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Conservation Aid II

Summer 2023

Lathrop & Capurro Year End Report:

When looking back at the experiences I have gained from this excellent internship program, I realize I need to thank the people who make this a reality. So, to preface my end of year report, I would like to thank the Nevada Bighorns Unlimited, The Nevada Record Book, and the Nevada Department of Wildlife. For without the cooperation of all these organizations and agencies, the experiences gained would merely not be possible. Now going into the Summer of 2023: Nevada along with many other states experienced record level snowfalls throughout the winter, as a result record runoff numbers, and high-water levels for most of the summer well into August. Finishing the spring semester of college in May, it wasn't long before I found myself headed across I-80 toward Elko, NV to start my second summer as a Lathrop intern. My partner for this summer was Seth Wilson, but I later learned that due to injury he would be returning in the middle of the summer.

My first day of work started very promptly on May 23rd, and the first task of the summer was retrieving a mule deer collar for the Area 10 Biologist: Scott Roberts. The collars GPS location was on the southern side of the Ruby Mountains, so I went out with the landowner compensation biologist Owen Bake to locate the collar. Due to the extreme winter any mortality

collars that we were sent to go find, if possible, I was asked to break a femur and try and see the quality of the bone marrow within. Marrow acts as an indicator of how well an animal was doing over the winter in terms of malnutrition vs. proper nutrition. While using the telemetry unit to pinpoint the collar, the region/terrain proved to be beneficial in terms of practicing differentiating bounce from actual collar signal, and after about an hour and half of searching we located the collar sunken at the bottom of a creek.

The rest of my first week was spent working for the Area 7 Biologist: Kari Huebner. The next task at hand was driving north on SR93, to then pull off the highway to retrieve the game cameras from the wildlife crossing bridges, as well as to survey and make minor fence repairs to the NDOW land parcel located off the highway as well. The game cameras show how many Mule deer and other big game animals are using the bridges as a migration corridor, which also in turn shows how many animals would be resorting to crossing the highway without these crossings. While surveying the NDOW parcel Owen and I noticed and repaired many loose sections of barbed wire that cattle had been using to gain access, there were some areas on the fence that we marked for repair later as we would have to bring more equipment to fix these sections. However due to the Super El Nino present in the Pacific Ocean this year, Elko County had been unbelievably prone to severe thunderstorms, and as a result we were caught in torrential rainfall toward the end of the fence survey. It was later learned that this same thunderstorm produced a tornado in Ruby Valley. Torrential Rainfall and severe weather would soon become a theme for the rest of my summer in the eastern region. Owen and I also did Elk Incentive in the Pilot Valley for Kari, which is something that I had little to no knowledge about going into this summer as the western region does not have an Elk incentive plans (as far as I am aware). It was interesting to see what to look for in terms of signage for animal use and how estimates of

animals on parcels are generated. While doing this incentive we estimated 10-15 Elk were using this parcel consistently.

Moving on to the week of May 30th I was working for Travis Allen, the Area 6 Biologist. My first assignment of the week was to collect two mortality collars from two Mule deer does and do a right-of-way fence inspection on a section of dirt road to see if it was passable for deer. Upon arriving to the first GPS point, I used telemetry and was able to quickly locate the first doe and collar. After retrieving the first collar I tried to take a bone marrow sample of the doe, however all the marrow in her femurs is and was nonexistent (she had been sitting in the sun and entirely decomposed). So next I hiked over to the right-of-way fence and was able to determine there was a secondary fence so I marked and informed Travis of the configuration so that he may be able to ask about taking it down. After I had completed those two things, I headed over to the next point to stage an ATV to drive out to the other mortality collar. Upon arriving to the staging area, a large thunderstorm rolled in a proceeded to gust wind and dump rain, like mentioned above this became a theme for the summer so I left to return to get the collar another day. Later in this same week Travis had sent me out around Tuscarora to find my first ever Antelope collar, after a lengthy off-road journey trying to find alternative routes because creeks were flowing to high, I arrive close enough to hike. When hiking a thunderstorm started to develop over the valley, and as soon as I returned to the truck with the collar it poured yet again. This concludes my second week of the summer.

Now to the week of June 5th, this week started with Owen Bake and I working for Scott again, however this time we were in the East Humboldt Range tasked with clearing fallen Aspens out of the Rough Grouse route so that the survey could be ran in the following weeks. It was interesting to experience this as it was my second time running a chainsaw, and first time within

the East Humboldt range. There was still upward of 10 feet of snowpack toward the top section of the route, which is where the tree clearing ended at a 10-foot snow drift. Moving to the latter half of the week Owen & I were working under Kari, and the work was finding two mortality collars in the Goshute Range. So, after staging the truck Owen and I split, and one person went to each collar as they were within 2 miles of one another. After I located my collar, I hiked over to Owen where we found the other collar and proceeded to hike back to the truck, on our way back toward the highway we also stopped to try and find one other collar that had last put out a ping around a month before hand. We found this collar tucked under some sagebrush with Mountain Lion scat inside of the collar. This day of work acted as excellent telemetry practice again, also aiding in the practice of bounce vs. the actual signal and how to locate and turn frequencies down by a couple of tones to get a better signal as the collars lose battery life. The rest of this week I worked by myself, one day doing a Ruffed Grouse route in the Jarbidge Wilderness in Copper Basin, where I detected 7 drums. Last year no drumming grouse had been detected. To end the week, I drove to Grouse Creek, Utah and was tasked with recovering a mortality collar from a deer that had been killed by a Mountain Lion. This was my first lion kill and it was awesome to see the caching of the carcass, as well as being able to take a proper marrow sample from the Doe and seeing what healthy marrow looked like.

Now in the middle of June, the week of the 16th was the Guzzler Build within the Butte Valley. Because of my experience with the Guzzler Build last summer in Mineral County, I had a bit of an idea of what to look forward to, however this guzzler proved to be different and similar in many ways to the Upper paymaster from last summer. There was a large group of us for this project, consisting of NDOW employees, Elko Bighorns Unlimited, and a group of volunteers. After arriving at camp on the night of the 16th everyone was briefed on how the next day was

going to look, most of the group had arrived that night, but several were going to be arriving in the morning before we headed to the building site. The morning of the 17th, everyone was fully briefed, and we caravanned to the building site. This is where several others and I were tasked with constructing the pipe-rail fence that surrounds the drinker, hanging the crossbeams for the apron, and aiding in building the barbed wire fence around the apron and water tanks. As it was slow getting together early in the morning as soon as everyone clicked the guzzler assembled as smooth as butter. I was ecstatic to be a part of, yet another guzzler build as these projects are some of my favorites and some of the most fun projects of the summer.

Three days after the project had concluded, I found myself working for Travis again, this time doing Elk Incentive on the Simplot and Ellison ranches by the Idaho-Nevada border. I was using an ATV to get to lookout points along the first property, and my first day out there was just glassing in the evening on the central and southern most outlooks. There was a collared Bull Elk I was trying to locate but later learned that he picked up and moved overnight so seeing him was not possible. However, I did locate a couple of cow groups, and a group of bulls on the property. One thing about this summer that was a lot different than last year was the amount in which I glassed for animals or specific collared groups of animals. I only did those 1-3 times last summer, and this summer I was glassing for animals' multiples times per week. The following morning, I drove the ATV along a southern direction through the heart of the parcels, in hopes of flushing a couple of Elk, I flushed a small handful of bulls and cows before returning to the truck to load up and move to the next ranch property. Upon arriving to this ranch, I was joined by Peter Iacono an Elk Technician working under Travis as well, and he was going to aid me with the incentive on this parcel, as well as doing a vegetative plot a bit to the north to see what certain Elk are eating and to aid in Travis project on the Elk disease. Because of the terrain being muddy

and uncertain of how other roads would be, we loaded all the camping equipment onto the quads and drove them into our campsite and built camp. That evening we glassed over the flats for Elk and immediately located two groups of Cow Elk, both groups numbering around 14 adults and 3 calves each. As the evening progressed, we were also able to glass a bachelor group of Bulls, numbering 6 as they walked out of the fir trees on the property. We repeated this process in the morning and were able to locate all three groups of elk again but no new individuals, and after this we headed toward one of Peter's designated vegetative plot areas. The idea of a vegetative plot was completely foreign to me at this point, and I had no idea what they consisted of until after the first one. Upon arriving at the site, you place a stake in the center and in each of the cardinal directions you go 13 meters N, S, E, W until you have made a circular plot. Then the goal is to take pictures and samples of each plant species in the area while also looking for signs of Elk forage and scat. Travis will use these samples to test the vegetation quality as well as testing for viruses and other things that may cause ill health effects. This vegetative plot took about 2 hours before hiking back to the truck and then heading back to the Elko Office.

The next large project was the Illipah Creek Beaver Dam Analog (BDA) project, where I was working under Cody Menghini. I had no previous idea what a Beaver Dam Analog was until after surveying last year's buildings. Basically, all in all a BDA acts as an artificial dam to manually raise an incised streambed to hopefully raise the water table as to created more suitable habitat for willows and other aquatic vegetation. So that one-day NDOW may be able to reintroduce beavers to this stream with the cooperation of the landowner. Once beavers are present, they would take over and naturally raise the water table and as a result the health of the stream. So, on this stream we were working in part with Forestry, BLM, and National Park Service as a small group of around 20-22 individuals. On the stream we installed around 8

BDA's, 2 log jams, and manually placed cuttings of willows throughout the meadows to hopefully root and start adding to the habitat present in the area. On the last day when building the final log jam, we were caught in a sudden downburst of rain and hail that resulted in a minor flash flood going right through our campsite, thankfully we had finished everything that we needed to get done before the sky opened onto us. I ended this week with Cody by doing an Elk Incentive inspection with him to see a biologist perspective on the process. I learned more about the spots you should be surveying, as well as how to better estimate the number of individuals using the parcels of land to be more accurate for the counts. It was a great way to learn how to improve my own surveys and I used it until the end of the summer.

Throughout the whole summer I had been anxious to work with Bighorn Sheep again, as last summer I got to experience a capture, so when I learned that I would be working with Matt Jeffres in the Snowstorm range with the sheep herd there I was very excited. So, on the week of July 10th I found myself glassing up into the rocky cliff faces of the Snowstorms and into the canyons facing me. With the telemetry gear I was looking for how strong the signals were pinging when going between the sheep collar frequencies, Matt explained to me how full bar means direct line of sight to the animal. During the first evening of glassing, I was not able to locate any of the sheep on the cliffs. So, the following morning Matt and I both went to glass the canyon from the night before, quickly we were both able to locate a couple of young uncollared rams. Soon after we saw two of the collared Ewes. The goal of this trip was to classify lambs with ewes so that they would be able to come and capture them later in August to test for *M. Ovi* (Pneumonia). After locating the sheep Matt and I split up, I hiked into the canyon to glass across and gain a better view of the animals and Matt drove an ATV to the top to glass from the ridge downward. I was able to tie a lamb to an uncollared Ewe and glass up some of the other collared

Ewes in the group. We glassed like this into the early evening before heading out back to Winnemucca for the night. The following morning, I headed out toward the Kelly Creek Bluffs to search for two collars that had fallen off two sheep in the range. I staged an ATV and drove it as far as I could before hiking across the top of the ridge toward the collars. This is where I learned that my experience with telemetry was not good enough to locate one of the collars. While the GPS point said that it was present within the small basin, I was searching I kept getting turned around by bounce and signals going in all directions. I realize now that I should've stopped, taken a break, and then proceeded to search again but in my searching I never found the first collar. The second collar was on a much more open plain and I was able to guide myself directly toward it with telemetry. While I didn't find the one collar it proved to be a valuable learning tool. I have now looked back at what I could have done differently to better utilize the equipment to find the collar. I believe that I could find a collar in a similar situation now more than ever.

On my second to last week of summer, the week of July 17th I was working for Kari again and headed toward the Idaho-Nevada border, tasked with doing Elk Incentive on the Trout Creek Ranch, Old-Winecup, and a handful of other ranches present in the area. This week would be the greatest number of Elk I had seen all summer. While glassing in the evening on the Old-Winecup property I glassed 3 groups of bachelor bulls with a total number of around 50 individuals, with a couple of small cow groups mixed between. I placed a pin on OnX describing the number of animals and a breakdown of what the group consisted of before moving on to a parcel down the road. However, this parcel contained no animals after classing for an hour and a half, so I returned to camp for the night. Unfortunately for me it proceeded to rain all night so camp turned into the front seat of the work truck. In the morning I finished doing the incentive on the rest of

the properties where I saw no further animals within the 3.5 hours of glassing. In the afternoon I was tasked with trying to locate a cow Moose to see if she had a calf or not, so I proceeded to drive into Idaho to try and get a telemetry signal on the animal. While searching for the cow I was never able to even get a ping from her collar, but I was able to glass up a different Moose while searching for her. The first ever moose I had seen, and it happened to be a young Bull that had walked out of an aspen bog. I was beyond thrilled to have seen a live Moose in person, but I was still questioning where the collared cow was. Because I had not been able to pick up the collared cow on the telemetry I headed back toward Elko in the afternoon. It is incredibly cool to reflect upon that encounter with a Moose and think that Nevada now has a healthy and growing Moose population, hopefully they become more common across our desert landscape within the eastern region. After returning to Elko, Seth, my partner for the summer had returned to Elko after recovering from his injury and he finished out the week with me doing Rabbit surveys for Kari. When running both routes, we did it at night and there were very few rabbits present along the routes, with a two-route total of around 13 rabbits (variety of species).

It is insane how fast summer will come to an end, for my last week of work as a Lathrop for the 2023 summer Seth and I were working for Josh Kirk, the Eureka Game Biologist, and a previous Lathrop/Capurro Intern. Josh lined us out for the week as follows, deer scat collection Monday-Tuesday morning, Chukar routes Tuesday afternoon-Thursday early evening. I was unfamiliar with the purpose of collecting deer scat, but I learned later that a college student is doing a research project testing what types of vegetation Mule deer eat and seeing if there is an overlap with the feral horse diet as to create and show further correlation as to the competition feral horses impose on the wildlife such as Mule Deer. So, Monday morning into the late afternoon we spent glassing up a few does and then walking up to their locations after

confirming if or if they hadn't defecated. We had several successful collections of fresh samples to send to the group doing the research project, and after Tuesday morning Seth and I headed off to the Simpson Park Range to begin our chukar routes for the rest of the week. Immediately upon our arrival to the first spring along the first route we encountered a covey of around 50 individuals with 4 adults and the chicks all consisting of class III brood. It was instantly a good sign as last summer there were times when Chukar routes would have no birds present at all. Thanks to the high precipitation of this summer and last winter the birds and other wildlife have been able to benefit greatly. The other routes in Simpson Parks had lesser amounts of Chukar but birds were still present. We camped the night at Tonkin Reservoir and proceeded to drive to the Cortez Range in the morning to finish the rest of the Chukar routes. However, there was a drastic difference in the quality of habitat between the Simpson Parks and the Cortez, as the Cortez looked like it had been grazed heavily on a consist basis. With springs and vegetation being noticeably sparse, we saw no birds throughout all the Northern routes in the Cortez range. The Southern routes proved to have a few more sources of water than the north, and along Cottonwood canyon we located several groups of birds. After we compiled all the data sheets together, along with our findings regarding the health of the springs we headed back to Elko through Crescent Valley, and after faxing the paperwork over to Josh this concluded my final week of the summer.

Overall, this past summer was a compilation of using skills I had learned from the summer previous, learning new aspects of the management side of wildlife, and more importantly realizing how much perspective this position gives to a student in a college classroom. The sheer experience that I can have and continue to build upon thanks to this internship program is insane, and not only is it beneficial to have going into the field, but it also

puts a slight edge on the classroom as now I firsthand know what is being discussed in NRES class lectures. So once again I would like to thank everyone at the Nevada Department of Wildlife, the Nevada Record Book, and the Nevada Bighorns Unlimited who are able to make such an awesome program like this possible. The worst part about a position like this is that it leaves you wanting to immediately be right back out in the field, an experience that is nearly impossible to recreate in any other field.