Rhode Island Department
of Environmental Management

Division of Fish and Wildlife

Wild Rhode Island

Summer 2019 ∞ Volume 12 ∞ Issue 3

Monarch Butterfly, Buck Hill Management Area, Burrillville, R.I.

Inside This Issue:

DFW Panel Discussion on *Racing Extinction*

By Amanda Freitas, Mary Gannon and Scott Buchannan, Division of Fish & Wildlife

Eastern spadefoot toad. Photo by Chris Raithel

Recently, the Division of Fish and Wildlife (DFW) participated in a panel discussion on endangered species at the University of Rhode Island (URI) following a viewing of the 2017 call-to-action film *Racing Extinction*. We were invited by Emma Ferrante, senior and outgoing President of URI's Marine Science Society, and joined by Dr. Brian Gerber, URI Assistant Professor of Wildlife Biometrics. Our moderator and audience, mostly comprised of students, posed many great questions on a variety of topics, from combating plastic waste, to effectively communicating the message of conservation to their peers. We would like to share our answers to their questions over the course of a few issues of *Wild Rhode Island*.

Continued on page 4

The Division of Fish and Wildlife

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.

Photos of Buck Hill Management Area by Mary Gannon
Cover photo by Mike Stultz

This Issue Features:

Made from 100% Recycled Materials

Follow us on Twitter @RhodeIslandDEM

Visit our Facebook page @RIFishWildlife

SPORT FISH & WILDLIFE RESTORATION

Wild Rhode Island is a quarterly publication created by the Rhode Island Department of Environmental Management, Division of Fish and Wildlife. Printing is supported by the Aquatic Resource Education Program (Federal Aid Grant F-42-E) and the Hunter Safety Education Program.

Janet Coit, *Director*
Rhode Island Department
of Environmental Management

Sarah M. Riley, *WRI Editor/Designer*
Implementation Aide
RIDEM, Division of Fish & Wildlife

Veronica Masson, *WRI Editor*
Federal Aid Coordinator
RIDEM, Division of Fish & Wildlife

Kimberly Sullivan, *WRI Publisher*
Aquatic Resource Education Coordinator
RIDEM, Division of Fish & Wildlife

For a free subscription to *Wild Rhode Island* and/or *Wild Rhode Island Explorer*, please email Sarah.Riley@dem.ri.gov

Buck Hill Management Area, Burrillville, R.I.

Featured State Land, RIDEM Division of Fish & Wildlife

RIDEM's Management Areas provide hunting and fishing opportunities to the public, and protection for wildlife habitat and important natural communities. In 1958 a 1,300-acre parcel located in the far Northwest corner of the state was purchased to establish Buck Hill Management Area in Burrillville. Subsequent acquisitions in the 1970s added to this area, and with two recent acquisitions along Wakefield Road in 2012 and 2016, the area now totals 2,242 acres. These recent purchases were accomplished in part with funding from the Wildlife and Sport Fish Restoration program and The Nature Conservancy. Buck Hill now contributes to more than 7,000 acres of conservation land in the town of Burrillville held by RIDEM, Burrillville Land Trust and other conservation organizations.

Buck Hill is comprised mostly of oak forest, along with a variety of other habitats, including forested wetlands and mixed forest. The 31-acre Buck Hill Impoundment is located near the main entrance and provides a variety of wetland and open water habitats for wildlife, as well as waterfowl hunting opportunities. Farther north, patches of young forest have been created through forest management to provide habitat for wildlife that rely on these dense thickets. The western shore of Wallum Lake is accessible from the Northeast corner of the property; Douglas State Forest (Massachusetts) borders Buck Hill entirely to the north.

This Management Area is accessible from a parking area north of Buck Hill Road in western Burrillville. Gated access roads and undeveloped trails wind throughout the property. Buck Hill is open to all forms of regulated hunting and trapping, and is located within Deer Management Zone 2. White-tailed deer, turkey, fisher, and woodcock are considered relatively abundant here. Numerous open fields scattered along the main access road are stocked with ring-necked pheasant throughout the small game season. Wildlife Restoration funds made available through the Pittman-Robertson Act, along with matching funds from the sale of hunting licenses and permits, are used to maintain and enhance this Management Area. With the recent boundary expansion here and other recent acquisitions at Rockville Management Area and Durfee Hill Management Area, RIDEM continues to increase its portfolio of open space to help support wildlife conservation and provide hunting opportunities to the public.

☙❧

Racing Extinction Panel Discussion continued from cover

Question 1: What is your main focus of study, what does endangered species conservation mean to you, and what can the public do?

Scott Buchanan, Herpetologist, DFW

I think it's important for every single Rhode Islander to understand that we are smack in the middle of the sixth great extinction event in the last 600 million years. These are not normal times when considering how life on earth has carried on over the eons. This crisis of global proportions very much hits home in the Ocean State, and has implications for each and every one of us.

To be in herpetology (the study of amphibians and reptiles) is to be on the front lines of this crisis. It's not sharks, it's not whales, it's not big cats, it's turtles and frogs that are the two most endangered groups of vertebrates on the planet. Several of these globally threatened species are native to Rhode Island and are at risk of disappearing from the state in the near future. These populations are under threat from a variety of things including habitat loss and degradation, disease, road mortality, and illegal collection. So clearly, my position with DEM to manage and conserve populations of amphibians and reptiles in the state is something I take very seriously. We are constantly trying to do everything in our power to improve the ways that the human world interacts with the wildlife world.

Eastern spadefoot toad. Photo by C. Raithel

We've all heard of endangered species and we've all heard of climate change – society has been aware of these two problems for decades. But even in the last few *months*, new research has made clear that the urgency of confronting climate change and biodiversity loss does not match up with what's happening on the ground. We're at a very pivotal moment where the fate of the planet hangs in the balance. That is not hyperbole. We need to be doing much, much more to prevent future crises and catastrophes, and the changes implemented need to be from the top down and from the bottom up. We need to be willing to support legislations that support natural systems via regulations and incentives. The vocal support of citizens is instrumental in moving these policies forward.

Black-throated blue warbler. Photo by J. Osenskowki

Mary Gannon, Wildlife Outreach Coordinator, DFW

I have a bachelor's in wildlife biology and a master's in science education, and use both degrees every single day (I feel pretty lucky!) My job entails creating outreach materials and programs that communicate information about our native wildlife and the Division's work to protect, restore, and manage Rhode Island's wildlife resources. While I work with the entire "public," my special focus has been on providing outreach to children and families. I visit a lot of classrooms, and always tell kids that they are the future of conservation in this state, no matter what they decide to do when they grow up. We are all responsible for being good stewards! It's my hope that the children I teach will take what they learn and spread the word as ambassadors for our wild creatures and places.

Eastern spotted turtle. Photo by C. Raithel

In my experience, kids can name a bunch of endangered animals without skipping a beat. Tigers, elephants, sharks, polar bears, and rhinos are usually the ones I hear. They typically look shocked when I explain that we have threatened and endangered wildlife right here in Rhode Island. While I am also very concerned about the plight of endangered wildlife across the globe, I think it's imperative that we "think globally and act locally." The threats are the same in little Rhody as in the Amazon or the

Serengeti: habitat loss, fragmentation, pollution, persecution, and poaching. It all happens right here. Our critters are just as important and special. The problem? A creature like the hognose snake doesn't receive the same glamor and attention as the red panda. My mission is to give our native wildlife some air time, to simply make people aware that these animals exist, and that they need our help. Aldo Leopold said, "Teach the student to see the land, understand what he sees, and enjoy what he understands." A big part of conservation is first getting people to stop and take a good look at the amazing world around us. The more we learn, the deeper our connection to the natural world. When you personally care about something, you're more likely to take action to save it. A big part of my outreach message is that last piece of the quote, enjoyment. What's the point in doing all of this conservation work if no one finds joy in seeing an egret wading in the salt marsh or listening to a chorus of spring peepers?

So how can we all do our part to help? I could write endlessly about this (in fact, I had to edit this response, so I wouldn't take up the whole article), so I will reiterate one action everyone can take: Educate yourself! Take a look at our State Wildlife Action Plan, read up on local wildlife, vote in support of open space and habitat conservation, and most importantly, share what you've learned. I think many of our creatures are in peril simply because a vast majority of Rhode Islanders are completely unaware that they exist.

Amanda Freitas, RI Wildlife Action Plan Community Liaison, DFW via partnership with RI Natural History Survey

I am an ecologist by education and background who has found herself in an outreach position. Instead of really focusing on one or a few species, it's my job to convince Rhode Islanders that they should care about and for all 454 Species of Greatest Conservation Need (SGCN) in the state's Wildlife Action Plan (RI WAP), and frankly, the thousands more that are not in the plan. One of the best ways to do that is by taking care of the places these animals call home. That can mean a lot of different things. On my end of the shop, it often involves helping land-use planners make smart siting decisions so that we can have healthy, well-planned built spaces *and* leave enough room for nature.

By the time a species becomes endangered, we've generally been unaware of, or outright ignored, its needs for quite a long time. Turning around its fate at that point is usually costly, difficult and, sadly, far from guaranteed. So that's the first thing. If we're talking about *endangered* species conservation, we've already let the problem get too far.

Species conservation of any kind means appreciating and taking care of the amazing treasure we've been given, even when doing so involves hard decisions. We can't afford to just be upset about what some far away "they" are doing to our species and to our planet. We need to recognize our own role and that ***absolutely everything is connected***. What, how much, and from where we consume, for example, has a massive impact on our planet. If you're not sure how this applies to you, maybe start with one of the more detailed carbon footprint calculators online. A good one should address diet and recommend more veggies and less meat. A great one would factor in that in-season organic veggies and pastured meat from small local farms are going to take far less energy to get to your plate than veggies grown with tons of chemicals and grain-fed animals from industrial farms hundreds or thousands of miles away. And speaking of food - hunting may not be for everyone, but if you're going to eat meat, responsible hunting is one of the most humane and easy-on-the-planet ways to do it. Outside of necessities it's never a bad idea to buy less "stuff," especially new (and even more so single-use) stuff. When you buy something, think of it as voting with your dollars for the world you want.

Another big thing is habitat. We have songbirds that won't nest in less than a few hundred acres of forest. Our native New England cottontail is less equipped to avoid predators in fragmented habitat patches than its introduced competitor, the Eastern cottontail. And we have three whale and four marine turtle species that are federally listed due in no small part to encounters with boats, fishing equipment, and our trash and pollution in their habitat. Many of our species simply need more space than we're giving them. This is where things like shrinking our lawns, staying on marked trails, not chasing critters for the perfect picture, and supporting land conservation (even where there may be no public access or direct benefit to us at all) come into play. This is where getting political to advocate for smart siting of our homes, businesses, and energy sources becomes important.

The Future of Our Bees

By Troy Langknecht, Division of Fish & Wildlife

There are over 4,000 species of bees in North America, and about 180 species documented in Rhode Island as of 2016. There are many bee species that are social, like honeybees and bumble bees, and others that are solitary, like leafcutter bees. Bees play an important role in honey production and agriculture. They pollinate everything from ornamental flowers to crops like zucchini, tomatoes, apples, and raspberries. Without bees, we would lose significant agricultural crops that we depend on to feed our families. Sadly, bee species in the United States, particularly honey bees, have been experiencing significant decreases in their populations over the last three decades.

Why Are Bees Declining?

Scientists believe that there is not one factor contributing to their decline, but several forces working together. One cause is the increase of pests, pathogens, and viruses using bees as their host. An example is the varroa mite that acts similarly to a tick by sucking fluids out of the bee and transmitting viruses to it. Pesticides are another cause of decline, as pesticides affect all insects rather than just the targeted species. Like many species, bees are also facing habitat loss and fragmentation which is leading to poor nutrition. Colony Collapse Disorder (CCD) describes a phenomenon wherein nearly all the worker bees in a colony disappear, the cause of which is currently unknown. Finally, climate change may be contributing to the decline of bees with more extreme weather patterns and changing growing seasons of food sources.

How Can We Help?

- Provide native flowering plants for bees to use as a food source
- Avoid raking, tilling, or mowing your lawn until late spring to avoid disrupting queen bees wintering in small holes underground
- Eliminate the use of pesticides in your yard or garden
- Visit www.bumblewatch.org to report bee sightings
- Visit the US Fish & Wildlife Service's website to learn how to make a bee nest! https://www.fws.gov/southeast/wildlife-and-you/bees/

Photo credit: background photo: J. Manansala Above: USFWS

What Do Fish Eat
(When They're Not Stealing Your Bait)?

By Thomas Angell, RIDEM Division of Marine Fisheries

When you catch one of the several marine fish that reside in, or regularly visit, Narragansett Bay and our coastal waters, do you ever wonder what it was eating other than the bait you used, how old it was, or if it is mature? When cleaning your catch, have you ever opened the fish's stomach to see what was in there, or looked at a fish scale to get an idea of how old it was? Knowing these things may just be interesting bits of trivial information for a recreational angler, but it is very important for determining the status of our fishery resources. RIDMF staff biologists Nicole Costa, Christine Denisevich and Thomas Angell have been collecting and analyzing this data in an effort to provide information for stock assessment purposes.

Age and growth information is essential in estimating the age-structure of a fish population. Understanding the age-structure of a population allows scientists to make informed management decisions regarding acceptable harvest levels for a species. In recent years, diet composition of finfish has become increasingly important in understanding the age and growth of a population, and it may also help to inform managers about whether or not an observed change in a population may be due to prey availability. Understanding predator-prey dynamics can allow managers to utilize a multi-species modeling approach by which they can better understand the population dynamics of a particular target fish species, as well as identify prey species that may be associated with the target species. For example, work is currently underway at the Atlantic States Marine Fisheries Commission (ASMFC) through the Biological Ecological Reference Points (BERP) working group, to develop an ecosystem-based approach for assessing Atlantic menhaden. The data collected in this study will help contribute to those efforts.

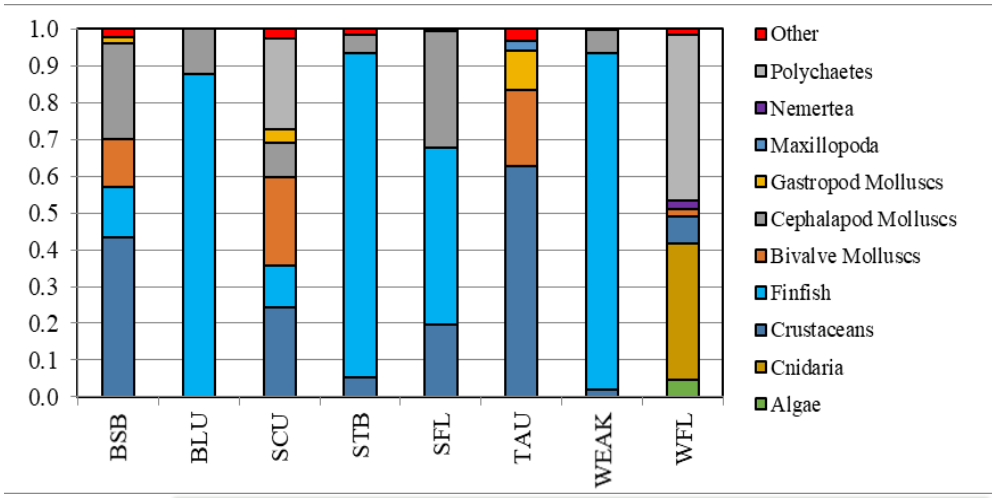


Figure 1 – Proportional contribution of prey items by fish species

Since 1987, the RI Division of Marine Fisheries (RIDMF; formerly part of the Division of Fish and Wildlife) has collected age and growth data for several fish species important to both recreational and commercial fishing interests in RI, including black sea bass, bluefish, menhaden (pogies), scup, striped bass, summer flounder (fluke), tautog, weakfish, and winter flounder, which was added to the sampling more recently. Samples are obtained from various RIDMF sources including the coastal trawl survey, finfish ventless pot survey, and Narragansett Bay juvenile finfish survey, as well as from commercial fish trap or gillnet operations, finfish dealers, and donations from recreational party/charter boat businesses and individual fishermen. Anatomical structures collected from these fish are used to determine age. They include scales, ear bones

What Do Fish Eat? continued

(otoliths), gill covers (opercula), and the first pelvic fin spine. Size (fork length or total length) and weight (of each fish) are also collected. Collection of stomach content, sex, and maturity stage data for the species listed above was initiated in 2014, with a minimum of 40 stomachs examined annually for each fish species. Identification of stomach contents is made to the lowest taxonomic level possible. This study is designed to characterize the age-structure and diet composition of these fish stocks and will supplement data collected in the Northeast Fisheries Science Center (NEFSC) spring and fall surveys as well as the Northeast Area Monitoring and Assessment Program (NEAMAP), which do not sample within Narragansett Bay. Data collected in this study is already used in several stock assessments, and that number is expected to increase each year as benchmark stock assessments are conducted and ecosystem-based modeling approaches are further developed. Additionally, this study satisfies the requirements of ASMFC Fishery Management Plans (FMP's) for tautog, bluefish, menhaden and weakfish which require the state of RI to collect a minimum number of age and growth samples annually for stock assessment purposes. The type and number of age structures collected, number of stomachs examined, and number of sexual maturity determinations made for each fish species during 2014-2018 was summarized (Table 1). The proportional contribution of prey items for eight important fish species was calculated (Figure 1). Otoliths and scales are used to determine the age of a fish (Figure 2). In this example from a striped bass, given the amount of growth past the second annulus and the sample date (4/27/17), it was determined that the fish had not laid down its annulus for the year and would be assigned an age of 3 years.

Analysis of 2014-2018 stomach content data for each fish species with "unidentifiable" contents removed from the analysis resulted in the following (see Figure 1):

Black sea bass (BSB) – stomach contents dominated by crustaceans (43%; rock crab, Jonah crab, lobster, amphipods, mud crabs, mantis shrimp, hermit crabs, mud shrimp, Asian shore crab, sand shrimp, spider crab), cephalopod molluscs (26%; squid, snails), followed by finfish (14%; sand lance, clupeids, black sea bass, butterfish, scup) and bivalve molluscs (13%; blue mussel, soft-shell clam, razor clam); minor contributions came from gastropod molluscs (1.4%), with all "other" identifiable contents combined accounting for less than 2.4%.

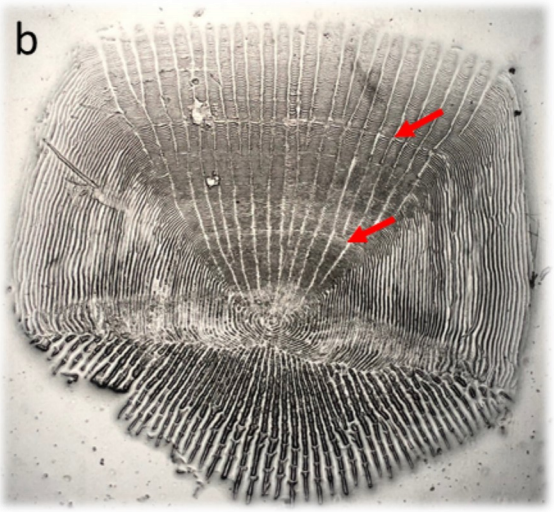
Bluefish (BLU) – stomach contents dominated by finfish (88%; menhaden, scup, butterfish, sea robin, bay anchovy, silversides) and cephalopod molluscs (12%; longfin squid).

Menhaden – Due to the fact that menhaden are filter feeders, all stomach contents encountered during this study were liquefied, with prey item(s) unable to be identified and classified. Due to this, no menhaden stomachs have been examined since 2017 and are not included in Figure 1. Generally, menhaden stomach contents will reflect the dominant planktonic species present at the time of sample collection.

Scup (SCU) – stomach contents dominated equally by polychaetes (25%; bamboo worms, blood worms, clam worms, red-lined worms), crustaceans (24%; amphipods, mud crab, hermit crab, sand shrimp), bivalve molluscs (24%; razor clam, blue mussel, softshell clam), followed by finfish (11%; menhaden, bay anchovy) and cephalopod molluscs (10%; longfin squid), with a minor contribution from gastropod molluscs (3%; slipper shell, dog whelk). Algae (1%) and sipunculids (1%) made up the "other" contents.

Striped bass (STB) – stomach contents dominated by finfish (88%; menhaden, Atlantic herring, scup, butterfish, sand lance, Atlantic mackerel, black sea bass, silver hake), followed by cephalopod molluscs

Figure 2 – Sectioned otolith (a) and scale impression (b) from a striped bass with 2 annuli marked and growth beyond the last annulus.



(5%; longfin squid) and crustaceans (5%; mantis shrimp, sand shrimp, amphipods). Algae, aquatic plants, bivalve and gastropod molluscs, and polychaetes made up the "other" remaining 2% of identifiable stomach contents.

Table 1- Stock assessment data collected for each fish species during 2014 - 2018.

Species	Scales	Otoliths	Operculum	Spine	Stomachs	Maturity
Black sea bass	1,493	1,493	-	0	1,098	1,098
Bluefish	-	593	-	0	274	376
Menhaden	425	425	-	0	133	313
Scup	634	536	-	0	195	246
Striped bass	1,252	960	-	40 (dorsal)	195	191
Summer flounder	502	502	-	0	192	253
Tautog	-	1,001	1,001	214 (anal), 79 (pelvic)	385	555
Weakfish	-	279	-	0	141	173
Winter flounder	122	122	-	0	122	122

Summer flounder (SFL) – stomach contents dominated by finfish (48%; menhaden, scup, weakfish, sand lance, Atlantic herring, black sea bass, bay anchovy), cephalopod molluscs (32%; longfin squid), and crustaceans (20%; mantis shrimp, sand shrimp, amphipods), with a small amount of gastropod molluscs (<0.5%) making up "other" contents.

Tautog (TAU) – stomach contents dominated by crustaceans (63%; rock crab, green crab, mud crab, spider crab, Asian shore crab, lobster), followed by bivalve molluscs (21%; blue mussel, blood ark, bay scallop) and gastropod molluscs (11%; slipper shell, greedy dovesnail, chink shell, dog whelk), with minor contributions from maxillopods (3%; barnacles). Algae (2%) and echinoderms (1%; sea urchin) made up the "other" 3%.

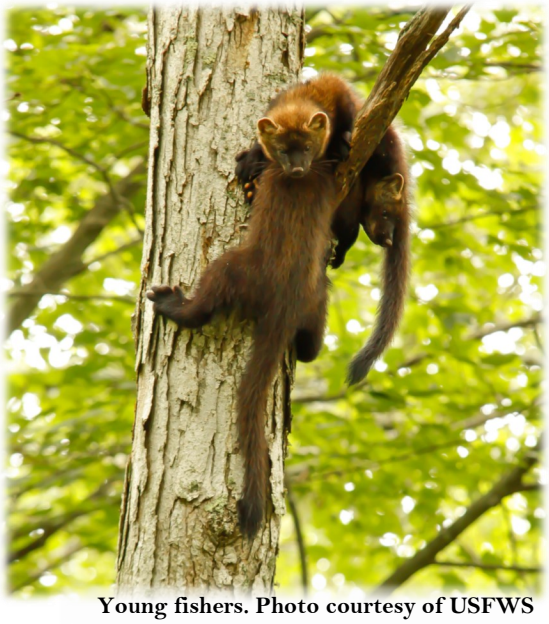
Weakfish (WEAK) – stomach contents dominated by finfish (91%; butterfish, menhaden/clupeids, scup, silversides), followed by cephalopod molluscs (7%; longfin squid) and "other" contributions from crustaceans (2%; shore shrimp, sand shrimp, sand crab) and algae (<0.1%).

Winter flounder (WFL) – stomach contents dominated by polychaetes (45%; brush worm, blood worm, red-lined worm, bamboo worm, opal worm) and cnidarians (37%; anemone, hydrozoa), with small amounts of crustaceans (8%; amphipods, sand shrimp, hermit crab, mud crab), algae (4%; barrel weed, sea lettuce), and minor contributions from nemerteans (2%), and bivalve molluscs (2%). Sipunculids, gastropod molluscs, and cephalopod molluscs made up the "other" remaining <2%.

The Fisher: A Misunderstood Mustelid

Despite their name, fishers are not cats, nor do they typically eat fish. Frankly, there sometimes seems to be more misinformation circling the reputation of these animals than there are facts. So let's clear some things up:

- **Fishers do not primarily prey on cats** and do not seek them out for an easy meal. Although they will eat cats, as will other predators such as coyotes, a free-roaming cat is more likely to be killed in a vehicle strike than by a fisher.
- Contrary to popular belief, **fishers are not responsible for those scream-like calls** heard at night, especially in the spring and summer. Those are the calls of foxes made by both male and females when they are looking for a mate or announcing their territory.
- Despite all the fear associated with the "big, bad fishercat" **attacks on humans are extremely rare.** In the rare instances of a fisher attacking a person, it is usually because the animal is very sick, it is protecting itself or its young, or a person is injured while intervening in a fisher - pet conflict.



Young fishers. Photo courtesy of USFWS

So now let's get to know the "real" fisher (*Pekania pennanti*)....

They belong to the weasel family (Mustelidae) which also includes the mink, river otter, and weasels, as well as species not found in the Northeast, like the wolverine and badger. The name fisher may have derived from the name given to them by early French trappers: "fitchet," because of their resemblance to the European polecat, the pelt of which they called *fiche* or *fitchet*. Fishers were once considered extirpated (regionally eradicated) from Rhode Island, having disappeared for more than 200 years. In the last few decades, fishers have extended their range into Rhode Island from source populations in New Hampshire and Massachusetts as a result of forest restoration, reintroduction efforts in neighboring states, and wildlife conservation and management programs.

Fishers are usually a dark brown to black color with short legs and an elongated body between 36 and 48 inches long. Their tails are long, dark and bushy, especially during fall and winter. People sometimes mistake fishers for bear cubs because of their rounded ears and excellent tree-climbing skills. Female fishers generally weigh between four and six pounds, while male fishers weigh between ten and fifteen pounds. It is still debated as to why there is such a large difference in body size between males and females, but one theory is that each sex targets varying prey species and uses somewhat different resources, thereby reducing competition between sexes, known as intraspecific competition. Male fishers have larger home ranges than females and may have a territory that overlaps the territories of several females, however males and females both will exclude other fishers of the same sex from their territories.

Fisher tracks often appear asymmetrical, with the front track appearing larger than the hind track. Front tracks are usually between $2^{1/8}$ to 3 inches long and $2^{1/8}$ to $3^{1/4}$ inches wide, while the hind track usually measures $2^{1/8}$ to 3 inches long and 2 to 3 inches wide. Mustelid tracks often have a bounding pattern that appear as two sets of tracks following by a second set of two

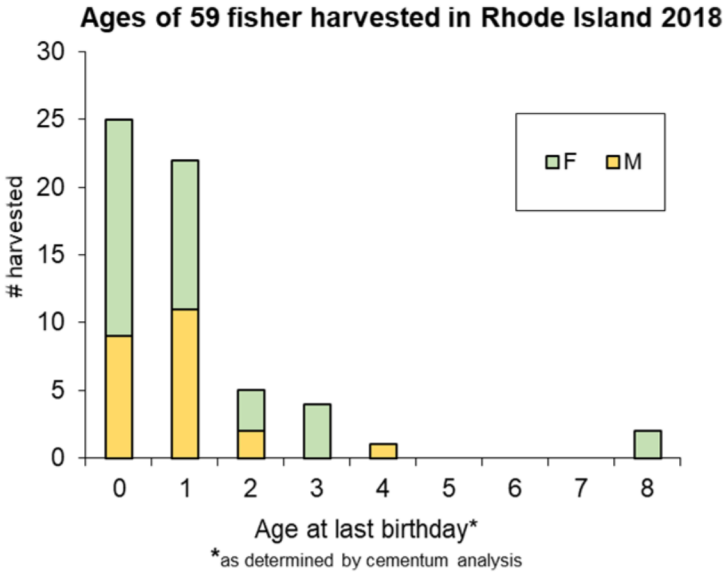
tracks. Fishers have large retractable claws and are excellent climbers, with the ability to rotate their hind feet 180 degrees and descend trees headfirst.

Fishers eat a wide variety of small animals such as squirrels, mice, voles, rabbits, and birds. Occasionally, they will scavenge carcasses and eat fruits and berries. Interestingly, fishers are one of the only predators that will kill and eat porcupines, but likely only do so when other food sources are unavailable. Porcupines are rare in Rhode Island and do not constitute a large part of their diet.

Suitable habitats for fishers include upland hardwoods, coniferous forests, mixed hardwoods and conifers, wetlands, and second growth and old growth forests. It is uncommon to see fishers in habitats without overhead canopy cover, such as fields or early successional forests. Studies conducted in New Hampshire and Wisconsin found that male home ranges can be between 10 - 15 square miles, while females' home ranges are typically between 3 and 5 square miles. Home range and population densities vary with time of year, sex, and habitat.

Pictured below: fishers are adept hunters that can stalk prey on the ground, but more often hunt in trees. Photo by USFWS

In the Northeast, fishers mate in April; mating time can vary by region due to temperature and differences in habitat. Like other Mustelids, fishers have delayed implantation, which means the fertilized egg does not immediately implant in the uterus as it does in humans. The egg remains dormant for approximately ten months after fertilization, which is thought to be induced by increasing photoperiod. So, if the egg was fertilized in April, it would implant the following February. Once implanted, the embryo takes about 30 - 60 days to develop, and the female gives birth the following March or April. Fishers typically have one litter per year, generally with two to three young per litter. Mating then takes place immediately after birth, and the cycle begins again. Female fishers use hollow tree cavities high above the ground exclusively for rearing young, while males do not participate in raising young. The young usually become full grown after about six months. Fishers are solitary animals, with the exception of a mother and young, and they hunt and travel alone.



In 2000, Rhode Island opened the very first fisher trapping season. Every fisher harvested must be brought to the DFW for tagging and biological sampling. Teeth collected from fisher carcasses can be aged by cementum analysis, a process similar to counting growth rings on a tree. Assessing the age of harvested fishers provides the DFW one means of monitoring fisher harvests and population demographics with the goal of maintaining sustainable populations.

Fishers are often misunderstood, feared, and unjustly blamed for missing pets and attacks on livestock. They have been persecuted for hundreds of years, at great detriment to their populations. Thanks to conservation efforts across the Northeast, however, their populations have once again become stable and continue to expand into new areas. Fishers serve an important purpose in our ecosystem by controlling small mammal populations, and they provide a crucial trapping resource to our state. Despite the persistence of misinformation, and in some cases persecution, the fisher has become a testament to the value of conservation efforts, and an inspiring success story.

☙❧

News from the Rhode Island Division of Fish & Wildlife

Sign up for the RI Division of Fish & Wildlife Monthly Update for information about events and opportunities. Email our Outreach Coordinator at DEM.DFW@dem.ri.gov to be added to the list.

Inland Fishes of Rhode Island on Sale Now!

This publication describes more than 70 fishes found in over 377 pond and stream locations throughout Rhode Island. With gorgeous color and black and white scientific illustrations, each fish is addressed with a detailed description and color location map.

Paperback: 287 pages, 8"x10" Price: $18.75 (includes tax). Email DEM.DFW@dem.ri.gov for more information.

Visit the Rhode Island Department of Environmental Management website for **information on all of our programs, news, events, volunteer opportunities, information, and more**: www.dem.ri.gov

Hunting & Fishing Regulations

Rhode Island Management Area Maps & Information

Hunter Education Programs & Events

Aquatic Education Programs & Events

Division of Fish & Wildlife Volunteer Programs

Wildlife Education & Outreach Programs & Events

Hunting & Fishing Season Dates

WILD RHODE ISLAND
A QUARTERLY PUBLICATION FROM THE
RI DEPARTMENT OF ENVRIONMENTAL MANAGEMENT
DIVISION OF FISH & WILDLIFE
GREAT SWAMP FIELD HEADQUARTERS
277 GREAT NECK ROAD
WEST KINGSTON, RI 02892

TO: