

# 2017 SUMMER CRUISE REPORT

SEAMAP Shrimp/Groundfish Survey  
*Penaeid* Shrimp  
Benthic Fauna

*R/V Point Sur*

Louisiana Department of Wildlife and Fisheries  
Fisheries Research Laboratory  
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**Chief Scientist  
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SURVEY PERIOD: 6/21/2017 – 6/23/2017

AREA OF OPERATION: Gulf of Mexico (latitudes 28.41°-29.07°, longitudes 89.53°-91.29°, depths 12-100m)

## INTRODUCTION

The Southeast Area Monitoring and Assessment Program (SEAMAP) Shrimp/Groundfish trawl surveys are conducted throughout the Gulf of Mexico to provide fishery-independent monitoring and assessment information on shrimp and groundfish assemblages associated with low relief soft-bottom habitats. These data are essential to the management of the fisheries resources in the Gulf of Mexico. Louisiana Department of Wildlife and Fisheries (LDWF), as well as SEAMAP state partners, sample in conjunction with the National Marine Fisheries Service (NMFS) to provide a Gulf-wide trawl survey each summer and fall.

## OBJECTIVES

1. Utilize the standard SEAMAP 42ft trawl to characterize shrimp and groundfish assemblages associated with low relief soft-bottom habitats.
2. Increase understanding of the environment associated with shrimp and groundfish assemblages by collecting environmental data, water column profiles, and chlorophyll measurements at each shrimp/groundfish station.
3. Provide information on the occurrence, abundance, and geographical distribution of eggs, larvae, and juvenile fishes and invertebrates by sampling plankton stations historically sampled by Louisiana during groundfish cruises (summer cruise only).
4. Increase understanding of the environment associated with pelagic eggs, larvae, and juvenile fishes and invertebrates by collecting environmental data, water column profiles, and chlorophyll measurements with each plankton collection (summer cruise only).
5. Collect detailed observations (i.e. identification, number, volume, bell diameter) of net-caught jellyfish and ctenophores to assess these communities in relationship to plankton catches (summer cruise only).
6. Collect volumetric measurements of net caught *Sargassum* spp. to assess species living in and around *Sargassum* spp. habitats (summer cruise only).

## METHODS

Environmental data were collected in conjunction with each station. A full water column profile was recorded with a Seabird CTD (SBE 9plus or SBE 19plus). Water parameters measured included temperature, dissolved oxygen (DO), salinity, and conductivity. In the event a DO reading fell below 2.0 Mg/L, the DO was verified with a YSI.

SEAMAP Shrimp/Groundfish trawl sampling consisted of pulling a 42ft, 1-5/8 inch stretched mesh, trawl at each selected station. The trawl towline was set at a 4:1 cable length/water depth ratio. Trawl towing was conducted at or near 2.5 knots for 30 minutes after the net was fully deployed. Trawling was conducted both day and night. For trawl catches less than 22.7 kilograms (kg), the total weight of the catch was processed. For collections greater than 22.7 kg, samples were subsampled by randomly

removing a percentage of fishes from the total catch. The catch was processed following procedures per the SEAMAP Operations Manual guidelines.

Data were coded according to the NMFS SEAMAP Operations Manual guidelines and entered into the LDWF SEAMAP data entry system. Data were then submitted to the Gulf States Marine Fisheries Commission.

## SURVEY DESIGN

A probability based sample design is utilized to select groundfish trawling stations. All Gulf of Mexico waters from 6 to 60 fathoms ranging from Brownsville, TX to the Florida Keys are included in the groundfish sampling universe. NMFS has set the target for total number of stations sampled per survey at roughly 300 stations. Sampling stations are proportionally allocated among NMFS Gulf Coast Shrimp Statistical Zones. Each Zone has been divided into two strata based on water depth (<20 fathoms) and (>20 to 60 fathoms). The number of stations selected to sample in each of the Zones is proportional to the surface area within each Zone/depth strata to the total surface area. Sampling stations within each stratum are randomly selected. This selection process ensures all areas within the sampling universe have equal probability of being selected.

Currently, SEAMAP partners, including Louisiana, participate in a summer and fall shrimp/groundfish trawl survey. NMFS provides GSMFC a list of sampling stations, who in turn, work with state SEAMAP partners to select stations that each state can complete. NMFS vessels sample remaining stations. Louisiana chooses inshore stations west of the Mississippi River to the Texas border for sampling. All data go to GSMFC for management and storage. These data are available to the scientific community upon request.

## RESULTS

Summer Shrimp/Groundfish Survey  
1701: 6/21/2017 – 6/23/2017  
Vessel: R/V *Point Sur*

Louisiana sampled 12 shrimp/groundfish stations (Table 1) in Louisiana's territorial sea and the adjacent EEZ (latitudes 28.41°-29.07°, longitudes 89.53°-91.29°, depths 12-100m) (Figure 1) aboard the R/V *Point Sur*. Biological and environmental data were entered into the SEAMAP data system.

## DEVIATIONS

Plankton sampling (and therefore chlorophyll collection) was suspended by NOAA for the duration of the summer season.

## SURVEY PARTICIPANTS

Jeremy Miller	Chief Scientist	FRL, Grand Isle, LA
Paul McLaughlin	Biologist	FRL, Grand Isle, LA
Clint Edds	Biologist	FRL, Grand Isle, LA

Chris Levron	Biologist	FRL, Grand Isle, LA
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Figure 1. 2017 Summer Shrimp/Groundfish Survey sampling locations

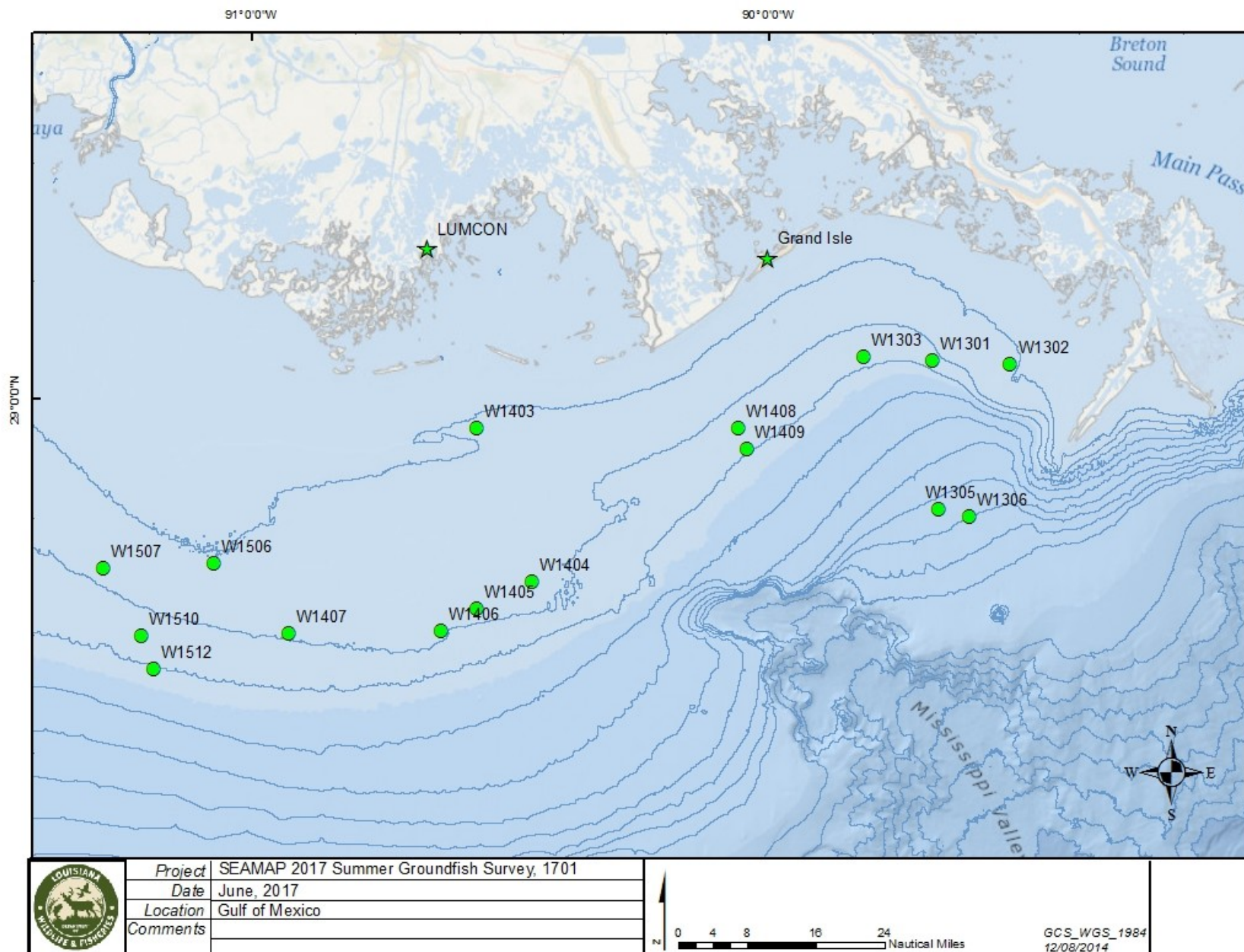


Table 1. 2017 Summer Shrimp/Groundfish Survey Station Details

		DATE						Salinity			TEMPERATURE			DO						
STA#	PASC#	MM/DD/YYYY	GMT TIME	LAT	LONG	STAT ZONE	MAX DEPTH(m)	SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	FIN CATCH	CRUS CATCH	OTHR CATCH	MIN FISH
W1305	95009	6/26/2017	1151	28°49.23	89°39.98	13	76.5	29.53	36.08	36.2	27.06	27.36	22.43	5.62	6.13	5.34	85.1483	7.8831	0.4686	30
W1411	95017	6/27/2017	820	28°25.23	90°43.51	14	43.3	35.69	35.64	35.63	27.96	27.82	27.27	6.24	6.23	6.18	4.947	3.362	0.321	31
W1403	95001	6/25/2017	1217	28°56.66	90°33.88	14	5.1	23.64	24.47	32.3	28.34	28.16	27.19	6.85	6.45	5.88	22.821	0.009	0	29
W1407	95019	6/27/2017	1244	28°36.43	90°55.40	14	19.8	35.24	35.32	35.27	28.22	28.12	27.08	6.3	6.26	4.85	5.742	0.274	0.346	32
W1401	95018	6/27/2017	1039	28°28.94	90°51.92	14	34.7	35.34	35.56	35.68	27.84	27.43	25.92	6.19	6.24	4.22	3.97	0.92	0.838	29
W1512	95020	6/27/2017	333	28°32.78	91°11.31	15	33.5	35.42	35.44	35.43	27.84	27.41	27.11	6.23	6.22	5.52	23.353	2.599	0.436	31
W1409	95002	6/25/2017	1648	28°56.03	90°02.35	14	29.3	30.26	34.9	35.7	27.64	26.88	26.3	7	5.53	4.5	9.554	10.761	0.008	30
W1307	95010	6/26/2017	1629	28°34.24	89°59.62	13	85.5	35.65	36.1	36.31	28.15	25.9	21.2	6.45	6.39	4.81	16.049	0.278	0.76	31
W1413	95011	6/26/2017	1917	28°29.84	90°10.16	14	59.7	35.51	36.02	36.11	28.09	27.32	23.7	6.7	6.19	4.63	1.884	1.543	0.358	30
W1510	95021	6/27/2017	1714	28°36.50	91°11.90	15	28	35.43	35.44	35.41	28	27.97	27.26	6.17	6.2	6.03	4.499	0.4895	0.214	30
W1412	95012	6/26/2017	2027	28°33.55	90°14.27	14	48.1	35.38	35.66	36.04	28.51	27.24	24.89	7.03	5.77	4.94	15.254	5.308	0.441	30
W1404	95013	6/27/2017	13	28°41.41	90°27.12	14	18	33.72	34.64	35.14	28.03	28.03	27.13	8.02	7.16	4.79	44.2155	7.2938	0.07064	30
W1405	95014	6/27/2017	712	28°38.65	90°33.63	14	20.9	35.1	35.23	35.39	28.25	27.79	27.16	6.5	5.93	5.17	22.4761	3.2015	0.14101	30
W1406	95015	6/27/2017	856	28°36.57	90°37.57	14	20.5	35.01	34.99	35.26	28.06	27.99	27.12	6.4	6.32	4.95	17.506	3.872	0.007	30
W1410	95016	6/28/2017	605	28°28.89	90°36.92	14	30.3	35.69	35.64	35.63	27.96	27.82	27.27	6.24	6.23	6.18	3.134	4.674	0.397	30
W1507	95022	6/27/2017	1912	28°42.65	91°17.11	15	19.4	35.32	35.36	35.37	27.84	27.82	27.53	6.24	6.17	5.43	8.39	2.021	0.435	30
W1506	95023	6/27/2017	2116	28°43.27	91°04.30	15	12.9	35	35.06	35.34	28.11	28.12	28.12	6.32	6.28	6.02	2.453	0.079	0.166	30
W1302	95006	6/26/2017	231	29°02.38	89°31.80	13	12.4	20.73	28.7	32.55	28.88	27.17	26.87	9.14	5.65	5.15	12.257	6.876	0	30
W1408	95003	6/25/2017	1832	28°56.82	90°03.56	14	27.6	29.84	34.86	35.6	28.52	27.02	25.74	10.11	6.03	3.22	39.3086	7.7732	0.13539	30
W1303	95004	6/25/2017	2134	29°04.55	89°49.04	13	31	28.79	31.4	35.33	28.92	27.1	24.95	9.06	5.7	2.28	8.75	4.926	0.092	30
W1301	95005	6/25/2017	2337	29°04.22	89°41.02	13	26	22.97	31.09	35.53	28.35	27.08	26.34	8.31	5.6	4.84	4.694	5.626	0.089	30

W1304	95007	6/26/2017	505	28°51.6 8	89°31.0 6	13	62.3	22.8 8	35.8 2	36.2	27.2 1	27.1 1	23.02	5.32	6.1	5.76	0	0	0	30
W1306	95008	6/26/2017	934	28°48.4 0	89°36.3 7	13	80	30.7 9	36.1 2	36.27	26.9 6	27.3 6	22.21	5.37	6.16	5.76	3.922	1.305	0.869	30