

SEAMAP 2014 Fall Shrimp/Groundfish Survey Cruise Report

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Introduction

SEAMAP Fall Shrimp/Groundfish cruises are conducted to provide fishery-independent monitoring and assessment information essential for the management of Texas' Gulf of Mexico fisheries resources in a coordinated and cost-efficient program. Fishery-independent information is that collected without direct reliance on statistics reported by commercial or recreational fishermen.

Objectives

1. Conduct a fall trawl survey to collect information on shrimp and groundfish abundance and distribution with standard TPWD 20-ft trawls.
2. Select 80 stations for random sampling. All species are identified, measured, weighed, and counted, and selected species are sexed with their maturity stage recorded according to the SEAMAP Operations Manual.
3. Collect information on environmental parameters (salinity, temperature, dissolved oxygen, turbidity, wind speed, wind direction, barometric pressure, wave height, water color, cloud cover, etc.) in conjunction with trawl sampling.
4. Code all data according to approved SEAMAP Operations Manual guidelines, and enter data on the SEAMAP data entry system.
5. Submit data to the Gulf States Marine Fisheries Commission SEAMAP Coordinator.

Methods

Vessels that participated in the 2014 Texas Fall Shrimp/Groundfish Survey were: Matagorda Bay (32), Trinity Bay (65), Nueces (67), San Antonio (87) and Sabine (90). All Texas Territorial Sea areas were sectioned into 1-minute latitude by 1-minute longitude grids. Grids within the Texas territorial sea with at least 1/3 of their area equal to or greater than 1.8 m (1 fm) deep and at least 1/3 of which is free from known obstructions, were selected at random by a computer program. Sampling was conducted in 16 grids from each one of the following five gulf areas: (Sabine Pass, Bolivar Pass, Matagorda Pass, Aransas Pass, and Brazos Santiago Pass). Eight trawls samples were collected in each gulf area between the 1st and 15th of the month and 8 between the 16th and the last day of the month. A

20 ft trawl with 1.5 inch (38 mm) stretched mesh was lowered into position at the selected site and towline was set at a 5:1 cable length water depth ratio. Trawl towing was conducted at or near 3 mph for 10 minutes after lockdown and towed parallel to fathom curve.

Sample work and data processing was conducted in accordance with SEAMAP Operations Manual guidelines.

Environmental data were collected in conjunction with each trawl. Surface, mid-water and bottom temperature, salinity, and dissolved oxygen were measured with a YSI 6600 datasonde at each trawl station. Bottom water samples were collected at each station for in lab turbidity reading.

Results

Texas vessels collected 80 Fall Shrimp/Groundfish survey samples in Texas Territorial Seas between latitudes $25^{\circ} 57'$ and $29^{\circ} 41'$ and longitudes $-93^{\circ} 34'$ and $-97^{\circ} 08'$ (Table 1). Samples were collected from November 8 to November 26, 2014 (Table 1).

Deviations

There were no significant deviations from protocol.

Cruise participants:

Texas Parks and Wildlife Department staff collected samples, processed catch and entered information on data sheets. Cruise report summary completed by Fernando Martinez-Andrade.

Submitted By:

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Table 1. TPWD SEAMAP 2014 Fall Shrimp/Groundfish cruise report summary.

STA#	DATE	TIME	LAT	LONG	STAT	MAX	DO			SALINITY			TEMPERATURE			FIN	CRUS	OTHER	MIN	BIO	LENGTH
					ZONE	DEPTH	SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	CATCH	CATCH	CATCH	FISHED	COUNT	COUNT
32 MATAGORDA BAY																					
32001	11/09/2014	744	2604.12	-9707.37	21	15.7	6.8	6.7	6.7	32.5	32.6	32.6	23.8	23.8	23.8	1.004	0.029	0.145	10	14	28
32002	11/09/2014	841	2559.57	-9704.47	21	21.7	6.7	6.7	6.7	35.2	35.2	35.3	24.5	24.5	24.5	0.234	0.003	0.205	10	13	31
32003	11/09/2014	919	2557.70	-9705.37	21	19.7	7.1	6.8	6.7	35.4	35.4	35.4	24.3	24.3	24.3	0.198	0.010	0.231	10	12	29
32004	11/09/2014	1010	2558.22	-9700.33	21	27.4	6.9	6.6	6.6	35.4	35.4	35.4	25.3	25.3	25.3	0.926	0.036	0.099	10	13	44
32005	11/09/2014	1050	2559.60	-9659.37	21	28.4	6.7	6.6	6.5	35.5	35.5	35.5	25.5	25.5	25.4	1.709	0.031	0.020	10	17	72
32006	11/09/2014	1139	2601.70	-9659.48	21	28.8	6.8	6.7	6.6	35.4	35.4	35.4	25.4	25.4	25.4	2.478	0.070	0.103	10	21	81
32007	11/09/2014	1234	2603.20	-9659.52	21	28.5	6.8	6.8	6.7	35.3	35.4	35.4	25.2	25.1	25.1	0.817	0.024	0.185	10	14	56
32008	11/09/2014	1324	2604.57	-9704.42	21	21.4	7.1	7.1	7.0	35.3	35.3	35.4	24.6	24.5	24.6	0.457	0.031	0.305	10	12	51
32009	11/26/2014	817	2605.33	-9705.53	21	19.9	7.6	7.6	7.6	30.4	30.4	24.4	18.0	18.0	18.0	0.494	0.236	0.023	10	17	44
32010	11/26/2014	854	2606.82	-9703.53	21	22.8	7.7	7.6	7.6	30.5	30.5	30.5	18.4	18.5	18.5	0.015	0.024	0.082	10	8	15
32011	11/26/2014	921	2607.27	-9702.42	21	24.0	7.9	8.0	7.9	30.6	30.6	30.7	18.9	18.9	18.9	0.325	0.104	0.031	10	10	34
32012	11/26/2014	1030	2615.80	-9701.40	21	24.7	7.8	7.9	8.0	30.7	30.7	30.7	19.1	19.1	19.2	0.183	0.080	0.051	10	11	26
32013	11/26/2014	1102	2615.20	-9704.57	21	19.8	7.9	7.9	7.8	30.4	30.5	30.5	18.5	18.4	18.5	0.211	0.018	0.481	10	12	36
32014	11/26/2014	1147	2619.92	-9706.52	21	17.7	8.0	7.9	7.7	30.2	30.3	30.3	18.0	18.0	18.0	0.314	0.343	0.175	10	17	45
32015	11/26/2014	1237	2615.23	-9708.55	21	16.9	7.9	7.7	7.7	30.2	30.2	30.2	18.2	17.9	17.9	0.373	0.025	0.097	10	10	17
32016	11/26/2014	1317	2608.78	-9707.50	21	18.3	7.8	7.7	7.5	30.2	30.2	30.2	18.2	18.2	18.1	0.067	0.097	0.192	10	10	39
65 TRINITY BAY																					
65001	11/09/2014	1039	2918.55	-9438.35	18	12.6	7.9	7.8	7.9	27.0	27.0	27.1	20.2	20.2	20.2	0.074	0.102	0.246	10	13	38
65002	11/09/2014	1120	2920.78	-9438.28	18	10.0	7.7	7.7	8.1	27.5	27.5	27.5	20.6	20.6	20.5	0.276	0.047	0.166	10	14	32
65003	11/09/2014	1207	2922.75	-9435.28	18	10.5	7.9	7.9	8.1	27.7	27.7	27.7	21.0	20.8	20.8	0.045	0.050	0.251	10	11	44
65004	11/09/2014	1254	2924.38	-9431.75	18	11.0	8.0	7.9	8.0	27.7	27.7	27.7	21.1	20.9	20.8	0.034	0.007	0.116	10	6	13
65005	11/09/2014	1332	2927.75	-9430.28	18	9.0	8.0	7.8	8.0	26.9	26.9	26.9	20.7	20.3	20.3	0.178	0.001	0.033	10	6	12
65006	11/09/2014	1424	2922.78	-9427.30	18	13.3	7.7	7.5	7.4	27.7	27.8	28.4	21.2	20.9	21.3	0.115	0.001	0.539	10	10	25
65007	11/09/2014	1501	2920.73	-9430.37	18	13.7	7.8	7.8	7.8	27.7	28.0	28.3	21.3	20.8	21.0	0.055	0.027	0.373	10	9	35
65008	11/09/2014	1533	2919.75	-9432.35	18	14.0	7.8	7.5	7.7	28.3	28.3	28.3	21.7	21.2	21.2	0.271	0.002	0.050	10	8	11
65009	11/18/2014	1119	2916.67	-9436.33	18	15.0	8.9	8.9	8.8	27.2	27.2	27.2	15.5	15.5	15.5	1.967	0.623	0.035	10	24	114
65010	11/18/2014	1155	2915.50	-9436.33	18	15.5	8.9	8.9	9.1	27.7	27.7	27.7	15.7	15.7	15.7	1.925	0.236	0.099	10	18	81
65011	11/18/2014	1232	2914.57	-9439.30	18	15.0	9.0	9.0	9.1	27.4	27.4	27.3	15.6	15.6	15.4	1.404	0.177	0.651	10	16	51
65012	11/18/2014	1309	2916.50	-9441.33	18	10.5	9.4	9.4	9.5	27.0	27.0	27.0	14.8	14.7	14.5	0.416	0.039	0.178	10	14	32
65013	11/18/2014	1358	2914.50	-9449.33	18	9.5	9.1	9.2	9.3	28.0	28.0	28.0	15.3	15.3	15.2	0.314	0.216	0.114	10	11	39
65014	11/18/2014	1427	2913.60	-9450.37	18	10.3	9.3	9.3	9.6	28.0	28.0	28.0	15.5	15.5	15.5	0.423	0.199	0.052	10	14	41
65015	11/18/2014	1505	2910.50	-9449.33	18	13.7	9.1	9.1	9.1	27.6	27.6	27.7	15.3	15.3	15.3	0.203	0.340	0.146	10	17	48
65016	11/18/2014	1604	2909.50	-9442.33	18	17.5	8.9	8.8	8.8	28.2	28.3	28.3	16.3	16.3	16.4	0.739	0.132	0.356	10	17	46

Table 1. (cont.)

STA#	DATE	TIME	LAT	LONG	STAT	MAX	DO			SALINITY			TEMPERATURE			FIN	CRUS	OTHER	MIN	BIO	LENGTH
					ZONE	DEPTH	SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	CATCH	CATCH	CATCH	FISHED	COUNT	COUNT
67 NUECES																					
67001	11/10/2014	804	2746.72	-9657.20	20	19.7	5.3	5.3	5.5	33.3	33.2	33.4	22.3	22.3	22.0	2.236	0.058	0.101	10	14	66
67002	11/10/2014	900	2744.28	-9700.50	20	18.2	5.3	4.9	5.5	33.3	33.4	33.8	22.5	22.3	21.8	1.177	0	0.648	10	12	53
67003	11/10/2014	940	2742.90	-9657.32	20	22.4	5.5	5.4	5.3	33.6	33.6	33.5	23.1	23.0	22.9	0.551	0.090	0.129	10	19	58
67004	11/10/2014	1022	2741.25	-9658.73	20	21.8	5.5	5.4	5.7	33.5	33.5	33.5	23.1	23.0	23.1	0.176	0.002	1.253	10	12	20
67005	11/10/2014	1112	2739.78	-9703.50	20	18.7	5.3	5.4	5.4	33.3	33.3	33.3	22.4	22.4	22.3	5.790	0	0.447	10	14	70
67006	11/10/2014	1144	2741.15	-9705.55	20	15.8	5.4	5.5	5.6	33.3	33.2	33.2	22.1	22.1	22.2	0.018	0.001	0.286	10	8	38
67007	11/10/2014	1235	2742.85	-9704.67	20	14.4	5.4	5.5	5.5	33.2	33.3	33.2	22.2	22.2	22.3	0.865	0	0.293	10	7	46
67008	11/10/2014	1300	2744.15	-9704.57	20	13.0	5.3	5.4	5.6	33.2	33.2	33.2	22.1	22.1	22.2	0.993	0	0.206	10	14	71
67009	11/19/2014	811	2748.85	-9658.37	20	17.2	6.2	5.7	6.0	31.3	31.5	31.6	16.9	17.1	17.3	0.528	0.671	0.016	10	19	96
67010	11/19/2014	844	2748.65	-9655.43	20	20.0	5.9	5.8	5.7	32.1	32.1	32.2	18.1	18.1	18.0	3.380	0.751	0.131	10	21	113
67011	11/19/2014	950	2748.17	-9654.70	20	20.2	5.5	5.5	5.6	32.3	32.6	32.6	18.4	18.6	18.8	7.523	1.267	0.155	10	21	168
67012	11/19/2014	1036	2747.93	-9654.73	20	21.2	5.9	5.9	5.6	32.4	32.7	32.7	18.6	18.6	18.8	3.809	1.094	0.030	10	16	79
67013	11/19/2014	1148	2751.07	-9651.68	20	20.6	5.9	5.6	5.6	32.8	32.9	32.9	19.2	19.0	19.0	3.137	0.286	0.186	10	19	108
67014	11/19/2014	1216	2752.70	-9651.42	20	19.8	5.9	5.6	5.7	32.7	32.8	32.9	19.1	18.9	18.9	5.301	0.531	0.166	10	18	148
67015	11/19/2014	1250	2752.03	-9654.63	20	16.4	5.8	5.8	5.6	32.0	32.1	32.1	18.4	18.2	18.3	7.145	0.739	0.343	10	17	134
67016	11/19/2014	1325	2755.92	-9657.52	20	10.0	6.2	6.3	6.4	30.8	30.9	31.0	17.0	16.6	16.4	1.523	0	0.202	10	11	55
87 SAN ANTONIO																					
87001	11/15/2014	705	2824.03	-9617.62	19	12.2	7.4	7.3	7.1	30.9	30.9	30.9	17.6	17.8	17.8	1.987	0.248	0.013	10	17	53
87002	11/15/2014	740	2825.75	-9616.17	19	10.3	7.6	7.6	7.8	30.9	30.9	30.9	17.3	17.3	17.3	12.161	1.444	0.065	10	21	142
87003	11/15/2014	837	2828.78	-9610.37	19	12.4	7.7	7.7	7.7	30.7	30.7	30.7	17.7	17.7	17.7	4.409	0.402	0.007	10	17	107
87004	11/15/2014	930	2829.45	-9605.53	19	12.5	7.4	7.4	7.5	30.7	30.7	30.7	18.2	18.2	18.2	3.269	0.783	0.073	10	19	122
87005	11/15/2014	1041	2824.25	-9609.97	19	16.8	7.5	7.5	7.6	31.3	31.3	31.2	19.4	19.4	19.2	2.172	0.136	0.086	10	17	72
87006	11/15/2014	1122	2819.88	-9614.27	19	19.8	7.3	7.4	7.4	31.6	31.6	31.6	19.5	19.5	19.5	1.108	0.277	0.134	10	22	76
87007	11/15/2014	1152	2820.68	-9616.78	19	18.6	7.6	7.6	7.5	31.5	31.5	31.5	19.4	19.4	19.4	0.739	0.158	0.153	10	18	70
87008	11/15/2014	1244	2823.88	-9615.30	19	14.9	7.5	7.5	7.5	31.2	31.2	31.2	18.3	18.3	18.3	3.443	0.582	0.092	10	21	76
87009	11/26/2014	733	2819.75	-9619.15	19	16.2	6.3	6.3	6.3	30.5	30.5	30.6	17.7	17.7	17.6	0.694	0.364	0.625	10	16	83
87010	11/26/2014	806	2817.08	-9620.68	19	17.9	6.3	6.3	6.4	30.8	30.8	30.7	17.9	17.9	17.7	0.791	0.231	0.265	10	18	61
87011	11/26/2014	834	2816.70	-9619.30	19	19.0	6.3	6.3	6.3	31.0	31.0	31.1	17.9	17.9	18.0	0.720	0.145	0.078	10	11	37
87012	11/26/2014	910	2813.33	-9617.73	19	23.4	6.3	6.3	6.1	30.9	30.9	32.0	17.8	17.8	18.6	1.970	0.021	0.249	10	19	85
87013	11/26/2014	945	2812.85	-9619.10	19	22.8	6.2	6.1	5.9	31.9	31.9	32.3	18.6	18.7	19.1	0.745	0.022	0.172	10	15	58
87014	11/26/2014	1048	2810.43	-9624.83	19	21.6	6.1	6.2	6.2	31.9	31.8	32.0	18.7	18.7	18.8	0.050	0.010	0.282	10	9	43
87015	11/26/2014	1121	2813.57	-9626.10	19	17.9	6.4	6.3	6.2	31.2	31.2	31.6	18.2	18.2	18.5	0.243	0.012	0.193	10	9	27
87016	11/26/2014	1152	2815.15	-9627.73	19	13.0	6.3	6.4	6.4	30.9	30.9	30.9	17.8	17.8	17.8	1.167	0.064	0.210	10	15	53

Table 1. (cont.)

STA#	DATE	TIME	LAT	LONG	STAT	MAX	DO			SALINITY			TEMPERATURE			FIN	CRUS	OTHER	MIN	BIO	LENGTH
					ZONE	DEPTH	SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	CATCH	CATCH	CATCH	FISHED	COUNT	COUNT
90 SABINE																					
90001	11/08/2014	836	2939.40	-9400.87	17	4.3	7.8	7.4	7.0	25.7	27.0	27.5	18.2	20.0	19.8	0.201	0.049	0.429	10	10	23
90002	11/08/2014	924	2938.48	-9357.13	17	4.9	7.7	7.3	6.9	24.7	24.7	27.4	19.2	19.2	20.3	0.087	0.046	0.605	10	9	25
90003	11/08/2014	1002	2936.52	-9357.97	17	6.4	7.5	7.2	6.8	25.3	25.7	26.9	19.4	19.7	20.5	0.383	0.250	0.127	10	14	47
90004	11/08/2014	1056	2935.48	-9357.10	17	7.6	7.2	6.3	6.7	26.3	26.8	27.5	19.9	20.0	20.7	0.733	0.007	0.131	10	7	23
90005	11/08/2014	1128	2934.80	-9358.80	17	8.5	7.2	7.0	6.6	26.7	27.0	28.0	20.3	20.2	21.0	0.700	0.081	0.461	10	14	62
90006	11/08/2014	1202	2934.52	-9359.23	17	8.8	7.6	7.0	6.7	26.8	27.2	28.1	20.5	20.2	21.0	0.168	0.033	0.225	10	14	27
90007	11/08/2014	1238	2933.42	-9400.90	17	10.4	7.4	7.1	6.1	27.3	27.8	28.6	20.3	20.5	21.2	0.352	0.019	0.545	10	11	34
90008	11/08/2014	1423	2934.50	-9354.22	17	9.4	7.8	7.3	6.6	25.9	26.9	27.8	20.3	20.2	20.8	0.369	0.038	0.921	10	16	39
90009	11/19/2014	654	2937.48	-9354.17	17	5.2	8.6	8.6	8.4	28.4	28.4	28.6	14.0	14.0	14.5	0.072	0.279	0.048	10	13	48
90010	11/19/2014	727	2939.50	-9352.87	17	4.0	9.2	9.0	8.8	27.0	27.0	28.1	13.0	13.0	13.4	0.027	1.428	0.300	10	9	37
90011	11/19/2014	759	2939.48	-9351.13	17	3.5	9.4	9.2	9.2	26.3	26.3	26.5	12.6	12.6	12.3	0.027	0.173	0.174	10	5	44
90012	11/19/2014	855	2941.53	-9342.77	17	7.3	8.9	8.7	8.2	29.6	29.6	30.2	14.4	14.4	15.3	0.200	0.007	0.169	10	14	22
90013	11/19/2014	933	2940.42	-9339.13	17	8.8	8.8	8.5	8.1	30.3	30.3	30.7	14.9	14.8	15.5	1.352	0.041	0.169	10	13	47
90014	11/19/2014	1038	2937.73	-9339.82	17	10.4	8.6	8.5	8.2	30.7	30.8	31.1	15.3	15.3	15.7	1.904	0.002	0.237	10	10	34
90015	11/19/2014	1122	2936.50	-9334.10	17	11.6	8.6	8.1	8.0	31.4	31.4	31.4	16.0	16.0	16.0	0.527	0.039	0.305	10	8	37
90016	11/19/2014	1228	2934.50	-9344.83	17	12.2	8.8	8.4	7.9	28.8	31.0	32.1	14.5	15.8	16.4	0.797	0.071	0.559	10	14	56