

Project Title:

New England Cottontail Recovery in Southeastern New Hampshire

Project Description:

This project is a collaboration between the UNH Cooperative Extension, UNH Department of Natural Resources and the Environment, New Hampshire Fish and Game Department, US Fish and Wildlife Service, USDA Natural Resources Conservation Service, and the Wildlife Management Institute (i.e., “project partners”). Through a combination of educational outreach and technical and financial assistance, project partners will work directly with private landowners in southeastern New Hampshire to create and maintain habitat for endangered New England cottontail rabbits. Supported by over 20 years of New England cottontail research conducted by UNH faculty and students, this project directly connects the University with the public and cooperating state and federal agencies in an effort to restore uncommon and declining habitats in New Hampshire. Project successes and shortcomings will be evaluated in order to guide the range-wide restoration of New England cottontails and their habitat throughout New England.

Background Information:

Fields, pastures, and abandoned fields and pastures that contain shrubs, support unique collections of wildlife species that don't occur in the forested habitats that dominate much of New Hampshire. Since the early 1900's, the amount of agricultural land in New Hampshire has decreased significantly as fields have reverted naturally to forest, and development has permanently converted hayfields, pastures and natural shrublands (e.g., pine barrens) into residential and commercial developments. Wildlife species such as New England cottontail rabbits that require shrubby “old fields” as habitat have been declining precipitously as these habitats disappear from the NH landscape. As a direct result of habitat loss, New England cottontails have been listed as an endangered species in NH and many of the other wildlife that require these habitats are identified as species in greatest need of conservation. Since the majority of the land in NH is privately owned, many of these species could be lost if private landowners don't take action to create or maintain these habitats on their land.

Working on privately-owned land presents numerous obstacles to creating the shrubby habitat conditions that New England cottontails require:

- The best quality habitat is a dense tangle of shrubs and vines that is difficult, if not impossible to walk through, and many landowners simply think shrubby fields looks unkempt. As a result, most landowners are not inherently inclined to manage their fields for these conditions and few recognize the habitat value such fields provide.
- These habitats quickly revert to forest and lose their shrubby structure if invading trees are not mowed or otherwise cut at least occasionally. As a result, landowners must be committed to actively manage these habitats in order to maintain the shrubby conditions New England cottontails require.
- Managing these habitats is an out-of-pocket expense to the landowner. Unlike managing a forest where trees can be cut periodically and sold for lumber, no

merchantable products are created or removed when managing shrubby fields for habitat.

- Many landowners are concerned about the implications that attracting an endangered species to their land means to their land ownership rights.

Project Goals:

- The ultimate goal of this project is to halt the decline of New England cottontail rabbits in New Hampshire by working with private landowners to create and maintain habitat conditions required to support the species. Creating the amount and quality of habitat suitable to accomplish this goal will also improve habitat conditions for a wide range of birds, mammals, reptiles and amphibians that are in greatest need of conservation.
- Central to our ultimate goal, we want to identify what outreach mechanisms are most effective at motivating private landowners to actively manage New England cottontail habitat on their land.
- Finally, we will use the results of this project to guide the development of a larger effort to restore New England cottontails throughout their range that includes Maine, New Hampshire, Massachusetts, and Connecticut.

Project Objectives:

- Work with project partners to identify habitat “focus areas” centered on known populations of New England cottontails and surrounded by a landscape that is most conducive to creating and maintaining suitable habitat (e.g., existing or potential habitat conditions, presence of land protected by conservation easements). Identification of these focus areas will rely heavily on the results of previous research and surveys conducted by UNH faculty and students and project partners.
- Identify all landowners within each focus area to inform them about the project, provide them with educational materials, identify their landownership objectives, and offer them a variety of technical and financial assistance to manage New England cottontail habitat on their land.
- Evaluate whether this approach is effective for creating and maintaining habitat conditions required to stabilize or increase populations of New England cottontails within focus areas.
- Evaluate which educational, technical, or financial assistance mechanisms were most/least effective in engaging landowners and motivating them to actively manage New England cottontail habitat on their land.

Target Audience:

- The immediate project audience is private landowners and those who assist landowners in land management activities (e.g., consulting foresters and biologists, wetlands and soil scientists, land trusts).
- The larger audience of the project includes public and private entities that are interested in influencing land management patterns on private land (e.g., state and federal natural resources agencies, non-profit natural resources groups, University researchers).

Methods:

- All partners will collaborate to identify and agree upon specific focus areas.
- UNH Cooperative Extension (UNHCE) will use a variety of outreach methods to contact landowners within focus areas and inform them of the project and how they can become involved. These mechanisms include direct mailings and direct phone calls, press releases, educational brochures and literature, educational workshops.
- UNHCE will provide initial assistance to any landowner expressing interest in becoming involved in the project. This will include free site visits, assessments of landowner objectives, assessments of options to create or maintain New England cottontail habitat, and assistance enrolling in financial assistance programs sponsored by project partners.
- NH Fish and Game Department (NHFG), US Fish and Wildlife Service(USFWS), USDA Natural Resources Conservation Service (NRCS) and the Wildlife Management Institute (WMI) will provide financial assistance to landowners who are interested in managing New England cottontail habitat or in permanently conserving their land with an option to manage New England cottontail habitat.
- Staff from UNHCE, NHFG, USFWS, NRCS, and WMI will provide free technical assistance to any landowner interested in managing New England cottontail habitat.
- Any landowners concerned about attracting endangered species to their land can enter into an agreement with NHFG and the USFWS to protect their future land ownership rights on the portion of their land that is not managed for New England cottontails.
- UNH faculty and students, along with staff of UNHCE, NHFG and USFWS will conduct regular monitoring of habitats to assess the effectiveness of management efforts to create suitable habitat for New England cottontails.
- UNH faculty and student(s) will conduct a follow up survey of landowners who where contacted as part of this project to assess why they did/didn't participate and to evaluate what outreach mechanisms were most effective in motivating landowners to manage habitat on their land.
- All partners will review results of this effort together at the end of 2010 to assess project success and shortcoming in order to guide future efforts in southeastern NH, as well as to develop a range-wide effort to recover New England cottontails.

External Partners:

- UNH Cooperative Extension's mission is to provide the public with science-based information that helps them make informed decisions. This project allows UNHCE to accomplish its direct mission of connecting the public with the results of the research that happens here at the University, and with connecting UNH researchers and students with the public end-user of that research. Further, this partnership provides us with a service contract that supports a full-time Wildlife Program Assistant.
- This project directly applies the results of research conducted by UNH researchers and provides funding to support faculty and students who are studying New England cottontail biology and management. Further, we have secured funding to support additional faculty and a graduate student to study the social science portion of this project that will allow us to better evaluate project success and short-comings.
- The New Hampshire Fish and Game Department and the US Fish and Wildlife Service are charged with overseeing the welfare of wildlife in the state of New

Hampshire and with wildlife that are listed as threatened or endangered species. This project allows these agencies to meet their missions for creating and maintaining habitat for native wildlife species. It also increases their recognition by the public as leaders in the conservation of natural resources.

- The Natural Resources Conservation Service and the Wildlife Management Institute are conservation organizations that direct funding to on-the-ground habitat management and conservation projects. Both organizations have identified the conservation of New England cottontails as a priority. This project puts both groups in direct contact with landowners who own and control habitat for this species and allows them to direct funding to the properties where we are most likely to accomplish habitat management goals.

Measuring Impacts and Disseminating Results:

- Regular monitoring of managed habitats and surveys for New England cottontails within and outside of focus areas provides a mechanism for monitoring the success of habitat management and conservation efforts to create suitable habitats, and to assess whether cottontails are responding to habitat management efforts. The results of these surveys should be regularly reported to all project partners as part of regular partner updates to ensure that goals of each partner are being met.
- Assessment of outreach mechanisms will allow partners to direct future staffing efforts and program dollars to the mechanisms that are most successful in motivating landowners. The results of this assessment will be provided in the form of a progress report that will be made available to all project partners.
- We are exploring mechanisms to keep landowner partners informed and involved in the project after their initial involvement in managing habitat on their land. These include establishing demonstration areas on private lands to acknowledge landowner achievements and to encourage neighbors to become involved. We are also considering a web-based habitat monitoring protocol (similar to “Picture Post” developed by Annette Schloss) that would allow landowners to monitor habitat and wildlife changes on their own land and share their results with a network of other involved landowners.

Scholarship:

Scientific assessment of the effectiveness of our Extension outreach mechanisms will be invaluable for improving future programming and designing competitive proposals to secure future funding. The results of this project will be presented in agency reports to partners, as well as in peer-reviewed journals and will be invaluable for identifying effective methods for managing critical habitats across landscapes that are under multiple ownership patterns and habitat conditions.

Evaluation Plan:

This project will serve as a pilot study to aid in the development of the range-wide recovery effort of New England cottontails. As that larger project develops, the results of this study will guide where program partners will direct their staffing and financial resources – thus serving as the ultimate evaluation of whether this partnership was beneficial to each of the respective partners.

