

NEWSLETTER

Preserving open space and connecting people to nature since 1961

NEWTONCONSERVATORS.ORG • SUMMER 2024

SUMMER ISSUE

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Protecting Our Most Vulnerable Plants and Animals: Endangered Species Conservation in Massachusetts

In September, 2023, to celebrate Climate Week, Governor Healy signed an executive order to advance biodiversity conservation in the Commonwealth. The governor pointed out that "our state is home to towering forests, numerous lakes and ponds, a vast network of rivers, and beautiful marshland, estuaries, and abundant ocean that clean our air, power our economy, and *serve as a home to hundreds of threatened and rare species.*"

Although Massachusetts is a conservation leader and has set ambitious land protection goals in the face of climate change, we face a global biodiversity crisis today, and Massachusetts is not immune. More than 400 species are currently listed as Endangered, Threatened, or of Special Concern under the Massachusetts Endangered Species Act (MESA), including 173 animal and 259 plant species. The Natural Heritage and Endangered Species Program (NHESP) of the Massachusetts Division of Fisheries and Wildlife (MassWildlife) tracks the status of these species and works to recover and protect them. Although state-listed species enjoy regulatory protections, they still face many threats, such as habitat loss and

MassWildlife's Natural Heritage & Endangered Species Program (NHESP)

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fragmentation, invasive species, emerging diseases, climate change, and alteration of hydrology and other natural processes.

Drivers of Rarity

Many of our rare species are habitat specialists, requiring very specific habitat types for at least a portion of their life cycles. Some examples of habitats that support disproportionate numbers of rare species are pine barrens, sandplain grasslands and heathlands, river floodplains, calcium-rich wetlands (confined to western MA), and bogs and other peatlands. Other important habitats for rare species include the shores of coastal plain ponds in southeastern MA and coastal beaches. Some of these habitats have been greatly altered by human activity such as damming of rivers, filling of wetlands, wildfire suppression, road construction, and coastal development.

Rarity is a matter of scale. Some species are rare and imperiled in Massachusetts but secure globally or regionally. A good example is the large-leaved goldenrod, a plant that occurs at high elevations in the Berkshires but is much more common



Q Search this organization

The Natural Heritage & Endangered Species Program is responsible for the conservation and protection of hundreds of species that are not hunted, fished, trapped, or commercially harvested in the state, as well as the protection of the natural communities that make up their habitats. bit.ly/3R9uwbj

farther north. Other species found in Massachusetts are imperiled regionally or globally. Some of these species, such as the Piping Plover and Red Knot (another shorebird) are protected under the Federal Endangered Species Act and MESA. Massachusetts plays a disproportionate role in the conservation of some federally listed species such as the Piping Plover (about 44% of the Atlantic Coast population breeds in MA), and a small role in the conservation of others (e.g., Bog Turtles are mostly found farther south, but do occur in the southern Berkshires).





Map A shows areas of the state with the largest numbers of rare species — rare species richness "hotspots." Although regions throughout the state support rare species and their habitats, areas with significant concentrations of rare species comprise much of southeastern Massachusetts, including



Cape Cod and the islands, portions of the Berkshires, and portions of the Connecticut River Valley. Southeastern Massachusetts supports the largest and most significant pine barrens north of southern New Jersey, as well as other rare coastal

Beach Tiger Beetle

species like the federal and state-listed Northeastern Beach Tiger Beetle.

A relatively high proportion of the reptiles and amphibians found in Massachusetts are rare and MESA-listed. This involves 6 out of 10 native freshwater turtle species. In addition to having some specialized habitat requirements, many of these species range widely, making them vulnerable to habitat loss, fragmentation, and road mortality. For



Blue-spotted Salamander

considerable distances overland between wetlands to nest and is found primarily in and near the I-495 corridor. This area has experienced significant development and increasing road traffic in recent decades.



example, species such

Marbled Salamanders

require vernal pools for

breeding, but they also

depend on upland forest

habitats hundreds of feet

Blanding's Turtle, with its

from breeding pools.

Similarly, the splendid

as Blue-spotted and

Blanding's Turtle

Freshwater mussels are another group with a high proportion of listed species due to human alteration of rivers and ponds and impacts of land-use changes on water quality. Spectacular wildflower species like the endangered ram's



head and showy lady's slippers are also vulnerable to browsing by excessively high deer populations. In some cases, it has become necessary to erect deer exclosures to protect critically endangered plant populations. Recently, steep declines in certain bee species have led to new listings. For example, the American Bumble Bee used to be widespread in Massachusetts but was listed as critically endangered in 2020 and may now be extirpated in our state.

Showy Ladyslipper Rare Species in Newton

If you visit the state's online Rare Species Viewer and enter "Newton" into the map search, a list of species will appear. Almost all of these are historic and no longer believed to occur in Newton, the exception being the Blue-spotted Salamander, which was last seen in Newton in 2009. Some of these former Newton inhabitants such as the Ringed Boghaunter (a type of dragonfly) and Wood Turtle likely disappeared due to wetland loss or the ditching/piping of streams. Long's bittercress may have disappeared due to damming and disruption of tidal flows in the Charles River. Finally, several of the historic species needed the more open





Wood Turtle

specific information about the locations of rare species due to risk of poaching for the pet trade or other harm.

landscape associated with

have succeeded fields, even

in rural parts of the state.

Note that Massachusetts

an exemption for rare

the NHESP does not

release detailed site-

species information, and

public record law contains

active farming and have

become rarer as forests

Conservation Successes

Over the course of my career, I have had the opportunity to work directly with colleagues to protect and restore the habitat of many rare species, such as Bog Turtles in the Berkshires and Barrens Buckmoths in Plymouth. Although there are many challenges remaining, there have been many noteworthy successes: the establishment of a robust population of sandplain gerardia (a plant) in Crane Wildlife Management Area on Cape Cod, and the recent recolonization of the Montague Plains Wildlife Management Area by the Frosted Elfin Butterfly in response to habitat restoration and increases in the population of its wild lupine host plant. Although the NHESP receives some state general fund support, the program remains dependent on grants and donations to carry out its efforts — and much work remains to be done! You can help support endangered species conservation in Massachusetts by supporting the NHESP. ◆

🦑 Jon Regosin

Annual Meeting 2024

ewton Conservators' president Alice Ingerson began the Newton Conservators' 63rd annual meeting at the American Legion Post 44 in Newton by welcoming everyone, including the sponsors, and turning

> the podium over to Newton Conservators' vice president Nyssa

Land acknowledgements have

creation of a Diversity, Equity,

Inclusion, and Justice Committee

several years ago. "We are meeting

have lived with and cared for over

recognize that the Massachusett

of the people who now claim to

thousands of years," Nyssa said. "We

never ceded this land to the ancestors

on land that the Massachusett people

Patten for a land acknowledgement.

become a tradition since the board's



Nyssa Patten

own it. At our 2022 annual meeting, Massachusett Tribal Elder Elizabeth Solomon asked us to think about 'how we can be in a reciprocal relationship with nature, neither using it as a resource, nor seeing it as something static to protect.' She urged us to see this relationship as a 'continuous flowing,' in which 'we give to nature as frequently and as much as we take from nature.' We hope to build truly reciprocal relationships with nature and people of all backgrounds, including those who have been displaced or excluded from the open spaces for which we advocate." Although Mayor Ruthanne Fuller could not be present because of a School Committee budget meeting, Jennifer Steel, Newton's chief environmental planner, delivered the mayor's comments with the following observations.



"What an amazing group of conservationists, environmentalists, advocates, and all around do-gooders from President Alice Ingerson, Vice President Nyssa Patten, and the entire all-volunteer team at the Newton Conservators. Thank you for your more than 60 years of strong advocacy and action to preserve and protect our open spaces here in Newton; you teach us how to better understand and appreciate the wonderful natural world around us

Jennifer Steel

with walks, webinars, and programs. You roll your sleeves up and get your hands dirty organizing invasive pulls and conservation land cleanups. I'm thrilled that you're recognizing tonight the new community pollinator projects as the Environmentalist of the Year. This effort is teaching us all how to transform our properties and habitats to nourish our native insects, birds, and other wildlife. The original demonstration pollinator garden that you planted at City Hall back in 2021 has brought us and our native bee populations joy ever since. And thanks, as well to our students from EcoPledge at Boston College for leaning

Continued on page 4

