

SEAMAP Summer 2009 Shrimp/Groundfish Survey Cruise Report

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Introduction

SEAMAP Summer 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 summer 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, weighed and counted, and selected species are sexed and measured according to the Texas SEAMAP Operations Manual.
3. Collect information on environmental parameters (salinity, temperature, dissolved oxygen, wind speed and direction, wave height, cloud cover and water color) 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.

Methods

Vessels that participated in the Texas Summer 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 at least 1/3 of which is within the territorial sea 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 computer programs. Sampling was conducted in 16 grids from each of the 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 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 workup 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 values 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 Summer Shrimp/Groundfish survey samples in Texas Territorial Seas (between latitudes 25° 59' and 29° 44' and longitudes -93° 35' and -97° 11') (Table 1). Samples were collected between June 1st 2009 and June 24th, 2009 (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
SEAMAP Coordinator

Table 1. TPWD SEAMAP 2007 Summer 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	06/03/2009	901	2617.28	-9702.47	21	21.6	6.6	6.4	6.3	34.8	35.1	36.9	27.0	26.7	26.5	0.305	0.228	0.023	10	13	44
31002	06/03/2009	935	2618.87	-9701.5	21	25.3	6.6	6.0	6.0	34.7	34.7	35.3	27.0	27.0	26.7	0.043	0.054	0.024	10	9	21
31003	06/03/2009	1013	2618.32	-9704.48	21	19.5	5.8	5.9	5.6	34.6	35.2	37.1	27.2	27.1	26.0	0.233	0.049	0.020	10	9	30
31004	06/03/2009	1054	2618.82	-9707.53	21	16.8	6.2	6.1	5.7	34.6	34.6	35.4	27.1	27.0	26.6	0.040	0	0.059	10	3	2
31005	06/03/2009	1130	2620.32	-9705.5	21	18.6	5.8	6.1	5.9	34.7	35.5	36.2	27.5	27.0	26.4	0.198	0	0.040	10	7	35
31006	06/03/2009	1220	2621.9	-9711.58	21	11.0	5.9	5.7	5.5	35.0	35.6	35.7	27.4	26.1	25.9	0.014	0	1.176	10	7	41
31007	06/03/2009	1308	2617.28	-9709.43	21	14.9	6.5	6.7	5.8	34.8	34.8	36.8	27.6	26.8	25.7	0	0	0	10	6	6
31008	06/03/2009	1338	2616.85	-9708.43	21	15.5	6.3	6.1	6.1	34.8	35.1	37.0	27.4	26.8	25.6	0.030	0.022	0.001	10	1	0
31009	06/24/2009	820	2600.85	-9705.57	21	18.6	6.0	6.1	6.3	31.4	34.2	34.0	27.5	27.4	26.6	0	0	0.009	10	10	15
31010	06/24/2009	904	2559.33	-9702.53	21	22.9	6.0	6.0	6.4	32.5	34.5	34.5	27.7	27.7	24.9	0.304	0	0.027	10	8	12
31011	06/24/2009	1014	2609.85	-9703.53	21	19.8	5.8	5.9	5.9	33.0	34.5	34.6	27.7	27.7	27.6	0.042	0.119	0.002	10	6	8
31012	06/24/2009	1107	2616.27	-9705.6	21	18.5	5.9	6.0	6.1	32.8	34.5	34.7	27.9	27.8	27.5	0.013	0.016	0.075	10	9	12
31013	06/24/2009	1136	2615.78	-9706.52	21	17.7	5.7	6.0	6.0	32.9	34.5	34.2	27.8	27.4	24.8	0.663	0.005	0.078	10	8	11
31014	06/24/2009	1221	2612.28	-9707.55	21	16.5	5.8	5.9	6.4	32.9	34.7	34.4	27.8	27.5	24.1	0.141	0.003	0.078	10	2	0
31015	06/24/2009	1250	2611.87	-9707.52	21	16.8	5.8	6.0	6.0	33.3	34.7	34.7	27.8	27.6	25.5	0	0	0.488	10	15	36
31016	06/24/2009	1333	2608.37	-9708.6	21	14.0	5.9	5.9	6.2	33.0	34.6	34.5	27.6	27.4	23.8	0.695	0.278	0.073	10	5	1
32 MATAGORDA BAY																					
32001	06/03/2009	911	2828.5	-9613.65	19	6.6	6.1	6.4	5.7	26.7	27.7	27.7	28.5	27.9	27.6	0.6	0.2	0.3	10	14	64
32002	06/03/2009	939	2829.63	-9611.4	19	7.1	6.3	6.9	6.1	26.8	27.1	27.9	28.8	28.0	27.5	1.2	0	0.7	10	11	45
32003	06/03/2009	1012	2828.57	-9609.48	19	11.8	6.6	6.2	3.9	27.6	28.3	30.0	28.0	27.6	26.5	0	0	0.5	10	12	48
32004	06/03/2009	1016	2831.33	-9608.42	19	6.7	6.8	7.1	4.6	27.0	27.1	28.1	25.5	28.2	27.5	0.6	0.1	1.2	10	14	57
32005	06/03/2009	1042	2828.62	-9607.35	19	12.7	6.5	6.2	4.3	28.2	28.3	29.7	27.8	27.4	26.6	8.9	0.1	0.9	10	9	11
32006	06/03/2009	1203	2826.58	-9603.33	19	16.3	6.2	6.1	6.1	27.9	28.3	28.5	27.7	27.4	27.3	0	0	0.1	10	10	37
32007	06/03/2009	1249	2824.55	-9609.5	19	16.0	6.2	6.2	5.1	28.3	28.4	31.3	27.7	27.2	25.9	0.1	0	0.7	10	4	1
32008	06/03/2009	1322	2822.53	-9608.53	19	18.2	6.2	6.1	5.0	25.0	28.2	30.7	27.9	27.3	26.1	0	0	0	10	0	0
32009	06/24/2009	1530	2811.63	-9625.72	19	20.5	6.4	6.5	6.0	34.5	34.5	34.8	29.7	28.4	27.7	1.3	0.6	0.2	10	20	105
32010	06/24/2009	1602	2813.37	-9626.43	19	17.8	6.1	6.7	6.4	33.8	33.7	34.3	30.1	29.1	29.0	8.4	0.2	0.3	10	19	104
32011	06/24/2009	1634	2816.67	-9626.45	19	11.5	6.4	6.9	6.5	33.5	33.3	33.4	30.3	29.8	29.0	9.7	1.3	0.1	10	17	93
32012	06/24/2009	1712	2815.53	-9622.55	19	19.2	6.3	6.8	5.4	33.6	33.7	34.7	29.9	29.1	26.1	14.9	0.1	0.4	10	20	111
32013	06/24/2009	1816	2817.65	-9617.48	19	19.8	6.8	6.7	6.7	32.8	33.0	33.8	30.6	29.8	28.2	9.2	0.2	0.1	10	18	125
32014	06/24/2009	1842	2818.4	-9616.53	19	19.4	6.8	6.7	6.4	32.8	33.1	33.4	30.2	29.9	28.7	7.0	1.0	0.1	10	20	183
32015	06/24/2009	1922	2822.57	-9620.12	19	8.8	6.5	6.6	6.8	33.6	33.6	33.6	30.5	30.4	29.5	0.9	0.1	0	10	15	52
32016	06/24/2009	2010	2827.48	-9614.85	19	7.4	6.6	6.8	6.7	32.5	32.8	32.9	30.3	30.2	29.7	1.1	0.1	0.3	10	18	66

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	06/01/2009	834	2933.58	-9346.13	17	11.9	7.8	7.2	4.8	25.5	26.5	28.3	27.6	27.6	26.3	14.601	0.600	0.243	10	16	167
40002	06/01/2009	930	2934.45	-9348.85	17	11.6	7.8	6.3	3.4	27.3	28.1	32.6	27.6	27.3	26.1	3.585	0.332	0.101	10	12	76
40003	06/01/2009	1011	2937.52	-9350.3	17	6.7	8.2	7.1	6.4	22.4	27.6	28.1	27.8	27.5	27.4	0.998	0.008	0.048	10	6	23
40004	06/01/2009	1050	2939.32	-9353.82	17	4.3	8.2	7.8	5.3	27.5	27.7	28.2	28.1	28.0	27.8	1.776	0.851	0.290	10	15	80
40005	06/01/2009	1118	2940.43	-9354.27	17	2.1	6.3	6.2	6.0	25.6	25.7	25.7	27.9	27.8	27.8	3.475	3.879	2.387	10	18	158
40006	06/01/2009	1252	2937.47	-9358.85	17	6.1	6.9	7.1	4.9	28.5	28.6	28.8	27.8	27.5	27.2	5.822	0.269	0.146	10	15	119
40007	06/01/2009	1327	2937.45	-9401.25	17	6.1	7.4	7.3	4.6	28.9	29.0	29.2	28.0	27.6	27.1	3.063	0.070	0.021	10	12	37
40008	06/01/2009	1854	2932.57	-9352.75	17	11.3	7.8	8.1	3.5	27.5	27.6	30.6	27.8	27.6	26.2	5.659	0.039	0.180	10	10	55
40009	06/23/2009	726	2937.35	-9347.8	17	8.5	7.9	5.1	3.7	28.1	30.2	31.4	29.3	29.3	28.9	4.262	0.467	0.217	10	14	110
40010	06/23/2009	819	2941.33	-9344.2	17	7.3	7.9	8.3	2.3	27.2	27.9	31.1	30.1	30.1	28.0	5.033	0	0.141	10	6	41
40011	06/23/2009	851	2943.27	-9343.75	17	4.8	8.4	5.7	6.6	27.9	28.4	29.7	29.8	29.7	29.3	1.970	0.158	0.010	10	14	89
40012	06/23/2009	944	2944.43	-9338.07	17	4.3	8.1	7.6	6.8	27.4	27.6	27.7	30.5	30.5	30.3	2.615	4.388	0.042	10	17	125
40013	06/23/2009	1052	2940.23	-9335.9	17	8.8	6.2	3.6	3.4	25.7	29.6	29.8	30.6	28.9	28.8	2.851	0.127	0.109	10	20	75
40014	06/23/2009	1129	2940.28	-9339.03	17	8.8	6.1	4.5	4.1	26.8	31.4	31.5	30.9	28.9	28.7	3.168	0.101	1.392	10	16	72
40015	06/23/2009	1159	2939.58	-9340.85	17	9.1	6.2	4.9	3.9	27.5	31.4	31.5	30.4	28.8	28.7	2.430	0.077	1.270	10	14	73
40016	06/23/2009	1304	2936.53	-9340.1	17	11.0	7.5	6.8	4.1	28.8	30.8	31.5	30.9	29.9	28.6	0.622	0.174	0.141	10	12	37
67 NUECES																					
67001	06/01/2009	820	2744.93	-9704.57	20	12.2	6.9	6.9	6.8	28.7	28.3	28.7	27.3	27.3	27.3	0.057	0.002	0.424	10	8	39
67002	06/01/2009	900	2742.32	-9705.3	20	14.4	6.6	6.6	6.6	29.6	29.6	29.6	27.1	27.0	27.0	0.090	0	0.328	10	9	51
67003	06/01/2009	941	2739.88	-9707.48	20	13.5	6.5	6.7	6.5	29.5	29.5	29.9	26.8	27.1	26.7	0.205	0.029	0.216	10	8	38
67004	06/01/2009	1038	2736.27	-9703.62	20	21.3	6.8	7.0	6.8	29.3	29.3	29.4	26.9	26.9	26.8	0.608	0.036	0.465	10	15	71
67005	06/01/2009	1111	2738.93	-9702.55	20	20.2	6.7	6.7	5.3	29.4	29.4	29.6	27.0	26.9	25.4	0.611	0.114	0.278	10	15	57
67006	06/01/2009	1151	2737.37	-9700.6	20	23.0	6.7	6.8	4.9	29.2	29.2	33.9	27.1	27.1	25.1	0.706	0.103	0.218	10	18	84
67007	06/01/2009	1228	2740.83	-9700.57	20	20.8	6.8	6.8	6.1	29.3	29.3	29.4	27.2	27.1	26.3	0.121	0.046	0.168	10	11	29
67008	06/01/2009	1302	2742.32	-9700.5	20	20.0	6.8	7.1	4.7	29.3	29.3	33.8	27.2	27.0	25.5	11.085	0.164	0.317	10	19	123
67009	06/24/2009	710	2748.5	-9657.55	20	17.2	6.3	6.1	6.2	34.8	34.8	34.8	28.8	28.3	28.1	0.002	0.253	2.814	10	14	48
67010	06/24/2009	855	2745.53	-9654.58	20	22.2	6.3	6.5	6.4	34.9	34.9	35.0	27.9	27.9	27.8	0.104	0.277	0.355	10	19	59
67011	06/24/2009	938	2749.15	-9655.37	20	19.4	5.9	6.2	4.0	34.9	34.8	34.7	28.8	27.8	27.2	0.437	0.464	0.629	10	19	132
67012	06/24/2009	1028	2755.73	-9657.45	20	10.4	6.2	6.1	4.0	34.1	34.5	34.6	29.6	29.2	28.2	0.963	0.139	0.461	10	13	71
67013	06/24/2009	1116	2754.35	-9651.52	20	17.4	6.1	6.2	4.8	34.8	34.8	34.7	29.1	28.7	27.5	0.496	0.025	0.422	10	17	65
67014	06/24/2009	1155	2758.68	-9652.4	20	12.5	6.1	6.2	5.4	34.3	34.8	34.7	29.7	29.3	29.0	0.130	0.049	0.437	10	11	48
67015	06/24/2009	1237	2755.52	-9648.63	20	19.3	6.2	6.3	4.1	34.7	34.7	34.7	29.4	28.7	27.5	1.144	0.061	0.871	10	18	97
67016	06/24/2009	1308	2754.77	-9647.6	20	20.1	6.1	6.3	5.4	34.6	34.6	34.7	29.1	28.6	27.3	0.506	0.112	0.570	10	18	83

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	06/15/2009	1114	2911.93	-9446.07	18	10.0	5.6	5.6	6.0	36.8	36.8	36.9	27.3	27.3	27.2	3.876	0.043	0.070	10	6	27
69002	06/15/2009	1215	2910.47	-9451.6	18	10.2	5.5	5.4	4.2	36.7	37.0	37.5	27.6	27.3	26.8	2.295	0.002	0.940	10	8	33
69003	06/15/2009	1244	2909.37	-9448.67	18	9.3	5.4	4.6	3.7	33.6	37.7	37.7	27.3	26.9	26.7	4.667	0.166	1.840	10	8	53
69004	06/15/2009	1326	2909.98	-9447.05	18	11.0	4.7	4.6	4.2	37.3	37.3	37.2	27.1	27.1	26.9	0.027	0	0.074	10	3	1
69005	06/15/2009	1403	2907.48	-9445.58	18	13.0	5.0	4.7	4.1	37.0	37.0	37.0	27.3	27.1	26.9	0.026	0	0.006	10	2	1
69006	06/15/2009	1443	2908.38	-9445.67	18	14.0	5.2	5.1	4.8	36.9	36.8	36.8	27.5	27.3	27.1	0.063	0	0.093	10	5	2
69007	06/15/2009	1512	2909.33	-9444.55	18	14.0	5.6	5.5	5.4	36.9	36.9	36.8	27.7	27.6	27.4	7.973	1.072	0.305	10	16	163
69008	06/15/2009	1545	2909.82	-9442.08	18	15.0	5.5	5.4	4.8	36.8	36.8	36.7	27.8	27.6	27.5	6.433	1.124	0.090	10	14	100
69009	06/23/2009	1020	2918.82	-9440.25	18	11.1	5.2	5.1	5.0	38.0	38.0	38.0	28.6	28.5	28.4	0.588	0	0.023	10	3	21
69010	06/23/2009	1115	2914.3	-9443.75	18	10.9	5.4	5.2	1.9	38.2	38.2	38.7	28.7	28.2	26.6	18.291	0.012	0.025	10	10	80
69011	06/23/2009	1215	2916.03	-9437.87	18	12.7	5.7	5.7	1.6	37.9	38.1	38.3	28.9	28.5	26.7	13.387	0.614	0.158	10	14	81
69012	06/23/2009	1339	2919.58	-9435.23	18	12.6	5.4	5.5	3.2	37.3	37.7	37.8	30.2	28.7	27.4	10.232	0.590	0	10	15	90
69013	06/23/2009	1418	2921.33	-9434.82	18	11.2	5.5	5.4	4.1	37.2	37.7	37.7	29.6	28.7	27.9	4.777	0.018	0.030	10	7	41
69014	06/23/2009	1512	2927.85	-9432.17	18	7.4	5.7	4.6	2.6	37.2	37.5	37.6	31.4	28.5	27.9	1.684	0.032	1.155	10	14	58
69015	06/23/2009	1547	2926.43	-9434.72	18	7.6	7.6	5.2	3.3	36.7	37.1	37.6	30.4	28.7	27.8	1.870	0.045	0.348	10	15	88
69016	06/23/2009	1622	2925.98	-9436.3	18	7.4	5.6	4.3	3.1	36.8	37.5	37.5	30.1	28.3	27.8	1.596	0.368	0.356	10	16	75