

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, and Chihuahuan Desert Networks. The overall goal of our



Western Meadowlark

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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 FOUN, we surveyed each of 3 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

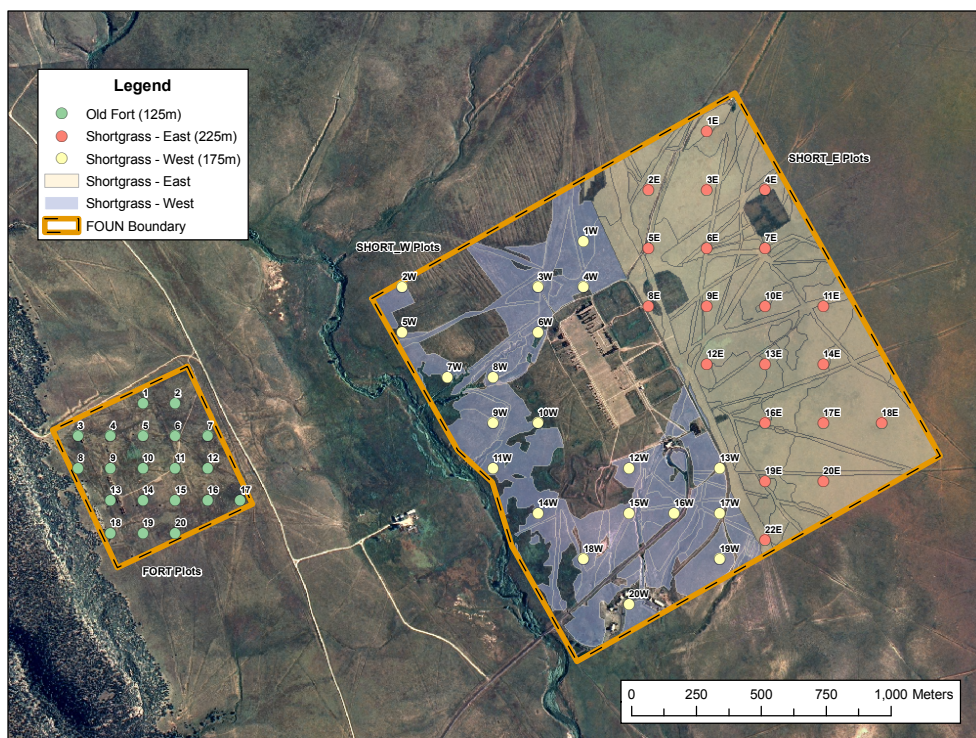


Figure 1. Bird sampling locations at Fort Union NM

Table 1. Sampling dates at Fort Union NM

Location Name	Visit 1	Visit 2
FORT	6/3/2009	6/4/2009
SHORTE	6/7/2009	6/10/2009
SHORTW	6/7/2009	6/10/2009

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

Species	Species Code	No. Detections	Species	Species Code	No. Detections
American Kestrel	AMKE	7	Mountain Bluebird	MOBL	2
Ash-Throated Flycatcher	ATFL	1	Mourning Dove	MODO	41
Barn Swallow	BARS	9	Northern Mockingbird	NOMO	16
Brown-Headed Cowbird	BHCO	3	Northern Rough-Winged Swallow	NRWS	1
Canada Goose	CANG	3	Pinyon Jay	PIJA	1
Cassin's Sparrow	CASP	25	Rock Wren	ROWR	3
Cliff Swallow	CLSW	15	Red-Winged Blackbird	RWBL	16
Common Nighthawk	CONI	1	Say's Phoebe	SAPH	12
Common Raven	CORA	3	Turkey Vulture	TUVU	3
Eastern Phoebe	EAPH	1	Vesper Sparrow	VESP	36
Eurasian Collared-Dove	ECDO	1	Violet-Green Swallow	VGSW	1
Great Blue Heron	GBHE	1	Western Kingbird	WEKI	7
Horned Lark	HOLA	6	Westen Meadowlark	WEME	259
Lark Sparrow	LASP	6	Wild Turkey	WITU	2
Lesser Goldfinch	LEGO	1		Total	483

tion 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, 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, we had 483 detections of birds of 29 species. Our surveys detected quite an impressive number of Meadowlarks, a species that has been reported to be declining in many areas.