The Endangered Species Act and Its Impacts on Gray Wolf Recovery in Yellowstone National Park

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ABSTRACT

Gray wolf recovery in Yellowstone National Park is widely controversial. The species has been delisted and relisted on the Endangered Species Act (ESA) multiple times over the past several years. With no consistency, it became hard to propose an effective management strategy both inside and outside the park. This paper argues that delisting wolves from the ESA positively impacts the policy agenda of managing the wolves. Methods used in this paper include a thorough literature review, secondary data analysis, and interviews; these will show how delisting wolves from the ESA positively impacts wolf management policy.

INTRODUCTION

The story of the gray wolf of Yellowstone National Park is one wrought with politics and values. Steven A. Primm and Tim W. Clark developed the idea that science and the policy process are value-oriented in "Making Sense of the Policy Process for Carnivore Conservation." They confirmed that science is usually misinterpreted by bureaucrats who have policy agendas. In order to effectively use science in policy, they stated that scientists had to think like social problem solvers (Primm and Clark 1041-1044). Throughout the wolf recovery project, biology, a hard science, has been relied on by environmentalists, legislators, and judges. Therefore, it is important to objectively study the values presented when looking at wolf recovery and the surrounding issues. For example, environmentalists and some biologists prefer to see the wolves listed as endangered species to afford full protection to them. On the other hand, ranchers and federal agencies want to see the species delisted in order to protect their own interests. There is only one logical solution in terms of the Endangered Species Act (ESA), and that is delisting the wolf. This paper will examine the crucial role the ESA has played in terms of gray wolf recovery in Yellowstone and will show why delisting the wolf benefits policy and wolf management.

History

From the late 1800s to the early 1900s, humans exterminated wolves in the West as a result of the management practice to eradicate all predators. With predators removed from the West, large game was more readily available for people. By the 1930s, wolves did not exist in the Yellowstone ecosystem, causing the ungulate population to escalate to a point where elk and bison had to be trapped or shot from helicopters to reduce their numbers. Congress approved listing the gray wolf as endangered under the ESA in 1974. During the 1980s, the gray wolf started naturally recurring in northern Montana. In order to prevent the naturally recurring wolves from spreading to Yellowstone and gaining full protection under the ESA, the U.S. Fish and Wildlife Service (USFWS) started pushing wolf reintroduction in 1987 ("Issues: Wolf Restoration" 191). However, this idea was also controversial. According to Doug Smith, a wolf biologist who has studied wolves for 32 years, the wolves would not have re-colonized Yellowstone without the reintroduction:

> I think reintroduction was a good idea because having flown the Yellowstone ecosystem in the last 17 years; we really are an island of wild country. You've got the park, and you've got the national forest around it, and then it abruptly ends. It becomes rangeland and agricultural land and land dominated by human activity. It is very difficult for wolves to get through there. Not because they can't, but because we won't let them. They get shot, they get [hit by cars]…I don't think they would have made it (Lamar Valley Wolf Week).

Other key people involved in the reintroduction included Steve Fritts who worked for the USFWS and trapped wolves in Canada, David Mech, the key wolf biologist, Tom France, the National Wildlife Federation lawyer who approved the reintroduction, Ed Bangs, project leader, Carter Niemeyer who worked for Animal Damage Control within the Department of Agriculture and was responsible for problem wolves, and Wayne Brewster who worked for the National Park Service (NPS) (McNamee 21-22). The wolf recovery project hit a roadblock in 1990 when the

Department of the Interior banned the NPS from spreading educational materials about wolves. Although most of the materials discussed solely the ecological role and history of the wolf in Yellowstone, opponents wanted more coverage of negative effects of wolf recovery, such as livestock depredation ("Yellowstone Wolf Projects Censored"). Despite the ban, Congress granted funds for an Environmental Impact Statement (EIS) in 1991, and it approved the completed version in 1994, which contained over 160,000 public statements ("Issues: Wolf Restoration" 191). From 1995 to 1996, thirty-one gray wolves were transported from Alberta, Canada to Yellowstone as a nonessential experimental population as defined under section 10j of the ESA. This status gave less protection to the wolves, which meant that no critical habitat could be designated, and problem wolves could be taken by the USFWS ("Gray Wolf Restoration" 148-149). By means of soft release, wolves were brought to acclimation pens, which were chain link fences about an acre in size. The pens had a two-foot overhang and a four-foot skirt along the bottom to prevent the wolves from digging or climbing. They also contained plywood boxes for shelter and a separate holding area for problem wolves or wolves that needed medication ("Issues: Wolf Restoration" 192).

Wolf reintroduction appeared to be a success until a U.S. district judge mandated that all of the reintroduced wolves in Yellowstone be transported back to Canada in 1997. He ruled that the full protection given to the naturally recurring wolves in Montana conflicted with the nonessential experimental population of wolves in Yellowstone. He referred to the fact that if a wolf from northern Montana migrated to Yellowstone, it could potentially be shot if it destroyed any livestock along the way. However, the decision was overturned in 2000, which made the reintroduction final ("Issues: Wolf Restoration" 192-193; Donnelly).

Ecological and Economic Benefits

Since the reintroduction, biologists have researched the impacts of wolves on the Yellowstone ecosystem. The most prominent impact is on the elk population, which decreased to a healthier level. This natural regulation of the elk herd has allowed vegetation, especially willow, to grow. Small mammals, birds, beavers, and moose depend on this vegetation for survival. Beavers, in particular, re-colonized along the northern range of Yellowstone, which naturally created habitat for fish, birds, and other small mammals (Smith and Ferguson 118; Smith, Peterson, et. al. 335-338).

Another important impact is on the coyotes. Prior to wolf reintroduction, the coyote population was dangerously high since there was no competition for food. Since the wolves returned, the natural competition between them has been re-established. With the reduction of coyotes, pronghorn antelope fawn survival rate has increased. Wolves typically do not prey on pronghorn, which is another reason for the increase in survival rate (Smith and Ferguson 118; Smith, Peterson, et. al. 335-338).

More wolves in the area have also increased the number of carcasses available for scavengers and other mammals. Grizzly bears, possessing greater strength than wolves, claim wolf kills as their own, which makes fattening up for hibernation easier. Grizzlies are currently listed as a threatened species under the ESA, but that status may change if wolf kills continue to increase the grizzly bear population. Other scavengers, such as ravens, eagles, and magpies also benefit from wolf kills. When wolves kill an animal, such as an elk, they only take what they can eat, which leaves the rest for scavengers. Other predators, such as cougars and grizzlies, bury or cover their kill to prevent other scavengers from feeding. After scavengers pick the carcass over, beetles, other insects and their larvae break up the remainder of the carcass into organic matter, which adds to the nutrients in the soil (Smith and Ferguson 121; Smith, Peterson, et. al. 336). Bones are further gnawed on by rodents.

Wolf reintroduction has not only benefitted the Yellowstone ecosystem ecologically, but it has also contributed to the economy of Yellowstone. Over 200,000 visitors come to the park annually to see wolves, which brought revenue of approximately $23 million to the surrounding communities and an additional $35 million to the park. A majority of the visitors come between Memorial Day and Labor Day, but there has also been an increase in the number of visitors to the park over the winter because of wolf enthusiasts. Since wolf watching has become popular, new guide businesses are specializing in the sport (Smith and Ferguson 98). It is unclear whether the economy will be negatively affected once wolves are delisted from the ESA.

Livestock Depredation and Methods of Protection

As mentioned earlier, the reintroduction of wolves to the Yellowstone ecosystem has kept the elk population in check. Typically, wolves largely hunt elk with the exception of the Mollies pack that also hunts bison. However, the elk herd has been declining for several years, which may cause the Yellowstone wolf packs to mediate their diets with other animals, including livestock. Jim Halfpenny, a naturalist who specializes in animal tracking, has studied the elk herd in Yellowstone. The winter of 2010 was one of the harshest winters in Yellowstone. This combined with human hunting, predation, drought, human development, and decreased pregnancies have reduced the elk herd

greatly. Halfpenny agreed that if the elk herd continues to decline, wolves will branch out to kill more livestock (Halfpenny). After all, they have to eat something.

Livestock depredation has been the most controversial aspect of wolf reintroduction in surrounding communities. Joe Sampson, a sheep rancher in Wyoming, experienced wolf predation on his flock. A lone black wolf befriended his guard dog, which made the sheep grow accustomed to its presence and lose their fear of the wolf. A few days later, the same wolf attacked two pregnant ewes but did not kill them, though one later died from injuries. That one attack caused Sampson to lose one-third of his lamb crop. In the same state, Cat Urbigkit, also a sheep rancher, experienced wolves on her ranch. During a normal day of chores, she spotted three wolves watching her and her son herd sheep. The wolves did not attack, but they started descending upon the sheep. Urbigkit fired a shotgun to scare the wolves off her property (Urbigkit 248-251, 259-261). Because of the limited protection given to the Yellowstone wolves, she was legally allowed to do so.

Bruce Malcolm, a cattle rancher in Montana just 30 miles outside the park boundaries also experienced livestock depredation. On one account, one of his calves disappeared within twelve hours. There was no evidence left to prove that a wolf had killed the calf, but he felt certain that it was a wolf kill. Since reintroduction, Malcolm has accepted wolves, but he strongly believes in delisting. According to him, "We don't need to put wolves on a pedestal and treat them different than the rest of our wildlife." There have been few documented illegal killings in Montana since the reintroduction, and Malcolm stated that people have remained tolerant in Montana since the reintroduction. "The reason that we're tolerant is because we were promised in the EIS that they would delist them when they got to a certain number. Well, that number got passed about ten years ago," said Malcolm regarding tolerance levels. Because of this, he indicated that wolves were starting to disappear, alluding to the fact that there have been more illegal killings. The tolerance level has dropped dramatically since the relisting of wolves. In order to improve the tolerance level, Malcolm suggested that wolves need to be delisted. This would put more trust in the federal government because it would live up to its promise. It would also re-establish public wolf hunts. According to Malcolm, people look forward to the opportunity to hunt wolves, and it makes them more tolerant of the predators (Malcolm).

Of course, Urbigkit's and Sampson's stories are only one side of the issue. Dale Gable, a law professor at the University of Idaho, commented that the wolf recovery plan was tailored to appease the ranching industry instead of concentrating on what the wolf needed biologically. Opposing him, Martin Nie commented that ranchers needed something to blame (the wolf) since they were already facing drought, high taxes, and a nation more interested in synthetic materials and healthier foods than leather and red meat (Nie 101, 106).

Unfortunately, Gable was partially right. In order to effectively bring the wolves back to Yellowstone, the USFWS, along with Bangs and his crew, knew that the project would not be a success unless they could get ranchers on board with it. By allowing a minimum protection under the ESA, the USFWS attempted to satisfy both environmentalists and ranchers. The 10j rule of the ESA allowed the use of nonlethal methods to ward off wolves from preying on livestock, and it also gave the USFWS the ability to kill problem wolves. Nonlethal deterrents are not as effective as lethal methods, but they must be used in order to receive compensation from Defenders of Wildlife. Deterrents include range riders, guard dogs, portable fencing or fladry, and hazing techniques, such as firing a pistol or using bright lights ("The Art of Wolf Restoration" 109; "Wolves and the Endangered Species Act"). Good husbandry practices such as removing carcasses also helps limit livestock depredation. Elizabeth H. Bradley, a wolf management specialist, and Daniel H. Pletscher, director of the Wildlife Biology Program and the University of Montana in Missoula, conducted a study on wolf predation of livestock. They concluded that smaller herds of cattle and smaller pastures experienced less wolf predation. In their study, they suggested that finding wolf dens and filling them in might encourage wolves to den closer to Yellowstone or within the park grounds, which would also lessen livestock depredation. Protecting the feed supply from elk during the winter was also shown to attract fewer wolves, which meant less livestock depredation (Bradley and Pletscher 1261-1263).

However, nonlethal deterrents and good husbandry practices do not always work. For example, when wolves become habituated to humans, lethal action is required. Typically, the USFWS engages in reactive incremental removal, which means the entire pack is not killed at the same time. Instead, two or three of the wolves will be located and shot by helicopter. If the remaining pack members disband or cease preying on livestock, no further action is required. In other cases, the agency will attempt to leave one or two wolves from the pack alive that will sometimes join other packs or cease to become problems. If the remaining members do not disband or if they continue to cause problems, the entire pack will be taken out. This method allows wolves to sustain themselves by giving them time to reproduce ("The Art of Wolf Restoration" 110).

In order to keep ranchers satisfied, two non-profit groups organized trust funds to compensate ranchers for their losses. The main one, Defenders of Wildlife, required that ranchers exhaust all possible non-lethal methods in order to be eligible for compensation. If the rancher is eligible, he will receive up to $3,000 per animal for confirmed wolf

kills and up to $1,500 per animal for probable wolf kills. Two problems exist with this program: not all wolf kills are confirmed since evidence is hard to protect and the program only operates when wolves are listed under the ESA (Stone 150; "Wolves and the Endangered Species Act"). This follows the reasoning that when wolves are not listed, ranchers will be able to shoot them on site to protect their livestock, so losses should not occur as frequently. The Bailey Wildlife Foundation Proactive Carnivore Conservation Fund is similar to the Defenders of Wildlife program, but it specifically promotes non-lethal deterrents. In other words, it gives money to ranchers for these methods or provides range riders to prevent livestock losses (Stone 152).

The newest method of livestock protection includes regulated public harvests of wolves. These hunts may only take place while the wolf is delisted. Proponents say that it might remove problem wolves and would make locals more tolerant of wolves since they would be able to directly participate in controlling the population ("The Art of Wolf Restoration" 113).

Clearly, livestock depredation is a serious issue plaguing the surrounding communities of Yellowstone. The question is, to what extent? Data from the National Agricultural Statistics Service indicates that from 2004-2006, respiratory problems, weather, and calving issues were responsible for the most cattle losses in Wyoming. Figure 1 shows that these three causes far outnumbered the losses of cattle caused by wolves.

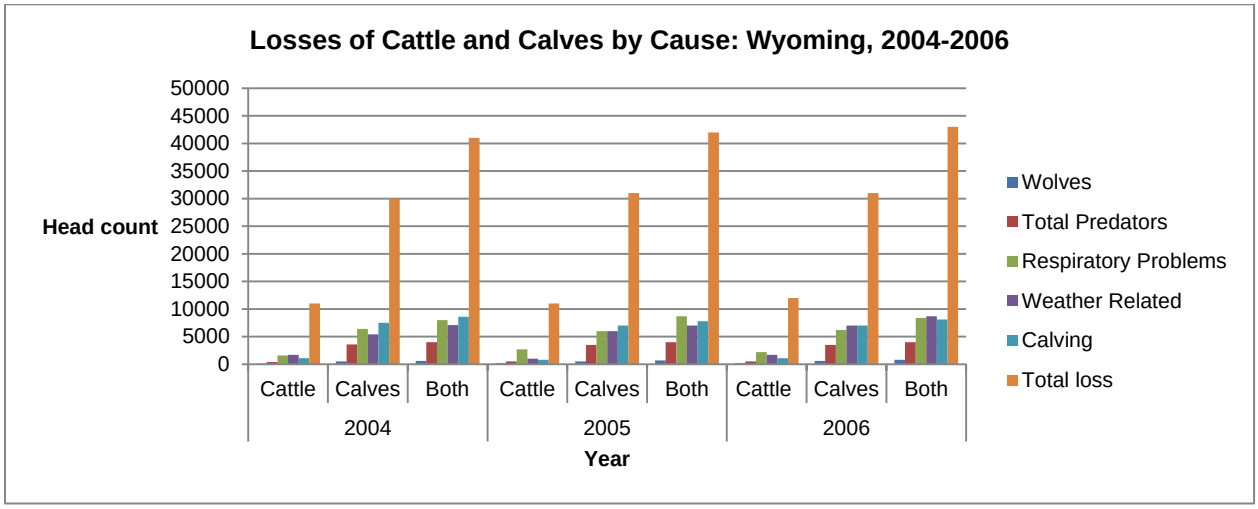
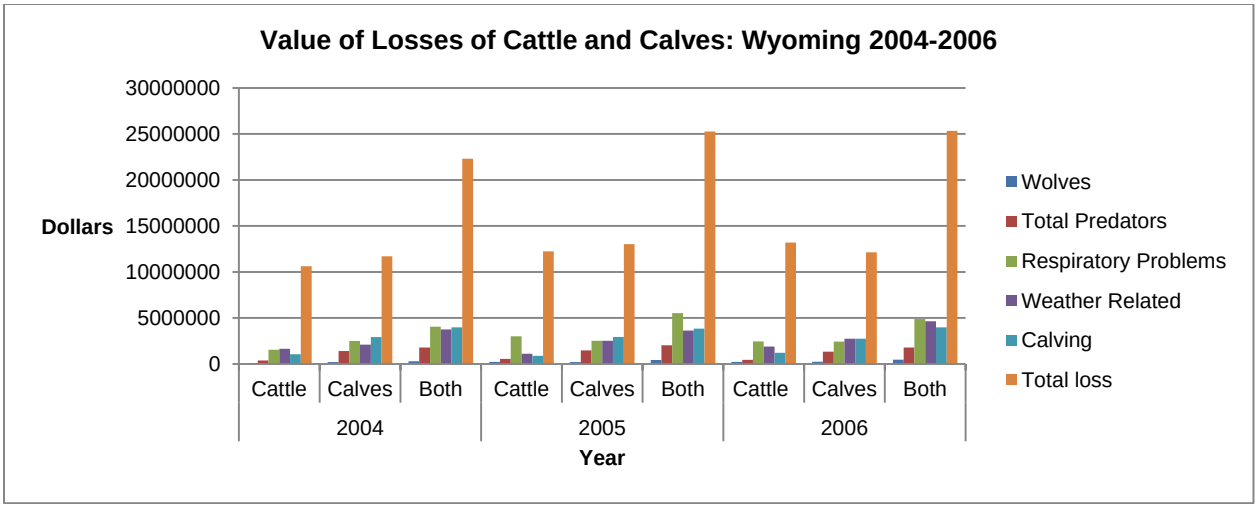


Figure 1. Losses of Cattle and Calves by Cause from Wyoming Field Office; "Cattle Losses to All Causes 2006"; *National Agricultural Statistics Service*; United States Department of Agriculture, n.d; Web; 8 Oct. 2010; <www.nass.usda.gov/wy/internet/livestock/cattleloss.pdf>.

The NASS also reported the value of cattle and calf losses from 2004-2006. Figure 2 shows that wolves had a minimal economic impact on ranchers compared to weather, respiratory problems, and calving issues.



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According to these figures and the data represented, livestock depredation caused by wolves should not create as much anger as it does. However, the data reported by NASS revealed something else. Figure 3 depicts the losses of cattle and calves from each Agricultural Statistics District in Wyoming. Wolves are included among the total predators in this case. The northwest district was the only district that experienced more losses to predators than any other cause. This district of Wyoming is also where Yellowstone is located. According to this data, ranchers located closely by Yellowstone experience more predation on livestock than other districts in the state. This could explain the heated debate of ranchers located around Yellowstone. However, since the data does not distinguish wolves from total predators, it is difficult to say whether livestock depredation is mostly attributed to wolves.

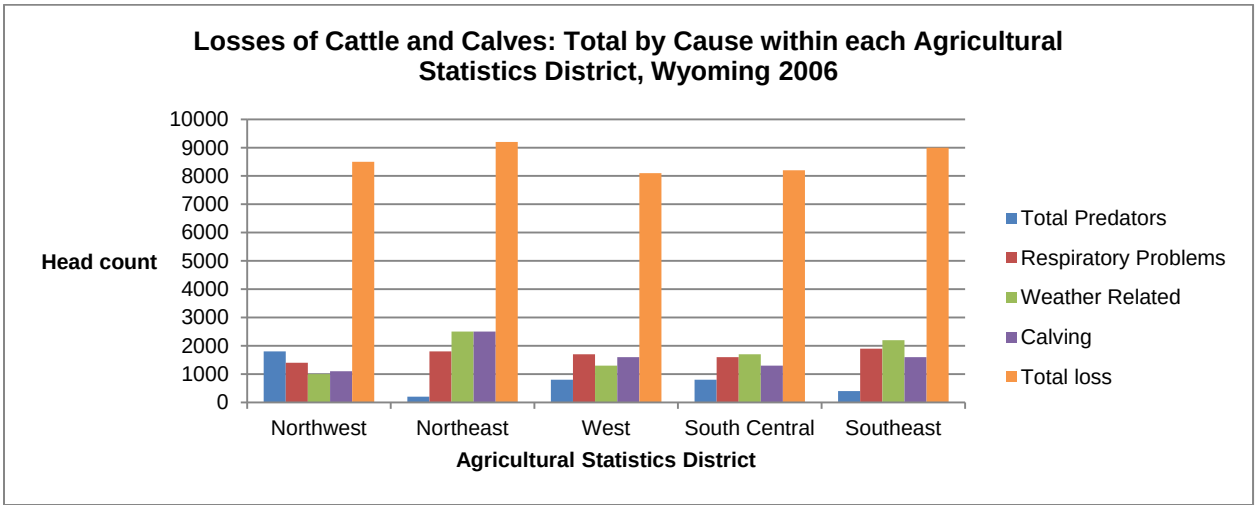

Figure 3. Losses of Cattle and Calves by Agricultural Statistics District from Wyoming Field Office; "Cattle Losses to All Causes 2006"; *National Agricultural Statistics Service*; United States Department of Agriculture, n.d; Web; 8 Oct. 2010; <www.nass.usda.gov/wy/internet/livestock/cattleloss.pdf>.

METHODS

Wolf recovery in Yellowstone needed to be viewed from all possible angles, which included an extensive literature review on articles, books, websites, and journals based in biology, ecology, political science,

environmental studies, and personal testimonies. This project synthesizes ideas taken from the literature as well as interviews and discussions.

Discussions that included question and answer sessions with Doug Smith and Jim Halfpenny were utilized to gain perspectives from the biologists' and naturalists' side. Additionally, a personal interview with Bruce Malcolm, a cattle rancher who co-authored a bill to reimburse livestock owners and landowners in Montana, helped to gain insight from the ranching community.

In addition to the extensive review, secondary data analysis was used on data found in the literature. Data published by the National Agricultural Statistics Services regarding causes of cattle loss from 2004-2006 in Wyoming was examined. This analysis gave dimension on the livestock depredation issue related to the wolves' status on the ESA. In addition, the National Park Service has published the Yellowstone Wolf Project Annual Report every year since the reintroduction, which documents the wolf population in Yellowstone. Looking at the years 1995 through 2009, wolf population was correlated with the species' status on the ESA. These analyses proved that delisting the wolf is beneficial to policy and wolf management.

RESULTS

The ESA and Its Role in Wolf Recovery

Wolf recovery in Yellowstone would not have been successful without the ESA. The ranching industry surrounding YNP is a powerful commercial entity. This paper has clearly indicated that livestock depredation is a serious issue that causes anger in many ranchers. In order to protect their livestock, many ranchers would prefer that wolves be removed from the area; however, there are a select few that recognize the ecological importance of wolves.

In order to list a species to the ESA, only biological grounds may be considered. Factors, which are the same for listing and delisting, include: modification of habitat or habitat destruction, overusing the species for commercial, recreational, scientific, or educational purposes, disease or predation of the species, inadequate regulation, or other factors affecting the species' existence whether they be natural or manmade. The species can be listed if any of the factors causes a problem for its future survival (Malloy 15). Under normal circumstances, after a species is listed, critical habitat is established for it, which may involve land-use restrictions. Any taking of the species, whether the species is endangered or threatened, is illegal. Section 10j was established in 1982 in order to get around these limitations and reintroduce the wolf. This rule stated that a species could be listed under an experimental population only if the experimental population did not conflict geographically with non-experimental populations. Furthermore, it allowed an experimental population to be classified as essential or nonessential to the species. If the species was classified as an essential experimental population, then it would be afforded the same protection as a threatened species. Nonessential experimental populations do not have critical habitats established and are given less protection than threatened species (Albrecht and Christman; "Endangered Species Act"). The 10j rule proved vital for wolf recovery because it meant that land could not be taken away from ranchers, and problem wolves could be killed by the USFWS.

When the gray wolf was added to the endangered species list in 1974, the USFWS determined that in order to delist the species in the future, 300 wolves and 30 breeding pairs had to be present within the three recovery areas: Wyoming, Montana, and Idaho. That qualification was first reached in 2000 and has been reached consistently in subsequent years. In order to successfully delist the gray wolf, management plans from Wyoming, Montana, and Idaho must be approved by the USFWS. Once the decision has been made to delist the species, it must be published and followed by a public and professional peer review. If the delisting is successful, it enters into a five-year oversight period, during which the USFWS monitors the wolf populations and state management plans. If the wolf population drops below the viable level, it can be relisted to the endangered species list by an emergency order (Zumbo; Bangs and Sime).

Following these guidelines, the USFWS moved to delist the gray wolf from the endangered species list in March 2008. However, the species was temporarily relisted in July 2008 and fully relisted in October 2008 because Wyoming's wolf management plan allowed wolves to be shot on sight. Another attempt to delist the wolf was made in May 2009 for Montana and Idaho but not Wyoming ("News, Information, and Recovery Status Reports"). The USFWS approved Montana and Idaho's wolf management plans, but it had qualms about Wyoming's plan. While Montana and Idaho implemented measures to manage the wolf population without decimating it, Wyoming decided to manage wolves as varmints, meaning that anyone could kill a wolf at any time. The Wyoming plan was not based on science, so USFWS officials will not approve the plan until it is changed to match the ideals of wolf recovery (Western Wolf Coalition).

The case was brought before the Montana District Court, and Judge Malloy determined that a distinct population segment must be listed or delisted as a whole. Wyoming could not be left out of the delisting process;

since Wyoming's plan did not conform to federal standards, delisting could not occur (Malloy 13). The species was relisted in August 2010 following the decision. In September 2010, Wyoming, Utah, and Idaho attempted to remove more of the protection for the listed wolf. In essence, the states pushed for holding public hunts while the species was under federal protection (Neary).

In October 2009, while the wolves were delisted, the first public hunts were held in Montana and Idaho. Members of the Cottonwood Pack that had been radio collared and used as research wolves for Doug Smith and his team in Yellowstone were among the wolves killed during the hunt. Of course, this became very controversial since proponents had indicated that the hunt would target livestock killing wolves (Morell 506-507). Wildlife officials stated that 30 percent of the wolf population could be killed and rebound the next year. They added that if population levels started falling dramatically, quotas could be changed to make sure the wolf population did not drop below viable levels ("Study Says Montana Hunt Would Cut Wolf Population in Half"). Nevertheless, wolf enthusiasts and biologists alike felt emotional about the hunt.

Throughout Montana and Idaho, hunters killed 260 wolves. An additional 270 wolves were killed by government agencies to reduce livestock depredation ("Western Lawmakers Turn Sights on Endangered Wolves"). With 530 wolves killed in one year, many wolf enthusiasts blamed the decreased wolf population on the ESA, claiming that delisting the wolf dramatically reduced the population. Lloyd Janice, a writer for *USA Today*, was among the population to feel that the delisted status attributed to the reduction in wolves. However, he also stated that parvovirus and mange added to the decline (Janice).

Although parvovirus and mange are responsible for many wolf deaths in Yellowstone, the effect that the ESA has on wolf population is more controversial. The Yellowstone Wolf Project Annual Report provides wolf population counts taken in December in Yellowstone. Using the data from the years 1995 through 2009, the theory of whether delisting the wolf dramatically lowers its population was tested. Figure 4 shows the wolf population in Yellowstone from 1995 to 2009.

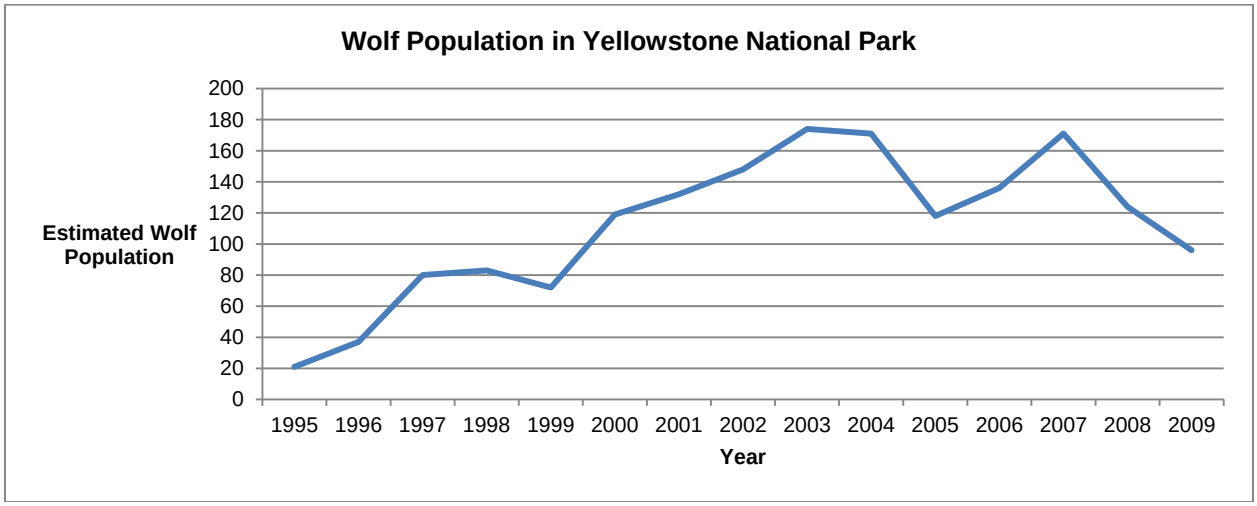

Figure 4. Wolf Population 1995-2009 from Douglas W. Smith, Daniel R. Stahler, and Debra S. Guernsey; *Yellowstone Wolf Project: Annual Report, 2002*; (Yellowstone National Park, Wyoming: National Park Service, Yellowstone Center for Resources, 2003) 2; Print.

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Looking at the graph, two significant drops in the population occurred: one from 2004 to 2005 and another from 2007 to 2008. Wolves were listed from 1995 to 2007. The first delisting took place from March 2008 to July 2008, which did not allow enough time to hold a public hunt. By looking only at the population, it is unlikely that the status makes a difference since wolves were listed between 2004 and 2005, and there was a decrease of 53 wolves. From 2007 to 2008, the wolf population dropped by 47. At both of these times, wolves were listed. From 2008 to 2009, the population dropped by 28 wolves, during a time when wolves were delisted for part of the year. To show this in a different light, another test was necessary. Using the same data, the mean wolf population in listed years was compared with that in delisted years.[1] Figure 5 shows the results.

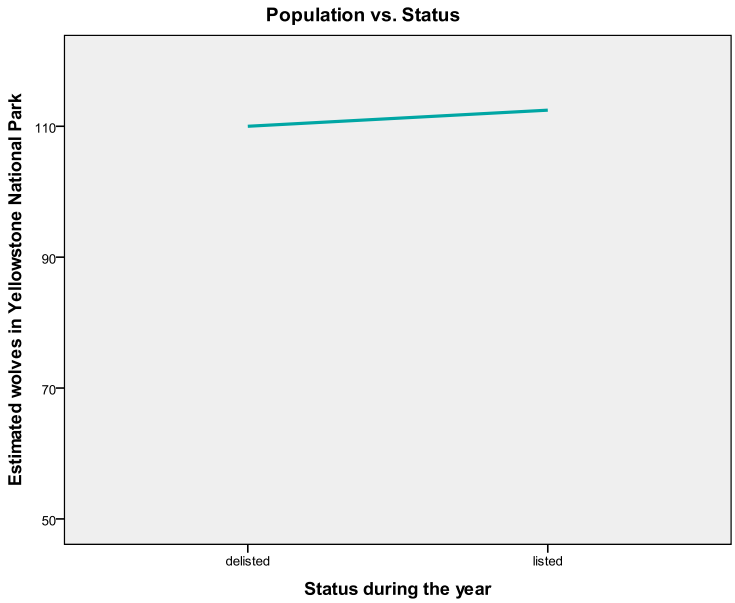

Figure 5. Wolf Population vs. ESA Status from Douglas W. Smith, Daniel R. Stahler, and Debra S. Guernsey; *Yellowstone Wolf Project: Annual Report, 2002*; (Yellowstone National Park, Wyoming: National Park Service, Yellowstone Center for Resources, 2003) 2; Print.
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Clearly, the graphs do not indicate that the status of the wolf greatly affects its population. In Figure 5, the difference between the population in listed years and delisted years is two and a half wolves. That number is not significant enough to drop the wolf population beyond viable levels. Therefore, the findings indicate that although wolf population has dropped in delisted years, the effect is not significant.

[1] From 1995 to 2007, the wolf remained listed under the ESA. In my analysis, 2008 and 2009 counted as delisted years since delisting occurred during those years even though the status did not last the full two years.

DISCUSSION

The information presented in this paper has characterized wolf recovery in Yellowstone as being largely controversial. For this reason, it is important to view the issue objectively when recommending the next step. Many involved in the wolf project, especially those with the sentiments of Gable, would argue that delisting the wolf only caters to livestock interests. However, that is not true.

Wolf biologists like Thomas McNamee, along with the USFWS, have indicated that a species can only be truly triumphant when it is successfully delisted from the ESA. As long as a species is listed under the act, there is some doubt that the species will survive on its own. In order to move beyond that doubt, society has to have faith that the system will not allow the eradication of the species. As difficult as this may be, it is a necessary step in the direction of species recovery.

The wolf population in Yellowstone is approaching carrying capacity. Because the population has been protected for approximately fifteen years, it has expanded within that time. In 2007, there were 171 wolves in the park. Large pack numbers lead to an expansion of pack territory. Although Yellowstone is home to a great deal of species, there comes a point when too many animals are fighting for the same resources. With wolves, territory is a huge issue. When there are too many wolves in the park, as there was in 2007, fights break out between packs over territory. In fact, Smith mentioned this in his book, *Decade of the Wolf.* He indicated that three periods of wolf recovery existed. The first phase focused on growth of the population, meaning that the wolves were healthy. At the time the book was published in 2005, the first phase had just passed. The second phase shows weight reductions and more conflicts among the wolves. This is the period that is taking place now. The third phase will result in fewer conflicts, more dispersion among the wolves, and a balance between predator and prey (Smith and Ferguson 170). If wolves are delisted, the third phase will naturally take place, which will signal a successful balance of the Yellowstone ecosystem.

Delisting the wolf also allows public hunts to occur. Although the wolf invokes numerous emotions within a person, it is still an animal that must be managed by humans. Public hunts could lower the wolf population to one that favors the third phase. As with all hunts, however, regulations would need to be established. For example, poisoning is not a form of hunting and would need to be outlawed. Quotas would need to be established to ensure that a viable population of 300 wolves and 30 breeding pairs throughout Montana, Idaho, and Wyoming remained. If the population started diminishing, future quotas would be adjusted. These public hunts would give power back to the people. This could establish a better relationship between people and wolves, meaning that ranchers would not seek the eradication of the animal.

Ranchers would have better means of protection for their livestock with wolves delisted. When wolves are listed, ranchers must obtain special taking permits if a wolf continues to prey on his livestock. However, with federal protection removed from wolves, ranchers would be able to trap or shoot the offending wolf without worrying about legal trouble. Although public hunts should reduce the amount of livestock depredation, ranchers would have a definite form of protection in case of any wolf predation.

With public hunts and a secure method of protection for ranchers, the USFWS would not have to kill as many wolves. This would free up agency time for other responsibilities in addition to reducing the stress on the wolf population. Currently, the agency is responsible for a great deal of wolf deaths in Yellowstone. The agency killing adds to the wolf population decline caused by parvovirus, mange, and pack fights. Minimal agency killings, wolf hunts, and rancher involvement should balance the wolf population out and keep it above the viable population.

Since its inception, the ESA has been viewed as a policy failure by many. Successful delisting and management of the wolf would emphasize that the act can restore populations, which was its intended purpose. The ESA fulfilled its purpose of protecting the wolf, but now it is time to remove the protection and let nature take over.

CONCLUSIONS

There are several benefits of delisting the wolf for wolf management and policy in Yellowstone. These include balancing the wolf population, giving the power back to the people, restoring a secure protection for ranchers, and showing the ESA in a favorable light. It is clear from looking at the history of wolf recovery that eradicating the wolf is not an option. Removing the wolf from Yellowstone disturbs the balance of the ecosystem. Although the wolf's presence causes problems such as livestock depredation, there are methods that can be used to reduce these effects such as nonlethal deterrents, good husbandry practices, and lethal action. The ESA played an important role in recovering the wolf population, but effectively delisting the species will mark the act's true success.

UPDATES

Since this research project, one important event has occurred: the wolves in the northern Rocky Mountain region were delisted with the exception of Wyoming. After failing to delist wolves through court litigation, lawmakers in the western states decided to insert a rider into the federal budget bill, which passed on April 15, 2011. This legislation prevents court intervention and lifts protections for wolves within 60 days of the passing of the bill. However, this legislation is already being scrutinized by environmentalists, claiming that the ESA needs to be left to the scientists and the judiciary. Congress should not be involved, according to them (Casper Star-Tribune and Associated Press). Prior to the passing of the budget bill, the USFWS and Defenders of Wildlife, the Greater Yellowstone Coalition, and eight other conservation organizations had reached an agreement regarding delisting. If the settlement had passed, wolves in Montana and Idaho would have been delisted on an interim basis until a full delisting could have been reached for the region. The conservation groups also agreed to allow steps for delisting without attempting to stop it through litigation (Department of the Interior). However, since lawmakers decided to take steps toward delisting, ignoring the proposed settlement, environmentalists will likely retaliate. Additionally, it remains questionable whether this legislation is legal since it did not allow for public and professional peer review, which is one of the qualifications for delisting mandated by the ESA.

LIMITATIONS

Although this paper covered a wide variety of topics related to wolf recovery in Yellowstone, there are several other important considerations to look at. The severe winter of 1996-97 caused a lot of populations to decrease. Since this occurred one year after wolves were reintroduced, how did this affect the wolf population? Another important factor to research would be the impact of elk feeding grounds in Wyoming. During the winter, Wyoming uses elk feeding grounds to make sure the elk have enough food to eat. Elk attract wolves, which could bring more wolves out of the park. Once wolves leave the park, they are no longer protected. Finally, another important area of research would be studying why values in Wyoming are different from Montana and Idaho in terms of wolf management. The problem with successfully delisting wolves from the ESA is because Wyoming refuses to change its plan. Instead, the state prefers to manage the wolves as predators to be shot on site. Since delisting would benefit wolf management, why does Wyoming refuse to modify its plan? These are several important issues to look into that are related to the purpose of this paper.

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