

# Hiking, hunting has minor effects on mammals in protected eastern forests

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White-tailed deer, shown in a camera trap image from the study, were detected less often at sites where hunting was allowed. However, deer did not avoid hiking trails, even those that were most heavily used. Credit: Roland Kays

A North Carolina State University study of mammals in protected Eastern forests found that hiking and hunting caused minor effects on wildlife distribution.

The six-state study, part of the eMammal project, used citizen science camera traps to determine whether recreation activity disrupted wildlife in 32 protected forests. Researchers did side-by-side comparisons of protected areas with similar habitats but different [hunting](#) regulations, and compared sites on and off [hiking](#) trails.

"While hiking and hunting did have measurable effects on some species, the overall impact of humans in the park was minor compared with the effects of other factors, such as large undisturbed areas of forest habitat and local housing density," says lead author Roland Kays, a conservation biologist with NC State's College of Natural Resources and the N.C. Museum of Natural Sciences.

The most-hunted species in the study—white-tailed deer, raccoons, eastern grey squirrels and fox squirrels, which are common throughout the region—were detected less often at sites where hunting was allowed. Coyotes, in contrast, frequented hunting areas more often than nonhunting sites, and they did not steer clear of hiking areas.

In fact, most species in the study did not avoid hiking trails. "Some predators sought them out. While bears and bobcats shied away from people in hunting areas, the most-heavily hunted species did not, which suggests that humans aren't broadly feared," Kays says.





Bobcats, shown in a camera trap image from the study, avoided people in hunting areas on protected sites, as did bears. However, most mammal species did not avoid hiking trails, and some predators actually sought them out. Credit: Roland Kays

More than 350 citizen scientists contributed to the study over a two-year period, operating camera traps in North Carolina, South Carolina, Virginia, West Virginia, Maryland and Tennessee. To assure data quality, all images from more than 1,900 locations were also reviewed by mammal experts.

The study's methodology provides a scientific basis for evaluating

wildlife conservation at protected sites that allow hiking and hunting, Kays says.

"Park managers have dual mandates that could be at odds: protecting biodiversity and providing recreational opportunities for people. This research suggests that managers are doing a good job of finding that balance and that hiking and managed hunting can be part of sustainable operations."

**More information:** "Does hunting or hiking affect wildlife communities in protected areas?" [DOI: 10.1111/1365-2664.12700](https://doi.org/10.1111/1365-2664.12700)

Provided by North Carolina State University

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