

Preliminary Results of Post-Fire Bird Monitoring and Overview of Trends During Year One of the Recovery

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Description of the project

Southern California's forests have a long history of evolving with fire, but extreme drought (perhaps the worst in 5 centuries) has resulted in the most extensive & destructive wildfires in history. Under the leadership of Phil Unitt of the San Diego Natural History Museum, a study was started to evaluate the impacts of these recent fires on the distribution and abundance of birds. A portion of the study focuses on hardwood-conifer forests in Cuyamaca Rancho State Park burned in the Cedar Fire. Another related study by a PhD student at UCR will examine bird diversity in the desert –chaparral ecotone and document post-fire recovery.

Study Objectives

Using data from the recently completed and comprehensive 5-year San Diego County Bird Atlas, and unburned control transects, as baselines, the current studies will monitor and quantify bird use in burned areas. The data will be used to examine the impacts of recent fires on local bird populations and to monitor their recovery. Results will be used to formulate management recommendations for State Parks and other agencies and to focus conservation efforts.

Methods

Anticipating at least a 5-year monitoring period, and starting in winter 2003/04, data is being collected along 4 burned transects in Cuyamaca and one unburned control transect at Palomar Mountain. Transects range in length from .5 to 2.7 miles. All birds detected are recorded while walking slowly along the transect. Transects are run 3 times in winter and 4 times in breeding season each year by volunteers and Park and Museum staff. In addition, starting in 2002, 37 transects, using the same protocol, are being run in various habitats in the Pines Fire. All this data will be combined for analysis by the Museum.

Results

There isn't enough data yet to draw any solid conclusions about long-term impacts on birds. Certain anticipated results are being seen: Mountain Quail, Costa's Hummingbird, Lawrence's Goldfinch and Lazuli Bunting (expected fire followers) are far more numerous than before the fire. Conifer dependent species such as nuthatches, Mt. Chickadee, Brown Creeper and woodpeckers seemed to be down. Deep forest dwellers such as Saw-whet and Spotted Owl are of concern. Spotted Owls were absent from two reliable nesting sites. Until extensive foliage returns, many tree nesters (Western tanager, Black-headed grosbeak) will not have much nest habitat. Ground nesting residents should rebound markedly in the next year or two.

Benefits to California State Parks and people of California

Our goal is to insure the long term health of this precious park. Study results will help managers (us) focus on what needs to be done immediately and in the future. Issues

include: Do we actively try to restore/enhance pine forest, such as extirpated sugar pine on Middle Peak? Are other habitats or sensitive areas in need of protection or restoration? Should public use, trails, planned development or other facilities be modified? Do we need to initiate focused studies to conserve certain bird species or groups of species? We plan to work in cooperation with other group and agencies such as CDFG, U.C. Davis' Wildlife Health Center and San Diego Natural History Museum to attain our goal.