

## Researchers to study the status of black bears in Missouri

June 13 2007

Researchers at the University of Missouri-Columbia are studying the status of black bears in Missouri. Black bears were abundant in the state during the 18th and 19th centuries, but have been considered almost extinct in Missouri since the late 19th century. The results of the MU study will be used by the Missouri Department of Conservation to help manage Missouri's black bear population.

The researchers – Kaitlyn Faries, a senior biology and chemistry major, and Lori Eggert, assistant professor of biological science in the College of Arts and Science – will use a non-invasive sampling technique called "hair snares," barbed wires that remove a few of the bears' hairs without harming the bears themselves. After collecting hair samples this summer, they will extract DNA from the hair follicles and use that DNA to estimate the number of bears, the gender ratio of male to female bears, where the bears are migrating from and if they are reproducing.

"This study is a good example of the use of cutting-edge molecular biology in the management of Missouri's wildlife," Eggert said. "We're pleased to work with the Missouri Department of Conservation to generate the data needed to better understand and effectively manage the black bear population."

Dave Hamilton, a resource scientist at the Missouri Department of Conservation, said he believes there are approximately 300 black bears in Missouri, but only a few females. This study will give the Missouri Department of Conservation a better understanding of the population.



"This study is important to us because we need to have a better idea about the nature of the bear population in Missouri," Hamilton said. "We get lots of questions from citizens and media this time of year because bears are active and get into trouble, and we try to reassure the public that we are prepared to handle nuisance bears and protect their property. This pilot study should help us ask better research questions down the road. We don't know if we have a self-sustaining population in Missouri or if we simply have a lot of dispersing males coming from Arkansas. We need to investigate the genetic interchange between the two populations to understand where we are in the growth state of the population."

The study is expected to continue for two to three years.

"I am really excited to be working on this project because it will be a fantastic learning experience for me. MU really encourages undergraduate participation in research, and I have been fortunate to receive support from the College of Arts and Science, as well as the Life Sciences Undergraduate Research Opportunity Program to conduct this research," Faries said.

Source: University of Missouri-Columbia

Citation: Researchers to study the status of black bears in Missouri (2007, June 13) retrieved 25 April 2024 from <a href="https://phys.org/news/2007-06-status-black-missouri.html">https://phys.org/news/2007-06-status-black-missouri.html</a>

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