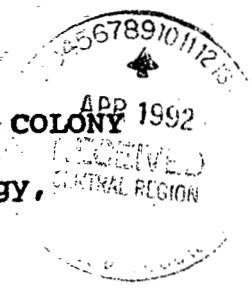


SPECIES AND RELATIVE ABUNDANCE OF AN OPEN SPACE PRAIRIE DOG COLONY

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Abstract: An established prairie dog colony on Open Space land produced sightings of 22 species. The most abundant was the western meadowlark (*Sturnella neglecta*) and the red-winged blackbird (*Agelaius phoeniceus*). Recommendations range from continued irrigation of center region to the halting of future grazing.

The land in Open Space is home to a variety of flora and fauna communities. Today, there is a housing subdivision planned for development along a border of this Open Space land. The effects this subdivision will have on this area of Open Space is not known. Monitoring the area before the subdivision is built, during the construction phase, and after the construction is completed is needed to evaluate what the effects are and what recommendations can be made for the future. The objective of this study is to determine a species list and percent relative abundance for an area of Open Space land.

Study Area Methods

The study area is located approximately .5 mile west of Boulder Reservoir in sections 4 and 5, township 1 N, range 70 W, in Boulder county, Colorado.

The area consists of an established prairie dog colony north of a marsh. Species expected to be observed are small mammals, primarily rodents, and species frequently associated with them such as raptors and burrowing owls (*Athene cunicularia*) (Holt and Lane, 1987). There is a possibility of seeing coyotes (*Canis latrans*).

A point count method was used for this study. Each day observations followed the same routine of randomly selecting a station, making observations from that station for 20 minutes, then randomly moving to the next station. Birds and animals were located visually through the use of binoculars and by auditory characteristics. Species of birds and mammals were identified with the help of a field identification guide. Data was recorded on data sheets for a period of five weeks. Percent relative abundance was determined by dividing the total number of individuals of a species by the total number of all species then multiplying by 100.

The project began on Thursday, April 6, 1989 and continued for one morning each week for four weeks, and in the afternoon of the fifth week. Studies related to identifying Avian species concentrate on the half hour before sunrise and the four hours following sunrise to bracket times of greatest activity (Robbins, 1981). This study concentrated on the half hour before sunrise and the three and a half hours following sunrise for a total of four hours each morning. To try and identify more nocturnal

species, the fifth week of study encompassed the hours of four pm. to 8 pm.

Results

Results are summarized in table 1.

Table 1. Species list and % relative abundance.

<u>COMMON NAME</u>	<u>SPECIES NAME</u>	<u>% RELATIVE ABUNDANCE</u>
American Crow	(<i>Corvus brachyrhynchos</i>)	.99
American Kestrel	(<i>Falco sparverius</i>)	.37
Barn Swallow	(<i>Hirundo rustica</i>)	1.24
Black-Billed Magpie	(<i>Pica pica</i>)	2.59
Black-Tailed Prairie Dog	(<i>Cynomys ludovicianus</i>)	13.84
Brown-Headed Cowbird	(<i>Molothrus ater</i>)	.74
Canada Goose	(<i>Branta canadensis</i>)	1.36
Cliff Swallow	(<i>Hirundo pyrrhonota</i>)	.86
Common Grackle	(<i>Quiscalus quiscula</i>)	.62
Coyote	(<i>Canis latrans</i>)	.12
Eastern Cottontail	(<i>Sylvilagus floridanus</i>)	.74
Grasshopper Sparrow	(<i>Ammodramus savannarum</i>)	.12
Great Blue Heron	(<i>Ardea herodias</i>)	.25
Killdeer	(<i>Charadrius vociferus</i>)	2.72
Mourning Dove	(<i>Zenaida macroura</i>)	1.11
Northern Harrier	(<i>Circus cyaneus</i>)	.12
Red-Winged Blackbird	(<i>Agelaius phoeniceus</i>)	17.30
Ring-Billed Gull	(<i>Larus delawarensis</i>)	4.57
Rock Wren	(<i>Salpinctes obsoletus</i>)	.25
Song Sparrow	(<i>Melospiza melodia</i>)	1.36
Vesper Sparrow	(<i>Pooecetes gramineus</i>)	.74
Western Meadowlark	(<i>Sturnella neglecta</i>)	47.96

Discussion

The area on Open Space land studied has the potential to create a great variety of avian and mammalian species. Recommendations to enhance this area include; 1) not allow grazing, 2) continue to allow irrigation into the center of the region, and 3) not allow any hunting of predators. With a non-grazing policy, shrubs in the area will get a chance to grow and provide cover for many bird species. Presently shrubs are of little or no value to them due to defoliation. Introduced grasses predominate in the area, native grasses will return if grazing is not allowed. Irrigating into the center of the region will help in regrowth of the shrubs and grasses. Predators are needed to maintain the prairie dog colony which provide homes to burrowing owls.

People frequent the area to engage in a variety of recreational activities. A total of 19 humans were observed riding mountain bikes, running dogs, riding horses, and just plain walking, during the time studied. Most of the use came in

the afternoon hours, as 14 of the 19 were observed from the hours of four pm. to eight pm.

Acknowledgements

I would like to thank Janet George for her assistance in this project. Her time, patience, and knowledge of the area was greatly appreciated.

I would like to also thank Dr. Ryder for acting as advisor for this project and for taking the time to participate in this study. His knowledge of birds was very helpful and greatly appreciated.

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