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Is Conservation Important in Utah?

Over the course of history, there is one undeniable fact. Nature has existed since the beginning of life on this planet. It is life itself and inhabits all other lives within itself. That leaves a bigger question to be asked, is nature worth protecting? There is a fair amount the wilderness gives to humanity, that is a bare necessity for life. From things like clothes, food, and our beloved pets, one finger can point to one thing that brings all those familiarities to the table. That familiarity is nature. Without nature, humans would not have clothes on their bodies, nor would there be crops to sustain the energy of day-to-day life. Humans are omnivores, so there must be food sources beyond just being able to rely on the animals in their environment. Humans rely on plants and fruit just as much as they do meat. Even the meat they deeply rely on is also sustained by plants. Looking into the more complex side of things as well, animals rely on much more, just the same as people. Without plants or crops, animals would not be able to thrive either. The environment that inhabits Earth deserves upmost protection, although some may see a couple exceptions. Some plants are incredibly resilient, like fungi. There are certain species of fungi that can survive in extreme environments, like Chernobyl. Chernobyl is highly radioactive. Not only are fungi resilient, but so are animals and people. There are also many options of lab-grown food sources, and small hydroponic systems that people can keep in their house. Not only that, but humans regularly rely on destroying environmental processes to build houses. Overall,

there are many conflicting opinions that stagger towards saving our environment, as well as finding other resources that can sustain people without it. There are many scholarly and educational sources to investigate that can aid the answer to these important questions. Ecological environments have key components that make them functional, and without them there would be no clothes, food, or other resources in the environment, which is why it needs to be protected at all costs, which is seen often in Mojave Tortoise mortality rates crumbling.

A very important aspect to environmental regulation is a good outlook on food chains. Looking at a simple overview, food chains are composed of multiple main components. Starting out, the sun is a very important part of the food chain, and the one connector to all of life. It allows UV rays to penetrate crops and allows animal growth. For example, without UV rays from the sun most reptiles can develop something called “Metabolic Bone Disease”, or MBD for short. A more commonly used name of this disease is “Rubber Bone Syndrome”. This syndrome can cause loss of bone density, which makes bones flexible and malleable. Without help from the sun’s UV rays, these animals will ultimately perish, and it is irreversible. Although symptoms can be lessened with more intensely stable environments, it can only ward off these symptoms and disease for a couple of months at best. The same story continues with plants, as without sunlight and UV rays, plants will disintegrate and be unable to produce the fruits of hard labor. Another importance in any food chain is tertiary consumers. Predators aid food chains greatly, being at the top tier of the list. These predators can eliminate many plant eaters or other animals that aid in moving food up the chain, and they prohibit many issues in an environment like overgrazing of plants, and overproduction of offspring in smaller species. These apex beasts are amazing at their jobs, and without them, there would be no way to properly distribute resources between different species. This ties into resources between species, being able to preserve

different plants for different roles. For examples, bees need flowering plants to pollinate, produce honey, and allow the spread of male and female counterparts of plants to reproduce. Other than that, deer often snack on plants and graze the environment, as well as cows. This is especially important because of the spread of cheatgrass in the state of Utah, causing raging wildfires that can devastate millions of acres of land if mismanaged. This is why apex predators are so important in our food chains, the top dog that keeps peace within our nature. Another major component to food chains are plants themselves. As reviewed, plants are food sources for many animals that inhabit this earth, and on occasion, sometimes it's the other way around. Not only do plants provide amazing, fast-growing resources in most cases, they also have a unique way of creating their own food through a process called photosynthesis. They can take CO2 out of the air and convert it back into oxygen. Since animals use oxygen primarily, while exhaling CO2, these plants can cycle out the CO2 animals breathe back into oxygen. Opposite counterparts often work perfectly together, which this is a perfect example of. As mentioned, small primary consumers, like deer, are also a major component to the ecosystem. These animals graze on plants and help in the process of grazing. This can help cease wildfires by trimming back plant growth and allowing for new plants to sprout by eliminating old ones. There is a middle class of secondary consumers that helps eliminate smaller grazers and move energy up the food chain. A good example of this would be snakes, that consume mice and other small rodents. The final part of an ecosystem to recognize is decomposers. These could be anything from fungi to earthworms that help cycle any leftover deceased matter. This class is incredibly resilient and can allow new growth by turning something once dead into fresh matter, like compost, to start the food chain all over again. The food chain is a vicious circle, and without it, there is missing key components

that can aid this circle of life. Food chains can often become destroyed from one key component, which was witnessed with Yellowstone National Park.

Now that an understanding has been made about how the Earth's precious and meticulous environment runs full circle, there can be an understanding for why these food chains can be in a crisis with missing or overabundant components. Wolves became extinct in Yellowstone National Park near Utah in 1926. They were initially seen as a threat to livestock, among other initial threats that caused them to be hunted to extinction in the area. Proceeding with this, there became an overpopulation of elk, which led to overgrazing, and overproduction of elk in the area. This nearly doubled the population and allowed no cover for smaller mammals and rodents that would use shrubbery and tall grass as a hiding place from predators. This also devastated larger predators, like bears because the elk took all the fresh berries from them. Since there was no apex predator to stand its ground against the elk, the waterways became eroded from the elk trampling and not having to get water sources further down the river. As seen, one missing key component led to an entire disaster in this ecological system. Everything became tarnished, from other predators, primary consumers, and even waterways. Once wolves were introduced back into Yellowstone, scientists were amazed at the drippling effect one small change had made. Waterways started flowing where they haven't for nearly 100 years, which led to the reintroduction of beavers naturally. Beavers were able to properly build dams, which caused the waterways to be more solidified. Bear populations increased as well. This also caused more meat to be distributed through the food chain from elk carcasses, giving food to coyotes, ravens, and other predatory birds or animals. The reintroduction of wolves were a key part of the ecosystem, and their valuable presence aided in keeping a functional ecosystem. Due to the extinction and

reintroduction of this species, there is a clear answer to how each key component of an ecosystem is equally important.

One major conservation success story in the state of Utah would be Bear Ear Monument. This conservation covers 1.36 million acres and has a bit of a messy backstory. Although this conservation is now effective and successful, it was originally put into place by President Barack Obama. Obama awarded this land 1.35 million acres initially. Once President Donald Trump was elected, he shrunk the conservation effort by 85%, while Joe Biden later restored it to its former glory, and then some. This was to protect over 18 species, all of which belong to The Endangered Species Act. Although many of these species may not be outright endangered, if many of them continue down the path they are going, they will continue to be threatened. Some of these species include the greenback cutthroat trout, and the Mexican spotted owl. The purpose of this conservation effort was not only to protect vulnerable species from extinction, but to protect the diversity of the land from oil drilling, mining, and development. As far as national parks go, this one has one of the most diversity in the entire country. From nighttime sky darkness to ecological intactness this one has the best. Not only those, but it has a great diversity between vegetation, mammals, and reptiles as well. Considering this area is so diverse, it could be detrimental if anything got in the way of the ecological intactness. As witnessed in Yellowstone, one key component could flip this ecosystem backwards. With the conservation efforts from Biden and Obama, there has been considerable protection for this park. Due to these circumstances, there has been very amazing success at preserving the natural habitat of these animals, and the environment continues to stay incredibly diverse, and functional. Every aspect to an ecosystem is important.

Another great example of how our ecosystem can be impacted is the devastation at Cottonwood Canyon, in southern Utah. This case is quite devastating and focused on the devastation of a notoriously endangered tortoise species, called the Mojave Desert Tortoise. This species once ran free and plentiful, before human intervention. Since the early 90's, there has been a nearly 90% decrease of this species. This species is incredibly important to all the ecosystems they are native to. The reason they are so vital to a healthy ecosystem is due to their burrows. These burrows provide important shelter to over 40 other vertebrates and species. Some of these species include Gila Monsters, which are also endangered and play their own role in ecosystems, as well as species like burrowing owls. Since they build a slew of burrows, their abandoned ones become vital for all reptiles, mammals, and birds in the area. Not only is this important for other species, but their frequent digging helps aid in soil and water distribution. When a man-made fire hit near cottonwood canyon, these amazing giant tortoises were hit hard. Not only did they deal with excruciating pain from rodents bothering and chewing their open burn wounds, but many suffered fatalities they could not recover from. Nearly 15% of the Mojave Desert Tortoises were cost their lives. With this species already endangered, this was detrimental to the growth and development of their population. Without them, more cost and resources may be necessary from human intervention, to provide shelter and coverage to other species that rely on these tortoises. As seen in Yellowstone, the extinction of one species caused waterways to be damaged, and overproduction of certain species, while there was loss of others that were unable to thrive. These tortoises provide so many of those key components that were restored in Yellowstone. Without these tortoises, there would be less coverage for other animals, less soil redistribution, and less grazing.

Even with human intervention, some things may not always go as planned. There has been protection for Mojave Desert Tortoises since the early days of 1994, and these tortoises obviously continue to suffer. There is a fair bit of genetic diversity which has been a savior for these tortoises, since they are not only native to Utah. These important shell dwellers span across Arizona, Colorado, and other southwestern parts of the United States. This means they are not only majorly important to the ecosystems in Utah, but many others too. After the inconsistencies in getting these species to grow, there was remarkable effort to enhance testing for disease and genetic testing, which is commonly used in human medicine as well. Although there has been noticeable effort made to protect these species, they continue to decline and are still crushed by the terrifying reality of extinction.

Although there is tons of evidence that shows an ecosystem can crumble easily if mismanaged, many disagree. One conflicting point of evidence is the infestation of cheatgrass in the state of Utah. This cheatgrass grows faster than weeds and dries out even quicker. This means it is also very hard to keep control of. Cows are a great option for eliminating growth of cheatgrass, but it has a very outstanding regrow rate. It poses a threat to native plants and animals, due to the way this plant dries out quickly, it causes fires very easily. That brings the bigger issue, how is it even possible to manage? Many controlled fires are very helpful to an environment. This allows new growth and new resources to sprout. When cheatgrass dries out it can cause major burns, that are capable to start fires easily. The main issue with cheatgrass is it will span millions of miles if improperly controlled, which can just as easily cause fires over millions of miles. This means cheatgrass could be used as a great resource for starting controlled burns, which could be important to keep it around. Since it is so plentiful, it is also impossible to control. Many researchers believe there is not enough resources to micromanage every little

thing that can be harmful to the environments around them. It allows ways to bring new growth into areas, and it grows so quickly it cannot be properly controlled. This can be comparable to the devastations faced by Mojave Tortoises, where a man-made fire ran rapid. Since so many resources would have to go into an environment, it is not cost effective or productive to protect an infestation that has been unmanageable for decades.

Another disagreement many have about the environmental state of Utah is how densely the population has grown over the past couple decades. Many developers have stepped into this state due to a high influx of new residents moving to the state, and it is useless trying to protect an environment that will later be demolished either way. There can be no stop in choosing where individuals want to call home, and new homes will always be built. There is nothing that can stop this process entirely.

Overall, there are many resources that can play into the upkeep and protection of natural land in Utah. Between the fatalities the Desert Mojave Tortoises have faced from wildfires to the success seen in Bear Ear Monument, there is a clear drive to why this should be maintained. Without tortoises, there would be little to no protection for other animals, including other endangered and protected species. Without these delicate food chains, there would be little to no resources for humans to gather food, clothes, and other resources many use in their day-to-day lives. Even though many researchers believe it is a waste of opportunity to dump so many resources into environmental aspects that cannot be controlled, it can still cause extreme fatalities if nothing is done towards protecting the delicate processes where humans originate from. These delicate processes have been seen crumbling at one inconvenience, like Yellowstone. With the removal of one predator, wolves, the entire ecosystem started failing and many animals within them started reacting poorly. Without the aid of these important species, humans would have no

farms to bring them food, nor would they have cotton to produce clothing. Meat is a main part of the human diet, which means people would have no sustainable resources for meat either without the help of the environment that helps support all of life within itself. It is a priority to protect the animals and plants that surround all of life, because it gives a solid grounding for survival of humanity.

Bibliography

Britannica. *"Food Chain | Ecology."* Encyclopædia Britannica, 15 Oct. 2018, www.britannica.com/science/food-chain.

Paul Pion, D. V. M., and Gina Spadafori. *"Veterinary Partner."* VIN.com, 8 Aug. 2017, veterinarypartner.vin.com/default.aspx?pid=19239&catId=102919&id=8012396.

National Geographic. *"Wolves of Yellowstone."* Education.nationalgeographic.org, National Geographic, 12 Aug. 2023, education.nationalgeographic.org/resource/wolves-yellowstone/.

Rowland, Jenny. *"American Treasure at Risk: How Bears Ears National Monument Stacks up to U.S. National Parks."* Center for American Progress, www.americanprogress.org/article/american-treasure-risk-bears-ears-national-monument-stacks-u-s-national-parks/.

Gulliford, Andrew. *"Preserving Great Landscapes of the American West: Hispanics and Native Americans Lend Wisdom To, Advocacy for National Conservation Lands."* Parks Stewardship Forum, vol. 41, no. 3, 15 Sept. 2025, https://www.proquest.com/agriculturejournals/docview/3270504841/33DD71A0E8DC4720PQ/6?sourcetype=Scholarly%20Journals

Kellam, John O., et al. *"Mojave Desert Tortoise (Gopherus Agassizii) Mortality and Injury Following the Cottonwood Trail Fire in Red Cliffs National Conservation Area, Utah."* ProQuest, The Southwestern Naturalist, 1 Dec. 2021, www.proquest.com/agriculturejournals/docview/3306544322/33DD71A0E8DC4720PQ/5?accountid=28683&sourcetype=Scholarly%20Journals.

DXD. *"Desert Tortoises | Wild Kingdom | San Diego Zoo Wildlife Alliance."* Mutualofomaha.com, 2024, www.mutualofomaha.com/wild-kingdom/article/giving-desert-tortoises-a-head-start.

Jabr, Ferris. *"John A. Long - Publications List."* Publicationslist.org, vol. 14, no. 6, 2023. https://www.proquest.com/agriculturejournals/docview/208670863/2663A00F1547490APQ/2?accountid=28683&sourcetype=Scholarly%20Journals

Christopher Call, Nora Devoe, Joel Diamond, Jan Schade. *"Do Fence Me in: Cattle Enlisted in the Great Basin to Reverse the Cheatgrass/Wildfire Cycle."* Fire Science Brief, no. Issue 64, July 2009, pp. 1–3, extension.usu.edu/rangelands/files/Cattle-grazing-cheatgrass.pdf.

Markosian, Richard. *"The Battle over Utah's Environment: Great Salt Lake Great No Longer?"* Utah Stories, 16 Oct. 2021, utahstories.com/2021/10/the-battle-over-utahs-environment-great-salt-lake-great-no-longer/.

Nadja, Belhadj. *The Art of Rewilding*. Milky Way, 15 May 2023, www.proquest.com/docview/2812356433/54E6353290B14F45PQ/1?accountid=28683&sourcetype=Trade%20Journals.