

Research Finds Gobbling Peak Varies Throughout the State



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By Karen Brasher

Spring turkey hunting is a popular sport throughout Mississippi, and the sound of a gobbler responding to a call is unrivaled for the more than 30,000 hunters who spend mid-March to May in search of the elusive bird.

While the season is set for the entire state, many hunters have expressed concerns over the time frame as it relates to peak gobbling activity.

"Hunters have long thought that spring gobbling activity peaks at different times in different regions of the state," said Dave Godwin, wild turkey program coordinator for the Mississippi Department of Wildlife, Fisheries and Parks. "However, little research has been done to qualify this perception."

A normal gobbling pattern usually consists of three phases: rise, stabilization and fall. The rising phase typically occurs between the first and second week, the stable phase from week two through week four and the falling phase from week four to week six, Godwin said.

A study was initiated in Mississippi State University's Forest and Wildlife Research Center to determine if there is variability among the regions in wild turkey spring gobbling.

"We looked at gobbling survey data collected in Arkansas and Louisiana during 2006 and 2007 to refine our gobbling survey technique," said Francisco Vilella, wildlife and fisheries professor and project investigator.

The Arkansas data showed a difference of 1.5 days for gobblers heard per day between the northern and southern parts of the state. In contrast, the Louisiana data showed a difference of less than a half-day, Vilella said.

A short project at the Noxubee National Wildlife Refuge during 2007 further refined the technique of detecting turkey gobblers and also helped determine logistical needs for the first statewide spring gobbling survey for Mississippi.

"The pilot study helped us determine how many individuals it would take to survey the entire state in a short amount of time," Vilella said.

Matt Palumbo, a wildlife and fisheries graduate student and native of Lackawanna, NY, began the statewide surveys in 2008. He employed undergraduate students and technicians to survey the southern and northern portions of Mississippi.

"We placed eight survey routes north of Highway 82 and seven routes south of Highway 84 from mid-February to late May," Palumbo said. "The routes were in areas characterized by hardwood saw timber, pine saw timber and pine regeneration."

Preliminary analysis of the 2008 spring gobbling survey found a difference of approximately 10 days between the northern and southern portions of Mississippi.

"Spring gobbling activity peaked around April 7 for the southern portions of the state and around April 17 for the northern region of the state," Palumbo said.

The results are markedly different from the spring gobbling data obtained for the neighboring states of Arkansas and Louisiana. The spring gobbling survey was replicated in 2009 with similar results.

"We are currently conducting data analyses to investigate the influences of weather, age and population rate on gobbling activity," Vilella said. "We are also exploring various factors that may help explain why there is a difference in peak gobbling activity between the north and the south."

The results will serve as the basis for long-term monitoring of spring gobbling activity across the state to enable state biologists to adaptively manage hunting seasons around gobbling activity.

"Mississippians have a rich tradition of turkey hunting, and over the last three decades the state has consistently boasted one of the largest turkey populations in the country," Godwin said. "This study will help the Mississippi Department of Wildlife, Fisheries and Parks ensure that our hunting season framework best fits the peak gobbling activity throughout the state."