

Birds

2010

RESOURCE BRIEF

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 Chihuahuan Desert Network (CHDN) began monitoring birds in Spring 2010, after a pilot season 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



PHOTO: © ROBERT SHANTZ

Pyrrhuloxia

review). At White Sands National Monument (NM), we sampled 2 transects/grids in grassland habitat (Figure 1) one time during the breeding season (on June 28). 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.

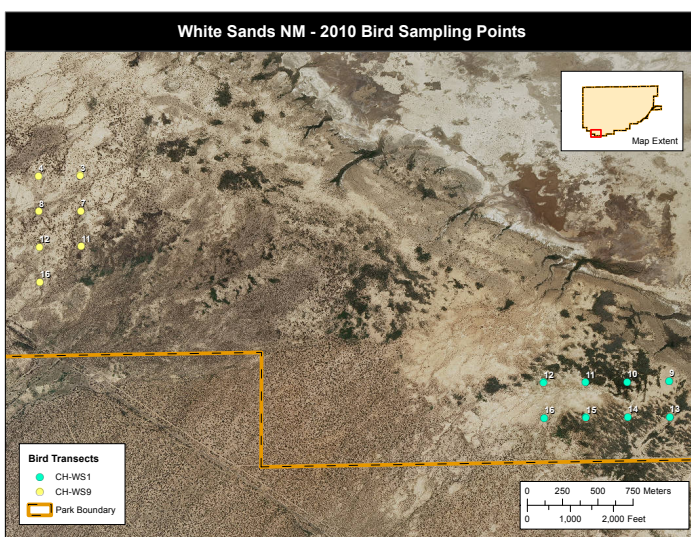


Figure 1. Bird sampling locations at White Sands NM.

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, 102 birds of 14 species were counted on 15 grassland survey points at White Sands NM. The most commonly counted species was black-throated sparrow (38%). Blue grosbeak (13%), pyrrhuloxia (11%), lesser nighthawk (9%), and northern mockingbird (6%) were also common.

The habitat at the national monument is a mix of playa lakes, creosote scrub, and sand dunes. The birds found on the two transects were typical of desert scrub in much of the CHDN; there were no highlights to report except for one out of place Brewer's sparrow, which was probably a very late or very early migrant. Although this species is known to occur at all of the other parks in the CHDN, it was only observed here and at Big Bend NP during 2010 sampling. Only two transects were completed in White Sands NM because we were not authorized to access much of the area. For future monitoring, it is important to arrange for authorized rangers to escort field technicians to the survey sites.

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>).

Contacts

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

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

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



Black-throated sparrow

PHOTO: © ALAN & ELAINE WILSON (WILDLIFENORTHAMERICA.COM)