



Massachusetts Division of Fisheries & Wildlife

New England Cottontail *Sylvilagus transitionalis*

State Status: **None**
Federal Status: **None**

SPECIES DESCRIPTION: The New England Cottontail (*Sylvilagus transitionalis*) is a medium-sized cottontail rabbit with dark-brown to buffy upper parts overlain with distinct black guard hairs. Its ears are short, rounded, and typically heavily furred, with the anterior portion edged in black. Occasionally there is a black spot between the ears. Cranial characteristics (i.e., skull features), including an irregular suture between the frontals and nasals, a long slender postorbital process (rarely touching the skull), and the presence/absence of a supraorbital process, can reliably distinguish New England Cottontail from the similar in appearance and sympatric Eastern Cottontail (*S. floridanus*). Adult New England Cottontails typically weigh approximately 1 kg and measure 390 to 430 mm in length.

DISTRIBUTION AND ABUNDANCE: Historically New England Cottontails were likely distributed statewide in Massachusetts; however, by the 1930s their range had begun to decline. By 1990, Eastern Cottontail was found in 13 of 14 counties, while *S. transitionalis* was found in only 6. Currently, the abundance and distribution of New England Cottontail has been stable since the early 2000s, though geographically limited to portions of southeastern Massachusetts and southern Berkshire County.

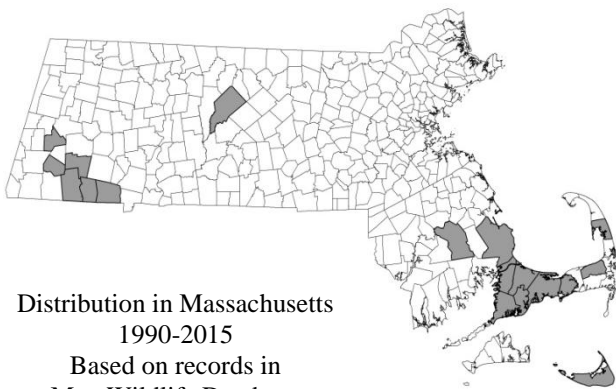


Photo by Tom Barnes, USFWS

PAST RESEARCH: From 1950 to 1952, graduate students at the University of Massachusetts, working with the Division of Fisheries & Wildlife (MassWildlife), collected 938 cottontails from throughout Massachusetts. Site specific data remain available for 654 (70%) of these, which include 508 (78%) Eastern Cottontails from 13 counties and 146 (22%) New England Cottontails from 11 counties.

From 1960-62, another student collected 337 (62%) Eastern Cottontails and 207 (38%) New England Cottontails, mostly from within a 20-mile radius of Amherst, Hampshire County, including parts of both Franklin and Hampshire counties.

In 1970-72, a third cooperating student collected 36 cottontails in Massachusetts as part of a regional study. These included 28 (78%) Eastern Cottontails from 5 counties and 8 (22%) New England Cottontails from 3 counties.

MassWildlife biologists conducted a fourth survey during 1979-81, principally collecting specimens from cooperating hunters. They received 401 (78%) Eastern Cottontails from 13 counties and 114 (22%) New England Cottontails from 7 counties.

A Species of Greatest Conservation Need in the Massachusetts State Wildlife Action Plan

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The next MassWildlife survey, in 1991-93, received 967 cottontails, mostly from hunters. These included 929 (96%) Eastern Cottontails from 13 counties and 38 (4%) New England Cottontails from 6 counties. The sample may have been skewed due to the lack of participants in some counties; however, the predominance of Eastern Cottontails is apparent.

In 2000-2003, 183 cottontails were received from 9 counties. All specimens were Eastern Cottontails. However, outside this survey period, New England Cottontails were confirmed from Barnstable, Berkshire, and Hampden counties.

HABITAT DESCRIPTION: The New England Cottontail is an early successional or thicket-dwelling species. Suitable habitat can be found in both forests and shrublands, where there is a dense understory with food and cover in close association. High stem density ecosystems are necessary to provide critical protection from predators and provide ample food resources, particularly in winter. Typical habitats include native habitat with substantial shrub development, such as beaver flowages, old fields and pastures, young regenerating forests, and forested wetland and shrub swamps. Although not identified in Massachusetts, New England Cottontails have been documented within Mountain Laurel thickets in portions of New York State.

THREATS: Many factors have influenced the general decline of New England Cottontail over the past century. The widespread decline of early successional habitat types has significantly contributed to their decline. Continued residential and commercial development in pitch pine-scrub oak barrens or other ecosystems has also fragmented, degraded, or eradicated habitat for New England Cottontail. Also, Eastern Cottontails were introduced into Massachusetts beginning around 1900, and certainly interspecific competition has influenced the abundance of New England Cottontail in favor of Eastern Cottontails that have less specific habitat requirements. New England Cottontails may be unable to compete with and ultimately may become displaced by the more adaptable Eastern Cottontail in higher productivity habitats. However, within lower productivity habitat such as pitch pine/scrub oak barrens, the lower metabolism and reproductive rate of New England Cottontail may prevail.

REFERENCES

- Arbuthnot, M. 2008. A Landowner's Guide to New England Cottontail Habitat Management. Environmental Defense Fund. 36 pp.
- Litvaitis, J.A. 1993. Response of early successional vertebrates to historic changes in land use. *Conservation Biology* 7: 866-873.
- Litvaitis, J.A., M.N. Marchand, J.P. Tash, M. Oberkrieser, V. Johnson, and M.K. Litvaitis. 2003. Interim progress report II: a regional inventory of New England cottontails. Departments of Natural Resources and Zoology, University of New Hampshire, Durham, New Hampshire, 37pp.
- Smith, D.F., and J.A. Litvaitis. 2000. Foraging strategies of sympatric lagomorphs: implications for differential success in fragmented landscapes. *Canadian Journal of Zoology* 78: 2134-2141.

For more information on New England Cottontail in Massachusetts, see:

- <http://www.mass.gov/eea/agencies/dfg/dfw/fish-wildlife-plants/mammals/cottontails-in-massachusetts.html>
- <http://newenglandcottontail.org/>