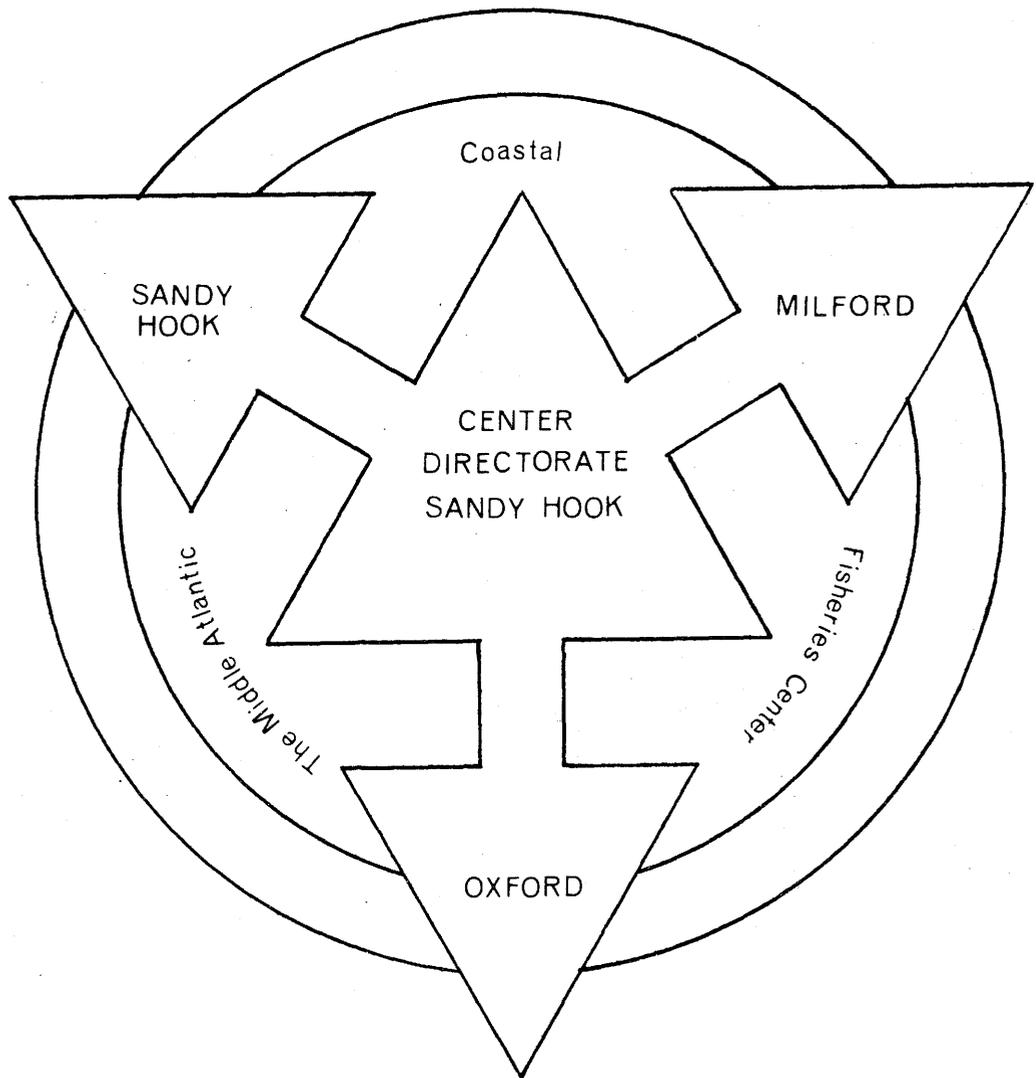




U.S. DEPARTMENT OF COMMERCE  
National Oceanic and Atmospheric Administration  
National Marine Fisheries Service  
Northeast Region

MIDDLE ATLANTIC COASTAL FISHERIES CENTER



SUB-TASK PROGRESS REPORT - FY 1974

Informal Report No. 29

July 12, 1974



**U.S. DEPARTMENT OF COMMERCE**  
**National Oceanic and Atmospheric Administration**  
NATIONAL MARINE FISHERIES SERVICE  
Middle Atlantic Coastal Fisheries Center  
Highlands, New Jersey 07732

Date : July 12, 1974

Reply to Attn. of: F16

To : F1 - Assoc. Director for Resource Research, NMFS  
Washington, D. C. 20235

From : Carl J. Sindermann, Center Director, MACFC

A handwritten signature in cursive script, reading "Carl J. Sindermann", written in dark ink.

Subject: Transmittal of FY'74 STPR's

Attached are two (2) copies of the STPR's reflecting progress made in the total research effort, including reimbursables, of this Center. In summary, of 328 milestones projected to be reached in fiscal '74, Center researchers attained 120 and attained 75% or more completion of an additional 107. We estimate that our overall schedule slippage was not more than one-quarter year. We have never prepared such documents for our "collecting tasks", i. e., ADP, Libraries, etc., in that these were wholly service units, responding to the day-to-day needs of our researchers. In this connection, we were pleased to see that "collecting tasks" were cancelled for fiscal '75 and consolidated into the "General Support" category. In general, we are quite pleased with our showing inasmuch as our people in their first formal attempt at scheduling research, were quite naive in terms of time/funds commitments, i. e., no allowances were made for diversions to short-term higher priority projects and in terms of commitments over which they had no control, i. e., publication of a manuscript rather than to referral of manuscript to the editorial process. A formal in-house program review, emphasizing the fiscal '74 achievements and benefits was held in January 1974 and another is scheduled for August 1-2, 1974.

Attachments

Summation of Milestones Projected and Achieved:<sup>5/</sup>

<u>By Investigations</u> <sup>2/</sup>	<u>Initiated</u>	<u>'74 Completion</u>	<u>Completed</u>	<u>Nearly Completed</u> <sup>3/</sup>
Resource Assessment <sup>2/</sup>	57	40	25	16
Experimental Biology <sup>2/</sup>	111	63	37	22
Pathobiology <sup>1/2/</sup>	37	28	15	12
Ecosystems <sup>1/2/4/</sup>	<u>118</u>	<u>82</u>	<u>43</u>	<u>57</u>
Center	323	213	120	107

<sup>1/</sup> Reports not yet received: (Patho:2) (Ecosystems:1) Projected milestones included in figures above (Total: 9 for FY'74 completion).

<sup>2/</sup> Major reasons for non-completion:

- 1) Diversion to higher priority activities.
- 2) Lack of typing and ADP services and editorial/publishing delays.
- 3) Under-estimation of sorting/identifying time requirements.
- 4) Delays in contract awards or delivery of equipment.
- 5) Intractable biological (organism) problems, i.e., highly seasonal spawning, etc.

<sup>3/</sup> Although tabulated when 50% or more completed, great majority indicate 75% or more completed. It is my impression that, with a very few exceptions, completion by end of 1st quarter, fig. '75 can be safely estimated, i.e., quarter-year slippage is safe overall estimate.

<sup>4/</sup> Includes all MESA work.

<sup>5/</sup> Some ambiguity exists in many STP's as to whether milestones are to be achieved at end of fiscal year or in following year. See comment below.

Comment: Most delays occasioned by conditions wholly outside control of researcher. Suggest strategy of STPR reporting based on above observations, e.g., do not commit to publication, rather to completion of draft manuscript; do not commit, at end of 3rd quarter, to ADP manipulations rather slip over into 1st quarter of new fiscal year. In addition, any milestone anticipated in the following fiscal year should be clearly shown - by an arrow - as carrying over.

Sub-task Progress Report - June 30, 1974

Sub-task #	# Milestones to be initiated in FY'74	Total # of Milestones to be completed in FY'74	# Milestones Completed	# Milestones 50% or more Completed	Cause(s) of Slippage(s)
02(-01)	5	4	2	3	ADP problems
02(-02)	3	3	2	1	ADP problems
02(-03)	7	5	2	1	State-Federal obligations
02(-04)	3	2	1	1	Delay in cruise completion
02(-05)	5	4	2	2	Lack of typing help. CEQ
02(-06)	4	2	2	2	
02(-07)	4	3	1	2	Delay in typing & translations
02(-08)	6 <u>37</u>	3 <u>26</u>	2 <u>14</u>	1 <u>13</u>	
05(-01)	5 <u>5</u>	3 <u>3</u>	2 <u>2</u>	0 <u>0</u>	Material not yet to publisher
06(-01)	6	3	3	2	None
06(-02)	6 <u>12</u>	5 <u>8</u>	5 <u>8</u>	1 <u>3</u>	
07(-01)	7	4	1	5	High-level diversion of effort
07(-02)	7	5	1	5	High-level diversion of effort
07(-03)	5	4	3*	1	Sub-task terminated
07(-04)	6	6	2	4	(Training of new sorters and
07(-05)	2 <u>27</u>	2 <u>21</u>	0 <u>7</u>	2 <u>17</u>	(identifiers caused slight delays
08(-01)	7	3	2	5	
08(-02)	5 <u>12</u>	4 <u>7</u>	1 <u>3</u>	4 <u>9</u>	

Sub-task #	# Milestones to be initiated in FY'74	Total # of Milestones to be completed in FY'74	# Milestones Completed	# Milestones 50% or more Completed	Cause(s) of Slippage(s)
09(-01)	9	8	3	5	Diversion to other tasks
09(-02)	$\frac{15}{24}$	$\frac{15}{23}$	$\frac{7}{10}$	$\frac{7}{12}$	
12(-01)	6	5	1	4	Inability to induce spawning
12(-02)	7	4	3	1	
12(-03)	Inactive - personnel reassigned				
12(-04)	$\frac{13}{13}$	$\frac{9}{9}$	$\frac{4}{4}$	$\frac{5}{5}$	
13(-01)	7	3	3	2	
13(-02)	4	2	1	2	
13(-03)	$\frac{4}{15}$	$\frac{3}{8}$	$\frac{3}{7}$	$\frac{0}{4}$	
14(-01)	12	5	4	0	Problems of seasonal spawning
14(-02)	10	8	5	4	Diversion to other tasks
14(-03)	$\frac{20}{42}$	$\frac{13}{26}$	$\frac{4}{13}$	$\frac{3}{7}$	Diversion to other tasks
15(-01)	16	8	5	3	Equipment & animals not avail
15(-02)	13	6	4	1	
15(-03)	$\frac{12}{41}$	$\frac{6}{20}$	$\frac{4}{13}$	$\frac{2}{6}$	Lack of experimental animals
16(-01)	12	7	7	3	Lack of necessary facilities
16(-02)	5(6)	5			Not received
16(-03)	$\frac{17}{17}$	$\frac{12}{12}$	$\frac{7}{7}$	$\frac{3}{3}$	

Sub-task #	# Milestones to be initiated FY'74	Total # of Milestones to be completed in FY'74	# Milestones Completed	# Milestones 50% or more Completed	Cause(s) of Slippage(s)
17(-01)	6	4	3	3	
17(-02)	6	5	3	3	
17(-03)	5	5	2	3	Underestimated time requirements
17(-04)	3	2	2	1	Not received
	20	16	8	9	
53(-01)	5	4	4	0	
53(-02)	6	4	3	1	Excessive backlog of samples
53(-03)	4	3	2	2	Lack of typing help /f. sorting
	15	11	9	3	
55(-01)	3	1	1	2	Delayed delivery of equipment
55(-02)	3	1	1	1	
55(-03)	5	2	1	3	Underestimated sorting time
55(-04)	6	3	1	3	" " required
55(-05)	4	3	2	1	" " "
55(-06)	3	2	2	1	
55(-07)	4	2	2	1	Contract award delayed (1/1/74)
55(-08)	4	2	0	2	Underestim. sorting time requ
55(-09)	1	1	1	0	Sub-task terminated
55(-10)	3	1	1	2	
55(-11)	4	3	3	0	
55(-12)	See 17(-01)				On schedule
55(-13)	3	2	1	1	Not received
	43	23	15	16	

FY-74

6/24/74

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

July 15

MA-02-74  
2812P1-01

Groundfish Assessment: Autumn Cruise FY-74

NO.  
OF  
PAGE

7. %

8. STATUS

- 100 Planning and coordination of cruise completed on schedule.
- 100 Cruise completed with some delay due to weather and inclusion of special MESA stations. Detailed cruise report completed.
- 85 Hand preparation of catch and hydrographic data for submission to ADP unit completed on schedule. Delay with final audits from ADP. Final audits now underway.
- 10 Preliminary listings received from ADP -- need remainder of listings.
- 0 No progress - ADP delays encountered as expected.

RESULTS

Contracts let for special 3/4 trawl nets and charter of research vessel - on schedule. 133 trawl stations made in coastal area (0-15 fm) between Block Island, R.I. and Cape Fear, N. C. Fifteen planned offshore stations (15-200 fm) not made due to rough seas. Samples for life history investigations and contaminant studies distributed. Hand processing of data completed on time. ADP delays in final listing and audit programs now cleared -- data backlog should be remedied. Some delay of audit correction because of heavy cruise schedule. Preliminary listing received. On receipt of final listing from ADP will initiate report, first quarter FY 75. Analysis program developed delayed -- will initiate program development first quarter FY-75.

OFFICIAL PREPARING REPORT (Signature)

*Thomas K. Garwood*

11. BMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIC)

*Carl J. Suderbaum*

FY-74

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

6/24/74

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

July 15

MA-02-74  
2812P1-02

Groundfish Assessment: Spring Cruise - FY 74

O.  
F  
E

7. %

8. STATUS

- 100 Planning and coordination of cruise completed on schedule.
- 100 Completed on schedule.
- 50 Hand preparations of catch and hydrographic data completed on schedule.
- 0 Begin report when data processing completed - no delays anticipated.
- 0 Begin analysis program development when data processing completed. Some minor ADP programming delays may be encountered.

RESULTS

Contracts let for special 3/4 trawl nets and charter of research vessel - on schedule.  
142 trawl stations made in coastal area (0-15 fm) between Nantucket Shoals and Jacksonville, Fla. Samples for life history investigations and contaminant studies distributed.  
Salinity determinations and collation of other hydrographic data completed for inclusion in ADP program. Hand processing of cruise logs completed and keypunching of data begun on schedule.  
Not scheduled.  
Not scheduled.

OFFICIAL PREPARING REPORT (Signature)

*Werner H. Garver*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIG.)

*Carl J. Sudermann*

FY-74

6/24/74

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

July 15

MA-02-74  
2812P1-03

Resource Assessment; Invertebrates

O.  
F  
E

7. %

8. STATUS

100	Completed first half of FY
50	Behind schedule
20	On schedule, continuing
25	Behind schedule
0	Project cancelled
100	Completed
0	Behind schedule

RESULTS

Ms finished in stages of editorial revision and submission.  
 Ms #2 & 3 slipped to end of 2nd quarter FY-75 due to time demands for state-federal management obligations, technical preparation of material and contract proposals.  
 Manuscript begun.  
 Collections began in spring. Now on schedule for a years collection sequence. Vessel now available and making monthly collections.  
 Lack of material; demands of state-federal management obligations.  
 Cruise completed.  
 Cruise completion delayed to June 28. Slip report completion to August.

OFFICIAL PREPARING REPORT (Signature)

*Officer for J. Popes*

11. (FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIC))

*Carl J. Sundermann*

FY-74

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

6/24/74

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

July 15

MA-02-74

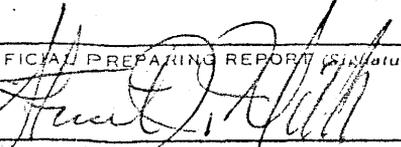
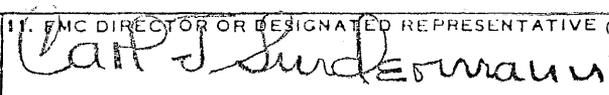
2812P1-04

Historical Cruise Data - 18 Cruises (1968-1972) Between  
Florida and New York

NO. OF PAGE	7. %	8. STATUS
	100	Manuscript complete
	90	Behind schedule due to lag in typing pool.
	100	On schedule

RESULTS

Final draft of manuscript ("Fish and Hydrographic Collections made by Research Vessels Dolphin and Delaware II during 1968-1972 from New York to Florida") has been completed including illustrations. Manuscript in the process of final editing and reviewing; when complete will be submitted for publication in NMFS Data Series. Recurrent group analysis ADP programs ("REGROUP" "CONNEX", "STATION") have been received from Scripps Institution of Oceanography and are presently being incorporated into existing systems.

<p>OFFICIAL PREPARING REPORT (Signature)</p> 	<p>U. S. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.)</p> 
---	---

1. FISCAL YEAR  
FY-74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
6/24/74

(Submit four copies.)  
To: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
July 15

4. TOP NO. PLUS STP SUFFIX  
MA-02-74  
2812P1-05

5. SUBTASK TITLE  
Status of Stocks (Species Briefing Books)

NO. OF /E	7. %	8. STATUS
100		Priority species determined on schedule.
100		Priority species assigned on schedule.
95		Book compilation begun.
90		Most books submitted on schedule.
0		No progress

RESULTS  
27 priority species for MACFC have been determined after consultation with other state and federal agencies. Constant evaluation of recent trends will permit the addition of new species if the need arises.  
27 species assigned to 14 people - on schedule.  
Book compilation nearly complete - some drafts being typed.  
Some books delayed briefly due to cruise conflicts and typing delays.  
First drafts must be completed before updating can begin.

OFFICIAL PREPARING REPORT (Signature)

*Thomas H. Garver*

OFFICIAL FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Suderman*

1. FISCAL YEAR  
FY-74

2. DATE PREPARED  
6/24/74

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)  
: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
July 15

4. TDP NO. PLUS STP SUFFIX  
MA-02-74  
2812P1-06

5. SUBTASK TITLE  
Historical and Ongoing Assessment of the Genus Paralichthys

O. F. E.	7. %	8. STATUS
1.	100	On schedule
2.	100	On schedule
3.	100	On schedule
4.	100	On schedule

RESULTS

- Specimens were collected during all phases of spring groundfish cruises.
- All specimens, to date, have been sampled for morphometric and meristic variates.
- All previous samples have been recorded in the proper form, keypunched, checked, and incorporated into ADP systems.
- Over 1400 specimens are now undergoing preliminary discriminant function analysis.

OFFICIAL PREPARING REPORT (152)(156)  
*[Signature]*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (152)  
*Carl J. Suderbaum*

1. FISCAL YEAR  
FY-74

2. DATE PREPARED  
6/24/74

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
July 15

4. TDP NO. PLUS STP SUFFIX  
MA-02-74  
2812P1-07

5. SUBTASK TITLE  
Bluefish Monograph (Pomatomus saltatrix)

O. F. E.	7. %	8. STATUS
	100	Manuscript completed
	85	Behind schedule due to time lost in typing pool.
	100	On schedule
	100	On schedule

RESULTS

Manuscript ("Morphometric Separation of the Atlantic Coast Stocks of the bluefish, Pomatomus saltatrix (L.)") is complete.

Manuscript ("Age and Growth of Atlantic Coast Bluefish, Pomatomus saltatrix (L.)") is in the rough draft stage.

Food item tabulation is complete.

Bibliography is complete to date with the exception of several foreign translations and will be typed during the next quarters.

OFFICIAL PREPARING REPORT (Signature)

17. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.)

*[Signature]* *[Signature: Carl J. Suderbaum]*

1. FISCAL YEAR  
FY-74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
6/24/74

(Submit four copies.)  
To: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

July 15

4. TOP NO. PLUS STP SUFFIX  
MA-02-74  
2812P1-08

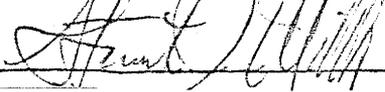
5. SUBTASK TITLE

Historical and Ongoing Assessment of the Family Sciaenidae

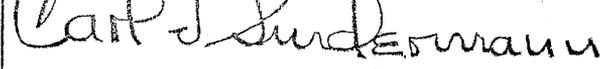
NO. OF /E	7. %	8. STATUS
1.	100	On schedule
2.	100	On schedule
3.	100	On schedule
4.	100	On schedule
5.	100	On schedule
6.	100	On schedule

RESULTS  
 All weakfish scales have been mounted. Spot scales are mounted to date and over 2000 have been read. Weight-length relationships have been statistically deduced and furnished to groundfish interests.  
 Spot ovaries have been collected for fecundity studies.  
 Over 140 spot are now in the process of being analyzed for morphometric and meristic variation.  
 Spring collections (MACFC, NEFC, MARMAP II) have been made and catalogued.  
 Sampling of northern ports will resume again this month.  
 A special report ("The Weakfish (Cynoscion regalis) - A Review of its Biology and Present Research") was given at the ASMFC annual meeting and excepted for publication as an ASMFC Leaflet.

OFFICIAL PREPARING REPORT (Signature)



14. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.)



1. FISCAL YEAR  
FY-74

2. DATE PREPARED  
6/21/74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)  
: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

4. TDP NO. PLUS STP SUFFIX  
MA-05-74  
2813P1-01

5. SUBTASK TITLE  
Biostatistics: Middle Atlantic Sportfish

O. F. E	7. %	8. STATUS
98		Text complete, sections 5, 6; Sections 7, 8 to be assembled. Maps completed (final 19).
0		
100		Meetings and contacts with C. O., other state and federal agencies, statistics and MN staff.
10		Pilot survey of sampling area (Ocean City, Md.) completed
0		No progress

RESULTS

Two sections to editor. Art work completed, will require check when returned from printer.  
 Second half will be submitted to publisher when completed.  
 Communication established and all relevant groups informed.  
 Boating and shore facilities identified: contact with operators, data log forms finalized, interviews begun on trial basis.  
 No funding available: will derive from results of pilot survey.

OFFICIAL PREPARING REPORT (Signature)  
*El Pacheco*

U. S. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderwan*

1. FISCAL YEAR  
FY 74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)

3. Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January - June 1974

4. TDP NO. PLUS STP SUFFIX  
2818P101  
MA-06-74

5. SUBTASK TITLE

Behavior of fishes under stress: field studies

ID. OF /E	7. %	8. STATUS
	100	Manuscript completed and published.
	95	On schedule.
	100	Completed on schedule.
	100	Stomach sample analysis completed on schedule.
	100	On schedule.
	100	On schedule.

RESULTS

Olla, B.L., A.S. Bejda and A.D. Martin. 1974. Daily activity, movements, feeding and seasonal occurrence in the tautog, Tautoga onitis. Fish. Bull., U.S. 72: 27-35.  
Physical habitat requirements of cunner are not as stringent as for young tautog (<30 cm). Home range of cunner and tautog (<30 cm) overlap.  
Completed as reported in previous STPR.  
Tautog show no seasonal change in feeding habits; cunner exhibit marked changes in food items ingested as related to season.  
Cunner are active from spring to fall and become inactive and remain inshore during the winter as do small (<30 cm) tautog.

OFFICIAL PREPARING REPORT (Signature)

Bori L. Olla

11. FISCAL DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

Carl J. Sundermann

9. Results

- f. Continuing analysis on feeding and activity.

1. FISCAL YEAR  
FY 74

2. DATE PREPARED  
June 20, 1974

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)  
1. Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TDP NO. PLUS STP SUFFIX  
2818P102  
MA-06-74

5. SUBTASK TITLE  
Behavior of fishes under stress: laboratory studies

NO. OF /E	7. %	8. STATUS
100		Data analysis (FY 73) on Atlantic mackerel completed.
85		Low temperature study in progress after initial delay.
100		Data analysis in progress on schedule.
65		Manuscript preparation delayed by delay in low temperature study.
100		Literature search on weakfish on schedule.
100		Experimental design preparation on weakfish completed.
100		Data analysis on mullet completed.
100		Manuscript completed and accepted for publication (J. Fish. Res. Bd. Canada).
100		Thermal stress studies on juvenile bluefish on schedule.
100		Completed on schedule.
100		Studies on thermal response continuing on schedule.

**RESULTS**

Results reported in previous STPR.

Experimental fish were captured in April, acclimated at preferred temperatures to establish normal swimming speed and feeding prior to lowering temperature.

Mackerel activity increases as temperature decreases from acclimation level.

Initial draft in progress.

Literature search is providing essential information on natural habits of weakfish.

Normal activity and feeding of weakfish at preferred temperature and simulated natural photo-period to begin in FY 75.

Results reported in previous STPR.

OFFICIAL PREPARING REPORT (Signature) *Bori L. Olla*

NMFS DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.) *Carl J. Sundermann*

SUBTASK PROGRESS REPORT - FY 74  
2818P102  
MA-06-74

Results: (continued)

Manuscript revision completed and submitted following acceptance for publication.

Juvenile bluefish increase activity as temperature increases above preferred and compares closely with results obtained in previous studies on adults. Changes in behavior, such as orientation and schooling were evident as temperature reached stress levels.

Results reported in previous STPR.

Preliminary tests show that immature tautog become inactive and seek shelter as temperature reaches sublethal stress levels.

1. FISCAL YEAR  
FY 74

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TOP NO. PLUS STP SUFFIX  
2818P202  
MA-07-74

5. SUBTASK TITLE  
Impact of environmental change, Long Island Sound

NO. OF A/E	7. %	8. STATUS
100		Final baseline survey completed on schedule.
75		Sediment report received in Feb. 1974. Nutrient chromatography finished same time; computer SYMAPping now in progress.
80		Sorting completed in Jan. 1974, identifications in Apr. 1974. Slippage due largely to high macrofaunal densities and species richness in LIS.
90		Logsheets developed for ADP analysis of faunal environmental parameters, faunal codes assigned and all Cruise I data keypunched. Diversity, equitability programs now ready for SYMAPping.
90		Report now delayed to Jul. 1974 - due to above slippage and redirection of effort to study of New London dredge disposal operation.
90		Actual manuscript preparation not begun, but NERBC report being written in MS-type form to facilitate conversion.
100		Sorting begun in Feb. 1974, ahead of schedule. Concentrating on central LIS stations for which historical comparisons available (per Program Review recommendation). Progress will slow as sorters shift to New London samples.

**RESULTS**

- Paired grabs taken at 95 stations.
- Sediments, nutrients now in printout form.
- 142 stations processed, over 300 species found.
- Printouts on densities and diversities now available.
- Describing faunal assemblages of various sediment-depth environments, and diversity patterns throughout LIS.
- None other than for NERBC report (above).
- Finding good seasonal and historical consistency of fauna at central LIS stations.

OFFICIAL PREPARING REPORT (Signature)  
*Robert N. Reid*

1A. PNC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderbaum*

1. FISCAL YEAR  
FY 74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TRP NO. PLUS STP SUFFIX  
2818P203  
MA-07-74

5. SUBTASK TITLE  
Distribution and ecology of sublittoral meiobenthos in Long Island  
Sound

3. = E	7. %	8. STATUS
	3	No further samples sorted since January STPR, since Cruise I samples considered inferior to Cruise II and III (see STP), and analysis of Cruise II and III samples provided necessary information for final report.
	100	Analysis of samples completed on schedule.
	100	Analysis completed on schedule.
3	75 100	Report on Cruise II analysis submitted with report for Cruise III in May 1974. With receipt of this acceptable final report, subtask was terminated.

RESULTS

None reported.

Concentrated on samples from four zones: immediately adjacent to New York area and western, northern and eastern LIS.

Same as "b".

and e. Found meiofauna densities and distributions comparable to published information on sub-tidal temperate areas. Nematodes dominated, with diversity related to sediment size, but apparently not to geographic position or sediment heavy metals (used as a pollution index).

OFFICIAL PREPARING REPORT (Signature)  
Robert K. Reid

11. FAC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
Carl J. Suderbaum

1. FISCAL YEAR  
FY 74

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TOP NO. PLUS STP SUFFIX  
2818P204  
MA-07-74

5. SUBTASK TITLE  
Analyses of sediments in Long Island Sound, Raritan Bay and New  
Jersey coast

O. F. E.	7. %	8. STATUS
	80	Report completed in December 1973.
	100	Report received on schedule.
	75	LIS II analyses completed on schedule; NJCI sample processing delayed due to preserva- tion in formalin and training new graduate students. Analyses now nearing completion.
	75	LIS II report received on schedule; NJCI report delayed for above reasons. Expected by early July 1975.
	90	LIS III analyses completed on schedule, RB III and IV completed near schedule.
	90	Received LIS III report on schedule in March; RB III and IV report in May.

RESULTS

Now have SYMAPPED distributions of mean grain size, % silt-clay and organics for LIS.  
Sediment distributions for 88 stations throughout RB described.  
and d. LIS II results appear to show seasonal movements of fines and organics.  
and f. Printouts now available on seasonal sediment distributions in both LIS and RB.

OFFICIAL PREPARING REPORT (Signature)

Robert N. Reid

1. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

Carl J. Suderbaum

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)  
: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TDP NO. PLUS STP SUFFIX  
2818P205  
MA-07-74

5. SUBTASK TITLE  
Distribution, abundance and diversity of benthic fauna in Long Island  
Sound

O. F. E.	7. %	8. STATUS
	80	Sorting of Cruise I samples completed in January 1974. Completion of identifications delayed until April 1974, largely due to large number of species present (over 300, several with no descriptions available).
	80	Report awaited completion of sample processing and ADP analysis. Distribution and abundance information now in hand; diversity patterns expected by end of FY or early July.

RESULTS  
Annelids, arthropods and molluscs from all 142 LIS stations now sorted, identified and enumerated to species level.  
Have found several distinct faunal assemblages related to depth and sediment type. Correlations to geographical position and contaminant load are less well defined, but present.

OFFICIAL PREPARING REPORT (Signature)  
Robert N. Reid

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
Carl J. Suderbaum

FY 74

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

June 20, 1974

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January - June 1974

2818P301

MA-08-74

Environmental effects on biochemistry and physiology of crustacea

7. %

8. STATUS

- 95 One report in hands of Center Editor, second awaiting consultative review with co-author in India.
- 95 Graphic illustration being completed, final draft ready shortly.
- 100 Assays of cadmium effect on gill enzymes completed (on schedule).
- 50 Glutamic dehydrogenase method set up, chromatographic equipment for amino acid analysis purchased (on schedule).
- 60 Equipment obtained and methods being developed (on schedule).
- 100 Rearing of crab larvae carried out.
- 80 Assays of lead effects on gill enzymes nearly complete (ahead of schedule).

RESULTS

Publication anticipated in near future.  
 Publication anticipated in near future.  
 Cadmium at 10 parts per million level (in vitro) inhibited crab gill,  $Na+K^+-ATPase$  by 50-60%;  
 at 1 ppm, effect was slight but noticeable.

Cancer irroratus larvae reared from egg, through five zoeal stages, to megalopa.  
 Data not analyzed, but lead appears to have less effect than cadmium.

OFFICIAL PREPARING REPORT (Signature)

Robert K Tucker

NMFS DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

Carl J. Suderhann

A FORM 32-15C (4)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		1. FISCAL YEAR FY 74
NMFS SUBTASK PROGRESS REPORT (See Detailed Instructions)				2. DATE PREPARED June 20, 1974
				4. TOP NO. PLUS STP SUFFIX 2318P302 MA-08-74
(Submit four copies.) Director, National Marine Fisheries Service, ATTN: Fx5 National Oceanic and Atmospheric Administration Washington, D.C. 20235		3. REPORTING PERIOD January - June 1974		
		5. SUBTASK TITLE Environmental forms of nutrients and heavy metals		

OFFICE	7. %	8. STATUS
	90	Analysis completed, data ready for computer analysis.
	90	Analysis completed, data submitted for SYMAP computer mapping.
	100	Polarographic techniques developed, now being used on routine basis for sample analysis.
	60	Sampling methods developed, routine sampling will begin next month.
	50	Methods being developed and equipment acquired for organics identification and binding analysis.

RESULTS

Eight hundred samples from New Jersey shore clam survey analyzed for phosphate, nitrate, nitrite, urea, ammonia, and iron.

Approximately 1500 samples from the Lond Island Sound Survey have been analyzed for phosphate, nitrate, nitrite, urea, ammonia and iron.

Anode stripping polarography for cadmium, lead, zinc, and copper in sea water, with a U.V. irradiation technique for distinguishing organically bound metals, ready for routine use.

Methods developed.

Instrumentation being repaired.

OFFICIAL PREPARING REPORT (Signature) Robert K Tucker	11. JMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.) Carl J. Suderbaum
--	---

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

1974

2. DATE PREPARED

6/20/74

(Submit four copies.)

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA09-74 2818P4 01

5. SUBTASK TITLE

Microbiol Ecology-Bacterial Interrelationship to Fin Rot Disease

O. F. E.	7. %	8. STATUS
100		Sampling of fin rot areas on schedule.
100		Enumeration and isolation of sediments to date completed.
90		On schedule.
90		On schedule.
75		Sediment analysis for heavy metals (7) completed. No animals obtained.
100		Samples collected and submitted for analysis.
0		Study not initiated.
50		Oral report to task force, January-April 1974. Compilation of analysis of data.
50		Compilation of data continuing on previous studies. Presentation of results to American Society of Limnology and Oceanography.

RESULTS

Three sampling cruises. New York Bight stations. January-April 1974.  
 Total counts lipolytic and proteolytic counts obtained. Additional Vibrio isolates obtained.  
 Lipolytic and proteolytic isolates predominately Vibrio sp. (60%). Sediment enrichment yield 82% Vibrio-like organisms.  
 Chitinase-starch hydrolysis related--25% isolates possess lipo, proteolytic, and chitinase activities.  
 Concentrations of 7 heavy metals higher in fin rot area than control area.  
 No results to date.  
 Personnel not available.  
 Tabulation of current data.

OFFICIAL PREPARING REPORT (Signature)

*Wit Gralkowski*

6/20/74

IN FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Sundermann*

1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED

6/20/74

(Submit four copies.)

3. REPORTING PERIOD

4. TOP NO. PLUS STP SUFFIX

Director, National Marine Fisheries Service, ATTN: Fx5 National Oceanic and Atmospheric Administration Washington, D.C. 20235

January 1 - June 30, 1974

MA 09-74 2818P4-02

5. SUBTASK TITLE

Heavy Metal Contamination of Marine Animals and Inshore Water

ID. # / E	7. %	8. STATUS
80		Decision made to collect whelk in 3rd and 4th quarters.
80		Metal analysis delayed because of collection scheme change.
100		Report LIS Study 1972-73 in sediments completed and other delayed pending analysis completion.
70		First draft completed. Second draft being prepared.
100		Report submitted to coordinator for incorporation into Center report.
90		Final submitted to Center Editor. Revised manuscript being prepared.
100		Report submitted to coordinator for incorporation into Center report.
85		New Jersey Coast Study complete. Raritan Bay Study 50% complete.
70		Cunner Study complete. Clearance work delayed because of special study.*
100		Sediment analysis complete. No fish collected for Fin Rot Study.
70		Cd uptake by Cunner manuscript completed. No other manuscript started.
100		Good collection obtained, however, some desired species not able to be collected
100		Completed on schedule.
100		Completed on schedule.
*60		Special Study (MESA Funded) Trace metal levels in sediments of New York Bight.

RESULTS

Trace metal levels in whelk from New Haven dump-site showed substantial decline for December 1973 collected animals. Further sampling required for verification of results. Cunner exposed to Ag were analyzed for Ag uptake and levels of Na, K, Mg. No appreciable Ag uptake noted. Increased K level found in Cunner exposed to Ag as compared to controls.

Trace metal levels in winter flounder and windowpane flounder generally low. Trace metal levels in plankton from dump-site area generally not different from levels in plankton from several miles further out to sea.

OFFICIAL PREPARING REPORT (Signature)

*Richard Greig*

NMFS DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Sundermann*

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
June 21, 1974

(Submit four copies.)  
TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX  
MA-12-74

5. SUBTASK TITLE  
Culture Methods for Coastal Bivalves - 2818P501

6. NO. OF A/E	7. %	8. STATUS
a.	100	Completed during 1st quarter as reported.
b.	70	Behind schedule.
c.	80	Behind schedule.
d.	70	Behind schedule.
e.	20	Behind schedule.
f.	80	On schedule.

9. RESULTS

- b. Problem of ripening surf clams during the winter still not solved.
- c. Inability to spawn surf clams during the winter has delayed experimental confirmation of earlier data indicating excellent culture results with antibiotics.
- d. Inability to spawn surf clams during the winter has delayed further study of environmental effects on survival and growth of surf clam larvae.
- e. Significant growth of juveniles at 7°-8°C. Burrowing in response to stress being studied.
- f. Two papers published; two papers in press.

10. OFFICIAL PREPARING REPORT (Signature)

*Warren S. Landers*  
Warren S. Landers

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Suderbaum*

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-12-74

5. SUBTASK TITLE

Culture Methods for Marine Decapod Crustaceans - 2818P502

6. NO. OF A/E	7. %	8. STATUS
a.	100	Completed during 2nd quarter as reported.
b.	100	Completed.
c.	100	Completed.
d.	50	On schedule for rock crabs; behind schedule for blue crabs.
e.	30	On schedule for rock crabs; behind schedule for blue crabs.
f.	10	On schedule for rock crabs; behind schedule for blue crabs.
g.	0	Behind schedule.

9. RESULTS

- b. Sources of parent stocks of blue crabs and rock crabs found year-round.
- c. Installation of temperature controls completes maintenance facilities and insures healthy stocks year-round.
- d. Rock crabs produced egg sponges in laboratory; larvae hatched 3 months early under temperature manipulation.
- e. Survival and growth of rock crab larvae in relation to culture density, salinity and temperature being studied.
- f. Preliminary observations on metamorphosis of rock crab larvae to the megalops stage.
- g. Insufficient experimental data to support a paper.

10. OFFICIAL PREPARING REPORT (Signature)

*Warren S. Landers*  
Warren S. Landers

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Suderwan*

1. FISCAL YEAR  
1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED

June 21, 1974

(Submit four copies.)  
TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-12-74

5. SUBTASK TITLE

Control of Water Quality in Marine Culture in the Laboratory -  
2818P503

5. NO.  
OF  
A/E

7. %

8. STATUS

This Subtask was inactive this reporting period due to the reassignment of personnel for FY 1974.

9. RESULTS

No progress.

10. OFFICIAL PREPARING REPORT (Signature)

*Warren S. Landers*  
Warren S. Landers

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Sudermann*

1. FISCAL YEAR  
1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED

June 21, 1974

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-12-74

5. SUBTASK TITLE

Control of Disease in Marine Culture in the Laboratory -  
2818P504

NO. OF A/E	7. %	8. STATUS
		<p>This Subtask was inactive this reporting period due to the reassignment of personnel for FY 1974.</p>

9. RESULTS

No progress.

10. OFFICIAL PREPARING REPORT (Signature)  
*Warren S. Landers*  
Warren S. Landers

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderbaum*

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-13-74

5. SUBTASK TITLE

Experimental Effects of Pollutants on Phytoplankton - 2818P601

5. NO. OF A/E	7. %	8. STATUS
a.	100	On schedule.
b.	0	Slightly behind schedule.
c.	100	On schedule.
d.	50	On schedule.
e.	100	On schedule.
f.	20	Behind schedule.
g.	50	Slightly behind schedule.

9. RESULTS

- a. Data compiled; manuscript in preparation.
- b. None.
- c. Manuscript accepted for publication by J. Phycology.
- d. Experimental problems hindered more progress.
- e. Manuscript in preparation.
- f. None.
- g. Experimental work in progress.

10. OFFICIAL PREPARING REPORT (Signature)

Ravenna Ukeles

*Ravenna Ukeles*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Suderbaum*

1. FISCAL YEAR  
1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED

June 21, 1974

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-13-74

5. SUBTASK TITLE

Methods of Cultivation of Phytoplankton - 2818P602

NO. OF A/E	7. %	8. STATUS
a.	90	Nearly on schedule.
b.	20	Behind schedule.
c.	100	On schedule.
d.	50	Nearly on schedule.

9. RESULTS

- a. Almost all strains purified; balance extremely resistant to all procedures.
- b. None.
- c. Strains in collection always available for this experimental investigation and outside investigators.
- d. None.

10. OFFICIAL PREPARING REPORT (Signature)  
Ravenna Ukeles *Ravenna Ukeles*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderbaum*

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January 1 - June 30, 1974

MA-13-74

Mass Cultivation and Food-chain Phytoplankton Species -  
2818P603

NO. OF A/E	7. %	8. STATUS
a.	100	On schedule.
b.	100	On schedule.
c.	100	On schedule.
d.	20	Partially behind schedule.

RESULTS

- a. Numerous new species evaluated; additional possibilities still exist.
- b. Yield production considerably increased.
- c. Harvesting provided sufficient volume of excellent food sources for all Experimental Biology Investigations.
- d. Investigation on chronic exposure work started.

10. OFFICIAL PREPARING REPORT (Signature)  
Ravenna Ukeles *Ravenna Ukeles*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderbaum*

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-14-74

5. SUBTASK TITLE

Induction of Dominant Lethal Mutations in Commercial Oysters  
and Wild Mussels by Mutagenic Marine Contaminants - 2818P701

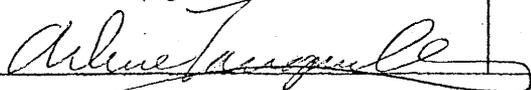
5. NO. OF A/E	7. %	8. STATUS
2.)	100	On schedule.
3.)		
4.)	25	Some work accomplished but must be extended to cover summer months when ripe
5.)		shellfish gametes are more readily obtainable of the quality required for
6.)		this test.
7.)	0	Completion depends on accomplishment of 2, 3, 4, 5, and 6 above.
8.)		
9.	100	Included in report listed under 10 (see last Subtask report); also, in informal review of mutagenic effects of ionizing radiation in terms of impact on the wild fisheries.
11.	100	On schedule.
12.		On schedule.

9. RESULTS

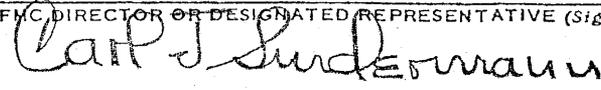
Some initial data have been collected but not enough for an analysis of the situation. Since the dominant lethal test necessitates spawners in prime condition, critical work had to be deferred until this summer's natural spawning season. (Spawners conditioned out of season this last spring and winter did not produce many high quality eggs - probably a matter of water quality.) Extensive background has been collected on the use and interpretation of the dominant lethal gene test for assay of environmental mutagens, and methods adapted for use with fish.

10. OFFICIAL PREPARING REPORT (Signature)

Arlene Longwell



11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)



1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January 1 - June 30, 1974

MA-14-74

5. SUBTASK TITLE Analysis Through Fertilized Egg-zygote Stages of  
Chromosome Damage Induced in Oysters and Clams by Mutagenic  
Marine Contaminants - 2818P702

5. NO. OF A/E	7. %	8. STATUS
2.	100	On schedule.
3.	100	On schedule.
4.	100	On schedule.
5.	85	Not yet done completely because of the addition of a second heavy metal for study.
6.	50	In progress.
7.	50	Material being organized for manuscripts.
8.	75	Completion of manuscript delayed by increased load of official reports.
9.	100	On schedule.
10.		On schedule.

9. RESULTS

Fairly extensive work has been completed on the cyto-genetic mutagenicity of the marine contaminant heavy metals, lead and silver, for the spawned, fertilized and developing eggs of a commercial oyster, a commercial clam and small wild clams. Three or so formal publications will be prepared in the next several months.

Arlene Longwell

*Arlene Longwell*

*Carl J. Sundermann*

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX

MA-14-74

5. SUBTASK TITLE

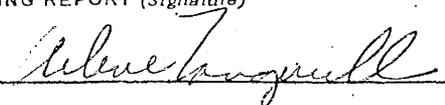
Assessment of Genetic Damage to Gametogenesis by Mutagenic  
Marine Contaminants - 2818P703

6. NO. OF A/E	7. %	8. STATUS
2b.	100	Completed.
2c.	50	To be accomplished in 3-4 weeks.
2d.	10	Behind schedule because of unavoidable delay in starting chronic exposure due to revamping of chronic exposure laboratory.
2e.	0	As above.
2f.	0	As above.
3b.)		Not yet accomplished because of limited facilities available for chronic exposure work.
3c.)	0	
3d.)		
4b.)		Postponed because of the increased workload in other areas that could not have been anticipated at this reporting level.
4c.)	0	
4d.)		
4e.	90	Manuscript almost ready for in-house review.
4f.	75	Manuscript somewhat behind schedule because of increased workload in other areas that could not have been anticipated at this reporting level.
5a.	100	On schedule.
5b.	100	On schedule.
5c.)	25	Still in progress because of the extension of the studies to include field samples of fish eggs from the New York Bight.
5d.)		
6.	40	Completion of other manuscripts depends on accomplishment of some of the above milestones currently running behind schedule.

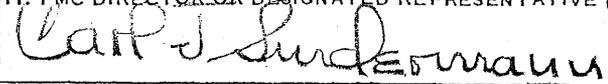
9. RESULTS Commercial American oysters were given a two-month period of exposure to low parts per million silver while being held in ozonized water in a semi-dormant state with no gametogenesis occurring. Chromosome mutations and other cyto-genetic aberrations occurring in the nuclei of germ-line primordia should be evident as gametogenesis occurs this summer; also, any genetically deleterious effects of the ozonized water. For the first time fish eggs sampled from the neuston are being processed and studied for genetic damage that could be related to the polluted waters from which they came. A manuscript has been largely completed on the breeding effects of ionizing radiation on the commercial oyster. An extensive review has been made on the sensitivity of germ line cells to radiation and other mutagenic chemical pollutants of the marine environment, and this related to problems of the fisheries.

10. OFFICIAL PREPARING REPORT (Signature)

Arlene Longwell



11. FMC DIRECTOR, OR DESIGNATED REPRESENTATIVE (Sig.)



1. FISCAL YEAR  
1974

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

2. DATE PREPARED  
June 21, 1974

(Submit four copies.)  
TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January 1 - June 30, 1974

4. TDP NO. PLUS STP SUFFIX  
MA-15-74

5. SUBTASK TITLE  
Physioecology - 2818P801

NO. OF A/E	7. %	8. STATUS
1.	100	Manuscript completed. See Biochemical Effects, Subtask 2818P803.
2.	80	Final testing in progress. To be completed by first quarter FY 75.
3.	100	Manuscript published.
4.	10	Further testing to be continued through FY 75.
5.	0	Testing to be initiated when testing diluter becomes available.
6.	100	Manuscript in press.
7.	10-50	See Subtasks 2818P802 and 2818P803.
8.	0	Testing to be initiated when animals and diluter become available.
9.	0-10	See Subtasks 2818P802 and 2818P803. Testing to be continued in FY 75.
10.	0	Testing to be initiated in FY 75 when lobsters and diluter become available.
11.	0	Terminated. Low priority species.
12.	0	Terminated. Low priority species.
13.	100	Manuscript in preparation.
14.	100	Manuscript completed.
15.	40	To be continued in FY 75.
16.	50	On schedule.

9. RESULTS

1. Manuscript completed. See above.
2. See Biochemical Effects Subtask (2818P803), Milestone No. 3.
3. Manuscript published - Marine Biology, 1973, 23: 171-175.
4. Data incomplete.
5. No results.
6. Manuscript in press. Special Scientific Report.
7. See Subtasks 2818P802 and 2818P803.
8. Not to be initiated until FY 75.
9. Data incomplete.
0. No data.
1. No data.

(SEE REVERSE)

10. OFFICIAL PREPARING REPORT (Signature)  
Anthony Calabrese *Anthony Calabrese*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suder*

1974

June 21, 1974

## NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

## 3. REPORTING PERIOD

January 1 - June 30, 1974

## 4. TDP NO. PLUS STP SUFFIX

MA-15-74

## 5. SUBTASK TITLE

Physiological Effects - 2818P802

NO. OF A/E	7. %	8. STATUS
1.	100	Manuscript in press.
2.	40	To continue in FY 75.
3.	100	Testing to continue through FY 75.
4.	5	Methodology development.
5.	0	Testing to be initiated when exposure diluter available.
6.	10	Testing to continue in FY 75.
7.	100	Manuscript in press.
8.	50	To continue when animals available.
9.	100	Published: Marine Pollution Bulletin, 4: 185-186, 1973.
10.	10	Discontinued: Low priority species.
11.	100	Published: Marine Biology, 23: 171-175, 1973.
12.	10	To continue in FY 75.
13.		Publications on schedule.

## 10. RESULTS

1. MS in press.
2. Elevated gill tissue respiration after 30-day exposures.
3. Data incomplete.
4. Data incomplete.
5. No data.
6. Depressed respiration after 30-day exposures.
7. MS in press.
8. Depressed oxygen consumption.
9. Published manuscript.
10. Discontinued.
11. Published manuscript.

(SEE REVERSE)

## 10. OFFICIAL PREPARING REPORT (Signature)

Frederick P. Thurberg  
Frederick P. Thurberg

## 11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

Carl J. Suderhann

1974

June 21, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January 1 - June 30, 1974

MA-15-74

Biochemical Effects - 2818P803

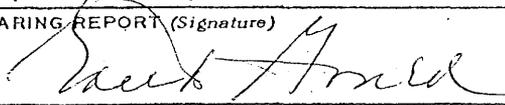
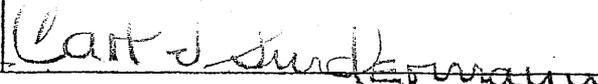
NO. OF A/E	7. %	8. STATUS
1.	N.A.	Development of methodology. A continuing effort; presently beginning work on protocol for carbonic anhydrase. Copper stain finished.
2.	100	Rock crab, acute exposure to cadmium. Final testing completed.
3.	80	Rock crab, chronic exposure to cadmium. Final testing in progress.
4.	100	Cunner, acute exposure to cadmium. MS in press.
5.	10	Cunner, acute exposure to silver. Testing continuing into FY 75.
6.	0	Cunner, chronic exposure to cadmium. Testing to be initiated when animals and large diluters become available.
7.	10	Lobster, chronic exposure to cadmium. Testing to be continued through FY 75.
8.	0	Lobster, chronic exposure to mercury. Testing to be initiated when large diluters become available.
9.	10	Bivalves, exposure to silver. Some tissues collected; testing to be initiated in FY 75.
10.	0	Striped bass, chronic exposure to cadmium. Testing to be continued into FY 75.
11.	100	Blue crab, <u>Paramoeba</u> infestation. Testing completed, MS in press.
12.	80	Manuscripts: four completed, two in preparation.

9. RESULTS

1. MS completed for new copper stain. Will be submitted to Analytical Biochemistry.
2. Testing was expanded to include different salts; 1 MS completed, another in preparation.
3. Data being coordinated with Physiology's (2818P802) for MS; scheduled for early FY 75
4. MS in press, SSR-F.
5. Further testing contingent upon availability of animals.
6. No data (no animals).
7. Further testing contingent upon availability of animals.
8. No data (no animals).
9. Frozen-stored tissues awaiting development of protocol.
10. No data (no animals).

(SEE REVERSE)

Edith Gould

1974

6/21/74

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fr5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

1/74 - 6/74

4. TDP NO. PLUS STP SUFFIX

MA-16-2817P1-01

5. SUBTASK TITLE

Molluscan Pathobiology

NO. OF A/E	7. %	8. STATUS
1.	100	Sampling completed.
2	100	1st and 2nd quarter samples received and examined (to be continued in FY75).
3	100	Examination of prepared slides completed.
4	100	All samples examined (to be continued in FY75).
5	5	Facilities not available for initiation of the study.
6	N/A	Services supplied as requests occur.
7.	100	Live tissue diagnosis of ovacystis virus
8	100	Fluorescent antibody studies to determine similarity to papova
9	80	Experimental transmission studies with ovacystis virus
0	100	Electron microscopy of ovacystis virus infected oyster cells
1	50	Negative staining of ovacystis virus
2	50	Electron microscopy of neoplasms in mollusks

9. RESULTS

- 1400 oysters examined, no herpesvirus type "A" inclusions found.
- 647 oysters examined, one new haplosporidan infection found in 1st quarter sample.
- 340 clam slides from Milford, Conn., were examined.
- 1024 clams examined, neoplasm found in new area (Castle Haven, Choptank River, Md.)
- Histopathologic affect of outboard motor effluents data provided for NMFS, Seattle.
- 1036 mollusks examined for other agencies.
- Methods were developed and utilized to diagnose ovacystis in live tissues.
- Fluorescent AB studies were done using SV-40, BK and JA virus; no relationship was found (papilloma virus should also be tested).
- Experimental transmission was attempted in a recirculated system using local oysters

(continued)

10. OFFICIAL PREPARING REPORT (Signature)  
*Fred G. Kern and C. Austin Farley*  
 Fred G. Kern and C. Austin Farley

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderhann*  
 Carl J. Suderhann

9. Results (continued)

9. continued

and virus infected slurries and supernatants -- no transmission was accomplished.

10. Electron microscopy permitted partial morphologic characterization of virus suggesting that virus is in genus papilloma. Ultrastructural pathology of virus development and cell origin was accomplished.
11. Attempts to find negatively stained virus were not successful due to low concentrations of virus.
12. EM of two neoplastic diseases has been done; additional work needed.

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)  
TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
1/74 - 6/74

4. TDP NO. PLUS STP SUFFIX  
MA-16-2817P1-02

5. SUBTASK TITLE  
Crustacean Pathology

6. NO. OF A/E	7. %	8. STATUS
1	100	see last STPR. (Jan. 15, 1974)
2	100	continuing; see last STPR
3	100	see last STPR
4	100	see last STPR
5	100	see last STPR
6	-	no material available

9. RESULTS

- Inhouse report written and submitted. Results presented at Soc. Invert. Pathol. meeting June 1974.
- All data available for analysis. Final analysis and preparation for publication will continue past FY 75.
- Inhouse report written and submitted to R. Murchelano. Results to be written for publication following results of long-term exposure.
- Given in last STPR
- Project dropped. General investigation to be continued with marine Crustacea.

10. OFFICIAL PREPARING REPORT (Signature)  
*Phyllis T. Johnson*  
Phyllis T. Johnson

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Sudermann*

1974

6/20/74

### NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

4. TDP NO. PLUS STP SUFFIX

MA-16-2817P1-03

5. SUBTASK TITLE

Fish Pathobiology

6. NO. OF A/E

7. %

8. STATUS

All activities in this subtask suspended due to appointment of the subtask leader to a NOAA fellowship at the University of Wisconsin from 1/74-1/75

9. RESULTS

10. OFFICIAL PREPARING REPORT (Signature)

Robert A. Murchelano

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

Carl J. Suderomann

1. FISCAL YEAR  
1974

2. DATE PREPARED  
6/18/74

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

(Submit four copies.)  
TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
1/74 - 6/74

4. TDP NO. PLUS STP SUFFIX  
MA-17-2818P9-01

5. SUBTASK TITLE  
Fin Rot Disease in the NY Bight

6. NO. OF A/E	7. %	8. STATUS
1	100	All data collated, analyzed statistically, and prepared for publication
2	100	All data collated, analyzed statistically, and prepared for publication
3	100	All monthly cruises for period 1/74-6/74 (also 7/73-1/74) complete; data has been collated, analyzed statistically and is being prepared for publication
4	90	All bacterial isolation not complete; projected completion in 2/74 not possible since diseased fish not obtainable on cruise to NY Bight apex area
5	75	Agglutinin titers assessed in 110 winter flounder from Sandy Hook and Great Bays to 35 bacterial isolates
6	75	All descriptive histopathology of fin rot lesions in winter flounder from the NY Bight is complete; text and photomicrographs being prepared for publication

9. RESULTS

1. Fin rot in apex 317/1944 (16.3%) outside apex 28/1209 (2.3%)
2. Few fish (winter flounder) caught; apex 15/177 (8.5%) outside 0/5
3. Summing all months - Sandy Hook Bay 170/2227 (7.6%); Great Bay 19/964 (1.9%)
4. Bacterial isolates dominantly Pseudomonas, Achromobacter
5. No correlation between Ab titers in Bight fish and a given bacterial species
6. Histopathology characterized by necrosis, fibroplasia, epidermal hyperplasia, acute and diffuse hemorrhage, hyperemia

10. OFFICIAL PREPARING REPORT (Signature)  
*Robert A. Murchelano*  
Robert A. Murchelano

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderomann*

1974

6/17/74

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

1/74 - 6/74

MA-17-2818P9-02

Microfauna of New York Bight Fish & Benthos

NO. OF A/E	7. %	8. STATUS
1	100	Scheduled collections for FY 74 completed
2	100	All collections processed and microfauna photographed and identified to genus
3	100	Protozoa cultured from crabs and lobsters - fish not done because of time limitations
4	75	Identifications made to genus, species identifications in progress (about 25% completed)
5	50	Species lists complete to genus
6	50	Two abstracts in press

9. RESULTS

1. Seven collections made on MESA cruises, 4 on fin rot trips
2. Approximately 26 species of amoebae recorded from water and sediment; sessile ciliates, nemertean worms on gills of benthic Crustacea.
3. Free living ciliates and amoebae cultured from gills
4. Amoebae identified to genus, ciliates in progress
5. Species lists in preparation
6. Two papers presented to Soc. Protozool.

10. OFFICIAL PREPARING REPORT (Signature)

*Thomas K. Sawyer*  
Thomas K. Sawyer

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Carl J. Suderbaum*  
Carl J. Suderbaum

1974

6/21/74

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

1/74-6/74

4. TDP NO. PLUS STP SUFFIX

MA-17-2818P9-03

5. SUBTASK TITLE

Ultrastructural studies of normal and physiologically stressed crabs, fish, and mollusks

. NO. OF A/E	7. %	8. STATUS
1	100	The electron microscope facility is presently capable of participating in the evaluation of normal and diseased tissues at the ultrastructural level.
2	100	Based on preliminary experiments completed during the last year the laboratory is prepared to further refine some EM cytochemical procedures in order to utilize these procedures on tissues examined in the laboratory.
3	80	A paper on the ultrastructure of hemocytes from the blue crab ( <i>C. sapidus</i> ) is being prepared for submission to the journal "Cell and Tissue Research" (formerly "Z. Zellforschung").
4&5	50	In this collaborative experiment with Mr. M. Newman, the tissues from normal and experimental striped bass and cunner have been collected and prepared, thus far, in part for ultrastructural observation.

9. RESULTS

- All fixation and embedding procedures required to process the diverse types of specimens received by this laboratory have been perfected.
- Specific methods for the illucidation of neutral and complex glycoproteins (e.g. procedures of Movat, Thiery etc.) as well as acid phosphatase have been attempted and the necessary modifications from these preliminary efforts are in progress.
- Hemocytes from the blue crab have been found to be of one cell type; however, morphological variants of these cells have been found and represent different stages in their maturation within hemolymph system of this species.
- Tissues (i.e., liver, spleen, kidneys, intestine, and epidermis) from striped bass and cunner exposed to lethal and sublethal doses of cadmium have demonstrated marked disorganization and necrosis especially in the intestine and skin.

10. OFFICIAL PREPARING REPORT (Signature)  
*Joel E. Bodammer*  
Joel E. Bodammer

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl J. Suderwan*

1974

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

2. DATE PREPARED

7/11/74

(Submit four copies.)

TO: Director, National Marine Fisheries Service, ATTN: Fx5  
National Oceanic and Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

1/74 - 6/74

4. TDP NO. PLUS STP SUFFIX

MA17

2818P9-04

5. SUBTASK TITLE

National Registry of Marine Pathology

6. NO. OF A/E	7. %	8. STATUS
1.	85	Basic registry requirements generally well-established with minor policy decisions awaiting resolution.
2.	100	New and amended material being assembled after issue and review of first draft of Manual of Diseases in aquaculture. Revised more definitive issue in progress.
3.	55	Physical facilities allocated, curatorial duties assigned, existing suitable accessions surveyed, and analogous services at the U. S. Department of Agriculture and the Smithsonian Institution visited.

9. RESULTS

- 1) The basic philosophy, physical facilities, modus operandi, and initial professional
- 2) contacts for activating a National Registry of Marine Pathology have been
- 3) established and are being implemented.

10. OFFICIAL PREPARING REPORT (Signature) *Carl Suckerman for HST/eb/ash* 11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.) *Carl Suckerman*

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

2. DATE PREPARED  
6/21/74

(Submit four copies.)  
3. Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
July 15

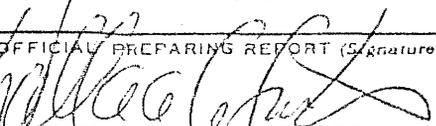
4. TDP NO. PLUS STP SUFFIX  
MA-53-74  
2817P2-01

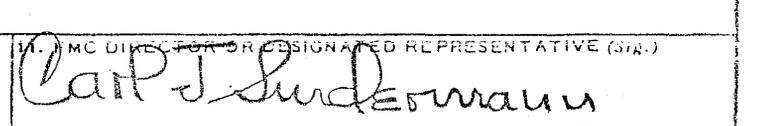
5. SUBTASK TITLE  
Distribution and abundance of prerecruits

NO. OF /E	7. %	8. STATUS
.	100	Fall survey cruise completed
.	100	Sorting and identification of material from fall cruise completed
.	100	Compilation of data from fall cruise completed
.	100	Spring survey cruise completed
.	10	Sorting and identifying of material from spring cruise started on schedule

RESULTS

- Sampled at 48 plankton stations and 170 neuston stations to assess distribution of early stages of fishes in coastal waters of Middle Atlantic Bight.
- Completed sorting and identification of larval and juvenile stages from 170 neuston samples, 48 plankton stations, plus 50 plankton samples collected on outer half of Bight by Albatross IV.
- Compilation of both plankton and neuston samples completed.
- Sampled at 44 plankton stations and 165 neuston stations during spring cruises to assess distribution of early stages of fishes in coastal waters of Middle Atlantic Bight. Arranged for addition samples from Albatross IV to be forwarded to Sandy Hook.
- Began sorting plankton and neuston samples from spring survey cruise.

OFFICIAL PREPARING REPORT (Signature)  


U. S. MC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.)  


NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
July 15

4. TDP NO. PLUS STP SUFFIX  
MA-53-74  
2817P2 - 02

5. SUBTASK TITLE  
Diurnal activities of young fishes

O. F. E.	7. %	8. STATUS
	100	Cruise completed.
	100	Cruise report completed.
	0	No progress.
	100	Identification, counts and measurements of yellowtail flounder and Atlantic mackerel completed.
	50	Analysis of data on yellowtail flounder and Atlantic mackerel started on schedule
	0	No progress

RESULTS

Cruise designed to sample young bluefish completed on schedule.  
Cruise report completed.  
Because of backlog of plankton samples, sorting of samples from FY-73 cruise not initiated.  
Yellowtail flounder and Atlantic mackerel larvae identified, counted, and measured.  
Analysis of preparation of flounder and mackerel data started on schedule.  
Samples not sorted, thus identifications not initiated.

OFFICIAL PREPARING REPORT (Signature)  
*[Handwritten Signature]*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.)  
*[Handwritten Signature: Carl J. Suderbaum]*

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD

July 15

5. SUBTASK TITLE

Analysis and preparation of in-house data for publication

7. %	8. STATUS
90	Manuscripts pertaining to distribution and abundance of larval fishes nearly completed.
100	Manuscript describing early stages of Atlantic mackerel completed.
100	Manuscript on distribution of juveniles in south Atlantic Bight completed.
500	Work on manuscripts pertaining to larval bluefish, searobins and silver hake proceeding on schedule.

SUMMARY OF RESULTS

- Silver hake manuscript in press.
- Menhaden manuscript accepted for publication after minor revision.
- Leptocephalid eel manuscript approved for submission to Center Office.
- Flatfish manuscript in review

Manuscript describing young Atlantic mackerel accepted for publication.  
 Manuscript describing distribution of juveniles collected in surface-meter net in south Atlantic Bight accepted for publication.  
 Bluefish manuscript in advanced draft stage and searobin manuscript submitted for review; silver hake manuscript 1st draft completed.

OFFICIAL PREPARING REPORT (Signature)  
*[Handwritten Signature]*

II. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (S/N)  
*Carl J. Sundermann*

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)

3. REPORTING PERIOD  
January - June 1974

5. SUBTASK TITLE  
Seabed oxygen consumption, New York Bight

NO. OF /E	7. %	8. STATUS
95		Essentially complete for Pamatmat system. Bell jar system of Smith requires ordering, receiving and testing of equipment.
60		Study remains one quarter behind schedule for Pamatmat system. Bell jar measurements are yet to be started. Bell jar system delayed in preference to Pamatmat system.
50		Oxygen consumption values for Jan. and Mar. '74 cruises calculated and plotted by hand. No SYMAP's or analysis available yet.

RESULTS

Pamatmat system using Multiple Corer, water baths, and multipoint recorders all functioned at full capacity with capability of handling 48 cores at the same time.

Cruises to the apex in Jan. '74 and Mar. '74 successfully sampled 45 and 57 stations respectively. RAYDIST navigation enabled all sampling to take place within a quarter of a mile of the true station.

Even with twelve replicate cores from an area less than the size of a football field, oxygen consumption values for the center of the sludge disposal area appear to be highly variable compared with surrounding areas.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
James P. Thomas

11. PMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sigs.)  
*Carl J. Suderbaum*

1. FISCAL YEAR  
FY 74

### NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)  
: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TOP NO. PLUS STP SUFFIX  
27121702  
MA-55-74

5. SUBTASK TITLE  
Phytoplankton and primary productivity, New York Bight

O. F. E.	7. %	8. STATUS
95		Nearly complete. Some ordering and building of equipment is continuing to increase efficiency of operations and validity of data.
70		On schedule and at nearly full scale sampling with exception of heavy metals and hydrocarbons.
20		Samples are processed except for carbon, nitrogen, and phytoplankton. No data analysis yet.

RESULTS

Research vessel has been greatly modified with additional laboratory space which has greatly increased our sampling capabilities.

Sea water near the Narrows was filtered and heavy metal analyses were successfully accomplished on the filter. In most cases the values were an order of magnitude above background - demonstrating the feasibility of sampling seston for heavy metals.

None.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
James P. Thomas

II. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIG.)  
*Carl J. Suderbaum*

NMFS SUBTASK PROGRESS REPORT  
(See Detailed Instructions)

(Submit four copies.)  
Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

4. TOP NO. PLUS STP SUFFIX  
27121703  
MA-55-74

5. SUBTASK TITLE  
Benthic macrofauna, New York Bight

10. % OF /E	7. %	8. STATUS
100		On schedule.
80		On schedule.
30		Behind schedule based on original assumptions for length of time required for sorting and identifying organisms.
80		Behind schedule. Delayed by sorting and identification of organisms in samples.
50		Behind schedule due to sorting and identification delays.

RESULTS

None.

RAYDIST navigation greatly increased accuracy and precision of replicate sampling. All samples taken within one-quarter mile of true station on Mar. '74 cruise.

None.

Preliminary statement suggesting one or two heavy metal samples per station are probably adequate to characterize distribution and concentrations of heavy metals burdens in sediments with confidence.

None.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
James P. Thomas

11. THE DIRECTOR OR DESIGNATED REPRESENTATIVE (Sigs.)  
*Carl J. Suderbaum*

FY 74

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

June 20, 1974

(Submit four copies.)

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January - June 1974

27121704

MA 55-74

Benthic macrofauna - sorting and reporting

NO. OF /E	7. %	8. STATUS
	100	On schedule.
	95	Behind schedule caused by delays in sorting and identifying.
	95	Behind schedule. Most of reconnaissance data has been provided for a preliminary report.
	80	On schedule.
	5	Slightly behind schedule.
	0	On schedule.

RESULTS

Reconnaissance data completed.  
 Verification for computer analyses completed.  
 Copy of data sent to biometrician for analysis of sampling validity.  
 Logging and caring for baseline survey samples done routinely.  
 Sorting, identifying, and enumerating organisms in baseline survey samples begun.  
 Preparation of final report per se not begun, although much information for it was collected.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
 James P. Thomas

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIG.)  
*Carl J. Suderomann*

1. FISCAL YEAR FY 74
2. DATE PREPARED June 20, 1974
4. TDP NO. PLUS STP SUFFIX 27121705 MA-55-74

**NMFS SUBTASK PROGRESS REPORT**  
(See Detailed Instructions)

(Submit four copies.)  
To: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

3. REPORTING PERIOD  
January - June 1974

5. SUBTASK TITLE  
Statistical design and analysis - New York Bight

NO. OF /E	7. %	8. STATUS
100		On schedule.
50		Behind schedule because rates of sorting and identification of organisms slower than anticipated. Biometrics contractor is now processing the data.
100		On schedule.
0		On schedule.

RESULTS  
and b. Preliminary statement suggesting one or two heavy metal samples per station are probably adequate to characterize distribution and concentration of heavy metals burdens in sediments with confidence.  
Completed with respect to historical data.  
None.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
James P. Thomas

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)  
*Carl S. Sundermann*

1. FISCAL YEAR  
FY 74

### NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

2. DATE PREPARED  
June 20, 1974

(Submit four copies.)

3. REPORTING PERIOD  
January - June 1974

4. TDP NO. PLUS STP SUFFIX  
27121706  
MA-55-74

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

5. SUBTASK TITLE  
Sediment analyses - grain size distribution, etc.

Q. F /E	7. %	8. STATUS
	100	On schedule.
	100	On schedule.
	50	On schedule.

RESULTS  
Samples provided to contractor.  
Samples provided to contractor.  
Data report being prepared.

OFFICIAL PREPARING REPORT (Signature)  
*James P. Thomas*  
James P. Thomas

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sigs.)  
*Carl J. Suderbaum*

FY 74

June 20, 1974

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

(Submit four copies.)

Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January - June 1974

2712707

MA-55-74

Benthic meiofauna - foraminifera - New York Bight

NO.  
F  
VE

7. %

8. STATUS

100 On schedule.

80 On schedule.

100 On schedule.

- On schedule.

RESULTS

None.  
Laboratory analyses (sorting, identifying, and enumerating) began in January 1974. Elphidium sp. abundant in sludge dumping area. This and other benthic and planktonic foraminifera are present throughout study area, demonstrating their ability to exist in these polluted waters. Two quarterly progress reports submitted.  
None directly.

OFFICIAL PREPARING REPORT (Signature)

James P. Thomas

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sigs.)

Carl J. Suderbaum

AA FORM 32-15C (74)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		1. FISCAL YEAR FY 74
NMFS SUBTASK PROGRESS REPORT <i>(See Detailed Instructions)</i>				2. DATE PREPARED June 20, 1974
				4. TDP NO. PLUS STP SUFFIX 27121708 MA-55-74
(Submit four copies.) To: Director, National Marine Fisheries Service, ATTN: Fx5 National Oceanic and Atmospheric Administration Washington, D.C. 20235		3. REPORTING PERIOD January - June 1974		
		5. SUBTASK TITLE Benthic meiofauna - nematodes - New York Bight		

NO. OF /E	7. %	8. STATUS
	70	Behind schedule. Sorting and identifying organisms is taking longer than anticipated.
	70	Data provided for analyses of sampling variability as soon as available.
	0	Behind schedule. Data delayed due to sorting and identification. Priorities as to location and number of samples to be analyzed to be set based on results of sampling validity.
	0	Interim quarterly progress reports only submitted to date.

RESULTS

- Preliminary results indicate that two to three grabs provide  $\pm 50\%$  of mean number of species, number of individuals, and biomass.
- Data being provided to biometrics contractor as soon as they become available.
- No results to date.
- Quarterly progress reports.

OFFICIAL PREPARING REPORT (Signature) <i>James P. Thomas</i> James P. Thomas	11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIG.) <i>Carl J. Suderbaum</i>
--	--

A FORM 32-15C (4)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		1. FISCAL YEAR FY 74
<b>NMFS SUBTASK PROGRESS REPORT</b> <i>(See Detailed Instructions)</i>				2. DATE PREPARED June 20, 1974
				4. TDP NO. PLUS STP SUFFIX 27121709 MA-55-74
(Submit four copies.) Director, National Marine Fisheries Service, ATTN: Fx5 National Oceanic and Atmospheric Administration Washington, D.C. 20235		3. REPORTING PERIOD January - June 1974		5. SUBTASK TITLE Benthic meiofauna - amoeba - New York Bight

D. = E	7. %	8. STATUS
		100

RESULTS

Report available. Dredge spoils and sewage sludge drastically decreased the numbers of free-living amoeba.

OFFICIAL PREPARING REPORT (Signature) <i>John B. Thomas for JPT</i> James P. Thomas	11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.) <i>Carl J. Suderbaum</i>
---	---

FY 74

NMFS SUBTASK PROGRESS REPORT

(See Detailed Instructions)

June 20, 1974

(Submit four copies.)

January - June 1974

27121710

MA-55-74

Benthic meiofauna - ciliates - New York Bight

7. %	8. STATUS
100	On schedule.
90	On schedule.
95	On schedule.

RESULTS

Procuring and testing equipment completed.

Ciliates are an integral part of the microbiota of the New York Bight, in the plankton and benthos. Qualitative and quantitative results achieved. A lense of bactivorous scuticociliates "hovers" over sewage sludge and dredge spoil dump sites, but few species inhabit bottom materials at the dump site.

Six months and annual reports submitted.

OFFICIAL PREPARING REPORT (signature)  
James P. Thomas

FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIG.)  
Carl J. Sundermann

A FORM 32-15C 4)		U. S. DEPARTMENT OF COMMERCE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION		1. FISCAL YEAR FY 74
<b>NMFS SUBTASK PROGRESS REPORT</b> (See Detailed Instructions)				2. DATE PREPARED June 20, 1974
(Submit four copies.) Director, National Marine Fisheries Service, ATTN: Fx5 National Oceanic and Atmospheric Administration Washington, D.C. 20235		3. REPORTING PERIOD  January - June 1974		4. TDP NO. PLUS STP SUFFIX 27121711 MA-55-74
		5. SUBTASK TITLE Primary productivity and phytoplankton - Apex of New York Bight		

D. = E	7. %	8. STATUS	
		100	On schedule.
100	On schedule.		
100	On schedule.		
-	On schedule.		

**RESULTS**

Equipment procured in late summer and fall 1973

Primary productivity higher in Bight Apex than in Upper Bay or to seaward of the Apex. Zooplankton biomass also is relatively high in the Apex; particle grazers (copepods, cladocerans) predominate rather than predators (chaetognaths, ctenophores, polychaetes).

Six-month report submitted February 1974.

Final report is being prepared.

OFFICIAL PREPARING REPORT (Signature) <i>James P. Thomas</i> James P. Thomas	FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (SIGN.) <i>Carl J. Suderbaum</i> Carl J. Suderbaum
--	--

1974

**NMFS SUBTASK PROGRESS REPORT**

(See Detailed Instructions)

2. DATE PREPARED

7/10/74

(Submit four copies.)

3. REPORTING PERIOD

4. TDP NO. PLUS STP SUFFI

TO: Director, National Marine  
Fisheries Service, ATTN: Fx5  
National Oceanic and  
Atmospheric Administration  
Washington, D.C. 20235

January 1 - June 30, 1974

MA-55-74

271217-03

5. SUBTASK TITLE

Historical Study of the Fisheries of the New York Bight

6. NO. OF A/E	7. %	8. STATUS
a	100	Study began on schedule.
b	100	Interim report submitted on schedule.
c	75	Verbal report June 1974 indicated final report about 3/4 completed. Due August 1974.

9. RESULTS

- a. Study begun.
- b. Interim report described declining fisheries of New York Bight except for dramatic development of surf clam fishery after World War II, which continues to the present.
- c. Final report being prepared.

10. OFFICIAL PREPARING REPORT (Signature)

*J. K. McLeary*

11. FMC DIRECTOR OR DESIGNATED REPRESENTATIVE (Sig.)

*Capt J. Suderbaum*