

## The Great Lobster Mystery: Regulations Proven to Pay Off

The “great lobster mystery” refers to the confusion around our understanding of why lobsters are surviving as a species, and why lobster catch rates are thriving, while many other fisheries in the Gulf of Maine are suffering from a low catch. The reason that lobster populations are abundant in a time of ecological trouble is because lobstermen have been taking the initiative to protect lobsters by adhering to harvesting regulations.

In order to sustain lobster populations in the Gulf of Maine, Maine has laws and regulations about how many lobsters can be taken at a time, and which lobsters can be taken depending on what stage of their life they are in. For example, in order to allow all lobsters to go through at least one reproduction cycle before it is caught, the minimum size a lobster can be is  $3\frac{1}{4}$  inch long in the carapace (Maine Lobster Council). There is also a maximum size of  $5\frac{1}{4}$  inches for permitted harvest. (Maine Lobster Council). There is a maximum size limit to permit large lobsters to reproduce more years of their lives. This is a very effective way of maintaining the lobster population, because it allows every lobster to replace itself at least once or allows it to continue replacing itself. Lobsters are not suffering from depletion, because fishermen allow the birth rate to be faster than the catch rate.

The law enforcing minimum size limits for lobsters is supported by the structure of lobster traps. All lobster traps contain escape vents. These vents allow juvenile or small lobsters to leave the trap if they enter (Maine Department of Marine Resources). This vent allows lobsters that are too small to be caught legally, a chance to avoid being

landed either accidentally or illegally being landed. Since every lobster trap has an escape vent, it strictly enforces the minimum lobster size law and makes it almost impossible to disobey it.

Another method of preventing low birth rates is V-notching. Since 1917, the state of Maine has required lobstermen to carve a V into the right uropod, or, the last pair of appendages on the abdomen of a lobster that forms the tail (Martin 151). V-notches are carved onto pregnant lobsters, so that the next lobsterman to catch the lobster will know that it has the capability to reproduce. Landing a lobster with a V-notch, even if it no longer has eggs, is illegal in Maine (Martin 151). Data collections show that 29% of trapped female lobsters that are not ovigerous were V-notched, and 69% of the ovigerous lobsters that were trapped were also V-notched (Martin 151). This means that there is a realistic balance in the V-notching system, because even though lobsters continue to be caught at a consistent rate, there are enough lobsters that are able to reproduce and remain protected from being caught. Preserving all of the fertile and pregnant lobsters in Maine has been a successful way to conserve the lobster populations, and allowing continued population growth.

There are severe consequences for landing pregnant female lobsters. For each violation of landing pregnant lobsters, there is a fine of \$1,000, and an additional \$200 for each of the first five lobsters involved in the violation. If there were more than five lobsters involved in the violation, there is a \$400 fine for each lobster that was not one of the first five (Maine Department of Marine Resources). The law protecting pregnant lobsters is strict, but the severity of it inclines lobstermen to obey the regulations.

Regulations on lobster traps also sustain the lobster populations in the Gulf of Maine. In March of 1996, the trap-tag requirement was put into action for lobstermen (Acheson 117). This means that each lobsterman was allowed a certain number of traps. With the tags, the government and authorities could regulate how many lobsters were being caught. This law is a direct approach that minimizes the number of lobsters that are legally allowed to be caught for every lobsterman. Such an exact solution to controlling the number of lobsters caught is surely a way to prevent over-consumption.

Laws involved in catching lobsters are strict enough to prevent lobstermen from cheating the system. In addition to trap tagging, Maine passed a trap-limit law in 1999 to permit a limited number of traps per boat instead of per individual (Acheson 119). This way, a lobsterman cannot have a set of traps under his name and under the name of a different lobsterman. The many regulations protecting the lobsters allow continued catches in the future, and these regulations are supported by the cooperation of the lobstermen. Although the many restrictions to catching lobsters may seem too limiting for the lobstermen, they are sustaining the species and allowing the business to stay stable throughout time, while still being allowed a reasonable amount of catch.

In 1998, there was a law passed in Maine that enforced permission for only licensed lobstermen to catch lobsters on vessels (Acheson 119). With the persistence of this law, large companies were prevented from excessively landing lobsters. Large corporations, like the Schafmaster Corporation, tend to catch too many lobsters, because they use large trawlers, and also usually have large crews on board (Acheson 119). This regulation does not relate to the number of lobsters allowed to be caught, nor does it relate to quantitative measurements that determine whether or not certain lobsters can be

caught. However, it indirectly minimizes the number landed by limiting the size of the corporation that is catching the lobsters.

Time regulation is another factor in the lobster business that protects the lobster population by minimizing when lobstermen can haul their traps. Between June 1 and September 1, lobster traps are not allowed to be hauled after 4 PM, and they are not allowed to be hauled at any time on Sundays (The Lobsterman's Page). In addition to this, for the rest of the year, lobster traps may only be hauled until sunset (The Lobsterman's Page). This time management method is suitable, because it allows lobsterman enough time to catch a certain amount to sustain themselves, however at the same time it limits them from excessively trapping lobsters.

The many lobster regulations in the state of Maine are the catalyst for the success of the business in the long run. For example, trap runners help the success of lobster business; they are the mesh inside of the traps that prevent the lobster's claw, where a lot of the meat is, from being damaged (Department of Marine Resources). By preventing damage to the lobster's claw, the lobster is more likely to sell and make profit for the business. Regulations such as these are not the only ones helping business succeed. Sustaining the number of lobsters in the Gulf of Maine ensures their long-term presence. The longer there is an abundance of lobsters in the Gulf of Maine, the longer lobstermen will stay and do well.

In my opinion, the Gulf of Maine has a very effective system for sustaining lobsters and the lobstering businesses. It is no wonder that the lobster industries are thriving in Maine. Most fisheries try to catch as much of a certain fish as they can so that they are more successful than other fisheries. However, if this were how all fisheries ran

their business, the fish that they land would quickly become scarce. It is like a cycle.

First, fisheries catch as much fish as they can. Then, the fish become depleted. To avoid going out of business, the fisheries catch even more of that fish, and it repeats. If all fisheries would put in the effort to protecting what they catch by enforcing regulations, it is probable that they would be as successful as lobstermen in the long run.

The lobster business has proven to be successful in multiple ways. If other fisheries followed the example of the lobster business, there would be a dramatic ecological improvement, and it would be difficult for most fish to become depleted. This would cause a ripple effect, because if populations of fish species stay consistent throughout time, so will the food chain that is intertwined with the fish at multiple levels. It has also proven itself economically, and there would be fewer fisheries going out of business if the lobstering system is followed. All of the laws and regulations have paid off, because lobstering is set to be a long term marine business.

## Bibliography

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