

PAE Student Sample 1

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What is the Effect of Deforestation on the Northern Spotted Owl?

Within the past few years, the forests that I had once been accustomed to in my hometown slowly devolved into buildings, parking lots and neighborhoods. These changes made me question how deforestation in the Pacific Northwest affects the sustainable wildlife native to areas in and surrounding Washington. This question progressed when I learned more about a particular species, the Northern Spotted Owl; in high school, I learned about this issue from my former teacher who had completed fieldwork in Washington forests with the aim to study the habitat and nature of the Spotted Owl. Now, while learning more about the concept of sustainability, I have come to be more interested in the Northern Spotted Owl, in particular, what is the effect of deforestation on the population and what are ways we can protect the species?

The United States has experienced a dramatic increase in the production of housing developments with 10.3 million acres of forestland converted to developed housing within 15 years alone (Alig 4). The new developments have been greatly influenced by the exponential human population growth. These new housing developments have been supported by new families but also have been opponents who disapprove of the encroachment new developments have on the environment, such as environmentalists, scientists, concerned citizens, etc. One of the opponents includes, Luis Bettencourt, an American physicist of the Sante Fe Institute, who

explains, “Cities were never formed and have never grown with the objective of...protecting the environment.” His claim suggests that mankind’s advancement rarely considers the effect on the environment. As a former Washington native, I have seen this claim through the transition of a forest to a suburban neighborhood within just a few years, because the population is expected to double within the next 20 years (“Future Development”). More developments have been created throughout the Pacific Northwest because of this increased population growth, which results in 2% deforestation annually (“Forest Products”).

My house is located on the top of a hill, known as the Plateau. When I was younger I remember there being only one road to get down the hill. When my mom would drive, I would look at the forest on either side, noticing the different trees along the way. I would even let my imagination loose, thinking I saw a bear or a family of deer within the trees spacing. However, in recent years there have been two new roads built for transportation to and from the Plateau, and the forest was cut in order to build the roads. With these roads also came more and more housing developments and neighborhoods. Now, all I can see is endless concrete and signs that announce new housing developments for sale. Developments, such as on the Plateau, occurred in other areas of the Pacific Northwest. The developments would not have been an issue; however, there was also an increase in logging throughout the areas as well (Alig 4).

The need for more housing developments and logging led to the increased deforestation in the Pacific Northwest (“Forest Products”). The deforestation really impacted the native species that inhabit the Pacific Northwest, such as the Northern Spotted Owl. The Northern Spotted Owl is a native species in the Pacific Northwest. This area has been abundant with some of the largest trees, but during the past century, 80 percent of the old growth forests have been cleared due to deforestation (Lomolino 56). Large trees, diverse canopy of moderate coverage,

and proximity to water sources characterize the Northern Spotted Owl's habitat (Laymon 1). Laymon and Barrett suggest that the species had adapted to maintain a sustainable lifestyle in the old growth forests that have been largely associated with the United States; however, with the more recent acts of deforestation and logging, the habitat has slowly been declining into smaller areas for the owls to inhabit. If deforestation continues to increase by 2%, the Spotted Owls must discover a new area to live that has the sustainable habitat that they need (Laymon 5). However, the territory and home range expansion would require the owls to expend more energy (Laymon 5). The expansion may also consist of a larger territory than the Spotted Owl requires. When the Northern Spotted Owl's home range increases to that extent the energy intake will then balance the energy expenditure towards finding prey and maintaining body temperature, which would lead to the cease of reproduction (Laymon 5). The lack of reproduction will then result in a decline of the population in the Pacific Northwest.

Deforestation in the Pacific Northwest did not only result in the decline of the Northern Spotted Owl population, but also deforestation in other areas of the United States led to the population decline. Deforestation, in areas in the United States, east of Alberta region in Canada, led to the migration of the Barred Owl to areas inhabited by the Spotted Owl (Livezey 251). In eastern areas the presence of Barred Owls mean there are still old growth forests, therefore people east of the Alberta consider the Barred owls desirable (Livezey 251). However, in the Pacific Northwest the Barred Owls are viewed as taking over the Spotted Owl's territory (Livezey 251). When deforestation occurred in other parts of the United States, the Barred Owl had to expand the home range, which led to an abundance of Barred Owls to the Pacific Northwest. The Spotted Owl has a decreased territory from the deforestation occurring in the Pacific Northwest, as well as the introduction of the Barred Owl into the territory, causing a

decline in the available resources the Spotted Owl requires living sustainably. In competition with the Spotted Owls, the Barred Owls become larger and more aggressive to compete with the Spotted Owls in physical confrontation for more food and space (Livezey 252). The presence of Barred Owls in the area had led to more support that deforestation is negatively affecting the Northern Spotted Owl population. Fish and Wildlife Service Director Dan Ashe, agrees that the increase in barred owls effects spotted owls, stating “We can’t ignore the mounting evidence that competition from Barred Owls is a major factor in the Spotted Owl’s decline, and we have a clear obligation to do all we can to prevent the Spotted Owl’s extinction and help it rebound” (“Feds Consider”).

The introduction of Barred Owls in the Pacific Northwest added to the growing debate on solving the decline of the Spotted Owl population. When I was in high school the Spotted Owl and Barred Owl created serious discussion in my class. Some people thought the Barred Owl was cute and cuddly, while others called the species the enemy owl. To maintain the arguments about our opinions my teacher hushed us and asked if we wanted to learn how to make a Spotted Owl call. Everyone seemed intrigued because it was odd that we were learning birdcalls instead of more about the species. Once my teacher did the Spotted Owl call she said that when she completed fieldwork for the Spotted Owls they used to answer back with a call. Once the Barred Owls migrated to the Pacific Northwest she explained how the Spotted Owls are too scared to respond. If they would respond the Barred Owls could easily locate their position. Her story led the class, once again, to call the Barred the enemy and called to stop logging and deforestation all together. The other side of the class was seriously upset by the suggestion. Many people in the area had parents who worked in the logging industry and their solution would leave their parents unemployed. Comments were exchanged back and forth for a few minutes. The

arguments that erupted were not my teacher's intention. She interrupted the discussion by teaching us that the Barred Owl is not at fault for the decrease in the Spotted Owl population. The fault lies on the act of deforestation, because if there was less deforestation in areas there would be more available habitat for the species and the Barred Owl could have maintained a sustainable lifestyle back east. This leads to the question, what can we do to help protect the Northern Spotted Owl? This is a simple question that results in numerous answers and controversies surrounding the issue.

The U.S. Forest Service has selected the Northern Spotted Owl as an indicator species for old growth forests in the Pacific Northwest (Laymon 1). This title means that environmentalists can study the population of the Northern Spotted Owl and if the population decreases there is an indication that a variable in the habitat or other factor is influencing the population. Once the indication has been discovered, scientists and environmentalists take on the task of determining what action should be taken in order to protect the species. I thought that solutions to situation involving the possible extinction of a species would be taken well by most of the community; however, I discovered that there is a lot of controversy surrounding the issue. The resolutions that have been suggested have been either about the negative impact of the Barred Owl introduction or about the negative effects deforestation and logging have on the population. The controversy involves questioning the endangerment of Northern Spotted Owl and the job loss as a result of some environmentalism action.

The Spotted Owl is a "rare, native species in the Pacific Northwest and is federally threatened in the United States", which led extremists to consider taking action by killing off hundreds of Barred Owls to benefit the Spotted Owl (Livezey 252). I contemplate how one may view killing off one species as a way to help another. It is the same concept that one has to kill to

save. This resolution is still in the experimental phase in development. This solution would first need to have an experimental period for scientists to determine the effectiveness of the plan. If the experiment were to happen, it would start within the next year, and could last up to ten years (“Feds Consider”). Another motion that was placed into action was the suspension of most Washington and Oregon logging (Easterbrook 23). This option seems more reasonable and realistic to the situation because it does not just focus on one aspect of the problem but identifies the issue as a whole. However, more controversy arose with this suggestion because of the job loss that may occur with the suspension of the logging industry.

Although there are solutions offered by the environmentalist’s point of view, there is an opposing side that disagrees with the suggestions. This side does express belief in the negative effects deforestation has on the Pacific Northwest. However, they believe that the Spotted Owl is being used as a cute scapegoat produced by environmentalists, to reduce the deforestation of old growth forests in Washington and Oregon (Easterbrook 23). The opposing side views the Spotted Owl as an excuse created by environmentalists, to prevent deforestation and logging in the area. There was also a suggestion that the Spotted Owl is not even endangered at all. Gregg Easterbrook stated, “The owl can help protect many others that are not so cuddly and not so popular” (23). His statement describes how the Spotted Owl is a more attractive animal that society would be more responsive in protecting. Another animal may be more endangered and at risk for extinction, however fewer funds would be donated in helping the species because of the appearance. That is where the Spotted Owl comes into play, because people will be more willing to protect an area that the Spotted Owl inhabits, which may also protect a species that would receive less attention to its’ extinction normally. However, the environmentalists continue to disregard the allegations that the Spotted Owl is being used as a scapegoat. Environmentalists do

agree that deforestation not only effects the Northern Spotted Owl, but also other organisms, however it is still one of the main causes of the decrease in the Spotted Owl population. Kent Connaughton, a Regional Forester for the USFS Pacific Northwest Region, also agrees that deforestation has been negatively impacting the Spotted Owls, stating, “Improved forest health is important for recovery of the Northern Spotted Owl” (“Service Identifies Habitat”). There was also a suspension of logging suggestion, which has already been implemented in some areas in Washington and Oregon (Easterbrook 23). This resulted in thousands of people losing their jobs due to the logging deferral (Easterbrook 23). Many of these people are still struggling to find new jobs (Easterbrook 23). This job loss also causes more people to neglect supporting the Northern Spotted Owl population. The controversy ensuing from the issue has led to every suggestion about the Spotted Owl’s protection resulting in opposition.

These controversies about the Spotted Owl prompted me to research the methods in place that allow the Spotted Owl Protection. The solutions were focused on the Spotted Owl as opposed to anthropocentric methods to solve the issue. The primary protection of the Spotted Owl is through the Endangered Species Act (“Northern Spotted Owls”). The Endangered Species Act prohibits the harming, harassing or injuring of Spotted Owls (“Northern Spotted Owls”). Once the Spotted Owl was listed as a species on the list more action was taken to protect the species in areas specific to the Pacific Northwest. In 1994, a formalized management plan was created called the Northwest Forest Plan, which is the foundation of owl conservation (“Northern Spotted Owl”). With this plan over 24 million acres of public land were under management, which put 88% of the land in Washington, Oregon, and California off limits to logging and deforestation (“Northern Spotted Owl”). The Northwest Forest Plan not only became one of the main protection acts for the Spotted Owls, but also for more than 1,000 more species associated

with the Old Growth forest (“Northern Spotted Owl”). This plan helped the Spotted Owl in regards to preventing the species extinction thus far. Although, one side of the controversy suggested that many people would lose their jobs with a suspension of logging, people can find a new job, but if the Spotted Owl becomes extinct, there is nothing anyone can do. Therefore, the plan benefits many species that have been negatively affected by deforestation allowing for a more sustainable ecosystem and habitat in the Pacific Northwest.

Although, opinions vary greatly on the issue of the Northern Spotted Owl population, I sincerely believe that the efforts in protection are benefiting the species. The Spotted Owl population indicated the need to decrease the amount of deforestation in the Pacific Northwest. The decrease rate was once 2.9% annually, yet with the efforts to protect the Spotted Owl; this annual rate has decreased to where the Spotted Owl has the likelihood to thrive (“Service Identifies”). Although, the controversies surrounding the issue allows for multiple interpretations of the situation, the Northern Spotted Owl is still an endangered species. The efforts to create a more sustainable environment, such as the Northwest Forest Plan, are improving the likelihood that the Northern Spotted Owl will still flourish in the Pacific Northwest old growth forests.

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