Survey for Long-Billed Curlews (*Numenius americanus*) on the Buffalo Gap National Grassland, South Dakota

2004 Completion Report

Submitted by

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Introduction

Long-billed curlews (*Numenius americanus*) are neo-tropical migrant shorebirds and summer residents in western South Dakota, arriving in March-April and nesting in grasslands during May-June. Although curlew populations are globally secure, Breeding Bird Survey data indicate an overall slight decline in South Dakota populations (http://www.mbr-pwrc.usgs.gov/bbs/grass/a2640.htm). South Dakota Game, Fish & Parks regard the curlew as a rare species and the U.S. Forest Service a sensitive species. The occurrence and abundance of curlews in South Dakota is not well understood thus it is important to gather population data to help determine the status of the bird within the state. We conducted surveys for curlews on a portion of the Buffalo Gap National Grasslands in southwestern South Dakota.

The objectives of this project were:

1. To determine the occurrence and abundance of breeding long-billed curlews on approximately 40,500 ha of the Buffalo Gap National Grassland – Wall District
2. To produce a GIS map of long-billed curlew occurrence and abundance
3. To record the occurrence and abundance of other rare/sensitive species

Methods

We used trucks and ATVs to transect native prairie across the BGNG in a modified point-count method. Transect routes were spaced approximately 800 m (½ mile) apart and often utilized existing roads and trails. Surveys began one half hour before sunrise and continued throughout the morning hours when bird activity was highest. Observers stopped approximately every 800 m and recorded all curlews seen and heard during a five-minute count period (Saunders 2001). Binoculars and spotting scopes were used while standing in the truck bed or on top of the ATV to aid observers in detecting curlews. Observers used Global Positioning Systems (GPS) units to approximate survey routes and record the general location of curlews. We tried to minimize disturbance of curlews.

When curlews were observed or heard the estimated distance and compass direction to the birds was recorded. We also recorded observations of other rare/sensitive species observed. Curlew locations were entered into an ArcView GIS database. Prairie Wildlife Research provided a Biologist and Technician and gas/mileage with funds received from a 2004 Wildlife Diversity Grant. The U.S. Forest Service provided an additional Biologist and Technician for a portion of the surveys as well as vehicles and equipment.

Results

Surveys occurred from April 13-May 13, 2004 with 172.5 hours spent surveying (252 hours including travel/setup times) 30,128 ha for curlews. Sixty-two long-billed curlews were observed (Figure 1., Appendix 1.) as well as other bird species (Table 1.). Curlews were quite conspicuous and observable. We tended to find curlews in flat, open areas with low vegetation. Interestingly, we observed marbled godwits (*Limosa fedoa*) on several occasions in close proximity to curlews. Throughout the northeast portion of the study area curlews appear to be common and well distributed. The observed density of curlews in the surveyed area was one curlew per 486 ha.

Literature Cited

Howe, M., J. Bart, S. Brown, C. Elphick, R. Gill, B. Harrington, C. Hickey, G. Morrison, S. Skagen, and N. Warnock. 2000. A comprehensive monitoring program for North American shorebirds. Manomet Center for Conservation Sciences, Manomet, MA.

Saunders, E.J. 2001. Population estimate and habitat associations of the long-billed curlew (*Numenius americanus*) in Alberta. Alberta Species at Risk Report No. 25. Alberta Sustainable Resource Development, Fish and Wildlife Division, Edmonton, AB.

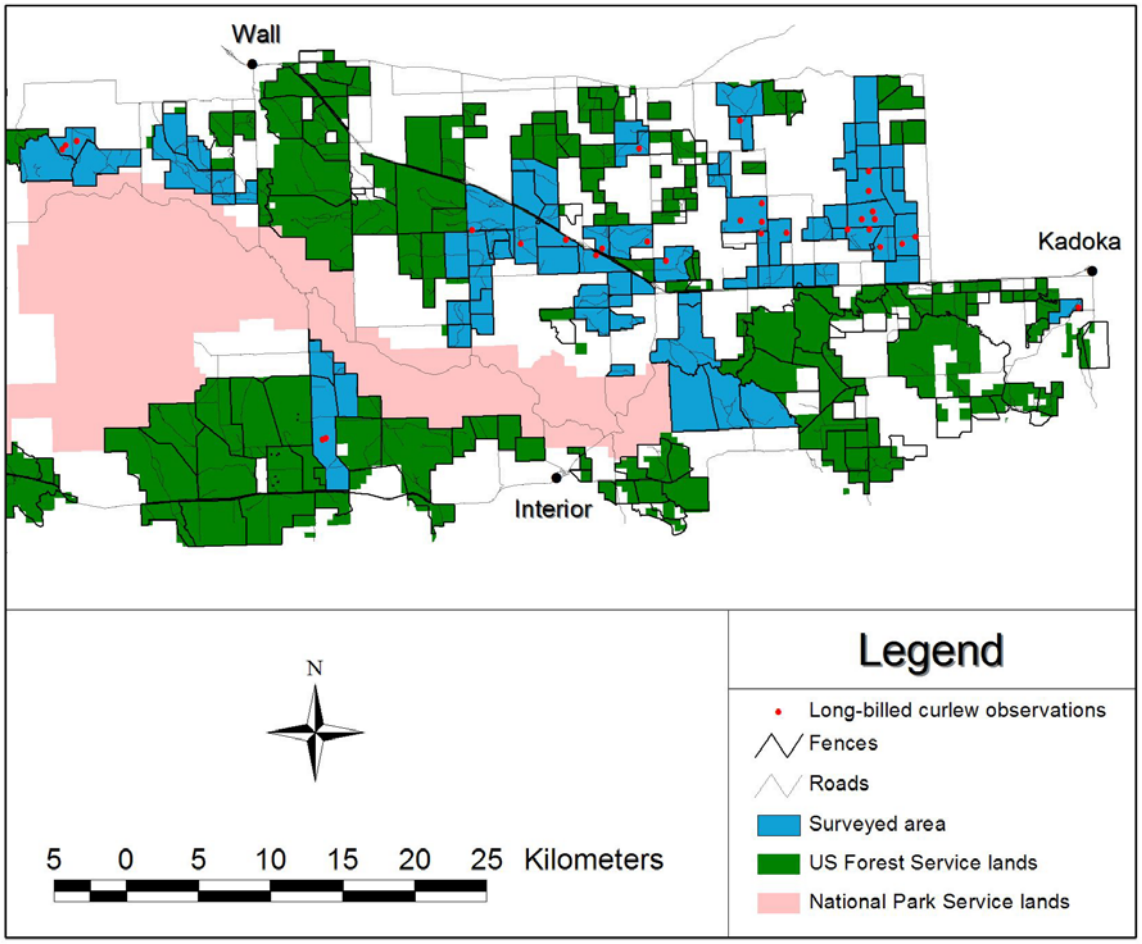

Figure 1. Long-billed curlew observation locations on Buffalo Gap National Grasslands, South Dakota, April-May 2004.

Table 1. Bird species observed during long-billed curlew surveys on Buffalo Gap National Grasslands, South Dakota, April-May 2004.

Common Name	**Scientific Name**
Long-billed curlew	*Numenius americanus*
Burrowing owl	*Athene cunicularia*
Marbled godwit	*Limosa fedoa*
American white pelican	*Pelecanus erythrorhynchos*
Double-crested cormorant	*Phalacrocorax auritus*
Great blue heron	*Ardea herodias*
Canada goose	*Branta canadensis*
Mallard	*Anas platyrhynchos*
Northern pintail	*Anas acuta*
American widgeon	*Anas americana*
Turkey vulture	*Cathartes aura*
Northern harrier	*Circus cyaneus*
Swainson's hawk	*Buteo swainsoni*
Red-tailed hawk	*Buteo jamaicensis*
Ferruginous hawk	*Buteo regalis*
American kestrel	*Falco sparverius*
Prairie falcon	*Falco mexicanus*
Sharp-tailed grouse	*Tympanuchus phasianellus*
Wild turkey	*Meleagris gallopavo*
Sandhill crane	*Grus canadensis*
Killdeer	*Charadrius vociferous*
American avocet	*Recurvirostra americana*
Greater yellowlegs	*Tringa melanoleuca*
Upland sandpiper	*Bartramia longicauda*
Mourning dove	*Zenaida macroura*
Northern yellow-shafted flicker	*Colaptes auratus*
Horned lark	*Eremophila alpestris*
Cliff swallow	*Hirundo pyrrhonota*
Barn swallow	*Hirundo rustica*
Black-billed magpie	*Pica pica*
American crow	*Corvus brachyrhynchos*
American robin	*Turdus migratorius*
Lark bunting	*Calamospiza melanocorys*
Red-winged blackbird	*Agelaius phoeniceus*
Western meadowlark	*Sturnella neglecta*
Brown-headed cowbird	*Molothrus ater*
House sparrow	*Passer domesticus*

Appendix 1. Locations and numbers of long-billed curlews observed, Buffalo Gap National Grasslands, South Dakota, April-May 2004.

Date	# Curlews	Easting*	Northing*	Latitude	Longitude
4/15/2004	1	736666.8	4862414	43.87879	-102.055
4/17/2004	3	740062.3	4861473	43.86923	-102.013
4/17/2004	4	743164.5	4861732	43.87055	-101.974
4/19/2004	1	745253.9	4860648	43.8601	-101.949
4/19/2004	2	745639.6	4860736	43.86077	-101.944
4/20/2004	4	726307.7	4847898	43.75149	-102.19
4/20/2004	1	726542.8	4847961	43.75199	-102.187
4/21/2004	1	708271.6	4868002	43.93761	-102.406
4/21/2004	1	708486.8	4868323	43.94043	-102.403
4/21/2004	1	709290.7	4868610	43.94279	-102.393
4/27/2004	1	766494.1	4861479	43.86021	-101.684
4/27/2004	1	767416.6	4861964	43.86424	-101.673
4/28/2004	2	764197	4862459	43.86985	-101.712
4/28/2004	4	764964.4	4861230	43.85853	-101.704
4/28/2004	2	762681.5	4862459	43.87039	-101.731
5/3/2004	1	764165.2	4866517	43.90634	-101.711
5/3/2004	2	764599.3	4863157	43.87598	-101.707
5/3/2004	2	764152.6	4865115	43.89374	-101.712
5/3/2004	2	764456.2	4863697	43.88089	-101.709
5/3/2004	4	763692.2	4863195	43.87665	-101.718
5/5/2004	1	756734.4	4862160	43.8698	-101.805
5/5/2004	1	758468.4	4862217	43.86971	-101.784
5/6/2004	2	756782	4864250	43.88857	-101.804
5/6/2004	3	756778.1	4862973	43.87709	-101.804
5/6/2004	4	755254.1	4870004	43.94082	-101.82
5/6/2004	5	755270.9	4863102	43.87877	-101.823
5/10/2004	1	748271	4868071	43.92583	-101.907
5/12/2004	2	748829	4861597	43.86745	-101.903
5/12/2004	1	750134	4860293	43.85528	-101.888
5/13/2004	2	778726	4857034	43.81575	-101.534

*UTM coordinates in NAD27 Zone 13. Although the survey area overlaps into another zone, we converted all to Zone 13 for mapping purposes.