

UNITED STATES GOVERNMENT

Memorandum

TO : Small Mammal Studies File

DATE: January 14, 1980

FROM : Non-game Biologist

SUBJECT: Small Mammal Study

A small mammal study was conducted by Mary Allen in three different habitat types--grassland, sage, and a chained Pinyon Juniper area--from July 8-24, 1977. These areas were also the sites of Meribeth Riffe's bird studies. Two lines of traps were located 30' apart and the traps in each line were placed every 15 feet at a ratio of 3 Museum Specials to every McGill Rat Trap. The bait used was a mixture of peanut butter, rolled oats, and cat food. Each area was trapped four successive nights; the traps were checked and reset twice a day between 6:30-11:30 a.m. and 5:30-8:15 p.m..

The grassland plot is covered mainly with grasses and a few shrubs (snakeweed, cholla, saltbush, sage). Sage covers 35% of the sage area with a scattering of saltbush, snakeweed, cholla and grasses. the chained P-J area is a large open area that has been chained leaving P-J on three sides. Sage, cliffrose, and grasses are the dominant plants.

During the grassland census the weather remained clear, winds were from 5-10 mph, and the moon was waning, starting at a quarter moon. During the sage census two days were overcast and the wind was approximately 5 mph, but it never rained. The census began 1 day before the new moon. Rain tripped many of the traps in the chained area on the first and third nights, skewing the numbers of rodents trapped, and thus making the regression test inappropriate. There was a half moon throughout the chained area census.

The relative abundance of total species trapped was highest in the chained area, grass had the next highest, and sage the lowest. (see graphI). There were equal numbers of species (5) trapped on the grassland and chained areas; sage had 4 different species trapped (see graphII) .

Summary of the trap data is in Table I.



TRAPPED AT THREE DIFFERENT VEGETATIONAL SITES
ALLEN STUDY - 1977

Relative Abundance Based on Total Species Trapped Per Trap Night

0.1
.09
.08
.07
.06
.05
.04
.03
.02
.01
0

Grass

Sage

Chaining

GRAPH 1

DIFFERENT VEGETATIONAL SITES - 1977 (ALLEN STUDY)

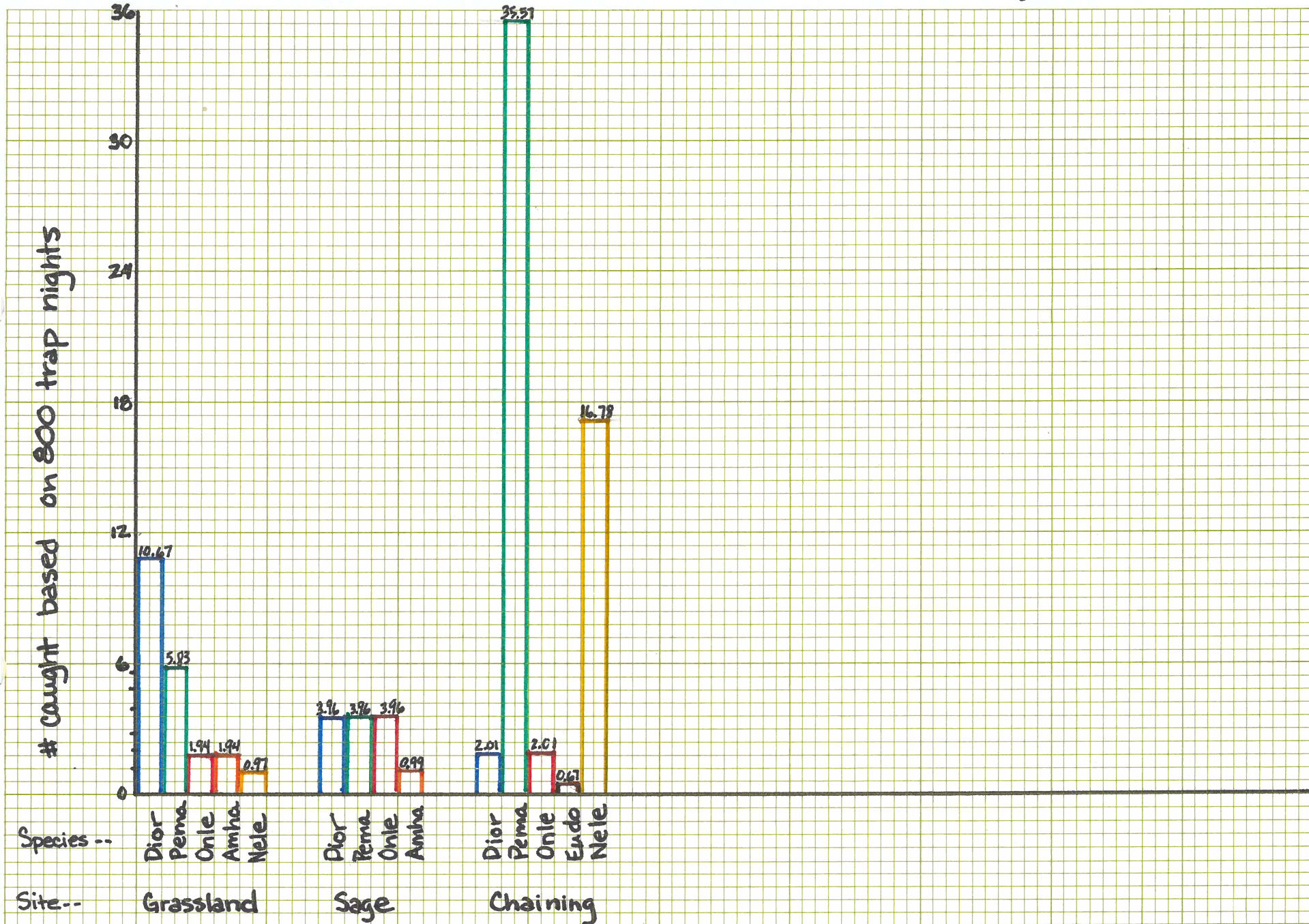


TABLE I SUMMARY OF TRAP DATA IN LOWER CLAY HOLE AREA-1977

Location	Trap nights	# Rodents trapped night #				Total # rodents trapped	Rodents/ trap night	% Success	Regression		Total species and #of rodents trapped	Relative abundance based on 800 trap nights
		1	2	3	4				P	Y		
GRASSLAND	T. 36N R. 7 W Sec. 12 13	824.	9	7	2	2	20	0.024	2.427	23	9.5	Dior 11 Pema 6 Onle 2 Amha 2 Nele 1 10.67 5.83 1.94 1.94 0.97
SAGE	T. 36 N R. 6W Sec. 15N E	808	4	1	6	2	13	0.016	1.6	*	*	Dior 4 Onle 4 Pema 4 Amha 1 3.96 3.96 3.96 0.99
CHAINING	T. 35 N R. 9W Sec. 21 SW	1192	8	47	4	25	84	0.07	7.04	*	*	Dior 3 Onle 3 Pema 53 Eudo 1 Nele 25 2.01 2.01 35.57 0.67 16.78

*Number of rodents trapped in successive nights didn't decline; can't compute regression