An Evaluation of Certain Exclosures Dixie R. Smith University of Wyoming Project Number 89

The purpose of this study was to gain a more complete knowledge of plant communities in the Jackson Hole region as they exist without undue disturbance. Also included in the study were the effects of variables such as exposure, altitude, soil, and use on the plant cummunity.

The following relict areas have been found suitable for use in this study:

- 1. Goosewing Study Plots
- 2. Upper Slide Lake Exclosure
- 3. Buffalo River Exclosure
- 4. Jackson Elk Refuge (2 exclosures)
- 5. Gilcrest Unit Exclosure
- 6. Camp Creek Unit (2 exclosures)
- 7. Jackson Watershed Area
- 8. Big Game Ridge Exclosure

Both Elk and Moose Island were deemed unsuitable for use in this study; Elk Island because of fire damage and comparatively heavy game use and Moose Island because of the trampling effect caused by large numbers of game animals using it to cross the Snake River.

Frequency and abundance of species occurring within the plant community are determined by use of the square foot quadrat. Number of samples required is estimated by methods outlined by Snedecor and Oosting.

A botanical analysis has been completed on the big sagebrush community in the Jackson watershed area, and the Upper Slide Lake exclosure. Preliminary surveys for use in estimating sample size have been completed for plant communities in the other relict areas.

Permanent photographic transects have been established for the study of effects of snowfall patterns and resultant available winter range on plant communities.

Work on this project will be resumed June 1, 1957.