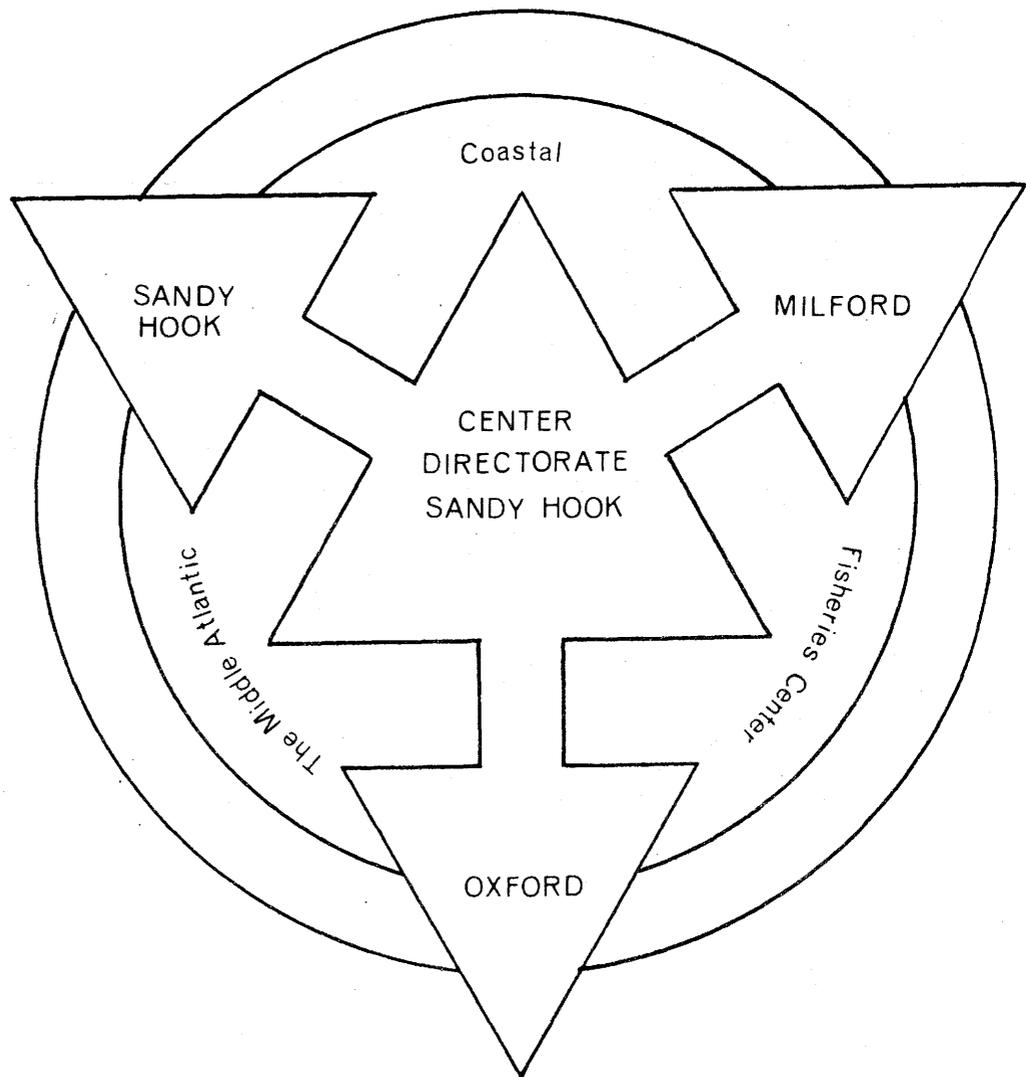


DRAFT RESEARCH PROPOSAL FOR FY 1976
MESA-NYB FUNDING: "ROLE OF THE HUDSON SHELF VALLEY
IN MIGRATIONS OF FISH AND CRUSTACEANS"



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

MIDDLE ATLANTIC COASTAL FISHERIES CENTER



Informal Report No. 55

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:

ROLE OF THE HUDSON SHELF VALLEY IN MIGRATIONS
OF FISH AND CRUSTACEANS

Total Amount Requested: \$ 110,800.00

Date: _____

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

Carl J. Sindermann
Director, Middle Atlantic Coastal Fisheries Center

ROLE OF THE HUDSON SHELF VALLEY IN MIGRATIONS
OF FISH AND CRUSTACEANS

(Narrative summary of proposed research)

The Hudson Shelf Valley is considered to influence migrations of certain fish and shellfish species, and possibly to act as a concentrating mechanism for some species. Additionally, there is some evidence that dumped materials from the NYB apex may be moving down the valley. For these reasons it seems important to conduct specific fish and shellfish surveys in the Valley and contiguous shelf areas -- augmenting this Center's monthly and biannual fish survey cruises.

We propose that a concentrated effort be made during two 10-day periods (spring and fall) to compare fish and shellfish populations in the Hudson Shelf Valley with that of contiguous areas of the shelf on either side in depths of 5 to 60 fathoms. Samples will be taken of groundfish and larger invertebrates.

Samples will be random within established MARMAP strata. A #36 Yankee trawl with a 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 the macro-invertebrates. Operations will be continuous, with about 10 stations completed per day for a total of 70 to 110 samples, depending upon weather conditions and the size of the samples. Standard salinity and temperature measurements will be taken at each station.

All fish and macro-invertebrates from the trawl will be sorted, measured, and weighed aboard ship and the unidentified specimens, as well as selected identified 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.

It is important that associated hydrographic, geological, and chemical data be collected during these surveys, but we have not included these as part of this proposal, on the assumption that other groups will submit separate proposals for such studies. As examples

of what is needed, three standard Phleger cores should be taken from grab samples at each station. Two cores should be frozen and saved for sediment and chemical analyses, including heavy metals, pesticides, and hydrocarbons. Benthic populations should be assessed in subsequent years of the study. Hydrographic and sediment conditions as they affect animal density and distribution should be compared with samples from the areas inside and outside of the Valley. Historical data from the study area should be analyzed and incorporated where feasible.

Work Unit: Title: Role of the Hudson Shelf Valley in Migrations of Fish and Crustaceans

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
*Dr. K. McNulty, Fish. Biol.	GS-14	5	0.6	1.6
T. Azarovitz, Fish. Biol.	GS-11	10	1.2	2.1
J. LeBaron, Computer Prog.	GS- 9	25	3.0	3.7
Biometrician	GS-12	25	3.0	12.1
Fishery Biologist	GS- 7	100	12.0	5.3
Student Trainee, Bio. Sci.				
Biol. Aid.	GS- 4	100	12.0	8.9
Overtime			<u>3.8</u>	<u>5.0</u>
			36.8	42.6
<u>Travel</u>				3.2
<u>Transportation of Things</u>				.6
<u>Printing and Reproduction</u>				.8
<u>Computer</u>				2.5
<u>Contracts</u>				2.0
<u>Support Services</u>				.5
<u>Supplies and Expendables</u>				<u>30.9</u>
<u>Total Direct Funds</u>				83.1
<u>Total Support Funds</u>				<u>27.7</u>
Total Funds				110.8

* MESA Coordinator