

Rhode Island Department of Environmental Management

Division of Fish and Wildlife

Annual Report 2024



DEM
RHODE ISLAND



Eastern Whip-poor-will and chick, Megan Gray

**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.**



RI DFW FIELD HEADQUARTERS

277 Great Neck Road, West Kingston, RI 02892
401-789-0281 | DEM.DFW@dem.ri.gov

RI DFW EDUCATION CENTER

1B Camp E-Hun-Tee, Exeter, RI 02822
401-539-0019

A Letter from the Division Chief

Welcome to the RIDEM Division of Fish and Wildlife's annual report for 2024! Over the past year, we have accomplished an enormous amount of work, with only a small sampling highlighted in this report. Numerous fish and wildlife research projects were completed throughout 2024, including the completion of a 3-year telemetry study partnership with The Nature Conservancy on river herring migration throughout the Saugatucket River. In addition, over 400 Saltmarsh Sparrows were captured and marked in an effort to gain a better understanding of survival, productivity, and dispersal of this high priority Species of Greatest Conservation Need (Saltmarsh Sparrow Research Initiative). This past year was also the conclusion of a 5-year cooperative effort with the University of Rhode Island that has revealed a significant decline in Rhode Island's fisher population. This adaptive harvest management approach directly resulted in a regulatory action reducing the season bag limit to ensure sustainability of the species.

The Division continues to work on fish and wildlife habitat improvement projects. Significant highlights for 2024 include the completion of prescribed burns, performed in collaboration with the Division of Forest Environment, on 130 acres at five management areas. Prescribed fire is a valuable management tool that can be applied to maintain and restore the condition and function of various ecosystems such as forests and grasslands, as well as to reduce wildfire risks through fuel reduction. In addition, the Division continued work on several coastal habitat restoration projects which are currently in various stages of planning, permitting, and/or preliminary design phases. These projects will improve habitat conditions at six sites for Saltmarsh Sparrows, waterfowl, and other wildlife species, as well as enhance the overall quality, integrity, and resiliency of various coastal upland and saltmarsh habitats. The Division also worked in partnership with Ducks Unlimited to restore the Durfee Hill Marsh and Nye Marsh impoundments through the replacement and/or repair of the associated water control structures. Both structures had malfunctioned due to beaver damage, resulting in a reduced ability to manipulate water levels to create desirable waterfowl habitat. Ducks Unlimited provided engineering and construction management services for the Division, with the work being successfully completed at the end of October. Our aquatic habitat restoration staff continued efforts to improve fish passage throughout the state, on both coastal and inland river habitat restoration projects.

The Division continued its efforts to educate Rhode Islanders about its wildlife and conservation efforts, engaging 1,190 residents through wildlife outreach events and reaching over 1,000 students through Rhody Critter Kits – a collection of free educational resources for K-5 educators that contain lesson plans, activities, videos, and hands-on learning materials. Our Volunteer Program engaged dedicated volunteers who contributed over 23,000 miles and 6,393 hours of service in 2024, representing an in-kind value of \$122,543 in support of our wildlife and fisheries conservation efforts. DFW's Aquatic Resource Education (ARE) program hosted over 160 programs with over 8,000 participants, also hosting the national ARE Association biennial conference in Newport with over 80 participants from 32 states and 2 territories. In 2024, the Division stocked over 127,000 trout and salmon into 87 water systems throughout RI. The National Archery in the Schools Program (NASP) engaged 1,017 students across 11 RI schools to promote archery skills.

The Great Swamp Shooting Range was utilized throughout the open season, and we continued our partnerships with the Matt Light Foundation and Ducks Unlimited for our mentored youth turkey and waterfowl hunts. Both were a great success, resulting in some harvested game and lots of smiles and memories!

As in past years, DEM worked on acquiring new land for hunting, fishing and conservation activities, and one example of this is the newly acquired Boy Scouts Buck Hill Property. The conservation of the 942 acres of forested land in Burrillville will be opened for public recreational use, including hunting and fishing. The \$1,610,000 purchase price for the property was funded through \$1,207,500 from the USFWS Wildlife Restoration Program and through the \$301,250 National Fish and Wildlife Foundation grant, with a \$101,250 match from State Bond funds. The conservation of this large Rhode Island property provides critical connectivity between the over 4,000-acre George Washington Management Area and Pulaski State Park to the south, the 2,220-acre Buck Hill Management Area to the north, as well as a large tract of conservation land in Connecticut to the west, and the Douglas State Forest to the north in Massachusetts, resulting in a total contiguous protected area of over 13,000 acres.

Two additional highlights for 2024 include the construction of a new state-of-the-art 5,000 sq. ft. maintenance facility at the Division of Fish & Wildlife's Great Swamp Headquarters that is being utilized by the development staff who maintain the Division's management areas, fishing access areas and boat ramps statewide. Staff from the Division's Development Program participated in project design and general construction oversight. Overall project management was performed by the RIDEM Division of Planning and Development. In addition, the Main Street Boat ramp renovations and bank stabilization project on the Pawcatuck River in Westerly was completed. This is a very popular boat ramp and allows anglers and boaters access to the Watch Hill area and Block Island Sound.



I hope you find the 2024 annual report informative, and I encourage everyone to participate in Rhode Island's outdoor activities whether it's fishing, hunting, hiking, or boating!

Phil Edwards

Year in Review

DEM DIVISION OF FISH & WILDLIFE FUNDING BY SOURCE

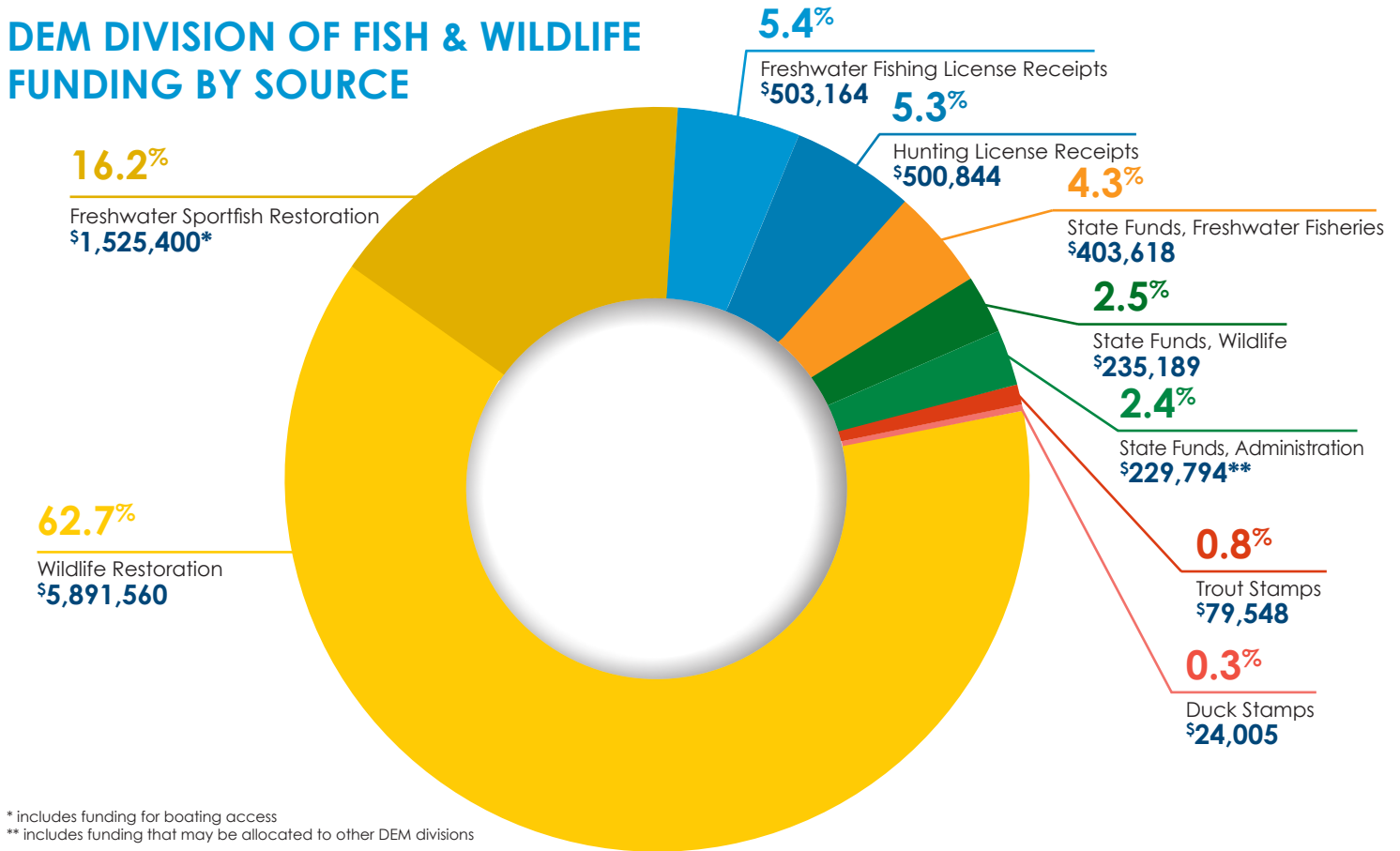


PHOTO: ROBERT POS.

OUTDOOR LICENSE SALES (2023-2024)



HUNTING LICENSES SOLD

Resident Hunting License **4,355**
Non-Resident Hunting Licenses **1,492**
Resident Hunt/Fish Combo **2,815**



ALL HUNTING LICENSES
FEBRUARY 1 TO JANUARY 31

8,662



RESIDENT FRESHWATER
FISHING LICENSES
MARCH 1 TO FEBRUARY 28

16,453



TURKEY PERMITS

1,934



STATE DUCK STAMPS
2023/2024 LICENSE YEAR

1,798



TROUT STAMPS
MARCH 1 TO FEBRUARY 28

13,799



UPLAND GAME PERMITS

1,496



DEER TAGS

19,960

PHEASANT ART: GABRIELA PALOMO-MUNOZ.

Outdoor Education & Volunteer Programs

Program data may fluctuate due to differences in reporting periods, such as fiscal year or calendar year. Variations in data can occur as a result of the timing and duration of these reporting periods, which may not align consistently across all programs or data sets.

AQUATIC RESOURCE



CLASSES
166



HOURS SPENT
2,562



PARTICIPANTS
8,373



VOLUNTEERS
~300



IN-KIND MATCH
\$125,398

HUNTER EDUCATION



CLASSES
46



HOURS SPENT
1,610



PARTICIPANTS
1,279



VOLUNTEER INSTRUCTORS
47

WILDLIFE OUTREACH



PROGRAMS
26



STUDENTS
1,077



HOURS SPENT
66



TOWNS
31



PARTICIPANTS
1,190

VOLUNTEER PROGRAM



PROJECTS
27



MILES
23,415



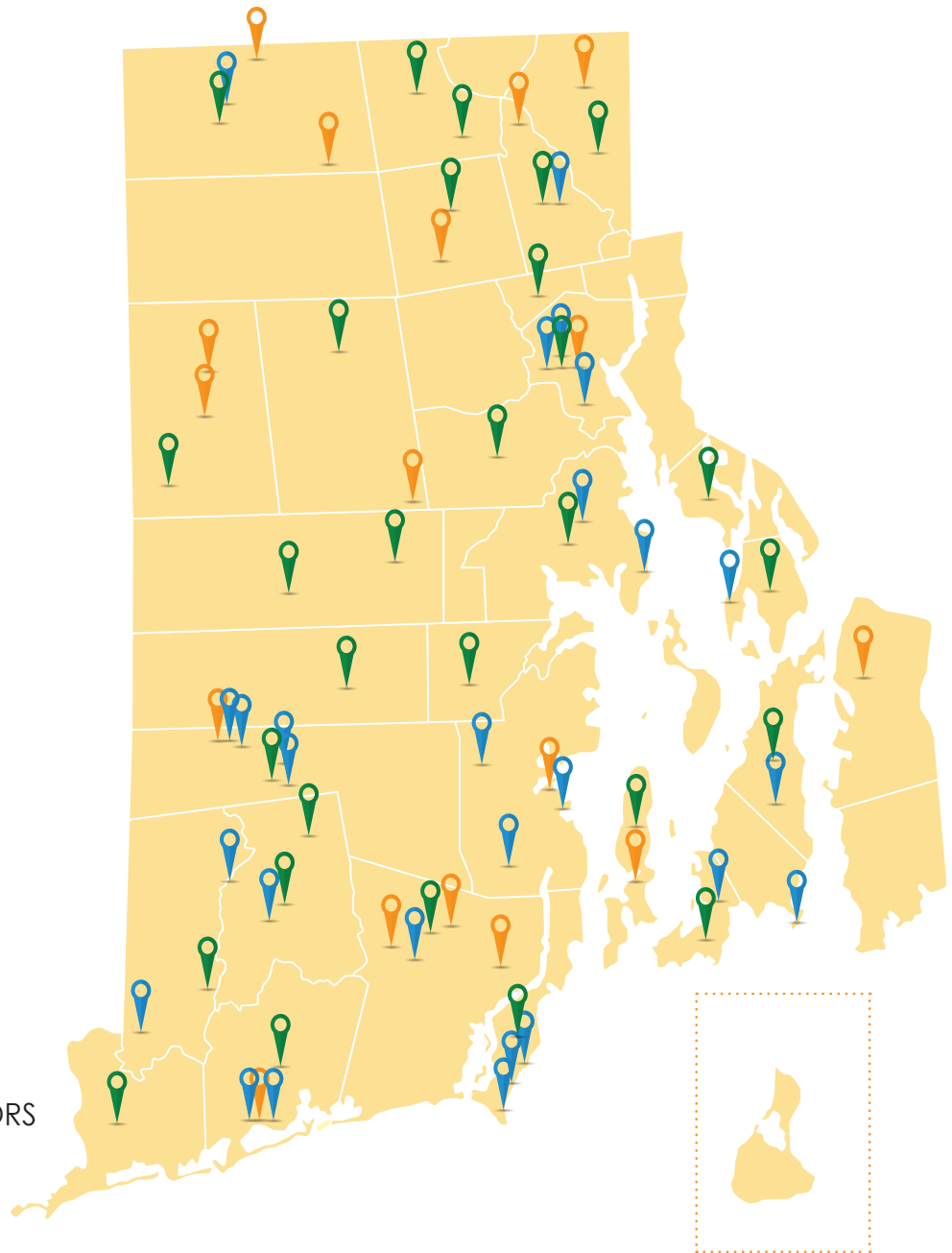
HOURS SPENT
6,393



IN-KIND MATCH
\$122,543



VOLUNTEERS
225



Our Division consists of...

27 State Full-time Employees

16 Contract Full-time Employees

22 Seasonal Employees

572 Volunteers



We are immensely grateful to our partner organizations, volunteers, and Rhode Island's sportsmen and women for your support and assistance. Without you, we would not be able to accomplish our work in stewarding our state's fish and wildlife species, protecting critical habitats, and educating the public. Thank you!

Gray squirrel, Dean Birch



Big Changes in the Beaver River: Sometimes Mother Nature is on Our Side!

By Corey Pelletier, Fisheries Biologist



In 2021, RIDEM Fish and Wildlife changed the regulations for the Beaver River, designating the river as catch-and-release only and removing it from the list of trout stocked waters. These changes were implemented to further protect the wild Brook Trout population in the river, addressing added pressures from competition with stocked trout for food and habitat resources, and angler harvest. Despite these protections, wild Brook Trout in the system still experience natural stressors that influence their growth and survival. Being a cold water-dependent species, they typically inhabit streams that have significant groundwater contribution, which help to maintain cold water temperatures. This is in part the case in the Beaver River, but because the river's origins begin as a series of ponds, water temperatures become very warm during summer months. Ponds act as thermal sinks, or large areas of surface water that collect solar radiation, which heat water much more than a flowing stream channel. Therefore, groundwater contribution in a stream channel is often not sufficient to mitigate the effects of warm pondwater outflow on a hot summer day. Summer water temperatures often become well above the tolerable threshold of wild Brook Trout, forcing them to move and find suitable habitat. The Beaver River is no exception to this.

This brings us to one location in Richmond, RI, where the Beaver River runs through—the Beaver River Preserve—owned and managed by The Nature Conservancy. Within

this approximately 270-acre preserve, a pond existed by means of an earthen dam—until 2023. During a high precipitation storm event in December of 2023, high flows burst through the dam at the Beaver River Preserve, eliminating the storage of water in the ponded area. This allowed the Beaver River to return to its natural channel, leaving mud flats with the exposed rhizomes of aquatic vegetation.

After some review of historical aerial imagery, the story of the pond at the Beaver River Preserve was not as it seemed. From the earliest available imagery of the area (1939 Aerial Photographs, RIDEM Environmental Resource Map), there was no pond at the site despite the presence of the earthen dam. This indicated that the dam had likely been built in the previous century and used as a source of power generation for a mill, like the history of many other Rhode Island dams. But sometime prior to 1938, the dam was breached either by human hands or naturally. In the following years of imagery, no pond can be seen. That is until the early 1980s when the first stages of a pond began to form again. From the 1980s through 2020, imagery indicates the pond continued to grow. Interestingly, the return of the pond coincided with the recolonization of beavers in the 1980s. The section of dam that blew out in 2023 consisted of 40+ years of material from Mother Nature's engineer, the beaver!

Impoundment in December 2023, within a week after the dam had breached

In the broader picture, this natural process completed the work for conservation organizations working to restore cold water habitat, healthy fish populations, and clean water. Freshwater ponds and lakes are abundant throughout Rhode Island, most of which were created in the 19th and 20th centuries for mill power, flood retention, and recreation. Unfortunately, many of these human-created waterbodies negatively affect the ecosystems downstream by way of altering fish communities, introducing excessive nutrients, and promoting conditions that allow invasive species to flourish. Furthermore, dams act as barriers within stream and river networks, restricting upstream movement for fish and other aquatic animals. This can cause significant impacts to populations, limiting the ability of fish to access habitats necessary for spawning, feeding, and relief from high water temperatures and flood events. With that being said, the value of lakes and ponds across the state vary considerably. Natural resource managers and conservation groups are currently focused on identifying human-built dams which negatively impact cold water streams and serve little function in the way of property value, recreation and other ecosystem functions. This was the case with the pond on the Beaver River Preserve. Based on years of monitoring conditions at this site, water temperatures became elevated throughout the summer months, negatively impacting the population of wild Brook Trout and other aquatic organisms downstream.

Now that the dam is gone, a perfect opportunity for monitoring the post-removal condition arises. RIDEM, The Nature Conservancy, and the Wood-Pawcatuck Watershed Association began collecting a wide range of data on the fish community, water temperature, plant community, macro-invertebrates and more. We have also brought in help from URI's Freshwater Wetlands class to conduct a long-term study on the macro-invertebrate community. This will be important to assess how dam removal affects the community of underwater insects that serves as the primary source of food for fish and other animals in the river.



Impoundment in July of 2024, where you can see how new vegetation blankets the areas previously submerged

I may have left you wondering where the beavers went. Well, they are still there and have relocated their water storage engineering to the east, impounding a small tributary which flows into the river. This has allowed the Beaver River to remain free flowing. The topic of beavers can be a controversial one, given the problems that they can cause for roadway infrastructure, among other things. Beavers are native to the landscape and fulfill important roles in the ecosystem. As with many other species coexisting on the same landscape with us humans, we must carefully manage them when issues arise, but allow them to carry on with their natural functions on the landscape.

For now, this natural transformation of the Beaver River back to its free flowing, pre-settlement condition is a welcome change. Moreso, it provides us with a case study to better understand changes to a river when a dam is removed. As you can see from the photos, the mud flats don't last long and new terrestrial life takes over almost immediately, transitioning the drained area to a flourishing grass meadow within the first growing season. We are eager to continue our monitoring and see what happens next. Stay tuned for future updates and take a hike at this beautiful preserve to see the change yourself!

RI Wild Bee Survey & Pollinator Atlas Updates

By Toby Shaya, Pollinator Atlas Entomologist



The southeastern blueberry digger bee, one of this year's Pollinator Atlas discoveries

As we reflect on the past year, I would like to highlight some of the work done with the smallest critters under our Division's purview – native bees! Here at the Rhode Island Division of Fish and Wildlife, we have been surveying these pollinators for three years, coordinating two volunteer-led surveys. This year marks the last year of our Rhode Island Bumblebee Survey and the first full-scale year of our Rhode Island Wild Bee Survey.

Over the past fifteen years, the public has become much more aware of the importance that native pollinators for our landscapes and agricultural food systems. Since 2006-2007, when non-native, managed honeybee populations were threatened by Colony Collapse Disorder, there has been increased attention given to the stunningly diverse community of native bees, wasps, flies, moths, and other pollinating insects that can be found in the United States, including ~4,000 species of native bees. Statewide survey efforts have

greatly contributed to this specific knowledge of bee biodiversity in the US. Here in Rhode Island, DFW, along with regional partners like the University of Rhode Island, Providence College, Rhode Island Natural History Survey, and others, have taken up the mantle of developing a statewide Pollinator Atlas, with the first focus on bees. We have documented 250+ bee species, but are confident we can get this number up to 300+ species, which would be a great accomplishment for Rhode Island. However, this work cannot be done by biologists alone. By recruiting volunteers and working with regional partners, we are increasing our survey coverage throughout the state and building a network of community scientists invested in pollinator conservation.

This year, 20 volunteers conducted monthly surveys of bumblebees at 21 sites, and 6 volunteers conducted surveys for wild bees at 7 sites throughout the state. As we look ahead to 2025, we are hoping to greatly increase that number for our Rhode Island Wild Bee Survey. From Burrillville to Block Island, Pawtucket to Little Compton, we are casting a wide net for folks to lead the way in expanding our knowledge of the state's bee fauna.

2024 was also a transition year for the Pollinator Program here at DFW. In March of this year, I took the helm of the Pollinator Atlas Entomologist position, formerly held by Katherine (Katie) Burns. Katie did extensive work to develop the Rhode Island Bumblebee Survey and Wild Bee Survey that laid a solid foundation for me to continue these projects. In addition to acquainting myself with the agency and forming relationships with our volunteers and partners, I was able to get out into the field this year, conducting monthly surveys at eight sites and visiting many more. This work resulted in the addition of at least one new species to Rhode Island's bee fauna – the southeastern blueberry digger bee – *Habropoda laboriosa*. This species likes to nest in sandy soil and specializes on spring-blooming blueberry plants. I found this species at three confirmed locations, two in Washington County and one in Kent County. As I process specimens that volunteers and I collected this year and continue to survey next year, finding more species like this one will help us better understand how different bees are linked to rare or threatened habitats like coastal grassland, pine barrens, cedar swamps, and wet meadows. Designation of Species of Greatest Conservation Need (SGCN) will allow us to link pollinator conservation with habitat management, furthering DFW's mission of conserving lands for biodiversity.



Bee wrangling in action! Toby conducting a survey at Napatree Point

RI Division of Fish and Wildlife Hosts First Book Signing Event

By Melissa Curry, Administrative Assistant

On a beautiful September evening, the Rhode Island Division of Fish and Wildlife (DFW) hosted our inaugural book signing event at the charming Louttit Library in West Greenwich. This event celebrated the latest addition to the DFW collection, *Reptiles of Rhode Island*, bringing together local authors, wildlife enthusiasts, and community members for a night filled with conversation, connection, and desserts!

The library's community room, decorated with colorful bouquets of flowers from our Wildlife Outreach team's home gardens, buzzed with excitement as attendees had the opportunity to meet and interact with several authors from DFW's publications. Among the featured guests was Christopher Rathiel, the author of both *Amphibians of Rhode Island* and the newly released *Reptiles of Rhode Island*. His presence drew many local wildlife lovers eager to learn more about his work and the fascinating creatures of the Ocean State.

In addition to Rathiel, the evening welcomed notable figures in the realm of wildlife literature, including Virginia A. Brown and illustrator Nina Briggs, who collaborated on the book *Dragonflies and Damselflies of Rhode Island*. Long-time DFW fisheries biologist Alan Libby, author of our first publication, *Inland Fishes of Rhode Island*, also joined the gathering, making it a remarkable occasion for book signings and discussions. Deputy Chief of Wildlife Jay Osenkowski, and University of Rhode Island professor Dr. Peter Paton chatted with attendees about the large collaborative publication *The Second Atlas of Breeding Birds in Rhode Island*.

With several copies of each publication available for purchase, the event offered a perfect opportunity for attendees to enhance their personal collections and engage in meaningful conversations about Rhode Island's unique biodiversity. As guests savored delicious desserts and coffee, they mingled with like-minded individuals, creating an atmosphere of camaraderie and shared interest.

The turnout and enthusiasm for the event were overwhelming, leading to numerous inquiries about future book signings. While initially planned as a one-time affair, the positive response has inspired the DFW to consider organizing another event in the near future. Our staff sincerely enjoyed organizing this delightful gathering for our amazing authors and community!



DFW staff and authors smile for the camera!



From left to right: Christopher Rathiel, Virginia Brown, Alan Libby, Nina Briggs, Jay Osenkowski



Learn more about DFW's publications and order your own copies at www.dem.ri.gov/bookorder.

Wild Turkey Banding

By Lizzi Bonczek, Upland Game Bird Biologist

The wild turkey restoration effort is considered one of America's greatest wildlife conservation success stories. Loss of habitat coupled with overharvest resulted in the steep decline of turkeys, and even extirpation in parts of their range by the late 1800s. Following success in other states, the reintroduction of turkeys to Rhode Island in 1980 and the mid-90s resulted in the population we see today. According to state surveys, it appears the Rhode Island turkey population is stable. However, these data reflect population trends, or the general direction of change rather than exact numbers.

To better understand turkey population changes and what drives these fluctuations, Rhode Island Division of Fish and Wildlife initiated an annual turkey banding program in spring 2024. We capture turkeys on both public and private land using rocket nets, which are nets propelled by explosives that shoot out over the flock and trap them. Once captured, we mark each bird with a metal leg band with a unique identifying number and release individuals in the same location in which they are captured.

The public can encounter these banded individuals in a variety of ways and all banded turkey encounters are important to biologists. Encounters can occur by harvesting a banded turkey or finding a dead banded turkey, but also by observing a live banded turkey (also called a re-sight). Additionally, biologists may re-capture banded individuals in subsequent years during turkey banding operations. The mix of encounters allows biologists to estimate harvest and survival, and gain insight into local movements. Following our first year of banding, hunters reported harvesting 8 banded turkeys. One of these individuals traveled a minimum of 6 miles from the banding location to where he was harvested. Movements like that are likely due to following or looking for hens during the breeding season. We hope to continue turkey research in the future to explore topics such as nest survival, nest site selection, brood survival, and movements to gain a deeper insight into the drivers of our local turkey population dynamics.

The leg bands used on turkeys are similar to those deployed on migratory birds, such as waterfowl and mourning doves. Because turkeys are non-migratory, they are managed on a state-level as opposed to a federal level and therefore band recoveries are reported differently. We ask that anyone who encounters a banded turkey report it to Rhode Island Division of Fish and Wildlife by either calling the Great Swamp Headquarters at (401)789-0281 or reporting the band online in our survey123 form at <https://arcgis.is/XTHjW0>. Information we request when reporting a band includes the band number, date of encounter, location of encounter (general area at the minimum, exact location if possible), and age/sex if known.



Left to right: Upland Game Bird Biologist, Lizzi Bonczek, with a banded turkey ready for release. Hunter Education staff, Madison Proulx and Jim Tappero, holding turkeys before banding. Outreach, Education, and Volunteer Program Supervising Biologist Emily Peacock getting ready to release a turkey.

Winter 2024 Trapping Class Series

By Madison Proulx, Hunter Education & Aquatic Resource Education Technical Assistant

In 2024, the Hunter Education Program hosted a series of non-certification Trapping Education Workshops. The first class, “Trapping 101,” covered a variety of topics, including the history of trapping, conservation, trapping regulations, the biology of target species in Rhode Island, best management practices, and different types of traps. Participants also enjoyed hands-on demonstrations on how to set traps and discussed the uses of each animal they might trap.

After completing Trapping 101, participants were invited to take part in a two-day “Trapping 201” course. In this advanced class, they went afield with experienced trappers in a wildlife management area to learn how to identify animal signs and select the best locations for setting traps. Under the guidance of their mentors, participants set traps with the hope of catching something to check the following morning. With some luck, they found beavers in their traps! Mentors then demonstrated how to safely remove the animals and prepare them for use. The group practiced skinning, butchering, and briefly discussed tanning hides and utilizing the fur. They also learned that beaver meat is a delicious food source.

Although the fur trade has significantly diminished, regulated fur trapping remains an important practice in the United States, including in Rhode Island. Trapping regulations are carefully crafted by state biologists to ensure the safety of trappers, minimize animal suffering, and control the harvest of certain species. Rhode Island is home to iconic North American furbearers, such as mink, muskrat, and raccoon. Additionally, the North American beaver has made a remarkable recovery and now occupies much of its historic range in the state’s watersheds. Beaver can be used for food and clothing; their fur is waterproof and provides excellent insulation, making it ideal for gloves, coats, and hats. Beaver castor, a substance from glands near the animal’s tail, is also used in perfumes and as a vanilla substitute in baking.

The Division of Fish and Wildlife is dedicated to supporting legal and regulated fur trapping in Rhode Island and will continue to offer these educational workshops in the future. Fur trapping is an excellent way to spend time outdoors, harvest food sustainably, and connect with your community!



Participants checking their traps and successfully harvesting beavers

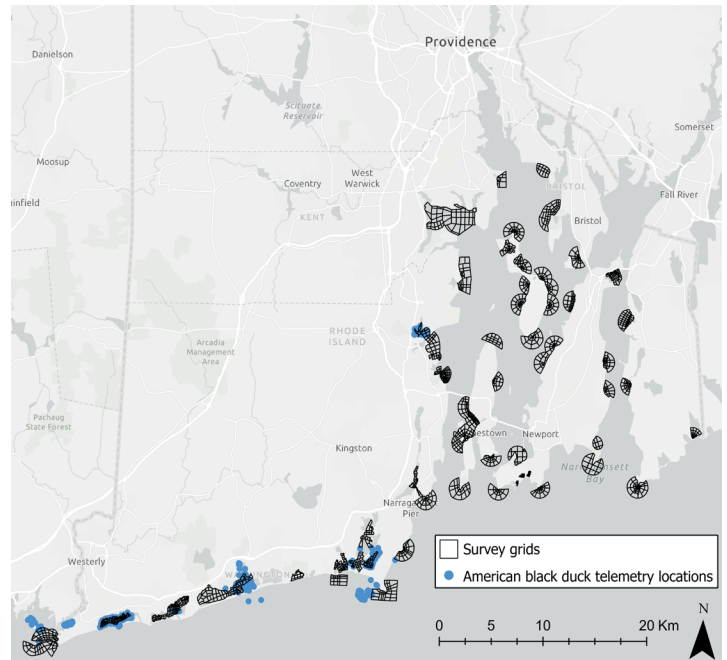
Waterbirds & Aquaculture

*By Tori Mezebish Quinn, PhD Candidate; Dylan Bakner, Postdoctoral Fellow;
Scott McWilliams, Professor*

The number of marine aquaculture farms in Rhode Island has increased from 6 in 1996 to 84 in 2022. Currently, regulations established by Rhode Island's Coastal Resources Management Council restrict aquaculture to no more than 5% of the total area within the coastal ponds, though there has been a recent push to increase the threshold to 10%. The potential for greater aquaculture expansion is more likely to occur in Narragansett Bay, as fewer restrictions apply to that area. Given the recent growth, and the potential for further expansion, wildlife managers are concerned some waterbird species may be either attracted to, potentially increasing disease risk, or deterred from areas around aquaculture farms. This could potentially influence the distribution and space use patterns of waterbirds. Therefore, researchers from Dr. Scott McWilliams' lab are exploring these patterns across the coastal ponds and Narragansett Bay to understand how they relate to the presence of aquaculture farms.

We evaluated waterbird distribution patterns in relation to aquaculture farms by conducting land-based, year-round surveys at 60+ sites across the salt ponds and Narragansett bay. From 2020–2023 we conducted over 37,000 surveys and collected sufficient data for 29 different waterbird species. Thus far we have found little indication that waterbird distribution patterns are related to proximity to aquaculture farms. However, 10 of the species we considered in this analysis were more likely to occur in areas better suited for future aquaculture development.

We also evaluated the influence of aquaculture on the fine scale movement patterns and habitat selection of American Black Ducks. To do so, we deployed backpack style GPS transmitters on 26 American Black Ducks that spend the winter on Rhode Island's coastal waterbodies. Like the findings of our land-based surveys, American Black Duck habitat selection patterns and movements were not impacted by existing aquaculture infrastructure. However, American black ducks selected for areas most suited for establishment of aquaculture in the future. These findings suggest that existing levels of aquaculture in the coastal ponds and Narragansett Bay may not currently influence waterbird distribution and space use patterns, but that further development has the potential to displace waterbirds.



Map of survey grids and American black duck telemetry locations



American Black Duck with backpack GPS transmitter, Megan Gray



Ready to count waterbirds! Martina Muller

Forestry & Wildlife

By Scott McWilliams, Professor; Megan Gray, M.S. Candidate; Liam Corcoran, M.S. Candidate



Banded Eastern Towhee, Megan Gray

Shrubland birds across North America have declined significantly in the last 40 years and here in southern New England we have seen similar declines in birds that inhabit young (shrubby) forests. These so-called early successional, younger (< 30 year old) forests currently represent <5% of forested lands in southern New England. The rarity of this young forest habitat means the breeding birds who rely on such habitat are also rare. One of these species, the American Woodcock, is considered an “umbrella species” because forest management for American Woodcock may benefit other inhabitants of early-successional forest such as Eastern Whip-poorwill, Eastern Towhee, Prairie Warbler, and other young forest-dependent wildlife.

For the past few years, we have been conducting a URI-DEM collaborative study evaluating whether woodcock are an effective umbrella species. How to do this? If woodcock are an effective umbrella species, then the breeding success of other migratory birds like Eastern Whip-poorwill, Eastern Towhee, and Prairie Warbler should be higher in areas in Rhode Island deemed better quality for woodcock.

Why focus on these three migratory bird species? Abundance of all three species has declined by ~50-70% since the 1970s primarily due to the loss of early successional forest habitat, and they each differ significantly in their ecology and migration strategies even though all three breed in Rhode Island. Eastern Whip-poor-wills are nocturnal aerial insectivores (meaning they feed at night on flying insects) that spend the winter in southern U.S., Mexico, and Central America. Towhees are large sparrows that migrate short distances, winter in the southeastern U.S., and eat a variety of insects, seeds and fruit. Prairie Warblers are longer distance neotropical migrants that spend the winter in the Bahamas and Caribbean Islands and they eat only insects.



Banded Prairie Warbler, Megan Gray

What have we learned thus far? Between April and August of 2022 and 2023 at six study areas across the state, a dedicated field crew surveyed and counted singing males, mapped their territories, found nests, measured nestling growth rates, and used trail cameras at the nest to monitor the behavior of parent birds, detect predators, and determine the success (or failure) of each nest. For Whip-poor-wills, the nest cameras allowed us to witness some rarely seen pair-bonding behavior that involved grunting, calls, tail wagging, and rocking back and forth. We also documented for the first time a unique predator defense behavior that successfully deterred a milk snake from eating the eggs in a nest, but did not deter a slug which eventually killed one egg. We found enough Prairie Warbler and Eastern Towhee nests to compare their breeding success at study areas that differed in habitat suitability for woodcock. We found that Prairie Warblers and Eastern Towhee were more abundant and defended smaller territories at higher quality sites for woodcock, that nesting success was similar across sites, and that nestlings grew faster and weighed more when they left the nest at 9-12 days old at higher quality sites for woodcock. Thus, both songbird species seemed to benefit from management aimed at American Woodcock. During summer 2024 and 2025, we are also conducting a radiotelemetry study of woodcock to determine whether the diet of woodcock differs between sites deemed better quality for woodcock. In sum, evidence to date suggests woodcock are indeed serving as a good umbrella species for these young-forest dependent bird species. We are also learning some very cool things about the breeding ecology of these key species that inhabit such uncommon habitats in Rhode Island!

Documenting Bird Migration on Block Island

By Aaron Graham, Seasonal Research Assistant

Unbeknownst to many, autumn night skies teem with more than celestial objects. When conditions are favorable, birds numbering in the hundreds of thousands—or even millions—migrate under the cover of darkness, journeying from their breeding to wintering grounds. But why do most landbirds migrate at night when daytime travel might make more sense? The night sky offers significant advantages for migrating birds. Nocturnal travel helps songbirds evade predators, such as birds of prey, many of which often hunt during the day. Additionally, night skies tend to be more stable, with cooler temperatures and less atmospheric turbulence, making flights more energy-efficient and less stressful. Under the cloak of darkness, birds can navigate using cues from the stars and moon, setting their course with remarkable precision.

However, nocturnal migration is not without risks. Prevailing winds, which often blow west to east in autumn, can push birds off course, potentially displacing them over the Atlantic Ocean near Southern New England. Open water presents serious challenges for songbirds, including the lack of resting or refueling opportunities and increased vulnerability to predators during the day. Juvenile birds embarking on their first migration are particularly prone to wind-drift due to their inexperience and reduced physiological capacity for long-distance travel. In fact, approximately 95% of songbirds banded on Block Island are juveniles that have been displaced offshore. Often, these birds quickly realize their navigational error. After an active night of migration with strong northwesterly winds, the sunrise over Block Island triggers another flight—not southward toward wintering grounds, but northward, as birds attempt to reorient themselves and correct their navigational mistake.



Rusty Blackbird, Aaron Graham

This phenomenon, known as “morning flight,” concentrates migrants as the island narrows towards Sandy Point and the North Light. Perched atop the highest dune, Aaron Graham, the RI Division of Fish and Wildlife’s seasonal Morning Flight Migration Counter, meticulously records the birds passing by. Many continue offshore toward the mainland, while others circle and land back on the island. While reorientation flights on Block Island have been noted before, this marks the first rigorous effort to collect both quantitative (how many) and qualitative (species-specific) data on these movements. This work aims to deepen our understanding of migrant landbird occurrence in offshore environments. The resulting dataset will complement previous work, such as acoustic and radar surveys, allowing researchers to characterize and predict these offshore movements at a species-specific level.



Occasionally, migrating birds use researchers as resting perches!
Aaron Graham

Notably, this is the first morning flight count established in Southern New England, filling a critical gap in the Atlantic Flyway. This effort enables researchers to study species potentially underrepresented elsewhere in the Flyway, like the Blackpoll Warbler, known for its remarkable transatlantic flights, and to paint a more complete picture of bird migration over the Atlantic. Morning flight counts also offer opportunities to track changes in bird populations over time and identify cyclical patterns or irruptions in specific species. Many of the observed species are neotropical migrants, which face heightened conservation concerns due to habitat loss caused by deforestation and fragmentation in the tropics. Additionally, the majority of these passerines are nocturnal migrants—a group that has experienced significant declines in biomass since the 1970s. By collecting and analyzing morning flight data, we aim to better understand the occurrence of migrant songbirds offshore and use this knowledge to inform conservation strategies for these vulnerable species.

2025 State Wildlife Action Plan Revision Underway

By Amanda Freitas, RI Wildlife Action Plan Community Liaison

Rhode Island's Wildlife Action Plan (RIWAP) is set for its next update by October 2025! First published in 2005 and revised in 2015, this comprehensive strategy identifies Species of Greatest Conservation Need (SGCN) and their Key Habitats, evaluates the threats to both, and identifies conservation actions to address those threats. The Plan is a critical tool for conserving the state's fish and wildlife and their habitats. It also enables RI to secure State and Tribal Wildlife Grants (SWG) funding. This program is vital because DEM relies on SWG to fund direct conservation actions for more than half of Rhode Island's SGCN.

While the RIWAP Community Liaison is coordinating the revision effort, it truly is all hands on deck! As with the 2015 revision, DEM is relying on The Nature Conservancy, RI Natural History Survey (RINHS), University of Rhode Island, and other conservation partners to lend substantial technical assistance and staff expertise to the project. A Core Team provides decision-making support. Technical Teams for Birds, Fish, Herptiles, Invertebrates, Mammals, and Plants, each led by one or more DFW, Division of Marine Fisheries, and/or RINHS staff and collectively composed of over 50 experts from across the state and region, are beginning to review and update the 2015 data.

Once there is enough information assembled, DEM will convene a Mapping Team as well as a Scientific Review Team (over 100 individuals in 2015) to review the work of the Technical Teams. Partner outreach will continue to expand as information comes online, and an Outreach Team is strategizing the best ways to provide interested parties with diverse opportunities to participate in advance of the eventual public comment period by the summer of 2025.

The revised plan and vetting process will update our blueprint for safeguarding Rhode Island's fish and wildlife heritage and allow us to improve communicating this information to Rhode Islanders for the next ten years.



Blue dasher dragonfly, Dean Birch

RI Educators Go WILD at Professional Development Day!

By Mary Gannon, Wildlife Outreach Coordinator

This April, our outreach and education staff were joined by 25 educators from across Rhode Island for a professional development day like no other: our Project WILD and Rhody Critter Kits educator workshop! Participants learned about the RIDEM Division of Fish and Wildlife and our local species, all while moving, playing, creating, and having fun. Project WILD is a national resource for K-12 educators that includes lessons and activities to increase students' knowledge and critical thinking skills regarding ecosystems, fish and wildlife resources, and conservation. Rhody Critter Kits are free, educational kits geared towards K-5 students that can be borrowed for two weeks at a time. The kits focus on Rhode Island species and conservation projects, with connections to Project WILD through some of the included activities, like the ever-popular "Oh Deer!" game. By participating in the activities themselves, educators are able to bring their firsthand experiences back to their classroom or learning environment.



Participants from the Woonasquatucket River Watershed Council build a mini beaver dam.

Our participants this year ranged from classroom teachers to community advocates to educators from non-profit organizations. Our staff greatly enjoyed the unique perspectives and diverse learning communities represented in this year's cohort! We would like to extend our thanks to the staff at US Fish and Wildlife Service for allowing us to use the classroom and trails at the Kettle Pond Visitor Center in Charlestown for the workshop. Our team is excited to host another fun workshop in spring of 2025! To learn more about these resources, email Mary.Gannon@dem.ri.gov.

Volunteers Keep Watch for Northern Diamondback Terrapins

By Abigail Clark, Volunteer and Wildlife Outreach Technical Assistant

On a beautiful summer day in Rhode Island, it is not uncommon to see nature enthusiasts enjoying a walk along Rhode Island's coastal inlets. One particularly devoted group is on the lookout for something unique. Each summer, more than 25 volunteers have dedicated at least 8 weeks of their time to monitor for signs of Northern diamondback terrapins utilizing our coast. Once a week, these community scientists wield their binoculars and scan the water to identify turtle heads surfacing. Through these observations, this community science project is helping the Division of Fish and Wildlife gain better insight into the population trends and overall distribution of diamondback terrapins within our state.

What makes a Northern diamondback terrapin so special? These aquatic turtles are adorned with exquisite diamond shaped markings on their carapaces and light gray skin with small black spots. An exceptional turtle species, the diamondback terrapin lives in brackish water, which is a mix of freshwater and saltwater. Their range can extend from Cape Cod south to the Gulf of Mexico along coastal Texas. Rhode Island's coastal marshes, tidal flats and estuaries make the perfect home for these reptiles. However, historic overharvesting, poaching and habitat loss has resulted in the Northern diamondback terrapin being listed as a state endangered species. It is through these valuable volunteer observations that biologists are hoping to better understand the distribution of the species within Rhode Island. This data can then help to guide future conservation initiatives, such as habitat management.



Welcome to the world! A newly hatched terrapin greets our terrapin monitoring volunteers on the eagerly anticipated "Hatchling Day." After a long summer of searching for terrapins, RIDEM volunteers are invited to the Barrington Land Conservation Trust, where a devoted group of volunteers have been protecting terrapin nests for over 30 years!

Volunteer community science projects like the Diamondback Terrapin Monitoring Project continue to provide the Division with valuable data and the ability to increase the number of observations that would never be possible with staff alone. The Division of Fish and Wildlife continually appreciates the efforts of our dedicated volunteers, and we value all the time and effort they provide to these important projects throughout the year!

Rhode Island Hosts Aquatic Resource Education Association Conference

By Kimberly Sullivan, Aquatic Resource Education Coordinator

In October, Rhode Island's Division of Fish and Wildlife's Aquatic Resource Education program hosted the 2024 Aquatic Resource Education Association (AREA) Biennial Training Conference in Newport, Rhode Island. AREA is a nonprofit organization that connects state aquatic resource education professionals from across the United States and its territories. This year, 82 representatives from 32 states and 2 territories gathered to network and discuss a range of topics, including best practices for fishing education, R3 strategies (Recruitment, Retention, and Reactivation), and integrating aquatic education into classrooms. The conference was sponsored by Zebco, BassPro, and the Recreational Fishing and Boating Foundation.

The event kicked off with a welcome address from RIDEM Director Gray, who introduced Rhode Island's many natural resources. Attendees also had the chance to explore environmental equity and justice through a session led by Ayana Melvan, Director of Conservation Action at the Aquarium Conservation Partnership.



Conference attendees on a group excursion



Enjoying local coastal flavors with a classic New England lobster bake

Other conference highlights included a fly-tying workshop presented by Rhode Island's Trout Unlimited, Rhody Fly Rodders, and United Fly Tyer instructors. Participants also enjoyed fishing at Fort Adams State Park and Narrow River. A coastal bird walk and tour of the U.S. Fish and Wildlife Service's (USFWS) Sachuest Point National Wildlife Refuge was led by Alison Schwart (USFWS), Mary Gannon, (RIDEM), and Sam Miller (RIDEM). Everyone enjoyed a tour of Rose Island's lighthouse and barracks, and a banquet featuring a New England lobster bake. Captain Dave Monte, fishing report writer for the Providence Journal, gave a compelling presentation on how climate change is impacting Rhode Island's saltwater fisheries.

Rhode Island's ARE program was thrilled to showcase our stunning natural resources to many attendees who had never visited New England, let alone our small state of Rhode Island. We extend our heartfelt thanks to AREA's Conference Committee, its Executive Board, and the numerous partners who helped make this conference a success, including RIDEM Division of Parks and Recreation, the Rhode Island Lighthouse Foundation, Viking Tours, the Jamestown Ferry, and the USFWS Rhode Island Wildlife Refuge Complex.



Hands-on fly tying workshop



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