



Birds 2009

RESOURCE BRIEF

Importance

The National Park Service's mission is to manage park resources "unimpaired for future generations." Protecting and managing some of our nation's most significant natural resources requires basic knowledge of the condition of ecosystems and species that occur in national parks. Landbirds are a conspicuous component of many ecosystems and have high body temperatures, rapid metabolisms, and occupy high trophic levels. As such, changes in landbird populations may be indicators of changes in the biotic or abiotic components of the environment upon which they depend. Relative to other vertebrates, landbirds are also highly detectable and can be efficiently surveyed with the use of numerous standardized methods.

Status and Trends

The Sonoran Desert Network (SODN) began monitoring birds in Spring 2007. This effort is part of a collaboration among



PHOTO: MARIETTA COLLEGE

White-winged dove

the Southern Plains, Sonoran Desert, and Chihuahuan Desert Networks. The overall goal of our bird monitoring program is to detect biologically significant changes in population parameters over time. Details of our approach can be found in our monitoring protocol (in preparation). At Organ Pipe Cactus National Monument (NM), we sampled 42 survey points along six transects (Figure 1) two times during the breeding season (Table 1). The specific objectives of our efforts are:

1. To estimate the proportion of sites occupied for most species in most parks. Occupancy is a measure of presence or absence of a species in space that, when evaluated across time, indicates changes in the distribution of a species.
2. To estimate parameters related to community dynamics, particularly species richness and species composition. Monitoring the richness and composition of native communities can provide valuable insights about changes in the overall health of the system of concern.
3. To estimate density of the most-common species.

It is important to note that our objectives focus on long-term changes and trends, and a minimum number of years are required before meaningful estimates related to trends are feasible. Therefore, it is not practical or feasible to conduct comprehensive analyses for each objective on an annual basis.

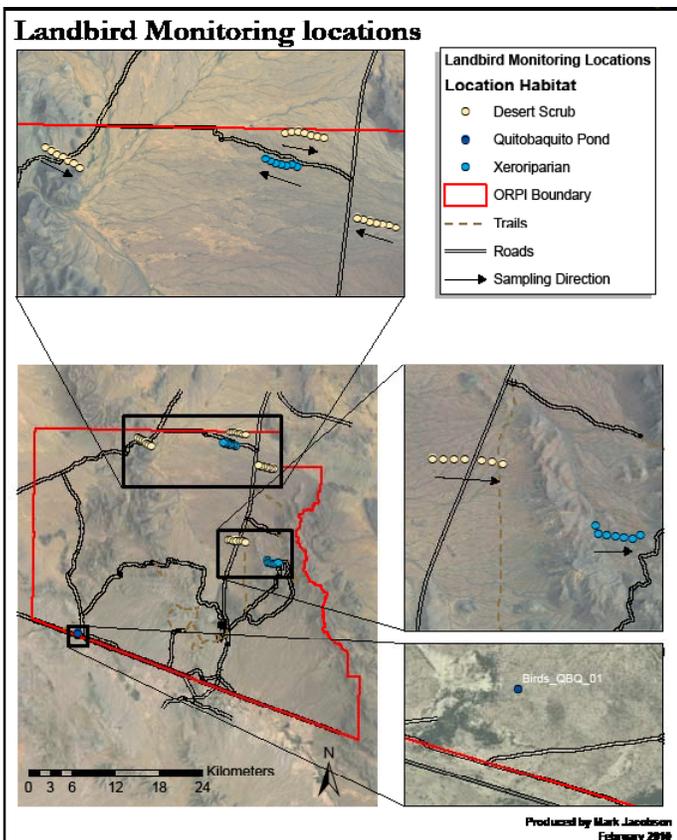


Figure 1. Bird sampling locations at Organ Pipe Cactus NM.



Table 1. Sampling dates at Organ Pipe Cactus NM.

Transect Name	Habitat Type	Visit 1	Visit 2
R1	Xeroriparian	4/29/2009	5/7/2009
R2	Xeroriparian	4/30/2009	5/8/2009
U1	Desert scrub	4/28/2009	5/6/2009
U12	Desert scrub	4/29/2009	5/7/2009
U4	Desert scrub	4/30/2009	5/8/2009
U5	Desert scrub	4/28/2009	5/6/2009

Results and Discussion

During our 2009 surveys, we had 1,456 detections of birds of 58 species. White-winged doves were the most commonly detected species, accounting for 16% of the total detections. Gila woodpeckers (11%), ash-throated flycatchers (9%), cactus wrens (8%), Gambel's quails (7%), and verdins (7%) were also common. No new species were detected in the park in 2009.

Large numbers of migrant warblers were noted in several habitats along the transects, most notably in desert riparian washes lined with ironwood and willow where Lucy's, Virginia's, Wilson's, Townsend's, black-throated gray, orange-crowned, yellow-rumped, and a few yellow warblers streamed through. White-winged doves and Gila woodpeckers were abundant throughout the park, and resident desert species like cactus wrens, curve-billed thrashers, black-throated sparrows, Costa's hummingbirds and verdins were actively nesting. An exhausted migrant male indigo bunting, an interesting migrant this far west, spent a full day feeding and resting under a flowering palo verde tree at the park staff housing; it was documented with a photograph and written account. Crissal thrashers were noted nesting in a desert wash, and a possible LeConte's thrasher was briefly seen in suitable habitat by the park biologist. The species is known to occur and breed in the park, but it has not been detected on recent surveys. Bendire's thrashers were equally odd as they are present but have gone undetected on survey routes in suitable habitat. At night, numerous elf owls, common poorwills, and lesser nighthawks were frequently heard in the surrounding desert.



Desert scrub habitat



Gila woodpecker

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Sonoran Desert Network website
(URL: <http://science.nature.nps.gov/im/units/sodn/>)

Learning Center of the American Southwest
(URL: <http://www.southwestlearning.org>)