



Nature Conservancy land recently hosted black bear research. © Megan Lorenz

Studying Black Bears

Research project takes place on Conservancy land

The Nature Conservancy's newly acquired tract of forestland in McCreary County recently hosted an important study on black bears. Researchers with the University of Tennessee and several government agencies are working together to assess black bear numbers throughout the Big South Fork region.

"Researchers have done some other studies in the area in the past, but they've only looked at fragments of the population," says Josh Alston, a graduate student at the University of Tennessee working on the study. "This is the first study that encompasses what we believe to be the entire range within this population."

The Big South Fork's bear population was reintroduced in the mid-1990s with 14 female bears and their cubs. The study will tell researchers how the population has changed over time.

"We're hoping to mark more bears, and we're hoping to see an expansion in their range," says John Hast, state bear program coordinator with the Kentucky Department of Fish and Wildlife Resources. "What we're doing



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is using science to understand this bear population so we can make sound management decisions."

A total of 440 hair snares were constructed, each designed with barbed wire to snag the hair of bears traveling

through the area. Researchers monitored the sites and collected hair throughout the summer. A lab will analyze the hair for DNA, and researchers will use this genetic information to understand bear population size and dynamics.

"One of the things that makes this project unique is to tackle an area with so many trap sites in one summer," Alston says. "By doing it all in one year, we're not introducing any bias from one year to the next."

Many of the snare locations were placed on private land with the landowner's permission. Hast noted that working with TNC helped make the project run smoothly.

"We were very glad that these study sites ended up on TNC land," Hast says. "It's a pleasure to work with science-minded TNC to conduct this type of research."

Bringing Fire to Tennessee

Over the past year, The Nature Conservancy's Kentucky chapter has worked closely with the Tennessee program and partners to increase prescribed fire capacity and implement prescribed burns. The two states share similar high-priority habitats where fire once played an important role. The Kentucky chapter's focus is the Central Appalachians priority area, including the Cumberland Plateau and Tennessee's southern Blue Ridge Mountains.



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Kentucky has assisted with implementing prescribed fire on Chestnut Mountain Preserve, Cherokee National Forest, and Great Smoky Mountains National Park. These prescribed burns enhance wildlife habitat, improve forest health and composition, and reduce wildfire risk.

"There was a niche that just made sense," says Chris Minor, who now serves as the fire manager for both states. "Tennessee had a desire to grow their program and happened to be in a similar place to where Kentucky had been. This allows many of our strategies, ideas, and concepts to work in Tennessee."

The Kentucky chapter continues to work on agreements in cooperation with Tennessee's Prescribed Fire Council to build capacity and prioritize prescribed burning.



An aerial photo of a Green River conservation easement taken during monitoring © Zach Pickett

Q&A: Easement Monitoring

Conservation practitioner Zach Pickett explains

What is a conservation easement, and why are they so important? A conservation easement is a set of restrictions on a property that protects the conservation value of that property. An easement can be purchased by TNC or donated by an owner. It's a conservation strategy that allows us to protect a property that is under different ownership.

What types of habitats do these easements protect? That varies pretty widely across the state. In the Kentucky River Palisades area, the habitat ranges from open land and grasslands, to wooded cliff line, to creeks and streams. In the Green River area, easements are geared toward water quality for the river. Particular habitats down there are grasslands or replanted hardwoods along bottomlands. Taking livestock or row crop production out of service in key areas keeps excess sediments and nutrients from getting into the river. In western Kentucky, easements protect wetlands, bottomland hardwood forests, upland glades and grasslands.

What are you looking for when you monitor these easements? When I'm physically out monitoring, whether in the aircraft or on the ground, I have reviewed whatever easement I'm going to monitor, so I'm thinking about the individual terms within that easement and the rights that are reserved by the landowner. I'm looking at the property and comparing it to what it looked like last year and in previous years, looking for any changes in the property, particularly if they go against the restrictions or what is allowed in the reserved rights for the property owner.

If there are violations, what is the next step? If I suspect a violation or see something that throws a red flag, I'll document that, get photos, and then bring that to the monitoring team. We may need more information, to contact the landowner and ask a few questions to figure out what I saw or what happened. We go through a pretty lengthy process to ensure diligent monitoring to keep these important natural areas protected.