

23. EASTERN COTTONTAIL RABBIT

Sylvilagus floridanus

SUMMARY

Vermont has two species of rabbits; the nearly extirpated New England cottontail and the eastern cottontail. Eastern cottontails are found mostly in Vermont's southernmost portions, as well as along the Champlain Valley and Connecticut River Valley. Cottontails require thick cover to hide in, particularly during the winter when they are not well camouflaged due to their brown coats. Maintaining thick hedgerows and early successional forest as well as brush piles and hay or croplands is the best way to manage for cottontails.

NATURAL HISTORY

Vermont historically has been home to two species of cottontail rabbit that look so similar that they are almost impossible to tell apart in the field. The New England cottontail rabbit, *Sylvilagus transitionalis*, is a native species which has resided in this state since pre-colonial times, but which is extremely rare today due to changes in habitat. The eastern cottontail rabbit, *Sylvilagus floridanus*, occurs throughout the United States. It was introduced into New England in the 1800s and is now common in Addison, Rutland, and Bennington counties. It is less common in Chittenden and Grand Isle Counties. Eastern cottontails have moved up the Connecticut River Valley from Massachusetts in recent decades.

HABITAT REQUIREMENTS

Eastern cottontail habitat is found in the valley farmland region where fields and pastures are interspersed with hedgerows and low, dense brush. Winter is the most difficult time of year for rabbits. In Vermont, snow cover limits the distribution and densities of the cottontail population. Because they are poorly camouflaged in snow, they need thick winter cover in which to hide. Because preferred foods such as agricultural crops and herbaceous plants are not available in winter, they depend on low-growing woody vegetation for food as well as for escape cover and thermal cover.

The average home range size for the eastern cottontail rabbit is 10 acres; although in high-quality habitat it may be much smaller. The cottontail tends to inhabit the same home areas throughout its life, although it may range in a smaller portion in winter when cover availability is lowest. Home ranges of rabbits tend to overlap, particularly in the best habitat.

Cottontails will select areas of better cover over areas with abundant food if both are not found together. Rabbits have two different cover requirements: feeding cover and resting/escape cover. Dense woody vegetation can provide adequate summer cover but, in order for the rabbit to survive the Vermont winters, dense woody vegetation such as that found in old fields is critical. Clean farming and a lack of brushy fence rows in agricultural fields has led to the decline of the eastern cottontail rabbit in Vermont since the 1940s. Because of the animal's need for cover throughout its life cycle and the yearly seasons, cover availability

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Figure 23.1a and b
New England cottontail (top) and
Eastern cottontail (bottom)

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Figure 23.2

Cottontail habitat often consists of fence rows with shrub habitat.

Courtesy of John Gobeille, VFWD.

is the most limiting factor for cottontails. Cover is also important for the rare New England cottontail rabbit. However, it seems to prefer dense understory in regenerating woodlots or shrubby wetlands. The isolation of these patches of habitat may have led to extinction of local populations of New England cottontails.

MANAGEMENT PRACTICES

Because the eastern cottontail is truly a species associated with old fields and edge-type habitat, woody vegetation interspersed in agricultural fields provides the best habitat. Maintenance and enhancement of hedgerows is an important practice for the species. Hedgerows should be of dense woody vegetation 3 to 6 feet high and at least 20 feet wide. Mowing adjacent to hedgerows further enhances the habitat. Old fields reverting back to forest also provide the critical cover requirements of cottontails. In the Champlain Valley, brushy areas of gray dogwood, prickly ash, red cedar, and low-growing juniper near mowed meadows of grasses and legumes provide optimal conditions for eastern cottontails. Pastures containing red cedar and low-growing juniper provide excellent habitat.

Within every 10-acre area, all of the following habitat requirements of the eastern cottontail rabbit should be available:

1. Between 20 and 75 percent of the managed area should be maintained as brushy cover. Reverting field or pasture should be kept in early successional stages by actively mowing, burning, or light grazing on half of the area every 5 to 10 years.
2. Areas lacking early successional habitat can be enhanced with brush piles, or log or stump piles. Piles should be 3 to 7 feet high and 13 to 20 feet in diameter. Place them adjacent to edges of fields, pastures, and woodlots, spaced 50 to 100 feet apart. Brush piles will break down in 3 to 5 years, so one-quarter of them should be replaced annually.
3. The remaining acreage should be composed of hay or cropland and/or deciduous forest.

If you are considering managing your land for rabbit habitat, you should create or maintain a matrix of woody vegetation and herbaceous vegetation. Land is enhanced for rabbits when brushy cover is distributed throughout the area and not concentrated in one large block. Densities of one to three cottontails per 2 acres can be expected under optimum habitat conditions.