Birds
2009

RESOURCE BRIEF

PHOTO: RYAN HAGERTY, USFWS

Northern mockingbird

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 are a conspicuous component of many ecosystems and have high body temperatures, rapid metabolisms, and occupy high trophic levels. As such, changes in landbird populations may be indicators of changes in the biotic or abiotic components of the environment upon which they depend. Relative to other vertebrates, landbirds are also highly detectable and can be 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 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 preparation). At Fort Bowie National Historic Site (NHS), we sampled 15 survey points on two transects/grids (Figure 1) two times during the breeding season (Table 1). The specific objectives of our efforts are:

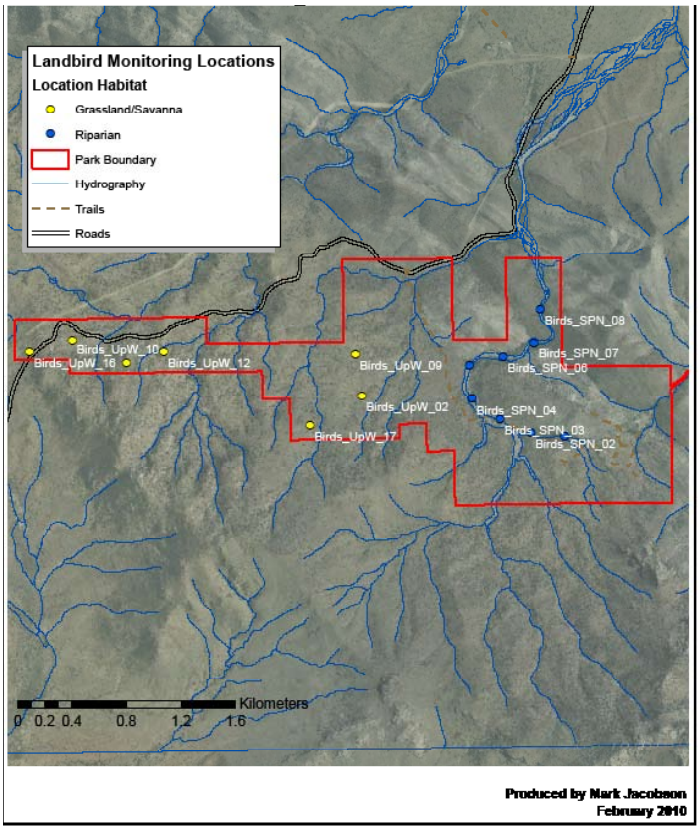

Figure 1. Bird sampling locations at Fort Bowie NHS.

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, and a minimum number of years are re-

quired before meaningful estimates related to trends are feasible. Consequently, it is neither practical nor feasible to conduct comprehensive analyses for each objective on an annual basis.

Table 1. Sampling dates at Fort Bowie NHS.

Location Name	Visit 1	Visit 2
SPN (Riparian)	6/07/2009	6/26/2009
UpW (Grassland/Savanna)	6/07/2009	6/26/2009

Results and Discussion

During our 2009 surveys, we had 417 detections of birds of 53 species. The Northern mockingbird was the most commonly detected species, accounting for 12% of the total detections. Black-throated sparrows (9%), white-winged doves (8%), rufous-crowned sparrows (6%), ash-throated flycatchers (5%), and Bewick's wrens (5%) were also common. One new species, the indigo bunting, was documented during the surveys.

The lush riparian stretch of Siphon Canyon is a good migrant trap, and several nesting resident species continue to use this narrow strip, attracted to the flowing spring at its upper reaches close to the visitor center. Cooper's hawk, Crissal thrasher, broad-billed and black-chinned hummingbirds, Northern mockingbird, summer tanager, Bell's vireo, Cassin's and Western kingbirds, common raven, and zone-tailed hawk once again nested in similar territories as in the previous year. The blooming desert willow is a magnet to migrant hummingbirds, most notably the broad-tailed, which can be very obvious with its metallic wing-trills. The gray vireo pair that nested along the creek last year was present again, with the male singing on territory but the nest not located. The large communal roost of turkey vultures was again quite healthy. The Western scrub-jay was seen in small groups, and a pair of golden eagles was detected soaring over the hills (but did not seem tied to the area for nesting). Interesting was the continued presence of migrant Pacific-slope flycatchers quite late into the season, a phenomenon observed by other birders elsewhere in the region.

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Black-throated sparrow

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Sonoran Desert Network website
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Learning Center of the American Southwest
(URL: http://www.southwestlearning.org)