"The world's Tuna trade is an awesome 21st century hunt. Ancient Greeks used to stand on bluffs to watch for schools of tuna. Today fishing fleets stalk the fish across thousands of miles of ocean with helicopters, GPS and sonar. In 1950 about 600,000 tons of tuna were caught worldwide. Last year that figure hit nearly 6 million tons, the prize of a chase that plays out from the Philippines to Canada's Prince Edward Island. 1

This quote very vividly paints the problem of overfishing with a glimpse of how tuna populations used to be, so vast they could be seen from land. Bluefin tuna stocks have been declining at an alarming rate due to greed driven by insatiable appetite, and this could quite possibly result in their extinction in our lifetime if measures are not taken. In fact, just in the Mediterranean Sea the Bluefin that spawn there could be extinct by as soon as 2012 if the yearly catch rates are not reduced or halted. Fishermen are motivated to illegal measures to keep catching Bluefin to provide for the world's sushi connoisseurs who most assuredly pay top dollar for the privilege.

Our appetites for gourmet cuisine are not the only cause of the Bluefin population decline though. Early in 2010 the British Petroleum oil spill in the Gulf of Mexico happened to coincide with one of their spawning grounds. Adult Bluefin spawn at the ocean surface so it is possible the eggs may have been coated with oil. The effects of which won't even be known for another three to four years when they reach adulthood. Of course by then it may be too late.
Bluefin tuna are a migratory fish, although they only spawn in the Gulf of Mexico and the Mediterranean Sea. The female fish when spawning produce over 30 million eggs at one time and this large number is important. Due to the fact that "in the first two weeks after hatching, 50 percent of the larvae have succumbed to the rigors of their new pelagic home and the losses continue to mount with time, approaching 99.9 percent after one year." 2

Considering the survival rate of the eggs, the fact that Tuna caught now on average have a weight around 143 pounds is alarming. This means they are being caught too young. A young Bluefin weighs around 130 pounds and these fish are not yet sexually mature yet. They do not reach sexually maturity until they are 5-6 years old and weigh around 300 pounds. Tuna can achieve weights of up to 2,000 pounds but they are not being allowed to live that long. If they are caught before they are capable of reproducing, the tuna population will become extinct once we have caught all the existing fish. This chart to the left shows that scientists are not being listened to when setting catch quotas. The quota of 22,000 tons is not even being abided by since the number of illegal catches surpasses it.

The International Commission for the Conservation of Atlantic Tuna was formed by several countries in 1966 to help maintain the tuna population to where the largest possible amount of sustainable fish catches could be possible. They have never met this goal and do not even appear to attempt to. When the ICCAT was faced with Bluefins being listed as endangered by the Convention on International Trade in Endangered Species of Wild Fauna and Flora which would ban any kind of international trade in Bluefin, they hastily agreed to lower their quota by 50% over time. Although when


more research on the matter was suggested by U.S National Research Council, the ICCAT dropped all plans of lowering the quota and instead started increasing it again.

The ironic fact is that so many groups and individuals have ignored the advice of scientists to keep their catches and profits high but these same people are now suffering from only being able catch 90% of the quota since the tuna is not as plentiful anymore. And if scientists were listened to and allowed to recover the population, the catches from that new population could actually be much more than the amount currently being caught. The underlying problem is that if help comes too late for the Bluefin tuna, we may not be able to recover their population.

In the Mediterranean Sea the outlook for tuna is bleak. It is here that many fishers catch entire schools of juvenile tuna in nets and drag them to floating pens in the ocean where the fish are kept and fattened until they are slaughtered. They exploit a loophole in laws there that state young tuna may not be caught, but do not mention anything about growing the fish in pens offshore. As it was stated earlier, this method kills tuna before they can even spawn. The photo below shows one of many illegal tuna ranches that are being run out of the jurisdiction of laws.
Japan eats around 80% of the over 70,000 tons of Bluefin tuna caught each year. The meat is prized in sushi and sashimi preparation and commands a high price. "At Tsukiji, the world's most famous fish market, tuna has been sold at a price equivalent to an Ivy League education... Throwing his weight into the fish as he makes a cut, Morishima is philosophical."

"Some think it's endangered, and I understand their position, but what can you do by worrying about it?" he asks. He'd like all his bluefin to come from Japan, but if there are none on any given day, he says, he'll buy one caught somewhere else.";

Tsukiji Fish Market handles more than 2,800 tons of fish a day as can be seen in the above photo. An auctioneer that works there has been quoted as saying that "the number of tuna coming in these days is down 60% to 70% from what it used to be.";

"While most of us would never willingly consume a highly endangered species, doing so might be as easy as plucking sushi from a bento box.";

Another obstacle in the battle to save the tuna is not only does Bluefin fetch a high price, many restaurants mislabel all of their tuna as just tuna so that diners who may have otherwise avoided Bluefin are oblivious. A method of DNA barcoding was used on about 68 samples of fish from sushi restaurants that were generically called tuna. One third of those samples tested to be Bluefin even though only 8 of the Bluefin samples were actually identified as such on the menu. The FDA even approves all 8 species of tuna to be just called "tuna" on menus so restaurants are not forced to clarify. The photo to the right is "toro" or the pricy fatty belly cut of a Bluefin. This would never be mislabeled on a menu due to the price difference but other cuts of tuna are.


The Fall of the Bluefin

After discussing all of the numerous difficulties that surround trying to save the world’s Bluefin population it makes sense to attempt and find a solution. Many fisheries and governments are attempting to do this very thing. An Australian company called Clean Seas Aquaculture Growout was given a $3.4 million by their government to pursue the ability to breed Bluefin just like cattle and other animals are raised on farms. Their tanks are very technologically advanced to the point where they are able to mimic any water temperature, sunlight amount, or even the darkness/lightness of the water.

Breeding tuna is not the perfect end all to the problem of possible extinction although it is a step in the right direction. For one farmed Bluefin to gain just 2 pounds of weight it must be fed 22 pounds of other fish. Antibiotics added to farmed stock can also pose a risk to humans who consume them as it can create strains of bacteria that cause diseases in humans which are immune to the current antibiotics used to treat them. Chemical runoff from fish farms close to the shore can also harm animals in the ocean as well as polluting the environment.

A biological oceanographer by the name of John Marra has solutions for the current flaws in fish farming though. He suggests moving these fish farms to the outer continental shelves and use extremely large fish pens that get moved periodically to different areas of the ocean. Another idea of his is to capture only some of the tuna from schools and maintain them while only harvesting some which he compares to the way cattle are handled on ranches. This would be a change from the current trend of capturing entire schools of tuna at one go.

However the feat of tuna farms is finally tackled. One thing is sure, it needs to be done very soon or we may be facing the loss of a large predator in the ocean. This would have an impact on the ocean food chain and also our own.

