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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

No season better represents Connecticut than fall. Whether your passion is the panorama of color from a ridge top vista, the cold running waters of a local stream, or stomping about in the woods, the crisp fall air is an awe-inspiring time to go afield.

Fall treasures fill all the senses. Where better to see the splendor of nature than in the spawning colors of a male brook trout or in the whirling dervish of tens of thousands of tree swallows as they congregate in mass at sunset in the lower Connecticut River valley. For many, the sounds more than the sights of flocks of ducks and geese, quacking and honking on their southward journey, define the season.

Perhaps Henry Ford put it best when he said "Chop your own wood and it will warm you twice." There is a thrill that is hard to miss with the sound of an ax biting into a round of oak, followed by the satisfying crack as the wood splits. And, it all comes with the sense of completeness knowing that soon you'll be enjoying the warmth and rich aroma of a roaring fire.

My hope is that everyone could experience pure joy of a dog anxious to point a bird, or a young hunter side-by-side with a parent, breathless as a deer steps into sight.

Fall is a wondrous time to be outside. Don't miss it – it'll be gone before you know it.

Rick Jacobson

Director – Wildlife Division

In this issue . . .

Cover:

Connecticut hunters have the opportunity to harvest wild turkeys during the fall archery and firearms hunting seasons.

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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A trail camera captured this image of a cougar traveling through private land in Clark County, Wisconsin, on January 18, 2010. No DNA samples were collected at this site. However, based on other nearby sightings and DNA evidence collected at several locations, biologists agree that the cougar is possibly the same individual that eventually traveled all the way to Connecticut by June 2011.

Cougar Makes Incredible Journey from South Dakota to CT

Written by Paul Rego, DEEP Wildlife Division

The DEEP Wildlife Division has received numerous reports of cougars for decades. Many of these have been investigated and none could be confirmed by tangible, physical evidence. Identification through tracks or photographs had shown many of these sightings to be cases of mistaken identity, mainly bobcats, coyotes, and even house cats. This same scenario has been experienced by states throughout the East – sightings but no confirmation. Florida is the only eastern state with a cougar population. A small number of cougars have been documented in the eastern states, but many of these were known or suspected to be from captive sources. Earlier this year, the U.S. Fish and Wildlife Service conducted a thorough review of cougar status in the East and determined the Eastern cougar to be extinct.

After many years with no verifications of cougars, the DEEP Wildlife Division received a report of probable evidence of a large cat in Greenwich, including a blurry photograph. Within a week, 35 miles farther east in Milford, the body of a cougar was being examined where it was struck and killed on the Wilbur Cross Parkway. The vehicle-kill was the first confirmation of a cougar in the state in more than 100 years, leading to obvious questions about the animal's origin. A broad and intense investigation ensued, and, eventually, the story of an amazing behavioral feat emerged.

Where Was this Cougar From?

Prior to detailed examinations of the cougar, it seemed that the most likely explanation for this unexpected occurrence was that the cougar originated from a captive source. The nearest wild established populations are in Florida and the Dakotas, approximately 1,200 and 1,600 miles distant, respectively. And, although young cougars normally disperse from the area in which they are reared, they travel comparatively short distances. In addition, no cougar had been known to travel more than 1,000 miles. In Florida, young male cougars disperse an average of 40 miles and females an average of 12 miles. Research in South Dakota found that males dispersed an average of 160 miles and females an average of 30 miles. The longest documented dispersal was by a young male cougar that traveled 640 miles from South Dakota to Oklahoma.

An Extensive Investigation

The investigation began with a preliminary examination of the dead

Travels of the Connecticut Mountain Lion

1,800 Miles from Black Hills, South Dakota, Breeding Population to Connecticut

cougar. It was a young male, estimated to be two to five years old. There was no evidence of a collar and it had not been declawed or neutered. Outward injuries were consistent with it being killed on the road. Environmental Conservation Police immediately began a search for facilities that may have legally possessed cougars and possible leads for illegal possession. No sources for a released or escaped cougar were found.

Supervisory Veterinary Pathologist Tabitha Viner, DVM DACVP, from the U.S. Fish and Wildlife Service's Forensics Lab performed a detailed necropsy on the cougar, which included full body x-rays. The animal appeared to be healthy, and the stomach was empty. Porcupine quills were found under the skin. This finding suggested that the cat had spent some time in the wild (cougars commonly prey on porcupines), but it did not prove that the animal had always been wild.

Tissue samples were shipped to the U.S. Forest Service Rocky Mountain Research Station Wildlife Genetics Lab in Montana and to the Arizona Cooperative Fish and Wildlife Research Unit at the University of Arizona for genetic testing. Researchers Michael Schwartz and Kristine Pilgrim from the U.S. Forest Service lab discovered two surprising results. First, they compared the Connecticut cougar's DNA to DNA from South American cougars and from subpopulations of cougars in North America. Many captive cougars in the pet trade have South American genetics and a positive match would have suggested captive origin. The surprising result was that the cougar's DNA matched the subpopulation in the Black Hills of South Dakota.

Researchers then took their forensic efforts further by comparing the Connecticut sample to the genetics of a number of cougar "outliers" (individuals found outside of areas known to have a cougar population). Again, a surprising result – the DNA matched a cougar that had roamed Minnesota and Wisconsin 18 months earlier! To quote the report, *"The probability that two individuals with the genetic profile of CT-PC-1 [the Milford cougar] / WI-St. Croix [the St. Croix cougar] match by random chance is 1.17 x 10-15 (i.e., greater than 1 in 854,000,000,000,000)."* Minnesota biologists first documented this cougar near the Twin Cities and collected a scat sample, which provided DNA. Within a month, the cougar was in Wisconsin where biologists snowtracked it and collected scat or hair for DNA analysis at three sites. The cougar was dubbed the St. Croix cougar because it was first documented in St. Croix County, Wisconsin.

New Questions

How did this cougar travel 1,200 miles from Wisconsin to Connecticut without being detected and why did this individual disperse so far east? Biologists believe that the cougar traveled eastward from its last confirmed location in northern Wisconsin through the Upper Peninsula of Michigan, then through lower Ontario and into southern New England. Two confirmations of cougars in May 2010, one in northeastern Wisconsin and one nearby in the Upper Peninsula, are along this route and may have been the St. Croix cougar. Detecting the cougar along the route may have been difficult because of the remoteness of the area and the low human population. Further, detection is less likely during the snow-free period – many confirmations of cougars in the Midwest have been through tracks in snow. Finally, the cougar may have been observed but, without tracks, photographs, or other tangible evidence, confirmation would have been difficult.

Subadults of many mammal species exhibit dispersal behavior. Males usually disperse farther than females, and some females stay within their mother's home range. Suggested reasons for dispersal include access to better food resources, reduced competition with other males, and increased mating opportunities. One study of cougars dispersing from the South Dakota population found that those traveling into areas with resident cougars tended to stop their dispersal, while those

traveling through areas without cougars dispersed for longer periods of time and farther distances. This seemed to be the case for two other subadult males from the Black Hills that dispersed remarkably long distances. One, fitted with a radio collar in the Black Hills in 2003, traveled southeast through Nebraska and Kansas and into Oklahoma where it was killed by a train in 2004. That 640-mile trek was the longest documented at the time. Another cougar, which had DNA that matched the Black Hills population, traveled east through southern Wisconsin and eventually into the Chicago area where it was dispatched by police in 2008. If it began its journey in the Black Hills, it too would have traveled over 600 miles. It appears that the St. Croix cougar kept traveling because it did not encounter habitat occupied with other cougars.

Cougar populations have increased in many western states. Although there will be dispersal from these populations, most will be by young males traveling modest distances. Movements by young females will be even shorter, limiting the likelihood for these populations to spread. It is unlikely that New England will soon witness another long distance disperser. The chance that female cougars will disperse this far and begin a reproducing population is much less probable.

Update: Milford Cougar Was Documented in New York

In December 2010, New York Environmental Conservation Officers investigated a cougar sighting near Lake George. They followed and photographed tracks in the snow that were believed to be from a cougar. They also collected hair samples from a bed site and submitted some to a genetics lab for testing. New York biologists were awaiting species confirmation from the lab when they heard the news of the St. Croix cougar killed in Connecticut. Some of the collected hairs had been retained, so biologists submitted them to the Forest Service lab in Montana for comparison to samples from the St. Croix cougar. The result was a match. This confirmation of the cougar traveling through a fourth state adds another piece to the puzzle of the St. Croix cougar's amazing journey.

To read more about the travels of the St. Croix cougar through Wisconsin, visit the Wisconsin Department of Natural Resources' Cougar Sightings Web page at http://dnr.wi.gov/org/land/er/mammals/cougar/sightings.htm.

Outdoor Safety: *Tree Stands*

Because most deer hunters know the advantages of being perched 15 to 20 feet above the forest floor while hunting, tree stands are an important part of the deer hunter's field equipment. A tree stand offers the hunter a larger field of view, places his scent higher above the immediate area below the tree, and is more open to wind currents, which disperse the human scent. In addition, a hunter positioned high in a tree is generally above an animal's field of vision, reducing his chance of being seen. Because a person in a tree stand is stationary, the chances of crossing into another's hunting area and possibly interfering with someone else's hunt are reduced.

These advantages do not come without risk, however. Tree stands can be dangerous if they are used incorrectly or carelessly. Nationally, one in three hunting injuries involves a tree stand. Falls from tree stands can be caused by a variety of factors, including a weakness in the stand's structure and incorrect installation. Hunters also may fall asleep while on their stands. Tree stands can be a factor in other hunting accidents, including injury from accidental firing of a loaded firearm while the hunter is climbing to the stand.

The best way to use a tree stand safely is to become familiar with its function and actually practice with it before hauling it out on the first day of hunting season. Try to use updated equipment. When used properly, newer tree stand equipment is solid, safe, and secure. Other safety precautions include:

- Always read the manufacturer's instructions and follow them strictly. Inspect portable stands for loose nuts and bolts each time they are used. Check permanent tree stands every year before using them, and replace any worn or weak lumber.
- Do not modify the equipment.
- Make sure the equipment is in good shape and that the suspension straps and attachments are not frayed or worn.
- Above all, always wear a safety belt device, preferably a full-body harness. This improved equipment may not come with your stand, but purchasing it may be the extra measure that could save you from serious injury or death.
- Be extremely wary any time there is wet weather, especially sleet or snow. Wear boots with non-skid soles.
- Choose only healthy, living trees. Rough-barked trees, such as oak, are best. Do not use a tree that is rotten or has dead limbs.
- Never carry equipment while climbing. Use a haul line to raise or lower your gear. Make sure guns are unloaded and broadheads are covered prior to raising or lowering firearms or bows with a haul line.
- Never put all your weight on a single branch. Keep at least one hand and one foot on a secure place when reaching for the next hold.
- Climb higher than the stand and step down onto it. Climbing up onto the stand can dislodge it.
- Tell a dependable person where you're hunting and when you plan on returning. Map your whereabouts and leave a note at camp, at home, or in your car so that you can be found.
- Don't fall asleep. This is a common cause of accidents. If you get drowsy, move your arms rapidly until you feel alert.

Tree stand safety is one of several safety topics that are covered in Connecticut's Conservation Education/Firearms Safety (CE/FS) classes. Sign up for classes on the DEEP Web site (www.ct.gov/dep/hunting) or by calling the Wildlife Division's Sessions Woods (860-675-8130) or Franklin (860-642-7239) offices.

Striped Bass: a Connecticut Comeback Story

Written by Justin Davis, DEEP Inland Fisheries Division

J. DAVIS, DEEP INLAND FISHERIES

Resurgent populations of striped bass are giving Connecticut anglers something to smile about.

On a cool May morning, an angler pilots his skiff through the pre-dawn mist hanging over the mouth of the Connecticut River. Reaching his destination, he cuts the outboard and lets the boat slowly drift to a stop, taking in the beautiful scenery and the sounds of the salt marsh waking to a new day. "It's good to be back," he thinks to himself. Moments later, his line traces a thin silver arc against the brown backdrop of tall reeds lining the shore. Cast, retrieve. Cast, retrieve. The angler settles into the familiar cadence, laser-focused on the lure's zigzag path across the surface, eagerly anticipating that electric moment of connection. Cast, retrieve. Cast, retrieve. And then it happens. In the blink of an eye, a crater opens and swallows his lure, closely followed by the SLAP of a large tail spanking the surface and spraying water skywards. Adrenaline surging, the angler instinctively snaps the rod up and sets the hook. The drag sings as line melts off the reel, the unseen adversary on the other end sprinting for deeper water, trailing dinner plate sized boils in its wake. A few tense minutes later, it's all over. The angler slides a landing net underneath his spent opponent and admires the contrast of dark horizontal stripes running down bright silvery-white flanks, the fish's large scales reflecting the rays of the newly-risen sun. Feeling like he's just run into an old friend, the angler smiles and dislodges the lure from the corner of the fish's mouth. "Spring is here," he thinks, as the released fish glides back into the murky depths.

Does this scene sound familiar to you? If so, you're probably one of the thousands of Connecticut anglers who take to our coastal waters every year to pursue striped bass (*Morone saxatilis*), a marine finfish native to the Atlantic seaboard of the United States and Canada. If it doesn't sound familiar, then you don't know what you are missing. It's no surprise that striped bass attract so much attention. They reach lengths in excess of five feet and weights over 100 pounds, are powerful swimmers, and are found in a variety of habitats (even the freshwater portion of coastal rivers). Striped bass also will eat just about anything they can fit in their mouths. Other fish (both large and small), crabs, lobsters, squid, even worms and insect larvae – nothing is safe from this supremely-capable predator. Need proof? A recent scientific study found over 70 different prey species in striped bass stomachs off coastal Massachusetts! Large, capable, widespread, and voracious, the "striper" is the true king of the food web in Connecticut coastal ecosystems.

Historical Significance

Stripers are not only major players in their world; they also have played an outsized role in the history of coastal communities in our region. For example, did you know that the first public school built in the New World was partially funded by taxes on the sale of striped bass? Or that striped bass were the impetus for America's first conservation law, passed by the Massachusetts Bay Colony in 1639 to prevent the use of striped bass for fertilizer? These fish have provided livelihoods and recreation for New Englanders for centuries. The story of striped bass is intertwined with our own – as Dick Russell suggested in his book "Striper Wars," the striped bass is "the aquatic equivalent of the American bald eagle."

Back from the Brink

The most recent chapter in the shared history of striped bass and coastal communities is quite possibly the biggest fisheries management success story of the twentieth century. Coastal striped bass stocks were plentiful throughout the 1960s and early 1970s. For instance, U.S. commercial landings of striped bass along the Atlantic Coast reached a historic peak of 14 million pounds in 1973. But by the 1980s, it was clear that striped bass were in trouble. Beset by a host of problems, including over-fishing, pollution, and loss of spawning habitat,

striped bass stocks began an alarming decline. By 1983, commercial landings had bottomed out at 1.6 million pounds, a 90% decline in just 10 years. It was clear that striped bass were in crisis and that without a concerted effort the economic and recreational benefits provided by this species could be lost forever.

A diverse coalition of recreational anglers, scientists, concerned citizens, and lawmakers rallied to the cause, pressing for more strict regulation of striped bass fisheries and clean-up of important spawning areas. Despite facing pitched opposition from some quarters, this coalition achieved unprecedented results. For instance, with the passage of the Atlantic Striped Bass Conservation Act of 1984, the U.S. Congress mandated, for the first time, that states implement striped bass conservation measures decided upon by the Atlantic States Marine Fisheries Commission (ASMFC). Many states also independently declared complete prohibitions on possession or sale of striped bass – a move previously unthinkable for such a prized species. And, it worked. The number of female striped bass using important spawning grounds in Chesapeake Bay doubled between 1985 and 1988, and coastwide catches by recreational anglers increased more than 400% between 1985 and 1989. By 1995, ASMFC declared the Chesapeake Bay striped bass stock (largest of the Atlantic coastal stocks) fully recovered. In 2004, coastal striped bass stocks reached the highest levels of abundance ever recorded. The recovery prompted noted conservationist Carl Safina to write "the resurgence of striped bass... is probably the best example in the world of a species that was allowed to recoup through tough management and an intelligent rebuilding plan."

Give Striper Fishing a Try

Recreational anglers in Connecticut now enjoy fantastic fishing, thanks to this historic recovery (commercial harvest of striped bass was outlawed in Connecticut in 1959). Most striped bass migrate into our waters during spring and depart in fall; however, small numbers of fish overwinter in deeper areas of coastal rivers. This truly year-round fishery is accessible to both shore and boat anglers, and there is no shortage of ways to hook a hard-fighting "linesider." If you are interested in getting in on the action and would like more information on potential locations and tactics, stop in at your local bait and tackle shore for tips or call a DEEP Fisheries Division office for guidance.

Be Aware of the Regulations

If you are thinking of bringing a striped bass home for the table (an excellent idea by the way – they are delicious), be aware of current regulations. The Connecticut striped bass fishery is managed under the auspices of the ASMFC, a multi-state Commission that includes representatives from Connecticut. For years, Connecticut anglers have been allowed to harvest two fish per day greater than or equal to 28 inches in length. However, DEEP recently instituted an experimental "bonus harvest" program for 2011 that allows anglers to harvest two fish per day between 22-28 inches long from the Connecticut River during May-June (anglers must obtain special vouchers to participate; call a DEEP Fisheries office for more information).

Recent studies by University of Connecticut (UConn) researchers found that over 80% of the striped bass present in the Connecticut River during spring were less than 28 inches long, and a 2008-2009 DEEP angler survey found that less than 10% of fish landed by Connecticut River anglers were over 28 inches long. Many anglers expressed a desire to harvest striped bass but were frustrated that catching a legal-sized fish was so difficult. The bonus harvest program was therefore instituted to provide an opportunity for Connecticut River anglers to harvest a relatively small number of striped bass (4,000 annually) from the "stockpile" of sub-legal fish available. This experimental management measure will be evaluated after the close of the bonus harvest season, and may be re-instituted in future years.

Challenges Remain

In closing, it should be noted that although the striped bass recovery is a fantastic success story, it also has created some new challenges. As you can imagine, the rapid resurgence of a top-level predator has placed substantial (and perhaps unsustainable) demand on prey resources. Newly abundant striped bass have been implicated in the decline of a number of other species, including winter flounder, American lobster, American shad, alewife, and blueback herring. For instance, UConn researchers estimate that striped bass currently consume over 400,000 blueback herring in the Connecticut River each spring – a substantial predatory loss. The contribution of striped bass predation to declines of other species remains a hot topic in scientific circles. Regardless, this situation illustrates the need for, and the difficulties inherent in formulating, ecosystem-based management of marine resources. Robust striped bass populations may make some folks happy (think about the guy in the opening paragraph) but cause problems for others. How do we balance the needs of various stakeholders? And, how do we achieve that balance while maintaining healthy ecosystems? These are some of the most pressing questions for natural resource managers in the 21st century.

But, enough of that. If you've never fished for striped bass but are intrigued, I encourage you to go for it. What better way to get outside, spend some time with friends and family, and enjoy the beautiful Connecticut coastline. And, if you're already a confirmed "striper nut" like I am, well then, I'll see you out there!

Discover CARE!

The DEEP's Connecticut Aquatic Resources Education (CARE) program introduces people to the wonders of water, fish, and fishing. Expert volunteer instructors pass along information and expertise they've gained over the years as avid anglers. DVDs, demonstrations, and activities make learning fun for adults and kids alike. Courses include discussions on where to fish, what bait to use, and safety around water. Information on ecology and the environment also make it easier for you to find fish in the habitats they prefer. Many courses include an opportunity to practice casting (equipment provided) and will teach you to identify, clean, cook, or release your catch. Some courses are comprehensive and meet several times. Others are short and may cover specific topics, like ice fishing. Most classes are designed for families and kids age nine and up. Summer fishing classes are offered to kids in day camps, and CARE lessons are even taught in many school classrooms. Instruction and materials are offered free-of-charge.

Certified CARE instructors offer time and expertise as a service to communities where they live. Over 2,000 of them have donated the work of 45 full-time employees! CARE Instructors have taught over 150,000 people, and continue to lead courses and events for thousands of families each year. To learn more about CARE or to see a list of available classes, go to www.ct.gov/dep/fishing.

Banding Together for Purple Martins

Written by Geoffrey Krukar, DEEP Wildlife Division

Geoff Krukar (left), of the DEEP Wildlife Division, records data during the banding process. DEEP staff and volunteers carefully handle each juvenile purple martin while affixing color bands to their legs.

PHOTO BY: P. J. FUSCO

The purple martin, the largest member of the swallow family in North America, has a range that stretches from the east coast of the United States and the Maritime Provinces of Canada, west to the Rocky Mountains, with isolated pockets in the western United States. Overall, the purple martin population is considered to be stable. However, based on Breeding Bird Survey data, purple martins have been showing range-wide declines in eastern North America and have been declining over most of their range in New England for the last 20 years. Early accounts from the 1920s suggested that purple martins were once widespread and abundant in New England. In Connecticut, the purple martin has declined to the point where it is listed as a threatened species.

The recovery of this species in Connecticut and throughout New England is potentially straightforward because martins in this region rely exclusively on human provided nest structures. While adult martins show great site fidelity, returning to the same nesting location year after year, sub-adult martins (or returning juveniles) are much more likely to move to new locations. In theory, if housing is provided, sub-adult martins should find it, use it, and increase the population. However, this is not the case. Many housing locations in Connecticut, including some adjacent to active colonies, are available yet remain unoccupied. The reasons for this lack of occupancy and use are not clear. The criteria these birds use for selecting nesting sites in Connecticut are not understood. A lack of knowledge about dispersal patterns of young birds and the optimal conditions for establishing new colonies threatens to hamper recovery efforts. Where active colonies do exist, martins are often slow to colonize new locations.

To close this knowledge gap, a color banding project was initiated in early July at six known martin colonies. Four coastal colonies in Clinton, Westport, and Madison (2 sites) and two inland colonies (both in Kent) were selected to see if coastal and inland colonies exhibit similar or different dispersion patterns. From those six sites, a total of 540 juvenile purple martins were fitted with both a standard silver United States Geological Survey (USGS) band and a color band. Each colony was assigned a different color (red, blue, green, purple, orange, or yellow) to facilitate the identification of the natal colony during future sightings of these birds. Additionally, each of the color bands has a unique alphanumeric code (CT###) so that individual birds can be identified. Other data collected by DEEP staff and volunteers included the weight and approximate age of each bird to assess its overall health.

The project will be repeated next year at the same locations with the same band colors to increase the number of banded birds, resulting in a greater likelihood of future sightings. The success of this study will be directly dependent upon the number of reported sightings of banded martins. If you see a color-banded purple martin in Connecticut, you are encouraged to report the sighting to the DEEP Wildlife Division by E-mail (geoffrey.krukar@ct.gov) or phone (860-675-8130). The location of the bird, date, color of the band, and alphanumeric code (if visible) are all important pieces of information.

Early reports from this past summer indicate that the juvenile martins may actually travel farther in search of new sites than was originally thought. A juvenile bird banded in Westport was observed at another colony in Clinton (a remarkable 42 miles away) less than two weeks after learning to fly. A martin banded in Kent was found 35 miles away with a colony in Cold Spring, New York. It will be interesting to see if these birds return to their natal colonies in the spring or if they decide to make new homes somewhere else in our state.

This project is supported by the Connecticut Endangered Species/Wildlife Income Tax Check-off Fund.

Where Do Turtles Go in Winter?

Written by Julie Victoria, DEEP Wildlife Division biologist, retired

As the leaves turn colors and fall off the trees and the temperatures start to get colder, most of the migrant birds have left the area for their wintering grounds and many mammals have fattened up and found dens or other shelters. But, what do cold-blooded animals like turtles do to prepare for the difficult winter ahead? Cold-blooded animals rely on their surrounding environment to keep warm. When cold weather hits, they go into a hibernation type state called "brumation" to help them survive the winter into spring.

Brumation is triggered by cold weather and a decrease in the amount of daylight during winter. Turtles in Connecticut generally begin brumation in late fall. During brumation, turtles become less active, their metabolism slows down so they don't need to eat as often, and their body temperature drops. However, turtles will often "wake up" to drink water. Turtles do not breathe during brumation, instead relying on oxygen stored in blood vessels in the throat cavity and anal sacs. To cope with the cold, turtles that live in aquatic environments move to the bottom of the pond or creek. It is advantageous if they can go deeper than the frost line, where winter temperatures tend to stabilize above freezing. Some turtles, like painted turtles, are tolerant of freezing to a certain degree. These turtles' cryogenic properties, or cryoprotectants, are even being studied to determine if they would be helpful in preserving human organs for future transplants.

When spring arrives with its warmer temperatures, most turtles emerge from brumation, becoming more active and seeking a good spot to bask in the sun.

Hatchlings

Young aquatic and land turtles that hatch from eggs buried in the ground over spring can either dig out of the hole, or "nest," in the fall and brumate as the adults do, or they can remain in the nest, possibly digging further into the soil. This demonstrates why female turtles must choose an optimum site to place their nests – the female must be able to detect features of the area that make it suitable for the eggs. Therefore, homeowners who witness a turtle nesting in their yard or garden should allow the turtle to dig its nest where it chooses, leaving the turtle and eggs alone.

Dessication and freezing are a problem for hatchlings that overwinter in the nest. Although hatchlings are able to absorb moisture from the soil around them and may even be able to tolerate freezing temperatures, some will not survive.

Whether turtle hatchlings emerge from the nest in fall or spring after brumation, the DEEP Wildlife Division reminds residents to **not** collect hatchlings and bring them home as pets. Leaving turtles alone and just observing them from a distance is best for the turtle and also your own health, due to concerns about *Salmonella* (see below).

P. J. FUSCO

As tempting as it may be to collect a hatchling turtle as a pet, it is best for the turtle and also your own health to leave the turtle where you found it.

Do Not Collect Turtle Hatchlings!

Turtle hatchlings are commonly found in fall or spring when they emerge from the nest. The DEEP Wildlife Division reminds residents that native turtles should never be collected from the wild and kept as pets. Whether collected singly or for the pet trade, turtles that are removed from the wild are no longer able to be a reproducing member of a population. Every turtle removed, in any developmental stage, reduces the ability of the population to maintain itself. Even if you believe you are removing a turtle from a dangerous situation or saving it by taking it to a nature center – STOP – and remember, from the overall population's perspective, any turtle removed from the wild is a dead turtle. Residents should also be reminded that it is illegal to take bog turtles, diamondback terrapins, wood turtles, and Eastern box turtles out of the wild in Connecticut. Current regulations restricting the take of these four turtles were established in an effort to stop the decline in their populations (www.ct.gov/dep/lib/dep/regulations/26/26-66-13through14.pdf). The bog turtle, Eastern box turtle, and wood turtle are also protected by Connecticut's Endangered Species Act.

Another concern involved with collecting turtles, particularly hatchlings, is *Salmonella*, which can cause serious illness in people. Although *Salmonella* infections are most commonly caused by contaminated food, these germs can also be caught by handling animals, including reptiles or amphibians, that may be carrying the germ. Salmonella infections also can result from having contact with reptile or amphibian environments, including the water from containers or aquariums where they live.

***Salmonella* can make people sick with diarrhea, vomiting, fever, and/or abdominal cramps. Sometimes, people can become so sick from a *Salmonella* infection that they have to go to the hospital, and could possibly die if not treated promptly with antibiotics. Young children, elderly persons, and those with weakened immune systems are more likely to develop severe illness from the infection.**

Since 1975, it has been illegal in the United States to sell or distribute turtles with shells that measure less than four inches in length. This size was chosen because small children are more likely to treat smaller turtles as toys and put them in their mouths. This ban prohibiting the sale of small turtles likely remains the most effective public health action to prevent turtle-associated salmonellosis. Despite this ban, such turtles are still sold over the Internet and are found in some pet stores, flea markets, and with street vendors. In addition, children continue to catch wild turtles, other reptiles, and amphibians and bring them home to keep as pets.

To learn more about *Salmonella* in reptiles, go to www.cdc.gov/Features/SalmonellaFrogTurtle.

Denizens of Darkness…Facts and Fables About Bats

Written by Jenny Dickson, DEEP Wildlife Division

Halloween. It conjures up images of bare, silhouetted trees in misty dark forests, where dark shadows emerge on silent wings and begin to take form. Bats. These misunderstood creatures have long been a staple of ghost stories, Halloween decorations, and Hollywood fright films. While far from reality, the link between bats and Halloween does provide an excellent opportunity to shed some light on these unique mammals.

Bats are one of the most misunderstood and under appreciated wildlife species. With all the images of bats we see at Halloween, this is a good time to put fear aside and separate fact from fable with regard to these beneficial animals. Come Halloween, most of Connecticut's bats have settled into their winter homes, or hibernaculas, where they will sleep until spring.

As voracious insect-eaters, bats provide a great natural insect control service from farms to backyards. Little brown bats can consume 1,200 mosquito-sized insects in an hour. Over an entire night, that's a lot of free insect control. Bats in tropical regions pollinate flowers and disperse seeds for many commercially available plants, like almonds, avocados, bananas, figs, and allspice. Bats also have contributed to advances in navigation, vaccine and antibiotic production, birth control and fertility studies, and the development of alternative fuels like gasohol.

The tales surrounding bats, their many alter egos, and far-fetched feats have caused them to endure a bad reputation for centuries. Here are some age-old fables that can be dispelled with a few interesting facts:

- Bats are not flying mice. They are the only mammal capable of true flight and are more closely related to primates (and people) than to rodents.
- Bats do not get caught in people's hair. They are adept fliers and rely on sensitive sonar (echolocation) to navigate night skies. Bats that swoop near people are after insects like moths and mosquitoes.
- Bats are not blind. They have good eyesight, but rely on echolocation to master night flight.
- Bats are not filthy or covered with parasites. Clean wings are essential for executing intricate flight patterns, so bats spend great amounts of time grooming themselves. Parasites that feed on bats are highly specialized and do not transmit infections to humans.
- Three species of bats are known as vampire bats. They are found only in Latin America and are a parasite of birds and cattle.
- Worldwide there are almost 1,000 different kinds of bats. Connecticut has only eight native species; four of these are classified as state special concern species and one, the Indiana bat, is classified as a state and federally endangered species.

By learning more about these unique creatures, people can come to appreciate bats based on facts rather than fables. Bat conservation is critical for helping these valuable animals. Conservation begins with understanding and the Wildlife Division can help. Information sheets on bats and building bat houses are available on the wildlife section of the DEEP Web site (www.ct.gov/dep/wildlife). There's even a special "Kid's Page" devoted to bats, with fun facts and a bat kids can color.

P. J. FUSCO

The brightly-colored hoary bat is a Connecticut species of special concern. At about six inches long, it is the state's biggest bat.

Bad News from the Bat Cave

A silent invader moves rapidly through the darkness, reaching out to ensnare its peacefully sleeping victim. What may sound like the plot of the newest Halloween thriller is actually a real conservation horror story occurring right here in Connecticut. In less than four years, white-nose syndrome (WNS) has killed thousands of Connecticut's bats and more than a million bats throughout the United States, and has spread to two Canadian provinces, leaving a trail of ecological havoc in its wake.

The DEEP, other state wildlife agencies in the Northeast, the U.S. Fish and Wildlife Service, and many other academic and conservation partners are working in concert to find solutions and stop this unparalleled mortality. Several bat species that call Connecticut home have been affected by WNS. Known as "cave bats," they include the little brown, northern long-eared, tri-colored (pipistrelle), big brown, and Indiana bats (a federally endangered species.) Since 2007, the DEEP has been an active participant in WNS response. Biologists continue to monitor hibernating bats for signs of WNS and document mortality. Over the past few years, biologists have also begun closely tracking summer maternity colonies to see if WNS is having a negative impact on bat survival and the ability to give birth and raise young.

White-nose syndrome continues to spread at an alarming pace through North America, increasing the challenges wildlife managers face in understanding the threats posed to bat populations and in developing an effective management strategy. Keep updated on WNS by visiting the DEEP (www.ct.gov/dep/wildlife) and U.S. Fish and Wildlife Service Web sites (www.fws.gov/WhiteNoseSyndrome).

The Menagerie at the Beach

Written by Penny Howell, DEEP Marine Fisheries Division

When we go to the beach on a hot afternoon, at first glance it looks like the water we splash into has nothing in it but some seaweed and a few shells. But, if you stand still and look carefully, you will see all the other animals that share the shallow water with us and swim away as soon as they are disturbed. Connecticut's shallow water beach fronts provide a warm and (usually) quiet nursery area for newly-hatched fish, called young-of-year, and small forage species that provide ready meals for larger fish, birds, and marine mammals.

To track the abundance of these forage and young-of-year fish, DEEP Marine Fisheries Division biologists have surveyed eight beach areas from Groton to Greenwich every September since 1988. Six samples are taken with a 25-foot seine net at each of the eight beaches using standardized methodology to ensure a consistent catch rate. A pass of the net through waist-deep water at low tide for a 100-foot distance usually yields about 100 small fish. A total of 57 different species of fish have been captured, counted, and released over the 23 years of the survey. This list includes common species and tropical exotics, including Atlantic needlefish, bluespotted coronetfish, banded rudderfish, a flying gurnard, and seahorses. Along with this great diversity, the average number of fish per sample has increased significantly since the early years of the survey.

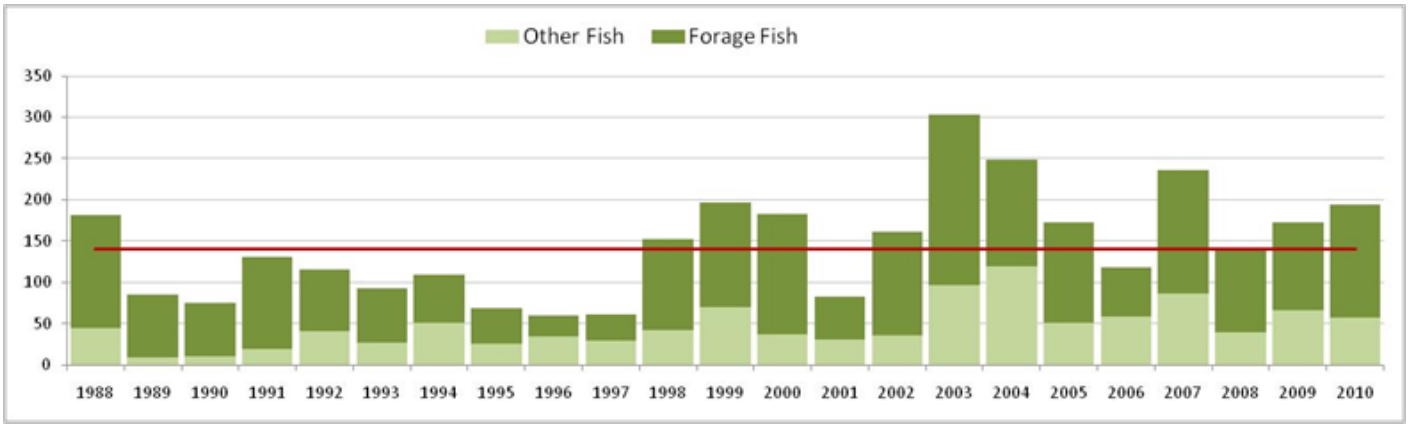
DEEP MARINE FISHERIES

Young-of-year winter flounder and a single windowpane flounder are measured after being sorted from the seine net catch. Both species have declined in abundance since the survey began.

Fish species captured as young-of-year in the beach zone include many sought after by sport and commercial fishers as adults — winter flounder, tautog (blackfish), scup (porgy), striped bass, summer flounder, black seabass, and snapper bluefish. In the early years of the survey, winter flounder was the most common young-of-year fish in the seine catch. However, the abundance of this species has declined significantly over the last decade. At the same time, young-of-year tautog, scup, bluefish, and other recreationally important species have shown up in the catch in increasing numbers. This increased production of young is a good indication of effective management practices and hopefully a sign of increased fishing opportunities in future years.

The seine survey catch data are also used to generate a 'forage index' comprised of four common food-fish: Atlantic silversides, striped killifish and their more freshwater-tolerant cousin the mummichog, and sheepshead minnow. Other food favorites captured in the seine survey include anchovies, menhaden (bunker), and white mullet. The forage index also has increased since the early years of the survey, indicating that the larger animals living in Long Island Sound have plenty to eat. If the Sound's 'forage base' remains strong, it will not only continue to maintain local populations but may also attract many more migratory species to our menagerie at the beach.

Intertidal Fish Abundance at Eight Connecticut Beaches, 1988-2010



The overall index of all fish has been above its median value (red line) of 140 fish/sample in 10 of the last 13 years. The forage index, shown in dark green, also has increased since 1997.

Semipalmated Sandpiper - What Will the Future Hold?

Article and photography by Paul Fusco

Semipalmated sandpipers are long distance migrants. Their winter range includes coastal habitat from the Caribbean islands south to southern Brazil. From there, they migrate to breeding areas that may be over 8,000 miles to the north, in the subarctic and arctic tundra regions of northern Alaska and Canada, and east to Labrador. Such a migration is extremely demanding for a small bird – especially considering that it must deal with bad weather, strong winds, predators, and human impacts along the way. This trip must be made twice a year. While these sandpipers are one of the most abundant birds in North America, they are not doing well.

Named for the partial webbing between their toes, semipalmated sandpipers can be found in Connecticut during certain times of the year as flocks migrate through the state. On their way north in spring, they are generally present in small numbers from late May to the middle of June. Amazingly, about a month or so later on their return south after breeding, larger flocks start arriving at shoreline stopover habitats. They will move through in waves with adult numbers peaking in late July and early August. Juveniles, with their crisp new plumage, start arriving a couple of weeks after the first adults show up.

Migratory stopover areas are critical habitats for species, like the semipalmated sandpiper, that migrate many thousands of miles every year. The birds require places along their route for resting and feeding in order to complete their journey in both spring and fall.

Description

Semipalmated sandpipers are small, plump-bodied, wading shorebirds. They are about the size of a sparrow, with long pointed wings and a short tail. Their plumage is basically gray/brown above and white below. In flight, they show a topside white wing stripe. Their legs are dark olive, and the bill is black.

The bill varies in length, with the female's averaging a little longer than the male's. The shape and length of the bill helps in identification when the bird is compared to other similar-looking small sandpipers. In the semipalmated sandpiper, the bill is short and stout, and has a blunt tip. In comparison, the closely related western sandpiper, occasionally seen in Connecticut with semipalmateds, has a longer, tapered bill with a drooped and more finely pointed tip.

Migrants will use a variety of shallow water habitat, both freshwater and saltwater, including intertidal zones, marshes, beaches, and mudflats. On the shoreline, where the big flocks gather, tidal mudflats are primarily used to forage for small crustaceans, worms, and insects.

Behavior

Courtship flight displays are performed by males over breeding territories in which the bird hovers, flutters, and glides while vocalizing. The display song is a variably pitched continuous trill. Nests are built on the ground where the female typically lays four eggs. Young are able to fly after about two-and-a-half weeks.

Their call, often given in flight, is a rough "*churk*,"or a short, high-pitched "*chit*." Other vocalizations, including a rapid chattering "*toy-toy-toy,*" are given when birds are feeding, often when aggressively claiming a feeding territory from others.

Large flocks that number several thousand may be seen at some Connecticut stopover sites. When these large flocks take flight, it is a breathtaking sight to see. They take to the air in a sudden burst of energy, forming a tight flock as they turn with the wind in perfect synchrony. Behaving as one, the flock flies low above the water, then rockets upward, flashing dark then white, as the birds twist and change direction. How can they fly so fast and in such unison?

The cohesion of the flock is thought to be based on a number of factors, including separation between flockmates, maintaining flying direction, and steering to keep position. All of these factors influence individual birds and combine with lightning fast reaction times, resulting in moment by moment flight adjustments and maneuvers to keep the flock in synchrony. The natural instinct of the birds is to form a tight group as a defense against predators, such as a falcon. While individuals within the flock make in-flight decisions regarding direction and maneuvers, the rest of the birds must quickly average their position to maintain themselves within the flock's integrity. Any individual that is caught off guard may be separated from the flock and would be an easier target for the falcon.

Conservation

Semipalmated sandpipers are the most abundant sandpiper in our region.

The North American population has been estimated at approximately 3.5 million. But, studies have indicated that semipalmated sandpipers are in a serious long-term population decline that has continued since at least the 1980s. The rate of decline is estimated to be five percent per year. The newest estimates from the U.S. Shorebird Conservation Plan indicate that the population size is now revised downward to two million birds.

One major factor in the sandpiper's population decline is loss of quality habitat, especially along the migration paths. Loss of habitat can take many forms, including degradation by encroachment, development and pollution; overuse and disturbance by humans and pets that make habitat unusable; and the outright destruction of wetlands. Additional pressures on sandpiper populations include predation, food shortages, and severe weather. Abnormally cold and wet weather can have a devastating impact on breeding efforts.

Migration stopover sites, known as staging areas, are critical to sandpipers, which depend on a series of these locations along their migration route for food and rest. When not resting or preening their flight feathers, the birds feed constantly on small crustaceans, worms, and insects, packing on the fat reserves they need to complete the next leg of their journey.

The migration route is made up of a series of wetland stopover areas that form a chain. The links make a connection between the birds' breeding areas and their wintering areas. Loss of a wetland along the migration path can be likened to losing or breaking a link in the chain, putting added stress on the migrants by forcing them to fly longer distances between stopover areas. Those birds that cannot find enough food to build up their energy reserves have low survival rates. As more quality habitat is lost or degraded, more birds become susceptible to the high energy demands of long distance migration and will succumb along their journey. It is truly a monumental challenge for wildlife managers and conservationists to reverse the decline of such a long range migrant that depends on stopover habitat in many places on an international level.

Connecticut has a number of regionally significant staging areas for shorebirds. The Charles E. Wheeler Wildlife Management Area (WMA) at the mouth of the Housatonic River in Milford and the Roger Tory Peterson Wildlife Area at the mouth of the Connecticut River in Old Lyme are among the state's most important stopover sites for shorebirds. Other significant staging areas include, but are not limited to, the tidal habitats near New Haven Harbor and the wetlands of the McKinney National Wildlife Refuge in Stratford. Inland wetlands also play a role as stopover sites, but concentrations of shorebirds are not as big as those found along the coast.

Habitat management and wetland restoration projects undertaken by the Wildlife Division are benefitting shorebirds, as well as many other species that depend on wetlands. Creation of marsh ponds, restoring natural tidal flow in grid ditched areas, and tidal marsh reclamation are increasing productive habitat for shorebirds in Connecticut. Biologists in the region also are working to gather information through capture and banding projects that will shed light on why shorebird populations are declining and how to address the causes.

Study Focuses on Urban Red-tailed Hawks

Written by Joan Morrison, Trinity College, Hartford, photos provided by author

Professor Joan Morrison (third from left) with Trinity College students and the adult red-tailed hawk that nests near the Legislative Office Building in downtown Hartford, just before the hawk was released after banding.

"Professor Morrison, I just saw the coolest thing!" A common phone call and I knew what was coming next. "A really large hawk just flew down and captured a squirrel, right in front of me, on the Long Walk! Now it is eating the squirrel!" The student had just witnessed a common occurrence at Trinity College in Hartford, but an event that also occurs throughout the city – one of our urban red-tailed hawks carrying out its daily life alongside its human neighbors.

Today, the red-tailed hawk is the most common hawk in North America. Not long ago, however, its populations declined, along with those of other wildlife species, when DDT and other chemicals were widely used during the post-World War II years of industrialization. DDT and other organochlorine pesticides proved lethal to the hawks because they caused females to lay eggs with paper thin shells. Reproduction plummeted as hawk pairs were unable to incubate their eggs successfully. After DDT was banned in 1972, the number and survival of young hawks increased, and populations of this spectacular raptor continue to expand nationwide. Red-tailed hawks are now common in rural areas, where they nest in scattered tall trees and brush. Perhaps surprisingly, though, is that these hawks have now become urban residents. Almost every American city has at least one nesting pair.

Red-tails can regularly be seen soaring on thermal air currents throughout Connecticut, and more and more pairs are taking up residence in our cities, where their favorite prey, such as squirrels and rats, abounds. These urban hawk pairs can be found nesting just about anywhere, from trees in neighborhood backyards and city parks, to ledges on high rise buildings, on support structures behind billboards, and even on the State Office Building in downtown Hartford.

Over the past five years, my students and I have been studying red-tailed hawks in Hartford. Ours is the first scientific study of these urban hawks in the Northeast. By marking the hawks with colored leg bands and attaching small radio transmitters to some individuals, we have learned about their nesting and feeding behavior and how they are distributed within the city. At least one pair nests in every one of Hartford's parks; pairs also nest in suburban neighborhoods, on golf courses, and even downtown. Breeding pairs are year-round residents, remaining on their territories even through winter. Perhaps pairs don't fly south because they don't have to; they can find sufficient prey throughout winter in the city. Or, staying in their territory all year may insure that no other hawks move in and take over their nesting site. Pairs typically use the same nest site year after year. They begin to spend more time near the nest site starting in February, and shortly thereafter, nest building begins. Eggs are laid by early March and hatch in April, and chicks leave the nest by late June and early July.

Information gained by radio telemetry tells us that red-tailed hawks nesting in Hartford are highly territorial. They have carved up the city so that a map of the territories of individual pairs in Hartford looks like a set of closely-fit puzzle pieces. Hawks soaring over the city might not just be looking for prey but are probably also keeping track of their neighbors! Interestingly, however, each of these urban territories contains a significant amount of "green space," – any open area with green vegetation, such as grass, weeds, or brush, but with few trees – where the hawks can easily hunt their prey. Although red-tailed hawks favor mammalian prey, in the city they also regularly feast on other numerous

One of our banded juvenile red-tailed hawks just after it captured a squirrel on the campus at Trinity College.

feathered residents, such as sparrows, starlings, and robins.

While many people may not be aware of our hawks during the early nesting season, once the chicks leave the nest they are often encountered by people not knowing what to make of the wide-eyed, perhaps somewhat frightening, young hawk that has just landed in their backyard and seems to be eyeing their chihuahua. "Professor Morrison, there is an enormous hawk in my backyard and it is about to attack my husband and eat my dog!" Such is another phone call I often get during late summer as these young hawks are testing their wings, exploring every new situation, and learning to become "streetwise." Fortunately, these young hawks are not dangerous, just naïve, not knowing they could not possibly pick up and carry away something as large as they are, let alone a human! Fully grown red-tailed hawks weigh between two to three pounds. So, these young hawks are not a threat; instead, I like to view them as "teenagers" testing their independence, figuring out what in life is good to eat, safe, scary, or dangerous.

Unfortunately, when confronted with the myriad of threats red-tailed hawks face in the city, many do not survive. Mortality of juveniles is particularly high; less than 50% survive their first year. Most succumb to collisions with vehicles and buildings as they dive after prey, perhaps a fleeing squirrel. Others, when resting on the ground as they often do soon after leaving the nest, may suffer attacks by dogs or feral cats.

At this stage, young hawks often can be approached and even picked up by a well-meaning human. When confronted by a hawk that does not run or fly away from you, it is best to just leave it alone. Chances are it has recently left the nest and thus doesn't even know that a human can be dangerous. For the first few days after leaving the nest, young hawks do not fly well because their flight muscles haven't developed fully, thus the bird likely cannot escape easily. The adults are almost always nearby and, in fact, probably become highly concerned when they see one of their youngsters being approached by a person. Concerned citizens should call DEEP or me, at Trinity College, and someone will come out and assess the situation. If the hawk is really in trouble, obviously injured or sick, it should be brought to an authorized wildlife rehabilitator, but only by someone who knows how to handle the bird safely, so neither the hawk nor the human is injured.

Perhaps the most serious threat to both adult and young hawks in the city, however, is poisoning by rodenticide. Unknowingly, urban residents, who otherwise would not harm the hawks, may contribute to their mortality through widespread or irresponsible use of rat poison. If they do not perish quickly, rodents that ingest the poison may wander around outside their dens, becoming easy prey for a hungry, naïve young hawk, or even for an adult searching desperately for food for its hungry brood. One of the best ways urban citizens can help our feathered urban neighbors is through careful and limited use of rodenticide.

If the red-tails make it through the gauntlet of potential threats in their early years, they can live a long time. A hawk recently captured in New York was found to be over 27 years old, although most hawks in the wild live less than half that long. New York City residents swell with pride when they talk about Pale Male, the hawk living near Central Park for at least a decade. In Connecticut, we too should be proud to call these wild feathered creatures our neighbors. We certainly can respect them for their ability to become successful urbanites. Watching them soar above our cities and knowing they can live alongside us and successfully rear their young, perhaps even makes our days a little brighter. And, next time you are confronted with a young hawk in your backyard, remember it is just as curious as you are!

CT's Envirothon Team Places 5th in Canon Envirothon Competition

The Housatonic Valley Agriscience Envirothon Team took first place in the Connecticut Envirothon competition held at Rocky Neck State Park this past May. The team went on to represent Connecticut at the Canon Envirothon in New Brunswick, Canada, in August. The team placed fifth out of 54 in the competition that included teams from 45 states, eight Canadian provinces, and one territory (the Yukon).

Making it to the final five was a great accomplishment as the team had only achieved this one other time out of five trips to the North American event. The other top-placing teams were from Manitoba, Ontario, South Carolina, and New Brunswick. The Housatonic Valley Team also received $7,500 in scholarship money for its accomplishment.

Congratulations for a job well done!

A Healthy Obsession with Oak

Written by David Irvin, DEEP Division of Forestry

Most people have probably seen commercials on television where a poultry CEO touts a "healthy obsession with chicken." There are times when Connecticut state foresters are accused of the same level of obsession with managing and regenerating oak species in our state forests. Why does it seem that foresters are primarily motivated to manage for oak, when the major objective is to manage for a diversity of forest types and age classes? Foresters have even been asked why we are trying to create a monoculture of oak in our forests.

First of all, the easy answer is that oak is not simple to regenerate compared to some native trees, so any effort toward that end has a risk of less than desirable results. We could not create a monoculture if we wanted to. The successful establishment and, more importantly, survival and graduation to the forest overstory of oak is usually a multiple-phase process for foresters that requires follow-up attention. Management of oak to ensure continued survival of oak forests in Connecticut requires a lot of attention for a little success. On the other hand, black birch, red maple, and beech regenerate easily, so management specific to these species is not as necessary. These tree species demand no attention for a lot of success.

Why Is Oak So Important?

Most of Connecticut is dominated by native oak forests. Connecticut has long been a source of high quality, locally-grown and renewable hardwood timber, especially red oak logs that have been sought worldwide.

From a local ecosystem perspective, oaks are important because their acorns provide an essential source of protein for many wildlife species. White-tailed deer, black bear, and turkeys (among other species) depend on acorns as a fall food source to help pack on the pounds and winter fat layers that are necessary to survive our Connecticut winters. Wildlife is so dependent on this hard mast that success of some wildlife species from year to year can be predicted based on the size of fall acorn crops. Oaks also host the most abundant and diverse array of moths and caterpillars, which in turn attracts a great variety of birds.

How Is Oak Regenerated?

The challenge in regenerating and maintaining oak lies in its disturbance-dependent nature. Oak seedlings appreciate a lot of full sunlight. Historically, many of our oak forests were originally established from an active landscape disturbance regime.

P. J. FUSCO (4)

The chestnut-sided warbler is an example of a bird that uses early successional habitat and benefits from shelterwood cuts and clearcuts for oak regeneration.

The American chestnut, a once dominant forest tree in Connecticut, succumbed to a lethal fungus infestation caused by the introduced chestnut blight in the early twentieth century. This widespread mortality created canopy openings in the forest and encouraged salvage logging that provided an opportunity for oak to exploit. Until that point, oak was generally regarded as secondary in importance for both its timber and wildlife benefits compared to the chestnut. After the disappearance of the chestnut, oak immediately began to fill the niche.

Connecticut's Three Most Common Oaks

Black oak

Red oak

White oak

Other disturbances also were working in favor of oak in the latter part of the nineteenth and early twentieth centuries. Charcoal production was common in Connecticut until after World War I. It involved repeated clearcutting of many forests, a practice conducive to oak regeneration. During that time period, forest fires were more common and intense. Although it is not heard of today, a century ago fires could rage out of control for hundreds or even thousands of acres in Connecticut. Fire assists in the regeneration of oak and effectively reduces competition by other tree species. (Before European settlers arrived in this region, Native Americans used fire to manage vegetation, thus benefiting oak for centuries.) As a result of this period of disturbances and land use changes, most of Connecticut's oak forests became established and thrived. Many of our oaks today are between about 90 and 120 years old. Unfortunately, the trend in the current century is toward a continuous loss of oak forest to other types, specifically red maple and black birch. Although those native species naturally have an important place in a diverse ecosystem, they have not been dominant historically, do not provide essential hard mast, and do not support the same level of insect and bird diversity of oak forests.

Why Is Oak Expected to Diminish?

Simply put, the same disturbances that allowed oak to persist no longer prevail. Modern fire control has eliminated landscape level fire disturbances. Clearcutting and other heavy harvesting practices are often viewed as undesirable by private landowners in favor of lighter, more "selective" cutting that favors shade tolerant species such as birch and maple. Also significant is the impact of deer in Connecticut. Oak seedlings are desired browse by deer, whereas birch and maple are not. Browsing of oak seedlings by the state's high deer population is having a strong influence on the composition of our future forests.

What Are Foresters Doing?

Foresters are trying to do their part on state land by managing for oak where natural seed sources and growing site conditions favor oak. Oak management usually involves a two- or three-phase "shelterwood" type harvest system that favors establishment of the shade-intolerant oak seedlings and then provides further periods of disturbance to help nurture a new oak forest and reduce competition (oak seedlings are slow growing for the first few years of life when compared to competitors). Sometimes, a controlled burn (prescribed fire) may be used to increase the success rate from the shelterwood cuts.

Instead of an "obsession" with oak, it may be more appropriate to say that state foresters maintain a "healthy attentiveness" to inevitable changes that lie ahead for our state. DEEP foresters are doing what they can to mitigate some of this change and maneuver the trends so as to continue providing a diversity of important native ecosystems.

Forestry is a fascinating profession that scrutinizes modern trends and needs for wood, wildlife, recreation, watershed protection, and healthy native ecosystems, as well as delves deep into local and regional history, to determine a management strategy. This strategy is not only for a few years ahead but for decades, even a century or more into the future, long after professionals of today are no longer here. The commitment contributes to a better future and a cause that goes beyond our own longevity.

The author would like to credit fellow DEEP Forester Emery Gluck for his inspiration and professional contribution to oak management in Connecticut.

DEEP's Fall Foliage Web Page

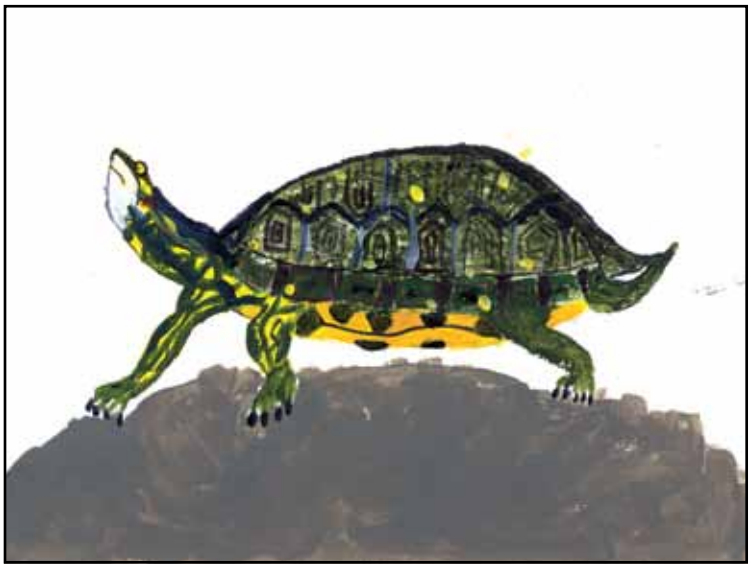
The Fall Foliage Web page (www.ct.gov/dep/foliage) has all the information you need to make your foliage viewing a success. It features an interactive map of the state where you can select a date, such as October 1-6, and a full display of fall foliage colors will showcase the intensity and vibrancy of colors in our state during that time period.

Also featured on the Web page:

- **Where to View Fall Foliage in Connecticut**
- **The Colors of Fall and Why Leaves Change Color**
- **Tips for All Leaf Peepers**
- **Scenic Views and Hiking Locations**
- **Connecticut's Shoreline**
- **The Fall Colors of Connecticut's Trees**
- **Fall Foliage Driving Routes in Connecticut**

P.J. FUSCO

First place, K-1st grade: Julia Stampp from Woodbury



First place, 2nd-3rd grade: Cassidy Jones from Guilford

First place, 4th-5th grade: Anagha Gogate from East Lyme

2011 Year of the Turtle: *Turtle Art Contest for Kids*

The DEEP Wildlife Division has been participating in the 2011 Year of the Turtle celebration (spearheaded by the Partners in Amphibian and Reptile Conservation) by informing Connecticut residents about the state's native turtles through a Year of the Turtle Web page (www.ct.gov/dep/yearofturtle), a Connecticut Turtles portable display, articles and turtle species profiles in *Connecticut Wildlife* magazine, a children's art contest, monthly press releases, and other related events.

The Turtle Art Contest for Kids was the Division's first attempt at holding an art contest. It was open to children from kindergarten through fifth grade, who were asked to submit original artwork of a turtle species native to Connecticut. We received over 220 entries, mostly from Connecticut residents but also from Florida, California, New York, Illinois, North Carolina, and even Malaysia. The entries were judged in three categories: K-1st grade, 2nd-3rd grade, and 4th-5th grade. The judges (all with art or turtle expertise) did a fantastic job of selecting first, second, third, and honorable mention winners in each category. The winners received ribbons and various prizes, which were graciously donated by the Connecticut Science Center and the Paul Petersen Memorial Fund of the Friends of Sessions Woods.

All of the artwork submitted for the contest was put up for display at the Division's Sessions Woods Conservation Education Center in Burlington during a special Turtle Day, in which the entrants to the art contest and the public were invited. Turtle Day was a huge success! This FREE event was attended by approximately 270 people who listened to informative talks about turtles (Connecticut Turtles, the Eastern Box Turtle, Sea Turtles and the Marine Animal Stranding Program) and had the opportunity to see live turtles and tortoises. Children were able to participate in various turtle crafts, get a turtle face painting, listen to turtle stories, and learn about turtles. Awards and prizes for the art contest were presented to the winners during Turtle Day. This popular event was sponsored by the Friends of Sessions Woods. KidCity Museum in Middletown donated a family pack of passes that was awarded as a door prize to a lucky attendee.

Artwork from the contest remained on display in the Education Center throughout the summer. The winning artwork in all three categories can be viewed as a slideshow on the Year of the Turtle Web page (www.ct.gov/dep/yearofturtle).

Congratulations to all of the winners of the contest. But, most importantly, the Division is pleased that so many kids made the effort to learn about Connecticut's turtles and also create such beautiful artwork. Year of the Turtle has been well received and has also generated a lot of interest in turtles.

Visit the U.S. Fish and Wildlife Service Northeast Region's Year of the Turtle Web site (www.fws.gov/northeast/ecologicalservices/turtle) that features news, photos, videos, event listings, volunteer opportunities, and information about turtle conservation in the Northeast Region.

Snapping Turtle

Chelydra s. serpentina

P. J. FUSCO

Background and Range

Snapping turtles are widespread in Connecticut. Their ability to adapt to people and the state's changing landscape has made them evolutionarily successful. They can even be found in polluted waters and urban wetlands, although populations in these habitats may not be robust.

Snapping turtles range across the eastern United States to the Rocky Mountains, from southern Canada to the Gulf of Mexico, and into Central America. They also have been introduced in some western states.

Description

The snapping turtle is Connecticut's largest freshwater turtle. It is easily recognized by its dark carapace (upper shell) with a deeply serrated back margin, and a small plastron (bottom shell) that does not completely cover all of the animal's flesh. The carapace measures eight to 12 inches on an average adult, and the turtles can weigh between 10 to 35 pounds. The color of the carapace can vary, from green to brown to black; sometimes the carapace is covered with moss. Snapping turtles have a long tail, often measuring as long or longer than the carapace, that is covered with bony plates. They also have a large head, long neck, and a sharp, hooked upper jaw. This hard beak has a rough cutting edge that is used for tearing food.

Habitat and Diet

Snapping turtles can be found in a wide variety of aquatic habitats, preferably with slow-moving water and a soft muddy or sandy bottom. They inhabit almost any permanent or semi-permanent body of water, including marshes, creeks, swamps, bogs, pools, lakes, streams, rivers, and impoundments. They can tolerate brackish water (mixture of seawater and fresh water).

As omnivores, snapping turtles feed on plants, insects, spiders, worms, fish, frogs, small turtles, snakes, birds, crayfish, small mammals, and carrion. Plants account for about a third of the diet. Snapping turtles usually feed underwater to aid with swallowing. Young turtles will forage for food, but older turtles often hang motionless in the water and ambush their prey by lunging forward at high speed and seizing prey with their powerful jaws.

Life History

Sexual maturity in snapping turtles has more to do with size than age. Turtles are ready to mate when their carapace measures about eight inches. The nesting season is from April through November, with the majority of nesting in southern New England occurring in late May through June. Snapping turtles rarely leave their aquatic habitat except during the breeding season, at which time females travel great distances in search of a place to dig a nest and lay eggs. Some turtles have been found as far as a mile from the nearest water source. Selected nest sites include banks, lawns, gardens, and road embankments.

One clutch of eggs is laid in May or June. With powerful hind legs, the female digs a shallow bowl-shaped nest in a well-drained, sunny location. Over a period of several hours, she lays approximately 20 to 40 creamy white, ping-pong ball-sized eggs. After covering the eggs, the female returns to the water, leaving the eggs and hatchlings to fend for themselves. Nests are often preyed upon by raccoons, skunks, and crows. As many as 90% or more of the nests are destroyed by predators annually.

Hatching takes approximately 80 to 90 days, depending on temperature and other environmental conditions. Generally, hatchlings emerge from their leathery egg in August through October by using a small egg tooth to break open the shell. (Northern snapping turtles sometimes overwinter in this egg stage). When the young hatch, they dig out of the nest and instinctively head to water. Young at hatching are about an inch long with soft shells and they must make it to water without being preyed upon by raccoons, skunks, foxes, dogs, birds, and snakes. When they reach water, the young turtles may be taken by fish and other snapping turtles. Once the turtles have grown some and their shells harden, they are virtually predator free.

Interesting Facts

Snapping turtles are nocturnal and spend most of the time underwater, lying on the bottom of the waterbody. Their dark-colored skin and moss-covered shell enables the turtles to lie in wait and ambush their prey. Usually docile in water, snapping turtles can be aggressive during the breeding season when they are found traveling across land. This is usually when most people encounter snapping turtles. If you find a snapping turtle in your yard, treat it with the respect it deserves. Snapping turtles have powerful, sharp jaws. Keep children and pets away from the turtle to allow it to finish laying its eggs and leave the area.

Countless turtles are killed or injured on roads during their terrestrial treks. The presence of a large turtle on a busy road can be a safety hazard. By driving defensively and keeping alert to conditions on the road, motorists should be able to avoid hitting a turtle.

Snapping turtles should never be picked up by their tails as this can damage the animal's vertebral column and tail, not to mention the human who is in danger of being bitten. Because snapping turtles can be slimy and heavy, the Wildlife Division does not recommend that anyone manually pick them up.

Northern Diamondback Terrapin

Malaclemys t. terrapin

P. J. FUSCO

The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water).

Background

The Northern diamondback terrapin is the only species of turtle in North America that spends its life in brackish water (water that is less salty than sea water). Terrapins are most abundant in tidal estuaries west of the Connecticut River. They are tolerant of some pollution and are known to congregate at warm water discharge outputs of power stations along the Connecticut shoreline.

In the early 1900s, terrapins were a popular gourmet food. Their numbers declined due to unregulated harvesting and habitat loss through coastal development. Motorboat propellers have been responsible for inflicting serious wounds to terrapins, usually causing death. Terrapins also become trapped and then drown in submerged crab and lobster pots. During the nesting season, many females are killed as they attempt to cross coastal roads in search of nesting areas.

The diamondback terrapin is protected by Connecticut Regulation 26-66-14a which states that there is no open season for taking terrapins in any developmental stage. Therefore, terrapins can no longer be collected or possessed in Connecticut.

Description

Diamondback terrapins have a gray, light brown, or black top shell (carapace) that is broad and patterned with concentric rings or ridges. The carapace also is wedge-shaped, and when viewed from above, the widest part is in the rear. The bottom shell (plastron) can range from yellowish to greenish gray, with or without bold, dark markings. The large feet are webbed, and the head and limbs may be spotted. Male terrapins are smaller than the female, weighing an average of 0.5 pounds and measuring four to 5.5 inches in length. Females weigh an average of 1.5 pounds and measure six to nine inches long.

Habitat and Diet

Diamondback terrapins live in the brackish water of salt marshes, estuaries, and tidal creeks. Adults are often seen basking on mud flats. Terrapins feed on fish, marine snails, crabs, marine and tidal mollusks, carrion, clams, and worms.

Life History

Adult terrapins nest on sandy borders of coastal salt marshes or in dunes from June to July. Maximum egg-laying activity usually occurs at high tide, ensuring that the eggs will be laid above the high water level. Females dig cavities four to eight inches deep, depositing four to 18 pinkish white eggs (average 9), which are about 1.5 inches long, leather-like, and thin-shelled, with a blunt end. The eggs hatch in nine to 15 weeks. The one to 1.25-inch hatchlings are patterned similar to the adults, but brighter. Occasionally after hatching, the young may remain in the nest for the first winter, emerging in April and May to head for brackish waters. Females reach sexual maturity in about 7 years; males mature earlier. Terrapins have a long lifespan of about 25 to 40 years.

Interesting Facts

The diamondback terrapin is the only marine species of turtle that regularly occurs in Connecticut. The turtles brumate during winter submerged in the mud of tidal creeks (see page 9 to learn more about brumation). The excess salt that terrapins consume in their diet is excreted through special glands at the eye.

During the early 1930s, when terrapin numbers decreased, the popularity of this turtle as a food item faded. Terrapin populations have since rebounded with the lack of harvesting pressure.

Terrapin nests are depredated by skunks, raccoons, and foxes. Upon emerging from the nest, young hatchlings are often eaten by gulls, crows, and black-crowned night-herons, and predatory fish when in water.

How You Can Help

You can help conserve Connecticut's diamondback terrapin population by supporting the protection, conservation, and restoration of Connecticut's salt marsh habitats. If you are a boater, navigate carefully in tidal creeks and estuaries where large numbers of terrapins may gather in late spring to mate at the water's surface. Boaters also are reminded that it is a violation of the Federal Pollution Control Act to pump or discharge any kind of oil into navigable waters. Oil spills have the potential to devastate many coastal wildlife populations, including terrapins.

Conservation Discovery Corps Removes Invasive Plants to Benefit Saw-whet Owl Habitat

Written by Peter Picone, DEEP Wildlife Division

A hot, muggy, summer day in Connecticut didn't stop Jackie Westlein, of the Beardsley Zoo staff, and her team of Conservation Discovery Corps from chopping down invasive, non-native plants at Quinnipiac River State Park in North Haven. The Conservation Discovery Corps is comprised of bright, young adults that are working on habitat projects throughout the state. This particular week they assisted the Wildlife Division with a project along the Quinnipiac River floodplain where wintering habitat for the Northern saw-whet owl, a Connecticut species of special concern, is being enhanced. Saw-whets use the evergreen habitat at Quinnipiac River State Park during winter. These smallest of Connecticut's owls have been documented in this area since the 1960s.

The young team of habitat managers learned quickly how to identify the top three non-native woody plants found on the property, namely oriental bittersweet, Japanese wisteria, and privet. Team members cut the stems of the non-native plants and DEEP Wildlife Division staff strategically painted an herbicide (Triclopyr) on the stems to prevent resprouting. Triclopyr is the key ingredient in over-the-counter herbicides, such as Brush-B-Gone®.

Invasive non-native plants have become the second biggest threat to wildlife, second only to habitat destruction. Introduced non-native plants that have escaped cultivation are displacing native plants and causing reduced ecological diversity. To learn more about invasive plants in Connecticut and to obtain a list of invasives found in the state, visit the Connecticut Invasive Plant Working Group's Web site at www.hort.uconn.edu/cpiwg.

The Wildlife Division extends its appreciation to the habitat management team from Beardsley Zoo for helping to make a difference for wildlife and habitat.

The Wildlife Observer

Do you have an interesting wildlife observation to report?

Please send your story with photos to:

Wildlife Observations, Wildlife Division, P.O. Box 1550, Burlington, CT 06013, or E-mail: dep.ctwildlife@ct.gov

Kevin Doyle from New Milford started monitoring a pair of ospreys nesting at Sherwood Island State Park in Westport on a weekly basis starting in late March 2011. This photograph of the female returning to the platform with a meal for her three chicks was taken on June 25. Kevin wrote:

"I had been following the Westport ospreys since late March or early April on a biweekly basis, tracking their progress and the rebuilding of the nest/platform through mating and eventually egg laying. At first I was photographing from the observation deck, where I gradually made my way out into the fields . . . getting as close as I could without spooking the female off her eggs. Sensing I was being tolerated, I moved to an area within 50 feet of the nest and, as long as I didn't make any sudden movements or move closer, I was a witness to an up-close and personal experience.

The interaction between the adults was something few rarely see, at least at these distances, and as time went on, one by one, the eggs hatched. I remember vividly the day I saw the first little head of chick one, then chick two, and thinking that was it. To my surprise one week later, chick three was observed. Three successful hatchlings and, despite chick three being nearly a week behind the others, all were doing fine on my last visit sometime in mid-July. Also during that last visit, two of the three chicks made their solo flights, with the third inching to the edge of the nest but not quite ready to fly."

FROM THE FIELD

DEP is now DEEP

You may have noticed we are now referring to DEP as DEEP. The agency has been renamed the Connecticut Department of Energy and Environmental Protection (DEEP) -- which is charged with the dual responsibilities of creating a new energy future for the state and protecting Connecticut's environment and natural resources. To accomplish this, the new agency brings together the Department of Environmental Protection (DEP), the Department of Public Utility Control (DPUC), and an energy policy group that had been based at the Office of Policy and Management. To find out more, go to www.ct.gov/deep.

11th Master Wildlife Conservationist Training Offered

The Master Wildlife Conservationist Program is a free, adult volunteer training series sponsored by the Wildlife Division and offered annually during spring at the Sessions Woods Conservation Education Center in Burlington. The intent of the program series is to provide wildlife-related training to candidates willing to conduct volunteer activities for the Wildlife Division and other environmental organizations.

The program consists of 40 hours of classroom and field training. Topics include wildlife management, Connecticut specific wildlife issues, ecology, forestry, and interpretation. The classes are presented primarily by Wildlife Division staff.

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

The program series is free but class size is limited to 20. Individuals interested in attending need to complete an application form. Application packets are scheduled to be mailed at the end of November, and applications must be returned by January 1, 2012. The program series will begin in March. If you would like to receive an application packet, please contact Laura Rogers-Castro at 860-675-8130 (Monday-Friday from 8:30 AM-4:00 PM) or laura.rogers-castro@ct.gov.

Little River Marsh Restoration

The Wildlife Division's Wetlands Habitat and Mosquito Management (WHAMM) Program recently completed a project that resulted in the restoration and conservation of 100 acres of wetlands along the Little River in New Haven and North Haven. The site has a history of degraded tidal wetlands. Intensive agricultural and mosquito control practices, including wetland ditching, draining, and conversion, have severely deteriorated the ecological functions of the floodplain wetlands. The area also is dominated by the invasive plant, Phragmites (also known as common reed).

Phragmites control and wetland restoration efforts, such as creek cleaning and berm removal of the wetland habitat, were necessary to help return a natural tidal flow regime to the Little River Marsh. The WHAMM Program used specialized, low ground pressure equipment to breech two dikes and remove a small culvert from a tidal creek, replacing it with six culverts. These improvements increase tidal flows and fish passages in the marsh habitat. The reintroduction of saltwater into the marsh also results in a gradual replacement of Phragmites by native vegetation. Phragmites is intolerant of salinities greater than 18 parts per thousand. Control of this invasive plant also involved the use of specialized herbicides and mowing.

J. SIMON, DEEP WILDLIFE VOLUNTEER

The WHAMM Program's excavator breaches a dike to restore tidal flow at the Little River marsh restoration site in New Haven/North Haven.

This newly-restored 100-acre site will provide habitat for breeding and migrating waterfowl and marsh birds, wetland furbearers, a diversity of migratory songbirds, fish, and other wetland dependent wildlife. Funding for this project was provided by the WHAMM Program, National Fish and Wildlife Foundation, Ducks Unlimited, and the Connecticut Corporate Wetlands Restoration Partnership. The WHAMM Program plans to monitor the site over time to assess wildlife use of the restored area.

Paul Capotosto, DEEP Wildlife Division

New Exhibits at Sessions Woods Education Center

The next time you are in the Burlington area, stop by the Wildlife Division's Sessions Woods Wildlife Management Area and Education Center to check out two new exhibits in the Center's exhibit room. A bird viewing window with feeders and educational panels was recently completed, along with a diorama featuring black bears in Connecticut.

Several other wildlife-related exhibits are featured in the Center, which is open to the public on weekdays from 8:30 AM-4:00 PM (and on select Saturdays during summer). The hiking/demonstration trails are open seven days a week from sunrise to sunset. Sessions Woods is located at 341 Milford Street (Route 69) in Burlington. For more information, call 860-675-8130 or check the DEEP Web site at www.ct.gov/dep/wildlife.

Calendar of Events

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. 12 ..... **Sessions Woods Fall Hike**, starting at 10:00 AM. Join Wildlife Division Natural Resource Educator Laura Rogers-Castro on a fall hike to visit the special features of the Sessions Woods Wildlife Management Area. This hike will include stops at the beaver marsh, fire tower, and Sessions' family Summer House. Laura will provide information on the fauna and flora during this approximately three-mile hike. Participants should wear appropriate footwear, bring water, and dress for the weather. Meet in the exhibit area of the Education Center for a pre-hike introduction.

Nov. 5..... **Maple Syrup Producers Meeting**, starting at 9:00 AM. The Maple Syrup Producers Association of Connecticut, Inc., invites the public each year to its meeting at Sessions Woods. Guest speakers present practical, how-to-do-it topics covering all aspects of sugaring. Free literature and lively discussions are always available during the meeting. Various sugaring materials also will be on display. For more information, visit www.ctmaple.org/calendar.htm.

Nov. 6..... **12 Practical Tips for Successful Wildlife Photography with Master Wildlife Conservationist Gary Melnysyn**, starting at 2:00 PM. Gary is back at Sessions Woods to present this popular program. He will use his beautiful images to support a discussion on each practical tip he has embraced for successful wildlife photography. The program will be an open forum that encourages questions about photo techniques or the wildlife itself. Gary is an avid outdoor enthusiast and has traveled throughout North and Central America, concentrating on digitally documenting a variety of wildlife species.

Hunting and Fishing Season Dates

Sept. 15-Nov. 15 ..... First portion of the deer and turkey bowhunting season on state land.

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, 2012) and on sate land bowhunting only areas.

Oct. 1 & Nov. 5..... Junior Waterfowl Hunter Training Days

Oct. 8 ..... Junior Pheasant Hunter Training Day

Oct. 15 ..... Opening day for the small game hunting season.

Nov. 5 & Nov. 12 ..... Junior Deer Hunter Training Days.

Nov. 16-Dec. 6 ..... Private land shotgun/rifle deer hunting season.

..... Consult the 2011 Connecticut Hunting and Trapping Guide and 2011-2012 Migratory Bird Hunting Guide for specific season dates and details. Printed guides are available at town halls, bait and tackle shops, DEEP facilities, and commercial marinas and campgrounds. The guides also are available on the DEEP Web site (www.ct.gov/dep/hunting). Go to www.ct.gov/dep/sportsmenlicensing to purchase Connecticut hunting, trapping, and fishing licenses. The system accepts payment by VISA or MasterCard.

***Daily Hawk Watch** at Lighthouse Point Park in New Haven, from September 1 through November 30, starting at 7:00 AM and continuing as long as the hawks keep flying.*

The 2010 Deer Program Summary is now available on the wildlife section of the DEEP Web site (www.ct.gov/dep/wildlife).

Connecticut Wildlife

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Sessions Woods Wildlife Management Area
P.O. Box 1550
Burlington, CT 06013-1550

P. J. FUSCO

A young common tern eagerly accepts a meal from its parent. Common terns mainly feed on small fish, as well as insects, crustaceans, and other aquatic creatures.