SPECIAL REPORT - THE YEAR IN REVIEW - 2004

January/February 2005

Connecticut Wildlife

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BUREAU OF NATURAL RESOURCES ● WILDLIFE DIVISION

From the Director

One hundred years ago, American chestnuts were the dominant tree of the eastern forests. Growing to heights over 100 feet and averaging more than five feet in diameter, these giants were incredibly valuable to humans and wildlife alike. The straight-grained, rot-resistant wood was easily worked and used for everything from heavy beams to fine furniture. The trees produced large, dependable mast crops. While the nuts were a delicacy for humans, they were the most important food in the forest for bears, deer, turkeys, grouse, and many other wildlife species.

However, all that changed in 1904 when a fungus unintentionally imported from Asia was discovered in New York City. Despite all efforts, the "blight" quickly spread and killed all the native chestnuts throughout their entire range. The destruction was rapid and complete. The most valued tree in the eastern forest was totally eliminated in less than 50 years. Perhaps making it even worse was the fact that the stumps persisted for decades, sending up new stems and spawning hope that some trees could recover. But none did.

As a result, my generation and future ones were robbed of the opportunity to sit among a grove of these majestic trees. I regret this immensely. However, I can't imagine the pain that my grandfather's generation endured as they helplessly watched the chestnuts die out. For people like my grandfather, who loved the land and wildlife, the loss of the chestnut was a natural and cultural tragedy of epic proportions. The house he lived in and the barn he worked in were constructed largely of chestnut, and the exposed beams were daily reminders of this great tree that was unbelievably no more. While other trees soon filled the space in the forest, no species could replace the value of the chestnut.

As Connecticut's State Forester, Donald Smith, writes in this issue, Connecticut's oak trees are now facing a potentially devastating threat from Sudden Oak Death (SOD). We must hope that the organism does not survive in our climate, because it has the capability to spread very quickly. With the chestnuts now gone, the oaks reign supreme in terms of their value for timber and wildlife food. While you won't find many humans roasting acorns over an open fire, the acorns are an extremely important source of nourishment for many mammals and birds. Oaks are especially important due to the quantity of mast they produce (a single tree can produce several thousand acorns) and the fact that the acorns are available during late fall and winter when other foods are scarce. The discovery of SOD in the Northeast is a cause for great concern and its status must be monitored closely.

Dale W. May

Cover:

The canvasback, pictured in a Connecticut salt marsh, is one of several waterfowl species counted in the annual midwinter waterfowl survey. The survey is usually conducted in early January.

Photo courtesy of Paul J. Fusco

Connecticut Wildlife

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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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P. J. FUSCO

In 2004, the Wildlife Division continued to focus its efforts on assessing the state's growing black bear population. Winter dens were visited so that reproductive success could be documented.

The Year in Review 2004

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

This "Year in Review" special report provides a summary of the many accomplishments and responsibilities of the Connecticut DEP Wildlife Division. 2004 was a successful year by most accounts, but one dominated by such issues as the growing black bear and moose populations, the high deer density in urban areas, and planning and budgeting for the future.

Reports of black bear and moose sightings and nuisance complaints concerning bears continued to rise in 2004. Black bear reports increased to over 1,800, a nearly 50% increase from 2003, indicating the continued upward trend in the bear population. Vehicle kills of bears were more frequent, with nine confirmed vehicle mortalities. Bears were seen more often in urban areas than ever before in 2004. DEP Wildlife Division biologists and Environmental Conservation Police removed bears from Hartford, West Hartford, Waterbury, and Granby. There also were responses to bears in Middletown and Willimantic. Two moose were immobilized and relocated to more remote areas in 2004. One moose was captured in Old Lyme, not far from busy Interstate 95, and the other was captured in Granby, near Bradley International Airport.

The Wildlife Division continued to stress efforts to help reduce the high deer population in shoreline communities in Connecticut, such as holding controlled hunts, increasing the antlerless deer harvest, and allowing hunting over bait in certain areas where deer densities are high.

The development of a Comprehensive Wildlife Conservation Strategy (CWCS) took centerstage in 2004. The CWCS is required in federal legislation establishing the State Wildlife Grants (SWG) Program. SWG provides much needed funding for projects focused on "species in greatest need of conservation."

Research/ Monitoring

Eight pairs of bald eagles attempted to nest in the state; seven young eagles fledged from four of the nests. The other four nests failed. During the Midwinter Eagle Survey, 92 bald eagles were counted (50 adults, 41 immature eagles, 1 unknown).

Six pairs of peregrine falcons attempted to nest. Six young peregrines fledged from two nests; three nests failed and one pair only exhibited territorial behavior and did not produce any eggs.

Shoreline nesting locations for state and federally threatened piping plovers and state threatened least terns were fenced for protection. Forty pairs of piping plovers fledged 54 young, while 158 pairs of least terns fledged 209 young.

The Wildlife Division contributed equipment to the long-term roseate tern project being conducted on Falkner Island in Long Island Sound. Forty-four pairs of roseate terns fledged 25 young.

During the 14th field season of surveying for bog turtles, four historic sites were visited and bog turtles were reconfirmed at one of these sites. One new site was investigated, but no turtles were found.

The Wildlife Division continued its involvement in the monitoring of West Nile Virus (WNV) in the state's bird population. Division staff worked with local health departments inspecting dead birds for testing suitability, species identification, and specimen tagging. During 2004, 2,385 dead bird sightings were reported, including 479 crows from 86 towns in all eight counties. Of the 117 birds that were submitted by local health departments and were suitable for testing, 27 tested positive for WNV (22 crows, 2 blue jays, 2 hawks, grackle) and 90 tested negative. The WNV-positive birds were collected from 18 Connecticut towns and were not restricted to a specific region of the state. Positive birds or mosquitoes were identified in 21 towns.

An entomologist was contracted to monitor the adult and larval populations of Puritan tiger beetles. These rare beetles are only found in New England at two areas on the Connecticut River--one in Connecticut and one in Massachusetts.

The Division participated in a multi-state, telemetry study of Indiana bats. Data are still being collected.

The Migratory Bird Stopover Habitat Survey entered its third and final field season. Point-count surveys were conducted by Division staff and volunteers during the spring and fall bird migrations. Results from the surveys will help the Division identify priority migration stopover sites and guide conservation efforts. Grassland birds were the focus of another important survey.

Division staff conducted callback surveys (using taped songs of particular birds) for six species of woodland raptors and six species of state-listed passerines. This was the first year of a two-year study to locate breeding pairs of these birds and document the important habitats that are being used.

The Wildlife Division continued to receive and record sighting reports of bobcats and fishers. Vehicle kills of bobcats and fishers have increased in recent years. In 2004, 27 bobcats and 53 fishers were known to have been killed on Connecticut roadways.

A project to assess black bear reproduction and survival in Connecticut continued (see below). The dens of four sows radiocollared over the summer of 2003 were checked in March to see if any of the females had given birth to cubs. Two had given birth; one had two cubs, the other had one.

The 3rd year of the resident Canada goose study was completed. In 2004, 1,857 geese were captured at 43 sites throughout the state. A total of 500 yellow neck collars were placed on geese, with approximately 60 put out in each of the eight counties. A mark-recapture study produced a population estimate of 35,686 resident geese. Over the past three years, resident goose numbers appeared to be stable in the state.

One aspect of the resident goose study looked at inducing molt migration in urban geese to reduce nuisance problems (see the September/October 2004 issue of *Connecticut Wildlife* for more information). To determine if molt migration can be induced in failed nesters, 12 urban goose nests were destroyed in late incubation and the nesting hens were fitted with transmitters. In addition, DNA

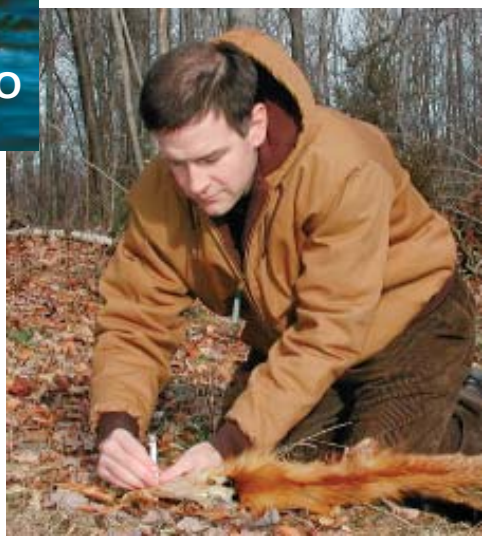
January

P. J. FUSCO (3)

The Wildlife Division, with assistance from the U.S. Fish and Wildlife Service, has conducted the Midwinter Waterfowl Survey every January since the 1940s. The most notable observations from the 2004 survey included the highest count of common goldeneyes and buffleheads in over 30 years. Unfortunately, the scaup count continued its downward trend. Only 1,900 scaup were observed during the survey. Historically, over 40,000 scaup wintered in the state.

February

Pelt tagging is one method to monitor the number of furbearers harvested by hunters and trappers. The beaver harvest was 977 in the 2003-2004 trapping season. Trapping has helped control the beaver population and reduce levels of property damage.



March

As part of a project to assess black bear reproduction and survival in Connecticut, Division staff visited the winter dens of five female bears that had given birth in 2003. Staff hoped to determine if the 17 cubs born in 2003 were still alive and well. Inspections revealed that 11 cubs, now considered yearlings, had survived the first year of their lives.

samples were collected from five birds to determine whether genetic makeup influences the incidence of molt migration. Data are still being collected on this aspect of the project.

The Division developed and sent a Municipal Canada Goose survey to each Connecticut town. This data will provide information on the magnitude of goose problems, the timing of such problems, and associated costs, as well as provide insight as to what measures towns are willing to undertake to solve their problems. This information will assist the Division in alleviating nuisance goose issues that are so prevalent in the state.

A project was initiated to assess the impacts of mute swans on wetland habitats. This cooperative project with the University of Connecticut is being funded by the Office of Long Island Sound Programs.

The woodcock research project continued in 2004 (see the November/December 2004 issue of *Connecticut Wildlife* for more information). Statewide surveys of woodcock were conducted for a second year, habitat was quantified along each survey route, and funding was secured to equip woodcock with radio transmitters in 2005.

Research was initiated on the distribution and abundance of wetland birds. Thirty marshes were surveyed for the presence of various rail species and other waterbirds. A total of three surveys were conducted at each marsh. The targeted species were black rail, king rail, sora, clapper rail, Virginia rail, American bittern, least bittern, pied-billed grebe, and common moorhen. Target species were detected at 12 of the 30 marshes. The surveys will continue in 2005.

To assess the distribution of breeding black ducks, 41 marshes were surveyed. Black ducks were detected at nine sites; three of the sites were in inland areas and six were along the coast. This effort will continue in 2005.

As part of a collaborative project between the Canadian Wildlife Service and the Atlantic Flyway Council Technical Section, Atlantic brant were trapped and banded. Winter banding of brant will complement the breeding ground banding that is already occurring.

A ruffed grouse project was initiated. Grouse populations in Connecticut appear to be declining. Initial informational needs include the basic distribution of grouse, their abundance, and hunting pressure. Thirty drumming survey routes and a grouse hunter questionnaire have been developed. Drumming surveys will begin in 2005. This initial data gathering effort will pave the foundation for a full research initiative in the years to come.

Efforts were made to capture and band 812 ducks. Banding data provide critical information on harvest rates and movements of ducks and are used to develop hunting season regulations for ducks across North America.

During winter, 431 wood duck nest boxes were checked statewide. Use of boxes by wood ducks and overall wood duck production remained unchanged from 2003.

Staff continued to conduct the following annual surveys related to waterfowl: breeding waterfowl, breeding mute swan, and midwinter waterfowl inventory.

The fourth year of the New England and eastern cottontail distribution study was completed. Over 800 rabbit specimens from 97 towns were collected and identified. The New England cottontail was documented from 22 towns. A radiotelemetry study evaluating home range size, habitat use, and mortality rates of both cottontail species was completed (see related article on page 9).

A two-year study investigating strategies to manage urban deer populations in Greenwich was completed. The study involved capturing, marking, and radio-tracking 58 adult female deer, conducting surveys of hunters and residents, and evaluating factors that contribute to deer/vehicle accidents. Partners in this project were the University of Connecticut and the Town of Greenwich.

Spotlight surveys of white-tailed deer were conducted in Groton and Greenwich to evaluate sex ratios and fawn recruitment, and to devise a model of population dynamics of deer in these areas. The first phase of a study evaluating hunter success and deer responses to the use of bait for hunting is nearly completed.

April

In spring 2004, the DEP launched a wildlife license plate program to help raise funds for wildlife research and management projects. There are two great designs to choose from: a state endangered bald eagle or the elusive bobcat. Money raised from the sales and renewals of wildlife license plates is earmarked for Connecticut's dedicated Wildlife Conservation Fund. Applications can be found at most Department of Motor Vehicle (DMV) and DEP offices or downloaded from the DMV's website: www.ct.gov/dmv.

May

2004 marked the final survey season of the three-year Migratory Bird Stopover Habitat Project. A dedicated group of 41 volunteers and several Wildlife Division staff members surveyed 41 sites throughout the state. Surveys were conducted on six scheduled dates in spring and five in the fall, for a total of 451 surveys. Preliminary analysis showed that over 20,000 individual birds were counted, averaging 1,000 birds per square kilometer in the spring of 2003.

June

Wildlife Division biologists, along with U.S. Fish and Wildlife Service employees and several volunteers, completed the eighth colonial waterbird survey in June 2004. The survey is conducted every three years from Greenwich to Stonington. During the survey, 95 sites were checked and 21 species of waterbirds were censused at nesting colonies located primarily on barrier beaches and coastal marshes and islands.

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Management

Wildlife Division staff was busy during the past field season, undertaking projects that continue to emphasize early successional habitats, such as young forests, old fields, and grasslands. A variety of techniques are used to restore, enhance, and maintain these critical habitats, such as prescribed burning, brontosaurus mowing/mulching, brush mowing, herbicide treatments, forest management practices, and grassland seedings.

Prescribed burning was conducted on 97 acres of old field and grassland habitat located at Robbin Swamp Wildlife Management Area (WMA) (Canaan), Higganum Meadows WMA (Haddam), Pease Brook WMA (Lebanon), and Pachaug State Forest (Voluntown).

A brontosaurus was used to reclaim 53 acres of old field/grassland habitat at the Flaherty Field Trial Area (East Windsor).

Brush mowing occurred at Flaherty, Bear Hill WMA (Bozrah), Babcock Pond WMA (Colchester), Zemko Pond WMA (Salem), Bartlett Brook WMA (Lebanon), Simsbury WMA (Simsbury), Goshen WMA (Goshen), and Cromwell Meadows WMA (Cromwell), totaling 250 acres.

Warm season grasses were planted on 33 acres at Quinnebaug WMA (Canterbury).

Ruffed grouse management activities continued at Kollar WMA (Tolland) through forest thinnings and cuttings on 20 acres.

The Division was awarded five new Wildlife Habitat Incentives Program (WHIP) contracts through the Natural Resources Conservation Service (NRCS) to address early successional habitat enhancement, with an emphasis on the management of non-native invasive plants. Projects will be implemented during the 2005 field season at Robbin Swamp WMA, Housatonic River WMA (Kent), Higganum Meadows WMA, Flaherty Field Trail Area, and Harkness State Park (Waterford). A total of 225 acres will be treated.

The DEP provided technical assistance and equipment, including our specialized truax no-till seeder, on two private land WHIP projects to establish 45 acres of warm season grasses. Such cooperation between the DEP and the NRCS is critical in delivering wildlife enhancement projects to the private landowners of Connecticut

The Division completed 47 acres of early successional vegetation management on two parcels of private land through funding provided by the U.S. Fish and Wildlife Service's Partner's Program. Subsequently, the Division has received an additional award of $20,000 to conduct similar work on two additional private land parcels during the 2005 field season.

The Wildlife Division continues to work towards implementation of its Landowner's Incentive Program. This program will allow the Division to deliver financial and technical guidance to enhance species and habitats "at risk" on private lands. The Division anticipates conducting landowner sign-ups and undertaking enhancement projects during the 2005 calendar year. (Look for more in future issues of *Connecticut Wildlife*.)

A natural resource inventory and historical review of Belding WMA (Vernon) was conducted and used as the framework in developing a long-term management plan. There are plans to hire a land steward who will oversee habitat management of the property, conduct ongoing research and inventories, and incorporate educational outreach within the local community. This has been made possible by the establishment of a trust account by the Belding family

The narratives of the Atlantic Coast Joint Venture (ACJV) Focus Area descriptions for Connecticut were finished. There are seven Focus Areas in the state that are identified as critical for both waterfowl and other migratory birds. The narratives serve as background information for nongovernment organizations and government entities who are applying for habitat restoration/ acquisition monies through either the ACJV or other funding sources. Staff also continued to provide technical assistance to towns on the development of resident Canada goose management plans.

A comprehensive survey of the state's duck hunters was developed and sent to 495 active duck hunters in the state. This survey will provide information on hunter demographics, hunting preferences, hunting knowledge, and concerns. The information will be vital to continuing the waterfowl

July

July 2004 was a busy month for moose in Connecticut. Along with numerous reports of sightings, the DEP immobilized and relocated two moose from two different locations. Both moose were examined, ear-tagged, and relocated to remote locations in the northwestern corner of the state.

August

Connecticut's Conservation Education/Firearms Safety (CE/FS) Program offers courses in firearms, bowhunting, and trapping throughout the year and at various locations. These courses are taught by a dedicated group of volunteer CE/FS instructors. In late summer, as hunters prepare for the upcoming hunting seasons, the phones at Division offices are busy with phone calls from people requesting CE/FS classes.

September

The Wetlands Habitat and Mosquito Management (WHAMM) Unit had several projects going on throughout the year. Restoration work was completed at three coastal salt marshes during 2004, while projects continued in Old Saybrook and Stratford. WHAMM Program staff assisted with a fisheries project in Colchester and finished a freshwater wetland enhancement project at Dead Man's Swamp in Cromwell.

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hunting tradition in the state. The Division hopes to focus future regulatory efforts on providing hunter satisfaction and retention among waterfowlers in Connecticut (see related article on page 12).

Wildlife assessment surveys were conducted at South Cove in Old Saybrook. These assessments were conducted to monitor the success of habitat restoration work performed at South Cove.

The Wetlands Habitat and Mosquito Management (WHAMM) team worked on three salt marshes during 2004. Eleven acres were restored at Minore Marsh in Branford by initiating *Phragmites* control and constructing a new main channel and four ponds. Ten acres were restored at Castle Rock Marsh in Branford by initiating *Phragmites* control, plugging three old ditches, re-cleaning an existing main channel, and constructing one small pond. Forty acres were restored at Mile Creek Marsh in Old Lyme by initiating *Phragmites* control, cleaning a main creek that flows into Long Island Sound, and re-cleaning a small ditch, reservoir ditches, and ponds.

Two fill removal projects to restore salt marshes were also on the agenda. Work continued at a 10-acre restoration site in Lynde Point Marsh in Old Saybrook, where 33% of the project has been completed. Work also continued at the Stewart B. McKinney National Wildlife Refuge in Stratford, where a 10-acre salt marsh, which was filled in the 1950s, is being restored.

Staff worked on a fisheries project on Blackledge Creek in Colchester, which included restoring 600 feet of embankment and creek habitat.

A freshwater wetland enhancement project was finished at the Cromwell Fish and Game Property called Dead Man's Swamp in Cromwell. Fourteen ponds were installed in degraded habitat that was dominated by invasive species like *Phragmites* and purple loosestrife. The ponds ranged in size from one-tenth of an acre to one-third of an acre.

Over 600 acres of *Phragmites*-dominated marshes were sprayed with herbicide, following a treatment applied in 2003.

Connecticut's population of monk parakeets is continuing to expand and the Division is receiving an increasing number of nuisance complaints, ranging from noise and droppings to electrical wire and light tower damage. The Division is working with utility companies and the USDA Wildlife Services to chart a course for resolution.

During the 2004 spring turkey season, 7,330 hunters harvested 2,081 wild turkeys. Birds were harvested from 150 of 169 Connecticut towns. The three towns with the highest turkey harvest were Lebanon (69), Sharon (50), and Redding (46). The spring harvest consisted of 653 juvenile and 1,428 adult birds.

Recreation Management

Several newly acquired properties were evaluated for primary management designation and public hunting access potential through an interdisciplinary team of agency staff. The properties included the Great Hill Block of Naugatuck State Forest (327 acres; Seymour), Housatonic River WMA (588 acres; Kent/Cornwall), Camp Columbia State Forest (500 acres; Morris), and Eightmile River WMA (322 acres; East Haddam). All areas were boundary marked and opened to bowhunting during the 2004 fall deer season. Additional types of public hunting will be allowed starting in 2005.

Public access for small game hunting was secured through renewals or new agreements with 12 landowners, totalling 1,411 acres.

Final improvements to the shooting range at the Franklin Wildlife facility, which is used by the Conservation Education/Firearms Safety Program, were completed. Exterior renovations to the classroom at the facility were initiated and are nearing completion.

During the fall hunting season, 20,770 ring-necked pheasants were released on 55 state-owned, state-leased, and permit-required hunting areas. Cooperative sportsmen's clubs released pheasants at various public hunting areas.

The Division was granted an extension to a special grant for the purchase of pheasants for private sportsmen's clubs hosting youth pheasant hunter training days. The project was supported by the Hunting Heritage Partnership, a grant program of the National Shooting Sports Foundation. A total of 290 junior hunters participated in 25 youth training events held by 19 clubs statewide.

October

The budget for the Pheasant Program is determined by the net revenue collected in the previous year. An increase in pheasant tag and license fees in 2003 resulted in more than $30,000 of additional revenue collected from pheasant hunters, which was used to directly support the pheasant stocking program in 2004. Thanks to the budget increase, the DEP was able to increase its purchase of pheasants by more than 3,000 birds and stocking was restored to five of the 20 areas where stocking was discontinued in 2003.

November

Biological data were collected throughout the state at check stations during the deer shotgun hunting season. As part of an effort to monitor for chronic wasting disease (CWD), heads of harvested deer were collected at select check stations throughout the state. All 230 samples that were tested were negative. Another 300 samples will be collected from deer management zone 11 (Fairfield County) in 2004-2005. CWD has not been documented in Connecticut's deer population.

December

Left to right: J. RILEY, P. J. FUSCO, P. GOOD

The Sessions Woods Conservation Education Center is fortunate to have the assistance of an active all-volunteer organization known as the Friends of Sessions Woods. This nonprofit group has been in existence since 1998 and has supported projects and programs to enhance the value of Sessions Woods. Along with sponsoring various activities, the organization also has raised money and received grants for the purchase of educational materials and wildlife mounts for exhibits in the education center.

Technical Assistance

Wildlife Division staff members spend a considerable amount of time responding to the continuous flood of requests for general wildlife information and for help in resolving wildlife problems and concerns. Many of the problems involve common wildlife that are well adapted to living near people, such as coyotes, foxes, geese, deer, raccoons, skunks and beavers. Personnel provide information and guidance about recommended solutions and legal control methods for nuisance wildlife situations. For problems involving such animals as beavers, deer, bears and geese, on-site inspections and assistance in resolving severe agricultural, ecological, or public health and safety damages are often required.

The Division regulates Nuisance Wildlife Control Operators (NWCOs) who provide commercial wildlife control services to persons seeking help in resolving common wildlife problems. The Connecticut Nuisance Wildlife Control Operator's Association works closely with the Division to train NWCOs in wildlife damage identification and control methods. In 2004, there were 279 licensed NWCOs and 57 persons completed NWCO training.

Each year, the Division responds to hundreds of calls regarding sick, injured, and orphaned wild animals. Because the DEP does not have the resources to provide care for these animals, it relies on a network of volunteer wildlife rehabilitators that consists of private individuals, nonprofit nature centers, and local veterinarians who have the appropriate training and facilities to house animals until they can be released. In 2004, 240 individuals were authorized as wildlife rehabilitators. Of that group, five had the resources to care for orphaned fawns and 38 had specialized training and authorization for the handling of rabies vector species, namely skunks, raccoons, and foxes. In addition, 64 individuals received federal permits to care for birds protected by the federal Migratory Bird Treaty Act. Wildlife rehabilitators handled and cared for 10,764 animals, which included 5,870 birds, 4,732 mammals (150 of which were fawns and 507 were rabies vector species), and 162 reptiles and amphibians. Almost 60% (6,330) of the animals cared for were released back to the wild.

Advice and technical guidance on deer population management was provided to communities or homeowner associations in Darien, Wilton, Greenwich, Groton, New Milford, and Ridgefield.

Division staff rated 55 land acquisition proposals, five proposed land use changes, and 36 municipal grant applications.

A draft resident goose management plan was completed for Sherwood Island State Park.

Education and Outreach

Master Wildlife Conservationists (MWCs) performed close to 1,900 hours of volunteer service, assisting with Division outreach and research efforts. Nineteen new individuals completed the MWC curriculum offered in 2004. Currently, there are 44 active MWCs assisting the Division.

The Division continues to maintain a web site (www.dep.state.ct.us/burnatr/wildlife) that allows users to access a wealth of information about the state's wildlife. Fact sheets, publications, photos, black bear sighting reports, and information about many of the Division's programs can be found there. Also included are online applications for the deer and turkey season state land lotteries and a database listing all of Connecticut's public hunting areas. The hunting area database gives a short description of access to each area, the types of hunting permitted, and links to downloadable maps. The web site is regularly updated with information about wildlife programs and new publications.

The Wildlife Division set up informational exhibits at 15 public events, including the Woodstock Fair, the annual Fishing and Hunting Expo, Sharon Audubon events, Connecticut Audubon's annual Eagle Festival in Essex, an International Girl Scout Camporee, and several Earth Day events. Division staff and Master Wildlife Conservationist volunteers interacted with thousands of people at these events, and both staff and volunteers gave wildlife presentations at several of the events. For example, biologists presented information on the status and life history of bald eagles in Connecticut at the Connecticut Audubon Eagle Festival.

Division staff gave numerous presentations at professional meetings and conferences, hunting seminars, conservation organization and town meetings, inland wetland commissioners' training, the Ruffed Grouse Society's Coverts Program, teacher workshops, school classrooms, college classes, scout meetings and other events. Topics included bears, coyotes, bats, backyard wildlife habitat enhancement, mosquito management, endangered species, reptiles and amphibians, deer and wild turkey management, habitat enhancement using native plants, and habitat management.

Biologists also gave numerous media interviews on such topics as bears, coyotes, moose, shorebirds, bats, bald eagles, and reptiles and amphibians.

A presentation was given to 30 municipal park and recreation directors outlining the resident goose problem, what can be done, and the new legislation in Public Act 192, which municipalities can use to alleviate goose problems.

The 321 volunteer Conservation Education/Firearms Safety (CE/FS) instructors donated 13,741 hours of service to the CE/FS Program. A total of 3,945 students graduated from 155 courses in firearms (89), bowhunting (61), and trapping (5). The home study version of the CE/FS firearms course continued to be offered as an alternative for students who are unable to attend the traditional classroom course. Five home study courses were given with 90 graduates.

A hunter education radio commercial was aired in the summer and fall of 2004 to publicize Connecticut's highly regarded hunter safety program. A large, full-color poster that promotes safe hunting and the availability of hunter safety classes was distributed to sportsmen's clubs and town halls.

Sessions Woods Education Center

Sessions Woods was the site of several scheduled public education programs, school field trips, youth group campouts, field trips, and presentations for numerous private groups, as well as meeting and training sessions for DEP staff. The facility also was the site for Master Wildlife Conservationist training. Numerous visitors used the interpretive trails at Sessions Woods.

Progress continued to be made on the development of exhibits on habitat and endangered species that will be in the exhibit room in the Conservation Education Center.

The Friends of Sessions Woods (FOSW) received a $4,500 grant through the Main Street Community Foundation from the Merriman Family Fund and the James R. Parker Trust. Tables, benches, and audiovisual equipment will be purchased with the funds. All purchases will be used to complete classroom space in the exhibit area. Several events were conducted at Sessions Woods in conjunction with the FOSW, including the annual "Halloween in September" event and a Wildlife Holiday Gift Workshop.

To find out about public educational programs at the Sessions Woods Conservation Education Center, check the calendar on page 19, call Sessions Woods at 860-675-8130 (Mon.-Fri., 8:30AM-4:30 PM), or check the calendar on the DEP's website (www.dep.state.ct.us).

Research on New England Cottontail Rabbits Continues

Written by Howard Kilpatrick, Deer/Turkey Program

A study was initiated in October 2000 to assess the distribution of New England cottontails in Connecticut. This study was partially funded by the *Connecticut Endangered Species/Wildlife Income Tax Checkoff Fund, Wildlife Conservation Restoration Program, and State Wildlife Grants*.

The New England cottontail is the only native rabbit species in Connecticut. The eastern cottontail was introduced to many New England states, including Connecticut, in the early and mid-1900s, primarily by sportsmen's groups. The two species are almost identical in appearance, so differentiation can only be reliably done through DNA analysis or examination of the skull. Historically, the New England cottontail was distributed statewide. Limited research conducted over the past 50 years suggested that the distribution and abundance of New England cottontails had declined in Connecticut. Data on population abundance and distribution are limited, but the little information available suggests that populations may have declined throughout New England. The decline is attributed primarily to habitat loss and habitat fragmentation and partially to increased competition from the more adaptable eastern cottontail

P. J. FUSCO

The Eastern cottontail (above) and New England cottontail are almost identical in appearance, so differentiation can only be reliably done through DNA analysis or examination of the skull.

From October 2000 through March 2004, the Wildlife Division collected cottontail specimens from hunter harvest, roadkills, public donations, and live-trapping efforts by the DEP. Pelage (fur) characteristics were noted and DNA samples or skulls were collected from all cottontail specimens. Previous studies indicate that eastern cottontails typically have a white spot on the forehead and New England cottontails typically have a black spot between the ears. Species identification was confirmed by examining skull sutures or conducting DNA analyses. In addition to research conducted by the Wildlife Division, the University of New Hampshire conducted a regional study throughout New England examining the current distribution of New England cottontails. This study, which was directed by Dr. John Litvaitis, focused on identifying the presence of New England cottontails by examining the DNA composition in rabbit droppings.

The Wildlife Division collected 800 rabbit specimens from 104 of Connecticut's 169 towns between October 2000 and March 2004. Of that sample, 80% of the specimens were eastern cottontail (EC), 10% were New England cottontail (NEC), and 10% were unidentified. Species confirmation through DNA analysis is pending for 23 additional specimens. By using solely pelage characteristics, 58 specimens were identified as EC and two as NEC.

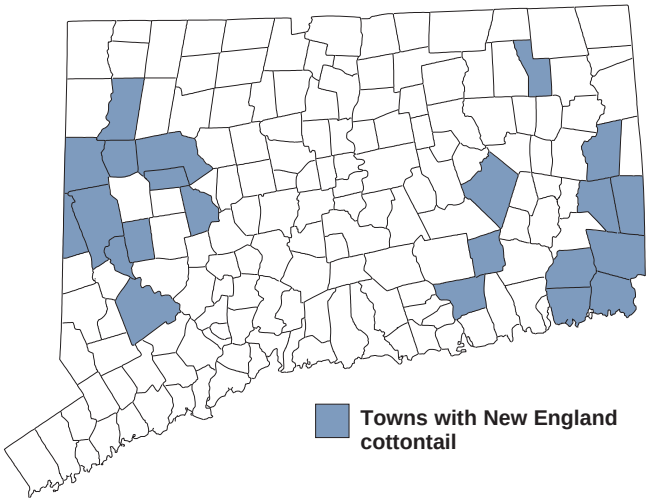
New England cottontails were found in 22 of 104 (21%) towns and eastern cottontails were found in 95 of 104 (91%) towns. In most towns (76%), four or fewer specimens were collected. Sixteen of 104 (15%) towns that cottontails were collected from had both NEC and EC.

Pelage characteristics were compared to DNA or skull analysis to determine the reliability of pelage characteristics to identify cottontail species. Specimens that had only a black spot between the ears had a 90% probability (54 of 60) of being NEC. Specimens that had only a white spot on the forehead had a 99% probability (399 of 404) of being an EC. Specimens that had no white or black spot had a 95% probability of being EC. Species that had both a black and white spot had a 43% probability of being NEC.

In addition to the 22 towns that were confirmed by the Wildlife Division as having New England cottontails, an additional 10 towns in Connecticut were confirmed by the University of New Hampshire as having the species. From December 2004 to April 2005, the Wildlife Division will be live-trapping rabbits in towns were little or no data exist. The U.S. Fish and Wildlife Service will use this data to determine if the New England cottontail warrants listing as a federal species of special concern.

Studies conducted by the Wildlife Division and the University of New Hampshire were designed to confirm the presence of New England cottontails. The lack of confirmation does not imply that New England cottontail rabbits are not present in towns where they have not been documented. If landowners have an abundance of cottontail rabbits on their property and are interested in participating in this study, they can contact the Wildlife Division's Franklin Wildlife Office at (860) 642-6528.

Distribution of New England cottontail species collected in Connecticut from October 2000 through March 2004.



Harbingers of Doom or Spirits of Good Fortune?

Written by Paul Fusco, Wildlife Outreach Unit

Large, loud, and with satin black plumage, these birds are often seen in numbers and seem to have a presence and awareness unlike other birds. They are strongly linked with myth and folklore as both an agent of fortune and a foreboding spirit.

In many cultures, crows and ravens have long been associated with death, carnage, gloom, doom, and even the devil. The raven has been connected in myth and poetry to solitude, greed, hope, longevity, death, fertility, and trickery. It is a frequently used symbol in mystery, magic, and witchcraft.

P. J. FUSCO (2)

At some locations in Connecticut, crows can be seen flying in from miles around to settle into sometimes huge roosts each night during winter.

Some of the superstitions are rooted in the scavenging habits of these birds. After all, crows and ravens will eat almost anything, and they have a particular taste for carrion. Today, crows are frequently seen along roadsides, feeding on the carcasses of vehicle-killed animals. In times past, opportunistic crows and ravens were seen descending on battlefields, feeding on the dead, and leaving stark impressions on battleground survivors. These noisy, black birds were quickly given labels of harbingers of bad luck and messengers of death. Some people believed that crows and ravens could actually smell the scent of death upon a person before they died.

The bill of the common raven is much larger and heavier than the bill of a crow.

Farmers have added to the birds' legend of doom and bad luck after having lost a season's crop to large flocks of crows and ravens. Other superstitions of crows and ravens being agents of the devil stem from the birds' black plumage, similar to the lore involving black cats and of witches dressed in black. A gathering of crows is known as a "murder," which originates from another myth that says crows will sit in judgment of their own and then kill them.

Native American folklore pays homage to crows and ravens in many ways, including as the spirit of wisdom and agents of kindness, as well as ominous bearers of misfortune. According to one legend, the raven is a well-intentioned guide whose keen sight allows it to issue warnings to the living and to lead the dead on their final journey.

Crows and ravens are also well known for their raucous behavior. Their noisy calls and bold nature can at times be both annoying and entertaining. Birders know that by following the loud calls made by a flock of crows, it may lead them to the rare sight of an owl or maybe a hawk as it's being harassed by the crows.

Although these birds are secretive during the nesting season, they are quite gregarious at other times of the year. In winter, crows will gather in large numbers to roost for the night. These

crow roosts frequently are made up of thousands of individuals that fly in from miles around. Crows and ravens will also gather at food sources, including agricultural fields, sometimes much to the farmers' dismay.

Crows and ravens are the largest members of the songbird, or perching bird, family. Closely related to jays and magpies, they are wary birds, and well known for their curiosity and intelligence. They are widely considered to be the most intelligent of the birds. They always seem to know when it is trash pick-up day. There are two species of crows and one raven in Connecticut.

The American crow is one of the most common birds in Connecticut.

American Crow

The most widespread member of this group is the American crow. It has a solid statewide distribution during the breeding season, but may withdraw somewhat from northern parts of the state during harsh winter conditions.

American crows have adapted extremely well to humanity. Crows prospered when forests were cleared and agriculture dominated the landscape during the 1700s and 1800s. As forests have regenerated and suburbanization has expanded, crows have taken advantage of new opportunities. Landfills, with their heaping loads of garbage, have provided crows with a plentiful food source over the years. Increased traffic volume along roads is also providing a steady source of scavenging opportunities. Suburban lawns provide almost unlimited foraging areas where, incidentally, crows consume large quantities of harmful insects. These suburban neighborhoods also provide them with protected "no hunting" zones.

Fish Crow

Slightly smaller than the American crow, the fish crow is best identified by its short, nasal *"cahr, cahr"* voice, as opposed to the familiar *"caw, caw"* of the American crow. Fish crows also have a lighter, thinner bill, which is noticeable when in direct comparison between the two species.

The fish crow is found mainly in tidal areas, being more common along Connecticut's western shoreline than eastern. It can also be found in some of the major river valleys, including the Housatonic and Quinnipiac, and especially close to where those rivers empty into Long Island Sound.

Fish crows are at the northern end of their range in New England. They have shown some range expansion to the north in recent years.

Common Raven

The common raven is a relative newcomer to Connecticut's list of breeding birds. Over the past few decades, the raven has gradually been expanding its range to the south, finally bringing the bird to Connecticut as a breeding species in the late 1980s. Ravens nest on rocky cliffs and outcroppings. Their primary breeding areas in Connecticut have been in the northwest hills of Litchfield County, but in recent years they have nested as far south as the trap rock ridges in Woodbridge and Hamden. Common ravens have been classified as a species of special concern on Connecticut's list of Endangered and Threatened species since the list was established in 1992.

Ravens are larger than American crows and have a much heavier bill. When observed in flight, they show a distinctive wedge-shaped tail and have a habit of soaring more than crows. They can sometimes be seen performing acrobatic aerial displays along cliffside ridges. Ravens also have a hoarse croaking call that can be an identifying trait.

Crows and West Nile Virus

Crows and other members of the Corvid family (which includes blue jays) are particularly susceptible to West Nile Virus (WNV). Their populations have clearly been impacted by this mosquito-borne illness. Because of their vulnerability, crows have served as an indicator species to monitor the presence of WNV across the state. Recent findings have shown that crows still show a high level of mortality to WNV, but their population should eventually become immune as resistant individuals survive and breed.

P. J. FUSCO (2)

Crows and ravens are opportunistic scavengers, frequently feeding on the carcasses of dead animals. This fish crow is carrying the remains of a dead pigeon.

Connecticut Duck Hunters Respond to Survey

Written by Min T. Huang, Migratory Gamebird Program

Waterfowl hunters in the Atlantic Flyway, Connecticut included, are currently enjoying some of the most liberal seasons ever for both duck and goose hunting. Duck hunting seasons are set based upon the population models in Adaptive Harvest Management (see article in the January/February 2004 issue of *Connecticut Wildlife*). Goose seasons, which are also set annually, are based upon spring breeding surveys. However, due to the boom or bust nature of some of our waterfowl species, liberal seasons may not always be in the cards.

Waterfowl managers are not just concerned with managing bird populations and wetland habitats. Another factor that managers strive to improve is the overall satisfaction of our constituents (hunters, birders, etc). One issue of interest is how regulations affect waterfowl hunter satisfaction and participation. Previous research has indicated that hunting season regulations (season length, bag limit), in general, do not have a great influence on hunter satisfaction. However, the Wildlife Division has been interested in obtaining information on the preferences of Connecticut's duck hunters, and, more importantly, if there is dissatisfaction among duck hunters, how can it be addressed. So, in 2004, the Division conducted a comprehensive survey of Connecticut's duck hunters. Surveys were sent to 495 duck hunters. Thirty-two surveys were undeliverable and 353 hunters responded. Thus the overall response rate was 76%. The responses are still being evaluated, so the information provided in this article is preliminary, but very interesting nonetheless.

How Old Are Waterfowlers?

Waterfowl hunting is a time-honored tradition. True to that statement, Connecticut's waterfowl hunters also seem to be honored by time. The average duck hunter in the state is 43 years old and has hunted ducks for 21 years. This result was not surprising. Hunters were asked if they had ever participated as either a mentor or shooter in a youth waterfowl hunter training day. Surprisingly, 16% of respondents had participated. This is an encouraging statistic for the continued tradition of waterfowling in Connecticut. Hunters also were asked how they first started duck hunting. Forty-one percent were taken on their first hunt by a parent or relative, while 50% went with a friend. Duck hunting is a complex endeavor. Being taken out for the first hunt by an experienced hunter is important to understanding what is involved and for experiencing the rewards of everything coming together "just right" on a particular morning.

How Active Are Waterfowlers?

Connecticut's duck hunters are active in their sport. Eighty-seven percent hunted ducks in 2003, with this percentage ranging from 84% to 93% for the preceding five years. Hunters were out in the field an average of 13 days a year. The principal reasons for not duck hunting in any of the past five years were other commitments, complicated regulations, inconvenient season dates, and too few ducks. The amount of time, however, that hunters are spending in the field is declining. Forty-four percent of duck hunters said that the number of days they spent hunting over the past five years had remained the same, while 34% were spending fewer days hunting and 19% were spending more days hunting. The reasons for spending fewer days hunting mirrored those for hunters who had not participated at all in any of the previous five hunting seasons.

Connecticut's duck hunters prefer mallards, which were the favorite duck for 37% of respondents. Wood ducks were the duck of choice for 25% of the respondents and black ducks were favored by 7%. The diversity of hunting interest was reflected by this question. The question only allowed hunters to provide one species that was their favorite to hunt/harvest. Answers listed 13 different species, ranging from relatively rare wintering ducks, such as pintails, to the sea ducks (eider, scoter, oldsquaw). Hunters spent an average of 73% of their duck hunting time hunting puddle ducks and 27% of their time hunting diving and/or sea ducks.

P. J. FUSCO

According to a recent survey of Connecticut duck hunters, the two most important factors that influenced the decision to hunt ducks were the opportunity to be in the outdoors and the chance to spend quality time with family or friends.

Hunter Harassment an Issue

Unfortunately, continuing issues include the harassment of waterfowl hunters and waterfowl hunter ethics. Within the last three years, 126 (36%) hunters had been harassed while hunting. Most incidents involved homeowners along the coast or the Housatonic River who complained about hunters being too close to their houses, boaters/kayakers running through decoy spreads, non-

hunters banging pots and pans or yelling at decoying ducks, and, unfortunately, four incidents when trailer lug nuts were loosened or removed. A surprisingly high number of incidents involved other hunters. Hunter harassment will always occur. However, many of the incidents cited by our respondents could be avoided if hunters didn't set up right in front of a house or public park, regardless of whether they were a legal distance away. As Connecticut becomes more urbanized, these incidents will likely increase in number, and hunters need to exercise discretion.

Within the last three years, 48% of respondents reported witnessing a waterfowl hunting violation. Violations ran the gamut, from shooting before/after hours, to rallying birds, to disregarding the minimum shooting distance from a building. Again, violations will continue to occur, but hunters need to police themselves and, in this era of cellphones, a conservation officer is just a quick phone call away. Violations, such as rallying birds, are unacceptable and have no place in the arena of fair chase.

P. J. FUSCO (2)

Connecticut's duck hunters prefer mallards, which were the favorite duck for 37% of the survey respondents.

Waterfowl Conservation Is Important

Connecticut's duck hunters are active in conservation efforts, as 57% hold a membership in a conservation organization. The majority of membership was in Ducks Unlimited, followed by the Connecticut Waterfowlers Association. The concern that duck hunters have for the waterfowl resource is demonstrated in the responses to several other questions. One question asked whether hunters had passed on a duck that would have legally counted towards their bag during the past year. Of those that had, 118 (45%) said that they passed on a shot because of concern over the population status of that species of duck. An additional 153 respondents (59%) said they passed on a shot because it was a questionable shot. Hunters also were asked whether they would support an increase in the cost of a state duck stamp from $5 to $10. Over 64% of respondents indicated they would support an increase because those funds are mandated for wetland restoration and enhancement.

Connecticut duck hunters also have the opportunity to hunt Canada geese and brant (above) during the waterfowl season.

Why Do Waterfowlers Hunt?

Hunters were asked what factors influenced their decision to hunt ducks. The two most important factors that influenced the decision to hunt ducks were the opportunity to be in the outdoors and the chance to spend quality time with family or friends. Other factors that were important to Connecticut duck hunters were the status of the duck population and the availability of access to hunting areas. Numerous questions were also asked to assess what makes for a 'happy' duck hunter. Similar to what motivated a duck hunter to go hunting, the most important factors that led to a satisfied duck hunter were being outdoors, seeing wildlife, and spending time with family or friends. Shooting a limit of ducks was not a determinant for satisfaction, but shooting at least one duck was a factor. Carrying on the waterfowling tradition was an extremely important satisfaction factor for over half of the respondents. Some of the other important issues that Connecticut duck hunters identified in this survey were inland wetland restoration, lack of public land hunting opportunity, hunter harassment, and crowding.

A wealth of important information was gained from this survey, a fraction of which was discussed in this article. The information provided by duck hunters will assist the Wildlife Division in managing waterfowl and hunting opportunities over the next few years.

Northern Flying Squirrels Remain Elusive in Connecticut

Written by James P. Fischer, contracted researcher for the DEP Wildlife Division

P. J. FUSCO

James Fischer, a contracted researcher for the Wildlife Division, attaches a live-capture trap to a tree trunk in an effort to catch a flying squirrel. The trap is baited with a peanut butter mixture.

One of the biggest mysteries wildlife biologists encounter is documenting rare animal populations. Biologists display a great deal of patience and detailed observational skills, similar to that of police detectives, when searching for these organisms. The challenge of documenting an uncommon animal stems from their secretive habits, isolated habitats, and/or the lack of information associated with them. Nevertheless, the answers increase our awareness of natural heritage, while searching for these animals serves as the ultimate personal reward for naturalists.

Recently, a project to document the distribution of northern flying squirrels began in Connecticut. Northern flying squirrels are rarely observed and their status concerns biologists throughout the Northeast. Specimens stored at the University of Connecticut's Biological Collection document northern flying squirrels as part of Connecticut's landscape, but only at a couple locales. Southern flying squirrels, which are more common in Connecticut, reside in mature oak and hickory (typically) forests. Distinguishing between northern and southern flying squirrels requires a trained eye and can be quite difficult without having the actual animal in hand. Several state-licensed Nuisance Wildlife Control Operators and wildlife rehabilitators describe working with southern flying squirrels, but neither group reports handling northern flying squirrels (they were supplied with a detailed pamphlet to aid in identification). These two groups work with common animals year-round, which suggests the rarity of northern flying squirrels in Connecticut. Therefore, further investigations required the use of specialized techniques and knowledge to detect the elusive northern flying squirrel.

This investigation began by pinpointing sites that exhibit habitat typically associated with northern flying squirrels in the Appalachian Mountains. These habitats include mature forests dominated by eastern hemlock and associated with sugar maple, yellow birch, and American beech. State and private foresters were consulted in the search for these places because, just as detectives conduct interviews to gather facts about a problem, so do biologists by interviewing professionals from other disciplines. The sites suggested by the foresters contained many large eastern hemlock trees in the canopy, mountain laurel shrubs growing closer to the ground, and dark, moist, humus soils. The dense tree canopy shaded the forest floor so much that very few plants grew, except for those able to grow in shady conditions.

Once the sites were selected, the next step required a more thorough analysis of the flying squirrels living at each site. Just as detectives scour a crime scene looking for evidence or subtle clues, so will a biologist examining an animal's habitat to support suspicions that the species is there. To capture flying squirrels, live-capture traps, held in brackets, were tied to tree trunks and baited with a peanut butter mixture. The traps were arranged at uniform intervals along a transect. Captured animals were measured, weighed, tagged, and released. The other small mammal species encountered in the traps included white-footed mice, red-backed voles, red squirrels, eastern chipmunks, eastern gray squirrels, and short-tailed shrews. To date, southern flying squirrels were captured, but no northern flying squirrels have been captured so far.

Although the northern flying squirrel was the primary target of the study, the project yielded at least one interesting pattern worth noting. The sites where southern flying squirrels were captured had more northern red oak trees than sites that had no flying squirrel captures. Understanding the importance of this observation relies upon applying observations of other flying squirrel populations throughout their ranges. Both flying squirrel species consume hard mast for food (acorns, hickory nuts, beech nuts). However, northern flying squirrels survive in habitats without oak or hickory trees, while southern flying squirrels require hard mast to survive the winter. This suggests that northern flying squirrels may live in habitats in the northern Appalachian Mountains where southern flying squirrels cannot survive. The strategies that each flying squirrel species employs to survive in different habitat types still needs much more examination, but these investigations

would benefit the long-term conservation efforts of both species.

Northern flying squirrels may reside in Connecticut even though they were not detected through live-trapping. Other investigators have noticed a similar paradox while searching for northern flying squirrels in the southern Appalachian Mountains. Investigators have employed different techniques (traps, nest boxes, butterfly nets, etc.) for capturing flying squirrels while trying to answer questions regarding their biology and ecology. Live traps in some locales capture northern flying squirrels, while nest boxes do not. Yet, at other sites the alternative is true—nest boxes detect northern flying squirrels but live traps do not.

The status of northern flying squirrels in Connecticut remains unclear. Developing another project where nest boxes are used to survey for northern flying squirrels could prove useful for detecting this species in the state. The search for northern flying squirrels is ongoing and, like most good mysteries, we refine our approach with each observation. Eventually this approach may help us discover this animal in the state and, if so, we can conserve the species for perpetuity with what we learn.

The Wildlife Observer

Do you have an interesting wildlife observation to report to the Wildlife Division?

Please send it (and any photos) to:

Wildlife Observations
DEP - Wildlife Division
P.O. Box 1550
Burlington, CT 06013

Email: katherine.herz@po.state.ct.us

(submitted photos will be returned at your request)

Hawk "Eating Crow"

Reader Richard Conklin, of Norwalk, sent in the following wildlife observation and photograph:

"This incident gives new meaning to the phrase "eating crow." During the winter, in Stamford, after a snow storm, we discovered this hawk eating a crow. It was in a small woodland next to a parking lot. The hawk (red-tailed) completely consumed the entire crow, leaving only feathers and the feet. The hawk must have been very hungry as it allowed us to get very close and take photos.

I was surprised when I had some enlargements of the photos made to see a metal band on the right leg of the hawk. Any idea how the hawk came to be banded?

Answer: By placing leg bands on birds of prey, wildlife managers are able to trace movements of individual birds, estimate population changes, and determine lifespans. For example, the Wildlife Division makes an effort every year to place bands on peregrine falcon and bald eagle chicks hatched in Connecticut. Data about each bird are collected at the time of banding, such as age, sex, and health. The bands contain an identifying code, which can easily be read with a spotting scope. People are also encouraged to report bands found on dead birds. During the fall hawk migration, bird banding stations are usually set up by licensed bird banders at various "hot spots" around the country, where migrating hawks are captured, fitted with leg bands, and released. The hawk in the photograph may have been banded at one of these stations or it may have been rehabilitated and then set free. Rehabilitated raptors are usually banded before they are let go.

Do You Have a Wildlife License Plate?

Enter the Wildlife Division's License Plate Contest!

We want to know if our readers have a wildlife license plate on their vehicle. Please send us a photograph of your license plate, along with your name and address. Every two months, we will pick a name and that lucky person will receive a one-year subscription (new or extended) to *Connecticut Wildlife*. Photographs may be published; however, those who do not want their photograph published should indicate otherwise.

Send photos to *Connecticut Wildlife*, P.O. Box 1550, Burlington, CT 06013 or email to katherine.herz@po.state.ct.us (type "license plate photo" in subject line).

The winner of the first drawing is Thomas Bernier, of Bristol, who ordered the bald eagle license plate. Thanks are extended to Thomas and all of the other wildlife enthusiasts who sent us photographs of their license plates. By purchasing wildlife license plates, these people help support Connecticut's wildlife projects!

Threat of Sudden Oak Death Has Come to Connecticut

Written by Donald H. Smith, Jr., Director/State Forester, CT DEP Forestry Division

Sudden Oak Death, a deadly disease that has been killing oak trees in the western United States for the last decade, has been inadvertently introduced in Connecticut through infected rhododendron plants sold at local nurseries and planted in the environment. The USDA Animal and Plant Health Inspection Service (APHIS) confirmed in late November the presence of Sudden Oak Death on five of 14 samples sent to their labs by the Connecticut Agricultural Experiment Station (CAES) for confirmation.

P. J. FUSCO

Deer and turkeys are not the only wildlife species that depend on oak trees for food. During spring migration, many songbirds, including blackpoll warblers feed on insects found in oak flowers. If Sudden Oak Death becomes established in Connecticut, these animals' food source could be in jeopardy.

What Is Known?

Shipments of over 10,000 rhododendron plants came into Connecticut over the past year from a nursery in Oregon. APHIS notified CAES in late October that they had traced infected plants forward from that nursery to 53 outlets in Connecticut. CAES set about the process of visiting the outlets and taking samples for testing for Sudden Oak Death. Pathologist Sharon Douglas of the CAES conducted DNA analysis of pathogens found on numerous plants at various outlets and found multiple positive results. Fourteen samples of those positive tissues were sent to APHIS labs for confirmation. In late November, APHIS announced to CAES that five of the samples were confirmed positive for Sudden Oak Death. The five positive samples came from three sites in Connecticut.

At this time, plant stock of host species at each of the three sites is being held and cannot be sold. APHIS and CAES are coordinating the response to this situation.

What Is the Immediate Impact on Connecticut Forests?

The pathogen that causes Sudden Oak Death, *Phytophthora ramorum*, has been introduced into the Connecticut environment. Now, we must wait and watch closely to see what occurs. It is simply a matter of time before it can be determined whether the climate, environment, and local species favor the survival of the pathogen in Connecticut. The best that can be hoped for is that the pathogen cannot survive Connecticut's environmental and weather conditions and dies out. However, scientists believe that if the pathogen survives in Connecticut, it may cause major damage to oak forests, as well as other trees and plants.

What Can You Do?

Homeowners who purchased rhododendron plants within the past year should examine their plants, looking for circular fungal lesions on the leaves. Any suspicious leaf conditions should be reported to the CAES at 1-877-855-2237. Do not discard the plants without consulting the CAES first.

Foresters, arborists, tree wardens, and loggers should be aware of the condition of vegetation in and around residential areas with relatively new rhododendron plantings. Unusual foliage lesions or sudden wilting and dying of oaks should be reported immediately to the CAES. Suspect vegetation should NOT be cut and transported, as doing so may spread the pathogen to new areas.

To the casual observer, infected oak trees may appear healthy and then suddenly wilt and die within two to four weeks. However, with closer inspection, infected trees will show evidence, such as cankers and seeping of a black or reddish substance, for a year or two before final collapse.

Background on Sudden Oak Death

Sudden Oak Death, which is not thought to be native to the United States, was first seen in 1995 in Mill Valley, California, on tanoak. Since that time, large numbers of oaks and tanoaks have been dying in twelve coastal California counties and in a localized area of Oregon. Many other types of plants also have been found to be infected or associated with Sudden Oak Death. Plants and trees usually die within one to three years after infection. At this time, there is no known practicable control of the pathogen in forest environments.

The nation has known other *Phytophthora* species, like root rot and potato blight, for a while. The means of spread for those species has been through rain splash or other mechanical means. The species that causes Sudden Oak Death seems much more dangerous because it can spread through the air. Thus, its spread can be accelerated via severe weather events that may coincide with spore production. Several tree species are vulnerable to Sudden Oak Death, most notably many red and black oaks. Two of the most common oak species in Connecticut, the northern red oak and the white oak, appear to be susceptible to infection by the pathogen. Many shrub species, such as rhododendron, laurel, and viburnum, are also hosts to this disease.

According to the USDA, infected nursery stock from California and Oregon has been found in 22 states, including Massachusetts, Connecticut, New York, New Jersey, and Pennsylvania. It is apparent that certainly the Connecticut landscape (and possibly a much larger portion of the Eastern Seaboard) has been significantly exposed to the *Phytophthora*

species that is believed to cause Sudden Oak Death. However, Sudden Oak Death has not yet been confirmed as being established in the wild in the eastern United States.

To learn more about Sudden Oak Death, as well as how to identify infection in trees and shrubs, go to the APHIS web site at www.aphis.usda.gov/ppq/ispm/sod/. Those who have potentially infected rhododendron shrubs or oak trees can contact the Connecticut Agricultural Experiment Station at 1-877-855-2237.

Naugatuck State Forest

Recognized as Important Bird Area by Audubon Connecticut

Written by Gerard Milne, DEP Forestry Division

Naugatuck State Forest was recently named an Important Bird Area (IBA) by Audubon Connecticut. Specifically, the West and East Blocks of the Forest, consisting of almost 3,000 acres in Naugatuck, Beacon Falls, Oxford, and Bethany, were recognized because of the wide diversity of quality habitat for nesting, migrating, and wintering birds. Of particular importance are the shrubland and other high quality early successional habitats found in the area. These habitats are dependent upon active management of the forest, such as timber harvesting and prescribed burns. The DEP Forestry and Wildlife Divisions work closely on developing and implementing management plans that recommend such activities on state forests and wildlife management areas. According to a press release from Audubon Connecticut, "the recognition of this area as an IBA is a testament to the quality stewardship of DEP."

G. MILNE (2)

To enhance early successional habitat in Naugatuck State Forest, the DEP conducted a prescribed burn in a field in 2003. The photograph to the right shows this same field two months after the prescribed burn.

What Are Important Bird Areas?

According to the National Audubon Society, the Important Bird Areas (IBA) program is the focal point for Audubon's bird conservation work. It is a global effort to identify the most important sites for bird populations and to focus conservation efforts on those site. IBAs are important for species of high conservation concern, for species with restricted ranges, and for species that congregate in large numbers during some portion of the year.
To learn more about IBAs, visit National Audubon's web site at www.audubon.org.

P. J. FUSCO (3)

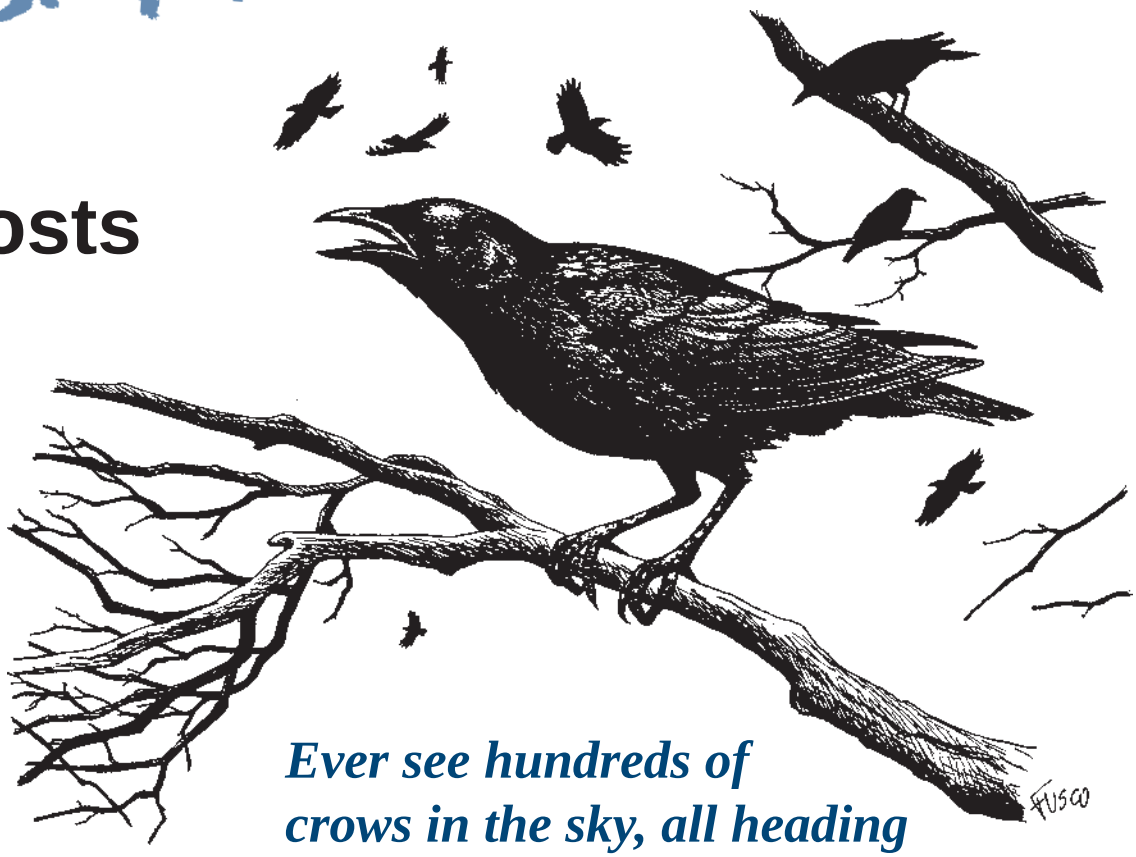
Early successional habitats (old fields, farmlands, shrublands, grasslands) are disappearing in Connecticut. As a result, many songbirds dependent on these habitats have been declining. The DEP actively manages state forests and wildlife management areas to enhance and maintain early successional habitats. (From left to right) The blue-winged warbler, indigo bunting, and field sparrow, which are found in early successional habitats, are still fairly common and widespread in Connecticut.

Just for Kids

Crow Roosts

Roost Roots!

Crows have always gathered together in roosts. Some flocks can number in the hundreds, while others in the hundreds of thousands!



Ever see hundreds of crows in the sky, all heading in the same direction? Chances are, they were heading to a crow roost!

Record Roost!

In Oklahoma, one crow roost was estimated at two million crows!

Roost Ruckus!

Crows begin gathering each evening before dusk, away from the roost site. Usually, they are very noisy. Then, as darkness approaches, the group travels together to the actual roosting site.

Predator Protection!

Why gather in such large numbers? Although, no one knows for sure, some scientists believe, crows roost for protection from predators, such as owls. Sometimes, there is safety in numbers!

Crows Are Corvids!

Are these sentences true or false?

Crows mate for life.

Crows are related to ravens.

Crows can be hunted.

The answers are all true! Crows are believed to mate for life. They are related to ravens, belonging to the same family of birds (Corvidae). Ravens, though, are larger than crows. Finally, crows can be hunted. In Connecticut, crow hunting season is usually in fall and winter.

Wildlife Calendar Reminders

Dec. 26-Mar. 16 ..... **Shepaug Bald Eagle Viewing Area** open for the 2004-2005 viewing season. The observation area will be open 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 15 ..... Donate to the Endangered Species/Wildlife Income Tax Check-off Fund on your 2004 Connecticut Income Tax form.

Feb. 17-20 ..... Visit the exhibit sponsored by the DEP's Bureau of Natural Resources and the Division of Law Enforcement at the 7th **Annual Hunting and Fishing Expo**, at the Connecticut Expo Center in Hartford. For more information on the Hunting and Fishing Expo, visit the website for North East Promotions, www.fishingandhuntingexpo.com.

Feb. 19-20 ..... **6th Annual Connecticut River Eagle Festival** in Essex. For more information, visit Connecticut Audubon's website at www.ctaudubon.org.

Feb. 27 ..... **Bluebird Nest Box Workshop**, at the Sessions Woods Conservation Education Center in Burlington. Come any time between 1:00-3:00 PM and bring your hammer and power screwdriver (if you have them) to construct a bluebird nest box. Participants will also learn where to place the nest box and how to maintain it. Members of the Friends of Sessions Woods will be on hand to assist in the construction of boxes. A donation of $5.00 to the Friends of Sessions Woods will cover the cost of the pre-cut wood. Call 860-675-8130 to preregister and for more information.

Feb. 28 ..... Send in permit-required (small game) season survey cards.

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

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

April 24 ..... **Friends of Sessions Woods Annual Meeting**, starting at 12:00 noon, at the Sessions Woods Conservation Education Center in Burlington. All are welcome to attend! This year's special presentation will feature a program on coyotes and bobcats by Wildlife Division biologist Paul Rego. A potluck luncheon precedes the presentation. Please bring a side dish to share. This meeting also will feature music by local singer Josh Black.

April 30 ..... **Spring Bird Walk**, starting at 7:30 AM, at the Sessions Woods Conservation Education Center in Burlington. Warblers and other birds are on their way back to Connecticut to take advantage of our healthy insect populations emerging this time of year. Join Paul Fusco of the Wildlife Division for a two-mile walk in search of early migrants. Paul also will provide bird identification tips. This walk is suitable for adults and children over 12. Bring binoculars and meet at the flagpole in front of the building. Call 860-675-8130 to preregister.

Step Up to the Plate for Wildlife...

and show your support by displaying a wildlife license plate on your vehicle.

There are two great designs to choose from: the state-endangered bald eagle or the secretive bobcat.

Funds raised from sales and renewals of the plates will be used for wildlife research and management projects; the acquisition, restoration, enhancement, and management of wildlife habitat; and public outreach that promotes the conservation of Connecticut's wildlife diversity.

Application forms are available at DEP and Department of Motor Vehicle offices and online at www.ct.gov/dmv.

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P. J. FUSCO

Read the Year in Review 2004 to find out what the Wildlife Division has been doing to monitor Connecticut's Canada goose population.

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