

SEAMAP Summer 2005 Groundfish Survey Cruise Report

Prepared by
Paul Choucair
Texas Parks and Wildlife Department
Coastal Fisheries
702 Navigation Circle
Rockport, Texas 78382

Introduction

SEAMAP Summer 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 Texas SEAMAP Operations Manual.
3. Collect information on environmental parameters (salinity, temperature, dissolved oxygen, wind speed and direction, wave height, cloud cover) 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/NMFS Data Manager.

Methods

Vessels that participated in the Texas Summer Groundfish Survey include: Sabine Lake (40), San Jacinto (69), Matagorda Bay (32), Nueces Bay (67), Trinity Bay (65) and Laguna Madre (31). 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. Data was entered and checked with the Texas SEAMAP Data Entry Database.

Environmental data were collected in conjunction with each trawl. Temperature and dissolved Oxygen values were measured with YSI 85 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 Groundfish survey samples in Texas Territorial Seas (between latitudes 28° 58' and 29° 44' and longitudes -93° 34' and - 04') (Table 1). Samples were collected between June 2, 2005 and July 5, 2005.

A total of 1183 biological and 6861 length frequency records were recorded (Table 1)

Deviations

1. Eight samples from the Bolivar Pass Gulf area (statistical zone 18) were collected onboard the RV San Jacinto and 8 from the RV Trinity Bay.
2. Eight samples from the Aransas Pass Gulf area (statistical zone 20) were collected onboard the RV Matagorda Bay and 8 from the RV Nueces Bay.
3. Because of vessel problems, 8 samples from the Aransas Pass Gulf area were collected in June and 8 samples were collected in July.

Cruise participants:

Texas Parks and Wildlife Staff collected samples. Sample summary and data entry completed by Paul Choucair and Domingo Sanchez.

Submitted By:

Paul Choucair

SEAMAP Subcommittee member

Table 1. TPWD SEAMAP 2005 Summer Groundfish cruise report summary.

STA#	DATE		LAT	LONG	STAT ZONE	MAX DEPTH	D.O			SALINITY			TEMPERATUR			FIN CATCH	CRUS CATCH	OTHR CATCH	MIN FISHER	BIO COUNT	LENGTHS	
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX						SUR	MID
31 R.J.KEMP																						
31001	6/13/2005	820	26 02.20'	-97 08.50'	21	7.3	7.7	7.6	7.8	36.4	36.4	36.2	25.6	25.4	25.3	0.916	0.196	0.036	10	12	56	
31002	6/13/2005	859	26 01.83'	-97 05.47'	21	18.7	7.8	8.1	8.0	36.4	36.4	36.4	26.5	26.4	24.1	2.897	0.075	0.225	10	18	63	
31003	6/13/2005	946	25 58.40'	-97 05.55'	22	18.2	7.6	7.8	7.8	36.5	36.5	36.5	26.6	26.2	24.1	1.614	0.041	0.123	10	22	85	
31004	6/13/2005	1028	25 58.82'	-97 02.45'	22	23.3	7.5	7.7	8.3	36.5	36.5	36.4	27.2	27.2	24.0	2.925	0.055	0.099	10	28	74	
31005	6/13/2005	1104	25 59.47'	-97 00.55'	22	25.4	7.2	7.2	7.9	36.4	36.4	35.5	27.4	27.3	21.4	3.555	0.042	0.122	10	11	68	
31006	6/13/2005	1207	26 06.80'	-96 59.55'	21	26.1	7.2	7.2	7.4	35.7	36.2	35.9	27.3	27.1	26.6	3.339	0.085	0.128	10	16	79	
31007	6/13/2005	1309	26 06.45'	-97 06.53'	21	17.7	7.0	7.3	7.7	36.4	36.4	36.2	26.3	26.2	25.5	2.324	0.023	0.207	10	14	52	
31008	6/13/2005	1347	26 06.82'	-97 07.53'	21	15.8	7.6	10.8	8.1	36.4	36.4	31.3	26.4	26.0	25.5	1.488	0.037	0.137	10	18	72	
31009	6/16/2005	820	26 07.35'	-97 04.40'	21	19.1	5.5	5.6	5.6	36.0	36.3	36.2	27.8	27.8	27.5	2.008	0.099	0.224	10	16	81	
31010	6/16/2005	904	26 07.70'	-97 00.38'	21	25.6	6.0	5.6	5.7	35.8	36.0	36.3	27.8	27.7	27.3	1.570	0.067	0.130	10	16	64	
31011	6/16/2005	941	26 09.33'	-97 00.43'	21	26.3	5.7	6.5	6.1	36.0	36.3	36.3	28.7	27.6	27.2	2.248	0.164	0.237	10	22	109	
31012	6/16/2005	1030	26 09.63'	-97 03.52'	21	20.0	6.5	5.4	5.9	36.3	36.4	36.4	27.4	27.0	26.3	2.644	0.134	0.168	10	19	79	
31013	6/16/2005	1107	26 10.32'	-97 03.53'	21	19.7	5.7	5.5	6.0	36.3	36.3	36.3	27.6	27.1	26.4	0.885	0.012	0.240	10	17	72	
31014	6/16/2005	1247	26 20.77'	-97 03.53'	21	17.6	6.1	6.8	5.8	36.3	36.3	36.3	28.8	27.6	27.4	0.431	0.108	0.284	10	13	52	
31015	6/16/2005	1327	26 20.42'	-97 09.63'	21	15.8	8.4	6.8	5.6	36.3	36.3	36.3	27.9	27.8	26.0	1.678	0.046	0.292	10	17	101	
31016	6/16/2005	1553	26 11.75'	-97 08.48'	21	15.2	5.7	6.4	5.6	32.7	36.3	36.5	25.0	25.9	27.5	0.804	0.173	0.638	10	14	81	
32 MATAGORDA BAY																						
32001	6/2/2005	638	28 23.48'	-96 18.50'	19	8.5	6.0	6.1	4.5	32.4	33.3	33.8	26.7	26.3	25.6	0.148	0.000	0.293	10	6	11	
32002	6/2/2005	720	28 27.50'	-96 15.53'	19	6.0	6.1	6.2	6.1	32.9	32.8	32.8	27.1	27.1	27.1	0.282	0.013	0.300	10	9	34	
32003	6/2/2005	809	28 27.52'	-96 10.50'	19	12.1	6.1	6.2	2.8	33.2	33.1	34.7	26.4	26.4	23.4	0.344	0.024	5.017	10	19	81	
32004	6/2/2005	840	28 28.52'	-96 08.48'	19	12.1	6.3	6.4	2.8	33.3	33.4	34.8	26.7	26.6	23.5	0.735	0.046	7.415	10	16	92	
32005	6/2/2005	917	28 26.50'	-96 07.50'	19	14.9	6.3	6.2	4.8	33.2	33.3	35.3	26.4	26.2	23.5	0.107	0.212	1.727	10	15	94	
32006	6/2/2005	958	28 26.53'	-96 03.52'	19	16.4	6.2	6.2	4.4	33.1	33.6	35.3	26.5	24.9	23.3	0.774	0.131	2.367	10	19	128	
32007	6/2/2005	1041	28 24.50'	-96 06.47'	19	17.0	6.5	6.4	5.2	33.1	34.2	35.4	26.5	25.7	23.2	0.233	0.218	1.131	10	16	129	
32008	6/2/2005	1147	28 19.50'	-96 12.50'	19	19.5	6.5	6.5	6.2	34.5	35.0	35.6	26.6	26.1	23.0	0.393	0.340	0.509	10	22	147	
32009	6/16/2005	800	27 46.85'	-97 01.45'	20	13.4	5.4	5.6	5.0	33.3	33.3	33.0	28.6	28.9	29.0	0.290	0.200	0.176	10	8	19	
32010	6/16/2005	855	27 42.17'	-97 04.43'	20	14.0	5.4	5.6	5.5	33.6	33.5	33.5	29.1	29.1	28.9	0.049	0.032	0.668	10	9	34	
32011	6/16/2005	922	27 41.60'	-97 04.42'	20	14.3	5.4	5.5	5.3	33.4	33.4	33.4	29.1	29.0	29.0	0.074	0.043	0.408	10	9	32	
32012	6/16/2005	1007	27 38.12'	-97 08.65'	20	12.8	5.4	5.6	5.6	33.9	33.8	33.9	29.4	29.3	29.3	0.000	0.000	0.311	10	4	4	
32013	6/16/2005	1100	27 36.87'	-97 04.57'	20	18.5	5.3	5.0	5.2	33.4	33.5	33.6	29.3	29.0	28.9	0.367	0.099	0.769	10	18	95	
32014	6/16/2005	1346	27 42.23'	-96 57.50'	20	21.3	5.7	5.8	5.7	37.7	33.0	33.0	29.5	29.2	29.7	0.329	0.104	1.023	10	14	98	
32015	6/16/2005	1418	27 43.92'	-96 58.45'	20	19.2	5.6	5.8	5.8	33.0	32.8	32.8	29.5	29.0	29.0	0.463	0.088	1.392	10	15	97	
32016	6/16/2005	1504	27 45.20'	-96 54.57'	20	21.3	5.7	5.7	6.0	33.1	33.0	32.9	29.3	29.3	29.0	0.967	0.093	0.469	10	22	145	
32017	6/23/2005	1013	28 12.37'	-96 27.83'	19	16.4	5.3	5.5	5.4	32.4	32.4	32.5	29.2	29.2	29.1	0.409	0.023	0.689	10	14	91	
32018	6/23/2005	1108	28 13.33'	-96 23.60'	19	19.8	5.3	5.6	5.4	32.4	32.8	32.4	29.0	29.0	28.9	0.483	0.145	1.353	10	20	152	
32019	6/23/2005	1153	28 16.53'	-96 27.83'	19	8.5	5.5	5.6	5.3	32.0	32.1	32.3	29.9	29.9	29.8	4.685	0.142	0.074	10	16	104	
32020	6/23/2005	1231	28 18.27'	-96 27.58'	19	4.8	5.6	5.7	5.8	31.7	31.7	31.7	30.1	30.1	29.9	0.000	0.000	0.000	10	8	71	
32021	6/23/2005	1310	28 18.58'	-96 24.82'	19	7.9	5.3	5.7	5.6	32.0	32.1	32.1	30.1	29.9	29.8	0.584	0.000	0.130	10	7	62	
32022	6/23/2005	1408	28 18.57'	-96 22.65'	19	13.1	5.7	5.7	5.8	32.2	32.2	32.4	29.9	29.9	29.8	34.815	1.544	1.169	10	26	314	

Table 1. (cont.)

STA#	DATE		LAT	LONG	STAT ZONE	MAX DEPTH	D.O			SALINITY			TEMPERATUR			FIN CATCH	CRUS CATCH	OTHR CATCH	MIN FISHER	BIO COUNT	LENGTHS	
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX						SUR	MID
32 MATAGORDA BAY (cont.)																						
32023	6/23/2005	947	28 21.53'	-96 19.53'	19	11.2	5.8	5.7	5.6	31.6	31.9	32.1	29.8	29.8	29.7	2.857	0.267	1.066	10	19	119	
32024	6/23/2005	1021	28 19.48'	-96 20.53'	19	14.4	5.9	5.8	5.8	31.9	32.0	32.2	29.7	29.6	29.5	0.000	0.000	0.000	10	14	62	
40 SABINE																						
40001	6/1/2005	759	29 44.18'	-93 41.88'	17	2.7	5.4	5.3	5.4	29.7	29.7	29.8	27.4	27.4	27.3	3.444	0.331	0.169	10	15	122	
40002	6/1/2005	842	29 43.58'	-93 38.08'	17	5.5	5.7	5.5	3.2	29.7	29.7	29.8	27.7	27.6	27.2	2.947	0.091	0.496	10	13	80	
40003	6/1/2005	1027	29 37.50'	-93 34.87'	17	10.7	6.8	4.5	1.8	29.5	29.6	30.4	27.2	26.8	26.0	0.048	0.014	0.077	10	9	13	
40004	6/1/2005	1053	29 38.40'	-93 35.25'	17	10.1	6.4	5.5	1.3	29.6	29.7	30.4	27.4	26.9	26.1	0.169	0.009	0.185	10	7	32	
40005	6/1/2005	1128	29 38.52'	-93 38.82'	17	10.1	6.0	5.8	1.9	30.0	30.0	30.3	27.4	27.1	26.1	1.929	0.003	0.254	10	10	106	
40006	6/1/2005	1154	29 38.52'	-93 39.25'	17	10.1	6.1	5.7	2.0	29.9	30.0	30.0	27.4	27.1	26.1	1.788	0.023	0.084	10	6	49	
40007	6/1/2005	1222	29 37.48'	-93 39.85'	17	10.7	6.1	5.9	1.9	30.0	30.1	30.4	27.3	27.1	25.8	1.574	0.017	0.093	10	11	43	
40008	6/1/2005	1258	29 37.40'	-93 42.20'	17	10.4	6.3	5.6	2.7	30.0	30.3	30.6	27.3	26.8	25.8	8.099	0.008	0.420	10	14	133	
40009	6/16/2005	844	29 32.32'	-93 48.15'	17	12.2	6.2	3.6	4.6	21.6	28.3	27.9	30.7	24.9	29.2	0.311	0.028	0.238	10	19	41	
40010	6/16/2005	951	29 38.52'	-93 53.70'	17	4.6	5.7	5.6	4.6	21.5	21.5	21.6	31.2	31.1	30.9	6.044	0.459	0.856	10	16	142	
40011	6/16/2005	1038	29 40.42'	-93 56.20'	17	2.4	5.8	5.6	5.4	21.3	21.3	21.3	31.2	31.2	31.0	1.376	0.684	1.590	10	20	152	
40012	6/16/2005	1259	29 36.47'	-94 03.83'	17	7.0	5.8	4.9	1.8	21.3	27.6	27.6	31.5	29.8	29.0	0.894	0.023	0.030	10	10	39	
40013	6/16/2005	1401	29 35.48'	-93 59.22'	17	7.6	6.5	4.9	2.3	20.9	25.4	28.9	31.8	30.2	29.1	3.697	0.061	0.143	10	19	125	
40014	6/16/2005	1507	29 33.50'	-93 59.70'	17	10.1	7.3	6.0	1.7	21.4	28.5	29.1	31.8	29.9	28.8	0.412	0.020	0.233	10	8	40	
40015	6/16/2005	1544	29 33.45'	-93 56.37'	17	10.1	7.0	5.3	2.3	21.3	26.3	27.3	31.8	29.8	28.9	0.287	0.067	0.362	10	12	43	
40016	6/16/2005	1621	29 32.50'	-93 56.78'	17	11.0	7.3	4.5	2.9	21.3	23.2	27.9	31.7	29.5	28.9	1.135	0.036	0.282	10	12	67	
65 TRINITY BAY																						
65001	6/28/2005	944	29 28.15'	-94 31.88'	18	7.3	6.7	6.4	4.2	26.0	26.0	27.0	29.8	29.8	29.8	3.039	0.199	0.952	10	17	86	
65002	6/28/2005	1019	29 27.87'	-94 30.30'	18	8.5	6.0	5.9	5.2	27.4	27.0	27.3	30.1	29.9	29.9	0.419	0.036	0.098	10	10	71	
65003	6/28/2005	1105	29 23.13'	-94 30.90'	18	11.6	5.9	5.9	5.7	28.0	28.0	28.1	30.1	29.9	29.8	0.367	0.029	0.061	10	10	52	
65004	6/28/2005	1144	29 19.83'	-94 32.25'	18	12.9	6.2	6.0	5.3	28.2	28.2	28.3	30.1	29.8	29.8	1.167	0.067	0.430	10	21	75	
65005	6/28/2005	1214	29 20.22'	-94 33.99'	18	12.4	6.1	6.1	5.9	27.0	28.3	28.2	30.2	29.9	29.9	0.176	0.033	0.143	10	11	47	
65006	6/28/2005	1250	29 22.83'	-94 35.35'	18	10.3	6.3	6.2	4.5	26.8	27.9	28.0	26.7	30.2	30.0	3.686	0.013	0.148	10	15	86	
65007	6/28/2005	1411	29 16.78'	-94 38.33'	18	12.9	6.3	6.4	4.7	26.5	27.1	28.4	30.3	30.0	29.9	0.137	0.073	0.569	10	18	90	
65008	6/28/2005	1447	29 14.15'	-94 38.92'	18	14.4	6.3	6.0	6.1	27.3	27.9	28.1	30.6	30.1	30.0	0.115	0.071	0.563	10	22	95	
67 NUECES																						
67001	7/5/2005	846	27 52.58'	-97 00.10'	20	9.4	5.0	5.0	4.6	35.5	35.3	34.3	28.4	27.3	26.9	11.216	0.048	0.212	10	19	129	
67002	7/5/2005	818	27 52.32'	-96 58.33'	20	12.2	5.5	5.3	5.2	34.9	35.4	35.4	29.4	29.6	27.7	2.063	0.000	0.306	10	9	62	
67003	7/5/2005	922	27 53.15'	-96 56.50'	20	13.1	5.3	5.2	4.8	34.3	35.4	35.5	29.4	27.8	26.7	0.548	0.050	0.775	10	13	60	
67004	7/5/2005	1005	27 57.93'	-96 51.47'	20	12.8	5.6	5.0	4.7	34.5	35.6	35.5	29.6	26.3	26.8	0.093	0.051	0.205	10	10	20	
67005	7/5/2005	1038	27 55.18'	-96 49.40'	20	17.7	6.0	6.0	5.6	35.0	35.6	35.6	29.2	28.6	27.1	0.288	0.063	0.771	10	10	61	
67006	7/5/2005	1115	27 51.85'	-96 50.37'	20	19.8	5.7	5.9	6.0	35.1	35.2	35.9	29.5	29.2	26.9	0.707	0.020	0.642	10	12	42	
67007	7/5/2005	1148	27 50.15'	-96 52.50'	20	19.5	5.9	6.3	6.1	35.3	35.3	35.4	29.7	29.1	29.0	0.426	0.077	0.267	10	13	55	
67008	7/5/2005	1227	27 49.80'	-96 55.30'	20	17.4	5.6	6.5	6.4	35.0	35.8	35.9	29.6	28.9	28.3	0.239	0.029	0.189	10	10	51	
69 SAN JACINTO																						
69001	6/7/2005	858	29 16.45'	-97 47.85'	18	4.9	5.7	5.7	5.6	30.8	31.3	31.4	28.4	28.4	28.3	0.961	0.014	0.079	10	11	50	
69002	6/7/2005	1004	29 12.93'	-94 45.35'	18	11.6	5.3	5.4	5.3	30.3	30.9	31.3	28.4	28.4	28.3	5.936	1.468	0.471	10	16	177	
69003	6/7/2005	1042	29 11.95'	-94 46.35'	18	12.8	5.6	5.6	5.6	31.8	31.8	31.8	28.2	28.2	28.1	6.763	1.134	0.096	10	18	164	

Table 1. (Cont.)

STA#	DATE		LAT	LONG	STAT ZONE	MAX DEPTH	D.O			SALINITY			TEMPERATUR			FIN CATCH	CRUS CATCH	OTHR CATCH	MIN FISHERY	BIO COUNT	LENGTHS		
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX						SUR	MID	MAX
69 SAN JACINTO (cont.)																							
69004	6/7/2005	1118	29	11.27'	-94	47.90'	18	12.5	5.6	5.5	5.4	31.9	31.9	31.9	28.5	28.5	28.4	4.784	0.884	0.126	10	16	136
69005	6/7/2005	1239	29	06.93'	-94	49.42'	18	15.5	5.5	5.5	5.4	31.8	31.9	31.9	28.0	27.9	27.8	3.283	0.572	0.546	10	22	178
69006	6/7/2005	1339	29	09.88'	-94	45.30'	18	15.2	5.6	5.6	5.7	31.8	31.8	31.9	28.2	28.1	27.7	3.143	1.360	0.099	10	20	171
69007	6/7/2005	1415	29	09.27'	-94	44.88'	18	15.5	5.6	5.6	5.5	31.9	31.9	31.9	28.2	28.1	27.8	1.857	0.996	0.129	10	18	122
69008	6/7/2005	1454	29	11.18'	-94	42.75'	18	14.6	5.8	5.6	2.4	31.7	31.7	31.7	28.5	28.3	28.1	2.753	1.103	0.182	10	23	151

Data transfer summary: number of observations in each table.

Station Card	Environmental	Biological Index	General Length Freq.
80	80.0	1183	6861

Submitted by: Paul Choucair
Date submitted: Thursday, February 23, 2006