

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



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Black-throated sparrow

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 Tonto National Monument (NM), we sampled 15 survey points along two 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 fea-

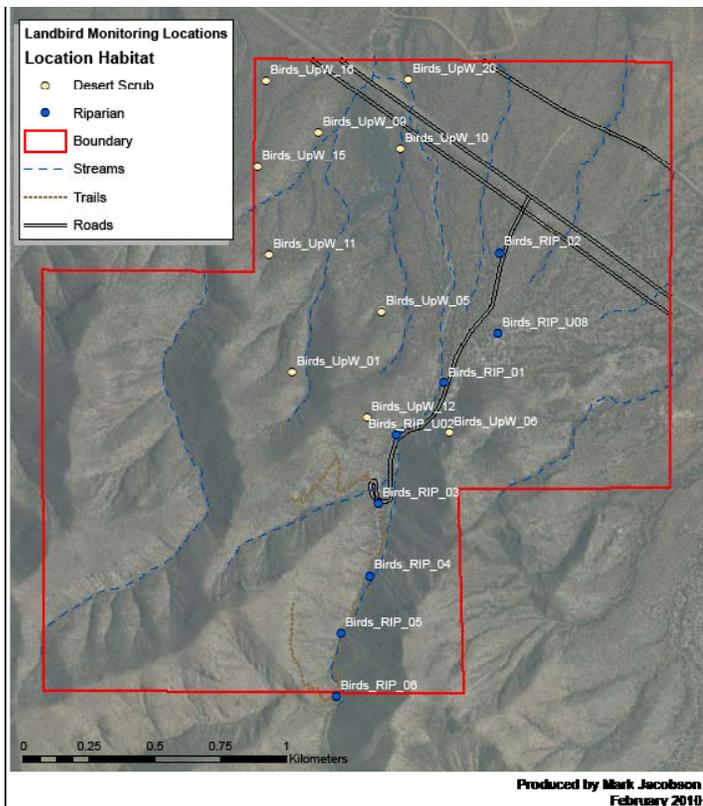


Figure 1. Bird sampling locations at Tonto NM.

sible. Consequently, it is neither practical nor feasible to conduct comprehensive analyses for each objective on an annual basis.

Table 1. Sampling dates at Tonto NM.

Transect Name	Visit 1	Visit 2
RIP	5/18/2009	6/2/2009
UpW	5/18/2009	6/2/2009

Results and Discussion

During our 2009 surveys, we had 619 detections of birds of 58 species. The black-throated sparrow was the most commonly detected species, accounting for 11% of the total detections. Gambel's quail (7%), ash-throated flycatchers (7%), cactus wrens (6%), mourning doves (6%), and Bell's vireos (5%) were also common. The Eurasian collared-dove was detected in the monument for the first time during the 2009 surveys.

The very small but lush riparian section continued to host the most migrant activity, with several species favoring the cool shade and flowing water: Swainson's thrush, lazuli bunting, indigo bunting, Western tanager, black-headed grosbeak, and black-throated gray and Townsend's warblers. The resident pair of nesting Cooper's hawks was again tending to an active nest in the same tree. A singing migrant gray vireo was noted on the upland desert transects. The park staff housing area continued to draw many birds, such as nesting hooded orioles, Say's phoebes, Western kingbirds, American kestrels, crissal thrashers, Bell's vireos, common ravens, and pyrrhuloxias. The cliff dwelling ruins again housed nesting turkey vultures, zone-tailed hawks, and white-throated swifts.

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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>)



Cooper's hawk (immature)

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