

Birds 2010

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 have high body temperatures and rapid metabolisms, and they occupy high trophic levels. Therefore, they may be indicators of changes in the biotic or abiotic components of the environment upon which they depend. Landbirds are also a conspicuous component of many ecosystems, making them highly detectable and 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 the



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Phainopepla.

Southern Plains, Sonoran Desert, and Chihuahuan Desert Networks, and the Rocky Mountain Bird Observatory (RMBO). 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 review). During May and June of 2010, we sampled two transects at Tuzigoot National Monument (NM; Figure 1). Both transects, with seven survey points each, were in riparian habitat. Each transect was surveyed twice for a total sample of 28 survey points. 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. It is neither practical nor useful to conduct comprehensive analyses for each objective on an annual basis. Therefore, we will provide basic data summaries on an annual

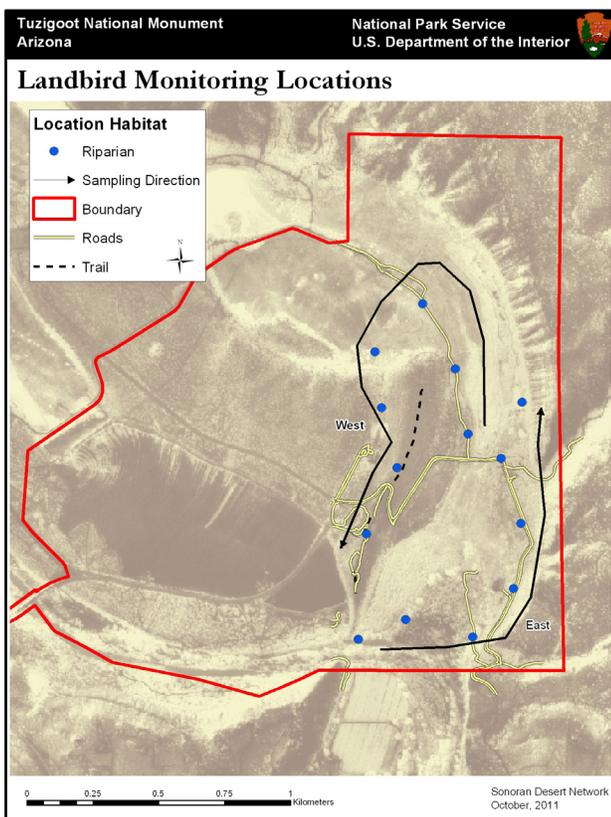


Figure 1. Bird sampling locations at Tuzigoot NM.



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Red-winged blackbird.

basis (in resource briefs such as this one) and, once every five years, a comprehensive synthesis report that will go into much greater depth, including analyses for all objectives and interpretations in a broader ecological context.

Results and Discussion

During 2010, 774 birds of 51 species were counted at Tuzigoot NM. Red-winged blackbird (*Agelaius phoeniceus*) was the most commonly counted species (21%). Phainopepla (*Phainopepla nitens*; 8%), mourning dove (*Zenaida macroura*; 7%), Gambel's quail (*Callipepla gambelii*; 5%), brown-crested flycatcher (*Myiarchus tyrannulus*; 5%), Lucy's warbler (*Oreothlypis luciae*; 5%), and common yellowthroat (*Geothlypis trichas*; 5%) were also common. No new species were recorded during the surveys in 2010.

The large breeding population of red-winged blackbirds at Tavaschi Marsh continued to be healthy, with plenty of mated pairs and confirmed breeding at several sites within the park. Interesting reports from the marsh by the Audubon Society's marshbird monitoring surveys included least bittern (*Ixobrychus exilis*), Virginia rail (*Rallus limicola*), sora (*Porzana carolina*), and marsh wren (*Cistothorus palustris*), and an unconfirmed report of common moorhen (*Gallinula chloropus*), which was detected at the marsh last year. Green heron (*Butorides virescens*), wood duck (*Aix sponsa*), black-crowned night-heron (*Nycticorax nycticorax*), and great blue heron (*Ardea herodias*) were again confirmed breeding at the marsh. Double-crested cormorant (*Phalacrocorax auritus*), belted kingfisher (*Megaceryle alcyon*), and a pair of mallards (*Anas platyrhynchos*) were also present.

RMBO, the NPS's primary cooperator for this project, collects and manages the bird monitoring data. The data are available through the RMBO Avian Data Center (URL: <http://www.rmbo.org/public/monitoring/CountsEffort.aspx.4>).

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

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