

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. F



NPS PHOTO

Yellow Billed Cuckoo

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 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 LAMR we surveyed each of 4 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,

Table 1. Sampling dates at Lake Meredith NRA / Alibates Flint Quarries NM

Location Name	Visit 1	Visit 2
BOTTOM	5/28/2009	5/30/2009
CWOOD	5/21/2009	5/22/2009
HONEY	5/17/2009	5/20/2009
UPLAND	5/15/2009	5/19/2009

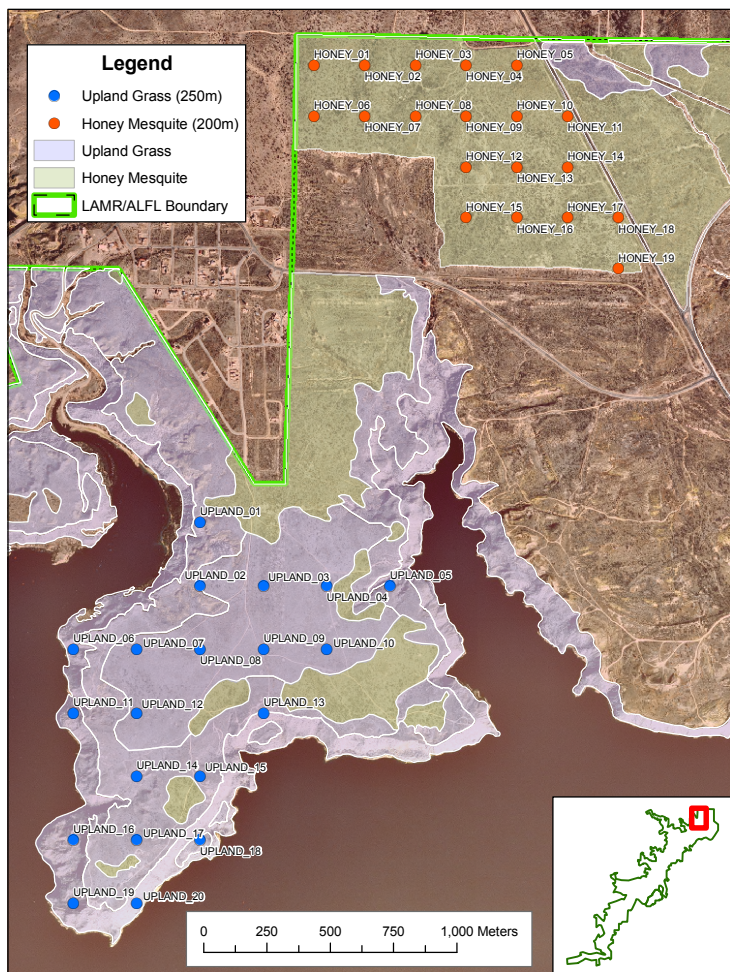


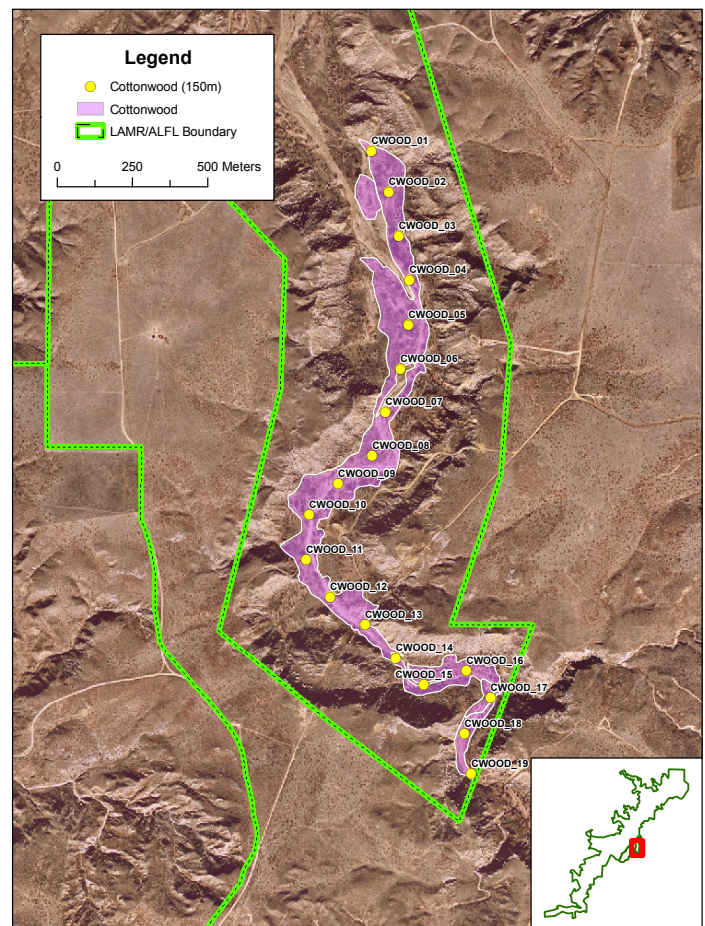
Figure 1. Bird sampling locations at Lake Meredith NRA (Upland and Honey Mesquite)



Table 2. The bird species, species ID Code, and number of detections of birds during the 2009 survey at Lake Meredith National Recreation Area and Alibates Flint Quarries National Monument.

Species	Species Code	No. Detections
AMERICAN KESTREL	AMKE	3
ASH-THROATED FLYCATCHER	ATFL	6
BELL'S VIREO	BEVI	1
BEWICK'S WREN	BEWR	16
BROWN-HEADED COWBIRD	BHCO	3
BLUE GROSBEAK	BLGR	18
BLUE JAY	BLJA	2
BULLOCK'S ORIOLE	BUOR	22
CANADA GOOSE	CANG	6
CANYON WREN	CANW	5
CASSIN'S SPARROW	CASP	51
CLIFF SWALLOW	CLSW	2
COMMON GRACKLE	COGR	2
COMMON NIGHTHAWK	CONI	1
DICKCISSEL	DICK	36
EASTERN KINGBIRD	EAKI	5
EASTERN MEADOWLARK	EAME	9
EASTERN PHOEBE	EAPH	1
EURASIAN COLLARED-DOVE	ECDO	1
EUROPEAN STARLING	EUST	1
FIELD SPARROW	FISP	9
GREAT BLUE HERON	GBHE	4
GREAT EGRET	GREG	2
GRAY FLYCATCHER	GRFL	2
GREATER ROADRUNNER	GRRO	5
GRASSHOPPER SPARROW	GRSP	2
KILLDEER	KILL	1
LARK SPARROW	LASP	12
LADDER-BACKED WOODPECKER	LBWO	1
MALLARD	MALL	2
MISSISSIPPI KITE	MIKI	11
MOURNING DOVE	MODO	66
NORTHERN BOBWHITE	NOBO	83
NORTHERN CARDINAL	NOCA	21

Species	Species Code	No. Detections
NORTHERN FLICKER	NOFL	6
NORTHERN MOCKINGBIRD	NOMO	43
ORCHARD ORIOLE	OROR	12
OLIVE-SIDED FLYCATCHER	OSFL	1
PAINTED BUNTING	PABU	16
RED-BELLIED WOODPECKER	RBWO	1
RUFUS-CROWNED SPARROW	RCSP	1
RED-HEADED WOODPECKER	RHOW	24
RING-NECKED PHEASANT	RNEP	12
ROCK WREN	ROWR	4
RED-TAILED HAWK	RTHA	1
RED-WINGED BLACKBIRD	RWBL	87
SPOTTED TOWHEE	SPTO	1



Bird sampling plocations at Alibates Flint Quarries NM

Table 2. Continued

Species	Species Code	No. Detections
SCISSOR-TAILED FLYCATCHER	STFL	15
SUMMER TANAGER	SUTA	3
SWAINSON'S HAWK	SWHA	3
TURKEY VULTURE	TUVU	7
WESTERN KINGBIRD	WEKI	36
WESTERN WOOD-PEWEE	WEWP	1
WILLOW FLYCATCHER	WIFL	3
YELLOW-BREASTED CHAT	YBCH	1
YELLOW-BILLED CUCKOO	YBCU	2
YELLOW WARBLER	YWAR	1
	Total	693



Bird sampling locations at Lake Meredith NRA (Bottomlands)

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, 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 693 detections of birds of 57 species. Red-winged Blackbirds, Northern Bobwhites, and Mourning doves were among the most commonly detect-

ed species. Also of note was the unusually high number of Cassin's Sparrows. A Ladder-backed Woodpecker was also observed in upland habitat, which is quite unusual.