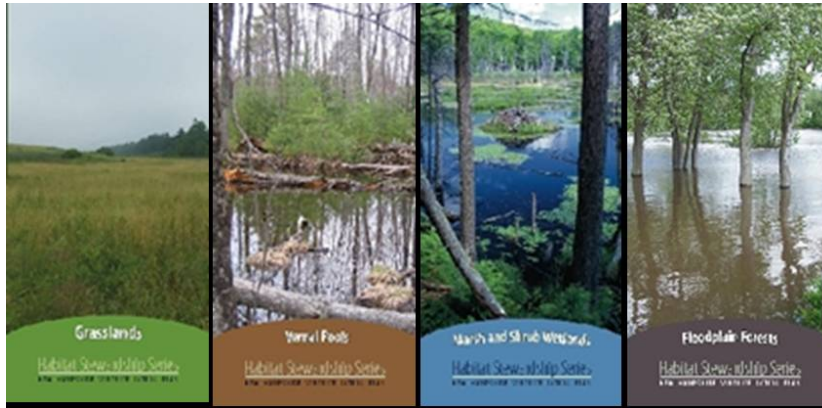


Do You Recognize Important Wildlife Habitat When You See It?

Malin Clyde, UNH Cooperative Extension



UNH Cooperative Extension has published a brochure series to help landowners learn about and help conserve important wildlife habitats found on their land. The **New Hampshire Wildlife Action Plan: Habitat Stewardship Series** brochures, available for download at www.nhwoods.org, cover a variety of habitat types critical for wildlife species at risk in New Hampshire. The first four brochures, available now, focus on Grasslands, Marsh and Shrub Wetlands, Floodplain Forests, and Vernal Pools.

The colorful brochures include practical information for landowners. Pictures and text explain how to identify habitat types, describe the major threats to the health of those habitats, and offer information about wildlife species that depend on each habitat. The brochures also provide specific recommendations for landowners interested in helping protect and conserve the wildlife that depend on each critical habitat type.

The brochures were produced by UNH Cooperative Extension with support from the Sustainable Forestry Initiative and the N.H. Fish & Game Department. You may download brochures from the web, or receive a single set free through the UNH Forestry Information Center (call 1-800-444-8978, email forest.info@unh.edu).

When complete later this year, the Habitat Stewardship Series will also include brochures on Shrublands, Northern Hardwood Forests, Oak-Pine Forests, Hemlock Forests, and Spruce-Fir Forests.

Make your own Wildlife Action Plan maps on the Data Mapper!

Emily Brunkhurst, NH Fish & Game

A Wildlife Action Plan theme has been added to the GRANIT Data Mapper! Check it out and make your own wildlife maps!

The Data Mapper is a web-based mapping tool offering New Hampshire's communities, agencies, organizations and the general public access to a comprehensive collection of geospatial data archived in GRANIT. You can use this to make your own Wildlife Action Plan habitat maps as well as other types of maps.

The NH GRANIT Data Mapper presents data packaged into functional "Themes", thereby allowing users to view and query data sets and print maps that relate to a particular topic. A few themes for conservation planning include:

Land Conservation: Supplies data commonly

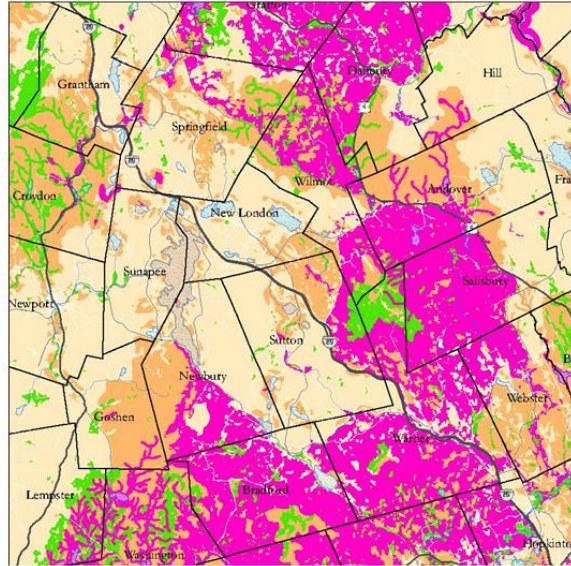
considered for land protection efforts, such as current conservation land, wetlands and land cover.

Water Resources: Presents a set of data related to water resources, including aquifer transmissivity, shoreline buffers, wetlands and hydric soils.

Wildlife: Provides users with access to wildlife related data, including the Wildlife Action Plan (WAP) layers.

Each data set, known as a layer, can be turned on/off, made active/inactive and labeled or not. Active layers will show you the data that is associated with each place on the map. Look for the button to show the map Legend, which displays layer symbols used on the map.

To access the Data Mapper go to: <http://mapper.granit.unh.edu/viewer.jsp>



Wildlife Action Plan Data and Maps Available on GRANIT

The Wildlife Action Plan Habitat maps have been available for download on GRANIT for some time, but now the Condition Rankings (WAP tiers) and Conservation Focus Areas data have been added as well. This data will also continue to be available on a CD by request. Any updates to the data will be added to GRANIT as soon as possible. Note that the although the data on GRANIT are all grouped under the heading "WAP 2005", this data is in fact up to date.

Conservation Focus Areas Attributes: Conservation focus areas are places in NH where the data show us there are clusters of high ranking condition habitat. These areas have several different kinds of habitats and are likely to have documented rare plant and animal species or exemplary natural communities. They also are habitats that are relatively undisturbed by humans. The goal is to keep these areas in this condition. This is a tool to help in statewide planning, but if your community has a Conservation Focus Area, we'd like to you to consider its importance. In the Focus Areas data layer on GRANIT, the data will show what habitats and what other important features are encompassed by the particular focus area. It also indicates whether there were rare species or natural communities, high ranking aquatic features, high ranking forest blocks, or vertebrate species richness. Note: if you got your Focus Areas data before May 2007, you may not have this data. Download the updated data from GRANIT.

Take Part in Marbled Salamander Surveys!

Implementing Wildlife Action Plan Strategy 901

Lindsay Webb, NH Fish & Game

Surveys of endangered marbled salamanders are scheduled for the spring of 2008 in Hollis, Brookline, and Milford to assess the species' distribution in southern NH. Surveys will be targeted in forested areas containing vernal pools that have low road densities. If you know of land that might be suitable for marbled salamanders or if you would like to help with the surveys, contact Brendan Clifford of the Nongame and Endangered Wildlife Program at 603-271-0463 or brendan.j.clifford@wildlife.nh.gov.



The Wildlife Action Plan (chapters 5 and 6) identifies 72 conservation strategies to address the needs of wildlife and habitats across the state. One of these, Strategy 901 - Monitoring, was identified as a priority for determining the distribution of the state endangered marbled salamander. Marbled salamanders are endangered since they use the specialized vernal pool habitat for breeding, and are at the northern tip of their range in southern New Hampshire. Historically, they were reported from Hollis and Milford, but few recent records for the species exist.

Adults are terrestrial and require relatively intact forests to provide for spring and summer migration and vernal pools for fall breeding, a unique trait in their life history. By hatching in the fall, marbled salamander larvae have a competitive advantage over other mole salamander larvae (e.g., spotted and blue-spotted salamanders) because they have a head start at development over the winter.

During April and May of 2007, biologists and volunteers conducted nocturnal surveys of vernal pools in Hollis, Brookline and Milford in search of marbled salamander larvae. The initial survey effort was successful as larvae were documented from a breeding pool in Hollis. The 2008 surveys will build on this data.

RAARP! Reporting Reptiles and Amphibians.

Putting the WAP to Work!

Matt Tarr, UNH Cooperative Extension

Appendix A, Part 3 of the New Hampshire Wildlife Action Plan provides a profile for all of the Reptiles and Amphibians that are in greatest need of conservation in New Hampshire. For every species there is a map showing the communities in which that species is known to occur. Blank towns on the maps indicate communities where a species has not been reported. However, don't immediately interpret a blank town on the map to mean that the reptile or amphibian doesn't occur in that town! While a blank could represent a true gap in where that species occurs in NH, more often than not it may just indicate a gap in the data. A blank could simply mean that no one has reported their observations of that species in a particular town. You can help fill in these gaps by reporting your observations of reptiles and amphibians to the Reptile and Amphibian Reporting Program (RAARP), coordinated by the New Hampshire Fish and Game Nongame & Endangered Wildlife Program.



RAARP volunteers report sightings of reptiles and amphibians from spring peepers to snapping turtles. Your observations are used to determine the distribution of all reptiles and amphibians within New Hampshire, not just those listed in the WAP. However, reports of less common species are especially important - verified reports of rare species locations are mapped and stored in a database used for land protection and conservation purposes. To help you accurately identify the reptiles and amphibians you see, go to the RAAP webpage to view color photos of all of the turtles, salamanders, frogs and snakes that occur in New Hampshire

http://www.wildlife.state.nh.us/Wildlife/Nongame/reptiles_amphibians.htm. On that webpage you can

also listen to the various calls of New Hampshire frogs, which can help with identification when frogs are seen, but not heard. Spring is almost here, so get out there and fill in the gaps!



For more information about the RAARP please contact the NH Fish and Game Wildlife Division: (603) 271-5859 or email wildlife@wildlife.nh.gov.

Landowner Incentive Program Protects Critical Wildlife Habitats

Rich Cook, NH Fish & Game Department

Since 2006, more than 6,500 acres of important wildlife habitats have been protected with funding from the NH Landowner Incentive Program (LIP). The LIP is a federally funded program, administered by the NH Fish and Game Department, that protects and restores habitats on private lands to benefit plant and animal species determined to be at-risk and in need of conservation. In 2006 and 2007, NH Fish & Game awarded LIP funds to nine projects conserving wildlife habitats.



LIP funds are provided to state fish and wildlife agencies through a national competitive grant program administered by the U.S. Fish and Wildlife Service.

LIP funds are used to purchase conservation easements on privately owned lands. Eligible lands should have documented occurrences of wildlife or plant species-at-risk. These include Federal and State listed plants and animals, wildlife and habitats at risk as identified in the New Hampshire Wildlife Action Plan and exemplary natural communities and natural community systems tracked by the New Hampshire Natural Heritage Bureau.

The 2007 awards were presented to:

- The Nature Conservancy for the sale of an easement on 103 acres of pine barrens in Ossipee;
- The Society for the Protection of New Hampshire Forests towards the purchase of a conservation easement on 343 acres along the headwaters of the Salmon Falls River in Milton
- The Strafford River Conservancy to purchase conservation easements on 309 acres in The Sheepboro Road corridor in Farmington surrounding the Rochester public water supply;
- The Society for the Protection of New Hampshire Forests to assist in the protection of 1,750 acres of forestland in the headwaters of the Ashuelot River in Lempster;
- The Lee Conservation Commission to help fund the purchase of an easement on 58 acres of the Misty Meadows property in Lee.

Several projects awarded grants in 2006 have been completed, leading to the protection of more than 4000 acres important habitat. These include Robb Reservoir in Stoddard (Harris Center), Mulligan Forest in Nottingham (SPNHF), Hartshorne Property in Madison (TNC) and the Turner tract in Frankestown (SPNHF).

Throughout the next year NHFG staff will work with each of the conservation organizations receiving awards and the U.S. Fish and Wildlife Service to ensure that these lands are protected in perpetuity for wildlife.

Unfortunately federal funds are not available for this program in 2008. Therefore there will be no grants awarded this year.

For more information contact Richard Cook at 217-1133 or Richard.cook@wildlife.nh.gov .

Peatlands - Special Wetland Natural Communities and Critical Wildlife Habitats

Frank Mitchell, UNH Cooperative Extension



New Hampshire's landscape is a rich natural heritage that includes vast stretches of representative native forest types, wetlands, streams and ponds as well as pockets of rare and unusual plants, animals, and natural communities. Among these rare natural communities are wetlands called peatlands, a term that encompasses fens and bogs. Peatlands are identified as critical wildlife habitats in the NH Wildlife Action Plan. The NH Wildlife Action Plan identifies threats to peatlands as: "development, altered hydrology (amount and flow of water), non-point source pollutants such as road salt, lawn fertilizers, and pesticides and unsustainable forest harvesting."

In New Hampshire, 38 individual natural community types are classified as peatlands, from Atlantic white cedar swamps to Leather-leaf/black spruce bogs. They may be open, shrubby or forested. Most are considered rare on a statewide basis, as are some of the plant species that grow in them. The Wildlife Action Plan Habitat Map

http://wildlife.state.nh.us/Wildlife/Wildlife_Plan/using_maps.htm shows peatlands in most New Hampshire towns, but most are small and scattered. Concentrations of peatlands are more common near the coast and in the north country.



Pitcher Plant

Peatlands are found in cold, low flat areas. In these conditions, decay of plant material is very slow, leading to a build-up of partly decayed organic matter, called peat and generally acidic conditions. Organic remains in some peatlands last for centuries. This is dramatically illustrated by the "bog people," well-preserved human corpses found in European bogs and dated at over a thousand years old. This preserving quality of peatlands also has important scientific value. Researchers have used pollen trapped in peat to learn about the sequence of re-vegetation of North America following the last ice age. Peatlands are vaults of living history as well as habitats for rare species and natural communities.

Regarding the distinction between fens and bogs, fens are less acidic than bogs, and usually have more water flowing through them and more mineral enrichment from groundwater. In fens and bogs you'll find plants adapted to wet, nutrient poor conditions including sphagnum mosses, cranberries, leatherleaf, sheep laurel, sweet gale, pitcher plants, highbush blueberry, and cotton grass, a sedge with showy cotton-like seed heads.

Wildlife species associated with peatlands include the state endangered Ringed Bog Haunter dragonfly (*Williamsonia lintneri*), Palm Warbler (*Dendroica palmarum*), Mink Frog (*Rana septentrionalis*) and Northern Bog Lemming (*Synaptomys borealis*). According to the Wildlife Action Plan, "Bog lemmings are probably the rarest mammal in New England and eastern Canada, making them vulnerable to local extirpation"

Peatlands aren't always easy to explore, but one, Heath Pond Bog in Ossipee, is owned by the State of New Hampshire and registered as a National Natural Landmark. According to the NH Natural Heritage Bureau, DRED, "This is an outstanding, classic example of a kettle hole bog natural community system. There is a greater variety of bog plants here than at any other peatland in the state." For photos, more information on Heath Pond Bog and directions to the site, see the NH Natural Heritage Bureau's web site at <http://www.dred.state.nh.us/divisions/forestandlands/bureaus/naturalheritage/HeathPondBog.htm> Meanwhile, you can use the NH Wildlife Action Plan Habitats Map to identify probable peatlands near where you live and perhaps explore them.