

SEAMAP Fall 2007 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, 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 Fall 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 and of the month and 8 between the 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 Fall Shrimp/Groundfish survey samples in Texas Territorial Seas (between latitudes 58' and 29° 40' and longitudes -93° 39' and -10') (Table 1). Samples were collected between November , 2007 and November , 2007.

A total of 919 biological and 4,215 length frequency records were reported (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:

FernandoMartinez-Andrade
SEAMAP Coordinator

Table 1. TPWD SEAMAP 2007 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	2-Nov-07	9:05	2610.20	-9700.30	21	26.8	6.3	6.3	6.3	33.4	33	33.4	25	25	25.1	1.921	0.043	0.154	10	14	73
31002	2-Nov-07	9:59	2614.41	-9703.29	21	19.2	6.3	6.7	6.6	32.8	33	32.8	25	25	24.7	0.315	0.023	0	10	4	8
31003	2-Nov-07	10:50	2618.19	-9706.34	21	17.7	6.6	6.7	6.7	32.4	33	32.5	25	25	24.5	0.455	0.220	0.004	10	11	17
31004	2-Nov-07	11:31	2619.42	-9709.30	21	16.5	6.7	6.8	6.8	32.2	32	32.2	25	24	24.4	0.257	0.031	0.075	10	8	9
31005	2-Nov-07	12:02	2620.16	-9710.35	21	14.3	6.6	7.0	6.8	32.1	32.0	32.0	25	24	24.4	0.149	0	0.112	10	5	4
31006	2-Nov-07	12:52	2616.39	-9707.26	21	17.4	6.6	6.8	6.6	32.5	33	32.5	25	25	24.6	2.106	0	0.032	10	4	26
31007	2-Nov-07	13:35	2613.10	-9707.30	21	16.8	6.8	6.7	6.8	32.5	33	32.5	25	25	24.6	0.184	0	0	10	2	5
31008	2-Nov-07	14:10	2613.54	-9710.31	21	6.4	6.6	6.8	6.7	32.6	33	32.7	25	25.0	24.9	0.105	0	0.109	10	4	3
31009	19-Nov-07	9:06	2600.20	-9706.26	21	16.5	6.2	6.2	5.7	35.0	35	35.4	25	25	24.5	0.711	0	0.066	10	6	21
31010	19-Nov-07	9:37	2600.40	-9705.22	21	18.6	6.2	6.3	6.1	35.3	35	35.5	35	25	24.6	0.166	0.004	0.107	10	10	26
31011	19-Nov-07	10:24	2558.19	-9700.25	21	25.6	5.8	6.2	6.2	35.3	35	35.4	25	25.0	24.9	2.261	0	0.005	10	9	52
31012	19-Nov-07	11:08	2601.49	-9700.30	21	25.6	6.2	6.1	6.3	35.3	35	35.3	25	25	24.9	0.918	0.029	0	10	10	32
31013	19-Nov-07	12:04	2608.20	-9700.23	21	25.9	6.0	6.5	6.2	35.2	35	35.2	25.0	25.0	25.0	0.321	0.160	0.062	10	12	28
31014	19-Nov-07	12:57	2605.43	-9705.30	21	17.7	5.9	6.2	6.4	35.3	35	35.3	25	25	24.7	0.435	0.028	0.048	10	12	22
31015	19-Nov-07	13:38	2603.23	-9703.28	21	21.6	5.9	6.2	6.4	35.5	36	35.5	25.0	25	24.7	0.387	0	0	10	4	11
31016	19-Nov-07	14:10	2603.48	-9705.32	21	18.3	6.0	6.1	6.3	35.4	35	35.4	25	25	24.5	1.570	0	0.076	10	9	28
32 MATAGORDA BAY																					
32001	1-Nov-07	10:07	2824.24	-9615.39	19	12.1	5.5	5.4	5.5	28.0	28	28.3	23	23	22.9	0.125	0.026	0.031	10	6	17
32002	1-Nov-07	10:38	2824.33	-9614.22	19	13.1	5.5	5.4	5.4	28.6	29	28.8	23	23	22.9	0.370	0.008	0.041	10	8	22
32003	1-Nov-07	11:22	2827.01	-9616.22	19	5.7	5.4	5.4	5.4	27.9	28	27.9	23	23	22.5	2.731	0.177	0.108	10	18	74
32004	1-Nov-07	12:11	2826.37	-9610.23	19	13.1	5.4	5.4	5.2	28.7	29	29.1	23	23	22.8	0.615	0.034	0.033	10	9	24
32005	1-Nov-07	12:57	2829.29	-9610.34	19	8.5	5.8	5.3	5.2	28.0	28	28.4	23	22	22.5	2.385	0.181	0.073	10	15	55
32006	1-Nov-07	13:36	2830.34	-9607.23	19	9.4	5.6	5.5	5.2	28.0	28.0	28.3	22	22.0	22.2	3.920	0.531	0.012	10	12	77
32007	1-Nov-07	14:33	2824.24	-9603.40	19	17.6	5.4	5.3	5.1	29.9	30	30.4	23	23	23.4	0.202	0	0.008	10	3	7
32008	1-Nov-07	15:28	2822.32	-9606.25	19	17.9	5.0	5.2	5.0	30.7	31	30.6	24	24	23.5	9.656	0.166	0.050	10	14	88
32009	19-Nov-07	9:40	2823.25	-9614.38	19	11.2	6.5	6.6	6.6	30.4	31	30.7	22	22	22.4	0.973	0.066	0.258	10	15	51
32010	19-Nov-07	10:28	2821.36	-9618.21	19	13.1	6.2	6.3	6.4	30.2	30	30.8	23	22	22.3	0.236	0.072	0.772	10	15	46
32011	19-Nov-07	11:05	2819.23	-9620.37	19	14.3	6.7	6.3	6.2	30.6	31	31.6	23	23	22.6	1.039	0.217	0.218	10	18	55
32012	19-Nov-07	11:38	2819.39	-9622.27	19	11.2	6.6	6.4	6.3	30.0	30	30.3	23	22.0	22.1	0.776	0.056	0.054	10	11	42
32013	19-Nov-07	12:38	2813.33	-9628.43	19	14	6.2	6.3	5.9	30.9	31	31.0	23	23	22.8	2.454	0.443	0.191	10	17	67
32014	19-Nov-07	13:20	2813.39	-9625.37	19	17.6	6.3	6.8	5.0	30.9	31	31.5	23	23	22.9	2.519	0.083	0.237	10	13	69
32015	19-Nov-07	14:36	2815.23	-9616.38	19	21.3	6.3	6.0	5.6	31.2	31	31.4	23	23	22.9	7.185	0.036	0.060	10	18	108
32016	19-Nov-07	15:18	2817.37	-9614.29	19	20.1	6.1	6.0	5.5	31.2	31	31.9	23	23	22.9	3.743	0.004	0.022	10	12	50

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	1-Nov-07	8:53	2936.20	-9351.15	17	7	6.9	6.6	6.5	28.2	28	28.3	21	21	21.5	1.824	0.519	0.050	10	13	100
40002	1-Nov-07	9:29	2936.28	-9352.53	17	6.4	6.7	6.5	6.2	28.0	28.0	28.3	21	21	21.4	1.174	0.228	0.285	10	15	110
40003	1-Nov-07	10:35	2938.23	-9402.07	17	5.5	6.6	6.8	6.8	28.1	28	28.1	21	21	21.2	0.376	0.040	0.164	10	12	46
40004	1-Nov-07	11:19	2934.26	-9400.49	17	8.8	6.6	6.5	5.2	28.7	29	28.9	22	22	21.8	0.265	0.083	0.104	10	14	41
40005	1-Nov-07	11:50	2935.27	-9359.07	17	8.5	6.1	6.1	5.0	28.4	28	28.4	22	22	21.5	1.154	0.090	0.272	10	17	75
40006	1-Nov-07	12:29	2934.35	-9357.46	17	8.8	6.2	5.9	5.2	28.5	29	29.8	22	22	21.6	0.728	0.375	0.482	10	15	75
40007	1-Nov-07	12:54	2933.28	-9356.11	17	10	6.8	6.0	6.2	28.1	28	30.8	22	21	21.8	0.589	0.043	0.269	10	14	32
40008	1-Nov-07	13:40	2932.32	-9356.50	17	11	7.0	5.9	6.2	28.2	28	30.8	22	21	21.8	0.873	0.046	0.206	10	13	58
40009	28-Nov-07	8:44	2940.35	-9346.54	17	6.1	7.0	7.0	6.9	30.1	30	30.1	16	16	15.9	0	0.002	0.074	10	3	16
40010	28-Nov-07	9:44	2936.40	-9339.10	17	10	6.4	6.2	6.5	35.0	32.0	32.1	17	17	17.2	0.080	0.022	0.257	10	8	43
40011	28-Nov-07	10:33	2935.34	-9345.46	17	10.4	6.5	6.3	6.3	31.2	31.2	31.2	17	17	17.1	0.369	0.026	0.53	10	11	43
40012	28-Nov-07	11:08	2936.28	-9347.12	17	9.1	6.5	6.5	6.4	31.0	31.0	31.1	17	17	17.1	0.003	0.028	0.104	10	4	17
40013	28-Nov-07	11:40	2937.06	-9349.44	17	6.7	6.5	6.6	6.5	30.1	30.3	30.3	17	16	16.4	0.301	4.702	0.032	10	13	126
40014	28-Nov-07	12:23	2935.31	-9350.15	17	8.5	6.7	6.6	6.6	28.2	28.3	28.8	17.0	17	16.8	0.202	0.001	0.692	10	8	29
40015	28-Nov-07	12:56	2934.28	-9351.53	17	9.4	6.5	6.4	6.4	30.8	30.8	31.0	17	17	16.8	0.039	0	0.543	10	6	25
40016	28-Nov-07	13:43	2931.24	-9350.15	17	11.8	6.3	6.4	6.1	32.0	32.0	32.1	18	18	17.5	0.473	0.008	0.300	10	9	34
67 NUECES																					
67001	1-Nov-07	9:20	2746.41	-9702.19	20	11.9	7.0	7.0	7.1	31.7	31.7	31.7	23.2	23.2	23.3	0.600	0.200	0.300	10	14	53
67002	1-Nov-07	10:03	2742.00	-9703.31	20	15.2	7.1	7.3	7.3	31.3	31.5	32.2	23.0	23.1	23.5	2.500	0.100	0.100	10	17	75
67003	1-Nov-07	10:36	2738.47	-9703.33	20	18.3	7.0	7.0	7.3	31.8	31.9	31.9	23.5	23.6	23.6	5.100	0.100	0.100	10	10	55
67004	1-Nov-07	12:37	2739.10	-9701.25	20	20.1	7.3	7.4	7.0	32.1	32.1	32.4	23.8	23.7	23.6	5.300	0.100	0.200	10	11	69
67005	1-Nov-07	13:08	2740.52	-9701.06	20	19.2	7.2	7.3	7.2	32.4	32.4	32.4	24.2	24.1	23.9	10.900	0.100	0.100	10	16	57
67006	1-Nov-07	13:41	2740.19	-9659.15	20	21.3	7.2	7.4	7.1	32.3	32.3	32.4	24.2	24.1	23.8	4.700	0.100	0.100	10	9	50
67007	1-Nov-07	14:15	2742.53	-9657.20	20	21	7.2	7.4	7.2	32.3	32.3	32.3	24.3	24.2	23.8	5.700	0.100	0.100	10	15	81
67008	1-Nov-07	16:02	2748.21	-9655.22	20	18.6	7.0	6.6	7.0	31.6	31.9	31.8	23.9	23.5	23.7	2.400	0.000	0.100	10	12	35
67009	19-Nov-07	8:16	2749.18	-9658.25	20	14.6	5.7	5.7	5.2	31.4	32.3	32.4	22.6	23.0	23.0	1.200	0.100	0.200	10	14	65
67010	19-Nov-07	8:58	2753.43	-9659.26	20	9.4	7.5	7.4	7.1	33.0	33.0	33.2	22.7	22.6	22.8	0.700	0.200	0.300	10	20	79
67011	19-Nov-07	9:30	2753.12	-9657.27	20	12.2	7.3	7.1	7.1	33.3	33.3	33.3	22.9	22.9	22.9	0.600	0.100	0.800	10	16	52
67012	19-Nov-07	10:07	2756.48	-9657.15	20	7.3	7.6	7.9	8.1	33.2	33.8	33.2	23.0	22.8	22.8	8.400	0	0.600	10	9	21
67013	19-Nov-07	10:38	2758.09	-9656.26	20	4.3	7.9	8.0	8.2	33.1	33.2	33.2	23.0	22.8	22.8	1.300	0.100	0.900	10	15	72
67014	19-Nov-07	11:16	2757.45	-9651.22	20	13.4	7.8	7.8	8.6	33.0	33.0	33.0	23.2	22.7	22.7	0.900	0.100	0.200	10	10	42
67015	19-Nov-07	12:32	2752.26	-9649.38	20	19.8	7.8	7.7	7.5	33.4	33.4	33.4	24.0	23.2	23.2	2.300	0.100	0.300	10	15	69
67016	19-Nov-07	16:06	2750.49	-9651.44	20	19.5	7.7	7.7	7.6	33.5	33.5	33.5	23.9	23.3	23.3	2.100	0.100	0.200	10	11	47

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	8-Nov-07	11:44	2920.52	-9438.17	18	9.3	6.6	6.5	6.2	27.4	27	27.9	21	21	21.4	1.853	0.047	0.788	10	19	161
69002	8-Nov-07	12:31	2921.20	-9432.48	18	11	6.9	6.8	6.2	29.0	29.0	29.3	21	21	21.6	0.279	0.013	0.521	10	11	89
69003	8-Nov-07	13:11	2922.56	-9429.19	18	11	6.6	6.6	6.6	29.2	29	29.3	22	22	21.5	0.204	0.024	0.245	10	7	48
69004	8-Nov-07	13:49	2925.25	-9431.54	18	9.6	6.8	6.8	6.4	28.3	28	28.5	21	21	21.4	0.180	0.009	0.390	10	15	70
69005	8-Nov-07	14:19	2928.11	-9431.51	18	6.8	6.6	6.6	6.3	27.9	28	27.9	21	21	21.0	0.316	0.200	0.019	10	11	49
69006	8-Nov-07	14:44	2927.51	-9432.19	18	7	6.6	6.6	6.4	27.9	28	27.9	21	21	21.1	0.588	0.136	0.073	10	14	77
69007	8-Nov-07	15:13	2926.51	-9435.27	18	6.3	6.3	6.3	5.9	28.0	28.0	28.0	21.0	20.8	20.9	0.938	0.287	0.023	10	14	72
69008	8-Nov-07	15:48	2925.15	-9439.56	18	4.5	6.4	6.4	6.1	27.8	27.8	27.8	21.8	20.8	20.6	0.596	0.147	0.079	10	14	84
69009	27-Nov-07	12:15	2918.47	-9436.21	18	11	7.7	7.7	7.6	27.4	27.4	27.5	16.5	16.5	16.5	0.307	0.010	0.656	10	14	85
69010	27-Nov-07	12:51	2917.07	-9436.55	18	12	7.7	7.5	7.3	28.2	28.4	28.8	16.9	17.1	17.2	0.112	0.064	0.263	10	17	72
69011	27-Nov-07	13:33	2916.38	-9442.27	18	7.7	7.5	7.3	7.1	27.0	27.3	29.0	16.6	16.9	17.3	0.096	0.003	0.231	10	9	39
69012	27-Nov-07	14:05	2915.11	-9444.57	18	8.2	7.5	7.6	7.5	27.7	27.8	27.9	16.9	16.9	17.0	0.184	0.013	0.391	10	8	74
69013	27-Nov-07	14:47	2911.42	-9446.09	18	12	7.7	7.6	7.1	28.7	28.6	28.7	17.0	17.0	17.6	0.174	0.035	0.602	10	14	85
69014	27-Nov-07	15:26	2908.03	-9447.58	18	15	7.7	7.7	7.5	28.4	28.4	28.5	17.2	17.2	17.2	0.201	0.004	0.290	10	9	54
69015	27-Nov-07	16:45	2912.04	-9449.45	18	10	7.7	7.5	7.4	28.2	28.9	29.2	16.9	17.1	17.2	0.901	0.082	0.123	10	12	55
69016	27-Nov-07	17:23	2912.09	-9453.57	18	7.7	7.3	7.4	7.3	28.9	28.9	29.1	17.0	16.9	16.8	0.768	0.338	0.304	10	14	92