

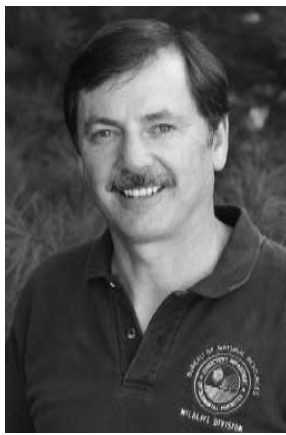
January/February 2008

Connecticut Wildlife

PUBLISHED BY THE CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF NATURAL RESOURCES • WILDLIFE DIVISION



From the Director



By law, Connecticut's wildlife is owned by the citizens of the state and held in the public's trust by the Department of Environmental Protection. The DEP pursues its goal of maintaining healthy populations of native species under laws passed by the General Assembly and through regulations and policies developed by the agency. For example, laws and regulations allow for the regulated use of certain wildlife by hunters and trappers while sustaining healthy populations of these species over the long-term. Other laws and regulations provide protection for endangered and threatened species.

The fact that more than three million people live within our small state's borders complicates things immensely. The checks and balances that regulate natural ecosystems have been severely compromised by human activity. Therefore, actively managing to achieve a balance between wildlife, habitats, and people is a necessity, not an option. Simply "letting nature take its course" would favor the adaptable and invasive species at the expense of the vulnerable and specialized ones. We would still have wildlife, but not the diversity.

Active management involves decision making. Most people have strong opinions about wildlife and, with few exceptions, the agency seldom addresses an issue with unanimous public support for one course of action. One of the Wildlife Division's key roles is to conduct surveys, research, and assessments so that decisions can be science-based. The citizens of Connecticut are fortunate to have a dedicated staff of experienced professionals at the DEP who are committed to sustaining the state's biodiversity. We appreciate the public's support and interest in our work. This issue of Connecticut Wildlife briefly summarizes some of the activities we have been involved with over the past year.

In closing, I would like to emphasize the critical importance of private land stewardship. The future of many declining species of "our" wildlife depends upon wise conservation planning and the efforts and willingness of private landowners to maintain important habitats. Over the past three years, the Wildlife Division has developed a successful Landowner Incentive Program (LIP) that uses federal funds and private match to improve habitats on private lands. The fact that no money was allocated in this year's federal budget for LIP is a setback for all states, particularly for those like Connecticut that have little public land. If wildlife are to have a future in Connecticut, LIP or incentive-based programs like it will be essential to encourage land use decisions that are beneficial for wildlife.

Dale W. May

Cover:

A bear cub peers out of its winter den at Wildlife Division biologists who have just finished checking its mother's weight and health, as well as the weight, health, and sex of the cub and its litter mates.

Photo by Paul J. Fusco

Connecticut Wildlife

Published bimonthly by
State of Connecticut
Department of Environmental Protection
 www.ct.gov/dep

Gina McCarthy..... Commissioner
 Edward C. Parker..... Chief, Bureau of Natural Resources

Wildlife Division

79 Elm Street, Hartford, CT 06106-5127 (860-424-3011)

Dale May Director
 Greg Chasko Assistant Director
 Mark Clavette Recreation Management Supervising Biologist
 Laurie Fortin Recreation Management Biologist
 Elaine Hinsch Program Specialist
 Brenda Marquez Secretary
 Shana Scribner Office Assistant
 Chris Vann Technical Assistance Biologist
 Kenneth Metzler..... Natural History Survey
 Dawn McKay Natural History Survey
 Nancy Murray Natural History Survey
 Karen Zyko Natural History Survey

Eastern District Area Headquarters

209 Hebron Road, Marlborough, CT 06447 (860-295-9523)

Robin Blum Habitat Management Program Technician
 Ann Kilpatrick Eastern District Biologist
 Carrie Pomfrey Habitat Management Program Technician
 Paul Rothbart District Supervising Biologist
 Jane Seymour Belding WMA Steward
 Judy Wilson Private Lands Habitat Biologist

Franklin W.M.A.

391 Route 32, N. Franklin, CT 06254 (860-642-7239)

Charles Bruckerhoff EP Safety Representative
 Paul Capotosto Wetlands Restoration Biologist
 Michael Gregonis Deer/Turkey Program Biologist
 Min Huang Migratory Bird Program Biologist
 Howard Kilpatrick Deer/Turkey Program Biologist
 Kelly Kubik Migratory Bird Program Technician
 Andy LaBonte Deer Program Technician
 Heather Overturf Office Assistant
 Winnie Reid Secretary
 Julie Victoria Wildlife Diversity Program Biologist
 Roger Wolfe Mosquito Management Coordinator

Sessions Woods W.M.A.

P.O. Box 1550, Burlington, CT 06013 (860-675-8130)

Trish Cernik Secretary
 Jenny Dickson Wildlife Diversity Program Biologist
 Peter Good Supervising Wildlife Biologist
 Jason Hawley Furbearer Program Technician
 Shannon Kearney-McGee Wildlife Diversity Program Technician
 Christina Kocer Wildlife Diversity Program Technician
 Geoffrey Krukar Wildlife Diversity Program Technician
 Dave Kubas CE/FS Program Coordinator
 Peter Picone Western District Biologist
 Kate Moran Wildlife Diversity Program Technician
 Paul Rego Furbearer Program Biologist
 James Koert Riley District Maintainer
 Laura Rogers-Castro Natural Resource Educator
 Laura Saucier Wildlife Diversity Program Technician
 Jim Warner Facilities Manager

Connecticut Wildlife

Kathy Herz Editor
 Paul Fusco Media Designer/Photographer

Wetlands Habitat & Mosquito Management Crew

51 Mill Road, Madison, CT 06443

Steven Rosa Mosquito Control Specialist
 Daniel Shaw Mosquito Control Specialist



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.



The Department of Environmental Protection is an affirmative action/equal opportunity employer, providing programs and services in a fair and impartial manner. In conformance with the Americans with Disabilities Act, DEP makes every effort to provide equally effective services for persons with disabilities. Individuals with disabilities needing auxiliary aids or services, or for more information by voice or TTY/TDD, call 860-424-3000.

The Wildlife Division grants permission to reprint text, **not artwork**, provided the DEP Wildlife Division is credited. Artwork printed in this publication is copyrighted by the CT DEP Wildlife Division. Any unauthorized use of this artwork is prohibited. Please contact the editor at the Sessions Woods office to obtain permission for reprinting articles.

The Year in Review 2007

CONNECTICUT DEPARTMENT OF ENVIRONMENTAL PROTECTION - BUREAU OF NATURAL RESOURCES - WILDLIFE DIVISION

This "Year in Review 2007" provides a summary of the many accomplishments and responsibilities of the DEP Wildlife Division.

Research and Management

Black Bears

In February and March, efforts to examine reproduction in Connecticut black bears continued. Dens of 16 radio-collared female bears were examined and 9 new litters of cubs were found, averaging 2 cubs per litter.

During 2007, 19 untagged bears were captured and tagged. These included 2 yearlings handled at winter dens, 7 bears trapped while trying to recapture research bears, and 10 bears captured at urban or problem sites.

Bear sighting reports continued to increase rapidly. In 2007, the Wildlife Division received 2,332 sighting reports and 237 property damage reports. Fourteen bears were killed by vehicles, the highest 12-month total recorded to date.

Furbearers

Many furbearers, including bears, are adaptable and frequently live or travel near residential areas. As a consequence, staff responded to hundreds of calls and emails from the public with questions and concerns about these animals.

Trappers harvested a record number of beavers and fishers during the 2006-2007 season, tagging 1,237 beaver pelts and 276 fisher pelts. This was the second season in which fishers could be legally trapped. A record high 267 coyotes were harvested by both hunters and trappers. The increased coyote harvest was probably due, in part, to a regulation change made 2 years ago that allows a 2-month coyote land trapping season.

On an annual survey, trappers reported that 61% of the beavers and 8% of the coyotes they trapped were taken



P. J. FUSCO

Wildlife Division biologist Paul Rego (left) hands a bear cub to biologist Mark Clavette. The cubs must be kept warm while the female bear is examined. The cubs are returned to the den once all data have been collected.

to resolve problems. Trapping has been valuable in directly resolving beaver conflicts and managing the population.

Sightings of bobcats and fishers have been solicited and recorded for more than 20 years. The 186 bobcat sightings received was among the highest 12-month total recorded. Bobcats are observed most frequently in towns west of the Connecticut River. The Division received reports of 109 fisher sightings, a drop from recent 12-month totals. The 28 vehicle-killed fishers that were recorded in 2007 are equal to the number of vehicle-kills recorded in 2006. Fisher harvests and vehicle kills are more frequent in towns east of the Connecticut River.

Carcasses of river otters (69), bobcats (26), fishers (79), and black bears (14) were examined to determine reproductive status, diet, and age. Past necropsies of bears have found that human-derived

foods, such as bird seed, were the most frequent food item found in stomachs.

Trapping is allowed on 68 state land units, primarily state forests and wildlife management areas (WMAs). During the 2006-2007 season, 63 trappers purchased 122 permits for trapping on these parcels. Approximately 20% of the statewide furbearer harvest is taken from state lands.

Small Mammals

Biennial bat hibernacula surveys were conducted at 6 sites in western Connecticut during February and March. Big brown bats, little brown bats, northern long-eared bats, and eastern pipistrelles were detected. A total of 4,987 individual bats were observed during the survey, an increase of 19% from 2005.

Short-tailed and long-tailed weasels are frequently observed in Connecticut,

continued next page



Wildlife Division Technician Geoff Krugar conducts a grassland bird survey at Bradley International Airport.

however their status requires further investigation. These two species are sympatric and exhibit considerable overlap in their morphology, making it difficult to differentiate between them. Division staff conducted a statewide survey of weasels. The project used live traps, track tubes, trail cameras, and specimen collection to gather more information. No weasels were captured in live traps. However, 10 tissue samples were collected from weasels that were in the care of rehabilitators, as well as from legally trapped (for fur) and road-killed weasels and ones killed by domestic animals. Tissue samples were genetically analyzed and used to accurately differentiate the two species. Of the 10 individuals tested, 3 were short-tailed weasels and 7 were long-tailed weasels. The weasel project will continue in 2008. Information gained from this study will provide a more accurate description of the distribution and abundance of both weasel species in Connecticut.

Nongame Birds

The second year of field surveys for Connecticut's Grassland Habitat Conservation Initiative began in May and continued through late July. Thirty-nine new sites were visited and follow-up visits occurred at several of the 100 sites originally surveyed in 2006 in Hartford and Windham Counties. In addition, this project was expanded into Tolland and New London Counties. As in 2006, land cover data and soil maps were used to

identify all grasslands with sandy soil types above a certain size. Visits were conducted for the 50 largest sites in each county. Field observers collected data, including current habitat conditions, bird species detected, current management practices, and potential for future surveys. The information collected from the 239 sites has allowed Division staff to rank the areas in order of priority for conserving grassland habitats in Connecticut.

Annual grassland bird surveys on state-owned properties continued in 2007 when 17 sites throughout the state were surveyed twice between May 15-July 15.

A third year of surveys were conducted for night birds. Winter surveys were conducted on 26 routes using a species specific callback recording. Surveyors detected 9 northern saw-whet owls, 14 eastern screech owls, 40 barred owls, 2 long-eared owls, and 25 great-horned owls. Summer Night Bird Surveys combined efforts to detect whip-poor-wills with efforts to detect breeding northern saw-whet owls. Surveys were completed along 28 routes. Efforts from these surveys are being combined with other states in the region to develop an efficient night bird monitoring strategy.

A pilot investigation was conducted over the summer to determine methods for assessing whip-poor-will density and habitat preference. The goal was to determine how many whip-poor-wills occupied selected plots and where these birds were located. The locations of calling birds will be overlaid onto forest stand maps to determine habitat preferences.



The upland sandpiper is one of the birds targeted in grassland bird surveys. This breeding season juvenile was found at Bradley International Airport.

The Woodland Raptor Surveys entered the fourth season of monitoring. Surveys, which were conducted 6 times between March and July, used callback recordings to detect sharp-shinned hawks, Cooper's hawks, northern goshawks, broad-winged hawks, red-shouldered hawks, and red-tailed hawks. Raptor nests were also monitored for activity.

Surveys for bird species that nest in shrubland habitat continued. Between May 15-July 15, avian point count surveys were conducted by Division staff and 2 volunteers at 24 sites in early successional habitats, such as old fields, shrublands, woodland edges, and power-line right-of-ways.

A survey of breeding chimney swifts was conducted for a second year. Surveys were conducted along 13 routes (130 points) once in the evening during June. Migration roosts continued to be located and mapped.

The Division continued to search for breeding common nighthawks (state endangered). Gravel roofs (potential and historical nesting sites) were identified for inventory. No breeding nighthawks were located.

During the 2007 Midwinter Eagle Survey in January, 153 volunteers counted 62 bald eagles (42 adults and 20 immature eagles) statewide.

In 2007, 15 pairs of bald eagles (state endangered) attempted to nest. Fifteen chicks (12 of which were banded) fledged from 10 of the nests and 4 nests failed. One pair built a nest but did not lay eggs. Of the 9 breeding pairs of peregrine falcons (state endangered), 6 pairs produced and fledged 10 chicks (6 of which were banded) and 3 nests failed.

With the help of fencing and other protection efforts, 36 pairs of ground

nesting piping plovers (state and federally threatened) fledged 69 young and 147 pairs of least terns (state threatened) fledged 59 young. Human activity at beach nesting areas continues to impact reproductive success. Trained volunteers (40) monitored several beaches and distributed educational materials to beach visitors. An additional 20 volunteers put forth 331 hours to protect 2 plover chicks at Silver Sands State Park (Milford). Fireworks permit applications (20) were reviewed for impacts to plovers.

The 9th statewide coastal colonial waterbird survey was conducted by members of the U.S. Fish and Wildlife Service (USFWS), Wildlife Division biologists, and volunteers.

Reptiles

The first year of a two-year study on wood turtle populations in Fairfield County was completed by the Wildlife Division. Wood turtles (state species of special concern) are declining throughout their range. Habitat loss and fragmentation are a concern in Fairfield County, which has the highest human population in the state. Visual surveys were conducted for wood turtles between March and June 2007 in rivers and streams throughout the county. Five wood turtles were located. Biological data were collected from all individuals and carapaces were notched for identification purposes. Surveys are slated to continue through the 2008 field season.

The 18th field season of a long-term study to survey historic or new locations for the presence or absence of bog turtles (state endangered, federally threatened) and/or suitable habitat was completed. The decline of bog turtles is mainly attributed to loss of habitat and, in small part, to collection pressure. No bog turtles were found at any new or historic sites.

Invertebrates

Suitable habitat was surveyed, for the 17th year, as part of a long-term effort to determine locations of viable populations of the Puritan tiger beetle (state endangered, federally threatened). The decline of this beetle may be attributed to loss and degradation of sandy beach habitat due to human activities. For the first time in 7 years, due to low numbers, larvae were not removed from a Connecticut site and transported to Massachusetts to augment the declining population there.

The Wildlife Division worked with



Master Wildlife Conservationist Susan Gray (left) helps Wildlife Division biologist Jenny Dickson install a sign that posts the closing of an offshore island to protect nesting herons and egrets.

the Connecticut Butterfly Association, The Nature Conservancy, and Audubon Connecticut, as well as with local volunteers, at a location in Fairfield County to remove invasive plants, particularly autumn olive. This was done to facilitate the regrowth of roundleaf ragwort, the larval host plant for the northern metalmark butterfly (state endangered). This butterfly is found in only a handful of sites throughout the country, mainly in open meadows, barrens, and streambanks near shale or limestone outcrops in the Appalachian range.

A new study was initiated to examine the effects of lake drawdowns on invertebrate communities. Numerous towns and lake associations in Connecticut continue to request fall drawdown of certain lakes for vegetation removal, dock maintenance, and to reduce ice damage to docks. The effects of these drawdowns have not been assessed and quantified. This study is in conjunction with a larger project being conducted by the University of Connecticut and DEP Fisheries Division.

Signs detailing state regulations for the collection of horseshoe crabs and a map of closed areas were developed and erected at 3 locations on the coast.



The DEP closes Charles Island and Duck Island in Long Island Sound to the public from May to September to protect the state-threatened great egret and other nesting egrets and herons.

White-tailed Deer and Moose

Health of Connecticut's deer herd and changes in hunting pressure are assessed by collecting biological data from hunter-harvested deer at check stations. Division staff collected biological data from about 2,500 deer during the 2007 shotgun/rifle deer hunting season.

A deer management plan implemented for the Bluff Point Coastal Reserve (Groton) has reduced the deer herd from about 222 deer per square mile down to about 20 per square mile. In January 2007, 11 deer were removed from the reserve by the DEP to maintain the population at 20 deer per square mile. All



The Wildlife Division received a grant to capture moose and attach radio collars (pictured below) so that biologists can learn more about moose ecology, habitat requirements, and moose movements in Connecticut. Biologists plan to use a helicopter to find and tranquilize moose so that they can be equipped with the radio collars.



deer removed were donated to Hunters for the Hungry and distributed to area food shelters.

The Wildlife Division received a grant from the U.S. Department of Agriculture to conduct surveillance for chronic wasting disease (CWD) in Connecticut's deer population. Tissue samples were collected from about 600 vehicle-killed and hunter-harvested deer. All samples tested negative for CWD. Over the past 4 years, about 1,900 samples have been tested for CWD and all tests were negative. Surveillance efforts will continue in 2008.

The second edition of "Managing Urban Deer in Connecticut" was printed and distributed in 2007. The revised edition incorporates additional information about the relationship between Lyme disease and deer, ecological damage caused by

deer, new management options available, answers to commonly asked questions about deer management, and examples of special deer management programs. The publication is on the DEP website at www.ct.gov/dep/wildlife. Over 3,000 copies have been distributed to towns in Fairfield County, Master Gardener Programs, Homeowner Associations, Lyme Disease Task Forces, schools, and universities.

In 2006, a survey was conducted to assess the value of youth hunting days, improve the youth hunting program, and identify opportunities and roadblocks for young hunters in Connecticut. Results indicated that 70% of youths who took Connecticut's Conservation Education/Firearms Safety course actually hunted and most of them with their father. However, 30% were unaware that a youth hunting day existed, and 16% that were aware, had no adult to take them. Youths who were able to hunt rated their experience as exciting, and what they liked most about hunting was being in the woods and spending time outdoors with family. The species most hunted were deer and pheasants, and youths spend most of their time hunting on Saturdays and holidays. Raising awareness about youth hunting day, increasing the number of youth hunting days, and developing a

mentor program may increase opportunities for youth hunters in Connecticut.

The Wildlife Division received a grant from the Northeast Wildlife Damage Management Cooperative to examine Connecticut's moose population. The 2-year study will focus on home range size, habitat use, movements, causes of mortality, and public perceptions about moose. Due to delays in receiving equipment, limited efforts to capture moose were unsuccessful in 2007. Efforts to capture and collar moose will be initiated in January 2008. Opinion surveys about moose and moose management have been developed and will be presented to the public and hunters in January 2008. The data from this study will assist the DEP in developing a comprehensive moose management plan. In 2007, there were 67 reported moose sightings and 7 documented moose mortalities. Prior to 2007, 2 or less moose-vehicle accidents occurred each year.

Ring-necked Pheasants

During the 2007 fall hunting season, 15,857 adult ring-necked pheasants were purchased for release on 44 state-owned, state-leased, and permit-required hunting areas. Cooperative sportsmen's clubs also released pheasants at 7 public hunting areas. The Division continues to use volunteers to assist with stocking on several public hunting areas.

The Division launched a new section on the DEP website highlighting the pheasant hunting program. The section lists all pheasant hunting areas, as well as the number of birds that will be stocked at each area. Included are new maps of some hunting areas, a list of areas not being stocked, a list of changes for the stocking season, and a number of charts and graphs showing the number of pheasant hunters, the price of birds in past years, and the number of birds stocked per hunter.

Wild Turkey

During the 2007 spring turkey season, 6,304 permits were issued and 1,601 birds were harvested. The overall success rate for all spring hunters was 16.5%. Twenty or more birds were harvested from 22 towns and 30 or more birds were harvested from 5 towns. At least one gobbler was taken from 148 of 169 Connecticut towns. The total spring harvest was comprised of 72.8% adults, 27.0% juveniles, and 0.02% bearded hens.

Brood surveys are conducted to provide an index of annual productivity for the state's turkey population. Survey cooperators reported 405 turkey observations, including 731 hens; 461 with broods and 270 without broods. The 2007 brood index of 2.6 young per adult for hens observed is higher than the 2006 index of 1.7. Brood survey information indicates that turkeys had higher productivity in 2007 than 2006.

Small Game

Studies were initiated in 2000 to determine distribution of New England (NEC) and eastern (EC) cottontail rabbits throughout Connecticut. Rabbit specimens have been collected from hunters, roadkills, and trapping, and fecal pellets have also been sampled. In 2007, specimens were collected from 22 towns, with 3 specimens determined to be NEC, 23 EC, and 40 unknowns (DNA analysis was not conducted on many of the unknowns because pelage characteristics showed a low likelihood of being NEC). Since 2000, 1,142 specimens have been collected. Of these, 90 were NEC, 900 EC, and 152 unknown. Cottontails have been collected from 116 towns. NECs have been documented in 26 towns and ECs were found in 106 towns.

During 2007, baseline ruffed grouse population data were collected from grouse observations and drumming surveys. A total of 18 observations were reported from 9 towns, bringing the total to 134 sightings since 2005. Drumming surveys were conducted in April. Grouse were heard drumming on 10 of 12 routes and 35 drummers were recorded. The actual number of unique males heard drumming was between 23 to 35 birds. The survey route that produced the highest number of birds (5) was in East Hampton.

American Woodcock

2007 was the second year in which 10 survey routes were used statewide as an index to woodcock population and habitat status. Mean number of woodcock heard per stop in 2007 was 0.29 and not significantly different from 2006. Since 2003, when surveys were first initiated on these routes, there has been no significant change in the total number of birds heard and the number heard on each individual route has been fairly consistent. However, the gradual decline in birds heard on routes in Sharon, New Hartford, and



The Wildlife Division received a grant from the U.S. Department of Agriculture to conduct surveillance for chronic wasting disease in Connecticut. Tissue samples were collected from about 600 vehicle-killed and hunter-harvested deer and all samples tested negative.

Lebanon is likely the result of increased development and differing land use along those routes. In addition, 16 survey stops have been impacted by new development. This represents 16% of the total stops on the index. Thankfully, no new habitat changes were noted in the 2007 surveys.

The third and final year of woodcock telemetry work began in March 2007. A spring ice storm in mid-March and persistent rain throughout April resulted in poor conditions for trapping and lower success. A total of 23 woodcock were captured from March through May. Captures were evenly distributed between high quality habitat (10) and lower quality habitat (13). Only 2 females were captured in 2007. Eight of the birds fitted with radio transmitters died due to predation. Survival rates between the low quality and high quality habitats differed significantly again, as in the past 2 years.

USFWS cooperative breeding woodcock surveys were conducted by Division staff. These surveys serve as the federal index to woodcock population status throughout the Eastern Management Unit (EMU). The results of these surveys from Connecticut and throughout the EMU, from Virginia north into Canada, are used to develop hunting season regulations for woodcock and serve to guide large scale management efforts.



During 2007, baseline ruffed grouse population data were collected from grouse observations and drumming surveys.

Waterfowl

Wood duck nest boxes located on state land were checked during winter 2006-2007. After a relatively mild start to winter, safe ice existed for box checks from mid-February to early March. A standard data form was completed at each site after all boxes were thoroughly checked, cleaned, and new nesting material added. A total of 308 boxes were checked and over 88% (274) were in good condition. An evaluation of the current wood duck box program was completed and a plan for new box placements for 2007-2008 was developed.

Annual surveys were conducted for breeding waterfowl, breeding swans, and midwinter waterfowl.

In November, the Division, along



Resource Assistant Stephanie Almeida removes shorebirds that were caught in a rocket net as part of the ongoing surveillance for avian influenza.

with several other states in the Atlantic Flyway, began the second field season of a project to investigate time and energy budgets and available food resources for wintering Atlantic brant. This project, when completed, will provide important information to guide management of wintering habitats for Atlantic brant.

Also in November, a study was initiated to investigate habitat use and energy budgets of wintering American black ducks. In addition, estimates of the carrying capacity of various black duck wintering habitats will be developed. Each winter at 3 study sites, 30 female black ducks will be captured and equipped with radio transmitters. The birds will be followed intensively throughout winter and early spring to determine their use of the available habitat. Intensive time budget surveys of both marked and unmarked birds in various habitats also will be conducted. Finally, researchers will collect monthly benthic and vegetation samples from habitats that black ducks are using and from randomly chosen habitats to determine the amount of food available to ducks and the depletion rate of those food resources throughout winter and spring.

Resident Canada geese were trapped and banded at 37 sites throughout the state; 1,529 geese (1,155 adults and 374 hatch year birds) were captured. Widespread flooding in March and April resulted in poor production of geese in 2007. A total of 818 ducks were caught during annual pre-season duck banding operations, including 703 mallards, 63 black ducks, 12 mallard-black duck hy-

brids, 39 wood ducks, and 1 pintail.

As new data are received and analyzed, current goose harvest zones are continually refined. An analysis of the current NAP harvest zones was conducted. Based upon these analyses, a change to the harvest zones was adopted by the USFWS. This change will result in a more simple zone boundary, as well as increased harvest pressure on resident geese. An analysis was also undertaken to determine whether the current north and south zone boundary (Interstate 95) can be adjusted. The current boundary was delineated in 1987, and goose harvest has declined precipitously in recent years. The lack of farms and other suitable harvest areas within the current south zone limits the current value of the special late (mid-January to mid-February) resident Canada goose season. Substantive changes to the north and south zones will be proposed in 2008.

In September 2006, the USFWS implemented its Final Rule associated with an Environmental Impact Statement (EIS) on the management of resident Canada geese. The Final Rule transferred much of the responsibility of administering resident Canada goose control from the federal government to individual states. Activities authorized under the Final Rule were organized into 3 separate components: control and depredation, expanded hunting, and managed take. Connecticut chose to participate in and take responsibility for several activities within these components -- agricultural depredation,

public health, and expanded hunting methods. An agricultural depredation program was developed within the guidelines set forth in the EIS. A list of all vegetable, turf, and dairy farms in the state was compiled and a letter outlining the program and an application were sent to these farms. In 2007, 28 farms requested applications, with 13 farms enrolling in the program. Of these, 6 farms used the permit. Between May and August 2007, 124 resident Canada geese were taken under the various permits. No eggs were added by any of the participants.

Avian Influenza Testing

The targeted surveillance of migratory birds for Asian H5N1 (avian influenza) continued in 2007. Species targeted for testing in Connecticut include resident Canada geese, mallards, American black ducks, greater scaup, long-tailed ducks,



Greater scaup, once plentiful in Connecticut's portion of Long Island Sound, nest in Alaska and are one of the species that are targeted for surveillance of avian influenza.

Atlantic brant, semi-palmated and least sandpipers, dunlin, sanderlings, and black-bellied plovers. Samples are being obtained across the state and throughout the migration and wintering period.

As part of avian influenza monitoring efforts, Connecticut was tasked with collecting at least 750 samples from live and hunter-killed birds in 2007. More emphasis was placed on mortality events. Therefore, the distribution of backyard poultry flocks, commercial poultry operations, and migratory bird concentration areas was examined and a list of high priority sites to monitor for mortality events was developed. Weekly surveys of these sites were conducted.

Habitat Management

Habitat management activities continued to emphasize early successional habitats (young forests, old fields, grasslands) in 2007. Such sites are rapidly declining due to the loss of farmlands, development, and the absence of fire within the Connecticut landscape. These declining habitats have been identified in Connecticut's Comprehensive Wildlife Conservation Strategy as priority habitats in need of conservation and active management to assure abundant and diverse wildlife populations throughout the state.

Although state and federal funding have been limited over the past decade, the Division has received funding through the USDA Wildlife Habitat Incentives Program (WHIP). WHIP was the first Farm Bill program specifically developed to address wildlife needs on non-federal land throughout the country. Through 2007, the Wildlife Division has received \$1,375,470 in WHIP grants, resulting in the development of 61 contracts encompassing 1,624 acres. Projects have included warm and cool season grass establishment; riparian native tree and shrub plantings; water control structure replacement; aspen/young forest regeneration; and old field enhancement/non-native plant management targeting invasives (autumn olive, multi-flora rose, asiatic bittersweet, tartarian honeysuckle, etc.). Management practices include brush mowing, heavy-duty brush and tree removal with specialized equipment (brontosaurus, fecon mower, feller buncher), prescribed burns, no-till fluffy grassland seedings, and selective herbiciding.

This past field season was extremely productive by combining WHIP funds with staff commitments from the Wildlife Division, Support Services, Parks, Forestry, and Water Resources. Approximately 750 acres of early successional habitat enhancement practices were completed at 20 sites. Early successional habitat management projects ranged in size from a 3-acre warm season grass seeding at Pease Brook WMA to 200 acres of grass-wet meadow enhancement at the Somers grassland complex.

Seven Conservation Reserve Program contracts were administered that involve the establishment and maintenance of grassland sites for 10 years at Robbins Swamp WMA (2), Pease Brook WMA,



The Northern Dam at Babcock Pond WMA (Colchester) was restored through a cooperative project between the DEP, USDA WHIP, CT Duck Stamp Program, and Connecticut Waterfowl Association. The dam maintains 160 acres of shallow marsh wetlands.

Bartlett Brook WMA, Spignesi WMA (2), and Bloomfield Flood Control Area. Staff also oversees 50 agricultural agreements on approximately 1,000 acres. This program allows farmers to use state-owned agricultural lands when properly managed and in the context of overall wildlife management goals for an area.

Staff reviewed various DEP and outside proposals and provided guidance to assure that impacts to wildlife are minimized and potential benefits are secured. These included general wildlife guidance on 10 forest management plans; 2 enduro reviews; land acquisition reviews; an Environmental Review Team to assure wildlife resource consideration in a 1,300-acre gravel operation and residential development proposal; and 12 reviews of DEP proposals, including boat launches, access roads, trails, and facility development. Site-specific wildlife objectives were developed for 3 forest sites totaling 2,500 acres. Wildlife Diversity Program staff reviewed and commented on 271 project proposals. Recommendations were offered to mitigate impacts to listed species.

Boundaries were posted at 3 WMAs and signs were installed at 4 WMAs. Access roads were restored at Franklin



A fecon mower clears a field at Pease Brook WMA (Lebanon). The site, which was dominated by non-native invasive plants, is being converted to a warm season grass field.

and Flaherty WMAs (3,500 ft). Routine maintenance activities continued at key public access locations on 35 WMAs, such as mowing, herbiciding, painting gates, staining wooden signs, replacement of informational signs, and general site clean-up.

Maintenance was conducted at 17 inland marshes, including vegetation control via mowing and herbiciding and management of water levels to maximize wetland wildlife values and minimize human public safety conflicts. Connecticut's

continued on page 12

Eagles in Connecticut

Article and photography by Paul Fusco, Wildlife Outreach Program

Winter can be a tough time for many species of wildlife in Connecticut. Some species, such as black bears, spend their winter hibernating in a cozy den, sheltered from the elements. The cold, raw temperatures and frigid winds can also keep many people from venturing outdoors. But these inhospitable conditions are some of the best times to observe one of the state's most inspiring creatures, the bald eagle.

Forced down from frozen areas to our north, hungry eagles will gravitate to areas of open water, where they may concentrate at food sources. The lower Connecticut River is such a place. In some winters, the stretch of river from Middletown to Old Saybrook may support upwards of 50 eagles.

Within that area is the town of Essex, which hosts the largest birding festival in the country. The Connecticut Audubon Society's Eagle Festival receives national attention, attracting over 20,000 people each year. February 2008 will be the ninth consecutive year of the festival.

Bald Eagle

Bald eagles became an extirpated nesting species in Connecticut in the 1950s due to habitat loss, food contamination by pesticides, and illegal shooting. Contamination of food by the organochlorine pesticide DDT is widely

Visit the DEP Wildlife Division at the Connecticut Audubon Society's Eagle Festival

February 16-17, 9 AM - 5 PM, along Main Street in Essex, and with events at other surrounding locations.



© PAUL J. FUSCO
All Rights Reserved

An immature bald eagle is dark brown with varying amounts of white in its body plumage and wing linings. Its head and tail do not turn entirely white until the bird reaches maturity, typically at five years of age.

accepted to be the major reason why populations of eagles, along with many other raptor species, declined precipitously in the mid-20th century. DDT accumulated in the food chain and, when contaminated food was ingested by eagles, it caused them to lay eggs with weakened shells that cracked when the birds incubated their eggs. Eagle populations across the country were decimated.

General use of DDT was banned in the United States in 1972. Additional protection for bald eagles came the following year when the Endangered Species Act became law and the bald eagle was declared a federally endangered species. Those two events were the major catalysts that led to the eagle's successful recovery. Although the bald eagle has since recovered in the lower 48 states to the point that it was removed from the Endangered Species List in 2007, it is still classified as an endangered species in Connecticut. On the federal level, the Bald Eagle and Golden Eagle Protection Act of 1940 and the Migratory Bird

Treaty Act of 1918 are now the primary federal laws protecting both bald and golden eagles.

In 1992, Connecticut documented its first successful nesting of bald eagles since the 1950s when a pair raised two young in Litchfield County. Gradually, the nesting population has increased and, in 2007, 15 pairs of bald eagles made nesting attempts in the state. Nesting attempts or territorial pairs were documented in six of the state's eight counties.

Major Dams

While the lower Connecticut River has the highest numbers of wintering eagles, the other large rivers and large reservoirs may also have a good showing.

The Housatonic River, in particular, offers some great eagle viewing opportunities at the two major dams on the river. In cooperation with the DEP and Connecticut Audubon, FirstLight Power Resources (formerly Northeast Utilities) operates the Shepaug Eagle Observation Area at the Shepaug Dam in Southbury

each winter. Thousands of eagle watchers come from far and wide every year for the chance to see dozens of eagles living in the wild at the dam.

The other major dam on the Housatonic is the Stevenson Dam in Monroe, which hosts smaller numbers of eagles, but the viewing there can be very good as well. Other areas to find bald eagles in winter include the upper Housatonic River in Litchfield County, Farmington River, lower Thames River, Naugatuck River, Bantam Lake, and Barkhamsted Reservoir. The mouths of major rivers and some coastal areas also may get eagles, especially when inland waters freeze up, forcing the birds to the shoreline.

Winter Food

When hydroelectric facilities at a dam generate electricity, open water remains below the dam, even when the rest of the river is frozen solid. The open water gives eagles the opportunity to catch their main food, fish. Gulls and waterfowl, which are also attracted to the open water and the availability of fish, may, on occasion, end up as prey for a hungry eagle. Bald eagles are opportunistic predators and scavengers. They will take advantage of whatever food resources are available. Their diet ranges from fresh caught fish to road-killed deer. They also have a reputation of being a thief, robbing other raptors or gulls of their catch.

Golden Eagle

Connecticut's "other" eagle is the golden eagle. Golden eagles are very rare in the state, with almost all sightings during migration or in winter. In North America, the golden eagle's range extends throughout Canada and the western United

It's Not too Late to Make Reservations for the Shepaug Eagle Observation Area:

Call 1-800-368-8954, 9:00 AM-3:00 PM, Tuesday - Friday for reservations. The Shepaug Eagle Viewing area is open Wednesdays, Saturdays, and Sundays from 9:00 AM - 1:00 PM until March 12, 2008.



A subadult bald eagle is seen catching fish along one of Connecticut's major rivers.

States. Its global range includes mountainous habitat in Europe, Asia, North Africa, and the Middle East. Golden eagles do not breed in Connecticut.

While adult bald eagles, with their white heads and tail, are easy to identify, separating immature bald eagles from golden eagles can be more difficult. The plumage of golden eagles is uniformly dark brown. Adults have golden highlights on the back of the neck. Immature golden eagles show a large amount of white at the base of the tail, with a broad dark terminal band. They also have white patches at the base of their flight feathers in the wings. Immature golden eagles do not have white extending into their breast plumage or in their wing linings as is seen in immature bald eagles.

When seen in flight, the head and neck of the bald eagle extends farther out than it does on the golden. Other differences between the two species are that golden eagles have feathering all the way down their legs to the foot, while bald eagles do not, and the bill of the bald eagle is larger and heavier than that of the golden.

While golden eagles will sometimes scavenge on carcasses, their main diet consists of small mammals. Rabbits and large rodents are their most frequent prey, but they have been known to take down small deer.



A rare species in Connecticut, the golden eagle has a distinctive golden nape and crown in all plumages.



In July 2007, Old Saybrook residents, Old Saybrook Land Trust members, town officials, and USFWS staff attended a press event held by the land trust and the DEP Wildlife Division to announce the start of the largest Landowner Incentive Program project to date.

Duck Stamp Program funded a seasonal position to help complete this task.

The Duck Stamp Program and Connecticut Waterfowl Association provided funding for the installation of an in-the-dike water control structure at the 6-acre Keeney Marsh in Nehantic State Forest (Old Lyme). The in-the-dike structure allows managers to regulate water levels

without beavers hearing or seeing the changes in water flow. Therefore, any conflicts with their dam building activities should be minimized. If this design proves to be a deterrent to beaver problems, its use will be expanded in other problem marshes.

The dam at Babcock Pond WMA (Colchester) was repaired with the co-



R. WOLFE, WETLAND RESTORATION PROGRAM (2)

Attendees at the Old Saybrook press event were given a demonstration of a specialized spray rig on tracks that exerts low ground pressure and doesn't impact the soft surface of the marsh.

operation of WHIP, the CT Duck Stamp Program, DEP's Water Resources and Fisheries Divisions, and Connecticut Waterfowl Association. This project assures public safety, improves high-quality wetland habitat, and provides opportunities for recreation.

A North American Wetlands Conservation Act small grant project at Brown Hill (Hampton) and McQuade (Chaplin) marshes was completed. This project aimed to restore 55 acres of freshwater marsh through the replacement of water control structures at 3 inland impoundments. By initiating a water level management plan, a 50:50 ratio of emergent vegetation to open water/open water with floating, leaved vegetation should be established. Restoration will result in more use of the marshes by waterfowl and other wetland wildlife. Monitoring will occur annually, and vegetation and wildlife surveys will help determine the project's success.

Landowner Incentive Program

The Landowner Incentive Program (LIP) worked in partnership with landowners across Connecticut carrying out projects to benefit species at-risk. Yearly Tier 1 grants from the USFWS to administer LIP and an original Tier 2 grant that provides funding for projects have enabled the Division to develop and administer this popular program.

Two warm season grass plantings were accomplished -- a 6-acre site at the Hadlow Preserve Trust (Sherman) owned by Naromi Land that adjoins vast hay fields, and a 6.3-acre site at the Manchester Coon and Fox Club (Coventry) that is adjacent to a diverse, forested riparian

Wetland Habitat Projects Completed in 2007 by the Wetland Habitat and Mosquito Management (WHAMM) Program:

- Specialized low ground pressure equipment and heavy-duty brush hogs were used to mow portions of several wildlife management areas (WMAs). Funding was provided by the Wildlife Division and Natural Resources Conservation Service (NRCS) Wildlife Habitat Incentives Program (WHIP).
- A pond-dredging project was completed at Chatfield Hollow State Park (Killingworth) to assist the park with its trout stocking and fishing projects.
- A 1-acre "shallow water wetland enhancement" project was completed at Connecticut Audubon's Bafflin Nature Sanctuary (Pomfret). Funding was provided by the WHAMM Program, Connecticut Audubon, USFWS Partners for Wildlife, and NRCS WHIP.
- A new four-gate tidal water control structure was installed on the Hammock River (Clinton) to allow the exchange of estuarine water while minimizing upstream flooding. Funding was provided by the Town of Clinton and the WHAMM Program.

Several invasive phragmites control projects were completed throughout Connecticut and especially at the following areas:

- Barn Island WMA (Stonington; 21 acres); Ayers Point WMA (Old Saybrook; 53 acres); and Ragged Rock WMA (Old Saybrook; 203 acres). These projects were funded by the WHAMM Program, and NRCS.
- North and South Cove (Old Saybrook; 50 acres). Funding was provided by the DEP's Landowner Incentive Program, the Old Saybrook Land Trust, and the WHAMM Program.

wetland system and agricultural lands.

The Avalonia Land Conservancy worked with LIP at the Moore Woodlands (Groton) to reclaim early successional habitat that had grown into a forest tangled with non-native vines and shrubs. The Conservancy was awarded \$9,600 to pay a state contractor to use a brontosaurus to cut and mulch vegetation. The Conservancy provided the necessary 25% match (\$3,200) by cutting down designated trees that were too large for the brontosaurus, creating brush piles, cutting invasives, and conducting outreach about the project to neighbors, members of the land trust, and the public.

Three projects were carried out in partnership with Connecticut Audubon to help restore and create early successional habitat at Audubon sanctuaries in Westport and Fairfield where quality wildlife habitat is sparse due to dense human development and ecosystem impacts from high deer populations. A brontosaurus created a “feathered edge” in a field at the Larsen Sanctuary and a hedgerow was removed to make the field more attractive to sensitive birds, like the bobolink. Over-topping trees were cleared from an area of cedars in what was old pasture at the Banks Farm Sanctuary. The brontosaurus was also used at the Smith Richardson Sanctuary to remove larger trees and big expanses of non-native vegetation. The goal was to set back succession and create a mosaic of herbaceous growth interspersed with islands of valuable trees, like apple and cherry, and shrubs that can be maintained easily with a tractor and brush hog. Part of the match for these projects requires CT Audubon to conduct bird surveys to measure the response of birds to the management efforts. CT Audubon must also mow, cut additional trees, and follow up with herbicides to combat the growth of non-native plants.

The first phase of the largest LIP project funded to date was initiated in July. The Old Saybrook Land Trust was awarded \$120,000 to work in partnership to restore tidal marshes by treating approximately 113 acres that had been overtaken by the non-native, invasive reed, phragmites. The Land Trust acted as LIP project steward and secured the written permission of over 200 landowners in North Cove and South Cove to allow the treatments to be carried out on their properties. Control efforts started with a cycle of herbicide spraying by a state contractor. All treated phragmites will be mowed/mulched in winter to help speed

Mosquito Management

The Mosquito Management Program consists of the DEP, Connecticut Agricultural Experiment Station (CAES), Department of Public Health, Department of Agriculture, and University of Connecticut Department of Pathobiology and Veterinary Science. Mosquito trapping and testing concluded at the end of October and will resume in June 2008. During the 2007 testing season, West Nile virus (WNV) positive mosquitoes were identified in 15 towns – Bridgeport, Bethany, Danbury, Darien, Glastonbury, Greenwich, Hartford, Manchester, New Haven, Newington, Norwalk, Stamford, Stratford, West Haven, and Westport. Eastern equine encephalitis virus (EEEV) was identified in mosquitoes collected in Ledyard and Plainfield. Six people (from Cheshire, Danbury, Darien, Hartford, New London, and Woodbridge) recovered after being diagnosed with WNV-associated illnesses. No human cases of EEEV were identified in Connecticut.

In an effort to monitor for WNV and EEEV, the CAES maintained a network of 91 mosquito-trapping stations in 72 municipalities from June through October. Mosquito traps were set by the CAES every 10 days at each site on a rotating basis. The DEP Wetlands Habitat and Mosquito Management Program provided larvacides to 34 towns and cities that had WNV positive mosquitoes and/or human cases. The DEP spent \$84,000 to provide this product from mid-August through early September.

Nationally, as of October 23, 2007, human cases of WNV-related illness were reported from 42 states. States in the Midwest and western U.S. accounted for the highest number of cases, including Colorado (544), North Dakota (360), California (353), South Dakota (206), Montana (193), and Wyoming (179). WNV-related illnesses reported in humans in the Northeast included New York (14), Massachusetts (6), New Jersey (1), and Rhode Island (1).

the natural decomposition process. This process will be repeated two more times.

Staff drafted LIP landowner agreements (or contracts) and worked closely with participating landowners to help them through a challenging process of completing state legal requirements, contract forms, and certifications. Thirteen agreements were signed by landowners, and approved by the DEP Commissioner and State Attorney General’s office. Unfortunately, congressional funding for LIP has been cut nationwide. Unless

funding is restored in the federal budget, no new money will be available. However, staff will remain on the job to carry out the 64 projects already underway or awarded funding to date.

Nuisance Beaver Management

Beaver complaints have remained consistent over the past three years, with a slight increase in 2007 (260 complaints). The number of complaints has historically been between 250 to



Using a low ground pressure excavator, the WHAMM Program assisted Chatfield Hollow State Park by dredging sediments from the pond, which is stocked with trout and open to the public.

R. WOLFE, WETLAND RESTORATION PROGRAM

Nuisance Beaver Management Program 2007

District	Phone Advice	Field Inspections	Total # Complaints	NWCO Permits Issued	Volunteer Authorizations Issued
Eastern	90	42	132	9	29
Western	72	56	128	12	14

Deer Damage Permit Program 2007 (Jan. 1-Oct. 31)

District	Inspections			Office Reviews		
	Daylight	Jacklight	Total	Daylight	Jacklight	Total
Eastern	40	3	43	7	4	11
Western	38	0	38	6	3	9

Federal Funding for Wildlife

Many of the projects described in this annual report are funded by sportsmen's dollars, either through the purchase of licenses, permits, and hunting equipment. The Federal Aid in Wildlife Restoration Program provides funding for wildlife management and research, habitat acquisition, wildlife management area development, and hunter education programs. Funds for this program are provided through an excise tax on the sale of sporting firearms, ammunition, and archery equipment.

The State Wildlife Grants program provides federal dollars to support cost-effective conservation aimed at preventing wildlife from becoming endangered. A non-federal match requirement assures local ownership and leverages state and private funds to support conservation. Projects supported by State Wildlife Grants restore degraded habitat, reintroduce native wildlife, develop partnerships with private landowners, and collect data to find out more about declining species.



300 per year. The majority of complaints are received during April to October. Human-beaver conflicts are aggravated by the loss of suitable beaver habitat and an increase in development. Concerns involve the cutting of trees; flooding of roads, septic systems and structures; increase in standing water; increase in mosquitoes; threats to fish and aquatic flora; and potential spread of diseases. Most of these concerns can be addressed with basic information on beaver behavior and the majority are deferred until the regulated trapping season.

Deer Damage Program

The Deer Damage Program provides farmers with a means to protect their commercial crops from the impact of deer. Applicants must be active farmers with a potential income of \$2,500 or more. There are restrictions on the number of shooters allowed and potential restrictions on the weapons allowed. Permits are valid from January 1 until October 31 and are issued only after an inspection is completed and the farmer qualifies. The Division typically responds to between 70 and 100 deer damage complaints annually. In 2007, there were 98 complaints requiring 71 site inspections, an increase from last season.

Belding WMA

The 282-acre Belding WMA (Vernon) was donated to the State of Connecticut in 1982 by Max Belding to be managed by the Wildlife Division. The Belding family also established a trust that has allowed the Division to employ a full-time staff person to oversee the implementation of goals for the property. Several activities were accomplished in 2007, including a prescribed burn on 7.4 acres of grasslands and a planting of 7.4 acres of native warm season grasses. Brush mowing occurred on 24 acres to enhance early successional stage habitat. The management/control of non-native invasive plants was emphasized through a combination of herbicides, brush mowing, prescribed burns, and the use of hand tools and a flame torch designed to girdle and thereby kill target species.

Annual bird and invertebrate surveys were conducted, and the Belding Pond dam was repaired after severe spring storms.

Thirteen off-site programs on wildlife ecology and habitat management were conducted at local schools, public libraries, and the Tolland County Agricultural Center; 205 people participated in these programs. Five formal programs on wildlife and habitat topics were presented at Belding WMA involving 73 students. Eight additional outreach initiatives were conducted involving Boy Scout badge work, DEP's "Wild Kids" program, and general interpretive walks.

CT Chapter of NWTF Warm Season Grass Seeder

The CT Chapter of the National Wild Turkey Federation (NWTF) previously donated a Truax no-till fluffy seeder to the 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 indian grass. Since receiving this donation, the Division has established numerous native plantings on state and private lands. This past field season, native grasslands were established at Pease Brook WMA (Lebanon), Belding WMA (Vernon), and Pachaug State Forest (Sterling). Plantings were also established on private land: Manchester Fox and Coon Club (Coventry), Naromi Land Trust (Sherman), and a Haddam Northeast Utilities site. These 6 warm season grass projects now provide 65 acres of quality habitat for grassland birds.

Native grasses support a diverse and abundant wildlife community. They grow in clumps, thus providing overhead cover from avian predators. The grasslands also contain intermixed bare spots that are used as wildlife travel lanes and dusting sites. Most importantly, grasslands serve as critical nesting habitat, and the grasses provide an abundant seed source for fall and winter food, along with associated broadleaf forbs and legumes. The numerous insects found within these 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 small mammals.

The Truax seeder is one of only two available in Connecticut and will continue to be used on wildlife management areas and private land enhancement projects within the scope of several private land programs, such as NWTF's Wild Turkey Woodlands, WHIP, USFWS-Partners Program, and the Wildlife Division's Landowner Incentives Program. Landowners who are interested in private land habitat enhancement programs and/or are in need of specialized seeding equipment may contact the Division's Habitat Program at 860-295-9523.

Education and Outreach

At the Wildlife Division's Sessions Woods WMA (Burlington), educational signs on the outer loop trail system were redesigned and replaced. New sign bases and covers were installed and some of the existing sign posts were replaced. The exhibit area in the Sessions Woods Conservation Education Center continued to undergo changes. New taxidermy mounts of a coyote, red fox, gray fox, beaver, fisher, bobcat, white-tailed deer fawn, and great horned owl were put on display. The Friends of Sessions Woods provided funding for the display of mounts.

The Outreach Program published 6 issues of *Connecticut Wildlife* magazine, prepared 26 press releases on wildlife topics, and assisted in the production of several publications, including the annual deer and turkey summaries and wildlife fact sheets. Most of these publications have been posted on the DEP website.

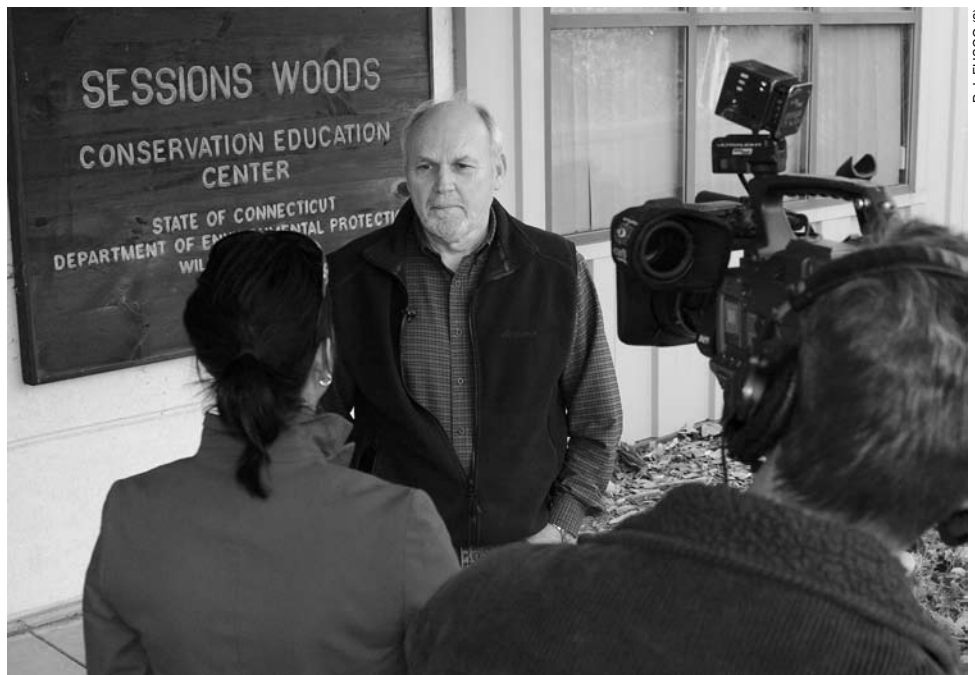
The 7th Master Wildlife Conservationist (MWC) Program series was completed by 23 participants. MWCs assist the Wildlife Division with public programs and wildlife projects. This year, MWCs and Division Outreach staff presented 99 programs to various school, scout, civic, and general public audiences. Wildlife displays were manned at 15 public events, including the Hunting and Fishing Expo, Hammonasset Festival, Litchfield Nature Day at White Memorial Conservation Center, and Martin Luther King Day at the Peabody Museum.

The Northeast Fish and Wildlife Conference was held this year in Connecticut and several Wildlife Division staff presented programs to other wildlife professionals during the event.

The Friends of Sessions Woods sponsored several unique programs for the general public at the Sessions Woods Conservation Education Center, including Halloween in September and a birds of prey program in February. Each event attracted a wide audience.

The Wildlife Division and MWCs participated in two Great Park Pursuit events sponsored by the DEP.

The Division provided rough-cut lumber to 43 groups for the construction of bluebird nest boxes. These groups, consisting of scout troops, school groups, senior centers, nature centers, and others, built and set up approximately 1,500 boxes across the state. The groups moni-



CE/FS Coordinator David Kubas responds to a media interview about hunting safety.

tored the boxes for bird use and returned annual reports to the Division.

Division staff participated in the University of Connecticut's BioBlitz held in Middletown in June. Teams of scientists from across the region attempted to document as many species of living organisms as possible within the boundaries of Middletown during a 24-hour period. Charged with searching for mammals, Division staff used live-traps and mist-

nets to capture individuals, and looked for tracks and other signs to document more elusive animals. Staff also led educational programs for students and teachers on a variety of topics, including mist-netting for bats. All of the hard work paid off as a total of 2,231 species of plants and animals were recorded in Middletown.

Educational and informative presentations on Connecticut's Comprehensive Wildlife Conservation Strategy, wildlife,



Wildlife Division biologist Chris Vann enthusiastically helps children identify insects they captured during a Great Park Pursuit event at Mansfield Hollow State Park (Mansfield).

Eagle Scout Project at Belding WMA

In 2007, Eagle Scout Tyler Matt constructed a 10-foot high deer fence and planted native shrubs at Belding WMA (Vernon). This was part of a Wildlife Habitat Incentives Program project that was funded by the USDA Natural Resources Conservation Service. Tyler worked long, hot days over the summer with other Boy Scouts he had recruited for the project and with DEP personnel. The process involved setting posts, rolling out the fence, staking the bottom of the fence, weaving tension wire at the top and bottom, staking the corner posts, and tying flagging to the fence to make it more visible to deer. According to Wildlife Division biologist Howard Kilpatrick, an 8-foot high fence is deer "resistant," but a 10-foot high fence is deer "proof."

Tyler and the Scouts also planted 150 native shrubs inside the deer fence, such as highbush and lowbush blueberry, American cranberrybush, silky dogwood, gray dogwood, bayberry, swamp rose, prairie rose, inkberry, arrowwood, and blackhaw viburnum. This patch of native shrubland, which is adjacent to a riparian zone, field, and forest, will provide habitat for birds like the common yellowthroat, yellow warbler, gray catbird, and indigo bunting, and for butterflies like the tiger swallowtail.

and wildlife issues were presented to various groups, including conservation organizations, elementary and high school students, and professional meetings, with the number of attendees ranging between 12 to over 400. Interviews were given to newspapers, magazines, and radio stations on topics such as ospreys, bald eagles, purple martins, nesting shorebirds, Puritan tiger beetles, and freshwater mussels. Division staff also participated in the Annual Connecticut River Eagle Festival, which is sponsored by Connecticut Audubon.

Presentations were given to town officials in Fairfield, Middlesex, New Haven, and New London Counties regarding Canada goose management.

CE/FS Program

The 304 volunteer instructors in the Conservation Education/Firearms Safety (CE/FS) Program contributed 12,871 hours of service to teach 3,514 students in 147 hunting safety courses. Courses were presented on firearms hunting (77), bowhunting (65), and trapping (5). Three supplemental coyote land trapping courses were given to 79 trappers who completed the trapping education course or its equivalent and wish to trap coyotes on private land. The firearms hunting home-study course continues to grow in popularity. In 2007, 9 courses were offered, allowing 177 students to complete most of the program at home.

Natural History Survey Projects

In 2007, the DEP Endangered Species/Wildlife Income Tax Check-off Account funded the following projects: publication of the "Connecticut Butterfly Atlas;" New England cottontail/Camp Columbia Habitat Management; New England cottontail distribution and population dynamics; status and distribution of long- and short-tailed weasels; state-listed plant species field work; monofilament fishing line receptacles; Indiana bat species assessment; winter drawdown and invertebrate abundance and diversity; identifying and predicting critical habitat for freshwater mussels; and an investigation to determine if a new species of freshwater mussel is present in Connecticut.

The DEP would like to thank residents who have contributed to the Tax Check-off fund, therefore helping projects that benefit state-listed species, other nongame wildlife, and state Natural Area Preserves. Contributions can be made to this dedicated fund on Connecticut state income tax forms or sent directly to DEP, Bureau of Financial and Support Services, 79 Elm St., Hartford, CT 06106 (make checks payable to "DEP-Endangered Species/Wildlife Fund").

The Connecticut Butterfly Atlas was published in 2007. The book includes accounts of all 117 butterfly species that are known to occur in the state, as well as amazingly beautiful and detailed photographs and species distribution maps. Copies can be ordered from the DEP Store website (www.ct.gov/dep).

The 5-year review of the Connecticut Endangered, Threatened and Special Concern Species List was initiated in 2007. Updates to the state list are due to be completed in 2009. DEP staff works with Taxonomic Advisory Committees to review the status of species currently on the state list and makes recommendations for additions.

The Connecticut State Legislature, with guidance from the Connecticut Invasive Plant Council, provided funding to the DEP Bureau of Natural Resources to create an Invasive Plant Program. This program will focus on early detection, rapid response, education, and prevention. Invasive species degrade habitats, compete with native species, and cost significant amounts of time and money to control.

The Internet version (www.IHEA.com) was the most popular with both students and instructors. Fewer than 10 students took the workbook-based course. Both versions still require the student to attend an 8-hour field day that is comprised of 4 instructional topics, a field course, live firing, and an exam.

The Glastonbury Public Shooting Range in Meshomasic State Forest continues to be a big hit with those who wish to sight in hunting firearms or just shoot targets for practice. The range was operational for its second full season. Public use increased by an impressive 109%, providing 1,825 shooter days for pistol, rifle, shotgun, and air gun during the 65 days of operation. Clay target shooting is not allowed. Four seasonal employees, who are trained as Range Safety Officers, currently staff the facility. The range is open free-of-charge for public use on weekends from April through November. It is also available to CE/FS firearms hunting instructors, on request, for use in conducting the live fire component of the course. All operational costs are funded through section 10 of the Federal Aid in Wildlife Restoration Program.

The High Rock Range in Naugatuck State Forest was improved with materials provided through the Federal Aid in Wildlife Restoration Program. Improvements included a new roof for the covered shooting platform, which was installed by High Rock Club volunteers. The facility is open to the public on weekends for a nominal charge and is operated with a 10-year cooperative agreement with the High Rock Shooting Association and DEP. Only rifles and pistols are allowed. Shotguns may be used on paper targets, but clay target shooting is not permitted.

A new 5-year cooperative agreement was negotiated for the Wooster Mountain Shooting Range at Wooster Mountain State Park (Danbury). The Danbury Shooting Sports Association will continue to operate the range for public use. There is a nominal charge to shoot regulated clay targets, rifles, and pistols.

The Nye Holman Field Archery Range, renovated in June 2006 and located in Nye Holman State Forest (Tolland), is available for unsupervised public use and CE/FS classes on an as-required basis. The range received moderate use by archers in 2007. Arrows tipped with target points are the only type allowed. Razor-edged broad heads are prohibited.

Technical Assistance

Wildlife Rehabilitation

The Wildlife Division responds to calls from the public regarding sick, injured, and orphaned wild animals. The Division does not have the resources to provide care for these animals. Therefore, it relies on a network of volunteer wildlife rehabilitators that consists of private individuals, staff at nature centers, and local veterinarians who have the proper training, as well as the appropriate facilities to house wildlife species until they can be returned to the wild. There are 243 individuals authorized to care for animals in need. Of that group, 6 are authorized to care for orphaned fawns and 38 have specialized training and authorization for handling rabies vector species (RVS; skunks, raccoons, foxes). In addition, 58 individuals have federal permits to care for migratory birds. In 2006, wildlife rehabilitators cared for 13,549 animals, which included 8,484 birds, 4,817 mammals (of which 134 were fawns and 478 were RVS), and 248 reptiles and amphibians. Approximately 9,238 of the animals cared for were released back to the wild.

Nuisance Wildlife

The Division receives thousands of phone calls involving human-wildlife conflicts every year. The majority of these calls concern “urban” wildlife species that take advantage of the shelter and food found around homes and businesses. Although common wildlife comprise a majority of the calls, the diversity of wildlife in Connecticut and the capacity of many other species to adapt to living “with” people has given rise to many other conflicts. Some of the more serious involve resident geese fouling lawns and ponds; turkey vultures roosting on homes and defecating on roofs and driveways; red and gray foxes denning under sheds in backyards; and coyotes attacking and killing pets, to name a few. Recommendations for controlling wildlife damage and identifying permanent solutions to prevent repeated damage are routinely provided to the public. Information is also provided on animal behavior.

The Nuisance Wildlife Control Operator (NWCO) Program licensed 324 NWCOs in 2007 who serviced an estimated 5,000 residents. NWCO reports indicate that most complaints involve

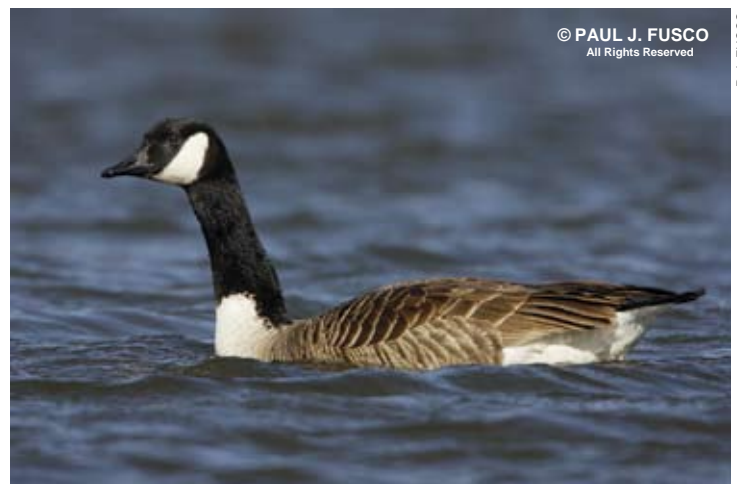


Wildlife Division biologist Laurie Fortin retrieves a juvenile red-tailed hawk that hit a window at the Bushnell when it fledged from its nest on the State Office Building on Capitol Avenue in Hartford.

problems caused by common “urban” species, such as gray squirrels, raccoons, skunks, woodchucks, and bats. Some NWCOs also have special permits that allow the control of problem Canada geese, woodpeckers, turkey vultures, beavers, flying squirrels, and muskrats. Over 200 of these special permits (both state and federal when migratory birds are involved) were issued by Division biologists. The permits prescribe the methods, numbers, and duration of the control efforts allowed.

The Wildlife Division and the Connecticut Nuisance Wildlife Control Operator Association worked together to set minimum qualification requirements for NWCOs wanting to perform large-scale Canada goose “round-up” population control services in Connecticut. This was necessary because state law now allows municipalities, homeowner associations, and non-profit organizations to submit a plan to the DEP

commissioner to control resident Canada geese, including their capture during the flightless stage, euthanasia, and subsequent donation to food kitchens. NWCOs must meet certain criteria to qualify for providing this service, such as taking an 8-hour training course and attending a 4-hour DEP class on laws, policies, and goose management. Both of the required training classes were held in 2007. Twenty NWCOs met the requirements and are eligible to qualify for permits to provide control services for landowners experiencing severe Canada goose damages.



State law now allows municipalities, homeowner associations, and non-profit organizations to submit a plan to the DEP commissioner to control resident Canada geese that are causing severe damage.

M. CLAVETTE, RECREATION MANAGEMENT PROGRAM

P. J. FUSCO

Hemorrhagic Disease Documented in Deer in New York

Written by Andrew LaBonte, Deer Program

In October 2007, the New York Department of Environmental Conservation (DEC) announced that over 20 deer found in the greater Voorheesville area of Albany county (approximately 60 miles from the Connecticut border) died from hemorrhagic disease (HD). Hemorrhagic disease is one of the most important infectious diseases affecting the health of white-tailed deer and, in rare cases, up to 50% of deer populations have been infected. HD is transmitted by biting flies called midges (commonly referred to as sand gnats, sand flies, no-see-ums). However, it is possible that other species of biting insects may eventually be confirmed as competent vectors of HD.

Since it was first documented, HD has been found to affect white-tailed deer, mule deer, bighorn sheep, pronghorn antelope, and elk in numerous states across the southeastern and southwestern United States.

HD was first reported in New Jersey deer in 1955. Prior to 2007, Pennsylvania was the most northeastern state in the United States to confirm HD in free-ranging white-tailed deer. HD viruses are widely distributed in temperate and tropical climates worldwide; however, HD in free-ranging wildlife populations have only been reported in the United States and Canada.

Outbreaks of HD typically occur in late summer and early fall relating to

peak activity of the midge. The onset of cold weather halts midge activity, which brings a sudden end to the outbreaks. It is unknown how the viruses persist through winter when midges are not active.

Initially, animals infected with HD may have a swollen head, neck, tongue, or eyelids, or have difficulty breathing. Clinical signs associated with infection are highly variable. Three stages of hemorrhagic disease exist (peracute, acute, and chronic). With the peracute form, or very rapid form, animals show severe swelling of the head, neck, eyes, lungs, or tongue, and typically die in one to three days. Animals living longer (acute) may have similar swelling, but also may have hemorrhages of the heart, rumen, and intestines. Animals also may show ulcerations on the dental pad, tongue, palate, and stomach. The chronic form is typically identified by growth interruptions on the hooves of animals. Due to high fevers sustained while sick, dead animals may be found in or near water.

The frequency and severity of HD varies by location. In the southern United States, reports of HD are more frequent but mortality associated with HD is lower. Factors associated with variation in both frequency and severity may include acquired and innate herd immunity, virulence factors associated with the virus, and vector species composition and activity patterns. The high prevalence of

antibodies in some wildlife species indicates that infection does not always result in animals contracting the disease.

Humans are not at risk by handling infected deer, eating venison from infected deer, or being bitten by infected midges. However, animals with gross lesions or bacterial infections may not be suitable for consumption. Little is known about the effects of HD on livestock, but research has shown that cattle often have antibodies to the virus. Most HD infections in cattle are silent, but a small percentage of animals can develop lameness, sore mouth, and reproductive problems. Cattle can also be short-term carriers. Depending on the specific virus, sheep can be seriously affected by HD. Previous documentation has revealed that when infected biting midges are in the area, simultaneous infections can incur in deer, cattle, and sheep.

In the eastern United States, the most northern states to document HD in deer have been New Jersey (1955, 1975, 1999, 2007), Pennsylvania (1996, 2002, 2007), and New York (2007). Unusually dry and warm conditions during the summer and fall of 2007 likely allowed midges harboring HD to expand further north, where they infected deer in New York. With the arrival of winter in Connecticut, there should be no cause for concern about HD affecting deer in the state.

New England Woodcarving & Wildlife Art Festival, March 8-9 in Cromwell

The Valley Shore Waterfowlers, Inc., and the Connecticut Chapter of Ducks Unlimited will be holding the 16th New England Woodcarving and Wildlife Art Festival at the Crowne Plaza Hotel in Cromwell on March 8 and 9, 2008. The Festival will feature a gathering of practitioners of all forms of woodcarving, bird carving, flat art, photography, and fish carving in first-rate competition, along with carving classes, demonstrations and sales – capped off with an art auction with winning works on Sunday at 3:00 PM. Tools, equipment, and wildlife art will also be for sale. Local carving clubs will be represented at the Festival.

The competition will be supported with over \$6,000 in prize monies. There will be door prizes and raffles, as well as a silent auction.

The Festival is the main fundraiser of the Valley Shore Waterfowlers, a nonprofit organization which funds wetland and wildlife-related projects in New England and Connecticut. Ducks Unlimited (DU) is an international organization specializing in the conservation and management of wetlands from Canada to Mexico. These two sponsors are uniting in a statewide effort to promote DU's Youth Group, "Green Wings," and the increased participation in wildlife art.

Admission to the festival is \$8.00 per person (youths under 15 are free). For more information about the Festival, visit the Valley Shore Waterfowlers website at www.valleyshorewaterfowlers.org.



Wildlife Calendar Reminders

Dec. 26-Mar. 12 Shepaug Bald Eagle Viewing Area is open for viewing bald eagles three days a week -- by advance reservation only -- on Wednesdays, Saturdays, and Sundays. Call 1-800-368-8954, Tuesday through Friday, from 9:00 AM-3:00 PM, to make reservations.

January-April Donate to the Endangered Species/Wildlife Income Tax Check-off Fund on your 2007 Connecticut Income Tax form.

Feb. 16-17 **9th Annual Connecticut River Eagle Festival.** To find out more information about the Festival, visit Connecticut Audubon's website at www.ctaudubon.org.

Early March Clean out bluebird nest boxes and install new ones.

March 8-9 New England Woodcarving and Wildlife Art Festival (see previous page for information).

Public Program Series at the Sessions Woods Conservation Education Center

The Public Program Series is a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please preregister for these programs by calling the Sessions Woods office at 860-675-8130 (Monday-Friday, 8:30AM-4:30PM). Programs are free unless noted and all children under 12 years old must be accompanied by an adult. **Sessions Woods is located on Route 69 in Burlington.**

Feb. 9 **Wildlife Tracks**, at 1:30 PM. Learn about wildlife tracks indoors with Natural Resource Educator Laura Rogers-Castro of the Wildlife Division and then head outside for a short walk to look for animal signs. Children also will make a wildlife track to take home. An adult must accompany all children.

Programs and workshops at Sessions Woods are sometimes scheduled between issues of *Connecticut Wildlife* and cannot always be advertised in the magazine in a timely manner. To stay informed about fun and interesting programs offered by the Wildlife Division, regularly check the calendar section of the DEP's web site (www.ct.gov/dep) or call the Sessions Woods office during business hours.

Hunting Season Dates

Jan 1-31, 2008 Extended deer bowhunting season on private land in deer management zones 11 and 12. A 2008 deer permit and private land consent forms for 2008 are required.

Jan. 15-Feb. 15 Special late Canada goose season in the south zone only.

March 15 State land lottery deadline for the deer hunting season.

..... See the 2008 Connecticut Hunting and Trapping Guide for specific season dates and details. The 2007-2008 Migratory Bird Hunting Guide contains information on duck, goose, woodcock, rail, and snipe seasons. Both guides are available at Wildlife Division offices, town halls, and on the DEP's website (www.ct.gov/dep).

Volunteers Needed to Check Wood Duck Nest Boxes

Wood ducks are currently the third most abundant breeding waterfowl species in Connecticut behind the mallard and Canada goose. Wood duck nest boxes have contributed to the recovery of wood ducks throughout their range. Productivity from box use can be used as an index to local breeding populations.

A maintenance and monitoring plan is essential to a successful wood duck nest box program. The data derived from wood duck box checks throughout the state are compiled and analyzed on an annual basis. The data provide the DEP Wildlife Division with critical information on the status of wood ducks in Connecticut. Checks and maintenance are conducted after the breeding season (mid-August) and prior to the initiation of the new breeding season (late February). Boxes that have been placed over water are more easily checked during winter, when safe ice conditions exist. Boxes placed away from water can be checked anytime during the period from mid-August to late February.

The Wildlife Division needs your help to check boxes placed on state land. Interested individuals should contact Kelly Kubik at (860) 642-7239 or kelly.kubik@po.state.ct.us. The Division's Migratory Gamebird Program has mapped and made corresponding data sheets for all wood duck box locations under its control and has also developed a detailed document explaining wood ducks and their nesting structures.

Kelly Kubik, Migratory Gamebird Program

Connecticut Wildlife

Subscription Order

Please make checks payable to:

Connecticut Wildlife, P.O. Box 1550, Burlington, CT 06013

Check one:

1 Year (\$6.00) 2 Years (\$11.00) 3 Years (\$16.00)

Name: _____

Address: _____

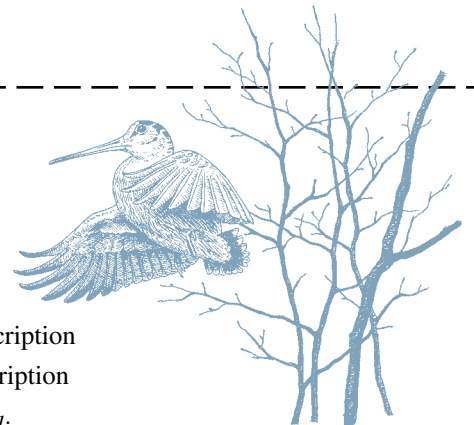
City: _____ State: _____

Zip: _____ Tel.: _____

Check one:

Renewal
 New Subscription
 Gift Subscription

Gift card to read: _____





© PAUL J. FUSCO
All Rights Reserved

A barred owl swoops down through snowflakes as it hunts in a Connecticut forest. Winter surveys for night birds were conducted on 26 routes in 2007, yielding 40 barred owls, among other species.

Bureau of Natural Resources / Wildlife Division
Connecticut Department of Environmental Protection
79 Elm Street
Hartford, CT 06106-5127

STANDARD
PRESORT
U.S. POSTAGE
PAID
BRISTOL, CT
PERMIT NO. 6