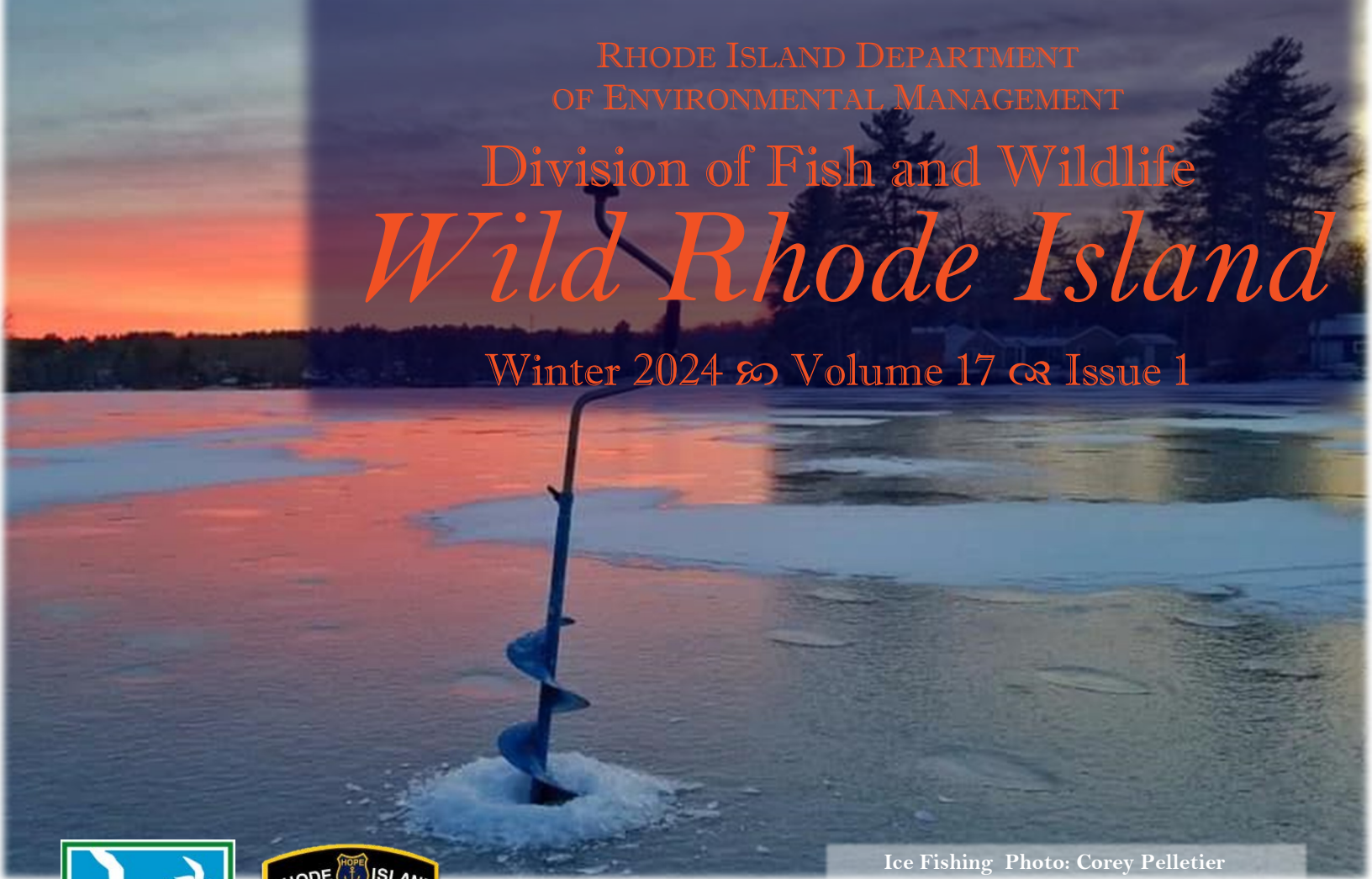
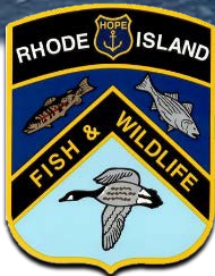


Wild Rhode Island

Winter 2024 ∞ Volume 17 ∞ Issue 1



Ice Fishing Photo: Corey Pelletier



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Winter Finches in Rhode Island

By Sam Miller, Non-game Bird Biologist, DFW

As the winter chill settles over Rhode Island, birdwatchers and nature enthusiasts eagerly await the arrival of vibrant winter finches to their bird feeders and favorite birding hotspots. These vibrant and energetic birds bring a burst of life to the still, frigid outdoors.

Most winter finches spend their summers in boreal haunts far north of Rhode Island, migrating south during the late fall and winter. The southbound migrations of these hardy birds are influenced primarily by the cyclical availability of their preferred food sources, causing for highly variable and sporadic seasonal movements. In years when favored food sources are present

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Left: Red crossbill (*Loxia curvirostra*). Photo: S. Miller

THE DIVISION OF FISH AND WILDLIFE
MISSION STATEMENT

Our mission is to ensure that the freshwater, wildlife, and marine resources of the state of Rhode Island will be conserved and managed for equitable and sustainable use.



Tufted titmouse (Baeolophus bicolor). Photo: Ian Mutti

This Issue Features:

WINTER FINCHES IN RHODE1



YOU MAY HAVE NOTICED THAT NOT ALL BIRDS DISAPPEAR IN THE WINTER, IN FACT, SOME MAKE SOUTHERN RI THEIR HOME DURING THE WINTER!

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THIS MAP HAS BEEN REVAMPED AND UPDATED TO REFLECT THE NEW WILDLIFE MANAGEMENT AREAS AND ACCESS SITES ACROSS THE STATE.

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THIS ARTICLE WILL HELP YOU LEARN HOW TO BETTER READ TRACKS, ESPECIALLY WHILE OUTSIDE EXPLORING RI THIS WINTER!

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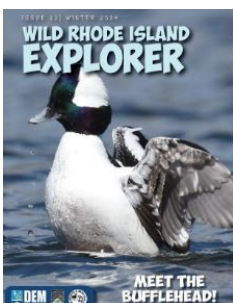


WE HAVE AN UPDATE ON OUR STAFF'S RESEARCH ON NATIVE SPECIES OF TROUT AND THE HABITATS THEY USE.

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RI FISH & WILDLIFE POSTS INFORMATION ON WILDLIFE AND FISH, PROGRAM ANNOUNCEMENTS, EMPLOYMENT OPPORTUNITIES AND MORE!



CHECK OUT THE LATEST ISSUE OF WILD RHODE ISLAND EXPLORER!



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Available Now! The 2023 Reprint of the Rhode Island Hunting Fishing & Wildlife Management Area Guide



The new map is now in print and replaces the 2003 version with updated Management Areas, hunting, fishing and boating access areas, and more.

A copy of the 2'x3' fold out map can be picked up at the RIDEM Division of Fish & Wildlife Great Swamp Office, or mailed out by emailing a request to DEM.DFW@dem.ri.gov or by calling 401-789-0281.

Rhode Island

Over 61,000 acres managed for nature and people

Our mission at the RIDEM Division of Fish and Wildlife is to ensure that our state's freshwater and wildlife resources will be conserved and managed for equitable and sustainable use. Whether you're a hunter, angler, hiker, biker, or wildlife watcher, there's something for every nature lover in Rhode Island!

Sharing stewardship of more than 61,000 acres of land with the Division of Forest Environment, we are responsible for thousands of wildlife species. We strive to protect Rhode Island's biodiversity by strategically conserving land as part of the State Management Area system, which connects core habitats as well as safeguards unique habitat types and rare species. Research and monitoring are at the core of our work, whether conducted directly by our staff or through our partnerships with other local conservation organizations, academia, and community scientists.

We also strive to educate Rhode Islanders of all ages about our creatures and wild places and how they can get involved, whether that's through becoming a responsible hunter or angler, volunteering with us, or taking actions at home to promote the wellbeing of our local wildlife.



Federal Aid in Wildlife & Sport Fish Restoration Program

As a result of European colonization, widespread overhunting, and habitat loss, many common species across America became scarce by the year 1900. Many hunted species, such as white-tailed deer, wild turkey, and waterfowl were in steep decline. In response to the loss of these important wildlife, a user-pay system was established to provide wildlife conservation funding, working with hunters to sustainably conserve and manage wildlife species. In 1937, the Pittman-Robertson Act was authorized by Congress and signed into law by President Franklin D. Roosevelt. This redirected Federal excise taxes on the manufacturers of guns, ammunition, and archery equipment to a Wildlife Restoration Trust Fund. In 1950, Congress passed the Dingell-Johnson Act. This similarly redirected excise taxes on the manufacturers of fishing rods, reels, creels, lures, flies, and artificial baits, as well as import duties on sport fishing equipment, pleasure boats, yachts, motorboat fuels, and interest earned from all these collected funds. In 1984, the Sport Fish Restoration Act, or Wallop-Breaux Amendment, added several new factors such as increased program funding, required expenditures for boating access, aquatic resources education opportunities, requirements for equal spending between salt and fresh water projects and maintenance of State fishery funding levels. In 1980, the Fish and Wildlife Conservation Act extended federal conservation funding eligibility to additional species that were not hunted or fished, but targeted, proactive conservation of those species remained unfunded until the creation of the State and Tribal Wildlife Grants Program in 2000.



Rhode Island Wildlife Action Plan

The State of Rhode Island has a rich and diverse natural heritage. Our wildlife resources are a vital part of our state's identity and provide a sense of place and connection to our natural world. The Wildlife Action Plan (WAP) is a comprehensive strategy to conserve and restore Rhode Island's wildlife resources for the benefit of all Rhode Islanders.

Our goal is to:

- Protect and restore a network of critical habitats, including about 300 miles of riparian habitat, and other critical habitats.
- Protect and restore critical wildlife populations, including about 100 species of birds, mammals, reptiles, amphibians, fish, and invertebrates.
- Protect and restore critical wildlife populations, including about 100 species of birds, mammals, reptiles, amphibians, fish, and invertebrates.

For more information, visit www.dem.ri.gov/wildlife

Don't take the home!

Prevention, protection, and response to the loss of your home and land are critical to the future of our state. The Department of Environmental Management (DEM) is committed to helping you protect your home and land from natural disasters and other threats.

Help keep our school safe!

The Department of Environmental Management (DEM) is committed to helping you protect your school from natural disasters and other threats.

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The Department of Environmental Management (DEM) is committed to helping you protect your school from natural disasters and other threats.

Migratory Bird Hunting & Conservation Stamp

The law requires that each waterfowl hunter 16 years of age and over purchase a Migratory Bird Hunting and Conservation Stamp (MBCS) when hunting migratory birds in any species in a valid Federal Migratory Bird Hunting and Conservation Stamp (MBCS) area.

Free Fishing Days

On the first weekend days of each month, Rhode Island fishing licenses and trout conservation stamps are not required by residents or non-residents.

BLAZE ORANGE

Wear blaze orange when hunting, fishing, or boating in the woods, on the water, or in the field. It helps you be seen and stay safe.

Trout Conservation Stamp

The law requires that each waterfowl hunter 16 years of age and over purchase a Trout Conservation Stamp (TCS) when fishing for trout in any species in a valid Federal Trout Conservation Stamp (TCS) area.

Fishing Hunting & Trapping Guides

Get the latest information on hunting, fishing, and trapping regulations, seasons, and locations. Visit www.dem.ri.gov/guides

Education of Outdoors

Learn about our state's natural resources and how to enjoy them responsibly. Visit www.dem.ri.gov/education

Winter Finches in Rhode Island continued from page 1



Pictured above: Pine siskin (*Spinus pinus*) Photo: S. Miller

in abundance to the north of Rhode Island, most finches stay where the food is and never make it this far south. Conversely, during winters with food shortages up north, winter finches may migrate south to Rhode Island in spectacular numbers looking for resources. These prolific southbound movements are referred to as “irruptions.” Since different species of winter finches prefer different foods, predicting which ones will “irrupt” from year to year can be a complex, but fascinating science. With some help from [Ron Pittaway’s annual Winter Finch Forecast](#), and some preliminary finch sightings around the region, we’ll go over which finches you can expect to see this year- and where you can find them.

PURPLE FINCH (*HAEMORHOUS PURPUREUS*)

Purple finches are the only “winter finch” species that can be found year-round in Rhode Island. During the summer months, they are an uncommon denizen of moist coniferous forests and scrubby bogs throughout the western portion of the state. Come winter, purple finches can often be found just about anywhere throughout the state, though in relatively small numbers.

Tips to find them: This winter, expect purple finches to be found throughout the state in small numbers, especially at bird feeders where they prefer black oil sunflower.

These birds can be easy to confuse with the more common house finch but can be separated confidently with practice. Male purple finches show a vibrant rosy-purple coloration throughout most of their body, extending well down their belly and throughout their head, back and wings. Male house finches show a less rosy, more red-toned wash restricted to their face and breast, with a brownish back and wings, and brown streaks on their sides. Females can be tougher to separate but look for the bolder and more contrasting white-and-brown head pattern on female purple finches, while female house finches appear more plain and muted light brown overall.

PINE SISKIN (*SPINUS PINUS*)

Though entirely absent from the state in some years, this winter will provide a good chance to see pine siskins in Rhode Island. Due to a poor white spruce crop throughout much of their homeland boreal forest this year, birds are irrupting south in relatively large numbers.

Tips to find them: Pine siskins have already been spotted throughout Rhode Island this winter. When not at bird feeders (where they strongly prefer thistle/nyjer) they can be found dining on seeds and berries from a variety of trees. They often prefer conifers such as pitch and black pine, hemlocks, larch, and spruces. You can also find them foraging on birch catkins and eastern redcedar berries. Pine siskins are often in noisy flocks, sometimes numbering in the dozens. Try listening for their wheezy, chattering calls to locate flocks as they move from treetops looking for food. Great Swamp Management Area, Burlingame State Park, and Arcadia Management Area are all fantastic places to look for pine siskins and there have reported sightings of them there this winter.

COMMON REDPOLL (*ACANTHIS FLAMMEA*)

A true northern finch, redpolls spend the summer months nesting throughout the northern boreal forest up to the Canadian tundra. Large irruptions of common redpolls

into Rhode Island are much less common than that of siskins, but they do occur every few years. This year, expect most common redpolls to stay far north of Rhode Island as they take advantage of a healthy alder crop throughout the boreal forest. As the winter progresses, few common redpolls may wander south into Rhode Island in search of new food sources.

Tips to find them: Any common redpolls that make their way to Rhode Island will likely find their way to bird feeders, or their favorite food source- birch catkins. The birches at Lonsdale Marsh along the Blackstone River in Lincoln are well-known for attracting redpolls, though birds can be found at birches anywhere in the state. At bird feeders, redpolls prefer nyjer or hulled sunflower.

RED CROSSBILL (*LOXIA CURVIROSTRA*)

A fine-tuned product of evolution, red crossbills sport a unique crisscrossed bill that enables them to effortlessly pick apart their favorite food- pine cones. Because cone crops are relatively poor throughout the interior boreal forest this year, these nomadic birds are already on their way south.

Tips to find them: Red crossbills have already been spotted at multiple locations within the state this winter. These birds specialize in feeding on “hard pines” including pitch and black pines. They will also forage on the more common white pines when their cone crop is good. They rarely appear at bird feeders, so your best chance to see this bird is to look for them at preferred food sources. Burlingame State Park and Nicholas Farm Management Area provide perfect habitat for red crossbills and have reported sightings of them this winter. As the winter progresses, expect more and more of these charismatic finches to make their way into Rhode Island as they deplete cone resources to the north of us.

WHITE-WINGED CROSSBILL (*LOXIA LEUCOPTERA*)

A more northerly distributed cousin of the red crossbill, white-winged crossbills are seen much less frequently in Rhode Island. This year will likely be no different, with most white-winged crossbills staying far north of us. Any white-winged crossbills that do make it south, will likely do so later in the winter and through March.

Tips to find them: White-winged crossbills specialize in softer pinecones, such as those of spruces, hemlocks, and tamaracks. Any birds that make it to Rhode Island will likely find their way to those favored food sources.

EVENING GROSBEAK (*COCCOTHRAUSTES VESPERTINUS*)

Evening grosbeaks have a rather complex history in the eastern united states. They were a relatively common winter visitor to Rhode Island through most of the 1900s but disappeared entirely from the state by the 1990s and into the 2000s. However, just recently, evening grosbeaks have begun showing up again in Rhode Island, with small irruptions occurring every few years. These birds are highly sought out by birders and nature lovers alike, hoping to catch a glimpse of the colorful finches that have been gone from the region for decades. Unfortunately, it appears that most evening grosbeaks will stay north this year, feeding on the abundant berry and deciduous seed crops that exist throughout the northern forests.

Tips to find them: When evening grosbeaks do irrupt south, they are often easiest to find at your backyard bird feeder looking for black oil sunflower. A relatively large bird, they prefer open platform feeders to tube or mesh feeders. By providing the right seed and feeder setup, you might just have a chance at attracting a wayward grosbeak this winter.

❧ ❧

Tips For Tracking Wildlife

By: Gabrielle DeMeillon, Biotechnician, DFW

Tracking can be an excellent excuse to get outside, especially when the drab colors of winter are buried beneath a clean blanket of snow. Many of the animals that inhabit Rhode Island are secretive, like the bobcat, or uncommon, like the American black bear. With a few tips and a bit of sleuthing, you can discover what is hidden within the wilderness.

All you need for tracking is a bit of quality substrate to examine. However, a tape measure, notebook and pencil, and a field guide can also be useful. A light dusting of snow first thing in the morning provides a beautiful canvas, but if the snow is too powdery or forms a hard layer, tracks can be difficult to read. Mud and dust are ideal for viewing individual tracks but are often found in small quantities. Finally, sand can be a good surface to explore on calm days, and wet sand is particularly effective at retaining impressions. It's best to start your search early in the morning, while tracks are still fresh from nocturnal visitors.

Some considerations when trying to identify a track are range, season, stride/gait, possible distortion, and other sign.

RANGE: Most animals are limited to certain regions, so you can start by eliminating any that are unlikely to be found around your area. If you do find tracks from an animal seemingly outside of its suspected range, you can share photos with the RI DEM Division of Fish & Wildlife.

SEASONALITY: Another way to narrow down your options, is by researching which animals are active during the

time of year when you are tracking. Some animals, like woodchucks, are true hibernators, so it would be rare to find their tracks during the middle of the winter. Others, like the bobcat, are active all year round.

STRIDE/GAIT: If possible, you should also look at the pattern of, and length between, the tracks. In this instance, you would need more than one track. Even though some domestic dogs have tracks that are similar in size and shape to coyotes, you can easily distinguish the ambling trail of a domestic dog from the direct, loping path of a coyote. This pattern you can find in the tracks, called the gait, tells you how the animal moves, such as bounding, walking, or trotting. You would expect a rabbit or squirrel to have a bounding gait, and a fox to have more of a trot. The distance from where a foot is placed to where that same foot lands again is called the stride. This is a good indicator of the size of the animal. For example, you may find small, paired, loping tracks with five toes and determine that the animal is some kind of mustelid (member of the weasel family), but you will need to measure the length of the stride to determine if it is a mink or a weasel.

DISTORTION: Some tracks can be deceptively large or appear to be misshapen when the substrate is unreliable. An animal's foot may slip on mud, leaving a strange, long track, and melted snow can make tracks appear much larger than they were to begin with. Loose sand can have a similar effect, giving the track a much wider appearance.

OTHER SIGN: Finally, a great way to confirm that you

have identified your tracks correctly, is to look for other sign from the animal. This could include scat (animal droppings), evidence of feeding, hair, or other indications that an animal has visited the area. Finding a pile of scat filled with crayfish and fish scales is a sure sign that you've tracked an otter. Or you may find a cleanly snapped twig only a foot off the ground, evidence that a rabbit has been feeding. Anything else that appears out of place in the area should be noted and looked up later to confirm your findings.

A Quick Guide to Tracking

1. Count the toes

- ◆ 4 toes on front and hind tracks: canine, feline
- ◆ 5 toes on hind and/or front tracks: opossum, raccoon, rodent, rabbit, skunk, mustelid (members of the weasel family)
- ◆ 2 toes: white-tailed deer (moose very unlikely)

2. Examine the shape

Canine: slightly oval shape overall, could draw an X between the pad and toes, nail impressions (canines can not retract their claws), two lobes on rear of pad

Feline: round shape overall, second toe is slightly farther forward than others, no nail impressions, three lobes on rear of pad

Raccoon, Opossum, Muskrat, Beaver: Spatula shape overall on hind track, front track smaller with long toes. Opossum has obvious opposable thumb print; beaver has webbing on hind track.

Rabbit/Squirrel: elongated oval overall on hind track, round front track

Skunk: Oval shape overall on hind foot, round front track, large pad divided in two on hind foot, short toes clustered towards front of pad, long nail impressions

Mustelid: oblong shape overall, small, chevron-shaped pad with four distinct lobes, nail impressions

3. Measure the size

Bringing a tape measure to note the length and width of a track can help you narrow down your options. If

you do not have a tape measure or ruler, anything that is a standard size, such as a pencil, can be placed beside the track and photographed, so that it can be measured later. At this point, you should be close to your final answer.

4. Consider the life history

If you are still unsure of what animal left an impression, consider habitat and behaviors. You are unlikely to find a muskrat deep in the woods, far from water, since they are semi-aquatic mammals, but raccoons will readily use forest habitats. Or, say you find a set of rabbit-like tracks leading up to the base of a tree, then disappearing. You can assume that they were left by an animal that has the ability to climb, such as a squirrel, rather than a ground-bound rabbit. Fisher typically use stone walls and fallen trees for travel, so if you find mustelid tracks along a fallen pine deep in the woods, you can make a good guess as to who passed by. Taking time to study the behaviors and life history of your local wildlife will greatly improve your tracking skills.

Learning to track animals can increase our connection to nature and help us understand how wildlife interacts with the environment. While these are just a few quick guidelines to help you get started, a good tracking guide is advisable for anyone wishing to decipher the hidden language of the woods. Happy trails!



Photo: URI

Why did the Trout Cross the Stream?

A follow up to 'Hot on the Tail of Trout', published in the Autumn 2021 Edition of Wild Rhode Island.

By Corey Pelletier, Freshwater Fisheries Biologist, DFW

Why did the trout cross the stream? Because it was colder on the other side! Rhode Island's only remaining native salmonid, the Eastern brook trout, requires cold water to survive. Water temperatures in local streams and rivers often become extremely warm during summer months, even in areas where brook trout reside. When water temperatures become too high for brook trout, they must move to find suitable habitat with cooler water.

If you have done any exploring within the beautiful state of Rhode Island (RI), you have most likely seen some of the numerous dams found throughout the state. You may even live near a pond or lake created by a dam. In the 1800's and early 1900's, dams were constructed in almost every stream and river in RI, primarily for powering mills of various sorts, but also for water storage and other purposes. There are over 650 registered dams in RI and that tally does not include many of the small, defunct dams, scattered throughout the state. Now, many of these dams are obsolete and serve little purpose other than their recreational opportunities and aesthetics. Aesthetically, they are gorgeous, forming a cascading waterfall with a picturesque pond above. The problem is, they do not have the same effect on our wildlife. Dams function as in-stream barriers to fish, amphibians, insects, and any other wildlife that cannot navigate well on land. Adding to the list of problems for our aquatic friends are road-stream crossings. Anywhere a road and waterway (river, stream, pond, etc.) meet, there must be a culvert or bridge to convey the water beneath the road. Often, these crossings are not properly constructed or have degraded overtime, creating a drop (also known as a perch) at the downstream side or in other words, a

BARRIER. Collectively, these barriers in our waterways create what is called, fragmentation. Sections of stream become isolated between barriers, limiting the amount of habitat an aquatic organism can access throughout its life.

In the context of our brook trout, we know that water temperatures become warm enough to affect them in many streams and those same streams have countless barriers that limit how far they can move. Now we arrive at the problem and question. If they cannot move to find cooler water during the summer months, where are they going and how are they surviving? If you read 'Hot on the Tail of Trout', you know that the RIDEM Division of Fish and Wildlife worked with the University of Rhode Island to answer this question. Here I will go into some brief details of the study, but the focus will be on our findings. For more information, please reference 'Hot on the Tail of Trout' in the Autumn 2021 Edition of Wild Rhode Island.

In 2023, RIDEM Fish and Wildlife completed a 3-year research study on brook trout movement and habitat selection in streams with high summer water temperatures and physical barriers. This study provided insight on how brook trout select habitat and move when water temperatures reach stressful and even critical temperatures yet are constrained by barriers. By tagging brook trout with VHF radio tags, we were able to track a total of 75 trout throughout the summer of 2021. Wild brook trout were captured and tagged in four different streams that had at least one barrier above where the trout were released and other barriers at varying distances downstream. We collected data at the location

of tagged trout each time they were relocated and the same data at random locations. This sampling method is designed to compare the habitat trout used versus what habitat was available to them. We measured habitat variables including water temperature, depth, velocity, dissolved oxygen, pH, distance to physical cover, type of cover, amount of canopy shading, and substrate composition. We used GPS points collected at each trout's location to measure the distance they moved from when we last found them and the total distance they moved over the period of the study.

Through data analyses, there were a few key findings. First, in streams where water temperatures were very warm (*i.e.* average summer temperature greater than 22 °C or 71.5 °F) brook trout moved longer distances. In our two warmest study streams, several brook trout moved completely out of the streams into downstream watercourses. Generally, the locations used by trout which emigrated the streams were cooler than where they had originated. Only one trout was observed to have migrated over a dam (moving downstream). Conversely, trout that were in our two cooler streams, generally stayed within



the

stream where they were released. These two streams were cooler in relation to the other two “warmer” streams, yet still experienced water temperatures that are considered stressful to brook trout. Overall, in the warmest streams, brook trout moved much longer distances than in cooler streams. Interestingly, the longest distance movements that we detected were between 3 and 4 miles! Two individuals from different streams moved these distances, both to the same area (which happened to be much cooler water than where they came from).

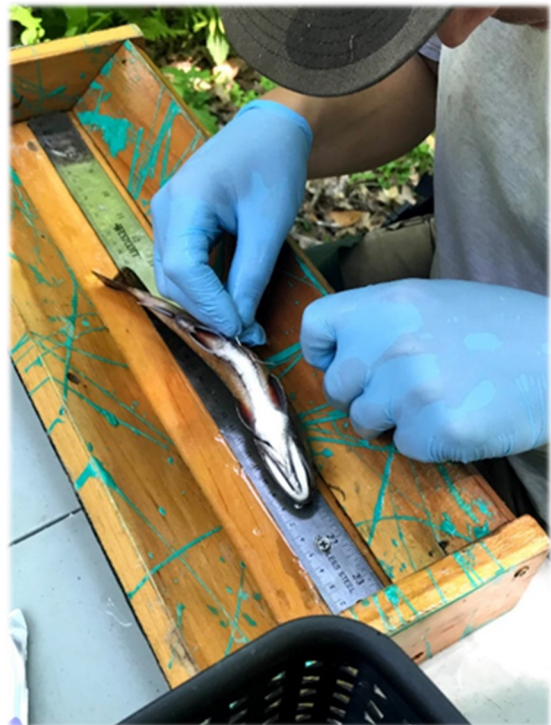
Looking at the preference of habitat variables from the used versus available data, a few habitat features stood out. Water temperature selection (or selection for cooler water) was obvious from the individuals in the warmest streams. Dissolved oxygen was also highly selected for by trout. In all streams, trout selected for close proximity to physical cover, meaning trout were always close to or hidden beneath physical cover such as logs, boulders and undercut banks. Lastly, brook trout tended to use deeper



water in the cooler stream but in the warmer streams, consistent use of deeper water was not as obvious. This suggests that when water temperatures are suitable, brook trout prefer deeper water but when temperatures are warmer, the need to find cooler water may be more important than finding deeper water depth.

So what does this all mean? First, high water temperatures may force brook trout to move long distances to find cooler water. This is problematic because they may be more vulnerable to predation. This also means that large amounts of stream habitat may become unsuitable during summer, concentrating fish in areas of cooler water. This lends to the issue of carrying capacity in streams and the population size that a given stream can support. It is possible that carrying capacity in a stream network is limited by suitable habitat during high temperature periods.

Impoundments of water (lakes and ponds) created by dams are contributors of high water temperatures to streams. By removing dams in streams that support brook trout and other cold-water sensitive species, water temperatures will stay cooler and trout will likely not have to move as far to find good summer habitat. This will ideally create a more robust population that will be more resilient to changes in the future climate. Additionally, we learned that brook trout prefer deeper water and physical cover, but the importance of finding cooler water may be more important than finding deeper water. This means restoring coldwater streams should be of highest priority. Secondly, ensuring these coldwater streams contain adequate physical cover for trout to hide and natural river processes that maintain pool habitat (*i.e.* deeper water), will help protect brook trout into the future. As a Species of Greatest Conservation in RI as well as up and down the East Coast, we need to restore coldwater stream habitats to ensure this species lives on for generations and continues to be our “canary in the coal mine” for clean water!



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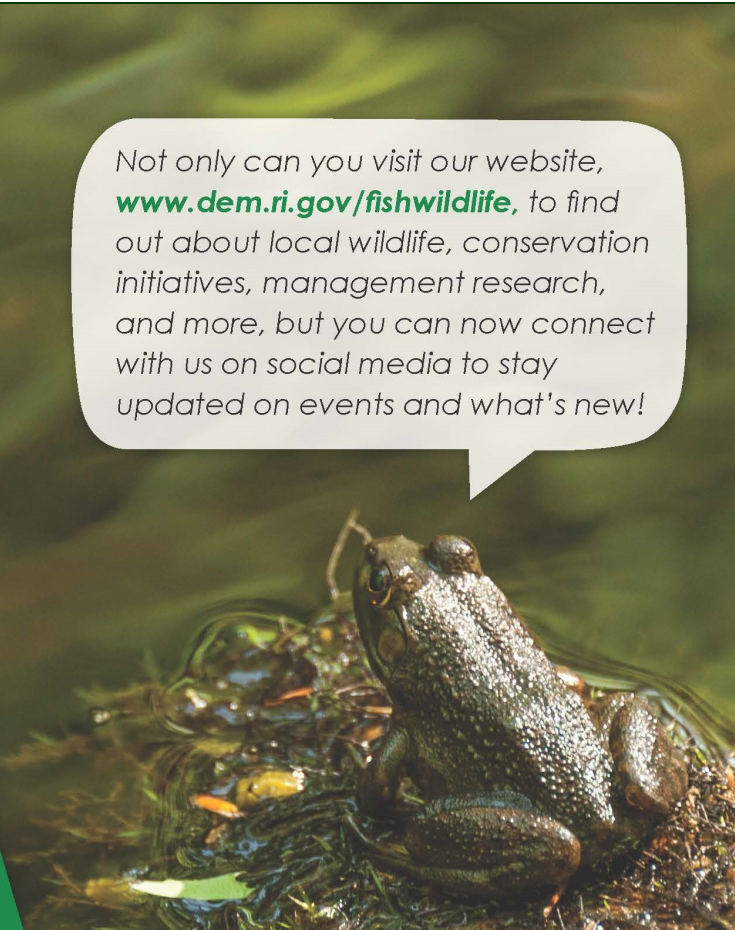


dem.ri.gov/fishwildlife



Photo by M. Stultz at Durfee Hill Wildlife Management Area, Gloucester, RI

Not only can you visit our website, www.dem.ri.gov/fishwildlife, to find out about local wildlife, conservation initiatives, management research, and more, but you can now connect with us on social media to stay updated on events and what's new!



Thank you for your continuing support of the Rhode Island DEM Division of Fish & Wildlife!