Researcher shows fishing has reduced salmon size in Alaska

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Drawing of ocean phase Sockeye (red) salmon (Oncorhynchus nerka). Image: Wikipedia

(PhysOrg.com) -- Neala Kendall, a graduate student from the University of Washington in Seattle, after studying cannery data on sockeye salmon harvested from Bristol Bay in Alaska, has discovered that the length of the average sockeye caught there, has been dropping for the past half century.

After studying data going back to 1943, Kendall has discovered that the average length of a sockeye salmon is now 14 millimeters shorter than it used to be. She also discovered that the number of sockeye that spent two, instead of the normal three years, out at sea before coming upstream to lay their eggs, had increased by 16%, suggesting Mother Nature was trying to make up for losses incurred due to fishing.

Kendall, in her presentation to the International Marine Conservation Congress in Victoria, British Columbia, last month suggested that it's not

just fishing, or even over-fishing that is the problem; instead it's the practice of going after the biggest fish that is really mucking things up. As she sees it, the largest salmon, generally pregnant females, who are caught in nets specifically designed to grab larger fish while letting the smaller ones pass through, wind up in the nets along with their egg carrying genes for a larger size, which are then lost when the fish is caught. The result is a disproportionate number of smaller fish representing each new generation, which of course leads to smaller and smaller fish as fishermen are forced to adjust down their net sizes.

Some have suggested that the same practice in the southern Gulf of St Lawrence in the North Atlantic, led to the collapse of cod fisheries there in the 1990's and now explains why the fish have not been able to recover. What took thousands or even millions of years of evolution to accomplish, has been undone in just a couple of centuries of human fishing practices.

Other fisheries in Alaska and elsewhere have not been waiting for data such as Kendall has provided and have been moving forward with new fishing regulations designed to prevent fishermen from taking the largest fish they can catch. Just last year, for example, the Alaska Department of Fish and Game mandated fishing net changes for those out for Chinook salmon in the Yukon river. Whether such efforts are being done in time to save such fisheries is still open to debate, but the facts remain, unless something is done, irreparable harm will come to fisheries in not just Alaska, but all over the world.