

Birds 2009

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 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.

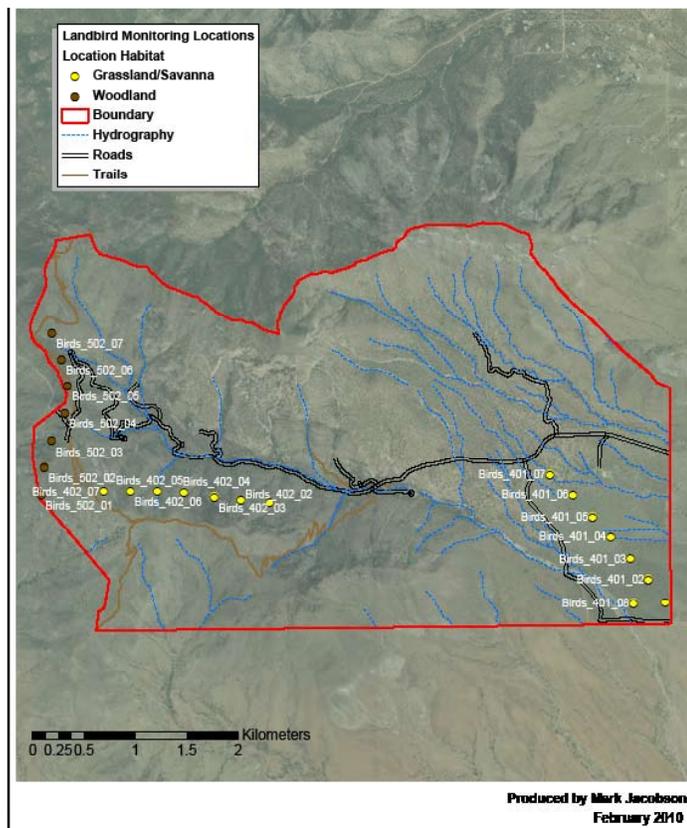


Figure 1. Bird sampling locations at Coronado NM.

Status and Trends

The Sonoran Desert Network (SODN) began monitoring birds



Spotted towhee

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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 Coronado National Monument (NM), we sampled 22 survey points along three transects (Figure 1) two times during the breeding season (Table 1). 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, and a minimum number of years are required before meaningful estimates related to trends are fea-

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Montezuma quail

sible. Consequently, it is neither practical nor feasible to conduct comprehensive analyses for each objective on an annual basis.

Table 1. Sampling dates at Coronado NM.

Location Name	Visit 1	Visit 2
401 (Grassland/Savanna)	5/16/2009	6/20/2009
402 (Woodland)	5/15/2009	6/18/2009
502 (Grassland/Savanna)	5/17/2009	6/19/2009

Results and Discussion

During our 2009 surveys, we had 592 detections of birds of 64 species. Spotted towhees were the most commonly detected species, accounting for 8% of the total detections. Ash-throated flycatchers (7%), Bewick's wrens (7%), rufous-crowned sparrows (6%), white-winged doves (4%), mourning doves (4%), and Scott's orioles (4%) were also common. No new species were detected in the monument in 2009.

The lush mesquite grassland habitat stretching towards the international border fence was teeming with breeding species, most notably Cassin's and Botteri's sparrows and Eastern meadowlarks, but nesting loggerhead shrikes were also worth noting. Montezuma quail seemed abundant in the park, ranging from the grasslands to oak scrub higher on the surrounding hills, and frequently detected in calling coveys (but rarely seen). Western scrub-jays seemed to be restricted by the east-west divide of Montezuma Pass atop the ridge, only favoring the west slope in small flocks (and absent elsewhere). Numerous singing black-chinned sparrows in the grassy oak slopes were notable among the abundant rufous-crowned sparrows, spotted towhees, and Bewick's wrens that were most

prominent in the habitat. Yellow-billed cuckoo was noted as a migrant along the narrow sycamore-lined riparian canyon, as were other migrant warblers, flycatchers, vireos, tanagers, grosbeaks, and thrushes. Most notable was a female Lucifer hummingbird, tending a nest with two eggs, found by the park biologist after the surveys concluded. The Lucifer hummingbird is a rare Mexican hummingbird with a very small breeding range in southeastern Arizona, and it is more expected from the moister canyons a few miles to the north.

Contacts

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

Kristen Beaupre', Data Manager
Sonoran Desert Network
Kristen_Beaupre@nps.gov

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

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