Rhode Island Department of Environmental Management Division of Fish and Wildlife Annual Wildlife Report 2020



White-tailed deer fawn(Dean Birch)

Protect | **Restore** | **Manage**

The Division of Fish and Wildlife (DFW) serves as a resource for hunters, anglers, hikers, mountain bikers, wildlife watchers, municipalities, legislators and the public as a whole.

The DFW protects, restores and manages the wildlife resources of the state. Sharing management responsibility of more than 60,000 acres of land with the Division of Forest Environment, we are responsible for thousands of wildlife species. In addition to our other duties (e.g., research and management), we are responsible for the State's public hunter education programs and overseeing all hunting and trapping, which is an integral component to our revenue stream.

The DFW is primarily funded through the Federal Wildlife and Sport Fish Restoration Program, which is administered through the U.S. Fish & Wildlife Service. This program uses taxes placed on firearms, ammunition, and archery equipment to help fund fish and wildlife research and conservation programs, habitat acquisition, and outreach and education programs.



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A Message from the Deputy Chief

At the Rhode Island Division of Fish & Wildlife, resiliency and innovation were the key to success during this difficult year. Adapting to working apart while remaining a team allowed us to continue to collect valuable data on our native wildlife without interruption.

With the help of Survey123, several new citizen science opportunities have come to fruition, giving residents across the state the ability to participate in data collection for deer, turkeys, reptiles and amphibians. The timely introduction of these independent surveys provided new observations to our biologists and an outlet to our dedicated volunteers during this otherwise stagnant year.

A new appreciation for our natural resources developed as Rhode Islanders flocked to State Management Areas to seek refuge from long days inside, further strengthening our need for wild spaces. The popularity of food independence grew, and our hunter education staff saw a greater interest in hunting as trends shifted toward harvesting meat locally.

While 2020 seemed destined to hold us back, instead Division staff and volunteers overcame all obstacles and thrived; they deserve a great deal of thanks for their perseverance and ingenuity. This year proved that when all else



fails, we turn to nature. This truth is what fuels us to protect, conserve and restore Rhode Island's natural resources now and for generations to come.

Jay Osenkowski Deputy Chief - Wildlife



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

Tillinghast Management Area (Mike Stultz)

Adapting Citizen Science Opportunities During COVID-19

This year, many of us were disappointed by the cancellation of group and social events. Many of our volunteer opportunities at the DFW involve working with a group and connecting with others. Our volunteers are incredibly dedicated, and the generous gift of their time not only assists with various projects, but also provides our conservation programs with critical federal match funding. To keep up this important volunteer work and stay connected with our volunteer network, we got creative!

This year, we launched three citizen science data collection opportunities using the free smartphone app Survey123. Volunteers simply downloaded the app and submitted incidental observations of wild turkey, whitetailed deer, and reptiles and amphibians from anywhere in the state. Observations are entered into a secure database monitored by our biologists, and statistically analyzed. Citizen scientists make it much easier to collect a large amount of data in short period of time. This data was used to estimate wild turkey brood productivity, deer fawn recruitment, and the distribution of the state's various reptiles and amphibians.

We plan to continue the use of these citizen science surveys in the future, and extend our thanks to the many Rhode Islanders who participated! It is our hope that being a part of these collaborative data collection projects helped folks feel connected and proud to assist in the conservation of our state's wildlife.

Learn more about submitting wildlife observations at <u>dem.ri.gov/reportwildlife</u>.

er Management Area (Mika



WILD TURKEY SURVEY

GOALS: Document brood index over time 2020 RESULTS: A total of 328 observations were submitted this year. The brood index for this year was estimated at 3.78 poults per hen. Overall, the brood index depicts good survival during the spring of 2020 and is above the ten-year average (3.3 poults/ hen). Long term trends (1993-2020) in the brood index show a significant decline while in recent years (2004 to 2020) trends have stabilized



SUMMER DEER SURVEY GOALS: Document fawn recruitment index and buck to doe ratio over time 2020 RESULTS: A total of 411 observations were submitted. Observations were submitted from all cities and towns except for Central Falls, Warren, and Newport. Volunteers observed 540 does, 328 fawns, and 99 bucks. This year's data resulted in a fawn recruitment rate of 0.6 fawns per doe and the doe to buck ratio of 5.4:1.



HERP OBSERVER

GOALS: Document distribution of reptiles and amphibians across the state, identify potential new populations of Northern diamondback terrapin in RI 2020 RESULTS: A total of 564 observations were submitted, with 34 species documented. We also used Survey123 to pilot diamondback terrapin volunteer data collection. There were 5 regular volunteers that contributed regular observations from about 20 sites sites over an 8 week period. We documented terrapins at 15 new sites throughout the state.

State Land Conservation Expansion in Tiverton

In 2020, DEM acquired the 148 acre Mandros property in Tiverton, abutting DEM's 120-acre Tiverton Rod & Gun Club property. The East Bay has few opportunities for public recreation and hunting. The Tiverton Rod & Gun Club acquisition in 2012 helped to alleviate this problem, and this new acquisition will more than double the size of the publicly accessible hunting ground.

The property consists of forested habitat with a stream, a wetland complex, and several stone walls. The forest graduates through three forest types - from a younger black and red oak canopy with a huckleberry, princess pine, and bracken fern understory, to a red maple canopy with a spicebush understory, and then to a more mature white oak, holly and hemlock canopy with a thick understory of mountain laurel. The wetlands on the property are part of the larger "Great Swamp", which, at 400 acres, is one of the two largest remaining forested swamps in eastern Rhode Island. This forested wetland lies adjacent to an unfragmented block of wetland and forest habitat that is approximately 2,000 acres, and itself a focus of great conservation interest.

Aside from increasing recreational and hunting opportunities, the acquisition of this property will benefit game and non-game species alike by increasing habitat connectivity on the East Bay. In the face of climate change and land use changes, it is critical to conserve places like the Mandros property in perpetuity for our wildlife.



New Resources for Educators

This year, DFW Wildlife Outreach staff developed a series of educational resources for K-8 educators, organized thematically into kits. "Rhody Critter Kits" contain lesson plans, activities, videos, hands-on learning materials, and other resources curated by Wildlife Outreach staff, with special emphasis on Rhode Island's wildlife species, conservation work, and management practices. A total of five kits have been developed, three of which are currently available for educators to access.

Materials were developed and selected to correlate to the Next Generation Science Standards. Kit topics include bats, birds, reptiles and amphibians, wildlife habitat, and conservation through the careful management of wildlife. As a precaution to prevent the spread of COVID-19, the Wildlife Outreach Program will not be lending out the hands-on kit containers for the 2020-21 school year, but all other materials will be accessible on the Wildlife Outreach Program webpage.

The kits have been designed to connect students to the wildlife resources right in their own backyards and communities, as well as spread awareness about wildlife conservation work in the state. Resources and suggestions on how teachers and students can get involved and help wildlife right in their own schoolyards, backyards, and communities are also included.

Post-COVID, Wildlife Outreach staff plan to host fun, hands-on workshops on each kit, providing educators with experiential learning opportunities they can bring back to their students.



A New Way to Connect: Podcasting!

During summer 2020, the Hunter Education Program began developing the idea of hosting a podcast to provide content outlining educational programming, research efforts, and other topics related to the Division of Fish and Wildlife, as well as to build a following of listeners. After some research, planning, and troubleshooting, the "InFAWmation Nation" podcast was launched!

In fall of 2020, the first episode of InFAWmation Nation went live and is currently available on the Division of Fish and Wildlife's social media platforms as well as several external providers such as Podomatic, Spotify, Apple Podcasts, Deezer, and Amazon Music.

Each episode averages 90 views on Podomatic alone. Statistics from the other sites are not available at the time of this report, but we have plans to track the growth of our listener base.

Future podcasts will include interviews with Division of Fish and Wildlife staff and others, highlighting information pertaining to hunting, fishing, and wildlife outreach opportunities in the community.

Check out InFAWmation Nation on your favorite podcast app, and help us spread the word about this new resource! Do you have a topic you'd like to learn more about? Email Scott.Travers@dem.ri.gov to share your ideas!

Not familiar with podcast apps? <u>You can also</u> <u>listen to each episode on the RIDEM's You-</u> <u>Tube channel.</u>



Monitoring Deer Population Health

DFW staff would like to thank all the successful hunters who checked their deer during the first four days of muzzleloader season in November. The warm weather didn't stop hunters from getting into the field and harvesting some great bucks! At deer check stations, we collect critical biological data such as age, weight, sex, and antler beam measurements. Each year, we conduct disease surveillance for Chronic Wasting Disease, a devastating disease that affects deer, moose, and elk. In 2020, we also began monitoring for Eastern Equine Encephalitis (EEE). Disease monitoring and basic biological data help to inform future management decisions to support a healthy, sustainable deer population in RI.

This year, we obtained and processed 235 deer blood samples for EEE serology. Collection, transporting and processing these samples was no small undertaking, involving staff from DFW, RI Department of Health, and RIDEM's Division of Agriculture. Hopefully, when these samples are analyzed, it will help us focus testing resources and strategies on areas that were previously thought to not have significant EEE activity. Sampling these deer will give us a valuable snapshot of where this virus was active in the previous several years along with having some inference on the species of mosquitoes in that area since not all mosquito species are likely to transmit the virus from a bird to a mammal. This is just one example of how our work intersects and supports the research and goals of other State agencies, and how wildlife conservation affects the health and well-being of RI's residents.



Operation Spadefoot

The Herpetology Program spent significant time this summer conducting eastern spadefoot toad (*Scaphiopus holbrookii*) surveys in targeted areas throughout the state. Biologists and a number of student volunteers visited 16 different sites, using historic records, soil type, and the presence of freshwater wetlands to steer site selection. These nighttime surveys rely on a method known as eye-shining – scanning the ground after sunset with a powerful headlamp to detect the glare from the eyes of the toads.

Eastern spadefoot toads are Rhode Island's only state endangered amphibian. Exceedingly few historic records exist for the species, and prior to this year's effort, spadefoot toads have been documented at only a few locations in Charlestown and Richmond within the last decade. Though they are always easy to miss because they are active at night and breed in very short time windows, the species was once more widespread, even occurring in Providence and the surrounding suburbs. The filling of vernal pools, pesticide use, and road mortality have all contributed to declines.

Results from this year's surveys confirm the rarity of the species, but do offer some hope for future conservation. Of the 16 sites surveyed, only 2 contained toads. One distressing feature of the survey results was that no spadefoot toads were detected at a number of sites with recent historic records. However, surveys did identify a previously unknown population in Westerly. Preliminary data collected at this site suggests it is a robust population that has bred successfully in recent years. The DFW will work with local stakeholders to ensure its sustained success. We are also working with a number of conservation partners, including URI and Roger Williams Park Zoo, to design and construct wetlands specifically for spadefoot toad breeding. That project is set to break ground in 2021.



Collaborating for Cottontails

The New England cottontail (NEC) is native to the Northeast and was recently a candidate for listing under the Federal Endangered Species Act. Potential causes for NEC decline include loss of young forest habitat, predation, and competition with the non-native Eastern cottontail. Locally in Rhode Island, NEC have dramatically declined in distribution and abundance since the 1980s. Currently, the NEC is listed in RI as a Species of Greatest Conservation Need and is the focus of a large coordinated effort to conserve the species. DFW staff have partnered with United States Fish and Wildlife Service, Roger Williams Park Zoo, Queens Zoo, and other state wildlife agencies in the Northeast to work collaboratively to keep this species on the map. Since 2012, a to-tal of 84 rabbits have been released on Patience Island to support a wild founder population in the region, relatively safe from predation. Rabbits have been translocated to Great Swamp Wildlife Management Area and surrounding states to create new and support existing populations in the region.

Although the COVID-19 pandemic affected the release of captive-bred NEC on Patience Island, Ninigret National Wildlife Refuge, and Great Swamp, the 2020 winter pellet survey was still able to be completed. This survey involves searching for rabbit fecal pellets, which are then sent the University of Rhode Island's Wildlife Genetics and Ecology Lab for analysis. During 2020 surveys, reproduction was documented for the second time at Great Swamp, with 5 new individual rabbits identified. At Ninigret, reproduction was also documented, along with 2 new individuals identified. In 2019, 14 GPS-collared rabbits were translocated to Ninigret; 9 individuals survived longer than the battery life of their collars.

Collaborative efforts will continue into the future to safeguard our native rabbit species!



On the Horizon

As 2020 draws to a close, we have many new and exciting ventures on the horizon! Already in their early stages, we have two partner projects with the University of Rhode Island focused on mammals. One study will examine semi-aquatic mammal distribution and habitat preference in Rhode Island. The other will gain information on fisher populations through radio-tracking and provide insights into the range, demographics and habitat selection of this elusive species.

Beginning this winter, our waterfowl program will shift focus from American black duck to mallard banding, in conjunction with the rest of the Atlantic Flyway.

We are thrilled to announce, after 4 years of data collection and the long process of compilation, analysis and editing, the Rhode Island Breeding Bird Atlas 2.0 is on track to be released in 2021! This cooperative project with the University of Rhode Island reveals the changes in breeding birds in the state since the first Atlas was completed, over 30 years ago. Volunteers and researchers worked together to collect the data for this amazing publication which will provide a clear picture of the distribution and abundance of breeding birds in Rhode Island.

We anticipate new and positive changes to occur in 2021 and beyond. Currently, we are engaged in an all-encompassing external review of our Division. This review was solicited by our Division and aimed at taking a holistic approach at our functions, responsibilities, and structure. It is our intent to closely examine our responsibilities and implement new strategies that will ensure we are pragmatically managing the natural resources in our state and sustainably maximizing opportunity for all to enjoy. We are looking forward to all the new changes 2021 will bring and are proud to continue to support the beautiful natural resources Rhode Island has to offer!



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Our Partners U.S. ISH & WILDLIFI SERVICE NTIC FLY **O**NR **Audubon Society** of Rhode Island RHODE ISLAND The Nature Conservancy The Conservation DUCKS Agency NATURAL HISTORY SURVEY ding Ecosystem Science and Infor UNLIMITED







