LIFE AS AN INTERN ON TAYLOR RANCH

Submitted to
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from
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Taylor Ranch Internship

INTRODUCTION

The internship at Taylor Ranch, located in the Frank Church River of No Return Wilderness, consisted of quite a diversity of activities. The program is set up to give students experience in research projects and ranch work. A choice of one or two credits is given for the research and the interns are paid for the ranch work. The time spent on each was about the same. Though these were the main projects, I learned a great deal on horsemanship, packing stock, and about a wide variety of people. The latter, perhaps, being the most important in the future. People visiting the ranch ranged from local outfitters to state senators. It sometimes amazed me at how much was going on in the world that I knew nothing about. Just by listening and asking I learned much and was exposed to many differing views.

This summer (1988) I worked on five research projects, four at Taylor Ranch and one at Chamberlain Basin. The four projects at Taylor Ranch included measuring plant biomass and composition of browse species for big game with Dr. Jim Peek, plot estimates and species composition in relation to spotted knapweed with Dr. Steve Bunting, bighorn sheep observations with Jim and Holly Akenson, and catch and release trapping for small mammal populations with Dr. Oz Garton. At Chamberlain Basin I helped Greg Hayward, a graduated student working on his doctoral dissertation, finish his research on boreal owls.

BIG GAME BROWSE RESEARCH

The objective of this research was to set up plots for measuring forage for big game species. Hopefully future research will be done to ultimately give data trends and plant succession.

Measurements of biomass and plot composition of the grasses were attained by using 20cm x 50cm plots. Several sites, each different, were sampled and surveyed. At every site 20 plots, each two meters apart running diagonally to the slope, were surveyed. In each plot the percentage of bare ground, litter, vegetation, and rock was recorded. Clippings of grasses were also taken within each plot to measure biomass. Random samples of twigs from mountain mahogany, sage brush, and bitter brush were taken to measure growth and biomass.

Circular plots with a one meter radius were used for species composition. Twenty circular plots were done with the same method as the Dobbermeyer plots, except the circular plots were three meters apart rather than two. The two plot lines never intercepted at any point. Every twig greater than one half inch and any stem was recorded. A stem was defined as a rooted stem of a plant. If a branch or stem of a plant was in the plot the twigs and stem would be counted, and if a stem was not in the plot, the twigs of the branch were counted, but the stem was not. Dimensions of mountain mahogany, bitterbrush, and sagebrush (20 plants of each species) were also taken randomly.

SPOTTED KNAPWEED

The objectives of the spotted knapweed research was to see how this noxious weed spreads in a site without grazing pressures of livestock. Two sites were surveyed; a clearing near Goat Basin and Soldier Bar landing strip. Since this weed is not native, it was believed that its current presence had been transported by livestock and/or livestock feed.

In surveying the spotted knapweed, a 30m tape measure was strung out in a straight line, and five random numbers were chosen. A separate 10m tape was then set perpendicular to the 30m tape (5m on either side of the 30m tape) on the selected random numbers, starting with the lowest number. Four plots within a 50cm x 50cm plot were used to estimate the abundance of plants species. A 50cm x 25cm plot -- plot 3, 25cm x 25cm plot -- plot 2, 10cm x 10cm -- plot 1 were all within a 50cm x 50cm plot -- plot 4. If a species was found in plot 1 it was considered to be more abundant than if found in plot 2 and so on. Every plant species found was recorded according to the plot it was found in, but never repeated within the same place. The plot was laid down every meter and thus there were 10 plots per line.

This project was started just this year and will serve as data in the future. Throughout the summer any additional spotted knapweed plants noticed were recorded, collected and mapped. Two plants were found at Lobauer Basin and possibly several plants believed to be spotted knapweed at an outfitter spike camp near Rush Point, however, the plants had not been keyed as of yet.

CATCH AND RELEASE

A sampling grid behind the lab at Taylor Ranch was set up to sample small mammals using Sherman traps. This project was in its preliminary stages so the objectives were to find what was out there and to provide data for future use.

Six lines on a 152' azimuth, with eleven traps in each line, were flagged and laid with traps. The traps were 10m apart as were the lines. Traps were baited with peanut butter and oatmeal every evening, and checked early every morning. All animals caught were marked by toe-clipping, and the trap number and catch number were recorded. Trapping continued for six days when a greater than 80% recapture was achieved. The sampling site had quite a diversity in possible habitats. Trap lines 1 and 2 ran through a talus slope, lines 3 and 4 had some brush and some openings, and lines 5 and 6 ran through a riparian zone. Although there was some habitat diversity only one species -- deer mice (Peromyscus maniculatus) was found.

BIGHORN SHEEP

The bighorn sheep herd around Taylor Ranch seemingly has a lower fitness than in other areas. This low lamb to ewe ratio is believed to be caused in part from lungworm. Lungworm may eventually cause pneumonia and ultimately death. There are lambing cliffs to the east of Horse Mountain near Taylor Ranch where most of the observations took place.

Throughout the summer we observed and counted sheep whenever they were seen, paying special attention to the lamb to ewe ratio. Early in the summer we counted 13 ewes and 10

lambs at the highest count on the lambing cliffs near Taylor Ranch. Other lambing cliffs were searched near the Wall Creek drainage, but none were found. Sightings were difficult due to the speed of the airplanes, and the rugged, trailless terrain, which made hiking very difficult. Pellet samples were collected to check for the presence and abundance of lungworm. Future plans are to put radio-collars on the ewes to facilitate finding lambing areas.

BOREAL OWL RESEARCH

At Chamberlain Basin I helped with trapping of small mammals, radio-tracking of boreal owls, checking nest boxes and weighing and measuring female and young borealS. Greg Hayward was finishing up five years of research in the Chamberlain area so the radio-packs needed to be retrieved. The week I was there, we attempted to retrieve three radios, but only retrieved one. One owl had nested in an old snag which was too dangerous to climb. (Logging spikes and belts were used to climb trees). We radio-tracked and found a male boreal, but could not coax him to take our bait. A mouse was attached to a line behind a mist net as the bait. Had he been caught, we would have taken off his radio-backpack and released him. The radio that was retrieved was found on a dead female boreal that had been in the same tree for nearly two weeks.

Small mammal trapping near the Chamberlain Basin airstrip was done in two grids, one in a douglas fir habitat and the other in a mixed conifer habitat. Each grid had

nine lines with 10 traps in each line. The traps were 15 feet apart and 15 feet between each line. Snap traps baited with peanut butter and oatmeal were used in all the traps. Trapping of the small mammals gave an indication of a prey base for the boreal owls.

Two of the females we checked had young in the nest. One person climbed the tree and netted the female. She and the young were lowered in separate bags to be weighed and measured by those on the ground. After taking measurements, the owls were placed back into the bags and put back in the nest. Gloves that were tied to a rope were stuffed in the cavity to keep the female in while we all cleared the area so as not to scare her. When we were a safe distance away the gloves were pulled out.

CONCLUSION

On every research project that I helped with, I gained a great deal of confidence and knowledge that will help me in future classes and job situations. I had not done any of the sampling and estimating techniques before and I am sure that I will use them sometime in my future career. I also learned many things about horses and mules and how to work with them that I had not known before. This was a highlight for me since I enjoy being, and working with animals. Meeting the various people also was a good experience. Talking to the different groups, I learned a lot on the politics of how environmental issues and funding are viewed and dealt with.