



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

White-Nose Syndrome Confirmed in Rhode Island By Charles Brown



Photo of bat from New York exhibiting telltale signs of WNS

In February 2016, Rhode Island became the 29th state to confirm the presence of white-nose syndrome (WNS), an often-fatal fungal disease that is responsible for the death of an estimated six million bats since first being described in eastern New York State in 2006. A tricolored bat, *Perimyotis subflavus*, hibernating in Newport County tested positive, while two other tricolored bats from the same location were determined to be “suspect” for the disease. Additionally, soil samples collected from two other locations in Newport County tested positive for presence of the fungus.

WNS affects bats during hibernation and is caused by the fungus *Pseudogymnoascus destructans* (Pd). The fungus occurs in the cold, humid environments of caves and mines- habitats used by bats for hibernation- and is also so named because of the white, “fuzzy” appearance often seen on the muzzle or wings of affected bats. During hibernation a bat’s immune system enters a reduced state to conserve resources. This reduced immunity allows the fungus to spread unchecked over the bat’s body, disrupting the bat’s metabolism and causing dehydration and depletion of its fat reserves. Symptoms often

include deterioration of wing membranes (patagium) and uncharacteristic behavior such as early arousal from hibernation and flying outside during the daytime in winter. There is no evidence that Pd poses a threat to humans, domestic animals, or other wildlife.

Since its discovery in eastern New York State in the winter of 2006- 2007, WNS has spread across the eastern United States and five provinces in eastern Canada. The fungus is primarily transmitted from bat to bat by direct

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New Boating and Fishing Access Sites in RI By Veronica Masson

As part of its ongoing efforts to provide boaters and anglers with increased access to RI fresh waters, DEM recently completed construction of a new boat ramp in Exeter and access site in Westerly. A new boat ramp was installed at Beach Pond, as well as a fishing and car-top boat access site at Potter Hill Landing along the Pawcatuck River. Both of these projects were funded by the Sport Fish Restoration Program from the U.S. Fish and Wildlife Service.

The Beach Pond boat ramp is located at the parking area on Route 165 in Exeter, just before the Connecticut border. Sixteen parking spots are designated for boat trailers, with many more available for car-top parking. Previously, boat access to Beach Pond was only available on the Connecticut side. With the new boat ramp,



New boat ramp at Beach Pond in Exeter, RI. Photo courtesy of V. Masson

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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.



Janet Coit, Director
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Environmental Management

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Boating and fishing access continued from page 1

Rhode Islanders now have additional opportunities to launch boats onto this spectacular pond.

One of the wetland permit requirements for construction included educating the public about cleaning boats before and after launching. There are invasive aquatic plants in many Rhode Island ponds, and a new boat ramp means a new opportunity for these invaders to be introduced into a pond. Invasive plants can be transported and spread to different ponds on the propellers and trailers of boats. It is important that boaters understand the importance of cleaning plant material off boats and trailers after each use. Please be sure to clean, drain and dry off your boat after every use.

Potter Hill Landing is a new access point and a hidden gem located along the Pawcatuck River near Potter Hill Dam. The landing sports a beautiful field, an area to launch a canoe, kayak or other car-top boat, and a nice stretch of riverbank on which to fish. This land was purchased by DEM in 2012 to provide car-top boat and fishing access along this stretch of the Pawcatuck River. A parking lot that will accommodate about ten cars is available on site. This is the only public access to this portion of the river until you get to White Rock in Westerly. The Division of Fish and Wildlife is very pleased to be able to offer these expanded opportunities for the public to access Rhode Island's beautiful waterways. We hope you take the time to get out there and enjoy!

Help Keep Beach Pond Pristine!

TRANSPORTING INVASIVE SPECIES CAN DESTROY OUR LAKE!



BEFORE AND AFTER LAUNCHING, PLEASE

CLEAN • REMOVE ALL PLANT FRAGMENTS FROM YOUR BOAT, TRAILER & GEAR.
• DISPOSE OF MATERIALS IN A TRASH BAG AND CARRY OUT.

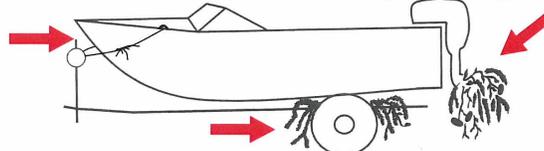
• CLEAN OFF WADERS, BOOTS, & GEAR AFTER USE IN ANY WATER BODY.

DRAIN • TO AVOID SPREADING MICROSCOPIC ANIMALS (LIKE ZEBRA MUSSELS)
• DRAIN BOAT AND MOTOR FAR FROM THE WATER.

DRY • ALWAYS ALLOW BOAT AND MOTOR TO FULLY DRY BEFORE NEXT USE.

*NEVER RELEASE BAIT, AQUARIUM FISH, SHELLFISH, OR PLANTS INTO A BODY OF WATER.

CHECK YOUR BOAT! CLEAN, DRAIN, DRY



For more information contact:
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Division of Fish and Wildlife
(401) 789-0281
www.dem.ri.gov



Division to take over Marine Recreational Information Program (MRIP) Recreational Survey By Michael Bucko

Saltwater recreational anglers who fish from shore or from a vessel are being asked to share important information about their fishing practices, catch, and demographics with staff from the DEM's Division of Fish & Wildlife for a new survey project that began this spring.

The Department is gathering the information as part of the Access Point Angler Intercept Survey (APAIS) program. This survey is the primary source of recreational saltwater fishing data along the Atlantic Coast, and was previously conducted by subcontractors working for NOAA Fisheries - National Marine Fisheries Service. Rhode Island joins other states along the Atlantic coast from Maine to Florida in taking over the survey; this change allows for local fisheries staff to collect the data in place of federal subcontractors. States that have taken over APAIS have seen measurable improvements in the quality of the data generated from the survey, along with increased angler participation.

Division staff are surveying recreational anglers at various locations throughout Rhode Island who fish from the shoreline, as well as those on private/rental boats, charter boats, and party boats. From March to December, staff will conduct more than 450 interviews with anglers at the completion of their fishing trip from shore, private/rental and charter boats; in addition, 48 surveys are planned with anglers who fish on party boats - large, for-hire vessels that accommodate seven or more anglers per trip. Data related to fishing from a party boat will be collected at sea by a two-person survey team who will record the number of fish caught and discarded by species.

Those anglers selected for interviews will be asked about their fishing practices and the number and species of fish caught and discarded during a fishing trip; when possible, length and weight measurements of whole harvested fish will be collected to supplement the catch data. Survey participants will also be asked to provide demographic information that will be used to validate the survey results. Data collected from the interviews will not be shared and will be aggregated so that information about individual anglers is not included in public survey reports.

Saltwater fishing for striped bass, summer flounder, bluefish, scup and other species impacts Rhode Island's quality of life and economy. In addition to being a traditional pastime and a great way to obtain fresh and healthy seafood, recreational saltwater fishing is an important economic driver for the state, generating an overall economic impact of some \$208 million and supporting more than 1,000 jobs.



The MRIP team conducts the recreational survey with some fishers on the dock. Photo courtesy of M. Bucko



The Division's MRIP Recreational Survey team.
Photo courtesy of J. Lake

The DEM is vested in increasing the quality and quantity of the data collected on our important recreational fisheries, and committed to improving outreach with the recreational saltwater community. Taking over the APAIS survey and having our Division employees out in the field- in direct contact with the recreational fishing community- should help achieve our goals. Together we can become true partners in the collection of critical marine recreational fisheries data. Better data, Better fishing. For more information about the APAIS survey, contact Michael Bucko at michael.bucko@dem.ri.gov or call 401-783-2304.



White-Nose Syndrome continued from page 1



Little brown bat with RIDFW band hibernating in Vermont. Photo courtesy of C. Brown

contact, or from an infected bat to the cave or mine environment. Pd can survive in soil for years, infecting healthy bats when they enter these sites. It is now believed that the fungus was introduced into North America from Europe, where it has been found to occur; however, European bat species do not exhibit the same deadly response to exposure. Given that bats do not migrate across the Atlantic Ocean, it is assumed that Pd was somehow transported by humans. Fungal spores can be spread between caves and mines by humans on clothing, footwear, and equipment.

The detection of WNS in RI disappointing was not unexpected; Pd and WNS have been previously confirmed present in all other New England states. The disease was detected in samples collected by DEM as part of a national study conducted by researchers at the U.S. Geological Survey National Wildlife Health Center in Wisconsin. When samples were collected in early February, the bats in question showed no visible signs of the disease. Initial results confirmed the presence of Pd, but not WNS. A follow-up visit was made in March to collect additional samples, and the bats again showed no visible symptoms; further testing confirmed that one bat was infected with the disease, and two others were suspected of being infected.

Three additional locations in Newport County where small numbers of bats are known to hibernate were also surveyed and sampled last winter. The sampling process does not injure the bat and causes a minimal amount of disturbance to the bats. Division of Fish and Wildlife staff follow decontamination protocols established by the U.S. Fish and Wildlife Service when visiting these sites.

Rhode Island does not host large numbers of hibernating bats, as there are no mines or natural caves that bats can use for hibernation. Some man-made structures can provide appropriate conditions that small numbers of bats utilize for hibernation. To date, DEM have documented four species of “cave” bats hibernating in the state: tricolored bat, big brown bat (*Eptesicus fuscus*), little brown bat (*Myotis lucifugus*), and the northern long-eared bat (*M. septentrionalis*); a species that was recently listed as federally threatened under the Endangered Species Act as a consequence of species decline due to WNS. The little brown bat is known to travel hundreds of miles to hibernation sites in northern New England. Several little brown bats banded during summer mist net surveys in Rhode Island have been recaptured or observed at caves in central Vermont in the fall and winter.

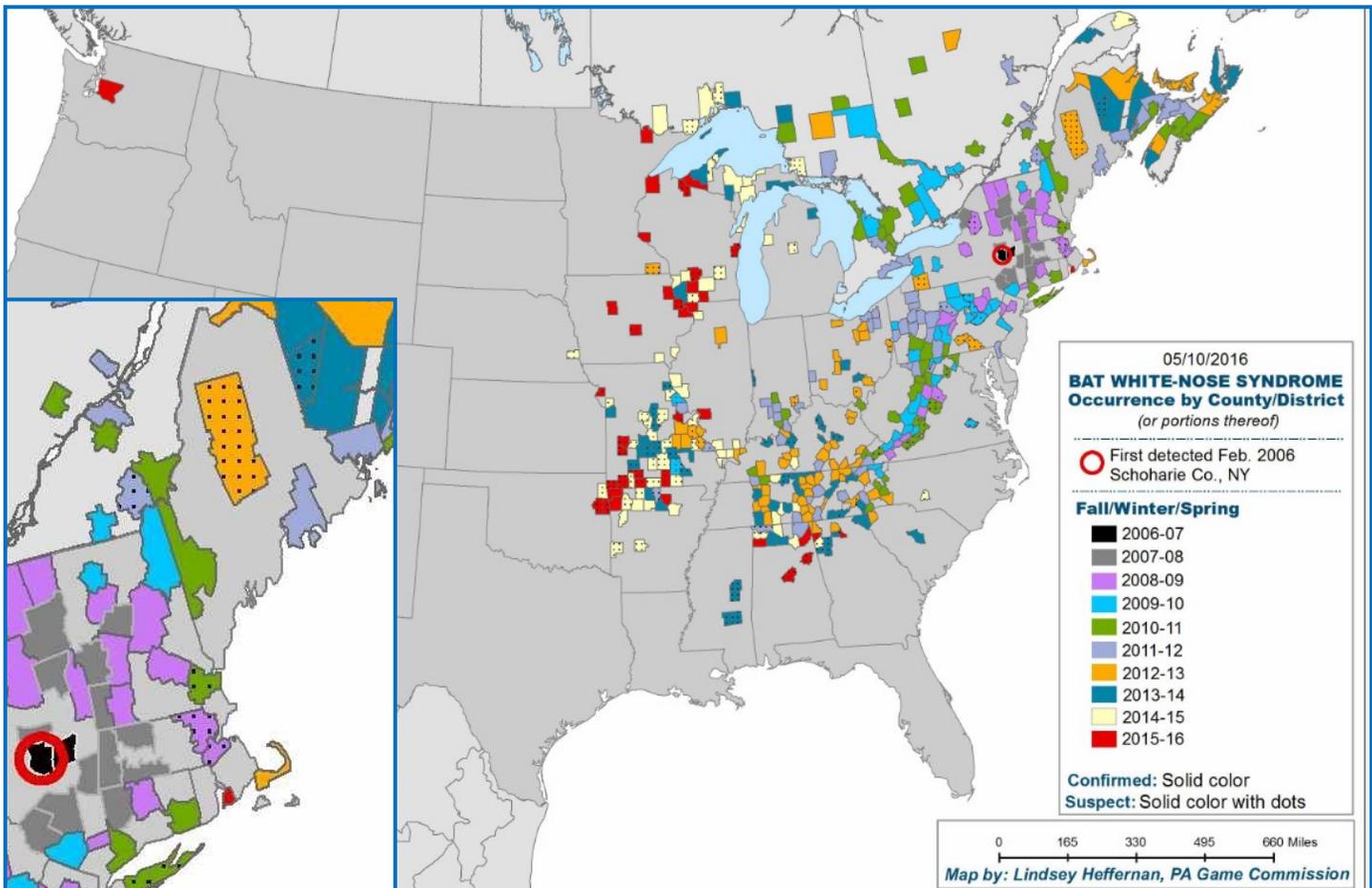


The Division has been using mist nets to catch and band bats since 2011 for population and movement data. Photo courtesy of C. Brown

Scientists do not yet know how the loss of six million insect-eating bats will impact our ecosystem. A single bat may consume hundreds, if not thousands, of insects in the course of a single night. As WNS continues to spread over a wider geographic area, many more bats will likely succumb to the disease. Given their low reproductive rate, most cave bat species only produce one “pup” a year, the normal high rate of mortality of young bats, it will likely be many decades or longer before some bat species populations recover to levels that existed prior to the introduction of WNS. Scientists are hopeful there is evidence that some bats survive from repeated exposures in WNS contaminated sites. There is much ongoing innovative research focused on treatment and controlling the spread of WNS.

To insure that bat populations have the best chance to recover, bat habitats including hibernation sites, maternity roosts, forested areas need to be protected. People should not enter sites where bats are hibernating or are known to hibernate to minimize disturbance and prevent further spread of WNS. For more information on white-nose syndrome visit the national white-nose syndrome website at: www.whitenosesyndrome.org or: www.nwhc.usgs.gov/disease_information/white-nose_syndrome.

White-Nose Syndrome continued from page 4



Bat white-nose syndrome occurrence by county/district since first occurrence in North America in 2006. Map by Lindsey Heffernan, PA Game Commission. Map can be found at: https://www.whitenosesyndrome.org/sites/default/files/wns_map_20160510_1.jpg

Wild Turkey brood survey yields important information about the RI turkey population By Brian Tefft

Spring is that magical time of year when life is reborn after the long dreary winter. All creatures great and small, including our eastern wild turkeys (*Meleagris gallopavo silvestris*) population begins courtship, breeding and nesting activities that will produce the next generation of birds. DEM has asked the public to help monitor turkey broods this summer by reporting sightings.

Restoration of the wild turkey population in RI began in 1980 with a release of 29 wild birds from Vermont, after extirpation from the state in the late 1700s. Between 1980 and 1996, turkeys were released in several RI towns and the population grew to an estimated 6,000 birds by 2001. Once the ecosystem's carrying capacity is reached, populations will fluctuate up and down. The Division of Fish and Wildlife has seen a general trend of decreasing population over the last several years, and we currently estimate the state's turkey flock at around 3,000 birds, roughly half of the 2001 estimate. Successful nesting and production of young is critical to growth



Turkey hen with young poults. Photo courtesy of B. Tefft

Turkey Brood Survey continued from page 5

And maintenance of the turkey flock. It can be difficult to get an actual population growth index that can be compared year to year. It is the status and trend of the population that wildlife managers use to make decisions about how to best manage and sustain any wildlife species that is hunted, including the turkey.

One of the most important trend indicators for the wild turkey population is brood production. Growth or decline in the population is closely tied to the annual productivity of nesting hen turkeys and how many poults are successfully raised. A hen turkey will nest and typically lay a clutch of 10 eggs each year. If the first nest is destroyed, she will re-nest and produce a smaller clutch, typically 8 eggs. Turkeys are ground nesters so the wide variety and abundance of generalist predators can take a huge toll on nests and newly hatched turkeys. In 1993, DEM began a summer turkey brood survey to help determine the annual productivity of the state's turkey flock, and developed a brood index to reflect trends in the population (Figure 1). Monitoring turkey broods helps the Division determine the number of poults born that survived after mortality factors such as predators (fox, coyote and birds of prey), poor weather, road kills, or domestic pets (cats and dogs). Turkey hens are monitored by the Division from June through August, assisted by the public who report turkey sightings by using the "Wild Turkey Brood Reporting Survey" under Online Services on the DEM website homepage.

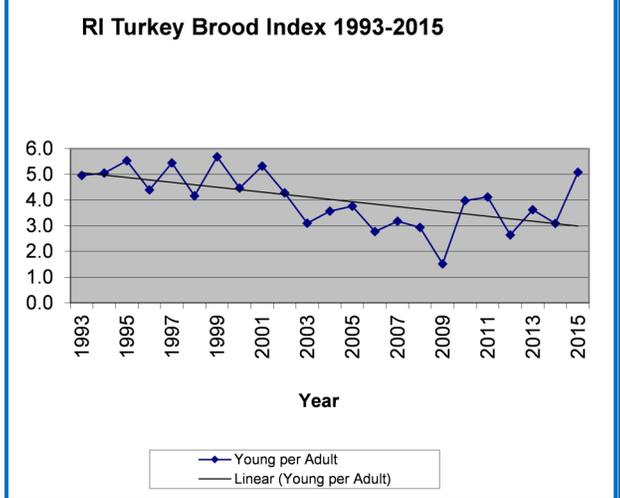


Fig 1- annual productivity of the state's turkey flock shows declining trend based on turkey brood index

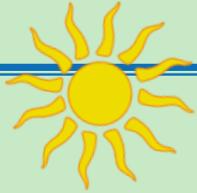


Two male turkeys display for the females by spreading their tail feathers. Photo courtesy of B. Tefft

This information is used to develop a brood index, the number of young per adult hen observed. The brood index is monitored over the years and shows the breeding season success rate in a particular year. Ultimately the index helps biologists develop an estimate for the overall turkey population. The turkey population in RI has shown a trend of decline over the past five years and while the exact cause(s) are unknown, it is speculated that a variety of factors may be acting together to limit wild turkeys including habitat issues, predators and weather. Weather-related factors and predators can dramatically affect productivity in ground-nesting birds like wild turkeys. Warm, dry weather favors the survival of turkey poults, while cool and rainy conditions in early summer can reduce young survival.

In Rhode Island, the average long-term brood index is 3.3 young per adult. This simply means that if a hen turkey lays 10 eggs, only 3 young reach adult size. Several consecutive years of low productivity may not sustain the population and local scarcity can result. This may be disputed by some who see large flocks of turkeys in your neighborhoods. We have observed these flocks hanging out at bird feeders in more urban communities, where birds may actually be protected from some forms of natural mortality and take advantage of food handouts given by locals. This is something that the Division recommends against as it can cause nuisance wildlife issues. In 2015 the statewide brood index was 5.1 young per adult, an above average production rate, which may help the wild turkey population to rebound.

The wild turkey is a wildlife management success story. A native bird that was once extirpated from Rhode Island is now back in its natural place within our forests. Hunters now enjoy a limited spring and fall hunting season and the public can marvel at these magnificent birds. The turkey is part of RI's natural and cultural heritage; a charismatic species that historically helped sustain our ancestors with food. It is part of the DEM's mission to keep up with this species to ensure that it survives and thrives in RI for future generations to enjoy. To report wild turkey brood sightings, hens with or without broods, you should note: **date, location, total number of adult and young turkey, size and behavior seen**. Reports can be submitted online at www.dem.ri.gov and at: <http://goo.gl/forms/7D3UsoH2af>.



SUMMER CALENDAR OF EVENTS

JULY

16th: Archery Day at the Kettle Pond Visitors Center in Charlestown. Come learn about archery hunting in Rhode Island. Register by emailing Scott.Travers@dem.ri.gov

20th: Family Fun Day, 6 PM at Champlin Scout Reservation, 223 Scituate Avenue in Cranston. Event held as part of the Great Outdoors Pursuit.

22nd: Bioluminescence Night at the Aquarium, 5 p.m. to 9 p.m. at Beavertail State Park in Jamestown. For information, contact Terri Bisson at 222-4700 ext. 4402. Event held as part of the Great Outdoors Pursuit.

24th: Governor's Bay Day. Free parking and events at RI State Beaches.

AUGUST

6th: White Tailed Deer hunting seminar at the Hunter Education office in Exeter. Learn all there is to know about deer hunting in RI. Register by emailing Scott.Travers@dem.ri.gov

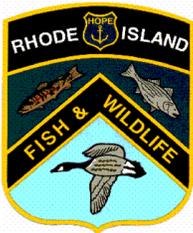
7th: Land Navigation (GPS) course. A one-day introductory class on GPS technology orientation. Register by emailing Scott.Travers@dem.ri.gov

28th: Archery proficiency test at Tiverton Rod & Gun Club. To register please email Scott.Travers@dem.ri.gov or call 401-539-0019

For more fun, outdoor events please go to: <http://www.dem.ri.gov/events>



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