

Hunting continues to account for the largest number of adult white-tailed deer mortalities in Wisconsin, while predation accounts for the highest death of fawns, according to recent results from an ongoing deer mortality study.

"Hunter harvest continues to be the greatest cause of death of both adult and yearling bucks," said Jared Duquette, research scientist and lead researcher for the study, "while predation was the leading cause of fawn mortality, with most predations occurring within the first four to six weeks following birth."

The Department of Natural Resources Bureau of Science Services has compiled data collected during 2011-12 on the causes of death in white-tailed deer into a new report, "Wisconsin Deer Research Studies, Annual Report 2011-2012."

Prompted by questions asked by hunters, two groundbreaking studies are currently underway in Wisconsin. A five-year study of causes of adult deer mortality is quantifying, for the first the various causes of deer death and overall survival rates in deer in a northern forest environment and in an eastern farmland environment. A similar three-year study looks at causes of mortality in fawns.

Duquette said the data will play a role in future deer management decisions and addresses recommendations forwarded by study groups reviewing Wisconsin's deer population estimating process.

A brief summary of the 2011-12 report shows:

#### **Buck and doe mortality**

- 16 adult males (deer greater than 1.6 years old) and 25 male fawns (deer 8-10 months of age) were radio-collared and ear tagged in the northern study area.
- 15 adult males and 40 male fawns were radio-collared and ear tagged in the eastern farmland study area.
- Adult male survival (10-12 months post capture) was 31 percent in the north and 27 percent in the eastern study area; hunter harvest was the greatest source of mortality in both areas.
- Yearling male survival (10-12 months post capture) was 52 percent in the north and 58 percent in the eastern farmland; hunter harvest was the greatest source of mortality in both areas.
- 30 adult does were radio-collared in the northern and seven in the eastern study areas.
- Adult female survival (10-12 months post-capture) was 73 percent in the north and 86 percent in the east.
- Predation (44 percent) was the leading cause of adult female mortality followed by hunter harvest (33 percent).

## **Fawn recruitment**

- 30 fawns (16 males; 14 females) were radio-collared and ear tagged in the northern study area; 46 fawns (26 males; 20 females) were radio-collared and ear tagged in the eastern farmland study area.
- Fawn survival at 6-7 months post capture was 47 percent in the north and 63 percent in the east.
- Predation was the leading cause of mortality for both study areas, followed by road kill.
- Most fawn mortality occurred shortly after birth in May and June mainly due to predation.

Capture of adults will continue through the 2012-13 and 2013-14 winters. Fawns were live-captured in May and June in 2011 and 2012 and will be captured again in 2013. A number of captured adults and fawns are fitted with radio collars. All are fitted with ear tags. Additional metrics are collected including body weight and size, blood samples, sex, presence of external parasites and age. Does are also examined for pregnancy. Deer are followed by radio signal until death, at which time researchers study the mortality to determine cause.

Radio collars emit a special signal when a collar doesn't move for a specified period of time indicating the animal possibly has died. Researchers and volunteers zero in on the radio signal and attempt to determine cause of death. Information on deer harvested by hunters is collected when the hunter registers a collared or ear tagged deer.

Radio-collared and ear tagged deer are legal for harvest during the hunting seasons. Essential information is collected on these deer when they are registered. Hunters or others finding a dead deer with an ear tag are asked to report the find by phone, calling the number on the ear tag, so that researchers can gather any available mortality information the caller may be able to provide.