U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Center
Mississippi Laboratories
Pascagoula Facility
P O Drawer 1207
Pascagoula, MS 39568-1207

NOAA Ship CHAPMAN Cruise 98-04 (84)
April 19, 1998 to May 30,1998

INTRODUCTION

The NOAA Ship CHAPMAN departed Pascagoula, MS on April 19, 1998 to initiate the Southeast Area Monitoring and Assessment Program (SEAMAP) spring ichthyoplankton survey in the northern Gulf of Mexico. A total of 38 successful sea days were worked over four legs during the cruise: Leg 1, April 19 - 22; Leg 2, April 25 - May 8; Leg 3, May 11- May 17, and Leg 4, May 19 - June 1.

OBJECTIVES

SEAMAP:

1. Collect ichthyoplankton with 60 cm bongo and 1 x 2 m neuston gear primarily for bluefin tuna abundance and distribution of eggs, larvae, and small juveniles.
2. Obtain station associated environmental and oceanographic data throughout the survey area using the SBE 25 - 03 Sealogger Conductivity, Temperature and Depth recorder (CTD), outfitted with a SBE 13/22/23 dissolved oxygen sensor, a Sea Tech Fluorometer, and a Sea Tech Transmissiometer.
3. Obtain real time depth, temperature and salinity data for each of the bongo profiles using the SEACAT SBE - 19.
4. Record opportunistic marine mammal sightings/identifications along cruise track.

METHODS

Cruise objectives, environmental and ichthyoplankton, were implemented in accordance with procedures outlined in the SEAMAP data collections manual and the cruise operational plan. The addition of the SBE 19 to the bongo was the only procedural modification made. Two passes of the survey were conducted over four legs along the standard SEAMAP ichthyoplankton cruise track of 92 stations, approximately 30 miles apart. The first pass of the survey, the NOAA Ship CHAPMAN sampled 66 of the proposed 92 stations. The second pass of the survey was conducted without the customary assistance of the Florida Department of Environmental Protection. The NOAA Ship CHAPMAN sampled 90 of the original 92 preselected stations.

Primary station operations consisted of a bongo tow outfitted with a Seabird SBE 19 profiler, a neuston tow, and a Seabird SBE 25 CTD profile.

RESULTS

Over the course of this survey, ichthyoplankton was collected from 157 of 184 stations. All of the 92 targeted sampling sites were sampled at least once (Figure 1). A breakdown of samples collected by Leg of survey and gear is given in Table 1.

TABLE 1. Breakdown of Ichthyoplankton and Environmental Collections During CHAPMAN Cruise 98-04 (84)

GEAR TYPE	Leg I	Leg II	Leg III	Leg IV
BONGO:				
SEAMAP:				
LEFT:	0	28	12	31
RIGHT:	0	29	12	30
NEUSTON:				
SEAMAP:				
LEFT:	5	60	28	63
RIGHT:	5	60	28	63
CTD*				
SBE 25:	5	60	28	63
SBE 19:	0	28	12	31

* SBE - 21 data not presented because of collection format.

Observed differences between left and right bongo or left and right neuston tows are the result of a smack of jellyfish in the sampling area, lost cod ends during bongo retrieval, and bongo winch level-wind complications during the bongo tow.

Ichthyoplankton samples collected during the survey were assigned SEAMAP numbers before deposition of left bongos with GCRL. Right bongos and neustons were shipped to ZSIOP Szczecin, Poland for sorting. Left neuston samples are temporarily stored at NMFS, Mississippi Laboratories, Pascagoula, MS. A list of the stations comprising one complete pass over the survey track in the month of May is given in Table 2.

A summary of the environmental data collected is also presented in Table 1. Locations of CTD profiles are also shown in Figure 1. Incidental sightings of marine mammals, the SBE - 21 sea surface profile of the survey track, Turner fluorometer values and all other environmental data were returned to the NMFS, Mississippi Laboratories for analysis, editing, comparison, and archiving.

PARTICIPANTS

Leg 1 (April 16 - 23, 1998)

Name	Title	Organization
Alonzo N. Hamilton, Jr.	Chief Scientist	NMFS Pascagoula, MS
Denice Drass	Fishery Biologist II	Johnson Controls
Robert Ford, Jr.	Res. Fish Biologist	NMFS Pascagoula, MS
Perry Thompson	Res. Fish Biologist	NMFS Pascagoula, MS
Carrie Hubard	Fish. & Wildlife Bio. I	Johnson Controls
Jordan Kortmansky	Cooperator	Univ. Of Miami, Fla.

Leg 2 (April 25 - May 8, 1998)

Name	Title	Organization
Alonzo N. Hamilton, Jr.	Chief Scientist	NMFS, Pascagoula, MS
Denice Drass	Fishery Biologist	Johnson Controls
Carolyn Burks	Fish. &Wildlife Bio. II	Johnson Controls
Andre' Debose	Fishery Biologist I	Johnson Controls
Kimberly Williams	Fishery Biologist	FDEP St. Pete., Fla

Leg 3 (May 11 - May 17, 1998)

Name	Title	Organization
Alonzo N. Hamilton, Jr.	Chief Scientist	NMFS, Pascagoula, MS
Denice Drass	Fishery Biologist II	Johnson Controls
Walter Ingram	Cooperator	Univ. Of South Alabama
Kathy Maze	Fishery Biologist II	Johnson Controls
Kimberly Williams	Fishery Biologist	FDEP St. Pete., Fla.
Carleigh Trapp	Cooperator	Vanderbilt Univ.

Leg 4 (May 19 - June 1, 1998)

Name	Title	Organization
Alonzo N. Hamilton, Jr.	Chief Scientist	NMFS, Pascagoula, MS
Denice Drass	Fishery Biologist II	Johnson Controls
Joanne L-Shultz	Res. Fish Biologist	NMFS, Pascagoula, MS
Jack Javech	Illustrator	NMFS, Miami, Fla.
Kate Hampton	Cooperator	Univ. Southern Mississippi
Stacey Britton	Cooperator	Univ. Southern Mississippi

Submitted by:

Alonzo N. Hamilton, Jr.
Chief Scientist

Approved by:

Scott Nichols, Director
Mississippi Laboratories

Bradford E. Brown, Director,
Southeast Science & Research Center

Table 2. CHAPMAN Cruise 98-04(84)SEAMAP Ichthyoplankton Bluefin Tuna sampling sites in May 1998. Gear codes DN and PN represent type of operation conducted at each station. DN = CTD and double neuston; PN = CTD, 60cm oblique bongo profile and a double neuston tow.

Station	Gear	Latitude	Longitude	SEAMAP Sample Site
28067	DN	30°00'00	87°00'00	B172
28068	DN	29°30'00	86°30'00	B169
28069	PN	29°00'00	86°00'00	B165
28070	DN	28°30'00	85°30'00	B160
28071	PN	28°00'00	85°00'00	B153
28072	DN	27°30'00	85°00'00	B152
28073	PN	27°00'00	85°00'00	B151
28074	DN	26°30'00	85°00'00	B150
28075	PN	26°00'00	85°00'00	B149
28076	DN	26°00'00	84°30'00	B147
28077	PN	26°00'00	84°00'00	B131
28078	DN	25°30'00	84°00'00	B130
28079	PN	25°00'00	84°00'00	B129
28080	DN	24°30'00	84°00'00	B128
28081	PN	24°30'00	84°30'00	B163
28082	DN	24°30'00	85°00'00	B72
28083	PN	25°00'00	85°00'00	B7
28084	DN	25°00'00	85°30'00	B261
28085	PN	25°00'00	86°00'00	B8
28086	DN	25°30'00	86°00'00	B74
28087	DN	25°30'00	86°30'00	B270
28088	PN	26°00'00	86°00'00	B6
28089	DN	26°30'00	86°00'00	B77
28090	PN	27°00'00	86°00'00	B5
28091	DN	27°30'00	86°00'00	B78
28092	PN	28°00'00	86°00'00	B163
28093	DN	28°30'00	86°00'00	B164
28094	DN	29°00'00	86°30'00	B170
28095	PN	29°00'00	87°00'00	B2
28096	DN	28°30'00	87°00'00	B80
28097	PN	28°00'00	87°00'00	B3
28098	DN	27°30'00	87°00'00	B79
28099	PN	27°00'00	87°00'00	B4
28100	DN	26°30'00	87°00'00	B76
28101	PN	26°16'00	87°00'00	B9
28102	DN	26°00'00	87°30'00	B273
28103	PN	26°00'00	88°00'00	B10
28104	DN	26°30'00	88°00'00	B66
28105	PN	27°00'00	88°00'00	B11
28106	DN	27°00'00	88°30'00	B288
28107	PN	27°00'00	89°00'00	B12
28108	DN	26°30'00	89°00'00	B63
28109	PN	26°00'00	89°00'00	B13
28110	DN	26°00'00	89°30'00	B291
28111	PN	26°00'00	90°00'00	B14

Table 2.(Cont'd) CHAPMAN Cruise 98-04(84)SEAMAP Ichthyoplankton Bluefin Tuna sampling sites in May 1998.

Station	Gear	Latitude	Longitude	SEAMAP Sample Site
28112	DN	26°30'00	90°00'00	B62
28113	PN	27°00'00	90°00'00	B15
28114	DN	27°00'00	90°30'00	B296
28115	PN	27°00'00	91°00'00	B18
28116	DN	26°30'00	91°00'00	B59
28117	PN	26°00'00	91°00'00	B19
28118	DN	26°00'00	91°30'00	B299
28119	PN	26°00'00	92°00'00	B20
28120	DN	26°30'00	92°00'00	B58
28121	PN	27°00'00	92°00'00	B21
28122	DN	27°00'00	92°30'00	B304
28123	PN	27°00'00	93°00'00	B24
28124	DN	26°30'00	93°00'00	B55
28033	PN	26°00'00	93°00'00	B25
28125	DN	26°00'00	93°30'00	B307
28127	PN	26°00'00	94°00'00	B26
28128	DN	26°30'00	94°00'00	B54
28129	PN	27°00'00	94°30'00	B312
28130	DN	27°00'00	95°00'00	B28
28131	PN	26°30'00	95°00'00	B52
28132	DN	26°00'00	95°00'00	B29
28133	PN	26°00'00	95°30'00	B313
28134	DN	26°00'00	96°00'00	B30
28135	PN	26°30'00	96°00'00	B240
28136	DN	27°00'00	96°00'00	B31
28137	PN	27°30'00	96°00'00	B232
28138	DN	28°00'00	96°00'00	B231
28139	PN	28°00'00	95°30'00	B226
28140	DN	28°00'00	95°00'00	B223
28141	PN	28°00'00	94°30'00	B217
28142	DN	28°00'00	94°00'00	B216
28143	PN	28°00'00	93°30'00	B209
28037	DN	27°00'00	94°00'00	B27
28144	PN	28°00'00	93°00'00	B23
28145	DN	28°00'00	92°30'00	B202
28146	PN	28°00'00	92°00'00	B22
28147	DN	28°00'00	91°30'00	B195
28148	PN	28°00'00	91°00'00	B17
28149	DN	28°00'00	90°30'00	B190
28150	PN	28°00'00	90°00'00	B16
28151	DN	28°00'00	89°30'00	B185
28152	PN	28°00'00	89°00'00	B83
28153	DN	28°00'00	88°30'00	B250
28154	PN	28°00'00	88°00'00	B82
28155	DN	28°30'00	88°00'00	B81
28156	PN	29°00'00	88°00'00	B1
28157	DN	29°25'00	88°00'00	B322

Figure 1. NOAA Ship Chapman's spring SEAMAP Ichthyoplankton survey track of successful sample collections in the month of May.