

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 Lyndon B. Johnson National Historic Park (NHP), we sampled two transects, one in grassland (referred to as "restoration" in Figure 1) and one in riparian habitat (referred to as "ranch"; Figure 1) three times during the breeding season. Sampling was conducted over three days, from April 27-30. 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



Ash-throated flycatcher

PHOTO: © ROBERT SHANTZ

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, 463 birds of 31 species were counted at Lyndon B. Johnson NHP. Northern cardinal was the most commonly counted species (24%). Black-crested titmouse (22%), cliff swallow (6%), Bewick's wren (6%), and scissor-tailed flycatcher (5%) were also common. Two new species, ash-throated flycatcher and Eurasian collared-dove, were recorded at the NHP in 2010. A third species, black-bellied whistling-duck, was observed for the first time, but the detection was outside of survey points along the Pedernales River. Prominent species worth noting include cliff swallow and mourning dove. Several interesting detections included an eastern phoebe nest with nestlings, a suspected Carolina wren nest, and Bullock's and orchard orioles. Carolina wren and Caro-

lina chickadee were found at both transects and seemed to be more common than in 2009.

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
(URL: <http://www.southwestlearning.org>)



Cliff swallow (with mud on beak)

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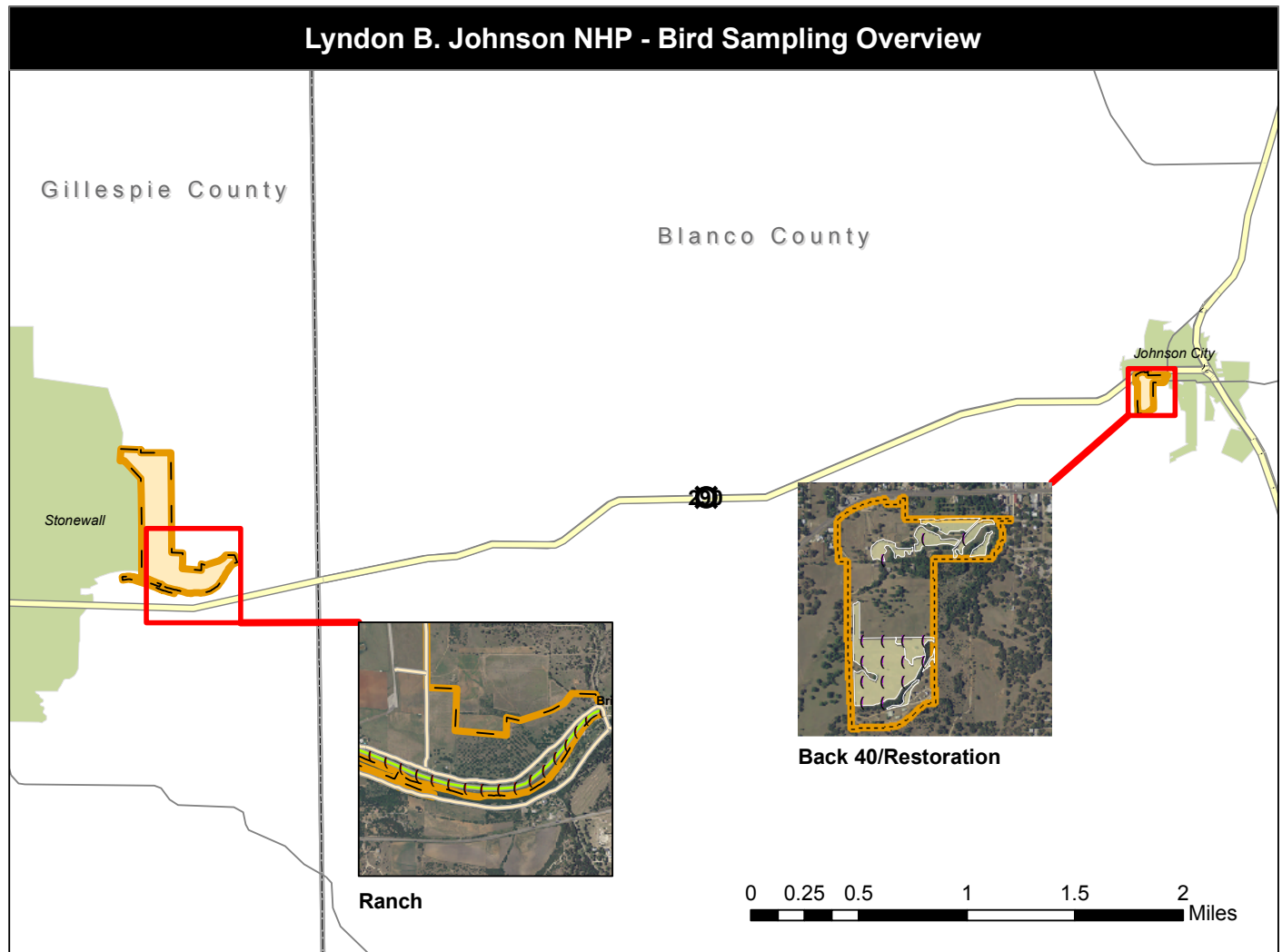


Figure 1. Bird sampling locations at Lyndon B. Johnson NHP.