

APPROACHES BY STATES TO EDUCATING DRIVERS ABOUT WILDLIFE HAZARDS ON ROADS

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Abstract: This report summarizes information on approaches by states to educating future licensed drivers to handle problems created by free roaming animals on highways.

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Collisions involving wild animals and motor vehicles result in the loss of human lives, personal injury, extensive property damage, and loss of wildlife resources. In North America the most frequent serious collisions involving wildlife species are between vehicles and deer (*Odocoileus* spp.) species. Other large mammals frequently involved in collisions are elk (*Cervus canadensis*), antelope (*Antilocapra americana*), moose (*Alces alces*), and bears (*Ursus* spp.). A wide range of other species, including domestic species, are also involved in highway collisions.

Several reports in the literature provide some indication of the frequency of animal-vehicle collisions and of the monetary losses incurred. Puglisi's (1974) study of deer-vehicle accidents showed that approximately 130,000 such encounters occur annually, resulting in an estimated national property loss in excess of \$34,500,000. The mean actual cost to repair a vehicle, as determined through questionnaires from 903 motorists involved in deer-vehicle accidents in 1967, 1968, and 1969, was \$293 (Pojar et al. 1972). The average cost of vehicle repair in 1977, based on 125 responses, had increased to approximately \$426 (Colorado Division of Wildlife 1977).

Deer-vehicle collisions in Colorado result in the loss of 5-10% of the annual legal deer harvest (Pojar et al. 1972). An earlier investigation reported 119,198 deer lost in vehicle accidents in 48 states, as well as 1,249 other big game animals (Thompson 1966). In this same study, the human fatality and casualty figures (though considered rather unreliable, for a variety of reasons) showed a decrease in fatalities and an increase in casualties.

Collisions involving large animals, especially wild animals are thus a major problem. The purpose of the present report was to examine whether individual states provided instructions to future drivers concerning the potential hazard presented by animals on highways.

PROCEDURES

Information was requested from the Division of Motor Vehicles or equivalent agency of all 50 states including the following:

- 1) Statistics of accidents involving wild animals.
- 2) The driver's handbook or its equivalent.
- 3) Whether specific instructions were given in driver's instruction courses, or in advanced driver's courses.

Driver's handbooks were examined to determine whether they contained any references as to how to deal with situations created by animals on roads. They were also examined to determine whether they contained illustrations of animal crossing signs.

RESULTS AND DISCUSSION

Details of statistics on highway accidents involving wildlife were supplied proved difficult to analyze in any consistent manner. Several states advanced the correspondence to Departments of Natural Resources. These usually provided what statistics were available. Other states provided data which were gathered on animal-vehicle collisions but in these cases details of the animal species involved was not available. No statistics were available from some states. Accordingly, it was considered to be particularly difficult to improve on existing reports.

Driver's manuals were obtained from 40 states and several states provided comments concerning defensive driving instruction and advanced driving classes. In the 40 driver's

manuals received 33 failed to mention animal hazards on roads while the remaining 7 states had very limited mention of animal hazards. Animal crossing signs were utilized in some of the driver's manuals. Fourteen of 40 manuals had illustrations of cattle crossing signs; 18 of 40 manuals had illustrations of a deer crossing sign while 1 manual had a moose crossing sign.

Of 13 states replying to questions concerning defensive driving courses only 5 indicated that the problem of animals on the roads was specifically addressed.

The apparent absence of effort to educate potential drivers to problems of animals on roads seems particularly unfortunate when one considers the loss of human and animal life, injuries, and property damage involved. Even rudimentary knowledge of animal habits could contribute to improving ability of drivers to cope with animal hazards and probably would reduce losses.

The following recommendations are based on the results of our survey:

- 1) Statistics on animal-vehicle collisions should be maintained in a uniform manner. In particular the species of animal involved should be identified. At present many statistics mention only "animal" without reference to the species. Data on wild-life involvement in vehicle collisions is kept in several states but not all.
- 2) Reports should indicate whether the animal was hit or not in single vehicle collisions to allow appropriate weighting of accident statistics.
- 3) Data on place, time, and area characteristics of collision sites should be recorded so that better predictive information can be developed.
- 4) A meaningful system should be devised for informing drivers as to what deer crossing or other animal crossings are meant to convey. Drivers should be informed:
 - a) as to animal movements and habits,
 - b) likely movement areas for deer based on physical characteristics of areas,
 - c) times of day of animal movements,
 - d) that animals in some areas migrate at specific times of the year.

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