



Stewardship and Conservation

This issue of Connecticut Wildlife highlights a critical, yet often overlooked *aspect of wildlife conservation and management – stewardship. The generic* definition is an individual's responsibility to manage one's life and property with proper regard, but in a conservation context it is often much more nuanced. Good stewardship of wildlife and natural resources can take many forms. At its core, you simply have to have an appreciation for the uniqueness and beauty of wildlife in its many forms. Connecticut has an amazing diversity of species, from bees to butterflies, trout to turtles, and bears to bats, to help foster that appreciation. An awareness of the ecosystem value of wildlife is also important. Knowing that a cuckoo is an insect-eating machine when it comes to controlling caterpillar outbreaks or that native pollinators are our farmers' best friends help us to understand that value. The many Connecticut Grown Forest Products are clear examples of important and direct economic benefit from our natural resources. The odds are good that if you are reading Connecticut Wildlife, you already have a strong interest and sense of value for wildlife and natural resources and a core appreciation, which builds a strong foundation for successful stewardship.

Stewardship goes beyond that as this issue highlights. Today, one of the most important roles of a good steward is sharing what you know with others. Help your friends, neighbors, and even people you've just met develop a curiosity for the natural world around us and the appreciation you have for its values, both intrinsic and economic. The free insect control provided by birds, bats, reptiles, and amphibians is a clear economic plus. Wildlife recreation generates conservation dollars and supports local economies. This issue highlights many of the great things that are made possible through the federal Wildlife and Sport Fish Restoration Program (Pittman-Robertson/Dingell-Johnson/Wallop-Breaux Acts), which is funded by an excise tax on firearms, ammunition, archery and fishing equipment, and motor boat fuels and fees – a successful user-pay, user and resource benefit program that is also a form of stewardship.

Taking action is another important component of stewardship. The newest Master Wildlife Conservationists are sharing their sense of stewardship and the knowledge they've gained to foster that appreciation in others and help educate state residents at the local level about the value of wildlife and their habitats. To get the full sense of what it means to be a true steward of wildlife and natural resources, you need to look no further than the example set by Sandy Breslin. Sandy was a passionate and successful advocate for Connecticut's wildlife and natural heritage. We can pay no better tribute to the tremendous contributions Sandy has made to stewardship of our natural resources than to follow her example.

Share your passion for wildlife and the outdoors with others. Help others understand the value – both aesthetic and economic – of those resources. Share your support for wildlife, natural resources, and their continued stewardship with your state and federal legislative leaders in a passionate and professional way. If we undertake these actions to the best of our ability, our stewardship will accomplish great things for wildlife conservation.

Jenny Dickson, Supervising Wildlife Biologist

Cover:

The grasshopper sparrow is an endangered species in Connecticut. It requires dry grassy upland habitat to nest and raise young. Photo courtesy of Paul J. Fusco

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CT DEEP Commissioner Remarks at the March for Science

Written by Robert Klee, DEEP Commissioner, photography by Paul Fusco, DEEP Wildlife Division

DEEP Commissioner Robert Klee participated in the March for Science in New Haven on Saturday, April 22. The New Haven march was one of 600 held around the world that amassed an unprecedented total of approximately 1.07 million participants -- making the March for Science the largest global science event in history. The following are Commissioner Klee's insightful remarks for this historic day when scientists, educators, journalists, students, neighbors, friends, and family marched in support of science, to stress how science is critical to our health, economies, food security, safety, and natural resources, and to defend the role of science in policy and society.

am thrilled to be with you all today. I am Robert Klee, Commissioner of Connecticut's Department of Energy and Environmental Protection, an agency whose mission is the protection of the natural world, and the health and wellbeing of all who live on it.

Over 600 of my amazing staff at the Agency are scientists or engineers – many of them are here today or at the sister march in Hartford. I am honored and privileged to count myself among them – as I am a geology undergrad, and also hold a Master's and Ph.D. from the Yale School of Forestry and Environmental Studies.

I am also the son of a scientist – my biomedical engineering dad is out there in the audience – and the grandson of a scientist – a food chemist. I married a

scientist – a psychologist – and have two boys here today who have a passion for exploring the natural world.

It is exciting to see this great turnout...part of growing activism we are seeing around the state and nation as people are speaking out about the direction of this nation and expressing concerns about our future. This is a strange time indeed, as there are forces at work that run contrary to our history, and what has made our country a leader in the world.

Science and technological innovation have been at the heart of our nation's story, bringing amazing advances in medicine, industry, communications, transportation, power generation, and management of our diverse natural resources.

Support of basic science was not and should not be a partisan issue. But there are some now in Washington and elsewhere who do not like the facts that emerge from the scientific method – and would rather stick their head in the sand, or rely on belief, opinion, or "alternative facts." We must march today and mobilize for tomorrow to ensure that basic science is supported, and that we invest in technological innovation that will bring us the next generation of clean energy, clean cars, efficient homes, and other technologies that will enable all of us to thrive here on earth and enable future generations to continue to enjoy the wildlife and natural places we treasure.

It is very fitting that this March for Science is being held on Earth Day...as science and data are critical in decisions we make about how to best protect this planet, our natural resources, and the health of our people. Back in 1970, millions



of people took to the streets for the first Earth Day. At that time air pollution created a dense smog that often hung over this city. Raw sewage and industrial pollution poured in to water bodies across our state. Iconic species, such as the osprey, bald eagle, and peregrine falcon, had disappeared from our state, and much of the nation, due to DDT contamination.

In the more than four decades since the first Earth Day, we have made much progress. Our air, waters, and lands are cleaner than ever and bald eagles, osprey, and peregrine falcons have not only returned, but are thriving. That only happened because of hard work from citizens, non-profit organizations, government agencies, and progressive policy makers ... and our progress will be threatened if we turn a blind eye to science. Ignoring the information and data we can obtain through rigorous observation, measure-

continued on next page



Waterfront homes in Connecticut have taken on a new elevated profile in recent years. Climate change and raising sea levels are now a fact of life in our state.



Extreme high tide events are becoming more frequent and are having an adverse effect on marsh habitat and marsh nesting birds in Connecticut.

March for Science

continued from previous page

ment, and analysis of the natural world around us is not a path to success – and it is certainly NOT the way to make our nation great again. Rather, it is a formula for disaster.

This is especially true when it comes to the issue of climate change. There are those who seek to deny that the planet is warming because human activities release nearly 40 BILLION tons of carbon dioxide and other greenhouse gases into the atmosphere EACH YEAR.

But, as one of my favorite scientists, Neil DeGrasse-Tyson, recently put it, "The good thing about science is that it's true whether or not you believe in it."

The scientific method employed by a global network of literally thousands of scientists and researchers has established an "emergent truth" that human action is fundamentally altering the climate of the planet we live on – the only planet we have. Ignoring the facts will not make the problem go away. It will only serve to make it worse, and delay the political solutions

we desperately need to meet this local, regional, national, and international challenge we face.

Here in Connecticut we are already seeing the impacts of climate change. I am sure all the citizen scientists here have seen and felt the changes too – the road that floods every month now at high tide. The unusual intensity of storm events followed by weeks with no rain. The early arrival of certain birds or plants in spring. The absence of favorite species remembered from childhood, and new unusual invasive arrivals, never seen before in these parts.

Our summers are hotter – with more days than ever when the temperature exceeds 90 degrees F. The waters of Long Island Sound are rising and getting warmer. The flora and fauna you find in the Sound are changing with fewer cold water and more warm water fish found there every year. We are now becoming more like the mid-Atlantic than New England. We have also been living with drought conditions and more forest fires. All of these are symptoms of climate change, based on data collected by scientists at my agency, and researchers at our great academic institutions throughout the state.

As noted physicist Stephen Hawking recently said in response to unsettling actions he was seeing coming from the Trump Administration, "Climate change is one of the greatest dangers we face, and it's one we can prevent."

In Connecticut, we are not ignoring the science, nor are we shying away from finding solutions. We are working hard to reduce our carbon footprint by burning less fossil fuel. We are focused on energy efficiency and greater reliance on renewables such as solar, wind, and hydro power. And, we are working with residents, communities, businesses, and institutions to adapt to changes we are seeing and make our state safer and more resilient.

We are studying the impact of a changing climate on wildlife – species such as the saltmarsh sparrow at risk from sea level rise; turtles at risk from widely varying winter temperatures and drought; colorful warblers whose lives depend on the timing of tree bloom, insect emergence, and the ability to find food; and many others whose vulnerability to climate change is still poorly understood. We are working to make habitats – be they forests or grasslands or anything in between – healthier and more resilient to the effects of climate change and to create connected corridors between these habitats.

We should all be proud that Connecticut is a national leader for practical and sustainable environmental and energy policies.

We should all be proud that in our state it is okay not only to talk about climate change, but to do something about it.

We should all be proud that in our state we use science to make informed public policy decisions.

We should be proud that nesting bluebirds have returned to every town in our state and species, such as wild turkey and deer, have become common sights across Connecticut. You should also know that we are going to continue on this positive path – no matter what some people in Washington might be saying or doing to thwart our efforts.

With the support of all of you – and those marching today in other cities across the nation – we will work to make certain our federal government continues to respect, acknowledge, invest in, and take advantage of the benefits of science and scientific research.

In closing, it seems most appropriate today, on Earth Day, to offer a quote from Rachel Carson, Godmother of the Environmental Movement, who once said:

"This notion that 'science' is something that belongs in a separate compartment of its own, apart from everyday life, is one that I should like to challenge. We live in a scientific age; yet we assume that knowledge of science is the prerogative of only a small number of human beings, isolated and priest-like in their laboratories. This is not true. It cannot be true. The materials of science are the materials of life itself. Science is part of the reality of living; it is the what, the how, and the why of everything in our experience. It is impossible to understand man without understanding his environment and the forces that have molded him physically and mentally."

(Address by Rachel Carson upon receiving a National Book Award at a reception, Hotel Commodore, New York on 27 January 1952. As cited in Linda Lear, Rachel Carson: Witness for Nature, 1997, 218-219.)

DEEP Launches New Saltwater Fishing Resource Maps

Written by Emma Heidtman and Deb Pacileo, DEEP Marine Fisheries Program

Recreational anglers of the Connecticut shoreline have a new resource to turn to when searching for a new spot to fish. Interactive resource maps using an online Geographic Information System (GIS) are now available on the DEEP website. These maps show useful information for recreational anglers, including locations of bait and tackle shops, places to get a fishing license, lists of captains or marinas where you can charter a boat, as well as boat launches with access to Long Island Sound. By selecting the icons on the map, users can find more information

for specific places. For anglers searching for that perfect place to fish while on a fishing trip, the story map version of this resource is easily accessible on a mobile device's web browser. The map also includes a link to the Connecticut Angler's Guide, where information on fishing license requirements and catch limits are available, as well as a link to a summary of marine sport fishing regulations.

Perhaps the feature of most interest to recreational anglers is the "popular places to fish" section of the map (pink areas on the maps). These areas of the Sound are known as good fishing spots for Connecticut anglers. Selecting a pink-shaded area will show what types of fish have historically been found there. It is important to emphasize that the goal was to provide Connecticut anglers with information on good places to go fishing. Consequently, very few areas in New York waters are identified, except those New York areas known to be popular with Connecticut anglers. To view the maps on a mobile device or web browser, go to *www. ct.gov/deep/saltwaterfishingresourcemap.*

Development of the information shown on these maps is an ongoing effort and we need your help to improve them! The Marine Fisheries Program is looking to update the map's popular places to fish section. This section was compiled primarily from folks who fished mostly in the eastern portion of Long Island Sound. DEEP is interested in obtaining input from anglers throughout the Connecticut shoreline, particularly those with local knowledge of the western end of the Sound. If you are an avid angler and would like to contribute your fishing knowledge to the maps, please call 860-434-6043 or send an email to *deep.marine.fisheries@ct.gov* to find out how you can help. Be sure to include "feedback on fishing app" in the subject line of your email.



Interactive resource maps using an online Geographic Information System (GIS) are now available on the DEEP website. These maps show useful information for recreational anglers.

Helping Wildlife in Connecticut

Written by Laura Rogers-Castro, DEEP Wildlife Division



wenty-four people recently completed the latest Master Wildlife Conservationist Program (MWCP) series offered by the DEEP Wildlife Division. The MWCP is an adult education program designed to train participants in the fields of wildlife management, natural history and interpretation, and develop a volunteer corps capable of providing education, outreach, and service for state agencies, environmental organizations, libraries, schools, and the general public. Participants receive 40 hours of intensive classroom and field training and have one year, following completion of the training, to provide 40 hours of volunteer service. To maintain certification in the program, a minimum 20 hours of volunteer service each year must be completed.

Past MWCs have assisted the Wildlife Division with efforts to band Canada geese, protect piping plovers, provide education about bald eagles at the Shepaug Dam Bald Eagle Observation Area in Southbury, erect and monitor bird nest boxes, staff wildlife displays at fairs and festivals, and many other wildlife-related activities. The Wildlife Division greatly appreciates the volunteer service conducted by both current and past MWCs.



From front to back and left to right: First row, MWCP Coordinator Laura Rogers-Castro, Jen Filer, Linda Infante, Anna Martino, Ann Brieck, CT DEEP Environmental Analyst Susan Robinson, Mickey Nordell, Heidi Palker. Second row: Katerina Hutchins, Andrew Bonetti, Jillian Zampaglione, Richard Benfield, Jessica Maack, Gina Groseclose, Pierce Schmidt, Kathy Coe, Miranda Crabb, Deb Cody, Jo Ann Holmes, Maureen Heidtmann. Back row: Tom Finan, National Archery in the Schools Program Coordinator Keith Hoffman, Paul Benjunas, Richard Taylor, John Correia.

Federal Aid Focus: Glastonbury Shooting Range

The Glastonbury Shooting Range, which is located in Meshomasic State Forest in Glastonbury, has been in operation since 1980 and is available to the public for target shooting, patterning shotguns, and sighting in rifles. The range is typically open on WEEKENDS ONLY from early April through the end of November. There are no fees to use the range; however, ammunition, firearms, eye and ear protection, and targets are not provided. Those interested in using the range should make reservations through DEEP's Online Sportsmen Licensing System (www.ct.gov/deep/SportsmenLicensing) or by calling 860-424-3737 one week in advance. Walk-in shooters are welcome and accommodated for unreserved positions as space becomes available. Every year, special access provisions are made for spring turkey hunters and fall firearms deer hunters, with the

appropriate licenses, permits, or stamps, to help them prepare for the upcoming season. More specific details about range use, rules, and procedures can be found on the DEEP website at www.ct.gov/deep/ hunting (select "Shooting Ranges").

Federal funding for site improvements, range equipment, and seasonal staffing at the Glastonbury Range is provided through the Federal Aid in Wildlife Restoration Program, commonly referred to as the Pittman-Robertson Act. Connecticut receives a special allocation of federal funding that can be used for the construction, operation, maintenance, and enhancement of public target and shooting ranges. Federal funds available to the states through this program are derived from an excise tax on firearms, ammunition, and archery equipment.

Federal funds were used for renovations at the range in 2005. Improve-

ments included the construction of a 10-position covered shooting platform; construction of a building for spectators and registration behind the firing line; access and parking development; increased berm/impact zones; and new signage. Construction and site work were completed using quality craft workers and maintainers from the DEEP Support Services Division. Portable target stands also were purchased to provide shooters the flexibility of placing targets at 25, 50, 75, and 100-yard distances. A specially designed shooting bench was constructed to accommodate disabled individuals in a wheelchair.

Seasonal range safety officers are hired to supervise range operations during open weekends. The employees all have credentials as Certified Range Safety Officers.

Find CT Grown Forest Products with New Interactive Map

Written by Lisa Massicotte, DEEP Wildlife Division

From pencils to posts and from firewood to fine furniture, Connecticut is abundant in local forest products, which are encouraged and promoted through the Connecticut Grown Program. With just under 60% of forested land covering the state, combined with an expanding residential population, sustainable and responsible long-term forest management is now more important than ever for the future of Connecticut's forests. The DEEP Forestry Division aims to engage municipalities and citizens alike in the work of urban forestry, and encourage the local

forest industry through the Connecticut Grown Forest Products Program.

By purchasing Connecticut Grown Forest Products, you can make a statement in support of the state's forests, including those owned by private woodland owners. The economic value of products from these local woodlands encourages landowners and communities to keep their "woods" and not convert the land to other uses.

In the midst of early European settlement, most of Connecticut's forests were cut and/or burned until the early 1900s. From that time on, the forest began to regrow, but it became much less biodiverse than the forest that had greeted the Europeans. As part of DEEP's mission to promote healthy and high-quality sustainable forests, trees are harvested or cut to restore the forest landscape and diversity of forest life, as well as to provide society with forest products. Forest stands being thinned or managed on an uneven-aged system may only have some harvesting done at approximately 25-year intervals.

The Forestry Division has created a new interactive map to find where the types of Connecticut forest products you are searching for are located – the Connecticut Grown Forest Products map. This map features the 23 Connecticut Grown certified vendors. Together, the vendors sell over 18 different Connecticut forest products. A few vendors even sell specialty products, such as masts of tall ships and wooden boat timber.

DEEP is always looking for new Connecticut forest products producers to be registered with the Connecticut Grown Program. Those interested are encouraged to fill out an application at *www. ct.gov/deep/CTGrownForestProducers*.

Forest products sold as Connecticut Grown must be produced in the state and come from trees grown and harvested locally:

- Using sustainable forestry practices. (Conversion of forest land to non-conservation or non-agricultural uses is unacceptable.)
- Using best management practices as described in DEEP's 2007 guide for "Best Management Practices for Water Quality While Harvesting Forest Products" (available on the DEEP website).
- May include trees from urban forests provided there is evidence of a program of urban tree sustainability.
- Must be in compliance with Section 22-38 of the Connecticut

General Statutes. Records must be maintained to document that the product came from Connecticut and was produced in a sustainable manner. Products sold under the Connecticut Grown label must have an origin traceable to Connecticut.

Following these requirements results in sound forest management, which creates healthy forests in Connecticut. Periodic harvesting of trees encourages forest growth by weeding out diseased or deformed trees, making room for the healthiest, most vigorous trees to grow. A healthy, vigorous forest is better able to





Country Carpenters, located in Hebron, Connecticut, specializes in post and beam country barns, carriage houses, and garden sheds made with Connecticut Grown forest products.

ward off diseases, defoliating insects, and the effects of natural disasters such as fires and hurricanes. A well-managed forest, encouraged by the Connecticut Grown Program, provides a variety of habitat conditions and contributes to biological diversity while being resilient enough to handle the recreational demands of Connecticut's increasing population.

Connecticut Grown Forest Products

Connecticut is a state rich in forest resources. The wide variety of products that come from our forests include:

- Lumber
- Timbers and beams
- Flooring
- Fencing
- Landscape mulch
- Maple syrup

Wood from Connecticut's trees is also used in the manufacture of items as wide ranging as fine furniture, wooden bowls, and

specialty items, such as the masts of tall ships and wooden boat timber.



The Best School Field Trip Ever: Learning to Fish

Article and photography by Justin Wiggins and Tom Bourret, DEEP Fisheries Division

This article was made possible through years of support from the Hamden School District and Dave Casko, a now retired East Lyme Middle School teacher, who bring students to Forster Pond as a culminating activity for learning about fish and aquatic ecology. We are pleased to be a part of the experience of many students who catch their "first fish." Thank you to the teachers and administrators who make this possible for their students.

"My anticipation rises as the bus takes a left into a long, wooded driveway ... 'Oh, boy! You kids are in for a treat today,' says the bus driver. As the bus winds down what seems like a path more than a road, we get our first glimpse of Forster Pond. 'So this is what last year's sixth graders were talking about, that beautiful place in the woods they visited,' I think to myself. Our sixth grade class has been preparing for this trip all spring by learning about different types of fish and their morphology, the habitat they live in, and water quality during our science classes."



One of the many school groups that annually visit Forster Pond put their newly-learned fishing skills to the test.



Each school group learns how to assemble a fishing rod, tie an improved clinch knot, cast, and about important characteristics of Connecticut's recreational fish.

Beginning the first week of May and going until the end of the school year, the DEEP Fisheries Division's Connecticut Aquatic Resources Education (CARE) Program hosts field trips at its fisheries education center. Buses filled with students arrive almost daily at the CARE Center; a cabin-like red building filled with fish taxidermy and pictures of smiling young anglers, creating a "fishing camp" ambiance. Students spend the morning learning the basics of fishing – how to set up a rod and reel, tie the improved clinch knot, find bait, and put a worm on a hook, as well as a review of Connecticut's fish. The rest of the day is spent outside where students set up their fishing rod (tying on a hook, and attaching a split shot and a bobber), become proficient at casting, and then fish in small groups.

"Our teacher said the more we know about the fish in this pond and are able to 'think like a fish,' the better chance we will be successful and have bragging rights for the year. When I saw Jamal and Michelle's pictures of the fish they had caught here last year, I could understand why they were walking around school acting so proud. I'm sure they must have told their stories on how they caught the "Big One" a hundred times. I heard those same stories at least a dozen times! Well, now that I'm here, I'm going to create my own fishing memories."

The warm water fish community of Forster Pond is comprised of bluegill and pumpkinseed sunfish, largemouth bass, chain pickerel, yellow perch, and the occasional black crappie, brown bullhead, and American eel. Forster Pond is closed to the public and only open for scheduled education activities. The fishing is often quite good, and most of these aspiring young anglers are rewarded with catching a

fish, or five! Many of these catches are the coveted "FIRST FISH" of these students' lives. Keeping a high-catch rate for new anglers is critical at Forster Pond as research indicates that a person is more likely to become a lifelong angler if they are successful during their first experience.

"After we practiced casting and set up our rod, it was finally time to fish. I didn't like putting the worm on the hook, but I really wanted to catch a fish. My first cast was pretty good. My bobber landed right near some lily pads. I hoped a bluegill was hiding underneath. Within a couple of minutes my bobber went



We, the CARE staff, are humbled to be a part of so many "First Fish" through school visits to Forster Pond.



under and I started to reel. Wow, this fish was really strong and, after a tug of war battle, I landed my fish. It was not a bluegill but a pumpkinseed! I learned how to identify the different fish in our class. The pumpkinseed has a red dot on its gill cover (operculum, I mean). My class continued to fish for an hour and a half and I landed two bluegills and a yellow perch. I will never forget my first fishing trip today and I can't wait to show my family my newly learned fishing skills."

This is the vision we hope all students take from the CARE Center after fishing Forster Pond each spring. This unique field trip allows students to learn about fish and their habitat and also apply that knowledge during a real fishing experience. Through fishing, students are connecting to the outdoor world, at the same time becoming users of one of Connecticut's finest natural resources. Hopefully, these budding young anglers carry these experiences with them throughout their lives, creating a deeper appreciation of and becoming stewards for our aquatic environment.

As a reader of *Connecticut Wildlife*, we know that you, too, have a vested interest in our natural resources and outdoor recreation opportunities. The simple act of putting a fishing rod in a child's hand can and does have long-term effects on their desire to be outside and appreciate our natural environment. You can help create the next generation of environmental stewards by taking a kid fishing! The CARE Program has been teaching kids and families about water, fish, and fishing for 30 years and has reached over 200,000 students in that time! CARE relies on vol-





unteers to teach Family Fishing Courses in their community. If you would like to get involved as a volunteer, contact us at 860-

663-1656. Our webpage at *www.ct.gov/deep/care* has a variety of resources (schedule of Family Fishing Courses, "Let's Go Fishing!" manual, and videos) for beginner anglers and about how to volunteer.



The Second CT Breeding Bird Atlas ... and More!

Written by Min Huang, DEEP Wildlife Division, photography by Paul Fusco, DEEP Wildlife Division

The first Connecticut Breeding Bird Atlas, which was published in 1986, summarized the distribution of 189 confirmed species of breeding birds in our state. In the following 30 years, many changes have occurred regionally, globally, and climatically. Recent survey work by the Wildlife Division and analysis of other existing breeding bird survey data have indicated that historic breeding distributions have contracted for some species, such as forest interior birds, and distributions and abundance of many other species have changed, some positively and others negatively. As climate change

to conduct an extensive Connecticut Bird Atlas. This multi-faceted project focuses on breeding and wintering birds and, should enough financial resources become available, migrating birds. The project will use the best available science to:

- Provide contemporary data on bird distributions throughout the year to better inform land use decisions by conservation organizations, land trusts, nature centers, and federal, state, and municipal governments;
- Obtain a better understanding of the habitat needs of species of greatest conservation need;



Breeding bird surveys will help monitor the statewide distribution and abundance of many of Connecticut's breeding birds, including the Canada warbler.

has progressed, many other distributional changes have undoubtedly occurred since the early 1980s when data for the initial Breeding Bird Atlas were collected, as illustrated by recent atlas resurvey projects in New York and Massachusetts.

If biologists are to efficiently and effectively use dwindling financial resources to conserve this beautiful resource, they must have a contemporary understanding of just where the birds are and how many there may be. This not only involves breeding birds, but also birds that spend the winter in Connecticut and those that rely on the state's habitats as migration stopover sites during spring and fall.

The Wildlife Division and University of Connecticut (UCONN) are leading an effort

- Develop metrics that can be used to monitor health of the environment;
- Galvanize the conservation community to come together and work towards a common and shared goal;
- Develop the basis for predicting effects of future development and climate change on individual species; and
- Result in more efficient and informed conservation planning.

This project is going to take five to six years to complete and, similar to other Atlas projects, will rely to a large extent on volunteer birders to collect data. Seasonal technicians will assist in collecting more in-depth survey data. Collection of field data will begin in spring 2018 and continue in all seasons through 2021.

Breeding Birds

Biologists will be investigating the distribution of Connecticut's breeding bird assemblage by duplicating initial Breeding Bird Atlas techniques used for the first Atlas. This involves determining presence or absence of birds during the breeding season within set blocks (596) across the state. The process for this aspect of the project is to assign specific blocks to surveyors. The surveyors go into their assigned block(s) for a set amount of time (usually 15 to 20 hours) throughout the breeding season. This could entail two 10-hour visits, four five-hour visits, or whatever timeframe is convenient for the surveyor; however, it must be within the specified time window. All bird species observed are tallied, as well as specific behavioral cues that help determine whether the species is confirmed breeding, suspected breeding, or just passing through that particular block. This is the traditional breeding bird atlas project.

Specialized surveys that build upon previously conducted work will be employed to assess more difficult to detect breeding birds. Standardized marshbird callback surveys will be used in select marshes (those with the highest probability of detecting target species), and nightbird surveys will be conducted in those areas of the state that are not already being surveyed.

The project is going to go further, however. With efficient and effective conservation planning, it is not good enough to just know that a species is breeding or not breeding. There is a need to know how many are breeding, what habitat features make one area better than another, and how this might change over time. Thus, point count surveys will also be conducted across the state. These surveys, following very strict protocols, will help researchers develop abundance estimates for many species. In many instances, and for most nonharvested wildlife species, the surveys will constitute the first statewide population estimates for these species. Abundance estimates are critical to the understanding of how birds are keying in on certain habitat features. Knowledge of abundance and habitat association enables biologists to better prioritize where

conservation efforts need to be focused. This kind of indepth knowledge also allows the development of indices that can help predict future breeding bird distributions as the landscape changes.

Wintering Birds

Most of our birds are migratory. Therefore, habitat should be conserved for the entirety of a migratory bird's life cycle of breeding, migration, and wintering. This project will also focus attention on wintering birds and their habitat needs and associations. The approach towards wintering bird assemblages and distribution will be similar to the block survey approach used for the breeding bird component. Some modifications may be made to the timing aspect so that temporal (time) differences in arrival of wintering birds can be assessed, as



Wintering bird occurrence will be updated and habitat needs will be documented for species such as the short-eared owl.

some arrive much earlier than others. This aspect of the project will be more challenging, mainly due to having to conduct surveys during winter weather.

Migrating Birds

The last, and likely most difficult, component of the Atlas Project focuses on migration. This also happens to be the component that is not yet fully funded. The approach that makes the most sense for assessing the importance of our habitats for migrating birds and what birds those may be is to use existing migratory stopover data and take advantage of contemporary radar data. These, in conjunction with on the ground surveys, should allow the identification of critical habitat for migrating species. These are the types of data that will require rigorous analysis, and thus more funding to hire a post-doctoral fellow who can devote two years of time to complete this task.

Galvanizing the Conservation Community

All of us who are concerned about birds, their habitats, and the environment also appreciate the natural world and want to leave it in good hands for future generations. At times, we may find ourselves at odds with each other over various issues, and sometimes what might be a high priority for one entity is not necessarily the priority for another, although the end desire (e.g. bird conservation) may be the same. The Connecticut Bird Atlas project should serve as a vehicle to bring everyone in the conservation community together to achieve a critical goal. Only by coming together can obstacles be overcome. Whether they be shrinking budgets, inadequate legislation, differing priorities, or something else, a united community can do what is best for the birds and the environment.

How Can the Conservation Community Help?

There are a number of ways that the conservation community can assist with and take ownership of this project. First and foremost, the project will require an extensive and committed volunteer birding effort to take ownership and responsibility for surveying one or more of the 596 blocks across the state. This is no small task; however, it serves as the solid foundation for everything that this project strives to accomplish. It is anticipated that some birders may also be willing to take on the greater responsibility of assisting with point counts. The current President of the New Haven Birding Club and Conservation Chair for the Connecticut Ornithological Association, Craig Repasz, will

be taking on the huge task of coordinating the volunteer survey effort. Prospective volunteers can become a part of this great project by sending an email to *ctbirdatlasvol@gmail.com*. Several training sessions will be held for volunteers. More information about the project will be coming over the next year as we gear up for the first year of data collection in 2018.

A second way the conservation community can take ownership of this project is to assist in raising the necessary funds (approximately \$120,000) to fund the post-doctoral student that will work on the migration piece of the project. This is key. The DEEP Wildlife Division and UCONN have already committed about \$860,000 to fund this Bird Atlas. None of the funding from the Wildlife Division comes from the State General Fund and the Division has already committed all that it can towards the project.

Another critical way the conservation community can assist with this project is to truly embrace it. It is not just DEEP's and UCONN's project but a collective project for all who care deeply about birds in Connecticut. DEEP and UCONN are merely initiating and guiding the effort. For the Atlas to succeed and guide bird conservation into the future in a truly objective and scientific manner, it must be a cooperative effort with many supporters.

Spirited Little Bugger – The Blue-gray Gnatcatcher

Article and photography by Paul Fusco, DEEP Wildlife Division

s the spring shadbush and spicebush come to bloom in Connecticut forests, a new avian arrival makes its presence known. The little blue-gray gnatcatcher can be heard and seen zipping through the budding tree branches as it snatches small flying insects and claims breeding territory. This tiny bird is among the first neotropical migrants to arrive in Connecticut forests for the breeding season. It travels from its wintering grounds, as far away as Mexico or Central America, to breed and raise its young



The male blue-gray gnatcatcher has a distinct black forehead and stripe that extends over the eye.

in Connecticut's deciduous forests.

At four-and-a-half inches in length, the blue-gray gnatcatcher is one of our smallest birds. It has a long tail and long, thin bill to go with its slender body. It often holds its tail in a raised posture, similar to a wren. The plumage is blue-gray on top and white below, with a thin white eye ring and blackish tail with white outer feathers. Males in spring show a black forehead blending to a black stripe that reaches over the eyes.

Distribution and Habitat

During the breeding season, the blue-gray gnatcatcher is found in Yucatan Mexico, north to California and east to New England and southern Canada. In winter, it is found in the extreme southern United States, south to Florida, and south to Mexico, Honduras, and Cuba.

In the eastern United States, the blue-gray gnatcatcher is found in moist

deciduous or mixed forests and in the west, it uses scrublands, often near water. The birds can regularly be found at the edge of a habitat transition, and in Connecticut they are strongly associated with the nearby presence of wetland habitat. They have an uneven distribution in Connecticut, with low numbers in more heavily developed areas, including the upper Connecticut River and lower Housatonic River sections of the state. Overall,in Connecticut, the blue-gray gnatcatcher is considered an uncommon to common migrant and breeder.

Behavior

The voice of the blue-gray gnatcatcher is a series of high-pitched, wheezy notes that have a twangy quality. The sound is almost insect-like and, once recognized, it is quite unique.

More often that not, blue-gray gnatcatchers are seen high among the canopy branches as they actively forage. They glean and dart after insects and spiders. Flycatching is a frequent forage behavior as the birds constantly snap after small flying insects. Among their food items are small flies, moths, ants, beetles, and spiders. They will also eat insect eggs and larvae.

Gnatcatcher nests are built on top of a horizontal tree limb, often against a smaller branch for support or added cover. The open cup nest is built with plant rootlets and fibers, bark strips, hair, feathers, and fine grasses. The nest is held together with spider silk and the sides are decorated with lichen, making it blend perfectly into the surrounding bark and tree knots.

Three to five spotted, pale blue eggs are laid in the nest and incubated by both adults for approximately 13 days. Young fledge after 12 to 15 days. A pair may raise two broods in a season. Nests are

Neotropical migratory birds are those that breed in the United States and Canada during summer and spend the winter in Mexico, Central America, South America, or the Caribbean islands.



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The open cup nest is built on a horizontal branch using fine plant rootlets, small bark strips, and lichen that is held together with spider and caterpillar silk. The lichen is placed on the side walls to make the nest blend into the surrounding tree branches.

vulnerable to parasitization by brownheaded cowbirds.

Blue-gray gnatcatchers will aggressively defend their territories against intruders, including other gnatcatchers, larger birds, and potential nest predators. For a little bird, they have a lot of spunk.

Conservation

According to North American breeding bird surveys, the blue-gray gnatcatcher has had a stable or slightly increasing population trend since the late 1960s. The overall breeding range is expansive and population numbers are healthy. In our region, habitat loss and degradation are always a concern for any birds that depend on healthy forest habitat. For now, this spirited little bird is a fairly common Connecticut denizen in most parts of the state.



The Big Threats – Habitat Loss, Degradation, and Fragmentation

Many species of neotropical migrant birds are dependent on large, forested habitats to reproduce successfully. Loss and degradation of forest habitats will adversely affect populations of these birds, many of which have been declining for decades. Habitat loss and forest fragmentation on breeding and wintering grounds are the primary causes for the decline of warblers, tanagers, thrushes, and other neotropical migrants. While the blue-gray gnatcatcher has healthy populations, it still faces the same threats that other neotropical migrant songbirds do.

When large forest blocks are chopped into smaller pieces by roads and other forms of development, populations of forest interior birds experience tremendous stress. Forest fragmentation opens a path into the interior for nest predators, cowbirds, and human disturbance. On a population level, the birds cannot withstand being squeezed into smaller and less desirable space without being affected negatively.

Native Tent Caterpillar or Non-native Gypsy Moth Caterpillar?

ypsy moth caterpillars are usually observed from May through July in Con-Jnecticut. Tent caterpillars are out around the same time. Both caterpillars are covered in coarse hairs and look similar in appearance, but the two species are quite different. Eastern tent caterpillars are a moth species native to the eastern United States and a normal part of our forest ecosystems. Gypsy moths, however, are invasive insects from Europe and Asia that feed on the leaves of many species of trees and shrubs. They are known for causing mass defoliations (losses of leaves) during outbreaks in our forests.

With an eye for the right details, gypsy moth and tent caterpillars can be easily identifiable. The following helpful hints aid in identifying the harmful non-native species from the native species:

- Tent caterpillars are dark, showing a white line down the back with light blue • and black spots on the sides. They have black heads and are fully grown at about 2 to 2.5 inches long.
- Gypsy moth caterpillars have five pairs of raised blue spots followed by six pairs of raised red spots along their backs. They will reach about 2 inches in length.
- Tent caterpillars congregate in familiar silken tents in forks of branches of sapling trees. They feed on opening buds and new foliage. The tent serves as a place to rest and be protected from predators and extreme temperatures. Larvae leave the tent to feed. Fully grown larvae leave the host tree to find a protected place to pupate.
- Gypsy moth caterpillars do not form tents, though many may live on the • same tree, eating the leaves until the tree is stripped. Caterpillars hatch from the buff-colored egg masses often seen on the bark of trees. Gypsy moth caterpillars will feed day and night and their frass (droppings) may be heard falling to the ground, often sounding like rain.

Interesting Facts:

- Female gypsy moths are white with brown markings and do not fly. Males • are brown and can fly.
- Gypsy moth caterpillars have been documented feeding on up to 500 different species of trees and shrubs.
- Black and yellow-billed cuckoos will seek out tent caterpillars and gypsy moths for increased feeding opportunities.

Gypsy Moth Update

The maimaiga fungus is effective in controlling gypsy moth caterpillars because the annual life cycles of the two organisms interconnect well. The fungus persists in the soil and leaf litter as a resting spore. In spring, humidity in the soil and leaf litter activates the fungus when there is adequate rain. The Connecticut Agricultural Experiment Station confirmed the emergence of the fungus due to damp weather in May 2017.

By early June, gypsy moth caterpillars had entered their third instar (1 to 1.5 inches) and were spending a significant amount of time on the ground to seek shelter from the daytime heat. When these larger caterpillars descended to the ground, activated spores of the fungus infested the caterpillars. Caterpillar deaths were reported in south central and eastern Connecticut, although not all areas of active gypsy moth infestations saw equal impacts. Unfortunately, the fungus became effective after considerable tree defoliation had already occurred.

After being infested with the maimaiga fungus, caterpillars that climb back up a tree before succumbing to the fungus decompose and release a second, wind-borne type of spore that spreads the disease even further among the surrounding caterpillars. Once it gets going, the fungus moves quickly through the population. At the end of the gypsy moth season, the fungus produces a resting spore which accumulates in the soil and leaf litter to await the next year, remaining viable for at least 10 years.

This cycle of infection by the fungus has kept the gypsy moth population in Connecticut at a low level for the past 25 years. Those concerned about the health of their trees from repeated defoliation should call a licensed arborist or certified forester for advice. Typically, one or two consecutive years of defoliation will not kill a tree. Three consecutive impact years, coupled with drought conditions, could pose a problem for some trees.



Gypsy moth caterpillars have five pairs of raised blue spots followed by six pairs of raised red spots along their backs.



Tent caterpillars are dark, showing a white line down the back with light blue and black spots on the sides.



Tent caterpillars congregate in familiar silken tents in forks of branches of sapling trees.



This black-billed cuckoo is feeding on a tent caterpillar, but the birds also will take advantage of gypsy moth outbreaks.

Fall Wild Turkey Seasons Offer New Opportunities

Written by Michael Gregonis, DEEP Wildlife Division

t was the last day of *I* the 2016 fall firearms wild turkey season and I arrived at my private land hunting location later than I would have liked. A very vocal hen was yelping loudly, alerting me to her presence, and the hunt was on. I selected a spot that I had hunted many times during past seasons to begin calling. My first series of yelps received an immediate response from the hen in the center of the cornfield. A short time later. I could see the hen walking over the ridge, coming to investigate the interloper in her territory. The bird approached to within 20 yards, providing an opportunity for harvest;

she weighed in at nine pounds. Although the fall wild turkey hunting seasons are not as popular as the spring season, many hunters find that these seasons offer a unique challenge and excellent table fare.

2016 Fall Firearms Turkey Season

The 2016 fall firearms season ran from October 1 to October 31. Bag limits for this season allow for the harvest of two birds of either-sex on private land and one bird of either-sex on state land. A total of 60 wild turkeys were harvested during the 26-day hunting season. This

Connecticut Hunting Zone Map





harvest rate was an 18% increase over the 2015 harvest of 51 birds. Private land hunters harvested nine times more turkeys than state land hunters (54 birds versus 6 birds). Wild turkeys were harvested from 28 towns with Woodstock (8) and Stafford (7) reporting the highest harvest. The two hunting zones that recorded the highest harvest were zones 5 with 20 birds and 4A at 11 birds. The harvested turkeys' age and sex included 12 adult males, 18 juvenile males, 19 adult females, and 11 juvenile females. Fifteen hunters harvested two birds during the season. The fall firearms turkey season

continues to be an underused season because hunters having many choices during this time of year between going afield to hunt deer, small game, waterfowl, or wild turkeys.

2016 Fall Archery Turkey Season

Connecticut's 33rd fall archery turkey season was open statewide and ran concurrently with the 2016 archery deer season, which varied by zone and state land. State regulations allow for the harvest of two

birds of either-sex, which may be taken on state and/or private land. Archers harvested 91 turkeys during the 2016 fall archery turkey season. The season harvest total showed a 42% increase over the 2015 harvest of 64 birds. The increase in harvest may be attributed to higher productivity during the previous spring and increased use of the crossbow for archery turkey hunting. The crossbow has a major advantage over conventional bows because the archer does not have to draw the string back prior to the shot; this reduces the chance that the turkey will be alerted to the hunter's presence. Lyme (5), Stonington (5), and Newtown (4) recorded the highest harvest by town, and zones 12 (21 birds) and 11 (20 birds) recorded the highest zonal harvest. Sixty-six of 91 birds harvested by archers were males (40 adult, 26 juveniles) and 25 were females (16 adults, 9 juveniles).

Despite the challenges associated with fall archery turkey hunting, the season has been characterized by great hunter interest. Most participants are deer hunters hoping to encounter a turkey while afield. The presence of turkeys provides additional excitement to their hunting experience.



Can We Use Technology to Count Birds?

Written by Min Huang, DEEP Wildlife Division

he vast majority of waterfowl surveys I in North America are conducted from a plane. However, planes are expensive, particularly when operating in very remote areas where logistics of fueling, landing areas, and other issues are difwaterfowl. In March 2017, we began flying toward that future by testing the use of drones over decoys positioned in Great Harbor Wildlife Management Area in Guilford, Connecticut.

For the test flights, we placed a



known number of decoys of various waterfowl species in the marsh. The marsh was divided into a grid and the placement and number of decoys were determined through a statistical sampling method called Generalized Random Tesselation Stratified sampling. Decoys were placed

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photographs and compared them with the known number to determine the accuracy of the method and photographs.

The missions included flying quadrotor helicopter and fixed-wing airplane style drones at elevations ranging from 250 feet up to about 400 feet. Early results have shown promise; however, we realized that replacing human eyes with a camera lens will require a more powerful camera than originally planned. Weather conditions are also a consideration, at least with the types of drones being experimented with now. The fixed wing drone cannot operate well in winds above 18 knots. Larger, more expensive drones



ficult and challenging. Not to mention that flying is the most dangerous activity a biologist can undertake. More biologists lose their lives to aircraft incidents than any other activity.

Using drones may represent the future of observing and counting waterfowl, and could supplement traditional aerial surveys conducted since the 1950s. If drones were used to annually conduct waterfowl surveys, it could result in great financial savings and also remove one of



The Wildlife Division secured funding from several sources and teamed up with Ducks Unlimited, the Black Duck Joint Venture, and the Conservation Management Institute at Virginia Tech to assess the use of drones for counting waterfowl. In March 2017, the use of drones was tested over decoys positioned in Great Harbor Wildlife Management Area in Guilford, Connecticut.

the greatest hazards to the well-being of biologists. Before any of this would be possible, however, much needs to be assessed.

The DEEP Wildlife Division secured funding from several sources and teamed up with Ducks Unlimited, the Black Duck Joint Venture, and the Conservation Management Institute at Virginia Tech to assess the use of drones for counting

into each assigned area. We then conducted sampling flights during high tide, low tide, and mid-tide situations. The drone flew scheduled, pre-programmed routes of transects that covered the entire marsh surface. Depending on the altitude of each survey flight, photographs were taken at different intervals so that the entire transect was photographed. Separate researchers counted the decoys in the

can certainly handle higher winds.

The group plans to return to the marshes this fall to conduct more tests, which include observing how real ducks respond to different types of drones overhead. For many potential drone applications, how their presence affects bird behavior is a key factor to understand.



Improving Deer Population Estimation Techniques

Article and Photography by Bill Embacher, Wildlife Management Institute/DEEP Wildlife Division

n a cooperative effort between the DEEP Wildlife Division, University of Connecticut, and the Wildlife Management Institute, researchers are trying to build a better model for evaluating deer populations. Since 1974, aerial surveys have been used in Connecticut to monitor trends in the deer population. The current technique of observing deer from low-flying aircraft while snow cover exists does not allow for correction of observations under different habitat types. For example, deer are easier to observe in an open hardwood stand than they are in a conifer stand. Currently, a correction factor of 2.0 is used across the landscape, based on previous studies published in scientific peer reviewed journals. This means we assume only half of the deer flown over were observed. while others are obstructed by vegetation. For example, if 25 deer are seen while flying, 50 are likely present, or the final tally of deer seen is doubled to more accurately estimate the population.

Through use of deer fitted with GPS collars, it is possible to obtain real-time data on an animal's exact location. Having this data will allow researchers to evaluate several techniques for estimating white-tailed deer abundance. Deer Management Zone 5 (northeast Connecticut) was chosen as the study area for its broad range of habitat types which represent the state's overall landscape.

Deer were captured using dart guns at bait sites. Once captured, the deer were aged and fitted with a GPS collar and cattle-style ear tags. The goal was to distribute 35 collars across various habitat types representing all areas deer may be observed during the winter months when population surveys are conducted. GPS locations of deer will be downloaded just prior to flights. Transects will then be delineated over the last known location of each deer, and an observer without knowledge of that location will search for deer along the transect. Number of deer seen in the group, habitat type, whether or not the animal is collared, and the animal's activity will be recorded. If a marked deer is not observed during the survey, the aircraft will locate that



Adult female white-tailed deer fitted with a GPS collar in northeast Connecticut. GPS collars make it possible to obtain real-time data on an animal's exact location. Having this data will allow researchers to evaluate white-tailed deer population surveying techniques.

marked deer using radio telemetry to record habitat and behavioral variables that can be used to develop a more accurate model to estimate deer abundance. Using the number of marked animals seen as opposed to the number not seen in various habitat types will allow a better model to be established for use throughout the state.

As many deer hunters can attest, patterning deer has been a difficult task during the previous two hunting seasons. Even with use of bait, the abundance of acorns on the landscape keeps deer from using a bait site with any regularity. Acorns (especially white oak) are a higher quality food source than corn, and bait becomes more of a snack than a necessity. In a year with normal oak production, acorns would be consumed by the time capture efforts begin in January; therefore, leaving deer more likely to use bait sites and making them more vulnerable to capture efforts.

A total of 15 female deer were captured and collared during the winter of 2016-2017. Only adult does were captured because males tend to move long distances and their necks swell during the rut, making it difficult for the males to wear. Of the 15 collared deer, one was illegally killed, one died of unknown causes, and one slipped the collar on its own, leaving 12 collared animals. Plans are to continue capture efforts late this summer (August 2017) through early winter, with hopes of fewer acorns and better success rates. The Wildlife Division expects to conduct aerial deer surveys later in the upcoming winter.

Although hunters can legally harvest GPS-collared deer during the fall hunting season, the Wildlife Division encourages hunters to pass on shooting collared deer in Putnam and Eastford to help maintain a large enough sample size for the study this winter in the northeastern portion of the state. Collared deer remain in the northwest corner of the state, as well. However, hunters should not refrain from harvesting those deer because that study has concluded. If a collared deer is harvested, please contact the DEEP at the number provided on the collar.

DEEP Honors Environmental Conservation Police Officers

DEEP Commissioner Robert Klee recognized several Environmental Conservation (EnCon) Police Officers and others for their exemplary work in protecting Connecticut's citizens and the environment at a ceremony held in May at Harkness Memorial State Park in Waterford. Klee joined EnCon Police Colonel Kyle Overturf in presenting several awards.

The **Shikar-Safari Officer of the Year** award recognized and honored EnCon Officer Erin Flockhart, who has shown exemplary performance of her duties in the protection of wildlife, enforcement of game laws, and implementation of conservation programs.

Boating Officer of the Year was given to EnCon Officer Joseph Ruggiero, whose efforts in boating safety and enforcement were deemed to have contributed significantly to the safety of recreational boaters in Connecticut.

The Unit Citation award recognizes exceptional collective effort by members of district, sector, or specialized unit. Western District EnCon Officers Edward Yescott, Erin Flockhart (K-9 Ellie), and Sergeant Tate Begley were given a Unit Citation for apprehending a convicted felon in possession of a firearm. Marine District EnCon Sergeant Todd Chemacki and Officers Robert Monday, Alexandria Blackwell, Jeffrey Bruno, and Patrick Kiely (K-9 Balou) were presented with a Unit Citation for assisting the Madison Police Department with the apprehension of an armed and dangerous suspect. Another Unit Citation was awarded to EnCon Sergeant Todd Chemacki, and Officers Robert Monday, Karen Reilly; Madison Police Officers Christopher Dube, Phillip Rosati, and Harold French; and Madison Fire Department Firefighters Christopher Yenco, Gregory Carroll, and Jeffrey Young for their efforts to subdue and detain a violent person causing a disturbance at Hammonasset Beach State Park.

The **Medal for Outstanding Service** was awarded to EnCon Sergeant Tate Begley and EnCon Police Dispatcher Clarence Kinney. Sergeant Tate Begley demonstrated exceptional skill and ingenuity, allowing him to apprehend a wanted person during a foot pursuit after the suspect jumped off a cliff into the Housatonic River. Dispatcher Clarence Kinney's dedication for the past 30 years, combined with his knowledge and ability to handle any situation, has made him a truly invaluable asset to the Emergency Dispatch Center and the public he serves.

The Medal for Meritorious Service was awarded to EnCon Officers Cristian Hage, Ryan Mihalyak, Britni Scatena-Kurtznacker, and Dean Wojcik, who all rendered service beyond the ordinary course of duty with alertness, perseverance, or timely judgment in the performance



Connecticut State Environmental Conservation Police Officer Erin Flockhart poses with DEEP Commissioner Rob Klee after being presented with the Shikar-Safari Officer of the Year Award.

of a difficult task which resulted in the protection of life, the recovery of stolen property, the prevention or solving of a major crime, or the apprehension of an armed or dangerous person.

The **Lifesaving Award** was presented to EnCon Officers Jesse Nivolo and Glenn Fergason who both made valiant efforts to save a woman in critical condition after a serious two car accident. Lifesaving Awards were also presented to civilians Adam Curtin and Jacob Bernard for their heroic actions in the successful rescue of a female canoeist whose canoe capsized. Civilian Jacob Picard received a Lifesaving Award for rescuing a female kayaker that fell into the water and suffered an injury.

Shikar-Safari Officer of the Year Award: Officer Erin Flockhart

This award, given to EnCon Officer Erin Flockhart, was sponsored by the Shikar-Safari Club International, an organization that promotes wildlife conservation and protection. Officer Flockhart has been serving the Western District since October 2005. Over the past year, Officer Flockhart's case load in the Northwest sector has been extremely diverse, and her professionalism and dedication in each investigation and to the EnCon Police Division is commendable. Officer Flockhart is an extremely well-rounded, competent, and valued member of the District, as well as the Division, and has earned this nomination of Western District Officer of the Year 2016.

Hunting Enforcement: Officer Flockhart conducted a lengthy illegal deer hunting investigation on the Kent Land Trust Property of an individual with several aliases and a lengthy criminal history. The investigation included the use of social media, video recordings, and networking with local police departments. The investigation concluded with Officer Flockhart obtaining an arrest warrant for the New York resident on several charges.

While patrolling in Kent, off River Road and National Park Service Property, in December 2015, Officer Flockhart observed a vehicle parked suspiciously. She and her K-9 partner Ellie tracked from the vehicle into the adjacent wood line and found an individual who was carrying an unloaded shotgun. She and Ellie performed a search of the area for evidence and located two shotgun shells consistent with the gun the person was carrying. The individual, a convicted felon, later admitted to throwing out the shotgun shells from his weapon when he heard officers approaching. He was arrested and charged, and eventually indicted in federal court.

In December 2015, in Cornwall, Flockhart observed an individual kneeling on the ground, attempting to unload a crossbow. He did not have permission to be on the property nor a hunting license. He stated he was "holding the bow for his friend" who was still in the woods. The second person, a convicted felon, exited the woods without a weapon. Flockhart and K-9 Ellie conducted a search. The convicted felon later admitted to hunting with a crossbow. He was arrested and charged with illegal deer hunting.

Officer Flockhart is a member of the EnCon Division's K-9 Unit, as well as a the Connecticut State Police K-9 SAR team. Over the past year, she and her K-9 partner responded to over 15 calls for service, with the majority being for missing persons and suicidal individuals.

State Environmental **Conservation Police**

The EnCon Police are responsible for protecting the public and Connecticut's natural resources through public education and outreach, prevention of crime and accidents, and the enforcement of

laws and regulations. All EnCon Officers are fully certified law enforcement officials with full arrest powers. Officers have nine areas of expertise: fish and game, boating, commercial fishing, wildlife management, parks and forests, recreational vehicles, search and rescue, homeland security, and public outreach.

Purchase of Porter Pond Adds to Pachaug State Forest

Written by Laurie Fortin and Elaine Hinsch, DEEP Wildlife Division

EEP purchased the Porter Pond property in Sterling from United Electrical and Fuel Corporation in 2014. A Federal Aid in Wildlife Restoration (Pittman-Robertson) grant, which is administered by the U.S. Fish and Wildlife Service, provided additional funding for the purchase of this property. This acquisition provides protection and management of a key block of undeveloped land within Pachaug State Forest. The parcel shares its entire eastern, western, and southern boundary with

the existing state forest. Pachaug State Forest is already an extensive property consisting of over 26,000 acres in the towns of Voluntown, Griswold, Sterling, Plainfield, and North Stonington; Porter Pond adds an additional 146.7 acres. The Porter Pond property is primarily upland hardwood forest and includes 17 acres of wetlands. A tributary within the Wood River basin bisects a distance of more than one-half mile near the western border along Porter Pond Road.

Pachaug State Forest is heavily used

for a variety of wildlife-based recreational opportunities. The state forest, including the Porter Pond parcel, is open for hunting of small game, pheasant, waterfowl, spring and fall turkey, and muzzleloader and non-lottery shotgun deer. Porter Pond is open yearround for fishing and the Wood River is stocked seasonally with trout. Porter Pond Road provides public access to this area.

Porter Pond is ideal for wildlife observation and photography. The pond,

plus the entire state forest, provides habitat for state-listed species, such as red and hoary bats; Hessel's hairstreak, Henry's elfin, and bog copper butterflies; sanddragon dragonflies; scarlet bluet damselflies; and featherfoil, an aquatic plant with submerged, feathery leaves and an inflated flower stalk that rises above the water.

Maps of public hunting areas on state forests, wildlife management areas, and other similar properties can be found on the DEEP website at www.ct.gov/deep/ hunting (select "Public Hunting Areas" in the left navigation bar).



The acquisition of Porter Pond adds approximately 146 acres of hardwood forest and wetland habitat while also providing wildlife recreational opportunities in eastern Connecticut.

CT Artist Wins 2017-2018 CT Duck Stamp Art Contest

In a contest filled with great artwork, a panel of judges selected world renowned and Connecticut artist Chet Reneson's depiction of a pair of surf scoters flying at the mouth of the Connecticut River with the Saybrook Jetty and Lighthouse in the background as the winner of DEEP's 2017 Connecticut Migratory Bird Conservation (Duck) Stamp Art Contest. Chet has been painting and carving for over half a century and resides in Lyme. His painting was chosen out of a total of 22 entries submitted by artists from across the country, including a record 12 from Connecticut artists.

Chet's painting will be the image for the 2018 Connecticut Duck Stamp. A pair of American black ducks flying in front of Gillette Castle and the Chester Ferry painted by Broderick Crawford of Georgia placed second. Broderick's artwork has placed third twice and this was the second time his work has been runner-up. Third place went to the Clayton Family of Ohio for a painting of a pair of Canada geese painted by Matt Clayton. The Clayton Family has submitted artwork every year, and Christine placed second in 2015 and third in 2016.

The Winning Artist

Chet Reneson was born and raised in Connecticut. He developed an interest in drawing and painting at a very early age and, by the age of 12, was producing exceptionally detailed drawings and paintings. Over the past 50 years, his work, particularly his watercolor paintings, have attracted and been highly sought after by collectors and sportsmen alike. Chet has won a number of prestigious awards, such as being named Artist of the Year by Ducks Unlimited, Trout Unlimited, and the Atlantic Salmon Federation. The Connecticut Migratory Bird Conservation Stamp Contest is Chet's first win in such a contest. Never shying away from hard work, much of Chet's artistic work has reflected the passions of his life and experiences. He has always enjoyed hunting and fishing and, as the years have passed, he now concentrates on hunting upland game birds and fishing for landlocked salmon and brook trout. He taught his son and grandchildren the crafts of the sporting trade and continues to run his hunting dogs on a daily basis.

The Wildlife Division encourages local artists to submit paintings for this contest. Chet's win marks the first time a



Winning artwork for the 2017-2018 Connecticut Duck Stamp Art Contest painted by Chet Reneson of Lyme, Connecticut.

Connecticut artist has taken first place. It is hoped that this win will inspire more Connecticut artists to showcase their talent and highlight the beautiful natural resources in our state. The top three paintings will be on display through the end of September 2017 at the DEEP Wildlife Division's Sessions Woods Conservation Education Center in Burlington. Sessions Woods is located at 341 Milford Street in Burlington, and is open to the public on Mondays through Fridays from 8:30 AM to 4:00 PM.

Hunters are not the only ones who can purchase Connecticut Migratory Bird Conservation Stamps. Anyone who wishes to support wildlife and wetland conservation and restoration in our state should buy a Duck Stamp. Stamps can be purchased for \$17 each wherever hunting and fishing licenses are sold: participating town clerks, participating retail agents, DEEP License and Revenue (79 Elm Street in Hartford), and through the online Sportsmen's Licensing System (www.ct.gov/deep/sportsmenlicensing). Upon request, stamps can be sent through the mail. To learn more about



Broderick Crawford's painting took second place in the contest.



Matt Clayton's painting was awarded third place.

the Connecticut Duck Stamp and the Art Contest, visit the DEEP website at *www. ct.gov/deep/ctduckstamp*.

Dedicated Advocate: Sandy Breslin

Written by Jenny Dickson, DEEP Wildlife Division

Every conservation success story is filled with hard work and many behind-the-scenes efforts which make those moments possible and help us accomplish great things. Those successes are achievable thanks to the diligent efforts and dedication of people who believe anything is possible if you work at it. They also have a strong sense of stewardship that allows them to effectively communicate why wildlife and our natural resources are important and why the average person should care. Sandy Breslin was one of those people. This time of year, you were as likely to find her deep in conversation with legislators about funding for wildlife or land acquisition or other key environmental issues as you were to spot her at a coastal beach chatting with a family about how special piping plovers and least terns are and why people need to be careful when going to the beach in summer. Connecticut's conservation community lost a valuable and steadfast advocate of our state's wildlife and environment with her passing on May 31, 2017.

Sandy was a staunch supporter of the DEEP Wildlife Division and devoted decades to supporting and maintaining the federal State Wildlife Grant program, which provides critical funding for work on songbirds, reptiles, amphibians, bats and other small mammals, insects, and nongame fish. Her long-time dedication to helping secure this funding nationally earned her a Teaming with Wildlife Member Achievement Award. Sandy spent hours working with Division staff to understand the need for the funding and become aware of both the successes in wildlife conservation resulting from this annual appropriation, as well as what was still to be achieved. This allowed her to effectively communicate with Connecticut's Congressional delegation and helped the Division keep critical conservation programs funded. At the State level, she worked to establish the Conserve Wildlife license plate whose sales and renewals were earmarked for Connecticut's Wildlife Conservation Fund.

Sandy's land conservation efforts helped the Wildlife Division acquire Suffield Wildlife Management Area, and re-



Sandy Breslin, DEEP Wildlife Division staff, and wildlife graduate students from the University of Connecticut (UConn) met with Connecticut U.S. Senator Richard Blumenthal during a visit to Washington, D.C., in support of the State Wildlife Grant program. From left to right: Jenny Dickson, Wildlife Division Biologist; Sandy Breslin; UConn students Kelly O'Connor and Megan Floyd; Senator Blumenthal; UConn students Mike Evans and Jason O'Connor; and Rick Jacobson, Wildlife Division Director.

sulted in the expansion of the state-owned Barn Island Wildlife Management Area in Stonington and the federally-owned Silvio O. Conte and Stewart B. McKinney National Wildlife Refuges. Sandy also worked tirelessly to help secure other places valuable to wildlife and resource conservation, including Trout Brook Valley State Park in Easton, the former Griswold Airport, Long Beach West in Stratford, and The Preserve in Essex, Old Saybrook, and Westbrook.

An active champion for Long Island Sound, Sandy was involved in the passage of the Long Island Sound Stewardship Act, securing tens of millions of dollars in annual federal funding for conservation in communities around the Sound, and she served as the Connecticut co-chair of the Long Island Sound Study's Citizens Advisory Committee. Recognizing that many shorebirds, migratory birds, and other wildlife rely on the Sound, she helped establish menhaden harvesting standards and fought for horseshoe crab protection areas where they can lay eggs - critical for the diet of many migrating shorebirds - on sandy beaches without being subjected to harvest pressure.

Sandy was soft-spoken, but strong in her convictions. She encouraged discussion and welcomed debate, and was always polite and professional - even if she vehemently disagreed with someone. She was well-respected in her hometown of Bethany, as well as in Hartford and Washington D.C. While Sandy always claimed not to be an "expert" in wildlife, she effectively communicated key conservation messages to people from all walks of life and they responded. Her passion for conservation was infectious; you couldn't help but become interested in what she was teaching you. Those of us at the Wildlife Division, and the rest of DEEP, who worked with Sandy have lost not only a tireless advocate and resolute supporter, but also a true friend. We can honor her amazing legacy by sharing our passion for wildlife and the natural world, speaking up for conservation and efforts to preserve Connecticut's natural resources for future generations to enjoy, and doing it all with a smile, kindness to others, professionalism, and the belief that together we can accomplish great things.

Connecticut Wildlife 21

Invasive Plant Profile: Giant Hogweed

First documented in Connecticut in C 2001, giant hogweed (Heracleum *mantegazzianum*) is an invasive, federally listed noxious weed. This plant poses a threat to human health and its surrounding environment because its sap is toxic. The sap causes large painful blisters on human skin and acts as an anti-sunscreen, which may cause skin to be more sensitive to sunlight. Eye contact may result in blindness. Giant hogweed has negative impacts to the environment as well. Plants have invaded natural areas, such as riverbanks and woodland edges, where they displace native plants and upset the ecological balance of these important habitats. Giant hogweed can also be found in disturbed sites, such as roadsides and along railroads, and it has been accidentally introduced into managed landscapes.

Giant hogweed is native to the Caucasus Mountains and Southwest Asia. It is a member of the carrot or parsley family (Apiaceae), which was introduced into Europe and North America in the early 1900s. Its massive size and imposing appearance made it desirable for arboretums and gardens. Giant hogweed escaped from cultivation and became established along roadside ditches, stream banks, tree lines, and in open wooded areas. In the U.S., it is known to occur in 15 states. In New England, giant hogwood has been confirmed in Connecticut, Maine, Massachusetts, and Vermont.

Identification

Giant hogweed can grow up to 15 feet tall and has compound, deeply cut leaves which can grow up to five feet. The hollow stems are two to four inches in diameter and marked with purple blotches and coarse white hairs. The hairs that circle the stem are especially prominent at the base of the leaf stalks. Small white flowers, which typically appear in July, develop in large clusters, forming umbrella-like or umbel-shaped blooms up to 2.5 feet across.

This plant is easily confused with noninvasive plants, such as cow parsnip, poison hemlock, angelica, and many others. It is important to know the subtle differences between these plants before coming in contact with any similar-looking plants.

How Dangerous Is It?

Giant hogweed is toxic because furocoumarins (also known as psoralens) are present throughout the plant and are concentrated in its sap. Furocoumarins are photosensitizing organic compounds, which become toxic when triggered by light. Painful blisters, burns, scars, and permanent blindness can result when human skin comes into contact with photosensitizing compounds. These chemicals make our skin exceptionally sensitive to sunlight, but in small doses, the compounds have been tested or used in medicine to treat skin conditions and even certain types of cancers and tumors.

Prevention and Control

If you suspect giant

hogweed occurs on a property, check the Connecticut Invasive Plant Working Group (CIPWG) website (*http://cipwg. uconn.edu/giant-hogweed-in-connecticut/*) for photos and descriptions of giant hogweed and plants often mistaken for hogweed. If you believe giant hogweed is present, report your finding to the CIPWG at 860-486-6448 or *http://cipwg.uconn. edu/report-giant-hogweed/.* Providing a photo of the suspect plants is helpful. If giant hogweed is confirmed on a property, management options will be provided.

Mowing, cutting, and weed whacking are not recommended as a means of control because the plant's large perennial root system soon sends up new growth. Also, these tactics are risky because they increase the opportunities for homeowners to come in contact with the plant's sap.

Giant hogweed seeds can be windblown several feet from the parent plant or may be carried by water to invade



It is unlawful to propagate, sell, or transport giant hogweed. Since 2001, the U.S. Department of Agriculture, University of Connecticut, and CIPWG have been surveying for this weed through the Cooperative Agricultural Pest Survey Program.

Information for this article came from the Connecticut Invasive Plant Working Group (http://cipwg.uconn.edu/giant-hogweed-inconnecticut/).



Giant hogweed is capable of growing up to 15 feet tall.

Conservation Calendar

Mid-April-August..... Respect fenced and posted shorebird and waterbird nesting areas when visiting the Connecticut coastline. Also, keep dogs and cats off of shoreline beaches to avoid disturbing nesting birds.

Programs at the Sessions Woods Conservation Education Center

Programs are a cooperative venture between the Wildlife Division and the Friends of Sessions Woods. Please pre-register by sending an email to **laura.rogers-castro@ct.gov** or calling 860-424-3011 (Mon.-Fri., 8:30 AM-4:30 PM). Programs are free unless noted. An adult must accompany children under 12 years old. No pets allowed! Sessions Woods is located at 341 Milford St. (Route 69) in Burlington.

- July 12Butterfly Talk and Walk, starting at 10:00 AM. Back by popular demand, Wildlife Division Natural Resource Educator Laura Rogers-Castro will provide participants with a lesson on the basics to butterfly identification, including tips on distinguishing the various butterfly families. Following a brief indoor program, Laura will guide the group on a walk to identify the local butterfly fauna at Sessions Woods. Meet in the classroom located in the exhibit room of the Education Center. Inclement weather cancels. (Butterflies are most active on sunny days!) This program is appropriate for ages 8 years and older.
- July 22Bird Walk, starting at 7:30 AM (raindate: July 29). Join Burlington birder Laura Spitz for a walk along the trails at Sessions Woods. Laura will provide insight on easy ways to identify birds as the group visits many habitat types throughout the wildlife management area. Please bring binoculars and meet at the flagpole in front of the Education Center.
- August 9Animals that Scurry Among Us, from 10:00 AM to 12:00 PM. Join Master Wildlife Conservationist Katerina Hutchins for a two-mile educational hike at Sessions Woods, spotlighting rodents of the forest. This walk and talk about rodents includes fun facts about woodchucks, beavers, squirrels, chipmunks, and more! The program is geared toward families with children ages five years and older. Please meet at the flagpole in front of the Education Center.

Hunting and Fishing Season Dates

- Sept. 1-30 Early September Canada goose season.
- Sept. 15-Dec 30......Deer and turkey bowhunting season on state land bowhunting only areas (and private land for turkeys).

Sept. 15-Dec 31..... Deer bowhunting season on private land.

Oct. 21Opening day of the small game hunting season.

Consult the 2017 Connecticut Hunting and Trapping Guide, 2017-2018 CT Migratory Bird Hunting Guide, and the 2017 Connecticut Angler's Guide for specific season dates and details. The guides are available at DEEP facilities, town halls, bait and tackle shops, and outdoor equipment stores, and also on the DEEP website (www.ct.gov/deep/hunting and www.ct.gov/deep/fishing). Go to www.ct.gov/deep/sportsmenlicensing to purchase Connecticut hunting, trapping, and fishing licenses, as well as required permits and stamps. The system accepts payment by VISA or MasterCard.

Save the Date -- Saturday, September 23! The DEEP Bureau of Natural Resources will be holding Connecticut Hunting and Fishing Day from 10:00 AM to 4:00 PM at Cabela's, 475 East Hartford Blvd. N., in East Hartford. Lots of fun activities for the whole family are planned for this free event. Go to www.ct.gov/deep/HuntFishDay for details.

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The waters of Long Island Sound are rising and getting warmer. What will the future be like for Connecticut's coastal wildlife, including the common tern? See DEEP Commissioner Rob Klee's remarks on page 3.