

SEAMAP Fall 2010 Shrimp/Groundfish Survey Cruise Report

Prepared by
Fernando Martinez-Andrade
Texas Parks and Wildlife Department
Coastal Fisheries Division
NRC Building, Suite 2500
6300 Ocean Drive, Unit 5845
Corpus Christi, Texas, 78412-5845

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 2010 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° 44' and longitudes -93° 35' and -97° 11') (Table 1). Samples were collected between November 1, 2010 and November 19, 2010 (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 2010 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	11/08/2010	856	2612.28	-9703.47	21	20.5	9.2	8.6	7.0	35.7	35.5	35.5	24.1	24.3	24.3	0.208	0.036	0.085	10	7	13
31002	11/08/2010	941	2615.87	-9701.55	21	25.8	6.5	6.5	6.5	35.6	35.0	35.5	24.1	24.4	24.4	0.772	0.039	0.037	10	14	53
31003	11/08/2010	1029	2620.18	-9702.45	21	24.5	8.6	7.8	7.2	35.6	35.5	35.6	23.9	24.1	24.1	1.065	0	0.004	10	12	57
31004	11/08/2010	1108	2620.83	-9705.52	21	19.3	6.6	6.6	6.6	35.5	35.5	35.5	23.9	23.8	23.7	0.102	0	0.051	10	6	7
31005	11/08/2010	1137	2620.18	-9706.55	21	18.3	6.8	7.1	8.1	35.5	35.5	35.5	23.3	23.7	23.8	0.372	0.014	0.117	10	9	15
31006	11/08/2010	1223	2619.87	-9711.47	21	10.1	6.7	6.7	6.7	35.6	35.6	35.6	23.2	23.1	23.1	0.052	0	0.422	10	4	14
31007	11/08/2010	1306	2617.20	-9709.60	21	15.2	6.8	6.5	6.2	35.6	35.6	35.6	23.5	23.3	23.4	0.276	0.002	0.052	10	10	29
31008	11/08/2010	1344	2616.73	-9707.45	21	18.1	6.4	6.5	6.1	35.6	35.5	35.5	24.0	23.5	23.0	0.483	0	0.163	10	11	16
31009	11/19/2010	830	2601.73	-9704.57	21	21.3	6.6	6.8	6.6	35.1	35.0	35.0	22.2	22.5	22.6	0.503	0.028	0.115	10	12	34
31010	11/19/2010	910	2558.13	-9703.45	21	23.4	6.5	6.6	6.5	35.4	35.2	35.2	22.7	22.9	22.9	2.537	0	0.096	10	13	61
31011	11/19/2010	959	2601.78	-9659.52	21	28.4	6.6	6.6	6.4	35.1	35.0	35.0	22.8	23.0	23.0	0.725	0.026	0.096	10	14	38
31012	11/19/2010	1030	2603.30	-9659.43	21	28.5	6.8	6.5	6.5	35.1	35.0	35.0	22.8	22.9	22.9	0.417	0.008	0.081	10	15	36
31013	11/19/2010	1100	2603.75	-9700.57	21	27.0	6.7	6.6	6.5	35.1	34.9	34.9	21.6	22.9	22.9	10.594	0.125	0.024	10	18	98
31014	11/19/2010	1135	2604.23	-9701.48	21	25.7	6.6	6.6	6.5	35.0	34.9	34.9	23.0	22.9	22.9	0.817	0.017	0.089	10	19	49
31015	11/19/2010	1211	2612.95	-9700.50	21	27.6	6.9	6.6	6.2	35.0	35.0	34.9	23.2	23.2	23.1	0.512	0.071	0.071	10	14	40
31016	11/19/2010	1320	2609.23	-9705.55	21	19.4	6.9	6.7	6.7	35.0	34.9	35.0	22.8	22.7	22.6	0.623	0.008	0.234	10	13	28
32 MATAGORDA BAY																					
32001	11/01/2010	1030	2822.62	-9619.35	19	9.1	6.1	6.2	6.1	34.6	34.6	34.6	25.6	25.6	25.7	1.394	0.011	0.903	10	16	44
32002	11/01/2010	1112	2823.43	-9615.62	19	13.7	6.2	6.3	6.2	34.6	34.6	34.6	25.9	25.9	25.8	4.521	0.074	0.056	10	17	56
32003	11/08/2010	932	2824.62	-9612.37	19	13.7	6.8	6.9	7.0	33.4	33.4	34.4	22.0	21.9	21.9	0.231	0	4.601	10	9	30
32004	11/08/2010	1006	2822.50	-9611.55	19	16.1	6.8	6.9	6.9	33.5	33.5	33.5	22.1	22.1	22.0	0.136	0.030	3.221	10	14	19
32005	11/08/2010	1039	2821.53	-9609.47	19	17.9	6.7	6.8	6.4	33.4	33.4	33.5	22.6	22.5	22.3	0.283	0.047	0.072	10	15	29
32006	11/08/2010	1127	2824.57	-9604.55	19	16.7	6.4	6.7	6.7	33.3	33.3	33.6	23.1	23.0	22.7	1.026	0.007	0.062	10	12	55
32007	11/08/2010	1200	2825.67	-9602.40	19	16.7	6.4	6.5	6.6	33.2	33.2	33.3	23.3	22.2	22.9	0.468	0.004	0.019	10	12	24
32008	11/08/2010	1247	2828.55	-9608.68	19	11.5	6.7	7.1	7.1	33.4	33.4	33.4	22.3	22.2	21.8	0.031	0.003	0.284	10	11	16
32009	11/17/2010	909	2820.52	-9620.57	19	11.2	7.2	7.4	7.4	30.8	30.8	30.8	20.0	20.0	20.0	4.441	0.655	0.183	10	21	111
32010	11/17/2010	937	2820.47	-9621.45	19	10.9	7.3	7.3	7.4	31.1	31.1	31.2	20.2	20.2	20.2	3.599	1.197	0.137	10	23	135
32011	11/19/2010	912	2818.55	-9614.48	19	19.2	7.2	7.6	7.5			32.3	21.3	21.3	21.3	0.221	0.007	0.092	10	10	15
32012	11/19/2010	947	2817.57	-9617.55	19	18.8	7.3	7.3	7.3	32.3	32.3	32.4	21.1	21.1	21.0	0.925	0.004	0.121	10	14	32
32013	11/19/2010	1045	2812.55	-9623.50	19	20.7	7.2	7.4	7.3	32.4	32.4	32.5	21.2	21.1	21.0	0.088	0.102	0.329	10	18	52
32014	11/19/2010	1111	2812.58	-9624.58	19	19.8	7.4	7.4	7.4	31.9	32.1	32.4	20.8	20.9	21.0	0.121	0.061	0.044	10	10	16
32015	11/19/2010	1148	2810.65	-9626.50	19	19.8	7.2	7.2	7.3	32.2	32.2	32.5	21.2	21.0	21.2	0.123	0.037	0.420	10	12	21
32016	11/19/2010	1237	2816.50	-9629.63	19	7.9	7.7	7.6	7.6	30.4	30.4	30.5	18.8	18.6	18.7	0.493	0.059	0.079	10	16	27

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	11/09/2010	722	2936.55	-9349.95	17	7.9	7.3	7.5	7.3	27.9	27.6	27.5	19.7	19.9	20.0	2.160	0.292	0.037	10	12	73
40002	11/09/2010	757	2937.45	-9350.32	17	7.0	8.6	8.4	8.1	26.5	26.8	27.3	19.1	19.5	19.9	2.023	0.259	0.628	10	10	70
40003	11/09/2010	835	2939.53	-9351.87	17	3.6	8.2	8.2	7.8	27.0	27.0	27.0	19.6	19.6	19.6	0.639	0.596	0.053	10	10	83
40004	11/09/2010	933	2937.42	-9355.32	17	5.5	7.7	7.5	7.6	27.0	27.1	27.2	19.9	19.7	19.7	4.202	0.362	0.353	10	9	86
40005	11/09/2010	1022	2934.43	-9359.95	17	8.8	7.5	7.5	6.9	29.9	28.2	28.4	20.4	20.2	20.2	0	0.008	0.180	10	3	15
40006	11/09/2010	1054	2933.83	-9359.17	17	9.4	7.7	8.0	7.3	27.9	28.2	28.5	20.4	20.3	20.4	0.214	0.009	0.106	10	8	39
40007	11/09/2010	1253	2934.35	-9348.87	17	11.5	7.3	7.3	7.3	27.0	27.3	27.5	20.8	20.7	20.6	1.275	0.150	0.328	10	14	77
40008	11/09/2010	1326	2934.47	-9347.18	17	11.5	7.3	7.5	7.3	27.3	27.4	27.4	20.7	20.5	20.4	4.749	0.796	0.062	10	18	147
40009	11/18/2010	859	2940.65	-9347.85	17	5.8	7.3	7.3	7.2	27.3	27.2	27.1	17.6	17.7	17.8	0.074	0.037	0.041	10	7	15
40010	11/18/2010	938	2939.58	-9344.27	17	8.2	7.2	7.1	7.1	27.8	27.7	27.6	18.1	18.4	18.5	0.426	0.019	0.054	10	9	31
40011	11/18/2010	1037	2942.72	-9339.90	17	7.0	7.2	7.1	7.1	26.4	26.4	26.6	17.8	17.9	17.9	0.643	0.030	0.119	10	6	31
40012	11/18/2010	1126	2944.73	-9336.18	17	4.3	7.4	7.3	7.1	26.1	26.0	26.0	17.5	17.6	17.6	0.555	0.043	0.243	10	9	41
40013	11/18/2010	1316	2939.63	-9335.77	17	10.0	7.5	7.5	7.1	26.8	27.2	29.3	19.2	19.1	19.1	0.735	0	0.365	10	5	51
40014	11/18/2010	1421	2937.50	-9344.20	17	10.4	7.5	7.3	7.2	27.8	27.9	27.9	19.1	18.9	18.8	2.512	0.067	0.115	10	16	41
40015	11/18/2010	1457	2935.55	-9344.73	17	11.3	7.3	7.1	6.8	26.8	28.2	28.3	18.7	18.8	18.9	0.697	0.091	0.351	10	18	53
40016	11/18/2010	1534	2934.83	-9346.13	17	11.8	7.4	6.8	6.7	26.0	28.2	28.5	18.3	18.8	18.9	1.023	0.086	0.114	10	14	73
67 NUECES																					
67001	11/01/2010	1025	2752.32	-9700.60	20	10.0	10.9	11.1	9.9	33.5	33.4	33.4	25.6	25.6	25.5	0.412	0	0.189	10	10	38
67002	11/01/2010	1051	2753.68	-9700.03	20	7.4	8.0	8.2	8.3	33.4	33.4	33.5	25.2	25.2	25.2	0.820	0.004	0.078	10	11	26
67003	11/01/2010	1156	2800.17	-9653.72	20	9.3	8.0	8.2	8.7	33.6	34.0	34.0	25.4	25.4	25.3	0.239	0	0.569	10	8	38
67004	11/01/2010	1231	2758.97	-9652.53	20	12.9	7.0	7.0	7.1	33.3	33.4	33.5	25.4	25.3	25.3	0.604	0.012	0.176	10	10	37
67005	11/01/2010	1308	2758.27	-9651.43	20	13.4	6.9	6.9	7.1	33.3	33.3	33.3	25.8	25.8	25.7	0.367	0.021	0.329	10	14	26
67006	11/01/2010	1423	2756.92	-9649.40	20	16.8	7.1	7.2	7.8	33.1	34.3	34.4	26.3	26.3	26.2	13.795	0.081	0.107	10	23	75
67007	11/01/2010	1500	2756.33	-9651.37	20	16.1	7.4	7.0	8.1	33.7	34.5	34.5	26.3	26.3	26.1	14.642	0	0.010	10	11	79
67008	11/01/2010	1531	2756.82	-9653.45	20	13.0	7.5	7.6	8.8	34.6	34.6	34.6	26.2	26.2	26.0	0.801	0.012	0.105	10	8	35
67009	11/17/2010	844	2743.85	-9705.37	20	11.9	8.4	8.1	8.1	32.0	32.0	32.0	21.1	21.1	21.1	0.032	0	6.253	10	9	28
67010	11/17/2010	922	2742.15	-9706.57	20	12.9	8.5	8.2	8.0	32.1	32.1	32.1	21.2	21.2	21.1	0.259	0	14.833	10	8	25
67011	11/17/2010	954	2741.88	-9707.38	20	11.9	8.5	8.2	8.0	32.1	32.1	32.1	21.0	21.0	21.0	0.009	0.001	11.716	10	7	30
67012	11/17/2010	1030	2740.15	-9707.23	20	13.2	9.3	9.2	9.1	32.5	32.6	32.7	21.6	21.6	21.6	0.003	0.007	4.434	10	11	10
67013	11/17/2010	1127	2736.83	-9703.48	20	20.7	9.7	9.7	9.1	32.7	32.7	32.7	22.7	22.7	22.7	0.051	0.007	0.370	10	7	25
67014	11/17/2010	1200	2739.05	-9703.42	20	19.2	9.0	9.1	9.3	32.9	32.9	32.8	22.4	22.3	22.3	0.336	0.004	10.759	10	11	33
67015	11/17/2010	1501	2747.88	-9656.57	20	19.4	9.2	9.9	9.7	31.2	32.5	32.7	21.3	21.6	21.4	17.408	0.024	0.032	10	20	129
67016	11/17/2010	1540	2749.35	-9652.28	20	21.3	9.7	9.8	9.9	32.5	32.5	32.5	22.1	21.6	21.6	0.052	0.021	0.391	10	9	10

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	11/08/2010	949	2920.67	-9439.72	18	10.2	7.2	7.1	7.2	30.8	30.8	30.7	19.4	19.3	19.8	0.465	0.118	0.033	10	13	32
69002	11/08/2010	1036	2920.80	-9433.20	18	11.3	7.0	7.1	6.5	31.1	31.3	32.1	19.4	19.3	19.8	2.922	0.012	0.064	10	8	29
69003	11/08/2010	1124	2925.40	-9430.83	18	10.0	7.1	7.1	6.9	32.2	32.2	32.2	19.9	19.7	19.6	1.034	0	0.035	10	5	27
69004	11/08/2010	1151	2926.32	-9429.75	18	9.5	7.1	7.2	7.1	32.0	32.0	32.0	20.0	19.7	19.5	0.045	0	0.017	10	3	8
69005	11/08/2010	1215	2926.83	-9430.27	18	8.8	7.1	7.1	7.1	32.0	32.0	32.0	20.1	19.8	19.5	0.275	0	0.016	10	6	14
69006	11/08/2010	1240	2927.73	-9431.28	18	7.4	7.8	7.6	7.1	31.1	31.1	31.6	19.0	18.6	19.2	0.630	0	0.067	10	6	10
69007	11/08/2010	1316	2925.25	-9434.77	18	8.5	7.8	7.7	7.5	31.1	31.6	31.5	19.2	19.2	19.0	0.394	0.031	0.182	10	11	20
69008	11/08/2010	1355	2924.82	-9439.28	18	6.1	8.6	6.6	7.7	30.6	30.8	30.8	19.2	17.8	17.5	0.838	0.022	0.008	10	6	40
65009	11/17/2010	851	2918.20	-9443.80	18	6.0	7.6	7.7	8.0	29.1	29.1	29.1	18.0	18.0	18.0	2.295	0.079	0.047	10	10	57
65010	11/17/2010	929	2916.97	-9444.17	18	7.5	6.9	6.9	6.9	29.5	29.5	29.5	18.3	18.3	18.3	1.796	0.158	0.038	10	9	46
65011	11/17/2010	1045	2912.33	-9452.68	18	9.8	7.0	6.9	6.8	29.5	29.5	29.5	18.2	18.1	18.2	6.228	0.060	0.014	10	14	44
65012	11/17/2010	1146	2909.98	-9449.17	18	13.5	7.3	7.1	6.8	30.0	29.9	30.4	18.7	18.6	19.0	0.378	0.011	0.117	10	9	52
65013	11/17/2010	1247	2906.33	-9448.83	18	16.5	7.1	7.0	6.7	30.7	30.8	31.0	19.3	19.2	19.5	0.414	0.032	0.002	10	11	21
65014	11/17/2010	1353	2912.97	-9443.15	18	13.7	7.5	7.3	7.1	30.2	30.2	30.3	19.1	18.8	19.0	1.816	0.029	0	10	10	40
65015	11/17/2010	1430	2915.23	-9442.88	18	10.5	7.9	8.0	8.0	29.9	29.8	29.8	19.0	18.8	18.6	2.797	0.055	0.020	10	10	49
65016	11/17/2010	1519	2915.38	-9437.87	18	13.8	7.9	8.0	8.1	30.0	30.1	30.1	19.1	19.0	18.8	0.510	0	0.005	10	4	23