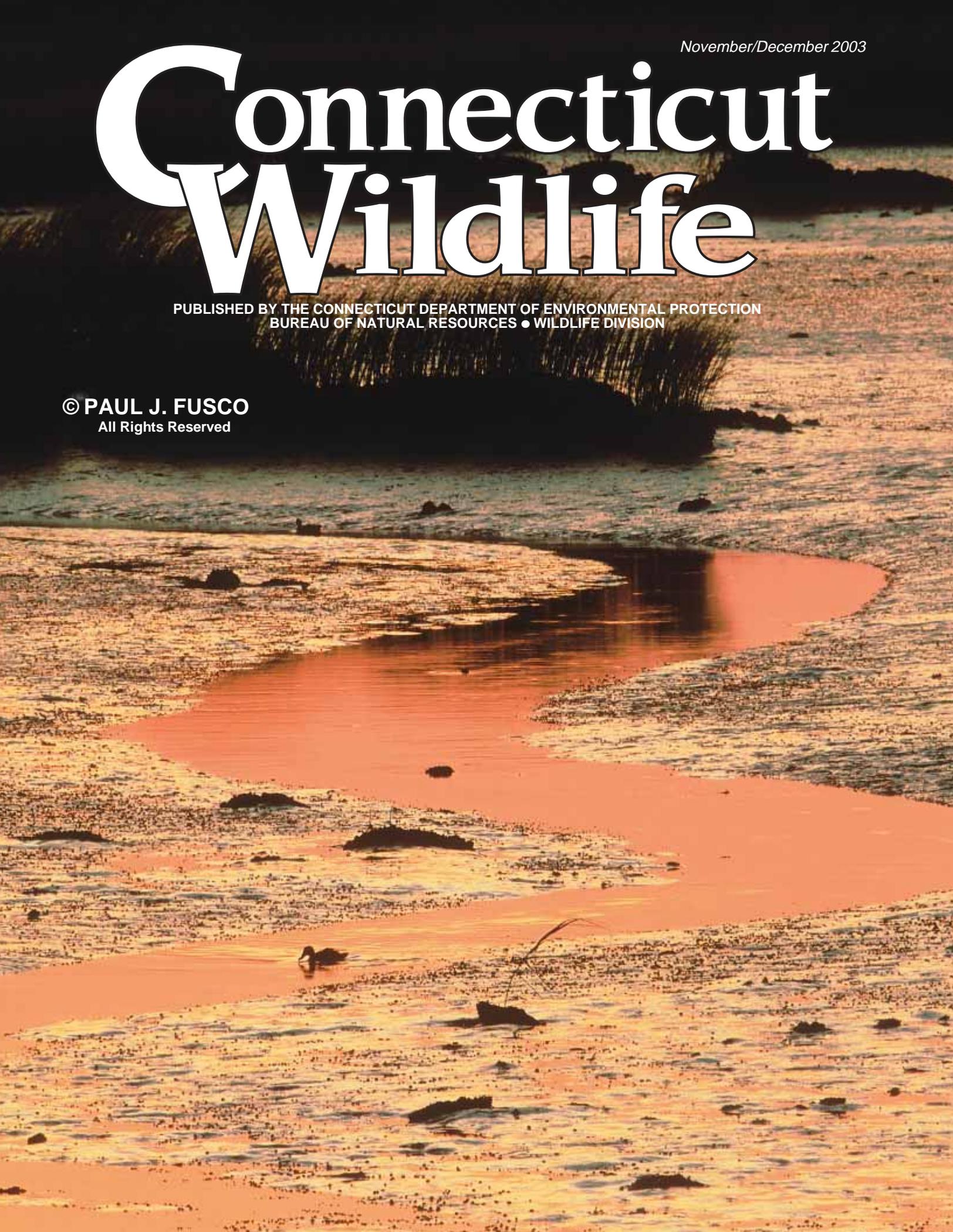


November/December 2003

Connecticut Wildlife

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From the Director

The recovery of many woodland wildlife species was fueled by the return of the forests to Connecticut during the 20th century. Moose, the largest of our extirpated mammals, are on the threshold of vigorously recolonizing the state. However, the combination of human development patterns and the wide-ranging habits of moose virtually ensures that coexistence will not be comfortable. Over the past several years, an alarming percentage of the moose sighted in Connecticut have been subsequently hit by cars. There are few places where moose can meet their habitat requirements without wandering into roadways. If moose populations were to become established at these few suitable sites, reproduction would result in annual dispersal into more populated areas where auto strikes would occur with regularity. It seems, due to our intensive development across the entire state, that Connecticut may have become "too civilized" to sustain moose. The species is a victim of "fragmentation."

Ecologists use the term fragmentation to describe the process by which habitats are broken into units of smaller and smaller size. It is a painful fact of life, especially here in Connecticut where high land values and intense development pressure have escalated the phenomena. We should not let our wooded environs lull us into complacency. The fact is that the reforestation that occurred during the 20th century is essentially over. The forest that we have today will become further fragmented and at an accelerating rate as land passes from the over-65 generation to their heirs. Make no mistake about it; habitat fragmentation is the greatest threat to the future of Connecticut's wildlife.

Unfortunately, identifying the problem does not solve it. For decades, conservationists have advocated for smart growth, anti-sprawl, sustainable development or any number of other terms used to define wise land use. As a result, additional public lands have been secured and conservation easements have been purchased. However, these accomplishments are not nearly sufficient to offset the wasteful land practices that continue to this day. We have yet to achieve the land ethic promoted by Aldo Leopold more than a half-century ago. In fact, we are not even close.

It is beyond the scope of this column, and certainly beyond the scope of my intelligence, to devise the social changes needed to safeguard our wildlife by preserving a habitat base. What I do want to clarify is that, from a wildlife perspective, size does matter. Twenty and 50-acre green spaces scattered among suburbia will provide nice parks, but they won't sustain functioning ecosystems. We need regional planning and significant landowner conservation initiatives to protect important habitats of suitable size. And, we need to act quickly lest other species face the same plight of the moose, returning after all this time but with nowhere to go. Dale W. May

Cover:

The Wildlife Division has received funding to develop a dedicated private lands habitat program that will protect wildlife species and habitats at-risk, including those associated with tidal wetlands (see page 6 for more information).

Photo courtesy of Paul J. Fusco

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Arthur J. Rocque, Jr. Commissioner
David K. Leff Deputy 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 (Assessment)
Mark Clavette Recreation Management
Laurie Fortin Wildlife Technician
Brenda Marquez Secretary
Shana Shafer Office Assistant
Chris Vann Technical Assistance Biologist

Eastern District Area Headquarters

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

Ann Kilpatrick Eastern District Biologist
Paul Rothbart District Supervising Biologist

Franklin W.M.A.

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

Paul Capotosto Wetlands Restoration Biologist
Mike Gregonis Deer/Turkey Program Biologist
Min Huang Waterfowl Program Biologist
Howard Kilpatrick Deer/Turkey Program Biologist
Heather Overturf Program Assistant
Winnie Reid Secretary
Julie Victoria Wildlife Diversity Unit Biologist
Roger Wolfe Mosquito Management Coordinator

Sessions Woods W.M.A.

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

Trish Cernik Program Assistant
Jenny Dickson Wildlife Diversity Unit Biologist
Peter Good Supervising Wildlife Biologist
Geoffrey Krukar Wildlife Technician
Dave Kubas CE/FS Coordinator (West)
Peter Picone Western District Biologist
Paul Rego Furbearer Program Biologist
Laura Rogers-Castro Education/Outreach Unit
Jim Warner Field Assistant
Judy Wilson Private Lands Habitat Biologist

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. 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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Wildlife License Plate Coming to Your Car Soon!

While driving on Connecticut roadways on the way to work, school or some other destination, there's a good chance you've seen vehicles with the Long Island Sound license plate with an illustration of a lighthouse. Sometimes, you may have even glimpsed an out-of-state plate, maybe from Massachusetts, New Hampshire or Florida, which showed attractive artwork of an animal, possibly a whale, moose or panther. Currently, 38 states have a license plate program specific to wildlife and/or environmental conservation. The money raised from the sale of these specialty plates is usually placed in a dedicated fund that can be used for wildlife and environmental projects.

Connecticut has already experienced how popular specialty plates can be. For example, Connecticut drivers who care about their state's environment have purchased approximately 118,000 Long Island Sound license plates since the beginning of the program in 1993. The program has raised more than \$4 million from the sale of license plates and donations for projects to help restore the Sound and its habitats, foster educational opportunities, increase public access to the Sound and conduct research.

Now, thanks to the tireless efforts of Audubon Connecticut (the CT office of the National Audubon Society) and others, Connecticut motorists will soon have the opportunity to purchase a specialty **wildlife** license plate and thus raise much needed funds for wildlife projects in the state. Early in 2004, wildlife conservation commemorative license plates will be issued to enhance public awareness of efforts to conserve wildlife species and their habitats in Connecticut. As defined by state statute, "wildlife means all species of invertebrates, fish, amphibians, reptiles, birds and mammals which are (ferae naturae) or wild by nature."

The wildlife license plate program could generate about \$3.5 million over a period of years from the fees alone. The plates will cost \$50 (in addition to the regular fees prescribed for the registration of a motor vehicle). The Wildlife Conservation Fund will receive \$35 of this onetime fee, while \$15 will cover administrative costs for the Department of Motor Vehicles. It will cost \$15 to renew the plate every two years (\$10 to the Wildlife Conservation Fund and \$5 for administrative costs).

The money raised from the license plate program will enable the Department to provide the required state match to use approximately \$950,000 in federal funding that is available for fish and wildlife conservation programs in Connecticut. The state must match those funds by 25% to 50%, depending on the project. If Connecticut fails to provide the match, the federal funds will be reallocated to other states that can provide matching funds.



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Funds from the sale of wildlife license plates will be used to match state wildlife grants for various projects. One project will focus on woodland raptors, like the sharp-shinned hawk.

The Wildlife Conservation Fund will also be available for:

- Wildlife research and management, with an emphasis on those wildlife species in greatest need of conservation (projects involving many of these species have never been funded at all or adequately),
- Wildlife inventory and restoration,
- Wildlife habitat acquisition, restoration, enhancement and management, including, but not limited to, the conservation of grasslands and other early successional habitats, and
- Public outreach that promotes the preservation of the state's wildlife diversity.

The DEP Wildlife Division's Wildlife Diversity Program has been underfunded since the program was created in 1986. According to statistics, Connecticut is 48th in the nation in per capita spending on "nongame" wildlife. The wildlife license plate program will fill the gap and provide funding for management and conservation projects for such animals as songbirds, shorebirds, raptors, black bears, small mammals, reptiles and amphibians.

Sincere thanks are extended to the following organizations and individuals for helping to make the wildlife license plate program a reality: Audubon Connecticut; Hartford Audubon Society; The Nature Conservancy; Connecticut Audubon Society, New Haven Bird Club; Audubon Council of Connecticut; State Senator Biago "Billy" Ciotto and Senator Donald Williams, the legislative sponsors of the original Senate Bill 593; and Senator Andrew Roraback and Representative Jim O'Rourke, cosponsors of the bill.

This exciting, new opportunity to help Connecticut's wildlife will be available soon. Look for more information in future issues of *Connecticut Wildlife* magazine.

Use of Attractants in Deer Management

Written by Howard Kilpatrick, Deer/Turkey Program

A priority of the Wildlife Division's Deer Management Program is to stabilize deer population growth in areas with overabundant deer populations. In deer management zones (DMZ) 11 (southwest Connecticut) and 12 (shoreline towns) where deer populations are high, a liberalized hunting season framework has helped increase harvest rates. Since 1995, the archery deer hunting season has been expanded to 120 days and free replacement antlerless tags have been issued to hunters who take antlerless deer in DMZs 11 and 12.

Increasing the harvest of antlerless deer (primarily females) has the greatest impact on reducing deer population growth. The removal of an adult doe during the hunting season is

equivalent to removing three deer from next year's population (on average, 1 adult doe will produce 2 offspring each year). The replacement

antlerless tag program has successfully increased the harvest of female deer. For example, since the initiation of this program, the archery buck harvest has increased from 200 to 400 deer (100% increase) while the archery doe harvest has increased from 200 to 800 deer (300% increase) in DMZ 11.

To continue increasing the deer harvest in DMZs 11 and 12, a statutory change, which took effect on October 1, 2003, allows the use of bait for hunting deer in areas where there is a need to reduce high deer populations. Baiting will help focus deer activity in specific areas, making the deer more vulnerable to hunting. Research conducted by the DEP Wildlife Division on the effects of bait on deer movements indicated that bait had no affect on deer home range size. However, within home ranges, deer did shift their areas of activity closer to bait sites. This indicates that the use of bait will increase harvest rates on local deer populations only.



To continue increasing the deer harvest in deer management zones 11 and 12, a statutory change, which took effect on October 1, 2003, allows the use of bait for hunting deer in areas where there is a need to reduce high deer populations.

Baiting and Use of Attractants for Deer Hunting in Connecticut

Attractants allowed during the statewide deer hunting seasons.

- 1) Deer decoys during the early and late archery seasons only.
- 2) All types of scent attractants (i.e., doe in heat, buck lure, urine, tarsal glands, food smells, smoke pole) that provide no substance for deer to consume.
- 3) All types of sound attractants (i.e., doe calls, buck calls, antler rattling, electronic calls).
- 4) Hunting over planted fields where normal agricultural planting, harvesting or post-harvest manipulation is used.

In addition to the attractants listed above, the following are allowed **ON PRIVATE LANDS ONLY** in deer management zones 11 and 12 during the archery, shotgun/rifle and muzzleloader deer seasons.

- 1) Minerals or chemicals that may be safely consumed by deer (i.e., salt lick)
- 2) Artificial or natural foods placed, scattered, distributed or deposited (i.e., hay, grains, fruit, nuts—any foods that may be safely consumed by deer).

NOTE: It is strongly recommended that individuals hunting on private lands in DMZs 11 and 12 consult with landowners prior to placing bait.

Gaining access to deer on private land is the biggest obstacle to successfully managing deer populations. Use of baits is being permitted in DMZs 11 and 12 because access to private land for deer hunting is limited. Where hunter access to land is limited, especially to small parcels, use of

attractants should increase deer harvest opportunities and hunter success rates.

The new legislation that became effective in October allows the DEP commissioner to authorize the use of attractants for deer hunting in designated areas. The commissioner has

authorized use of attractants on **private land only** during the **archery, shotgun/rifle** and **muzzleloader** deer seasons in **DMZs 11 and 12 ONLY**. (See sidebar for information on what attractants are allowed.)

5th Annual Connecticut River Eagle Festival: February 14-15

Each winter from January to March, bald eagles from Canada and points north return to the lower Connecticut River Valley to feed on prey found in unfrozen rivers and reservoirs. To celebrate the return of these remarkable birds of prey, the Connecticut Audubon Society will present the 5th Annual Connecticut River Eagle Festival on February 14-15, 2004, in Essex.

Working closely with the Festival's founding sponsor, Select Energy, plans are underway to host another terrific weekend event filled with many free environmental activities for adults and children. The Festival has received the State of Connecticut Governor's Award for Excellence in Travel Promotion and a Green Circle Award from the Connecticut DEP for promoting the conservation of critical animal habitat.

For many attending the Festival in 2003, it was their first time seeing bald eagles in the wild. Opportunities to view eagles were plentiful with a record number of eagles spotted on eight two-hour guided boat tours on the Connecticut River.

Visitors can enjoy a wide variety of free activities at the Festival, including an opening parade, land-based eagle viewing tours, environmental lectures and live birds of prey demonstrations. There will be free nature programs, games and crafts offered for children, Native American presentations, nature exhibits, music, ice carvings and a host of entertainment. Boat tickets are the **only** cost associated with the festival and reservations are required. DEP Wildlife Division biologists Jenny Dickson and Julie Victoria will be presenting wildlife lectures at the festival. In addition, festival attendees will have the opportunity to learn about the Connecticut Wildlife Conservation Plan currently under development (stay tuned to future issues of *Connecticut Wildlife* to also learn more about the Plan).

Focal points at the Eagle Festival are two large, heated tents within easy walking distance of each other on Main



Don't miss out on the 5th Annual Connecticut River Eagle Festival that will be held in Essex in February. You may even have the opportunity to view a magnificent bald eagle.

Street. Both are filled with interesting environmental information and activities. The main tent, alongside the Connecticut River Museum riverbank location, is the site of lectures and special presentations. The marketplace tent is located within a town park and will feature exhibits from environmental organizations, retailers selling a wide variety of items and plenty of musical entertainment. Sprinkled throughout the town--and identified on the Festival map--will be art exhibits, book signings, bird carving exhibits and other activities. Free shuttle buses will be provided from designated parking lots around town to various Festival destinations.

A complete Connecticut River Eagle Festival Program Guide, listing boat tours, programs and events will be available in November and can be obtained by calling 1-800-714-7201. To find out more information about the Connecticut River Eagle Festival 2004, visit Connecticut Audubon's Web site at www.ctaudubon.org.

The New Landowner Incentive Program (LIP)

Connecticut awarded U.S. Fish and Wildlife Service Tier I LIP Grant

Written by Judy Wilson, Habitat Management Program

The DEP Wildlife Division is very pleased to announce that it has been awarded a Tier I Landowner Incentive Program (LIP) grant from the U.S. Fish and Wildlife Service (USFWS) to develop a new private lands habitat program. This program is designed to benefit Connecticut wildlife species at-risk and the habitats that support them. These initial Tier I funds may be used to develop and administer a dedicated private lands habitat program to provide professional/technical and financial assistance to private landowners (funding for on-the-ground projects is not included). The program will be designed to protect wildlife species and habitats at-risk by facilitating wildlife management practices and providing conservation tools for private landowners interested in conserving wildlife and habitat on their properties.

The USFWS defines “species at-risk” as any federally listed, proposed or candidate species or other species of concern as determined and documented by the state. Connecticut’s “species at-risk” list includes all federally listed threatened and endangered wildlife and plants, all state listed threatened, endangered and special concern species and additional species which are considered at-risk by the DEP Wildlife Division. The list contains just under 200 species of plants and animals and includes the northern flying squirrel, least shrew, southern bog lemming, bog turtle, Jefferson salamander, dwarf wedge mussel, golden-winged warbler, prairie warbler, saltmarsh sharp-tailed sparrow, American black duck, New England cottontail,

ruffed grouse, American woodcock, a noctuid moth (*Agrostis stigmosa*), frosted elfin (*Incisalia irus*), sandplain gerardia (*Agalinis acuta*) and showy aster (*Aster spectabilis*). Species will be added or removed based on the criteria and the recommendations of the review committee being developed under the new program.

Because the majority of federally listed, state listed and species determined to be at-risk in Connecticut are dependent on early successional and wetland habitats, LIP funding will be directed to these designated “priority habitats” and the “imperiled communities” found within them. These broad priority habitats include fields, old fields, grasslands, seedling/sapling stands, tidal wetlands, inland wetlands and even vernal pools. “Imperiled communities” are those natural communities defined by the DEP Environmental Geographic Information Center and the University of Connecticut publication entitled *Thirteen of Connecticut’s Most Imperiled Ecosystems* (Metzler and Wagner 1998; the authors note that this is a partial listing). These imperiled communities support many of our at-risk plants and animals, particularly many of the plants and invertebrates. Ten of Connecticut’s imperiled communities can be found within the broad priority habitats. Examples of imperiled natural communities include beaches, dunes and other coastal communities, sandplain grasslands, pitch pine-scrub oak barrens, calcareous fens and associated wetlands, larger rivers and streams and their associated riparian communities, and Atlantic white cedar swamps.

P. J. FUSCO



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The protection, restoration and enhancement of wetlands under LIP will benefit a variety of wetland-dependent wildlife species.

Wildlife Division Applies for Tier II LIP Funding

The Wildlife Division recently submitted a LIP Tier II grant proposal requesting funding from the USFWS to carry out on-the-ground habitat management on private land, which is not provided for under the Tier I grant. Unlike the Tier I grant, the Tier II grant will be awarded on a competitive basis, with all states competing for a limited amount of money. LIP Tier II funding can provide up to 75% of the cost of a project, but a 25% match is necessary. The Wildlife Division will use a variety of means to meet the match requirement, including but not limited to DEP personnel and equipment, match dollars from partner conservation groups, monitoring and labor by volunteers, conservation organization grants, in-kind services from landowners (i.e., brush mowing or shrub planting) and landowner funds.

The U.S. Congress has made a onetime appropriation of \$40 million from the Land and Water Conservation Fund to implement the Tier I and Tier II portions of LIP. Both the USFWS and state natural resource agencies hope that a highly successful program will lead Congress to make funding available annually. The Wildlife Division will learn if it has been successful in competing for the Tier II grant before the start of the new year. An award of the Tier II grant would make possible an unprecedented private lands habitat management program in Connecticut.

How Would LIP Tier II Funds Be Used in Connecticut?

If awarded, LIP Tier II funds will be used to do on-the-ground habitat management and to execute conservation easements to reclaim, restore, enhance, maintain, manage and protect priority habitats and the at-risk species they support. The entire state is comprised of a tremendous diversity of habitats and wildlife. However, the Connecticut River and its watershed support a high proportion of the state's species at-risk and will define the broad project area for the program. Resources will be focused on priority habitat projects within the lower Connecticut River Tidelands focus area (south of Portland/Cromwell), which contains nationally recognized tidal wetlands and the Eightmile River watershed focus area, which is an important tributary to the lower Connecticut River. As the program evolves, additional focus areas may be added. It should be stressed that projects outside of these focus areas will be eligible for funding.

The Wildlife Division recognizes the need to direct the limited LIP funding it may receive to those projects of highest priority and most likely to succeed. The Division will therefore work in partnership with entities such as The Nature Conservancy, Connecticut Audubon, Ruffed Grouse Society, Hartford Audubon Society, Connecticut Forest and



LIP projects will focus on the management of early successional habitats, including fields, old fields and grasslands.

Park Association and various sportsmen's groups, such as the Connecticut Chapter of the National Wild Turkey Federation, Ducks Unlimited, Connecticut Waterfowl Association and others, to effectively maximize the ability of LIP funding to get on-site projects completed.

Projects will focus on early successional and wetland habitats and will include, but not be limited to, old field restoration through the use of heavy brush and tree cutting machinery, native warm season grass plantings, prescribed mowing, invasive vegetation control, riparian zone restoration, shrubland restoration and management and open marsh water management. LIP funds cannot be used to buy land, but a small portion of the LIP funds will be dedicated to the purchase of conservation easements to protect extremely valuable habitat. Because of the high value of land and limited LIP funding, conservation easements will be carried out in partnership with established conservation groups so that the conservation benefits can be maximized.

How Landowners Will Get Involved

As development of the program progresses and the Wildlife Division learns if funding will be available to provide financial assistance to private landowners, the Private Lands Program biologist (Judy Wilson) will post up-to-date LIP information in *Connecticut Wildlife* and several other publications, as well as on the DEP Web site, www.dep.state.ct.us. Landowners will need to fill out an application to apply for technical/financial assistance. Financial assistance will be awarded on a competitive basis. Project criteria, application forms and a ranking process are currently being developed. Applications should be available in spring 2004 at DEP offices and on the DEP Web site. Check future issues of *Connecticut Wildlife* for updates on this exciting new private lands program that will work to protect, restore and enhance Connecticut's habitats that support at-risk plants and animals.

Leg Bands on Ducks Provide Habitat Clues

Written by Min Huang, Migratory Gamebird Program

The management of migratory birds, waterfowl in particular, is complex. Many species annually travel thousands of miles from breeding areas to wintering areas and back. Maintaining the ecological integrity of the migratory pathways and the important stopover areas is vital for conservation efforts. Data on the recovery of waterfowl leg bands provide needed information about these migratory pathways and stopover areas. Without band recovery data, biologists would not know which areas are important for migratory waterfowl. Identification of key wintering and stopover areas allows for concerted conservation efforts at these locations. As habitat losses continue to mount, the conservation of important wetland habitats is paramount.

From a harvest management standpoint, waterfowl band recovery data provide information on harvest pressure and estimates of productivity. These data also provide information on distribution of harvest from certain areas, help to assess vulnerability between different age and sex classes and allow for estimation of survival rates. Band recovery data is integral for the management of waterfowl harvest.



K. KUBIK

Ducks caught in a swim-in trap.



M. HUANG

Once captured, ducks were aged and sexed, banded with a metal leg band and released.

From mid-August through September, the DEP Wildlife Division spent considerable time and effort to band dabbling ducks, primarily mallards and black ducks. Both rocket nets and swim-in bait traps were used to catch ducks. Swim-in traps were set up at six different sites throughout the state, and rocket-netting operations were placed at an additional site. The decision was made to predominantly trap ducks at rural sites this year. Although many ducks are present in town park locales, ducks were only trapped at one public park. It will be interesting to see how movement patterns and recovery rates differ between rural and urban settings.

Swim-in traps were constructed of wire mesh and lengths of conduit. The traps contained a funnel opening, and a trap door in the back to allow for extraction of captured ducks. A float was also added in the trap so that the ducks had a place to loaf out of the water. Traps were baited with corn. They

were checked daily to insure that ducks didn't remain in the trap for more than 24 hours and to prevent predators from keying in on the trapped ducks.

A rocket net was used on three separate occasions along the coast to capture ducks. Bait was placed out for several days in an area before a net was set up. Once the ducks were using the site regularly, the rocket net was shot over the ducks early in the morning, just after sunrise. The Wildlife Division would like to thank the surrounding homeowners for their patience and understanding during the rocket-netting operation.

All of the captured ducks were aged, sexed and banded with a metal leg band before being released. Capture efforts in 2003 netted 758 dabbling ducks, an all-time record for banding efforts in Connecticut. If similar numbers of ducks are captured in the coming years, the Division will be able to accrue excellent data on the movements and survival patterns of locally breeding ducks. The vast majority of the ducks caught were mallards (90%). However, 59 black ducks were captured and banded. Several juvenile and adult black ducks were caught at inland areas, indicating some remnant breeding pairs of black ducks at these sites. This is encouraging. There has been a gradual decline in the number of inland breeding black ducks throughout southern New England. On an interesting note, five mallard-black duck hybrids were captured. Hybridization with mallards is one potential reason for the decline, in some areas, of black ducks. Competition with mallards is also a likely cause for localized black duck declines.

To help with the banding effort, the Wildlife Division is urging those who encounter a banded duck to call 1-800-327-BAND to report the band.

New Sites Checked During Wetland Bird Callback Survey

Volunteers needed for 2004 survey

Written by Geoffrey Krukar, Wildlife Diversity Program

The 2003 wetland bird callback survey can be considered a success despite the low number of volunteers (8) and sites surveyed (11). Four of the nine target species of wetland birds were observed during surveys, with clapper rails, pied-billed grebes and willets each being observed at three separate locations. Virginia rails were detected at only one site this year.

In past years, wetland bird callback surveys were conducted only at sites known to historically contain some of the target species of wetland birds. However, this year, surveys were conducted at six new sites, yielding two new locations of pied-billed grebes. Hopefully, with increased volunteer participation in the future, the surveys can be expanded to other areas and more potential nesting locations for these wetland birds can be found.

What is the Wetland Bird Callback Project?

The wetland bird callback project was developed to assist in the inventory of state-listed birds that prefer wetland habitats. These birds are secretive by nature and are often missed by standard surveys. The wetland bird callback project helps pinpoint likely nesting locations for birds like the pied-billed grebe, American and least bitterns, the common moorhen and rails. Knowing where these birds occur will aid in the conservation of their important wetland habitats.

What's Involved?

Participants survey wetland locations statewide, twice in May, twice in June and once in July, during either peak morning or evening activity periods. A recorded tape of wetland bird songs is played and responses to the taped calls are noted. Surveys can be done on foot or by watercraft and by one person or a two or three person team. Detailed knowledge of wetland birds is not as important as enthusiasm and an enjoyment of wetland areas.



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Virginia rails were heard at one of 11 sites surveyed during the 2003 wetland bird callback Survey.

How Can You Get Involved?

If you would like to participate in the wetland bird callback project, please contact Geoffrey Krukar of the Wildlife Diversity Program by calling 860-675-8130 or send email to geoffrey.krukar@po.state.ct.us. Volunteers will be provided with survey materials and with help in selecting survey areas. Having a portable tape player, canoe, kayak or pair of waders for this project is helpful, but not essential.

<i>Species</i>	<i>Number of survey sites heard at</i>
American Bittern	0
Least Bittern	0
Virginia Rail	1
Sora	0
Clapper Rail	3
King Rail	0
Black Rail	0
Common Moorhen	0
Pied-billed Grebe	3
Coot	0
Willet	3

Monarchs on the Move

Written by Laura Rogers-Castro, Wildlife Outreach Unit

“Is that one tagged?”
“Yep, how about that one?”

“No...don't think so. I'll get it!”

With a quick flip of the wrist, soon-to-be butterfly CAN#355 was now in Rich Chyinski's net. He carefully and gently removed the monarch butterfly from the net and adhered a tiny tag to a specific area on the underside of one of the hindwings. With any luck, this butterfly will fly south all the way to the mountains in central Mexico and spend the winter with millions of other monarchs until it's time to begin the journey back north.



P. J. FUSCO (2)

Rich Chyinski of the Connecticut Butterfly Association nets a monarch in the butterfly garden at Hammonasset Beach State Park in Madison (above). Later, the tagged butterfly returns to feed on a *Buddleia* blossom (below left).



Monarchs are large, orange and black butterflies, famous for their “unpalatability” to birds. The caterpillars of monarch butterflies feed on milkweed plants, ingesting toxic compounds from the milkweed that render them distasteful to predators. Adult monarchs also retain this unpalatability and their bold, orange and black coloration warns predators of this fact.

Rich's job that day was to tag as many butterflies as he could, and the

butterfly garden at Meig's Point Nature Center in Hammonasset Beach State Park was making the job a little easier. The butterflies had definitely started their journey south by this day in mid-September and were coming in small waves to the *Buddleia*, or butterfly bush, in the garden. Each would alight on a cluster of flowers, feeding on the nectar to gain valuable energy stores for the

journey ahead. *Buddleia* is a nonnative plant but one that can bloom into October in Connecticut. Monarchs also feed on the nectar of goldenrod, joe-pye-weed and New England aster, all late-blooming, native wildflowers.

The Connecticut Butterfly Association (CBA) has been purchasing butterfly tags from the University of Kansas' Monarch Watch Program annually for the past three or four years. Rich Chyinski and his friend, Sharon Sanders, have been tagging in

Connecticut for the past seven years. Monarch Watch began in 1991 as a research project and later developed into an educational outreach program. It is a collaborative network of students, teachers, volunteers and researchers dedicated to the study of the monarch butterfly. The goals of the program, as stated in their Web site www.monarchwatch.org, are to further science education, particularly in primary and secondary school systems, promote the conservation of monarch butterflies and involve thousands of students and adults in a cooperative study of the monarch's spectacular fall migration.

Tagging monarchs is one of the major components of the Monarch Watch Program. The project continues the work of Fred Urquhart who began tagging monarchs in the late 1930s. Each tag has a specific number and instructions for mailing information to the University of Kansas if recovered. Recovery information has helped document the route monarchs take

through North America to their overwintering grounds in Mexico and on the return flight north. Butterflies returning from Mexico will not reach Connecticut. Instead, they will lay eggs on milkweed in the Midwest. The generation of butterflies that we see in Connecticut, usually beginning in May, are the monarchs that have developed from the Midwestern eggs. In turn, these “Connecticut” butterflies will also mate and lay eggs while in Connecticut. The eggs will develop from caterpillars (larvae) to pupae and adults. The adults will mate and lay eggs. This final generation will be the butterflies making the trip to Mexico. Confusing? Think of it this way. It’s the great-grandchildren of the migrating butterflies that make the return trip to Mexico!

To think that a delicate butterfly can fly 2,000 miles over rivers, hills, towns and cities is incredible! Not all butterflies, however, make it to Mexico. Some Connecticut-tagged butterflies have been recovered only miles from where they were initially tagged. Tagging does not harm the butterfly when performed correctly and, certainly, the fact that some butterflies have been recovered in Mexico is added proof to the benign nature of butterfly tagging. In the spring of 2002, Monarch Watch notified the CBA that three butterflies tagged in Madison, Connecticut, traveled to Mexico. Two were recovered in El Rosario (2,209 miles) and one in Sierra Chincua (2,145 miles).

Tagging butterflies is addictive! The site at Hammonasset is frequented by many different CBA members at various times during the flight season. Any CBA member interested in helping to tag monarchs can request up to 25 tags from CBA’s supply. Some taggers will arrive early in the morning, hoping to get slow-moving monarchs at their overnight roosting site. Later, by mid-morning, the monarchs can be found in the butterfly garden. After Wildlife Division natural resource educator and CBA member Laura Rogers-Castro learned how to tag from Rich Chyinski, she tagged several at Hammonasset and then returned to the butterfly garden at the Wildlife Division’s Sessions Woods Wildlife Management Area to tag several more. Maybe this year one of the Sessions Woods butterflies will make it to



P. J. FUSCO

Rich Chyinski carefully adheres a tag to a monarch butterfly. Returned tags can provide important information on the monarch’s migratory flight to central Mexico.

Mexico! Watch for an update in future issues of *Connecticut Wildlife*.

The Monarch Watch Program has provided important data and also has raised new research questions. How, physiologically, can a small butterfly fly such a long distance? How do the butterflies find the same overwintering sites found by their ancestors a generation earlier? For each question answered,

Monarch Watch reveals more questions to be discovered.

One thing is for certain, monarch butterflies are truly unique animals. Children love to see and learn about them; adults love to study them. Their long migratory flights are fascinating. We are lucky in Connecticut to have such diversity among our wildlife species.

Monarch Migration

It wasn’t until 1975 that researchers determined precisely where eastern monarch butterflies spend the winter. They discovered that monarchs east of the Rocky Mountains fly to the mountains in central Mexico and overwinter in oyamel fir forests at 10,000 feet above sea level. There are 11 to 14 main monarch overwintering sites in Mexico and these unique environments are very vulnerable. Local logging operations threaten the preservation of the area and native villagers harvest trees for firewood and to acquire more farming land. Many officials in Mexico, however, do value the butterflies and are working with conservationists to protect as much of the forest as they can.

Scientists have discovered a different locale for most overwintering monarchs west of the Rocky Mountains. These butterflies spend the winter in the eucalyptus, pines and cypresses along coastal California, although some do travel to Mexico to overwinter. The California overwintering sites are also threatened, particularly by development. Some individuals are also debating whether or not to remove nonnative eucalyptus even though the butterflies rely on it as a roosting site. A special program called the Monarch Project is helping to protect sites through land conservation easements.

Overwintering monarchs in California and Mexico survive the winter by clustering together along the trunks and branches of the trees. It has been said that the trees look like they have “butterfly leaves!” On warmer days, the butterflies leave the roost sites and fly to watering areas nearby. Cool, but not freezing locations, are important for the butterflies to conserve energy throughout the winter.

If you would like more information about monarch migration, visit www.monarchwatch.org.

Flashy Bird of the Wetlands - the Kingfisher

Written by Paul Fusco, Wildlife Outreach Unit

With a loud, raucously rattling call, a medium-sized bird flies across a beaver pond, only to stop in mid-flight, hovering above the pond. It faces into a light wind, looking down into the water as it hovers with its tail spread and wings beating rapidly. Seeing nothing it moves on with an erratic flight pattern, only to stop again a short distance away. This time, while hovering, it spots a small fish and quickly dives head-first, splashing into the water. Grabbing the fish with its powerful bill, the bird bursts out of the water and flies to the branch of a dead tree along the edge of the wetland. It makes the raucous call again, but this time the call is muffled by the prey being held in its mouth. This flashy bird is the belted kingfisher, Connecticut's only member of the kingfisher family.

Like all members of their family, belted kingfishers have a large head, massive bill, short legs and short tail. Perhaps their most notable feature is the shaggy crest that tops the head. The birds are bluish gray above and white below. Males have a bluish breast band and females have a rust-colored belly band. Belted kingfishers are stocky and slightly larger than a robin.

Small fish are the main dietary staple of the belted kingfisher, although tadpoles, frogs, crayfish, insects and small snakes are occasionally eaten. Kingfishers may sometimes get themselves into trouble at trout hatcheries, especially at ones with open, unprotected ponds that provide the opportunity for an easily caught meal. Covering ponds with screens and providing overhangs for fish to use as cover would protect hatchery fish from the assault of kingfishers and other fish-eating birds.

Quality wetland habitat is essential for kingfishers to survive. They need clear water to see their prey, so they are seldom seen around areas with murky water or at ponds that are choked with too much vegetation. Often found in more secluded areas, kingfishers will use both freshwater and coastal wetland habitats, as long as there are good fishing opportunities and nearby nesting sites during the breeding season.



Belted kingfishers use their bill and feet to excavate nest cavities in river and pond banks and gravel pits. The nest chamber is at the end of a tunnel that is usually four to seven feet long, but may be up to 15 feet long. The typical clutch size is six or seven eggs, and the young fledge after about 24 days.

In Connecticut, belted kingfishers are fairly common around wetland habitats and have a wide distribution across the state from April through October. They are migratory, but depending on how severe winter is, some birds will remain for the season in areas

where there is open water for foraging. Major rivers and the shoreline are good places to find them during winter.

Kingfishers are easy to locate and identify, even from a distance. Look for their distinctively erratic flight pattern, and listen for their noisy, rattling call. Their call will frequently give away their presence before an observer is able to see the bird. Also, be aware that kingfishers habitually hunt from open perches, such as dead branches or wires that overlook water, making them easy to find and observe.

Your Questions Answered

Mystery Beetles

These large dark blue, ant-like insects appear in my side yard every two or three years. They are in the lawn and slow-moving. I haven't been able to find them in any insect books I have or that are at the library. I would appreciate any advice or an identification. - Richard Koleszar, Redding.

Although appearing “ant-like” to this observer, this insect is actually a beetle. Beetles comprise the largest group of insects and can be a challenge to identify. However, this beetle has several characteristics that aid in its identification. Metallic blue coloration; short, soft elytra (specialized front wings in the beetle group); and a narrower neck than the head and thorax are indicative of a type of blister beetle with the scientific name (genus) *Meloe*. Sometimes called oil beetles, *Meloe* beetles, when disturbed secrete a substance, called cantharidin from the joints of their legs to deter predators. Cantharidin

is an irritant and, if ingested by cattle or other animals, can cause intestinal and urinary tract problems leading to the death of the animal. Some people may recognize the term “Spanish fly”

which was used as an aphrodisiac years ago. Spanish fly was actually a concoction of dried blister beetles! Once the toxicity of cantharidin was known, the use of Spanish fly became less common.

The young (larvae) of many blister beetles are considered to be beneficial because they feed on grasshopper eggs. The *Meloe* beetles, however, feed on the eggs of solitary bees. Solitary bees are pollinators and, therefore, very important for healthy ecosystems. The impact of *Meloe* beetles on solitary bee populations is a topic better left for the scientific community.



Do you have a wildlife question you'd like to have answered?

Please send it to:

Your Questions Answered
DEP - Wildlife Division
P.O. Box 1550
Burlington, CT 06013

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

The Wildlife Observer

A Battle Between Mute Swan and Muscovy Duck

Reader Scott C. Williams, from Guilford, sent in the following wildlife observation and photographs:

“On April 28, 2003, I traveled to a known nesting site of a pair of mute swans in the marshy shallows at the north end of Quonnipaug Lake in Guilford. My intentions were only to document the existence of the nest for a paper for school. Upon my arrival at 9:00 AM, I found a drake (male) Muscovy duck perched atop the nest with the nervous pen (female swan) swimming in tight circles adjacent to the nest. The cob (male swan) was nowhere in sight. Other than its presence, the duck was not disturbing the nest, as if gaining a new vantage point of its surroundings. The pen demonstrated no aggressive behavior toward the duck, save her posture. She stayed next to the nest until my presence caused her to move away. The duck followed, perhaps also disturbed by me (top photo). After the pen had led the duck more than 100 yards from the nest, the cob emerged from the vegetation on the far side of the marsh. He immediately took flight and headed for the duck. The cob landed on top of the duck and proceeded to beat it into the water using its breast and repeated wing blows (bottom photo). The cob also used its feet and bill to further attack the duck. The assault lasted 20 seconds at most. After the attack, the pen and cob rejoined company and the cob continued to make aggressive advances toward the duck, but did not make contact with it again. This unique interaction could have never occurred in the wild without human domestication practices, as mute swans are native to Eurasia and Muscovy ducks to Central and South America. It also demonstrates how aggressive mute swans can be, especially during the breeding and nesting seasons.”



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)

Burnham Brook Preserve: White-tailed Deer Browse Study

Written by Ken Metzler, DEP, State Geological & Natural History Survey of Connecticut

In 1989, the Eastern Region of The Nature Conservancy (TNC) became concerned over the apparent negative impacts on natural vegetation by the overbrowsing of white-tailed deer in "Natural Areas" and several of their preserves. Several studies throughout the northeastern United States had demonstrated that deer had a significant impact on seedling growth and forest regeneration. Few studies had focused on the impacts to herbaceous growth, yet there was an apparent decrease in herbaceous plant distribution, particularly in woodland orchids and lilies. Similar observations were made in other areas where deer populations were reported to be large, but few quantitative studies had been conducted documenting the results.

Fencing Out the Deer

Given these concerns, five large TNC preserves in the northeastern United States were selected to assess the impacts of deer on herbaceous vegetation. The Mashomack Preserve in Shelter Island, New York, was one of these sites, and Kenneth Metzler and Ron Rozsa, two plant ecologists with the Connecticut Department of Environmental Protection, established fenced and unfenced study plots there. After collecting data for several years, it was obvious that when deer were excluded from forested areas, there was a marked increase in plant growth, particularly shrubs and tree seedlings and saplings, and a remarkable increase in herbaceous species diversity. Several tick-treefoil species previously absent from either the fenced or the unfenced control plot had appeared, likely regenerating from the seed bank in the soil.

Concurrently, Dr. Richard Goodwin raised similar concerns from his observations in the TNC Burnham Brook Preserve in East Haddam, Connecticut. Several regularly monitored rare plants had either been repeatedly browsed by deer or had disappeared entirely from the preserve. Dr. Goodwin also noticed increased deer activity around his home adjacent to the preserve and experienced considerable damage to his ornamental plants. To initiate

white-tailed deer population control, Dr. Goodwin permitted deer hunting on his land in 1989. Hunting continued until 1998, when Dr. Goodwin's land was transferred to TNC. In 2000, hunting was resumed and expanded to include all of the Burnham Brook Preserve.

Of equal concern to Dr. Goodwin was the lack of forest regeneration under areas of dead and dying hemlock trees throughout the Burnham Brook Preserve. An infestation of woolly adelgid was severely impacting the health of eastern hemlock on both Dr. Goodwin's land and within the preserve. Few seedlings were surviving to the sapling size necessary for reforestation of the site. The long-term stability of the preserve and its biodiversity was uncertain. Given this multitude of issues and Dr. Goodwin's increasing concern with the effects of a large deer herd on the vegetation, an additional study was initiated in Burnham Brook Preserve in 1993.

Collecting the Data

The objectives of the study were three-fold: 1) to demonstrate the impacts of deer browsing on herbaceous plants within the Burnham Brook Preserve; (2) to assess if forest regeneration was occurring in areas where Eastern hemlock had been killed by woolly adelgid infestations; and (3) to determine which seedling species will survive deer browse pressure.

In fall 1993, two paired plots were established in Burnham Brook Preserve in upland forest habitat dominated by mixed hemlock-hardwood stands. One pair of plots (Burnham Brook) was located south of Burnham Brook and the second (Dolbia Hill Road) was south of the abandoned portion of Dolbia Hill Road. Both sites have similar soils and vegetation, although the Dolbia Hill Road plot has a greater mixture of oaks.

Each paired plot contained an unfenced control plot (deer had access) and a fenced plot (deer had no access) in close proximity to each other in uniform habitat. In late summer 1994, 1996, 1997 and 1998, vegetation data were

collected in the two-paired plots. A plant species list was compiled for each plot and the dominant height of trees, shrubs and herbs also was recorded.

Figure 1. Change in shrub cover from 1994-2000.

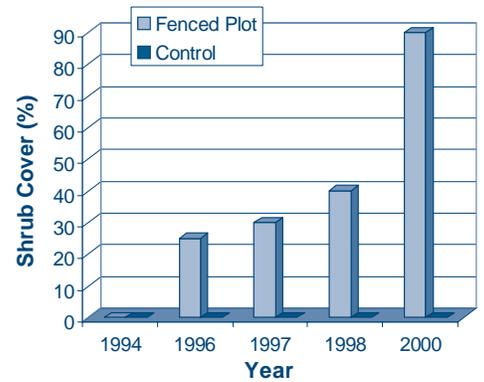


Figure 2. Change in shrub height from 1994-2000.

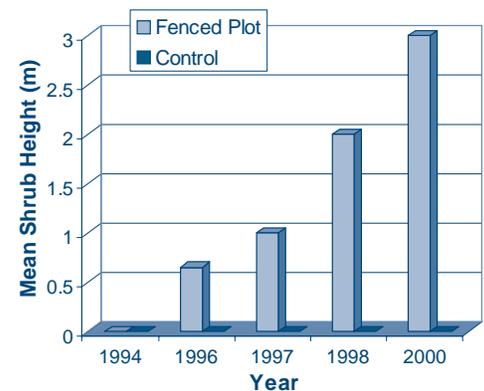
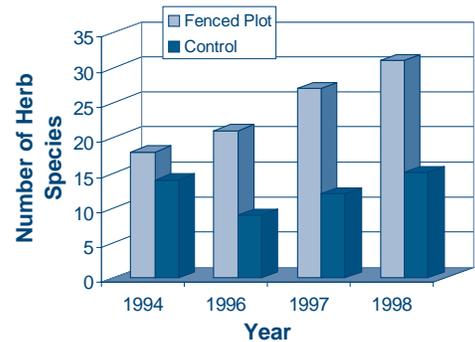


Figure 3. Change in number of herbs from 1994-1998.



In 2000, the Burnham Brook fenced plot was damaged by fallen tree branches, which enabled deer to access the fenced plot. About 20% of the shrubs and taller herbs in the plot were browsed. A decision was made to collect limited data on the entire plot, repair the fence and assess the study the following year. In 2001, a large hemlock limb again crushed the fence, no data were collected and the study was terminated.

Data from each subplot for each sampled year were analyzed for several factors, including changes in the percent coverage of individual plant species in the shrub and herbaceous layers, changes in the height of these plants and changes in species diversity over time.



The impact of deer browsing on the growth of seedlings, saplings, shrubs and other plants was the focus of a recent study at The Nature Conservancy's Burnham Brook Preserve, in East Haddam.

Were Deer Having an Impact?

In the Burnham Brook study plots, the fenced plot showed a small increase in the coverage of herbaceous species, increasing from less than 10% in 1994 to about 15% in 1998, due, in part, to an increase in the number of tree seedlings. In contrast, the shrub layer increased dramatically from 1994 to 2000, with the plot being dominated by saplings in 2000 (Figure 1). By 1998, the seedlings had grown to form a thicket, shading the herb layer and presumably inhibiting herbaceous growth.

During the same period, the unfenced plot showed no change in herbaceous species coverage, except for a moderate increase in hay-scented fern. No shrubs were observed in the control plot in any sample year.

The fenced plot at the Burnham Brook study area also showed a marked increase in shrub height, with much of the plot dominated by six-foot tall saplings (black birch, maple, sassafras, ash, tulip poplar) by 1998. In 2000, the dominant sapling height was about 10 feet, a 50% increase from 1998 (Figure 2). The unfenced plot had annual seedling establishment (mostly maple) with little growth. No seedlings grew to shrub or sapling height in the unfenced plot.

In addition, the number of herbaceous species (including seedlings) in the fenced plot increased from 18 to 31 from 1994 to 1998 (Figure 3). This increase included the appearance of Indian cucumber root, bellwort, wood violet, wild grapes, hemlock and flowering dogwood seedlings, and an increase in wild white violet. During the same period, the number of species in the unfenced plot remained unchanged.

In the Dolbia Hill Road study plots, there was little change in either the fenced or unfenced plots throughout the study period. The herb layer remained virtually unchanged, with coverage remaining at less than 1%. During this period, there was regular seedling establishment but the seedlings showed little growth. No shrub or sapling growth was observed and no seedlings grew to sapling size in either plot.

Discussion and Conclusions

From 1993 to 2001 the Burnham Brook fenced plot (which excluded deer) showed a dramatic increase in herbaceous species diversity, a progressive growth of seedlings to sapling size and a diversity of tree species in the sapling height class

whereas the unfenced plot remained unchanged.

In contrast, both of the Dolbia Hill Road plots showed little change throughout the entire study period. Although seedlings germinated in both plots, they grew poorly and, by 1998, only one ash seedling in the fenced plot reached the height of 20 cm. All of the other seedlings either did not survive and/or remained stunted. The reasons for this are unknown. Perhaps there are some limiting soil conditions or other unknown factors that influence growth, or possibly rodents browsed on the seedlings. These plots should be studied further to find the answer to these questions.

During the study period, other parts of the Preserve also showed dramatic growth in woody species (mainly black birch), particularly on rocky slopes with abundant dead hemlock tops and in rocky areas of low deer preference. The apparent success of sapling recruitment here, as opposed to the rest of the Preserve, is possibly due to the sheer saturation of a large number of seedlings growing in a difficult area. Throughout most areas in the Preserve, however, few saplings were observed with seedlings and small saplings were clearly browsed.

Master Wildlife Conservationist Program Classes to Begin

In February 2004, a new series of Master Wildlife Conservationist Program (MWCP) classes will be offered at the Sessions Woods Conservation Education Center in Burlington. The MWCP, which is sponsored by the DEP Wildlife Division, is a volunteer program designed to train adults in wildlife conservation and education. These trained volunteers are then required to assist the Division and other environmental organizations with wildlife-related outreach and research projects. Currently, there are about 40 active Master Wildlife Conservationists (MWC) throughout Connecticut.

The February classes will be the fourth time the program has been offered. Training consists of 40 hours of classes, held primarily in Burlington and taught by DEP and other environmental professionals. Classes cover topics such as the history of wildlife conservation, ecological principles, Connecticut specific wildlife issues and environmental interpretation. Volunteers receive a notebook of written materials, and they are expected to attend all 40 hours of the program and complete an examination before beginning volunteer service. After 40 hours of volunteer work have been completed, participants receive a certificate of completion. Active volunteers also receive *Connecticut Wildlife* magazine and a MWC shirt, and are expected to continue to take advanced training classes offered by the Wildlife Division.

The MWCP is offered through an application process as only 20 individuals are trained each session and the demand for the opportunity to become a volunteer is high. For the upcoming training, the Wildlife Division is particularly looking for volunteers that would be available to help with outreach efforts during weekday hours at schools throughout Connecticut. The Division will also be accepting applications from individuals with a strong record of volunteerism and commitment to the environment and wildlife conservation. If you are interested in the program and would like more information or an application, please contact Laura Rogers-Castro, Natural Resource Educator, at 860-675-8130 or laura.rogers-castro@po.state.ct.us.

Laura Rogers-Castro, Wildlife Outreach Unit

“Connecticut Wildlife” Goes to Iraq

The DEP Wildlife Division received the following note in August from a new subscriber to *Connecticut Wildlife*:

“My husband Marc Yougquist sent me this subscription order form from Iraq where he is serving since February in the 143rd MP Company. A friend sent him Connecticut Wildlife and he thoroughly enjoyed reading about home. He asked me to subscribe and I will be forwarding your publication to him, but hopefully not for too much longer. Thank you.”

The Wildlife Division is pleased that Marc is a subscriber to *Connecticut Wildlife*. We hope he stays safe in Iraq and that he returns to his family and friends in Connecticut very soon.

Thanks to Volunteer Beaver Trappers

Each year the DEP Wildlife Division receives hundreds of complaints from Connecticut residents about nuisance beavers. Given the demand for trapper assistance, the Division has developed a list of licensed trappers willing to volunteer their services during the trapping season. The Wildlife Division would like to thank these individuals who have volunteered numerous hours of their time and have put many miles on their vehicles while helping address nuisance beaver complaints.

If you are interested in the Volunteer Beaver Trapper Program, please call Western District biologist Peter Picone, at (860) 675-8130, or Eastern District biologist Ann Kilpatrick, at (860) 295-9523, for more information.

Laura Saucier, Wildlife Research Assistant



New Exhibit on CT's Changing Landscape at Sessions Woods

A new exhibit on Connecticut's changing landscape was recently added to the exhibits already on display at the Sessions Woods Conservation Education Center in Burlington. This colorful and interactive exhibit, designed and constructed by the Wildlife Division's Outreach Unit, gives visitors to Sessions Woods the opportunity to learn more about the environment they live in and how changes to the landscape affect wildlife. This information packed display answers questions about succession, habitat, what species live in different habitats, what changes habitat and more. Test your bird call identification skills and play a computer game that asks questions about wildlife and their habitats. After viewing this new display, visitors should leave Sessions Woods with more knowledge about Connecticut's changing habitats and the impact on the environment we live in.

James Warner, Wildlife Outreach Unit

Billions of Dollars Spent on Wildlife Watching Activities

A new economic report released by the Department of Interior's U.S. Fish and Wildlife Service found that 66 million Americans spent more than \$38 billion in 2001 observing, feeding or photographing wildlife. The new report, called the 2001 National and State Economic Impacts of Wildlife Watching Addendum, relied on data collected in the Service's 2001 National Survey of Fishing, Hunting and Wildlife-Associated Recreation. Direct expenditures by wildlife watchers included expenditures for items such as cameras, binoculars and bird food, and for trip-related expenses such as lodging, transportation and food. For each \$1 of direct spending associated with wildlife watching, an additional \$1.49 of economic activity was generated. The total industrial output of \$95.8 billion resulted in 1,027,833 jobs (full and part time) with total wages and salaries of \$27.8 billion.

Wildlife watching expenditures generated a total sales tax revenue of \$2.1 billion; a total state income tax revenue of \$712 million; and a total federal individual income tax revenue of \$3.3 billion.

Cooperation is Key for Nesting Plovers and Terns

Written by Rebecca Foster, Wildlife Research Assistant

Another piping plover nesting season along the Connecticut shoreline has come and gone. This year, 37 pairs of piping plovers attempted to nest in nine separate beach locations. That is six more nesting pairs than were documented in 2002, and five more than in 2001. This year's statewide average of 1.3 chicks per pair is similar to results from previous years. A total of 48 piping plover chicks fledged in 2003, a decrease from 2002 (58 fledged chicks). Greatest egg losses this year were due to depredation and high tide nest washouts.

The piping plover is a federally and state threatened species. The birds nest along seacoasts on isolated sandy beaches with little vegetation and access to mudflats for feeding. This year, the most successful Connecticut beaches for plovers were Pleasure Beach in Bridgeport, Sandy Point in West Haven and Harkness Memorial State Park in Waterford. In addition, piping plovers nested in two locations (Short Beach, in Stratford, and Milford Point) that haven't been used in recent years, a sign that habitat which may have been undesirable in the past was appropriate this year. The physical characteristics of a beach may be altered during fall and winter by beach erosion or sand deposition due to storms, high winds and tide action. A decrease in human presence and predators could also result in a more desirable nesting location. Common

predators of piping plovers include skunks, raccoons, foxes, rats, cats and large scavenger avian species such as crows, night herons and gulls.

Cooperation a Key Factor

In 2003, protecting the piping plover was a cooperative project between the Connecticut DEP, U.S. Fish and Wildlife Service, The Nature Conservancy, Connecticut Audubon, over 40 dedicated plover volunteers, including Master Wildlife Conservationists, and several beachfront property owners. This type of group effort is essential if the piping plover recovery plan for Connecticut is to be a success. Various jobs included daily monitoring of plover pairs/nests/chicks, erecting both rope fencing and exclosures to minimize disturbance and predation, putting up signs, educating the public about plovers and removing all equipment from the beaches at the season's end. None of this work could have been conducted as effectively as

it was without the help of many individuals and groups. All of those responsible for helping out during the 2003 piping plover nesting season should be commended.

Least Tern Numbers Increase

Overall, the 2003 least tern nesting season in Connecticut showed a marked improvement over the past few years. Least terns attempted to nest on five separate beaches,

with successful nesting occurring on only two beaches. Sandy Point in West Haven had the greatest concentration of nesting least terns. At the height of season, over 300 adult least terns were present with approximately 175 nests. This year, approximately 200 least tern chicks fledged. This is a dramatic increase over the 2002 season, when only 38 chicks fledged statewide.

The state-threatened least tern, like the piping plover, nests on sandy beaches, laying its eggs in a small nest depression in the sand. This season, least terns in Connecticut nested alongside piping plovers, common terns, American oystercatchers and black skimmers. This type of interspecific nesting may help improve hatching success rates because predators must fight off the combined defenses of many birds when trying to eat eggs. The majority of least tern egg losses in 2003 were due to high tide washouts rather than to predators or human disturbance.



Overall, the 2003 least tern nesting season showed a marked improvement over the past few years.



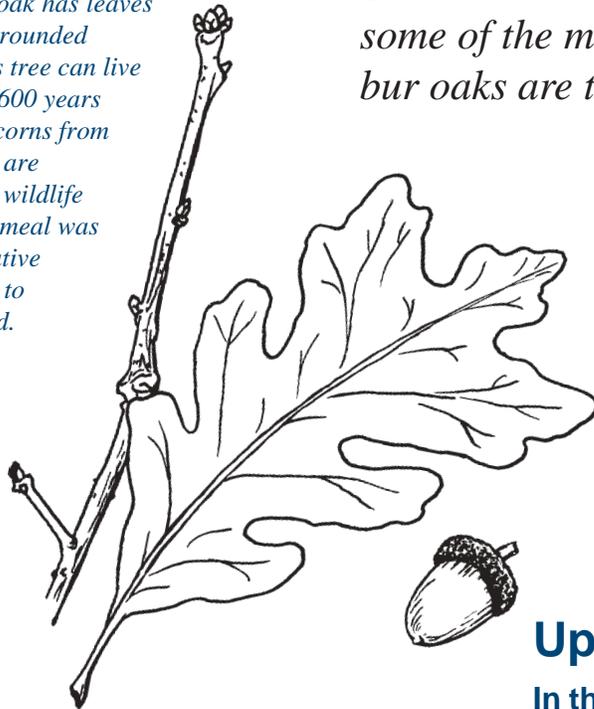
This season, least terns nested alongside piping plovers, common terns (pictured above), American oystercatchers and black skimmers.

Just for Kids

OAK TREES & ACORNS

Connecticut's State Tree-- White Oak

The white oak has leaves with even, rounded edges. This tree can live to be over 600 years old! The acorns from white oaks are favored by wildlife and acorn meal was used by Native Americans to make bread.



Oaks, Oaks and More Oaks!

There are about 10 different kinds of oak trees in Connecticut. White, red and chestnut oak are some of the most common. Post, chinkapin and bur oaks are the least common.

Mast for a Meal

Wildlife biologists call hard fruit from trees *mast*. Acorns are one of the most important types of mast found in forests. Squirrels, blue jays, black bears, wild turkeys and white-tailed deer are just a few of the animals that rely on acorns for food.

Ups and Downs

In the wild, animal populations go up and down from year to year. When there are a lot of acorns, gray squirrels do very well. Sometimes when the acorn crop is low, the animals that depend on them as a source of nutrition have a hard time finding other foods to eat to survive.

Next time you are in the woods.....

Look for acorns! See if any have a small, round hole in them. This hole is made by an acorn weevil which grows inside the acorn and exits through the hole.

Unscramble the names of other animals that eat acorns

1. MIKNPCUH
2. HUCNTTHA
3. WROC
4. HWEIT-ODOTEF USEOM
5. REGUSO

Answers to the right

Answers to Quiz:

1. chipmunk; 2. nutcracker; 3. crow; 4. white-footed mouse; 5. grouse

19th Season at Shepaug Bald Eagle Observation Area

Northeast Generation Services has announced that the Shepaug Bald Eagle Observation Area will be open to the public for its 19th consecutive winter season. The observation area will be open on Wednesdays, Saturdays and Sundays, from December 27, 2003, through March 17, 2004-- strictly by advance reservation. All individuals and groups wishing to visit the site to view eagles must make a reservation for a particular date, as there will be a limited number of visitors allowed per open day.

Starting December 9, 2003, reservations can be made Tuesday through Friday, from 9:00 AM to 3:00 PM, by calling 1-800-368-8954. Controlled access to the site through a reservation system has proven to be very effective in

achieving an established goal of ensuring the welfare of wintering eagles and providing a quality educational experience for the general public.

Eagle Volunteers Needed

Volunteers are also being sought to help at the Observation Area. Duties include providing information to

visitors, helping people to and from the shelter, pointing out the location of eagles and coordinating parking. No previous experience is required, but knowing how to dress for cold weather is a must. Prospective volunteers can contact Catherine Urbain of Connecticut Audubon at 203-878-7440. A mandatory volunteer workshop is scheduled for December 6, 2003.

Shepaug Eagle Observation Area will be open December 27, 2003, through March 17, 2004, on Saturdays, Sundays and Wednesdays, from 9:00 AM-1:00 PM.

Reservations can be made by calling 1-800-368-8954, starting December 9, Tuesdays through Fridays, from 9:00 AM-3:00 PM.

Wildlife Calendar Reminders

- Dec. 1 Beaver trapping season opens.
- Dec. 10-23 Deer muzzleloader season.
- Mid-Dec. 2004 Connecticut Hunting and Trapping Guide available at town halls and Wildlife Division offices. The guide can also be found at the DEP's Web site: www.dep.state.ct.us.
- Dec. 24-31 Second part of the fall turkey bowhunting season on state and private lands.
- Dec. 27-Mar. 17 **Shepaug Bald Eagle Viewing Area** open for the 2003-2004 eagle viewing season (see above).
- January Donate to the Endangered Species/Wildlife Income Tax Check-off Fund on your 2003 Connecticut Income Tax form.
..... Spring turkey hunting and state land deer lottery applications available at town halls and Wildlife Division offices, or apply online on the DEP's Web site: www.dep.state.ct.us.
- Jan. 10 Midwinter Eagle Survey.
- Jan.1-31 Extended archery deer season on private land in deer management zones 11 and 12. A 2004 deer permit and private land consent forms for 2004 are needed.
- Jan.15-Feb. 15 Special late Canada goose hunting season in the south zone only. For more details, consult the 2003-2004 Migratory Bird Hunting Guide, available at town halls and DEP offices. The guide can also be found on the DEP's Web site at: www.dep.state.ct.us.
- Feb. 12-15 Visit the exhibit sponsored by the DEP's Bureau of Natural Resources and the Division of Law Enforcement at the **6th Annual Hunting and Fishing Expo**, at the Connecticut Expo Center in Hartford. For more information on the Hunting and Fishing Expo, visit the Web site for North East Promotions, www.fishingandhuntingexpo.com.
- Feb. 14-15 **5th Annual Connecticut River Eagle Festival** (see page 5 for more information).

Connecticut Wildlife

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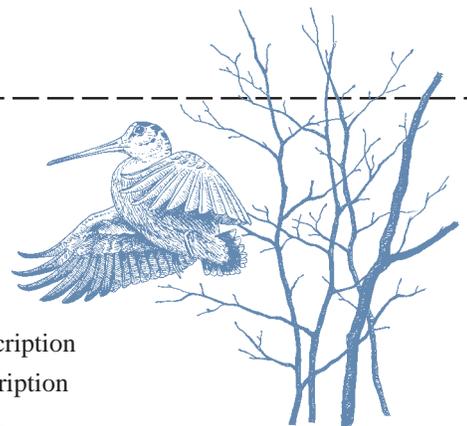
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