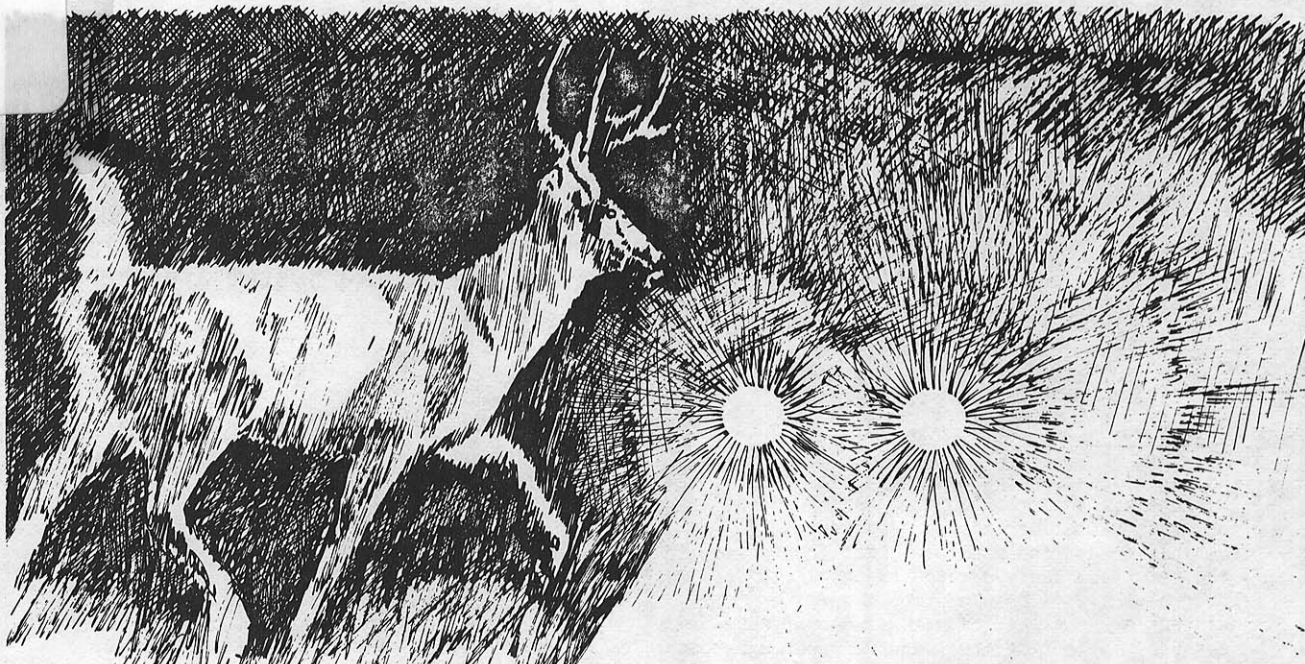


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The Cost and Chronology of Wisconsin Deer-Vehicle Collisions

DEPARTMENT OF NATURAL RESOURCES

**RESEARCH
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ABSTRACT

Individual and statewide motorist costs of hitting deer were determined by sending out 1,469 questionnaires to people involved in accidents in which deer were hit in three southern Wisconsin counties from 1976 through 1978.

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Returns from 949 accident victims indicated that mean insurance claims increased from \$407 in 1976 to \$503 in 1978, while average personal repair estimates escalated from \$189 to \$318 during the same period. Based on 18,200 deer killed annually from 1976 through 1978, the total loss borne by accident victims was \$22.1 million.

According to county accident reports, most deer-vehicle collisions occurred during early November, when the rut was in progress. Deer hunting activity caused an increase in collisions during late November. During all months, the highest rate of accidents occurred one to two hours after sunset. Defensive driving and continued use of the variable quota system are the best solutions to the problem of collision with deer.

Introduction

White-tailed deer and motor vehicles abound in Wisconsin. When the two meet on the highway, numerous killed or injured deer, extensive vehicle damage and possible human injury are the results. Badly damaged or unsalable dead deer have always been a problem for the Wisconsin Department of Natural Resources because of the time, fuel and manpower expended to pick up and dispose of carcasses. The less damaged, salable deer killed by vehicles also require considerable attention by DNR personnel. Problems associated with their disposal were lessened in 1976, when Wisconsin motorists were given the option of salvaging deer that were hit and killed by vehicles. However, only 19% of the recorded 1974-78 highway kills were salable.

This report (1) shows the cost to individual motorists of hitting a deer; (2) estimates the total statewide dollar losses resulting from deer-vehicle collisions; (3) explores the chronology of deer-car accidents to determine in which months and at what time of day deer are most commonly struck by vehicles; and 4) offers some solutions to the collision problem.

How Many Deer Are Being Hit by Vehicles?

Estimating the total numbers of deer hit on Wisconsin roads is a difficult task. DNR researchers have estimated that at least 30% of the deer struck by vehicles go unreported or unrecovered (D. R. Thompson, pers. comm.). Deer killed by vehicles and recovered were recorded on a calendar year basis through 1975. From that point on, all dead deer handled by the DNR, including illegal gun or bow kills, dog kills, vehicle kills and deaths from unknown causes were reported on a July 1 to June 30 basis as either seized deer (salable and unsalable) or vehicle-killed deer given free to driver or other persons at the scene of the accident. The total number of vehicle-killed deer reported after 1975 was thus virtually impossible to determine. The number of deer reported killed on the highways during 1974 and 1975 was about 14,000 and the total number of deer reported during 1976 and 1977 was 14,755. Therefore, we used a conservative estimate of 14,000 + 30% (animals hit but unreported), or 18,200 deer

killed on the highway to represent the average annual loss during our 1976 through 1978 study period.

Accident Reports -- A Valuable Source of Information

County motor vehicle accident reports supplied us with the names and addresses of motorists involved in deer-vehicle collisions, as well as the appropriate dates, times and locations of the accidents. We chose accident victims in Dane, Dodge and Columbia counties as representative sources of information from southern Wisconsin. From 1976 through 1978, 1,469 questionnaires were sent out to deer-vehicle accident victims to determine the cost of the damage. Results of the questionnaires were segregated into personal and insurance damage estimates and average figures were determined for each category. Both averages were then multiplied by 18,200 (the estimated number of annual vehicle-deer collisions). The results were added together to determine how much money these accidents cost Wisconsin motorists.

Cost to Wisconsin Motorists

Almost 65% (949 returns) of the 1,469 questionnaires sent out were returned with usable information. Average insurance claim estimates increased from \$407 in 1976 to \$503 in 1978, while average personal repair estimates rose from \$189 in 1976 to \$318 in 1978 (Fig. 1). These costs are somewhat lower than the 1976 National Safety Council estimates of \$670 in property damage for vehicle accidents of all types. Similarly, total damage cost estimates increased sharply to \$167,801 (insurance and personal) during 1978 (Fig. 1).

Inflation was probably the chief culprit in the steady rise of costs during the study. Personal estimates of damage were lower than insurance estimates because the former represented less serious accidents which could usually be repaired by the motorist involved. Cost estimates varied from \$0 to \$2,400 (personal and insurance) and included two motorcycle accidents. One motorcyclist and his passenger were both unharmed after hitting a deer on the highway. Other bizarre accidents included a motorist hitting two deer at once and a Dane County police car striking a deer