

CHICKASAW

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.

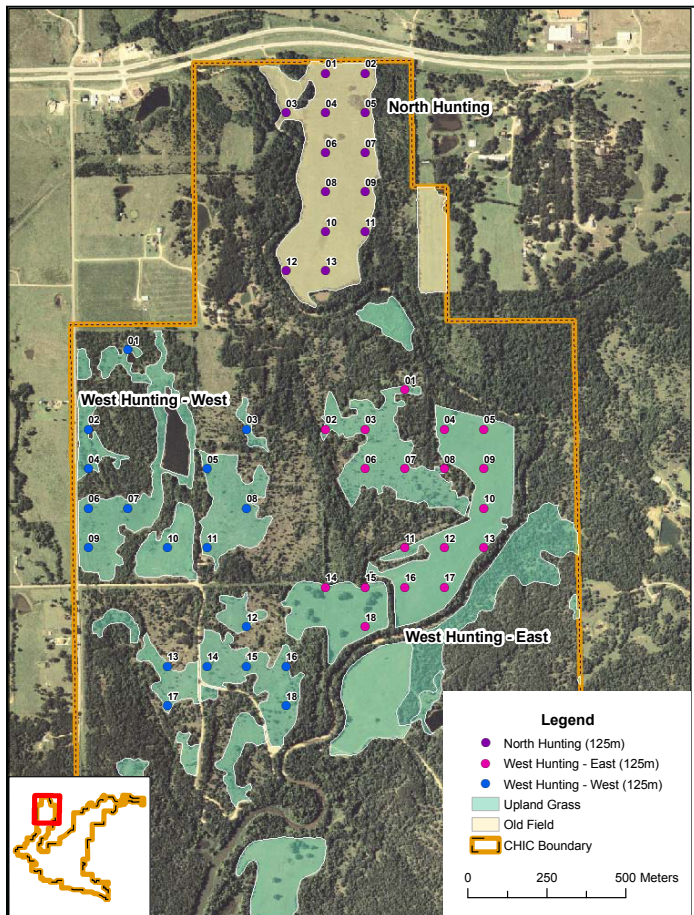


Figure 1. Bird sampling locations at Chickasaw NRA- west.



Northern cardinal

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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 Chickasaw National Recreation Area (NRA), we sampled four transects/grids (Figures 1 and 2) in grassland habitat three times (from May 8-June 19) during the breeding season. 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 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, 1,814 birds of 80 species were counted at Chickasaw NRA; the 80 species counted was the greatest number of species observed at any of the SOPN parks in 2010. Sixteen of the species are of national or regional special concern. Northern cardinal was the most commonly counted species (13%). Brown-headed cowbird (8%), painted bunting (8%), and American crow (6%) were also common. A total of 11 new species were recorded during surveys in Chickasaw NRA: American coot, Baltimore oriole, blue grosbeak, chipping sparrow, eastern kingbird, Eurasian collared-dove, gray catbird, and lark sparrow, and three migrant species: cedar waxwing, Lincoln's sparrow, and song sparrow. A western vagrant gray flycatcher was detected by call and least flycatcher and olive-sided flycatcher were late migrants.

Several other species were prominent at the NRA: blue-gray gnatcatcher, tufted titmouse, Carolina wren, red-bellied woodpecker, turkey vulture, and indigo bunting. Interesting birds included seven species of warblers, white-eyed, warbling and red-eyed vireo, and five species of woodpecker.

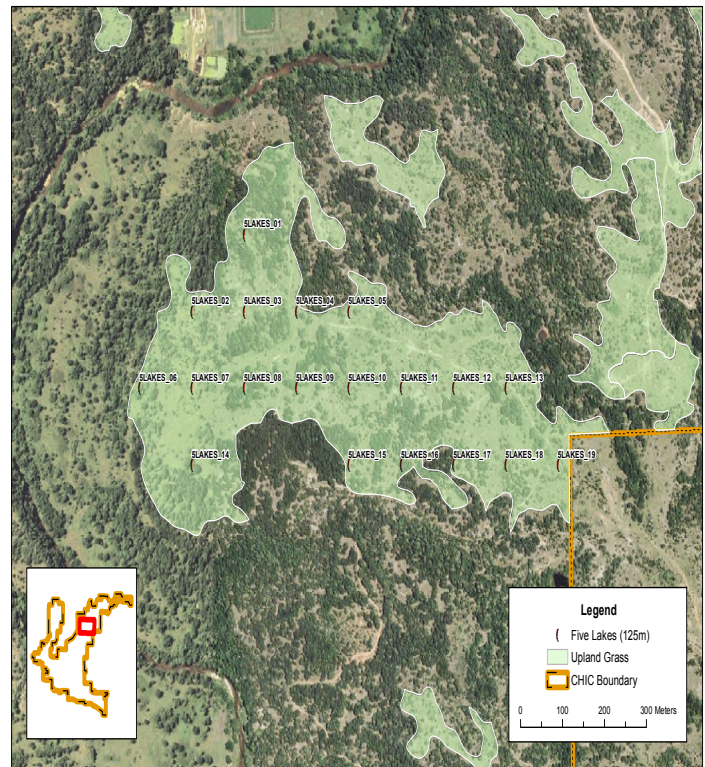


Figure 2. Bird sampling locations at Chickasaw NRA- east.

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
(URL: <http://www.nature.nps.gov/im/units/SOPN>)

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



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Blue grosbeak, recorded at the park for the first time in 2010.