

Brief Summary of AFSC Bering Sea Coral Research and the NPFMC Process

In 2012 the North Pacific Fishery Management Council (NPFMC) initiated the development of measures to protect these areas from fishing activity. In response, the North Pacific Fishery Management Council asked the Alaska Fisheries Science Center (AFSC) to conduct an assessment of deep sea coral in the Bering Sea. Staff at the AFSC subsequently released a report that modeled the abundance of coral, sponge, and sea whips based on information collected in the NOAA trawl survey. The AFSC then conducted a camera drop survey of the Bering Sea shelf break and continental slope areas (the areas where most coral are thought to exist) to better understand the abundance of coral, sponge, and sea whips there. The hundreds of thousands of images of the Bering Sea seafloor collected were analyzed to determine coral, sponge, and sea whips and their interaction with fisheries in the area.

A final report from AFSC staff scientists was released describing the findings of Bering Sea research on deep sea coral. It includes information from the camera drop survey as well as information from the NOAA trawl survey. Findings include:

- Canyons are not biologically unique. Species found in the canyons were found elsewhere in the Bering Sea.
- Coral density is low throughout the Bering Sea, averaging 1 coral per 200 square meters.
- Most camera drop images did not find any coral.
- Areas of highest coral density were in and around Pribilof canyon where it is estimated that over 30% of coral in the Bering Sea are found; however coral density here is several orders of magnitude lower than the densities reported in the Aleutian Islands and Gulf of Alaska. Researchers have estimated the following densities via the use of camera drop techniques:
 - The highest reported density area in the Bering Sea is approximately 1 coral per 3.6 square meters.
 - The highest reported density in the Gulf of Alaska is approximately 1 coral per 0.8 square meter.
 - The highest reported density in the Aleutian Islands is approximately 1 coral per 0.6 square meters.
- Sea whips are relatively abundant in the Bering Sea, with densities that are more than twice those found in the Aleutian Islands.
- Sponges are somewhat common in the Bering Sea, though densities there are far lower than the Aleutian Islands, roughly half as dense as densities observed along Bowers Bank and Ridge, and roughly on par with those observed in the Gulf of Alaska.
- The lack of coral in the Bering Sea can be attributed to the lack of rocky substrate there. Just 2.8% of images taken in the Bering Sea contained any “rocky” substrate, and only 0.8% of the images had rocky substrate as the primary substrate type. This compares to 35.5% of observed substrate in the Aleutian Islands that is considered rocky.
- Most coral in the Bering Sea can be considered small, with most coral being less than 8 inches in height.
- Few observed coral were damaged. In total 2.9% of all coral observed were documented as damaged, which could be from fishing or other factors.

In October the North Pacific Fishery Management Council will consider this final report along with a problem statement they adopted in April of 2014. That problem statement specifies that the purpose of

any action is to conserve known, significant concentrations of deep sea corals in the Pribilof Canyon and adjacent slope. Their task at that meeting will be to identify whether any additional steps should be taken given the information on coral abundance from the final research paper.

A copy of the final report can be found at: http://www.afsc.noaa.gov/News/Validation_of_models.pdf

Visit the NPFMC's Bering Sea canyon page at: <http://www.npfmc.org/bering-sea-canyons/>

For more information on the final report, contact:

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