

Birds

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.

Status and Trends

With the exception of some pilot efforts at PECO in 2008, SOPN began monitoring birds in 2009. This effort is part of a collaboration among the Southern Plains, Sonoran Desert,



DAVE MENKE

Pinyon Jay

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 Powell et al. 2010. At CAVO, we surveyed each of 2 transects (Fig. 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 pro-

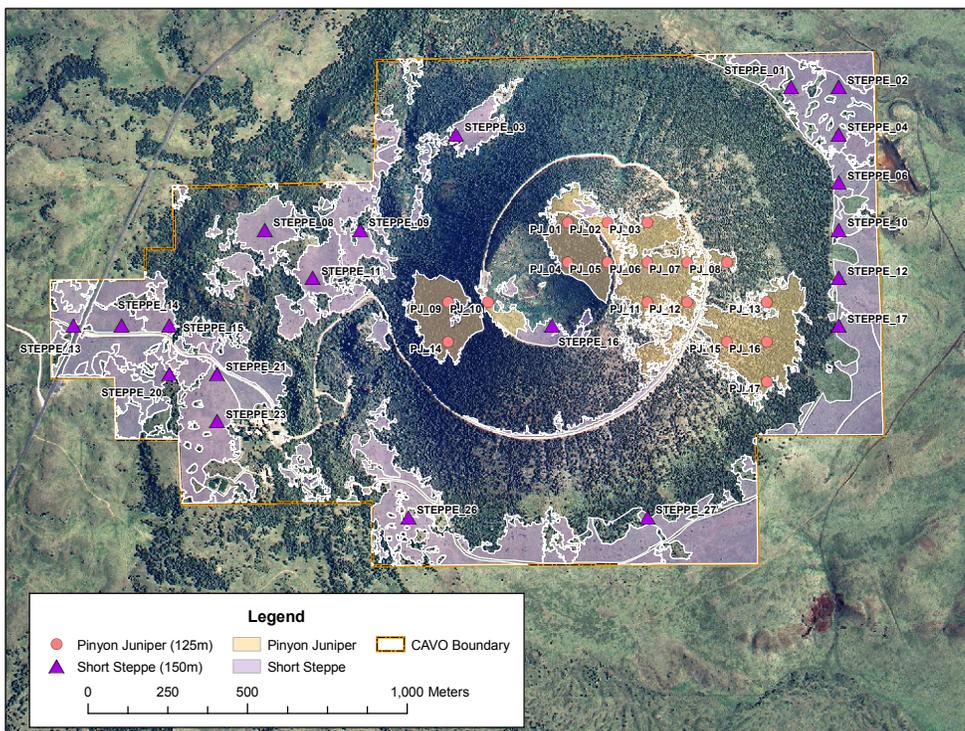


Figure 1. Bird sampling locations at Capulin Volcano NM.

Table 1. Sampling dates at Capulin Volcano NM

Location Name	Visit 1	Visit 2
PJ	6/5/2009	6/12/2009
STEPPE	6/7/2009	6/11/2009

vide 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, which requires a minimum number of years before meaningful estimates related to trend are feasible. Consequently, it is neither practical or feasible to conduct comprehensive analyses for each objective on an annual basis. For annual resource briefs, such as this one, will provide a basic data summary. At a more reasonable frequency of every 5 years, we will provide a comprehensive synthesis report that

will go into much greater depth, including analyses for all objectives and interpretations that consider our results in broader ecological context.

During our 2009 surveys at CAVO, we had 732 detections of birds of 48 species. Spotted Towhees were the most commonly detected species, with Northern Mockingbirds of notable abundance. Also of note were 8 Hepatic Tanagers which is somewhat unusual for this area and habitat.

Table 2. The bird species, species ID Code, and number of detections of birds during the 2009 survey at Capulin Volcano National Monument.

Species	Species Code	No. Detections	Species	Species Code	No. Detections
American Robin	AMRO	20	Mountain Bluebird	MOBL	3
Barn Swallow	BARS	2	Mountain Chickadee	MOCH	1
Black-Capped Chickadee	BCCH	2	Mourning Dove	MODO	22
Bewick's Wren	BEWR	9	Northern Flicker	NOFL	1
Blue-Gray Gnatcatcher	BGGN	19	Northern Mockingbird	NOMO	74
Blue Grosbeak	BLGR	1	Pinyon Jay	PIJA	52
Brown-Headed Cowbird	BHCO	24	Plumbeous Vireo	PLVI	2
Black-Headed Grosbeak	BHGR	34	Rock Wren	ROWR	5
Broad-Tailed Hummingbird	BTAH	13	Say's Phoebe	SAPH	6
Bullock's Oriole	BUOR	2	Spotted Towhee	SPTO	130
Cassin's Kingbird	CAKI	17	Turkey Vulture	TUVU	11
Cassin's Sparrow	CASP	3	Vesper Sparrow	VESP	26
Chihuahuan Raven	CHRA	3	Virginia's Warbler	VIWA	14
Chipping Sparrow	CHSP	48	Warbling Vireo	WAVI	1
Common Raven	CORA	2	White-Breasted Nuthatch	WBNU	1
Dark-Eyed Junco	DEJU	2	Western Kingbird	WEKI	5
Eurasian Collared-Dove	EUCD	1	Western Meadowlark	WEME	38
Great Horned Owl	GHOW	1	Western Scrub-Jay	WESJ	8
Green-Tailed Towhee	GTTO	34	Western Tanager	WETA	9
Hepatic Tanager	HETA	8	Western Wood-Pewee	WEWP	48
Horned Lark	HOLA	1	Wild Turkey	WITU	4
House Wren	HOWR	2	White-Winged Dove	WWDO	1
Juniper Titmouse	JUTI	5	Yellow-Rumped Warbler	YRWA	7
Lark Sparrow	LASP	8		Total	732
Lesser Goldfinch	LEGO	2			