

# LINKAGES

## Coordination Highlights of the NORTHEAST FISHERIES CENTER

*January 1987*

### Fisheries Management

1. The New England Council met on 6 January in Danvers, MA to discuss, among other items, (a) the development of the Atlantic Salmon Fishery Management Plan (FMP), (b) the Development of a Secretarial Multi-Species FMP by NEFC and the NMFS Regional Office, and (c) the work of the Multi-Species Technical Monitoring Group and the Council's Multi-Species Amendment timetable.

2. The Mid-Atlantic Council met 7-8 January in Atlantic City, NJ, and voted to begin work, on a priority basis, on Amendment #8 to the Surf Clam/Ocean Quahog FMP. Development of Amendment #8 was not expected to delay work on the Summer Flounder FMP, although work on the Bluefish FMP could end up sliding just a bit.

Formal reports covering both meetings are available from RPAC for those having an interest in further details on the above items or on other Council discussions and actions.

Contact: Ed Bowman (617/548-5123, x249)

### Remote Sensing

Atmospherically and geographically corrected digital data of sea surface temperature off the east coast from NOAA satellites can now be received at the Woods Hole Laboratory, NEFC. The images are accessed from the NEARSS archives at the University of Rhode Island. An IBM XT has been modified to serve as a NEARSS terminal; it receives a 512 x 480 digital image in approximately 20-30 minutes by voice telephone communications. Images may be stored on soft disc and analyzed at any time. A color printer is available to print the images. Although still being modified, the current applications software makes it possible to display the images in shades of gray or color, enhance, pull out temperature values, determine the location of a particular pixel, zoom, overlay a geographic grid of 10 or larger, and run cruise tracks. The terminal is maintained by the Physical Oceanography Branch, EPD, and may be used by others at NEFC. Arrangements for use of the terminal should be made through Dr. Ronald Schlitz, x211.

Contact: Helen Mustafa (617/548-5123, x244)

## Sea Grant

NEFC experts contributed comments on fisheries-related projects of the New Jersey Marine Science Consortium 1987-88 Proposed Program. The on-site review for the program took place this month. Fisheries-related projects included:

- o Demand and Economic Benefits of New Jersey's Marine Recreational Fisheries;
- o Genetic Factors Associated with Disease Resistance and Growth Rates in Oysters;
- o Physiological Factors Associated with MSX Mortality Resistance in Hatchery-produced Oysters;
- o A Biological Test of the Spawner Sanctuary Project;
- o Site-selection of Proposed Spawner Sanctuary Project;
- o Implementation and Evaluation of Co-management in the Shellfisheries;
- o Social and Cultural Aspects of Regulation in the Surf Clam and Ocean Quahog Fisheries;
- o Use of Numerical Circulation Modeling to Define Oyster Larva and Spat Distribution.

Summaries of these and other projects from the proposed program may be obtained from RPAC.

Contact: Helen Mustafa (617/548-5123, x244)

## Vessel Operations

1. The DELAWARE II completed Parts I and II of the winter MARMAP I (Ichthyoplankton, Zooplankton, and Oceanography) Survey. Part II was curtailed five days due to adverse weather.

2. The Polish vessel ADMIRAL ARCISZEWSKI arrived in Boston on 14 January and departed two days later to begin Part I of the Atlantic Mackerel Research Fishery Survey. In addition to trawling, the vessel will tow bongo nets in an attempt to collect egg and larval life stages of mackerel. The vessel has been outfitted with a special variable speed winch for such purposes.

Contact: H.C. Boyar (617/548-5123, x235)

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## Coordination Highlights of the NORTHEAST FISHERIES CENTER

February 1987

### Fisheries Management

1. The New England Council met on 4 February 1987 to discuss groundfish and the development of Amendment #1 to the Multi Species Fishery Management Plan; the management regime for sea scallops; and, an increase in the 1987 TALFF for Loligo , squid.

2. The Mid-Atlantic Council met during 25-25 February 1987 to consider a research proposal to study density-dependent growth of surf clams in the Chincoteague, VA, area. In addition, the Council discussed the development of their Summer Flounder Fishery Management Plan and heard a presentation on "The Fish and Seafood Promotion Act of 1986."

Formal reports covering both meetings are available from RPAC for those having an interest in further details on the above items or on other Council discussions and actions.

Contact: Ed Bowman (617/548-5123, x249)

### Remote Sensing

Two more institutions recently joined the NEARSS Association, bringing membership up to 18 institutions in the Northeast. The new members are: Complex Systems Research Center, University of New Hampshire; and, Department of Earth and Planetary Sciences, Harvard University.

Contact: Helen Mustafa (617/548-5123, x244)

### Sea Grant

The on-site review of the Connecticut Sea Grant Proposal for 1987 - 1988 took place this month. Project proposals were in the areas of marine biotechnology, living resources and marine animal husbandry, coastal processes and engineering, environmental studies, marine economics, education, advisory services and program management. Research projects included:

Strain selection in Laminaria longicruris for development of maximum biomass; Control of reproduction and growth regulation in crustacean resources;

Marine microorganisms as a potential source for

antitumor compounds;

Chemical control of the marine fish parasite,  
Amyloodinium ocellatum;

Importance of competing sessile species to the  
survivorship of juvenile oysters;

Field mortality rates of neoplastic versus  
nonneoplastic soft-shell clams;

Remote bathymetry of coastal shallow waters using  
Landsat Thematic Mapper data;

Release of soluble contaminants from dredge spoils  
mounds;

Theoretic and laboratory studies and their application  
to engineering design;

Low-cost, digital, seismic system for shallow water  
applications;

Historical record of metal pollution and benthos in the  
Connecticut River estuary;

A three-dimensional circulation model of Long Island  
Sound; and,

Managing the realities and perceptions of the health  
risk from molluscan shellfish ingestion.

Project summaries are available at RPAC.

Contact: Helen Mustafa (617/548-5123, x244)

### Vessel Operations

1. The DELAWARE II completed Cruise 87-02 (Gear Testing). The cruise was designed to: (1) compare the use of Norwegian and Portuguese trawl doors; (2) test the scanner and mensuration system; and (3) collect biological samples of invertebrates and fish. Seven of the eleven scheduled days were lost because of adverse weather, a two-day delay in sailing, and a detail by the US Coast Guard to a search and rescue mission.

2. The Polish vessels ADMIRAL ARCISZEWSKI and KUBLIN have continued to fish for mackerel. Catches by the ARCISZEWSKI have ranged from 0.1 to 20.5 metric tons per tow (mode of 20.0). Catches by the KUBLIN ranged from 0.1 to 18.6 metric tons per tow (mode of 6.0).

Contact: H.C. Boyar (617/548-5123, x235)

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## Coordination Highlights of the NORTHEAST FISHERIES CENTER

*March 1987*

### Fisheries Management

1. The New England Council met on 4 March 1987 to discuss previously adopted Council positions relating to the development of an amendment to the Multispecies Fisheries Management Plan. The discussions ended with the Council voting to formally adopt the positions and to direct their staff to begin preparation of Amendment 1.

Another item discussed at length was the gear conflict issue between gillnetters and party boat operators. Following testimony from both sides of the conflict, the Council voted to request that the Secretary of Commerce, by emergency action, establish and implement regulations that close an area of Stellwagen Bank and an area on Jeffreys Ledge on an alternating, one-week basis. When one area is closed to one user group the other will be open, and vice versa.

2. The South Atlantic and Mid-Atlantic Councils met in a joint session during 25-26 March 1987 in Fort Pierce, Florida. The meeting was devoted to a series of discussions concerning: (1) the status of the tuna fishery; (2) management options for longline fisheries; (3) management options for billfish; (4) a Council Chairmen's meeting; (5) law enforcement; and (6) habitat issues.

Reports of both meetings are available from RPAC for those having an interest in further details.

Contact: Ed Bowman (617/548-5123, x249)

### Marine Recreational Fisheries

About five years ago, staff at the Center's Gloucester Laboratory prepared a comprehensive treatise of the care, handling, and home processing of recreationally-caught fish. Reviewers outside NMFS praised the document and predicted that a popularized version would become the "bible" in its field. Arrangements were made with the Sport Fishing Institute to rewrite parts that were too technical or ponderous for the public, and to handle publication of the final product. The publication, entitled: "The Angler's Guide to Fish as Food," will be available this spring from Osprey Books, Huntington, NY, for \$14.95. If the publication lives up to the promise of the manuscript, the Tech Lab may make the best seller list!

Contact: Tom Morrissey (617/548-5123, x236)

## Sea Grant

The University of Rhode Island Sea Grant College Program Proposal for 1987 - 1989 was reviewed this month. Research projects seeking funding under this proposal include:

### Research in Support of Fisheries:

Evaluation and analysis of the fishing power and energy efficiency of the RI trawl fishing fleet.

Biology of Xylophaga atlantica and the development of a treatment system to prevent its infestation of wood lobster traps

Mechanisms of larval recruitment in the lobster Homarus americanus: distribution and swimming behavior of postlarvae

An investigation of seasonal growth models for fisheries

### Advancing Marine Research Techniques:

Sea surface temperature time series for oceanographic research

A search for chaos in some marine-related phenomena, through calculations of strange attractors

### Aquaculture and Seafood Products:

Endocrine control of growth and salinity tolerance in Atlantic salmon

Evaluation of a marine yeast as an inexpensive non-algal food supplement for hatchery-reared hard clam and scallop seed

Further studies on a biotechnical application of Pseudomonas syringae for energy savings and improved quality in the freezing of seafood

Development of coastal fish oil resources for potential US health industry

### Narragansett Bay Studies:

A study of growth, survival, and food habits of winter flounder larvae in Narragansett Bay

Predator prey relationships between larval winter flounder and gelatinous zooplankton in Narragansett Bay -- a laboratory and field study

The role of Crangon septemspinosa as an epibenthic predator in Narragansett Bay

A multidisciplinary approach to estimating the spatial and temporal variation in the sedimentation rate of Narragansett Bay sediments

Coprostanol as an indicator of sewage contamination in Mercenaria mercenaria from Narragansett Bay

Phytoplankton productivity: Effects of marine photochemistry and metal redox reactions

A water quality model for Mount Hope Bay and the Taunton River

A study of enforcement and compliance in the hard shell clam fishery of Narragansett Bay

### Narrow River Studies:

Development of a water quality model for Pettaquamscutt River

Fresh water inflow model for a river estuary system

Microbial microstratification, processes, and rates in the upper anoxic basin of the Pettaquamscutt River

### Coastal Lagoons and Barrier Spits:

Design and evaluation of nitrogen removal systems for individual sewage disposal in coastal communities

A long-term nitrogen enrichment study of water quality and productivity in replicate coastal lagoon ecosystems

A regional sediment budget for the south shore of Rhode Island: implications for coastal management

## Comparative Studies of Estuarine Management:

A profile of trends in the condition of United States estuaries and the activities they support

A comparative analysis of the governance of estuaries

A comparative analysis of user perceptions of estuarine governance

Contact: Helen Mustafa (617/548-5123, x244)

## Vessel Operations

1. The DELAWARE II departed for its shipyard repair period two weeks behind schedule. It will be in drydock for at least 30 days. No program days were scheduled for March.

2. The ALBATROSS IV returned to active program duty one month behind schedule. The vessel began the Spring Bottom Trawl Survey and, to-date, vessel and program operations have gone well.

3. The ADMIRAL ARCISZEWSKI and KULBIN continued their mackerel fishery research in the waters off North Carolina and Virginia. A total of 3,500 metric tons have been obtained (to-date) by both vessels. The modal catch by the ARCISZEWSKI has been 20 metric tons per tow; the mode for the KULBIN has been 2 metric tons per tow. A four-day demonstration cruise was held aboard the ADMIRAL ARCISZEWSKI for 13 guests; representatives from the two Fishery Management Councils, academia, State and Federal agencies, and industry observed fishing and processing of mackerel.

Contact: H.C. Boyar (617/548-5123, x235)

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## Coordination Highlights of the NORTHEAST FISHERIES CENTER

*April 1987*

### Estuaries

1. The first annual Narragansett Bay Symposium, sponsored by the Narragansett Bay Project and the National Sea Grant Program, was convened this month for the purpose of exchanging information on projects funded by a variety of sources including EPA, NOAA, state, and private. The status of knowledge presented will help the Narragansett Bay Project and URI Sea Grant to logically address additional research needs and current issues. Presentations were in the areas of pollution sources, chemistry, physical oceanography and modelling, geology, ecology, brown tide and marine plants, shellfish, shellfish and birds, finfish, man and Narragansett Bay, and education. A book of abstracts is available at RPAC.

2. The following documents are now available:
- NOAA Estuarine and Coastal Ocean Science Framework (Draft-16 April 1987).
  - NOAA Estuarine Program Plan (Draft 23 April 1987).
  - NOAA Estuary of the Month Reports-- Long Island Sound and Delaware Bay.
  - Narragansett Bay Project, Third Semi-Annual Report (FY86 Projects).

Contact: Helen Mustafa (617/548-5123, X244)

### Fisheries Management

1. During their April 1-2, 1987, meeting in Philadelphia, the Mid-Atlantic Fishery Management Council took several actions of interest to the Center: (a) Amendment #7 to the Surf Clam/Ocean Quahog Fishery Management Plan (FMP) was adopted for Secretarial approval; (b) the Council selected a preferred alternative for their Summer Flounder FMP that would establish a 14-inch minimum fish size north of the line connecting the points 40° 31' N latitude, 73° 58.5' W longitude and 39° 40' N latitude 72° 30' W longitude and extending seaward to the boundary of the EEZ; south of this line a 4.5-inch minimum mesh size would apply to finfish otter trawls; and, (c) the Council endorsed the New England Councils' recommendations for the hearing draft of Amendment #1 to the Northeast Multispecies FMP.

2. The New England Fishery Management Council met in Danvers, Massachusetts on April 7, 1987, to discuss: (a) research priorities, (b) foreign fishing, (c) progress on the development of alternative management approaches for the sea scallop fishery and (d) the Council's position on the implementation of an alternative-week fishing proposal to address user

group conflicts on Stellwagen Bank. Following a lengthy Council debate and public comment, the Council voted to take their draft Amendment #1 to the Northeast Multispecies FMP to public hearing during April 1987.

Reports covering both Council meetings are available from RPAC for those having an interest in further details on the above items or on other Council discussions and actions.

The New England Council will again meet May 5-6, 1987, in Newport, Rhode Island, and the Mid-Atlantic Council will meet May 13-14, 1987, in Philadelphia, PA.

Contact: Ed Bowman (617/548-5123, X249)

### Habitat Conservation

1. The Regional Action Plan (RAP) Board met on April 29, 1987. Discussion focused on the Center's and NOAA's inshore/estuarine plans and FY89 budget initiatives, and on the effectiveness of "RAP process." Washington wants comments on NOAA's plan by May 13, 1987. RPAC needs comments on the Center's plan and initiative by May 15, 1987, and will complete the entire package before the National Board of Directors meeting to be held on June 1-3 in Washington.

The Region is concerned about how well the RAP process is working, in view of the Center's present emphasis on long-term planning vs. short-term coordination and action. The Region's Habitat Conservation Branch (HCB) needs help from the Center now, before the inshore research program can be implemented. The RAP Coordinator will work with HCB to determine its highest priority needs, and with Center staff, and others to determine the best approach to meeting these needs in the near future. Various kinds of cooperative arrangements will be explored, including the "working group" or team approach concept for problem solving recommended in the RAP document.

2. HCB's recent request for Center assistance on the Grays Island project in Chesapeake Bay is an example of the kind of help the Region needs. This project will affect 90 acres of tidal waters and wetlands to enhance waterfowl populations. HCB is seeking technical expertise and assistance from Center personnel on the design, coordination, and implementation of research studies pertaining to this project.

HCB is concerned that: (1) the proposed water control structures across a tidal creek will constrict the tidal prism, reduce tidal flushing, and reduce transport of detritus and nutrients to and from the impounded marsh; (2) the structures will inhibit passage of bottom-dwelling fish and crabs during 7.5 months of each year; (3) the impounded water held over the mudflats will reduce the amount of sunlight reaching the flats, thereby reducing benthic diatom productivity during periods of tidal water retention; and (4) the extent of potential loss of smooth cordgrass that may be perpetually flooded. HCB seeks to influence the State's decision through recommendations that the applicant conduct or sponsor research and monitoring studies on project-related impacts and concerns regarding fishery

resources. Research results could be used to modify project elements to minimize impacts to fisheries. Potential adverse ecological trends detected through long-term monitoring studies could invoke a future decision to further modify or dismantle the project. Information garnered through field studies also could be applied to review of similar proposals in the future. Coordination with the Southeast Region and Center is contemplated.

3. NOAA has identified about 30 Superfund hazardous waste clean-up sites along the Northeast coast that require NMFS involvement. The Region's HCB is actively involved with several of these sites, and may need further help from the Center in assessing the impact of toxic materials. NMFS has submitted an FY89 budget estimate to NOAA requesting additional personnel, including one FTE for the Center.

Contact: Bruce Higgins (617/54-5123, X340)

#### Marine Recreational Fisheries

1. Canada, New Zealand, and Ireland have formulated formal government policies relative to their recreational fisheries. The U.S. Fish & Wildlife Service has volunteered to serve as facilitator and coordinator of an effort to formulate a National Recreational Fisheries Policy in the United States. A policy development steering committee composed of representatives of Federal (including NMFS) and State agencies, constituency groups, and the MRF industry is scheduled to meet in Washington at the end of April to scope out the initiative. Target date for official national ratification/recognition of the policy is September, 1988. Such a policy would have significant impact in shaping future management of U.S. marine and fresh water fishery resources.

2. The recently formed Atlantic States Marine Fisheries Commission's Subcommittee on Recreational Fisheries held its first meeting on April 13-14. The Subcommittee identified about 15 problems and issues for future work and possible development of recommendations to the ASMFC Scientific Advisory Committee. Highest priority of work tentatively was assigned to issues relative to MRF licensing, fisherman access, coordination of research, and habitat conservation.

Contact: Tom Morrissey (617/548-5123, X236)

#### Remote Sensing

The NEARSS Association has recently set up committees in areas of high interest to members. Terms of reference for the committee are currently being drafted. Committees and Chairmen include:  
Biological and Physical Ocean Processes-- Reed Armstrong, Northeast Fisheries Center.  
Estuaries and Wetlands-- Kim Richardson, Graduate School of Oceanography, University of Rhode Island.  
Terrestrial Processes-- David Oliver, University of Massachusetts.  
Meteorology-- Kenneth Hardy, Air Force Geophysics Laboratory.  
Aircraft Remote Sensing-- Donald Murphy, International Ice Patrol,

U.S. Coast Guard.

Communications; Demonstration-- James Gallagher, Naval Underwater Systems Center.

Next Generation NEARSS-- Technical Committee.

Educational/Outreach-- Lester Paldy/Malcolm Bowman, Marine Research Center, State University of New York.

Contact: Helen Mustafa (617/548-5123, X244)

### Sea Grant

1. The staff of the National Sea Grant Office and other select NOAA personnel meet annually to discuss the status of the National Sea Grant Program and objectives for the coming year. Sea Grant activities and trends discussed at the last meeting are summarized in the National Sea Grant College Program, Annual Retreat Report, FY86, available through RPAC.

Reports of technical specialists include: environmental studies, human resources (communication, education, and training, marine advisory extension services, marine policy and social fisheries, marine biotechnology, seafood science and technology), non-living resources (coastal processes, marine geological resources, diving physiology and technical development), and technology and commercial development (marine coastal transportation systems, marine economics, ocean engineering, marine recreation and tourism).

2. A collection of abstracts from the Nations Sea Grant Programs (Spring 1987) is now available through RPAC.

Contact: Helen Mustafa (617/548-5123, X244)

### Vessel Operations

1. The ADMIRAL ARCISZEWSKI completed Part I of the BIOMAC survey. Ninety-one plankton stations were completed in nine days. In addition to the bongo work, eight tows with the vessel's pelagic trawl were made to obtain mackerel for gonadal examination; none of the mackerel obtained were ripe.

2. The ADMIRAL ARCISZEWSKI and KULBIN are continuing with the mackerel fishery research survey. The ARCISZEWSKI has made 230 pelagic trawl sets, the KULBIN 241. The total catch of mackerel (as of 28 April 1987) is approximately 4,933 metric tons. The bycatch of other species (river herring, dogfish, silver hake, squid, etc.) has been less than one percent of the catch.

3. The ALBATROSS IV and DELAWARE II completed the spring bottom trawl survey. Most of the selected stations were sampled.

Contact: H.C. Boyar (617/548-5123, X235).

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## Coordination Highlights of the NORTHEAST FISHERIES CENTER

*May 1987*

### Habitat Conservation

1. In response to a request from the Northeast Region's Habitat Conservation Branch, coordination with the Southeast Fisheries Center's Beaufort Lab was initiated in reference to the State of Maryland's proposed Grays Island impoundment project in Chesapeake Bay. The project would result in inundation of 90 acres of salt marsh and mudflats to benefit waterfowl, and is a component of the Maryland Waterfowl Restoration Program, which has strong public and political support. The Northeast Region is seeking advice on research and monitoring studies that should be undertaken if the Corps of Engineers issues a permit for the project. The U.S. Fish and Wildlife Service has no objection to the project; however, NMFS is concerned about the potential effects of the project on fish and invertebrates that utilize the affected wetlands.

2. In response to amendments to the Magnuson Fishery Conservation and Management Act and NMFS's Habitat Conservation Policy, in cooperation with the NMFS Headquarters and Northeast Regional Offices, and in recognition of the fact that all species are dependent on the quantity and quality of their essential habitats, the New England Council adopted the following habitat policy at its May meeting:

Conserve, restore and develop habitats upon which commercial and recreational marine fisheries depend, to increase their extent and to improve their productive capacity for the benefit of present and future generations.

The Council will assume an active role in protecting and enhancing habitats important to marine and anadromous fish by entering into federal decision-making processes where proposed actions may otherwise compromise the productivity of fishery resources of concern to the Council. The Northeast Regional Office and Northeast Fisheries Center will be expected to take a more active role in the preparation of the habitat portions of fishery management plans.

3. The Department of the Interior's Minerals Management Service (MMS) is going forward with its scheduled Lease Sale 96 in the vicinity of Georges Bank. MMS hopes to make a decision soon on the area to be considered in the environmental impact statement. Public scoping meetings are scheduled for Portland

(ME), Boston, Hyannis, and Providence on June 15-18, 1987. The petroleum industry has expressed interest in the eastern portion of Georges Bank, along the boundary line, in blocks along the slope adjacent to the submarine canyons, and in an area south of Nantucket and Martha's Vineyard. NMFS supplied information to Senator John Kerry on its role on the Biological Task Force and its participation in the entire leasing process. The Regional Office is preparing to update the information regarding endangered species, and may need Center assistance in plotting cetacean distribution from the marine mammal data for a specific area.

Contact: Bruce Higgins (617/548-5123, x340)

### Inshore Programs

1. The NEFC Framework for Inshore Research and EPA Strategy for Marine Toxicological and Ecological Research Including Near Coastal Waters were reviewed and discussed this month at a meeting of RPAC and EPA/Environmental Research Laboratory personnel at Narragansett, Rhode Island. Discussion of the two documents was of a general nature. Specific activities and coordination will be discussed by experts at another time when the NEFC inshore research initiative (ESCORT) and the EPA plan of action have been completed.

2. An Estuarine Instrumentation Conference sponsored by the New England Chapter of the Marine Technology Society and Exhibitors was held at the University of Rhode Island this month. The conference theme was whether or not technology limits our understanding of estuaries and our ability to manage them. Estuarine parameters that are necessary to measure and instrumentation for measuring the identified parameters were discussed. As a result of the subject conference, four papers will be written by groups of scientists and engineers for presentation at the International Estuarine Research Conference scheduled for New Orleans 25-29 October 1987: (1) large scale flux measurements, (2) fluxes of dissolved particles and species arrays in the sediment and water interface, (3) mechanical vision/image analysis of particle populations, and (4) spot-to-volume surveys. Conference documents, including descriptions of relevant equipment available from the exhibitors, are on file at RPAC and available for Center personnel use.

3. The Chesapeake Bay Plume Study: Superflux In situ Data Report is now available. The report represents a compilation of in situ data collected during three cruises (March, June, and October 1980) that examined the Chesapeake Bay plume and adjacent coastal waters as part of a joint NOAA/NASA/academia remote sensing experiment called Superflux. The purpose of the experiment was to track the areal extent and assess the impact of

estuarine outflows, and attempt to develop a sensible package of airborne sensors for monitoring estuarine and marine waters. As a result, an integrated synoptic database for the future evaluation of coastal water resources and environmental problems was produced. The report is complementary to the Chesapeake Bay Plume Study: Superflux 1980 proceedings of a symposium held in Williamsburg, Virginia, in January of 1981.

Contact: Helen Mustafa (617/548-5123, x244)

### Fisheries Management

1. The New England Council met 5-6 May 1987 in Newport, Rhode Island, to discuss the final provisions and the wording to be included in Amendment #1 to the Northeast Multispecies Fishery Management Plan. While the major part of the Council meeting was devoted to Amendment #1, it was a productive discussion, and culminated in the Council voting to adopt the Amendment and to forward it to the Secretary of Commerce for approval. Four Council members, including the Acting Regional Director for NMFS, voted in opposition to the adoption.

In other actions, the Council voted to adopt a habitat policy statement (see item #2 under Habitat Conservation), but declined to establish a habitat oversight committee. The Council also approved, in part, a joint venture application by Mayflower International - Faroe Islands involving red and silver hake, Loligo and Illex squid, and Atlantic mackerel. The next meeting of the Council will be 9-10 June 1987 in Hampton, New Hampshire.

2. The Mid-Atlantic Council met 13-14 May 1987 in Essington, Pennsylvania. The meeting was dominated by reports with few actions. The Council disapproved the Mayflower - Faroe Islands joint venture application (see item #1 above) by voting not to allocate any silver, red, white, or spotted hake on the east coast to joint ventures. The next meeting of the Mid-Atlantic Council will be 24-25 June 1987, again in Essington, Pennsylvania.

Detailed reports covering both Council meetings have been prepared and are available through RPAC.

Contact: Ed Bowman (617/548-5123, x249)

### Sea Grant

The Woods Hole Oceanographic Institution Sea Grant Program will sponsor a Bluefin Tuna Handling Workshop on Tuesday, June 30. The purpose of the workshop is to inform Massachusetts tuna fishermen of on-board handling techniques for bluefin tuna, and

to provide a forum for informal discussion between tuna fishermen and tuna specialists/buyers. The program will include presentations on tuna utilization and the reason for the high Japanese demand, on-board handling techniques, why bluefin tuna are hot and must be cooled quickly, body bags for large tuna, quality criteria, and dock-side marketing.

Contact: Helen Mustafa (617/548-5123, x244)

### Vessel Operations

1. The Polish vessels ADMIRAL ARCISZEWSKI and KULBIN completed Part V of the Atlantic Fishery Research Survey. In addition to the standard work with the pelagic trawl, the ARCISZEWSKI completed a 13-day BIOMAC survey (begun in April) in the Mid-Atlantic Bight, which involved towing a bongo net array at selected MARMAP I stations). The KULBIN completed a larval gadoid survey for eight days on Georges Bank using an Isaacs-Kidd trawl. Both vessels have departed for Poland.

2. The Polish vessel WIECZNO arrived at Woods Hole in May and has been geared to continue the BIOMAC survey.

3. The ALBATROSS IV completed the last part of the Spring Bottom Trawl Survey, a Current Meter Deployment Cruise, and a Hydrography and Sediment Sampling Survey. The DELAWARE II completed Parts I and II of a MARMAP Survey, and is currently completing Part III.

Contact: H.C. Boyar (617/548-5123, x235)

#### SPECIAL NOTICE TO READERS

LINKAGES has been published monthly since July 1986. If you would like copies of any back issues, contact John Boreman at Woods Hole (617/548-5123, x225).

# LINKAGES

## Coordination Highlights of the NORTHEAST FISHERIES CENTER

June 1987

### Inshore Programs

1. Boston Harbor and Massachusetts Bay: Issues, Resources, Status and Management, the proceedings of a seminar sponsored by the NOAA Estuarine Programs Office, is now available. The volume contains papers on the following topics: (1) Historical Perspective and Overview; (2) Sewage Management; (3) Fisheries: Past, Present, and Future; (4) Status of the Habitat: Chemical Considerations; (5) Hepatic Histopathology of Winter Flounder from Boston Harbor (presented by Dr. Robert Murchelano of NEFC); (6) Multiple Uses and Management; and (7) Partial Bibliography for Boston Harbor and Massachusetts Bay.
2. The NOAA Estuarine Programs Office has recently released a series of booklets on NOAA's activities in estuaries. Included in the series are NOAA Involvement in Long Island Sound and NOAA Involvement in Narragansett Bay.

Contact: Helen Mustafa (617/548-5123, x244)

### Fisheries Management

1. During their 9-10 June 1987 meeting in Hampton Beach, New Hampshire, the New England Council took the following actions: (1) to reaffirm their position of 1984 to prepare a herring management plan upon firm indication of the recovery and rebuilding of the Georges Bank herring stocks, (2) to approve Amendment #2 to the American Lobster Fishery Management Plan (FMP) for submission to the Secretary of Commerce, (3) to approve for public hearings a summary of Amendment #2 to the Sea Scallop FMP, and (4) to support a minimum fish size rather than the variable season closure provision as presently contained in the Swordfish FMP. The next meeting of the Council will be 7-8 July 1987 in Danvers, Massachusetts.
2. The Mid-Atlantic Council met 24-25 June 1987 in Philadelphia, Pennsylvania, to discuss: (1) the preferred

management alternative for the Summer Flounder FMP, (2) NMFS's proposed 601 regulations for Councils and FMPs, and (3) NOAA responses to the Task Force Report. The Council also received a variety of special interest reports. The next meeting of the Council is presently scheduled for 5-6 August 1987, again in Philadelphia.

Details of the foregoing meetings can be found in separate reports available from RPAC.

Contact: Ed Bowman (617/548-5123, x249).

### Habitat Conservation

1. Habitat Conservation Branch staff from Oxford met on 2 June with Southeast Region and Beaufort Lab staff at Beaufort NC to discuss the State of Maryland's proposal to impound about 90 acres of estuarine wetlands (Grays Island Impoundment Project). A tentative 5-year study was proposed.
2. A recommendation was submitted through the Regional Office to NOAA in Washington that the Department of the Interior's Minerals Management Service (MMS) use an approach to conflict resolution for the North Atlantic OCS planning area very similar to that tested last year by the Institute for Resource Management (IRM) in the Bering Sea off Alaska. This approach involved prolonged negotiations by high-level representatives of the oil industry, environmental community, fishing industry, native groups, and other interested parties, including the Conservation Law Foundation of New England. NMFS recommended that MMS use the IRM approach to resolve both the Congressional Moratorium issue (which bans leasing on most of Georges Bank) and the issue of what areas should (and should not) be offered in Sale 96.

Contact: Bruce Higgins (617/548-5123 x340).

### Marine Recreational Fisheries

On 9-10 June 1987, NOAA staff met with 15 representatives of the marine recreational fishing (MRF) industry. The representatives were invited to Washington, DC, by the Assistant Administrator for Fisheries, Dr. Bill Evans, to help NOAA develop a more effective MRF policy. NOAA staff are preparing a report based on the meeting which includes a discussion of issues and

priorities. The report will be used in discussions with MRF constituents at-large (e.g., in the Regions) to form a national consensus, including specific recommendations for program emphasis to guide NOAA planning and activities.

Contact: Tom Morrissey (617/548-5123, x236)

#### NMFS Northeast Regional Office

The NMFS Northeast Regional Office is moving ahead with plans to publish a bimonthly newsletter on a trial basis. The purpose of the publication would be to further develop public relations in the northeast. The Region is developing a master mailing list consisting of key people in the states, academia, commercial and recreational fishing industries, and related associations who are active in marine fisheries affairs. A target date in the last half of August is contemplated for the first mailing.

Contact: Ed McLeod (617/281-3600)

#### Vessel Operations

1. The DELAWARE II completed Part II of the MARMAP I Cruise 87-04 and the Juvenile Fish Survey 87-05. The ALBATROSS IV completed the Juvenile Fish Survey 87-04. The Polish vessel WIECZNO completed Parts I and II of the BIOMAC Survey, Cruise 87-01.
2. The total weight of mackerel obtained by the Polish vessels ADMIRAL ARCISZEWSKI and KULBIN during Cruise 87-01 (Parts I-V) was approximately 5,800 metric tons. The bycatch of all other species was less than 5% of the total catch.

Contact: H.C. Boyar (617/548-5123, x225).

# LINKAGES

## Coordination Highlights of the NORTHEAST FISHERIES CENTER

*July 1987*

### Inshore Programs

The Northeast Fisheries Center is in the process of finalizing the third year of projects to be funded under the Cooperative Agreements with Maryland DNR, VIMS, the District of Columbia, and Penn State University for work to be performed under the auspices of the Chesapeake Bay Stock Assessment Committee. A major undertaking with FY87 funds will be the formulation of a Bay-wide plan for fishery-independent sampling of the major fish stocks. Maryland and Virginia have agreed to work together in designing the sampling strategy, gear, and data archiving procedures for the Bay-wide program. The Stock Assessment Committee considers this work a major step forward in the completion of the Bay-wide assessment plan. Future cooperative research "modules" will include fishery-dependent sampling (collection of consistent fisheries statistics in the Bay region), recruitment studies, and systems analysis and modelling.

Contact: John Boreman (617/548-5123, x225)

### Marine Recreational Fisheries

In 1986, the Atlantic States Marine Fisheries Commission (ASMFC) implemented an artificial reef program having the following objectives:

1. To encourage planning of State artificial reef programs.
2. To share information on siting, construction, research, and management of artificial reefs.
3. To encourage evaluation of artificial reef costs and benefits.
4. To define the appropriate role of artificial reefs in an overall fisheries management program.

The ASMFC Artificial Reef Program is conducted through the

Commission's Advisory Committee on Artificial Reefs. Membership on the Committee includes representatives of the States of Maine to Florida, the District of Columbia, the Sport Fishing Institute, the U.S. Fish and Wildlife Service, and NMFS's Washington Office (F/CM3), Southeast Region, and Northeast Region.

To date, the Committee has met to establish priorities of Committee activities and to review current and planned State artificial reef programs. Based on the review, the Committee is preparing a report to ASMFC on the status of artificial reef programs on the Atlantic Coast. In a meeting scheduled to be held in Annapolis during 11-13 August 1987, the Committee will focus on the question of fish aggregation vs fish production of artificial reefs. The meeting will be open to any researcher or fishery manager interested in presenting relevant points-of-view.

At the initial meetings of the Committee, a consensus developed that artificial reef programs should not be conducted solely to provide recreational fishing opportunities. Existing sites have demonstrated that the value of artificial reefs may be to both commercial and recreational fisheries.

Contact: Tom Morrissey (617/548-5123, x236)

### Vessel Operations

1. Two juvenile fish surveys were conducted aboard the DELAWARE II on Georges Bank. High densities of 0-group gadids (haddock and cod) were obtained during the cruise; up to 3,856 specimens were sampled per 30-minute tow. During the second survey, joint studies were conducted with the Canadian R/V A. NEEDLER to compare catchability of 0-group gadids with an IYGPT trawl versus a standard bottom trawl.
2. Parts I and II of the Sea Scallop Survey were completed aboard the ALBATROSS IV. The areas of study were the waters of the mid-Atlantic and southern New England. As in past years, most of the scallops were collected from the mid-Atlantic. Catches ranged from 0 to 11,000+ scallops per 15-minute tow.
3. The detailed schedules for the ALBATROSS IV and DELAWARE II in FY88, submitted by the Center in June to the Atlantic Marine Center (AMC), have been reviewed and approved.

Contact: H.C. Boyar (617/548-5123, x225).

# LINKAGES

## Coordination Highlights of the NORTHEAST FISHERIES CENTER

September 1987

### Inshore Programs

1. The Northeast Fisheries Center Framework for Inshore Research has been published as NOAA Technical Memorandum NMFS-F/NEC-49. Copies of the memorandum together with the initiative, Estuarine and Coastal Research Thrust (ESCORT), have already been distributed to all Center components. Copies are now being distributed to the Center's cooperators and others with interest in the inshore environment.
2. The 1986 Annual Report to the Under Secretary, developed by NOAA Estuarine Programs Office is now available. The report addresses: (1) significant accomplishments of the Estuarine Programs Office, (2) NOAA Estuarine and Coastal Ocean Science Framework, (3) NOAA activities in estuaries, (4) Federal estuarine and coastal ocean activities, and (5) national estuarine needs from a regional perspective.

Contact: Helen Mustafa (617/548-5123, x244)

### Fisheries Management

1. The New England and Mid-Atlantic Councils met in joint sessions on 16-17 September 1987 in Williamsburg, Virginia. The entire meeting consisted of four panel discussions on the following topics: (1) Joint Ventures: Past, Present, and Future; (2) Americanization of the Atlantic Mackerel Fishery; (3) Cost Effective Law Enforcement; and (4) Ecosystem Management. For the most part, discussion stimulated thoughtful questions by Council members and extensive dialogue with panel speakers.
2. The Mid-Atlantic Council met on 22-23 September 1987 in Philadelphia. Bob Martin was again elected Chairman for the 1987-1988 term of office, and Mr. James McHugh was elected Vice Chairman. The major purpose of the meeting was to set the 1988 quota specifications for the two squids, Atlantic mackerel, and butterfish, as well as for surf clams and ocean quahogs.

3. Bob Martin and Clarence Pautzke, Deputy Director of the North Pacific Council, have completed and sent out for review the package entitled "Council Proposed 601 Regulations and 602/603 Guidelines." The Center has received the package for review and that process is underway. This review is preparatory to a meeting scheduled for early November in Denver, where the proposed regulations and guideline will be discussed.

Contact: Ed Bowman (617/548-5123, x249).

### Habitat Conservation

The Department of the Interior's Minerals Management Service (MMS) is in the last stages of preparing the Draft Environmental Impact Statement (DEIS) for OCS Lease Sale 96 in the North Atlantic. The DEIS should be completed by mid-November. MMS has asked the Center to supply additional fisheries information, and will give NMFS an opportunity to review this information before releasing the DEIS for public review. MMS has scheduled a meeting of the North Atlantic Regional Technical Working Group on October 29 in Albany, New York, to discuss this sale and the DEIS.

Contact: Bruce Higgins (617/548-5123, x340)

### Marine Recreational Fisheries

The Director of the Northeast Fisheries Center attended the meeting of the United Sport Fishermen held at Hyannis, MA, on 29-30 September 1987. At the meeting, Dr. William Evans discussed the issues and recommendations contained in the draft report of the Marine Recreational Fisheries Group. Other topics discussed included domestic and international considerations and interactions involved in the management of billfish and tuna resources.

Contact: Tom Morrissey (617/548-5123, x236)

## Remote Sensing

The Northeast Area Remote Sensing System (NEARSS) Association is sponsoring a seminar on NASA's Ocean Data Acquisition System (ODAS), by Dr. Wayne Esaias (Project Scientist, NASA/Goddard Space Flight Center), on 9 October 1987, beginning at 10:00 AM, at Corless Auditorium on the Bay Campus of the University of Rhode Island. Dr. Don Murphy (International Ice Patrol, U. S. Coast Guard), Chairman, NEARSS Aircraft Remote Sensing Committee, will serve as Moderator.

ODAS includes a sensor that can be mounted on a small aircraft to be flown over coastal and estuarine waters to measure sea surface temperature and water color (phytoplankton pigment and seston). Data may be transmitted to ships or ground-based stations to guide in situ sampling programs. A discussion of ODAS' utility in the Northeast will follow the presentation.

Contact: Helen Mustafa (617/548-5123, x244)

## Sea Grant

1. The Second Annual NMFS - Sea Grant Retreat in the Northeast was held October 28-30 1987, at the New England Center, University of New Hampshire, Durham. Forty-five persons, representing NMFS (NEC and NER), the Sea Grant College Programs in the Northeast, and the Office of Sea Grant and Extramural Programs were in attendance. Allen Peterson (F/NEC), Richard Schaefer (F/CM), Jon Rittgers (F/NER), and Ned Ostenso (R/SE) made the introductory statements. Presentations in the general session included: new Sea Grant initiatives/programs; new NMFS initiatives/programs (National-Interjurisdictional Fisheries Act, and the NEFC Framework for Inshore Research and ESCORT); and highlights of ongoing cooperative efforts (fishery conservation engineering efforts in the Northeast, and Northeast Region S-K Program for the coming year).

William Rickards, Director of the Virginia Sea Grant College Program, reviewed last year's retreat and presented the charge to the committees (Research Coordination and Data Information Exchange, Technology Transfer/Extension, Habitat Evaluation/Conservation, Fisheries Development and Seafood Utilization, Recreational Resources, and Great Lakes Initiative/Development) which identified issues to address and developed their plans of action for the coming year.

Plans are to convene the Third Annual Retreat late in the

fall of 1988 in the Middle-Atlantic region. The date and place of this meeting will be confirmed and announced within a month.

2. The University of Maryland Sea Grant College Proposal 1988-89 is now available. Research projects include:

Immune Status and Susceptibility to Disease in the Oyster;

Influence of Complex Biofilms and Adsorbed Pollutants on Oyster Set and Survival;

The Role of Picophytoplankton in the Nutrition of Larval and adult Oysters (Crassostrea virginica);

Mitochondrial DNA Analyses of Year Class Variation in Chesapeake Bay Populations of Striped Bass;

Population Biology of Bay Anchovy in Mid-Chesapeake Bay;

Striped Bass and Hybrid Striped Bass Larval/Juvenile Nutrition and Energetics;

Genetic Engineering of Fish;

The Use of Synthetic Fish Growth Hormone to Enhance Fish Growth;

Hormonal Regulation of Gametogenesis in Striped Bass, Morone saxatilis;

Biological Filter Design for Crab Shedding and Aquaculture;

An Economic Analysis of the Decline in Maryland Seafood Processing;

Studies on the Role of Marine and Estuarine Bacteria in the Production of Tetrodotoxin and Saxitoxin-Related Compounds;

Production and Fate of Phytoplankton Biomass in the Mesohaline Reach of Chesapeake Bay;

The Long Term Record of Community Structure in Chesapeake Bay;

The Control of Trace Metal Toxicity in Chesapeake Bay by Dominant Phytoplankton;

The Determination of Ultratrace Concentrations of Tributyltin Species in Chesapeake Bay Sediment by Simultaneous Hybridization/Extraction with GC/FPD Detection;

An Analysis of Normative and Conceptual Issues in the Regulation of Biotechnology in the Nation's Bays and Estuaries.

Contact: Helen Mustafa (617/548-5123, x244)

Vessel Operations

1. The DELAWARE II completed Parts II and III of MARMAP I Cruise 87-08; the work was finished six days ahead of schedule. The ALBATROSS IV completed Part I of the Autumn Bottom Trawl Survey.
2. Two hundred and eighty-eight medical history forms (a sea duty requirement) were forwarded to the Medical Officer at AMC for review. Ninety of the forms were originally submitted to RPAC incomplete, and the Medical Officer is returning an additional dozen forms due to lack of a signature or inconsistent information.

Contact: H.C. Boyar (617/548-5123, x225).

# LINKAGES



## Coordination Highlights of the Northeast Fisheries Center



October 1987

### Fisheries Management

1. The New England Fishery Management Council met in Mystic, Connecticut, on 7 October 1987. The Council: (1) approved the draft Fishery Management Plan (FMP) for Atlantic Salmon for submission to the Secretary of Commerce; (2) passed a motion to begin addressing the problem of undersized cod fish fillets entering the U.S. market from Canada by developing a fillet size that can be related back to the size of the whole fish; and (3) voted to recommend to the NMFS Regional Director that he make a temporary adjustment in the sea scallop meat count standard from 30 to 33 meats per pound to account for meat weight loss associated with spawning. The next meeting of the Council will be in Portland, Maine, on 1-2 December 1987.

2. The Mid-Atlantic Fishery Management Council met during 29-29 October 1987 in Ocean City, Maryland. One of the major topics of discussion related to the development of the Council's first Joint Venture Policy. In regard to joint ventures, the Council voted: (1) to recommend that foreigners must purchase 1 mt of U.S.-processed mackerel and take 3 mt over-the-side from U.S. vessels, in exchange for every 9 mt of foreign directed mackerel catch; (2) that for every mackerel taken in an approved joint venture will not come back into North American markets; and (3) that any foreign processing vessel for Illex must have, as a minimum, a 30 mt per day processing capacity, and that joint venture preference will be given to vessels having refrigerated sea water holding systems. With regards to the Summer Flounder FMP, the Council adopted their preferred alternative and voted to take the draft plan out to public hearings during January 1988. The next meeting of the Council will be 8-9 December 1987 in downtown Philadelphia.

Contact: Ed Bowman (617/548-5123, x249)

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### Habitat Conservation

1. The Department of the Interior's Minerals Management Service (MMS) hosted a meeting of the North Atlantic Regional Technical Working Group in Albany, NY, on October 29, 1987. The main topic of discussion was OCS LEASE SALE 96, scheduled for February

1989. The Draft Environmental Impact Statement (DEIS) should be ready for review by February 1988, followed by public hearings in March-April 1988. The DEIS will evaluate at least nine alternatives, including many that are designed to reduce potential impacts on fisheries and living marine resources.

Also discussed were the Northeast Fisheries Center's new information on the long-term yield potentials and economic values of three species of shellfish; the Congressional moratorium (which prohibits leasing of much of the Georges Bank area), and MMS's proposal for conflict resolution; Texaco's plans for exploratory drilling on the Canadian portion of Georges Bank in 1988; MMS's Fisheries Training Program (designed to reduce conflicts between, for example, seismic operations and fishing gear); MMS's Environmental Studies Program; and the State of New York's proposed Sand Mining Program in the New York Bight (Ambrose Channel) area.

2. For the Mid-Atlantic area, MMS has issued a Call for Information for OCS LEASE SALE 121, scheduled for October 1989. Information on the possible environmental effects and use conflicts associated with oil and gas activities in this area are due in Washington by November 4, 1987.

Contact: Bruce Higgins (617/548-5123, x340)

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### **Inshore Programs**

Remote Sensing of Estuaries, Proceedings of a Workshop, has recently been published by the Estuarine Programs Office, and the National Environmental Satellite Data and Information Service, NOAA. The document contains the objectives for the seminar and workshop held in Washington, DC, 3-4 December 1985; fifteen seminar papers; the reports of workshop panels on Wetlands and Uplands, Water Column Properties, Physical Processes and Estuarine Dynamics, and Benthic Environment. The recommendations of the panels presented in the proceedings are currently being reviewed.

Contact: Helen Mustafa (617/548-5123, x244)

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### **Marine Recreational Fisheries**

1. Future Atlantic Salmon Management was the title of an international symposium held in Portland, Maine, 27-28 October 1987. The symposium was organized into four consecutive sessions, which addressed science for management purposes, restoration as a management tool, national management issues, and international management issues. Papers were presented by panelists from the U.S., Canada, the United Kingdom, Denmark, Norway, Iceland, and the Faroes Islands.

2. The Annual Meeting of the Atlantic States Marine Fisheries Commission (ASMFC) was held at Key West, Florida, 19-22 October 1987, in conjunction with the Annual Meeting

of the Gulf States Marine Fisheries Commission. The numerous topics discussed at the meeting included grant-in-aid and other federal programs of funding to the states (e.g., Wallop-Breaux), the status of current state fishery management planning activities, and the need for revision and updating of existing ASMFC management plans. A special session of the meeting included a review of the NMFS and State research in the development of trawl efficiency devices (TEDs) to minimize incidental mortality trawl fisheries, and problems and issues relating to implementation of TEDs in the fisheries for southern shrimp to reduce mortality of threatened and endangered sea turtles.

Contact: Tom Morrissey (617/548-5123, x236)

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## Sea Grant

The New York Sea Grant Institute 1988 Proposal to National Sea Grant College Program is now available. Research projects include:

Methods for Improving the Efficiency of Supercritical Extraction for the Fractionation of Fatty Acids from Marine Oils;

Preparation and Elucidation of Beneficial Biological Effects of n-3 Polyunsaturated Fatty Acids from Marine Sources;

Manipulation of Seaweed-Microbe Associations;

Regulation of lux Genes in Vibrio fischeri: Control of a High-level Gene Expression System in a Marine Bacterium;

Synthesis of Pharmacologically Active Saponins Based on Shark Repellents;

Structural and Synthetic Studies on Marine Natural Products;

Ecologically Efficient Screening of Pharmaceuticals from Marine Soft Corals;

Development of a Behavioral Model of Lake Ontario Boat Angling;

Risk Perception and Communication Regarding Chemically Contaminated Fish in Lake Ontario Fisheries;

Comparison of the Reproductive Success of Hatchery Lake Trout Strains on Different Spawning Shoals in Lake Ontario;

The Relation Between Oceanic Spawning and Recruitment of Juvenile Bluefish to the U. S. Atlantic Coast;

Spawning, Early Life History and Larval Transport of Bluefish, Pomatomus saltatrix, in the New York Bight;

Behavior and Behavioral Modifiers of Important Shellfish Predators: The Crabs Neopanope sayi and Ovalipes ocellatus;

Improved Diagnostic Methodology for Diseases of Salmonids;

Uptake and Depuration of Red Tide Paralytic Shellfish Poisoning Toxins in East Coast Bivalve Molluscs;

Creation of Genetic Clones for Increased Commercial Production of Bay Scallops, Argopecten irradians;

Volatilizing Toxic Chemicals in the Estuarine Environment: Surface Gas Transfer Experiments in a Tilting Wind-Water Tunnel;

Upper Niagara River Ice Dynamics Simulation;

Regional Applications of Parabolic Wave Equation Approach for Wave Refraction/Diffraction;

Open Marsh Water Management on Great South Bay, Long Island, New York;

An Integrated Modeling Scheme for Inlet Dynamics;

Optimization of Oxygen Pressure for Inert Gas Elimination in Divers;

Mariculture and Physiology of Commercially Valuable Red Seaweeds from Baja California, Mexico.

Contact: Helen Mustafa (617/548-5123, x244)

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## Vessel Operations

1. The DELAWARE II completed Cruise 87-09 (Gear Testing). Sixty-three trawl stations were occupied during Part I; 33 were occupied during Part II. The acoustic trawl mensuration package was used to monitor depth, bottom temperature, headrope height, and wing spread at 53 stations, 34 during Part I and 19 during Part II.
2. The ALBATROSS IV completed Parts I-III of Cruise 87-07 (Autumn Bottom Trawl Survey). The total number of trawl stations completed was 297: 129 during Part I, 98 during Part II, and 70 during Part III. In addition, 105 standard MARMAP stations were occupied (52, 43, and 20 during Parts I, II, and III, respectively).

Contact: H.C. Boyar (617/548-5123, x235)

# LINKAGES



## Coordination Highlights of the Northeast Fisheries Center



December 1987

### Fisheries Management

1. During their 2 December 1987 meeting in Portland, Maine, the New England Council: (a) discussed the issue of minimum size of groundfish fillets and equivalent minimum fish size; (b) discussed and took action regarding Rep. Don Young's 'Fisheries Research Funding Act of 1987'; (c) authorized the Sea Scallop Oversight Committee to make final word changes in Amendment #2 to the Fishery Management Plan (FMP) before submitting it to NMFS; (d) voted to adopt a 'Fishery Development Policy'; and (e) voted to support a series of motions dealing with the Billfish FMP. The next meeting of the full Council will be 13 January 1988 in Danvers, Massachusetts.

2. The Mid-Atlantic Council met in Philadelphia on 9-10 December 1987. During the meeting there was: (a) extensive discussion on the development of Amendment #8 to the Surf Clam/Ocean Quahog FMP; (b) the identification of some of the deficiencies the Council sees with the 'Fisheries Research Funding Act of 1987'; (c) an update on the development of the Bluefish FMP; and (d) discussion on a proposal by New Jersey to conduct a study to determine the impact of the size increase in lobsters under Amendment #2 to the American Lobster FMP. The next Council meeting will be 20-21 January 1988 in Essington, Pennsylvania.

Contact: Ed Bowman  
(617/548-5123, x249)

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### Marine Recreational Fisheries

A Task Force of representatives from United Sport Fishermen (USF) has submitted a report to the Assistant Administrator for Fisheries (Dr. Evans) that reviews the NMFS Marine Recreational Fisheries (MRF) Policy. The Task Force concluded that the MRF Policy, which was adopted by NMFS in October, 1981, has fallen short in practice and that NMFS needs more aggressive implementation of its commitment to respond to MRF interests and concerns. The Task Force found that the fisheries re-

sources have been managed more with the commercial fishing industry in mind and not for the long-term benefit of the public, and that NMFS has shown a consistent bias towards the commercial sector over the recreational sector in terms of programs and activities. The report includes 30 suggestions on how NMFS can develop a more effective MRF program.

The Task Force Report has been distributed by Dr. Evans to NMFS Regional and Office Directors for their recommendations regarding the suggested actions. A working group of NMFS field and headquarters individuals is being set up to evaluate the recommendations and to provide the Assistant Administrator with a final action plan for NMFS to respond to USF.

Contact: Tom Morrissey  
(617/548-5123, x236)

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### Remote Sensing

An instrument to provide co-registered ocean color (chlorophyll) and temperature data is a potential payload component for LANDSAT 6, due for launch in 1991. The Sea WiFS (Wide-Field-of-View Sensor) combines the best attributes of data from the (CSZS) Coastal Zone Color Scanner and AVHRR (Advanced Very High Resolution Radiometer). EOSAT recently published System Concept for Wide-Field-of-View Observations of Ocean Phenomena from Space, which is a report of the joint EOSAT/NASA Sea WiFS Working Group that met in early 1987. The report includes: historical perspective, commercial and operational users' panel report, research users' panel report, synthesis of requirements, implementation panel report, bibliography, discipline-specific vocabulary and acronyms, and a list of participants.

Contact: Helen Mustafa  
(617/548-5123, x244)

## Vessel Operations

The DELAWARE II completed Part III of Cruise 88-10 MARMAPI: Ichthyoplankton-Zooplankton and Oceanographic Survey. Approximately nine days of the cruise were lost due to inclement weather; consequently, only 125 of 180 scheduled stations were completed. No stations north of Georges Bank were occupied.

Contact: H.C. Boyar  
(617/548-5123, x235)

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