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U. S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
3209 Frederci St.
Pascagoula, MS 39564

Cruise Report

Date Submitted: 12/04/2023

Platform: NOAA Ship OREGON II

Cruise Number: R2-23-01 (347)

Project Title: SEAMAP Spring Ichthyoplankton

Cruise Dates: 05/03/2023 - 05/27/2023

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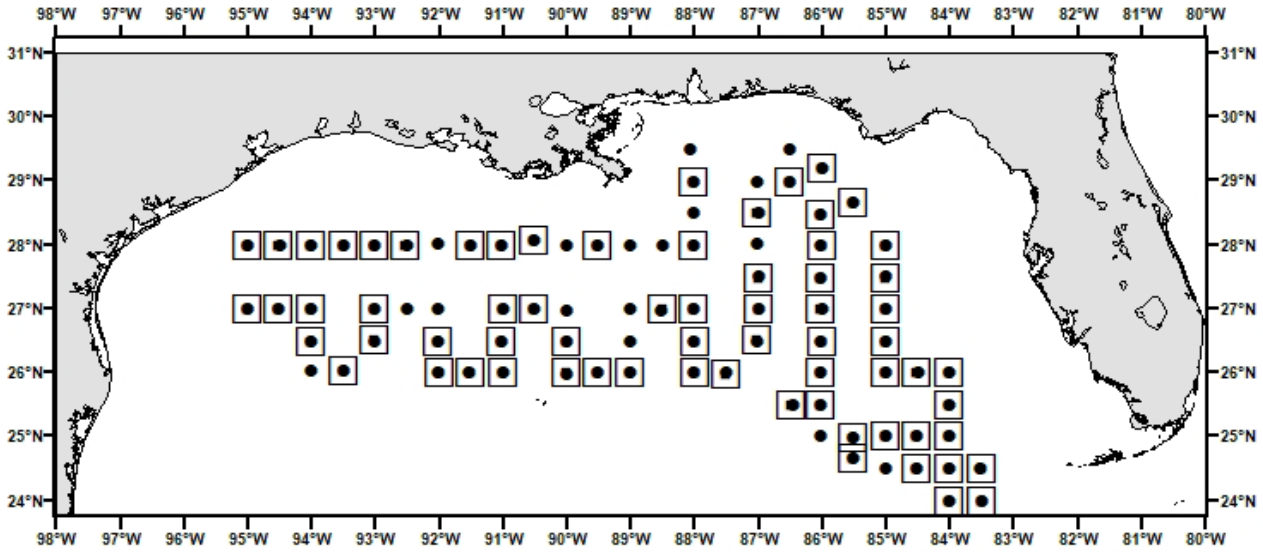
CRUISE RESULTS

Southeast Area Monitoring and Assessment Program (SEAMAP) 2023 Spring Plankton Survey

NOAA Ship *Oregon II* Cruise R2-23-01 (347)
May 3 - May 27, 2023



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National Oceanic and Atmospheric Administration (NOAA) Ship *Oregon II* departed Pascagoula, MS on 3 May 2023 to initiate the Southeast Area Monitoring and Assessment Program (SEAMAP) Spring Ichthyoplankton Survey in the 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 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, specifically targeting larval Atlantic bluefin tuna (*Thunnus thynnus*). A total of 23 successful sea days were worked over two legs during the cruise: Leg I, May 3 - 10; Leg II, May 12 – 27.

The original departure date was 26 April 2023, but due to ship personnel issues the ship could not depart until May 3, 2023. The objective of the first leg was to sample as many stations in the eastern Gulf of Mexico as possible before returning back to port on 10 May 2023. Due to the personnel issue, the ship was not able to perform certain at-sea Operation Readiness Trial (ORT) requirements prior to departure. Therefore, 24 hours were needed after departure to perform the tasks prior to any plankton sampling. On the way to conduct ORT requirements, two wooden drifters were deployed as part of a NOAA Fisheries turtle drift study. Plankton sampling started on May 4 and the ship returned back to Pascagoula on May 10.

Due to the 7-day delay on Leg I, the commanding officer reduced the in-port time between the survey legs by one day and Leg II departed May 12. Sampling began on May 13, but on May 15 an issue arose with one of the ship's generators and the ship had to return to port in Pascagoula. The ship arrived on May 16, repairs were made at the dock, and the ship departed on May 17 to finish up the survey. The ship completed the survey and returned to the dock on May 27 with 85 of the planned 97 stations.

OBJECTIVES

1. Assess the occurrence, abundance and geographical distribution of the early life stages of spring spawning fishes, especially Atlantic bluefin tuna, from mid-continental shelf to deep GOM waters using a bongo frame fitted with 0.335 mm nets, a neuston frame fitted with a 0.950 mm net, and a second bongo frame fitted with two 0.505 mm nets at selected SEAMAP stations in support of annual stock assessments.

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.

3. Collect detailed observations (i.e. identification, number, volume, bell diameter) of net-caught jellyfish and ctenophores.

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

SURVEY RESULTS
Ichthyoplankton Data

Survey Design

A predefined cruise track of 97 standard Spring SEAMAP stations, approximately 30 nm apart in a systematic grid, were targeted. Standard SEAMAP plankton gear used at each station consisted of a bongo net, a neuston net, a shallow bongo net, and a CTD. Originally MOCNESS tows were scheduled to be conducted during the Leg II of the survey, however, due to the shortened Leg 1, it was decided that the MOCNESS tows had to be dropped in order to insure spatial coverage of the survey.

Sampling Methodology

Samples and data collection were implemented in accordance with procedures outlined in the SEAMAP data collections manual. SEAMAP 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. SEAMAP 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 (~ 2 kt) sufficient to keep the net opening half submerged in the water maintaining a sampling depth of 0.5 m. In areas with a high density of *Sargassum* spp. or jellyfish, the total tow time was reduced to 5 min. Shallow bongo samples were taken with 0.505 mm mesh nets attached to a 61 cm bongo frame that was towed for 10 min. The shallow bongo was lowered to a depth of 10 m, returned to the surface, lowered again, and bounced throughout the 10 min tow period.

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 right bongo, neuston, and both shallow bongo samples, were initially preserved in 95% ETOH and then transferred to fresh 95% ETOH after 24 h.

CTD casts were conducted at each station and water was collected at the surface, chlorophyll maximum depth, and bottom depth, which was then used for chlorophyll extraction and measurement.

Collection Summary

Ichthyoplankton samples were collected at 85 stations (Figures 1 and 2). A total of 23 stations were sampled during Leg I resulting in 23 right bongo, 22 left bongo, 20 neuston, 23 right shallow bongo, and 23 left shallow bongo (Tables 1 and 2) samples. Sixty-two stations were sampled during Leg II resulting in 62 right bongo, 61 left bongo, 48 neuston, 61 right shallow bongo, and 62 left shallow bongo (Tables 1 and 2) samples. Neuston tows were dropped at 6 stations over the course of the survey due to large amounts of *Sargassum* spp. impacting our ability to collect a valid sample. The left bongo and neuston sample from the first station were discarded due to both samples being rinsed in freshwater prior to preservation. At station 66, the right shallow bongo sample was spilled so the left was sent to Poland and the right sample was saved as a non-quantitative outreach sample.

A total of 97 stations were planned for standard gear, so 12 bongo, shallow bongos, and neuston samples were not collected at those stations dropped due to ship delays. Twenty MOCNESS stations were planned for the entire survey, but all of them had to be dropped resulting in 172 samples not collected. Additionally, 60 shallow bongo samples for Close-Kin-Mark-Recapture studies were dropped in order to allow for time to complete the standard survey due to ship delays.

Jellyfish, ctenophores, and larger juvenile fish collected in bongo and neuston nets were thoroughly rinsed, removed from the plankton samples, and noted in the database. These organisms were identified, counted, and measured.

Sargassum spp. collected in bongo and neuston nets were thoroughly rinsed, removed from the plankton sample, and volume measured. The amount of *Sargassum* spp. in each net was recorded in the database.

Archival Storage

Plankton samples were assigned SEAMAP numbers at sea (Table 2). Right bongo, neuston, and right shallow bongo will be shipped to the Sea Fisheries Institute, Plankton Sorting and Identification Center, Gdynia, Poland for sorting. The left bongos will be deposited in the SEAMAP Invertebrate Archive at GCRL, USM, Ocean Springs, MS. Data on gelatinous organisms and *Sargassum* spp. collected during the cruise will be archived at NMFS Pascagoula Laboratory for future analysis.

Environmental Data

Environmental data were collected with a Seabird SBE 9/11 Plus CTD at a total of 85 stations during the survey. The SBE 9/11 plus CTD profiles were processed at sea by the FPC and Watch Leaders using Seabird's SEASAVE processing software. 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. All environmental data and data from the ship's SCS were returned to the NMFS Pascagoula Laboratory for editing, analysis and archival storage. CTD profiles were taken to a maximum of 200 m or to near-bottom.

Water samples for chlorophyll analysis were taken at 84 stations where the Seabird SBE 9/11 Plus CTD was deployed, using niskin bottles attached to a SBE Carousel sampler. Standard SEAMAP target sampling depths were: surface, chlorophyll maximum, and near-bottom (up to 200 m maximum). Samples were analyzed for chlorophyll *a* concentrations (µg/L) at sea using a Turner Designs Trilogy Laboratory Fluorometer equipped with a Chlorophyll *a* Non-Acidification module (Table 3). Standard protocol for SEAMAP stations calls for analysis of duplicate water samples from each of the three target depths. However, at shallower stations where the water column was well mixed and no chlorophyll maximum was present, only surface and bottom samples were taken. All replicates at each sample depth were averaged and entered into the Microsoft Access database.

Temperature (º C), salinity (PSU), dissolved oxygen (mg/L), fluorescence (µg/L), and transmissivity were recorded from the CTD sensors for the same depths as water samples for the chlorophyll *a* measurements.

CRUISE PARTICIPANTS

Leg I (3 May – 10 May 2023)

Name / Title / Organization

Pam Bond / Field Party Chief / NMFS, Pascagoula, MS
Walter Ingram / Fishery Biologist / NMFS, Pascagoula, MS
Adam Pollack / Fishery Biologist / NMFS, Pascagoula, MS
Mark Grace / Fishery Biologist / NMFS, Pascagoula, MS
Ian Williams / Student Volunteer / University of South Florida
Ryan McMullen / Student Volunteer / University of Miami

Leg II (12 May – 27 May 2023)

Name / Title / Organization

Glenn Zapfe / Field Party Chief / NMFS, Pascagoula, MS
Pam Bond / Fishery Biologist / NMFS, Pascagoula, MS
Chrissy Stepongzi / Fishery Biologist / ERT[1], Pascagoula, MS
Olivia Lestrade / Fishery Biologist / ERT[1], Pascagoula, MS
Maddie Carr / Student Volunteer / University of Miami
Michael Zarske / Student Volunteer / University of Southern Mississippi

[1] – Earth Resources Technology Inc.

Table 1. Summary of valid SEAMAP ichthyoplankton collections taken during the 2023 Spring SEAMAP Plankton survey aboard NOAA Ship *Oregon II* R2-23-01 (347) May 3-27, 2023.

Leg	CTD Casts	Right Bongo	Left Bongo	Neuston	Right SB	Left SB
		(0.335 mm)	(0.335 mm)	(0.950 mm)	(0.505 mm)	(0.505 mm)
I	23	23	22	20	23	23
II	62	62	61	48	61	62
Total	**85**	**85**	**83**	**68**	**84**	**85**

Table 2. Summary of plankton sampling effort during the Spring 2023 SEAMAP Plankton Survey conducted from NOAA Ship *Oregon II*, cruise R2-23-01 (347) May 3-27, 2023. Station = Pascagoula station number; SEAMAP = SEAMAP station number; Sample # = SEAMAP sample number; RB = Right Bongo; LB = Left Bongo; NN = Neuston; RSB = Right Shallow Bongo; LSB = Left Shallow Bongo; Preservative = Initial preservative; Form = Formalin; ETOH = Ethanol; Lat = Latitude of sample in decimal degrees; Lon = Longitude of sample in decimal degrees

001	B169	55522	RB	95% ETOH	5/4/2023	29.51	-86.50
001	B169	55525	RSB	95% ETOH	5/5/2023	29.50	-86.50
001	B169	55526	LSB	95% ETOH	5/5/2023	29.50	-86.50
002	B165	55527	RB	95% ETOH	5/5/2023	29.20	-86.00
002	B165	55528	LB	10% Form	5/5/2023	29.20	-86.00
002	B165	55529	NN	95% ETOH	5/5/2023	29.20	-85.99
002	B165	55530	RSB	95% ETOH	5/5/2023	29.20	-85.99
002	B165	55531	LSB	95% ETOH	5/5/2023	29.20	-85.99
003	B160	55532	RB	95% ETOH	5/5/2023	28.67	-85.51
003	B160	55533	LB	10% Form	5/5/2023	28.67	-85.51
003	B160	55534	NN	95% ETOH	5/5/2023	28.67	-85.50
003	B160	55535	RSB	95% ETOH	5/5/2023	28.67	-85.50
003	B160	55536	LSB	95% ETOH	5/5/2023	28.67	-85.50
004	B153	55537	RB	95% ETOH	5/5/2023	28.00	-84.98
004	B153	55538	LB	10% Form	5/5/2023	28.00	-84.98
004	B153	55539	NN	95% ETOH	5/5/2023	28.00	-84.99
004	B153	55540	RSB	95% ETOH	5/5/2023	28.00	-84.98
004	B153	55541	LSB	95% ETOH	5/5/2023	28.00	-84.98
005	B152	55542	RB	95% ETOH	5/5/2023	27.51	-85.00
005	B152	55543	LB	10% Form	5/5/2023	27.51	-85.00
005	B152	55544	NN	95% ETOH	5/5/2023	27.50	-85.00
005	B152	55545	RSB	95% ETOH	5/5/2023	27.50	-85.00
005	B152	55546	LSB	95% ETOH	5/5/2023	27.50	-85.00
006	B151	55547	RB	95% ETOH	5/6/2023	27.00	-85.00
006	B151	55548	LB	10% Form	5/6/2023	27.00	-85.00
006	B151	55549	NN	95% ETOH	5/6/2023	27.00	-85.00
006	B151	55550	RSB	95% ETOH	5/6/2023	27.01	-85.00
006	B151	55551	LSB	95% ETOH	5/6/2023	27.01	-85.00
007	B150	55552	RB	95% ETOH	5/6/2023	26.51	-85.00
007	B150	55553	LB	10% Form	5/6/2023	26.51	-85.00
007	B150	55554	NN	95% ETOH	5/6/2023	26.50	-85.00
007	B150	55555	RSB	95% ETOH	5/6/2023	26.50	-85.00
007	B150	55556	LSB	95% ETOH	5/6/2023	26.50	-85.00

Station							
008	B149	55557	RB	95% ETOH	5/6/2023	26.01	-85.01
008	B149	55558	LB	10% Form	5/6/2023	26.01	-85.01
008	B149	55559	NN	95% ETOH	5/6/2023	26.00	-85.00
008	B149	55560	RSB	95% ETOH	5/6/2023	26.00	-85.00
008	B149	55561	LSB	95% ETOH	5/6/2023	26.00	-85.00
009	B147	55562	RB	95% ETOH	5/6/2023	26.00	-84.50
009	B147	55563	LB	10% Form	5/6/2023	26.00	-84.50
009	B147	55564	NN	95% ETOH	5/6/2023	26.00	-84.50
009	B147	55565	RSB	95% ETOH	5/6/2023	26.00	-84.51
009	B147	55566	LSB	95% ETOH	5/6/2023	26.00	-84.51
010	B131	55567	RB	95% ETOH	5/6/2023	26.00	-84.01
010	B131	55568	LB	10% Form	5/6/2023	26.00	-84.01
010	B131	55569	NN	95% ETOH	5/6/2023	26.00	-84.00
010	B131	55570	RSB	95% ETOH	5/6/2023	26.00	-84.01
010	B131	55571	LSB	95% ETOH	5/6/2023	26.00	-84.01
011	B130	55572	RB	95% ETOH	5/6/2023	25.51	-84.00
011	B130	55573	LB	10% Form	5/6/2023	25.51	-84.00
011	B130	55574	NN	95% ETOH	5/6/2023	25.50	-84.00
011	B130	55575	RSB	95% ETOH	5/6/2023	25.51	-84.00
011	B130	55576	LSB	95% ETOH	5/6/2023	25.51	-84.00
012	B129	55577	RB	95% ETOH	5/7/2023	25.00	-84.00
012	B129	55578	LB	10% Form	5/7/2023	25.00	-84.00
012	B129	55579	NN	95% ETOH	5/7/2023	25.00	-83.99
012	B129	55580	RSB	95% ETOH	5/7/2023	25.00	-84.00
012	B129	55581	LSB	95% ETOH	5/7/2023	25.00	-84.00
013	B128	55582	RB	95% ETOH	5/7/2023	24.51	-84.01
013	B128	55583	LB	10% Form	5/7/2023	24.51	-84.01
013	B128	55584	NN	95% ETOH	5/7/2023	24.50	-84.00
013	B128	55585	RSB	95% ETOH	5/7/2023	24.51	-84.00
013	B128	55586	LSB	95% ETOH	5/7/2023	24.51	-84.00
014	B125	55587	RB	95% ETOH	5/7/2023	24.50	-83.51
014	B125	55588	LB	10% Form	5/7/2023	24.50	-83.51
014	B125	55589	NN	95% ETOH	5/7/2023	24.50	-83.50
014	B125	55590	RSB	95% ETOH	5/7/2023	24.50	-83.51
014	B125	55591	LSB	95% ETOH	5/7/2023	24.50	-83.51
015	B126	55592	RB	95% ETOH	5/7/2023	24.00	-83.50
015	B126	55593	LB	10% Form	5/7/2023	24.00	-83.50
015	B126	55594	NN	95% ETOH	5/7/2023	24.00	-83.49
015	B126	55595	RSB	95% ETOH	5/7/2023	24.00	-83.49
015	B126	55596	LSB	95% ETOH	5/7/2023	24.00	-83.49

Station							
016	B127	55597	RB	95% ETOH	5/7/2023	24.00	-84.00
016	B127	55598	LB	10% Form	5/7/2023	24.00	-84.00
016	B127	55599	NN	95% ETOH	5/7/2023	24.00	-83.99
016	B127	55600	RSB	95% ETOH	5/7/2023	24.00	-84.00
016	B127	55601	LSB	95% ETOH	5/7/2023	24.00	-84.00
017	B263	55602	RB	95% ETOH	5/8/2023	24.51	-84.50
017	B263	55603	LB	10% Form	5/8/2023	24.51	-84.50
017	B263	55604	NN	95% ETOH	5/8/2023	24.50	-84.50
017	B263	55605	RSB	95% ETOH	5/8/2023	24.50	-84.51
017	B263	55606	LSB	95% ETOH	5/8/2023	24.50	-84.51
018	B262	55607	RB	95% ETOH	5/8/2023	25.00	-84.51
018	B262	55608	LB	10% Form	5/8/2023	25.00	-84.51
018	B262	55609	NN	95% ETOH	5/8/2023	25.00	-84.51
018	B262	55610	RSB	95% ETOH	5/8/2023	25.00	-84.51
018	B262	55611	LSB	95% ETOH	5/8/2023	25.00	-84.51
019	B007	55612	RB	95% ETOH	5/8/2023	25.00	-84.99
019	B007	55613	LB	10% Form	5/8/2023	25.00	-84.99
019	B007	55614	NN	95% ETOH	5/8/2023	25.01	-85.00
019	B007	55615	RSB	95% ETOH	5/8/2023	25.00	-85.00
019	B007	55616	LSB	95% ETOH	5/8/2023	25.00	-85.00
020	B072	55617	RB	95% ETOH	5/8/2023	24.50	-85.00
020	B072	55618	LB	10% Form	5/8/2023	24.50	-85.00
020	B072	55619	RSB	95% ETOH	5/8/2023	24.50	-85.00
020	B072	55620	LSB	95% ETOH	5/8/2023	24.50	-85.00
021	B266	55621	RB	95% ETOH	5/8/2023	24.67	-85.51
021	B266	55622	LB	10% Form	5/8/2023	24.67	-85.51
021	B266	55623	NN	95% ETOH	5/8/2023	24.66	-85.50
021	B266	55624	RSB	95% ETOH	5/8/2023	24.67	-85.50
021	B266	55625	LSB	95% ETOH	5/8/2023	24.67	-85.50
022	B261	55626	RB	95% ETOH	5/9/2023	25.00	-85.51
022	B261	55627	LB	10% Form	5/9/2023	25.00	-85.51
022	B261	55628	NN	95% ETOH	5/9/2023	25.00	-85.51
022	B261	55629	RSB	95% ETOH	5/9/2023	25.00	-85.51
022	B261	55630	LSB	95% ETOH	5/9/2023	25.00	-85.51
023	B008	55631	RB	95% ETOH	5/9/2023	25.00	-86.00
023	B008	55632	LB	10% Form	5/9/2023	25.00	-86.00
023	B008	55634	RSB	95% ETOH	5/9/2023	25.01	-86.00
023	B008	55635	LSB	95% ETOH	5/9/2023	25.01	-86.00
024	B270	55636	RB	95% ETOH	5/14/2023	25.50	-86.45
024	B270	55637	LB	10% Form	5/14/2023	25.50	-86.45

Station							
024	B270	55638	NN	95% ETOH	5/14/2023	25.50	-86.46
024	B270	55639	RSB	95% ETOH	5/14/2023	25.51	-86.46
024	B270	55640	LSB	10% Form	5/14/2023	25.51	-86.46
025	B074	55641	RB	95% ETOH	5/14/2023	25.51	-86.01
025	B074	55642	LB	10% Form	5/14/2023	25.51	-86.01
025	B074	55643	NN	95% ETOH	5/14/2023	25.50	-86.01
025	B074	55644	RSB	95% ETOH	5/14/2023	25.50	-86.01
025	B074	55645	LSB	95% ETOH	5/14/2023	25.50	-86.01
026	B006	55646	RB	95% ETOH	5/14/2023	25.99	-86.01
026	B006	55647	LB	10% Form	5/14/2023	25.99	-86.01
026	B006	55648	NN	95% ETOH	5/14/2023	26.00	-86.01
026	B006	55649	RSB	95% ETOH	5/14/2023	26.00	-86.01
026	B006	55650	LSB	95% ETOH	5/14/2023	26.00	-86.01
027	B077	55651	RB	95% ETOH	5/14/2023	26.50	-86.01
027	B077	55652	LB	10% Form	5/14/2023	26.50	-86.01
027	B077	55653	NN	95% ETOH	5/14/2023	26.49	-85.98
027	B077	55654	RSB	95% ETOH	5/14/2023	26.50	-86.00
027	B077	55655	LSB	95% ETOH	5/14/2023	26.50	-86.00
028	B005	55656	RB	95% ETOH	5/14/2023	27.00	-86.00
028	B005	55657	LB	10% Form	5/14/2023	27.00	-86.00
028	B005	55658	NN	95% ETOH	5/14/2023	26.99	-86.00
028	B005	55659	RSB	95% ETOH	5/14/2023	26.99	-86.01
028	B005	55660	LSB	95% ETOH	5/14/2023	26.99	-86.01
029	B078	55661	RB	95% ETOH	5/15/2023	27.50	-86.02
029	B078	55662	LB	10% Form	5/15/2023	27.50	-86.02
029	B078	55663	NN	95% ETOH	5/15/2023	27.50	-86.02
029	B078	55664	RSB	95% ETOH	5/15/2023	27.50	-86.01
029	B078	55665	LSB	95% ETOH	5/15/2023	27.50	-86.01
030	B163	55666	RB	95% ETOH	5/15/2023	28.00	-86.01
030	B163	55667	LB	95% ETOH	5/15/2023	28.00	-86.01
030	B163	55668	NN	95% ETOH	5/15/2023	28.00	-86.00
030	B163	55669	RSB	95% ETOH	5/15/2023	28.01	-86.00
030	B163	55670	LSB	95% ETOH	5/15/2023	28.01	-86.00
031	B164	55671	RB	95% ETOH	5/15/2023	28.49	-86.01
031	B164	55672	LB	10% Form	5/15/2023	28.49	-86.01
031	B164	55673	NN	95% ETOH	5/15/2023	28.49	-86.00
031	B164	55674	RSB	95% ETOH	5/15/2023	28.50	-86.00
031	B164	55675	LSB	95% ETOH	5/15/2023	28.50	-86.00
032	B170	55676	RB	95% ETOH	5/15/2023	29.00	-86.50
032	B170	55677	LB	10% Form	5/15/2023	29.00	-86.50

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032	B170	55678	NN	95% ETOH	5/15/2023	28.99	-86.50
032	B170	55679	RSB	95% ETOH	5/15/2023	28.99	-86.49
032	B170	55680	LSB	95% ETOH	5/15/2023	28.99	-86.49
033	B002	55681	RB	95% ETOH	5/18/2023	29.00	-87.01
033	B002	55682	LB	10% Form	5/18/2023	29.00	-87.01
033	B002	55683	RSB	95% ETOH	5/18/2023	28.99	-87.01
033	B002	55684	LSB	10% Form	5/18/2023	28.99	-87.01
034	B080	55685	RB	95% ETOH	5/18/2023	28.51	-87.00
034	B080	55686	LB	10% Form	5/18/2023	28.51	-87.00
034	B080	55687	NN	95% ETOH	5/18/2023	28.50	-87.00
034	B080	55688	RSB	95% ETOH	5/18/2023	28.50	-87.00
034	B080	55689	LSB	95% ETOH	5/18/2023	28.50	-87.00
035	B003	55690	RB	95% ETOH	5/18/2023	28.01	-87.00
035	B003	55691	LB	10% Form	5/18/2023	28.01	-87.00
035	B003	55692	RSB	95% ETOH	5/18/2023	28.01	-86.99
035	B003	55693	LSB	95% ETOH	5/18/2023	28.01	-86.99
036	B079	55694	RB	95% ETOH	5/18/2023	27.50	-87.00
036	B079	55695	LB	10% Form	5/18/2023	27.50	-87.00
036	B079	55696	NN	95% ETOH	5/18/2023	27.50	-86.99
036	B079	55697	RSB	95% ETOH	5/18/2023	27.49	-86.99
036	B079	55698	LSB	95% ETOH	5/18/2023	27.49	-86.99
037	B004	55699	RB	95% ETOH	5/18/2023	26.99	-86.98
037	B004	55700	LB	10% Form	5/18/2023	26.99	-86.98
037	B004	55701	NN	95% ETOH	5/18/2023	27.00	-86.98
037	B004	55702	RSB	95% ETOH	5/18/2023	27.00	-86.99
037	B004	55703	LSB	10% Form	5/18/2023	27.00	-86.99
038	B076	55704	RB	95% ETOH	5/19/2023	26.50	-87.00
038	B076	55705	LB	10% Form	5/19/2023	26.50	-87.00
038	B076	55706	NN	95% ETOH	5/19/2023	26.51	-87.00
038	B076	55707	RSB	95% ETOH	5/19/2023	26.51	-87.00
038	B076	55708	LSB	95% ETOH	5/19/2023	26.51	-87.00
039	B273	55709	RB	95% ETOH	5/19/2023	26.00	-87.48
039	B273	55710	LB	10% Form	5/19/2023	26.00	-87.48
039	B273	55711	NN	95% ETOH	5/19/2023	25.99	-87.49
039	B273	55712	RSB	95% ETOH	5/19/2023	26.00	-87.50
039	B273	55713	LSB	95% ETOH	5/19/2023	26.00	-87.50
040	B010	55714	RB	95% ETOH	5/19/2023	26.01	-88.00
040	B010	55715	LB	10% Form	5/19/2023	26.01	-88.00
040	B010	55716	NN	95% ETOH	5/19/2023	26.00	-87.99
040	B010	55717	RSB	95% ETOH	5/19/2023	26.00	-87.98

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040	B010	55718	LSB	95% ETOH	5/19/2023	26.00	-87.98
041	B066	55719	RB	95% ETOH	5/19/2023	26.49	-88.00
041	B066	55720	LB	10% Form	5/19/2023	26.49	-88.00
041	B066	55721	NN	95% ETOH	5/19/2023	26.50	-87.99
041	B066	55722	RSB	95% ETOH	5/19/2023	26.50	-88.00
041	B066	55723	LSB	95% ETOH	5/19/2023	26.50	-88.00
042	B011	55724	RB	95% ETOH	5/19/2023	27.01	-88.00
042	B011	55725	LB	10% Form	5/19/2023	27.01	-88.00
042	B011	55726	NN	95% ETOH	5/19/2023	27.00	-88.00
042	B011	55727	RSB	95% ETOH	5/19/2023	26.99	-88.00
042	B011	55728	LSB	95% ETOH	5/19/2023	26.99	-88.00
043	B288	55729	RB	95% ETOH	5/19/2023	26.99	-88.51
043	B288	55730	LB	10% Form	5/19/2023	26.99	-88.51
043	B288	55731	NN	95% ETOH	5/19/2023	26.99	-88.50
043	B288	55732	RSB	95% ETOH	5/19/2023	27.00	-88.51
043	B288	55733	LSB	95% ETOH	5/19/2023	27.00	-88.51
044	B012	55734	RB	95% ETOH	5/20/2023	27.00	-89.00
044	B012	55735	LB	10% Form	5/20/2023	27.00	-89.00
044	B012	55736	RSB	95% ETOH	5/20/2023	26.99	-89.00
044	B012	55737	LSB	95% ETOH	5/20/2023	26.99	-89.00
045	B063	55738	RB	95% ETOH	5/20/2023	26.50	-88.99
045	B063	55739	LB	10% Form	5/20/2023	26.50	-88.99
045	B063	55740	RSB	95% ETOH	5/20/2023	26.51	-88.99
045	B063	55741	LSB	95% ETOH	5/20/2023	26.51	-88.99
046	B013	55742	RB	95% ETOH	5/20/2023	26.01	-88.99
046	B013	55743	LB	10% Form	5/20/2023	26.01	-88.99
046	B013	55744	NN	95% ETOH	5/20/2023	26.01	-88.99
046	B013	55745	RSB	95% ETOH	5/20/2023	26.00	-89.00
046	B013	55746	LSB	95% ETOH	5/20/2023	26.00	-89.00
047	B291	55747	RB	95% ETOH	5/20/2023	26.01	-89.51
047	B291	55748	LB	10% Form	5/20/2023	26.01	-89.51
047	B291	55749	NN	95% ETOH	5/20/2023	26.00	-89.51
047	B291	55750	RSB	95% ETOH	5/20/2023	26.00	-89.50
047	B291	55751	LSB	95% ETOH	5/20/2023	26.00	-89.50
048	B014	55752	RB	95% ETOH	5/20/2023	25.99	-89.99
048	B014	55753	LB	10% Form	5/20/2023	25.99	-89.99
048	B014	55754	NN	95% ETOH	5/20/2023	26.00	-89.99
048	B014	55755	RSB	95% ETOH	5/20/2023	26.00	-89.98
048	B014	55756	LSB	95% ETOH	5/20/2023	26.00	-89.98
049	B062	55757	RB	95% ETOH	5/21/2023	26.50	-90.01

Station							
049	B062	55758	LB	10% Form	5/21/2023	26.50	-90.01
049	B062	55759	NN	95% ETOH	5/20/2023	26.49	-90.01
049	B062	55760	RSB	95% ETOH	5/20/2023	26.49	-90.01
049	B062	55761	LSB	95% ETOH	5/20/2023	26.49	-90.01
050	B015	55762	RB	95% ETOH	5/21/2023	26.99	-90.01
050	B015	55763	LB	10% Form	5/21/2023	26.99	-90.01
050	B015	55764	RSB	95% ETOH	5/21/2023	26.99	-90.01
050	B015	55765	LSB	95% ETOH	5/21/2023	26.99	-90.01
051	B296	55766	RB	95% ETOH	5/21/2023	27.00	-90.50
051	B296	55767	LB	10% Form	5/21/2023	27.00	-90.50
051	B296	55768	NN	95% ETOH	5/21/2023	26.99	-90.50
051	B296	55769	RSB	95% ETOH	5/21/2023	26.99	-90.50
051	B296	55770	LSB	95% ETOH	5/21/2023	26.99	-90.50
052	B018	55771	RB	95% ETOH	5/21/2023	27.00	-91.00
052	B018	55772	LB	10% Form	5/21/2023	27.00	-91.00
052	B018	55773	NN	95% ETOH	5/21/2023	27.00	-90.99
052	B018	55774	RSB	95% ETOH	5/21/2023	26.99	-90.99
052	B018	55775	LSB	95% ETOH	5/21/2023	26.99	-90.99
053	B059	55776	RB	95% ETOH	5/21/2023	26.50	-91.01
053	B059	55777	LB	10% Form	5/21/2023	26.50	-91.01
053	B059	55778	NN	95% ETOH	5/21/2023	26.50	-91.01
053	B059	55779	RSB	95% ETOH	5/21/2023	26.51	-91.00
053	B059	55780	LSB	95% ETOH	5/21/2023	26.51	-91.00
054	B019	55781	RB	95% ETOH	5/21/2023	26.00	-91.00
054	B019	55782	LB	10% Form	5/21/2023	26.00	-91.00
054	B019	55783	NN	95% ETOH	5/21/2023	26.01	-91.00
054	B019	55784	RSB	95% ETOH	5/21/2023	26.01	-91.00
054	B019	55785	LSB	95% ETOH	5/21/2023	26.01	-91.00
055	B299	55786	RB	95% ETOH	5/21/2023	26.00	-91.51
055	B299	55787	LB	10% Form	5/21/2023	26.00	-91.51
055	B299	55788	NN	95% ETOH	5/21/2023	26.00	-91.51
055	B299	55789	RSB	95% ETOH	5/21/2023	26.00	-91.50
055	B299	55790	LSB	95% ETOH	5/21/2023	26.00	-91.50
056	B020	55791	RB	95% ETOH	5/22/2023	26.00	-92.00
056	B020	55792	LB	10% Form	5/22/2023	26.00	-92.00
056	B020	55793	NN	95% ETOH	5/22/2023	26.00	-91.99
056	B020	55794	RSB	95% ETOH	5/22/2023	26.00	-92.00
056	B020	55795	LSB	95% ETOH	5/22/2023	26.00	-92.00
057	B058	55796	RB	95% ETOH	5/22/2023	26.50	-92.00
057	B058	55797	LB	10% Form	5/22/2023	26.50	-92.00

Station							
057	B058	55798	NN	95% ETOH	5/22/2023	26.50	-92.01
057	B058	55799	RSB	95% ETOH	5/22/2023	26.50	-92.02
057	B058	55800	LSB	95% ETOH	5/22/2023	26.50	-92.02
058	B021	55801	RB	95% ETOH	5/22/2023	27.00	-92.00
058	B021	55802	LB	10% Form	5/22/2023	27.00	-92.00
058	B021	55803	RSB	95% ETOH	5/22/2023	26.99	-92.01
058	B021	55804	LSB	95% ETOH	5/22/2023	26.99	-92.01
059	B304	55805	RB	95% ETOH	5/22/2023	27.00	-92.49
059	B304	55806	LB	10% Form	5/22/2023	27.00	-92.49
059	B304	55807	RSB	95% ETOH	5/22/2023	27.00	-92.48
059	B304	55808	LSB	95% ETOH	5/22/2023	27.00	-92.48
060	B024	55809	RB	95% ETOH	5/22/2023	27.00	-93.01
060	B024	55810	LB	10% Form	5/22/2023	27.00	-93.01
060	B024	55811	NN	95% ETOH	5/22/2023	26.99	-93.00
060	B024	55812	LSB	95% ETOH	5/22/2023	26.99	-92.99
061	B055	55813	RB	95% ETOH	5/22/2023	26.50	-93.00
061	B055	55814	LB	10% Form	5/22/2023	26.50	-93.00
061	B055	55815	NN	95% ETOH	5/22/2023	26.51	-93.01
061	B055	55816	RSB	95% ETOH	5/22/2023	26.51	-93.01
061	B055	55817	LSB	95% ETOH	5/22/2023	26.51	-93.01
062	B307	55818	RB	95% ETOH	5/23/2023	26.03	-93.50
062	B307	55819	LB	10% Form	5/23/2023	26.03	-93.50
062	B307	55820	NN	95% ETOH	5/23/2023	26.03	-93.49
062	B307	55821	RSB	95% ETOH	5/23/2023	26.03	-93.50
062	B307	55822	LSB	95% ETOH	5/23/2023	26.03	-93.50
063	B026	55823	RB	95% ETOH	5/23/2023	26.03	-94.01
063	B026	55824	LB	10% Form	5/23/2023	26.03	-94.01
063	B026	55825	RSB	95% ETOH	5/23/2023	26.03	-94.01
063	B026	55826	LSB	95% ETOH	5/23/2023	26.03	-94.01
064	B054	55827	RB	95% ETOH	5/23/2023	26.49	-94.00
064	B054	55828	LB	10% Form	5/23/2023	26.49	-94.00
064	B054	55829	NN	95% ETOH	5/23/2023	26.49	-94.00
064	B054	55830	RSB	95% ETOH	5/23/2023	26.48	-94.00
064	B054	55831	LSB	95% ETOH	5/23/2023	26.48	-94.00
065	B027	55832	RB	95% ETOH	5/23/2023	27.00	-94.00
065	B027	55833	LB	10% Form	5/23/2023	27.00	-94.00
065	B027	55834	NN	95% ETOH	5/23/2023	26.99	-94.00
065	B027	55835	RSB	95% ETOH	5/23/2023	26.99	-94.01
065	B027	55836	LSB	95% ETOH	5/23/2023	26.99	-94.01
066	B312	55837	RB	95% ETOH	5/23/2023	27.00	-94.50

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066	B312	55838	LB	10% Form	5/23/2023	27.00	-94.50
066	B312	55839	NN	95% ETOH	5/23/2023	27.00	-94.51
066	B312	55840	RSB	95% ETOH	5/23/2023	26.99	-94.51
066	B312	55841	LSB	95% ETOH	5/23/2023	26.99	-94.51
067	B028	55842	RB	95% ETOH	5/24/2023	27.00	-95.00
067	B028	55843	LB	10% Form	5/24/2023	27.00	-95.00
067	B028	55844	NN	95% ETOH	5/24/2023	27.00	-94.99
067	B028	55845	RSB	95% ETOH	5/24/2023	27.00	-94.98
067	B028	55846	LSB	95% ETOH	5/24/2023	27.00	-94.98
068	B223	55847	RB	95% ETOH	5/24/2023	28.00	-95.00
068	B223	55848	LB	10% Form	5/24/2023	28.00	-95.00
068	B223	55849	NN	95% ETOH	5/24/2023	28.01	-94.99
068	B068	55850	RSB	95% ETOH	5/24/2023	28.01	-94.99
068	B068	55851	LSB	95% ETOH	5/24/2023	28.01	-94.99
069	B217	55852	RB	95% ETOH	5/24/2023	28.01	-94.49
069	B217	55853	LB	10% Form	5/24/2023	28.01	-94.49
069	B217	55854	NN	95% ETOH	5/24/2023	28.01	-94.51
069	B217	55855	RSB	95% ETOH	5/24/2023	28.00	-94.52
069	B217	55856	LSB	95% ETOH	5/24/2023	28.00	-94.52
070	B216	55857	RB	95% ETOH	5/24/2023	28.00	-94.00
070	B216	55858	LB	10% Form	5/24/2023	28.00	-94.00
070	B216	55859	NN	95% ETOH	5/24/2023	28.00	-94.01
070	B216	55860	RSB	95% ETOH	5/24/2023	27.99	-94.01
070	B216	55861	LSB	95% ETOH	5/24/2023	27.99	-94.01
071	B209	55862	RB	95% ETOH	5/24/2023	28.00	-93.49
071	B209	55863	LB	10% Form	5/24/2023	28.00	-93.49
071	B209	55864	NN	95% ETOH	5/24/2023	28.00	-93.50
071	B209	55865	RSB	95% ETOH	5/24/2023	28.01	-93.50
071	B209	55866	LSB	95% ETOH	5/24/2023	28.01	-93.50
072	B023	55867	RB	95% ETOH	5/24/2023	28.00	-93.00
072	B023	55868	LB	10% Form	5/24/2023	28.00	-93.00
072	B072	55869	NN	95% ETOH	5/24/2023	27.99	-93.01
072	B023	55870	RSB	95% ETOH	5/24/2023	27.99	-93.01
072	B023	55871	LSB	95% ETOH	5/24/2023	27.99	-93.01
073	B202	55872	RB	95% ETOH	5/25/2023	28.01	-92.50
073	B202	55873	LB	10% Form	5/25/2023	28.01	-92.50
073	B202	55874	NN	95% ETOH	5/25/2023	28.00	-92.51
073	B202	55875	RSB	95% ETOH	5/25/2023	28.00	-92.51
073	B202	55876	LSB	95% ETOH	5/25/2023	28.00	-92.51
074	B022	55877	RB	95% ETOH	5/25/2023	28.01	-92.01

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074	B022	55878	LB	10% Form	5/25/2023	28.01	-92.01
074	B022	55879	RSB	95% ETOH	5/25/2023	28.01	-92.01
074	B022	55880	LSB	10% Form	5/25/2023	28.01	-92.01
075	B195	55881	RB	95% ETOH	5/25/2023	28.00	-91.51
075	B195	55882	LB	10% Form	5/25/2023	28.00	-91.51
075	B195	55883	NN	95% ETOH	5/25/2023	28.01	-91.51
075	B195	55884	RSB	95% ETOH	5/25/2023	28.00	-91.51
075	B195	55885	LSB	95% ETOH	5/25/2023	28.00	-91.51
076	B017	55886	RB	95% ETOH	5/25/2023	28.01	-91.00
076	B017	55887	LB	10% Form	5/25/2023	28.01	-91.00
076	B017	55888	NN	95% ETOH	5/25/2023	28.01	-91.02
076	B017	55889	RSB	95% ETOH	5/25/2023	28.00	-91.02
076	B017	55890	LSB	95% ETOH	5/25/2023	28.00	-91.02
077	B190	55891	RB	95% ETOH	5/25/2023	28.08	-90.50
077	B190	55892	LB	10% Form	5/25/2023	28.08	-90.50
077	B190	55893	NN	95% ETOH	5/25/2023	28.08	-90.51
077	B190	55894	RSB	95% ETOH	5/25/2023	28.08	-90.52
077	B190	55895	LSB	95% ETOH	5/25/2023	28.08	-90.52
078	B016	55896	RB	95% ETOH	5/25/2023	27.99	-90.01
078	B016	55897	LB	10% Form	5/25/2023	27.99	-90.01
078	B016	55898	RSB	95% ETOH	5/25/2023	28.00	-90.02
078	B016	55899	LSB	95% ETOH	5/25/2023	28.00	-90.02
079	B185	55900	RB	95% ETOH	5/26/2023	28.00	-89.50
079	B185	55901	LB	10% Form	5/26/2023	28.00	-89.50
079	B185	55902	NN	95% ETOH	5/26/2023	28.01	-89.51
079	B185	55903	RSB	95% ETOH	5/26/2023	28.01	-89.51
079	B185	55904	LSB	95% ETOH	5/26/2023	28.01	-89.51
080	B083	55905	RB	95% ETOH	5/26/2023	28.00	-89.01
080	B083	55906	LB	10% Form	5/26/2023	28.00	-89.01
080	B083	55907	RSB	95% ETOH	5/26/2023	28.01	-89.02
080	B083	55908	LSB	95% ETOH	5/26/2023	28.01	-89.02
081	B250	55909	RB	95% ETOH	5/26/2023	28.00	-88.49
081	B250	55910	LB	10% Form	5/26/2023	28.00	-88.49
081	B250	55911	RSB	95% ETOH	5/26/2023	28.00	-88.50
081	B250	55912	LSB	10% Form	5/26/2023	28.00	-88.50
082	B082	55913	RB	95% ETOH	5/26/2023	28.00	-88.01
082	B082	55914	LB	10% Form	5/26/2023	28.00	-88.01
082	B082	55915	NN	95% ETOH	5/26/2023	28.00	-88.01
082	B082	55916	RSB	95% ETOH	5/26/2023	28.00	-88.01
082	B082	55917	LSB	95% ETOH	5/26/2023	28.00	-88.01

Station							
083	B081	55918	RB	95% ETOH	5/26/2023	28.50	-88.01
083	B081	55919	LB	10% Form	5/26/2023	28.50	-88.01
083	B081	55920	RSB	95% ETOH	5/26/2023	28.50	-88.01
083	B081	55921	LSB	95% ETOH	5/26/2023	28.50	-88.01
084	B001	55922	RB	95% ETOH	5/27/2023	29.00	-88.00
084	B001	55923	LB	10% Form	5/27/2023	29.00	-88.00
084	B001	55924	NN	95% ETOH	5/27/2023	29.00	-88.01
084	B001	55925	RSB	95% ETOH	5/27/2023	29.00	-88.01
084	B001	55926	LSB	95% ETOH	5/27/2023	29.00	-88.01
085	B176	55927	RB	95% ETOH	5/27/2023	29.50	-88.05
085	B176	55928	LB	10% Form	5/27/2023	29.50	-88.05
085	B176	55929	RSB	95% ETOH	5/27/2023	29.50	-88.06
085	B176	55930	LSB	95% ETOH	5/27/2023	29.50	-88.06

Table 3. Summary of average chlorophyll *a* measurements at three depths (surface, chlorophyll maximum, and bottom) for each station where the CTD was deployed during the 2023 Spring SEAMAP Plankton Survey conducted from NOAA Ship *Oregon II* cruise R2-23-01 (347) May 3-27, 2023. Station = Pascagoula station number; SEAMAP = SEAMAP station number; Depth = Depth of actual water sample (meters); Sample Depth = Sample location (S = Surface, MAX = Chlorophyll maximum, B = Bottom); Chl-a = Chlorophyll *a* measurement (µg/L).

Station				
001	B169	0.77	S	0.13
001	B169	77.45	MAX	-
001	B169	200.73	B	0.01
002	B165	2.31	S	0.11
002	B165	72.26	MAX	0.88
002	B165	189.94	B	0.01
003	B160	2.18	S	0.10
003	B160	65.10	MAX	1.92
003	B160	176.84	B	0.01
004	B153	1.43	S	0.09
004	B153	79.01	MAX	0.87
004	B153	200.47	B	0.00
005	B152	1.30	S	0.10
005	B152	81.95	MAX	0.96
005	B152	209.49	B	0.00
006	B151	2.36	S	0.11
006	B151	86.77	MAX	0.46

Station				
006	B151	200.82	B	0.00
007	B150	1.69	S	0.10
007	B150	89.64	MAX	0.85
007	B150	200.26	B	0.05
008	B149	1.98	S	0.11
008	B149	90.60	MAX	0.72
008	B149	200.37	B	-
009	B147	2.54	S	0.10
009	B147	78.57	MAX	0.61
009	B147	199.74	B	0.01
010	B131	0.93	S	0.10
010	B131	84.66	MAX	1.01
010	B131	136.74	B	0.11
011	B130	1.04	S	0.11
011	B130	94.63	MAX	0.89
011	B130	136.98	B	0.10
012	B129	1.50	S	0.09
012	B129	58.21	MAX	0.73
012	B129	125.68	B	0.10
013	B128	2.45	S	0.12
013	B128	76.08	MAX	0.68
013	B128	199.96	B	0.01
014	B125	1.58	S	0.14
014	B125	51.02	MAX	1.21
014	B125	198.93	B	0.00
015	B126	1.17	S	0.44
015	B126	75.48	MAX	1.13
015	B126	202.41	B	0.01
016	B127	3.73	S	0.08
016	B127	76.27	MAX	0.95
016	B127	200.74	B	0.07
017	B263	1.93	S	0.21
017	B263	33.22	MAX	0.82
017	B263	200.01	B	0.01
018	B262	1.90	S	0.11
018	B262	63.21	MAX	0.50
018	B262	199.28	B	0.00
019	B007	2.95	S	0.11
019	B007	53.93	MAX	1.26
019	B007	199.30	B	0.01

Station				
020	B072	1.56	S	0.12
020	B072	80.54	MAX	0.63
020	B072	200.80	B	0.00
021	B266	1.87	S	0.16
021	B266	89.17	MAX	1.05
021	B266	201.87	B	0.00
022	B261	1.88	S	0.10
022	B261	75.55	MAX	0.88
022	B261	199.95	B	0.01
023	B008	1.78	S	0.10
023	B008	123.67	MAX	0.68
023	B008	199.90	B	0.02
024	B270	2.17	S	0.02
024	B270	104.75	MAX	0.93
024	B270	201.52	B	0.06
025	B074	2.48	S	0.07
025	B074	116.98	MAX	0.71
025	B074	199.38	B	0.01
026	B006	2.47	S	0.08
026	B006	121.56	MAX	0.77
026	B006	201.42	B	0.01
027	B077	1.61	S	0.07
027	B077	109.89	MAX	0.84
027	B077	200.20	B	0.01
028	B005	1.60	S	0.14
028	B005	105.97	MAX	0.80
028	B005	200.07	B	0.03
029	B078	1.00	S	0.13
029	B078	53.88	MAX	1.02
029	B078	200.77	B	0.01
030	B163	1.96	S	0.15
030	B163	73.00	MAX	1.01
030	B163	200.94	B	0.02
031	B164	1.97	S	0.28
031	B164	75.18	MAX	0.49
031	B164	201.43	B	0.00
032	B170	1.37	S	0.22
032	B170	73.81	MAX	0.81
032	B170	202.28	B	0.00
033	B002	1.50	S	0.09

Station				
033	B002	84.09	MAX	0.84
033	B002	201.47	B	0.00
034	B080	0.73	S	0.13
034	B080	60.28	MAX	0.97
034	B080	201.83	B	0.01
035	B003	1.41	S	0.16
035	B003	88.98	MAX	0.70
035	B003	202.72	B	0.00
036	B079	1.74	S	0.15
036	B079	86.67	MAX	0.87
036	B079	200.83	B	0.01
037	B004	1.90	S	0.09
037	B004	99.76	MAX	0.83
037	B004	200.01	B	0.00
038	B076	1.99	S	0.13
038	B076	131.64	MAX	3.47
038	B076	201.13	B	0.02
039	B273	1.90	S	0.08
039	B273	128.33	MAX	0.64
039	B273	201.19	B	0.16
040	B010	1.96	S	0.11
040	B010	111.40	MAX	0.72
040	B010	200.36	B	0.02
041	B066	2.16	S	0.32
041	B066	131.46	MAX	0.92
041	B066	200.84	B	0.08
042	B011	1.04	S	0.16
042	B011	102.17	MAX	0.83
042	B011	200.52	B	0.02
043	B288	0.85	S	0.18
043	B288	64.97	MAX	1.15
043	B288	201.22	B	0.02
044	B012	0.93	S	0.10
044	B012	59.16	MAX	1.10
044	B012	201.02	B	0.00
045	B063	1.38	S	0.13
045	B063	108.60	MAX	0.84
045	B063	194.18	B	0.02
046	B013	2.06	S	0.07
046	B013	109.21	MAX	0.76

Station				
046	B013	200.91	B	0.00
047	B291	0.96	S	0.09
047	B291	92.54	MAX	0.69
047	B291	201.46	B	0.00
048	B014	0.88	S	0.07
048	B014	65.18	MAX	1.96
048	B014	201.57	B	0.01
049	B062	1.29	S	0.19
049	B062	83.44	MAX	0.98
049	B062	200.98	B	0.01
050	B015	1.72	S	0.11
050	B015	66.85	MAX	0.84
050	B015	200.52	B	0.01
051	B296	1.90	S	0.14
051	B296	78.96	MAX	1.02
051	B296	200.24	B	0.01
052	B018	1.83	S	0.19
052	B018	86.67	MAX	0.88
052	B018	200.03	B	0.00
053	B059	1.48	S	0.21
053	B059	90.82	MAX	0.64
053	B059	200.46	B	0.01
054	B018	0.74	S	-
054	B018	78.63	MAX	0.93
054	B018	201.13	B	0.01
055	B299	0.61	S	0.12
055	B299	81.74	MAX	0.99
055	B299	200.63	B	0.00
056	B020	2.22	S	0.08
056	B020	74.43	MAX	0.77
056	B020	201.56	B	0.00
057	B058	1.51	S	0.11
057	B058	78.30	MAX	0.79
057	B058	205.29	B	0.01
058	B021	1.21	S	0.22
058	B021	78.89	MAX	0.83
058	B021	200.08	B	0.00
059	B304	1.16	S	0.30
059	B304	69.65	MAX	1.13
059	B304	200.44	B	0.00

Station				
060	B024	1.32	S	0.23
060	B024	63.21	MAX	1.21
060	B024	201.27	B	0.00
061	B055	1.36	S	0.17
061	B055	73.46	MAX	0.77
061	B055	200.65	B	0.00
062	B307	1.72	S	0.19
062	B307	88.15	MAX	0.86
062	B307	201.00	B	0.01
063	B026	1.61	S	0.23
063	B026	116.47	MAX	0.65
063	B026	201.73	B	0.05
064	B054	1.58	S	0.15
064	B054	84.87	MAX	0.62
064	B054	202.06	B	0.01
065	B027	0.89	S	0.26
065	B027	88.33	MAX	0.99
065	B027	199.89	B	0.02
066	B312	0.64	S	0.20
066	B312	87.88	MAX	0.75
066	B312	200.87	B	0.00
067	B028	1.31	S	0.14
067	B028	90.90	MAX	0.92
067	B028	201.33	B	0.01
068	B223	1.64	S	0.21
068	B223	82.41	B/MAX	0.60
069	B217	2.44	S	0.22
069	B217	68.94	B/MAX	0.74
070	B216	1.41	S	0.23
070	B216	81.41	B/MAX	1.32
071	B209	1.86	S	0.17
071	B209	66.68	MAX	1.14
071	B209	98.23	B	0.48
072	B023	0.96	S	0.15
072	B023	74.72	MAX	1.50
072	B023	108.57	B	0.32
073	B202	1.42	S	0.13
073	B202	65.67	MAX	1.00
073	B202	108.74	B	0.45
074	B022	2.06	S	0.16

Station				
074	B022	74.29	MAX	0.80
074	B022	118.58	B	0.27
075	B195	2.43	S	0.17
075	B195	71.53	MAX	0.84
075	B195	168.18	B	0.03
076	B017	2.31	S	0.24
076	B017	79.77	MAX	0.73
076	B017	143.75	B	0.03
077	B190	2.49	S	0.21
077	B190	76.73	MAX	1.03
077	B190	148.76	B	0.06
078	B016	2.53	S	0.47
078	B016	58.27	MAX	1.20
078	B016	200.50	B	0.01
079	B185	1.88	S	0.36
079	B185	77.00	MAX	0.80
079	B185	200.54	B	0.01
080	B083	2.36	S/MAX	0.45
080	B083	200.68	B	0.00
081	B250	1.20	S	0.14
081	B250	76.34	MAX	0.80
081	B250	198.10	B	0.00
082	B082	1.38	S	0.09
082	B082	61.51	MAX	1.05
082	B082	200.68	B	0.00
083	B081	2.98	S	0.12
083	B081	71.51	MAX	0.95
083	B081	201.73	B	0.00
084	B001	2.77	S	0.10
084	B001	81.48	MAX	0.55
084	B001	201.01	B	0.00
085	B176	2.10	S	-
085	B176	26.26	MAX	-
085	B176	44.42	B	-

Figure 1. Locations of plankton stations completed during the SEAMAP Spring plankton Survey aboard the NOAA Ship *Oregon II* cruise R2-23-01 (347) May 3-27, 2023. Solid circles are stations where standard bongo tows and CTD casts were completed. Squares are stations where neuston tows were completed.

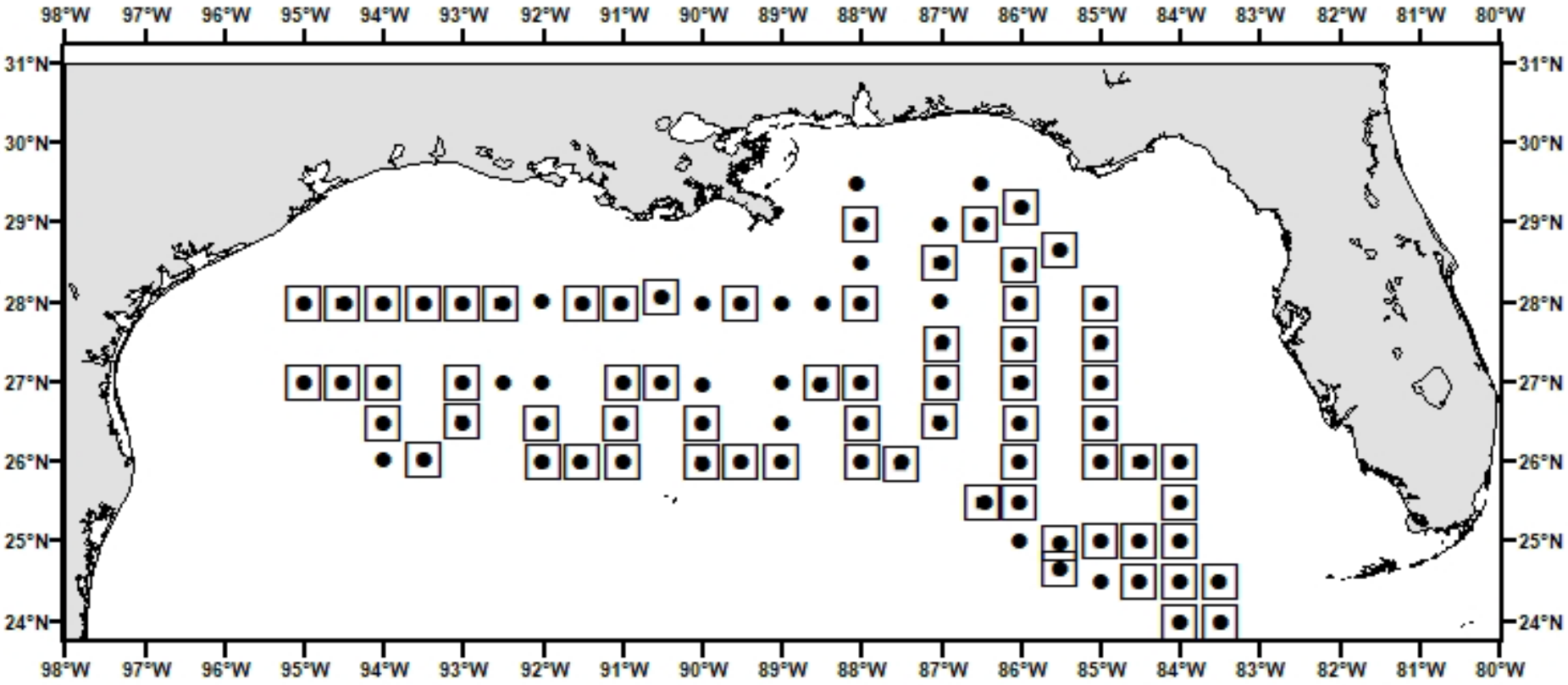
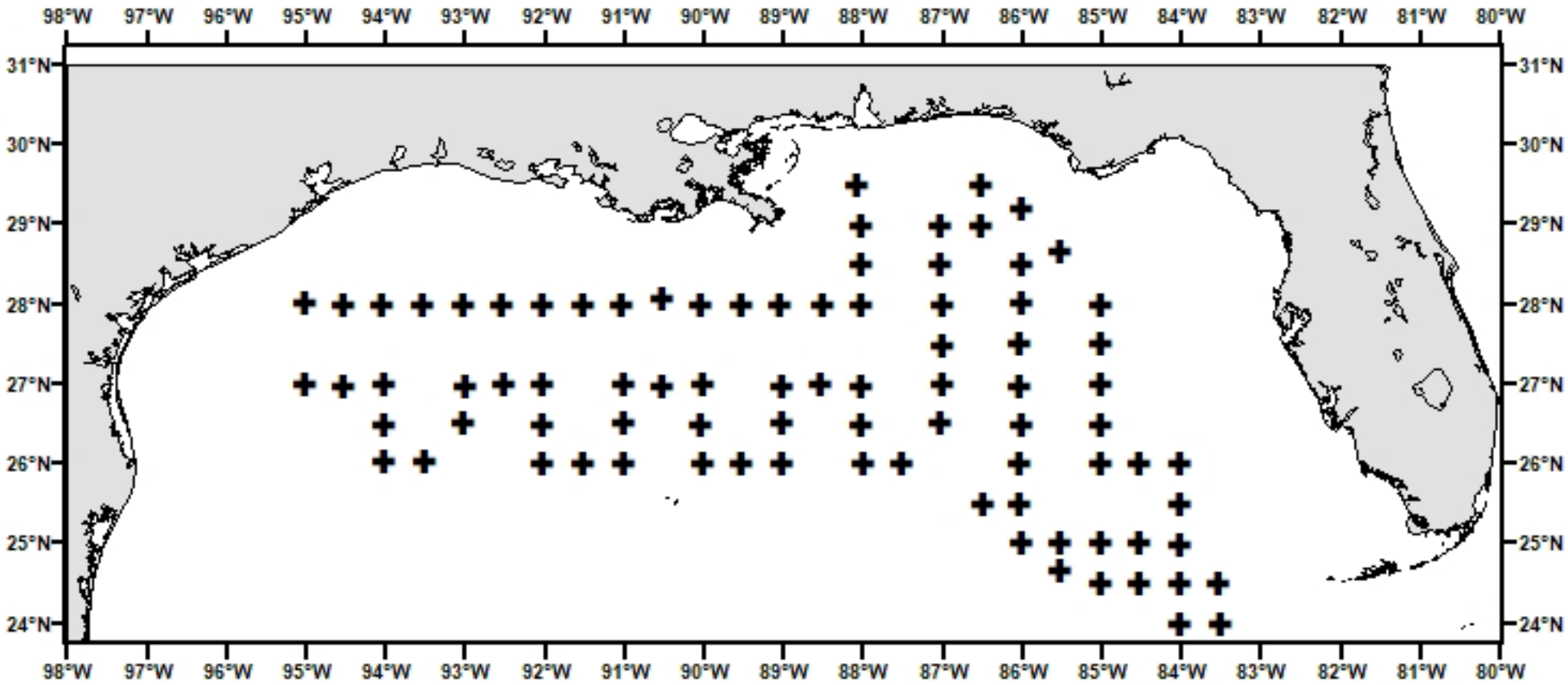


Figure 2. Locations of plankton stations completed during the SEAMAP Spring plankton Survey aboard the NOAA Ship *Oregon II* cruise R2-23-01 (347) May 3-27, 2023. Solid crosses are stations where shallow bongo tows were completed.



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