

SEMIANNUAL PROGRESS REPORT
DEMERSAL SHELF ROCKFISH STOCK ASSESSMENT
IN THE EASTERN GULF OF ALASKA
JANUARY 1, 2001 – JUNE 30, 2001
NOAA Award: NA07FN0076



Submitted to:

Program Office
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National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

Submitted by:

Victoria M. O'Connell
ADF&G Groundfish Project Leader

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A. Project Identifiers

1. NOAA Award NA07FN0076
2. Grantee: Alaska Department of Fish and Game
3. Principal Investigator: Victoria O'Connell
4. Project Title: Demersal Shelf Rockfish Stock Assessment in the Eastern Gulf of Alaska
5. Funding: Federal: \$237,500 Match: \$0
6. Award Period: July 1, 2000 – June 30, 2001
7. Period Covered by this Report: January 1, 2001 – June 30, 2001

B. Project Summary

The objective of this project is to continue a habitat-based method of estimating rockfish abundance as a means to improve rockfish management and to reduce the risk of overharvest. The focus this year is to survey a portion of seafloor using a multibeam echosounder in the important commercial fishing grounds offshore of Prince of Wales Island, Southeast Alaska. This information will allow improvements in estimates of rockfish biomass.

C. Summary of Progress and Results

1. Tasks scheduled for this period

Field work: collection of multibeam data.

Activities.

The survey was conducted using the Reson 8111 Multibeam Echo Sounder sensor operated at 100 kHz and hull mounted on the *R/V Davidson*. The *R/V Davidson* is approximately 150 feet long and fully equipped for work on the outer coast. Data was collected 24-hours per day for approximately 9 days as the vessel traveled back and forth over the survey areas in lines roughly parallel to the contour of the bottom. The average speed of the vessel was approximately 7 knots; lines were run at spacing not more than 3x the water depth. Backscatter was collected simultaneously.

Data was collected using Winfrog Multibeam V1.3A. The resulting data files were initially processed onboard the vessel around the clock using Universal Systems CARIS Hydrographic Information Processing System (HIPS), and Hydrographic Data Cleaning System (HDCS). Backscatter data files were initially processed on board as well. Crude mosaics of both the multibeam and backscatter data were rendered on board so that any holes in the mosaic could be rerun before leaving the survey area.

2. Changes

There were no changes made during this reporting period.

3. Results

Two survey sites were covered in this survey (Figure 1). The survey began at the Hazy Island site where an area approximately 390 km² was covered in about 5.6 days. Initial interpretations of the sun-illuminated imagery and backscatter data for that area shows an increase in the amount of known rock bottom over what we had previously thought. At the site off Cape Ommaney approximately 275 km² was covered in about 2.7 days. Initial interpretation of the data shows an increase in rock bottom. Good imaging of a known coral site was also obtained.

Further cleaning of the data and subsequent interpretation will yield definite quantification of rocky habitat in both of these areas.

4. Publications and presentations

O'Connell V., Ruccio M., Urban D., Trowbridge C., Brookover T., Cartwright M., Brylinsky C., Meyer S., Munk K, Jaenicke M, Piorkowski B, Seeb L, Haverland T., Bechtol, B., and Gish, R. 2001. State of Alaska Groundfish Fisheries and associated Investigations in 2000. Prepared for the Forty-Second Annual Meeting of the Technical Sub-committee of the Canada-United States Groundfish Committee. Pacific States Marine Fisheries Commission, Portland, OR. 36 pp.

D. Problems

1. Intermittent failures of the HDMS were ongoing throughout the survey until May 25 when we returned from Port Alexander to resume work at Cape Ommaney. At that time the HDMS failed completely and we switched to the vessel's TSS DMS2-05 system. Winfrog software experienced 3 crashes that were dealt with quickly. When failures in either of these systems occurred, the lines were broken off, the systems brought back on line then the lines were resumed.
2. There were no special problems associated with budgeted expenditures.

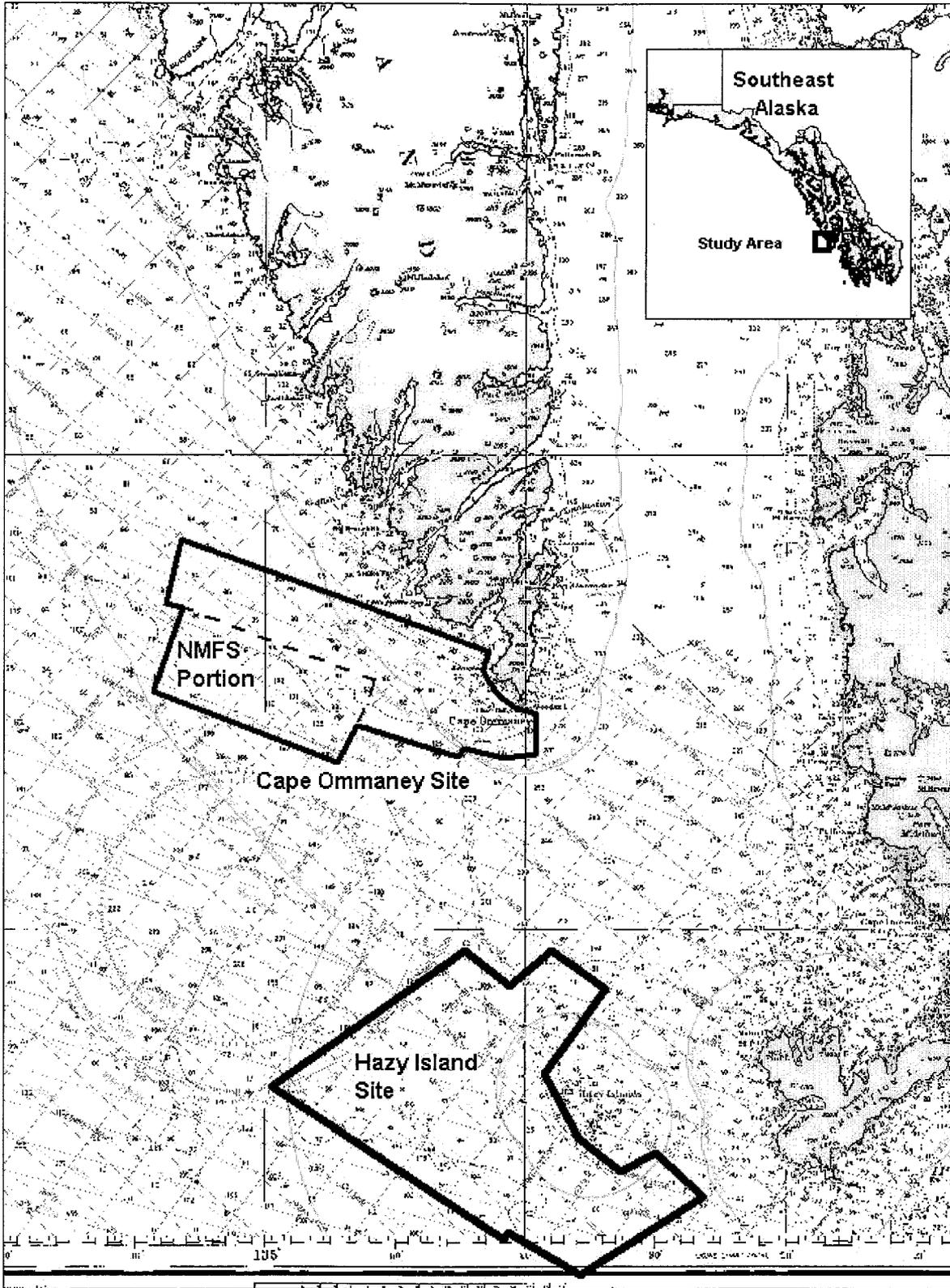


Figure 1. Multibeam survey sites, Southeast Alaska, May 2001. "NMFS Portion" refers to a *Primnoa* coral area of interest to Auke Bay Laboratory scientists.

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