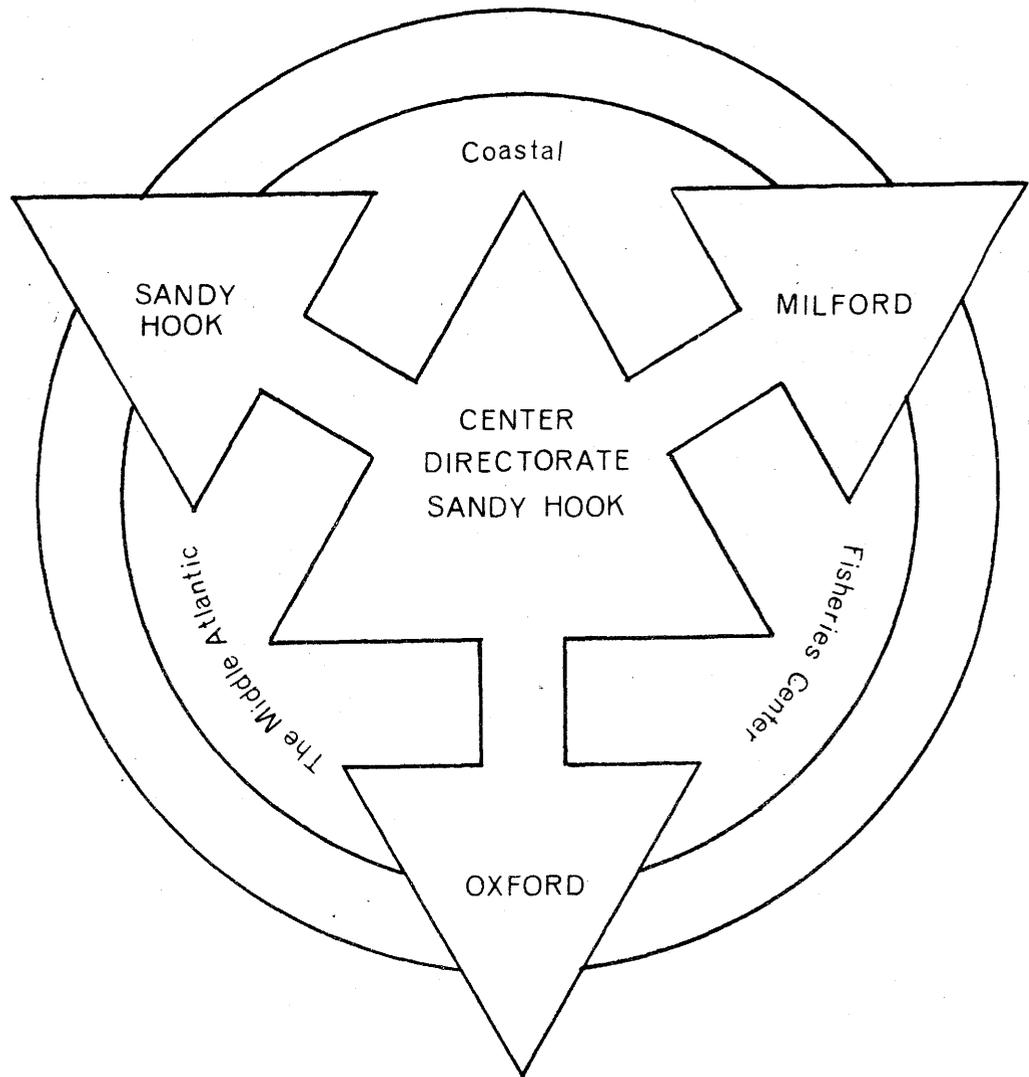


DRAFT RESEARCH PROPOSAL FOR FY 1976
MESA-NYB FUNDING: "RELATION OF BENTHIC POPULATIONS
TO GROUND FISH"



U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Northeast Region

MIDDLE ATLANTIC COASTAL FISHERIES CENTER



Informal Report No. 56

March 26, 1975

DRAFT

Research Proposal

Submitted by

Middle Atlantic Coastal Fisheries Center
National Marine Fisheries Service
National Oceanic and Atmospheric Administration

to

MESA-New York Bight Project Manager
Marine Ecosystems Analysis Program
Environmental Research Laboratories
National Oceanic and Atmospheric Administration

for support of studies on:

RELATION OF BENTHIC POPULATIONS TO GROUND FISH

Total Amount Requested: \$ 89,400.00

Date: _____

Approved by: _____
Principal Investigator
(201) 872-0200

Carl J. Sindermann
Director, Middle Atlantic Coastal Fisheries
Center

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RELATION OF BENTHIC POPULATIONS TO GROUND FISH
(Narrative summary of proposed research)

We propose to undertake a study of the importance of benthic organisms as food for groundfish. Groundfish inhabit much of the area of the New York Bight at one season or another, many migrating to the deeper waters of the Atlantic Shelf to overwinter and returning to the shallow coastal waters for the summer. Migration occurs during the spring and fall months and pathways may follow the distribution and abundance of the benthos on which the fish depend for food.

Trawl samples will be taken during routine monthly surveys. The area of the monthly surveys is within the New York Bight from nearshore to 200 fathoms. Samples will be taken for hydrography, groundfish and macro-invertebrates.

Samples will be taken in areas of high density of groundfish and of known diversities of benthic invertebrates. A Yankee #36 trawl with an 80-ft. chain sweep will be used to collect groundfish and the larger invertebrates. A 30-inch Digby Dredge with a 1/2-inch stretched mesh liner will be used to collect additional quantities of invertebrates. Samples will be taken from 4 stations during 10 monthly cruises for a total of about 40 stations for the year. The stomachs of 25 selected flatfish, with emphasis on the summer flounder, will be saved from each cruise, which will total about 1,000 stomachs for the year. Standard salinity and temperature measurements will be taken at each station.

All fish and macro-invertebrates will be sorted, measured, and weighed aboard ship, and the unidentified specimens frozen and returned to the laboratory for further study. The material from the dredge will be partially sorted and preserved; a portion of each sample will be frozen for later sorting, identification, and preservation of the smaller specimens. The stomachs of the selected fishes will be excised and preserved with the fishes they came from for study in the laboratory. The stomach content will be sorted and identified in the laboratory.

The data will be analyzed to establish relationship of stomach contents of flatfish to benthos as a function of natural and contaminant variables, in the area where each station was taken. The results which will include estimates of the reduction in availability of food due to contamination, will be prepared for inclusion in a major MESA report.

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Work Unit: Title: Relation of Benthic Populations to Groundfish

BUDGET SUMMARY - FY 1976

	<u>% Time</u>	<u>MAN-MONTHS</u>	<u>MESA FUNDS</u>
<u>Personnel Service</u> (15% Benefits - Leave Surcharge, etc.)			
<u>Name or Position</u>			
Dr. A. Merrill, Dir. of Invest.	GS-15 10	1.2	3.9
C. MacKenzie, Fish. Biol.	GS-12 100	12.0	23.4
Biometrfician	GS-12 25	3.0	5.3
(2) Student Trainees, Bio. Sci.			
Bioll Aid.	GS-4 100	18.0	13.4
Overtime		<u>1.5</u>	<u>2.0</u>
		35.7	<u>48.0</u>
<u>Travel</u>			2.0
<u>Transportation of Things</u>			.5
<u>Printing and Reproduction</u>			.3
<u>Computer</u>			3.0
<u>Support Services</u>			.3
<u>Supplies and Expendables</u>			<u>13.0</u>
<u>Total Direct Funds</u>			67.1
<u>Total Support Funds</u>			<u>22.3</u>
Total Funds			89.4