NEW ENGLAND COTTONTAIL NEWSLETTER

SPRING 2026

Welcome to the New England Cottontail Newsletter! This publication was produced by members of the New England Cottontail Conservation Initiative. We formed in 2009 as a collaboration between state and federal natural resource agencies, non-governmental organizations, universities, zoos, land trusts, and private landowners, with a goal of conserving the New England cottontail throughout the species' current range. From conservation rearing, to research and monitoring, to creating habitat, we are working hard to make sure New England's native cottontail rabbit can thrive. In this edition, we will share with you work done by state agencies and universities that contributes to carrying out the **Conservation Strategy for the New England Cottontail (*Sylvilagus transitionalis*)**.

A landowner meets with a natural resource professional to discuss a young forest project that was completed on private property. / NRCS.

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A Very Hungry Caterpillar Leads to Forest Management That Helps Young Forest Wildlife

Dustin Riordan
Wildlife Technical Assistant
Connecticut Department of Energy & Environmental Protection Wildlife Division

The forests of Connecticut's northwest corner are changing. In summer 2022 it wasn't unusual to see entire hillsides of trees stripped of their foliage, so that midsummer drives appeared eerily springlike. That year the Connecticut Agricultural Experiment Station estimated that more than 45,000 acres of forest in Litchfield County, Connecticut's northwesternmost county, were severely defoliated. This followed a defoliation of 40,000 acres in 2021 in the same region, centering on the towns of Sharon and Cornwall. The culprit? Successive outbreaks of ravenous caterpillars of the spongy moth (*Lymantria dispar*), formerly known as the gypsy moth.

A 3,500-acre portion of Housatonic State Forest known as the Sharon Mountain Block was particularly devastated, with secondary stress brought on by another insect pest, the two-lined chestnut borer in 2023 and 2024. Thousands of oak trees succumbed, or were so severely compromised they would soon die, by the time the outbreaks ceased. Connecticut Department of Energy & Environmental Protection's (CT DEEP) Division of Forestry began inventorying the damage and planning a series of management operations to salvage remaining timber for forest products, remove hazardous trees, and reduce fuel that could feed potentially catastrophic wildfires.

Salvage timber harvests reduce the threat of catastrophic forest fires while encouraging dense forest regeneration. / J. Clark, CT DEEP.

Forest regeneration provides habitat to a diversity of wildlife that need young forests, including ruffed grouse. / J. Clark, CT DEEP.

While accomplishing these goals, the operations were carefully planned to increase the diversity of tree species and age classes in the state forest. A 240-acre project, completed in 2025, created pockets of young forest adjacent to mature forest, which should improve conditions for wildlife including scarlet tanagers, eastern towhees, American woodcock, ruffed grouse, and New England cottontails.

A Very Hungry Caterpillar (continued)

While foresters were inventorying the latest insect-caused devastation in the Sharon Mountain Block, technicians working for CT DEEP Wildlife Division's New England Cottontail Program conducted winter fecal pellet surveys in a forest stand that underwent a similar salvage harvest in 2017, following the die-off of ash trees caused by another insect invader – the emerald ash borer.

Fecal pellet surveys are the primary tool wildlife biologists use to determine if habitat is occupied by New England cottontail or its nonnative relative, the eastern cottontail. DEEP's staff was excited when survey results showed that New England cottontails were occupying this habitat. The Sharon Mountain Block of Housatonic State Forest, which lies within a New England Cottontail Restoration Focus Area, had never been surveyed for New England cottontail occupancy before, making this discovery even more significant.

Additional forest harvests are underway near the newly discovered New England cottontail population. Around 325 acres of dead and dying oak trees will be managed by the time of completion. In this area, CT DEEP Wildlife and Foresty Divisions are currently partnering with the University of New Hampshire, South Dakota State University, the U.S. Fish and Wildlife Service, and the National Fish and Wildlife Foundation on a project to further evaluate techniques to manage habitats in ways that yield the most ideal conditions for New England cottontails.

Seedlings of oak, maple, hickory, tulip popular, and aspen grow back following a salvage timber harvest designed to boost young forest habitat at Housatonic State Forest in Sharon, CT. / J. Clark, CT DEEP.

Approximately 45 acres within these harvests have been set aside from surrounding areas where fewer trees will be cut, retaining greater live tree canopy cover where possible and leaving felled trees on the ground. Researchers plan to evaluate the relative use by New England cottontail and eastern cottontail of the regenerating young forest habitat.

In the Housatonic State Forest, a major forest disturbance caused by nonnative insect invaders is turning out to be pretty good news for local wildlife!

How Many Rabbits Per Acre? Modeling New England Cottontail Abundance in Western Connecticut

Carson Madigan
Graduate Research Assistant
University of New Hampshire

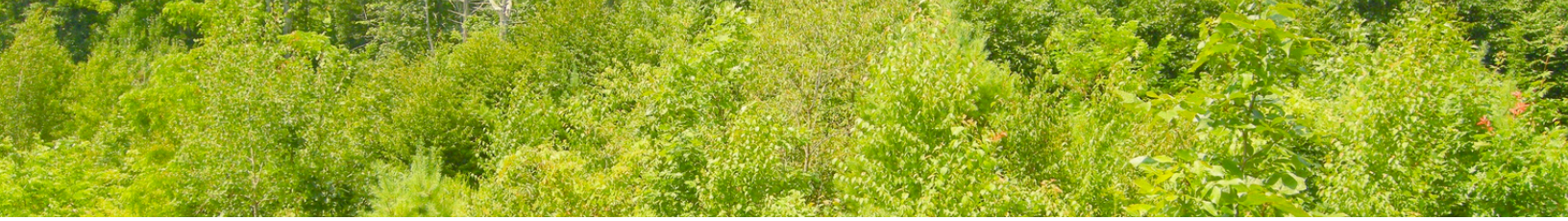
One problem conservationists face in restoring the New England cottontail is that we don't know how many rabbits live across the species' range. For many years, conservationists have tracked where rabbits are found, but they haven't been able to determine how many rabbits live in each known habitat patch.

How do managers know where the rabbits are? Fortunately, rabbits leave behind many clues to their presence. Though it is rare to see and identify a New England cottontail, they leave behind tracks, hair, and, most important for us, their poop! Rabbit poop, also known as fecal pellets, provides the best way for habitat managers and researchers to keep tabs on the presence or absence of a local rabbit population without causing any stress to the animals. In a typical rabbit pellet survey, small groups of people walk through thick New England cottontail habitat looking for pellets, which are easiest to find when the ground is covered with snow.

Collection teams record details about each pellet, such as where it was picked up, the habitat surrounding the pellet, weather conditions, and more. Then university labs across the Northeast work diligently to analyze the pellets and provide information about the rabbits that left them behind. From a single pellet, lab researchers can figure out the species of the rabbit that excreted it; whether that rabbit was male or female; and can match specific markers of its DNA to identify it as a unique individual.

UNH Graduate Student, Carson Madigan, preparing rabbit pellets for DNA extraction in the lab. / UNH.

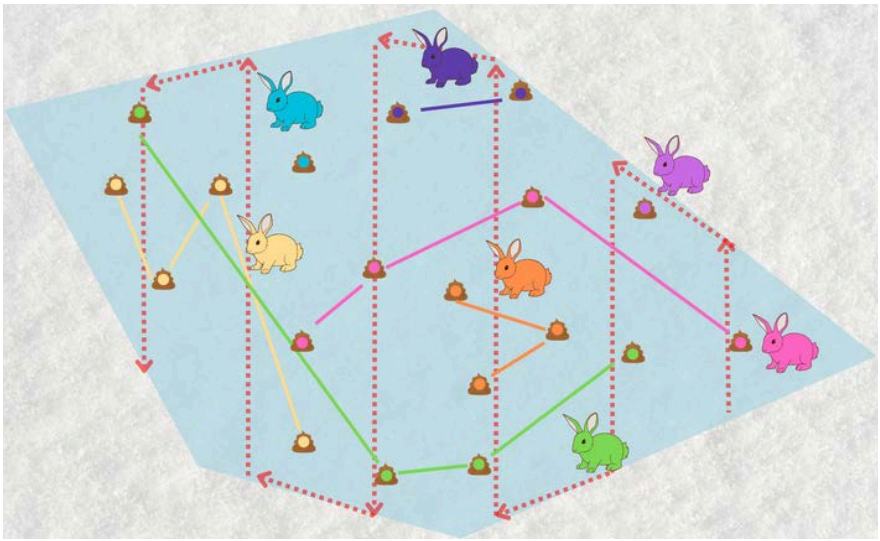
At the University of New Hampshire, our lab is using this information to determine how many rabbits are found in western Connecticut on sites where we know New England cottontails occur. We connect the identity of unique individual rabbits to the locations where we collected their pellets. In many pellet surveys, the same rabbit will be detected at many locations across a local habitat patch. This gives us the opportunity to use a "capture and recapture" framework to evaluate the patch's overall population without physically capturing, marking, and releasing any animals. More specifically, using a method called spatially explicit capture-recapture allows us to model the rabbits' movement across the habitat and estimate the population size and density of rabbits in a given area.



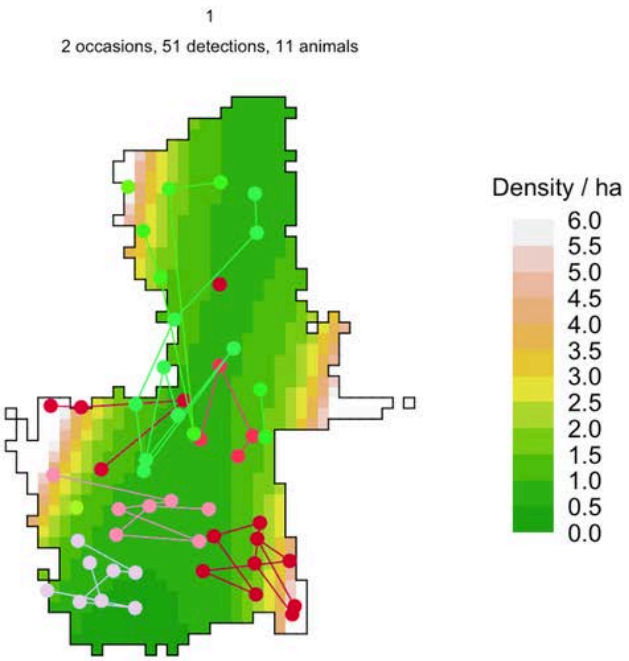
How Many Rabbits Per Acre (continued)

Why is knowing how many rabbits occupy an area so important? It lets managers and researchers track how the species is doing across its range. We know that the number of areas where conservationists have detected rabbits has decreased in recent years, but what does that mean in terms of the number of individual rabbits across that time period? To help restore the species, we must better understand how many rabbits are found in different populations and why they are doing well in some areas and not in others. Combining rabbit density and population size data with management efforts such as habitat restoration and rabbit translocations can help us arrive at the most effective strategy for increasing New England cottontail numbers now and in the future.

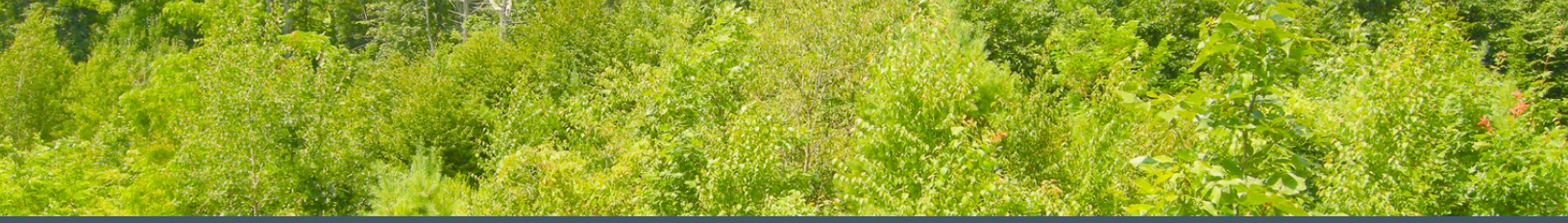
Though our current study is focused on western Connecticut, in the coming years the same approach will be applied across the entire range of the New England cottontail. This research will provide population estimates to wildlife managers with the goal of informing best management practices to conserve and restore New England's native cottontail rabbit.



This graphic depicts how each pellet collected in a habitat patch can be connected to an individual rabbit. Each color represents a unique rabbit and the fecal clues they leave behind. The lines connecting the pellets suggest the rabbits' movements across the blue patch. The red dotted lines represent how pellet collectors walk specific paths through the habitat patch to carry out an accurate sampling strategy. / C. Madigan.



Example of a spatially explicit capture-recapture model displaying how New England cottontail density varies across a habitat patch. Dots of different colors represent different individual rabbits and the connection between multiple pellet locations identified to that rabbit. The gradient of green to white represents rabbit density and how it varies across the habitat patch. / C. Madigan.



Kits Niche

Home is Where the Snacks Are

Grace McNally
Academic Intern
College of Arts and Sciences, University of New England

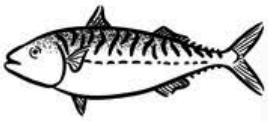
New England cottontail rabbits are special because they like **one** specific type of habitat: young forest, also known as an early successional forest. Since the rabbits are so small, they prefer a thicker environment with **smaller** trees, bushes, and plants to live in. When the trees get too big, and the bushes become less dense, **predators** like foxes and bobcats have an easier time seeing the rabbits.

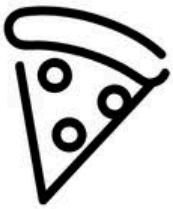
Do you have a favorite food you eat in the summer? And what about in the winter? New England cottontail rabbits have favorite foods too, depending on the season! In the summer, they like to eat goldenrods, asters, native grasses, and other **plants** and **flowers**. But in the winter when it is snowy and there are no more flowers, they rely on eating mostly **bark** and **twigs** from plants such as blackberry, dogwoods, maples, willow, and highbush blueberry.

Kits Niche

Color in what a rabbit would want to eat!







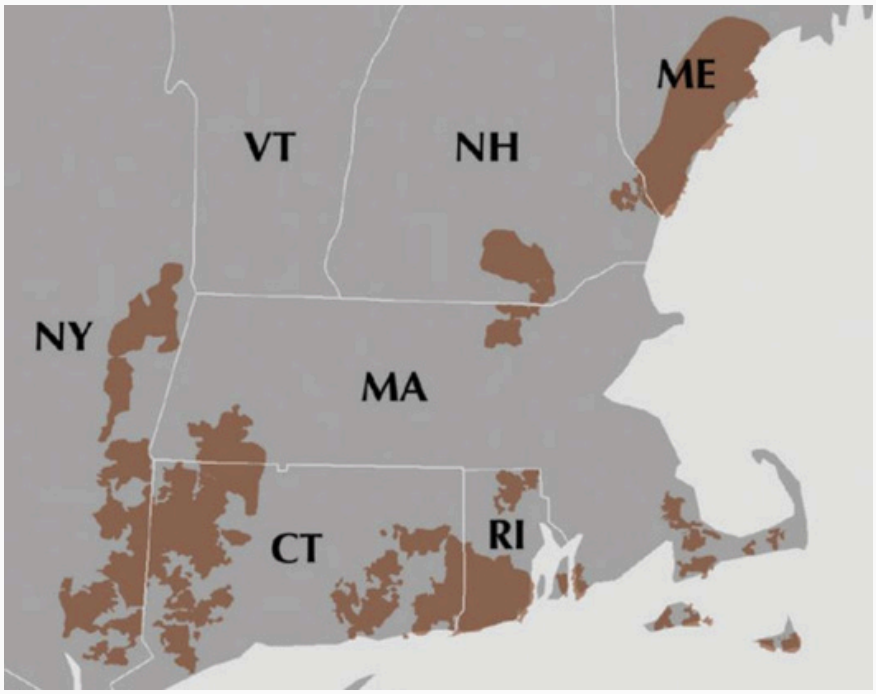


Can you color in where you think a New England cottontail would prefer to live?


Learn More and Join the Effort!

Visit our website explaining how we are working together for the New England cottontail: youngforest.org/wildlife/new-england-cottontail

New England Cottontail Focal Areas



If you want to learn more about New England cottontail conservation efforts in your state's focal areas, refer to the contacts below:

State Wildlife Agencies:

Connecticut: deep.ctwildlife@ct.gov
860-424-3011
Maine: info.ifw@maine.gov
207-287-8000
New York: wildlife@dec.ny.gov
518-402-8883
Massachusetts: Mass.Wildlife@mass.gov
508-389-6300
New Hampshire: wildlife@wildlife.nh.gov
603-271-2461
Rhode Island: DEM.DFW@dem.ri.gov
401-789-0281

Funding Resources for Habitat Management on Private Lands:

US Fish and Wildlife Service
Partners for Fish and Wildlife Program
newengland@fws.gov
603-223-2541

US Department of Agriculture
Natural Resources Conservation Service
Environmental Quality Incentives Program
www.nrcs.usda.gov