
EFFECTS OF RECREATIONAL DISTURBANCE ON MEXICAN SPOTTED OWLS ON THE COLORADO PLATEAU IN SOUTHERN UTAH

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The Mexican spotted owl (*Strix occidentalis lucida*) was listed as a “threatened” subspecies in 1993 by the USDI Fish and Wildlife Service. In the Canyonlands of Southern Utah, the spotted owl is associated with fragmented habitats characterized by steep rocky canyons that attract high levels of human use for recreation, including climbing, hiking, hunting, and ORVs. Human-use levels have strongly increased in the canyonland region, e.g., permits for access to popular canyon hikes increased 1714 percent during 1998-2002 in Zion National Park. To assess owl population status and estimate effects of human-use on spotted owls, we conducted an occupancy-based research project during the 2008, 2009, and 2010 breeding seasons (defined as March-August). We designed our study to estimate occupancy rates and detection probability among owl territories in four areas: Zion and Capitol Reef National Parks, Grand Staircase-Escalante National Monument, and Cedar Mesa. A primary objective was to estimate the potential effects of human recreation on occupancy of the owl territories (“sites”). In addition to occupancy, we estimated reproductive status. Preliminary results from our data analysis showed varying occupancy rates, with 83 percent occupancy at mesic sites (Zion and Cedar Mesa), and 43 percent at xeric sites (Capitol Reef and GSENM). Detection probability was estimated to be 89 percent. Human use did not appear to reduce occupancy or detection. Reproduction varied by year, with 2009 showing the highest number of young, and several years with relatively low production of juveniles. Our results suggest that current management of human-use in our study areas is not adversely affecting occupancy and reproduction by Mexican spotted owls.