

## 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.



Spotted towhee

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### Landbird Monitoring Locations

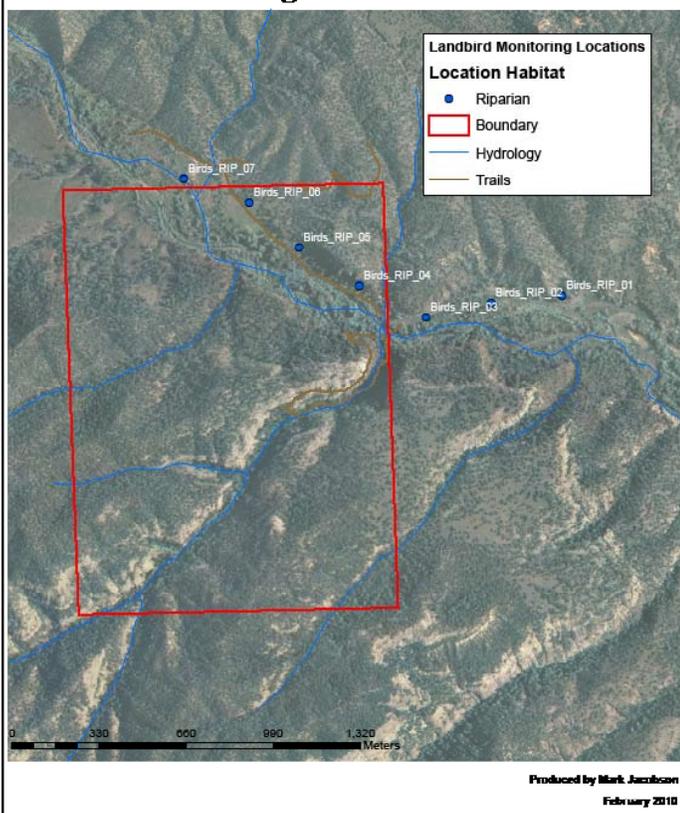


Figure 1. Bird sampling locations at Gila Cliff Dwellings NM.

### Status and Trends

The Sonoran Desert Network (SODN) began monitoring birds in Spring 2007. This effort is part of a collaboration among 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 Gila Cliff Dwellings National Monument (NM), we sampled seven survey points along one transect (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. Consequently, it is neither practical nor feasible to conduct comprehensive analyses for each objective on an annual basis.

**Table 1. Sampling dates at Gila Cliff Dwellings NM.**

Location Name	Visit 1	Visit 2
Riparian	6/10/2009	6/29/2009

## Results and Discussion

During our 2009 surveys, we had 275 detections of birds of 56 species. Spotted towhees were the most commonly detected species, accounting for 13% of the total detections. House wrens (9%), American robins (6%), black-headed grosbeaks (6%), warbling vireos (5%), yellow-breasted chats (5%), and mourning doves (4%) were also common. Five new species were recorded during the surveys (Table 2).

**Table 2. New species documented at Gila Cliff Dwellings NM during 2009 surveys. "Incidental" detections occurred in areas other than sample points.**

Species	No. Detections
Greater pewee	incidental
Rufous-crowned sparrow	2
Song sparrow	1
Summer tanager	2
White-winged dove	4

The riparian transect was very productive, and bird detections were quite high and diverse. A mix of lush riparian and open pine-oak juniper scrub bird communities along the transect was quite interesting, with species like Abert's towhee, yellow warbler, and song sparrows detected at the same survey point as Virginia's warbler, greater pewee, and Northern flicker. The great blue heron rookery was active with several nests with eggs and young, and a common black-hawk and pair of common mergansers were present along a suitable foraging stretch of creek. A pair of peregrine falcons was seen soaring above the cliff dwellings but did not indicate nesting. A singing yellow-throated vireo, an eastern vagrant, was also notable for the park.



PHOTO: © ROBERT SHANTZ

Summer tanager

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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>)