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Connecticut Wildlife

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BUREAU OF NATURAL RESOURCES ● WILDLIFE DIVISION

From the Director

As a condition of receiving federal funding for "wildlife species in the greatest need of conservation," states are required to develop a Comprehensive Wildlife Conservation Plan (CWCP) no later than October 2005. Because Connecticut has already initiated projects using federal funds from the Wildlife Conservation and Restoration and State Wildlife Grants programs, we are obligated to complete this plan. However, the scope and potential benefits of this particular plan are so enormous that we do not perceive this requirement as an administrative burden. Rather, we have embraced the process of creating a blueprint for the conservation of Connecticut's biodiversity.

Why such excitement over a plan? Several reasons. First, because the CWCP will direct new federal funding sources to those species most in need of attention, there is a direct financial incentive. We have never had this opportunity before. It allows us to supplement the highly successful, sportsmen-funded federal fisheries and wildlife "game" programs by identifying wildlife species that are declining, at risk or that we know very little about and developing projects that will assist in their conservation. The CWCP process will result in a list of species, habitats or communities that are prioritized by the degree of conservation need. It will allow us to address the full array of wildlife and wildlife-related issues.

Second, the CWCP involves a broad spectrum of participation by experts, both within and outside the Department. For the first time, ecological data from all sources are being drawn together and evaluated to determine knowledge strengths and gaps. This will help us identify and prioritize inventory projects that must be initiated to improve our understanding of the status of certain imperiled species or habitats that have been neglected in the past. It also will result in improved coordination between various agencies and organizations involved in the field of wildlife conservation.

Third, the CWCP requirement for public participation throughout the planning process presents a tremendous opportunity for the public to learn about the status of wildlife in Connecticut and the threats to our native biotic communities. The plan will be subject to input from organizations and individuals while it is being developed and as it is monitored and revised into the future.

The federal legislation that mandated the CWCP identified eight major elements that must be incorporated into the plan based upon the best scientific data: (1) species distribution and abundance, (2) extent and condition of community habitat types, (3) problems/threats to species or habitats, (4) priority research and surveys; (5) priorities for implementing conservation actions, (6) procedures to monitor effectiveness of conservation actions, (7) procedures to review and evaluate the plan and (8) public participation. Thus far we have made good progress on several of the major elements. We will keep you updated on this important endeavor in future issues of Connecticut Wildlife.

Dale W. May

Cover:

Wildlife Division biologists are evaluating the success of a saltmarsh restoration project on the East River Marsh, in Guilford (see page 4). Use of the area by migratory waterbirds and waterfowl (like the black duck pictured on the cover) has increased since the completion of the project.

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. Each issue of Connecticut Wildlife *contains articles reporting on Wildlife Division projects funded entirely or in part with federal aid monies.*

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Chronic Wasting Disease and Deer

Project to document presence or absence of disease in CT

Written by Howard Kilpatrick, Deer/Turkey Program

Chronic wasting disease (CWD) is a naturally occurring disease of the brain and nervous system that is fatal to deer and elk. In 1981, it was discovered in a free-ranging elk in Colorado. Recently, CWD was discovered in free-ranging deer in southern Wisconsin and western Colorado. To date, it has been found in captive herds of deer and elk at game ranches in Colorado, Nebraska, South Dakota, Montana, Oklahoma, Kansas and Alberta and Saskatchewan, in Canada. It also has been found in free-ranging, wild populations of deer and elk in Colorado, Wyoming, Nebraska, South Dakota, Wisconsin, New Mexico, Illinois and Saskatchewan. There have been no known cases of CWD in the northeastern United States.

Although CWD is similar to mad cow disease in cattle, there is no known relationship between CWD and mad cow disease and no known relationship between infected deer/elk and humans. Scientists believe that CWD spreads directly from one animal to another through animal-to-animal contact or indirectly from soil-to-animal contact. The most likely mode of transmission from an infected animal is through saliva and feces. Only three species (mule deer, white-tailed deer, elk) appear to be naturally susceptible to CWD. Domestic livestock and humans are not known to be naturally susceptible to CWD.

This year, Connecticut, Rhode Island and Massachusetts developed a regional "Southern New England CWD Surveillance Plan." This plan was initiated because little information exists on the presence and distribution of CWD in southern New England. Under this plan, a research project will be initiated in September 2003 to monitor for the presence and distribution of CWD in the tri-state region.

In Connecticut, this study will be conducted by the DEP Wildlife Division, with funding for data collection provided by the U.S. Department of Agriculture–Animal and Plant Health Inspection Service. The objective of the study will be to document the presence or absence of CWD in free-ranging white-tailed deer throughout the state and develop a brochure to inform the public about CWD. A minimum of 238 deer heads will be collected statewide for testing. Samples will be collected from all 12 deer management zones in proportion to relative deer densities. Heads will be collected at state-operated deer check stations throughout the region during the firearms deer hunting season in November to December 2003. Samples also will be collected from cooperating butcher shops throughout the region during the archery deer hunting season from September 2003 through January 2004.

Bowhunters willing to donate deer heads may contact the Wildlife Division's Sessions Woods office (860-675-8130) in Burlington or the Franklin office in North Franklin (860-642-7239). In areas of expected low harvest, additional samples will be collected from deer killed by motor vehicles throughout the year. Current efforts to identify and test free-ranging deer statewide that exhibit symptoms consistent with CWD (emaciation, abnormal behavior/nervous system symptoms, excessive salivation) will continue.

P. J. FUSCO

There have been no known cases of CWD in Connecticut's deer population. However, the Wildlife Division will be conducting a new study to document the presence or absence of the disease in the state.

Restoring "New Life" to East River Marsh

Written by Roger Wolfe and Paul Capotosto, Wetland Habitat and Mosquito Management Program, Min Huang, Migratory Bird Program and Chris Samor, Research Assistant

The East River in Guilford meanders through an extensive wetland system that separates Madison and Guilford. Like most other tidal wetlands along the Atlantic Coast, this 160-acre salt marsh was heavily grid-ditched by the Civilian Conservation Corps in the 1920s and 1930s for mosquito control. Although this activity provided employment for many people during the Great Depression and did control mosquitoes to a great extent, it also had many negative impacts to the habitat and the species that depend on it.

Prior to the extensive grid ditching, these tidal wetlands provided habitat for a variety of wetland dependent birds, such as black ducks, snowy and great egrets, herons, rails and a variety of shorebirds. These species used the shallow ponds, pannes and creeks for feeding, nesting and resting. The tidal wetlands also were valuable habitat for a number of resident and migratory fish species. Because of the drainage effect caused by the hand-dug ditches, much of this shallow water habitat was lost. Thus, a diverse wetland once interspersed with high and low marsh vegetation and shallow, open water was converted to one of predominantly high marsh grasses and shrubs. The only surface water that existed was in the ditches and, then, only at high tide. As a result, many wildlife species, primarily water birds, declined in number.

Realizing the need for this type of shallow water habitat, an attempt was made in 1960 at East River Marsh to restore some surface water with the excavation (using only a shovel and a wheelbarrow!) of a 0.25-acre pond. Laborious as it was, this showed promise but was just the tip of the iceberg considering the size of the marsh and the amount of habitat that was lost. A 1990 study conducted by the DEP Wildlife Division found that East River Marsh had some of the lowest habitat value for water birds in the state.

P. J. FUSCO

Newly created ponds and pannes provide foraging habitat for wading birds, including glossy ibis.

R. WOLFE

Following implementation of IMM, the East River Marsh now provides a mosiac of open water, shallow flats and interspersed vegetation. This photo gives a glimpse of what the marsh looked like prior to parallel grid ditching in the 1920s and 1930s.

Turning the Tide on Grid-ditching

In the spring of 1999, following a review by the DEP's Wetland Restoration Steering Committee and after obtaining the necessary permits and funding, the Wildlife Division's Wetland Habitat and Mosquito Management (WHAMM) Program completed a restoration project on approximately 40 acres in the East River Marsh Wildlife Management Area. This was done as part of the Program's Integrated Marsh Management (IMM) approach to wetland restoration and enhancement. As the name implies, IMM is an integrated approach to holistically manage wetland habitats to satisfy a variety of site-specific objectives. These

objectives could include water management for mosquito control, invasive vegetation control, fill removal, hydrologic modification and wildlife habitat enhancement. Over the past 10 years, IMM has been used to restore over 2,200 acres of tidal and non-tidal wetlands in Connecticut.

The primary objective of the East River Project was to create and enhance wetland wildlife habitat by restoring the natural flow of salt water into this drained system. The project involved the excavation of 16 ponds, ranging in size from 0.1-0.25 acres. The ponds were constructed with irregular edges and shallow, tapered bottoms that provide better foraging habitat for shorebirds and dabbling ducks. The ponds are not directly connected to a tidal ditch or creek and therefore retain water even at low tide, providing habitat during all tidal stages. The excavated material was used to plug some of the old grid ditches. As a result, the high water table caused by the plugged ditches created shallow pannes adjacent to the ditches. This hydrologic change also resulted in a desired change in vegetation, creating a more diverse mosaic of vegetation types.

The work was done using the WHAMM Program's low ground pressure excavators and bulldozers. These specialized pieces of equipment can work in soft, marshy conditions where more conventional equipment would quickly sink. The total cost for this project was $110,000. Projects of this nature can often be quite expensive; therefore, the formation of partnerships is needed to share costs, equipment and expertise. The East River Marsh Restoration Project was funded by the DEP's Long Island Sound Cleanup Funds, Department of Transportation, Connecticut Duck Stamp Program and U.S. Fish and Wildlife Service.

R. WOLFE (2)

The WHAMM Program's low ground pressure (less than 2 lbs. per square inch) excavators can work in soft, marsh soils to create ponds and plug old ditches.

Did the Birds Return?

To evaluate the success of this project, an assessment of bird use in the treated (restored) and untreated (control) areas was undertaken by the Wildlife Division's Migratory Game Bird Program in 1999-2000 and again in 2002-2003 (see graph). In the initial assessment, birds were grouped into three categories or guilds: wading birds, shorebirds and waterfowl. Birds were observed during different tidal stages and their activities and the habitats they were using were recorded.

Open grid ditches (left) drain natural ponds at low tides. Plugging old grid ditches (right) allows water to flood low areas even at low tide. This creates shallow ponds and pannes that are used by foraging shorebirds and dabbling ducks.

In just the first year following restoration, wading bird use was three times higher, shorebird use was more than four times higher and waterfowl use was almost twice as high as the untreated sites. Wading birds were mainly found using the flooded high marsh and plugged ditches. The plugged ditches created excellent habitat for killifish and other marsh fishes, fiddler crabs and snails that provide a food source for herons and egrets. As was expected in the control sites, foraging was limited to higher tidal stages as the ditches were dry at low tide. Shorebirds primarily used the shallow pannes created by the plugged ditches for foraging and loafing. Waterfowl primarily used the plugged ditches and shallow edges for foraging on snails and other invertebrates. The newly created ponds were used somewhat less and then, only for loafing. This was expected because, being recently excavated, the pond bottom was relatively sterile with little vegetative structure for harboring fish and invertebrates.

The survey in 2002-2003 had even more dramatic results. Twenty-eight different species of birds were observed, including four state-listed species of special concern (glossy ibis, seaside sparrow, saltmarsh sharp-tailed sparrow, willet), three threatened species (great egret, snowy egret, least tern) and one endangered species (northern harrier). Black ducks and greater yellowlegs were the most abundant, with willets, ruddy turnstones and saltmarsh sharp-tailed sparrows also being fairly common. Bird use of the marsh increased

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2003 Aerial Deer Survey Results Similar to 1999-2000

Written by Michael Gregonis, Deer/Turkey Program

The DEP Wildlife Division monitors the statewide white-tailed deer population by a variety of methods, including harvest data, deer hunter surveys, deer-vehicle collisions, homeowner complaints about deer damage and aerial deer surveys.

A statewide aerial deer survey is conducted by helicopter once every three years, on calm days with complete snow cover to maximize ability to see and count deer. When assessing aerial deer survey data, it is important to remember that many parameters may affect the visibility of deer, including pilot skill, observer experience, wind speed, temperature, timing of survey and snow conditions.

Due to these parameters, there may be a high degree of variability between survey periods. In addition, the aerial deer survey samples about one percent of the total deer habitat in the state. Therefore, trends in aerial surveys should be interpreted using at least three to five survey periods (9 to 15 years) rather than comparing data from one period to the next. The current survey technique and sampling scheme have been used since 1993. The survey technique is most useful as a long-term trend index determining whether the deer population is increasing, stable or decreasing.

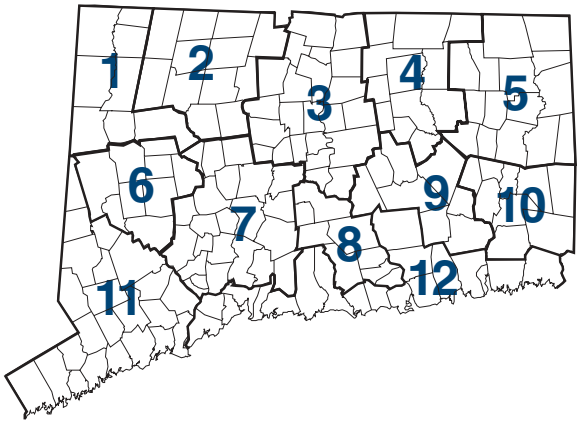
The most recent aerial deer survey was conducted from January to March of 2003. Survey results indicated that Connecticut's deer population is relatively stable, with an estimated winter population of 75,771 deer. The 2003 aerial deer survey population estimate was similar to the last aerial deer survey conducted in 1999/2000 (76,344). However, the 2003 deer population estimate is significantly higher than the 1993 (49,472) and 1996 (53,955) estimates.

Although the deer population appears to be stabilizing, additional surveys are required to confirm this trend. Harvest data, deer hunter surveys, deer-vehicle collisions and homeowner concerns about deer damage indicate that Connecticut's deer population is stable or slightly increasing. To continue the wise management of the deer population, it is important to collect a wide variety of biological and non-biological information. The aerial deer survey is an important component of Connecticut's deer management puzzle.

Additional results from the 2003 survey indicated that Connecticut had an average deer density of 21 deer per square mile. In 1993 and 1996, average deer densities were 14 and 15 deer per square mile, respectively, and in 1999/2000, the average deer density was 21 deer per square mile. In Connecticut's 12 Deer Management Zones (see map), relative deer densities ranged from 9.0 to 40.5 deer per square mile. The highest densities were found in zones 9, 7 and 11. The lowest densities occurred in zones 2, 3 and 4 (see table). Although some zones have low overall deer densities, these areas may contain pockets with higher deer densities.

To address increases in Connecticut's deer population, the Wildlife Division has lengthened deer seasons, liberalized bag limits and encouraged the harvest of antlerless deer in high deer density areas that have been identified through the data collection process. Wise deer management results in healthy deer populations and productive wildlife habitat.

Connecticut's 12 Deer Management Zones



Projected deer densities in Connecticut's 12 Deer Management Zones based on the 2003 aerial deer survey.

Zone	Average deer/mi²	Estimated mi² of deer habitat	Estimated deer population
1	17.2	298.9	5,141
2	9.0	359.2	3,233
3	14.0	329.7	4,616
4	15.0	281.4	4,221
5	22.0	505.9	11,130
6	23.5	242.4	5,696
7	30.0	299.3	8,979
8	21.0	175.3	3,681
9	40.5	227.5	9,214
10	16.7	228.1	3,809
11	25.3	349.7	8,847
12	21.2	339.8	7,204
Total	**21.0***	**3,637**	**75,771**

** Average statewide deer density.*

To continue the wise management of the deer population, it is important to collect a wide variety of biological and non-biological information. The aerial deer survey is an important component of Connecticut's deer management puzzle.

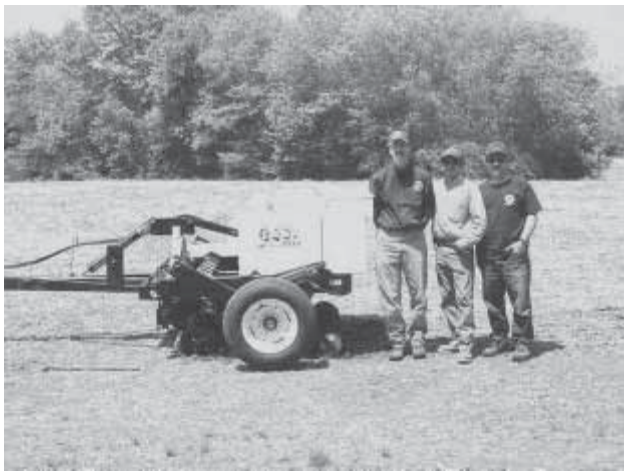
CT Chapter of the NWTF Donates Specialized Grass Seeder

Written by Paul Rothbart, Habitat Management Program

The Connecticut Chapter of the National Wild Turkey Federation (NWTF) recently donated a truax no-till fluffy seeder to the DEP Wildlife Division. The $12,000 specialized seeder is essential in the successful planting of native warm season grasses, such as big bluestem, little bluestem and indiangrass.

Warm season grasses, referred to as bunch grasses, grow in a wide variety of soil types and are long-lived once established. The grasses support a diverse and abundant wildlife community because they grow in clumps (providing overhead cover from avian predators), contain intermixed bare spots that are used as wildlife travel lanes and dusting sites, and serve as critical nesting habitat. The grasses, along with associated broadleaf forbs and legumes, provide an abundant seed source for fall and winter food. In addition, the large number of insects found within grasslands are an important source of protein for young growing birds. Grassland bird specialists, such as savannah sparrows, eastern meadowlarks and bobolinks, benefit from warm season grass establishment projects, as do cottontail rabbits, turkey, deer and other small mammals.

The truax seeder is one of only two available in Connecticut and will be used on state-owned wildlife management areas and for private land enhancement projects within the scope of several private land programs, such as NWTF's Wild Turkey Woodlands, Natural Resource Conservation Service--Wildlife Habitat Incentives Program, U.S. Fish and Wildlife Service (USFWS)-Partners Program, and Connecticut's new Wildlife Division-USFWS Landowner Incentives Program (see next article).



(L-R) Mike Gregonis, DEP Turkey Program biologist, Raymond Szajkowski, CT Chapter NWTF president, and Paul Rothbart, DEP Habitat Program biologist, stand with the recently donated truax seeder.

Landowners who are interested in various private land habitat enhancement programs and/or are in need of using such specialized seeding equipment may contact the Division's Habitat Management Program at 860-295-9523. Inquiries regarding NWTF's activities throughout Connecticut should be directed to the Chapter President at 860-828-5563. The National Wild Turkey Federation is a half-million member grassroots, nonprofit organization that supports scientific wildlife management on public, private and corporate lands, as well as wild turkey hunting.

Early Successional Habitat Is Focus of Management Efforts

Written by Paul Rothbart, Habitat Management Program

Enhancing early successional habitats on state wildlife management areas continues to be a focus of the DEP Wildlife Division's Habitat Management Program. Early successional habitats, such as young forests, old fields and grasslands, are rapidly declining in Connecticut due to loss of farmlands, suburban development and the absence of fire within the landscape. It is essential that early successional habitats are managed properly to assure abundant and diverse wildlife populations throughout the state.

Numerous wildlife species use early successional lands, including American woodcock, ruffed grouse, indigo buntings, blue-winged warblers, northern orioles, rufous-sided towhees, turkeys, bluebirds, American goldfinches, bobolinks, savannah sparrows, eastern meadowlarks and deer.

Restoring, enhancing and maintaining early successional habitats requires the use of a variety of techniques, from prescribed burning, to brontosaurus contracts (drum style mower/mulching), brush mowing, herbicide treatment, forest management practices and grassland seedings. The Division conducted the following management activities during 2003:

- Prescribed burns were conducted on 26 acres of old fields at Naugatuck State Forest and Babcock Pond Wildlife Management Area (WMA).
- A brontosaurus (specialized machine) was used to enhance 61 acres of old fields at Babcock Pond WMA, Roraback WMA, Goshen WMA and Flaherty Field Trial Area (FTA).
- Ruffed grouse management activities continued at Kollar WMA through a forest cutting of 20 acres.
- Brush mowing was undertaken on 220 acres of old fields at Flaherty FTA and Tunxis State Forest and 55 acres of grasslands at Goshen WMA.
- Warm season grasses were planted on 20 acres at Sugarbrook WMA.
- Comprehensive vegetation inventories were completed on 2,300 acres of state land at Goshen and Babcock Pond WMAs. The data will be used in the development of long range comprehensive management plans.

Additional Habitat Management Program highlights include:

- A contract was awarded to conduct a comprehensive natural resource inventory and historical review of Belding WMA to be used in the development of a long-term management plan. This was made possible by

continued on next page

Early Successional Habitat,
continued from previous page

the establishment of a trust account by the Belding family.

- The Wildlife Division has received a Tier I Landowner Incentives Program grant from the U.S. Fish and Wildlife Service (USFWS), which will allow the Division to dedicate staff to a private lands habitat program and, for the first time, deliver financial and technical guidance to landowners. The program will influence wildlife and habitats at risk. (Look for more on this program in future issues of *Connecticut Wildlife*.)
- A water level control structure project was initiated at 25 wetland sites with beaver problems in an attempt to maintain quality wetland wildlife habitat, while also researching various water level control structure designs and associated habitat characteristics that influence the success or failure of such structures.

The Wildlife Division extends its appreciation to all partners who have helped with many of these projects. Special acknowledgment is extended to the Belding family, Natural Resources Conservation Service, USFWS, Connecticut Chapter of the National Wild Turkey Federation, Connecticut Waterfowl Association, Ruffed Grouse Society and other DEP units.

Cottontail Collection Effort Providing Clues

Written by Travis Goodie, Wildlife Division Contracted Researcher, and Howard Kilpatrick, Deer/Turkey Program

Since October 2000, the DEP Wildlife Division has been conducting a research project to document the current distribution of the native New England cottontail and the introduced, but more common, eastern cottontail. The New England cottontail was historically distributed statewide. However, limited research from the past 50 years suggests that the distribution and abundance of New England cottontails have declined in Connecticut.

One aspect of the project involved the statewide effort to collect cottontail specimens from hunters and incidental roadkills. Rabbits were also live-trapped and then released by the DEP. For each specimen, data were recorded on pelage (fur) characteristics and location of collection. Cottontail specimens were initially identified by species using pelage characteristics (white spot on the forehead indicates an eastern cottontail and black spot between the ears indicates a New England cottontail). Species identification was confirmed by examining nasal sutures on the skull or DNA analysis conducted by the University of New Hampshire. Both of these are reliable methods of identification.

Over a 32-month period (October 2000-June 2003), 728 specimens were collected from 100 towns in Connecticut. Among all methods of collection, 90% of the specimens were eastern cottontails and 10% were New England cottontails. Specimens collected via roadkill tended to favor eastern cottontails. However, live-trapping efforts tended to favor New England cottontails, probably because trapping activity was focused in areas where New England cottontails were known or believed to occur. New England cottontails were found in 20 of the 100 towns where specimens were collected, while eastern cottontails were found in 92 towns. In most towns (79%), five or fewer specimens were collected. The lack of or small sample size from many towns does not imply that New England cottontails are absent. There were 15 towns were both New England and eastern cottontails were collected.

Pelage characteristics were compared to DNA analysis or nasal suture to determine the reliability of pelage characteristics for identifying cottontail species. Specimens that had only a black spot between the ears had a 92% probability of being New England cottontails. Specimens that had only a white spot on the forehead had a 99% probability of being an eastern cottontail. Specimens that had no white or black spot had a 95% probability of being an eastern cottontail.

Although there are no data or limited data from many Connecticut towns on the distribution of cottontails, this study has increased our knowledge. Efforts next year will likely focus on collecting additional samples from towns that have little or no data.

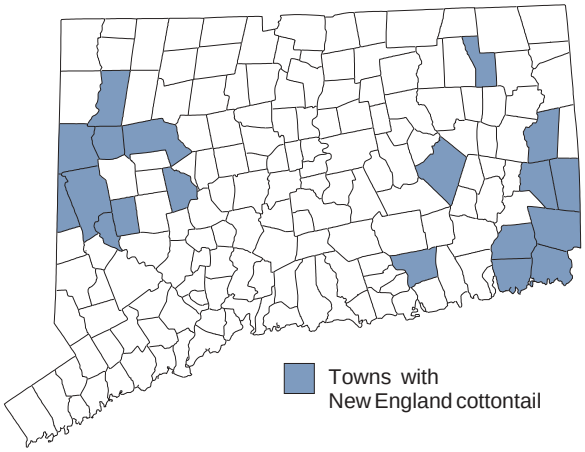
Funding for this project is being provided by the Wildlife Division and the Connecticut Endangered Species/ Wildlife Income Tax Check-off Fund.

Percent of cottontail species collected by each method, October 2000-June 2003.

Method	Sample Size	% NEC	% EC
Harvest	353	13	87
Roadkill	219	2	98
Trapping	48	31	69
Other	18	0	100
Total	**636**	**10**	**90**

Note: Of 728 collected specimens, 90 have not been confirmed to species by DNA analysis or nasal frontal suture.
NEC (New England cottontail), EC (eastern cottontail).

Distribution of New England cottontail specimens collected in Connecticut from October 2000-June 2003.



Migratory Bird Surveys Provide Insight on Stopover Habitats

Written by J. T. Stokowski, Contracted Researcher for the DEP Wildlife Division

The spring of 2003 kicked off the second year of the DEP Wildlife Division's three-year Migratory Bird Stopover Habitat Project, which is being funded by the federal Wildlife Conservation and Restoration Program. The project parallels the previous Silvio O. Conte Stopover Habitat Surveys that were performed along the Connecticut River in New Hampshire, Vermont, Massachusetts and Connecticut. However, it also highlights additional areas in Connecticut along the Housatonic, Naugatuck, Thames and Connecticut (mid to lower) Rivers.

Little information exists on critical stopover habitats used by migrating birds. Loss of these critical habitats can result in greater distances between "refueling" stops for migrating birds, which can significantly increase their mortality. The Wildlife Division will use these surveys to help identify Connecticut's priority stopover sites and guide conservation efforts at state and local levels. Surveys began in late April and were finished in late June. The fall component of the project began in late August.

Interesting Observations

Some of the more interesting reports from volunteers conducting the 2003 spring surveys included yellow-throated and warbling vireos, screech and barred owls, black vulture, common raven and the following warblers: northern parula, cerulean, worm-eating, Tennessee, blackburnian, hooded, pine, bay-breasted and golden-winged. Volunteers had the opportunity to view more than just the birds on their survey routes. In addition to the thousands of birds recorded, there were also sightings of a flying squirrel gliding from tree to tree, a black phase gray squirrel scurrying along the forest floor and a black bear rustling through the brush in search of food.

A total of 41 sites were surveyed throughout the state, each consisting of 10 survey points. Surveys were conducted on six scheduled dates in the spring for a total of 246 surveys and 2,460 survey points. This gigantic task was tackled by a combination of approximately 41 volunteers and 11 members of the Wildlife Division staff. For such a small group to work so hard shows a unique dedication to conservation of wildlife and its habitat.

Volunteers Still Needed

Although the surveys have been a success thus far, many more volunteers are needed to conduct future surveys. On each of the scheduled days, volunteers are asked to make one visit to each of 10 points and conduct a 10-minute survey of all birds seen or heard at each point. The surveys require participants who are familiar with bird identification by sight and sound.

Once you are assigned to an area, a survey can be conducted by an individual or a small team. You may also choose to split up the surveys of one area between individual surveyors. Those that only have time to do a couple of surveys are also encouraged to take part and fill in for volunteers with other commitments. For more detailed information on this and other volunteer opportunities, please visit the DEP's Web site at www.dep.state.ct.us/burnatr/wildlife/geninfo/volunteer.htm or call J. T. Stokowski at 860-675-8130 (birdsurveys@po.state.ct.us).

P. J. FUSCO (3)

The northern parula warbler (above) and the pine warbler (below) were observed during the migratory bird surveys undertaken in the spring of 2003.

Although not a survey target bird, a black vulture was an interesting observation during the migratory bird surveys. Black vultures are not as common as turkey vultures in Connecticut.

Sickle-billed Shorebirds - The Curlews

Written by Paul Fusco, Wildlife Outreach Unit

The genus name *Numenius* roughly translates to "bills similar to the crescent moon," referring to the long, slender, down-curved bills that are found on all of the curlews. Bill size and shape are good features to use in identifying shorebirds, and the distinctive bills of the curlews set them apart from other shorebirds.

Curlews are open country birds that are typically found in shoreline, marsh, open grassland and tundra habitats. These medium to large-sized shorebirds are mottled brown and buff in color, with varying amounts of speckling and streaking. They have a short tail, long, pointed wings and medium length legs. The long, curved bill is used to probe into mud for small crabs and worms, and to grasp insect prey such as grasshoppers. Curlews will also eat berries.

Four species of curlews are normally found in North America. However, the Eskimo curlew is considered to be nearly, if not already, extinct. The bristle-thighed curlew is a Pacific bird that is found on the North American mainland only as a breeder in western Alaska. At other times of the year it may be found on oceanic islands throughout the South Pacific. The largest member of the family is the long-billed curlew, which breeds in meadows and pastures of the western mountain states. This species has been documented in Connecticut only as a rarity.

Whimbrel

The only regularly occurring curlew in Connecticut is the whimbrel, formerly known as the Hudsonian curlew. It is an uncommon migrant, passing through the state in spring on the way north, and in late summer and early fall on the way south. Whimbrels nest in arctic tundra regions and winter in coastal areas from the Carolinas south through Central and South America. Most Connecticut sightings of whimbrels are of south-bound birds along the shoreline. An occasional non-breeder may be found along the coast during summer. Migrants are not commonly seen inland.

Whimbrels are slightly grayer than most other curlews. They have dark brown crown stripes and bluish gray legs. Their upperparts are speckled and the underparts are pale, with dark streaking on the neck and upper breast. The wing lining is pale buff. Slightly smaller than a wood duck, these strong flyers may be seen flying in irregular lines or in V-shaped flocks, similar to geese. Whimbrels fly with their neck extended and legs trailing behind.

In Connecticut, whimbrels can be found foraging on intertidal mudflats, on beaches and in tidal marshes. Their main food consists of marine invertebrates, including fiddler crabs, snails and marine worms. In late summer, whimbrels staging for migration on the tundra and along the coast of the Canadian Maritime provinces will pack on fat reserves by consuming large amounts of berries, including crowberries and blueberries.

P. J. FUSCO (2)

The whimbrel is the only regularly occuring curlew in Connecticut. Juveniles (above) that move through in late summer have shorter bills than adults (right), and can be confused with the almost extinct Eskimo curlew.

Voice

The name curlew originates from the call that some members of the family have. The drawn out, plaintive "*kur-leeou*" call of the whimbrel may be heard during migration. A loud, rapid series of sharp, uniformly pitched "*pip, pip, pip, pip, pip*" calls may be heard as a whimbrel flies past an observer. Whimbrels also utter soft, musical whistling notes during the breeding season.

Significant Decline

Based on population trends and estimates from the United States Shorebird Conservation Plan, coordinated by Manomet Center for Conservation Sciences, whimbrels are considered to be in a significant population decline. The eastern (Hudson Bay) population has gone from an estimated 42,500 birds in 1972 to 17,000 in 2001. The western North American whimbrel population is more numerous, but it has also undergone a similar percentage decline in population since the 1970s.

Eskimo Curlew

Last recorded in Connecticut in 1889 from the Quinnipiac River tidal marsh, the Eskimo curlew was designated as endangered in its entire range in 1967, six years before the federal Endangered Species Act became official. It was once one of the most abundant birds in North America. During fall in the northeastern United States, Eskimo curlews were found in such immense flocks that they were said to darken the sky as they passed. They were brought to the edge of extinction during the days of market hunting in the late 1800s.

After first receiving protection by the Migratory Bird Conservation Treaty with Canada in 1916, recovery was then impeded by the loss of natural grassland habitat to agriculture. This habitat loss in the North American prairie region may have had an adverse effect on spring migrants by reducing the curlew's food source, mostly locusts and other grasshoppers, during this time of year.

Eskimo curlews had a migration path that was an epic feat, being both monstrous and perilous. From their wintering grounds in the pampas of Argentina, these strong flyers would cross the Andes mountains, continuing through Central America and then straight up the "gut" of the North American prairie. Their breeding destination was the grassy tundra of the Canadian Northwest Territories.

In late summer, huge flocks would stage in the Canadian Maritime provinces and sometimes as far south as Cape Cod in New England. There, they would feast on crowberries and blueberries before flying non-stop over open water, directly to South America, across the Amazon basin and arriving on the Argentinean pampas for the winter. Such a migration was fraught with dangers. If the birds did not pack on enough fat reserves in the fall, they could perish during the long flight over open water. Storms during the hurricane season were an imposing obstacle. When migrating flocks encountered large storms at sea, they were frequently blown in closer to the mainland. During the days of market hunting their migration paths would be lined with gunners as the birds migrated south and again as they made their way north.

It is thought that the flocks of birds that were seen by a weary Christopher Columbus, when his armada was a few days from reaching the shores of the New World in early October 1492, may have been Eskimo curlews flying over open water on their way to South America. After seeing flocks of migrating birds, Columbus knew he was close to finding land after spending months at sea.

Very similar in appearance to the whimbrel, the Eskimo curlew is distinctly smaller and has a proportionally smaller and shorter bill. The underside of its wings are cinnamon colored, while the whimbrel's wing linings are pale buff. Positive identification in the field can be extremely difficult. Both species migrate along the Northeast coast in fall. Juvenile whimbrels migrating in fall have shorter bills than adults and, when seen at a distance on a wide open mud flat, they can easily be mistaken for an Eskimo curlew. Great care should be exercised in any attempted identification of the possibly extinct Eskimo curlew. It is not known for certain if this smallest of the curlew species still exists, but even if it does, there is probably no more than a handful of individuals remaining.

The last positively documented occurrence of an Eskimo curlew was a bird that was shot in Barbados in 1963. Most sightings over the last century have been sporadic and have been of small numbers of birds, usually less than six. The exception was in 1981 at a site on the Texas coast, when a flock of 23 individuals was recorded.

In August 2002, on Martha's Vineyard in Massachusetts, two experienced birders reported seeing a single curlew that they studied at close range for about an hour. They noted physical characteristics, plumage detail and heard the bird call. No one else was there to see the bird and no pictures were taken, but what the birders described in detail could only have been an Eskimo curlew.

P. J. FUSCO

The long-billed curlew rarely occurs in Connecticut. It is fairly common in some western states.

Importance of Wetland Habitat

Most shorebirds have a migration route that is made up of a series of wetlands forming a chain. The loss of any wetland (or link in the chain) increases stress on the migrant shorebirds by forcing them to fly longer distances between links. As wetland habitat continues to be lost, more and more birds may be susceptible to the high energy demands of migrating and may succumb along their journey. Also, large concentrations of shorebirds that gather in remaining wetlands are more vulnerable to catastrophic losses from disease outbreaks or other events such as oil spills and severe storms. Protection and restoration of wetland habitat is critical for the conservation of shorebirds. Many of the habitat management projects and wetland restoration projects undertaken by the Wildlife Division benefit shorebirds as well as many other species that depend on wetlands for survival.

Be on the Lookout for Canada Geese with Yellow Collars

Written by Min T. Huang, Migratory Gamebird Program

In late June and early July, the DEP Wildlife Division continued field work associated with a four-year study to assess Connecticut's growing resident Canada goose population. Resident geese are defined as geese that were hatched or nest in the lower 48 states, or in Canada below 48° latitude, excluding New Foundland.

In Connecticut, Canada geese were not present as summer inhabitants until the early 1920s. At that time, a winter feeding program in Litchfield attracted migrant geese, which eventually stayed for the breeding season and became a population of approximately 80 birds. In the 1960s, a small breeding population was established at Charter Marsh, in Tolland. Additionally, adults and goslings were transplanted from New Jersey and other states and placed throughout eastern Connecticut.

Over the past 15 years, human activity patterns have created excellent goose habitat throughout the state. As a result, the resident goose population has doubled in the past 10 years. With this population expansion has come an increase in nuisance, damage and health complaints and concerns. The feeding of geese in both urban and rural settings has substantially contributed to nuisance problems. In Connecticut, resident geese have negatively impacted both property and agricultural interests. High densities of geese in urban settings have led to conflicts with humans at parks, beaches, golf courses, athletic fields and residential lawns.

K. HERZ

This resident Canada goose wearing a yellow neck collar was observed in August 2003 at the beach parking lot at Rocky Neck State Park.

An important tool for managing overabundant resident goose populations in the state is the establishment of special regulated hunting seasons. These seasons (September and late January through early February) are specifically timed to occur when migrant geese are not present in large numbers. Assessment of the efficacy of sport hunting to reduce goose-human conflicts is paramount in ultimately achieving the proper balance between goose numbers and human tolerance.

A part of the current research project involves an assessment of movement patterns and survival rates of resident birds. To acquire this information, Wildlife Division staff and volunteers have captured geese throughout the state for the past two summers and fitted the birds with individually coded, plastic neck collars and metal leg bands. These fixtures cause no harm to the birds and allow biologists to assess movement patterns, survival rates and population size.

In 2003, 1,507 geese were captured at 43 different sites. Yellow neck collars were placed on 500 geese, with approximately 60 collars put out in each of the eight counties. Geese were caught during the annual flightless period. Canada geese, like all waterfowl, undergo an annual wing feather molt when they shed all their flight feathers. During the period of regrowth, which lasts approximately four weeks, the birds lose the ability to fly. Geese were corralled into a portable net and then aged, sexed and fitted with collars and legbands.

Subsequent sightings of the collared birds will provide valuable information on movement patterns. The data will be used in a Geographical Information System to analyze landscape attributes and other human influences that might attract geese to particular areas. Some interesting patterns have already been detected from the first year of neck-collaring. For instance, it appears that birds banded in the

L. ROGERS-CASTRO

Migratory Bird Program biologist Min Huang (left) and research assistant Orla Molloy (in kayak) work together to push a flock of Canada geese toward a net trap and a group of goose banding helpers and volunteers on the shore.

northeastern part of the state tend to travel to the southwestern part of the state during winter. Why do these birds travel farther to the southwestern corner of the state, rather than traveling half that distance to the southeastern corner? It has also been noted that hatch year birds (juveniles born that year) often leave their natal area and fly 40 to 50 miles to take up residence elsewhere in the state. Why do these birds leave their natal area as soon as they can fly? These and other questions will hopefully be answered by the time our research is completed. This research project will allow the Wildlife Division to formulate innovative management strategies to better alleviate some of the current nuisance problems.

Anyone seeing geese with yellow neck collars is urged to report sightings to the Division's Migratory Bird Program at 860-642-7239 or min.huang@po.state.ct.us. The information needed includes: the individual collar codes, number of collared birds present, number of uncollared birds present, and the location and date.

Record Harvest for the 2003 Spring Turkey Season

Written by Michael Gregonis, Deer/Turkey Program

Connecticut spring wild turkey hunters reported harvesting 2,367 birds, which is the highest spring harvest since turkey hunting began in 1981. The challenge of harvesting a wild turkey has lured both residents and nonresidents (from Florida, Montana, California, Texas, all New England states and Canada) to take advantage of the opportunities that exist in our state.

The 2003 spring wild turkey season harvest was an increase of 25% from 2002 (1,894) and an increase of 15% from the past record harvest of 2,067 in 2001. A total of 7,601 turkey hunting permits were issued, with 1,562 hunters harvesting at least one bird. Approximately one in five hunters that received a spring turkey hunting permit harvested at least one bird. The higher 2003 harvest was primarily attributed to the increase in bag limit (1 additional bird) and season length (4 additional days).

At least one turkey was harvested from state or private land in 155 of 169 (91%) Connecticut towns, with Lebanon reporting the highest harvest at 76 birds, followed by Woodstock (48) and Sharon (46). State land turkey hunters reported the highest harvest in Cockaponset State Forest (43) and Naugatuck State Forest (20). Highest harvest levels were consistent with areas of Connecticut that contain the best quality turkey habitat. Private land hunters accounted for 90% of the total harvest (2,121) and 77% of the permit issuance (5,870). The harvest consisted of 649 jakes (young males), 1,698 toms and 20 bearded hens.

In general, the highest harvest occurs on opening day and on Saturdays. The 2003 spring season was no exception as 21% (504) of the total harvest occurred on the first day of the season and 23% (544) occurred on the four Saturdays during the season. This is to be expected because opening day and Saturdays are when the majority of hunters have time off and are able to enjoy recreational pursuits. Although the majority of wild turkeys are harvested during the early portion of the season, a significant number of birds are still available throughout the entire season.

Youth Turkey Hunting Day

In an effort to provide a quality turkey hunting experience for Connecticut's junior hunters (ages 12 to 15), the first youth wild turkey hunting day took place on Saturday, May 3. Participants harvested 13 turkeys. This special day was well received as participants and mentors had many positive comments on the spring hunter surveys. Youth turkey hunting day is expected to become more popular in the future as more people become aware of this unique opportunity.

P. J. FUSCO

Connecticut spring wild turkey hunters reported harvesting 2,367 birds, which is the highest spring harvest since turkey hunting began in 1981.

Get Ready for the 2003 Hunting Season

White-tailed Deer Season

Connecticut's deer population is healthy and harvest rates are expected to be high during the 2003 deer hunting season. Aside from the size of the deer herd, the abundance of acorns and weather conditions during the hunting season are variables that will influence hunter success. For example, heavy rains on the first Friday and Saturday of the 2002 shotgun/rifle season resulted in a significant decrease in the harvest on those days. An abundant acorn crop this year will reduce deer movements, decreasing vulnerability to hunters.

Since 1995, a replacement antlerless tag system has been used to increase the harvest of antlerless deer in specific areas of the state where deer populations are growing. During the 2003 season, hunters who harvest an antlerless deer on private land and have permission to hunt on private land in deer management zones 11 and 12 (see the 2003 Connecticut Hunting and Trapping Guide) will be eligible to obtain a free replacement antlerless tag. In 2003, replacement tags will be available for use during the shotgun/rifle, archery and muzzleloader deer hunting seasons. A limited number of replacement antlerless tags will be available at designated vendor locations on a first-come, first-serve basis. Bowhunters who harvest a deer are still required to submit a kill report card at the vendor location where the replacement tag is obtained. The replacement tag program has resulted in an increased harvest of female deer in southwestern Connecticut and in many Connecticut shoreline towns.

Hunters are reminded that bowhunting is permitted during the shotgun/rifle deer season only in designated deer bowhunting areas and on private lands in deer management zones 11 and 12. On private land in zones 11 and 12, bowhunters can also hunt deer during January.

2003 will be the fifth consecutive year that the antlerless only deer tag on private land shotgun/rifle and muzzleloader permits will NOT be valid in deer management zone **4A**. Antlerless tags will be valid in deer management zone **4B**.

To be able to purchase an archery permit in 2003, all bowhunters are required to have either a bowhunter safety certificate or have purchased an archery permit in 2002.

P. J. FUSCO

Waterfowlers will have numerous opportunities to hunt Canada geese during a variety of open seasons. Bag limits have been liberalized in the September early season.

Wild Turkey Season

The 2003 fall turkey harvest is expected to exceed last year's harvest because hunter numbers continue to increase for all fall turkey seasons and Connecticut maintains a healthy statewide turkey population. Due to the wet spring of 2003, hunters should expect to observe less juvenile birds in local flocks; however adult birds remain abundant.

This fall, turkey hunters should concentrate their efforts on oak ridges, cut cornfields and forest openings. Acorns are a major fall food source for wild turkeys and, where available, turkeys will spend much time searching the forest floor for acorns. Turkeys also can be found feeding on spilled silage corn and on wild grapes and bittersweet growing along field edges and in forest openings. Hunters should scout several areas, prior to the seasons, to locate signs of scratching, feathers and droppings to determine whether turkeys are present. By scouting multiple locations, hunters can maximize their efforts and minimize hunter interference.

The fall bowhunting and firearms seasons start on September 15 and October 18, respectively. During the bowhunting season, the bag limit is two birds of either-sex taken on either state or private land. During the firearms season, the bag limit is one bird of either-sex on state land and two birds of either-sex on private land. In addition, during the firearms season, hunters may obtain only one permit type for either private land or state land. Connecticut continues to offer excellent opportunities for hunters to harvest a wild turkey during fall and new turkey hunters are encouraged to take advantage of this unique challenge.

Migratory Game Bird Seasons

September Canada Goose Season: This special season will be held in the North Zone (portion of the state north of Interstate 95) from September 2-30, 2003. The South Zone (portion of the state south of Interstate 95) season will run from September 17-30, 2003. The daily bag limit is eight geese. The September season provides the opportunity to harvest resident Canada geese. Connecticut's growing resident goose population continues to cause substantial nuisance problems. While the September season helps address a growing management need, hunters should recognize that some citizens are not aware of the early season. The DEP urges hunters to be judicious in selecting hunting sites and to be respectful to others who will be outdoors during this season.

Regular and Late Canada Goose Seasons: As was the case in 2002-2003, the North Atlantic Population (NAP) hunt zone for Canada geese is split into two zones—the NAP L-Unit, and the NAP H-Unit—based on differences in

the proportion of resident to migrant geese between the two areas. These zones were created to exert more harvest pressure on resident geese in areas (primarily southwestern Connecticut) where there have been persistent nuisance problems. The seasons for these two units are identical to last year; a 70-day season with a three-bird daily bag in the NAP-L unit and a 60-day season with a two-bird daily bag in the NAP-H unit.

The Atlantic Population (AP) of Canada geese continues to recover. Breeding pair estimates were 159,000, slightly below last year's estimate, but nearing the objectives for this population. Production in 2003 was average, so a good fall flight of AP breeding geese is forecast. The season will be as it was last year, 45 days, with a two-bird bag limit.

Sportsmen also will have the opportunity to harvest resident Canada geese during the special late season (in the south zone only) from January 15 through February 14, 2004. No special permit is required for this season.

Specific details on the Canada goose season dates and bag limits can be found in the 2003-2004 Migratory Bird Hunting Guide, available at town halls, certain DEP offices and the DEP Web site, www.dep.state.ct.us.

Ducks, Mergansers and Coots: There are few changes in the duck season frameworks this year. One change from 2002-2003 is the allowance of a 30-day season on canvasbacks. The daily bag limit for canvasbacks will be one, and the season will run from Dec. 8, 2003-Jan. 10, 2004, in the north zone and from Dec. 22, 2003-Jan. 24, 2004, in the south zone. Black duck populations continue to show stability, and one black duck will be allowed during the early season in both zones. Specific details on waterfowl season dates and bag limits can be found in the 2003-2004 Migratory Bird Hunting Guide.

Sportsmen pursuing woodcock are reminded that the woodcock season runs from October 25 to November 22, 2003. The rail season is from September 2 to November 1.

A Few Reminders: All waterfowl hunters are reminded that, in addition to obtaining a hunting license, they are required to purchase a federal Duck Stamp, a Connecticut Duck Stamp and an annual Harvest Information Program (HIP) permit. Federal Duck Stamps are available from certain post offices for $15.00. State Duck Stamps ($5.00) and HIP permits ($2.00) can be purchased at all Connecticut town halls. A HIP permit is also required to hunt woodcock, snipe, coot and rails.

Hunters are reminded to report waterfowl bands. Band returns provide vital information for the continued sound management of the waterfowl resource. Additionally, the Wildlife Division has begun a four-year resident Canada goose study. Anyone observing geese with yellow neck collars is urged to call 860-642-7239 with the location and individual collar code information (see page 12 for more information).

Small Game and Upland Bird Seasons

Opening day for most small game hunting will be Saturday, October 18. The DEP will purchase 17,625 adult pheasants for the upcoming fall season, a 1,310-bird decrease from the previous year's purchase. In addition, 1,050 eight-week-old pheasants were purchased and delivered to Norwich Fish and Game and Sprague Rod and Gun Clubs for eventual release on permit-required hunting areas. The budget available for the program was reduced by nearly $13,000, based upon a continued decline in license and tag sales to pheasant hunters. Because the Pheasant Program budget is determined by the net revenue collected in the previous year, any additional funds derived from the 40% increase in tag and license fees will not be available as a basis for the pheasant purchase until the 2004 season.

A number of changes will be implemented this fall. Pheasant stocking routes have been adjusted to compensate for the loss of field support due to staff reductions and budget constraints. Twenty lower

continued on next page

Attention Rabbit Hunters

The Wildlife Division encourages all rabbit hunters to support an ongoing research project documenting the distribution of New England cottontails in Connecticut. Hunters can participate by dropping off frozen rabbit heads at the Wildlife Division's Franklin (860-642-7239) or Sessions Woods (860-675-8130) offices, or by calling these offices for assistance. Information on the location (road and town), collection date, collector's name and contact phone number must accompany all rabbit specimens (see page 8 for more details).

P. J. FUSCO

Pheasant hunters can head to the field starting Saturday, October 18. Hunters should note that adjustments will be made to the pheasant stocking routes.

2003 Hunting Season,

continued from previous page

quality/lower public use areas will not be stocked in an effort to maintain or increase pheasant allocations for the remaining 50 areas, which will continue to be stocked at the same frequency throughout the seven-week distribution period. The DEP will be increasing the use of volunteers for Friday evening releases. Cooperative sportsmen's clubs that provide public hunting access to permit-required hunting areas have also been asked to recruit volunteers to stock state-purchased birds on those areas. Provisions will also be made to stock a number of major hunting areas on Saturday mornings. The following areas will not be stocked during the upcoming 2003 fall season:

Eastern District – Assekonk Swamp, Bolton Permit–Required, Mansfield State Leased (Chaplin section only), Nye Holman State Forest, Shenipsit State Forest, Tolland State Leased, Waldo Tract and Wopowog WMA. The Glastonbury Permit-Required Area has been closed to public hunting access at the request of the participating club and will not be stocked.

Western District – BHC State Leased, Black Rock Dam, East Swamp Permit-Required, Great Swamp Flood Control, J. Minetto State Park, Pequonnock Valley Permit-Required, Pootatuck State Forest, Sunnybrook State Park, Whiting River Flood Control, Wickwire State Leased, Wood Creek Flood Control and Wyantenock State Forest.

A complete listing of all major stocking areas is on the DEP Web site. Pheasant tags ($14 for 10 tags) can be purchased at town halls or at DEP's License and Revenue office, at 79 Elm Street, in Hartford.

2003 Junior Hunter Training Days

Regulations adopted in December 2002 established days for youth hunting in Connecticut. On these days, licensed junior hunters (ages 12 to 15) may hunt when accompanied by a licensed adult hunter 18 years of age or older. The adult mentor may not carry a firearm. The training days provide junior hunters with an opportunity to learn safe and effective hunting practices from experienced hunters.

Junior Pheasant Hunter Training Day--Saturday, October 11, 2003

Private lands only: Licensed junior hunters must have valid pheasant harvest tags. Harvest tags must be used except when hunting as members of a registered private hunting club with a pheasant tagging exception.

Junior Waterfowl Hunter Training Day--Saturday, November 8

Participants must possess a valid junior small game hunting license and a HIP permit. Ducks, geese, mergansers and coots may be hunted. Bag limits and shooting hours are the same as for the regular duck and goose hunting seasons

Junior Deer Hunter Training Day--Saturday, November 15, 2003

Private land: Licensed junior hunters must have a valid private land shotgun/rifle deer permit and written consent from the landowner. Adult mentors must have a deer permit and written consent from the landowner. Harvested deer must be brought to a deer check station.

State land: Licensed junior hunters must have an appropriate state land shotgun deer permit for the area. Adult mentors must have a valid deer permit. Harvested deer must be brought to a deer check station.

Wild Turkey Hunting Seminar, Sunday, October 5, 2003

Join DEP wildlife biologist Michael Gregonis and Conservation Education/Firearms Safety Program senior instructors Gary Bennett, Ray Hanley and Dave Sanford in an informative seminar about how to hunt the wild turkey in the fall season. Specific techniques and safety considerations will be discussed in full. Bring the shotgun and ammunition that you plan to use in your hunt. There will be an opportunity to pattern your gun.

The seminar will be held at the Sessions Woods Conservation Education Center, in Burlington, from 8:30 AM-2:00 PM. Call the Wildlife Division's Sessions Woods office (860-675-8130) between 8:30 AM and 4:00 PM, Monday through Friday, to register.

Conservation Education/Firearms Safety courses on firearms, bowhunting and trapping are offered year-round. To find a course near you, call 860-675-8130 or 860-642-7239, or visit the DEP's Web site at www.dep.state.ct.us.

National Hunting and Fishing Day 2003

On September 27, 2003, National Hunting and Fishing Day (NHF Day) will be celebrated in Connecticut and throughout the nation. NHF Day was established to recognize generations of hunters and anglers for the time and money they have donated to wildlife conservation programs—to date totaling over $2.2 billion and uncounted hours of work on habitat improvement and other projects. In Connecticut, sportsmen's hunting and fishing licenses, permit fees and excise taxes on equipment contribute $6.3 million annually to the conservation and management of the state's fisheries and wildlife resources. Sportsmen-financed programs have led to the dramatic comeback of many fish and wildlife species and the protection and management of their habitats.

Hunters and anglers today provide more than 75 percent of the funding for state fish and wildlife agencies. During the past century, sportsmen have also worked countless hours to protect and improve millions of acres of vital wildlife habitat—lands also available for the use and enjoyment of everyone.

To learn more about NHF Day and possible events in your area, visit www.nhfday.org.

East River Marsh Restoration,
continued from page 5

through the fall, decreased in winter and increased again during spring. These results indicate that East River Marsh is an important staging area for migratory water birds.

The constructed ponds were used significantly more by all guilds of birds than in the 1999 assessment. Waterfowl, shorebirds and wading birds were observed using the constructed ponds 76%, 57% and 75% of the time, respectively. It is presumed that after three years, the ponds and pannes had time to mature and establish a more diverse community structure that is more attractive to the birds.

Fishing for Clues

Fish and invertebrates are also an integral component of a healthy estuarine ecosystem. The WHAMM Program does not stock any of its restored systems. Rather, fish and other aquatic organisms (including plants) naturally find their way into the ponds following tidal flooding events. Over time, populations of these organisms will become established with some individuals moving in to and out of the ponds during flooding.

In 2000 and 2001, a study was done by WHAMM Program biologists to assess fish and invertebrate abundance in the created ponds and plugged ditches as compared to control sites, including the pond created in 1960. Sampling was done using minnow traps and sweep nets. A total of 2,184 individuals comprising 10 different species were observed using the ponds, with mummichogs, striped killifish, sheepshead minnows and brackish grass shrimp comprising 95% of the total catch in both the created ponds and the control pond. This demonstrated similar species assemblages in the treatment and control sites. Mummichogs and blue crabs were present in all sites, with other species being present to a lesser extent. Northern diamondback terrapins were present in five of the 15 constructed ponds but not in the control pond. The data also give an indication of the species diversity in the ponds. The control pond had eight of the 10 possible species in it, while 11 of the 15 treatment ponds had five or more species, demonstrating that within two years of completion, the ponds are showing signs of establishing viable aquatic communities.

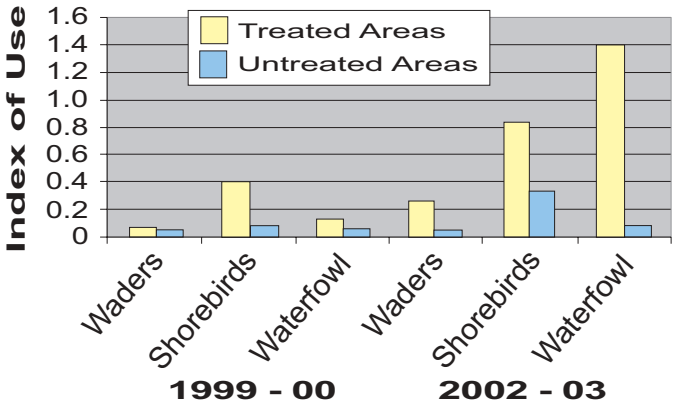

R. WOLFE

The East River Marsh prior to implementing IMM. Grid ditching for mosquito control in the 1920s left tidal salt marshes drained and devoid of surface water, which in turn degraded wildlife habitat. Note Haines Pond that was hand dug in 1960.

Monitoring Will Continue

A final assessment of the wildlife use of East River Marsh will be undertaken in 2005-2006 to see if pond maturation results in an increase in species diversity and numbers. The WHAMM Program will continue to monitor the East River Marsh Restoration Project and other similar projects to get a better understanding of how coastal ecosystems, and the wildlife communities that rely on them, respond to various management techniques. Based on the positive results to date of the East River project and past similar projects, the WHAMM Program will continue its steady and methodic implementation of IMM throughout the tidal wetlands of Long Island Sound.

Assessment of bird use of treated and untreated areas at East River Marsh in Guilford, CT

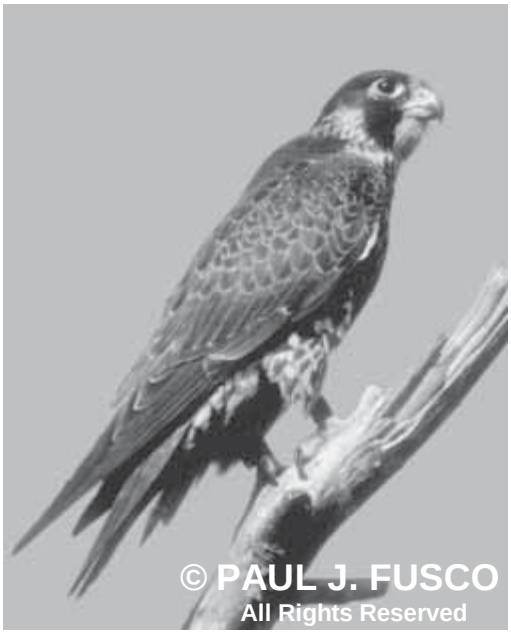


P. J. FUSCO

Migrating shorebirds, including greater yellowlegs, are using the restored wetlands at East River Marsh with increased frequency.

FROM THE FIELD

P. J. FUSCO



Mishap for a Milford Peregrine Chick

A pair of peregrine falcons that nested at the NRG power plant in Milford successfully reared three chicks this past summer (see the July/August 2003 issue). Tom Nurse from NRG has kept a careful watch over the adults and the new chicks during the nesting season and also once the young birds started flying.

Shortly after the chicks left the nest box, Tom could easily locate the two male chicks, but could not find the female. A couple of days later, he observed a chick sitting on the rim of a smoke stack that was no longer in operation. The chick was having trouble keeping its balance. That's when Tom decided to check inside the stack through a door at the bottom. Sitting on the door frame was the female chick, raggedy, but alive. Once free, the female started screaming and flew back to the nest box, staying there for the rest of the week, sleeping and yelling for food. Tom noticed that her eyes looked crusty, possibly because she got ash in them, and that her center tail feather was broken. After a week, the female started flying around more, but she wasn't able to keep up with her siblings. Fortunately, the tail feather finally filled out and she was able to keep up with the others. Now, she can't be mistaken when she's flying as she has a split tail.

Through his observations, Tom was able to read the leg band number on the adult male peregrine that nested at NRG. The number identified the male as a bird that hatched in 2002 and was banded in Cape May, New Jersey.

Freshwater Mussel Guide Available

The Wildlife Conservation and Restoration Program funding received by the DEP Wildlife Division allowed many new conservation projects to be undertaken (see the July/August 2001 issue). One project was to develop an identification guide to Connecticut's freshwater mussels as a tool to aid individuals with mussel identification. Geared toward high school students, *A Field Guide to the Freshwater Mussels of Connecticut* will be distributed during the 2003-2004 school year to interested high schools. Prepared by Ethan Nedeau, an aquatic entomologist and graphic designer, this field guide highlights life cycle information, identification tips and searching techniques, and it has excellent color photographs of all the native mussel species.

The Wildlife Division is interested in freshwater mussels because six out of the 12 native species are listed as endangered, threatened or special concern in Connecticut--which is a strong message that this species group is in trouble. The Division doesn't have a clear picture of the distribution of these animals in the state and would like the help of interested citizens to fill the inventory gaps, hence the guide. If you are interested in searching for freshwater mussels, or if you spend time in streams or rivers or just want to learn more about mussels, you may request a copy of the guide. Send a postcard with your name and address to the Wildlife Division's Franklin office (391 Route 32, North Franklin, CT 06254; no phone calls please). If you are a certified scuba diver that may be interested in helping the Division with mussel identification in deeper rivers, please contact Wildlife Division biologist Julie Victoria, also at the Franklin office.

Not interested in getting your feet wet? There are still things that you can do to help freshwater mussels:

- Be careful in your use of pesticides, fertilizers and other chemicals. Remember that what you put on the land will eventually end up in our rivers.
- Leave vegetated buffer strips along the water's edge when developing and managing a property.
- Keep livestock out of streams.
- Get involved in the local watershed group or river watch program.
- Boat owners can slow down the spread of non-native zebra mussels by inspecting trailer frames and boat hulls, removing aquatic weeds, draining all water from boats and washing boats with clean water.

Connecticut Forest Centennial Celebration: October 4, 2003

This year Connecticut's State Forest System is 100 years old--and, the DEP Division of Forestry and Connecticut Forest and Park Association (CFPA) are having a birthday celebration! The first 70 acres of state forest land was purchased in Portland in 1903. Since then, a century has passed and more than 150,000 acres have been added to create 30 state forests.

Mark the date of Saturday, October 4, 2003, on your calendar and bring your family and friends to Peoples State Forest in Barkhamsted to join the DEP Division of Forestry and CFPA for a family forestry field day. There will be a host of forest-theme activities: food, booths, fly-fishing demonstrations, kayaking demonstrations, field trips, slide shows, workshops, hikes, tours, talks, music and more.

The fun starts at 8:30 AM! Come and celebrate 100 years of your state forests and 100 years of forestry in Connecticut. For more information about the celebration, contact the DEP Division of Forestry, at 860-424-3630.

Art from CT Forests

The DEP continues its year-long celebration of the Connecticut Forest Centennial with the kickoff of a new project: **Art from Connecticut Forests**. This statewide artisan project will demonstrate that a tree can be twice beautiful--by highlighting the amazing diversity of art forms that can be created from a tree. The DEP has arranged for over 30 Connecticut artisans to work their creative magic with wood harvested from a century old white oak tree. Virtually every part of the tree (from branches to bark, lumber, roots, sawdust and even ash) will be incorporated into a host of objects of beauty and grace, including furniture, sculpture, paper and more.

Artists, foresters and guests gathered at Meshomasic State Forest in Portland on September 4 to witness the harvest of the ceremonial Centennial Oak. In addition to the significance of the age of this tree (approximately 100 years), this white oak was selected for harvest in keeping with the traditional Connecticut forest management goal of working with nature to create a healthier, more vigorous forest. The chosen tree was beginning to die back, had rot at its base and was not of the best quality. State foresters judged that harvesting the tree will promote growth of other trees in the immediate area.

The artists will work over the next several months to create their pieces, with exhibits beginning in July 2004. Half of the proceeds from the artwork will go to DEP environmental programs. Exhibitions are planned for Hartford, New Haven, New London, Greenwich, New Milford and Derby.

Wildlife Calendar Reminders

Sept. ..... 2003 pheasant tags available from town clerks' offices ($14.00 for 10 tags).

Sept. 1-30 ..... Early squirrel hunting season.

Sept. 2-30 ..... September goose season in the north zone

Sept. 15-Nov. 18 ... First portion of archery deer and turkey hunting seasons.

Sept. 17-30 ..... September goose season in the south zone

Sept. 27 ..... National Hunting and Fishing Day (see page 16 for more information).

Sept. 28 ..... **Halloween in September**, starting at 1:00 PM, at the Sessions Woods Conservation Education Center, in Burlington. Bats, spiders and fun will be the agenda at Sessions Woods on the last Sunday of September. Wildlife Division biologist Kathy Herz will present an informative program on bats and live spiders will be displayed, showing the diversity of these animals in Connecticut. Children are welcome to bob for apples and try eating a donut on a string. Costumes are encouraged! Call (860) 675-8130 to preregister.

Sept. 30 ..... Report use of bat houses to the DEP Wildlife Division. Call (860) 675-8130 for more information.

Oct. 4 ..... **Forest Centennial Celebration** at Peoples State Forest in Barkhamsted (see page 18 for more information).

Oct. 5 ..... **Wild Turkey Hunting Seminar**, at the Sessions Woods Conservation Education Center (see page 16 for more information).

Oct. 8 ..... Early duck seasons begin (Consult the 2003-2004 Migratory Bird Hunting Guide, available at DEP offices, town halls and at the DEP Web site: www.dep.state.ct.us).

Oct. 11 ..... Junior Pheasant Hunter Training Day (see page 16 for more information).

Oct. 11 ..... **Discover Tunxis State Forest**, from 8:30 AM-2:00 PM, at Tunxis State Forest, in East Hartland. This 5 1/2-hour, 5.4-mile day hike, led by DEP forester David Irvin on Tunxis Mainline Trail, includes interpretive stops to discuss tree identification, forestry practices and forest wildlife. Due to length of the hike and rough terrain, this hike is recommended for **advanced** level hikers in good physical condition. Wear comfortable and appropriate footwear and expect to get your feet wet. Bring lunch/snacks and plenty of drinking water. Carpooling is essential for this program. Call 860-379-7085 (day) or 860-675-4985 (evening) for more information and to preregister.

Oct. 18 ..... Small game hunting season opens.

Oct. 18-Nov. 1 ..... Fall firearms turkey hunting season.

Oct. 19 ..... **Tree ID Workshop**, starting at 1:30 PM, at the Sessions Woods Conservation Education Center, in Burlington. Don't know a maple from a pine? Or, maybe you want to learn more about trees. Take a leisurely hike along the trails with DEP forester David Irvin and learn how to identify native trees found at Sessions Woods. Total length of walking estimated at 1.7 miles, all on gravel roads and designated hiking trails. For beginning to intermediate hikers. Wear suitable footwear and dress for the weather. Only heavy rain cancels. Call 860-675-8130 to preregister.

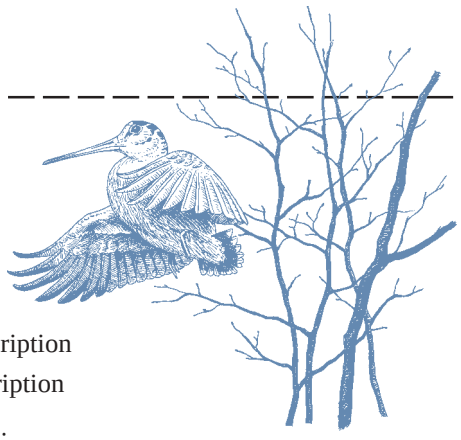
Oct. 25-Nov. 22 .... Woodcock and snipe hunting season.

Nov. 1 ..... Trapping season opens (except for beaver trapping season which begins on Dec. 1).

Nov. 8 ..... Junior Waterfowl Hunter Training Day (see page 16 for more information).

Nov. 15 ..... Junior Deer Hunter Training Day (see page 16 for more information).

Nov. 18 ..... **Flying Squirrels and Nocturnal Creature Walk**, starting at 7:00 PM, at the Sessions Woods Conservation Education Center, in Burlington. Flying squirrels are a common neighbor for most people who live in Connecticut. Yet, they are usually overlooked because they are only active at night. DEP Wildlife Division research contractor James Fischer will tell you how these animals live in Connecticut's forests. A short walk to search for nighttime creatures will follow his presentation, so bring a flashlight and keen eye. (0.5-mile walk, dress for the weather) Call (860) 675-8130 to preregister.



P. J. FUSCO

Aerial survey results from January through March 2003 indicated that Connecticut's deer population is relatively stable, with an estimated winter population of 75,771 deer (see page 6 for more details).

Bureau of Natural Resources / Wildlife Division
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