

MONTHLY REPORT
ON
MESA-FUNDED RESEARCH
FEBRUARY 1979

by

NATIONAL MARINE FISHERIES SERVICE
NORTHEAST FISHERIES CENTER
SANDY HOOK LABORATORY
HIGHLANDS, NEW JERSEY 07732

Report No. SHL 79-15 (March 1979)

Title of Study: Source of and Environmental Concentrations of Organic Compounds (I.C.7) and Organic Contaminants of Fish, Shellfish, and Plankton (I.E.1)

Principal Investigator: Vincent S. Zdanowicz

Institution or Agency: National Marine Fisheries Service
Northeast Fisheries Center
Milford Laboratory
Milford, Connecticut 06460

Period Reported: February 1979

Planned Activity:

(1) Collection of organisms and sediments for shipment to Seattle NAF

Actual Accomplishments:

(1) Additional samples for hydrocarbon analyses were collected on a R/V Kelez cruise, Feb. 8-10. Fishermen and NMFS port samplers from New York to North Carolina were contacted to obtain additional samples. Inclement weather and sea ice frustrated collection attempts for most of the month. Preparations for the final collection effort are underway to satisfy the Seattle shutoff date of early March.

Forecast of Activities for March

Completion of collections.

Title of Study: Heavy Metal Concentrations in Fish and Shellfish (I.E.2)

Principal Investigator: John B. Pearce

Institution or Agency: National Marine Fisheries Service
Northeast Fisheries Center
Sandy Hook Laboratory
Highlands, New Jersey 07732

Period Reported: February 1979

Planned Activity: Actual Accomplishments:

(1) Completion of report. Draft report furnished to MESA Office for comments.

(1) Section III of the report on heavy metal concentrations in fish and shellfish was reviewed by the MESA Office and comments furnished to this office on 22 January. The comments were furnished to the Director, Charleston Laboratory, SEFC, for his consideration on 13 February. Personnel at the Charleston Laboratory reviewed the comments made by the MESA Office and provided a reply to this office on 26 February.

(2) Both the Charleston Laboratory and the Sandy Hook Laboratory have agreed to consider the comments made by the MESA review personnel to redraft the manuscript incorporating these comments, where appropriate.

Forecast of Activities for March:

Charleston Laboratory and Sandy Hook Laboratory personnel will begin to incorporate MESA comments and suggestions into the draft manuscript. Since much correspondence will involve Mr. Hall, now resident in Alaska, it is anticipated that final revision will be completed late in April

Title of Study: Water Column Respiration and Release of
Dissolved Organic Matter from Natural
Populations of Phytoplankton (II.D.6)

Principal Investigator: Dr. James P. Thomas

Institution or Agency: National Marine Fisheries Service
Northeast Fisheries Center
Sandy Hook Laboratory
Highlands, New Jersey 07732

Period of Report: February 1979

Planned Activity:

Actual Accomplishments:

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| (1) Submit FY-79 proposal | (1) Completed. |
| (2) Continue data analysis
as proposed. | (2) Underway. |
| (3) Begin manuscript prep-
aration. | (3) Statistical analyses continued. |

Forecast of Activities for March:

- (1) Continue data analyses as proposed in FY-79 proposal.

Title of Study: Environmentally Induced Mutagenesis -
Cytotoxicity and Related Teratogenicity in
Planktonic Fish Eggs (III.5)

Principal Investigator: Dr. A. Crosby Longwell

Institution or Agency: National Marine Fisheries Service
Northeast Fisheries Center
Milford Laboratory
Milford, Connecticut 06460

Period of Report: February 1979

Planned Activity:

Actual Accomplishments:

(1) Complete sorting and
dissection of mackerel
embryos from '78 cruise

(1) Just about finished.

(2) Continue cytological
examination of '78
mackerel embryos

(2) Underway.

(3) Pursue examination of
mackerel egg chorion
(outer egg envelope)

(3) Seriously underway. Evidence
is accumulating which indicates
chorion damage may precede embryo
damage at some New York Bight
sample sites.

Comments on Significant Developments:

A manuscript was prepared for the ICES (International Council for the Exploration of the Sea) Workshop on Monitoring Biological Effects of Pollution in the Sea detailing our MESA-supported studies on Atlantic mackerel in the New York Bight. This appears to have been well received. The overall approach will figure significantly in the program of biological effects monitoring that is to be formally made by the working group to the ICES ruling body. Using other approaches the West Germans are coming up with data that support the overall conclusions of our studies. (Our Northeast Fisheries Center Director has heard of these German studies and recognizes that the work is mutually agreeable.) Also, it appears that genetic effects monitoring will be treated in the future on a par with any other type monitoring of oceans for biological effects.

Dr. R. Edwards has suggested that, instead of preparing a separate detailed paper on our mackerel studies for publication in Limnology and Oceanography, we prepare a paper for publication in a forthcoming book on early life history of fish. This book is to be comprised of contributions to a Symposium on the Early Life History of Fish, April 2-5, 1979. Woods Hole [ICES, FAO, ICNAF (International Commission Northwest Atlantic Fisheries), and IABO (International Association Biological Oceanography) and SCOR (Scientific Committee for Ocean Research)].