Massachusetts Wildlife

No. 3, 2024

$3.00

Yellow Garden Spider,
Fisher, Meet the Mustelids,
Photography Fundamentals

Reserve this New License Plate now *with the Mass. State Chapter of NWTF*

Since November 2023, the Massachusetts State Chapter of the National Wild Turkey Federation (NWTF) has been promoting and taking reservations for a new license plate being introduced in the Bay State. Proceeds from the sale of the plate will support the NWTF Massachusetts Chapter, a non-profit 501(c)(3) organization established in 1983, in its work to improve habitat and protect more open space with MassWildlife and other like-minded organizations and to ensure the continued conservation of the Eastern wild turkey, arguably one of the state's greatest restoration and conservation success stories. Beginning in 2019, the NWTF Massachusetts Chapter has been working with the Registry of Motor Vehicles (RMV) to develop a Massachusetts Wild Turkey license plate. The design has now been approved and the plate is available for pre-order to hunters, conservationists, and others who love having wild turkeys throughout our state. The new plate's design features a full-color Eastern wild turkey and was created by the graphic design team of the NWTF. To get this specialty plate into production, the NWTF Massachusetts Chapter must receive reservations for 750 plates and provide the names and addresses of the people who intend to purchase them to the RMV. Production will not begin until 750 plates have been reserved, processed, and paid for, so please share this opportunity with your family, friends, and colleagues. Individuals who reserve the first 750 plates will also receive a free, one-year membership to the NWTF. The initial cost of the license plate will be $40, with $28, which may be tax-deductible, going directly to the NWTF Massachusetts Chapter to support its habitat conservation and restoration work for the wild turkey in the Commonwealth. A $20 swap fee will also be collected by the RMV when the new plates are ready.

To learn more about this specialty license plate, the work of the NWTF, and how you can participate in its efforts, contact Joe Judd at **jjontheridge@comcast.net** or Keith Fritze at **centralmassnwtf@gmail.com**. They can discuss past and current land and habitat conservation projects with you, help you reserve this beautiful and impactful specialty number plate, and explain the potential tax deduction.

MASSWILDLIFE

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MASSACHUSETTS WILDLIFE

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Features

On the Cover: A mature female yellow garden spider (*Argiope aurantia*) hangs in the center of her web shortly after dark. This common species is one of the largest orb weavers in Massachusetts, with a body length of one inch and over two inches in total with its legs included. Photo © Troy Gipps, Canon EOS 5DSR, Tamron SP 90mm Di Macro VC USD, Canon Speedlight 430EX III-RT, f/11, 1/200 second, ISO 1250.

Demystifying the Fisher

by Alyssa Grayson

Though relatively few Massachusetts residents have ever seen a fisher, many have heard elaborate stories about these mysterious animals. They are rumored to emit a terrifying scream similar to the sound of a baby's cry or a woman in distress. Tales of fishers causing the disappearance of pets, and even stories of them successfully hunting adult deer, are spread through communities and on the internet. Because they are rarely seen, the secrets these shy and elusive creatures hold often lead to misunderstandings. How many of these stories are truly grounded in facts? The truth is that much of the information circulating about fishers is false, so let's set the record straight.

Fishers (*Pekania pennanti*) are native to much of the northern United States and into Canada, ranging as far north as Alaska and as far south as Virginia. Though native to Massachusetts, fishers were once completely absent from the landscape. Unregulated trapping and habitat fragmentation led to the extirpation of fishers in the state over a century ago, with the last fisher being seen in the mid-19th century. Over the past 60+ years, fishers have made a remarkable recovery in Massachusetts thanks to land conservation and the protection offered by regulated trapping seasons. They also benefited from a lack of competition from larger predators, such as black bears and bobcats, whose populations are still recovering after facing similar plights. Beginning with the first documented sightings in the late 1950s, fishers have expanded their range eastward and were present on Cape Cod by 2005. While fisher carcasses have been reported on the shore of Martha's Vineyard, there is currently no known fisher population on Martha's Vineyard or Nantucket. Today, fishers are once again an important part of the Commonwealth's healthy forest ecosystems. They remain a valuable furbearer species, harvested as a natural resource during a regulated trapping season, and are enjoyed by wildlife watchers and photographers alike.

Moving Past the Myths

The colloquial name "fisher cat" is a bit of a misnomer. Fishers do not typically eat fish, nor are they cats—they are members of the weasel family, which belongs to a scientific clade called Mustelidae and collectively referred to as mustelids (See pages 22–25 for a guide to all five mustelids found in Massachusetts). Their long, bushy tails, partially retractable claws, short ears, and long whiskers may have led people to refer to them as cats, but fishers are more closely related to dogs. Like other members of the weasel family, fishers belong to the suborder Caniformia, consisting of dog-like carnivores. A fisher's omnivorous diet regularly consists of small mammals such as squirrels, rabbits, porcupines, and raccoons. They will also scavenge easier meals such as eggs, fruit,

Photo © Sharon Lane

and carrion. Though they are generalist predators, fish are rarely on the menu. There is some speculation that they may have earned the name "fisher" after fur trappers caught them in traps baited with fish. Additional sources claim that European settlers saw their resemblance to a related animal, the "fitch" (polecat), which is native to Europe. Over time, "fitch" may have become "fisher." The truth is, there is no certain answer as to why they are called fishers.

Fishers are adept climbers, using their semi-retractable claws and highly mobile ankle joints to climb headfirst up and down trees. Like other mustelids, they have glands near their anus and on the bottom of their feet used to scent their trail, identifying themselves and their territory to other fishers. Their plush coats can grow to be three inches thick in the wintertime, which often makes them appear much larger than they are. Adult males usually weigh between 8–16

Generalist Predator

Rodents, like squirrels, chipmunks, and mice, are a staple of a fisher's omnivorous diet. Fishers will also eat birds, eggs, fruit, porcupines, and carrion. Contrary to popular belief, fishers do not "scream" or vocalize after a successful hunt as they could potentially lose their meal to a nearby competitor.

Photos MassWildlife Archive/Bill Byrne

Photos MassWildlife Archive/Bill Byrne

Adept Climber

Thanks to their semi-retractable claws and highly mobile ankle joints, fishers are able to climb headfirst down trees like seen in this photo. Although fishers are excellent climbers, they're not as agile in the tree canopy as their prey, so most of their hunting takes place on the ground.

pounds, while the smaller female fisher weighs only 4–6 pounds. The combined nose-to-tail length for both sexes is 2–3 feet long, with their long tail comprising one third of their total body length. Between November and December, fishers shed much of their insulating undercoat during an annual molt. They are well-adapted to cold weather and do not hibernate.

These animals also have a reputation for making some peculiar vocalizations, but most of the purported nighttime shrieks are falsely attributed to fishers. Fishers are solitary animals, and as such, tend to be quiet creatures. While fishers can—and do—make a number of sounds, most of their vocalizations are limited to quiet growls and chuckle-like grunts. They do not "scream" during mating season, nor after a successful hunt. Even though fishers are predators, larger animals such as coyotes and bobcats will prey on them or scavenge their kills. Making too much noise while hunting would alert prey to their presence and decrease their chance of catching food. It would also let other predators and scavengers know that there is an easy meal to steal nearby. During mating season, fishers communicate primarily through scent, which makes vocalizing largely unnecessary. There have been a few documented cases of young fishers making scream-like noises, but all were animals in captive settings. Being in unnatural and stressful environments can lead to anomalous behaviors not observed in the wild.

As for the screaming sounds you may be hearing at night, the most likely culprit is a red fox. Foxes can make a lot of noise, especially during mating season in spring, which includes loud barks and screams. Many videos posted on the internet dubbed as "fisher screams" are foxes vocalizing. Bobcats and barn owls may be another source of strange noises. Be wary of any videos circulating on the web claiming to capture "fisher screams" when the animal making the noise is not visible.

Because fishers do not "scream," Massachusetts residents should not expect to hear vocalizations throughout their mating season, nor should they expect to observe any other changes in fisher behavior. Fishers breed from late-March through April, shortly thereafter giving birth. They are one of over 100 species of mammals that utilize delayed implantation as a reproductive strategy. Other animals that do this include some species of seals, bats, and bears. After the female has been bred, the fertilized egg remains in a state of dormancy until it implants in the uterus later (in late-January to early-February of the following year). This fascinating adaptation allows fishers to begin embryonic development during favorable conditions regardless of when fertilization occurs and means that sexually mature females are almost always pregnant. Fishers do not mate for life and may have many partners throughout their lifetime, but females are selective of the males they choose to breed with.

Once females reach sexual maturity at around one year old, they can produce a single litter of 1–4 kits each year. The kits are born with closed eyes in the shelter of tree cavity dens and are cared for by the female for the first few months of their lives. Not all fisher kits make it through the spring and summer, so litters are typically reduced to two surviving kits by September. Both adult fishers and their kits are preyed upon by other predators, including bobcats, coyotes, and occasionally domestic dogs.

Even though fishers primarily eat small animals, they can (and sometimes do) kill prey much larger than themselves. This is a trait shared by most members of the weasel family, who have earned a reputation as formidable predators. Even tiny ermine, which are about 8 inches

Fisher Kits

These fisher kits were part of a study conducted in the early 1990s by the Massachusetts Cooperative Fish and Wildlife Research Unit at UMass Amherst.

Photo MassWildlife Archive/Bill Byrne

Photos MassWildlife Archive/Bill Byrne

Branching Out

Fisher were traditionally thought to be an old-growth, large intact-forest-block species. However, they have demonstrated an ability to utilize a wide variety of habitat types, including mature and young forests, a variety of wetland habitats, and even fragmented natural habitat in suburban and semi-urban areas.

Photo © Shawn P. Carey, www.MigrationProductions.com

long and weigh around 3 ounces, can kill snowshoe hares that are 15 times larger than their body weight. A study conducted in Maine between 1999 and 2011 found that adult fishers were able to kill adult lynx, accounting for 14 out of the 65 investigated lynx mortalities. These kills may be at least partially attributed to territorial conflicts between lynx and fishers. Even with the remarkable ability to take down larger animals, there has never been a documented case of a fisher killing a healthy adult deer.

Fishers are one of few predators known to actively pursue porcupines as a primary food source. Contrary to popular folklore, they do not flip over porcupines and "scoop out their bellies like a melon." Instead, they repeatedly attack the face of the animal, which is largely unprotected by quills. As one of the few main predators of the porcupine, fishers play an important role in maintaining forest health. Without fishers to keep the porcupine population in check, porcupines would overbrowse tender new growth and girdle trees, depriving them of nutrients and leaving them vulnerable to pests and diseases. The negative effects of an overabundant porcupine population can lead to a decline in forest health over time. Fishers are often seen as an indicator species for forest health: When there are problems seen within fisher populations, they may be indicative of broader problems affecting a forest.

Fishers are often unfairly blamed for preying upon cats and small dogs. While they may be physically capable of doing so, it is not a common occurrence. A study conducted in New Hampshire between 1979 and 1980 found that out of over 1,000 fisher stomachs examined by researchers, only one contained cat hair. This evidence suggests that cats are eaten by fishers much less often than previously thought.

Fishers in Suburbia

Once thought to be exclusive to large-tract, old-growth forests, we now know that fishers can also thrive in fragmented suburban habitats. Don't be alarmed if you see a fisher in your community. Though secretive, it is quite common for fishers to be present in neighborhoods. A fisher was even spotted scurrying along a street in The Bronx, New York, in 2014. The animals may be seen crossing backyards or moving along fence lines as they travel from one section of sheltered habitat to another. While fishers are generally crepuscular animals (most active at dawn and dusk), it is not unusual for them to be active during the daytime, especially in the summer. Additionally, fishers are not generally considered to be a common vector species for the rabies virus. Of the few fisher specimens that were submitted to the Massachusetts Department of Public Health for rabies testing between 2014–2023, none of them returned positive.

Fishers are generally more wary of us than we are of them, despite their fearsome reputation. There are very few documented cases of a fisher attacking a person, and the incidents that have occurred in Massachusetts were likely the result of a defensive action by a cornered animal. In the words of a former Massachusetts biologist, "Fishers are really only dangerous if you are a squirrel or a rabbit!"

Although fishers rarely have true conflicts with people and their pets, it's still important to take precautions. The best way to keep cats safe is by keeping them indoors or allowing them to have supervised outdoor time on a leash. Directly supervising all pets on a leash is recommended because wild animals are much less likely to attack pets if you stay close by them. Chickens, rabbits, and other livestock should be kept in secure housing, such as a coop or barn, especially at night. All livestock feed should be brought indoors at night or stored in secure containers in

Photo © Shawn P. Carey, www.MigrationProductions.com

The Dog Days of *S*ummer

While this fisher may look aggressive, it is actually panting to cope with summer heat.

Photo © Sharon Lane

Safety in the Trees

If you're trying to spot a fisher in the wild, remember to look up! Fishers will rest on branches, in squirrel nests, and in tree cavities during the day. Fisher kits are born exclusively in tree cavities to protect kits from the cold and potential predators.

a barn or other structure and house pets should be fed indoors. Leaving pet food outdoors or garbage uncovered can attract fishers and other wild animals to homes and neighborhoods. As fishers continue to seek food provided by humans, they may lose their natural fear of people. This process, known as habituation, can lead to the development of bold behaviors.

Bird feeders are another common human-associated food source sought out by wildlife. Though there have been a few documented cases of fishers eating suet (animal fat) out of bird feeders, fishers are typically more interested in eating the birds and rodents that seed attracts. Fishers, coyotes, foxes, and other opportunistic carnivores may utilize areas around bird feeders as easy hunting grounds. To prevent human-wildlife conflict, avoid using bird feeders. Instead, support local birds naturally by growing native plants or adding a water feature to your backyard.

Fishers can be beneficial neighbors because they eat a lot of common pests, but this also makes them more susceptible to rodenticide poisoning. These poisons have the same effect on predators that eat rodents as they do on rodents: interfering with the body's ability to form blood clots and leaving animals prone to fatal hemorrhaging. They may also cause reduced reproductive rates and suppress the animal's immune system, thus increasing their likelihood of contracting parasites and disease. The active agents in these rodenticides accumulate in the body because they are slowly metabolized over the course of hundreds of days. Recent research in states surrounding Massachusetts has shown that fishers are repeatedly and chronically exposed to multiple anticoagulant rodenticide compounds, with 100% of fisher livers tested from Vermont having been exposed to least one. The "hot zone" for rodenticide ingestion in Vermont, New Hampshire, and New York is highly concentrated around the Massachusetts border. Because the Northeast has one of the highest rural human population densities in the United States, these results are alarming but not necessarily surprising. The seasonality of many New England communities may also be a factor in elevated rodenticide exposure risk. An upcoming research project

from the University of New Hampshire speculates that summer homes may be especially problematic due to their common and unsupervised use of rodenticides during the off-season. Fishers are just one of many non-target species affected by rodenticide use.

The best way to reduce the risk of harm to fishers and other wildlife is to avoid rodenticide use altogether, especially the use of anticoagulant rodenticides. Identify and remove any potential food sources for rodents (bird feeders, pet food, etc.) and repair any openings that rodents may be using to enter your home. Using alternative lethal methods, such as snap traps, can reduce risk of accidental rodenticide exposure of non-target species.

Previous and Upcoming Research

In 1992, the Massachusetts Cooperative Fish and Wildlife Research Unit studied the population density, movements, and mortality of fishers in Massachusetts. Ninety-two fishers were captured, and many were fitted with tracking collars to determine fisher home range and population density. While the exact population size of fishers in Massachusetts is currently unknown, recent hunter surveys conducted by MassWildlife in the mid-2010s indicate a higher population density of fishers on the eastern side of the state. It is possible that food provided near bird feeders is contributing to their success in that region. However, data from nearby states suggests that the broader population may be beginning to decline again.

There is still much to learn about the world of the fisher. While considerable progress has been made to better understand their biology and behavior, some difficulties remain when studying their population. Recent and upcoming research projects from universities and wildlife agencies in the Northeast continue to expand our knowledge of this understudied animal.

About the Author

Alyssa Grayson is a wildlife biologist with experience working with multiple government agencies and wildlife organizations. She has been involved in research projects involving a variety of taxa, including large carnivores, waterfowl, and insects.

Photo © Christina Radcliffe

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This image may at first appear to be an acrylic or oil painting, but by setting a slow shutter speed and panning up during the shot the photographer's digital sensor was "painted" with the vibrant autumn colors of this Massachusetts wetland. To learn more about the fundamentals of photography, see page 26. Photo © Troy Gipps, Canon EOS 7D Mark II, Canon EF 70–200mm IS USM at 165mm, f/22, 1/3 second, ISO 100.