Title

How to teach a mule deer to safely cross an interstate? Preliminary results of a wildlife mortality mitigation strategy on Interstate 15 in Utah, USA

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Publication Date

2005-08-29

How to Teach a Mule Deer to Safely Cross an Interstate? Preliminary Results of a Wildlife Mortality Mitigation Strategy on Interstate 15 in Utah, USA

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Abstract

This poster presents the preliminary results of an on-going study in Utah. Previously, high wildlife mortality registered in a 20-mile stretch of Interstate15 south of its confluence with Interstate 70 led to the establishment of a mitigation strategy focused on mule deer. The strategy focused on two major objectives: 1) decrease wildlife-vehicle crashes and 2) maintain and improve landscape permeability that facilitates wildlife movement across the highway. The mitigation put in place involved the construction of exclusion fencing, right-of-way escape ramps, and two underpasses designed primarily for large-mammal passage.

In this study, we assessed the effectiveness of the mitigation measures in reducing mule deer mortality and evaluated the success of the new underpasses in allowing wildlife to cross the road safely. In this poster, we compare the pre- and post-construction levels of road mortality. We also report observed problems with the mitigation structures as well as the solutions we used to solve them. We used remotely sensed cameras to record deer passage through the new underpasses during the Fall 2004 and Spring 2005 migrations and compare results with a 20-year old 'control' structure.

Early results showed a sporadic and lower use of the new underpasses. We suspect that the novel presence of the new crossing structures, coupled with historic learned-behavioral migration patterns, may be responsible for these early results. The number of animals that used the new structures, however, leaves optimistic expectations for increased use in the future. We will test the prediction of increased use during the Fall 2005 and Spring 2006 migrations.

In this poster, we also address the use of bait to encourage passage, and report on the occurrence of startle behavior in response to heavy traffic, suggesting that it may be fruitful to explore the effects of noise and the visual barriers to encourage underpass passage by wildlife.

Biographical Sketches: Silvia Rosa is currently a graduate student at Utah State University working with John Bissonette. Her work aims to assess the effectiveness of a mitigation strategy planned to reduce wildlife mortality in roads and to look at road effects on small-mammal communities in sagebrush habitats.

John Bissonette is leader of the USGS Utah Cooperative Fish and Wildlife Research Unit and professor in the Department of Forest, Range, and Wildlife Sciences at Utah State University. He is currently leading a team of scientists on an NCHRP project funded by the National Academy of Sciences that is investigating the current status of wildlife crossings in North America. Bissonette is the author of four books and is currently working on a fifth book that is exploring the temporal effects of resource timing on animal response. His web sites are: http://www.cnr.usu/faculty/jbissonette/index.htm and http://www.wildlifeandroads.org.