

## **HUDSONIA HARLEM VALLEY BIODIVERSITY MANUAL SUPPLEMENT**

### **New England cottontail (*Sylvilagus transitionalis*) NHP G4 S1S2, NYSDEC SC**

#### **Habitats in the Study Area**

Shrublands, including shrub swamps, and high-elevation ridges and plateaus with pine-oak barrens or a mosaic of dense forest, thicket cover and open patches. New England cottontail is more likely to occur in suitable habitat remote from developed areas. Thickets are critical shelter (Livaitis, et al. 1999), and brush clearing is especially detrimental to this species (Arbuthnot 2008). Home ranges vary from 0.5-1.7 acres. New England cottontail and eastern cottontail can coexist in the same habitat, with overlapping individual home ranges, but eastern cottontail out-competes New England cottontail in disturbed or fragmented habitat (Probert & Livaitis, 1996).

#### **Study Area Distribution**

Formerly all of New England and extreme eastern New York (Godon 1997). Viable but declining populations in Maine and New Hampshire (DeGraaf and Yamasaki. 2001). Records from 1994-1995 include Putnam, Dutchess and Columbia counties (Whittaker and Hamilton 1998). The species is more likely to occur along the New England border in the study area.

#### **Other Relevant Aspects of Ecological Niche and Behavior**

Solitary, active year round. Summer food includes forbs, grasses, and leaves; in winter, bark, shoots and twigs. Unlike eastern cottontail, New England cottontail will eat conifer needles (Chapman 1990). Fecal pellets are reingested, providing reabsorption of vitamin B and other nutrients. Microorganisms in the gut extract nutrients from pellets. This rabbit does not burrow, but uses holes dug by other animals for refuge from predators. Breeds April to August, typically three litters of 3-8 young annually. Behavioral studies showed that New England cottontail is more reluctant to forage in the open than eastern cottontail, giving the latter a competitive advantage in and near areas of human activity (Livaitis et al. 2006)

#### **Description and Identification**

Length 38-43 cm, female larger than male. Pinkish buff above, streaked with black; white below, upper surface of tail russet, lower surface of tail white. Typically lacking white blaze on forehead characteristic of eastern cottontail (*Sylvilagus floridanus*); black patch between black edged, round ears. Recent studies suggest that New England cottontail is conspecific with Appalachian cottontail (*S. obscurus*) (Livaitis, et al. 1997). New England cottontail and eastern cottontail are nearly indistinguishable in the field. Eastern cottontail lacks black spot on the forehead of New England and Appalachian cottontails, but this is difficult to observe without the animal in hand (Whittaker and Hamilton 1998). Skull offers best identification characters.

#### **Threats and Conservation**

New England cottontail has decreased significantly in the Northeast since. Reported contributing factors include habitat fragmentation and degradation, introduction of eastern cottontail (Villafuerte *et al.* 1997), human hunting, and predation by both wild and domestic carnivores (University of Michigan, 2003).

Individuals from populations in large tracts of suitable habitat were larger, healthier and longer lived than those in isolated patches of suitable habitat (Barbour & Litvaitis 1993). Maintenance of optimal habitat conditions (mix of forest, thick brush and open patches) is important for conservation of this species (Litvaitis & Villafuerte, 1996).

### **Survey Technique Constraints**

New England cottontail is hard to distinguish from eastern cottontail even when captured. Litvaitis et al. (1991) describe field characters for distinguishing the two species. Rabbits in remote, upland forest habitat may be this species, but eastern cottontail may also occur in upland forest, even on ridge summits. (Also New England cottontail may occur in lowland mosaic of woods and open areas.)

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