

Birds 2009

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

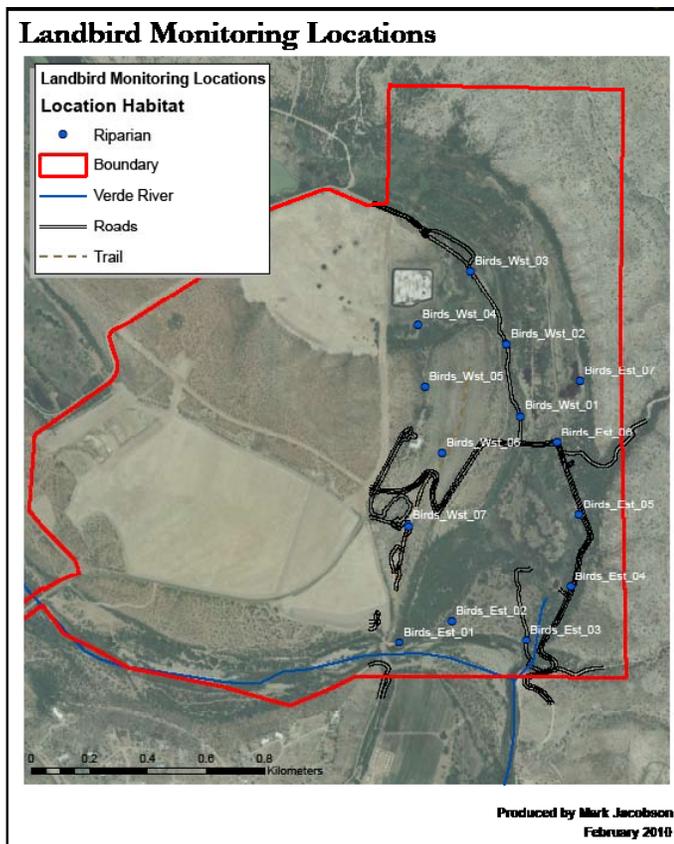


Figure 1. Bird sampling locations at Tuzigoot NM.

RESOURCE BRIEF



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Red-winged blackbird

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 Tuzigoot National Monument (NM), we sampled 14 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 feasible. Consequently, it is neither practical nor feasible to conduct comprehensive analyses for each objective on an annual basis.

Table 1. Sampling dates at Tuzigoot NM.

Transect Name (Habitat)	Visit 1	Visit 2
Est (Riparian)	5/5/2009	5/26/2009
Wst (Riparian)	5/5/2009	5/27/2009

Results and Discussion

During our 2009 surveys, we had 616 detections of birds of 62 species. Red-winged blackbirds were the most commonly detected species, accounting for 13% of the total detections. House finches (7%), Gambel's quails (6%), mourning doves (6%), common yellowthroats (5%), phainopeplas (5%), and yellow-breasted chats (5%) were also common. No new species were recorded during the surveys.

Tavasci Marsh continues to draw unusual species because of its unique marsh habitat and open water adjacent to the lush riparian corridor of cottonwoods and willows. Several interesting rail species have been detected over the years, and the marshbird monitoring team (conducting surveys at the same time as our landbird surveys) noted Virginia rail, sora, least bittern, and common moorhen. Also, there is always the possibility of an oddity such as the rare clapper rail or black rail, which have been recorded in the past. Black-crowned night-herons, great blue herons, and green herons were noted breeding at the marsh, and double-crested cormorants and belted kingfishers were also present, along with scores of breeding red-winged blackbirds.

The riparian transect hosted some unusual species for the Verde Valley, notably Inca and white-winged doves, which are quite interesting for the park. A male broad-billed hummingbird appeared briefly at the park staff's housing feeders, well-north of its regular range in southeastern Arizona; it has, however, been seen at the park in past years and could be a returning wanderer. Common black-hawks continued to nest along the lush stretch of cottonwoods and willows, and a group of two male and two female wood ducks was also noteworthy.

Contacts

Rob Bennetts, Landbird Monitoring Project Lead
Southern Plains Network
Robert_Bennetts@nps.gov

Kristen Beaupre', Data Manager
Sonoran Desert Network
Kristen_Beaupre@nps.gov

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

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



Broad-billed hummingbird

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