

## WILDLIFE

# Deer surveys remain popular despite weaknesses

by Will Moseley / [wamoseley@noble.org](mailto:wamoseley@noble.org)

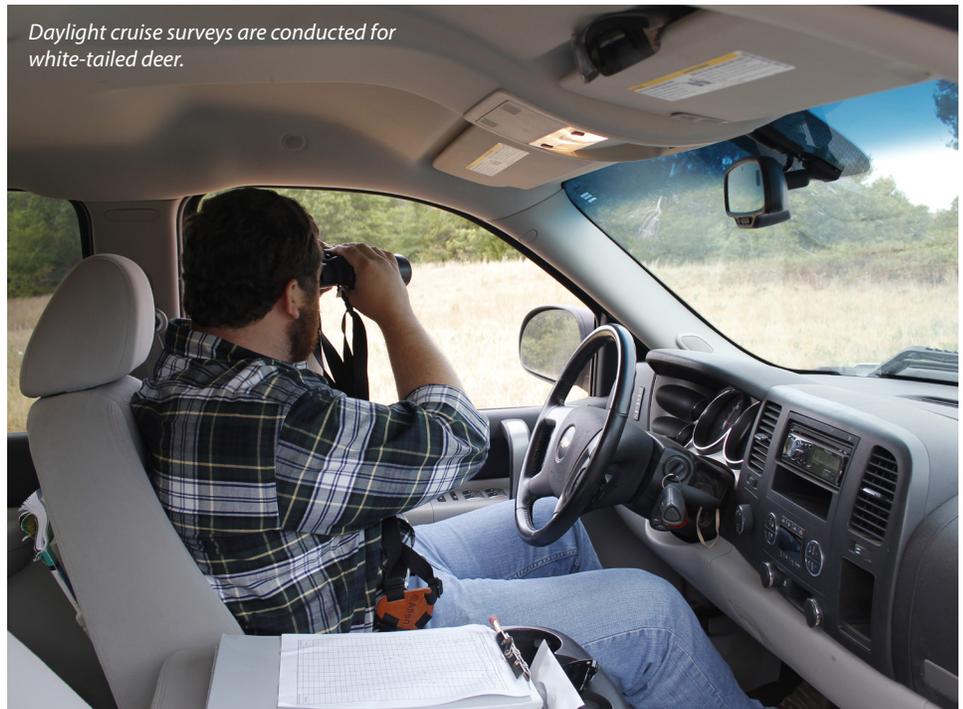


**Deer surveys** are a common practice in many deer management programs. Several techniques such as spotlight surveys, camera surveys and

daylight cruise surveys are used to gather population data such as deer density, fawn crop and buck-to-doe ratio. In late summer and early fall, managers take to the field to try to determine population parameters so they can set harvest limits for the upcoming deer season. So how accurate are these surveys?

Deer surveys are not a census. A census collects information from every individual within a population; a survey collects information from a sample of a population. There are also many assumptions associated with deer surveys. For example, camera surveys assume does and bucks use bait stations equally, and spotlight surveys assume deer use the surveyed habitat equally as the unsurveyed habitat. Research has shown that bucks use bait stations at a higher proportion than does and fawns, so camera surveys underestimate the doe and fawn populations. In general, camera surveys underestimate the total deer population.

Spotlight surveys and daylight cruise surveys can be inconsistent



*Daylight cruise surveys are conducted for white-tailed deer.*

depending on weather conditions and management activities. In years of abundant rainfall, the herbaceous vegetation can be so abundant that it can be difficult to see deer compared to drier years. Also, prescribed burning can increase visibility. Daylight cruise surveys have been conducted on an approximately 2,600-acre ranch for several years, and there is tremendous variability in the data. One year, the surveys indicated there were 0.4 does per buck. The next year, the survey indicated there were 7.8 does per buck. We have

maintained a conservative buck harvest, so those numbers probably do not reflect the true population parameters. The daylight cruise surveys have indicated a similar pattern with the fawn crops as well. Vegetation conditions contribute to the variability in observed fawn crop since they can be hard to spot with abundant vegetation.

So why do so many people conduct surveys if they have so many weaknesses? It is because deer surveys can provide some information about deer populations compared to doing nothing ▶

ing, and some deer management programs through state agencies require them. We can look for long-term trends in the data, but it is difficult to confidently make harvest recommendations based on one year's worth of data. The best data a manager can collect is harvest data. It is best to look at long-term trends in harvest data as well. These data can tell us more about the health of the deer herd than surveys if the sample size is large enough.

Despite their shortcomings, deer surveys can be useful in some situations. They can be used to supplement harvest data, and we can look for trends in long-term data sets. However, we cannot make accurate harvest recommendations based on yearly surveys. Too often managers put too much emphasis in yearly survey results. For most deer management goals, we should put more harvest pressure on does than bucks and monitor the population parameters by collecting harvest data. There will be natural yearly variability, so we should avoid a knee-jerk reaction to surveys, which are not very accurate to begin with. ■