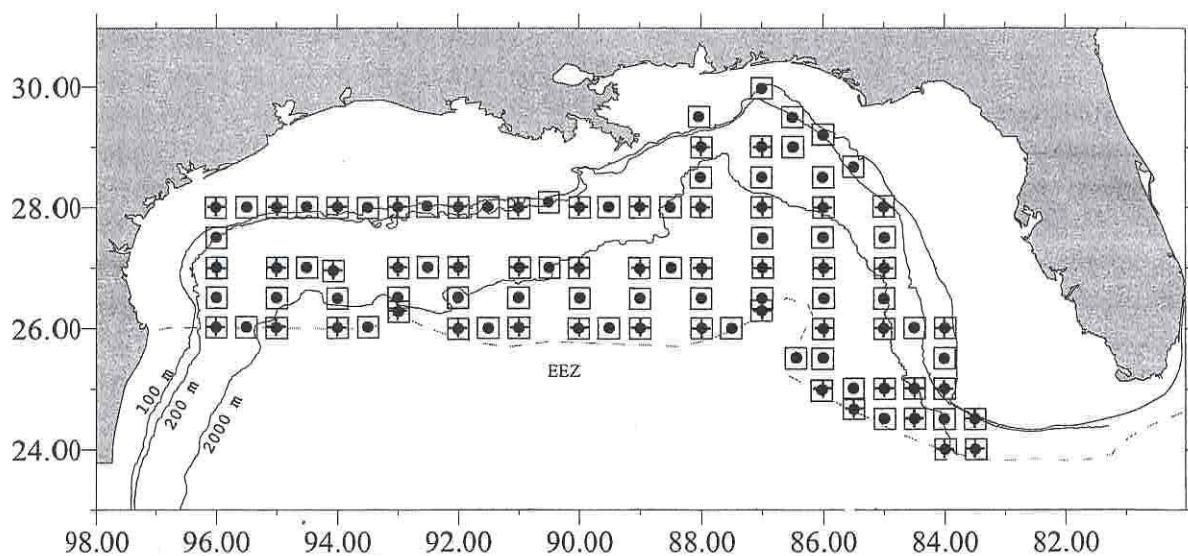


CRUISE RESULTS

Oct 16 2008
Fisheries Commission

Southeast Area Monitoring and Assessment Program
(SEAMAP) 2008 Spring Plankton Survey

NOAA Ship *Gordon Gunter* Cruise GU-08-02 (48)
April 19 – May 30, 2008



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
Mississippi Laboratories
Pascagoula Facility
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INTRODUCTION

The NOAA Ship *Gordon Gunter* departed Pascagoula, MS on 19 April 2008 to initiate the Southeast Area Monitoring and Assessment Program (SEAMAP) Spring Ichthyoplankton Survey in the northern Gulf of Mexico. The SEAMAP Program is a cooperative State/Federal/University program designed to collect biological and environmental data from waters of the U.S. Gulf of Mexico. During the Spring Survey, plankton samples are collected from a systematic grid of stations to assess distribution, occurrence and abundance of the early life stages of a variety of species of fishes and invertebrates. The survey specifically targets larval bluefin tuna (*Thunnus thynnus*).

A total of 39 successful sea days were worked over two legs during the cruise: Leg 1, April 19 – May 8 and Leg 2, May 11 – 30, 2008. An unscheduled 1 day port call occurred on May 18 to repair a leaking sewage pipe.

OBJECTIVES

1. Assess the occurrence, abundance and geographical distribution of the early life stages of spring spawning fishes, especially bluefin tuna (*Thunnus thynnus*), from the continental shelf edge to deep Gulf waters using a bongo frame fitted with 0.335 mm nets and a neuston frame fitted with a 0.947 mm net at selected SEAMAP stations in support of annual stock assessments. Targeted sampling for bluefin tuna larvae was also done at the end of Leg 1 where directed eddy sampling occurred near frontal circulation features based on satellite imagery of sea surface temperature and surface chlorophyll data. Stations were placed on cross-front transects to cover both outside, on the edges and inside the eddy.
2. Describe the pelagic habitat of fish larvae through measurements of various physical and biological parameters.
 - a) Record profiles through the water column of temperature, salinity, fluorescence, dissolved oxygen, and turbidity using a CTD at SEAMAP stations.
 - b) Measure chlorophyll *a* in replicate water samples taken at surface, mid or maximum chlorophyll layer and near bottom (to a maximum of 200 m) depths using bench top fluorometry.
 - c) Detect and measure frontal features along the survey cruise track using data from the ship's Fluoro-thermosalinograph flow-through system (TSG) and the Acoustic Doppler Current Profiler (ADCP).
3. To assist in the collection of marine debris from plankton samples for the Plankton & Plastic Surveys of U.S. Ocean Waters project with the National Fish and Wildlife Foundation.

METHODS

Environmental Data Collection

Environmental data were collected at each designated ichthyoplankton station in accordance with procedures outlined in the SEAMAP data collections manual. Each station included a CTD cast to near bottom or a maximum depth of 200 m except for the directed sampling stations where CTD casts were to a maximum depth of 500 m. The Seabird SBE 9/11 Plus CTD with SBE digiquartz pressure sensor was used with a dual suite of the following sensors: SBE 03 temperature sensor, SBE 04 conductivity sensor, and SBE 43 dissolved oxygen sensor. Only a single Wetlabs Wetstar fluorometer and Wetlabs C-Star transmissometer were used because of space limitations on the CTD plumbing. Information from shipboard sensors was accessed via the Scientific Computer System (SCS), which continuously displayed and recorded the ship's position, heading, speed, wind direction, wind speed, barometric pressure, sea surface temperature, air temperature and water depth. Each sampling event was conducted through the SCS and data (environmental and biological) for bongos, neuston, and CTD were then ingested into Microsoft Access for later analysis. Data from the TSG events were recorded and saved, but not ingested into the Microsoft Access database at this time. Water samples were taken, using Niskin bottles attached to a carousel sampler, at the surface, midwater or chlorophyll maximum, and near-bottom (up to 200 m maximum) for bench top fluorometric analysis using a modified Welshmeyer method. The modified procedure uses a Turner Designs 10-AU-005 benchtop fluorometer with a 10-040R optical kit. Temperature, salinity and depth were recorded in real time during bongo net tows using a Seabird SBE19 SEACAT Profiler.

Ichthyoplankton Sample Collection

Ichthyoplankton sample and data collection were implemented in accordance with procedures outlined in the SEAMAP data collections manual. A predefined cruise track of 97 SEAMAP stations approximately 30 nautical miles apart in a systematic grid pattern were targeted for each leg of the survey. However, the Leg 1 transect was broken off early to conduct directed sampling in eddy areas where adult bluefin tuna are known to spawn. Primary station operations consisted of a CTD profile, a neuston tow and every other station, a bongo tow with attached (on towing cable above the frame) SEACAT Profiler. Bongo samples were taken with the standard SEAMAP 61 cm bongo outfitted with two 0.335 mm mesh nets and towed in an oblique path from near bottom or 200 m maximum depth to the surface. Vessel speed was adjusted during the bongo tow to maintain a 45-degree wire angle in order to uniformly sample the water column. Water temperature, salinity and depth were monitored and recorded real-time during each bongo tow. Each bongo net had a flowmeter mounted inside to measure the volume filtered during the oblique tow. Neuston samples were taken using a 0.947 mm mesh net attached to a 1 x 2 m metal frame and towed for 10 minutes at a vessel speed (~ 2 knts) sufficient to keep the net opening half submerged in the water and thus maintaining a sampling depth of 0.5 m. Tows were shortened to no less than 5 minutes if *Sargassum* began to accumulate in the net and make retrieval onto the deck difficult. Right bongo samples were initially preserved in 10% formalin and transferred to new 95% Ethanol (ETOH) after 48 hours. Left bongo and neuston

samples were initially preserved in 95% ETOH and transferred to fresh ETOH after 24 hours.

As part of a NASA funded grant, directed sampling efforts targeting bluefin tuna larvae occurred during the last week of Leg 1; May 1-7. These non-standard stations were chosen to cross frontal features of the Loop Current and associated cyclonic and anticyclonic eddies. These mesoscale oceanographic features were located based on satellite imagery of sea surface temperature and surface chlorophyll. Daily updates of MODUS based imagery products were examined twice a day to track movements of these features and to position the ship. Shipboard CTD profiles and TSG data were sent daily to the Miami laboratory from the beginning of the cruise until the end of Leg 1 to assist in the determination of sampling locations. Standard SEAMAP gear and updated preservation techniques were used for all samples, including the directed sampling stations.

Secondary Samples

A request was made by an independent researcher who is collaborating with the American Chemistry Council and other NOAA laboratories to save any plastics caught in our sampling gear. The plastic samples will be sent with all station information to the independent researcher for further analysis.

To accommodate a dissertation project by a University of Michigan graduate student (Celia Christianson), neuston samples were scanned with the naked eye for two cnidarians, *Velella* and *Porpita*, and two mollusks, *Glaucus* and *Janthina* and the marine insect, *Halobates*. As passive drifters, these organisms are sometimes captured in our neuston samples. The collected specimens will represent the North Atlantic gyre in this multi-ocean study, Historical Ecology of the Neuston, which looks at the associations between populations of these taxa. Captured specimens were removed from the neuston samples and initially preserved in 95% ETOH, then transferred to new 95% ETOH after 24 hrs. The DNA will be extracted from the specimens and the polymerase chain reaction (PCR) will be used to amplify genes in the O'Foighil lab at the University of Michigan in order to build gene trees and compare lineages of the taxa from the other ocean gyres.

A recently installed autonomous underway CO2 system on the NOAA ship Gordon Gunter will be used to study ocean acidification in the Gulf of Mexico and Caribbean Sea. As part of this effort, a request was made by scientists from AOML (Atlantic Oceanographic and Meteorological Laboratory) and Texas A&M to collect co-located water samples to complement the CO2 data from the system on the Gunter. In support of this effort, 40 water samples were collected from SEAMAP stations along the standard trackline during the second leg.

SURVEY RESULTS

Environmental Data

Two hundred and thirty five, SBE 9/11 plus CTD and 102, SBE 19 SEACAT profiles were taken during the cruise. The SBE 9/11 plus CTD profiles were post-processed at sea by the Field Party Chief using Seabird's SEASAVE processing software. All environmental data and

data from the ship's SCS were returned to the NMFS Pascagoula Laboratory for editing, analysis and archival storage. TSG events were run to detect the presence of surface fronts and were emailed to Miami daily to help determine sampling areas for the directed eddy portion of the cruise. These data and the ADCP data were also returned to the NMFS Pascagoula Laboratory for editing, analysis and archival storage. The 40 water samples for the ocean acidification study were returned to the requesting researchers for analysis (Table 5).

Table 1. Summary of environmental data recorded near the surface (≤ 5 m depth) using CTD sensors and fluorometric analysis during Leg 1 of the *Gordon Gunter* cruise 08-02 (48), 19 April – 08 May 2008.

Measurement	Mean	Minimum	Maximum	No. of Samples
Sea Temperature ($^{\circ}$ C)	25.339	20.844	27.792	115
Salinity (ppt)	36.296	35.646	36.488	115
Dissolved Oxygen (mg/l)	6.447	6.171	6.994	115
Chlorophyll <i>a</i> (μ g/l)	0.089	0.003	0.163	100

Table 2. Summary of environmental data recorded near the surface (≤ 5 m depth) using CTD sensors and fluorometric analysis during Leg 2 of the *Gordon Gunter* cruise 08-02 (48), 11 – 30 May 2008.

Measurement	Mean	Minimum	Maximum	No. of Samples
Sea Temperature ($^{\circ}$ C)	26.508	23.403	28.103	97
Salinity (ppt)	35.710	31.391	36.582	97
Dissolved Oxygen (mg/l)	6.302	6.223	6.996	97
Chlorophyll <i>a</i> (μ g/l)	0.137	0.038	1.243	97

Plankton Samples

NMFS Vessels:

Over the course of the *Gordon Gunter* survey, ichthyoplankton samples were collected at 157 of the original 194 planned SEAMAP stations (Figures 6 and 7; Table 7 and 8). Additional stations from the directed bluefin eddy study on Leg 1 resulted in 108 samples (Figures 8-15). The combined stations from Leg 1 and Leg 2 resulted in the collection of 203 bongo samples (101 right and 102 left), and 221 neuston samples.

Table 3. Summary of ichthyoplankton collections taken during *Gordon Gunter* cruise GU-08-02 (48), 19 April – 30 May 2008.

Leg	CTD casts	Right - Bongo	Left - Bongo	Neuston
1	59	31	31	60
1 BF	56	22	22	64
2	97	48	49	97
Totals	212	101	102	221

State Vessels:

Directed eddy sampling was also conducted by the state of Mississippi for this survey.

Archival Storage:

Plankton samples taken with the bongo and neuston were assigned SEAMAP numbers at sea (Federal samples). All right bongos and standard neustons will be shipped to ZSIOP Gdynia, Poland for sorting. Left bongo samples will be deposited in the SEAMAP Invertebrate Archive at Gulf Coast Research Laboratory, University of Southern Mississippi, Ocean Springs, MS for archival. Left bongo and neuston samples from the directed eddy sampling will be shipped to the Miami lab for sorting and identification.

Secondary Samples

Plastics

Table 4. Plastics removed from samples during this survey.

Station	Gear	Date	Latitude	Longitude	Station	Gear	Date	Latitude	Longitude
002/B169	Neuston	4/20/2008	29 30.03	086 29.99	158/B077	Neuston	5/17/2008	26 29.78	085 59.39
004/B160	Neuston	4/20/2008	28 40.09	085 29.65	171/B273	Neuston	5/21/2008	26 00.03	087 30.08
007/B151	Neuston	4/21/2008	26 59.75	084 59.49	172/B010	Neuston	5/21/2008	26 00.15	087 59.60
008/B150	Neuston	4/21/2008	26 30.06	084 59.94	174/B011	Neuston	5/21/2008	26 59.78	087 59.63
011/B131	Neuston	4/22/2008	26 00.54	083 59.78	175/B288	Neuston	5/21/2008	26 59.96	088 29.56
012/B130	Neuston	4/22/2008	25 29.57	084 00.33	176/B012	Neuston	5/22/2008	26 59.28	088 00.17
015/B125	Neuston	4/22/2008	24 30.34	083 30.25	192/B024	Neuston	5/24/2008	27 00.26	092 59.70
018/B263	Neuston	4/23/2008	24 29.17	084 30.27	193/B055	Neuston	5/24/2008	26 30.61	092 59.91
019/B262	Neuston	4/23/2008	25 00.05	084 30.32	200/B028	Neuston	5/25/2008	27 00.10	094 59.90
020/B007	Neuston	4/23/2008	25 00.00	085 00.40	213/B209	Neuston	5/27/2008	28 00.03	093 30.07
036/B003	Neuston	4/26/2008	28 00.17	086 59.96	218/B017	Neuston	5/28/2008	27 59.74	091 00.30
039/B076	Neuston	4/26/2008	26 30.37	087 00.54					
049/B291	Neuston	4/28/2008	25 59.77	089 29.81					
050/B014	Neuston	4/28/2008	26 00.33	090 01.02					
055/B059	Neuston	4/29/2008	26 29.78	091 00.48					
064/BF04	Neuston	5/1/2008	26 59.25	087 41.28					
087/BF27	Neuston	5/4/2008	26 36.65	088 07.44					
090/BF30	Neuston	5/4/2008	26 58.07	088 31.14					
103/BF43	Neuston	5/5/2008	26 14.27	088 12.75					
103/BF43	Left Bongo	5/5/2008	26 14.27	088 12.75					
104/BF44	Neuston	5/5/2008	26 09.98	088 08.61					
114/BF54	Neuston	5/6/2008	27 25.25	088 15.06					
115/BF55	Neuston	5/6/2008	27 28.36	088 25.71					
116/BF56	Neuston	5/7/2008	27 36.04	088 20.79					
121/BF61	Neuston	5/7/2008	27 36.58	087 29.09					
122/BF62	Neuston	5/7/2008	27 33.54	087 17.86					
123/BF63	Neuston	5/7/2008	27 30.72	087 06.53					

Cnidaria / Mollusks:

Taxa collected from one left bongo and neuston samples during Leg 2 for the Univ. of Michigan dissertation project during this survey are as follows: 44 *Halobates* were collected at 9 stations, 55 *Porpita* were collected from 8 stations and 9 *Janthina* were collected at 4 stations. Station 159 (B005) contained *Halobates* in both the left bongo and the neuston. These specimens will be shipped to the Mollusk Division at the University of Michigan Museum of Zoology. The specimens pictured below were collected during the Winter Plankton Survey (GU-07-02) March 2007. Photos courtesy of C. Schobernd.

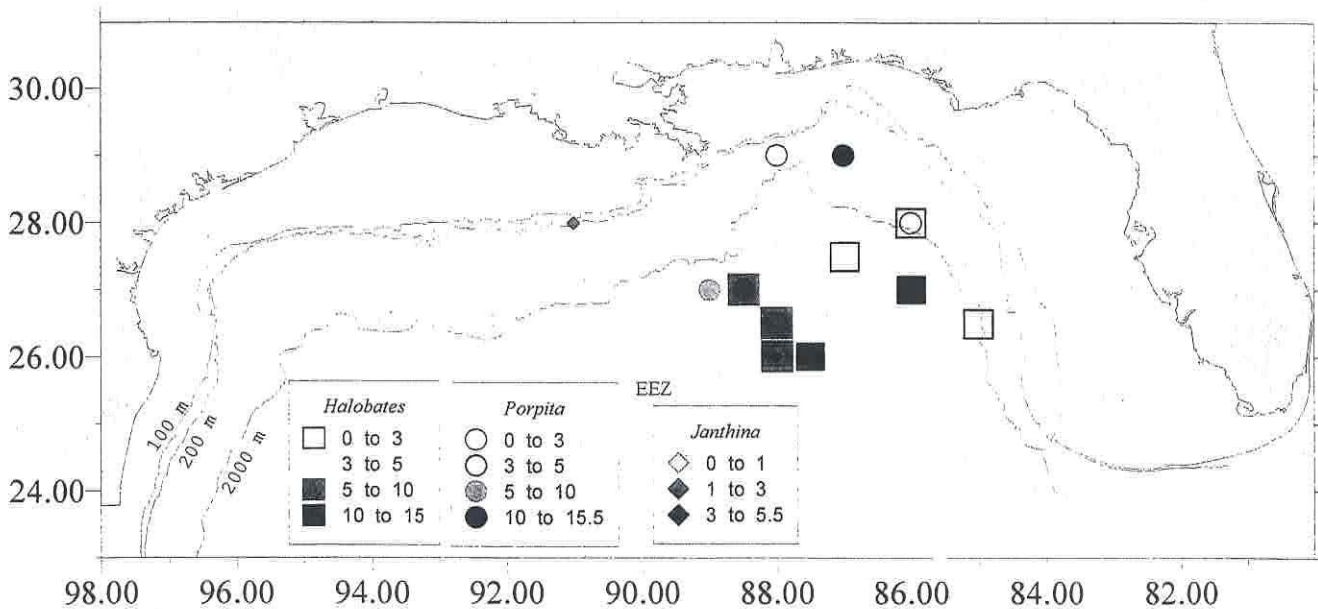
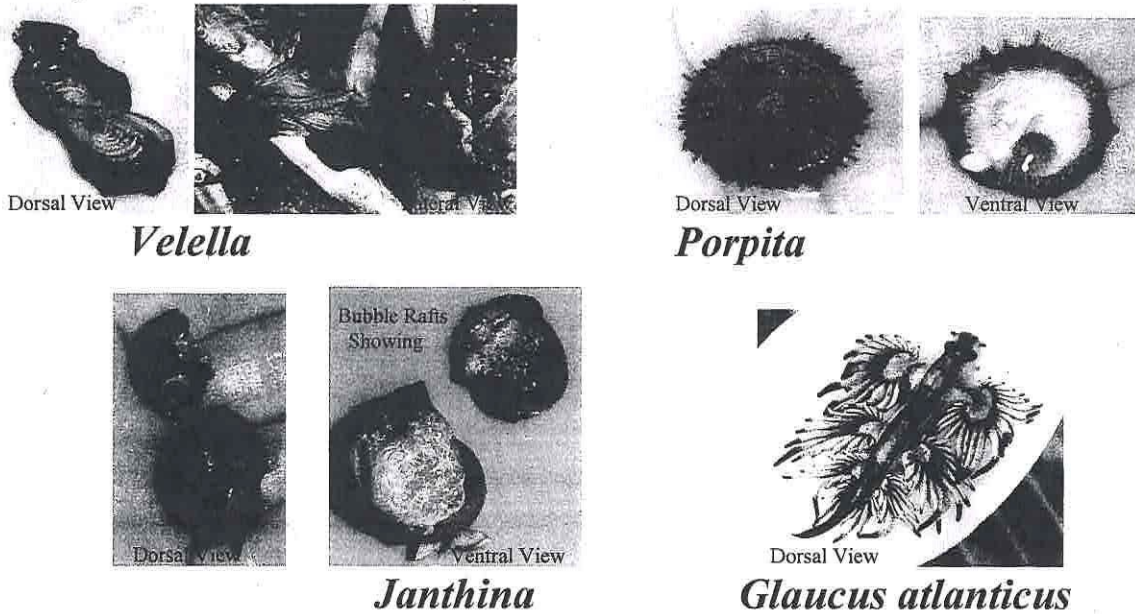


Figure 1. Neuston stations where cnidarians and mollusks were removed for the dissertation study. The diamonds represent *Halobates*, the circles represent *Porpita*, and the squares represent *Janthina*.

CO2 data

Table 5. List of stations where water samples were collected for ocean acidification study during Leg 2 of the 2008 SEAMAP Spring Plankton Survey aboard the NOAA Ship *Gordon Gunter* cruise GU-08-02 (48).

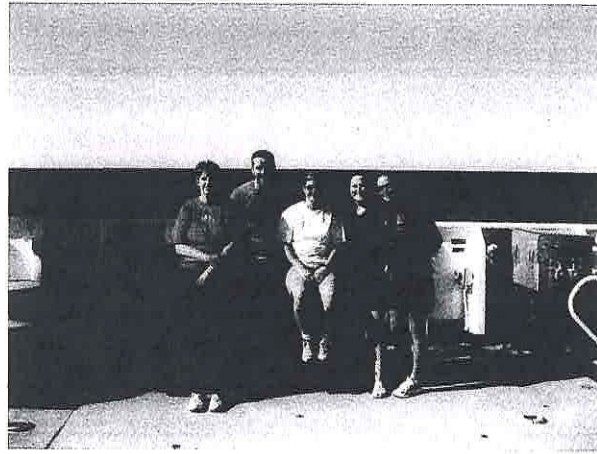
Sample Bottle #	Date (GMT)	Time (GMT)	LAT	LONG	Salinity	SST	depth
21	13-May-08	0318	28 00.778	085 00.283	36.47	24.179	2.20 m
22	13-May-08	1841	25 58.952	084 59.707	36.22	27.075	2.36 m
23	14-May-08	1718	24 29.871	083 30.139	36.42	26.350	2.00 m
24	15-May-08	1627	24 59.901	084 59.903	36.45	25.753	2.05 m
25	16-May-08	0106	24 39.902	085 30.332	36.44	25.604	2.34 m
26	16-May-08	1556	25 30.166	086 27.335	36.17	27.024	2.00 m
27	16-May-08	1556	25 30.166	086 27.335	36.17	27.024	2.00 m
28	17-May-08	1431	27 59.673	085 59.456	36.36	24.531	1.95 m
29	20-May-08	1615	27 29.542	086 59.985	36.42	26.689	1.85 m
30	21-May-08	0031	26 30.022	086 59.789	36.17	28.167	2.13 m
31	21-May-08	1422	26 30.500	087 59.410	36.07	27.839	1.34 m
32	22-May-08	0119	26 59.508	089 00.777	35.35	26.166	1.89 m
33	22-May-08	1546	25 59.518	090 00.856	36.29	26.549	1.46 m
34	22-May-08	1546	25 59.518	090 00.856	36.29	26.549	1.46 m
35	23-May-08	0048	26 59.624	089 59.926	36.26	26.431	3.82 m
36	23-May-08	1826	26 00.568	091 00.347	36.29	26.787	2.32 m
37	23-May-08	2145	26 00.499	091 30.119	36.33	26.758	1.93 m
38	24-May-08	1640	26 59.856	092 59.649	35.88	26.427	1.90 m
39	24-May-08	2309	26 16.330	092 59.057	36.51	26.937	1.66 m
40	25-May-08	1625	26 56.904	094 03.801	34.80	27.128	2.15 m
41	25-May-08	2305	26 59.922	094 59.459	36.51	27.408	1.04 m
42	25-May-08	2305	26 59.922	094 59.459	36.51	27.408	1.04 m
43	26-May-08	1417	26 00.928	096 00.062	36.51	27.507	2.68 m
44	26-May-08	1746	26 30.601	095 59.505	34.18	26.958	2.10 m
45	26-May-08	2150	26 59.822	095 59.635	33.35	27.697	3.48 m
46	27-May-08	0216	27 29.893	096 00.117	33.34	27.736	3.07 m
47	27-May-08	1413	28 00.216	094 59.612	33.00	27.177	2.68 m
48	27-May-08	1413	28 00.216	094 59.612	33.00	27.177	2.68 m
49	27-May-08	1719	28 00.444	094 29.310	33.14	27.049	2.05 m
50	27-May-08	2031	27 59.940	093 59.710	32.97	27.501	1.68 m
51	27-May-08	2359	27 59.641	093 29.470	33.70	27.315	2.04 m
52	28-May-08	1430	28 00.105	091 29.540	35.33	26.348	2.80 m
53	28-May-08	1805	27 59.300	090 59.668	35.98	26.604	1.87 m
54	28-May-08	1805	27 59.300	090 59.668	35.98	26.604	1.87 m
55	29-May-08	0141	27 59.816	089 59.315	36.37	26.562	2.18 m
56	29-May-08	1642	28 00.426	087 59.568	36.13	26.291	1.77 m
57	29-May-08	2032	28 29.664	088 00.367	34.55	26.998	1.80 m
58	30-May-08	0108	28 59.709	087 59.584	35.95	26.858	2.30 m
59	30-May-08	0509	29 30.137	088 01.992	33.58	27.306	2.14 m
60	30-May-08	0509	29 30.137	088 01.992	33.58	27.306	2.14 m

CRUISE PARTICIPANTS

Leg 1 (19 April – 8 May 2008)

Name / Title / Organization

Denice Drass / Field Party Chief / NMFS, Pascagoula, MS
Pam Bond / Fishery Biologist / NMFS, Pascagoula, MS
Jeremy Hall / Fishery Biologist / NMFS, Miami, FL
Christina Schobernd / Fishery Biologist / IAP¹, Pascagoula, MS
Kristen Kelly / Fishery Biologist / IAP¹, Pascagoula, MS



Leg 2 (11 – 30 May 2008)

Name / Title / Organization

Denice Drass / Field Party Chief / NMFS, Pascagoula, MS
Pam Bond / Fishery Biologist / NMFS, Pascagoula, MS
John Moser / Fishery Biologist / NMFS, Pascagoula, MS
Glenn Zapfe / Fishery Biologist / IAP¹, Pascagoula, MS
Kim Williams / Assistant in Research / University of South Florida, St. Petersburg, FL
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Denice Drass

Denice M. Drass
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Roger Zimmerman

Roger Zimmerman, Acting Director
Mississippi Laboratories

Bonnie Ponwith

Bonnie Ponwith, Acting Director
Southeast Science and Research Center

Table 6. Summary of average chlorophyll *a* measurements at 3 depths (surface, midwater or chlorophyll maximum, and bottom) for each station during Leg 1 of the Spring SEAMAP Plankton Survey conducted from the NOAA Ship *Gordon Gunter*, cruise GU-08-02 (48), 19 April – 8 May 2008. P-Sta.# = Pascagoula station number; S-Sta.# = SEAMAP station number; Depth = Sample Depth (meters); D-Code = Sample location in water column (S = Surface, M = Midwater, Max = Chlorophyll maximum, B = Bottom; Chl-*a* = Chlorophyll *a* measurement ($\mu\text{g/liter}$).

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
002	B169	0.87	S	0.149	013	B129	1.27	S	0.065
		200.92	B	0.017			49.20	Max	0.523
003	B165	1.72	S	0.114	014	B128	123.79	B	0.124
		187.50	B	0.009			63.96	Max	0.548
004	B160	2.27	S	0.110	015	B125	201.53	B	0.013
		49.56	Max	0.597			2.64	S	0.089
		173.67	B	0.008			61.69	Max	0.582
005	B153	1.51	S	0.080	016	B126	200.82	B	0.003
		58.24	Max	0.262			1.99	S	0.084
		200.07	B	0.003			74.47	Max	0.428
006	B152	1.41	S	0.113	017	B127	199.88	B	0.007
		58.85	Max	0.443			2.05	S	0.100
		200.96	B	0.003			63.70	Max	0.472
007	B151	1.26	S	0.093	018	B263	200.01	B	0.016
		202.95	B	0.003			2.51	S	0.056
008	B150	1.78	S	0.087	019	B262	100.78	Max	0.380
		60.75	Max	0.349			200.84	B	0.016
		200.15	B	0.003			2.38	S	0.042
009	B149	2.28	S	0.089	020	B007	71.81	Max	0.278
		45.24	Max	0.558			196.97	B	0.029
		199.62	B	0.003			2.10	S	0.050
010	B147	81.95	Max	0.469	021	B072	89.88	Max	0.174
		199.48	B	0.005			198.42	B	0.007
011	B131	1.59	S	0.115	022	B266	2.12	S	0.085
		64.90	Max	0.770			90.91	Max	0.583
		134.76	B	0.018			199.12	B	0.003
012	B130	77.61	Max	0.332	022	B266	1.95	S	0.067
		135.54	B	0.024			201.07	B	0.002

Table 6 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
023	B261	1.52	S	0.059	034	B002	2.62	S	0.086
		106.20	Max	0.498			70.35	Max	0.635
		198.65	B	0.014			200.76	B	0.007
024	B008	2.37	S	0.045	035	B080	2.12	S	0.064
		135.02	Max	0.231			68.15	Max	0.495
		200.38	B	0.046			200.72	B	0.040
025	B074	1.11	S	0.049	036	B003	2.31	S	0.050
		115.33	Max	0.302			74.95	Max	0.413
		200.33	B	0.053			202.43	B	0.002
026	B270	1.64	S	0.058	037	B075	2.49	S	0.066
		104.60	Max	0.411			68.66	Max	0.444
		198.51	B	0.014			200.53	B	0.050
027	B006	3.32	S	0.091	038	B004	3.71	S	0.117
		129.61	Max	0.518			57.69	Max	1.062
		198.33	B	0.050			200.34	B	0.023
028	B077	2.45	S	0.058	039	B076	2.53	S	0.084
		109.67	Max	0.701			99.51	Max	0.488
		199.03	B	0.022			202.50	B	0.087
029	B005	2.33	S	0.040	040	B009	91.68	Max	0.326
		52.93	Max	0.504			204.17	B	0.006
		200.50	B	0.073			041	B273	2.49
030	B078	2.21	S	0.080	114.19	Max	0.295		
		48.37	Max	0.350	200.39	B	0.056		
		200.46	B	0.003	042	B010	2.63	S	0.097
031	B163	3.05	S	0.073	78.29		Max	0.638	
		52.80	Max	0.482	207.75		B	0.008	
		198.80	B	0.028	043	B066	2.61	S	0.142
032	B164	4.11	S	0.093	86.67		Max	0.155	
		56.48	Max	0.892	200.68		B	0.016	
		200.32	B	0.006	044	B011	4.06	S	0.083
033	B170	2.82	S	0.113	65.31		Max	0.770	
		66.68	Max	0.847	204.72		B	0.083	
		199.83	B	0.008					

Table 6 continued

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
045	B288	3.37	S	0.072	057	B299	3.31	S	0.125
		38.01	Max	0.950			58.70	Max	0.677
		200.40	B	0.013			201.70	B	0.062
046	B012	3.38	S	0.075	058	B020	4.14	S	0.163
		72.69	Max	0.508			66.67	Max	0.462
		201.94	B	0.029			200.95	B	0.037
047	B063	2.61	S	0.049	059	B058	2.21	S	0.118
		81.98	Max	0.334			54.08	Max	0.242
		204.27	B	0.012			200.10	B	0.003
048	B013	2.20	S	0.067	060	B021	1.99	S	0.099
		38.73	Max	1.012			39.08	Max	0.465
		200.66	B	0.140			200.81	B	0.004
049	B291	1.77	S	0.076	061	BF1	2.91	S	0.090
		94.63	Max	0.363			54.60	Max	0.436
		200.51	B	0.006			498.52	B	0.003
050	B014	2.02	S	0.057	062	BF2	3.36	S	0.119
		81.09	Max	0.505			49.90	Max	0.795
		200.35	B	0.054			497.74	B	0.004
051	B062	3.01	S	0.084	063	BF3	3.04	S	0.121
		114.35	Max	0.427			65.62	Max	0.482
		200.28	B	0.010			500.84	B	0.003
052	B015	97.01	Max	0.598	064	BF4	3.58	S	0.106
		200.13	B	0.010			72.50	Max	0.575
		119.31	Max	0.431			499.65	B	0.003
053	B296	3.03	S	0.079	065	BF5	4.57	S	0.096
		119.31	Max	0.431			72.16	Max	0.450
		200.75	B	0.007			499.79	B	0.003
054	B18	2.20	S	0.099	066	BF6	4.30	S	0.090
		84.27	Max	0.520			66.05	Max	0.433
		200.87	B	0.077			498.67	B	0.004
055	B059	3.56	S	0.141	067	BF7	4.10	S	0.107
		98.71	Max	0.406			89.99	Max	0.378
		200.36	B	0.108			503.42	B	0.015
056	B019	4.33	S	0.124					
		73.00	Max	0.612					
		199.03	B	0.019					

Table 6 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
068	BF8	3.27	S	0.088	080	BF20	5.36	S	0.128
		85.31	Max	0.648			62.98	Max	0.459
		496.21	B	0.016			499.94	B	0.001
069	BF9	2.69	S	0.085	081	BF21	3.69	S	0.115
		64.85	Max	0.617			80.13	Max	0.516
		494.58	B	0.006			501.92	B	0.003
070	BF10	4.44	S	0.072	082	BF22	3.25	S	0.003
		94.91	Max	0.272			496.57	B	0.104
		499.29	B	0.001			092	BF32	3.55
071	BF11	4.28	S	0.102	70.70	Max	0.738		
		62.61	Max	0.404	499.70	B	0.005		
		500.65	B	0.001	093	BF33	2.84	S	0.077
072	BF12	2.78	S	0.138			66.36	Max	0.935
		31.91	Max	0.548			500.01	B	0.002
		496.01	B	0.011	094	BF34	2.94	S	0.080
073	BF13	4.33	S	0.106			74.02	Max	0.498
		60.86	Max	0.343			498.51	B	0.002
		498.77	B	0.002	095	BF35	2.04	S	0.087
075	BF15	4.75	S	0.063			69.43	Max	0.544
		91.40	Max	0.555			198.79	B	0.006
		498.90	B	0.001	103	BF43	3.75	S	0.145
076	BF16	2.78	S	0.072			57.64	Max	1.580
		64.27	Max	0.660			498.54	B	0.006
		498.78	B	0.002	106	BF46	2.34	S	0.070
077	BF17	3.00	S	0.057			79.55	Max	0.768
		66.00	Max	0.425			499.02	B	0.008
		499.49	B	0.000	107	BF47	4.02	S	0.058
078	BF18	3.59	S	0.110			77.07	Max	1.493
		44.95	Max	1.597			501.23	B	0.008
		500.72	B	0.019	108	BF48	3.15	S	0.111
079	BF19	4.44	S	0.130			94.80	Max	0.645
		58.30	Max	0.558			496.62	B	0.007
		498.67	B	0.004					

Table 6 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a
109	BF49	3.66	S	0.120
		92.90	Max	0.448
		498.94	B	0.003
110	BF50	3.93	S	0.122
		76.75	Max	0.390
		500.47	B	0.002
111	BF51	3.03	S	0.108
		47.88	Max	0.567
		500.33	B	0.003
112	BF52	2.56	S	0.127
		42.48	Max	0.507
		499.61	B	0.004
113	BF53	2.88	S	0.100
		67.01	Max	0.670
		499.41	B	0.006
114	BF54	2.85	S	0.099
		41.17	Max	1.250
		499.93	B	0.010
115	BF55	2.83	S	0.082
		67.61	Max	0.484
		499.87	B	0.003
116	BF56	2.18	S	0.082
		44.33	Max	1.280
		499.64	B	0.013
118	BF58	3.18	S	0.070
		66.60	Max	0.522
		499.44	B	0.003
119	BF59	2.59	S	0.077
		66.81	Max	0.487
		499.70	B	0.003
121	BF61	2.31	S	0.090
		48.82	Max	0.737
		502.76	B	0.013

P-Sta #	S-Sta #	Depth	D-Code	Chl-a
122	BF62	2.55	S	0.099
		59.62	Max	0.331
		500.75	B	0.003

Table 7. Summary of average chlorophyll *a* measurements at 3 depths (surface, midwater or chlorophyll maximum, and bottom) for each station during Leg 2 of the Spring SEAMAP Plankton Survey conducted from the NOAA Ship *Gordon Gunter*, cruise GU-08-02 (48), 11 – 30 May 2008. P-Sta.# = Pascagoula station number; S-Sta.# = SEAMAP station number; Depth = Sample Depth (meters); D-Code = Sample location (meters) in water column (S = Surface, M = Midwater, Max = Chlorophyll maximum, B = Bottom, N/A = No sample at that depth); Chl-a = Chlorophyll *a* measurement ($\mu\text{g/liter}$).

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
131	B172	1.84	S	0.331	141	B131	2.00	S	0.060
		46.86	Max	0.397			75.77	Max	0.497
		76.21	B	0.217			134.65	B	0.046
132	B169	1.91	S	0.122	142	B130	1.52	S	0.064
		64.17	Max	0.299			64.85	Max	0.334
		205.69	B	0.011			137.42	B	0.090
133	B165	63.74	Max	0.315	143	B129	1.62	S	0.081
		186.80	B	0.018			72.57	Max	0.351
134	B160	1.86	S	0.082	144	B128	2.68	S	0.092
		56.57	Max	0.612			71.19	Max	0.353
		175.52	B	0.024			202.20	B	0.009
135	B153	2.20	S	0.061	145	B125	2.00	S	0.086
		63.60	Max	0.672			63.76	Max	0.848
		202.23	B	0.008			200.17	B	0.006
136	B152	2.21	S	0.062	146	B126	1.31	S	0.072
		56.27	Max	0.585			65.56	Max	0.642
		200.41	B	0.011			200.48	B	0.005
137	B151	1.87	S	0.091	147	B127	2.55	S	0.056
		82.69	Max	0.371			60.40	Max	0.342
		204.22	B	0.004			199.99	B	0.004
138	B150	1.74	S	0.094	148	B263	62.25	Max	0.399
		48.96	Max	1.207			198.21	B	0.005
		202.92	B	0.011			2.39	S	0.081
139	B149	2.36	S	0.074	149	B262	62.44	Max	0.409
		45.55	Max	1.070			203.84	B	0.008
		198.39	B	0.004			2.05	S	0.102
140	B147	1.77	S	0.065	150	B007	75.22	Max	0.717
		75.48	Max	0.498			201.25	B	0.020
		199.93	B	0.004					

Table 7 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
151	B072	2.57	S	0.081	163	B002	1.53	S	0.401
		51.70	Max	0.610			54.23	Max	0.311
		201.41	B	0.007			199.78	B	0.004
152	B266	2.34	S	0.061	164	B170	2.38	S	0.201
		83.79	Max	0.615			50.68	Max	0.303
		201.72	B	0.004			198.97	B	0.009
153	B261	2.75	S	0.062	165	B084	1.55	S	0.262
		197.53	B	0.018			69.97	Max	0.282
154	B008	2.22	S	0.069	166	B003	203.23	B	0.004
		102.57	Max	0.705			1.93	S	0.093
		201.94	B	0.029			65.37	Max	0.410
155	B074	3.02	S	0.075	167	B079	201.90	B	0.006
		132.34	Max	0.331			2.82	S	0.106
		203.39	B	0.033			66.28	Max	0.555
156	B270	2.00	S	0.053	168	B004	203.44	B	0.009
		141.26	Max	0.333			1.35	S	0.049
		201.51	B	0.023			95.46	Max	0.531
157	B006	2.53	S	0.043	169	B076	199.87	B	0.024
		121.56	Max	0.375			2.13	S	0.065
		204.12	B	0.019			137.30	Max	0.345
158	B077	2.69	S	0.038	170	B009	199.43	B	0.011
		134.02	Max	0.327			2.04	S	0.045
		200.43	B	0.017			87.12	Max	0.341
159	B005	1.84	S	0.053	171	B273	201.44	B	0.009
		71.13	Max	0.687			1.13	S	0.069
		199.38	B	0.046			102.92	Max	0.447
160	B078	2.22	S	0.089	172	B010	203.68	B	0.023
		64.26	Max	0.548			2.03	S	0.076
		202.19	B	0.013			86.44	Max	0.647
161	B163	1.79	S	0.118	173	B066	200.25	B	0.013
		75.48	Max	0.628			1.34	S	0.063
		200.26	B	0.010			80.44	Max	0.667
162	B164	1.41	S	0.146	200.64	B	0.055		
		201.91	B	0.004					

Table 7 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a
174	B011	1.22	S	0.077
		69.78	Max	0.443
		200.01	B	0.012
175	B288	1.81	S	0.111
		47.97	Max	0.591
		199.68	B	0.003
176	B012	1.89	S	0.103
		59.45	Max	0.365
		199.46	B	0.004
177	B063	2.61	S	0.086
		66.66	Max	0.563
		200.05	B	0.007
178	B013	1.38	S	0.139
		74.13	Max	0.406
		202.72	B	0.007
179	B291	2.01	S	0.125
		93.09	Max	0.471
		199.44	B	0.010
180	B014	1.46	S	0.086
		87.80	Max	0.419
		200.08	B	0.003
181	B062	1.94	S	0.075
		100.06	Max	0.408
		200.04	B	0.003
182	B015	3.82	S	0.065
		84.83	Max	0.466
		198.58	B	0.000
183	B296	2.05	S	0.058
		112.55	Max	0.298
		200.95	B	0.002
184	B018	2.03	S	0.061
		101.83	Max	0.375
		201.89	B	0.005

P-Sta #	S-Sta #	Depth	D-Code	Chl-a
185	B059	2.60	S	0.070
		94.75	Max	0.376
		197.82	B	0.009
186	B019	2.32	S	0.066
		94.96	Max	0.481
		201.02	B	0.006
187	B058	1.93	S	0.064
		82.91	Max	0.675
		201.60	B	0.002
188	B020	3.24	S	0.069
		53.29	Max	0.650
		199.78	B	0.008
189	B058	2.24	S	0.065
		63.33	Max	0.943
		202.16	B	0.026
190	B021	2.29	S	0.076
		82.51	Max	0.627
		200.27	B	0.014
191	B304	2.75	S	0.120
		75.20	Max	0.486
		202.20	B	0.006
192	B024	1.90	S	0.100
		74.58	Max	0.455
		199.77	B	0.003
193	B055	2.98	S	0.084
		83.88	Max	0.405
		204.11	B	0.002
194	B025	0.68	S	0.060
		68.13	Max	0.403
		200.20	B	0.002
195	B307	2.12	S	0.064
		77.58	Max	0.418
		201.38	B	0.002

Table 7 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a	P-Sta #	S-Sta #	Depth	D-Code	Chl-a
196	B026	2.37	S	0.068	207	B232	3.07	S	0.179
		75.67	Max	0.425			38.01	Max	0.593
		204.56	B	0.024			199.46	B	0.002
197	B054	2.85	S	0.135	208	B231	2.08	S	1.243
		76.58	Max	0.485			43.95	B	0.256
		204.31	B	0.006			209	B226	2.69
198	B027	2.15	S	0.167	20.49	Max			0.612
		69.36	Max	0.355	52.28	B			0.222
		201.51	B	0.010	210	B223	2.68	S	0.298
199	B312	1.91	S	0.135			18.36	Max	1.052
		81.86	Max	0.408			79.41	B	0.275
		199.78	B	0.006	211	B217	2.05	S	0.445
200	B028	1.04	S	0.066			22.41	Max	1.033
		94.08	Max	0.379			68.48	B	0.162
		202.52	B	0.057	212	B216	1.68	S	0.478
201	B052	3.03	S	0.091			19.33	Max	1.400
		98.97	Max	0.302			80.45	B	0.212
		199.41	B	0.004	213	B209	2.04	S	0.310
202	B029	2.32	S	0.090			14.44	Max	0.777
		81.38	Max	0.315			94.58	B	0.259
		199.89	B	0.007	214	B023	1.96	S	0.177
203	B313	3.17	S	0.080			45.92	Max	0.565
		113.57	Max	0.242			101.07	B	0.191
		194.02	B	0.015	215	B202	2.88	S	0.172
204	B030	2.68	S	0.085			29.75	Max	0.475
		69.23	Max	0.827			106.44	B	0.214
		202.31	B	0.019	216	B022	2.78	S	0.087
205	B240	2.10	S	0.374			72.86	Max	0.500
		28.79	Max	0.552			118.18	B	0.204
		201.51	B	0.005	217	B195	2.80	S	0.125
206	B031	3.48	S	0.257			75.15	Max	0.425
		21.86	Max	0.412			151.35	B	0.020
		206.11	B	0.003					

Table 7 continued.

P-Sta #	S-Sta #	Depth	D-Code	Chl-a
218	B017	1.87	S	0.089
		75.42	Max	0.476
		161.61	B	0.013
219	B190	1.63	S	0.075
		74.54	Max	0.593
		139.79	B	0.081
220	B016	2.18	S	0.063
		70.48	Max	0.536
		199.29	B	0.005
221	B185	2.09	S	0.107
		57.40	Max	0.687
		203.08	B	0.006
222	B083	2.53	S	0.092
		54.58	Max	0.497
		200.49	B	0.004
223	B250	2.19	S	0.111
		73.72	Max	0.470
		205.77	B	0.006
224	B082	1.77	S	0.105
		83.03	Max	0.415
		203.86	B	0.006
225	B081	1.80	S	0.172
		77.33	Max	0.385
		200.87	B	0.006
226	B001	2.30	S	0.086
		80.30	Max	0.439
		200.56	B	0.007
227	B176	2.14	S	0.840
		19.50	Max	3.363
		42.07	B	0.518

Table 8. Summary of plankton sampling effort during the Spring SEAMAP Ichthyoplankton Survey conducted from the NOAA Ship *Gordon Gunter*, cruise GU-08-02 (48), Leg 1, 19 April – 8 May 2008. P-Sta.# = Pascagoula station number; S-Sta.# = SEAMAP station number; Smp.# = SEAMAP sample number; * represents SEAMAP samples where plastics were removed; RB = Right Bongo; LB = Left Bongo; NN = Neuston; Pres. = Initial preservative; Form = Formalin; ETOH = Ethyl alcohol.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
001	B172	35697	NN	95% Ethanol	04/20/2008 6:18:43
002	B169	35698	NN	95% Ethanol	04/20/2008 10:58:05
003	B165	35701	NN	95% Ethanol	04/20/2008 15:21:23
003	B165	35699	RB	10% Formalin	04/20/2008 14:49:00
003	B165	35700	LB	10% Formalin	04/20/2008 14:49:00
004	B160	35702	NN	95% Ethanol	04/20/2008 20:19:29
005	B153	35703	RB	10% Formalin	04/21/2008 1:55:12
005	B153	35705	NN	95% Ethanol	04/21/2008 2:22:34
005	B153	35704	LB	95% Ethanol	04/21/2008 1:55:12
006	B152	35706	NN	95% Ethanol	04/21/2008 6:03:23
007	B151	35708	LB	10% Formalin	04/21/2008 9:44:50
007	B151	35707	RB	10% Formalin	04/21/2008 9:44:50
007	B151	35709	NN	95% Ethanol	04/21/2008 10:10:49
008	B150	35710	NN	95% Ethanol	04/21/2008 13:53:14
009	B149	35713	NN	95% Ethanol	04/21/2008 18:32:50
009	B149	35712	LB	95% Ethanol	04/21/2008 18:03:59
009	B149	35711	RB	10% Formalin	04/21/2008 18:03:59
010	B147	35714	NN	95% Ethanol	04/21/2008 21:49:22
011	B131	35715	RB	10% Formalin	04/22/2008 1:09:02
011	B131	35717	NN	95% Ethanol	04/22/2008 1:31:11
011	B131	35716	LB	95% Ethanol	04/22/2008 1:09:02
012	B130	35718	NN	95% Ethanol	04/22/2008 5:09:50
013	B129	35719	RB	10% Formalin	04/22/2008 8:43:55
013	B129	35721	NN	95% Ethanol	04/22/2008 9:01:09
013	B129	35720	LB	95% Ethanol	04/22/2008 8:43:55
014	B128	35722	NN	95% Ethanol	04/22/2008 12:46:37
015	B125	35724	LB	95% Ethanol	04/22/2008 16:21:43
015	B125	35725	NN	95% Ethanol	04/22/2008 16:52:32
015	B125	35723	RB	10% Formalin	04/22/2008 16:21:43
016	B126	35726	RB	10% Formalin	04/22/2008 20:36:09
016	B126	35728	NN	95% Ethanol	04/22/2008 21:00:09
016	B126	35727	LB	95% Ethanol	04/22/2008 20:36:09
017	B127	35729	RB	10% Formalin	04/23/2008 0:30:09
017	B127	35731	NN	95% Ethanol	04/23/2008 0:55:59

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
017	B127	35730	LB	95% Ethanol	04/23/2008 0:30:09
018	B263	35732	RB	10% Formalin	04/23/2008 5:31:25
018	B263	35734	NN	95% Ethanol	04/23/2008 5:54:16
018	B263	35733	LB	95% Ethanol	04/23/2008 5:31:25
019	B262	35737	NN	95% Ethanol	04/23/2008 11:19:38
019	B262	35736	LB	95% Ethanol	04/23/2008 10:45:23
019	B262	35735	RB	10% Formalin	04/23/2008 10:45:23
020	B007	35740	NN	95% Ethanol	04/23/2008 15:55:06
020	B007	35739	LB	95% Ethanol	04/23/2008 15:15:37
020	B007	35738	RB	10% Formalin	04/23/2008 15:15:37
021	B072	35741	NN	95% Ethanol	04/23/2008 18:55:18
022	B266	35742	RB	10% Formalin	04/23/2008 22:47:58
022	B266	35744	NN	95% Ethanol	04/23/2008 23:09:56
022	B266	35743	LB	95% Ethanol	04/23/2008 22:47:58
023	B261	35745	NN	95% Ethanol	04/24/2008 2:22:55
024	B008	35746	RB	10% Formalin	04/24/2008 6:00:20
024	B008	35748	NN	95% Ethanol	04/24/2008 6:26:46
024	B008	35747	LB	95% Ethanol	04/24/2008 6:00:20
025	B074	35749	NN	95% Ethanol	04/24/2008 10:35:24
026	B270	35750	NN	95% Ethanol	04/24/2008 14:03:17
027	B006	35753	NN	95% Ethanol	04/24/2008 19:41:35
027	B006	35752	LB	95% Ethanol	04/24/2008 19:06:24
027	B006	35751	RB	10% Formalin	04/24/2008 19:06:24
028	B077	35754	NN	95% Ethanol	04/25/2008 0:32:50
029	B005	35755	RB	10% Formalin	04/25/2008 4:38:33
029	B005	35757	NN	95% Ethanol	04/25/2008 5:08:05
029	B005	35756	LB	95% Ethanol	04/25/2008 4:38:33
030	B078	35758	NN	95% Ethanol	04/25/2008 8:59:38
031	B163	35759	RB	10% Formalin	04/25/2008 12:40:20
031	B163	35761	NN	95% Ethanol	04/25/2008 13:06:39
031	B163	35760	LB	95% Ethanol	04/25/2008 12:40:20
032	B164	35762	NN	95% Ethanol	04/25/2008 17:02:44
033	B170	35763	NN	95% Ethanol	04/25/2008 21:34:14
034	B002	35766	NN	95% Ethanol	04/26/2008 1:16:58

Table 8 continued.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
034	B002	35765	LB	95% Ethanol	04/26/2008 0:54:08
034	B002	35764	RB	10% Formalin	04/26/2008 0:54:08
035	B080	35767	NN	95% Ethanol	04/26/2008 5:01:44
036	B003	35768	RB	10% Formalin	04/26/2008 8:40:44
036	B003	35770	NN	95% Ethanol	04/26/2008 9:04:22
036	B003	35769	LB	95% Ethanol	04/26/2008 8:40:44
037	B079	35771	NN	95% Ethanol	04/26/2008 12:44:55
038	B004	35772	RB	10% Formalin	04/26/2008 16:42:56
038	B004	35774	NN	95% Ethanol	04/26/2008 17:14:55
038	B004	35773	LB	95% Ethanol	04/26/2008 16:42:56
039	B076	35775	NN	95% Ethanol	04/26/2008 21:23:33
040	B009	35777	LB	95% Ethanol	04/26/2008 23:53:47
040	B009	35778	NN	95% Ethanol	04/27/2008 0:24:53
040	B009	35776	RB	10% Formalin	04/26/2008 23:53:47
041	B273	35779	NN	95% Ethanol	04/27/2008 5:14:10
042	B010	35780	RB	10% Formalin	04/27/2008 9:50:25
042	B010	35782	NN	95% Ethanol	04/27/2008 10:19:08
042	B010	35781	LB	95% Ethanol	04/27/2008 9:50:25
043	B066	35783	NN	95% Ethanol	04/27/2008 13:25:08
044	B011	35784	RB	10% Formalin	04/27/2008 16:49:39
044	B011	35786	NN	95% Ethanol	04/27/2008 17:37:16
044	B011	35785	LB	95% Ethanol	04/27/2008 16:49:39
045	B288	35787	NN	95% Ethanol	04/27/2008 21:47:18
046	B012	35788	RB	10% Formalin	04/28/2008 1:13:34
046	B012	35789	LB	95% Ethanol	04/28/2008 1:13:34
046	B012	35790	NN	95% Ethanol	04/28/2008 1:55:42
047	B063	35791	NN	95% Ethanol	04/28/2008 5:09:55
048	B013	35792	RB	10% Formalin	04/28/2008 8:35:16
048	B013	35794	NN	95% Ethanol	04/28/2008 8:56:04
048	B013	35793	LB	95% Ethanol	04/28/2008 8:35:16
049	B291	35795	NN	95% Ethanol	04/28/2008 11:53:49
050	B014	35796	RB	10% Formalin	04/28/2008 14:58:05
050	B014	35798	NN	95% Ethanol	04/28/2008 15:27:30
050	B014	35797	LB	95% Ethanol	04/28/2008 14:58:05
051	B062	35799	NN	95% Ethanol	04/28/2008 19:35:08
052	B015	35801	LB	95% Ethanol	04/28/2008 23:45:45
052	B015	35800	RB	10% Formalin	04/28/2008 23:45:45

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
052	B015	35802	NN	95% Ethanol	04/29/2008 0:14:42
053	B296	35803	NN	95% Ethanol	04/29/2008 4:11:45
054	B018	35804	RB	10% Formalin	04/29/2008 7:47:25
054	B018	35806	NN	95% Ethanol	04/29/2008 8:11:17
054	B018	35805	LB	95% Ethanol	04/29/2008 7:47:25
055	B059	35807	NN	95% Ethanol	04/29/2008 12:56:09
056	B019	35808	RB	10% Formalin	04/29/2008 17:56:14
056	B019	35810	NN	95% Ethanol	04/29/2008 18:30:16
056	B019	35809	LB	95% Ethanol	04/29/2008 17:56:14
057	B299	35811	NN	95% Ethanol	04/29/2008 22:06:35
058	B020	35812	RB	10% Formalin	04/30/2008 1:35:13
058	B020	35814	NN	95% Ethanol	04/30/2008 2:00:41
058	B020	35813	LB	95% Ethanol	04/30/2008 1:35:13
059	B058	35815	NN	95% Ethanol	04/30/2008 6:05:42
060	B021	35817	LB	95% Ethanol	04/30/2008 10:00:13
060	B021	35816	RB	10% Formalin	04/30/2008 10:00:13
060	B021	35818	NN	95% Ethanol	04/30/2008 10:22:56
061	BF1	35821	NN	95% Ethanol	05/01/2008 10:39:33
061	BF1	35819	RB	10% Formalin	05/01/2008 10:15:39
061	BF1	35820	LB	95% Ethanol	05/01/2008 10:15:39
062	BF2	35822	RB	10% Formalin	05/01/2008 12:37:46
062	BF2	35824	NN	95% Ethanol	05/01/2008 13:04:24
062	BF2	35823	LB	95% Ethanol	05/01/2008 12:37:46
063	BF3	35825	RB	10% Formalin	05/01/2008 15:15:22
063	BF3	35827	NN	95% Ethanol	05/01/2008 15:58:27
063	BF3	35826	LB	95% Ethanol	05/01/2008 15:15:22
064	BF4	35828	RB	10% Formalin	05/01/2008 18:02:47
064	BF4	35829	LB	95% Ethanol	05/01/2008 18:02:47
064	BF4	35830	NN	95% Ethanol	05/01/2008 18:29:59
065	BF5	35832	RB	10% Formalin	05/01/2008 20:45:26
065	BF5	35833	NN	95% Ethanol	05/01/2008 21:21:15
065	BF5	35831	LB	95% Ethanol	05/01/2008 20:45:26
066	BF6	35834	RB	10% Formalin	05/01/2008 23:28:46
066	BF6	35836	NN	95% Ethanol	05/02/2008 0:02:52
066	BF6	35835	LB	95% Ethanol	05/01/2008 23:28:46
067	BF7	35837	RB	10% Formalin	05/02/2008 3:15:49
067	BF7	35838	LB	95% Ethanol	05/02/2008 3:15:49

Table 8 continued.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
069	BF9	35839	RB	10% Formalin	05/02/2008 7:43:06
069	BF9	35840	LB	10% Formalin	05/02/2008 7:43:06
071	BF11	35841	RB	10% Formalin	05/02/2008 11:26:23
071	BF11	35842	LB	95% Ethanol	05/02/2008 11:26:23
073	BF13	35843	NN	95% Ethanol	05/02/2008 22:53:38
074	BF14	35844	NN	95% Ethanol	05/03/2008 0:21:01
075	BF15	35845	RB	10% Formalin	05/03/2008 1:23:45
075	BF15	35847	NN	95% Ethanol	05/03/2008 1:58:07
075	BF15	35846	LB	95% Ethanol	05/03/2008 1:23:45
076	BF16	35848	NN	95% Ethanol	05/03/2008 4:42:57
077	BF17	35849	RB	10% Formalin	05/03/2008 8:55:20
077	BF17	35851	NN	95% Ethanol	05/03/2008 9:16:21
077	BF17	35850	LB	95% Ethanol	05/03/2008 8:55:20
078	BF18	35852	NN	95% Ethanol	05/03/2008 12:19:12
079	BF19	35854	LB	95% Ethanol	05/03/2008 14:19:50
079	BF19	35853	RB	10% Formalin	05/03/2008 14:19:50
079	BF19	35855	NN	95% Ethanol	05/03/2008 14:54:09
080	BF20	35856	NN	95% Ethanol	05/03/2008 16:58:34
081	BF21	35857	NN	10% Formalin	05/03/2008 18:50:43
082	BF22	35858	NN	10% Formalin	05/03/2008 20:51:35
083	BF23	35859	RB	10% Formalin	05/03/2008 23:14:07
083	BF23	35861	NN	95% Ethanol	05/04/2008 3:16:07
083	BF23	35860	LB	95% Ethanol	05/03/2008 23:14:07
084	BF24	35862	NN	95% Ethanol	05/04/2008 6:09:15
085	BF25	35863	NN	95% Ethanol	05/04/2008 7:22:56
086	BF26	35864	NN	95% Ethanol	05/04/2008 8:43:00
087	BF27	35865	RB	10% Formalin	05/04/2008 10:04:09
087	BF27	35867	NN	95% Ethanol	05/04/2008 10:26:50
087	BF27	35866	LB	95% Ethanol	05/04/2008 10:04:09
088	BF28	35868	NN	95% Ethanol	05/04/2008 11:44:20
089	BF29	35870	LB	95% Ethanol	05/04/2008 13:03:42
089	BF29	35869	RB	10% Formalin	05/04/2008 13:03:42
089	BF29	35871	NN	95% Ethanol	05/04/2008 13:30:54
090	BF30	35872	NN	95% Ethanol	05/04/2008 14:56:25
091	BF31	35873	RB	10% Formalin	05/04/2008 16:55:20
091	BF31	35875	NN	95% Ethanol	05/04/2008 17:18:23
091	BF31	35874	LB	95% Ethanol	05/04/2008 16:55:20

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
092	BF32	35876	NN	95% Ethanol	05/04/2008 19:55:32
093	BF33	35877	RB	10% Formalin	05/04/2008 21:07:47
093	BF33	35879	NN	95% Ethanol	05/04/2008 21:29:00
093	BF33	35878	LB	95% Ethanol	05/04/2008 21:07:47
094	BF34	35882	NN	95% Ethanol	05/04/2008 23:44:45
094	BF34	35881	LB	95% Ethanol	05/04/2008 23:19:46
094	BF34	35880	RB	10% Formalin	05/04/2008 23:19:46
095	BF35	35883	NN	95% Ethanol	05/05/2008 1:24:35
096	BF36	35884	NN	95% Ethanol	05/05/2008 3:01:13
097	BF37	35885	RB	10% Formalin	05/05/2008 5:04:25
097	BF37	35887	NN	95% Ethanol	05/05/2008 5:23:59
097	BF37	35886	LB	95% Ethanol	05/05/2008 5:04:25
098	BF38	35888	NN	95% Ethanol	05/05/2008 7:10:17
099	BF39	35889	RB	10% Formalin	05/05/2008 8:24:47
099	BF39	35891	NN	95% Ethanol	05/05/2008 8:44:16
099	BF39	35890	LB	95% Ethanol	05/05/2008 8:24:47
100	BF40	35892	NN	95% Ethanol	05/05/2008 10:26:40
101	BF41	35893	NN	95% Ethanol	05/05/2008 11:39:28
102	BF42	35894	NN	95% Ethanol	05/05/2008 13:28:45
103	BF43	35896	LB	95% Ethanol	05/05/2008 14:52:09
103	BF43	35895	RB	10% Formalin	05/05/2008 14:52:09
103	BF43	35897	NN	95% Ethanol	05/05/2008 15:09:54
104	BF44	35898	NN	95% Ethanol	05/05/2008 17:23:36
105	BF45	35899	RB	10% Formalin	05/05/2008 18:39:26
105	BF45	35901	NN	95% Ethanol	05/05/2008 18:59:36
105	BF45	35900	LB	95% Ethanol	05/05/2008 18:39:26
106	BF46	35902	NN	95% Ethanol	05/05/2008 22:14:23
107	BF47	35903	NN	95% Ethanol	05/06/2008 5:42:50
108	BF48	35904	NN	95% Ethanol	05/06/2008 8:15:10
109	BF49	35905	NN	95% Ethanol	05/06/2008 11:02:47
110	BF50	35906	NN	95% Ethanol	05/06/2008 13:14:57
111	BF51	35907	NN	95% Ethanol	05/06/2008 15:30:31
112	BF52	35908	NN	95% Ethanol	05/06/2008 17:35:16
113	BF53	35909	NN	95% Ethanol	05/06/2008 19:31:57
114	BF54	35910	NN	95% Ethanol	05/06/2008 21:33:37
115	BF55	35911	NN	95% Ethanol	05/06/2008 23:08:32
116	BF56	35912	NN	95% Ethanol	05/07/2008 0:40:45

Table 8 continued.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
117	BF57	35913	NN	95% Ethanol	05/07/2008 2:26:01
118	BF58	35914	NN	95% Ethanol	05/07/2008 4:18:55
119	BF59	35915	NN	95% Ethanol	05/07/2008 6:16:54
120	BF60	35916	NN	95% Ethanol	05/07/2008 8:11:05
121	BF61	35917	NN	95% Ethanol	05/07/2008 10:02:49
122	BF62	35918	NN	95% Ethanol	05/07/2008 11:56:18
123	BF63	35919	NN	95% Ethanol	05/07/2008 14:06:27
124	BF64	35920	NN	95% Ethanol	05/07/2008 16:22:24
125	BF65	35921	NN	95% Ethanol	05/07/2008 18:40:52
126	BF66	35922	NN	95% Ethanol	05/07/2008 20:17:16
127	BF67	35923	NN	95% Ethanol	05/07/2008 21:48:27
128	BF68	35924	NN	95% Ethanol	05/07/2008 23:22:48
129	BF69	35925	NN	95% Ethanol	05/08/2008 0:58:01
130	BF70	35926	NN	95% Ethanol	05/08/2008 2:51:12

Table 9. Summary of plankton sampling effort during the Spring SEAMAP Ichthyoplankton Survey conducted from the NOAA Ship *Gordon Gunter*, cruise GU-08-02 (48), Leg 2, 11 - 30 May 2008. P-Sta.# = Pascagoula station number; S-Sta.# = SEAMAP station number; Smp.# = SEAMAP sample number; RB = Right Bongo; LB = Left Bongo; NN = Neuston; Pres. = Initial preservative; Form = Formalin; ETOH = Ethyl alcohol.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
131	B172	35927	NN	95% Ethanol	05/12/2008 6:06:23
132	B169	35928	NN	95% Ethanol	05/12/2008 10:44:08
133	B165	35929	RB	10% Formalin	05/12/2008 14:53:02
133	B165	35931	NN	95% Ethanol	05/12/2008 15:19:02
133	B165	35930	LB	95% Ethanol	05/12/2008 14:53:02
134	B160	35932	NN	95% Ethanol	05/12/2008 20:26:27
135	B153	35934	LB	95% Ethanol	05/13/2008 2:13:25
135	B153	35933	RB	10% Formalin	05/13/2008 2:13:25
135	B153	35935	NN	95% Ethanol	05/13/2008 2:42:28
136	B152	35936	NN	95% Ethanol	05/13/2008 6:34:47
137	B151	35939	NN	95% Ethanol	05/13/2008 10:44:30
137	B151	35938	LB	95% Ethanol	05/13/2008 10:12:44
137	B151	35937	RB	10% Formalin	05/13/2008 10:12:44
138	B150	35940	NN	95% Ethanol	05/13/2008 14:20:51
139	B149	35941	RB	10% Formalin	05/13/2008 17:37:54
139	B149	35943	NN	95% Ethanol	05/13/2008 18:12:21
139	B149	35942	LB	95% Ethanol	05/13/2008 17:37:54
140	B147	35944	NN	95% Ethanol	05/13/2008 21:35:23
141	B131	35945	RB	10% Formalin	05/14/2008 0:52:55
141	B131	35947	NN	95% Ethanol	05/14/2008 1:12:45
141	B131	35946	LB	95% Ethanol	05/14/2008 0:52:55
142	B130	35948	NN	95% Ethanol	05/14/2008 4:48:34
143	B129	35950	LB	95% Ethanol	05/14/2008 8:24:46
143	B129	35949	RB	10% Formalin	05/14/2008 8:24:46
143	B129	35951	NN	95% Ethanol	05/14/2008 8:45:33
144	B128	35952	NN	95% Ethanol	05/14/2008 12:46:20
145	B125	35953	RB	10% Formalin	05/14/2008 16:26:33
145	B125	35955	NN	95% Ethanol	05/14/2008 16:49:22
145	B125	35954	LB	95% Ethanol	05/14/2008 16:26:33
146	B126	35956	RB	10% Formalin	05/14/2008 20:42:11
146	B126	35958	NN	95% Ethanol	05/14/2008 21:27:37
146	B126	35957	LB	95% Ethanol	05/14/2008 20:42:11
147	B127	35961	NN	95% Ethanol	05/15/2008 1:53:10
147	B127	35959	RB	10% Formalin	05/15/2008 1:27:08

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
147	B127	35960	LB	95% Ethanol	05/15/2008 1:27:08
148	B263	35964	NN	95% Ethanol	05/15/2008 7:23:29
148	B263	35963	LB	95% Ethanol	05/15/2008 7:00:00
148	B263	35962	RB	10% Formalin	05/15/2008 7:00:00
149	B262	35966	LB	95% Ethanol	05/15/2008 11:18:15
149	B262	35965	RB	10% Formalin	05/15/2008 11:18:15
149	B262	35967	NN	95% Ethanol	05/15/2008 11:40:25
150	B007	35969	LB	95% Ethanol	05/15/2008 15:31:12
150	B007	35968	RB	10% Formalin	05/15/2008 15:31:12
150	B007	35970	NN	95% Ethanol	05/15/2008 15:55:29
151	B072	35971	NN	95% Ethanol	05/15/2008 20:05:15
152	B266	35973	LB	95% Ethanol	05/15/2008 23:47:19
152	B266	35972	RB	10% Formalin	05/15/2008 23:47:19
152	B266	35974	NN	95% Ethanol	05/16/2008 0:22:40
153	B261	35975	NN	95% Ethanol	05/16/2008 4:17:48
154	B008	35978	NN	95% Ethanol	05/16/2008 7:46:00
154	B008	35977	LB	95% Ethanol	05/16/2008 7:18:18
154	B008	35976	RB	10% Formalin	05/16/2008 7:18:18
155	B074	35979	NN	95% Ethanol	05/16/2008 12:36:42
156	B270	35980	NN	95% Ethanol	05/16/2008 15:26:39
157	B006	35982	LB	95% Ethanol	05/16/2008 20:18:39
157	B006	35981	RB	10% Formalin	05/16/2008 20:18:39
157	B006	35983	NN	95% Ethanol	05/16/2008 20:42:27
158	B077	35984	NN	95% Ethanol	05/17/2008 0:55:08
159	B005	35986	LB	95% Ethanol	05/17/2008 5:22:11
159	B005	35985	RB	10% Formalin	05/17/2008 5:22:11
159	B005	35987	NN	95% Ethanol	05/17/2008 5:59:28
160	B078	35988	NN	95% Ethanol	05/17/2008 10:10:23
161	B163	35991	NN	95% Ethanol	05/17/2008 14:13:08
161	B163	35990	LB	95% Ethanol	05/17/2008 13:50:36
161	B163	35989	RB	10% Formalin	05/17/2008 13:50:36
162	B164	35992	NN	95% Ethanol	05/17/2008 17:57:27
163	B002	35994	LB	95% Ethanol	05/18/2008 0:30:28
163	B002	35993	RB	10% Formalin	05/18/2008 0:30:28

Table 9 continued.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
163	B002	35995	NN	95% Ethanol	05/18/2008 0:53:20
164	B170	35996	NN	95% Ethanol	05/20/2008 3:30:36
165	B080	35997	NN	95% Ethanol	05/20/2008 8:11:51
166	B003	35999	LB	95% Ethanol	05/20/2008 11:55:31
166	B003	35998	RB	10% Formalin	05/20/2008 11:55:31
166	B003	36000	NN	95% Ethanol	05/20/2008 12:17:00
167	B079	36001	NN	10% Formalin	05/20/2008 15:56:03
168	B004	36002	RB	10% Formalin	05/20/2008 19:48:11
168	B004	36003	LB	95% Ethanol	05/20/2008 19:48:11
168	B004	36004	NN	95% Ethanol	05/20/2008 20:17:44
169	B076	36005	NN	95% Ethanol	05/21/2008 0:06:49
170	B009	36007	LB	95% Ethanol	05/21/2008 2:08:34
170	B009	36006	RB	10% Formalin	05/21/2008 2:08:34
170	B009	36008	NN	95% Ethanol	05/21/2008 2:34:53
171	B273	36009	NN	95% Ethanol	05/21/2008 6:44:51
172	B010	36011	LB	95% Ethanol	05/21/2008 10:11:16
172	B010	36010	RB	10% Formalin	05/21/2008 10:11:16
172	B010	36012	NN	95% Ethanol	05/21/2008 10:31:26
173	B066	36013	NN	95% Ethanol	05/21/2008 13:31:42
174	B011	36015	LB	95% Ethanol	05/21/2008 17:01:09
174	B011	36016	NN	95% Ethanol	05/21/2008 17:21:07
174	B011	36014	RB	10% Formalin	05/21/2008 17:01:09
175	B288	36017	NN	95% Ethanol	05/21/2008 20:33:47
176	B012	36019	LB	95% Ethanol	05/22/2008 0:24:24
176	B012	36018	RB	10% Formalin	05/22/2008 0:24:24
176	B012	36020	NN	95% Ethanol	05/22/2008 0:48:29
177	B063	36021	NN	95% Ethanol	05/22/2008 4:31:32
178	B013	36023	LB	95% Ethanol	05/22/2008 7:58:35
178	B013	36022	RB	10% Formalin	05/22/2008 7:58:35
178	B013	36024	NN	95% Ethanol	05/22/2008 8:23:09
179	B291	36025	NN	95% Ethanol	05/22/2008 11:41:10
180	B014	36026	RB	10% Formalin	05/22/2008 14:46:39
180	B014	36028	NN	95% Ethanol	05/22/2008 15:12:14
180	B014	36027	LB	95% Ethanol	05/22/2008 14:46:39
181	B062	36029	NN	95% Ethanol	05/22/2008 19:36:54
182	B015	36031	LB	95% Ethanol	05/22/2008 23:36:03
182	B015	36030	RB	10% Formalin	05/22/2008 23:36:03

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
182	B015	36032	NN	95% Ethanol	05/23/2008 0:09:45
183	B296	36033	NN	95% Ethanol	05/23/2008 4:06:12
184	B018	36035	LB	95% Ethanol	05/23/2008 7:50:04
184	B018	36034	RB	10% Formalin	05/23/2008 7:50:04
184	B018	36036	NN	95% Ethanol	05/23/2008 8:13:53
185	B059	36037	NN	95% Ethanol	05/23/2008 12:42:18
186	B019	36040	NN	95% Ethanol	05/23/2008 17:56:09
186	B019	36039	LB	95% Ethanol	05/23/2008 17:34:17
186	B019	36038	RB	10% Formalin	05/23/2008 17:34:17
187	B299	36041	NN	95% Ethanol	05/23/2008 21:16:39
188	B020	36042	RB	10% Formalin	05/24/2008 0:39:17
188	B020	36044	NN	95% Ethanol	05/24/2008 1:06:24
188	B020	36043	LB	95% Ethanol	05/24/2008 0:39:17
189	B058	36045	NN	95% Ethanol	05/24/2008 5:06:59
190	B021	36047	LB	95% Ethanol	05/24/2008 8:48:01
190	B021	36046	RB	10% Formalin	05/24/2008 8:48:01
190	B021	36048	NN	95% Ethanol	05/24/2008 9:14:09
191	B304	36049	NN	95% Ethanol	05/24/2008 12:35:37
192	B024	36051	LB	95% Ethanol	05/24/2008 15:50:30
192	B024	36050	RB	10% Formalin	05/24/2008 15:50:30
192	B024	36052	NN	95% Ethanol	05/24/2008 16:11:55
193	B055	36053	NN	95% Ethanol	05/24/2008 19:57:33
194	B025	36056	NN	95% Ethanol	05/24/2008 22:32:57
194	B025	36055	LB	95% Ethanol	05/24/2008 22:00:07
194	B025	36054	RB	10% Formalin	05/24/2008 22:00:07
195	B307	36057	NN	95% Ethanol	05/25/2008 3:16:30
196	B026	36059	LB	95% Ethanol	05/25/2008 6:49:57
196	B026	36058	RB	10% Formalin	05/25/2008 6:49:57
196	B026	36060	NN	95% Ethanol	05/25/2008 7:22:05
197	B054	36061	NN	95% Ethanol	05/25/2008 11:06:02
198	B027	36063	LB	95% Ethanol	05/25/2008 15:33:20
198	B027	36062	RB	10% Formalin	05/25/2008 15:33:20
198	B027	36064	NN	95% Ethanol	05/25/2008 15:54:42
199	B312	36065	NN	95% Ethanol	05/25/2008 18:50:36
200	B028	36066	RB	10% Formalin	05/25/2008 22:14:49
200	B028	36068	NN	10% Formalin	05/25/2008 22:37:05
200	B028	36067	LB	95% Ethanol	05/25/2008 22:14:49

Table 9 continued.

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
201	B052	36069	NN	95% Ethanol	05/26/2008 2:35:40
202	B029	36071	LB	95% Ethanol	05/26/2008 6:05:49
202	B029	36070	RB	10% Formalin	05/26/2008 6:05:49
202	B029	36072	NN	95% Ethanol	05/26/2008 6:29:59
203	B313	36073	NN	95% Ethanol	05/26/2008 9:50:14
204	B030	36075	LB	95% Ethanol	05/26/2008 13:25:09
204	B030	36074	RB	10% Formalin	05/26/2008 13:25:09
204	B030	36076	NN	95% Ethanol	05/26/2008 13:47:57
205	B240	36077	NN	95% Ethanol	05/26/2008 17:20:07
206	B031	36080	NN	95% Ethanol	05/26/2008 21:21:02
206	B031	36079	LB	95% Ethanol	05/26/2008 21:53:44
206	B031	36078	RB	10% Formalin	05/26/2008 21:53:44
207	B232	36081	NN	95% Ethanol	05/27/2008 1:44:41
208	B231	36082	RB	10% Formalin	05/27/2008 5:44:25
208	B231	36084	NN	95% Ethanol	05/27/2008 6:00:09
208	B231	36083	LB	95% Ethanol	05/27/2008 5:44:25
209	B226	36085	NN	95% Ethanol	05/27/2008 9:46:58
210	B223	36087	LB	95% Ethanol	05/27/2008 13:21:47
210	B223	36086	RB	10% Formalin	05/27/2008 13:21:47
210	B223	36088	NN	95% Ethanol	05/27/2008 13:47:44
211	B217	36089	NN	95% Ethanol	05/27/2008 16:55:42
212	B216	36091	LB	95% Ethanol	05/27/2008 19:55:35
212	B216	36090	RB	10% Formalin	05/27/2008 19:55:35
212	B216	36092	NN	95% Ethanol	05/27/2008 20:07:55
213	B209	36093	NN	95% Ethanol	05/27/2008 23:34:21
214	B023	36096	NN	95% Ethanol	05/28/2008 3:20:04
214	B023	36094	RB	10% Formalin	05/28/2008 3:00:34
214	B023	36095	LB	95% Ethanol	05/28/2008 3:00:34
215	B202	36097	NN	95% Ethanol	05/28/2008 6:47:37
216	B022	36098	RB	10% Formalin	05/28/2008 10:19:18
216	B022	36100	NN	95% Ethanol	05/28/2008 10:41:01
216	B022	36099	LB	95% Ethanol	05/28/2008 10:19:18
217	B195	36101	NN	95% Ethanol	05/28/2008 14:04:29
218	B017	36102	RB	10% Formalin	05/28/2008 17:22:19
218	B017	36104	NN	95% Ethanol	05/28/2008 17:39:05
218	B017	36103	LB	95% Ethanol	05/28/2008 17:22:19
219	B190	36105	NN	95% Ethanol	05/28/2008 21:14:04

P-Sta.#	S-Sta.#	Smp.#	Gear	Pres.	Date/Time (GMT)
220	B016	36108	NN	95% Ethanol	05/29/2008 1:08:27
220	B016	36107	LB	95% Ethanol	05/29/2008 0:40:25
220	B016	36106	RB	10% Formalin	05/29/2008 0:40:25
221	B185	36109	NN	95% Ethanol	05/29/2008 4:48:19
222	B083	36111	NN	95% Ethanol	05/29/2008 8:49:31
222	B083	36110	LB	95% Ethanol	05/29/2008 8:25:56
223	B250	36112	NN	95% Ethanol	05/29/2008 12:20:10
224	B082	36113	RB	10% Formalin	05/29/2008 15:48:47
224	B082	36115	NN	95% Ethanol	05/29/2008 16:14:48
224	B082	36114	LB	95% Ethanol	05/29/2008 15:48:47
225	B081	36116	NN	95% Ethanol	05/29/2008 20:05:39
226	B001	36117	RB	10% Formalin	05/30/2008 0:05:35
226	B001	36119	NN	95% Ethanol	05/30/2008 0:36:14
226	B001	36118	LB	95% Ethanol	05/30/2008 0:05:35
227	B176	36120	NN	95% Ethanol	05/30/2008 4:46:20

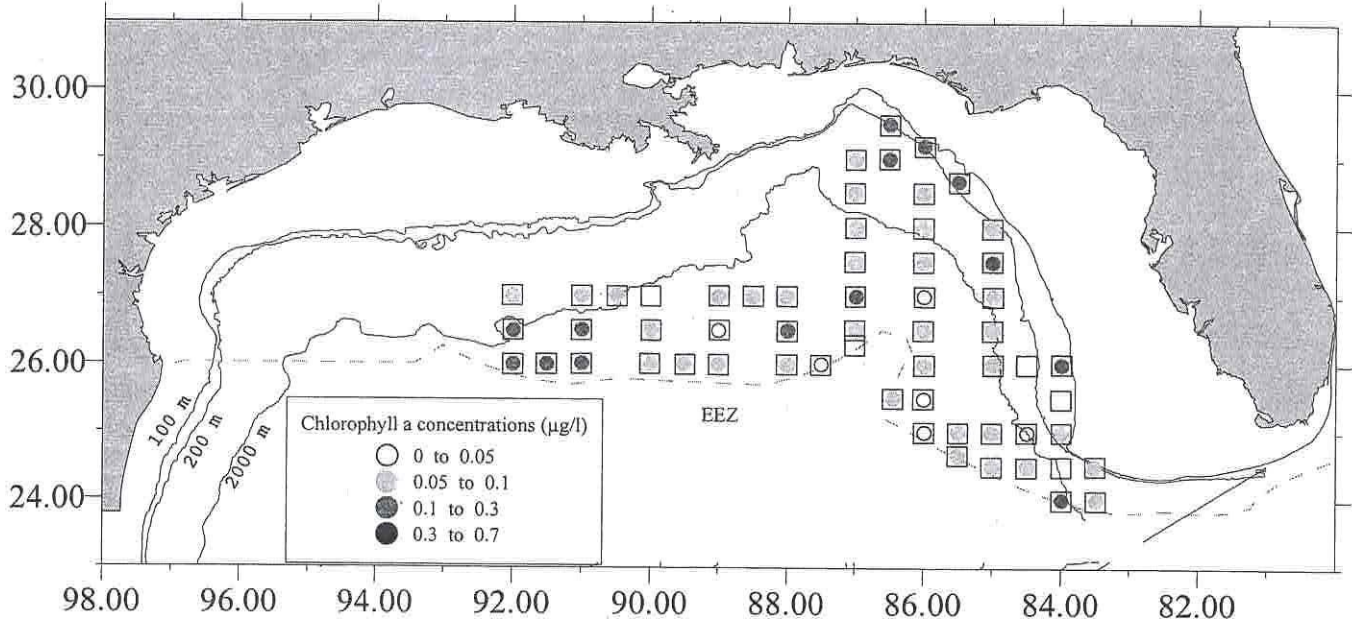
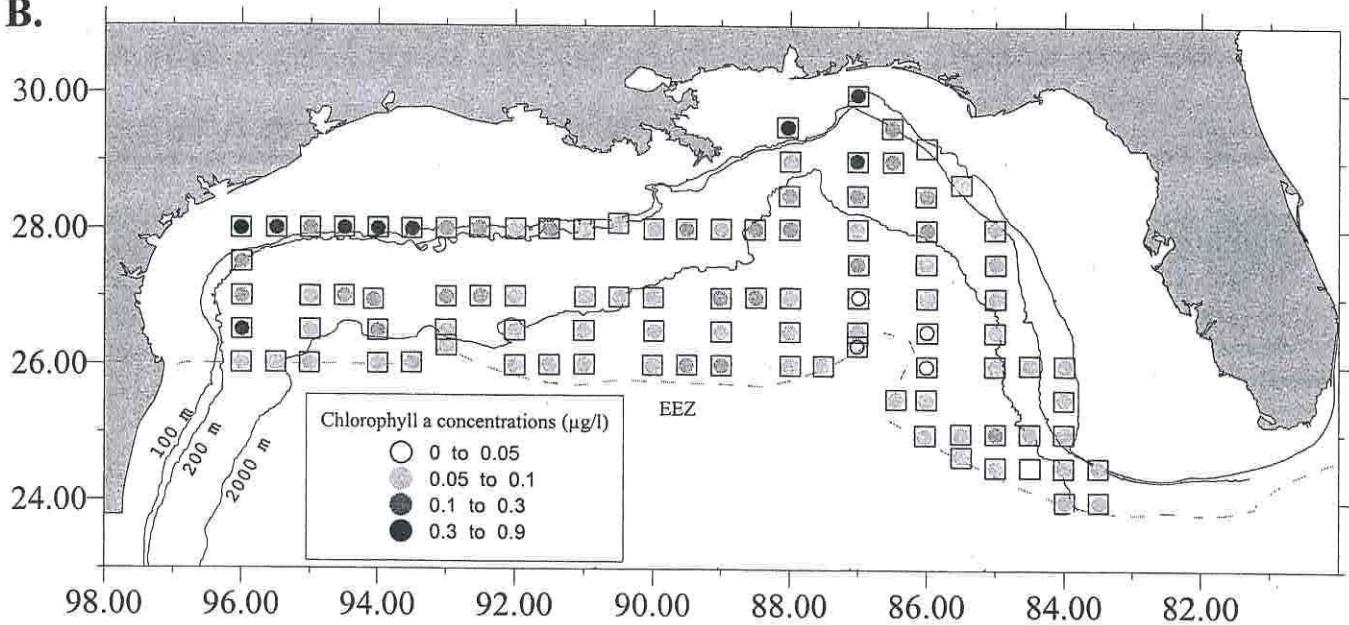
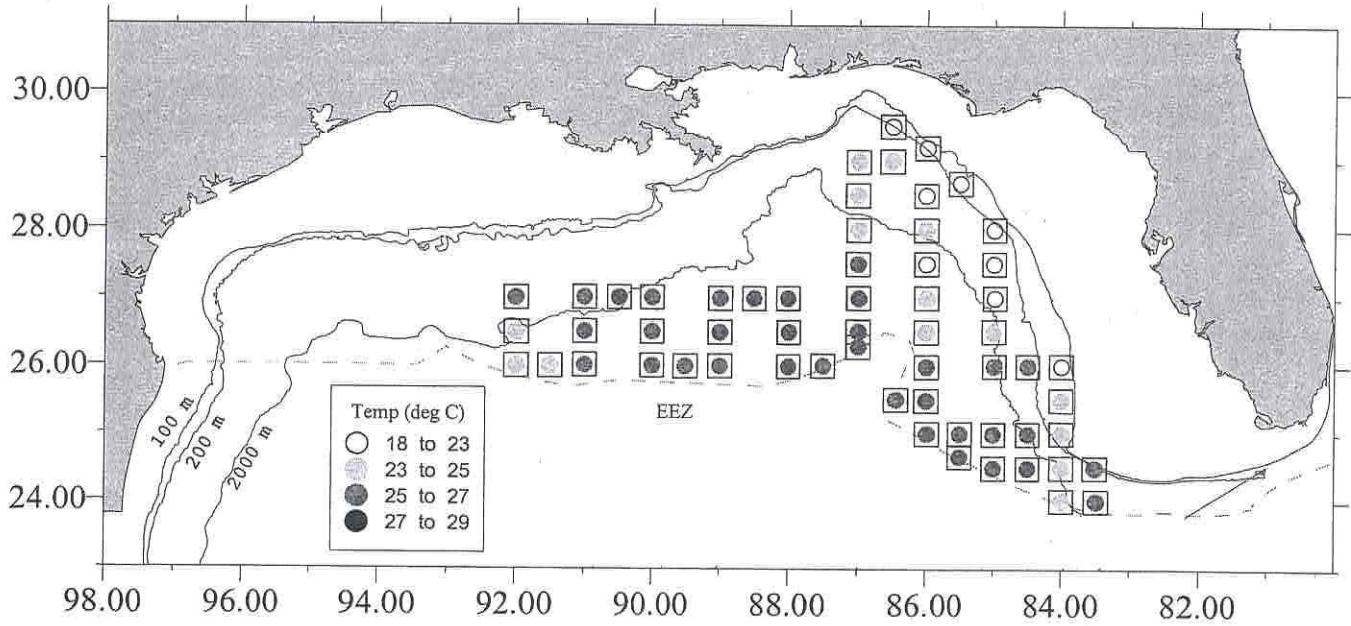
A.**B.**

Figure 2. Chlorophyll *a* concentrations ($\mu\text{g/l}$) near the surface (≤ 5 m depth) at SEAMAP plankton stations obtained during the 2008 SEAMAP Spring Plankton Survey aboard the NOAA Ship *Gordon Gunter* cruise GU-08-02 (48). Leg 1 data shown in plate A was collected during 19 April-8 May 2008. Leg 2 data shown in plate B was collected during 11-30 May 2007. Empty squares denote where CTD profile is available, but surface water samples were not retrieved.

A.



B.

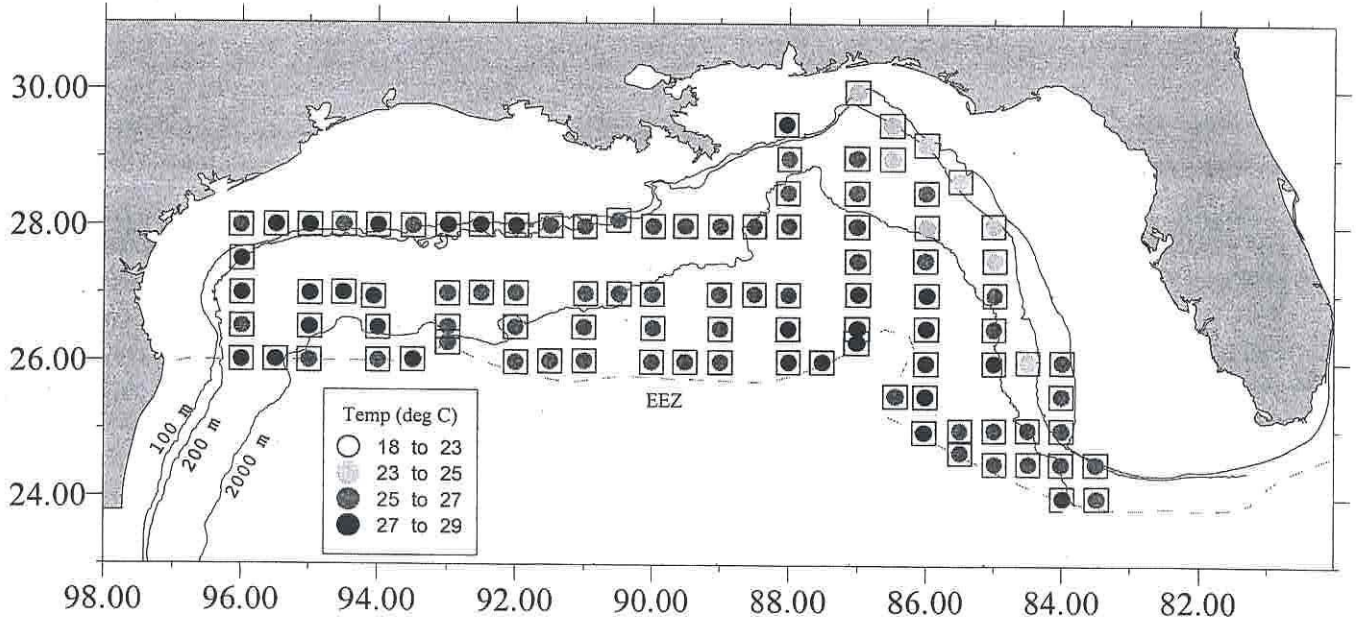


Figure 3. Sea temperature (°C) near the surface (≤ 5 m depth) at SEAMAP plankton stations obtained during the 2008 SEAMAP Spring Plankton Survey aboard the NOAA Ship *Gordon Gunter* cruise GU-08-02 (48). Leg 1 data shown in plate A was collected with a CTD during 19 April-8 May 2008. Leg 2 data shown in plate B was collected with a CTD during 11-30 May 2008.

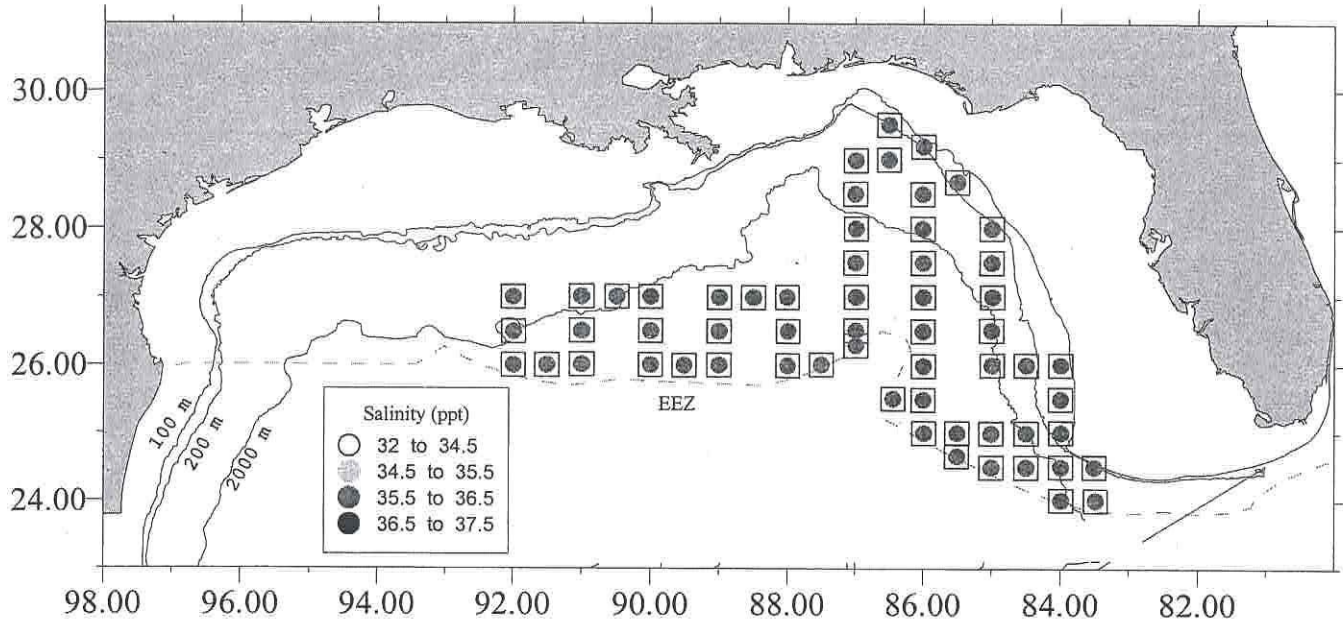
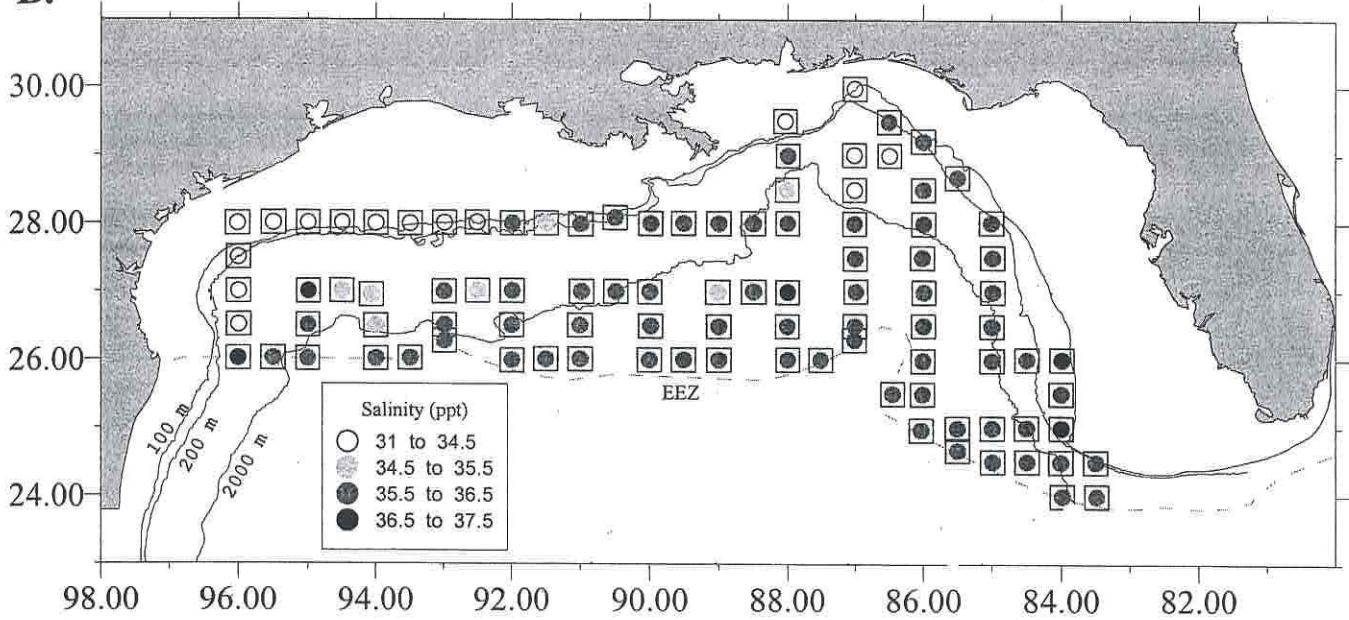
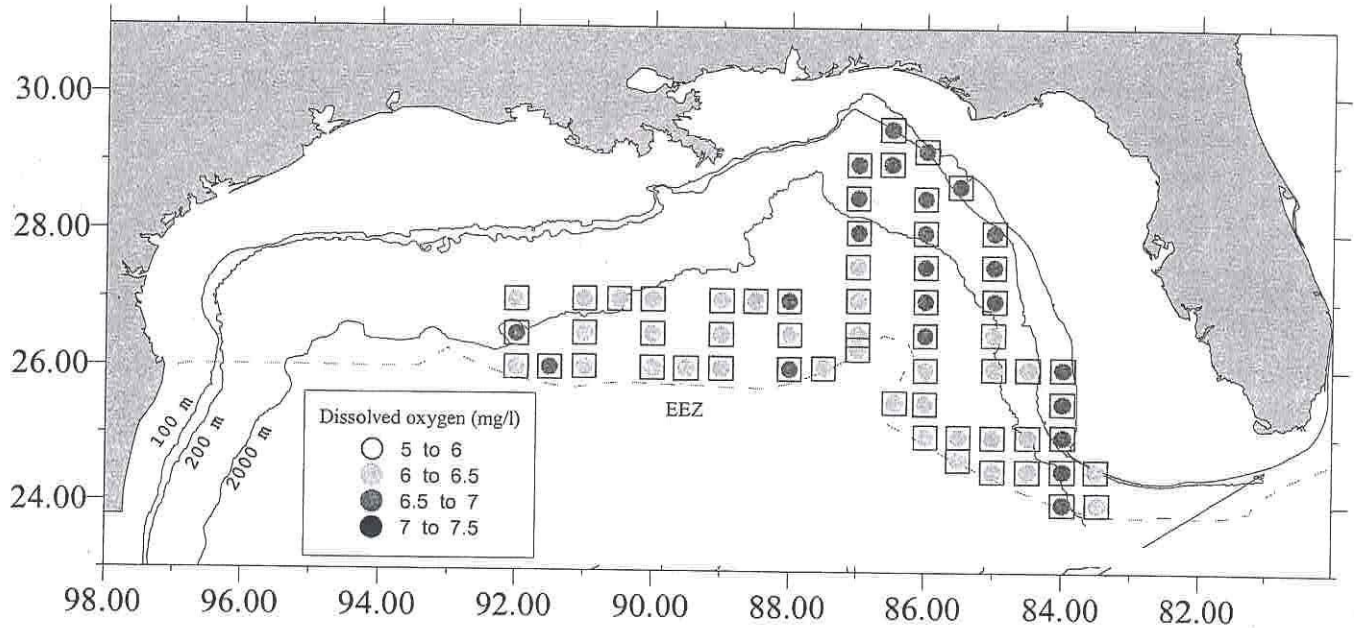
A.**B.**

Figure 4. Salinity (ppt) near the surface (≤ 5 m depth) at SEAMAP plankton stations obtained during the 2008 SEAMAP Spring Plankton Survey aboard the NOAA Ship *Gordon Gunter* cruise GU-08-02 (48). Leg 1 data shown in plate A was collected with a CTD during 19 April-8 May 2008. Leg 2 data shown in plate B was collected with a CTD during 11-30 May 2008.

A.



B.

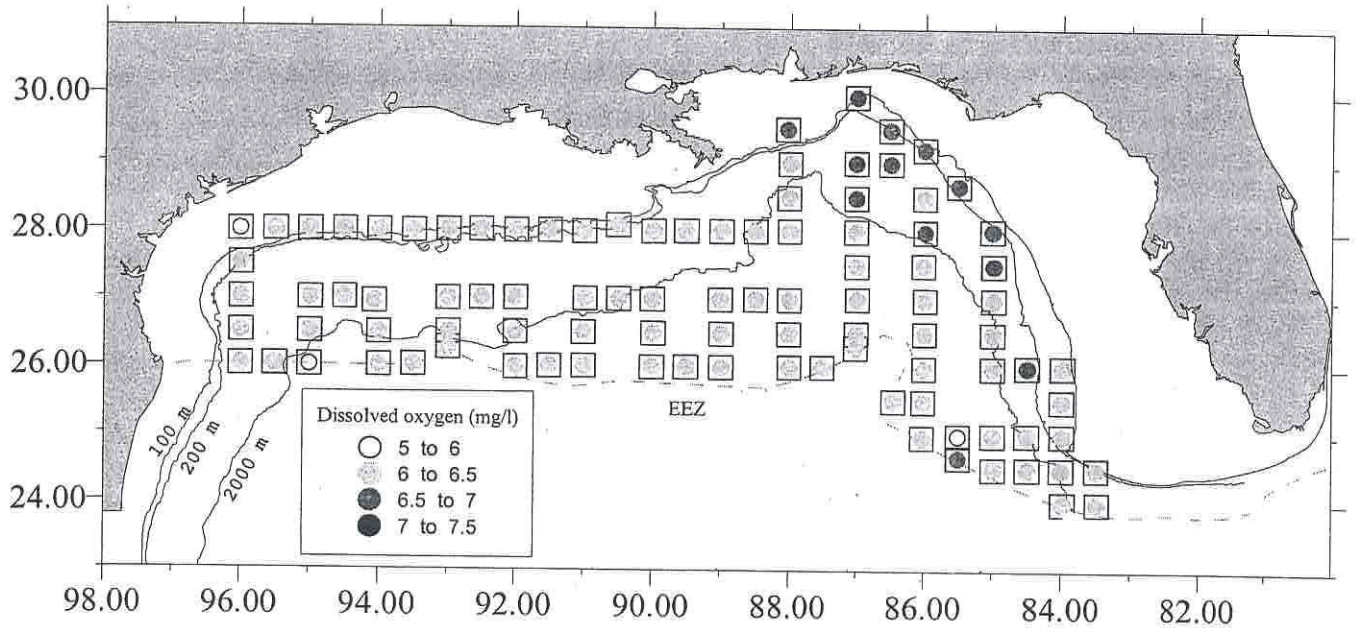


Figure 5. Dissolved oxygen (mg/l) near the surface (≤ 5 m depth) at SEAMAP plankton stations obtained during the 2008 SEAMAP Spring Plankton Survey aboard the NOAA Ship *Gordon Gunter* cruise GU-08-02 (48). Leg 1 data shown in plate A was collected with a CTD during 19 April-8 May 2008. Leg 2 data shown in plate B was collected with a CTD during 11-30 May 2008.

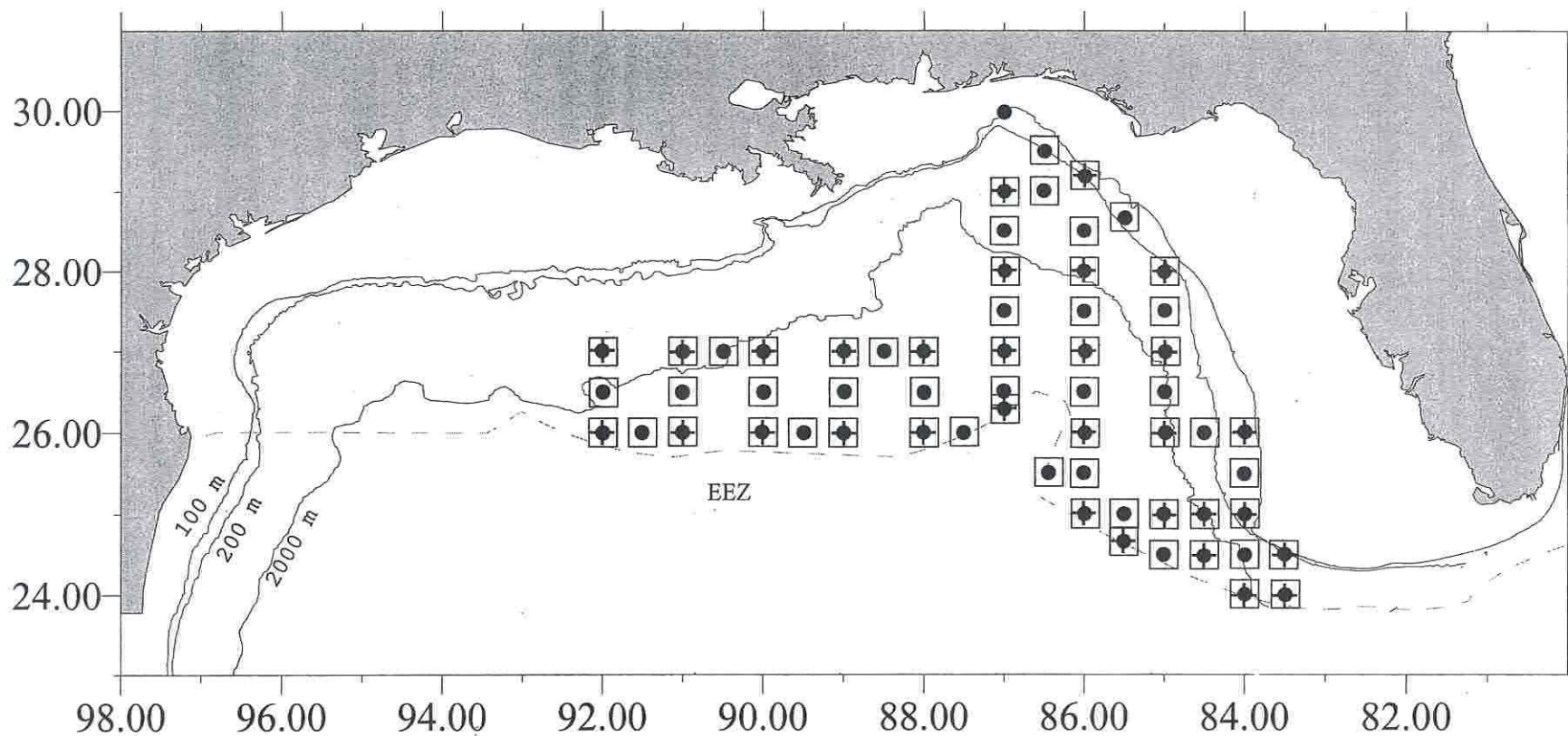


Figure 6. Stations occupied during Leg 1 of the 2008 SEAMAP Spring Plankton Survey. Dots represent completed neuston stations of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48), 19 April-8 May, 2008. The pluses represent stations where bongo tows were completed. Squares represent stations where an environmental profile was taken using the SBE 9/11 CTD.

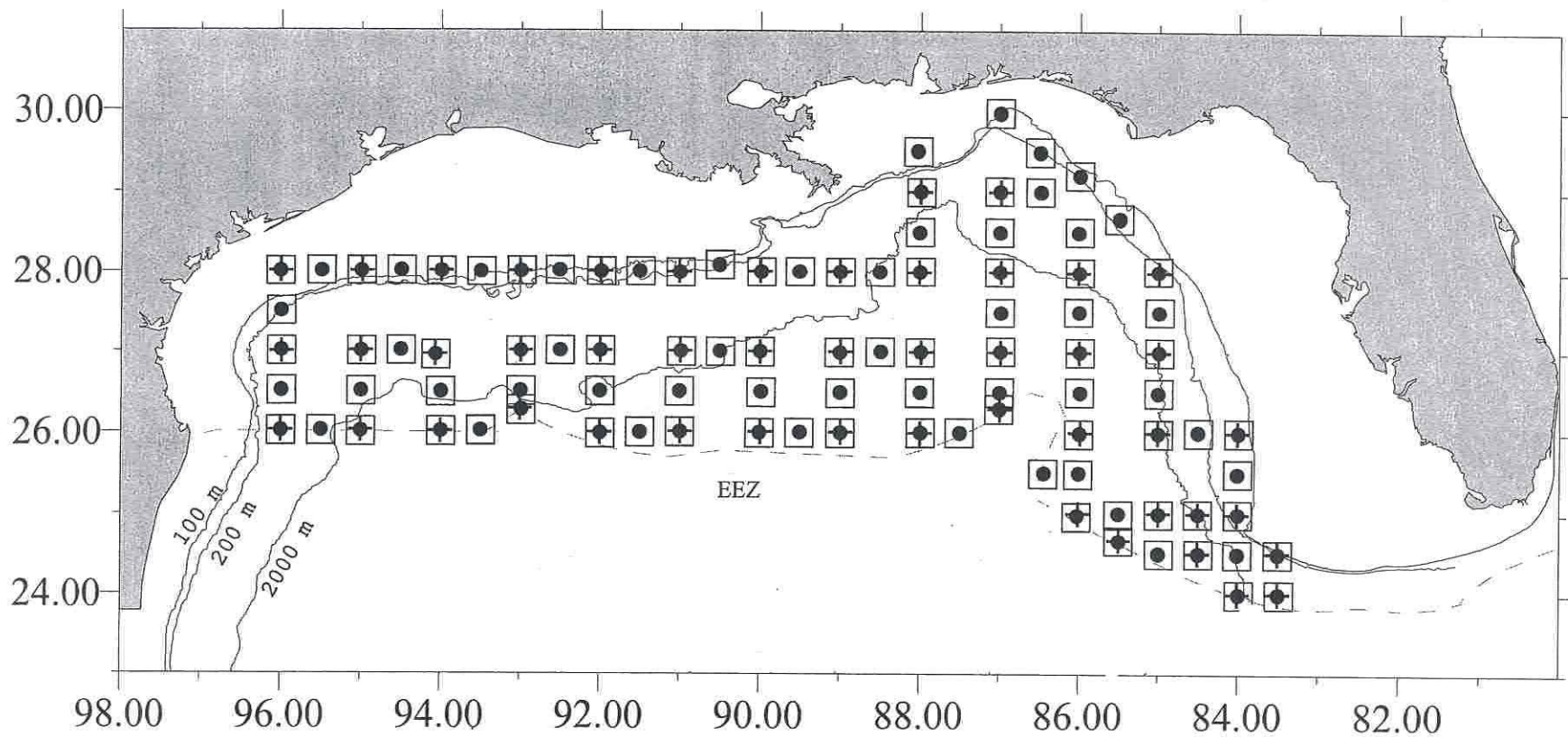


Figure 7. Stations occupied during Leg 2 of the 2008 SEAMAP Spring Ichthyoplankton Survey. Dots represent completed neuston stations of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48), May 11-30, 2008. The pluses represent stations where bongo tows were completed. Squares represent stations where an environmental profile was collected using the SBE 9/11 CTD.

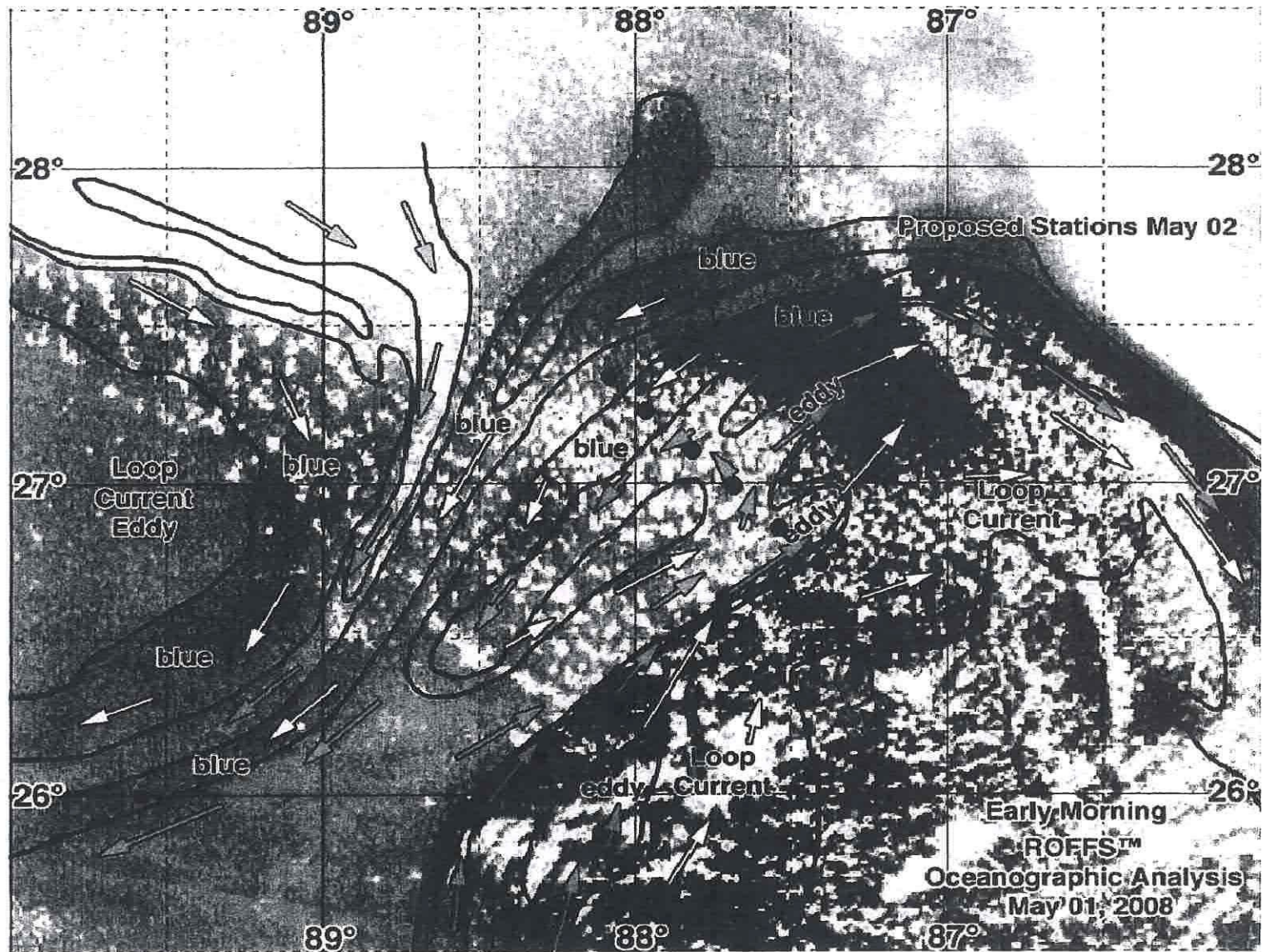


Figure 8. Transect stations (dark purple dots) occupied on 01 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image.

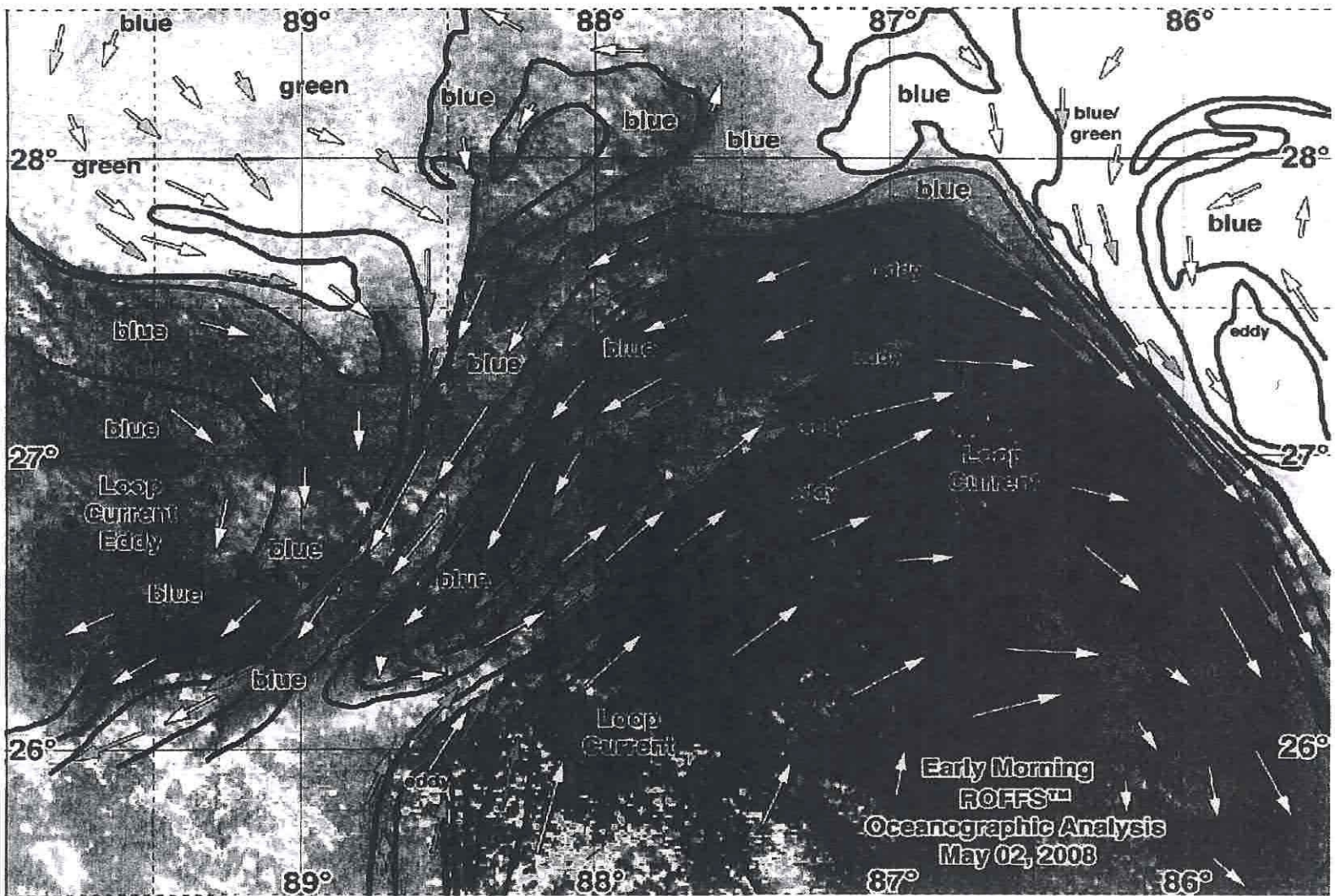


Figure 9. Transect stations (dark purple dots) occupied on 02 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image.

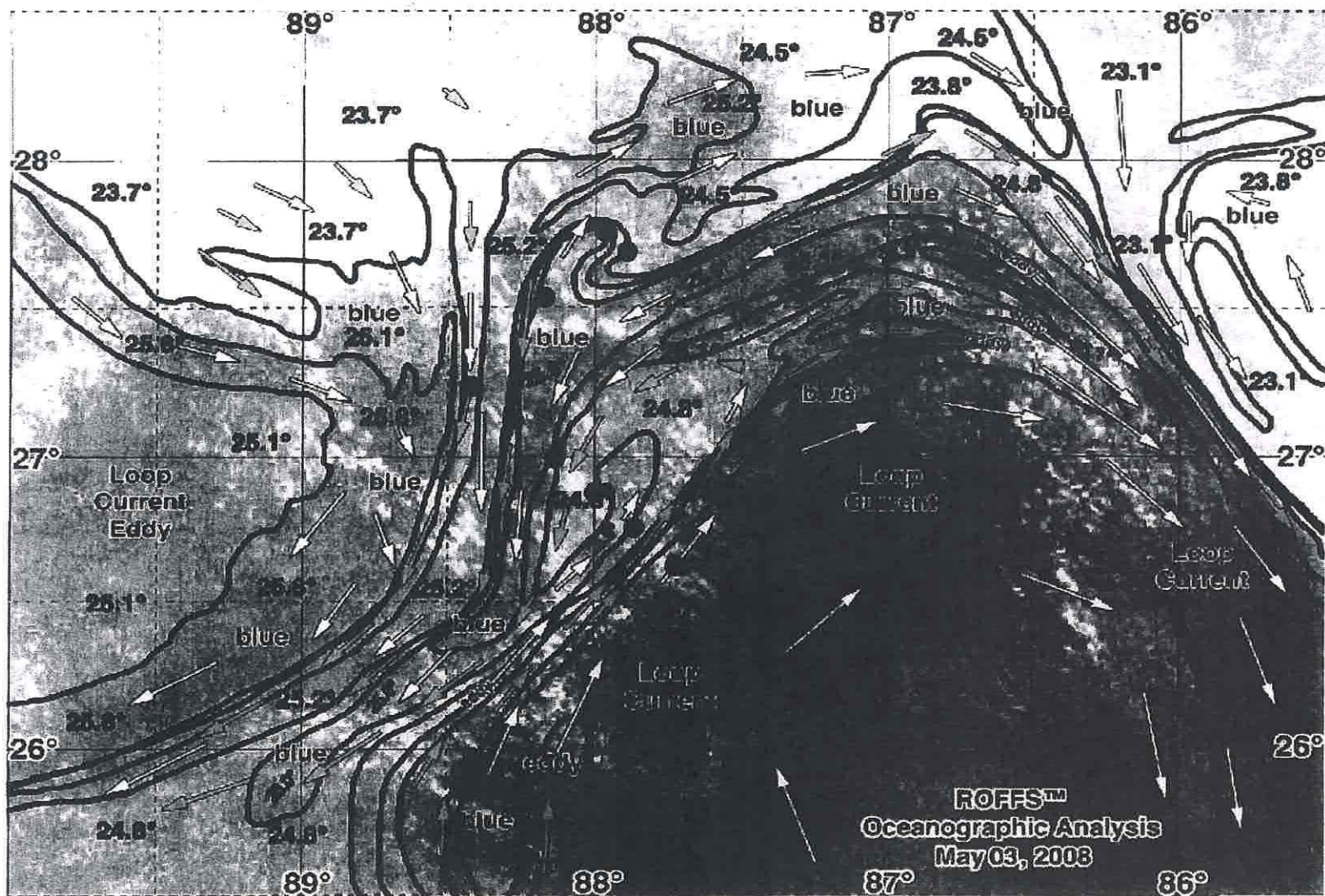


Figure 10. Transect stations (dark purple dots) occupied on 03 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image.

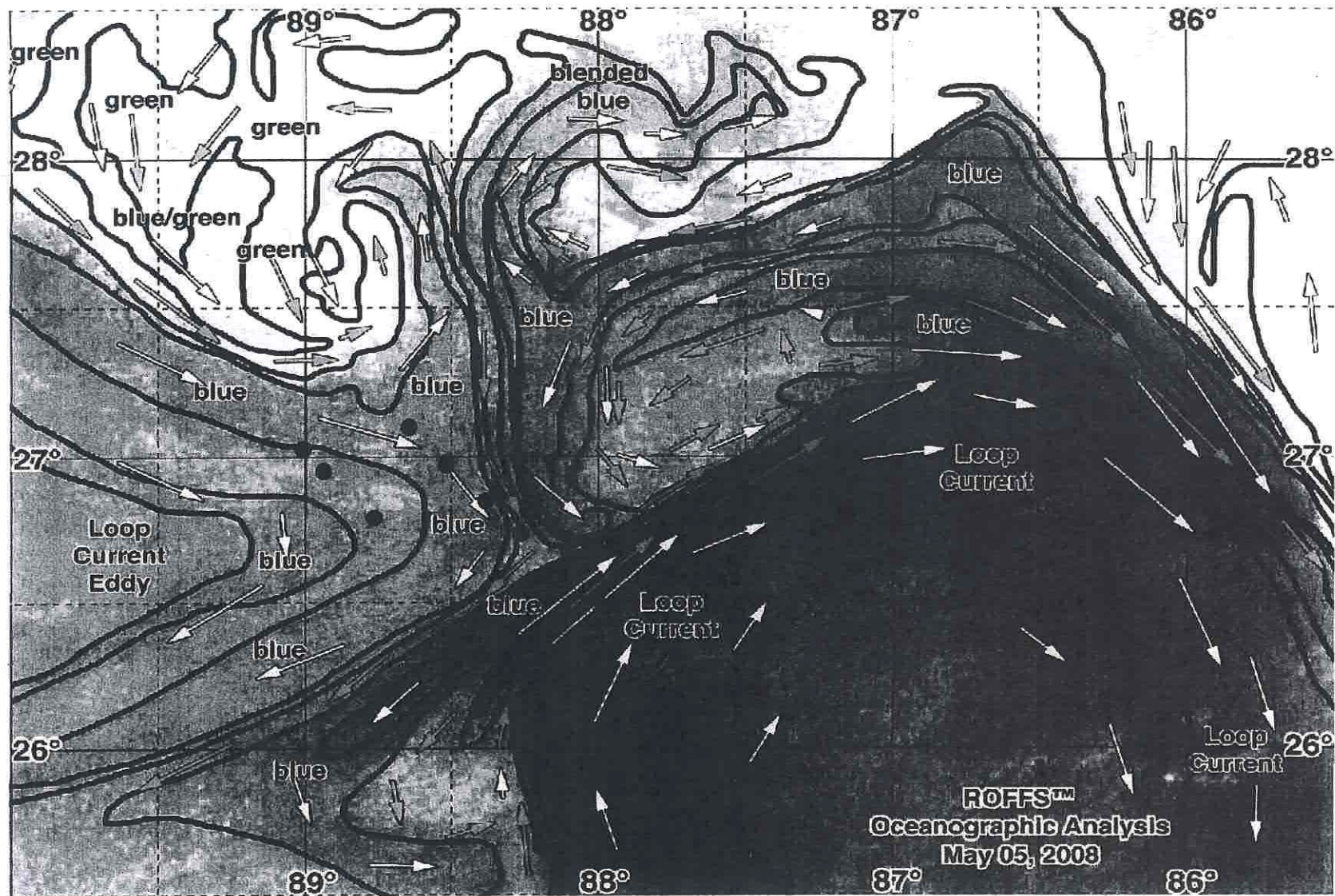


Figure 11. Transect stations (dark purple dots) occupied on 04 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48). Stations were plotted on early morning 05 May 2008 satellite imagery due to not receiving 04 May 2008 sea surface temperature satellite image.

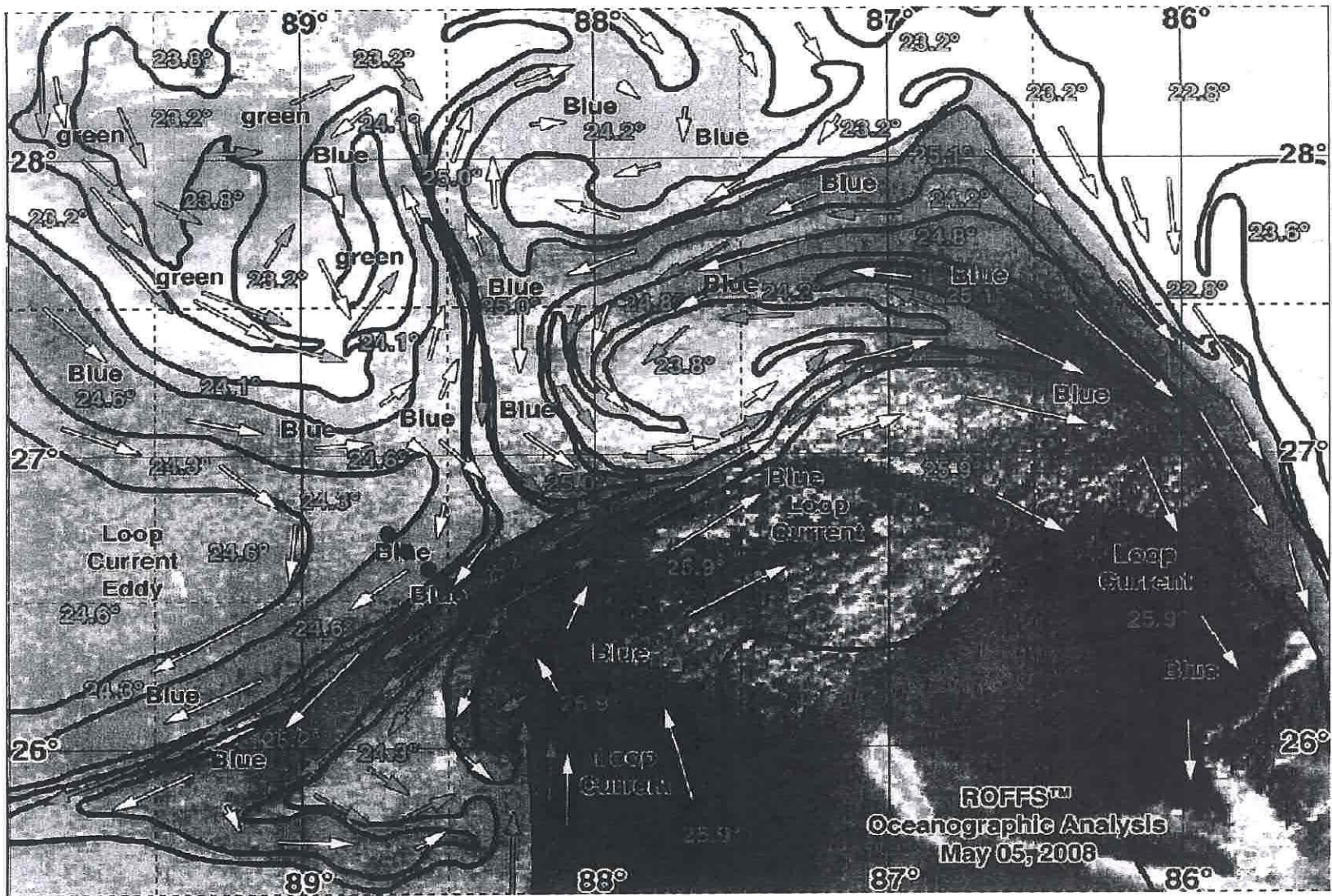


Figure 12. Transect stations (dark purple dots) occupied on 05 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image.

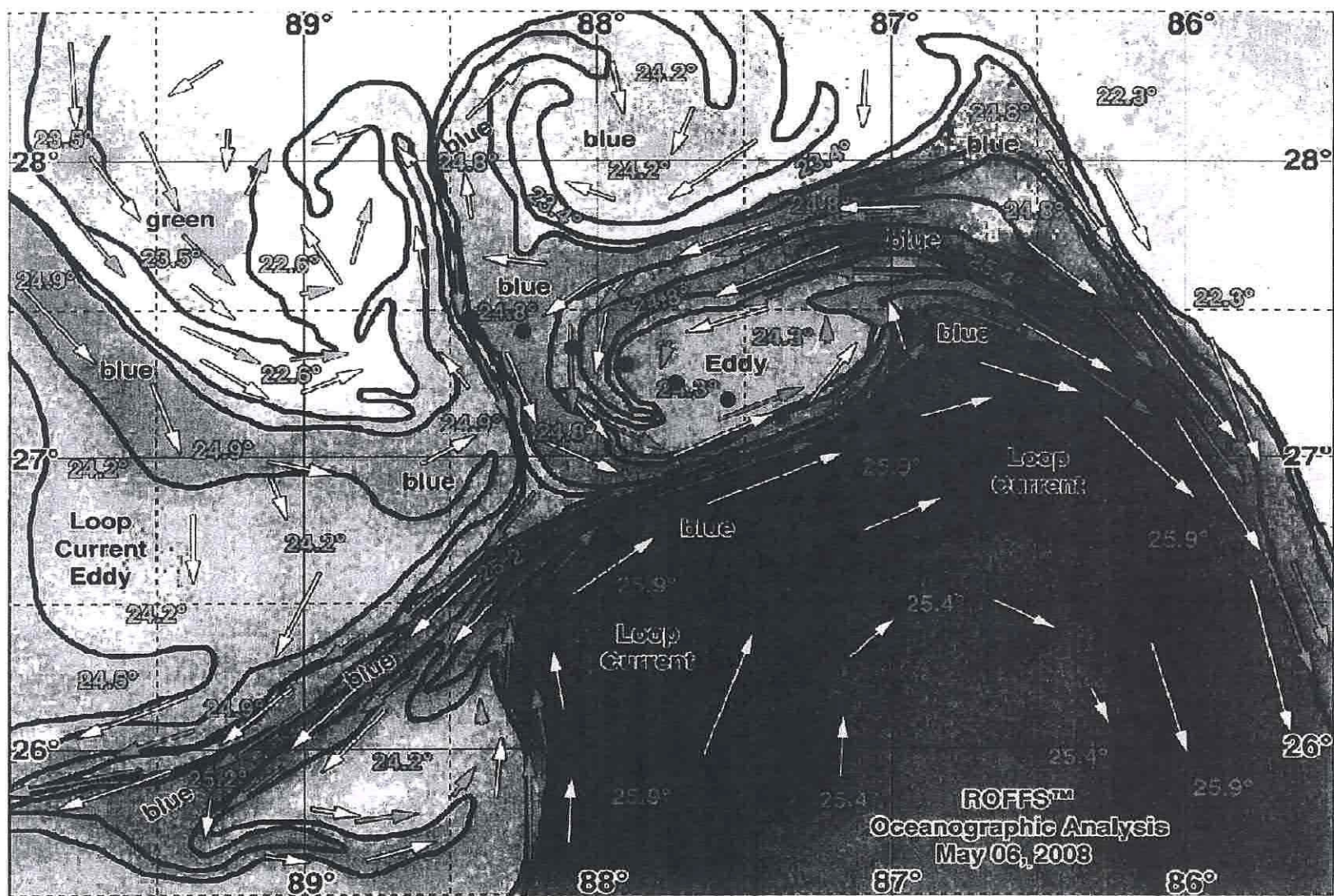


Figure 13. Transect stations (dark purple dots) occupied on 06 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image.

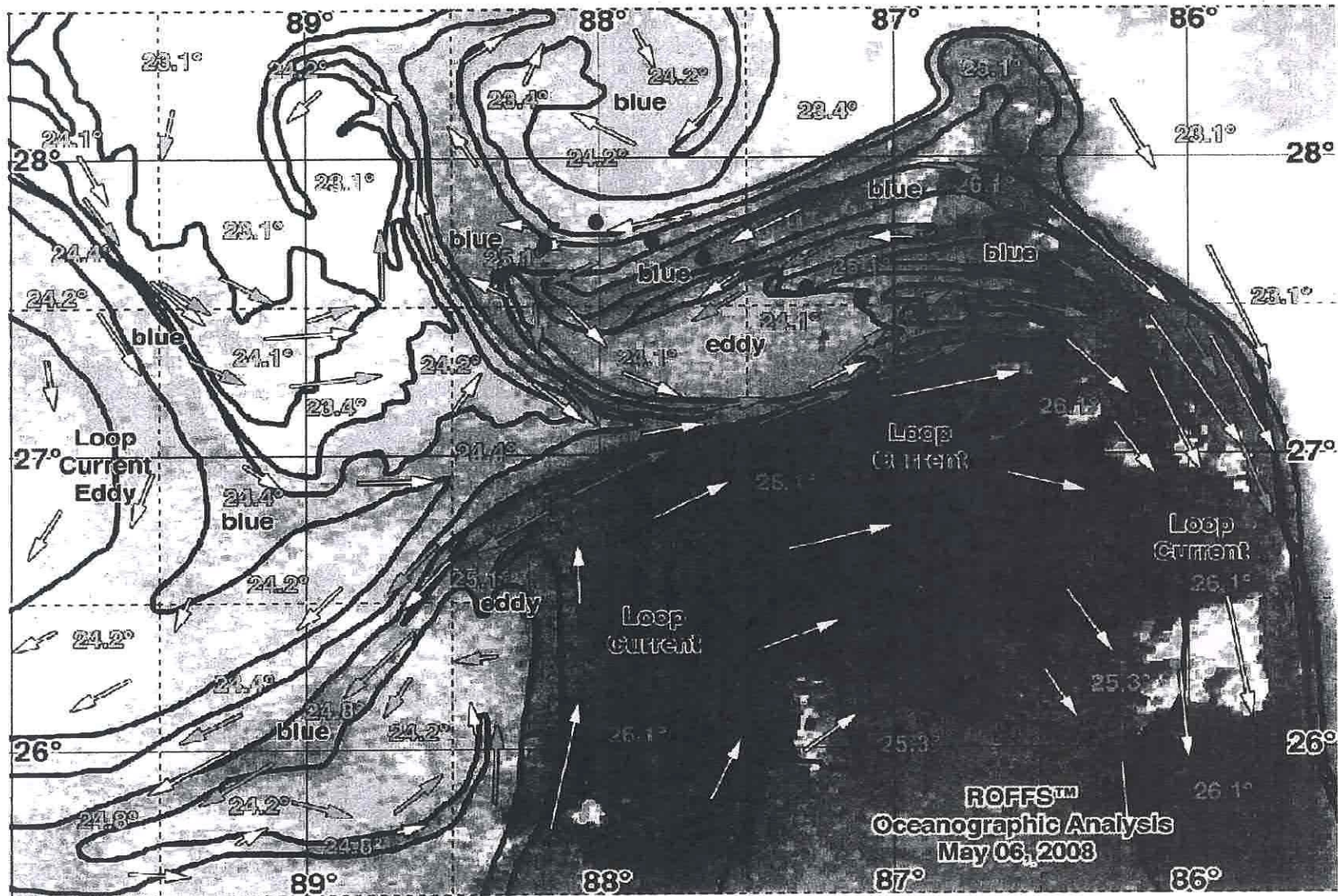


Figure 14. Transect stations (dark purple dots) occupied on 07 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48) plotted on sea surface temperature satellite image. Date on image is incorrect.

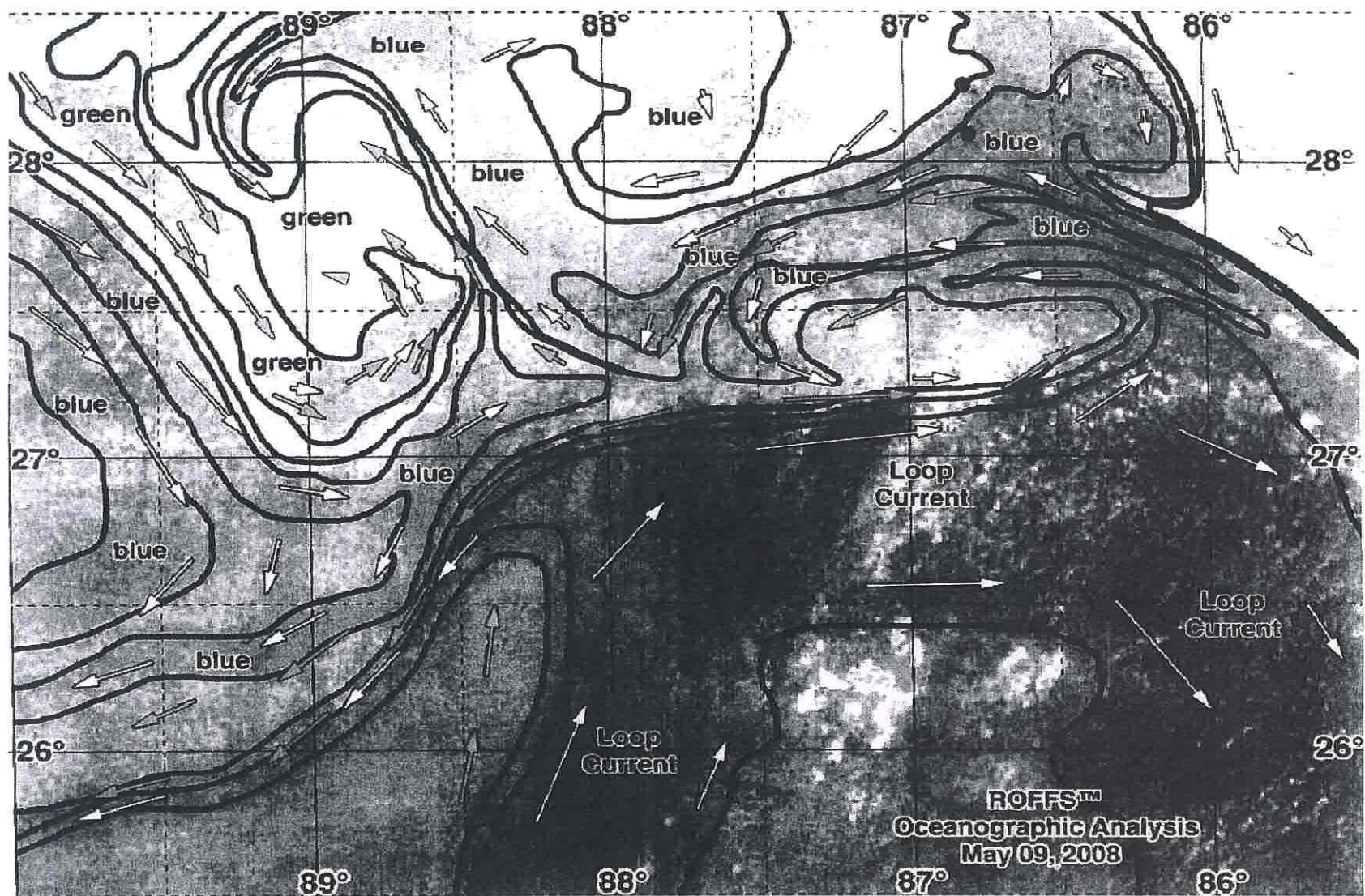


Figure 15. Transect stations (dark purple dots) occupied on 08 May 2008, Leg 1 of the NOAA ship *Gordon Gunter* cruise GU-08-02 (48). Stations were plotted on early morning 09 May 2008 satellite imagery due to not receiving 08 May 2008 sea surface temperature satellite image.