U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
3209 Frederic St.
Pascagoula, MS 39567

Cruise Report

Date Submitted: 11/06/2012

Platform: NOAA Ship GORDON GUNTER

Cruise Number: GU-12-03 (68)

Project Title: SEAMAP Fall Ichthyoplankton

Cruise Dates: 08/22/2012 - 09/28/2012

Submitted by: Glenn A Zapfe
Digitally signed by Glenn A Zapfe
DN: cn=Glenn A Zapfe, o, ou, email=glenn.zapfe@noaa.gov, c=US
Date: 2012.11.08 10:08:38 -06'00'
Field Party Chief
SEFSC, Pascagoula, MS
Date: 11/08/2012

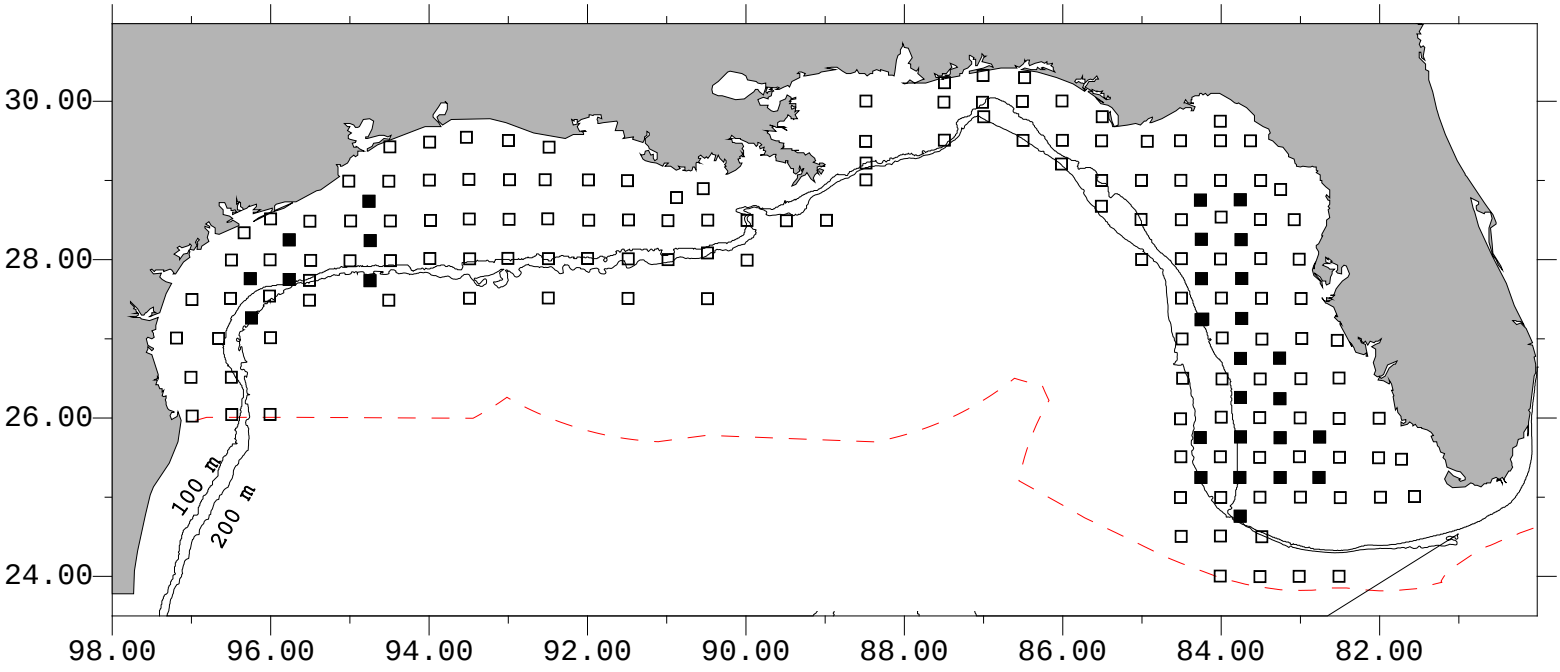
Approved by: Lisa Desfosse
Digitally signed by Lisa Desfosse
DN: cn=Lisa Desfosse, o=SEFSC, ou=NMFS, email=lisa.desfosse@noaa.gov, c=US
Date: 2012.11.19 15:04:59 -06'00'
Dr. Lisa Desfosse
Director, Mississippi Laboratory
NMFS, Pascagoula, MS
Date: 11/19/2012

Approved by:
Digitally signed by Theo R. Brainerd
DN: cn=Theo R. Brainerd, o=NOAA Fisheries, SEFSC, Miami, FL, ou=Deputy Center Director, email=theo.brainerd@noaa.gov, c=US
Date: 2012.11.19 17:55:59 -05'00'
Dr. Bonnie Ponwith
Director, SEFSC
NMFS, Miami, FL
Date: 11/19/2012

CRUISE RESULTS

Southeast Area Monitoring and Assessment Program
(SEAMAP) 2012 Fall Plankton Survey

NOAA Ship *Gordon Gunter* Cruise GU-12-03 (68)
22 August – 28 September 2012



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

INTRODUCTION

The National Oceanic and Atmospheric Administration (NOAA) Ship *Gordon Gunter* departed Pascagoula, MS on 22 August 2012 to initiate the Southeast Area Monitoring and Assessment Program (SEAMAP) Fall Plankton Survey in the northern Gulf of Mexico (GOM). The SEAMAP Program is a cooperative State/Federal/University program designed to collect biological and environmental data from waters of the U.S. GOM. During the fall survey, plankton samples were 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 larvae of red drum, red snapper, other snapper species, king mackerel, and Spanish mackerel. A total of 173 stations were sampled in the northern GOM from Texas over to Florida during the 34 days at sea (Leg 1, 22 August - 6 September and Leg 2, 11 September – 28, 2012).

On 5 September, the ship‘s gyro had issues with the UPS battery back-up and a one-day early inport was made to replace the batteries. The second leg of the survey departed as scheduled on 11 September. The survey ended a day earlier than scheduled (28 September) due to completion of all primary and secondary objectives.

The SBE-19 SeaCat malfunctioned towards the end of the second leg, so depth was calculated using wire out and wire angle for 6 stations (143 – 148). The cable was reterminated by the ship’s ET and the problem was corrected. However, at station 171, the Comm-7 winch malfunctioned and the bongo/neuston tows had to be done using the Desh-5 winch. The cable switch was done by the ship’s ET and FPC at the 3 remaining stations. Depth was calculated for the bongos at those stations using wire out and wire angle.

PRIMARY OBJECTIVES

1. Assess the occurrence, abundance and geographical distribution of the early life stages of fall spawning fishes; especially red drum, red snapper, other snapper species, king mackerel, and Spanish mackerel Gulf-wide on the U.S. continental shelf using a bongo frame fitted with 335 µm nets and a neuston frame fitted with a 950 µm net at selected SEAMAP stations. Mesh sizes reported here do not represent actual changes in standard SEAMAP gear (i.e. 333 µm and 947 µm mesh) but only a change in the accuracy at which mesh aperture size can be measured by the manufacturer.

2. Measure the vertical distribution of fish larvae by sampling at discrete depths in the water column at selected locations along the SEAMAP plankton survey grid using a 1 m MOCNESS with 505 µm nets.

3. 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.
    b) Measure chlorophyll *a* in replicate water samples taken at surface, 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).

4. Collect detailed observations (i.e., identification, number, volume, bell diameter) on net caught jellyfish and ctenophores.

5. Map the distribution of fish eggs and invertebrate zooplankton in samples collected at 30 min intervals with a Continuous Underway Fish Egg Sampler (CUFES) along the cruise track.

6. Examine the spatial variability of plankton by collecting standard gear samples at positions centrally located between standard SEAMAP stations in areas where Lutjanidae snapper (LU) abundances have been historically high.

7. Collect volumetric measurements of net caught *Sargassum* spp.

8. Collect fish and invertebrates associated with *Sargassum* spp. mats along the trackline for Dauphin Island Sea Lab (DISL).

SURVEY RESULTS

Ichthyoplankton Data

Survey Design

A predefined cruise track of 143 stations, approximately 30 nm apart in a systematic grid, were targeted for this survey. An additional 30 non-SEAMAP stations (LU) were planned to examine spatial variability in areas within the SEAMAP grid. Each of these stations were positioned at a center-point equidistant (~15nm) from the 4 surrounding standard SEAMAP stations. There were 16 planned MOCNESS stations throughout the trackline on both legs. The LU and MOCNESS stations were focused over areas where large numbers of snapper larvae have been collected on past surveys. The state of Louisiana planned to sample 7 of the standard SEAMAP stations, Mississippi planned 8, and Alabama planned 3 stations.

Sampling Methodology

Sample and data collection were implemented in accordance with procedures outlined in the SEAMAP data collections manual. Plankton samples were taken with the standard SEAMAP 61 cm bongo frame 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. A SBE19 SeaCat Profiler was attached on the towing wire above the frame to provide real time depth readings along with temperature and salinity. A flowmeter mounted inside each side of the bongo frame measured the volume filtered during the tow. Plankton samples were also taken using a 0.950 mm mesh

neuston net attached to a 1 x 2 m metal frame that was towed for 10 min at a vessel speed sufficient to keep the net opening half submerged in the water maintaining a sampling depth of 0.5 m. Preservation protocol called for the left bongo samples to be preserved in 10% formalin and then transferred to fresh 95% ETOH after 36 h. The original standard SEAMAP method of initial preservation in 10% formalin for 48 h was changed to 36 h in order to improve long term storage for genetic analysis. The right bongo and neuston samples were initially preserved in 95% ETOH and then transferred to fresh 95% ETOH after 24 h.

Additional plankton samples were taken using a 1 m MOCNESS at stations during both legs. The MOCNESS carried nine 0.505 mm nets to collect samples at discrete depths. One net was used in an oblique tow (Net 0) from the surface to the bottom or a maximum depth of 130 m. The remaining nets sampled set depth bins between 10 – 30 m depending on the water depth at each station. Winch and ship speeds were maintained at rates that would result in filtered water volumes of 250 - 350 m^3 per depth bin. In order to ensure enough volume was filtered for each depth bin, a 'bounce' method was used during the retrieval. The MOCNESS was brought up to the top of the depth bin, lowered back down to the bottom of the bin, and then brought back up to the top. This method allowed for consistency in sampling each of the depth bins during the tow. Oblique samples (Net 0) were initially preserved in 10% formalin and transferred to fresh 95% ETOH after 36 h. The remaining samples (Nets 1-6) were initially preserved in 95% ETOH and transferred to fresh 95% ETOH after 24 h.

Zooplankton and fish egg samples were collected between stations using a CUFES. Water sampled by the CUFES was pumped from the center sea chest which had an intake approximately 3 m below the surface of the water. Seawater was filtered through a 0.505 mm sieve within the CUFES and collected over 30 min intervals between stations.

Collection Summary

Ichthyoplankton samples were collected at 173 stations by the NOAA Ship *Gordon Gunter* during this survey (Figures 1 - 3). A total of 74 stations were sampled during Leg 1 resulting in 3 MOCNESS, 74 right bongo, 74 left bongo and 74 neuston samples (Table 1). A total of 99 stations were sampled on Leg 2 resulting in 96 right bongo, 95 left bongo, 98 neuston, and 8 MOCNESS samples (Table 1). Lightning caused the cancelation of the CTD, but not the bongo or neuston at one of the LU stations (LU017) during the second leg. The station was sampled again during the transit home and all gear was towed successfully. Two right and left bongo samples (Stations 78 and 79) were discarded due to a large number of *Pelagia* sp jellyfish in the nets. No further attempts were made at collecting in the area due to the large numbers of jellies present. The bongo samples from station 133 were discarded due to a large amount of phytoplankton collected in the nets. The amount of phytoplankton in the water could be observed from the ship for several miles, so no further attempt was made in the area. The neuston sample from station 153 was discarded due to the large number of siphonophores collected in the net. Even if a second tow was attempted for a reduced 5 min duration time, there still would have been too many siphonophores to collect a valid sample. The number of MOCNESS stations was curtailed on Leg 1 due to the presence of Hurricane Isaac in the GOM during the first part of the survey.

A total of 713 near-surface fish egg and invertebrate zooplankton samples were collected

between stations using a CUFES (Table 1 and Fig. 4). There is one area off of Louisiana that was not sampled due to overnight repairs to the CUFES. No CUFES samples were taken while the ship restarted the gyro after the battery backup went down on 5 September. Once the gyro was functional and the ship was able to follow the planned trackline, CUFES sampling continued. Samples will remain at the NOAA NMFS Mississippi Laboratories for sorting and analysis.

Jellyfish and ctenophores collected in bongo, neuston, and MOCNESS nets were thoroughly rinsed, removed from the plankton samples, and noted in the database. These organisms were identified, counted, and measured using graduated containers. Data were recorded on data sheets for each station.

Sargassum mats were targeted during transit between SEAMAP stations for DISL on Dauphin Island, AL. Six samples were collected during the entire survey (Fig. 5). During transit, the bridge would inform the scientist on watch of nearby patches or lines of *Sargassum*. If the patch/line was large enough, the bridge positioned the ship so that the patch/line moved down the port side. The neuston net was lowered down near the surface and deployed immediately in front of the patch/line. Deployment time varied, as the objective was to gather approximately 10 to 20 gal of *Sargassum*. When enough *Sargassum* had been collected, the neuston was brought aboard and the sample was sorted. All fish and invertebrate specimens were shaken loose of the *Sargassum* and placed in a -10°C freezer in Ziploc bags. Six gal of surface water was collected in conjunction with the *Sargassum* samples. This water was filtered in triplicate using 25 mm GF/F glass microfiber filters until material on the filter reduced the flow. The filters were placed in an aluminum foil packet and frozen at -10°C. All samples pertaining to the *Sargassum* sampling was sent to DISL for analysis.

State Vessels

The Louisiana Department of Fisheries and Wildlife sampled 7 SEAMAP stations off southern Louisiana with bongo and neuston gear from the R/V *Pelican* (Table 1 - 2, Figure 3). Bongo and neuston samples were also collected by the University of Southern Mississippi (USM), Gulf Coast Research Laboratory (GCRL) R/V *Tommy Munro* at 8 SEAMAP stations off Mississippi (Table 1 - 2, Figure 3). Plankton samples taken by Mississippi and Louisiana vessels were initially preserved in 10% formalin and transferred to 95% ETOH after 36 h following SEAMAP procedure. The Alabama Marine Resource Division (AMRD) sampled 3 standard SEAMAP stations with bongo and neuston gear (Table 1 – 2, Figure 3) aboard the R/V *Discovery*. One left bongo sample was spilled at sea, but the right remained a valid sample. All the samples collected by the Alabama vessel were initially preserved in 10% buffered formalin. The bongo and neuston samples were transferred to 95% ETOH upon arrival at the NOAA NMFS Laboratories. All samples from state vessels were transferred to the NOAA NMFS Laboratory in Pascagoula, MS. Due to Hurricane Isaac entering the Gulf, there were several stations (Table 2, Figure 3) that were sampled by multiple agencies. In order to insure that all the SEAMAP stations were sampled after the hurricane, agencies were instructed to pick up all of the agreed upon stations whether or not another agency had sampled them previously. This guaranteed complete coverage of the Fall SEAMAP sampling area.

Sample Processing/Archival Storage

Plankton samples were assigned SEAMAP numbers at sea on the NOAA Ship *Gordon Gunter* (Table 3). Right bongo samples and neuston samples were shipped to ZSIOP Gdynia, Poland for sorting. One left bongo sample was also shipped to ZSIOP Gdynia, Poland replacing a compromised right bongo sample. All other left bongo samples will be deposited in the SEAMAP Invertebrate Archive at GCRL, USM, Ocean Springs, MS. At this time, all MOCNESS samples and the 3 samples collected by Alabama will remain at the NOAA NMFS Laboratory in Pascagoula, MS until there is inventory space available for them to be sorted at ZSIOP. No loss of coverage occurred with the retained Alabama samples because other agencies had sampled those same stations and those samples were shipped to Poland.

Environmental Data

Environmental data were collected with a Seabird SBE 9/11 Plus CTD at a total of 172 stations from the NOAA Ship *Gordon Gunter* during the survey. At all stations sampled with the SBE 9/11 Plus CTD, a cast to near bottom or a maximum depth of 200 m was made. The Seabird SBE 9/11 Plus CTD was used with a dual suite of the following sensors: SBE 03 temperature sensor, SBE digiquartz pressure 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. Additional environmental and station information was accessed from shipboard sensors 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) were ingested into a Microsoft Access database. Aboard the *Gordon Gunter*, water samples were taken at all stations using Niskin bottles attached to a SBE carousel sampler. Target depths for the water samples were at the surface (≤5 m), chlorophyll maximum, and near-bottom (up to 200 m maximum). At stations where the water column was shallow and well mixed, only surface and bottom water samples were taken. Triplicate, 200 ml subsamples from the 3 sampled depths were analyzed for chlorophyll *a* concentration (µg/L) using a Turner Designs 10-AU-005 benchtop fluorometer with a 10-040R optical kit and the modified Welshmeyer method. Chlorophyll readings from each sample depth were averaged (Table 4) and entered into the Microsoft Access database. The CTD and chlorophyll data were processed at sea and ingested into the database. A copy of the database and CTD casts will be kept at the NOAA Laboratory in Pascagoula, MS.

Salinity (PSU), sea temperature (º C), and dissolved oxygen (mg/L) were recorded from the sensors on the CTD for the same depths as water samples for the chlorophyll *a* measurements. Near surface (≤ 5 m depth) values of salinity, sea temperature, and dissolved oxygen at stations sampled are presented in Figures 6 - 8. Chlorophyll *a* concentrations measured with the Turner benchtop fluorometer are presented in Figure 9.

Throughout the cruise, an SBE TSG equipped with a Turner Designs 10-AU fluorometer continuously measured surface salinity, temperature, and fluorescence. These data were recorded on a dedicated computer and backed up daily to the ship's server.

CRUISE PARTICIPANTS

Leg 1 (22 August – 6 September 2012)

Name / Title / Organization

Glenn Zapfe / Field Party Chief / NMFS, Pascagoula, MS
Andy Millet / Fishery Biologist / IAP[1], Pascagoula, MS
Alonzo Hamilton / Fishery Biologist / NMFS, Pascagoula, MS
Amy Schmitt/ Fishery Biologist / IAP[1], Pascagoula, MS
Denice Drass / Fishery Biologist / NMFS, Pascagoula, MS
Lindsey Kramer / Graduate Student / Dauphin Island Sea Lab, AL

[1] – IAP World Services

Leg 2 (11 September - 28 September 2012)

Name / Title / Organization

Glenn Zapfe / Field Party Chief / NMFS, Pascagoula, MS
Andy Millet / Fishery Biologist / IAP[1], Pascagoula, MS
Adam Pollack / Fishery Biologist / IAP[1], Pascagoula, MS
Jennifer Ford / Fishery Biologist / IAP[1], Pascagoula, MS
John Moser / Fishery Biologist NMFS, Pascagoula, MS

[1] – IAP World Services

Table 1. Summary of valid ichthyoplankton collections taken during the 2012 Fall SEAMAP Plankton survey aboard the NOAA Ship *Gordon Gunter* GU12-03 (68) and state agency vessels.

Leg	Right Bongo (0.335 mm)	Left Bongo (0.335 mm)	Neuston (0.950 mm)	MOCNESS (0.505 mm)	CTD Casts	CUFES
Gunter (NOAA) Leg 1	74	74	74	3	74	326
Gunter (NOAA) Leg 2	96	95	98	8	98	387
R/V *Tommy Munro* (Mississippi)	8	8	8	0	0	0
R/V *Pelican* (Louisiana)	7	7	7	0	0	0
R/V *Discovery* (Alabama)	3	3	3	0	0	0
Total	188	187	190	11	172	713

Table 2. Summary of samples collected by both state and federal agencies at standard SEAMAP stations. The ‘X’ indicates samples (bongo and neuston) collected by that agency at the corresponding SEAMAP station. Several stations were sampled by multiple agencies.

SEAMAP Station	MS	AL	LA	NOAA
B173	-	X	-	X
B176	X	-	-	-
B177	X	X	-	-
B178	X	-	-	X
B179	X	-	-	X
B180	X	-	-	X
B183	X	-	-	-
B187	-	-	X	-
B188	-	-	X	-
B191	-	-	X	X
B192	-	-	X	X
B193	-	-	X	X
B194	-	-	X	X
B197	-	-	X	X
B321	-	X	-	X
B322	X	-	-	-
B323	X	-	-	X

Table 3. Summary of plankton sampling effort during the Fall SEAMAP Plankton Survey conducted from the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012. PASC = Pascagoula station number; SEAMAP = SEAMAP station number or other station identifier; SAMPLE = SEAMAP sample number; RB = Right Bongo; LB = Left Bongo; NN = Neuston; MOC# = MOCNESS Net#; Preservative = Initial preservative; FORM = Formalin; ETOH = Ethyl alcohol; DATE = Date in GMT; Lat = Latitude of sample in decimal degrees; Lon = Longitude of sample in decimal degrees.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
001	B030	44133	RB	95% ETOH	8/25/2012	26.045	-96.008
001	B030	44134	LB	10% Form	8/25/2012	26.045	-96.008
001	B030	44135	NN	95% ETOH	8/25/2012	26.038	-95.997
002	B316	44136	RB	95% ETOH	8/25/2012	26.043	-96.491
002	B316	44137	LB	10% Form	8/25/2012	26.043	-96.491
002	B316	44138	NN	95% ETOH	8/25/2012	26.038	-96.495
003	B032	44139	RB	95% ETOH	8/25/2012	26.025	-96.991
003	B032	44140	LB	10% Form	8/25/2012	26.025	-96.991
003	B032	44141	NN	95% ETOH	8/25/2012	26.023	-96.989
004	B238	44142	RB	95% ETOH	8/25/2012	26.514	-97.006
004	B238	44143	LB	10% Form	8/25/2012	26.514	-97.006
004	B238	44144	NN	95% ETOH	8/25/2012	26.515	-97.000
005	B239	44145	RB	95% ETOH	8/25/2012	26.515	-96.496
005	B239	44146	LB	10% Form	8/25/2012	26.515	-96.496
005	B239	44147	NN	95% ETOH	8/25/2012	26.510	-96.494
006	B031	44148	RB	95% ETOH	8/26/2012	27.014	-96.002
006	B031	44149	LB	10% Form	8/26/2012	27.014	-96.002
006	B031	44150	NN	95% ETOH	8/26/2012	27.003	-96.001
007	LU007	44151	RB	95% ETOH	8/26/2012	27.264	-96.243
007	LU007	44152	LB	10% Form	8/26/2012	27.264	-96.243
007	LU007	44153	NN	95% ETOH	8/26/2012	27.258	-96.245
008	B328	44154	RB	95% ETOH	8/26/2012	27.005	-96.657
008	B328	44155	LB	10% Form	8/26/2012	27.005	-96.657
008	B328	44156	NN	95% ETOH	8/26/2012	27.004	-96.660
009	B051	44157	RB	95% ETOH	8/26/2012	27.010	-97.189
009	B051	44158	LB	10% Form	8/26/2012	27.010	-97.189
009	B051	44159	NN	95% ETOH	8/26/2012	27.005	-97.189
010	B235	44160	RB	95% ETOH	8/26/2012	27.496	-96.994
010	B235	44161	LB	10% Form	8/26/2012	27.496	-96.994
010	B235	44162	NN	95% ETOH	8/26/2012	27.492	-96.992
011	B234	44163	RB	95% ETOH	8/26/2012	27.511	-96.507
011	B234	44164	LB	10% Form	8/26/2012	27.511	-96.507
011	B234	44165	NN	95% ETOH	8/26/2012	27.507	-96.502
012	LU002	44166	RB	95% ETOH	8/27/2012	27.760	-96.257
012	LU002	44167	LB	10% Form	8/27/2012	27.760	-96.257
012	LU002	44168	NN	95% ETOH	8/27/2012	27.757	-96.254
013	B233	44169	RB	95% ETOH	8/27/2012	27.995	-96.496
013	B233	44170	LB	10% Form	8/27/2012	27.995	-96.496

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
013	B233	44171	NN	95% ETOH	8/27/2012	27.997	-96.499
014	B327	44172	RB	95% ETOH	8/27/2012	28.339	-96.335
014	B327	44173	LB	10% Form	8/27/2012	28.339	-96.335
014	B327	44174	NN	95% ETOH	8/27/2012	28.335	-96.333
015	B230	44175	RB	95% ETOH	8/27/2012	28.515	-96.001
015	B230	44176	LB	10% Form	8/27/2012	28.515	-96.001
015	B230	44177	NN	95% ETOH	8/27/2012	28.508	-96.002
016	LU003	44178	RB	95% ETOH	8/27/2012	28.250	-95.766
016	LU003	44179	LB	10% Form	8/27/2012	28.250	-95.766
016	LU003	44180	NN	95% ETOH	8/27/2012	28.250	-95.759
017	B231	44181	RB	95% ETOH	8/27/2012	27.998	-96.007
017	B231	44182	LB	10% Form	8/27/2012	27.998	-96.007
017	B231	44183	NN	95% ETOH	8/27/2012	27.997	-96.001
018	LU004	44184	RB	95% ETOH	8/27/2012	27.750	-95.766
018	LU004	44185	LB	10% Form	8/27/2012	27.750	-95.766
018	LU004	44186	NN	95% ETOH	8/27/2012	27.753	-95.753
019	B232	44187	RB	95% ETOH	8/27/2012	27.540	-96.014
019	B232	44188	LB	10% Form	8/27/2012	27.540	-96.014
019	B232	44189	NN	95% ETOH	8/27/2012	27.547	-96.003
019	B232	44190	MOC 0	10% Form	8/27/2012	27.555	-95.986
019	B232	44191	MOC 1	95% ETOH	8/27/2012	27.555	-95.986
019	B232	44192	MOC 2	95% ETOH	8/27/2012	27.555	-95.986
019	B232	44193	MOC 3	95% ETOH	8/27/2012	27.555	-95.986
019	B232	44194	MOC 4	95% ETOH	8/27/2012	27.555	-95.986
019	B232	44195	MOC 5	95% ETOH	8/27/2012	27.555	-95.986
019	B232	44196	MOC 6	95% ETOH	8/27/2012	27.555	-95.986
020	B225	44197	RB	95% ETOH	8/28/2012	27.488	-95.511
020	B225	44198	LB	10% Form	8/28/2012	27.488	-95.511
020	B225	44199	NN	95% ETOH	8/28/2012	27.495	-95.508
020	B225	44200	MOC 0	10% Form	8/28/2012	27.507	-95.505
020	B225	44201	MOC 1	95% ETOH	8/28/2012	27.507	-95.505
020	B225	44202	MOC 2	95% ETOH	8/28/2012	27.507	-95.505
020	B225	44203	MOC 3	95% ETOH	8/28/2012	27.507	-95.505
020	B225	44204	MOC 4	95% ETOH	8/28/2012	27.507	-95.505
020	B225	44205	MOC 5	95% ETOH	8/28/2012	27.507	-95.505
020	B225	44206	MOC 6	95% ETOH	8/28/2012	27.507	-95.505
021	B326	44207	RB	95% ETOH	8/28/2012	27.738	-95.510
021	B326	44208	LB	10% Form	8/28/2012	27.738	-95.510
021	B326	44209	NN	95% ETOH	8/28/2012	27.747	-95.508
022	B226	44210	RB	95% ETOH	8/28/2012	27.991	-95.495
022	B226	44211	LB	10% Form	8/28/2012	27.991	-95.495
022	B226	44212	NN	95% ETOH	8/28/2012	27.996	-95.500
022	B226	44213	MOC 0	10% Form	8/28/2012	28.006	-95.505
022	B226	44214	MOC 1	95% ETOH	8/28/2012	28.006	-95.505
022	B226	44215	MOC 2	95% ETOH	8/28/2012	28.006	-95.505
022	B226	44216	MOC 3	95% ETOH	8/28/2012	28.006	-95.505
022	B226	44217	MOC 4	95% ETOH	8/28/2012	28.006	-95.505
023	B228	44218	RB	95% ETOH	8/28/2012	28.486	-95.505
023	B228	44219	LB	10% Form	8/28/2012	28.486	-95.505

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
023	B228	44220	NN	95% ETOH	8/28/2012	28.491	-95.507
024	B221	44221	RB	95% ETOH	8/28/2012	28.992	-95.014
024	B221	44222	LB	10% Form	8/28/2012	28.992	-95.014
024	B221	44223	NN	95% ETOH	8/28/2012	28.994	-95.010
025	LU005	44224	RB	95% ETOH	8/28/2012	28.738	-94.759
025	LU005	44225	LB	10% Form	8/28/2012	28.738	-94.759
025	LU005	44226	NN	95% ETOH	8/28/2012	28.742	-94.760
026	B222	44227	RB	95% ETOH	8/29/2012	28.488	-94.990
026	B222	44228	LB	10% Form	8/29/2012	28.488	-94.990
026	B222	44229	NN	95% ETOH	8/29/2012	28.494	-94.996
027	LU006	44230	RB	95% ETOH	8/29/2012	28.240	-94.743
027	LU006	44231	LB	10% Form	8/29/2012	28.240	-94.743
027	LU006	44232	NN	95% ETOH	8/29/2012	28.246	-94.746
028	B223	44233	RB	95% ETOH	8/29/2012	27.986	-94.998
028	B223	44234	LB	10% Form	8/29/2012	27.986	-94.998
028	B223	44235	NN	95% ETOH	8/29/2012	27.992	-95.001
029	LU007	44236	RB	95% ETOH	8/29/2012	27.734	-94.746
029	LU007	44237	LB	10% Form	8/29/2012	27.734	-94.746
029	LU007	44238	NN	95% ETOH	8/29/2012	27.741	-94.745
030	B243	44239	RB	95% ETOH	8/29/2012	27.488	-94.509
030	B243	44240	LB	10% Form	8/29/2012	27.488	-94.509
030	B243	44241	NN	95% ETOH	8/29/2012	27.496	-94.513
031	B217	44242	RB	95% ETOH	8/29/2012	27.987	-94.488
031	B217	44243	LB	10% Form	8/29/2012	27.987	-94.488
031	B217	44244	NN	95% ETOH	8/29/2012	27.991	-94.489
032	B218	44245	RB	95% ETOH	8/29/2012	28.488	-94.489
032	B218	44246	LB	10% Form	8/29/2012	28.488	-94.489
032	B218	44247	NN	95% ETOH	8/29/2012	28.493	-94.492
033	B219	44248	RB	95% ETOH	8/30/2012	28.991	-94.508
033	B219	44249	LB	10% Form	8/30/2012	28.991	-94.508
033	B219	44250	NN	95% ETOH	8/30/2012	28.997	-94.506
034	B220	44251	RB	95% ETOH	8/30/2012	29.420	-94.495
034	B220	44252	LB	10% Form	8/30/2012	29.420	-94.495
034	B220	44253	NN	95% ETOH	8/30/2012	29.424	-94.495
035	B213	44254	RB	95% ETOH	8/30/2012	29.485	-93.993
035	B213	44255	LB	10% Form	8/30/2012	29.485	-93.993
035	B213	44256	NN	95% ETOH	8/30/2012	29.487	-93.991
036	B214	44257	RB	95% ETOH	8/30/2012	29.005	-93.997
036	B214	44258	LB	10% Form	8/30/2012	29.005	-93.997
036	B214	44259	NN	95% ETOH	8/30/2012	29.007	-93.999
037	B215	44260	RB	95% ETOH	8/30/2012	28.495	-93.982
037	B215	44261	LB	10% Form	8/30/2012	28.495	-93.982
037	B215	44262	NN	95% ETOH	8/30/2012	28.495	-93.985
038	B216	44263	RB	95% ETOH	8/30/2012	28.014	-93.991
038	B216	44264	LB	10% Form	8/30/2012	28.014	-93.991
038	B216	44265	NN	95% ETOH	8/30/2012	28.011	-93.996
039	B244	44266	RB	95% ETOH	8/31/2012	27.513	-93.490
039	B244	44267	LB	10% Form	8/31/2012	27.513	-93.490
039	B244	44268	NN	95% ETOH	8/31/2012	27.508	-93.498

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
040	B209	44269	RB	95% ETOH	8/31/2012	28.010	-93.488
040	B209	44270	LB	10% Form	8/31/2012	28.010	-93.488
040	B209	44271	NN	95% ETOH	8/31/2012	28.008	-93.492
041	B210	44272	RB	95% ETOH	8/31/2012	28.513	-93.493
041	B210	44273	LB	10% Form	8/31/2012	28.513	-93.493
041	B210	44274	NN	95% ETOH	8/31/2012	28.509	-93.492
042	B211	44275	RB	95% ETOH	8/31/2012	29.014	-93.497
042	B211	44276	LB	10% Form	8/31/2012	29.014	-93.497
042	B211	44277	NN	95% ETOH	8/31/2012	29.011	-93.497
043	B212	44278	RB	95% ETOH	8/31/2012	29.545	-93.529
043	B212	44279	LB	10% Form	8/31/2012	29.545	-93.529
043	B212	44280	NN	95% ETOH	8/31/2012	29.542	-93.528
044	B206	44281	RB	95% ETOH	9/1/2012	29.505	-92.998
044	B206	44282	LB	10% Form	9/1/2012	29.505	-92.998
044	B206	44283	NN	95% ETOH	9/1/2012	29.502	-92.998
045	B207	44284	RB	95% ETOH	9/1/2012	29.009	-92.985
045	B207	44285	LB	10% Form	9/1/2012	29.009	-92.985
045	B207	44286	NN	95% ETOH	9/1/2012	29.006	-92.986
046	B208	44287	RB	95% ETOH	9/1/2012	28.510	-92.990
046	B208	44288	LB	10% Form	9/1/2012	28.510	-92.990
046	B208	44289	NN	95% ETOH	9/1/2012	28.506	-92.991
047	B023	44290	RB	95% ETOH	9/1/2012	28.016	-93.005
047	B023	44291	LB	10% Form	9/1/2012	28.016	-93.005
047	B023	44292	NN	95% ETOH	9/1/2012	28.011	-93.003
048	B245	44293	RB	95% ETOH	9/1/2012	27.516	-92.496
048	B245	44294	LB	10% Form	9/1/2012	27.516	-92.496
048	B245	44295	NN	95% ETOH	9/1/2012	27.507	-92.498
049	B202	44296	RB	95% ETOH	9/2/2012	28.013	-92.493
049	B202	44297	LB	10% Form	9/2/2012	28.013	-92.493
049	B202	44298	NN	95% ETOH	9/2/2012	28.005	-92.496
050	B203	44299	RB	95% ETOH	9/2/2012	28.515	-92.502
050	B203	44300	LB	10% Form	9/2/2012	28.515	-92.502
050	B203	44301	NN	95% ETOH	9/2/2012	28.511	-92.500
051	B204	44302	RB	95% ETOH	9/2/2012	29.009	-92.535
051	B204	44303	LB	10% Form	9/2/2012	29.009	-92.535
051	B204	44304	NN	95% ETOH	9/2/2012	29.005	-92.539
052	B205	44305	RB	95% ETOH	9/2/2012	29.421	-92.485
052	B205	44306	LB	10% Form	9/2/2012	29.421	-92.485
052	B205	44307	NN	95% ETOH	9/2/2012	29.414	-92.488
053	B200	44308	RB	95% ETOH	9/2/2012	29.007	-91.989
053	B200	44309	LB	10% Form	9/2/2012	29.007	-91.989
053	B200	44310	NN	95% ETOH	9/2/2012	29.008	-91.995
054	B201	44311	RB	95% ETOH	9/2/2012	28.498	-91.985
054	B201	44312	LB	10% Form	9/2/2012	28.498	-91.985
054	B201	44313	NN	95% ETOH	9/2/2012	28.497	-91.992
055	B022	44314	RB	95% ETOH	9/3/2012	28.015	-91.999
055	B022	44315	LB	10% Form	9/3/2012	28.015	-91.999
055	B022	44316	NN	95% ETOH	9/3/2012	28.007	-91.999
056	B246	44317	RB	95% ETOH	9/3/2012	27.511	-91.489

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
056	B246	44318	LB	10% Form	9/3/2012	27.511	-91.489
056	B246	44319	NN	95% ETOH	9/3/2012	27.505	-91.495
057	B195	44320	RB	95% ETOH	9/3/2012	28.011	-91.510
057	B195	44321	LB	10% Form	9/3/2012	28.011	-91.510
057	B195	44322	NN	95% ETOH	9/3/2012	28.011	-91.499
058	B196	44323	RB	95% ETOH	9/3/2012	28.502	-91.482
058	B196	44324	LB	10% Form	9/3/2012	28.502	-91.482
058	B196	44325	NN	95% ETOH	9/3/2012	28.502	-91.489
059	B197	44326	RB	95% ETOH	9/3/2012	28.997	-91.496
059	B197	44327	LB	10% Form	9/3/2012	28.997	-91.496
059	B197	44328	NN	95% ETOH	9/3/2012	28.998	-91.500
060	B193	44329	RB	95% ETOH	9/3/2012	28.784	-90.876
060	B193	44330	LB	10% Form	9/3/2012	28.784	-90.876
060	B193	44331	NN	95% ETOH	9/3/2012	28.782	-90.881
061	B194	44332	RB	95% ETOH	9/4/2012	28.492	-90.985
061	B194	44333	LB	10% Form	9/4/2012	28.492	-90.985
061	B194	44334	NN	95% ETOH	9/4/2012	28.492	-90.990
062	B017	44335	RB	95% ETOH	9/4/2012	28.000	-90.983
062	B017	44336	LB	10% Form	9/4/2012	28.000	-90.983
062	B017	44337	NN	95% ETOH	9/4/2012	27.999	-90.993
063	B247	44338	RB	95% ETOH	9/4/2012	27.507	-90.486
063	B247	44339	LB	10% Form	9/4/2012	27.507	-90.486
063	B247	44340	NN	95% ETOH	9/4/2012	27.505	-90.493
064	B190	44341	RB	95% ETOH	9/4/2012	28.085	-90.485
064	B190	44342	LB	10% Form	9/4/2012	28.085	-90.485
064	B190	44343	NN	95% ETOH	9/4/2012	28.086	-90.491
065	B191	44344	RB	95% ETOH	9/4/2012	28.499	-90.482
065	B191	44345	LB	10% Form	9/4/2012	28.499	-90.482
065	B191	44346	NN	95% ETOH	9/4/2012	28.502	-90.486
066	B192	44347	RB	95% ETOH	9/4/2012	28.896	-90.539
066	B192	44348	LB	10% Form	9/4/2012	28.896	-90.539
066	B192	44349	NN	95% ETOH	9/4/2012	28.900	-90.541
067	B189	44350	RB	95% ETOH	9/5/2012	28.496	-89.986
067	B189	44351	LB	10% Form	9/5/2012	28.496	-89.986
067	B189	44352	NN	95% ETOH	9/5/2012	28.492	-89.995
068	B016	44353	RB	95% ETOH	9/5/2012	27.994	-89.985
068	B016	44354	LB	10% Form	9/5/2012	27.994	-89.985
068	B016	44355	NN	95% ETOH	9/5/2012	27.997	-89.995
069	B186	44356	RB	95% ETOH	9/5/2012	28.491	-89.490
069	B186	44357	LB	10% Form	9/5/2012	28.491	-89.490
069	B186	44358	NN	95% ETOH	9/5/2012	28.498	-89.498
070	B184	44359	RB	95% ETOH	9/5/2012	28.496	-88.984
070	B184	44360	LB	10% Form	9/5/2012	28.496	-88.984
070	B184	44361	NN	95% ETOH	9/5/2012	28.495	-88.994
071	B180	44362	RB	95% ETOH	9/6/2012	29.007	-88.485
071	B180	44363	LB	10% Form	9/6/2012	29.007	-88.485
071	B180	44364	NN	95% ETOH	9/6/2012	29.002	-88.496
072	B323	44365	RB	95% ETOH	9/6/2012	29.220	-88.484
072	B323	44366	LB	10% Form	9/6/2012	29.220	-88.484

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
072	B323	44367	NN	95% ETOH	9/6/2012	29.221	-88.492
073	B179	44368	RB	95% ETOH	9/6/2012	29.494	-88.489
073	B179	44369	LB	10% Form	9/6/2012	29.494	-88.489
073	B179	44370	NN	95% ETOH	9/6/2012	29.512	-88.507
074	B178	44371	RB	95% ETOH	9/6/2012	30.003	-88.485
074	B178	44372	LB	10% Form	9/6/2012	30.003	-88.485
074	B178	44373	NN	95% ETOH	9/6/2012	29.997	-88.481
075	B174	44374	RB	95% ETOH	9/12/2012	29.509	-87.495
075	B174	44375	LB	10% Form	9/12/2012	29.509	-87.495
075	B174	44376	NN	95% ETOH	9/12/2012	29.502	-87.494
076	B320	44377	RB	95% ETOH	9/12/2012	29.804	-86.990
076	B320	44378	LB	10% Form	9/12/2012	29.804	-86.990
076	B320	44379	NN	95% ETOH	9/12/2012	29.804	-86.998
077	B172	44380	RB	10% Form	9/12/2012	29.988	-87.014
077	B172	44381	LB	95% ETOH	9/12/2012	29.988	-87.014
077	B172	44382	NN	95% ETOH	9/12/2012	29.986	-87.010
078	B319	44383	NN	95% ETOH	9/12/2012	30.324	-87.004
079	B318	44384	NN	95% ETOH	9/13/2012	30.301	-86.479
080	B168	44385	RB	95% ETOH	9/13/2012	29.999	-86.510
080	B168	44386	LB	10% Form	9/13/2012	29.999	-86.510
080	B168	44387	NN	95% ETOH	9/13/2012	29.998	-86.506
081	B169	44388	RB	95% ETOH	9/13/2012	29.506	-86.502
081	B169	44389	LB	10% Form	9/13/2012	29.506	-86.502
081	B169	44390	NN	95% ETOH	9/13/2012	29.499	-86.496
082	B165	44391	RB	95% ETOH	9/13/2012	29.207	-86.016
082	B165	44392	LB	10% Form	9/13/2012	29.207	-86.016
082	B165	44393	NN	95% ETOH	9/13/2012	29.199	-86.009
083	B166	44394	RB	95% ETOH	9/13/2012	29.507	-86.006
083	B166	44395	LB	10% Form	9/13/2012	29.507	-86.006
083	B166	44396	NN	95% ETOH	9/13/2012	29.506	-86.002
084	B167	44397	RB	95% ETOH	9/13/2012	30.004	-86.010
084	B167	44398	LB	10% Form	9/13/2012	30.004	-86.010
084	B167	44399	NN	95% ETOH	9/13/2012	30.002	-86.005
085	B157	44400	RB	95% ETOH	9/13/2012	29.805	-85.502
085	B157	44401	LB	10% Form	9/13/2012	29.805	-85.502
085	B157	44402	NN	95% ETOH	9/13/2012	29.801	-85.503
086	B158	44403	RB	95% ETOH	9/14/2012	29.500	-85.510
086	B158	44404	LB	10% Form	9/14/2012	29.500	-85.510
086	B158	44405	NN	95% ETOH	9/14/2012	29.502	-85.506
087	B156	44406	RB	95% ETOH	9/14/2012	29.495	-84.934
087	B156	44407	LB	10% Form	9/14/2012	29.495	-84.934
087	B156	44408	NN	95% ETOH	9/14/2012	29.495	-84.932
088	B140	44409	RB	95% ETOH	9/14/2012	29.501	-84.514
088	B140	44410	LB	10% Form	9/14/2012	29.501	-84.514
088	B140	44411	NN	95% ETOH	9/14/2012	29.501	-84.511
089	B139	44412	RB	95% ETOH	9/14/2012	29.748	-84.011
089	B139	44413	LB	10% Form	9/14/2012	29.748	-84.011
089	B139	44414	NN	95% ETOH	9/14/2012	29.751	-84.007
090	B138	44415	RB	95% ETOH	9/14/2012	29.502	-84.009

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
090	B138	44416	LB	10% Form	9/14/2012	29.502	-84.009
090	B138	44417	NN	95% ETOH	9/14/2012	29.505	-84.005
091	B115	44418	RB	95% ETOH	9/14/2012	29.501	-83.631
091	B115	44419	LB	10% Form	9/14/2012	29.501	-83.631
091	B115	44420	NN	95% ETOH	9/14/2012	29.500	-83.627
092	B114	44421	RB	95% ETOH	9/14/2012	28.886	-83.250
092	B114	44422	LB	10% Form	9/14/2012	28.886	-83.250
092	B114	44423	NN	95% ETOH	9/14/2012	28.888	-83.249
093	B116	44424	RB	95% ETOH	9/15/2012	29.000	-83.502
093	B116	44425	LB	10% Form	9/15/2012	29.000	-83.502
093	B116	44426	NN	95% ETOH	9/15/2012	29.001	-83.497
094	B137	44427	RB	95% ETOH	9/15/2012	29.001	-84.009
094	B137	44428	LB	10% Form	9/15/2012	29.001	-84.009
094	B137	44429	NN	95% ETOH	9/15/2012	29.000	-84.004
095	B141	44430	RB	95% ETOH	9/15/2012	29.002	-84.509
095	B141	44431	LB	10% Form	9/15/2012	29.002	-84.509
095	B141	44432	NN	95% ETOH	9/15/2012	29.002	-84.506
096	B155	44433	RB	95% ETOH	9/15/2012	29.001	-85.007
096	B155	44434	LB	10% Form	9/15/2012	29.001	-85.007
096	B155	44435	NN	95% ETOH	9/15/2012	29.000	-85.004
097	B159	44436	RB	95% ETOH	9/15/2012	29.000	-85.509
097	B159	44437	LB	10% Form	9/15/2012	29.000	-85.509
097	B159	44438	NN	95% ETOH	9/15/2012	28.999	-85.504
098	B160	44439	RB	95% ETOH	9/15/2012	28.674	-85.513
098	B160	44440	LB	10% Form	9/15/2012	28.674	-85.513
098	B160	44441	NN	95% ETOH	9/15/2012	28.669	-85.507
099	B154	44442	RB	95% ETOH	9/15/2012	28.508	-85.012
099	B154	44443	LB	10% Form	9/15/2012	28.508	-85.012
099	B154	44444	NN	95% ETOH	9/15/2012	28.507	-85.004
100	B142	44445	RB	95% ETOH	9/16/2012	28.504	-84.503
100	B142	44446	LB	10% Form	9/16/2012	28.504	-84.503
100	B142	44447	NN	95% ETOH	9/16/2012	28.502	-84.499
101	LU012	44448	RB	95% ETOH	9/16/2012	28.752	-84.263
101	LU012	44449	LB	10% Form	9/16/2012	28.752	-84.263
101	LU012	44450	NN	95% ETOH	9/16/2012	28.750	-84.257
102	B136	44451	RB	95% ETOH	9/16/2012	28.538	-84.001
102	B136	44452	LB	10% Form	9/16/2012	28.538	-84.001
102	B136	44453	NN	95% ETOH	9/16/2012	28.535	-83.997
103	LU011	44454	RB	95% ETOH	9/16/2012	28.756	-83.759
103	LU011	44455	LB	10% Form	9/16/2012	28.756	-83.759
103	LU011	44456	NN	95% ETOH	9/16/2012	28.755	-83.757
104	B117	44457	RB	95% ETOH	9/16/2012	28.508	-83.505
104	B117	44458	LB	10% Form	9/16/2012	28.508	-83.505
104	B117	44459	NN	95% ETOH	9/16/2012	28.507	-83.502
105	B113	44460	RB	95% ETOH	9/16/2012	28.505	-83.079
105	B113	44461	LB	10% Form	9/16/2012	28.505	-83.079
105	B113	44462	NN	95% ETOH	9/16/2012	28.503	-83.074
106	B112	44463	RB	95% ETOH	9/16/2012	28.006	-83.016
106	B112	44464	LB	10% Form	9/16/2012	28.006	-83.016

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
106	B112	44465	NN	95% ETOH	9/16/2012	28.002	-83.014
107	B118	44466	RB	95% ETOH	9/16/2012	28.013	-83.501
107	B118	44467	LB	10% Form	9/16/2012	28.013	-83.501
107	B118	44468	NN	95% ETOH	9/16/2012	28.008	-83.503
108	LU014	44469	RB	95% ETOH	9/16/2012	28.252	-83.749
108	LU014	44470	LB	10% Form	9/16/2012	28.252	-83.749
108	LU014	44471	NN	95% ETOH	9/16/2012	28.248	-83.748
109	B135	44472	RB	95% ETOH	9/17/2012	28.008	-84.008
109	B135	44473	LB	10% Form	9/17/2012	28.008	-84.008
109	B135	44474	NN	95% ETOH	9/17/2012	28.006	-84.004
110	LU013	44475	RB	95% ETOH	9/17/2012	28.258	-84.251
110	LU013	44476	LB	10% Form	9/17/2012	28.258	-84.251
110	LU013	44477	NN	95% ETOH	9/17/2012	28.253	-84.248
111	B143	44478	RB	95% ETOH	9/17/2012	28.013	-84.503
111	B143	44479	LB	10% Form	9/17/2012	28.013	-84.503
111	B143	44480	NN	95% ETOH	9/17/2012	28.008	-84.501
112	B153	44481	RB	95% ETOH	9/17/2012	28.002	-85.004
112	B153	44482	LB	10% Form	9/17/2012	28.002	-85.004
112	B153	44483	NN	95% ETOH	9/17/2012	27.995	-85.003
113	B144	44484	RB	95% ETOH	9/17/2012	27.514	-84.501
113	B144	44485	LB	10% Form	9/17/2012	27.514	-84.501
113	B144	44486	NN	95% ETOH	9/17/2012	27.509	-84.498
114	LU016	44487	RB	95% ETOH	9/17/2012	27.760	-84.250
114	LU016	44488	LB	10% Form	9/17/2012	27.760	-84.250
114	LU016	44489	NN	95% ETOH	9/17/2012	27.755	-84.250
115	B134	44490	RB	95% ETOH	9/17/2012	27.515	-83.998
115	B134	44491	LB	10% Form	9/17/2012	27.515	-83.998
115	B134	44492	NN	95% ETOH	9/17/2012	27.510	-84.000
115	B134	44493	MOC 0	10% Form	9/17/2012	27.499	-84.005
115	B134	44494	MOC 1	95% ETOH	9/17/2012	27.499	-84.005
115	B134	44495	MOC 2	95% ETOH	9/17/2012	27.499	-84.005
115	B134	44496	MOC 3	95% ETOH	9/17/2012	27.499	-84.005
115	B134	44497	MOC 4	95% ETOH	9/17/2012	27.499	-84.005
115	B134	44498	MOC 5	95% ETOH	9/17/2012	27.499	-84.005
115	B134	44499	MOC 6	95% ETOH	9/17/2012	27.499	-84.005
116	LU015	44500	RB	95% ETOH	9/18/2012	27.762	-83.741
116	LU015	44501	LB	10% Form	9/18/2012	27.762	-83.741
116	LU015	44502	NN	95% ETOH	9/18/2012	27.759	-83.742
117	B119	44503	RB	95% ETOH	9/18/2012	27.512	-83.492
117	B119	44504	LB	10% Form	9/18/2012	27.512	-83.492
117	B119	44505	NN	95% ETOH	9/18/2012	27.508	-83.492
118	B111	44506	RB	95% ETOH	9/18/2012	27.509	-82.992
118	B111	44507	LB	10% Form	9/18/2012	27.509	-82.992
118	B111	44508	NN	95% ETOH	9/18/2012	27.507	-82.994
119	B097	44509	RB	95% ETOH	9/18/2012	26.983	-82.532
119	B097	44510	LB	10% Form	9/18/2012	26.983	-82.532
119	B097	44511	NN	95% ETOH	9/18/2012	26.981	-82.534
120	B110	44512	RB	95% ETOH	9/18/2012	27.004	-82.983
120	B110	44513	LB	10% Form	9/18/2012	27.004	-82.983

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
120	B110	44514	NN	95% ETOH	9/18/2012	27.004	-82.996
121	B120	44515	RB	95% ETOH	9/18/2012	26.996	-83.486
121	B120	44516	LB	10% Form	9/18/2012	26.996	-83.486
121	B120	44517	NN	95% ETOH	9/18/2012	26.996	-83.492
122	LU018	44518	RB	95% ETOH	9/19/2012	27.258	-83.742
122	LU018	44519	LB	10% Form	9/19/2012	27.258	-83.742
122	LU018	44520	NN	95% ETOH	9/19/2012	27.254	-83.743
123	B133	44521	RB	95% ETOH	9/19/2012	27.011	-83.987
123	B133	44522	LB	10% Form	9/19/2012	27.011	-83.987
123	B133	44523	NN	95% ETOH	9/19/2012	27.009	-83.991
123	B133	44524	MOC 0	10% Form	9/19/2012	27.005	-83.999
123	B133	44525	MOC 1	95% ETOH	9/19/2012	27.005	-83.999
123	B133	44526	MOC 2	95% ETOH	9/19/2012	27.005	-83.999
123	B133	44527	MOC 3	95% ETOH	9/19/2012	27.005	-83.999
123	B133	44528	MOC 4	95% ETOH	9/19/2012	27.005	-83.999
124	LU017	44529	RB	95% ETOH	9/19/2012	27.248	-84.233
124	LU017	44530	LB	10% Form	9/19/2012	27.248	-84.233
124	LU017	44531	NN	95% ETOH	9/19/2012	27.247	-84.241
125	B145	44532	RB	95% ETOH	9/19/2012	26.995	-84.485
125	B145	44533	LB	10% Form	9/19/2012	26.995	-84.485
125	B145	44534	NN	95% ETOH	9/19/2012	26.998	-84.494
126	B146	44535	RB	95% ETOH	9/19/2012	26.502	-84.486
126	B146	44536	LB	10% Form	9/19/2012	26.502	-84.486
126	B146	44537	NN	95% ETOH	9/19/2012	26.506	-84.495
127	B132	44538	RB	95% ETOH	9/19/2012	26.493	-83.990
127	B132	44539	LB	10% Form	9/19/2012	26.493	-83.990
127	B132	44540	NN	95% ETOH	9/19/2012	26.496	-83.995
127	B132	44541	MOC 0	10% Form	9/19/2012	26.497	-84.003
127	B132	44542	MOC 1	95% ETOH	9/19/2012	26.497	-84.003
127	B132	44543	MOC 2	95% ETOH	9/19/2012	26.497	-84.003
127	B132	44544	MOC 3	95% ETOH	9/19/2012	26.497	-84.003
127	B132	44545	MOC 4	95% ETOH	9/19/2012	26.497	-84.003
127	B132	44546	MOC 5	95% ETOH	9/19/2012	26.497	-84.003
127	B132	44547	MOC 6	95% ETOH	9/19/2012	26.497	-84.003
128	LU020	44548	RB	95% ETOH	9/20/2012	26.753	-83.755
128	LU020	44549	LB	10% Form	9/20/2012	26.753	-83.755
128	LU020	44550	NN	95% ETOH	9/20/2012	26.750	-83.750
129	B121	44551	RB	95% ETOH	9/20/2012	26.493	-83.508
129	B121	44552	LB	10% Form	9/20/2012	26.493	-83.508
129	B121	44553	NN	95% ETOH	9/20/2012	26.496	-83.502
130	LU019	44554	RB	95% ETOH	9/20/2012	26.756	-83.263
130	LU019	44555	LB	10% Form	9/20/2012	26.756	-83.263
130	LU019	44556	NN	95% ETOH	9/20/2012	26.754	-83.256
131	B109	44557	RB	95% ETOH	9/20/2012	26.496	-82.994
131	B109	44558	LB	10% Form	9/20/2012	26.496	-82.994
131	B109	44559	NN	95% ETOH	9/20/2012	26.497	-82.998
132	B098	44560	RB	95% ETOH	9/20/2012	26.505	-82.513
132	B098	44561	LB	10% Form	9/20/2012	26.505	-82.513

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
132	B098	44562	NN	95% ETOH	9/20/2012	26.503	-82.510
133	B096	44563	NN	95% ETOH	9/20/2012	26.000	-82.003
134	B099	44564	RB	95% ETOH	9/20/2012	25.995	-82.512
134	B099	44565	LB	10% Form	9/20/2012	25.995	-82.512
134	B099	44566	NN	95% ETOH	9/20/2012	25.996	-82.507
135	B108	44567	RB	95% ETOH	9/20/2012	26.001	-83.003
135	B108	44568	LB	10% Form	9/20/2012	26.001	-83.003
135	B108	44569	NN	95% ETOH	9/20/2012	26.003	-82.998
136	LU022	44570	RB	95% ETOH	9/21/2012	26.244	-83.259
136	LU022	44571	LB	10% Form	9/21/2012	26.244	-83.259
136	LU022	44572	NN	95% ETOH	9/21/2012	26.246	-83.255
137	B122	44573	RB	95% ETOH	9/21/2012	26.005	-83.514
137	B122	44574	LB	10% Form	9/21/2012	26.005	-83.514
137	B122	44575	NN	95% ETOH	9/21/2012	26.003	-83.509
138	LU021	44576	RB	95% ETOH	9/21/2012	26.260	-83.756
138	LU021	44577	LB	10% Form	9/21/2012	26.260	-83.756
138	LU021	44578	NN	95% ETOH	9/21/2012	26.254	-83.753
139	B131	44579	RB	95% ETOH	9/21/2012	26.011	-84.000
139	B131	44580	LB	10% Form	9/21/2012	26.011	-84.000
139	B131	44581	NN	95% ETOH	9/21/2012	26.002	-83.998
140	B147	44582	RB	95% ETOH	9/21/2012	25.990	-84.513
140	B147	44583	LB	10% Form	9/21/2012	25.990	-84.513
140	B147	44584	NN	95% ETOH	9/21/2012	25.990	-84.503
141	LU031	44585	RB	95% ETOH	9/21/2012	25.750	-84.253
141	LU031	44586	LB	10% Form	9/21/2012	25.750	-84.253
141	LU031	44587	NN	95% ETOH	9/21/2012	25.748	-84.260
142	B148	44588	RB	95% ETOH	9/21/2012	25.511	-84.509
142	B148	44589	LB	10% Form	9/21/2012	25.511	-84.509
142	B148	44590	NN	95% ETOH	9/21/2012	25.507	-84.501
143	B130	44591	RB	95% ETOH	9/22/2012	25.511	-84.011
143	B130	44592	NN	95% ETOH	9/22/2012	25.507	-84.005
144	LU032	44593	RB	95% ETOH	9/22/2012	25.758	-83.742
144	LU032	44594	LB	10% Form	9/22/2012	25.758	-83.742
144	LU032	44595	NN	95% ETOH	9/22/2012	25.761	-83.749
145	B123	44596	RB	95% ETOH	9/22/2012	25.503	-83.514
145	B123	44597	LB	10% Form	9/22/2012	25.503	-83.514
145	B123	44598	NN	95% ETOH	9/22/2012	25.500	-83.508
146	LU033	44599	RB	95% ETOH	9/22/2012	25.751	-83.256
146	LU033	44600	LB	10% Form	9/22/2012	25.751	-83.256
146	LU033	44601	NN	95% ETOH	9/22/2012	25.747	-83.253
147	B107	44602	RB	95% ETOH	9/22/2012	25.511	-83.013
147	B107	44603	LB	10% Form	9/22/2012	25.511	-83.013
147	B107	44604	NN	95% ETOH	9/22/2012	25.508	-83.009
147	B107	44605	MOC 0	10% Form	9/22/2012	25.502	-83.002
147	B107	44606	MOC 1	95% ETOH	9/22/2012	25.502	-83.002
147	B107	44607	MOC 2	95% ETOH	9/22/2012	25.502	-83.002
147	B107	44608	MOC 3	95% ETOH	9/22/2012	25.502	-83.002

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
147	B107	44609	MOC 4	95% ETOH	9/22/2012	25.502	-83.002
147	B107	44610	MOC 5	10% Form	9/22/2012	25.502	-83.002
148	LU034	44611	RB	95% ETOH	9/22/2012	25.760	-82.757
148	LU034	44612	LB	10% Form	9/22/2012	25.760	-82.757
148	LU034	44613	NN	95% ETOH	9/22/2012	25.754	-82.754
149	B100	44614	RB	95% ETOH	9/23/2012	25.504	-82.507
149	B100	44615	LB	10% Form	9/23/2012	25.504	-82.507
149	B100	44616	NN	95% ETOH	9/23/2012	25.504	-82.503
150	B095	44617	RB	95% ETOH	9/23/2012	25.498	-82.013
150	B095	44618	LB	10% Form	9/23/2012	25.498	-82.013
150	B095	44619	NN	95% ETOH	9/23/2012	25.495	-82.009
151	B096	44620	RB	95% ETOH	9/23/2012	25.479	-81.725
151	B096	44621	LB	10% Form	9/23/2012	25.479	-81.725
151	B088	44622	NN	95% ETOH	9/23/2012	25.477	-81.721
152	B089	44623	RB	95% ETOH	9/23/2012	25.009	-81.560
152	B089	44624	LB	10% Form	9/23/2012	25.009	-81.560
152	B089	44625	NN	95% ETOH	9/23/2012	25.006	-81.558
153	B094	44626	RB	95% ETOH	9/23/2012	25.000	-81.990
153	B094	44627	LB	10% Form	9/23/2012	25.000	-81.990
154	B101	44628	RB	95% ETOH	9/23/2012	24.994	-82.497
154	B101	44629	LB	10% Form	9/23/2012	24.994	-82.497
154	B101	44630	NN	95% ETOH	9/23/2012	24.989	-82.498
155	LU038	44631	RB	95% ETOH	9/23/2012	25.250	-82.766
155	LU038	44632	LB	10% Form	9/23/2012	25.250	-82.766
155	LU038	44633	NN	95% ETOH	9/23/2012	25.249	-82.760
156	B106	44634	RB	95% ETOH	9/23/2012	25.001	-83.001
156	B106	44635	LB	10% Form	9/23/2012	25.001	-83.001
156	B106	44636	NN	95% ETOH	9/23/2012	25.004	-82.994
157	LU037	44637	RB	95% ETOH	9/24/2012	25.249	-83.256
157	LU037	44638	LB	10% Form	9/24/2012	25.249	-83.256
157	LU037	44639	NN	95% ETOH	9/24/2012	25.251	-83.252
158	B124	44640	RB	95% ETOH	9/24/2012	25.000	-83.511
158	B124	44641	LB	10% Form	9/24/2012	25.000	-83.511
158	B124	44642	NN	95% ETOH	9/24/2012	24.998	-83.503
158	B124	44643	MOC 0	10% Form	9/24/2012	25.001	-83.494
158	B124	44644	MOC 1	95% ETOH	9/24/2012	25.001	-83.494
158	B124	44645	MOC 2	95% ETOH	9/24/2012	25.001	-83.494
158	B124	44646	MOC 3	95% ETOH	9/24/2012	25.001	-83.494
158	B124	44647	MOC 4	95% ETOH	9/24/2012	25.001	-83.494
158	B124	44648	MOC 5	95% ETOH	9/24/2012	25.001	-83.494
158	B124	44649	MOC 6	95% ETOH	9/24/2012	25.001	-83.494
159	LU036	44650	RB	95% ETOH	9/24/2012	25.250	-83.765
159	LU036	44651	LB	10% Form	9/24/2012	25.250	-83.765
159	LU036	44652	NN	95% ETOH	9/24/2012	25.255	-83.759
160	B129	44653	RB	95% ETOH	9/24/2012	24.997	-84.006
160	B129	44654	LB	10% Form	9/24/2012	24.997	-84.006
160	B129	44655	NN	95% ETOH	9/24/2012	25.000	-83.999
161	LU035	44656	RB	95% ETOH	9/24/2012	25.249	-84.256
161	LU035	44657	LB	10% Form	9/24/2012	25.249	-84.256

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
161	LU035	44658	NN	95% ETOH	9/24/2012	25.250	-84.247
162	B262	44659	RB	95% ETOH	9/24/2012	24.996	-84.515
162	B262	44660	LB	10% Form	9/24/2012	24.996	-84.515
162	B262	44661	NN	95% ETOH	9/24/2012	25.001	-84.508
163	B263	44662	RB	95% ETOH	9/24/2012	24.505	-84.506
163	B263	44663	LB	10% Form	9/24/2012	24.505	-84.506
163	B263	44664	NN	95% ETOH	9/24/2012	24.504	-84.496
164	B127	44665	RB	95% ETOH	9/25/2012	24.004	-84.013
164	B127	44666	LB	10% Form	9/25/2012	24.004	-84.013
164	B127	44667	NN	95% ETOH	9/25/2012	24.016	-83.998
164	B127	44668	MOC 0	10% Form	9/25/2012	24.012	-83.994
164	B127	44669	MOC 1	95% ETOH	9/25/2012	24.012	-83.994
164	B127	44670	MOC 2	95% ETOH	9/25/2012	24.012	-83.994
164	B127	44671	MOC 3	95% ETOH	9/25/2012	24.012	-83.994
164	B127	44672	MOC 4	95% ETOH	9/25/2012	24.012	-83.994
164	B127	44673	MOC 5	95% ETOH	9/25/2012	24.012	-83.994
164	B127	44674	MOC 6	95% ETOH	9/25/2012	24.012	-83.994
165	B126	44675	RB	95% ETOH	9/25/2012	23.997	-83.511
165	B126	44676	LB	10% Form	9/25/2012	23.997	-83.511
165	B126	44677	NN	95% ETOH	9/25/2012	24.002	-83.484
166	B140	44678	RB	95% ETOH	9/25/2012	24.001	-83.016
166	B140	44679	LB	10% Form	9/25/2012	24.001	-83.016
166	B140	44680	NN	95% ETOH	9/25/2012	23.996	-82.990
167	B103	44681	RB	95% ETOH	9/25/2012	24.001	-82.513
167	B103	44682	LB	10% Form	9/25/2012	24.001	-82.513
167	B103	44683	NN	95% ETOH	9/25/2012	23.997	-82.489
167	B103	44684	MOC 0	10% Form	9/25/2012	23.997	-82.487
167	B103	44685	MOC 1	95% ETOH	9/25/2012	23.997	-82.487
167	B103	44686	MOC 2	95% ETOH	9/25/2012	23.997	-82.487
167	B103	44687	MOC 3	95% ETOH	9/25/2012	23.997	-82.487
167	B103	44688	MOC 4	95% ETOH	9/25/2012	23.997	-82.487
167	B103	44689	MOC 5	95% ETOH	9/25/2012	23.997	-82.487
167	B103	44690	MOC 6	95% ETOH	9/25/2012	23.997	-82.487
168	B125	44691	RB	95% ETOH	9/26/2012	24.501	-83.487
168	B125	44692	LB	10% Form	9/26/2012	24.501	-83.487
168	B125	44693	NN	95% ETOH	9/26/2012	24.503	-83.494
168	B125	44694	MOC 0	10% Form	9/26/2012	24.503	-83.493
168	B125	44695	MOC 1	95% ETOH	9/26/2012	24.503	-83.493
168	B125	44696	MOC 2	95% ETOH	9/26/2012	24.503	-83.493
168	B125	44697	MOC 3	95% ETOH	9/26/2012	24.503	-83.493
168	B125	44698	MOC 4	95% ETOH	9/26/2012	24.503	-83.493
168	B125	44699	MOC 5	95% ETOH	9/26/2012	24.503	-83.493
168	B125	44700	MOC 6	95% ETOH	9/26/2012	24.503	-83.493
169	B128	44701	RB	95% ETOH	9/26/2012	24.510	-84.010
169	B128	44702	LB	10% Form	9/26/2012	24.510	-84.010
169	B128	44703	NN	95% ETOH	9/26/2012	24.509	-84.002
170	LU039	44704	RB	95% ETOH	9/26/2012	24.760	-83.761
170	LU039	44705	LB	10% Form	9/26/2012	24.760	-83.761
170	LU039	44706	NN	95% ETOH	9/26/2012	24.757	-83.757

Table 3 continued.

PASC	SEAMAP	SAMPLE	GEAR	PRESERVATIVE	DATE	LAT	LON
171	LU017	44707	RB	95% ETOH	9/27/2012	27.241	-84.253
171	LU017	44708	LB	10% Form	9/27/2012	27.241	-84.253
171	LU017	44709	NN	95% ETOH	9/27/2012	27.240	-84.244
172	B173	44710	RB	95% ETOH	9/28/2012	29.990	-87.500
172	B173	44711	LB	10% Form	9/28/2012	29.990	-87.500
172	B173	44712	NN	10% Form	9/28/2012	29.985	-87.500
173	B321	44713	RB	95% ETOH	9/28/2012	30.235	-87.493
173	B321	44714	LB	10% Form	9/28/2012	30.235	-87.493
173	B321	44715	NN	95% ETOH	9/28/2012	30.235	-87.496

Table 4. Summary of average chlorophyll *a* measurements at 3 depths (surface, chlorophyll maximum, and bottom) for each station during the 2012 Fall SEAMAP Plankton Survey conducted aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68), 22 August – 28 September 2012. P-Sta # = Pascagoula station number; Depth = Sample depth (m); D-Code = Sample location (m) in water column (S = Surface, C-Max = Chlorophyll maximum, B = Bottom); Chl-a = Chlorophyll *a* measurement (µg/L)

P-Sta #	DEPTH	D-Code	Chl-a
001	2.46	S	0.11
001	63.22	C-MAX	0.80
001	199.84	MAX-D	0.01
002	2.81	S	0.18
002	58.87	MAX-D	0.72
003	3.09	S	0.26
003	25.34	MAX-D	0.90
004	1.94	S	0.30
004	33.32	MAX-D	3.42
005	4.32	S	0.17
005	88.34	MAX-D	1.10
006	3.08	S	0.19
006	85.25	C-MAX	0.33
006	200.85	MAX-D	0.10
007	2.6	S	0.08
007	83.44	C-MAX	0.67
007	202.72	MAX-D	0.02
008	3.24	S	0.15
008	84.12	MAX-D	1.29
009	2.19	S	0.36
009	19.99	MAX-D	0.66
011	2.03	S	0.22
011	74.15	MAX-D	2.78
012	2.27	S	0.17
012	67.69	MAX-D	4.33
013	2.61	S	0.19
013	26.88	MAX-D	0.99
014	2.19	S	4.64
014	14.04	MAX-D	4.23
015	2.27	S	1.98
015	12.56	MAX-D	2.08
016	2.55	S	0.40
016	29.61	MAX-D	0.96
017	42.56	MAX-D	2.61
018	2.67	S	0.22
018	70.73	MAX-D	2.15
019	2.33	S	0.31
019	169.41	MAX-D	0.06

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
020	2.46	S	0.12
020	95.94	C-MAX	0.63
020	203.15	MAX-D	0.01
021	2.34	S	0.08
021	70.4	C-MAX	0.90
021	104.96	MAX-D	0.40
022	2.6	S	0.12
022	53.46	MAX-D	1.37
023	2.82	S	1.39
023	23.79	MAX-D	2.76
024	2.55	S	0.00
024	15.06	MAX-D	8.60
025	1.97	S	0.50
025	21.14	MAX-D	2.15
026	2.6	S	0.31
026	30.63	MAX-D	1.27
027	2.74	S	0.13
027	46.78	MAX-D	2.72
028	2.69	S	0.15
028	81.04	MAX-D	1.30
029	2.57	S	0.18
029	72.33	C-MAX	0.47
029	201.9	MAX-D	0.01
030	3.01	S	0.29
030	70.53	C-MAX	0.84
030	199.88	MAX-D	0.02
031	2.92	S	0.20
031	64.57	C-MAX	3.14
031	71.34	MAX-D	2.32
032	1.83	S	0.20
032	35.09	MAX-D	2.30
033	2.51	S	1.75
033	14.09	MAX-D	1.97
034	1.77	S	5.01
034	8.21	MAX-D	6.07
035	2.18	S	4.90
035	9.55	MAX-D	5.33
036	2.8	S	1.50
036	18.74	MAX-D	1.64
037	2.95	S	0.22
037	39.85	MAX-D	5.22
038	2.3	S	0.29
038	60.35	C-MAX	1.07
038	78.34	MAX-D	0.72
039	3.09	S	0.18
039	84.31	C-MAX	0.75

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
039	196.5	MAX-D	0.02
040	3.01	S	0.27
040	57.93	C-MAX	0.87
040	83.95	MAX-D	0.35
041	2.9	S	0.25
041	41.28	MAX-D	2.33
042	2.77	S	2.18
042	21.76	MAX-D	2.65
043	2.03	S	6.88
043	9.32	MAX-D	5.02
044	3.05	S	11.48
044	11.66	MAX-D	8.42
045	3.26	S	1.65
045	20.89	MAX-D	2.26
046	3.37	S	0.33
046	45.7	MAX-D	3.40
047	2.33	S	0.37
047	55.5	C-MAX	1.20
047	104.87	MAX-D	0.40
048	2.11	S	0.18
048	88.28	C-MAX	1.03
048	200.38	MAX-D	0.04
049	2.06	S	0.39
049	53.3	C-MAX	1.18
049	106.7	MAX-D	0.37
050	2.27	S	0.25
050	49.22	MAX-D	3.44
051	2.27	S	0.85
051	24.53	MAX-D	2.93
052	1.71	S	5.52
052	9.06	MAX-D	5.90
053	2.54	S	1.33
053	18.09	MAX-D	6.10
054	1.66	S	0.37
054	41.98	C-MAX	5.67
054	49.52	MAX-D	4.29
055	2.07	S	0.85
055	39.48	C-MAX	1.38
055	120.57	MAX-D	0.26
056	2.08	S	0.40
056	76.26	C-MAX	0.76
056	201.59	MAX-D	0.02
057	2.08	S	0.61
057	43.74	C-MAX	1.13
057	150.53	MAX-D	0.23
058	1.61	S	0.39

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
058	42.04	MAX-D	3.13
059	2.1	S	5.95
059	9.14	MAX-D	6.17
060	2.17	S	6.13
060	6.83	C-MAX	8.87
060	14.34	MAX-D	4.26
061	2.35	S	0.58
061	32.54	MAX-D	11.07
062	2.19	S	0.88
062	153.18	MAX-D	0.14
063	1.97	S	0.43
063	76.24	C-MAX	0.82
063	199.18	MAX-D	0.09
064	2.34	S	0.86
064	25.56	C-MAX	3.30
064	141.83	MAX-D	0.18
065	2.31	S	0.84
065	21.7	C-MAX	2.34
065	35.73	MAX-D	1.58
066	2.64	S	12.72
066	13.39	MAX-D	2.31
067	2.45	S	1.21
067	12.65	C-MAX	3.32
067	88.38	MAX-D	0.54
068	2.37	S	0.89
068	15.77	C-MAX	2.77
068	195.95	MAX-D	0.10
069	2.17	S	3.55
069	202.36	MAX-D	0.05
070	1.43	S	6.07
070	194.8	MAX-D	0.04
075	2.43	S	0.41
075	53.23	C-MAX	1.25
075	71.12	MAX-D	0.60
076	3.69	S	0.41
076	69.26	C-MAX	1.24
076	190.13	MAX-D	0.04
077	2.08	S	0.61
077	39.21	C-MAX	2.28
077	72.28	MAX-D	0.45
079	2.59	S	1.79
079	23.27	MAX-D	3.69
080	2.24	S	0.39
080	61.19	MAX-D	2.08
081	2.77	S	0.51
081	48.81	C-MAX	1.91

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
081	201.08	MAX-D	0.03
082	2.91	S	0.65
082	38.19	C-MAX	1.15
082	195.15	MAX-D	0.04
083	2.59	S	0.81
083	34.94	C-MAX	1.29
083	56.59	MAX-D	0.84
084	2.45	S	1.68
084	30.57	MAX-D	2.25
085	2.05	S	3.73
085	19.65	MAX-D	6.30
086	2.93	S	2.51
086	13.07	MAX-D	2.78
087	2.89	S	4.57
087	11.97	MAX-D	3.93
088	2.37	S	2.47
088	22.66	MAX-D	2.70
089	2.84	S	3.52
089	10.59	MAX-D	3.53
090	1.94	S	2.48
090	20.13	MAX-D	2.40
091	2.08	S	9.93
091	10.53	MAX-D	5.60
092	2.5	S	1.69
092	10.32	MAX-D	1.85
093	2.5	S	1.53
093	15.05	MAX-D	1.75
094	2.16	S	0.94
094	28.91	MAX-D	0.99
095	3.05	S	0.36
095	32.07	MAX-D	3.09
096	2.33	S	0.55
096	38.36	MAX-D	1.71
097	2.59	S	0.26
097	72.76	MAX-D	0.70
098	2.84	S	0.33
098	179.48	MAX-D	0.05
099	1.98	S	0.26
099	77.27	C-MAX	1.13
099	100.16	MAX-D	0.50
100	2.09	S	0.38
100	47.89	MAX-D	2.07
101	2.17	S	0.30
101	35.75	MAX-D	1.26
102	2.68	S	0.54
102	30.95	MAX-D	1.48

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
103	2.15	S	1.00
103	21.37	MAX-D	1.02
104	2.18	S	1.05
104	21.03	MAX-D	1.06
105	2.32	S	1.41
105	10.55	MAX-D	1.89
106	1.86	S	2.09
106	11.04	MAX-D	2.61
107	2.37	S	0.69
107	27.48	MAX-D	0.98
108	2.54	S	0.46
108	33.15	MAX-D	1.87
109	2.87	S	0.32
109	47.41	MAX-D	1.03
110	2.32	S	0.51
110	47.74	MAX-D	1.82
111	2.31	S	0.24
111	77.28	MAX-D	0.77
112	4.18	S	0.30
112	87.74	C-MAX	0.66
112	201.75	MAX-D	0.02
113	2.58	S	0.30
113	83.28	C-MAX	0.68
113	132.22	MAX-D	0.18
114	2.44	S	0.30
114	61.55	MAX-D	1.31
115	2.65	S	0.33
115	60.43	MAX-D	1.34
116	1.88	S	0.35
116	43.58	MAX-D	1.49
117	2.75	S	0.41
117	41.08	MAX-D	1.45
118	3.02	S	1.97
118	16.46	MAX-D	2.01
119	3.11	S	1.47
119	12.89	MAX-D	1.76
120	1.9	S	0.92
120	32.54	MAX-D	2.02
121	2.04	S	0.38
121	50.94	MAX-D	1.36
122	3.57	S	0.36
122	52.29	MAX-D	1.02
123	2.51	S	0.39
125	2.19	S	0.33
125	69.51	C-MAX	0.81
125	179.03	MAX-D	0.03

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
126	1.58	S	0.35
126	83.08	C-MAX	0.69
126	200.88	MAX-D	0.02
127	2.02	S	0.44
127	71.95	C-MAX	1.14
127	125.32	MAX-D	0.24
128	1.63	S	0.30
128	71.95	MAX-D	0.85
129	1.66	S	0.31
129	57.18	MAX-D	1.01
130	2.04	S	0.26
130	45.81	MAX-D	1.10
131	1.35	S	0.18
131	39.03	MAX-D	1.10
132	1.5	S	0.56
132	18.13	MAX-D	3.51
133	2.29	S	8.28
133	11.42	MAX-D	10.95
134	1.91	S	0.78
134	28.08	MAX-D	2.40
135	2.49	S	0.26
135	45.08	MAX-D	1.70
136	2.19	S	0.26
136	52.66	MAX-D	1.74
137	2.02	S	0.27
137	62.75	MAX-D	1.23
138	1.9	S	0.22
138	76.62	MAX-D	0.36
139	2.31	S	0.27
139	69.51	C-MAX	0.80
139	138.55	MAX-D	0.07
140	2.5	S	0.33
140	68.86	C-MAX	0.74
140	200.05	MAX-D	0.02
141	2.04	S	0.29
141	56.09	C-MAX	1.10
141	163.65	MAX-D	0.04
142	2	S	0.31
142	39.11	C-MAX	1.83
142	199.09	MAX-D	0.05
143	2.28	S	0.27
143	49.62	C-MAX	1.42
143	139.84	MAX-D	0.09
144	2.74	S	0.20
144	66.4	C-MAX	0.90
144	95.82	MAX-D	0.38

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
145	2.8	S	0.26
145	71.52	MAX-D	1.14
146	2.54	S	0.30
146	57.25	MAX-D	0.98
147	2.97	S	0.30
147	52.17	MAX-D	1.03
148	2.3	S	0.30
148	37.19	MAX-D	1.59
149	2.12	S	0.44
149	31.48	MAX-D	1.96
150	1.8	S	1.18
150	17.98	MAX-D	1.16
151	1.68	S	1.84
151	10.02	MAX-D	2.00
152	1.65	S	2.42
152	10.51	MAX-D	2.61
153	1.98	S	0.91
153	20.56	MAX-D	1.91
154	1.77	S	0.46
154	30.7	MAX-D	1.60
155	2	S	0.31
155	41.11	MAX-D	2.28
156	2.68	S	0.39
156	40.18	C-MAX	1.51
156	50.38	MAX-D	1.32
157	2.38	S	0.31
157	61.3	MAX-D	1.29
158	2.41	S	0.30
158	50.83	C-MAX	2.97
158	70.44	MAX-D	1.07
159	2.8	S	0.28
159	98.67	MAX-D	1.62
160	2.65	S	0.30
160	123.81	MAX-D	0.05
161	2.27	S	0.32
161	46.58	C-MAX	1.47
161	157.34	MAX-D	0.08
162	2.82	S	0.53
162	199.85	MAX-D	0.02
163	2.56	S	0.50
163	201.44	MAX-D	0.02
164	3.5	S	0.38
164	31.42	C-MAX	1.12
164	202.12	MAX-D	0.02
165	2.52	S	0.01
165	73.1	C-MAX	0.89

Table 4 continued.

P-Sta #	DEPTH	D-Code	Chl-a
165	200.93	MAX-D	0.23
166	1.55	S	0.25
166	199.96	MAX-D	0.01
167	1.91	S	0.23
167	205	MAX-D	0.01
168	1.66	S	0.69
168	37.98	C-MAX	0.98
168	200.59	MAX-D	0.04
169	3.04	S	0.49
169	42.95	C-MAX	1.06
169	199.63	MAX-D	0.01
170	2.55	S	0.65
170	74.6	MAX-D	0.36
171	2.33	S	0.20
171	62.65	C-MAX	1.28
171	108.35	MAX-D	0.22

Figure 1. Plankton stations completed during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012. An open box represents stations where a bongo, neuston, and CTD were completed. Closed squares represent stations that were sampled with a bongo, neuston, and CTD for spatial variability analysis (LU stations).

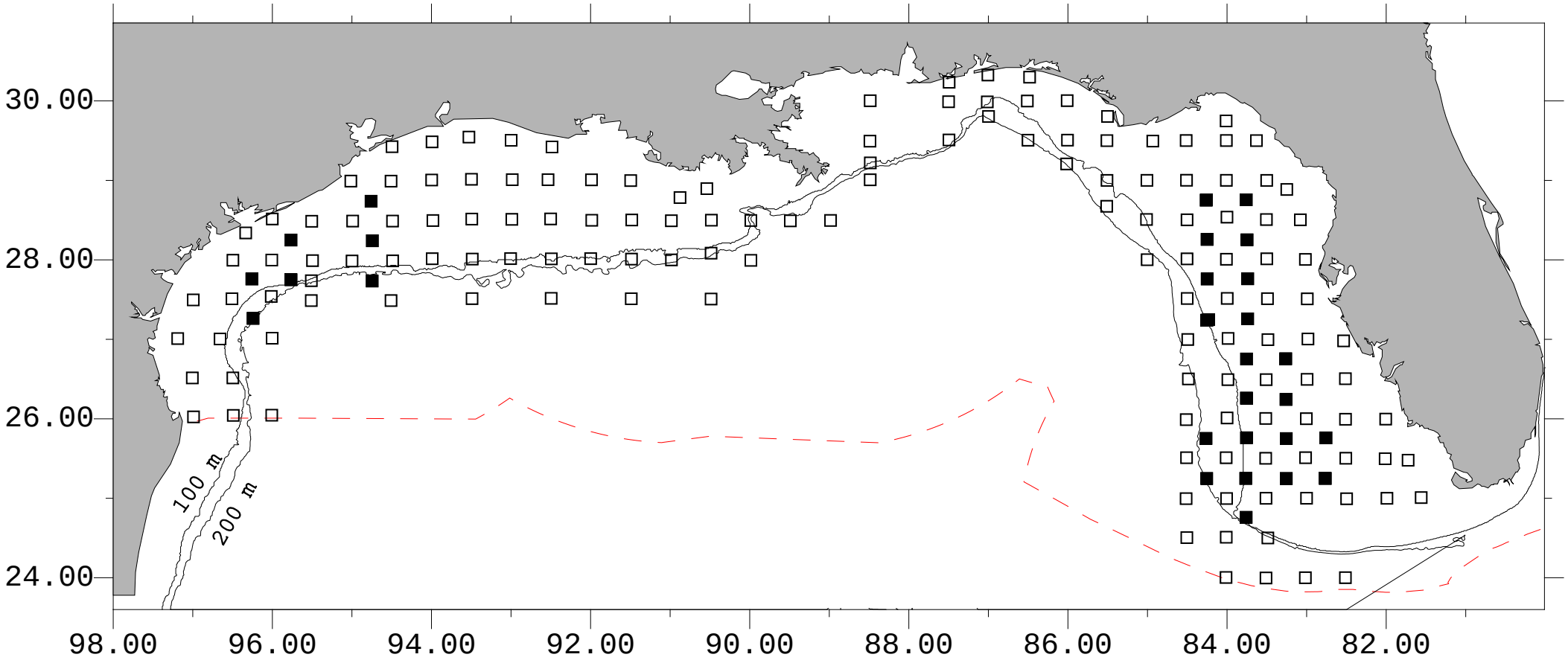


Figure 2. Location of stations where MOCNESS samples were collected during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012.

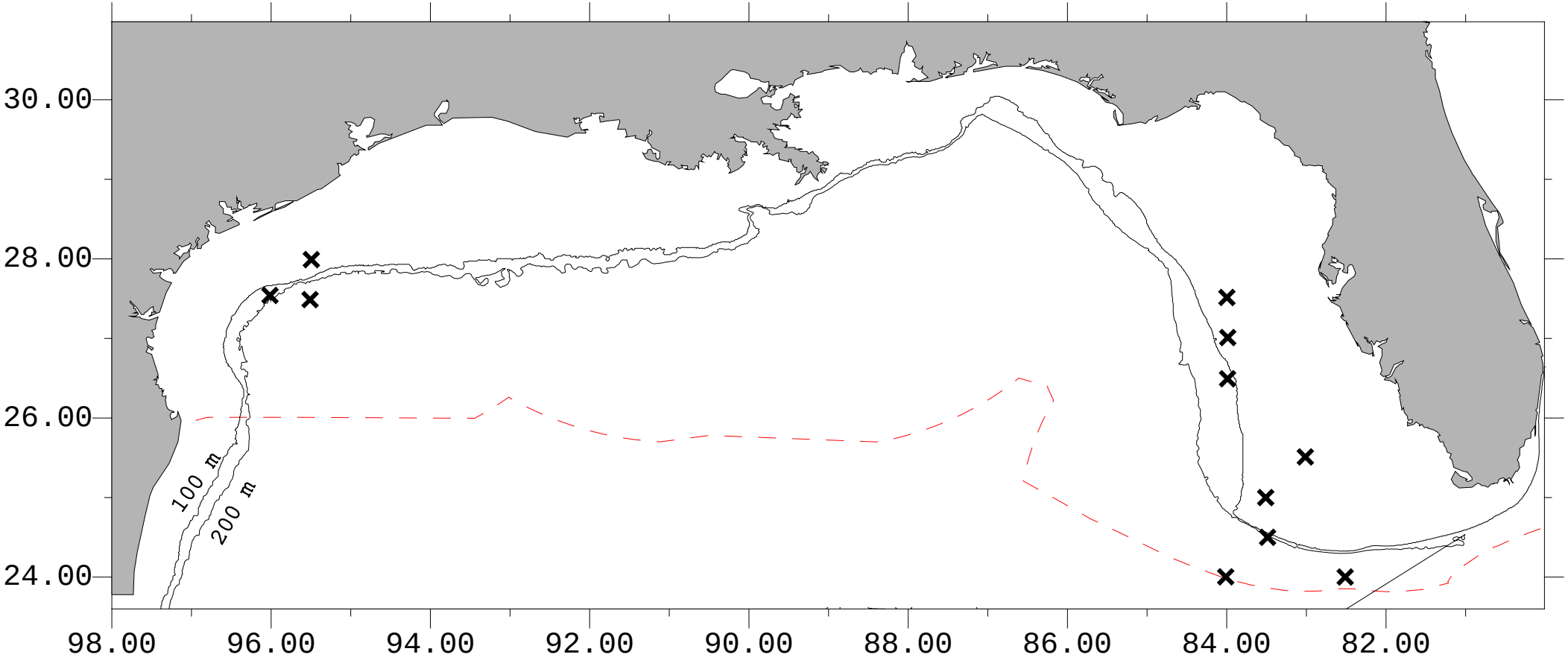


Figure 3. Location of stations where state and Federal agencies collected samples with bongo and neuston gear at standard SEAMAP locations. Samples were collected aboard several vessels (LA = R/V *Pelican*, MS = R/V *Tommy Munro*, AL = R/V *Discovery*, NOAA = NOAA Ship *Gordon Gunter*) from 22 August – 28 September 2012. Stations sampled by the state of Louisiana are represented with an '**L**', state of Mississippi with an '**M**', and Alabama with an '**A**'. Stations sampled by NOAA are represented by an open circle. Several stations were sampled by both NOAA and a state agency. Those stations are represented by the corresponding state code within an open circle. One station, represented by a closed square, was sampled by both the state of Mississippi and Alabama.

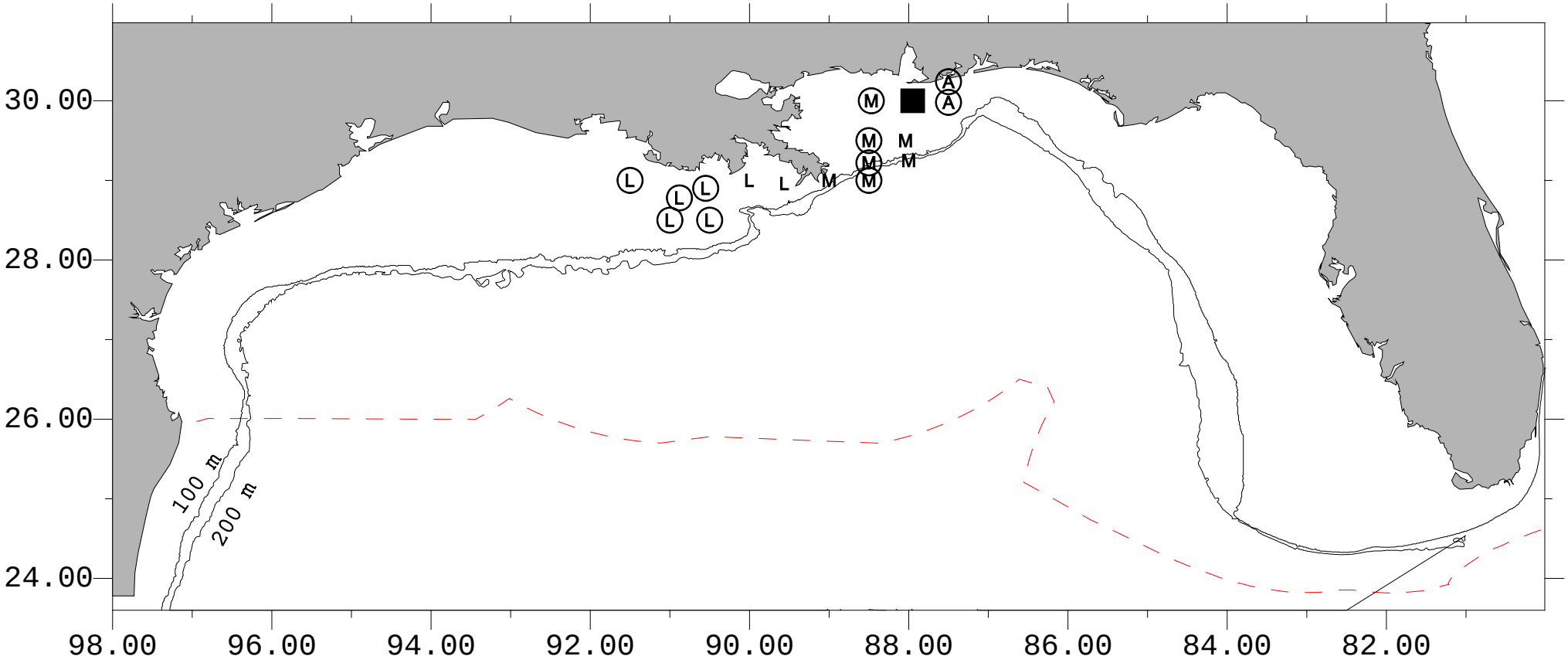


Figure 4. Locations of CUFES samples taken during the SEAMAP Fall Plankton Survey conducted aboard the NOAA Ship *Gordon Gunter*, GU-12-03 (68), 22 August – 28 September 2012.

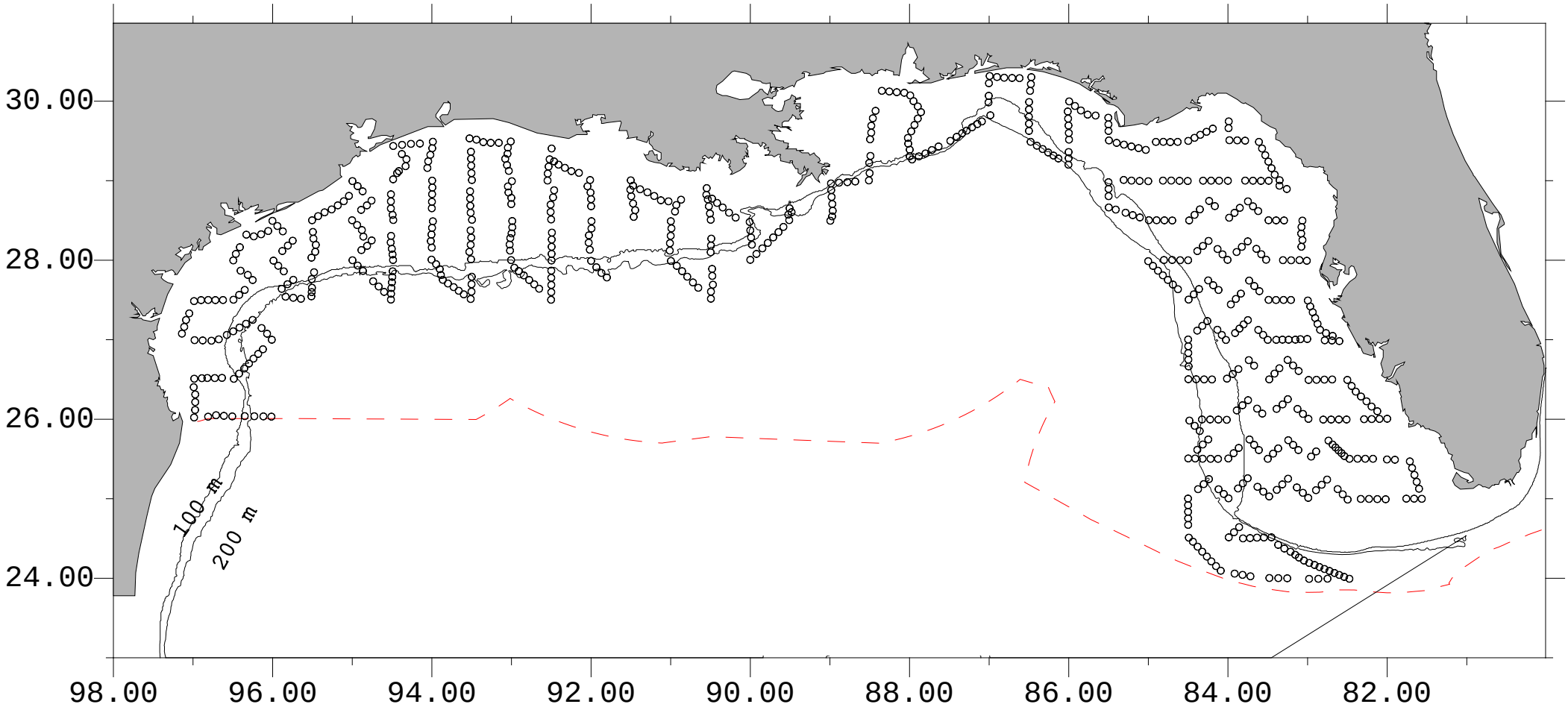


Figure 5. Locations of *Sargassum* samples collected during the SEAMAP Fall Plankton Survey conducted aboard the NOAA Ship *Gordon Gunter*, GU-12-03 (68), 22 August – 28 September 2012.

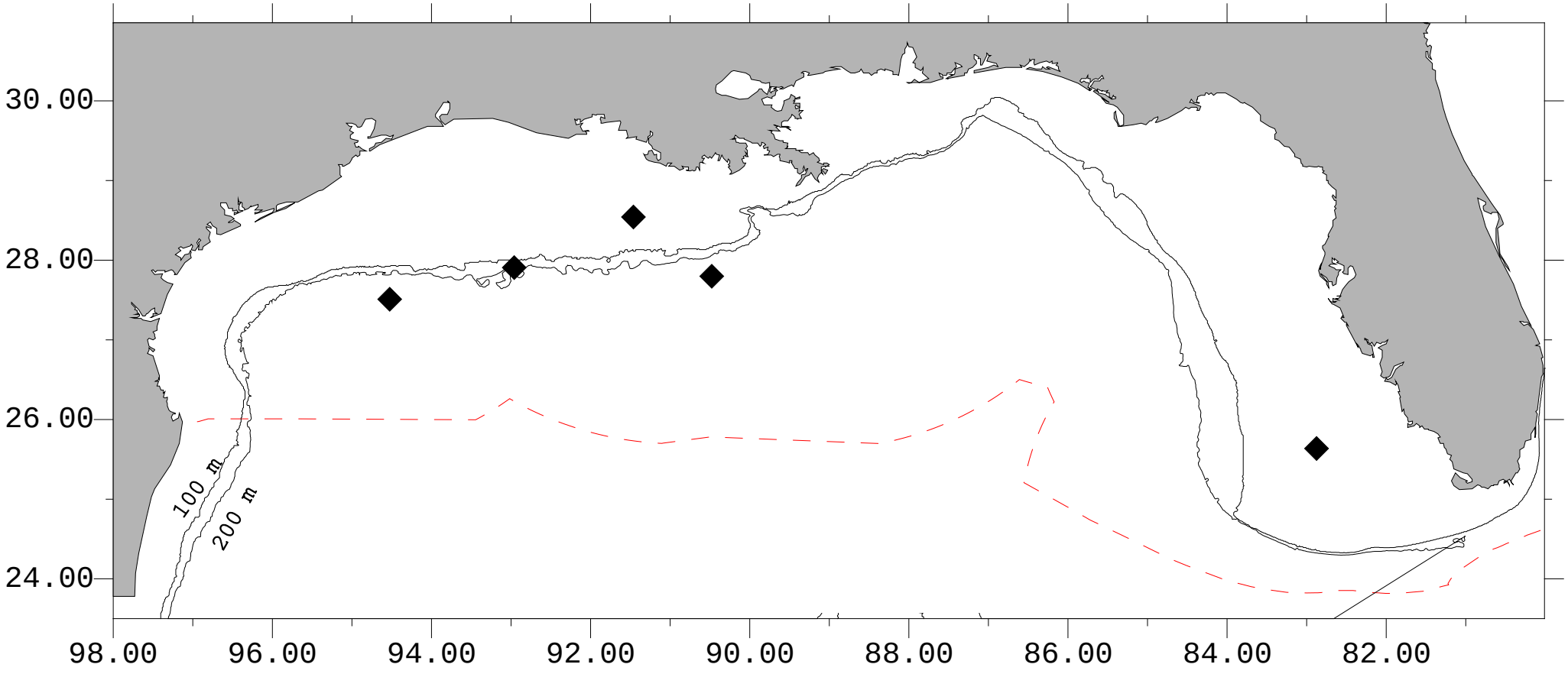


Figure 6. Sea temperature (º C) near the surface (≤ 5 m depth) at plankton stations during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012.

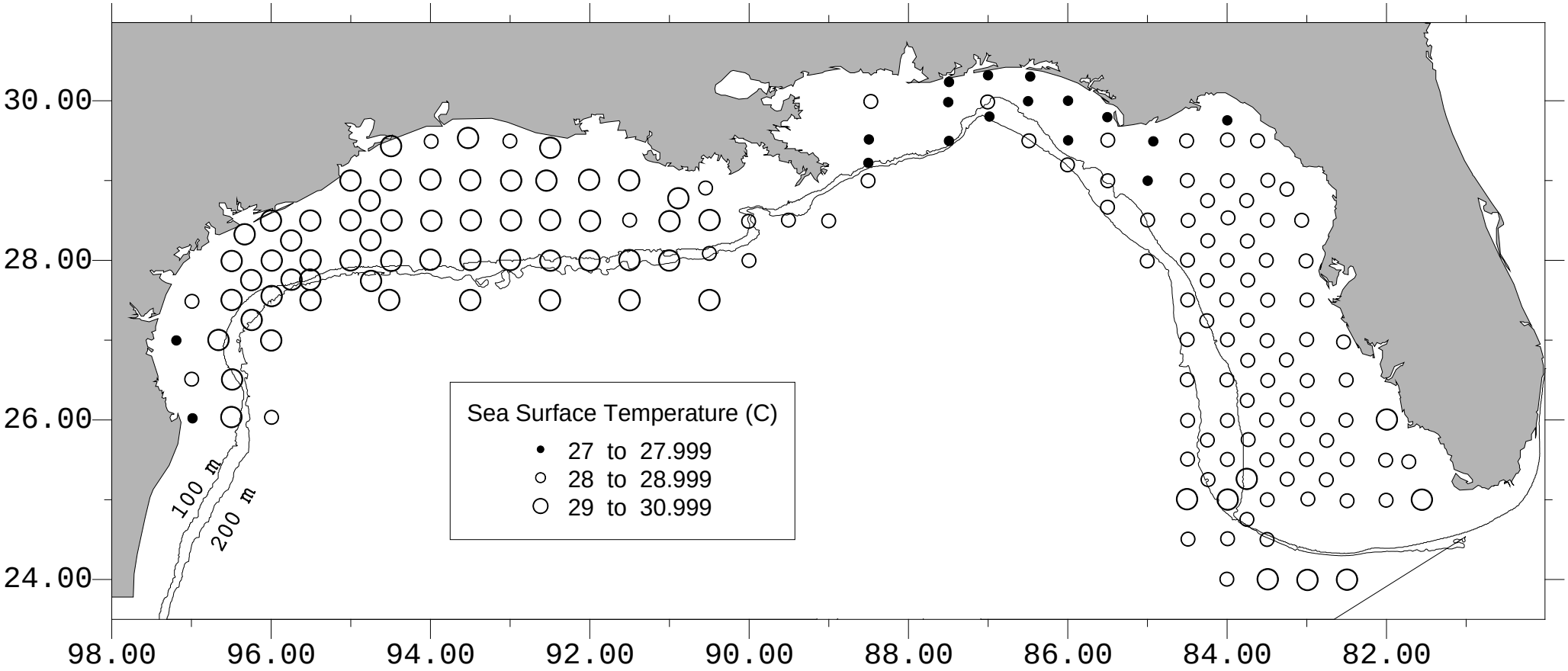


Figure 7. Dissolved oxygen (mg/L) near the surface (≤ 5 m depth) at plankton stations during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012.

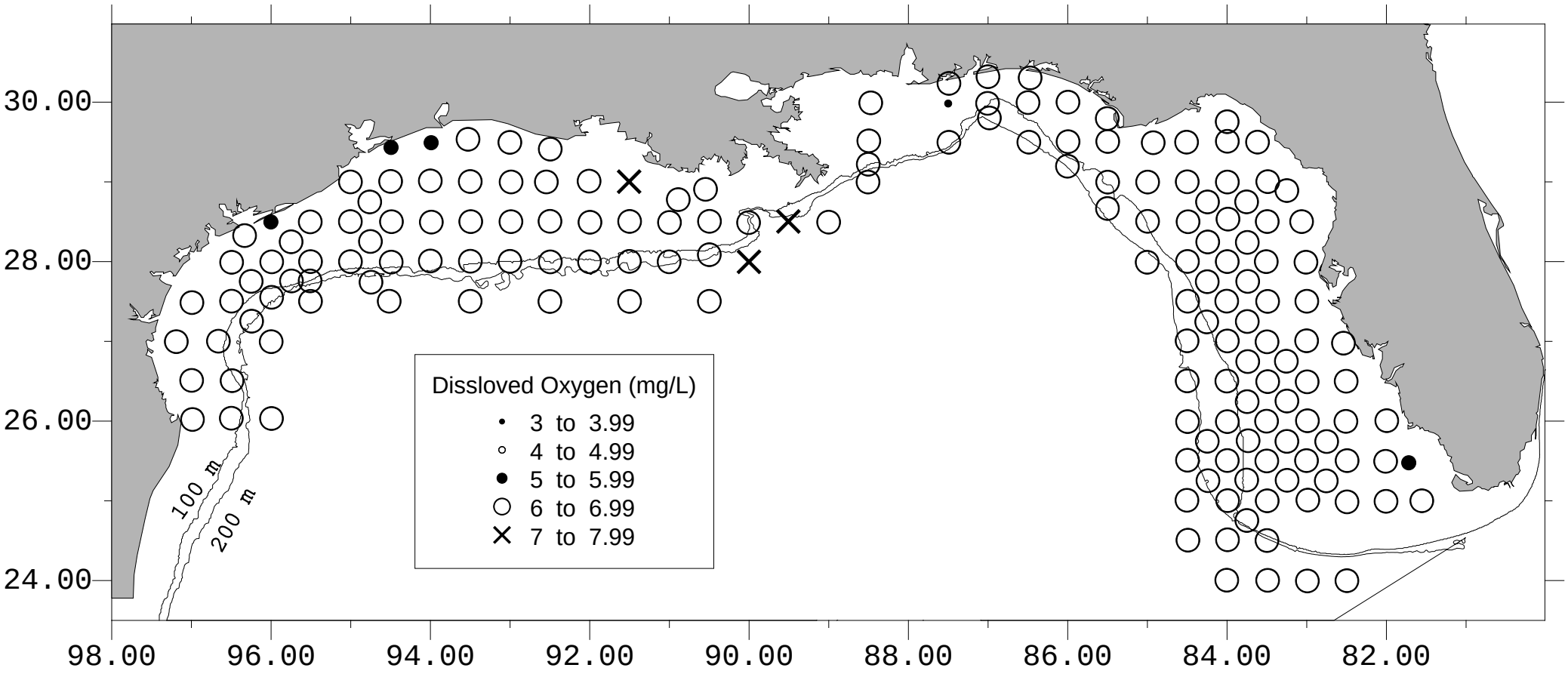


Figure 8. Salinity (PSU) near the surface (≤ 5 m depth) at plankton stations during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012.

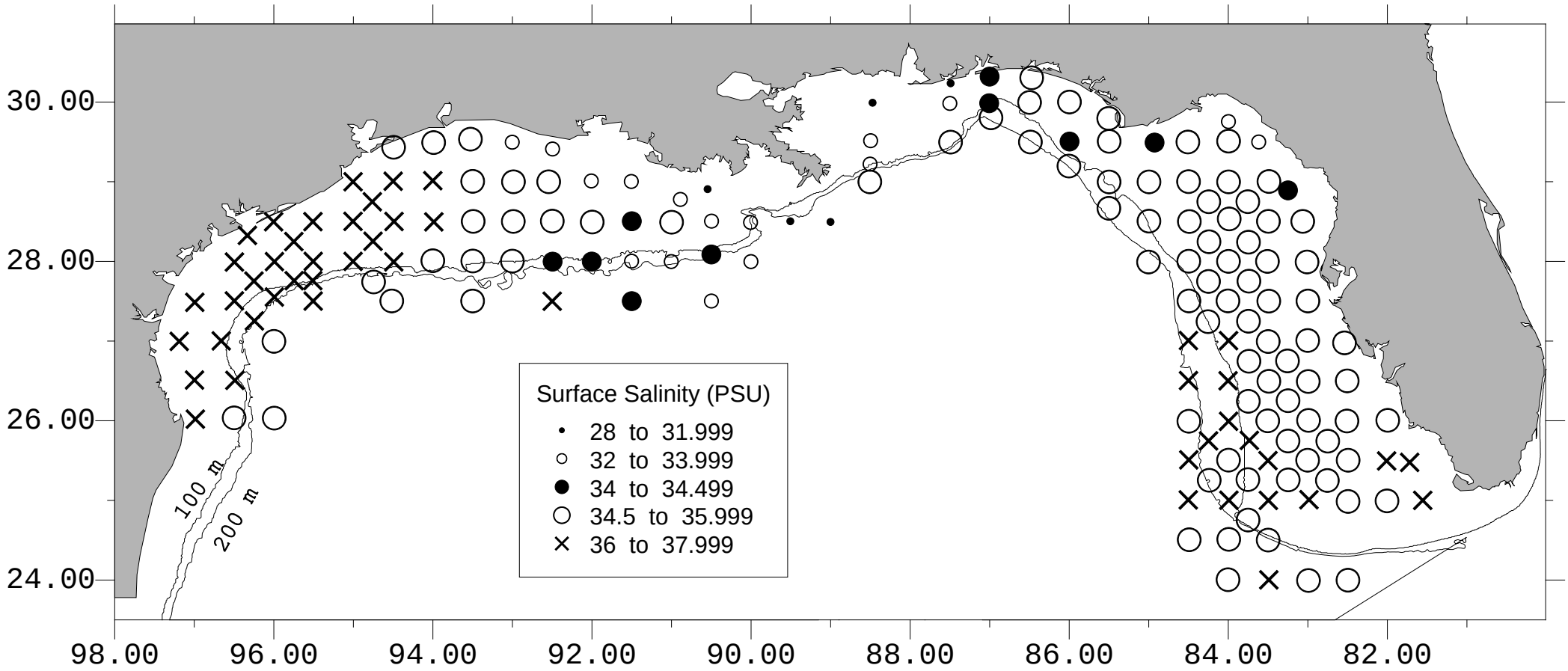
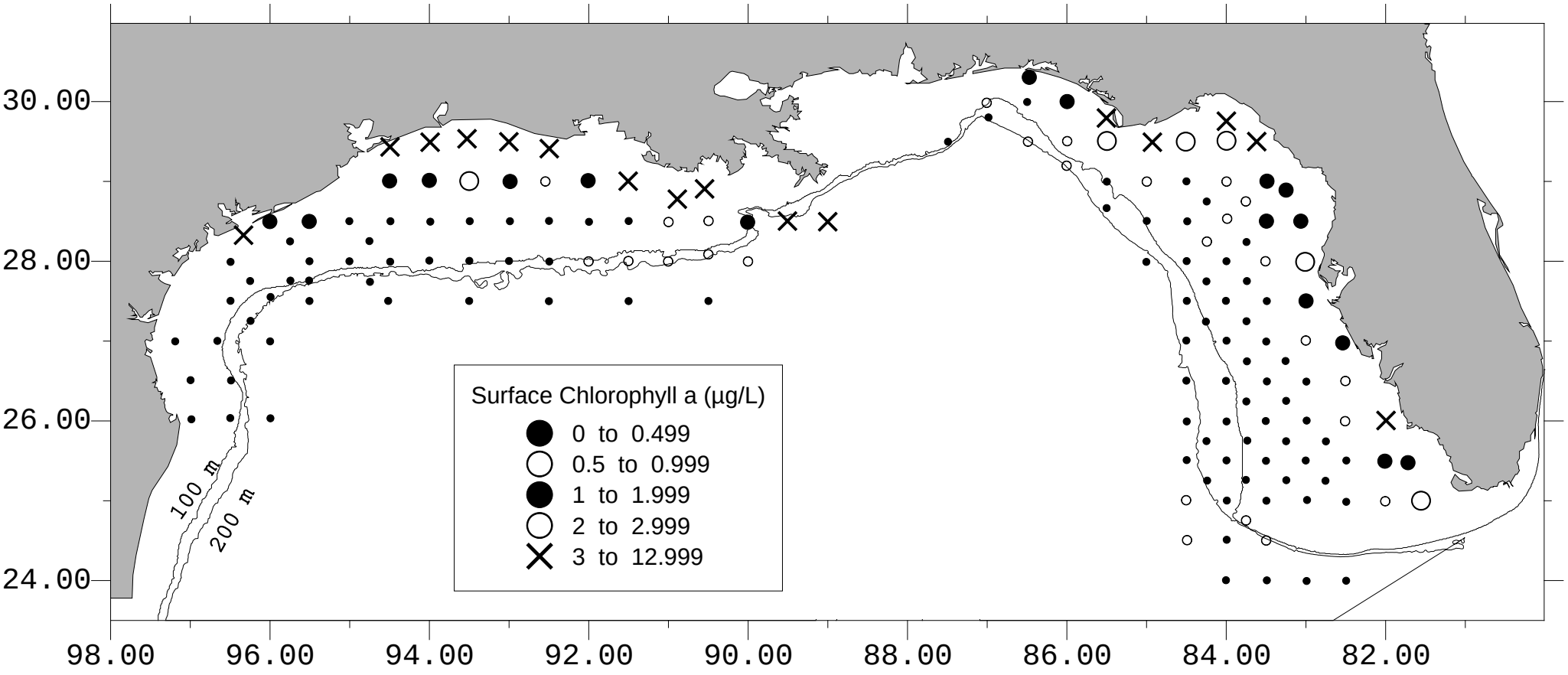



Table 9. Chlorophyll *a* concentrations (µg/L) near the surface (≤ 5 m depth) at plankton stations during the SEAMAP Fall Plankton Survey aboard the NOAA Ship *Gordon Gunter*, cruise GU-12-03 (68) 22 August – 28 September 2012.