

Elk Management

It was a dark, freezing, early morning in the wilderness of Montana. A man and his son were slowly trudging their way through the underbrush of dense trees, tall grass, and sagebrush with pounds of ammunition, rifles, warm clothes, and a six pack of apple juice. The morning dew saturated their boots, dense clouds of their breath were made visible due to the freezing temperatures outside, and snow peppered their surroundings as if nature was trying to hide underneath a sheet of snow. The 38 year old father, Devonte Johnson, was taking his 12 year old son, Deon Johnson, out for his first ever hunting trip.

“Line up the game in the scope now, ya hear? The center of the scope is where the bullet will fly toward the elk,” explained Devonte to his son. “This elk will help feed our family throughout the winter.”

Deon began to place the rifle into position, nuzzling his cheek into the stock, breathing slowly to control his thoughts, and resting his eye into the center of the scope. His father aligned the scope dead onto the elk. This was Deon’s first ever hunting trip with his dad, something he has been looking forward to for years. His grandfather had taught his father, and now it was Deon’s turn to take part of his family’s tradition; harvesting meat for the family, enjoying each other’s company, and becoming closer to nature. Deon desperately wanted to be a part of this tradition. Approaching the scope, he was fully prepared to pull the trigger and kill this elk, but to his amazement, he felt nothing but anxiety. This elk was the most beautiful animal he had ever seen; twitching ears scanning its surroundings, wide open eyes scouring the area for food and water, strong muscular legs to propel itself through the trees and brush, and the overall innocence that radiated from its presence. For some odd reason, the entire rifle began to quake...Deon was

trembling. How was he expecting himself to kill something so pure, innocent, and innately elegant?

“Hey Pops...” Deon asked nervously. “Why do you hunt elk so much? They’re so pretty, aren’t they needed for the environment? I remember learning about ecosystems in my science class and we talked about how every animal is important to its environment. If that’s so, why do you go out and hunt them?”

“You’re absolutely right!” Devonte responded excitedly. “Elk are very important animals, not just to this forest, but to the Yellowstone National Park (YNP) and the Greater Yellowstone Ecosystem (GYE)! Hunting is part of the equation of what makes them so important. Have I told you the story about my college trip to Yellowstone National Park? I learned all about this on that trip, and it honestly changed my life. Pop a squat son, I have a story to tell you. The story of the elk!”

Devonte began his tale by explaining that elk are hooved animals that are closely related to deer. They are predominantly found within the western parts of the United States and in mountainous terrains, typically within the National Elk Refuge of Wyoming or within the GYE. They are the most abundant large mammal within the YNP. Specifically discussing the YNP and the GYE, elk provide many positive impacts to these areas. The economies of both areas have been supported with the presence of elk. In 1985, 65% of all of the visitors of the GYE were hunters. Because these hunters were able to harvest 22,586 elk, the economies of the local communities like Cody, Gardiner, and Jackson Hole all benefited from the hunting of elk (School of Environmental and Forest Sciences, 2000). Elk hunting also benefits the ranchers of local areas too. During his college trip to the YNP, Devonte met a Gardiner resident named Hannibal Anderson. Hannibal is a rancher who owns and maintains a 20,000 acre basin where his primary

focus is providing naturally grown food for the surrounding areas. When he was asked about his opinion about the importance that elk play into the economy, Hannibal described how elk hunting increases revenue that directly benefits rancher reimbursements for cattle loss. He continued to explain that the revenue that is accumulated from the purchases of hunting licenses, tags, and permits are directly transferred to the Fish & Wildlife Service. This organization will allocate these funds to local ranchers who lose cattle due to predation or an outbreak of brucellosis from wildlife and to the national parks to improve their facilities.

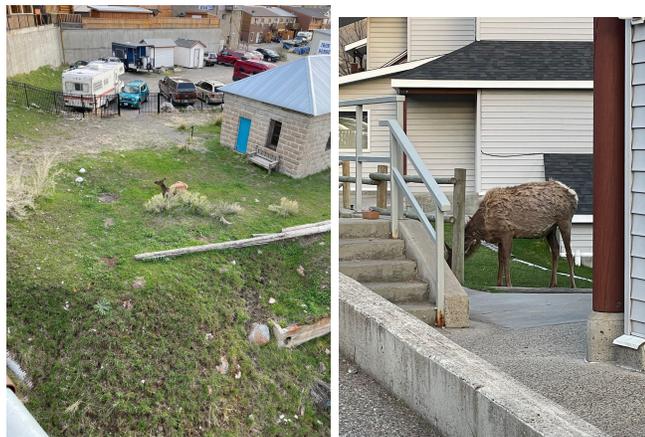
The presence of elk not only benefits the local ranchers, but increases tourism for local tourist towns and the national parks. Devonte interviewed many people during his explorations of YNP and the GYE, but his interviews with Shana and Hannah made this point evident. Shana is the store clerk of a photo gallery in the town of Cody, Wyoming. During their interview, she discussed with him the importance of elk for the tourism of the town. Elk are a big game trophy animal, attracting the attention of many hunters to this town. This increases the amount of tourism that the town receives, especially within the months of October and November. Outfitting businesses that sell hunting necessities earn most of their revenue when hunting season is at its peak. When the outfitting businesses increase their amounts of earned revenue, it benefits the town by increasing desirability for tourists to visit, thus increasing tourism for the entirety of the town. This is a similar situation within the town of Gardiner, Montana.

Hannah, the owner of Goods and Grindz, discussed in her interview that although she is relatively new to living in town (having lived in Gardiner, Montana for only two years at the time), she felt as though she had a general understanding of the elk's importance to this area. She stated that the elk bring in large amounts of tourism for both the town and the YNP since they are such a natural occurrence within both. Elk attracts tourism because it allows tourists the

ability to come close to nature, far closer to nature than they have previously in their own home towns. She explained that the elk have become domesticated within the town because they utilize this space as a “makeshift refuge” to hide from predators and to safely give birth to their calves. Hannah also explained how she understands



that elk outfitting and animal conservation efforts both increase revenue for the park and the town. Elk outfitting allows hunters to purchase increased amounts of hunting gear and the animal conservation efforts maintain the natural landscape that attracts the attention of so many tourists.



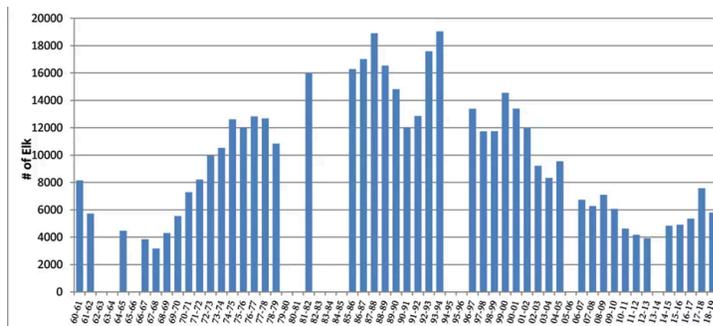
As he continued interviewing with Hannah, Devonte was told that elk are actually a scary presence in town, depending on the time of year. Hannah was asked about the negative impacts of elk and she stated how aggressive they can be. Typically, the elk are much more aggressive and territorial when they are pregnant or birthing their calves. “Elk mothers become very hostile to others when they are protecting their calves. They often scare the towns people when they become aggressive like that.” This statement was very interesting because both of these women discussed numerous examples of when elk peacefully come into town to graze, sit on the track field of the local highschool, and even cross the bridge to reach other parts of the town. They

have done all of this in search of food, safety, and without harming a single soul. Further into the interviews, they shared many examples of elk and wolves traveling into town and becoming aggressive toward the residents.

“But to answer your question,” Devonte started. “The reason that our family teaches our children how to hunt elk and we continue this tradition is to help manage elk populations.”

“What does ‘managing’ elk populations mean, Pops?” asked Deon.

As Devonte was preparing to answer his son’s question, he began by thinking about *why* managing elk populations is so important. During the years of 1926 and 1995 (when the wolves were reintroduced into the YNP), the elk population soared to numbers that were previously unseen. The elk numbers actually pushed the limits of the YNP’s carrying capacity, decreasing



their migratory movements and allowing them to devour most of the grazing resources needed by other animals. As seen in the graph, elk population numbers in Yellowstone

were at their highest between 1985-1995, averaging around 16.1 thousand elk within its borders at any given point in time.

Competition with elk for grazing resources have been found to alter diets, habitat selections, and demography of bighorn sheep, bison, moose, mule deer, and pronghorn. Young willows, cottonwood plants, grass, and sagebrush were scarce resources once the elk finally moved through an area of land. Elk grazing and nitrogen deposition have the ability of affecting soil fertility, vegetative production, and even plant diversity. In other words, over long periods of time elk have the power to completely change the landscape.

“We, as humans, manage the elk population by both hunting and helping the elk. We hunt them during hunting season so that their large numbers do not eat all of the resources and leave the other animals starving. We help the elk by protecting them in special areas, like the Yellowstone National Park and the National Elk Refuge,” Devonte explained.

The National Elk Refuge was established in 1912 to feed the elk throughout the harsh winter. This also serves as a method of tracking their population numbers, deterring them from civilization, protecting them from predators, and decreasing winter mortality so that local economies and nature may benefit from their presence. The National Elk Refuge is a state run refuge that spans 25,000 acres of land, successfully feeding 85-90% of the elk within the state of Wyoming. This refuge spans across wetlands, grasslands, and forests to provide various animals with refuge and support. This property is a fenced-in property of land that is open on one side to allow unobstructed entrance and exiting of the property. This fence serves as a deterrent for other predators, granting ungulates a safe place to graze within the winter. Feeding typically occurs during the harsh months of winter (December - April), feeding an estimated number of 9,000 elk per winter. Ben Wise is one of the wildlife conservationists that serve to manage and sustain these beautiful lands. His job is to ensure that the elk have enough sagebrush and other resources to nourish their bodies throughout the winter. This property also serves as a method to collect data regarding the health of different elk herds, collect accurate counts of herd population sizes, and allows for the most ethical and efficient way to “hold populations” (as Ben Wise states). Populations may be held here because it is the best way to determine if certain populations are reaching carrying capacity, which herds are sick, and an excellent way for wildlife watchers and photographers to educate and enjoy their crafts.

“When elk populations are not managed properly, they begin to affect their local areas, including ranchers who grow food!” Devonte explained.

Elk will graze on ranching fields and cause extensive damage to fencing. Hannibal Anderson considers elk to be one of the most common nuisances for his ranch because of these reasons. According to Hannibal, these are all common occurrences when “ranching in this business” within the GYE. To grow vegetation throughout the year, ranchers practice a technique called “crop rotation” where they will grow various types of vegetation in the same plot of land, dedicate certain areas of the field to certain plants, and rotate those plants to the next area once they have been harvested. To help the fields replenish their nutrients, ranchers will intentionally skip growing a productive plant on that area of the field and grow grass to allow the nutrients to collect within the soil again. Elk tend to come onto the land and graze during the resting periods of crops. They will graze on both the grass and the productive areas of the land. This damages the resting phase of the crop because the nutrients cannot collect within the topsoil, productive plants are being eaten, and fences are being damaged as the elk trample over them or rip the wires out of the posts.

“One might think that the easiest way to help the ranchers *and* allow the residents of town to feel safer would be to simply hunt an increased number of elk.” started Devonte. “This decision comes with many considerations, however, and cannot be made lightly. Elk have an amazing ability to increase revenue for the national parks, tourist towns, and bring people together to hunt or appreciate nature. If these animals were, hypothetically, hunted to extinction, this would pose economic and ecological disasters.”

Another factor of consideration about elk management is the human social carrying capacity. In the wise words of Tony Mong, a wildlife conservationist stationed in Wyoming,

“social carrying capacity is what a group of people are *willing* to put up with.” This is different from the environment’s carrying capacity, which is the maximum number of a certain species that the environment is *able* to support. The social carrying capacity has a “tight margin” as Tony described it, because the elk numbers cannot be increased too high because the ranchers and local biologists will lose money or be overworked, and the elk population cannot be culled below a certain point because there are people who hunt elk to harvest their meat and watchers who simply appreciate their presence in nature. If the elk population were to be managed in a way to reach either extreme, ranchers would lose too much money and not be able to produce enough crops, while hunters would not harvest enough to feed their families, elk watchers would not be able to appreciate them, the landscape would be negatively affected, and tourism to the park and local towns would decrease.

“So you see son, although elk may be a nuisance when their population numbers have reached their extremes, they are truly vital to the environment. These animals are capable of affecting local economies, affecting polarizing issues like wolves, spreading brucellosis, enticing tourists to visit the GYE, increase revenue for local towns, can alter the diets and habitats of other animals, but most importantly they are vital creatures to the ecosystem. All other life forms depend on these beautiful animals. These animals have the most potential for enacting change in their environments, and this is why they are the most influential animals of the YNP and GYE,” explained Devonte.

“Ohhh ok I see! We hunt the elk because it helps manage their population sizes, so that they don’t eat too much food and bully the other animals into eating different things, but also to make sure we keep enough so that people can still watch them in nature! I wonder if they poop a lot because of how much they eat?” responded Deon.

They both looked at each other and laughed, as Devonte put away his rifle and simply enjoyed the early morning sunrise with his son. He wanted Deon to enjoy nature more than anything in the world, he completely respected his son's wish to protect that elk's life. In fact, his son's desire to learn about elk management and form his own opinions made him very proud.

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Source Notes

Page 1: Depictions were generated from observations of landscapes made within my field notebook. Field notebook entries were made during my time exploring Wyoming and Montana.

Page 2: These descriptions are all based on various sources used when collecting data for this assignment. Hannibal Anderson is a local rancher of Gardiner, Montana that is mentioned numerous times throughout the entire chapter. Hannibal Anderson is one of the stakeholders that volunteered to be interviewed by my class.

Page 3 and 4: Information regarding the Fish & Wildlife Service was obtained by Hannibal Anderson. Shana and Hannah are two other individuals I met throughout my explorations of Cody, Wyoming and Gardiner, Montana. These two individuals have personal experience handling the tourism that enters their towns and were happy to educate me about their towns. Shana is a store clerk at the photo gallery of Cody and Hannah is the store clerk at the Goods and Grindz in Gardiner. Hannah is married to a hunter whose entire family hunts as well. She stated that she feels as though she may be one of few people who see valuable points on both sides of the hunting vs animal conservation debate.

Page 5: Information regarding the wolf reintroduction and the generational hatred was gathered within Cody, Wyoming. I used emotions, feelings, and information given to me by people I interviewed during my Place-as-text activity to generate that information.

Information gathered on this page was mainly obtained by Hannibal Anderson. Graph depicting variations of elk populations over time was obtained from the National Park Service Website.

Page 6: Wildlife conservationists Ben Wise and Tony were the source of this information. Emotions about social carrying capacity was generated from my real-world experience interacting with people of different tolerance levels.

Page 7: The beginning of this page was formulated by information obtained from Hannibal Anderson and further research online. The remainder of the page was generated as a culmination of information gathered throughout my entire Yellowstone Brock Experience.

Page 8: Wildlife conservationists Ben Wise and Tony were the source of this information. Emotions about social carrying capacity was generated from my real-world experience interacting with people of different tolerance levels.