

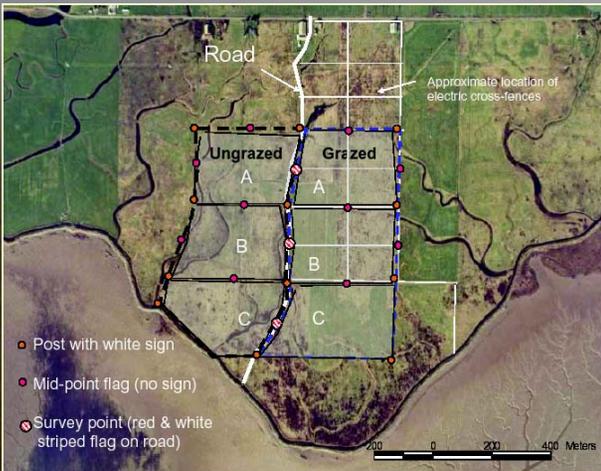
Does Grazing Affect Short-eared Owls at Mad River Slough Wildlife Area?

INTRODUCTION

Short-eared owls hunt in grasslands and open country for voles and other rodents. Though the species is widely distributed, their populations are declining, and as a result, it is listed as a species of special concern by the California Department of Fish and Game.

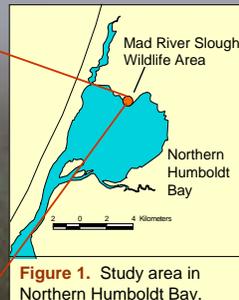
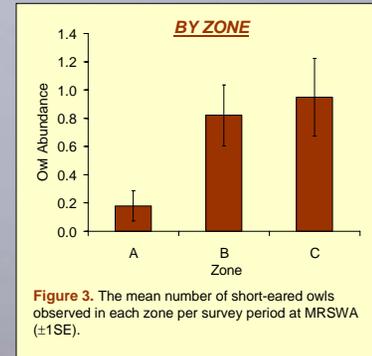
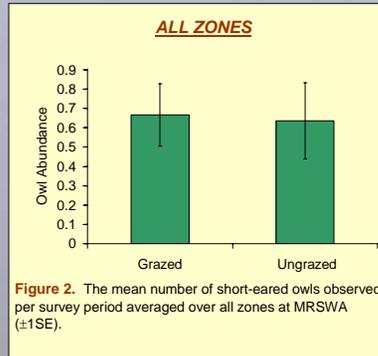
Short-eared owls use grasslands at Mad River Slough Wildlife Area (MRSWA) for winter habitat. Livestock grazing is used to manage a portion of the MRSWA. Few studies have addressed the effects of grassland management on this species, and the influence of grazing on short-eared owls in northern California is unknown.

The goal of this study was to examine differences in abundance of short-eared owls on grazed and ungrazed habitats at MRSWA.



METHODS

For two weeks in October 2004, we conducted daily counts of foraging owls. We divided the area into three zones (A, B, C, Figure 1). Each zone contained a grazed and ungrazed plot bisected by an unimproved road. Two observers were stationed at each survey point and counted owls on the grazed and ungrazed plots. To maximize owl observations, counts were conducted 20-35 minutes after sunset. We determined the density of owls in each zone and extrapolated this value for the entire MRSWA to obtain an estimate of local owl abundance.



RESULTS

- There was no significant difference in the number of owls observed on the grazed versus ungrazed plots ($t = 0.67$, $df = 64$, $P = 0.54$, Figure 2).
- There were significantly more owls observed in zones C and B than in zone A ($t > 2.6$, $df = 42$, $P < 0.02$, Figure 3).
- The population estimate for the entire MRSWA was 15 owls (95% confidence interval of ± 6 owls).

CONCLUSIONS

We found no negative impact of grazing on short-eared owls at the MRSWA. However, previous raptor surveys at MRSWA in the spring of 2004 found significantly more owls in the ungrazed than grazed habitat.

Short-eared owls apparently preferred zones B and C over zone A. This could be the result of multiple factors such as irregularities in grass condition, proximity to the bay, or frequency of human disturbances along roads.

Future research should continue to examine effects of grazing and focus on seasonal variation in owl populations.



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