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INTRODUCTION

Fishers (*Pekania Pennati)* are small carnivores of the weasel family, native to North America. Historically, Fishers have uninhabited forested to semi-forested closed canopy land (NYSDEC), although the populations have begun to see significant decrease in the wild. In the forested regions on western coast of the United States, *Pekania pennati*, once native to this habitat, became extirpated sometime during the human settling and exploitation of this area. The Fisher was listed as endangered by the state of Washington in 1998, and as of 2004, was likely extirpated from the state (Lewis and Hayes, 2004). While the fisher population on the Pacific Coastline has fared poorly with the spread of human activity, the regions near Albany, New York have swathes of land where Fishers are doing well, occupying 26,000 square miles in the eastern and southeastern areas of the State (NYSDEC). Reintroducing them to their habitat on the Pacific Northwest, however, has required extensive human intervention.

This dichotomy of fitness in two relatively similar habitats is a dilemma not easily attributable to a single variable or cause. While human endeavors are likely the cause, their extirpation has mostly been attributed to Habitat Loss, but there are many other threats to this population, both anthropological and non-anthropological.

EXTIRPATION

The western coast of the continental U.S is known to be a tumultuous region, ecologically; earthquakes and wildfires are common every year, and the woodland areas are adapted to these hazards. The deciduous and boreal forests in the Northwest, where the fisher had inhabited, are considerably affected by these wildfires. While these fires have been a contributor to the extirpation of fishers (Lewis, 2022), and human output of CO2 has been attributed to worsening wildfires (CARB), humans have been much more adverse for the population in other ways.

Fishers are a fur bearing mustelid, and their coat is one of the most valuable terrestrial furbearer pelts (Lewis, 2022). Wearing furs as an article of clothing was particularly popular in the late 17th and early 18th century, and the fur trade is still ongoing to this day.

Fisher pelts were extremely sought after. Overtrapping has been identified as a cause of the initial extirpation of this region (Aubry and Lewis), and the fur trade is still a contributing factor to the tenuous state of their population. Although the sale of furs is banned in Washington State and California, these areas are still used for trapping. Fishers are caught both intentionally and unintentionally, by trappers using bait for other game (Lewis, 2022).

Habitat loss is another major aspect of Fisher population decline. Worsening wildfires are a culprit, but human development for settlement and logging have decimated fisher habitat. A 5% increase in Wetlands or recent logging in an area decreases the likelihood of a fisher inhabiting that area by 50% (Weir, 2010). Logging affects Fishers in particular due to the overlap between ideal Fisher den conditions and commercially valuable timber. Old growth forests, low elevation forests, and mid-elevation forests are not only ideal fisher habitats, but also heavily targeted areas for clearcutting (Aubry and Lewis). In the facet of logging, there seems to be a level of malfeasance by governing bodies and corporations.

The Sierra Nevada national forest is a woodland region of California, where a fisher population was found to be inhabiting. In 2016, when the Forest Service knew of the threats facing the fisher population, they approved the area for logging. For this decision, the Forest Service had a lawsuit filed against it by various environmental groups.

Additionally, the American Marten can provide insight into the fate of the fisher. They occupy similar ranges and have similar morphology; The American Marten populations have either declined greatly or were extirpated. (Aubry and Lewis, 2003).

WHY THEY’RE DOING WELL IN NEW YORK

The regions of New York where the Fisher is thriving are similar to its habitat on the West Coast; deciduous, low elevation woodlands with ample food sources (porcupines, etc.). Where it differs, however, is its abundance of traffic and roadways. In a very short time, Urbanization has become a major influencer on species throughout the world. The wildlife in places where humans are likely to spread and settle are at risk of extirpation, if they cannot adapt to human impact. The bottleneck to survival is the ability to reproduce in a world of man and machines.

To this end, the Fisher has the advantage; its daily cycles are opposite to the hours of traffic. Fishers are awake when less cars are driving through the highways that section off their habitat.(Lapoint, 2013). Avoiding automobile collisions is a major aspect to survival for any animal adapting to urbanization, and avoiding the roads when they’re more dangerous is an effective survival strategy.

REINTRODUCTION EFFORTS

Since the loss in population has been observed, there have been efforts to stabilize the decline. Many of these early efforts were unsuccessful. However, there have been occurrences where a population of porcupines would need to be reduced, to negate their effects on forest plantations or farms. For this, fishers were translocated and released. In Oregon, 11 fishers were brought from British Columbia to Crater Lake, and 15-20 were brought from Minnesota to Crater Lake. There is no record of these animals being tagged, and no record of their impact on the local porcupine populations. This could be due to a variety of factors; accidental poisonings, although these were banned in the region surrounding the release site. Traffic collisions, predators, and trapping all could have extirpated these fragile populations, but it’s difficult to know for sure.

Reintroductions in recent years are smoother, but not without challenges; predators, parasites and diseases, poisonings, all could have a massively adverse effect on these fragile, translocated populations. Reintroductions of an extirpated species are difficult, not just due to the small sample size, but also due to low genetic diversity.

Feasibility assessments from 2004 by Dr. Jeff Lewis indicated that a reintroduction would be feasible on the west side of the Olympic Peninsula, on Olympic national park (Lewis and Hayes, 2004). Since then, the population has been released, and the project is still ongoing. The trackers used to monitor the fishers have begun to die out, due to power loss or breaking. The results are not completely determined, but the population has not been extirpated as of December 2022.

Human activity is the single most destructive element of the planet’s ecology. Through CO2 emissions, plastic and material waste, and the systematic erosion of the world’s forests, *Homo sapiens* have placed the entire earth on a path to uninhabitable conditions. The fisher is extraordinarily emblematic of this; Habitat loss due to human consumption is the cause of death for an innumerable amount of species.

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