

SEAMAP Winter 2010 Shrimp/Groundfish Survey Cruise Report

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Introduction

SEAMAP Winter 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 winter 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, and 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 Winter Shrimp/Groundfish Survey were: R.J. Kemp (31), Matagorda Bay (32), Sabine (40), Nueces Bay (67), and San Jacinto (69). All Texas Territorial Seas was 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 winter Shrimp/Groundfish survey samples in Texas Territorial Seas (between latitudes 25° 59' and 29° 42' and longitudes -93° 34' and -97° 11') (Table 1). Samples were collected between February 1, 2010 and February 17, 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
SEAMAP Coordinator

Table 1. TPWD SEAMAP 2010 Winter 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	02/14/2010	902	2610.20	-9706.35	21	19.2	8.4	8.3	8.2	29.4	29.4	29.8	13.3	13.3	13.4	0.324	0.191	0.062	10	14	47
31002	02/14/2010	928	2610.67	-9705.38	21	19.5	8.3	8.1	8.0	29.5	30.4	30.5	13.6	13.9	14.0	0.422	0.390	0.044	10	16	51
31003	02/14/2010	1000	2612.18	-9705.47	21	20.1	7.8	8.1	8.0	29.9	30.2	30.2	13.7	13.6	13.8	0.699	0.238	0.077	10	18	76
31004	02/14/2010	1044	2614.72	-9701.48	21	25.3	8.1	7.7	7.7	29.9	31.2	31.6	13.8	13.7	13.9	1.749	0.408	0.135	10	22	102
31005	02/14/2010	1131	2619.15	-9702.42	21	24.4	8.0	7.9	7.7	30.0	31.5	31.6	13.9	14.0	14.0	0.447	0.051	0.122	10	14	60
31006	02/14/2010	1226	2621.85	-9711.53	21	12.2	8.3	8.0	7.9	29.0	29.1	29.1	14.8	13.5	13.6	0.088	0.039	0.345	10	11	43
31007	02/14/2010	1312	2618.22	-9711.53	21	7.0	8.4	8.0	7.6	29.3	29.5	29.5	14.9	13.7	13.8	0.764	0.042	0.129	10	14	50
31008	02/14/2010	1406	2611.87	-9709.43	21	12.2	8.3	8.1	7.9	29.3	29.2	29.8	15.0	13.8	13.9	0.027	0.095	1.473	10	7	15
31009	02/17/2010	808	2604.15	-9705.35	21	19.5	8.5	8.3	8.3	29.6	29.8	30.5	13.0	13.1	13.5	0.155	0.001	0.143	10	11	42
31010	02/17/2010	838	2604.72	-9704.42	21	20.7	8.2	8.3	7.9	29.8	30.4	31.2	13.0	13.3	13.4	0.318	0.049	0.165	10	16	61
31011	02/17/2010	925	2600.20	-9706.50	21	16.5	8.3	8.2	8.0	29.9	29.9	31.8	13.2	13.2	13.8	0.264	0.015	0.291	10	15	58
31012	02/17/2010	1002	2559.70	-9703.48	21	23.5	7.9	8.0	7.6	30.9	31.0	32.4	13.4	13.4	14.3	0.280	0.002	0.135	10	12	23
31013	02/17/2010	1124	2601.20	-9659.57	21	29.0	8.1	7.9	7.4	31.1	31.1	32.1	13.5	13.5	14.7	0.557	0.019	0.183	10	12	51
31014	02/17/2010	1202	2602.60	-9659.45	21	28.3	8.0	7.9	7.5	31.0	31.1	32.8	13.5	13.4	14.4	0.054	0	0.090	10	5	10
31015	02/17/2010	1237	2602.18	-9701.57	21	25.9	8.3	7.8	8.0	31.1	31.2	31.0	13.5	13.5	14.9	0.085	0.032	0.210	10	13	13
31016	02/17/2010	1321	2609.67	-9701.52	21	25.9	8.3	9.7	7.5	31.0	33.0	33.9	13.5	13.4	14.5	0.017	0.000	0.256	10	6	9
32 MATAGORDA BAY																					
32001	02/05/2010	926	2820.55	-9622.45	19	9.6	9.0	8.9	8.8	23.8	24.6	25.9	12.5	12.7	13.0	2.122	0.674	0.006	10	14	98
32002	02/05/2010	1011	2821.43	-9617.48	19	15.6	9.0	9.3	8.8	24.5	27.0	27.0	12.6	12.9	13.2	0.247	0.338	0.318	10	11	55
32003	02/05/2010	1054	2825.45	-9614.42	19	12.4	8.9	9.1	9.1	24.0	26.5	26.4	12.7	13.0	13.1	0.163	0.296	0.306	10	17	42
32004	02/05/2010	1126	2826.47	-9613.48	19	11.6	8.7	8.9	8.9	23.8	26.0	26.3	12.7	12.8	13.0	0.230	0.259	0.512	10	17	63
32005	02/05/2010	1202	2830.37	-9610.08	19	6.8	8.4	8.6	8.5	24.6	24.8	24.9	13.0	12.9	13.0	0.835	0.930	0.007	10	9	96
32006	02/05/2010	1236	2831.42	-9607.42	19	7.5			8.5	24.7	24.7	25.4	13.0	12.9	12.8	0.305	0.509	0.004	10	11	62
32007	02/05/2010	1305	2829.55	-9608.47	19	11.0	8.7	8.7	8.4	24.5	25.5	28.2	13.0	12.9	13.7	0.731	0.661	3.891	10	28	114
32008	02/05/2010	1351	2824.45	-9609.50	19	16.6	8.9	8.7	8.4	25.6	27.3	30.2	13.3	13.4	14.4	0.255	0.228	0.243	10	11	25
32009	02/16/2010	844	2819.33	-9616.57	19	18.0	9.2	9.7	9.2	25.3	28.2	31.2	11.1	12.3	13.5	0.179	0	0.432	10	7	9
32010	02/16/2010	911	2818.47	-9616.50	19	19.1	9.3	9.5	9.4	27.4	28.2	31.2	11.9	12.3	13.6	0.008	0.001	0.601	10	4	7
32011	02/16/2010	940	2817.55	-9618.67	19	18.7	9.2	9.7	9.0	26.2	28.0	31.7	11.2	12.0	13.5	0.249	0.001	0.914	10	10	14
32012	02/16/2010	1013	2815.58	-9619.52	19	20.5	9.2	9.5	9.0	27.5	29.1	32.2	11.9	12.7	14.0	0.402	0.021	0.396	10	11	19
32013	02/16/2010	1040	2814.52	-9618.58	19	21.7	9.1	9.3	8.9	28.0	30.6	33.3	12.4	13.2	14.4	0.094	0	0.023	10	5	5
32014	02/16/2010	1117	2813.45	-9619.43	19	22.2	9.2	9.1	9.0	28.3	29.4	32.1	12.6	13.0	14.8	0.387	0.119	0.028	10	9	20
32015	02/16/2010	1158	2810.50	-9626.53	19	20.0	8.6	9.4	8.7	29.3	29.6	33.0	12.8	12.8	13.9	0.168	0.047	0.339	10	12	30
32016	02/16/2010	1240	2816.60	-9628.40	19	7.7	9.3	9.2	9.1	26.0	26.1	27.9	11.9	11.7	12.2	0.051	0	0.012	10	4	7

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	02/01/2010	907	2940.73	-9346.87	17	6.7	9.4	9.1	8.9	20.0	21.3	21.3	11.9	12.0	12.0	0.160	0.417	0.033	10	7	63
40002	02/01/2010	950	2941.67	-9344.15	17	7.0	8.9	9.0	8.3	22.7	22.8	24.1	11.9	12.0	12.3	0.288	0.230	0.014	10	8	42
40003	02/01/2010	1026	2942.45	-9346.88	17	3.6	9.3	9.2	9.1	22.4	22.4	22.4	11.3	11.4	11.5	0.188	1.620	0.020	10	10	83
40004	02/01/2010	1102	2941.47	-9348.28	17	4.6	9.2	9.3	8.9	22.7	22.6	22.4	11.5	11.5	11.6	0.154	1.540	0.037	10	9	94
40005	02/10/2010	1330	2940.40	-9343.83	17	8.5	9.1	9.1	7.6	23.5	23.6	23.6	11.5	11.6	11.5	0.179	0	0.013	10	9	19
40006	02/10/2010	1400	2939.45	-9343.30	17	9.4	8.8	8.9	8.5	23.8	23.8	23.8	11.6	11.6	11.6	5.541	0.022	0.001	10	10	10
40007	02/10/2010	1433	2937.60	-9344.83	17	10.4	8.8	8.8	8.5	23.8	23.8	24.2	11.7	11.8	11.9	0.063	0.041	0.025	10	11	15
40008	02/10/2010	1531	2937.50	-9355.22	17	6.1	8.9	8.7	8.6	18.9	20.4	22.9	11.6	11.4	11.4	0.013	0.093	0	10	6	20
40009	02/17/2010	754	2935.63	-9347.60	17	11.0	8.8	8.4	7.9	19.3	24.3	27.5	9.1	10.4	11.5	0.494	0.086	0.023	10	16	31
40010	02/17/2010	833	2933.73	-9346.15	17	12.2	8.4	8.3	7.7	23.6	25.9	27.9	10.1	11.0	11.8	0.084	0.001	0.146	10	11	11
40011	02/17/2010	936	2936.47	-9337.75	17	11.0	8.4	8.3	7.9	24.7	24.8	28.3	10.6	11.0	11.6	0.006	0	0.029	10	4	5
40012	02/17/2010	1013	2936.50	-9334.13	17	11.3	9.1	9.0	8.7	25.0	25.1	27.2	10.8	10.9	11.5	0.067	0.014	0.116	10	7	8
40013	02/17/2010	1059	2938.72	-9337.90	17	9.7	8.9	9.0	8.3	24.1	24.6	27.9	11.0	11.2	11.8	0.001	0	0.093	10	4	6
40014	02/17/2010	1135	2940.68	-9336.12	17	8.8	9.1	9.0	8.3	24.0	24.1	28.0	11.2	11.1	11.9	0.006	0.001	0.071	10	5	8
40015	02/17/2010	1212	2942.48	-9338.78	17	7.0	8.8	8.8	8.6	25.4	25.0	26.9	11.7	11.5	11.8	0.037	0	0.094	10	5	16
40016	02/17/2010	1251	2940.60	-9340.07	17	8.5	8.9	8.9	8.2	24.7	25.6	27.8	11.7	11.5	12.0	2.482	0.014	0.005	10	6	9
67 NUECES																					
67001	02/05/2010	808	2754.08	-9657.67	20	12.2	9.2	9.0	9.1	26.0	26.0	26.1	12.9	13.0	13.1	0.193	0.636	0.030	10	18	85
67002	02/05/2010	901	2757.37	-9655.45	20	12.2	9.0	8.9	8.8	25.4	25.6	25.7	12.8	12.8	12.9	1.382	0.809	0.032	10	17	141
67003	02/05/2010	937	2758.28	-9651.53	20	13.7	9.2	8.7	8.7	25.4	26.2	26.6	12.8	13.1	13.3	0.402	0.191	0.013	10	9	35
67004	02/05/2010	1023	2754.62	-9647.53	20	21.1	9.0	8.6	8.5	26.2	28.2	28.7	13.2	14.0	14.3	0.441	0.118	0.068	10	15	47
67005	02/05/2010	1058	2754.15	-9649.50	20	20.0	9.0	8.5	8.5	26.1	27.6	28.5	13.3	13.8	14.2	0.126	0.194	0.094	10	16	34
67006	02/05/2010	1134	2752.63	-9650.62	20	20.4	8.9	8.5	8.5	26.3	27.9	28.6	13.4	13.9	14.2	0.877	0.071	0.109	10	14	27
67007	02/05/2010	1203	2751.40	-9651.42	20	20.8	8.8	8.5	8.5	26.6	27.8	28.7	13.6	13.8	14.3	0.608	0.115	0.081	10	15	38
67008	02/05/2010	1240	2752.68	-9653.30	20	18.2	8.7	8.9	8.8	26.8	27.0	27.1	13.7	13.4	13.5	0.744	0.202	0.096	10	19	79
67009	02/16/2010	800	2751.40	-9657.42	20	14.3	9.7	10.1	10.1	25.4	25.4	27.8	12.1	12.2	13.2	0.503	0.178	4.452	10	22	57
67010	02/16/2010	830	2752.50	-9656.52	20	14.1	10.2	9.6	9.0	25.2	25.5	26.6	12.0	12.0	12.7	0.549	0.030	1.001	10	15	42
67011	02/16/2010	924	2744.05	-9655.47	20	22.8	9.5	9.1	8.7	26.8	29.0	29.2	12.2	13.4	13.7	1.587	0.028	0.031	10	15	53
67012	02/16/2010	1025	2736.48	-9703.62	20	21.9	9.6	9.3	8.6	26.9	27.2	28.9	12.6	12.8	13.8	2.069	0.037	0.066	10	16	53
67013	02/16/2010	1107	2739.35	-9705.53	20	15.8	10.3	9.5	9.0	25.4	26.0	26.9	12.3	12.5	13.0	0.439	0	0.073	10	8	37
67014	02/16/2010	1143	2742.87	-9705.43	20	13.3	9.8	9.6	9.3	24.8	25.0	26.5	12.1	11.9	12.7	0.460	0.373	0.344	10	23	89
67015	02/16/2010	1224	2745.37	-9702.58	20	13.5	10.1	9.7	9.3	23.0	24.9	26.5	12.6	11.9	12.9	1.493	0.052	0.684	10	20	100
67016	02/16/2010	1315	2749.52	-9701.22	20	15.8	10.3	9.7	9.5	20.3	24.0	24.9	11.6	11.8	12.3	4.280	0.567	0.178	10	26	165

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	02/01/2010	1014	2914.60	-9438.47	18	14.1	7.3	7.3	7.4	28.2	28.2	28.2	12.5	12.2	12.1	0.500	0.074	0.082	10	5	31
69002	02/01/2010	1053	2912.13	-9440.95	18	15.8	7.3	7.3	7.3	26.9	26.9	26.9	12.1	12.1	12.0	0.406	0.046	0.365	10	13	21
69003	02/01/2010	1131	2910.92	-9443.37	18	15.5	7.2	7.2	7.0	26.2	26.2	26.2	12.3	12.3	12.3	0.397	0.023	0	10	9	16
69004	02/01/2010	1207	2909.37	-9445.93	18	15.8	7.3	7.3	7.3	25.8	25.8	25.8	12.2	12.2	12.1	0.530	0.016	0.058	10	10	21
69005	02/01/2010	1238	2909.77	-9448.28	18	14.6	7.3	7.3	7.4	25.8	25.8	25.8	12.1	12.1	12.1	0.632	0.001	0.111	10	8	28
69006	02/01/2010	1312	2909.23	-9451.85	18	13.7	7.4	7.4	7.4	26.8	26.8	26.8	12.1	12.1	12.0	0.176	0.002	0.066	10	7	14
69007	02/01/2010	1350	2912.83	-9452.38	18	9.4	7.4	7.4	7.4	25.3	25.3	25.3	11.8	11.8	11.8	0.282	0.032	0.058	10	8	29
69008	02/01/2010	1415	2913.02	-9453.73	18	5.2	7.4	7.4	7.5	24.9	25.0	24.9	11.7	11.6	11.6	0.117	1.033	0.001	10	4	71
69009	02/17/2010	936	2919.47	-9440.52	18	12.2	8.5	8.5	8.6	25.1	25.6	25.8	10.5	10.7	11.1	0.180	0.042	0.121	10	13	27
69010	02/17/2010	1012	2919.13	-9443.65	18	4.0	9.3	9.1	7.4	23.3	23.4	27.3	10.5	10.5	11.2	0.212	0.006	0.026	10	5	5
69011	02/17/2010	1035	2918.65	-9443.17	18	5.5	9.1	9.0	7.5	22.4	22.5	26.2	10.3	10.1	11.3	0.037	0	0.018	10	5	9
69012	02/17/2010	1111	2915.17	-9443.70	18	9.4	8.3	7.6	6.9	24.2	26.4	29.1	10.3	10.6	12.0	0.010	0.040	0.029	10	7	7
69013	02/17/2010	1200	2918.70	-9436.28	18	12.5	9.2	8.2	6.8	22.0	23.9	30.5	10.6	10.4	12.5	0.029	0.075	0.096	10	7	10
69014	02/17/2010	1242	2921.35	-9432.53	18	12.1	8.5	8.4	7.2	24.1	24.3	27.2	10.5	10.2	11.4	0.173	0.038	0.071	10	7	10
69015	02/17/2010	1320	2922.73	-9429.13	18	12.2	8.7	8.3	6.8	22.9	23.6	28.7	10.3	10.0	11.7	0.053	0	0.019	10	3	3
69016	02/17/2010	1401	2922.25	-9433.60	18	11.0	8.4	7.0	6.7	24.7	28.3	30.3	10.7	11.1	12.3	0.026	0.029	0.007	10	4	4