

NEW HAMPSHIRE

Wildlife Action Plan

NEW STRATEGIES FOR CONSERVING
NEW HAMPSHIRE'S WILDLIFE DIVERSITY

BY ETHAN NEDEAU

I was seven years old when I first rode in an airplane. My lasting memory was looking down upon the distant landscape with awe — imagining the sources of twinkling lights, and reconciling my earth-bound perspective of the seacoast with this new aerial view. My eyes traced the strands of lights that connected the larger clusters, scanned the smattering of lights toward the horizon, and looked for faint lights in dark areas.

In the last 25 years, New Hampshire's population has grown by 330,000 people and the population is expected to grow by

350,000 more in the next 20 years. Lights across the landscape at night have multiplied even more than people have. Clusters have grown and merged. Smatterings have become concentrations. Dark areas have shrunk to islands in an illuminated landscape. I imagine how startlingly we could demonstrate population growth with nighttime photographs of southern New Hampshire over the past four centuries, condensed into a ten-second clip, showing the supernova of which we are in the midst.

A CHANGING LANDSCAPE

If lights across the landscape at night show the dominion of humans, then darkness shows where wildlife make their homes. Dark patches within urban areas might be where neighborhood skunks and raccoons reside, swaths of darkness on the suburban fringe might be where whitetail deer and cottontails flourish, and expanses of darkness might be where the greatest diversity of wildlife live and ecosystems remain intact.

But darkness masks the complexity of New Hampshire's changing landscape. By night, the dichotomy between developed and undeveloped — light and dark — is deceptively clear. By day,

will establish a nationwide look at imperiled wildlife and the actions needed to ensure their survival.

GUIDING FUTURE CONSERVATION

A core task of the Wildlife Action Plan was to produce detailed profiles of 27 habitats and 104 species of high conservation concern. Profiles provide information on the distribution and condition of species and habitats, a detailed risk assessment, and conservation actions. A second core task of New Hampshire Wildlife Action Plan was to produce Significant Wildlife Habitat maps. These maps have now been distributed to nearly all New Hampshire towns and will help to aid



Light on the landscape reveals the extent of the human footprint on the land. The Wildlife Action Plan will help guide development decisions in our communities.

the landscape becomes a tattered quilt with thousands of bits of fabric, loosely stitched with an unskilled hand and a blind eye. Dark patches emerge as mosaics of fields, shrublands, wetlands, stream corridors, lakes, and forests. Glass, steel, asphalt, concrete, and manicured lawns are strewn across the landscape in random patterns.

Conserving natural habitats and wildlife populations in a rapidly changing landscape is a daunting challenge. The Nongame and Endangered Wildlife Program of New Hampshire Fish and Game, in collaboration with conservation partners from several organizations and members of the public, recently produced the first Wildlife Action Plan for the state. The Wildlife Action Plan chronicles the condition of wildlife and habitats deemed most at risk in New Hampshire and provides a blueprint for conservation actions in the coming decades. Similarly, all 50 states and six U.S. territories have now created plans, which

local communities in identifying the most important wildlife habitat areas for future conservation. The core tasks were monumental achievements, but the synthesis of these tasks is what will guide wildlife conservation and management in the coming decades. The Wildlife Action Plan sought to answer the following types of questions:

- What are the species and habitats of greatest conservation concern in New Hampshire?
- What challenges pose the greatest risk to species and habitats?
- What strategies will help minimize risk to species and habitats?
- How can resource managers and the conservation community work together to protect New Hampshire's natural resources?
- Do conservation and management work, and how can we adapt to changing circumstances and emerging threats?

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The Wildlife Action Plan outlines strategies for conserving Appalachian oak-pine forest habitat (above), which is at risk because it's concentrated in populated areas. Spotted turtles and wild turkeys (below) will benefit from actions to conserve these habitats.

WHAT'S IN YOUR NEIGHBORHOOD?

Appalachian oak-pine forest is one of the habitat types profiled in the Wildlife Action Plan. New Hampshire citizens might be more familiar with this habitat because about 90% of the state's Appalachian oak-pine forest occurs in Cheshire, Hillsborough, Rockingham and Strafford counties, which is where most New Hampshire residents live. This forest type supports over 100 vertebrate species in New Hampshire, many of which are naturally rare or whose range has been greatly reduced. In addition, embedded within these forests are more rare habitats, such as vernal pools, shrublands and shrub wetlands, that are critically important for many of New Hampshire's wildlife species.

The prevalence of Appalachian oak-pine forests in New Hampshire's most densely populated and rapidly growing region is of great concern. Appalachian oak-pine forests have flat to gently rolling topography and well-drained soils that are suitable for development. Rockingham County holds New Hampshire's largest remaining parcels of this forest type and nearly 40% of the statewide total. Most remaining tracts are on small, privately owned parcels; only 12.6% of this forest type has some level of protection (such as conservation easements) and only 7.3% occurs on permanently protected lands.

As the human population continues to grow, there will be increased pressure on Appalachian oak-pine forests and the wildlife species that live there. The Wildlife Action Plan identified this forest type as one of the most at-risk habitats in New Hampshire. Urban development, increased roads, and altered natural disturbance, such as suppression of wildfires, are the three most critical challenges.

Species at highest risk from loss of Appalachian oak-pine forests include New England cottontails, spotted turtles, Blanding's turtles, marbled salamanders, Jefferson salamanders, timber rattlesnakes, eastern hognose snakes, ribbon snakes and eastern black racers. Urban development also encroaches on many other important habitats for several game species such as whitetail deer and wild turkeys, as well as habitat for migratory songbirds.

ROADMAP FOR SUCCESS

Development is by far the most pressing challenge to New Hampshire's wildlife and natural habitats. Even without sophisticated maps or an evening flight across southern New Hampshire, citizens are aware of what is happening. Once-quiet country roads are now congested with vehicles, quaint towns are bustling, and places of quiet solitude are harder to find. Evening walks that were once guided by moonlight are now guided by streetlights or the glow of urban centers.

New Hampshire might be losing its quaintness and darkness, but more importantly, it is losing habitats and wildlife species that depend on open spaces to



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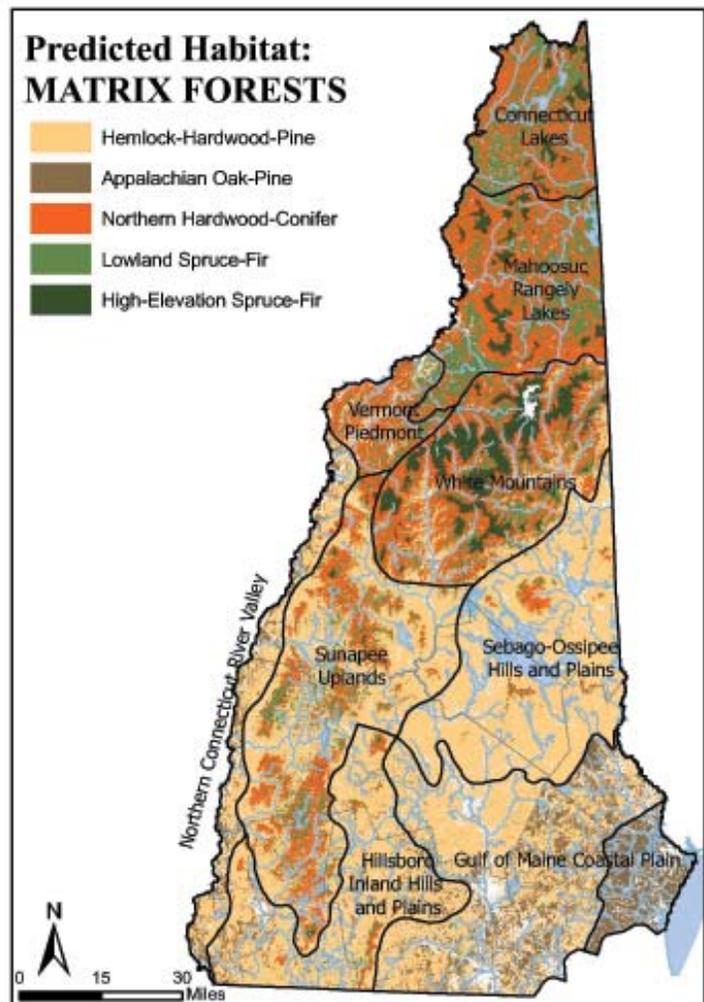
CONSERVATION STRATEGIES

Knowing the extent and distribution of Appalachian oak-pine forests (see map below), the species that rely on these forests and embedded habitats, and the many challenges that these forests and species face was an important piece of the Wildlife Action Plan. The next step was to develop conservation strategies to protect these vital natural resources. For example, conservation strategies may help protect Appalachian oak-pine forests from the effects of development include:

- Provide maps and pertinent information about wildlife and sensitive habitats to municipal officials, developers and land planners;
- Develop and promote guidelines and best management practices to mitigate common adverse effects of development;
- Provide technical guidance on monitoring protocols so the success of restoration and mitigation can be clearly demonstrated;
- Develop and implement a program to provide landowner incentives for land conservation;
- Educate the public about smart growth, safe resource use, sensitive habitat areas and sustainable development.

survive. New Hampshire's Wildlife Action Plan provides a multidimensional view of our changing landscape, the plight of our wildlife, and strategies that will help to preserve our natural and cultural heritage for future generations. 

Ethan Nedeau is an aquatic biologist, scientific writer, wildlife artist and a dedicated conservationist who partnered with Fish and Game Department's Nongame and Endangered Wildlife Program and contributed to the development of the New Hampshire Wildlife Action Plan.



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