

# Headstarting as a Tool in Restoration of an Endangered Population of Northern Red-bellied Cooter



# Status of Massachusetts Population at Time of Listing in 1980

- Fewer than 200 adults in 12 ponds in Plymouth County with very low recruitment
- 60% of population in one pond
- Habitat altered by lakeshore development and protection from fire resulting in forest succession leaving few good nest sites
- Nearly all nests destroyed by predators



# Purposes of Headstarting



- Increase recruitment
- Enhance small populations
- Restore extirpated populations
- Introduce the species to nearby appropriate habitat to expand contiguous distribution

# Nest Protection



- Locate and cage all nests
- Allow all eggs to hatch at natural temperatures



# Headstarting Protocol



- 80% of hatchlings are immediately released into donor pond.
- Headstarted cooters are marked by shell notches and distributed to 20+ institutions and individuals.

# Hatchling Care

- Maintain hatchlings for 9 months, September – May
- Feed leaf lettuce and aquatic turtle food pellets
- Maintain water temperature at 82-86 degrees Fahrenheit
- Provide basking site and UV lighting
- Try to keep water clean



# Monitoring Hatchling Progress



- Volunteers submit weight and carapace length each month



# Release



- Take final weight and carapace measurement
- Refresh shell notches
- Release



# Results

- About 94% survival of hatchlings
- Release of 3,672 from 1985-2013
- Populations in 13 new ponds and 2 rivers established
- First wild nesting of headstarted female in 2000 (13 yr. old)





Northern Red-bellied Cooter (headstarted adult with shell notches) and Eastern Painted Turtle



# **Conserving Snake Species of Greatest Conservation Need Threatened by an Emerging Fungal Skin Disease**







The Timber Rattlesnake is listed as Endangered in MA, NH, VT, CT, NJ, and OH, and as Threatened in NY











# Conserving Snake Species of Greatest Conservation Need Threatened by an Emerging Fungal Skin Disease

A grant proposal submitted to the State Wildlife Grants  
Competitive Grant Program  
March 27, 2013

A proposal to assess the causes and conservation significance  
Of an emerging fungal skin disease in snake Species of  
Greatest Conservation Need in the eastern U.S., and  
Develop a response

Lead State: Massachusetts

Cooperating States: NH, CT, VT, NJ, TN, MN, WI, IL

# Grant Objective

To assess the causes and conservation significance of an emerging fungal skin disease in snake Species of Greatest Conservation Need in the eastern U.S., and develop a response.



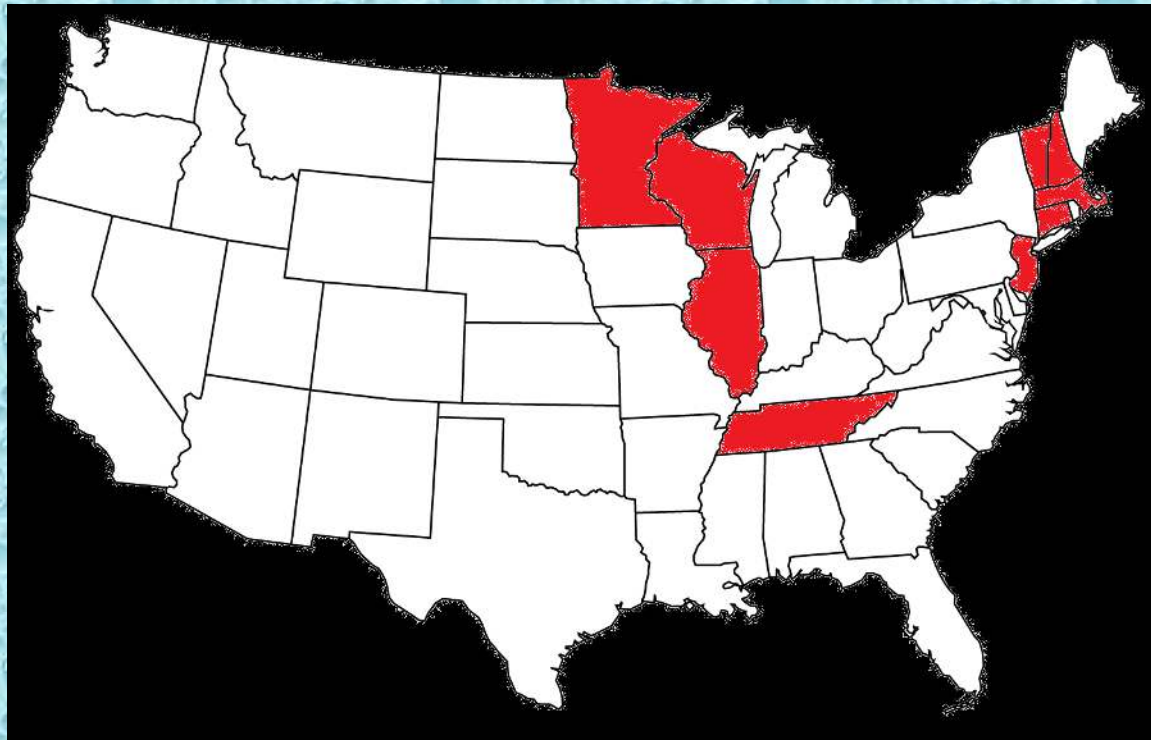


# Cooperators

Lead State: MA

Cooperating States: NH, CT, VT, NJ, TN, MN, WI, IL

Other Partners: UMass, University of IL, Roger Williams Park Zoo, USGS National Wildlife Health Center, Wildlife Conservation Society, Orianne Society



# Project 2

Undertake conservation measures designed to enhance survivorship and increase recruitment of imperiled populations of SGCN snakes.

Job 2.1: Augment imperiled populations by headstarting juveniles to mitigate adult mortality.

Job 2.2: Clear trees around rock outcrops to enhance basking opportunities.





Questions?

