

Dear Alaska Board of Fisheries,

RC 288

I wanted to share some excerpts from a radio story featuring Archaeologist Madonna Moss regarding the historical abundance of herring in Southeast Alaska. The paper referenced (published in 2013 by Proceedings of the National Academy of Science) can be found here: <http://www.pnas.org/content/111/9/E807.abstract>.

Archaeologist: Herring once far more abundant, widespread

Posted by Rachel Waldholz, KCAW | Apr 4, 2014 (<https://www.kcaw.org/2014/04/04/archaeologist-herring-once-far-more-abundant-widespread/>)

“A recent study suggests that current herring populations in Southeast Alaska and British Columbia may be just a remnant of what once existed.

Archaeologist Madonna Moss has studied sites in and around Southeast Alaska for decades. She says that evidence gathered by researchers up and down the coast indicates that herring were once far more widespread –and far more abundant – than they are today.

...Moss is part of a team of scientists who pulled together data from 171 archaeological sites stretching from Yakutat to Puget Sound. They identified nearly half a million different fish bones from the sites, some of which are nearly 10,000 years old.

And what they found was a lot of herring. The team found herring bones in all but two of the sites, and, Moss said, “Herring bones were the most *numerous* bones in most of the sites. And that was a surprise, because on the northwest coast, if you ask what fish is the most important, people will, of course they’ll say salmon.”

The team found herring bones everywhere: in places where you find large populations of herring today and, more tantalizingly, in lots of places where you won’t find herring today, but where oral histories or place-names imply herring were once present.

“And that is a significant finding, in that it helps illustrate how the spatial distribution of herring has contracted into fewer localities, whereas in the past, herring bones were really widespread in archaeological sites,” Moss said. “So there’s been a spatial constriction of where herring are abundant.”

...Moss says that while many factors influence herring populations — including pollution, climate change, and the rebounding populations of predators like whales and sea lions — she personally thinks that industrial fishing in the late 19th and early 20th centuries had a much more severe impact than modern managers assume.

“I think that huge numbers of herring were taken out of the system years ago,” Moss said. “And then there was kind of a lull, and the fisheries recovered, and then the 1970s becomes kind of the baseline that many fishery scientists rely on. And so if you compare the herring numbers to the 1970s, they might not look so bad. But if you go back 150 years, they look pretty paltry.”

Thank you,

Chandler O’Connell
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