



A Quarterly Publication from the Division of Fish and Wildlife, RI Department of Environmental Management

The Christmas Bird Count by Christopher Raithel

During the three-week period centered on December 25th, thousands of bird-watchers take to the field in areas as diverse as Point Barrow, Alaska, Ecuador, Panama, and even Antarctica. The method of this madness begins with a 15-mile diameter "count circle" in which all birds found are counted. Usually, circles are divided up into smaller units, which are assigned teams of participants. During the 2009 census held last winter, 2,124 areas in the western hemisphere were covered by nearly 60,000 observers. In terms of its length and geographic scope, the Christmas Bird Count (CBC) is the most extensive wildlife inventory in the world.

This now major effort had humble beginnings. Prior to 1900, people engaged in a holiday tradition known as the Christmas Side Hunt where whoever brought in the biggest pile of feathered and furred quarry won. Conservation was in its beginning stages, and many observers and scientists were



Northern Cardinal

Photo: USFWS, T. Barnes

becoming concerned about declining bird populations. We worry about declining species today, but it is difficult to imagine how depauperate the landscape of 100 years ago was. Because of centuries of unrestricted shooting for both food and fashion, most large mammals and birds were simply gone. Even species that we take for granted today, such as gulls, were not present early in the 20th century.

Beginning on Christmas Day 1900, ornithologist Frank M. Chapman, an early officer in the budding Audubon Society, proposed a new holiday tradition, a "Christmas Bird Census" or CBC, that would count birds during the holidays rather than hunt them. Thanks to the inspiration of Chapman and the enthusiasm of 27 dedicated birders, 25 CBCs were held that day. The locations ranged from Toronto, Ontario to Pacific Grove, California with most counts in or near the population centers of northeastern North America. Those original 27 Christmas bird counters tallied a total of

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The Research Vessel John H. Chafee by Scott Olszewski

The Research Vessel (R/V) John H. Chafee is the Department of Environmental Management's Marine Fisheries Research Vessel. The vessel is located at the DEM Division of Fish and Wildlife, Marine Fisheries

laboratory at Ft. Wetherill in Jamestown, RI. The R/V Chafee was named after the late Senator John H. Chafee who was instrumental in securing funding through a \$625,000 federal grant, in addition to \$285,000 in restricted state funds for boating purposes.

R/V John H. Chafee



Photo: Courtesy of Marine Fisheries

The vessel was built to replace the aging R/V TJ Wright, a 42 foot Bruno Stillman which conducted the marine fisheries coastal trawl survey for 25 years.

During the spring of 2002, after years of planning, a request for proposals was sent out for a custom vessel, to be built on a stock fiberglass hull. Marine Subcontractors Inc. of Southwest Harbor Maine secured the bid to finish the 50-foot Wesmac hull with a single 700 horsepower diesel engine, com-

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THE DIVISION OF FISH AND WILDLIFE MISSION STATEMENT:

Our mission is to ensure that the Freshwater, Marine and Wildlife resources of the State of Rhode Island will be conserved and managed for equitable and sustainable use.



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The R/V John H. Chaffee (cont. from pg. 1) by Scott Olszewski

plete with hydraulics, rigging and electronics.

The R/V John H. Chaffee was commissioned on June 7, 2004 and became a permanent member of the Marine Fisheries fleet. After a wave of comparative sur-

tain Richard Mello and Assistant Captain Ken Benson and Principal Biologist, Scott Olszewski. The vessel is also staffed by numerous other biologists, depending on the projects at hand. The R/V Chaffee is a 50-foot Wesmac kevlar hull with a fiberglass



The otter trawl.

vey work to calibrate the old vessel and gear to its new replacement, the R/V Chaffee became the Rhode Island Coastal Trawl Survey Vessel. The R/V Chaffee significantly enhances the Department's fisheries research capabilities. Its major role is to continue and expand the monthly and seasonal components of the coastal trawl survey, which is the basis for assessing the fish stocks and overall fishery health of Narragansett Bay, Rhode Island and Block Island Sounds.

The R/V Chaffee is being used for a number of projects of importance to Narragansett Bay. The research vessel is used monthly for the Mariner Shuttle surveys which cover the entirety of Narragansett Bay collecting real time data on the Bay's water quality. It also deploys and retrieves data buoys annually for the Office of Water Resources, which collects data on bay water quality. Additionally, the vessel is utilized to retrieve cryptic habitats which monitor productivity of the offshore reefs created by the former Jamestown Bridge demolition. It has proved to be a vital platform for gaining knowledge of the Ocean State's most precious natural resources.

The research vessel is piloted by Cap-

foredeck and wheelhouse. It has a 17.5 foot beam and draws six feet of water. It is powered by a 3406, 700 hp Caterpillar diesel engine turning a four blade prop. The vessel has a 1200 gallon fuel capacity, a 300 gallon hydraulic tank and a 60 gallon fresh water tank. The vessel generator is an Onan 15 kw Gen set with a 240 AC system, and 12v and 24v DC systems.

The deck hardware consists of an independent articulating A-frame, gantry and net reel. It is also equipped with a hydrographic winch and a pull master

PI2 winch. The main winches are pull master H12 rapid reverse trawl winches. The vessel is also outfitted with Furuno radar and color video sounder, a Simrad chart plotter and a Robertson autopilot. The ves-



The catch.

Photos by S. Olszewski

sel tows a scaled down otter trawl net during 13 monthly and 42 seasonal coastal trawl surveys throughout the year.

Now in its fifth year of operation the R/V John H. Chaffee has proven to be an integral part of the Department's mission of health and sustainability of Rhode Island's natural resources. For more information on the vessel or its project involvements please contact the Marine Fisheries Laboratory at Ft. Wetherill in Jamestown, RI at (401) 423-1920.

Absolutely Shocking! by Veronica Masson

From the shore at night, this may look and sound like an alien spacecraft, but upon closer inspection it is an electroshocking boat that is used by the Freshwater Fisheries section to conduct fish surveys in the ponds, lakes and reservoirs of Rhode Island. The boat is captained by Alan Libby, Principal Fisheries Biologist and requires four additional crew members to operate. These include two netters stationed at the bow of the boat; one person to record the data and one person to identify, measure and weigh the fish that are caught.

The vessel is a Smith-Root Model SR-16 electrofishing boat that is approximately 18 years old. The hull is 16 feet

The electroshocking boat at the ready.



Photo: A. Libby

Alien spacecraft? The boat at night.



long, is made of welded aluminum and is equipped with a 5.0 GPP generator. The generator produces electricity which enters the water via a set of electrodes. One electrode is a pair of one meter umbrella anode arrays attached to booms that can move 180 degrees. Each array is equipped with six stainless steel droppers which drag in the water forward of the hull. The cathode electrode is insulated from the hull and mounted across the bow and has twelve steel droppers. When the generator and all the switches are in the on position, electricity cycles between the anode and cathode, stunning the fish within a three to four foot radius from the electrodes.

There are several safety features for the crew. These include a series of switches for the electrical circuit in the water to be completed. The captain has a switch and each netter has button on the deck which all must be depressed for the electricity to flow. The net handles are made with non-conducting fiberglass. Both netters must also wear insulating rubber gloves and all personnel wear hip boots.

The boat is equipped with standard running lights and onboard lights which allow the crew to see on deck. Additionally, there are a series of bright lights mounted across the bow and on the forward sections port and starboard. These

lights are angled down into the water to help the netters see and catch the fish.

There are two live wells in the center of the boat which have a flow-through water pump and an air pump to provide fresh water and oxygen for the fish that are caught. As the fish are stunned they are netted and placed into the live well. At this point, one of the crew scoops up the fish from the live well and identifies it to species. A measuring board and scale with a basket are used to measure and weigh the fish. When largemouth or smallmouth bass are caught, scale samples are also taken by using a nail clipper to remove scales from the right side of the fish just below the dorsal fin.

Ponds and lakes all over the state that have boating access have been sampled. Usually the ponds are sampled in the spring and fall. The sampling typically occurs at night because that is when fish are at their most active and thus more vulnerable to being caught. In ponds smaller than

50 acres the entire shoreline is sampled. The shorelines of lakes larger than 50 acres are divided into 12 sampling areas. Within each sampling station the specific location is randomly determined in an attempt to sample all major littoral habitat types. Throughout the first six stations every species of fish is collected including as many individuals as possible. During the last six stations only bass and any other species that we



Three largemouth bass over six pounds.



Taking scales from a largemouth bass.

Photos by T. Thompson unless otherwise specified.

have not seen yet that night are collected.

The data are used for several USFWS Federal Aid in Sport-fish Restoration projects including Largemouth Bass Management and the statewide Stream and Pond Survey. Additionally, fish are collected in cooperation with the Office of Water Resources and the EPA Narragansett Laboratories to study levels of mercury in freshwater fishes.

The New England Cottontail – Rhode Island’s Native Rabbit by Brian Tefft

The New England Cottontail (*Sylvilagus transitionalis*) is a secretive rabbit found in Rhode Island that is native only to the New England states and a small portion of New York east of the Hudson River. This shy rabbit is one of two different rabbit species found in Rhode Island; the other is the introduced Eastern Cottontail. The Eastern cottontail (*Sylvilagus floridanus*) was first imported to Rhode Island in the 1930s

from the mid-west to improve rabbit hunting and was released in all five counties of the state. The introduced rabbit was so successful that the Eastern cottontail became the common species and the

New England cottontail is now considered rare. The reasons for the demise of the New England cottontail are still being studied but all indications are that habitat loss and fragmentation, such as construction of new roads, subdivisions and commercial development, are forces that have negatively affected the survival of New England cottontail. Meanwhile, the introduced Eastern cottontail rabbit seems to be able to thrive in the developed urban-suburban landscapes that are so prevalent today.

The New England cottontail is a medium sized rabbit weighing about two and a quarter pounds with mottled brown and gray pelage, and short ears. It is slightly smaller than the Eastern cottontail but is similar in appearance, making field identification difficult; however,

there are several features that help to distinguish the rabbits. The New England cottontail has a shorter ear length, the presence of a black spot between the ears, a black edge along the front of the ears, and also the absence of a white forehead spot. Specific cranial features found on the skull, including the prominent nasal frontal suture, which is jagged in the New England and smooth on the Eastern offer a positive means of distinguishing between the two rabbits. Modern genetic laboratory techniques, which allow for the extraction of DNA from tissues or fecal pellets are now being used to identify populations of rabbits. This is a quick and simple method, where scat samples are collected from the field for later identification

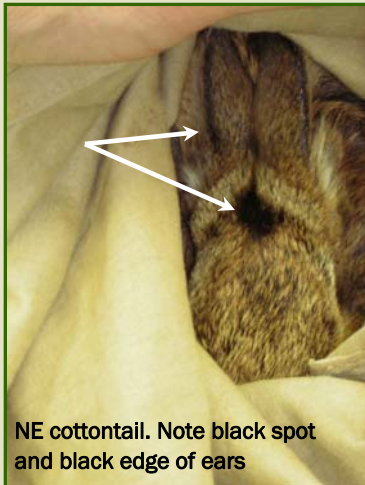
and is the method most commonly used to identify rabbits today.

Habitat for the New England cottontails consists of shrub thickets and other dense cover that provides protection from predators. Periodic management and disturbance of habitats of sufficient size is required in order to maintain territory for the New England cottontail. The absence of significant clear cutting

and creation of early successional habitats has led to a serious decline in the young forest and shrub thickets needed to support these cottontails. As a result, there is an overall maturing of forests which is accelerating the decline in habitat quality. The patch size is another important factor that affects rabbit survival. Small patches (<5 acres) make the rabbits more vulnerable to predators, causing local extinctions.

In Rhode Island, the principal range of the New England cottontail is in southern Kent and Washington counties; however, a few specimens have been collected from Providence and Newport counties and require further investigation. Attention

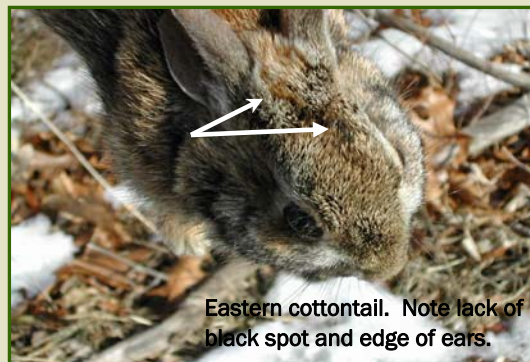
has been focused on sandy soils supporting pitch pine-scrub oak forests in southern RI as potential hot spots of New England cottontail presence. In evaluating the obvious decline of New England cottontail there are also persistent questions that remain unsettled including those involving competition be-



NE cottontail. Note black spot and black edge of ears



Note jagged nasal suture of NE.



Eastern cottontail. Note lack of black spot and edge of ears.



Note rusty nape of Eastern.

Photos by B. Tefft

tween the two rabbits, behavioral differences, hybridization and other factors that give the Eastern a competitive advantage.

The factors mentioned have collided throughout New England requiring the US Fish and Wildlife Service to declare the New England cottontail a candidate species for listing under the Endangered Species Act. The steep decline in the abundance of the New England cottontail in Rhode Island is alarming, prompting the state to list the rabbit as a species of greatest conservation need. Between 1994 and 2000 the Division of Fish and Wildlife examined 250 skulls submitted by rabbit hunters and from road kills and determined that only 16% were New England cottontails. More recently in 2003 and 2005, the presence of the New England cottontails was recon-

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The Christmas Bird Count (continued from page 1) by Christopher Raithe

90 species on all the counts combined. Within a few years the CBC had expanded dramatically, a trend that continues to this day.

In Rhode Island the first CBC was conducted in December 1901, in Providence. By 1915 a few other counts had been completed; these were invariably done by single participants. Local CBCs have come and gone over the years, and there are presently five CBCs in Rhode Island, some of which include parts of adjacent states and have been relatively stable for several decades.

Block Island was not among the very earliest CBC to be organized, but it began in 1924, led by the redoubtable "Bird lady of Block Island", Elizabeth Dickens, who taught at the Block Island school. Attendance in this matter was not optional and Miss Dickens allegedly marched the school children around the island on foot and, although the children may not have been deliriously happy about it, they still, to a person, remember it. Miss Dickens led this CBC until 1942. The survey languished until 1962, when it was resurrected and began to take on its present form. Several people organized the CBC until 1985, when it was handed off to me, and I have not missed a year since.

Today, the Block Island CBC is very different from most other contemporary counts. The Block Island count circle is centered on the north tip of the island and therefore contains all of the approximately 6,000 acres of the island, but is mostly ocean. This presents some logistical difficulties, not only in dancing around ferry schedules but also in observing much of the territory. In some years the only ocean coverage occurs during the morning ferry ride, but in some years we have had sea-watchers staring out from the bluffs in hopes of seeing some mega-rarity fly by. Logistical difficulties aside, the good news of doing a small island count is that the density of terrestrial coverage is exceptional. The Block Island CBC is still done mostly on foot; it certainly has a higher percentage of walking effort than most counts. This is not only in deference to Miss Dickens but because the island is small enough to walk around all day and still get back to the ferry for an afternoon departure. Also, it is easier to find birds on foot rather than by riding around in a car, which is standard for some mainland counts. The greenway trails allow excellent access and coverage across the island. The participation has been remarkably stable and highly experienced, which makes for a

high quality survey effort.

In recent years, as a throw-back to Dickensian times, we have involved the students of the Block Island School. Led by Scott Comings, all students have the opportunity to participate each year, which means that by the time they have finished their Block Island education, they may have participated in 12 or so CBCs. It is rewarding to see the students come into the system when they are small and appear year after year as participants. Maybe some of these kids will be leading the conservation charge of the next generation.

Part of the fun of doing a CBC is finding surprise birds, things that are rare or unexpected for the season, and Block Island has certainly had its share. Memorable birds have included a Brown Pelican (after a strong SW gale), Sooty Shearwater, Great Skua, Pacific Loon, and Grasshopper Sparrow. Several species of warblers have been found well after their normal departure dates, including Nashville, Prairie, Cape May, Pine, and Common Yellowthroat. When found, such brightly-colored species always add flavor to a mid-winter day in the field and conjure thoughts of spring, still four months distant. Interestingly, late warblers now seem to be more common on the Block Island CBC than formerly, probably an effect of the warming climate. Although rarities are the desert of a CBC, the main course consists of more typical species and these are the birds, when the data are aggregated across regions, whose populations lend themselves to being tracked continentally. On Block Island, the most dependable species (those seen each year since 1962) include Common Loon, American Black Duck, Northern Harrier, Herring Gull, American Crow, European Starling, Northern Cardinal, Song Sparrow, and White-throated Sparrow. Since 1962, about 200 species have been recorded on this count, but a typical year will tally about 95 different types of birds.

The data collected by observers over the past century allow researchers, conservation biologists, and other interested individuals to study the long-term health and status of bird populations across North America. It provides a picture of how the continent's bird populations have changed in time and space over the past hundred years. The long term perspective made possible by the Christmas Bird Count informs strategies to protect birds and their habitat and helps identify environmental issues with implications for people as well. Plus, it's fun. What would one rather be doing on the shortest days of the year?



Brown Pelican

Photo: USFWS



Yellow-rumped Warbler

Photo: J. Osenkowski



Common Loon

Photo: USFWS

Let's Go Ice Fishing! by Kimberly Sullivan

"Daddy, Daddy, come here! The flag went up! The flag went up!," yelled a very excited Morgan Bergstrom. Thirty pairs of eyes lit up as Max Bergstrom pulled a two and a half pound Bass from the hole in the ice and a dozen children made their way over to get a first hand look. The adults turned back to their hole in the ice with renewed hope that the flag on their ice fishing rig would go up. Others started jigging with brightly colored lures attached to very short fishing rods. Despite the January cold, the three hour Aquatic Resource Education 'Ice Fishing' program was such a sensation that two additional programs were offered for the public.

Fish and Wildlife's Aquatic Resource Education held its first Saturday morning ice fishing program. It was a great day, with Allen Williams teaching 30 participants the basics of how to use the ice fishing gear, the different types of baits and lures, ice fishing and ice safety, and what to do in an emergency. The goal of the program was to educate families and people of all ages how to make the sport of ice fishing productive and safe. Not only was the equipment and bait provided to the first time ice fishing participants but also a cup of hot chocolate with plenty of refills. The first ice fishing program was a success.

Last winter, after two years of limited ice, the weather finally cooperated and the ice fishing program was scheduled with the hope the ice would remain on the Big Pond at Carolina Trout Hatchery, a pond stocked with brown trout specifically for this program. The response was overwhelming and families from all over the state registered to participate. Since Rhode Island had a cold winter, ice remained on the pond long enough to host three programs with a total of 101 people trained in ice fishing. Dozens of fish were caught and a good time was had by all.

The Aquatic Resource Education program will host another ice fishing program for the public during the 2010 ice

fishing season. While Rhode Island's ice season is unpredictable, the ARE program will hold the program regardless of ice conditions to prepare anglers for the season and provide participants with a training session on ice fishing rigs, bait, ice safety, and hot chocolate. If the ice on the pond is safe, participants will have an opportunity to use their newly acquired ice fishing skills.

The program will take place on Saturday, January 30, 2010 from 9AM to 12PM. Families with children over five are welcome. The cost is \$7 per person or \$5 per person for families with over three people. Space is limited and registration is required to attend.






Please contact Kimberly Sullivan at 401-789-0281 or via email at

kimberly.sullivan@dem.ri.gov



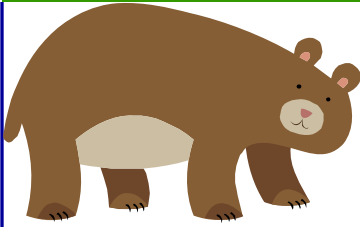
Photos by K. Sullivan

ICE SAFETY TIPS

-  *When venturing out on the ice, safety should be your number one priority.*
-  *Be cautious. Make sure the ice is at least six inches thick. Test the ice as you go with an ice auger. If there is a path, stick to it.*
-  *Beware of areas where there are springs or inlets to a pond—the ice may be thinner in these areas*
-  *Dress warmly in many layers with polypropylene long johns and a wind breaking overlayer. Wear appropriate footwear such as insulated boots and wool socks that will keep your feet warm and dry. Sunglasses or ski goggles are helpful for glare and wind. Rubber gloves are good for bait and fish handling and mittens are good for warmth.*
-  *Remember safety equipment including ice spikes, 50 feet of safety rope, boat seat cushion, and a first aid kit.*



Kids Corner! Presented by the Aquatic Resource Education Program



NEWSFLASH: BEARS DON'T HIBERNATE!

It is winter, and while humans look forward to playing in the snow and skating on the ice, many animals prefer to 'sleep' during the winter. This 'sleep' state is known as hibernation and many animals use this technique to survive cold winters and times of the year when food is scarce.

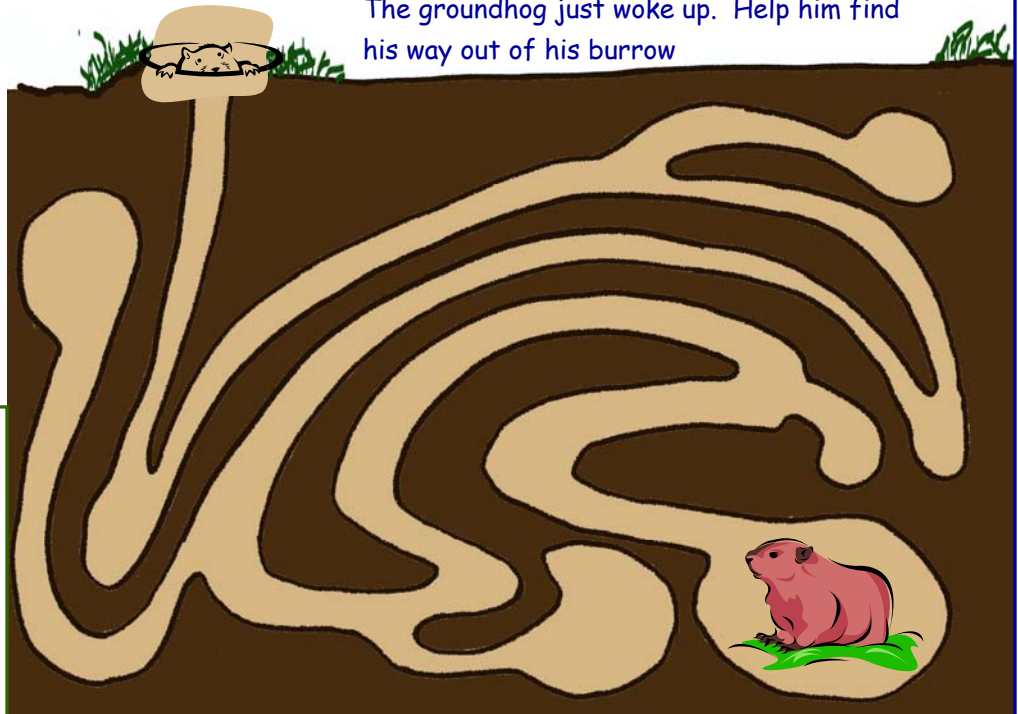
True hibernation is a very deep sleep where animals can drop their body temperature, lower their brain activity, and are difficult to wake up. In fact, many of these animals may appear dead when indeed they are just hibernating. These animals normally collect food during the late summer and fall and store it as fat to survive the winter in their winter nests. Warm-blooded animals (animals like humans that use energy to keep their body temperature the same all the time) conserve the energy by allowing their body temperature to lower to as little as 30 to 40 degrees Fahrenheit so that less energy is used to keep the animal warm. Cold-blooded animals (those animals who do not regulate their body temperature like reptiles and amphibians) automatically enter a hibernation state when their body temperature drops to a lower temperature. Some true hibernators include rodents such as mice, chipmunks, bats, woodchucks, lizards and toads. But bears are not true hibernators...

Despite the cartoons and media coverage on bears, bears do not hibernate in their caves. While they do enter a deep sleep, their body temperature is slightly higher than that of the true hibernators and they can be woken up very easily. They enter what is known as a torpor or temporary sleep state. While bears do not truly hibernate, unscramble the following words to find out who does:

- RWMARETHO _____
- RSILUREQ _____
- RGNUGHOOD _____
- ACRCONO _____
- GFRO _____
- KNUKS _____
- KNESA _____
- ESBE _____
- TBA _____



The groundhog just woke up. Help him find his way out of his burrow



Correction:

There was a mistake included in the autumn 2009 issue of Wild Rhode Island. The article in the Kids Corner stated that brook trout can lay over 100,000 eggs. In fact, brook trout females deposit between 500-1000 eggs in their redds. We apologize for this oversight.

NE Cotton Tail—RI's Native Rabbit

(cont. from page 4) by Brian Tefft

firmed in many patches previously checked in the 1994 survey but in 2009, not one New England cottontail was found. It is clear that the thicket quality of our native rabbit habitat continues to decline, continuing the decline of this species.

Conservation planning is currently underway in the Division, in cooperation with other State and Federal Agencies including the US Fish and Wildlife Service, Office of Coastal Programs, the Natural Resources Conservation Service, the University of Rhode Island, as well as non-profit organizations such as the Audubon Society and The Nature Conservancy to coordinate research and conservation efforts aimed at saving this species. Throughout New England, efforts are being directed at identification of suitable sites where new cottontail habitat can be created and existing thickets restored. In Rhode Island we hope to create hundreds of acres of thickets over several years near current strongholds to encourage population expansion on both state and private lands.

Calendar January—March 2009

January 30—Lets Go Ice Fishing 2010. An educational experience offered by the Aquatic Resources Education Program contact Kimberly Sullivan at (401) 789-0281 or Kimberly.sullivan@dem.ri.gov. Please see page 6 for more details.

January 7-10 Providence Boat Show at the RI Convention Center. For more information visit www.providenceboatshow.com.



The Division of Fish and Wildlife wishes you a happy and safe New Year. Go Wild!



Attention! Fluorescent Orange Requirements

All users of state management areas (e.g. hikers, cyclists, horseback riders) are required to wear 500 square inches of daylight fluorescent orange during shotgun deer season (12/5/2009 through 1/2/2010, with additional dates on Block Island in 2010). Additionally, all users of State Management Areas are required to wear 200 square inches of solid daylight fluorescent orange (generally, a baseball hat) from the third Saturday in October to the last day of February and the last Thursday in April to the last day in May.

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