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5 November 2020

Study Design and Execution SLO Reflection

I selected the Genesee Park Bison Final Research Report as an artifact for Study Design & Execution because it is the complete compilation of the study's background, its findings, ethogram, data sheets used, behavioral sampling techniques used, and inter-observer reliability for the associated research project.

This research was done under the supervision of Dr. Amy Schreier in the Department of Biology at Regis University and it meets the learning outcome of being able to propose, design, and execute a biological study or investigation as Dr. Schreier guided me and my group in the process of developing our own study hypotheses and a way to test them. This study was developed for a previously unstudied bison herd in Golden, Colorado for which we wanted to investigate the typical behavioral habits for that herd. First we determined a sampling technique to determine a baseline set of behaviors and developed a detailed ethogram specific to that bison herd. We also generated two hypotheses specifically related to their behavior, one about caloric intake and feeding behavior, and one about uncommon behaviors and their relation to changes in temperature. This artifact includes a methods section of the behavioral sampling techniques that were used in this research, as well as the results of the study depicted in figures related to each hypothesis tested. My research partners and I concluded the report with conservation and management suggestions for the bison herd manager at Genesee Park, Denver Mountain Parks as well as potential future studies that could be done for this herd and other plains bison (*Bison bison*) in Colorado.

While creating this artifact, I learned the difficulties of writing a document in a group of people rather than alone, as well as the amount of patience, respect, and collaboration that is required to make a coherent scientific research report. I also learned about the amount of time

and effort that is put into writing up research reports that are understandable to both scientists and laypeople that are not members of academia, as a copy of this report was given to the herd manager and conservation outreach manager for Genesee Park, Denver Mountain Parks.

I think some of the strengths of this artifact include the very detailed background that was written for the introduction and the very detailed ethogram that was developed according to this bison herd's behavioral characteristics. I think that both are well thought-out and organized and sufficiently describe some of the necessary details to understand and complete the study. Another strength would be the data analysis and figure representation of the results as each figure was concisely described and referenced. One weakness may include the conclusion section, which could have talked a bit more about how conservation and research on American bison can be connected and why they rely upon each other.

I like that this artifact encompasses all of the projects and assignments we did along with our research, from the research proposals, literature reviews, development of methods, and actually performing the research. If I were to recreate this research report, I do not think that I would write or arrange anything differently.