

California Gnatcatcher Monitoring and the MSCP: Synthesis of Findings and Future Research Needs

In 2004, surveys were initiated to monitor the status of the California Gnatcatcher (*Polioptila californica*) in the San Diego Multiple Species Conservation Program (MSCP) preserve network. Surveys were repeated in 2007 and 2009, and an occupancy modeling approach used to calculate gnatcatcher abundance, colonization and extinction rates, and the relationships between these variables and habitat quality. The results of these investigations became available in 2012, at which time a scientific panel was assembled to review the findings and propose priority needs for future gnatcatcher monitoring. The effects of wildfires on gnatcatchers and their habitat emerged as the greatest research need, with the goal of informing management before, during and after fires. Additional needs included designing research to guide how and where to rehabilitate coastal sage scrub habitat, and designing monitoring to predict and detect response of gnatcatchers to climate change. Assessing ways to improve the efficiency of the monitoring protocol followed to date is an important and immediate need for implementing future projects at large landscape and regional scales. While the findings presented here relate specifically to the MSCP, they have applicability to other conservation programs, and coordinated monitoring among entities will vastly extend the value of individual efforts.