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Connecticut Wildlife

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



From the Director's Desk



On September 22, the Bureau of Natural Resources and the Friends of Sessions Woods celebrated Connecticut Hunting & Fishing Appreciation Day at the Sessions Woods Wildlife Management Area in Burlington. Those who have attended this event in the past include hunters, anglers, families with children of all ages, and many who haven't tried hunting or fishing yet but had their interest sparked. The celebration this year is even more special as we highlight the 75th anniversary of the federal Wildlife and Sport Fish Restoration Program.

For me, hunting and fishing are like forces of gravity, drawing me to our wonderful lakes, ponds, streams, fields, and woodlots. These activities offer times of reflection, relaxation, stress relief, laughter, and wonder. I can't think of a fishing trip without images of my dad firing up our 1950s-era Johnson outboard tethered to the transom of my Uncle Rud's trusty 14-foot Alumicraft rowboat. We would putter out to the middle of the lake where we would drop the eight-pound Roloff's Manufacturing cast iron anchor with a splash. I can still hear the sound of the Plano tackle box scraping across the aluminum seat, and the lid popping off the top of the coffee can holding the night crawlers we had collected the night before. Dad would remind me to be careful putting the worm on the hook; his way of reminding me it was my job, not his. Next came attaching the red-and-white bobber, the split shot, and casting the line as far as I could. After that, it was all about the anticipation of watching that bobber and hanging with my dad.

At the time, it never occurred to me how or why we enjoyed such riches of fish and wildlife. They simply existed, and seemed inexhaustible. Now, as an adult, I have come to realize that those riches are the product of the remarkable commitment of those like my dad, the original conservationists.

For those that don't know, the vast majority of funding for fish and wildlife conservation comes from hunters and anglers. One obvious source is from license fees. But largely unknown is the excise tax paid by hunters and anglers on firearms, ammunition, archery equipment, and fishing tackle. This is a tax that people like my dad, and the hunters and anglers of his generation, argued for. A tax, collected by the federal government and returned to the states, exclusively for the conservation of fish and wildlife.

We lost my dad a couple of years after those early fishing trips, but those memories are as real today as if they occurred yesterday. The sounds, smells, even the feel of water lapping against a boat or canoe bring those images back. And, they bring a smile to my face. Now, as I watch our daughters during our too infrequent fishing trips, I hope that they keep with them the memories of hazy, lazy summers paddling in a nearby pond.

I have a lot to thank my dad for, and ensuring that our family will enjoy healthy and abundant fish and wildlife populations is a big one. Now, what will we do for the generations that follow us?

Rick Jacobson, DEEP Wildlife Division Director

Cover:

Weiland restoration projects (see article on page 6) have restored and created habitat for wading birds, like the glossy ibis.

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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Monitoring Connecticut's Rare Plant Species

Article and photography by Nelson DeBarros,
DEEP Wildlife Division

Just as field surveys are conducted for shorebirds, bats, and other wildlife, so are they conducted for Connecticut's rare plants. These data are used to determine status, trends, and changes in distribution for these plant populations, and to inform future management decisions.

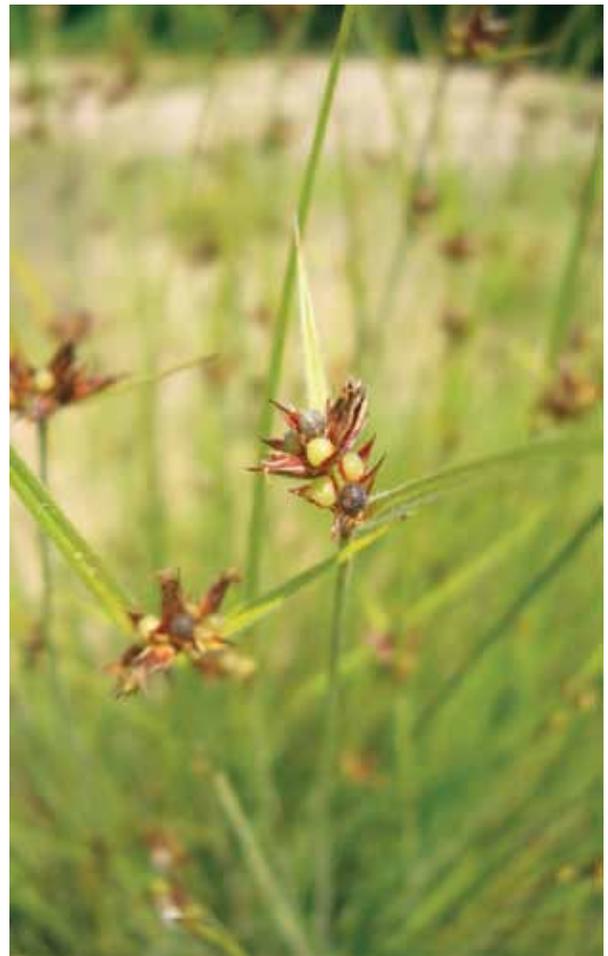
Every year, volunteers and DEEP staff monitor and manage habitat for Connecticut's rare plant populations. Monitoring occurs over a wide range of habitats – from coastal beaches and marshes to the summits of Connecticut's highest points. Some sites may look pristine, while others may bear noticeable scars.

The data collected are often simple and generally consist of the number of plants observed over a given geographic area. With this information, changes in density and spatial extent can be tracked over time. The possible expansion or contraction of a population also can be determined. In addition to monitoring known populations, surveys for new occurrences are conducted. Occasionally, previously unknown populations

are discovered or species are found to be more common than previously thought.

When monitoring data indicate that a plant population is in decline, conservation actions can be implemented. Vegetation can be managed to conserve plants in the same way that it can be managed to promote particular wildlife species. The management goal for many rare plants is to turn back the "successional clock." A number of Connecticut's rare plants grow best under the high-light levels present in early successional habitats rather than the deep shade of mature forests. Selective tree harvests or the creation and maintenance of early successional habitat can be used to provide habitat for these sun-loving species.

Invasive species management also has become a regular component of rare plant



A population of the state endangered few-flowered nutrush (*Scleria pauciflora* var. *caroliniana*) was discovered while surveying for another rare plant species.



(left) Low frostweed (*Helianthemum propinquum*; state threatened) occurs in sand barrens or open woods. These areas are often targeted for development. Natural succession to mature forest can also eliminate suitable habitat. (right) Connecticut's only population of sandplain gerardia (*Agalinis acuta*), a state and federally endangered plant species, requires well-timed mowings to reduce competition from other plants.

conservation. Invasive species, such as bittersweet, autumn olive, and common reed, often dominate sites and exclude other species. Control of these aggressive plants gives native species a fighting chance.

Get Involved!

Over the years, much of Connecticut's rare plant data has been collected and contributed by volunteers with the New England Plant Conservation Program (NEPCoP). This program, administered by the New England Wild Flower Society, trains volunteers in monitoring protocol and coordinates monitoring efforts across the six New England states. Becoming a NEPCoP volunteer is an excellent way to explore the outdoors, meet new people, and learn more about Connecticut's rare flora! To learn more, please visit www.newfs.org/protect/rare-plants-and-conservation/Volunteer. Learn more about state-listed plant species on the DEEP website at www.ct.gov/deep/endangeredspecies.

Written by Penny Howell, DEEP Marine Fisheries Division

The Federal Aid in Sport Fish Restoration (SFR) Program has had a major impact on sport fishing nationwide since its enactment in 1950. This program is made possible by people doing the things they love - fishing and boating - and at the same time helping to restore and protect fish and their habitats by paying a small tax on their fishing equipment and motor boat fuels. The premise of this program is a direct cycle of user pay/user benefit. Ten years after the formation of the Connecticut Department of Environmental Protection in 1971 from its roots in the state's Department of Fish and Game, marine fisheries management and research was launched in Long Island Sound and then flourished with the agency's participation in the SFR Program. Over the past 29 years, the SFR program has supported seven major marine projects in Connecticut; four are still ongoing. These projects span a wide range of species and important research and management needs.

Marine Recreational Information Program

Information on marine angler activity has been collected in Connecticut since 1979 from intercept interviews conducted by Marine Fisheries Division staff. This project became part of the coastwide Marine Recreational Fisheries Statistics Survey conducted by the National Marine Fisheries Service in 1984,

and then the Marine Recreational Information Program in 2010. The program provides statewide estimates of marine fishing trips, total fish caught, and angler numbers. An additional Volunteer Angler Survey characterizes the size composition of both kept and released fish reported by volunteer anglers.

Long Island Sound Trawl Survey

The relative abundance of over 100 finfish species, and many more invertebrate and algal species, is monitored seasonally through Long Island Sound-wide survey trawl catches. Age specific indices of abundance are generated for several recreationally important species, including scup, tautog (blackfish), winter flounder, summer flounder (fluke), bluefish, and weakfish. Numbers and biomass (total weight) are used in coast-wide resource models to assess productivity and the impact of fishing on migratory species.

Estuarine Seine Survey

The relative abundance of young-of-year winter flounder, as well as other nearshore finfish and crab species, is obtained from fall seine sampling conducted at eight beach sites from Groton to Greenwich. An intertidal forage fish abundance index also is generated.





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Recreational saltwater fishing opportunities abound along the Connecticut shoreline.

Inshore Survey/Study of Nearshore Habitat

This program began as a five-year study of five harbors which mapped the distribution of nearshore fish habitat to increase understanding of how non-fishing activities, such as

dredging and land-use practices, affect the health and abundance of valued recreational species. An additional two years of examining larval production in two of these harbors was followed years later by an ongoing study of Connecticut River anadromous fish production. Seine catches at seven sites stretching from Holyoke, Massachusetts, to Essex, Connecticut, provide annual indices of juvenile shad, blueback herring, menhaden, and other nearshore species abundance, along with information on the adult American shad spawning population (length, age structure, and sex ratio). Comparable data are gathered at eight sites in the Thames River.

Past SFR-funded Studies

Past studies no longer funded by the Sport Fish Restoration Program include:

- Examination of *Gear-Induced Incidental Mortality in Marine Finfish*;
- *Studies in Conservation Engineering*, which evaluated commercial and sport fishing gear and fishing practices to quantify incidental mortality from non-target net by-catch and recreational hook and release;
- *Connecticut River White Perch Assessment*, which found that abundance of this ubiquitous fish was lower, but fish were growing faster than in the 1970s, and that enacting a minimum harvest size of eight inches could increase the population's productivity; and

ing gear and fishing practices to quantify incidental mortality from non-target net by-catch and recreational hook and release;

- An accompanying *Connecticut River Angler Survey*, which showed that white perch support one of the most popular recreational fisheries in the river, along with striped bass and catfish, and that the fishing rate was at a level producing maximum yield.

All of these programs have provided one of the strongest databases available with which management strategies can be developed and implemented to meet both resource and angler needs. The long-term studies have allowed managers

to plan for effects due to habitat loss and restoration, climate change, and changes in harvest practices. The SFR grant program of dedicated funds has enabled natural resource agencies from Connecticut and neighboring states to protect fish stock productivity, along with improving opportunities for anglers to get out on the water and have a great fishing experience.

Marine Fishing Day 2012

No Child Left Inside® Great Parks Pursuit participants spent Saturday, August 4, casting into the Thames River off of the fishing access pier within Fort Trumbull State Park, in New London. DEEP staff from the Inland Fisheries, Marine Fisheries, and State Parks Divisions, teamed up with volunteers from the Connecticut Aquatic Resources Education (CARE) Program to provide an exciting day of hands-on fun, education, and angling. For each of the past five years, No Child Left Inside® programs have offered freshwater



and ice fishing events, introducing thousands of families to the sport of fishing. The salty air provided a welcome change of pace and set the stage for a day of learning about Connecticut's coastal marine life. Several activities included a marine fish identification challenge, "touch tank" full of shellfish and finfish (some of which were recently caught by the participants), lobster pot maze, crabbing, and of course fishing. The juvenile form of the voracious predator, the "bluefish," provided the most action, with hundreds of these "snapper blues" being caught throughout the day! Other fish brought into the pier included "keeper" scup (porgy), black sea bass, cunner, and croaker. Most importantly, families were able to spend quality time together while angling for some of Connecticut's bountiful natural resources at one of our most historic and scenic state parks.

Justin Wiggins, DEEP Inland Fisheries Division, photo by J. Murtagh

WHAMM Projects Clear the Way for Improved Wetlands

Written by Paul Capotosto; photography by Roger Wolfe; DEEP Wildlife Division

The DEEP Wetlands Habitat and Mosquito Management (WHAMM) Program completed three wetland restoration projects during January to July 2012. All of the projects involved the use of Integrated Marsh Management (IMM) techniques. IMM takes a holistic approach to wetlands management. It combines several management techniques, including invasive plant (common reed, purple loosestrife, etc.) control, culvert replacement for tidal flow restoration, and Open Marsh Water Management (OMWM) practices for biological mosquito control and wildlife habitat enhancement.

The WHAMM Program plays a crucial role in the restoration of tidal wetlands in Connecticut. Established in 1994, the



A view of the wetland restoration work conducted at Jacob's Beach off of Seaside Avenue in Guilford. Note that several pools and linear channels have been cleaned. This photograph was taken on June 14, 2012.



A low-ground pressure excavator is used to create a new pool and clean old mosquito control ditches in the Jacob's Beach Marsh in Guilford.

program is one of the first wetland restoration programs in the country with dedicated staff and specialized, low-ground pressure equipment used exclusively in restoration activities. Some of this specialized equipment was purchased with funding from the Connecticut Migratory Bird Conservation (Duck) Stamp Program.

Marsh Restoration in Guilford

The first project was conducted at two marshes in Guilford: Jacob's Beach Marsh and Chittenden Park Marsh. The WHAMM crew worked with the Engineers Office and the Environmental Planner for the Town of Guilford to start the process. Work started in January 2012 and was completed in April. Two low-ground pressure excavators were used to clear out 4,000 linear feet of old mosquito control ditches, 1,000 linear feet of new



A view of the wetland restoration work conducted at Groton Long Point. A long channel was excavated to allow tidal water in and out of the site. This photograph was taken on June 8, 2012.

channels, and several new pools. These pond and ditch networks are not connected directly to tidal channels and, therefore, do not drain at low tide. After excavation, a higher water level is maintained, which provides habitat for fish and other wildlife, and encourages revegetation by native marsh grasses. Mosquito management is achieved by modifying egg-laying sites and by creating open water habitat for small, naturally-abundant killifish, which prey on mosquito larvae and pupae. OMWM systems provide long-term control of mosquitoes, thus reducing the need to apply chemical insecticides.

LIP Project at Groton Long Point

A low-ground pressure excavator was used for a DEEP Landowner Incentive Program (LIP) project at Groton Long Point to clean out 1,200 linear feet of old mosquito control ditches and restore tidal flows in and out of the area. The work began in April and took less than a month to complete.

Mosquito Management in Stonington

Two low-ground pressure excavators cleaned out 3,649 linear feet of old mosquito control ditches as part of a DEEP Mosquito Management Program project with the Stonington Borough. Work was conducted at marshes located north and south of the railroad tracks. The project was completed in late June 2012.

Project Monitoring

Upon completion of projects, many of the sites are monitored over time to document bird use of the area, regrowth of native vegetation, and water quality. The final results demonstrate how fortunate Connecticut is to have a wetland restora-



The Stonington Borough marshes can be seen north and south of the railroad tracks. This photograph shows the newly cleaned ditches in the marsh to the south. The marsh to the north was not yet completed when this photograph was taken on June 8, 2012.



Ditches were cleaned and several pools were created at Chittenden Park in Guilford. This photograph was taken on June 14, 2012.

tion program in place that is working with other state and federal agencies and dedicated partners to conserve and restore such ecological treasures as our tidal wetlands.

WHAMM Crew Accomplishments

Paul Capotosto and Roger Wolfe, of

the Wildlife Division's WHAMM crew, co-authored an article on Integrated Marsh Management that was recently published in the scientific journal, *Wetlands Ecology and Management*. The article is available electronically on SpringerLink (www.springerlink.com/openurl.asp?genre=article&id=doi:10.1007/s11273-012-9251-9).

Prepare Windows and Turn Off Lights to Protect Birds

Written by Shannon Kearney-McGee, DEEP Wildlife Division

Have you ever heard a strange “thwack” sound early some morning that was caused by an object hitting a window at your house? The object most likely colliding with your window was a migratory songbird. Research suggests that one of the most likely causes of direct mortality to migratory songbirds in North America is collisions with glass windows. This cause of mortality is second only to habitat destruction. Surprisingly, these collisions are not limited to tall office buildings of urban centers. In fact, most collisions occur below the forest canopy, which corresponds to the height of windows of homes and smaller buildings.

If you take a moment to think about how birds move through the landscape, it makes sense that they would run into house windows. Birds often fly through and around shrubs and trees. These shrubs and trees are often reflected in shiny windows, and birds unknowingly fly right into the glass. Impact with glass can cause immediate fatal brain injury or, if the birds are lucky, it will just leave them stunned. However, stunned birds become more vulnerable to predation or further injury.

Death Toll Staggering

It is estimated that one to 10 birds are killed every year by each building in North America. Based on the most recent United States census, there are just over 90,000 privately owned structures in Connecticut. Using these numbers, it is estimated that 90,000-900,000 birds are killed each year by striking windows just in our own small state. These numbers may be quite surprising to homeowners who may only recollect a bird collision at their home once or twice. In fact, the majority of birds that collide with windows are never observed by the building occupants.

Misconceptions About Window Strikes

Although bird collisions can happen at any time of year, birds are more likely to collide with windows of new buildings, particularly when the birds are completing their migration and are not familiar



Most bird/window collisions occur during the early morning hours. At that time, people may not be awake or outside to observe a collision, and often the neighborhood cat, fox, or other predator will find an injured or stunned bird before a homeowner would detect it.

with their surroundings. Because most migratory songbirds migrate at night and descend into shrubbery in the morning, it is during these early hours when most window collisions are likely to occur. People may not be awake or outside to observe the collision, and often the neighborhood cat, fox, or other predator will find an injured or stunned bird before a homeowner would detect it.

Another misconception is that rare bird species are not at risk for collision with windows. Actually, almost 300 different species have been documented hitting windows, and they include some rare and declining species, like northern saw-whet owl, yellow-breasted chat, golden-winged warbler, and whip-poor-will.

Although statistics demonstrate that most collisions occur below four stories, it is important to consider the magnified effects of urban centers. Connecticut lies along the Atlantic Flyway, a major migration route from Canada to South America. Migrating birds use the stars to orient them as they navigate this route. The overwhelming light emitted from our urban centers confuses and attracts

these migrating birds, especially on foggy nights, where they can become trapped in a maze of glass windows.

What You Can Do

With all of the windows out there, it may seem like there is little anyone can do to reduce the impact. On the contrary, every one of us can do a few simple things to prevent window collisions at our home or office, and make a difference. It is important to remember that window reflections need to be broken up to be effective in reducing bird/window collisions. Although it was previously recommended that homeowners use a falcon decal or silhouette to stop birds from hitting windows, we now know that *just one* decal is not effective. Many migratory birds are very small and will try to squeeze around and through small openings. To be effective, window reflections should be broken up with vertical strips spaced less than four inches apart or horizontal stripes spaced less than two inches apart.

Several other techniques or items can be used to break up window reflections. Some projects might even be perfect for getting the kids involved:

- Add images to windows by applying tempera paint with stencils.
- Use tape to create patterns on windows. See www.abcbirdtape.org to find out how to order this special tape that will help prevent collisions. It lets birds see glass and you see out; is easily applied and easily removed; and lasts up to four years.
- Apply a window film that lets you see out the window, but birds can see from the outside (www.collidescape.org).
- Apply window decals that won't obstruct your view, but reflect ultraviolet sunlight that is visible to birds (www.windowalert.com).
- Keep full length screens on the outside of windows.
- Keep blinds closed to help reduce reflection and the appearance of an escape route through windows. However, this is not as effective as putting something on the outside of windows.
- Keep cats indoors to give window-stunned birds a fighting chance to survive.

What Can Businesses Do?

Making changes to windows in urban centers also can help migratory birds safely make their journey through Connecticut. "Kill the Lights - Save the Birds" is the motto of the Lights Out Toronto campaign, which encourages

businesses and building managers to save energy and help bird conservation at the same time.

It also should be recognized that windowed terrariums can be very dangerous because birds are unable to distinguish the window barrier between the outside and the plants inside the building.

Using lighting that is broadcast in a downward direction, as opposed to "up lighting," still provides safety lighting at night but does not illuminate the sky. More specific building guidelines and LEED recommendations can be found at www.birdsand-buildings.org/documents/BirdFriendlyBuildingDesign.pdf.

Learn More and Get Started!

There are many excellent resources for learning more about preventing bird collisions with windows. These resources offer advice on how to landscape yards, treat windows, and even how to start a local "Lights Out" campaign in your area. Lighting and building recommendations are offered as well.

The following websites are good starting points: www.abcbirds.org and www.flap.org. Help make a difference for our migratory birds and get started now on your efforts to reduce bird/window collisions!



P. PLANT, FLAP

The landscape is often reflected in windows and birds unknowingly fly right into the glass.

What Can I Do As a Homeowner?



P. J. FUSCO

Homeowners can use a number of different window treatments to reduce bird/window collisions. Bird strikes typically occur at windows that reflect nearby habitat. Birds unknowingly fly toward the reflection and collide with the glass. The far left photo shows a bare window reflecting habitat. This is the most dangerous for birds. The second photo of the same window shows how the reflection is muted when the shades are drawn. An external screen has been added to the window in the third photo. The reflection is still visible, but the screen serves as a barrier to a window strike. In the photo on the right, a bird decal has been applied to the outside, which makes birds aware of an obstacle. Applying multiple decals to a window works better than applying just one decal.

Summer Fishing Fun!

Written by Justin Wiggins, DEEP Inland Fisheries Division; Photography by Jim Murtagh, DEEP Certified Volunteer CARE Instructor

Do you remember catching your first fish? Like many life-long anglers, I remember it like it was yesterday! Mine was a pumpkinseed sunfish, caught on the banks of Lake Winfield in Plymouth, Connecticut, where I grew up. In fact, one of my first and favorite childhood memories is netting that very sunfish, placing the fine specimen in a five-gallon bucket for further investigation, and showing off my proud catch to parents, grandparents, siblings, and whoever else would listen. That five-gallon bucket I toted around with my pumpkinseed sparked the beginning



This happy young angler poses with his first catch, a sunfish!



Day campers line the banks of Lake Wintergreen in New Haven during a Summer Fishing Class.

of a passion and a career in FISH!

The Inland Fisheries Division's Connecticut Aquatic Resources Education (CARE) Program provides the opportunity to learn about water, fish, and fishing. By instilling basic principles, practices, and rules of fishing, the goal is to create many memories of "first fish" and, as a result, create life-long anglers. Throughout the year, CARE accomplishes this goal by delivering the fishing message through several methods. First, "Family Fishing Courses" are continually offered around the state. They are taught by over 250 volunteers who have completed the official "CARE Instructor Training Course." Each of the instructors then facilitates formal educational classes

consisting of two hours of fun, hands-on classroom training followed by a fishing trip.

A second approach begins the last week of June when five seasonal employees are added to the CARE staff to teach Summer Fishing classes to day-campers around the state. The Summer Fishing Crew consists of science teachers out of school for summer, instructors in training, and college students aspiring for a career in the field of biology (several crew members have returned for over 10 seasons!). For seven weeks, the Summer Fishing Crew will venture out to lakes, ponds, and saltwater fishing piers to teach morning and afternoon classes to approximately 25-35 students per class. The first hour consists of environmental information presented through discussion and games, followed by an hour and a half of fishing. Water quality, pollution, biodegradation, species diversity, fish identification, knot-tying, bait selection, and safety around water are all on the agenda during the first hour. Then comes the 90 minutes of fishing!

Armed with spincast rods and reels spooled with six-pound monofilament line, the Summer Fishing Crew and students make their way to the water. At the end of each fishing pole is a number 8-bait holder hook tied using the improved clinch knot. A small split-shot is placed a foot-and-a-half above the hook, and directly above that is a bobber (an excellent strike indicator). Bait of choice is the good ole' night crawler threaded on the hook like a sock onto a foot. Students "bait up" and walk to the water's edge. A gentle reminder to check behind to ensure a safe cast comes from a staff member. After safety is ensured, lines fly into the air and bobbers meet the water. The first bobber goes down and the excitement begins!

The quarry is (you guessed it!) the sunfish, a fine adversary for a nine-year-old child that is preparing to take his/her first cast with a fishing rod. Sunfish are densely populated in most lakes and ponds throughout Connecticut and often found roaming close to shore during summer. They are willing biters even on the hottest days, can be caught all day, and provide an excellent fight. What more can one ask for while seeking that elusive first fish? Thanks to some excellent opportunities provided by the Inland



A sunfish provided a lot of entertainment to this young family of anglers at a Summer Fishing "Family Night."

Fisheries Division, many Summer Fishing students experience the same thrill of having a "fighter" on the line just like many "grown up" counterparts who catch larger gamefish like catfish, bass, and even trout!

Research has shown that angling success during initial fishing experiences is a critical component in "hooking" a life-long angler. The Inland Fisheries Division has created opportunities for the public that dramatically increase angling success. To supplement already self-propagating fish populations, "Trout Parks" and "Community Fishing Lakes" are stocked frequently with trout from state fish hatcheries during spring and fall. Community Fishing Lakes are also stocked with catchable size (14-18 inches) channel catfish that are purchased from commercial suppliers each June. These locations offer easy access, ample shore fishing areas, and have bathrooms readily available. These sites also offer perfect conditions for introducing new anglers to the sport of fishing! In fact, over 40% of Summer Fishing classes are hosted at three "Community Fishing Lakes" – Lake Wintergreen, Keney Park Pond, and Bunnells Pond. These sites are located in the heart of large cities - New Haven, Hartford, and Bridgeport, respectively. Reliable partners in municipal park and recreation departments, YMCAs, Boys and Girls Clubs, and Outdoor Adventure Camps can easily transport

students to these local hot spots.

Another method was introduced this past summer and is an expansion of our Summer Fishing program. "Family Nights" were held to encourage the day-campers, now armed with their newfound angling expertise, to invite their families and return to the same waterbody for an evening of fishing. High attendance at these events proved that Summer Fishing classes were successful at delivering the message that fishing is a fun and exciting family activity. The Summer Fishing Crew received well-deserved praise from parents for their efforts. This past Summer Fishing season resulted in 1,521 day-campers being introduced to fishing, with an additional 359 students attending seven "Family Nights." Since 1990, the CARE Summer Fishing Crew has taught over 35,000 students, watching many of them catch their very first sunfish!

To learn more about the CARE Program, please visit the DEEP website at www.ct.gov/deep/CARE. The program is always looking for enthusiastic and caring individuals who would like to share their passion for fishing with others by becoming certified CARE Instructors. If this appeals to you and you think you have what it takes, please call the CARE Center at 860-663-1656 and speak with Tom or Justin. The next training session will be held in February 2013.

Sociable Wanderers - Cedar Waxwings

Article and photography by Paul Fusco, DEEP Wildlife Division

With a continuous series of clear, high-pitched whistling calls announcing their arrival, a flock of cedar waxwings descends into a small tree on a cold fall morning. The tree is a Japanese crabapple, holding thousands of ripened fruits that are ready for the opportunistic, berry-loving birds to eat.



Mulberries are a favorite for many species of birds and other wildlife, including cedar waxwings.

Within a few days, the berries will be gone and the flock will have moved on to its next fortuity. Such is the way of life for the waxwings. They are wanderers, nomads that are constantly on the move to their next food source. Waxwings are highly gregarious, and when one member of the flock finds food, the call goes out for the rest of the flock to join the gluttonous feast. In fact, waxwings are so sociable that they are often seen perching close together, side by side on a branch, sharing food

by passing a berry back and forth before one finally eats it. At times, waxwings may consume large quantities of over-ripened, fermented berries and have been known to become intoxicated.

While berries are their favorite food, cedar waxwings will also eat flower petals and buds from fruit trees. In spring and summer, waxwings will catch insects by "hawking," that is hunting from an open perch to snatch a flying insect. Then, the birds will return to the perch to await their next opportunity. Among the insects waxwings are known to consume are beetles, cankerworms, tent caterpillars, and carpenter ants.

Description

The cedar waxwing is small, about the size of a bluebird. Named for its fondness for cedar berries, the waxwing is known colloquially as "the cedar bird." Descriptively, it is often referred to as elegant, dapper, and sleek. The plumage is silky brown and gray. The bird has a black mask and chin giving it a somewhat exotic appearance. The soft browns of the underside transition smoothly into a bright lemon yellow on the lower belly. The tail is gray with a bright yellow band at the tip. Waxwings have a short, brown crest which is frequently seen laying flat to the top of the head. In flight, they show broad pointed wings and short tails, making them similar in size and shape to the abundant European starling.

The characteristic that gives waxwings their name is the bright red waxy droplets ornamenting the tips of their secondary feathers. The waxy tips are a prolongation of feather shafts, colored by astaxanthin, a carotenoid pigment, and are not always visible.

The purpose of the waxy feather tips is uncertain, but one of the theories is that the waxy tips help prevent the ends of the secondary feathers from becoming prematurely broken or frayed by frequent wing fluttering in thick branches. Another theory states that the waxy tips on each wing correspond to bird's maturity, and is thought to serve as a visible breeding marker whereby males and females will pair and mate according to age. Considered to be late nesters, cedar waxwings synchronize their nesting season so that chicks are raised during the time of peak summer berry development.

Open cup nests are built of twigs and grasses, with a lining of softer material, and placed at heights ranging from five to 50 feet off the ground. The normal clutch size is four to six pale blue or blue-gray eggs. The eggs may be spotted with dark speckles. Incubation takes 12 to 16 days and chicks fledge after 14 to 18 days. Two broods are frequently raised each year. Cedar waxwings

are somewhat colonial and non-territorial, and can frequently be found nesting in loose groups.

Range and Habitat

Generally considered woodland birds, cedar waxwings can be found almost anywhere at any time. Because of their nomadic nature, they use a wide variety of habitats from urban to remote forests, from orchards to wetlands, wherever there are

fruiting trees and shrubs. Typically, fruiting plants are found around edges and open areas, and often near water.

Suburban landscape plantings have greatly benefitted waxwings, as well as other fruit eating birds, such as robins and mockingbirds.

Common backyard plantings like dogwoods, honeysuckle, crabapple, and mulberry produce berries that are relished by waxwings. Homeowners who wish to enhance their property for waxwings can plant native flowering fruit trees and shrubs that produce berries. Wild cherries, cedar, serviceberry, and winterberry are a few more plants that will attract waxwings.

Cedar waxwings are abundant throughout most of their range. The breeding range extends coast to coast from New Foundland and North Carolina in the east, to southeastern Alaska and northern California in the west. In winter, they may be found as far south as northernmost South America. In general, waxwings migrate south for the winter, but in Connecticut some birds will remain while others from farther north will come into our state to spend the winter.

In Connecticut, the distribution of cedar waxwings is statewide but their occurrence is unpredictable. Waxwing flocks may travel extensively in their search for food. At times, they can be hard to find, especially in winter when food becomes scarce. Look for them when the berries on local fruit trees are ripening.

Cedar waxwings are normally found in small to large flocks throughout the year. Most flocks include up to a dozen birds, while flocks with more than 50 are rare. The birds are frequently seen perched in a close-knit group at the top of a tree, vocalizing with soft whistles and calls, communicating constantly with one another. Together, their high-pitched, thin lispy calls of “zee, zee” are multiplied, creating a louder resonance. From the treetop, the flock will suddenly

stir, as if on command, taking off all at once. The birds fly in a tight circle, then depart, only to land at the top of another tree some distance away. Next time you are out for a walk in the wild or your neighborhood, listen carefully for the soft, high-pitched calls of the wandering flocks of cedar waxwings. You never know when and where these sociable birds may show up.



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Crabapple berries are another waxwing favorite.



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Named for their close association with cedar trees, cedar waxwings can often be found in stands of red cedar during fall and winter when the berry fruits are ripe. Note the red, waxy tip of the secondary feathers that give this bird its name.

Providing “Fish Friendly Passage” at Stream Crossings

Article and photography by Brian Murphy, DEEP Inland Fisheries Division

We travel on roads every day as part of our normal daily routine. Yet, lurking under these roadways are old culverts that convey streams and brooks, many of which block movement of upstream fish passage. While much attention has been focused on obtaining fish passage at dams, few residents are aware that poorly maintained or improperly installed culverts pose a serious threat to fish movements. Impassable culverts fragment or isolate fish populations within a stream network, preventing fish from reaching critical spawning, nursery, feeding, or seasonal refuge habitats important for growth and survival. Populations of native brook trout, which typically reside in stream headwaters, are often impacted by impassable culverts. Movements of other stream dependent species, such as white suckers, blacknose dace, and fallfish, as well as diadromous species like river herring and American eel, can also be impacted. Unfortunately, the northeastern U.S. has some of the highest density of road crossings in the country, with an average of 106 road crossings per 100 miles of river, thus creating numerous potential obstacles to fish movement.

One of the more common problems in Connecticut is “perched” culverts that are situated above the elevation of the stream bottom at the culvert outlet (downstream end). These present physical barriers to upstream fish passage since most Connecticut stream fishes cannot jump high enough to gain entrance to the culvert. Another common problem is a culvert that creates shallow water or sheetflow conditions. Fish cannot swim through these structures due to insufficient water depths. Excessive water velocities create another problem, especially within smooth bottom culverts that do not contain natural streambed substrates. Culverts with excessive velocities cause many species to become physically exhausted and prohibit them from successfully navigating to the upstream side.

Municipal, state, and federal regulatory permits are required for stream crossing



Before restoration: Perched twin culverts at a stream crossing of Leadmine Brook, in Ashford, blocking upstream fish passage for native brook trout.

replacement projects. As part of the advisory permit review process, staff from the Inland Fisheries Division Habitat Conservation and Enhancement (HCE) Program have been assessing fish passage needs at stream crossings throughout Connecticut since the late 1980s. To facilitate construction of “fish passage friendly” culverts, HCE staff developed standard stream crossing guidelines, which can be found on the DEEP website at www.ct.gov/deep/lib/dep/fishing/restoration/



After restoration: Leadmine Brook twin culverts were removed and replaced with a clear span timber bridge, thus restoring fish passage to 2.9 miles of upstream habitats.

[streamcrossingguidelines.pdf](#). While the guidelines focus primarily on fish passage and protection of habitats, incorporating the suggested best management practices can also benefit other wildlife.

For new or replacement stream crossing projects, HCE Program staff typically recommend the installation of clear span bridges or bottomless arch culverts for the

crossing of perennial streams. These structures are “fish passage friendly” because they do not create barriers or impediments to fish migration and preserve instream habitats. The goal is to create crossings that are essentially “invisible” to aquatic organisms by making them no more of an obstacle to movement than the natural channel. If culverts with a bottom have to be used, it is recommended that they be sunken or buried one to two feet below the existing streambed. This strategy provides for fish passage and creates more natural conditions in the culverts because native stream substrates are placed over the culvert bottom.

More recently, many aging, corrugated metal culverts that convey streams under major Connecticut highways are in need of repair or replacement. Because complete culvert removal can be expensive and presents a multitude of construction and traffic issues, alternate measures to extend culvert life have been proposed. Often referred to as “baby-boomer” culverts (a term used to describe infrastructure built post WWII), these culverts are being rehabilitated with a method called “sliplining.” This technique involves placement and stabilization of a smaller diameter culvert within the failing culvert. Unfortunately, sliplining increases water velocities and may exacerbate existing perched conditions, making upstream fish passage a real challenge. HCE Program staff, in conjunction with the Connecticut Department of Transportation, are working hard to solve fish passage issues at these slipline projects. Culverts are proposed to be retrofitted using a variety of techniques, such as baffle systems, fishways, and rock weirs, to provide upstream fish passage.

HCE Program staff are available to provide technical guidance to municipalities and private landowners regarding the creation of fish passage friendly stream crossings. In eastern Connecticut, contact Brian D. Murphy at 860-295-9523 (brian.murphy@ct.gov) and, in western Connecticut, contact Donald J. Mysling at 860-567-8998 (donald.mysling@ct.gov).

2012 Connecticut Spring Wild Turkey Harvest

Written by Michael Gregonis, DEEP Wildlife Division

The spring wild turkey season continues to be the most popular turkey hunting season. Many sportsmen enjoy hearing the gobble of a mature tom and the challenge of harvesting a wild turkey during spring. The 2012 spring turkey season was open statewide and ran from April 25 to May 26. A total of 8,615 permits were issued and 1,364 birds were harvested. At least one turkey was harvested by 583 hunters for a 6.8% statewide success rate. In addition, 263 hunters harvested two birds, 95 hunters harvested three birds, 11 hunters took four birds, and five hunters reported five birds. The harvest consisted of 937 adult males, 424 juvenile males, and three bearded hens.

Harvest decreased by 4.2% from 2011; however, permit issuance increased by nearly 44%. Although the 2012 permit issuance appears to indicate a large increase in spring turkey hunting permits, it may not reflect an actual increase in spring turkey hunters. The increase may be attributed to changes in a relatively new license packaging system. Some hunters, who had no intention of hunting turkeys, may have purchased a Firearms Supersport License or an Archery Supersport License (which includes a Spring Turkey Permit) because the package was less expensive than buying individual permits separately.

In general, the highest harvest occurs on opening day and on Saturdays. The 2012 spring season was no exception as 18% (239 birds) of the total harvest occurred on the first day of the season and 26% (357 birds) occurred during



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five Saturdays. It is assumed that the majority of hunters had time off on these days, enabling them to enjoy recreational activities.

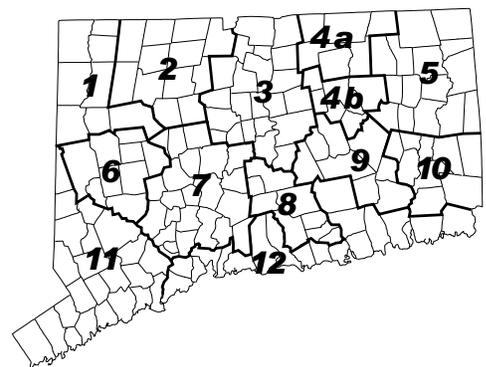
At least one turkey was harvested from 144 of Connecticut's 169 towns (85%). Lebanon (36), Suffield (32), and Woodstock (30) reported the highest harvest. State land hunters reported the highest harvest from Pachaug State Forest (18), Cockaponset State Forest (15), and Tunxis State Forest (14). On a regional basis, the highest harvests were reported in wild turkey management zone 5 (216 birds), zone 2 (165 birds), and zone 1 (135 birds).

In an effort to provide a quality wild turkey hunting experience for junior hunters (ages 12 through 15), Connecticut holds junior turkey hunter training days on two Saturdays every April. This year, youths harvested 71 turkeys during the training days. Junior hunter training days have been well received by both participants and mentors as many positive comments are made on hunter

surveys. These special days also prove to be a great way to introduce youth hunters to spring wild turkey hunting.

Although harvesting a wild turkey during the spring season can be a challenge, the rewards are plenty with excellent table fare and many watchable wildlife moments in the spring woodlands of Connecticut.

Connecticut Wildlife Management Zone Map



Deer Program Update 2012

Written by Andrew LaBonte, DEEP Wildlife Division

The DEEP Wildlife Division's Deer Program has been busy working on several projects this year.

Deer Study

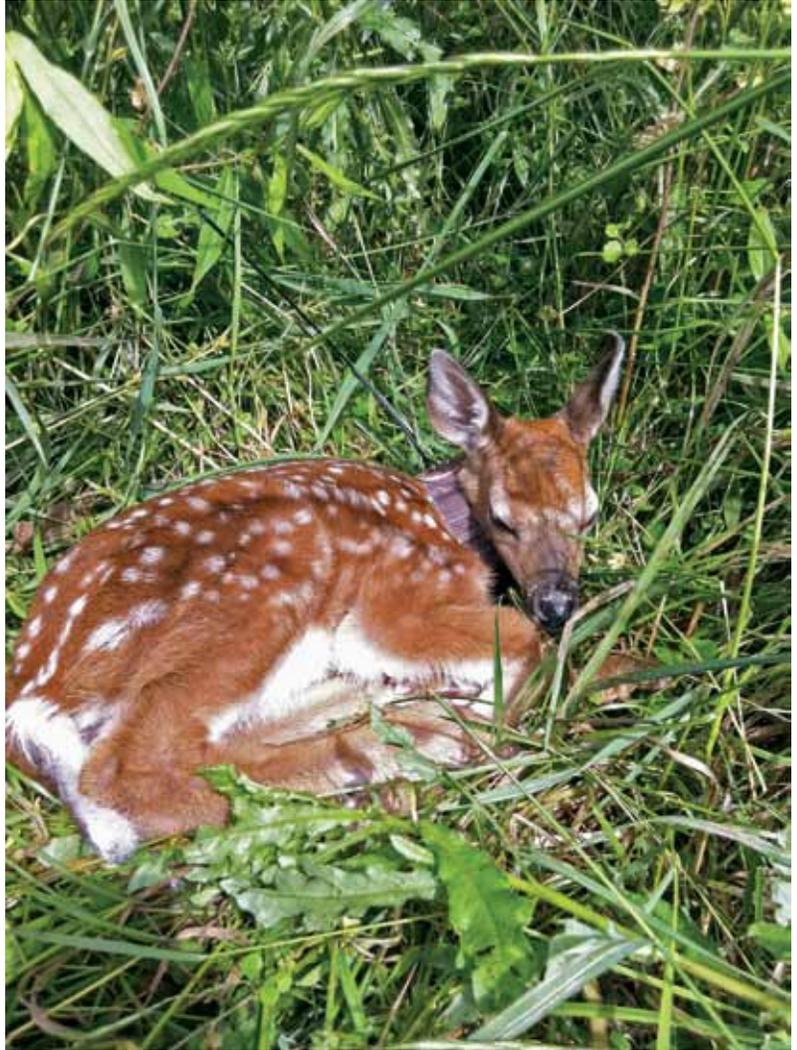
An intensive, multi-year research project, which began in fall 2011, will determine fawn production, adult and juvenile survival rates, causes of mortality, and habitat use in northwest Connecticut (deer management zone 1). Deer Program staff conducted spotlight surveys in Sharon, Salisbury, Cornwall, and Canaan an hour after sunset from the back of a pickup truck on specified routes to determine fawn to doe ratios. Staff observed 0.36 fawns per doe, which was slightly lower than the number reported by hunters during the hunting season (0.40-0.53 fawns per doe).

The following winter (January-April, 2012), 26 adult female deer (15 in Sharon, 9 in Salisbury, and 2 in Cornwall) were captured and equipped with radio-collars, ear tags, and a temperature sensitive vaginal implant transmitter (VIT). Radio-collars were used to locate the adult females several times a week, using a hand-held receiver and antenna, to determine survival and movements. During the first six months of the study, adult survival was 92%. One deer was struck by a motor vehicle within a few days and one died in July of unknown causes.

During the fawning period (May 23-June 27), 22 fawns were captured and equipped with a radio-collar. Many does gave birth late at night and moved their fawns before morning, making it difficult to locate them. Most does (67%) gave birth to single fawns; 27% gave birth to twins and one doe gave birth to triplets. Fawns were born as close as 17 yards (avg. = 113 yards) from a road and 26 yards (avg. = 124 yards) from a house. Average birth rate was 1.4 fawns per doe. Average weight of fawns at birth was 7.5 pounds and 68% of fawns were male. A total of 10 fawns died within 90 days of birth. Sources of mortality included natural causes (40%), predation (20%), agricultural practices (20%), and unconfirmed causes (20%). The fawn survival rate is currently 50% (0.67 fawns per doe). It can be expected that a few more fawns will be lost to some source of mortality by the end of their first year. Analysis on deer movements and landscape use of does and fawns will be evaluated in the future, and there are plans to capture additional deer this winter.

Chronic Wasting Disease Surveillance

After nine years of chronic wasting disease (CWD) surveillance in Connecticut, funding provided by the U.S. Department of Agriculture, Animal and Plant Health Inspection Service was eliminated from the federal budget. CWD is a degenerative neurological disease that affects cervids, such as deer, elk, and moose. Since Connecticut began CWD surveillance in 2003, nearly 5,000 deer have tested negative. Of greatest concern to Connecticut's deer population has been the status of CWD in neighboring New York. CWD was first documented in 2005 in seven deer in New York. Over 32,000 deer have been tested in New York, with no additional cases documented. The outlook for the deer population in New York looks good and some previ-



A total of 22 fawns were captured and equipped with a radio collars to determine survival rates, movements, and use of the landscape.

ous restrictions related to CWD concerns are being lifted.

Unfortunately, each year CWD is being documented in new states, with the most recent case occurring in a captive cervid facility in Iowa in July 2012. Many of the states where CWD has been documented have large numbers of captive cervid facilities. The movement of captive cervids is believed to be the primary means affecting the spread of CWD from state to state. Concerns with these actions have prompted tighter restrictions on the captive cervid industry and restrictions on hunters in New York. Few captive cervid facilities exist in Connecticut, and those that do primarily consist of a few animals. Although a large source of funding for CWD monitoring has been lost, the Deer Program will continue to test deer displaying symptoms associated with CWD, such as emaciation, abnormal behavior, and loss of bodily functions.

Tick Sampling

Wildlife Division biologists, along with staff from the Connecticut Agricultural Experiment Station, have been assisting

the community of Mason's Island, in Mystic, in assessing the use of 4-poster devices to reduce tick populations in the small isolated community. Division staff has been collecting ticks at Mason's Island where the devices are being used and at a control site (Black Point) where no 4-poster devices exist. Over a five-year period (2008-2012), ticks were collected in June at 37 sites at Mason Island and 39 sites at Black Point. At Mason Island, tick density and infection rates declined over a four-year period, although cases of Lyme disease remained similar (infection rates and cases of Lyme disease are not yet available for 2012). In addition to using the 4-poster devices at Mason Island, 61-68% of residents have been using a commercial tickicide application on their properties. A tickicide was also used on open space lands. At Black Point, the control site, tick density essentially remained the same over the five-year period. It appears that the 4-poster devices, in conjunction with commercial tickicide application, have reduced tick density and the percentage of ticks carrying the Lyme disease spirochete. However, the rate of human cases of Lyme disease in the Mason Island community has shown little change.

Biological Data Collection

Biological data have been collected by Wildlife Division staff during peak days of the hunting season at select check stations since 1975. Data collected includes sex, age, dressed body weight, number of antler points, and beam diameter of yearling bucks. These data are used to assess the health of Connecticut's deer herd. An analysis of data collected over the past 18 years shows little change in the health of the deer population.

Beginning in 2011, in an effort to explore alternate means of collecting biological data, several questions were added to the online and telephone harvest reporting system that provided greater sample sizes and confidence levels, as well as a variety of data. Sex, age, and antler points can still be determined through this method, along with hunter observation rates. Observation rates are used to determine fawn:doe ratios, buck:doe ratios, and deer observed per hour.

With the advancement and convenience of the on-line and telephone reporting system, Deer Program staff is able to collect similar and additional data in a more efficient and practical manner, negating the need to continue collecting biological data at deer check stations. Based on responses from hunters on the 2010 hunter survey, most hunters (69%) were in favor of closing



The 4-poster device is a passive feeding station designed to control ticks on white-tailed deer. As deer feed on bait at the station, tickicide-treated rollers brush against the neck, head, and ears where many adult ticks feed.

H. KILPATRICK / DEER MANAGEMENT PROGRAM

check stations if alternative methods were used to collect data on harvested deer. Moving forward, trend information generated from the new system should provide better insight into management of Connecticut's deer population. Hunters will be allowed to report harvested deer during the entire hunting season, including the first four days of the shotgun-rifle season, via the online and telephone reporting systems, and will not be required to bring their deer to a check station. Check stations will remain open for obtaining replacement tags for deer management zones 11 and 12, and during the first four days of the shotgun-rifle season, to accommodate those hunters who may not have been informed of the new changes.



Biological data have been collected by Wildlife Division staff during peak hunting days at select check stations since 1975. However, starting this year, hunters are no longer required to bring deer to a check station. Harvests should be reported via the online and telephone reporting systems.

P. J. FUSCO

A Welcome Alliance

Written by Rebecca Foster, DEEP Wildlife Division; photography by Paul Fusco

The 2012 piping plover and least tern nesting season in Connecticut has come to a close and the birds all likely migrated South by early September. The season was typical, with both ups and downs. One very positive note for the 2012 season was the tremendous assistance of the Audubon Alliance for Coastal Waterbirds (AAfCW) in its inaugural year. The AAfCW

help the DEEP Wildlife Division monitor our threatened shorebirds. The USFWS volunteer group was over 60 people strong in 2012, greatly increasing observations on beaches and strengthening educational efforts with the general public.

An Early Start

Beginning in March and ending in late August, the Wildlife Division locates, monitors, protects, and collects productivity data for the federally and state threatened piping plover and state threatened least tern populations along the Connecticut shoreline.

This year, piping plovers began arriving and establishing nesting territories in early March, somewhat sooner than is typical. Plovers and least terns scrape small inconspicuous nests in the sand, usually between dune vegetation and the high tide line. This, unfortunately, is also where most beach pedestrian traffic occurs.

Once plovers were located, wooden and string fencing and cautionary signs were erected around the nesting areas with the help of the AAfCW staff and volunteers. The wooden fencing provides a “psychological barrier,” both alerting beach-goers to the birds’ presence and directing people away from nesting areas. Fencing is vitally important to prevent the vulnerable and camouflaged eggs from being stepped on. Once a piping plover nest is located, a team of trained individuals enters the fenced area to erect an “enclosure” around the nest. An enclosure is an oval metal cage with openings large enough for plovers to walk through, but small enough to prevent most mammalian predators from reaching the eggs. The enclosure is covered with fine netting to deter avian predators. Enclosures must be constructed and placed around the plover nest within a 20-minute window so that the eggs are not exposed to the elements while the adult bird is off the nest. Adhering to this timeframe also limits the amount of stress caused by the team’s presence on the adult birds. With AAfCW staff assistance in erecting enclosures, plovers were able to return to their nests to incubate their eggs more quickly.

A Very Thorough Survey

DEEP staff was able to survey many more beaches for threatened shorebirds in 2012 than in previous years. If piping plovers successfully nest on a beach, they generally return to the same area the next year. Conversely, the birds may change locations from year to year due to human disturbance, predator “pressure,” and nest losses. The Wildlife Division annually monitors 28 historical nesting sites from Greenwich to Stonington. However, most of the breeding pairs

are concentrated on five beach complexes that support prime nesting habitat. In 2012, an additional 12 beaches were surveyed thanks to the increased manpower provided through the AAfCW and USFWS volunteers, with piping plovers found at two new sites.

Similar to the 2011 season, the greatest numbers of nesting



DEEP Piping Plover Technician Rebecca Foster putting up cautionary signs and string fencing in Stratford.



DEEP Seasonal Resource Assistant Brian Blais assisting with piping plover and least tern field work.

is an alliance between the two Audubon groups in Connecticut, Connecticut Audubon and Audubon Connecticut. The AAfCW was able to train, organize, and collect data from seven AAfCW seasonal field staff members and seven Audubon staff members, as well as all of the U.S. Fish and Wildlife Service (USFWS) volunteers, including Master Wildlife Conservationists, who

birds were found at Stratford, Milford, West Haven, Old Lyme, and Groton. Between these five sites, there were over 20 pairs of piping plovers and over 300 pairs of least terns – the largest concentrations of nesting plovers and terns in Connecticut. Two beaches in Fairfield and Westport that were used by plovers in 2011 were not used in 2012. Piping plovers will often shift to a new, nearby beach, but even with all of the additional surveys conducted in 2012, the two missing pairs from 2011 were not located.

Low Plover Productivity

A number of factors contributed to low piping plover productivity in 2012. Human disturbance has always been and continues to be a barrier to successful piping plover nesting. Human disturbance may have caused at least two nest abandonments in Milford. Fencing was set up for a returning pair of plovers observed defending a territory at another beach in Milford. Unfortunately, a day later, the remains of two bonfires were observed just beside the nesting area. The plover pair left and was not observed again during the 2012 season.

Weather is often a contributing factor to nest losses. Storms, extreme highs and lows in temperature, and high tides all affect the plovers' ability to properly incubate eggs. As is common every season, at least three nests were washed-out by June high tides in Milford and Groton. Heavy rains early in the season may have contributed to several nest abandonments in West Haven.

This year, it is believed that predators had the largest negative impact on both nest and fledgling success statewide. Nests and chicks were lost to predators at five beaches. Foxes, raccoons, and black-backed gulls were observed in close proximity to nesting pairs throughout the season. In addition, predator tracks were frequently documented in the sand within nesting areas. On four occasions, at two beaches, a mammalian predator attempted to dig under exclosures to reach eggs. Exclosures are buried deep into the sand so the attempts were unsuccessful, but the "pressure" of the predator disturbance



Although final numbers for the 2012 piping plover nesting season are still being tabulated, productivity appeared to be negatively affected by human disturbance, weather events, and predation. These three juveniles were beating the odds as they foraged at one of the plover nesting beaches.

caused the adults to abandon their nests. In Old Lyme, nests were documented as hatching three and four chicks only to have the young chicks gone within a day or two. The Wildlife Division is working with the USFWS to address predator issues should they be an issue again in 2013.

Tern Numbers Similar to 2011

Least tern data collection for 2012 is still ongoing, but initial results indicate that the numbers of tern pairs, nests, chicks, and fledges will be similar if not slightly higher than those of 2011. The largest numbers of breeding least terns were found in Stratford, West Haven, Old Lyme, and Groton. Unfortunately, the predator(s) present in Stratford resulted in the failure of more than 22 observed least tern nests.

Human disturbance from recreation likely caused a number of nest abandonments in Groton. Many kayakers and boaters land and pull their boats up onto the beach precisely where the least terns are nesting. At this same site in Groton on a weekend day in July, 14 boats and many picnickers with grills and radios were observed recreating beside the protected shorebird areas. Human disturbance may have caused the terns to abandon the area – adult tern counts went from 26 pairs

to 17 pairs to two pairs in a two week period. West Haven terns were the most productive, with over 165 fledges from more than 125 nests.

Public Education Is Key!

Threatened shorebirds must share the best nesting sites with people who also find the beaches ideal. Equestrians, kayakers, boaters, hikers, and, most importantly, beach-goers must all be made aware of sensitive nesting areas. Beach recreation can coexist along with nesting piping plovers and least terns as long as people maintain a safe distance from the fencing, obey postings, refrain from bringing dogs onto the beach, pack out garbage, and generally respect the space given to the nesting birds.

The DEEP Wildlife Division would like to sincerely thank the AAfCW and Audubon staff, and the USFWS volunteers for educating, immeasurably, more people on Connecticut beaches this year. Experience has demonstrated that if beach-goers are educated in a professional manner and shown literature and pictures of these beautiful birds, they become piping plover and least tern advocates. Public education and advocacy are crucial to maintaining and ultimately increasing Connecticut's threatened shorebird populations.

Measures in Place to Contain Destructive Emerald Ash Borer

Connecticut's ash trees are facing a serious threat due to the recent discovery of the invasive, non-native emerald ash borer (EAB) in areas of New Haven County. The EAB specifically targets ash trees, eventually killing them. Ash trees are an important species throughout Connecticut. In some parts, these trees comprise up to 19% of the forest. Ash is not only a source of economic revenue for the forest products industry and a favorite firewood of homeowners, but the trees are also ecologically significant as habitat for wildlife and in urban landscapes.

Unfortunately, research has shown that EAB cannot be eradicated. However, there is a strong chance infestations can be significantly slowed with the cooperation of Connecticut's visitors and residents, especially in the early stages of an infestation. DEEP is committing its resources and experience to prevent the widespread loss of the state's ash trees. This commitment includes supporting the Connecticut Agricultural Experiment Station (CAES) and its regulatory effort to slow the spread of this invasive insect.

CAES is requiring that all who transport firewood abide by emergency regulations to limit the movement of infested, or potentially infested ash wood into and within Connecticut. Both CAES and DEEP are asking that Connecticut's residents and visitors not move firewood

out of Connecticut. You may be transporting harmful forest pests to other states unknowingly. Furthermore, other states have prohibited moving untreated firewood across their borders.

In addition to these regulations, CAES has placed a quarantine on New Haven County that regulates the movement of ash logs, ash materials, ash nursery stock, and hardwood firewood from within New Haven County to any area outside of that county. The quarantine mirrors a federal quarantine also imposed on New Haven County, and requires permits for the transport of many wood products in the state, especially products harvested in New Haven County. Restrictions on moving hardwood products, especially firewood, are necessary because the small insects can hide in the wood and be easily transported into uninfested areas. Ashwood is difficult to identify in mixed loads of firewood. Therefore, split firewood and wood intended to be cut and split cannot be moved out of New Haven County unless the wood is heat-treated in a drying kiln or the bark and some of the wood are removed to ensure that EABs are not present. The goal of these regulatory efforts is to provide clear guidance for all, to help protect our state's ash trees.

When transporting firewood within Connecticut, a document stating the origin and destination must be with the transporter. A Self-Issued Firewood Transportation Certificate is available on the DEEP website (www.ct.gov/deep/EAB) to comply with this regulatory requirement.

Any questions about the regulations can be directed to the DEEP Division of Forestry at 860-424-3630, or by email at deep.forestry@ct.gov. You may also contact CAES at 203-974-8474 or by email at CAES.StateEntomologist@ct.gov. Detailed information about EAB, the quarantine, emergency firewood regulations, and the necessary permits for transporting wood products can be found at www.ct.gov/deep/eab or www.ct.gov/caes.



CONNECTICUT AGRICULTURE EXPERIMENT STATION

Detecting the Emerald Ash Borer

Efforts to monitor for EAB in Connecticut have been in place ever since this destructive insect was confirmed just over the state border in New York. This year, 541 purple prism detection traps, containing a special chemical lure, were placed across the state by the University of Connecticut Cooperative Extension System via an agreement with the USDA APHIS PPQ.

In addition, the U.S. Forest Service is supporting "biosurveillance" monitoring efforts that use a ground-nesting, native wasp (*Cerceris fumipennis*). This wasp hunts for buprestid beetles of all types (including EAB) and brings them back to its nesting hole to provide food for its young. Citizen scientist "wasp watchers" catch the wasp as it returns to the nest, taking the prey to determine if the wasps are foraging on EAB. This highly efficient and effective survey tool was responsible for the initial detection of EAB specimens in Prospect. Three additional EAB specimens were captured in a trap in Prospect, while other beetles were captured in a trap in Naugatuck. With this discovery, Connecticut became the 16th state in the nation to document this invasive beetle.

The EAB is small – approximately 1/2-inch long and 1/8-inch wide – and metallic green in color. Adults emerge from the bark of infested trees leaving a small "D"-shaped exit hole roughly 1/8-inch in diameter. This insect is native to Asia and was first discovered in 2002 in the Detroit, Michigan, and Windsor, Ontario, regions of North America. It has since spread through the movement of firewood, solid-wood packing materials, infested ash trees, and by natural flight dispersal.

Prevent the Spread of Invasive Insects

- Leave firewood at home when going camping anywhere in Connecticut or out-of-state. That includes hunters heading to hunting camps for the upcoming season. Purchase campfire wood from vendors located near your campsite.
- Burn all firewood at your campsite before you leave and do not bring it back to Connecticut.
- When purchasing firewood for the upcoming winter season, buy locally and make sure your supplier is following the emergency regulations and has obtained the proper permits for transporting wood.
- Report any possible infestations of the emerald ash borer or Asian longhorned beetle to the Connecticut Agricultural Experiment Station at 203-974-8474 or CAES.StateEntomologist@ct.gov. Please do not move the insect or wood from the site. Take a digital photo and send it to the email address above. Give a precise description of the location of the tree so that an investigator from CAES can visit the site.

Canada Goose

Brant canadensis

Background

The Canada goose was abundant in Connecticut during colonial times, principally as a migrant. Unregulated hunting and market hunting in the 1700s and 1800s caused a population decline. However, protective measures in the early 1900s gradually reversed this trend. Releases of geese by game breeders, sportsmen, private groups, and the State Board of Fisheries and Game resulted in an established population of resident geese that eventually spread throughout the state. Currently, Canada geese nest statewide, with the highest populations occurring in the 3 most urbanized counties (Fairfield, Hartford, and New Haven counties).

Canada goose numbers have increased substantially over the last 50 years. This increase is due to the ability of geese to adapt to man's landscaping practices. The multitude of new ponds, lakeside lawns, golf courses, and athletic fields created since the 1950s have resulted in a large expansion of the goose population. These areas provide the right combination of water, cover, and grazing sites for geese.

The establishment of special hunting seasons that focus on the harvest of resident geese have helped in controlling the resident goose population. Breeding waterfowl population survey data indicate that the resident Canada goose population is declining in those areas of the state where hunters are provided access to the birds during the hunting seasons.

Range

"Migrant" populations of Canada geese nest in Alaska and northern Canada and primarily winter in the United States. "Resident" populations, which are non-migratory, have become established since the 1950s and nest throughout the United States.

Description

The Canada goose is Connecticut's largest native waterfowl species, weighing between 6 and 13 pounds and measuring 22-48 inches. It is easily recognized by its black head, bill, and neck that contrast strikingly with a pale gray breast. The distinct white cheek patch, or chinstrap, that covers the throat is a characteristic field mark. The birds are gray-brown to dark brown on the back and wings and white on the belly; they have a black rump and tail



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feathers that are separated by a narrow but distinct band of white feathers.

Habitat and Diet

Canada geese are found in a variety of habitats that are located near water bodies, such as lakes, marshes, ponds, reservoirs, and rivers. Geese also are attracted to open grassy areas like lawns, parks, golf courses, athletic fields, and airports, as well as agricultural fields. These habitats provide ample food in the form of aquatic plants, seeds, clovers, cultivated grains, and lawn grass. When inland freshwater areas freeze in Connecticut, geese concentrate in the bays and inlets of Long Island Sound.

Life History

Canada geese are among Connecticut's earliest spring nesters. They may start to defend territories in March and nest by early April. Yearling geese generally do not attempt to nest; about one-third of 2-year-old birds nest, as do most of the 3-year-olds. Canada geese are monogamous and pairs mate for life. They use a variety of nest sites, such as islands, man-made structures, muskrat and beaver lodges, and shoreline edges. Nest site requirements include proximity to water, cover for the nest, and good visibility for the incubating bird. Usually 4 to 7 white eggs are laid and incubated by the female while the male stands guard a short distance away. Incubation lasts about 28 days. Hatching occurs from April through June, with the peak occurring the first week of May. Nesting success and gosling survival are generally high. Most nest losses are caused by flooding, desertion,

and predation. Egg predators include raccoons, skunks, foxes, coyotes, dogs, and gulls. Young goslings may be preyed upon by snapping turtles, gulls, owls, and coyotes.

Interesting Facts

Year-round resident geese that breed in the state are distinct from migratory populations that nest in the northern Canadian provinces. Most migrant geese that occur in Connecticut breed in Labrador, Newfoundland, and northern Quebec, arriving in Connecticut in early October. Migration continues through November with another peak number of migrants arriving in mid-December. Most migrant geese leave the state by mid-January to continue further south. However, in some years with mild winters, substantial numbers of migrant geese have remained in Connecticut the entire winter.

Flocks of geese travel in long lines, flying in V-formations. Their raucous honking can be heard for miles. The resonant calls from flocks of migrating geese have long been a welcome harbinger of autumn.

Resident geese sometimes serve as decoys, attracting migrant waterfowl. This can lead to crowded conditions and encourage the spread of diseases through the wild population. Further complicating the situation in Connecticut is the feeding of geese by the public. Geese and ducks that are fed nutritionally deficient food, such as bread, may be more susceptible to disease and malnutrition. Supplemental feeding of geese also creates unsanitary conditions and public safety issues at feeding areas. The DEEP Wildlife Division strongly discourages the supplemental feeding of geese and other waterfowl. Consult the Division's publication, "Do Not Feed Waterfowl," to learn how you can help waterfowl by NOT feeding them.

Conservation and Management

All migratory game birds, including Canada geese, are man-

aged by the U. S. Fish and Wildlife Service. Biologists manage the migrant and resident populations differently even though the two overlap during fall and winter and are indistinguishable in appearance. The migrant population is generally susceptible to high hunting pressure because of its long migration. The resident population receives too little hunting pressure. Special hunting seasons, timed to occur when migrants are not present in Connecticut, are used to direct hunting pressure toward resident geese. Regulated hunting is an effective management tool which can reduce nuisance problems. However, many nuisance goose problems occur in urban and suburban areas where hunting may not be a viable option.

Non-lethal techniques can be effective, particularly if several different methods are used in concert with each other and at the appropriate time. However, most of the available non-lethal methods, except for habitat modification, are transitory in their effectiveness. If habitat is not altered and human tolerance of nuisance geese does not change, some level of population reduction, together with non-lethal conditioning, is the only long-term, successful option.

Reducing the number of breeding adults is the only way to achieve and maintain a population decline of resident Canada geese. There are a number of ways to remove adult geese, such as regulated hunting and the issuance of federal depredation permits. Connecticut has liberal goose hunting seasons and hunting has resulted in a decline of goose numbers and problems in areas where hunters have access to the birds. However, hunting is limited in urban areas, making it necessary to use other means to reduce adult survival.

A separate fact sheet on how to deal specifically with nuisance goose problems is available on the DEEP's Web site (www.ct.gov/deep/wildlife) or by calling the Wildlife Division at 860-424-3011.



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Conservation Calendar

Programs at the Sessions Woods Conservation Education Center

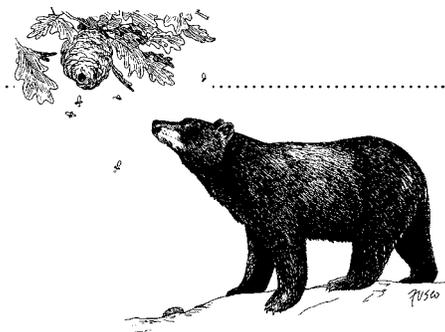
Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by calling 860-675-8130 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.

- Oct. 9 **Beaver Marsh Fall Evening Walk**, starting at 5:15 PM. Join DEEP Wildlife Division Natural Resource Educator Laura Rogers-Castro on an evening walk to the Beaver Marsh at Sessions Woods. View signs of fall along the trail during this two-mile round trip hike. Learn about beavers and other marsh animals as we explore this wetland habitat and beautiful location in the wildlife management area. Participants should dress appropriately and bring water.
- Dec. 1 **The Wolves & Bears of Yellowstone**, starting at 1:30 PM. Master Wildlife Conservationist and Photographer Gary Melnysyn returns to Sessions Woods to present an informative program on wolves and bears. The program will provide insight on the reintroduction of the wolf population to Yellowstone in 1995, and the successful growth of the population and its current status. Gary also will present information about wolf habitat, predation, and social structure. The bear portion of the program discusses the plight of the grizzly bear from the very beginnings of park history through the Grizzly Bear Recovery Act and ending with the current status of grizzlies in Yellowstone.
- Nov. 3 **Children's Program: Migration and Hibernation**, starting at 1:30 PM. How do animals get ready for winter? What changes do we see in the forest as the days get shorter and the nights longer? Take a walk at Sessions Woods with educator Laura Rogers-Castro to look for signs that winter is soon to arrive! Please wear appropriate outdoor gear and meet in the exhibit area of the Conservation Education Center.
- Dec. 15 **Meet & Greet Reception**, from 2:00 to 4:00 PM. Visit Sessions Woods for an open house to meet photographer and Master Wildlife Conservationist Gary Melnysyn and view his award-winning photography. Gary is an avid outdoor enthusiast and has been interested in wildlife from a very young age. A self-taught photographer, Gary's travels have taken him from the far reaches of Alaska, across the Canadian tundra, through the wilderness of Montana and Wyoming, southwest to the shores of the Sea of Cortez, through the Great Divide, and into the deep woods of Maine. Gary's passion for photography, combined with his wildlife background, results in stunning, wildlife images. If you like bears, birds, and breath-taking scenes, you won't want to miss this unique opportunity.

Hunting Season Dates

- Sept. 15-Nov. 13 First portion of the deer and turkey bowhunting season on state land (season extends until Dec. 31 on State Land Bowhunting Only Areas).
- Sept. 15-Dec. 31 Deer and turkey bowhunting season on private land (private land bowhunters in deer management zones 11 & 12 may hunt deer until January 31, 2013).
- Oct. 6 & Nov. 3 Junior Waterfowl Hunter Training Days
- Oct. 13 Junior Pheasant Hunter Training Day
- Oct. 20 Opening Day for the small game hunting season
- Nov. 3 & Nov. 10 Junior Deer Hunter Training Days
- Nov. 14-Dec. 4 Private land shotgun/rifle deer hunting season

Consult the 2012 Connecticut Hunting and Trapping Guide and the 2012-2013 Migratory Bird Hunting Guide for specific season dates and details. Printed guides can be found at DEEP facilities, town halls, and outdoor equipment stores. The guides also are available on the DEEP Web site (www.ct.gov/deep/hunting). Go to www.ct.gov/deep/sportsmenlicensing to purchase Connecticut hunting, trapping, and fishing licenses, as well as required deer, turkey, and migratory bird permits and stamps. The system accepts payment by VISA or MasterCard.



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A pair of greater yellowlegs chases after minnows in a flowing creek along the Connecticut shoreline. Small wetlands and tidal creeks are important habitats for migratory shorebirds and other wildlife. Such places are recognized as migratory bird stopover habitats, where migrants are able to refuel and rest as they continue their sometimes long and demanding journeys.