

SEAMAP Fall 2011 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 to 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 Texas 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 Texas SEAMAP Operations Manual guidelines, and enter data on the Texas SEAMAP data entry system.
5. Submit data to the Gulf States Marine Fisheries Commission SEAMAP Coordinator.

Methods

Vessels that participated in the 2011 Texas Fall Shrimp/Groundfish Survey were: R.J. Kemp (31), Matagorda Bay (32), Sabine (40), Nueces Bay (67), Trinity Bay (65) and San Jacinto (69). 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. Direction of first tow was randomly selected. Subsequent tows alternated tow direction.

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

Environmental data were collected in conjunction with each trawl. Temperature and dissolved oxygen were measured with either a YSI 6600 meter (Aransas Pass) or a YSI 85 meter (all others) at each trawl station. Three water bottles samples (surface, mid, and bottom) were collected at each station for in lab salinity measurements using a YSI 610DM.

Results

Texas vessels collected 80 Fall Shrimp/Groundfish survey samples in Texas Territorial Seas (between latitudes 25° 58' and 29° 43' and longitudes -93° 37' and -97° 09') (Table 1). Samples were collected between November 1, 2011 and November 29, 2011 (Table 1).

Deviations

There were no significant deviations.

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:

Fernando Martinez-Andrade
Texas Parks & Wildlife Department
Texas SEAMAP Coordinator

Table 1. TPWD SEAMAP 2011 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
31 R.J. KEMP																					
31001	11/05/2011	847	2614.30	-9703.47	21	20.0	6.0	5.9	6.2	34.9	35.1	35.0	24.2	24.1	24.2	0.023	0	0.016	10	2	1
31002	11/05/2011	920	2615.77	-9702.50	21	22.0	6.1	6.2	6.0	34.9	34.9	34.9	24.4	24.4	24.4	0.087	0	0.010	10	5	4
31003	11/05/2011	953	2615.23	-9704.62	21	20.5	6.4	6.1	6.4	34.9	34.9	34.9	24.1	24.1	24.1	0.539	0	0	10	5	6
31004	11/05/2011	1021	2615.67	-9705.62	21	19.2	6.2	6.0	6.2	34.9	34.9	34.0	24.0	24.0	24.0	0.021	0	0	10	1	1
31005	11/05/2011	1057	2616.32	-9703.58	21	19.3	6.2	6.2	6.1	34.9	35.0	35.0	24.4	24.4	24.1	0	0	0.041	10	1	1
31006	11/05/2011	1133	2614.73	-9705.57	21	18.9	6.1	6.2	6.0	34.9	34.9	34.9	24.0	24.1	24.0	0.190	0	0	10	4	4
31007	11/05/2011	1216	2611.25	-9707.55	21	17.4	6.1	6.1	6.0	34.6	34.6	34.6	23.4	23.4	23.4	0	0	0	10	1	3
31008	11/05/2011	1254	2608.87	-9707.52	21	14.7	6.3	6.3	6.2	34.5	34.5	34.5	23.2	23.2	23.2	0	0	0.008	10	4	15
31009	11/29/2011	743	2558.45	-9708.23	21	11.4	4.1	4.2	4.9	30.4	30.4	30.3	20.3	20.3	20.3	0.141	0	0	10	8	17
31010	11/29/2011	820	2604.17	-9705.17	21	19.2	4.0	4.0	4.1	30.7	30.7	30.6	21.3	21.2	21.3	0.171	0.031	0.139	10	7	13
31011	11/29/2011	855	2605.43	-9702.40	21	23.6	4.2	4.3	4.3	30.6	30.6	30.5	21.5	21.5	21.5	0.272	0.001	0.054	10	4	5
31012	11/29/2011	930	2606.83	-9659.50	21	28.7	4.7	4.9	5.8	30.5	30.6	30.5	21.3	21.5	21.5	0.209	0	0.011	10	4	3
31013	11/29/2011	1030	2612.32	-9702.42	21	22.1	4.2	4.0	4.1	30.9	30.9	30.9	21.2	21.2	21.2	0.060	0	0.009	10	6	5
31014	11/29/2011	1115	2610.82	-9707.50	21	17.6	4.4	4.4	4.4	31.2	31.2	31.2	20.9	20.8	20.8	5.203	0.002	0.008	10	3	2
31015	11/29/2011	1248	2609.18	-9709.52	21	9.5	3.9	4.0	4.0	31.3	31.3	31.3	21.0	20.6	20.5	0.004	0	0.041	10	6	5
31016	11/29/2011	1325	2606.87	-9708.52	21	12.3	3.9	3.4	3.9	31.3	31.3	31.4	21.1	20.5	20.2	5.561	0	0.020	10	6	5
32 MATAGORDA BAY																					
32001	11/01/2011	1014	2823.58	-9619.38	19	7.6	6.7	6.6	6.7	32.1	32.1	31.9	23.2	23.2	23.1	0.005	0.008	0.032	10	4	22
32002	11/01/2011	1105	2819.42	-9615.60	19	19.5	6.7	6.5	6.4	33.2	33.2	33.3	24.0	24.0	23.9	0.044	0.013	0.138	10	8	9
32003	11/01/2011	1147	2821.58	-9612.40	19	18.5	6.6	6.6	6.6	33.1	33.1	33.2	24.1	24.1	24.1	0.134	0.003	0.061	10	7	11
32004	11/01/2011	1235	2821.42	-9608.62	19	19.8	6.5	6.5	6.4	33.1	33.1	33.2	24.1	24.0	23.9	0.159	0	0.037	10	6	5
32005	11/01/2011	1332	2825.57	-9604.42	19	17.6	6.7	6.8	6.8	32.9	32.9	32.9	23.9	23.9	23.8	0.314	0	0.127	10	11	12
32006	11/01/2011	1413	2828.43	-9606.62	19	14.0	6.9	6.8	6.6	32.8	32.8	32.8	23.8	23.8	23.7	0.018	0.069	0.671	10	5	6
32007	11/01/2011	1450	2828.55	-9608.48	19	12.8	6.7	6.9	6.7	32.6	32.6	32.5	23.4	23.3	23.1	0.039	0	1.435	10	4	4
32008	11/01/2011	1533	2825.42	-9610.63	19	15.2	6.8	6.8	6.5	32.8	32.8	32.9	23.7	23.7	23.7	0.206	0	0.469	10	6	7
32009	11/16/2011	857	2820.58	-9622.47	19	10.0	6.3	6.3	6.2	32.7	32.7	32.8	21.2	21.2	21.1	1.198	0.165	0.054	10	15	30
32010	11/16/2011	931	2819.33	-9620.57	19	15.8	6.6	6.5	6.4	32.7	32.7	32.8	21.3	21.3	21.3	1.310	0.098	0.319	10	21	37
32011	11/16/2011	1009	2819.57	-9623.48	19	9.7	6.2	6.2	6.0	32.7	32.7	32.7	21.3	21.3	21.2	0.763	0.023	0.251	10	12	25
32012	11/16/2011	1053	2818.02	-9627.50	19	6.4	6.3	6.5	6.4	32.8	32.8	32.8	21.9	21.9	21.8	1.304	0.032	0.036	10	10	38
32013	11/16/2011	1125	2815.50	-9627.50	19	12.8	6.5	6.4	5.7	32.7	32.6	32.7	21.4	21.3	21.0	1.249	0.101	0.04	10	17	32
32014	11/16/2011	1203	2812.40	-9627.53	19	17.9	6.6	6.6	5.6	32.6	32.7	32.7	21.5	21.5	20.7	5.667	0.041	0.187	10	19	49
32015	11/16/2011	1240	2810.42	-9626.45	19	21.0	6.6	6.4	6.2	32.8	32.8	32.9	21.9	21.8	21.9	2.563	0.231	0.389	10	24	78
32016	11/16/2011	1320	2812.42	-9623.50	19	21.9	6.6	6.7	6.2	32.7	32.8	32.4	21.8	21.8	21.3	5.312	0.277	0.304	10	11	44

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
40 SABINE																					
40001	11/11/2011	905	2936.52	-9355.22	17	6.1	8.0	7.9	7.9	27.6	28.6	28.6	18.1	18.4	18.4	0.241	0.008	32.589	10	9	15
40002	11/11/2011	950	2937.45	-9356.87	17	5.5	7.9	8.1	8.0	29.1	29.1	29.1	18.7	18.6	18.6	0.181	0.004	23.611	10	10	27
40003	11/11/2011	1026	2937.55	-9357.08	17	5.5	8.3	8.2	8.0	29.1	29.1	29.1	18.9	18.6	18.6	0.025	0.024	1.217	10	7	22
40004	11/11/2011	1105	2939.53	-9356.92	17	4.0	8.8	8.9	8.6	28.9	29.0	29.0	19.0	18.6	18.5	0.001	0.012	8.121	10	4	5
40005	11/11/2011	1150	2939.35	-9401.12	17	4.6	9.0	8.9	8.4	28.8	28.8	28.8	18.9	18.7	18.6	0.511	0.010	1.325	10	11	15
40006	11/11/2011	1353	2934.55	-9359.75	17	9.4	8.4	8.3	7.5	29.5	29.5	29.7	19.6	19.5	19.4	0.059	0.007	0.136	10	8	30
40007	11/11/2011	1436	2933.52	-9356.15	17	9.4	8.6	8.4	7.7	29.2	29.2	29.4	19.2	19.1	19.1	0.149	0.066	0.015	10	9	35
40008	11/11/2011	1527	2933.57	-9352.80	17	11.5	8.6	8.1	7.5	28.6	28.6	29.3	19.0	18.9	19.2	0.162	0.071	0.467	10	9	43
40009	11/16/2011	844	2934.32	-9349.78	17	11.0	8.1	8.1	7.8	28.8	28.8	28.8	19.8	19.7	19.9	0.584	0.602	0.790	10	16	142
40010	11/16/2011	950	2940.33	-9343.22	17	7.9	7.7	7.5	7.6	28.2	28.2	28.5	20.0	19.7	19.9	0.973	0.265	0.672	10	18	86
40011	11/16/2011	1027	2939.40	-9341.77	17	8.8	7.8	7.9	7.7	28.5	28.6	28.6	20.1	20.0	19.9	0.615	0.065	0.236	10	14	37
40012	11/16/2011	1104	2938.50	-9340.17	17	9.4	8.0	8.1	7.8	28.2	28.2	28.2	20.3	19.9	19.8	1.482	0.078	1.194	10	14	50
40013	11/16/2011	1148	2936.47	-9337.77	17	10.4	8.0	7.9	6.7	28.0	28.0	29.1	20.3	19.7	19.9	2.356	0.056	159.620	10	8	30
40014	11/16/2011	1414	2939.55	-9338.08	17	9.1	8.1	8.2	7.9	28.3	28.3	28.4	20.3	20.3	19.9	1.536	0.120	1.471	10	11	40
40015	11/16/2011	1457	2943.48	-9338.85	17	5.5	8.6	8.6	8.3	27.7	27.7	27.7	20.2	20.1	19.8	0.410	0.178	0.157	10	15	64
40016	11/16/2011	1608	2941.67	-9348.10	17	4.0	7.9	7.9	7.8	28.3	28.3	28.3	20.8	20.8	20.8	1.014	0.255	0.179	10	17	101
67 NUECES																					
67001	11/01/2011	837	2748.85	-9703.13	20	4.9	7.6	7.3	7.6	32.4	32.4	35.7	23.3	23.3	23.2	0.006	0	0.015	10	2	2
67002	11/01/2011	930	2749.25	-9658.47	20	16.0	6.8	7.6	8.5	37.3	38.0	38.0	23.5	23.9	23.8	0.132	0.005	0.072	10	7	8
67003	11/01/2011	1008	2751.78	-9658.43	20	13.0	7.7	7.5	7.6	37.0	37.7	37.3	23.8	23.9	24.0	0	0.008	0.038	10	2	4
67004	11/01/2011	1106	2800.38	-9654.15	20	6.7	7.5	7.4	7.4	36.4	37.9	38.3	23.4	23.1	23.7	0.003	0.012	0.128	10	4	11
67005	11/01/2011	1142	2758.75	-9652.52	20	13.0	7.7	7.8	7.5	35.1	35.1	35.1	23.6	23.9	24.0	0.032	0	0.002	10	2	2
67006	11/01/2011	1628	2751.13	-9651.45	20	20.0	6.3	5.9	5.9	35.7	35.2	35.6	24.7	24.6	24.6	0.097	0.007	0.018	10	5	11
67007	11/01/2011	1658	2752.83	-9652.52	20	18.0	7.2	7.1	6.8	35.2	35.2	35.2	24.7	24.7	24.8	0.026	0.005	0.020	10	6	11
67008	11/01/2011	1725	2750.57	-9653.13	20	20.0	7.1	7.3	7.1	35.2	35.2	35.2	24.4	24.6	24.4	0.106	0	0.050	10	4	9
67009	11/16/2011	815	2745.88	-9702.43	20	14.0	4.7	4.5	3.5	33.3	33.4	34.7	21.1	21.2	20.8	0.019	0.005	0	10	6	8
67010	11/16/2011	903	2742.00	-9703.63	20	15.7	5.7	4.7	3.8	33.4	33.5	33.7	21.4	21.4	21.5	0.301	0.011	0.005	10	8	10
67011	11/16/2011	955	2739.67	-9709.33	20	10.9	5.5	5.1	5.1	33.3	33.4	33.3	21.4	21.3	21.4	0.009	0	0	10	2	2
67012	11/16/2011	1037	2737.17	-9706.65	20	16.3	5.9	4.7	5.4	33.4	33.5	33.5	22.1	22.0	22.1	0.014	0.016	0.004	10	6	7
67013	11/16/2011	1352	2735.88	-9701.48	20	23.1	4.4	4.8	3.9	33.2	33.4	34.9	23.8	23.5	24.6	0.086	0.018	0	10	7	11
67014	11/16/2011	1440	2742.12	-9700.47	20	19.8	4.9	4.3	3.7	33.4	33.5	33.7	23.6	23.0	24.2	0.021	0.005	0.061	10	10	12
67015	11/16/2011	1510	2743.87	-9700.27	20	18.2	4.3	4.0	3.6	33.3	34.0	33.9	23.5	23.5	23.5	0.061	0.025	0.073	10	13	19
67016	11/16/2011	1542	2744.22	-9658.43	20	20.4	6.1	5.4	3.7	33.1	32.9	33.7	23.0	22.9	22.8	0.208	0.002	0.017	10	7	11

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
69 SAN JACINTO																					
69001	11/01/2011	956	2918.12	-9437.87	18	12.5	7.2	7.1	7.0	32.1	32.1	32.1	22.0	22.0	22.0	0.274	0.050	22.500	10	6	15
69002	11/01/2011	1036	2920.88	-9436.30	18	11.3	7.4	7.3	7.2	32.1	32.1	32.1	22.5	22.5	22.5	0.443	0.038	0.009	10	12	28
69003	11/01/2011	1127	2920.47	-9431.70	18	12.5	7.1	7.1	7.0	32.0	32.0	32.0	22.4	22.4	22.4	0.137	0.007	0.010	10	6	8
69004	11/01/2011	1210	2921.78	-9428.37	18	12.5	7.5	7.4	7.1	32.4	32.4	32.4	22.9	22.9	22.8	0.112	0	0.555	10	8	28
69005	11/01/2011	1244	2923.83	-9430.35	18	11.3	7.2	7.1	7.0	31.6	31.6	31.6	22.3	22.3	22.2	0.014	0	0.584	10	8	27
69006	11/01/2011	1314	2923.43	-9433.88	18	10.1	7.3	7.2	7.0	31.5	31.5	31.6	22.3	22.3	22.2	0.048	0	1.668	10	10	23
69007	11/01/2011	1346	2924.90	-9436.35	18	8.2	7.6	7.6	7.4	31.0	31.0	30.9	22.0	22.0	21.8	0.137	0.011	5.585	10	10	15
69008	11/01/2011	1416	2923.85	-9438.47	18	8.2	7.7	7.6	7.4	31.0	31.0	31.0	21.8	21.7	21.5	0.370	0.030	3.013	10	11	26
69009	11/16/2011	853	2918.72	-9444.08	18	5.2	7.8	7.7	7.6	29.8	29.9	29.9	20.9	20.8	20.8	0.672	0.125	0.006	10	13	51
69010	11/16/2011	950	2914.88	-9445.10	18	9.1	7.9	7.9	7.9	30.3	30.4	30.4	20.8	20.8	20.8	0.354	0.065	0.092	10	11	34
69011	11/16/2011	1041	2915.75	-9449.08	18	4.3	7.3	6.9	5.8	30.1	30.3	31.1	21.0	20.9	20.8	0.582	0.807	128.000	10	11	78
69012	11/16/2011	1138	2913.58	-9453.05	18	3.1	6.2	5.5	5.1	31.3	31.4	31.5	21.2	21.1	21.0	0.626	0.155	0.017	10	14	57
69013	11/16/2011	1231	2911.27	-9448.67	18	12.2	8.1	7.9	5.5	30.3	30.6	32.9	21.2	20.8	20.7	0.838	0.575	0.368	10	14	79
69014	11/16/2011	1308	2910.43	-9447.52	18	14.0	8.1	8.0	7.7	30.5	30.6	30.9	21.3	20.9	20.4	1.173	0.543	0	10	13	87
69015	11/16/2011	1417	2916.20	-9437.60	18	12.2	8.0	8.0	7.8	30.0	30.3	30.3	21.2	21.1	20.9	0.286	0.387	42.029	10	20	53
69016	11/16/2011	1507	2918.07	-9438.65	18	11.3	8.2	8.1	6.8	30.4	30.4	30.6	21.3	21.1	20.7	0.023	0.033	0.372	10	7	33