



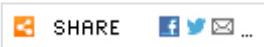
University of
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New Hampshire Agricultural
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New UNH Bobcat Research Aims to Understand Why Wildcats Are Rebounding

Scientists Theorize Bobcats Have Rebounded Because of Shifting Diet to Different Prey

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New Hampshire's bobcats are rebounding despite increased development and human activities in their natural habitats and decreases in the availability of their prey. A new research project funded by the NH Agricultural Experiment Station (<http://colsa.unh.edu/nhaes/>) at the University of New Hampshire aims to understand why.

“Bobcats are now functioning as apex predators, and as a result, their success may be an important indicator of overall ecosystem health. Recent population increases suggest that bobcats are adapting to a changing environment. Identifying the pathways of this success may provide insight into understanding how ecosystems can remain relatively intact as human population continue to expand,” said Marian Litvaitis, professor of natural resources and the environment. She and doctoral student Rory Carroll are leading the study.

New Hampshire's bobcat population has rebounded since the wildcat was protected from hunting in 1989. UNH researchers estimate there are as many as 1,400 bobcats in the state.

Specifically, researchers want to examine how changes in land use such as increased development and human activities have affected bobcats in northern New England. Researchers also want to understand why current bobcat populations are making a comeback despite a dramatic decrease in their traditional prey such as rabbits and hares.

Scientists theorize bobcats have rebounded, in part, because they have shifted their diet to different prey, such as turkeys and squirrels that hang out beneath bird feeders during the winter. To test their hypothesis, they will compare the stable isotope signatures – different forms of chemical elements such as nitrogen and carbon -- in possible prey animals with those in bobcat hair. The idea behind the analysis is that isotope signatures in a top predator are a reflection of foods consumed at different ecological levels.

They also want to understand if bobcats that live in more developed areas are subjected to higher levels of stress. To do this, scientists will compare levels of a stress hormone called cortisol in hairs from individuals living in developed areas with those from individuals in more rural areas.

“Increased stress has been associated with a decreased immune response and decreased reproductive success in animal populations. Ultimately this may allow for projections about the general health of the bobcat population,” Litvaitis said.

This research will contribute to a better understanding of bobcat distributions, especially relative to human landscape use. This in turn, allows for the development of effective management strategies, and ultimately, may be useful for maintaining biodiversity in human-dominated landscapes.

To learn more about UNH’s bobcat research, visit [Understanding Bobcats in the Granite State: A Cooperative Project Led by the University of New Hampshire and the New Hampshire Fish and Game Department](http://UnderstandingBobcats.com) at tinyurl.com/NHbobcats.

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Founded in 1887, the NH Agricultural Experiment Station (<http://colsa.unh.edu/nhaes>) at the UNH College of Life Sciences and Agriculture (<http://www.colsa.unh.edu/aes>) is UNH’s original research center and an elemental component of New Hampshire's land-grant university heritage and mission. We steward federal and state funding, including support from the USDA National Institute of Food and Agriculture (<http://nifa.usda.gov/>), to provide unbiased and objective research concerning diverse aspects of sustainable agriculture and foods, aquaculture, forest management, and related wildlife, natural resources and rural community topics. We maintain the Woodman and Kingman agronomy and horticultural farms, the Macfarlane Greenhouses, the Fairchild Dairy Teaching and Research Center, and the Organic Dairy Research Farm. Additional properties also provide forage, forests and woodlands in direct support to research, teaching, and outreach.

Lori Wright, NH Agricultural Experiment Station



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