

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 Southern Plains Network (SOPN) began monitoring birds in 2009. 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 review). At Washita Battlefield National Historic Site (NHS), we sampled two transects/grids (Figure 1) in grassland habitat (i.e., bottomland grassland ["restoration" on Figure 1] and upland grassland) three times during the breeding season. Sampling was conducted from May 4-10. 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.

RESOURCE BRIEF



PHOTO: © ROBERT SHANTZ

Northern cardinal

Therefore, we will provide basic data summaries on an annual basis (in resource briefs such as this one), and a comprehensive synthesis report once every five years. The comprehensive synthesis report will go into much greater depth, and it will include analyses for all objectives and interpretations in a broader ecological context.

Results and Discussion

During 2010, 1,382 birds of 55 species were counted at Washita Battlefield NHS. Eastern meadowlark was the most commonly counted species (11%). Approximately two-thirds of the eastern meadowlark detections were at the upland transect (see Figure 1). Brown-headed cowbird (9%), northern cardinal (7%), dickcissel (6%), red-winged blackbird (6%), and northern bobwhite (6%) were also common. Thirteen new species for the Washita Battlefield NHS were found during surveys: chipping sparrow, clay-colored sparrow, common yellowthroat, Cooper's hawk, eastern kingbird, great-tailed grackle, house wren, Lincoln's sparrow, ruby-throated hummingbird, tree swallow, and yellow-headed blackbird, as well as lark bunting and yellow-rumped warbler passing through the NHS on migration.

The occurrence of a nice mix of grassland and savannah/woodland bird species in the park is a reflection of the diverse habitat. The most notable interesting birds were Carolina chickadee, painted bunting, and three species of wrens: Bewick's, Carolina, and house. Nine species of sparrows were detected

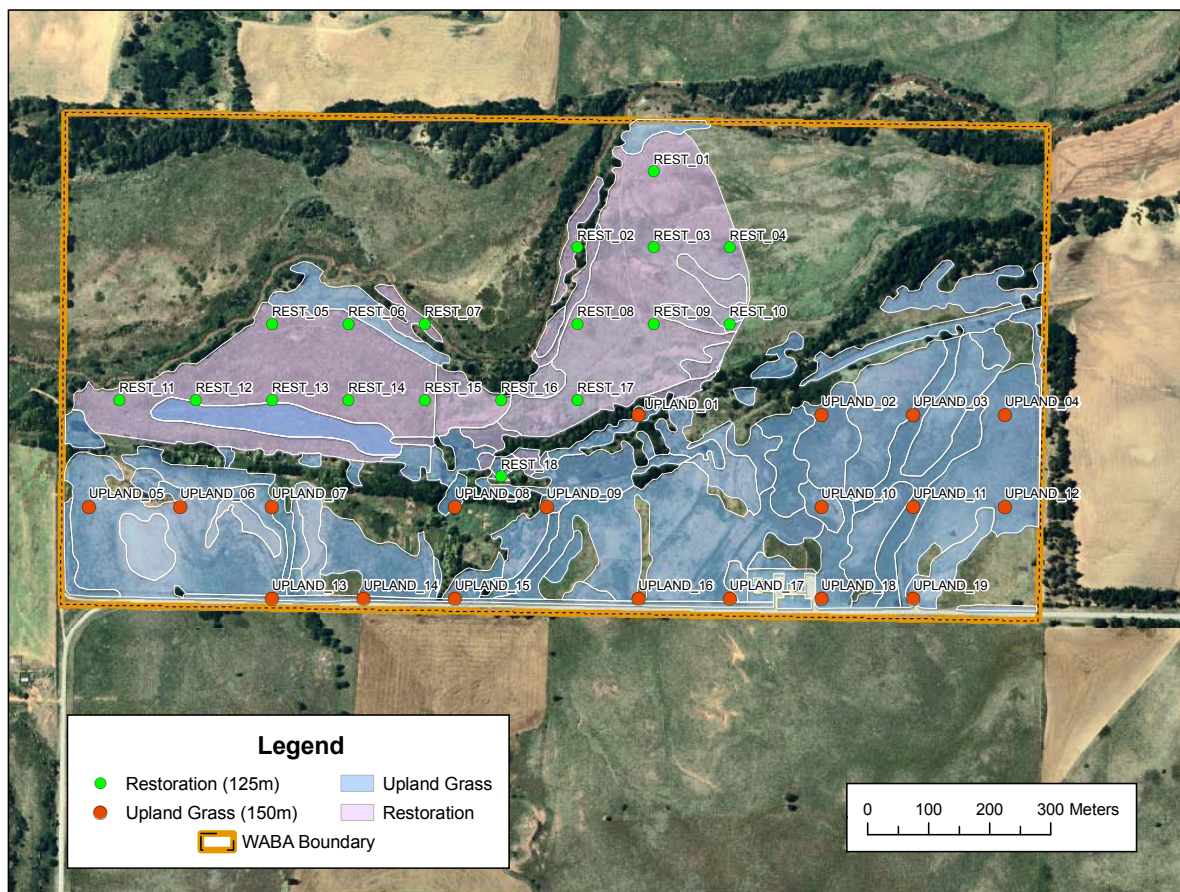


Figure 1. Bird sampling locations at Washita Battlefield NHS.

including Cassin's, field, lark, and grasshopper. Five additional species of sparrow passed through on migration and were new species for Washita Battlefield NHS: chipping, clay-colored, Lincoln's, savannah, and white-crowned. Though detected in 2009, barred owl, common nighthawk, pileated woodpecker, and yellow-billed cuckoo were notably absent in 2010.

The Rocky Mountain Bird Observatory (RMBO), the NPS's primary cooperator for this project, 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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Southern Plains Network website
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Learning Center of the American Southwest
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Dickcissel

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