

Mountain Plover Population Inventory and Habitat Management Comanche National Grasslands, 2007

Introduction

During 2007, mountain plover surveys were conducted on prairie dog colonies, and four prescribed burns. Mountain plovers may utilize prairie dog colonies during the breeding season. For this reason, a subset of 32 prairie dog colonies distributed across the Carrizo and Timpas Units of the CNG were surveyed for mountain plovers during May and early June of 2007, following the same methods as in 2003 - 2006. Two new points were added; one in the Antelope Allotment and one in the Stenson Allotment. These additions were made as an attempt to capture where prairie dog activity was occurring. Mountain plovers may also utilize prescribed burns for breeding. Four prescribed burns were completed on the Carrizo Unit of the Comanche within potential Mountain plover habitat. Each burn was surveyed twice by Stephanie Shively, David Augustine or Jonathan Reitz (CDOW).

Burns & Nesting Habitat

Four prescribed burns occurred in potential mountain plover habitat (shortgrass prairie on loamy soils with slope <5%) during early spring of 2007.

Table 1. Burns providing potential nesting habitat for mountain plover on the Grasslands.

Allotment	Acres Burned	Grazing Association	Comments
Buzzard's Roost	600	Pritchett	1 adult present prior to nesting season
Pintata	1280	Campo	
Pleasant Ridge	640	Campo	1 adult present prior to nesting season, seen by Augustine and Shively
Buffalo Wallow	320	Pritchett	
Total	2940		

Mountain plover population surveys

- (1) During May of 2007, a systematic grid of points was surveyed in the four burn locations on the Grasslands (see below) with grid points spaced at approximately 0.2 mi intervals (Svingen and Giesen 1999). At each point, the observer would exit the vehicle for several seconds to show a human silhouette (to cause any nearby plovers to move off of the nest) and then re-enter the vehicle and scan with binoculars for 2-3 minutes. In areas with suspected nesting plovers or significant amounts of bare ground, the survey interval was shortened to 0.1 mi in order to more intensively survey the area.

(2) During May and early June, prairie dog towns were surveyed at fixed points in conjunction with burrowing owl and Long-billed curlew surveys. These surveys were conducted at previously established points that covered the entire prairie dog town (based on its extent in 2003) and were typically spaced at ~400 m intervals. At each of these points, an observer scanned with binoculars and a spotting scope for 5 min, then waited 5 min, then scanned again for 5 min. A total of 52 survey points located at 21 different prairie dog towns (ranging from 1 – 5 survey points per town) were surveyed on the Carrizo Unit of the Comanche NG, and 16 survey points located at 11 different prairie dog towns (ranging from 1 - 3 survey points per town) were surveyed on the Timpas Unit of the Comanche NG. During 1999 – 2005, prairie dog colonies expanded dramatically on the Timpas Unit of the Comanche NG. On the Carrizo Unit, the colonies expanded in size dramatically during 2003 - 2005, but most were declining in prairie dog density and distribution in spring of 2006 due to plague. This trend continued in 2007 and only 11 of the 21 colonies were found active. Of those which were active, may have only had signs of prairie dog activity at one out of the three to four points within the colony, indicating a decline in size. Only one colony showed signs of expansion (Wych Allotment – 17C); Reader Lake (5Fn) and Picture Canyon (2A) colonies are approximately the same size as in 2006.

Results:

Surveys of the Timpas and Carrizo Units did not document any nesting mountain plovers. David Augustine found one plover on the Buzzard’s Roost burn in April and another with Stephanie Shively on Pleasant Ridge. Possibly the birds were migrating at the time.

Table 3. Prairie dog colony surveys on the Carrizo Unit of the Comanche NG, 2007

Colony		Allotment #	# of Survey	Plover Observations	
ID	Allot Name		Points	# Adults	# Chicks
1	Arlington	14Ge	4	0	0
2	Lonestar	14D	1	0	0
3	3 awn	8K	3	0	0
4	Liberty	14G	1	0	0
5	Antelope	8H	3	0	0
6	Joycoy	4I	3	0	0
7	Coyote	4C-South	3	0	0
8	Coyote North	4C-North	3	0	0
9	Vega	8D	2	0	0
10	Vienna	7A	4	0	0
11	North Fork	17C	4	0	0
12	Pintata	16Ae	2	0	0
13	Galleta	16Fs-S	1	0	0
14	Long Ridge	11F	3	0	0
15	Cholla/Kirkwell	3B	5	0	0
16	Reader Lake	5F	2	0	0

17	Galleta	16Fs-N	3	0	0
18	South Fork Stenson	5C	1	0	0
18.5	Ranch	5P	1	0	0
19	Shadel Picture	4U	1	0	0
20	Canyon	2A	2	0	0

Overall, survey results from 2007 indicate:

- 1) Prescribed burns continue to provide habitat for mountain plovers on the Grasslands, but the density of nesting plovers on burns is still lower than densities documented on burns during 1998 – 1999 (Svingen and Giesen 1999).
- 2) Decreased use of prairie dog colonies on the Comanche NG in 2007 may be related to the large amount of moisture received during the winter (5 ft.+ of snow in some areas) resulting in higher ground moisture and taller vegetation in the spring. It may also be related to the decline in acreage of prairie dog towns on the Carrizo Unit. Many of the inactive prairie dog colonies now have taller forbs growing along the edges of the burrows, possibly making the area unsuitable for the plover. The Timpas Unit has had relatively stable prairie dog populations during this same time period, yet no Mountain plovers have been located.
- 3) The taller vegetation height within the prairie dog towns may have made detection difficult.

Literature Cited

Svingen, D. and K. Giesen (1999). Mountain Plover (*Charadrius montanus*) response to prescribed burns on the Comanche National Grassland. Journal of the Colorado Field Ornithologists **33**(4): 208-212.