

LINKAGES



Coordination Highlights of the Northeast Fisheries Center



January 1988

Fisheries Management

1. The New England Council met in Danvers, Massachusetts, on 13-14 January 1988. Major actions taken by the Council included: (a) the passage of four motions directed at the Council's opposition to ocean dumping of industrial waste, contaminated sludge, and other hazardous material; (b) the adoption of a motion to request the Secretary to take an emergency action to extend the large-mesh area into Nantucket Shoals in an effort to limit the number of juvenile cod being taken in the winter cod fishery; (c) the adoption of motions to increase the minimum size of several groundfish species and to remove the requirement in the Multispecies Fishery Management Plan (FMP) increasing codend mesh size from 5-1/2 to 6 inches in the George's Bank regulated mesh area during the third year of the FMP's implementation; and (d) the defeat of a motion that would exempt the Puerto Rican artisanal handline fishery from the ban on the sale of swordfish. The next meeting will be 11-12 February 1988 in Newport, Rhode Island.

2. The Mid-Atlantic met in Essington, Pennsylvania, 20-21 January 1988, taking action as follows: (a) endorsed the New England Council's motions on ocean dumping and adopted three measures of their own, which together provides a course of action that is hoped to lead to the resolution of the problem of illegal dumping activities, and to deal with the longer-term problems of ocean dumping in general; (b) adopted tables covering research priorities in the areas of gear, economics, biology, and data gathering; and (c) voted to support the concept of an exemption for the Puerto Rican artisanal handline fishery (limited to 50 billfish), and to consider catch limits when Amendment #1 to the Billfish FMP is developed. The next meeting will be held in Easton, Maryland, on 2-3 March 1988.

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Habitat Conservation

The Regional Director met with staff from the Region, Center, and Washington Office on 19 January to review habitat conservation program activities and priorities.

Discussion focused on NMFS's involvement with the Fishery Management Councils on environmental issues, and during development of the habitat sections of Fishery Management Plans and Amendments; with NOAA and EPA on estuarine programs and Superfund hazardous waste sites; and with the Corps of Engineers, EPA, and other agencies and constituents on reviews of wetland, hydropower, waste disposal, ocean dumping, oil and gas drilling, and other projects.

The Region's Habitat Conservation Branch will develop an issues paper describing the major issues, the problems to be overcome, the options for solving them, and the strategies for accomplishing program objectives.

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

Inshore Programs

1. The New Jersey Marine Sciences Consortium recently published *THE HUDSON-RARITAN: STATE OF THE ESTUARY*, a report by the Panel on Water Quality of the Hudson-Raritan Estuary. The report is the result of a review of the current state of water quality in the estuary by representatives from universities; state, federal (including NEFC), and interstate agencies; industry; and interest groups. The volume (Volume 1, Part 1) is the first in a series of summaries on the water quality of New Jersey coastal waters, prepared at the initiation of the Governor's Science Advisory Committee. Copies of the volume may be obtained from the New Jersey Marine Sciences Consortium.

2. PROCEEDINGS OF THE WORKSHOP ON RISK ASSESSMENT AND CONTAMINATED FISH AND SHELLFISH are now available. The workshop, sponsored by the U.S. Environmental Protection Agency and the New England Interstate Water Pollution Control Commission, took place on January 15 - 16, 1987 at Westbrook, CT.

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Marine Recreational Fisheries

With the enthusiastic backing of the NMFS, a forward-looking group of East Coast sportfishermen, charter boat captains, and sportfishing clubs have joined leading tackle manufacturers, fishing journals, and outdoor writers in an ambitious tag-and-release program for yellowfin and bigeye tuna. This alliance has volunteered over \$50,000 worth of prizes, incentives, and awards to anglers who tag and release the tuna taken on rod and reel between 1 March and 1 December 1988. The tags, which will be distributed through leading saltwater tackle stores, will be provided through the NMFS Cooperative Game Fish Tagging Program, with the costs underwritten by the tackle manufacturers.

The program, which is named "Tuna for Tomorrow," will greatly increase the number of yellowfin and bigeye tuna tagged and released off of the eastern U.S., and should help supply fisheries managers with needed information on these increasingly important species. In addition to being an example of how the fishing industry and NMFS can work together for the good of the fishery, the program is an example of the efforts of the recreational fishing industry to promote a conservation ethic among the angling public.

Organizers of the program report that angler response has been so favorable that they expect to greatly exceed their first year goal of 1,000 yellowfin to be tagged and released during the 1988 season.

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Sea Grant

The on site review of the New Jersey Marine Sciences Consortium Sea Grant Institutional Program 1988 - 1990 Proposal was held this month. Proposed projects are in the areas of fisheries, marine socio-economics, estuarine/marine water management, marine technology research and development, coastal processes, and extension. Research projects include:

- o Impact of Glugea stephani disease on the American winter flounder (Pseudopleuronectes americanus) populations
- o Juvenile blue crab habitat utilization and survival: An evaluation of nursery areas
- o Development of an enzyme-linked immunosorbent assay (ELISA) for detection of the oyster parasite Haplosporidium nelsoni (MSX)
- o Genetic factors associated with disease resistance and growth rates in oysters
- o Physiological factors associated with MSX mortality-resistance in hatchery produced oysters, Crassostrea virginica
- o Use of numerical circulation modeling to define oyster larval and spat distribution
- o The effect of habitat quality and predation on survival of juvenile lobster (Homarus americanus) in north New Jersey inshore areas
- o Evaluation of New Jersey estuaries as critical nurseries for summer flounder (Paralichthys dentatus)
- o Site specific biology on hard clams (Mercenaria mercenaria) in New Jersey
- o Social and cultural aspects of regulation in the surf clam and ocean quahog fisheries
- o Caemico-biological interactions between fish and treated municipal wastewater
- o Effect of increased nitrogen loading in coastal lagoon ecosystems: denitrification as a sink for N inputs
- o Impact of reducing P loads from domestic wastewaters on New Jersey coastal algal-related water quality
- o Use of remote sensing for assessing planktonic algal chlorophyll in New Jersey nearshore waters of the New York Bight
- o The numerical modeling of the circulation and nutrient transport in the New York Bight
- o Modified nucleosides of marine organisms
- o Production of omega-3 fatty acids from microalgae (diatoms)

- o Optimization of dredging in unstabilized New Jersey inlets
- o Hydraulics, sedimentology and ecology of Barnegat Bay, NJ
- o Seismic stratigraphy and sedimentology of the ebb tidal delta-linear shoal complex, Barnegat Inlet, New Jersey.

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Vessel Operations

1. Only ten stations were done during Part I of the DELAWARE II Cruise 88-01, MARMAP I: Ichthyoplankton - Zooplankton and Oceanographic Survey. Seven of the 11 scheduled days were lost because of weather and mechanical breakdown; two of the usable days were transit time. The vessel went to the ship yard at Norfolk, Virginia, and was outfitted with a new main shaft, a new cutlass bearing and bearing, and a new propeller. The ship is currently at sea conducting Part II of Cruise 88-01.

A revised schedule for the DELAWARE II, to make up for the lost program sea days and to complete the originally scheduled cruises, has been submitted to the NOAA Atlantic Marine Center (AMC) for approval.

2. The ALBATROSS IV is still undergoing repair work at Norfolk. The shipyard has informed AMC of the need for two additional weeks to complete the work. The Gear Trials Cruise has been cancelled by NEFC to accommodate the schedule change.

3. The Vessel Coordinator attended AMC's Command Seminar in Williamsburg, Virginia. During his presentation, the Coordinator reviewed the work done by the ALBATROSS IV and DELAWARE II during FY87. He also emphasized the need to improve the paths of communication between NEFC and AMC, and stressed the need for AMC to adhere to the allocated shipyard repair period.

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Coordination Highlights of the Northeast Fisheries Center



February 1988

Fisheries Management

1. The New England Council met in Newport, RI, on 11-12 February 1988. Major topics discussed by the Council included: (a) the support, in concept, of the artisanal handline fishery for billfish of Puerto Rico; (b) the status of an emergency action to regulate the taking of small cod in the Nantucket Shoals area; (c) improvements in the draft Summer Flounder Fishery Management Plan; (d) the revision of the sea scallop penalty schedule for violators; and (e) suggestions and approaches regarding user fees (the Young Bill - see MARINE RECREATIONAL FISHERIES below). The next meeting of the Council will be held 6-7 April 1988 at the Ramada Inn, Mystic, CT.

2. On 16-17 February 1988, Washington Office staff conducted a "Regional Workshop on Preparation and Processing of Fishery Management Actions," which was attended by representatives from the Regional Office, NEFC, and NOAA General Council. The agenda was intended to identify: (a) the requirements of the Magnuson Act and other applicable laws for each type of management action, (b) the preparation and processing difficulties encountered, and (c) constrictive recommendations for addressing mutual problems.

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tance of the marine recreational fishing industry. The bill was intended mainly to put pressure on the states to implement licensing programs.

The situation changed markedly in 1986, when the Administration proposed licensing of marine recreational fishermen as a means of raising federal revenues. The proposal quickly was marked as inequitable by recreational interests, since it did not include commercial users of the fishery resources. The Secretary of Commerce subsequently developed and sent to Congress the proposed Marine Fishery Conservation Assurance Program Act of 1987, which would require a permit for all fishermen, buyers, and sellers, institute an *ad valorem* landing fee, and authorize a gamefish permit. Also in 1987, Congressman Young (Alaska) introduced H.R. 3341, the Fisheries Research Funding Act of 1987, which would impose a fee on processing vessels and licensing of recreational fishermen.

It is likely that there will be increased debate in 1988 over a federal system of permits and fees on both the commercial and recreational users of marine fisheries resources.

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Marine Recreational Fisheries

Saltwater sportfishing licensing has been hotly debated in most coastal states for more than a decade. The debate extended to the federal level in 1984, where Congressman Sawyer introduced a bill to establish a federal marine recreational fishing license program. The Sawyer bill, which eventually was withdrawn, was developed in cooperation with some recreational fishing leaders who felt licensing was needed to achieve recognition of the impor-

Ocean Dumping

The Environmental Protection Agency (EPA) is considering final designation of the Foul Area Disposal Site (FADS) in Massachusetts Bay for dredged material disposal. Inter-agency and public scoping meetings have been held, and EPA has requested NMFS participation in developing the draft environmental impact statement (DEIS). Because the FADS has been used as a dredged material disposal site for many years, EPA will not consider alternative disposal sites in the EIS.

The ocean dumping issue continued to be a subject of much controversy for the 106-mile dumpsite offshore New Jersey. The Thousand Fathom Club has organized fishermen opposing the continued dumping of industrial waste at the 106 mile site. The New England and Mid-Atlantic Fishery Management Councils are on record opposing dumping at this site. Bills have been introduced in Congress to prohibit ocean dumping by 1991, and Congressional hearings have been held. A Virginia Sportfishermen's Forum and the Atlantic Offshore Fisherman's Association discussed the topic at February meetings in Virginia Beach, VA, and Newport, RI.

EPA recently conducted an oceanographic cruise to the 106 mile site, is planning another cruise in August to look at the biota, and will give NMFS another opportunity to become involved. The Northeast Region's Habitat Conservation Branch is developing an issue paper on the ocean dumping issue.

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OCS Oil and Gas

The status of oil and gas leasing, exploratory drilling, and related research and monitoring studies in the Georges Bank area was reviewed at a US/Canada meeting held in Woods Hole MA. Fishermen and environmental groups continue to voice strong opposition to proposed leasing and exploratory drilling on both sides of the international boundary line. However, oil companies continue to exert pressure on the Canadian energy minister to allow exploratory drilling rigs on Georges Bank, and the US Department of the Interior's Minerals Management Service (MMS) continues to prepare for Lease Sale 96.

MMS has issued a DEIS for Sale 96, which offers 1,014 lease blocks on the continental shelf, slope, and rise along the southern flank of Georges Bank, along the US/Canada boundary line, and off the northern edge of Georges Bank at depths of 61-3,000 meters. The DEIS considers nine alternatives, including deferring blocks (1) in the haddock spawning closure area and primary scallop fishing beds, (2) within the shelf break zone, (3) on the northern edge of Georges Bank, and (4) adjacent to submarine canyons. The DEIS contains an NMFS biological opinion that the proposed actions will not jeopardize endangered species.

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Sea Grant

1. The site review of the CONNECTICUT SEA GRANT PROPOSAL 1988 - 1990 was held this month. Proposed projects are in the areas of marine biotechnology, living resources and marine animal husbandry, coastal processes and engineering, environmental studies, marine economics, education, and advisory services. Research projects include:

- o Control of reproduction and growth regulation in crustacean resources
- o Genetics of morphology and growth in *Laminaria* from the North Atlantic Ocean
- o Disease resistance and haplotype
- o The importance of competing sessile species to the survivorship of juvenile oysters
- o Field mortality rates of neoplastic vs. non-neoplastic soft-shell clams
- o Remote bathymetry of coastal shallow waters using Landsat Thematic Mapper data
- o Biological cycling of mercury and sulfur in coastal waters
- o Toward the development of probabilistic scenarios of sealevel vulnerability along the Connecticut shoreline.

2. The winter 1987 issue of SEA GRANT ABSTRACTS Publications from the Nation's Sea Grant Programs is now available.

3. The Northeast Marine Advisory Council sponsored the production of SEAFOOD: FACTS BEHIND THE MYTHS, a series of fact sheets developed to answer questions often asked about seafood contamination and to provide referral contacts. NMFS, Northeast Region, contributed background data for the series. The fact sheets are being distributed to individuals and agencies involved with seafood, health issues, or public information services in all 50 states. Plans are to periodically update the series. A copy of the fact sheets is available at RPAC.

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Vessel Operations

1. Part III of DELAWARE II Cruise 88-01, MARMAP I: Ichthyoplankton-Zooplankton and Oceanographic Survey, was cancelled because of a second mechanical breakdown on the vessel. The main shaft liner, which had been replaced in Norfolk, VA, in January, cracked again and was floating free on the shaft. Consequently, the vessel was drydocked at a shipyard in Newport, RI, to replace the shaft and liner.

2. The repair work on the ALBATROSS IV at Norfolk, VA, is near completion. The vessel is currently getting outfitted in preparation for the onset of Cruise 88-02(1): Spring Bottom Trawl Survey, which is scheduled to begin on or about 1 March 1988. Cruise 88-01, a Fishing Power Survey, was cancelled because of the need for additional shipyard time to complete repairs.

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Coordination Highlights of the Northeast Fisheries Center



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March 1988

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Fisheries Management

1. The Mid-Atlantic Council met 2-3 March 1988 in Easton, Maryland. The major topic of discussion was Amendment #8 to the Surf Clam/Ocean Quahog Fishery Management Plan. Following some fairly lengthy discussion, the Council approved two motions as guidance to their staff in further plan development. The first motion stated that there be an allocation for surf clams and ocean quahogs throughout the management unit (one management unit for allocations). The second motion charged the Surf Clam/Ocean Quahog Committee to look at a staff summary of comments obtained from industry, together with other considerations, in order to make final recommendations on an allocation system for Amendment #8 to the Council during the next meeting.

2. The New England Council will be meeting on 2 April in Mystic, Connecticut, and the Mid-Atlantic Council will meet during 13-14 April in Hampton, Virginia.

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Habitat Conservation

1. The North Atlantic Regional Technical Working Group Committee (RTWG) met in Boston on March 31 to discuss the draft environmental impact statement (DEIS) for North Atlantic OCS (outer continental shelf) Lease Sale 96 and other matters. Sale 96 is scheduled for February 1989.

The "base case" scenario for Sale 96 assumes that only exploration and delineation activities will take place; five exploratory wells and two delineation wells will be drilled over a three-year period; and production at the hypothesized resource level (20 million barrels of oil, 0.5 trillion cubic feet of gas; one platform and 25 production wells drilled over a 3-year period) is contingent on additional

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commercial discoveries and subsequent lease sales. Sale 96 is the first proposed OCS lease sale that depends on production from subsequent sales.

The DEIS discusses several alternatives and proposes two new lease stipulations. If MMS adopts these and other stipulations and existing mitigating measures, in conjunction with existing OCS Operating Orders and EPA's discharge permit requirements, NMFS's opportunities to conserve living marine resources and their habitats will be preserved.

MMS also continues to pursue, with the National Academy of Sciences (NAS), a two-phase approach to resolve all issues surrounding oil and gas leasing on Georges Bank. The first phase, begun in January 1988, is to establish a NAS panel to examine the facts, discuss the issues, and prepare a report. The second phase, begun in March 1988, calls for a small committee to develop recommendations for the process MMS should follow to facilitate discussion and resolve the issues.

The OCS Policy Advisory Committee will meet during the first week in April in New York. An RTWG representative will report on the status of oil and gas activities on the Canadian side of Georges Bank.

2. NMFS and General Counsel staff met on March 25 in Gloucester to discuss proposed NOAA trusteeship procedures under the Superfund and Clean Water Acts. The proposed procedures would give NMFS a much stronger role in these procedures, including the lead responsibility for conducting damage assessments and for planning and carrying out restorations of injured NOAA trust resources. Problems of adequate levels of staff and funds were discussed.

3. A draft document entitled "Information for Decision-making for the Nation's Coastal Ocean: A New Agenda and Strategy for the 21st Century" is now undergoing review by NOAA offices in Washington, and is available for NMFS

review and comment. This document resulted from a combined NMFS/NOS effort in Washington during the week of March 14. It relates to various other NOAA/NMFS budget initiatives and program development plans (PDPs), including NOAA's Global Change Prediction Initiative, NOAA's Coastal and Ocean Science Framework and Task Development Plan, NMFS's Ecosystem Monitoring and Fisheries Management PDP, the Northeast Fisheries Center's Inshore Research Framework and PDP, and NMFS's PDP for the National Habitat Conservation Program.

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Northeast Research Directory

In response to the need for the exchange of information on current programs, as expressed at the Second Annual National Marine Fisheries Service/Sea Grant Northeast Retreat, the NMFS Northeast Region has prepared the Research Directory FY - 1988. The Directory contains the organizational structures of the Northeast Regional Office and Northeast Fisheries Center, a listing of research activities by Center Investigation and Regional Office Branch, vessel schedules for all Center research vessels, and a directory of the data sets extant on the regional system.

The Directory was distributed this month to all Sea Grant College Program Directors and Marine Advisory Services Leaders: Virginia through Maine and the Great Lakes region. The Directory will soon be distributed to all Center Investigation and Branch Chiefs, Regional Office Branch and Division Chiefs, the Regional Fishery Management Councils, NMFS Headquarters, other NMFS Directors, and key NOAA personnel. Copies will also be provided to predominantly minority colleges and universities with marine science programs that could potentially interface with the Center program.

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Remote Sensing

NASA Oceanic Processes Program Biennial Report -- Fiscal Years 1986 and 1987 is now available. The report contains a discussion of the accomplishments, activities, and plans relative to the Physical Oceanography Program, Ocean Productivity Program, Polar Oceans Program, Oceanic Flight Projects, Data Systems Program, Ocean Topography Experiment (TOPEX/POSEIDON), NASA

Scatterometer (NSCAT), Ocean Color Imager (OCI), and the Alaska SAR Facility (ASF). The report also contains tables of Recent NASA Science Working Groups, and Ocean-Related Spacecraft: Next Decade; summaries of projects and studies, and individual research activities supported by NASA in fiscal years 1986 and 1987. A bibliography in the report lists NASA-supported scientific research papers from refereed journals.

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Sea Grant

1. The Massachusetts Institute of Technology Proposal for 1988-1990 is now available. Projects in research, education, and advisory services include:

Research in Automation in the Manufacture of Marine Systems -- Geometric Modelling in Computer-aided Engineering in Marine Systems;

Coastal Processes Research -- Influence of Merrimack River on Contaminant Transport to and the Physical Structure of Massachusetts Bay, Response of Silt-Sized Sediment to Wave Agitation, Bed-Water Exchange of Toxic Organic Compounds, Characterization of Coastal Colloids;

Living Resource Utilization Research -- Development and Control of Lipid Oxidation in Minced Menhaden Muscle, A Novel Technology for the Manipulation of Fish Reproductive Cycles: Controlled Release of Gonadotropin Releasing Hormones, Biotechnological Applications of Marine Biopolymers;

Offshore Engineering Research -- Extreme Wave Forces on Offshore Structure, Fundamental Study of Pile Capacity in Calcareous Sand, Corrosion Detection and Characterization/SQUID, Strumming and Drag Coefficient Prediction of Cables and Underwater Vehicle Tethers;

Research in Technology Development and Management for Ocean Uses -- Marine Research Center, A Study of the Physical Mechanisms Controlling the Instability of Jets;

Research on Unmanned Underwater Vehicles -- An Autonomous Underwater Vehicle to Study Large Vortical Patterns in the Ocean;

Education -- MIT Sea Grant/Undergraduate Research Awards, The Annual MIT Sea Grant Lecture/Seminar Series, Ocean Engineering Curricula, Public Education

and Training Short Courses, MIT Sea Grant/Massachusetts Maritime Academy Joint Program in Marine Education and Training:

Advisory Services -- MIT Sea Grant Marine Industry Collegium, Center for Fisheries Engineering, MIT Sea Grant/Massachusetts Marine Liaison Service, Marine Communications/Information Service.

2. The National Sea Grant College Program Annual Report, FY87 is now available. The report includes discussion of the status of the following program areas:

Non-Living Resources -- Coastal Processes, Marine Geological Resources, Diving Physiology and Technical Development;

Technology and Commercial Development -- Marine Economics, Marine Recreation and Tourism, Marine and Coastal Transportation Systems, Ocean Engineering;

Living Resources -- Aquaculture, Fisheries, Marine Biotechnology, Seafood Science and Technology, Environmental Studies;

Human Resources -- Communications, Education and Training, Marine Advisory Extension Services Program, Marine Policy and Social Science, Coastal and Ocean Law.

4. Chesapeake Bay Environmental Data Directory, a cooperative project of Maryland Sea Grant College, Virginia Sea Grant College, and National Oceanic and Atmospheric Administration, is now available. The directory identifies environmental data sources and contacts for the Chesapeake Bay region, and describes data sets. Data descriptions include measurements or observations of properties, characteristics, and conditions or states of the environment in the region. Copies of the publication may be obtained from the Maryland Sea Grant Program.

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Vessel Operations

1. The ALBATROSS IV completed Parts I and II of Cruise 88-02 Spring Bottom Trawl Survey. The first four days of Part I were "lost" because of a delay in getting the vessel out of the shipyard as scheduled. One day was lost on Part II because of adverse weather. Approximately 225 of the total of 344 stations (for the entire survey) have been occupied.

2. Two one-day demonstration cruises were held on the DELAWARE II to test the main shaft and trawl winches. Center personnel, mostly administrative, participated on the cruises to obtain first-hand knowledge of trawling operations. The Gadoid Recruitment Survey (Cruise 88-03) was cancelled because of budget cuts.

3. NEFC Division Chiefs submitted documents pertaining to their proposed vessel needs for FY 1989. CUD requested 244 program sea days, 140 aboard the ALBATROSS IV and 104 aboard the DELAWARE II. FED requested 200 program sea days, 90 aboard the DELAWARE II and 110 aboard either the ALBATROSS IV or the DELAWARE II. EPD requested 32 days aboard the ALBATROSS IV. In FY 1989 the DELAWARE II is tentatively scheduled for 225 sea days (permanent reduction in base from 243); the ALBATROSS IV is scheduled for 210.

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Coordination Highlights of the Northeast Fisheries Center



April 1988

Fisheries Management

1. The New England Council met in Mystic, Connecticut, on April 7, 1988. The major topics of discussion centered on the groundfish Certification Program; a report on the activities of the Technical Monitoring Group; and the progress and provisions of the Mid-Atlantic Council's Summer Flounder Fishery Management Plan (FMP). Other Council discussions involved the sea scallop penalty schedule, an update on the surf clam/ocean quahog fisheries, as well as updates on environmental affairs, user fees, and large pelagics. The next meeting of the Council will be May 18-19, 1988, at the King's Grant Inn, Danvers, Massachusetts.

2. The Mid-Atlantic Council met in Hampton, Virginia, on April 13-14, 1988 to discuss Amendment #8 to the Surf Clam/Ocean Quahog FMP; the draft Summer Flounder FMP; recommendations for the modification of the Atlantic Striped Bass Act; and habitat issues. Actions taken by the Council included: (1) the passing of a motion to recommend to NMFS that the Chincoteague 9-square-mile research area be reopened when and if the whole Chincoteague area is reopened, and that the reopening be deferred until adoption of Amendment #8 to the Surf Clam/Ocean Quahog FMP; and (2) the passing of a motion to submit the draft Summer Flounder FMP to NMFS for Secretarial review.

3. With the endorsement of Dr. Evans, a series of Conservation Standard Workshops have taken place. These workshops were intended to give the Councils and NMFS technical staff the opportunity to examine and develop further the "threshold" concept proposed earlier by NMFS. The "threshold" concept is intended to become a part of the 603 Guidelines for Fishery Management Plans. The Magnuson Act requires that fishery management plans shall be consistent with the National Standards, and other applicable laws. Part 603 of the Guidelines implements those portions of the Act that pertain to the development, content, submission, amendment, review, and implementation of FMPs, and establishes advisory

guidelines, which do not have the force of law. On April 19th, the Northeast Workshop was held in Boston, Massachusetts, and was attended by the Science and Research Director of the Northeast Region. Representatives from the NMFS Washington Office, the Northeast Region, the New England and Mid-Atlantic Councils, and Council Science and Statistical Committees were also in attendance.

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Habitat Conservation

1. Texaco Canada Ltd.'s plans for exploratory oil and gas drilling on Georges Bank continue to be thwarted. On April 18, the Government of Canada proclaimed a 12-year moratorium on oil and gas drilling on Georges Bank. Federal Energy Minister Marcel Masse also called for an environmental assessment review panel to hold public hearings and report on the possible impacts of petroleum activity on the bank. The Provincial government of Nova Scotia and the anti-drilling group "NORIG" were pleased, but consider the moratorium only a partial victory because it involves executive fiat that may prove less binding over time than would legislation.

2. NMFS's comments on the Minerals Management Service's (MMS) draft environmental impact statement for North Atlantic Oil & Gas Lease Sale 96 were transmitted to Washington on April 7, and are undergoing review by NOAA and MMS.

3. The New Jersey Sea Grant Extension Service (609/597-1500) has issued an "Ocean Dumping Fact Sheet for Coastal New Jersey." It gives coordinates for authorized dump sites, requests fishermen or boaters who encounter any unusual conditions (e.g., off-site ocean dumping, oil spills, dead or abnormal fish, algal blooms, discolored water, foul

odors, debris, etc.) to report them to the appropriate authorities, and provides guidelines on the proper procedures to follow.

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Sea Grant

1. The Woods Hole Oceanographic Institution 1988 - 90 Institutional Sea Grant Proposal to the National Oceanic and Atmospheric Administration National Sea Grant College Program includes the following research projects:

Fisheries Biology and Management -- Hydrographic Localization of Toxic Dinoflagellate Blooms in Coastal Waters; Assimilation of Organic Aggregates by Bay Scallops (*Argopecten irradians*); Growth and Reproduction Dynamics of the Iceland scallop; Immunological Detection of the Brown Tide; The Behavioral Physiology of Hibernation in Tautog and Cunner.

Human Impact on the Marine Environment -- Citizens' Monitoring of Water Quality in Coastal Ponds; Microbial Growth and Grazing in a Highly Contaminated Estuary; Nitrogen Budget for a Eutrophic Coastal Salt Pond; The Relative Importance of Benthic Regeneration and Groundwater Inputs.

Coastal Resource Management -- Biological and Hydrodynamical Constraints on Recruitment of Bivalve Larvae in a Well-mixed Estuary; Shallow Water Swath-mapping Systems; Climate Change and Extreme Sea Levels Along the U.S. Coast; Effects of Suspended Sediment Stratification on Coastal Currents and Sediment Transport; Application of Mathematical Models to the Evolution of Multiple Inlet Systems in Barrier Beaches.

Marine Resources Development and International Marine Science Cooperation Program -- International Marine Science Cooperation Program; Estimation of Supply Rate of Heat and Metals to Black Smoker Vent Fields; Cyclical Behavior in Marine Minerals Exploration and R&D: Signals, Sources and Implications.

2. A summary of research supported by the Woods Hole Oceanographic Institution Sea Grant Program during 1984-1986 is now available.

3. The proceedings of a seminar on hypoxic and related processes in Chesapeake Bay, DISSOLVED OXYGEN IN THE CHESAPEAKE BAY: Processes and Effects, is available from the Maryland Sea Grant College Program. The seminar, sponsored by the Maryland and Virginia Sea Grant Colleges, was held in 1987 as part of the process to

synthesize knowledge gained in a NOAA-funded study program that started in September 1985. In addition to papers on project results in the areas of recent trends in hypoxia, dissolved oxygen processes, and biological effects of hypoxia, the proceedings contains discussions of investigators' findings to date and the relationship of their research to other work. A list of participants and authors is included.

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Vessel Operations

1. The ALBATROSS IV completed Parts II through IV of the Spring Bottom Trawl Survey. A total of 181 stations were occupied. Bongo tows were made at 91 of the stations.

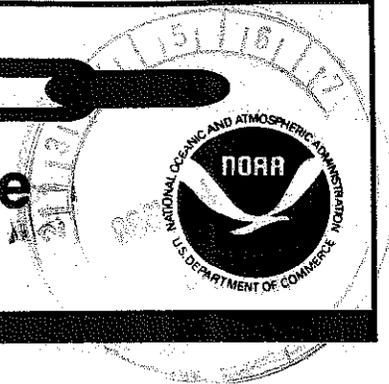
2. A Fishing Power Cruise and a Gadoid Recruitment Survey, to be conducted aboard the DELAWARE II, were cancelled. Because of the availability of sea days, we were able to loan the vessel to the SEFC and Sea Grant. SEFC conducted a Reef Fish Habitat Survey and Sea Grant conducted a Bluefish Larvae/Pelagic Survey.

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Coordination Highlights of the Northeast Fisheries Center



May 1988

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Fisheries Management

1. The New England Fishery Management Council met in Danvers, Massachusetts, on 18-19 May 1988. Topics discussed during the meeting included: (a) the development of a new penalty schedule for violations in the sea scallop fishery; (b) environmental affairs issues; (c) the U.S./Canada Free Trade Agreement; (d) the reauthorization of the Marine Mammal Protection Act; and (e) the Councils' unanimous endorsement of the National Recreational Fisheries Policy.

In conjunction with the Council meeting, and in cooperation with the Maine Department of Marine Resources and the Massachusetts Division of Marine Fisheries, the Council conducted an Informational Hearing. This hearing was intended to receive public comment on whether or not it was advisable to implement a Certification Program which would allow for the importation of cod, haddock, pollock, winter flounder, yellowtail flounder, American plaice, and flounder which do not meet U.S. minimum size requirements. The Hearing was very well attended, and of those who spoke to the issue, the overwhelming majority spoke in opposition to the proposed Program. Following the Hearing, the Council formally voted to reject the Program.

The next meeting of the Council will be 28-29 June 1988 at the Holiday Inn, Portsmouth, New Hampshire.

2. The Mid Atlantic Council met on 25-26 May 1988 at the Pittsburgh Hilton, Pittsburgh, Pennsylvania, to discuss a variety of issues including the following: (a) the status of Council Fishery Management Plans; (b) the results of the 2-5 May 1988 Stock Assessment Workshop held in Woods Hole, Massachusetts, at the Northeast Fisheries Center; (c) the reauthorization of the Marine Mammal Protection Act; (d) habitat issues; and (e) the National Recreational Fishing Policy, which the Council, on a one vote margin, voted not to endorse. The major reasons for the Councils'

rejection of the Policy was that the policy, as presently stated, has the potential for being divisive within the marine fisheries and that it neglects many of the marine recreational fishing concerns. The Council did indicate in their motion rejecting the policy that they were supportive of a national fishing policy that would address the concerns that the Council has identified with the present policy.

The next meeting of the Council will be 16-17 July 1988 at the Hotel Hershey, Philadelphia, Pennsylvania.

Contact: Ed Bowman
(617/548-4123, x249)

Marine Recreational Fisheries

Regional Director Dick Roe recently established a Northeast MRF Steering Committee composed of 18 representatives from the various recreational fishing interests and geographical areas of the northeast coast. The role of the Steering Committee is to advise the Regional Director on the relationship of NMFS policy, programs, and budget to the recreational fishing community, and to provide a link on marine fisheries issues between the recreational fishing constituency and the Regional Office.

The first meeting of the Committee is scheduled to be held 16 June 1988 in Philadelphia. The purpose of the meeting is to appoint a chair and obtain the views of the members regarding the issues and problems the Committee and the Regional Office need to address.

Contact: Tom Morrissey
(617/548-4123, x236)

Sea Grant

The spring 1988 issue of SEA GRANT ABSTRACTS, Publications from the Nation's Sea Grant Programs, is now available.

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

Vessel Operations

1. The ALBATROSS IV completed Cruise 88-03 Current Meter Deployment and Recovery. Four of five moorings were recovered. The failure of a snag shackle on the buoy used for the recovery prevented the servicing of one of the moorings. Either the ALBATROSS IV or the NOAA Vessel R/V WHITING will attempt the recovery and servicing the next time either vessel is in the area where the mooring is located.

2. The DELAWARE II completed Parts I and III of Cruise 88-06 Enforcement Feasibility Study. Part II was cancelled because of the breakdown of one of the vessels two generators. Four boardings were made during Part I and eight during Part II. No citations were issued to the U. S. fishing vessels; apparently no major violations were evident.

3. The final version of the vessel schedule for FY 1989 was distributed to personnel of NEC, NER, HQ-NMFS, AMC, and OMO. The nine days listed as open in November-December 1988 have since been allocated to the Sea Grant Program at the University of Massachusetts. The survey will be devoted to sampling for sea scallops in the waters off Chatham, Massachusetts.

4. The second 106-Mile Dump Site Study planned by EPA aboard the ALBATROSS IV, which replaced EPD's cancelled 12-Mile Dump Site Study, has also been cancelled. A cruise will now take place during the allocated time frame and will be divided into two parts. Part one will be conducted by Old Dominion University and will involve a study on the spatial distribution of blue crab. Part two will be conducted by Massachusetts Institute of Technology and will be directed to the study of Ship Wake Measurements.

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

name please route to your staff.

LINKAGES



Coordination Highlights of the Northeast Fisheries Center



June 1988

Fisheries Management

1. The New England Fishery Management Council met in Portsmouth, New Hampshire, on 29-30 June 1988. Topics discussed during the meeting included: (a) the development of Amendment 2 to the Northeast Multispecies Fishery Management Plan; (b) the report by the Council's Technical Monitoring Group entitled, "An Assessment Of The Effectiveness Of The Multispecies Fishery Management Plan With Recommendations For Plan and Management Systems Improvement"; (c) the sea scallop penalty schedule; (d) lobster pot vent size increases; (e) the relationship of Northern shrimp to the Exempted Fisheries Program; (f) environmental affairs issues; and (g) Atlantic salmon. The next meeting of the Council is currently scheduled to be held on 10-11 August 1988, in Danvers, Massachusetts.

2. The next meeting of the Mid-Atlantic Council will be held on 13-14 July 1988, in Philadelphia, Pennsylvania. The Mid-Atlantic Council did not meet during the month of June.

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

Habitat Conservation

1. Oil and Gas Lease Sale 96 in the North Atlantic, originally scheduled for February 1989, has been delayed at least six months to allow time to conduct negotiations aimed at resolving North Atlantic leasing issues. By August 1989, the National Academy of Sciences/National Research Council should have completed its Minerals Management Service (MMS)-funded study to assess the adequacy of the scientific and technical information base for the North Atlantic leasing area.

2. The draft document entitled "Characterization of the Middle Atlantic Water Management Unit of the North-

east Regional Action Plan" is available for review. This document, slated for publication as a NOAA Technical Memorandum, provides much useful information to anyone interested in the mid Atlantic area, including MMS staff as they prepare the draft environmental impact statement for Mid Atlantic Lease Sale 121.

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

Inshore Programs

The NOAA Estuarine Programs Office has recently completed another two in a series of papers on NOAA's participation in estuarine research around the Nation: "NOAA Involvement in Hudson/Raritan Estuary" and "NOAA Involvement in the Great Lakes." The papers describe the full range of NOAA activities conducted in the areas. Copies are available through RPAC.

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

Remote Sensing

1. Dr. Richard P. Stumpf (Assessment and Information Services Center, NESDIS, NOAA) will be the speaker at the technical (open) session of the next NEARSS Association Meeting, 29 July 1988, 10:00 AM; Corless Auditorium, Narragansett Bay Campus, University of Rhode Island. Dr. Stumpf's presentation will be on "Remote Sensing Activities in the Chesapeake Bay Region." In addition to his work on the application of AVHRR (Advanced Very High Resolution Radiometer) satellite data to the study of sediment and chlorophyll in turbid

coastal water, Dr. Stumpf will discuss a planned pilot project and the Chesapeake Bay Remote Sensing Working Group.

2. Oceanographic applications of Landsat digital imagery and specifications for the forthcoming Landsat 6 and 7 satellites will be discussed at a seminar on "U. S. Commercial Satellite Earth Observation Experience -- a Focus on Oceanographic Applications" by Dr. Matthew R. Willard of EOSAT (Earth Observation Satellite Company). Dr. Hartley Hoskins of Woods Hole Oceanographic Institution arranged for the presentation to take place at the Geology and Geophysics Department luncheon seminar on Tuesday, July 12th at 12:15 in Clark 507.

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

NOTE: Area Code 617 will change to 508
beginning 16 July 1988

Vessel Operations

1. The DELAWARE II completed Parts I and II of the Pelagic Juvenile Bluefish Survey. One hundred and one stations were occupied. Two juvenile bluefish larvae were obtained.

2. The ALBATROSS IV is currently conducting the Sediment Sampling and Bottom Trawl Survey four days behind schedule. The motors of the main trawl winch and bow thruster failed and had to be pulled before the vessel could sail. Smith McIntyre grabs have been made at most of the stations, hydrocasts have been made at selected stations, and a bottom trawl set for winter flounder at one station. All the stations in Christenson Basin and Hudson Shelf Valley have been completed. Water column toxicity has been verified using as a result of two tests, a third test did not show any apparent toxicity.

During the survey two current meter buoys were set near the 12-mile dump site for the continuation of recovery studies being conducted by FED. Attempts to recover buoy set last spring from the ALBATROSS IV have been unsuccessful. It appears that the pinger has broken off from the array.

3. A draft of the plan for a multi-purpose cruise to be conducted aboard the ALBATROSS IV has been prepared. The cruise will involve studies on the spatial distribution of blue crab, conducted by Virginia Sea Grant (Old Dominion University) and ship wake measurements, conducted by Massachusetts Sea Grant (Massachusetts Institute of Technology).

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

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Coordination Highlights of the Northeast Fisheries Center



RECEIVED

July 1988

Fisheries Management

1. The Mid-Atlantic Fishery Management Council met 13-14 July 1988 in Philadelphia, Pennsylvania. The Council: (a) voted to endorse three specific statements dealing with ocean dumping, which were drafted during the recent Mid-Atlantic and New England Council Environmental Affairs Committee meeting; (b) voted to begin work on the development of a Shark Fishery Management Plan by submitting a 303(e) data request to the Secretary of Commerce and that, at this time, the Fishery Management Plan (FMP) be "framework" in structure; and (c) following extensive discussion, voted to adopt the hearing draft of Amendment #8 to the Surf Clam/Ocean Quahog FMP.

2. The next meeting of the New England Council will be 10-11 August 1988, at the King's Grant Inn, Danvers, Massachusetts.

Contact: Ed Bowman
(508/548-5123, x249)

Sea Grant

The information sheet, TIPS ON TUNA HANDLING, was recently issued by the Sea Grant Program at the Woods Hole Oceanographic Institution.

Contact: Helen Mustafa
(508/548-5123, x244)

Vessel Operations

1. The R/V ALBATROSS IV completed Part II of Cruise 88-07, Sea Scallop Survey. Approximately 350 stations have been sampled.

2. The R/V DELAWARE II completed Parts III and IV and currently on Part V of Cruise 88-07, Pelagic Juvenile

Bluefish Larvae. The study is being conducted by Sea Grant at State University of New York, Stony Brook, New York.

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There are two phases to the study. The first phase is the study of the transport of spring-spawned bluefish (i.e., the bluefish spawned south of Cape Hatteras) northward into the Mid-Atlantic Bight and then across the continental shelf into the nursery grounds of the coastal estuaries. The second phase is the study of the bluefish spawned in the summer within the Mid-Atlantic Bight. The objective is to determine transport of the bluefish cross-shelf and longshore transport ultimately into the coastal estuaries.

During phase 1, pelagic juvenile bluefish (15-50 mm) were collected using a five meter frame net. During Parts I and II of the cruise, pelagic juveniles were obtained during their northward movement towards the New York Bight from the waters off Cape Hatteras, but only to the shelf's edge. On Part III, during which 101 stations were sampled within 2 miles of the shore, only two pelagic bluefish juvenile larvae were obtained.

There was uncertainty as to where the bluefish pelagic juvenile were habiting, because inshore sampling conducted simultaneously with the offshore sampling, initially "came up empty." Now, however, inshore sampling has documented recruitment to the coastal waters. The scarcity of bluefish larvae suggests that either they crossed the shelf very quickly and remained just outside of the estuaries, or they were crossing the shelf in water deeper water than the sampling net fished. This uncertainty should be resolved as a result of future proposed work.

3. Phase 2 of Sea Grant's study is currently underway. Preliminary efforts have resulted in the catching of larvae 3-5 mm in length.

Contact: H.C. Boyar
(508/548-5123, x235)

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Coordination Highlights of the Northeast Fisheries Center



August 1988

Fisheries Management

The New England Fishery Management Council met in Danvers, Massachusetts, on 10-11 August 1988. David Borden (RI) was re-elected Council Chairman and will be serving his third term in that position; James Warren (ME) was elected Vice Chairman. Robert Jones, Arthur Odlin, and Berry Gibson were all elected to serve on the Council's Executive Committee.

Groundfish Oversight Committee Chairman James Warren reported that his Committee reviewed the public hearing comments on Amendment #2 to the Northeast Multispecies Fishery Management Plan and, as the result of that review, the Committee made nine recommendations for Council consideration. Based on the Committee's recommendations and extensive Council discussion and debate, the Council voted to approve the following proposals:

1. To increase the minimum size of yellowtail flounder from 12" to 13" and American plaice from 12" to 14".
2. To establish a 9" minimum size for redfish.
3. To require that minimum fish sizes apply to both commercial and recreational fishermen.
4. To postpone the scheduled increase in the Georges Bank mesh size, but effective 1 October 1990, require that vessels operating in the Regulated Mesh Area use nets that are constructed with mesh no smaller than the regulated size (currently 5 1/2").
5. To modify the existing regulatory language which applies to small mesh nets aboard vessels in the Regulated Mesh Area.
6. That there be a seasonal extension of regulated mesh to Nantucket Shoals to protect juvenile cod in the Nantucket Shoals winter fishery.

7. To adopt regulatory language to facilitate non-reissuance of Exempted Fishery Program permits when participants have not complied with reporting requirements.
8. To establish a trip by-catch limit of 25% regulated species for vessels operating in the Exempted Fishery Program.

9. That trawl vessels not be allowed to enter the Haddock Spawning Area II during periods of closure.

These new provisions will be submitted to the Secretary of Commerce as Amendment #2 to the Northeast Multispecies Fishery Management Plan with the expectation of approval sometime this fall.

The New England Council will next meet on 21-22 September 1988 in Southport, Maine. The Mid-Atlantic Council did not meet during the month of August, but is scheduled to meet 7-8 September 1988 in Wilmington, Delaware.

Contact: Ed Bowman
(508/548-5123, x249)

Recreational Fisheries

A summary of the June, 1988, meeting of the Northeast MRF Steering Committee is available to interested persons. The meeting was the first by the 18-member group of MRF leaders appointed earlier this year by Regional Director Richard Roe to provide a link on marine fisheries issues between the recreational constituency and the Regional Office.

Although there was lively discussion of a wide range of issues at the June meeting, the discussions tended to focus on a need to improve communications from NMFS and the

Councils to the recreational fishing community regarding both FMP development activities and NMFS research activities. Part of the problem has been the technical form and format of material published or otherwise distributed by NMFS. A main point made by the industry representatives is that the Councils and NMFS should not count on recreational fishing interests in the Northeast to become sufficiently organized to handle the communications problem themselves (there are more than 3.5 million resident marine anglers in the northeast). There was consensus at the meeting that the problem of improved communications should be a main item of future committee activities.

To organize itself, the committee appointed Tom Hill, Gloucester, MA, and Eric Burnley, Elkton, MD, to serve as co-chairmen. The committee also formed a New England Subcommittee and a Mid-Atlantic Subcommittee, to hold local meetings with fishermen in the two areas between meetings of the full committee. It is planned the subcommittees will meet in October, 1988 and that the full committee again will meet in January, 1989.

Contact: Tom Morrissey
(508/548-5123, x236)

Vessel Operations

1. The R/V ALBATROSS IV completed Part III of Cruise 88-07, Sea Scallop Survey. Two hundred and fifty-four stations were occupied. Approximately 37,900 sea scallops, 3,300 sea scallop clapper, 7,900 Iceland scallop, and 60 Iceland clapper shell height measurements were obtained. In addition, lengths were obtained for 48 Atlantic cod, 121 cod, 128 yellowtail flounder, and 183 goosfish.

In conjunction with dredging operations at the special Iceland scallop sampling sites, approximately 16 bushels of Iceland scallops were marked and released. The mark consists of two parallel grooves ground into the margin of the shell. The University of Massachusetts Sea Grant Program will conduct a scallop survey in December in an attempt to recover as many of the marked scallops as possible for growth determinations.

2. The ALBATROSS IV also completed a Survey on the Spatial Distribution of Blue Crab. The cruise was conducted by Sea Grant personnel from Old Dominion University, Norfolk, Virginia. A total of 52 stations were occupied during the cruise in the waters of the Chesapeake Bay Plume. Forty-two stations were in a grid pattern 60 kilometers square; stations were at 10 kilometer intervals. In addition to doing plankton tows at each station with neuston and bongo nets, CTD casts were made at each station and hydrocasts at alternate stations. Additional

neuston tows were conducted at selected stations to supply blue crab larvae and prey items for feeding studies. Ten feeding experiments were conducted onboard the vessel. After the grid sampling was completed, 10 additional stations were occupied to locate and sample zooplankton along the Chesapeake Bay Plume front. One thousand live blue crab larvae megalopae were obtained for experiments on laboratory molt frequency.

3. The ALBATROSS IV is currently conducting a Ship Wake Measurement Cruise with Sea Grant personnel from Massachusetts Institute of Technology, Cambridge, Massachusetts. A brief summary of the work will be presented in September's issue of LINKAGES.

4. The R/V DELAWARE II completed Parts IV-VI of Cruise 88-07, Pelagic Juvenile Bluefish Larvae. The study was conducted by Sea Grant at State University of New York, Stony Brook, New York. There were two phases to the study. The first phase was the study of the transport of spring spawned bluefish (i.e., the bluefish spawned south of Cape Hatteras) northward into the Mid-Atlantic Bight and then across the continental shelf into the nursery grounds of the coastal estuaries. The second phase was the study of the bluefish spawned in the summer within the Mid-Atlantic Bight. The objective was to determine transport of the bluefish cross-shelf and "longshore" transport ultimately into the coastal estuaries.

The results of Phase 1 were reported in the July issue of LINKAGES. Preliminary findings suggest that Phase II was very successful. Large numbers of pelagic juveniles were obtained during Parts III-VI of the survey. The fish ranged in length from < 4 mm to 45 + mm. There appears to be an indication of a southwest transport of larval bluefish with a slight congregation of approximately 1-15 cm fish near the outer edge of the shelf. The fish then appear to rapidly cross the shelf and head towards coastal embayments, primarily along New Jersey. Concurrent seining surveys should verify their arrival in the bays of New Jersey. Summer spawned bluefish appear to be much more abundant than those spawned in the spring.

Detailed analyses of the approximately 1,000 larvae collected during the entire survey, along with shore-based sampling, will be used to access the probable mechanisms responsible for cross-shelf transport of bluefish. In addition, the analyses of the specimens will provide information on age and growth differences between spring and summer spawned fish and the possible periodicity in spawning during the summer season.

5. The DELAWARE II also completed a cooperative cruise among NEFC, Massachusetts Institute of Technology, and the U. S. Navy. The cruise was designed to provide an effective and expedient method to determine when a naval mine is in a net and to remotely release the

net when the mine is "caught". Preliminary findings indicate that an experienced operator watching a strip chart can tell when a mine is caught in the net, and is the most practical of all the current available systems.

Net twine tension provided the most dramatic and sure indication of an object in the net. Load cells indicated a tension of five to 20 pounds while towing. The mine contact caused tensions of 50-60 pounds for the first three to four seconds. Once the mine accelerated to tow speed, however, the tensions dropped back into the noise level.

Headrope tension provided the next most reliable indication of a mine in the net. It was not as easily described as twine tension, but the indication would be obvious to an experienced operator observing a real time monitor of head rope tension.

An attempt to release the mine by manual means indicated that this method would be unsafe. The pull of the lanyard (hydrodynamic drag on the catenary) exceeds what one could handle in moderately poor sea conditions. The trigger pull should be set at least 200 pounds to avoid a release caused by hydrodynamic drag on the catenary.

The system of tethering a mine to obtain many net encounters worked well. Encounters were made at the rate of one every six minutes. Attempts were made to "catch" mines 40 times. It would have been possible to make over 120 attempts in a 24 hour period. The tether tension provides a positive indication of a catch or a miss and is the most practical of all available systems.

Contact: H.C. Boyar
(508/548-5123, x235)

LINKAGES



Coordination Highlights of the Northeast Fisheries Center



September 1988

Fisheries Management

1. On 7-8 September 1988, the Mid-Atlantic Fisheries Management Council met in Wilmington, Delaware. Mr. Jim McHugh was elected Council Chairman and Mr. Bob Martin as Vice Chairman for the 1988-89 terms of office. Major actions taken by the Council included: (a) the approval of the 1989 surf clam quotas for the Mid-Atlantic (2,650,000 bu), Nantucket Shoals (200,000 bu), and Georges Bank (300,000 bu) areas; and (b) the approval of the 1989 specifications for the squid, Atlantic mackerel, and butterfish fisheries.

The next meeting of the Mid-Atlantic Council will be 12-13 October 1988 in Port Jefferson, New York.

2. The New England Council met in Southport, Maine on 22 September 1988. The Council approved 1989 specifications for butterfish and *Loligo* squid as they appear above. With regards to *Illex* squid, the New England Council approved a DAP of 13,000 mt and a JVP of 1,500 mt, and for Atlantic mackerel an IOY of 44,000 mt and a zero TALFF. The next meeting of the New England Council will be 24-25 October 1988, in Falmouth, Massachusetts.

Contact: Ed Bowman
(508/548-5123, x249)

Habitat Conservation

1. The EPA New Bedford Harbor Superfund project is entering the final stages of data gathering, modelling, and analysis that should lead to a remedial action decision within a year. The COE/EPA pilot study to assess the feasibility of dredging and disposal of the highly contaminated harbor sediments in confined shoreside and subaqueous disposal sites is underway. Other remedial action alternatives, including hydraulic control, biodegradation, and no action, are being analyzed in a separate report by an EPA contractor. Another EPA contractor has developed a hydrodynamic, food chain transfer model that will be used to assess the various clean-up alternatives.

Risk assessments and public health studies are complete, but not finalized. Much of this work should be available for review over the next 9 months. This project has ramifications for recreational and commercial fishing.

2. The National Undersea Research Center, University of Connecticut at Avery Point, held a meeting on 22 September to review results of submersible studies in the 106-mile dumpsite area, discuss the development of a cooperative multi-agency "rapid response program" to investigate the effects of sewage sludge dumping at the 106-mile site, and to further develop the "superstation" concept with regard to regional long-term ocean pollution research and monitoring studies in the mid-Atlantic. The draft final implementation plan for the 106-mile site monitoring program is available.

Contact: Bruce Higgins
(508/548-5123, x340)

Sea Grant

1. 1989 PROPOSAL TO NATIONAL SEA GRANT COLLEGE PROGRAM of the New York Sea Grant Institute is now available. The proposal contains new and continuing projects in the areas of Biotechnology and Seafood Science, Fisheries, Aquaculture, The Coastal Environment, Diving Physiology, and Advisory Services.

2. The summer 1988 issue of SEA GRANT ABSTRACTS is now available.

3. Also available is the CALIFORNIA SEA GRANT BIENNIAL REPORT OF COMPLETED PROJECTS 1984 - 86.

Contact: Helen Mustafa
(508/548-5123, x244)

Vessel Operations

1. The R/V ALBATROSS IV completed Part I of the Autumn Bottom Trawl Survey. One hundred and sixty-four bottom trawl stations were occupied in waters from Cape Hatteras to the Mid-Atlantic Bight. In addition, bongo tows were made at 70 of the stations.

2. The DELAWARE II completed a Sand Lance Survey in the waters of eastern Nantucket Shoals and southwest Georges Bank. The study was supervised by Sea Grant of the University of Rhode Island, but involved cooperative work with Center personnel. Fifteen Igypt trawls, 12 bottom trawls, and six bongo tows were made. Adult sand lance were obtained from only five stations; all the collections were with the bottom trawl (# 36 net). The fish were obtained from the waters of Little Georges Bank. Zooplankters (primarily *Calanus finmarchicus*) were collected and kept alive for further study at the laboratory of

the Graduate School of Oceanography.

3. The DELAWARE II also completed Part I of the Gear Testing Cruise. The vessel conducted a fishing power experiment with the ALBATROSS IV. The vessels towed alongside each other in the same direction and for the same length of time. The stations occupied were the random stations of the Autumn Bottom Trawl Survey. The catch brought aboard the DELAWARE II was processed similar to the procedures used during a routine groundfish survey. Ninety-eight of the 164 stations occupied by the ALBATROSS IV were duplicated by the DELAWARE II; the latter began the work one week later.

Contact: H.C. Boyar
(508/548-5123, x235)
