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BIODIVERSITY AND LAND–USE CHANGE IN THE AMERICAN MOUNTAIN WEST

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ABSTRACT. Rural private lands in the Mountain West of the United States are undergoing a profound land-use conversion, from agriculture to low-density residential or exurban development, though little scientific study documents the ecological consequences of this change. Nongovernmental conservation organizations are working with ranchers to keep rangeland out of development and in ranching, ostensibly because these organizations believe that biodiversity is better protected on ranches than on exurban developments. We compared plant and wildlife communities across the principal rural land uses in the Mountain West: protection, livestock ranching, and exurban development. Native plant and faunal biodiversity was better maintained on ranches and protected areas than on exurban developments. Exurban developments favored species that were nonnative or adapted to human-altered environments. The continued conversion of ranches to exurban development suggests a long-term alteration of the region's natural heritage. *Keywords: biodiversity, exurban development, land use, ranching.*

Conservationists have an admirable history of documenting the impacts of human land uses on biodiversity to better inform resource-management decisions. Considering all that, the state of our current knowledge about land-use changes in the Mountain West of the United States is less than satisfactory. Across the region, we work to diminish extractive and commodity-based industries, such as water development, logging, mining, and livestock grazing, but have largely failed to recognize the ecological consequences of our own actions, especially where we choose to live and play. While we devote much of our attention to the traditional consumptive land uses that characterized the "Old West," other threats to biodiversity become more pervasive each year with the emergence of a "New West." Urban sprawl and outdoor recreation, for example, are the second and fourth leading causes of the decline in federally listed threatened and endangered species (Czech, Krausman, and Devers 2000).

The character of the New West is being shaped by a flood of immigrants seeking to enjoy the natural amenities and recreational opportunities of a region rich in

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