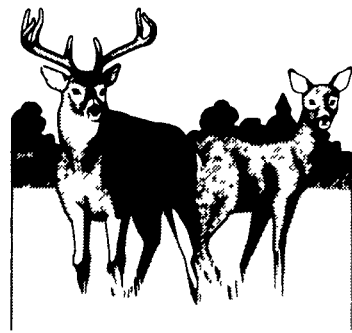


# When Time Is Right, Young Bucks Move On — Sometimes A Long Way



UNIVERSITY PARK (Centre Co.) — When scientists from Penn State's College of Agricultural Sciences and the Pennsylvania Game Commission began tracking young, male white-tailed deer last winter to learn how they disperse, the researchers weren't sure what to expect.

For years it was believed that deer in Pennsylvania don't move around much. But wildlife experts knew that for genetic reasons deer populations should minimize inbreeding, so it made sense that the males would leave the area where they were born. Now, almost a year into the study, a fascinating picture of young buck dispersal is emerging.

"Movement of young bucks is certainly not related to quality of habitat of a deer's home range," says Duane Diefenbach, adjunct assistant professor of wildlife resources with the Pennsylvania Cooperative Fish and Wildlife Research Unit, a joint effort of Penn State, the Game Commission, the Pennsylvania Fish and Boat Commission and the U.S. Geologic Survey. "We see young bucks leaving natal home ranges with good habitat and traveling to other areas of good habitat. It's almost like the doe gives them the message that it is time to go."

Researcher and graduate student Eric Long has been intrigued by the dispersal paths of the young bucks he is tracking. One swam the Allegheny River and crossed several highways during his 15-mile journey.

"We have found that 40 percent of male fawns born the year before leave their mother the following spring at about the time she is ready to have a new litter of fawns," Long says. "Then during the rut in early fall, many of the rest leave. We don't know whether the does somehow tell them they should leave, or if the young bucks get wanderlust from wanting to be involved in breeding activity. Maybe both."

The joint, three-year study — intended to be the most extensive radio-telemetry study of male deer dispersal, survival and the effects of antler restrictions for hunting ever attempted in the United States — started last December when 141 male deer were captured in Armstrong and Centre counties. Those deer — caught using helicopters, drop nets, walk-in traps and tranquilizer dart guns — were radio-collared and released unharmed. Researchers have been tracking their movements ever since.

The two sites offer dramatically different landscapes, Long points out, and that probably accounts for a difference in dispersal rates of young bucks. "At the Armstrong County site near Kittinging, which is mostly rolling hills with patches of forest and open agricultural areas often divided by roads, 44 percent of bucks that were collared left their mothers in the spring. On average they went about seven miles.

"At the Centre County site, which is less fragmented and features continuous forested ridges, 24 percent of young bucks dis-

persed in the spring," says Long. "They didn't move as far on average — about five miles. The maximum dispersal distance we have seen in Centre County was 13 and a half miles."

Mortality of animals has been about what researchers expected. At the Armstrong County site, four were killed by vehicles on roads, two were killed by poachers prior to hunting seasons and two were harvested during the first week of archery season. One of those was a 13-point buck — one of the few older bucks included in the study.

At the Centre County site, just one deer in the study has been killed on highways, and so far, archers have killed no deer in the study area. According to Long, the Centre County site has a higher human population, but far fewer miles of road than the Armstrong County site.

"There has been very little mortality and no predation of

study animals," Diefenbach says. "Hunting is clearly the big factor in deer management. But we knew that."

Early information yielded by the research dispels some myths about Pennsylvania deer, Long notes. "From a management perspective, we know that we can't manage deer in a small area," he says. "There is a lot of interchange between animals and areas. Landowners should realize that there is a good chance that the bucks they see on their property probably weren't born there. There is a lot more interchange than people were expecting."

This information likely will be of great interest to hunters, Long speculates. "There have been suggestions that landowners could introduce big-racked bucks to pass on their genes to offspring males that will have bigger racks," he says. "But we are seeing now that the young male deer probably won't stay in the area."

They more likely are producing bucks for landowners in the next valley, or even the next county."

Moreover, Gary Alt, deer management section supervisor for the Game Commission, points out that Pennsylvania deer don't need better genes, they just need to live a year longer. "We know from our research that two-and-a-half-year-old Pennsylvania bucks sport a seven- or eight-point rack with an outside spread of 15 inches," he says.

The Pennsylvania Game Commission's Web site, <http://www.pgc.state.pa.us>, is keeping a running journal of the study. For more information, click on "Wildlife," then "Deer in Pennsylvania" and then "Antlered Deer Study."

## Time To Have Heaters Inspected

As the weather turns colder throughout much of the country, the U.S. Consumer Product Safety Commission (CPSC) urges consumers to have a professional inspection of all fuel-burning heating systems — including furnaces, boilers, fireplaces, water heaters and space heaters — to detect potentially deadly carbon monoxide (CO) leaks.

Under certain conditions, all appliances that burn fuels can leak deadly CO. These fuels in-

clude kerosene, oil, coal, both natural and liquefied petroleum gas, and wood.

"Having a professional inspection of your fuel-burning heating appliances is the first line of defense against the silent killer, carbon monoxide poisoning," said CPSC Chairman Hal Stratton.

CPSC recommends that the yearly professional inspection include checking chimneys, flues and vents for leakage and blockage by debris. Birds, other animals, and insects

sometimes nest in vents and block exhaust gases, causing the gases to enter the home. In addition, all vents to furnaces, water heaters, boilers and other fuel-burning heating appliances should be checked to make sure they are not loose or disconnected.

Also, have your appliances inspected for gas leaks and adequate ventilation. A supply of fresh air is important to help carry pollutants up the chimney, stovepipe or flue, and is necessary for the complete combustion of any fuel. Never block ventilation air openings. Also, make sure the appliance is operating on the fuel that it is designed to use. To convert an appliance to burn propane, it must be modified by a professional.



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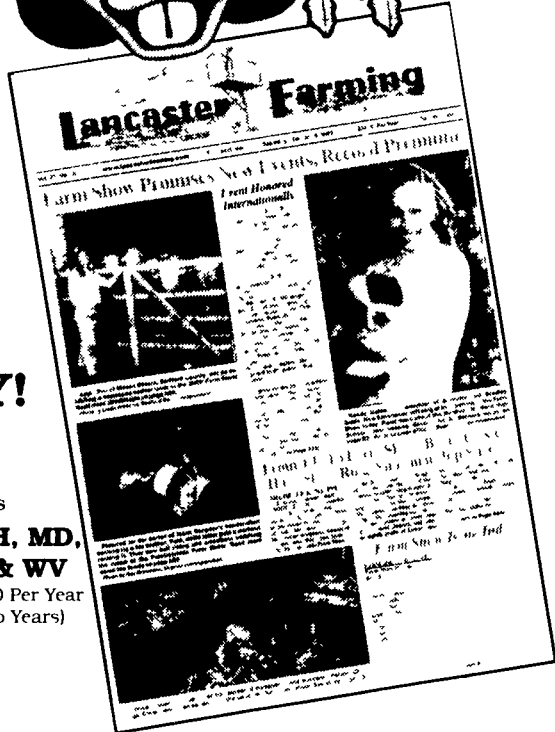
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