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**FOR IMMEDIATE RELEASE:**

**DEER ARE CHANGING FORESTS ON THE CUMBERLAND PLATEAU**

**Sewanee, Tenn.**—Ecologists at the University of the South in Sewanee, Tennessee, are the first to examine the patterns and drivers of deer browsing behavior, including preferences for food and locations, on the Cumberland Plateau. The new study was just published in the journal *Forests*.

White-tailed deer (*Odocoileus virginianus*) populations have been increasing in the eastern United States, causing changes in plant communities and the structure of forests due to deer eating the plants (herbivory). Using long-term deer exclosures, researchers at Sewanee found that deer are causing a decrease in sapling density on the Cumberland Plateau.

The southern Cumberland Plateau has been called one of the more resilient sites in the Southeast in the face of climate change; however, managing forest regeneration may be complicated by the effects of deer on sapling growth and survival. Deer herbivory may preclude the ability for tree species to adapt to microclimatic change. It has been poorly understood how topographical features affect deer herbivory. The results of this study show that on the Cumberland Plateau, topography plays a critical role in limiting the foraging behavior of deer and is a primary predictor of sapling density.

Understanding where deer impacts are most concentrated can help managers reduce human-wildlife conflicts, such as vehicle collisions, increasing Lyme disease prevalence, and economic losses, while improving forest regeneration and diversity.

For the study, researchers at Sewanee examined the density of tree saplings over 3,000 acres of plateau-top forest surrounded by bluff topography in order to determine the drivers and patterns of deer browsing on sapling density.

They compared the effects of topography, forest edge, and deer culls on sapling density in 2012 and 2015. Researchers found topography was the most important factor predicting deer herbivory impacts on the landscape, followed by forest edge and then deer culls.

These results are different from previously published studies, which have found proximity to forest edge to be the most important driver determining deer impacts.

“We believe that drainages in the unusually steep bluff topography of the Cumberland Plateau act as a funnel for deer,” said researcher Callie Oldfield. “Because of the unique topography of this area, we cannot assume that deer browse impacts will be uniform across this landscape—they may be concentrated in areas of high deer traffic onto the plateau.”

“This is the first step to understanding deer movement onto the Cumberland Plateau and its lasting impact on our forests,” noted Professor of Biology Jonathan Evans.

This article is available through the open-access journal *Forests*: <http://www.mdpi.com/1999-4907/7/5/101/htm>.

The University of the South, familiarly known as Sewanee, comprises a nationally recognized College of Arts and Sciences and a distinguished School of Theology. Located on 13,000 acres in Tennessee’s Cumberland Plateau, Sewanee enrolls 1,700 undergraduates and approximately 100 seminarians. For more information about the University of the South, visit [www.sewanee.edu](http://www.sewanee.edu).

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