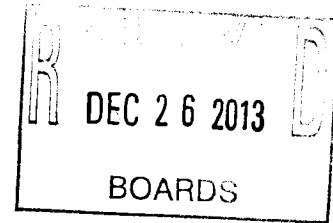


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Alaska Department of Fish and Game
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Dear Alaska Department of Fish and Game,

My name is Taylor Kristine Stumpf. I am a high school student from Prince of Wales Island in southeast Alaska. My family operates a small fishing lodge called Silver Sea Adventures. My parents have been working in the charter fishing business since before I was born. Over the past few decades, my parents have noticed a massive decline in the size and population of halibut around Prince of Wales Island. As a passionate environmentalist and marine life enthusiast, I decided I wanted to present my personal view on this problem with the halibut, and how I think we can make changes that could give the halibut a chance to have a comeback in Alaska.

I became passionate about halibut conservation when I saw a client bring in a 200 pound halibut when I was a little girl. When it was filleted, I saw that the halibut was full of eggs. In addition, the meat of the halibut was grainy in texture. Though my family can't make clients release the large halibut they catch, my family honors clients that catch and release halibut by giving them a free Silver Sea Adventures hat.

I, personally, am a vegetarian, so I am interested in conserving halibut for reasons other than how the population impacts fishing. Halibut help to manage the population of rockfish, sculpin, sand lance, and octopi. They also are prey for larger marine mammals and birds. Overall, halibut are an important part of Alaska's ecosystem. We need halibut in Alaska's oceans.

The damage of overfishing females has been done. The average weight for a sexually mature 12-year-old halibut in 1993 was 25 pounds. In 2011, the average weight of a halibut of the same age was 15 pounds, or 60 percent of what a halibut of that age weighed almost ten years ago. What's even more shocking is a look at the long-term change in weight of halibut. In 1993, the average 20-year-old halibut weighed 100 pounds. In 2011, the average 20-year-old halibut was less than 40 pounds. In addition, halibut are reaching sexual maturity a lot later than usual. The average female halibut reaches sexual maturity at 11 years of age and the average male halibut reaches sexual maturity at 8 years of age. However, the halibut are not growing large enough to have the body size needed to reproduce. In 2011, studies showed that most male halibut never reached the legal size of 32 inches. Also, spawning-age females of eleven or more years of age made up the majority of halibut harvested in the state of Alaska in 2011. As a result, there has been a massive

decline in the population of halibut in the waters around the state of Alaska, namely the Gulf of Alaska and the southeast region.

After doing extensive research, I have found there are many ways this problem could have started. From 1960 - 1970, foreign halibut trawling targeted small halibut. At that time, the age-to-size ratio in halibut was much higher, which meant the foreign trawlers were taking the young halibut, and as a result, not as many halibut lived to reach sexual maturity. Today, halibut trawlers in the Gulf of Alaska are allowed to take 4.4 million pounds of halibut by-catch per year. 75% of the halibut by-catch consists of juvenile halibut.

Ever since 1990, the rave about "trophy" or "barn-door" halibut caused a massive decline in the halibut population. Many commercial and charter fisheries in the state of Alaska have historically targeted the largest halibut. In addition, derbies encouraged fishermen from both fishing industries to seek big halibut. The problem is, the large halibut are the females that contribute the most to the population through spawning. According to the Pacific Fishery Management Council, the average 250 pound female can release four million eggs. Taking even one of these females can greatly impact the population.

After doing research on the population density of other fish species in Alaskan waters, I feel that I may have found a reasonable solution to this problem. Right now, commercial fishermen, charter fishermen, and trawlers are trying to blame each other for this problem with the halibut population, but the truth is, we can't go back in time and "unfish" the halibut that have been taken from the ocean. We can only try to change our future impact on the halibut population and hope for a population rebound.

The first part of my solution deals with size regulation. In recent years, size limits have been placed on ling cod. According to the Alaska department of Fish and Game, the ling cod have been listed as an overfished species in Oregon, Washington, and California. A size regulation was enforced that only allowed ling cod within a certain size range to be kept. As a result, the ling cod population in the waters around Oregon, Washington, and California has been making a comeback.

I think a similar population management method could be enforced for the halibut around the state of Alaska. Historically, either too small or too large of halibut have been targeted. Putting a size limit that is in the middle of the average halibut size might be an efficient way to manage the halibut fishery. As a result of implementing this population management method, the halibut population around the state of Alaska could potentially rebound for a more stable population of halibut in the future.

I am aware the enforcing of size regulations will end up impacting the commercial, trawling, and charter fishing industries. However, I feel I have found a valid and natural solution to this problem.

In the 1970's, the biomass of the Pacific halibut and the arrow-toothed flounder in the Gulf of Alaska expanded, creating an almost 1:1 ratio of halibut to flounder. After the 70's, the halibut industry boomed. Fishermen and trawlers fished for halibut but left the arrow-toothed flounders barely fished.

The arrow-toothed flounders and the Pacific halibut have the same prey. With the flounders being barely fished, the flounder proceeded to multiply almost uncontrollably. This resulted in the flounder over-eating the prey of the halibut, which might be another cause of the decline in the halibut population.

The arrow-toothed flounder population in the Gulf of Alaska is booming. Studies have shown that the population can support a catch of 210 metric tons of flounder. However, current regulations only allow for 44 metric tons to be taken from the Gulf of Alaska. Out of the allowed amount, only 33 metric tons of flounder are actually harvested from the Gulf of Alaska each year. In contrast, the Pacific halibut population is over-fished by approximately 8 million tons annually.

I think promotion of arrow-toothed flounder fishing could end up giving fishermen a flat fish to catch that is sustainable while the halibut population makes a come back. Increasing the fishing of arrow-toothed flounder and decreasing the fishing of Pacific halibut can help to balance the populations so biological factors leading to population decline are decreased.

Halibut are a staple for Alaska's oceans. The Pacific halibut fishery has been around since 1880 and has remained Alaska's second largest fishing industry (salmon being the first). Halibut are an important food source for organisms in the marine ecosystem as well. Alaska needs halibut to thrive. Halibut are needed in industry and in the environment, and that is why I am advocating for their conservation.

Sincerely,

Taylor Kristine Stumpf

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