

UC Davis

Recent Work

Title

Controlling transportation and wildlife-habitat linkages through partnerships, planning, and science near Los Angeles, California

Permalink

<https://escholarship.org/uc/item/9pt786s7>

Authors

Sauvajot, Raymond M.
Pettler, Amy
Marquez, Barbara
et al.

Publication Date

2005-08-29

CONTROLLING TRANSPORTATION AND WILDLIFE-HABITAT LINKAGES THROUGH PARTNERSHIPS, PLANNING, AND SCIENCE NEAR LOS ANGELES, CALIFORNIA

Raymond M. Sauvajot (Phone: 805-370-2339, Email: ray_sauvajot@nps.gov), Chief of Planning, Science, and Resource Management at Santa Monica Mountains National Recreation Area and Senior Science Advisor for the National Park Service, Santa Monica Mountains National Recreation Area, 401 West Hillcrest Drive, Thousand Oaks, CA 91360, Fax: 805-370-1850

Amy Pettler (Phone: 213-897-8081, Email: amy_pettler@dot.ca.gov), and **Barbara Marquez** (Phone: 213-897-0791, Email: barbara_marquez@dot.ca.gov) California Department of Transportation, 120 S. Spring St., Los Angeles, CA 90012

Jeffrey Sikich (Phone: 805-370-2301), Wildlife Biologist, National Park Service, Santa Monica Mountains National Recreation Area, 401 West Hillcrest Drive, Thousand Oaks, CA 91360, Fax: 805-370-1850

Seth Riley (Phone: 805-370-2301, Email: seth_riley@nps.gov), Seth Riley, Wildlife Biologist, Santa Monica Mountains National Recreation Area, 401 West Hillcrest Drive, Thousand Oaks, CA 91360, Fax: 805-370-1850

Abstract

Beginning in 1996, the National Park Service, Caltrans, and other agencies and organizations have worked together collecting, analyzing, and sharing data about regional wildlife- movement corridors within the Santa Susana Mountains, Simi Hills, and Santa Monica Mountains, near Los Angeles, California. This region is characterized by intense urban development, several major multi-lane highways, and large expanses of protected open space supporting abundant wildlife.

Scientific studies include radio telemetry of coyotes, bobcats, and mountain lions, monitoring of undercrossings and culverts to evaluate wildlife utilization, assessment of wildlife mortality along selected roadway segments, and geographic information system (GIS) analyses of potential wildlife-movement corridors adjacent to and across major highways. Results from these studies demonstrate that regional wildlife viability will depend on identifying and protecting habitat linkages and wildlife-movement corridors, particularly across major highways that bisect remaining open space.

In addition, the studies confirm that opportunities do exist to retain landscape connectivity, with many species found to utilize a variety of roadway-crossing structures. By combining the results of the science with transportation planning, Caltrans, the National Park Service, and other partners are now integrating on-the-ground conservation actions with needed transportation-improvement projects and regional transportation plans. Recent successes include the formation of a multi-agency and local participant group to identify and prioritize regional wildlife-movement corridors and to create plans for implementing enhancements.

Agencies and organizations are also sharing information about collaborative opportunities to fund and implement wildlife-corridor enhancement projects. GIS analyses, including least-cost path-linkage analysis, have been used to identify regional wildlife-connectivity requirements. These data will then be available to help to identify priority sites for on-the-ground enhancements.

Along one highway segment (State Route 23), National Park Service scientists are working with Caltrans planners and designers to install wildlife-proof fencing where mortality frequencies are high, enhance existing culverts and undercrossings to facilitate safe wildlife movement, and conduct detailed animal monitoring both before and after improvements to evaluate the success of various actions.

These improvements and monitoring are all linked to lane additions along the highway to improve transportation efficiency. In another location (Highway 101), National Park Service scientists are collaborating with Caltrans environmental specialists to design and install a wildlife-crossing structure along one of the last remaining habitat linkages between the Simi Hills and the Santa Monica Mountains.

Overall, we demonstrate that by sharing expertise and experiences and by linking science and planning, regional wildlife-habitat connectivity can be enhanced in combination with needed transportation projects. This model of partnership and collaboration can be applied to other areas facing similar wildlife-conservation and transportation challenges.

Biographical Sketch: Dr. Ray Sauvajot is Chief of Planning, Science, and Resource Management at Santa Monica Mountains National Recreation Area and is a Senior Science Advisor for the National Park Service. Dr. Sauvajot also holds adjunct faculty positions at the University of California, Los Angeles and California State University, Northridge. Dr. Sauvajot designs and supervises ecological studies, manages science and research, and oversees cultural-resource programs and planning in the Santa Monica Mountains, adjacent to Los Angeles, California. As a National Park Service Science Advisor, Dr. Sauvajot also assists other units of the National Park System. Dr. Sauvajot's research focuses on the effects of urban encroachment and habitat fragmentation on wildlife, including the effects of roads. Dr. Sauvajot obtained a B.A. degree in biology from the University of California, San Diego and M.S. and Ph.D. degrees in ecology from University of California, Davis.