

SEAMAP Fall 2005 Groundfish Survey Cruise Report

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Introduction

SEAMAP Fall 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 Fall 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 Fall Groundfish survey samples in Texas Territorial Seas (between latitudes 57' and 29° 33' and longitudes -93° 37' and - 06') (Table 1). Samples were collected between November , 2005 and November , 2005.

A total of 1008 biological and 4895 length frequency records were recorded (Table 1)

Deviations

There were no significant deviations.

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 Fall 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	LENGTH COUNT	OP
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX							
31 R.J.KEMP																						
31001	11/9/2005	759	26 02.78'	-97 08.50'	21	7.5	5.6	5.6	5.7	33.7	33.8	33.8	25.8	25.8	25.8	0.008	0.007	0.022	10	4	9	
31002	11/9/2005	857	25 57.35'	-97 05.52'	22	18.0	6.3	5.8	4.7	33.0	33.2	34.7	25.5	26.1	26.3	2.984	0.014	0.062	10	9	31	
31003	11/9/2005	1000	26 00.75'	-97 00.58'	21	25.2	6.4	6.3	4.7	32.7	33.8	35.2	25.5	25.9	26.9	1.260	0.022	0.143	10	18	81	
31004	11/9/2005	1050	26 03.42'	-96 59.45'	21	26.4	6.3	6.1	5.3	32.7	33.6	35.1	25.6	26.1	26.7	1.285	0.124	0.037	10	13	75	
31005	11/9/2005	1139	26 06.75'	-97 01.47'	21	23.4	6.4	6.3	5.3	32.7	33.5	34.8	25.7	25.8	26.3	1.306	0.149	0.138	10	17	74	
31006	11/9/2005	1215	26 07.45'	-97 02.62'	21	21.6	6.4	6.3	4.8	32.7	33.5	34.5	25.6	25.8	26.3	1.763	0.051	0.179	10	12	59	
31007	11/9/2005	1308	26 08.83'	-97 08.67'	21	13.8	6.0	5.7	5.3	34.0	34.4	33.6	26.1	26.6	26.1	0.332	0.000	0.089	10	5	37	
31008	11/9/2005	1358	26 04.38'	-97 06.57'	21	16.0	6.2	5.9	5.3	33.9	33.3	33.8	25.8	26.0	26.2	1.676	0.000	0.071	10	7	34	
31009	11/22/2006	850	26 09.33'	-97 05.43'	21	17.7	6.7	6.9	6.4	34.5	34.6	34.6	22.7	22.4	21.9	2.198	0.039	0.035	10	6	26	
31010	11/22/2006	938	26 10.77'	-97 02.40'	21	21.6	7.0	6.8	6.6	34.2	34.2	34.3	23.1	23.1	22.6	0.205	0.000	0.000	10	12	28	
31011	11/22/2006	1026	26 14.33'	-97 04.45'	21	17.7	7.2	7.2	7.1	34.2	34.2	34.2	22.9	22.8	22.3	0.035	0.000	0.088	10	2	9	
31012	11/22/2006	1121	26 19.75'	-97 02.50'	21	21.7	7.2	7.0	6.9	34.0	34.0	34.2	22.7	22.4	22.2	0.152	0.000	0.000	10	9	32	
31013	11/22/2006	1157	26 19.27'	-97 03.40'	21	18.9	7.4	7.2	6.1	33.9	34.0	34.2	22.5	22.1	22.1	0.006	0.000	0.024	10	2	6	
31014	11/22/2006	1300	26 21.63'	-97 08.42'	21	15.7	6.9	7.3	6.8	33.9	33.8	33.9	22.2	21.9	21.6	0.288	0.000	0.000	10	9	55	
31015	11/22/2006	1347	26 19.17'	-97 09.47'	21	15.6	7.2	7.2	6.2	34.1	34.1	34.1	21.8	21.4	21.2	0.015	0.000	0.000	10	12	53	
31016	11/22/2006	1508	26 15.78'	-97 08.45'	21	15.4	7.1	7.1	6.8	34.4	34.4	34.4	22.5	22.1	22.0	0.124	0.000	0.000	10	9	51	
32 MATAGORDA BAY																						
32001	11/2/2005	910	28 20.45'	-96 19.55'	19	13.4	6.8	6.9	6.1	30.1	30.1	31.6	21.2	21.3	23.3	2.533	0.275	0.219	10	17	113	
32002	11/2/2005	950	28 20.50'	-96 17.52'	19	15.5	6.7	6.9	6.2	30.2	30.3	32.1	21.3	21.3	23.5	2.416	0.077	0.281	10	16	108	
32003	11/2/2005	1022	28 20.48'	-96 16.45'	19	16.1	6.7	6.9	6.0	30.2	30.6	32.5	21.2	21.2	23.6	3.416	0.024	0.114	10	15	107	
32004	11/2/2005	1120	28 21.55'	-96 10.53'	19	17.9	6.3	6.6	6.4	32.0	32.1	32.2	23.2	23.1	23.2	1.314	0.047	0.244	10	15	68	
32005	11/2/2005	1225	28 26.50'	-96 05.53'	19	14.9	6.6	6.6	6.4	31.5	31.5	31.6	22.9	22.9	22.9	0.662	0.000	0.210	10	10	66	
32006	11/2/2005	1313	28 30.53'	-96 09.55'	19	7.6	6.7	7.0	6.9	30.2	30.1	30.1	21.4	21.3	21.2	1.348	1.017	0.365	10	24	110	
32007	11/2/2005	1413	28 25.50'	-96 15.55'	19	10.6	6.7	6.7	6.2	30.8	30.8	31.4	22.3	22.2	23.2	1.334	0.000	0.244	10	15	73	
32008	11/2/2005	1444	28 24.52'	-96 15.50'	19	12.1	6.8	6.7	6.6	31.0	31.0	31.6	22.5	22.4	22.4	1.736	0.066	0.804	10	17	99	
32009	11/21/2005	1000	28 18.43'	-96 20.45'	19	15.5	6.5	6.5	6.2	31.1	31.2	31.5	19.8	19.8	20.5	0.607	0.010	0.070	10	13	54	
32010	11/21/2005	1035	28 18.45'	-96 18.45'	19	17.0	6.6	6.6	6.0	31.3	32.2	31.7	19.9	19.9	21.3	0.399	0.035	0.125	10	8	53	
32011	11/21/2005	1107	28 16.47'	-96 17.50'	19	19.2	6.5	6.4	6.1	30.9	31.8	32.6	20.4	20.7	21.6	0.629	0.008	0.089	10	8	45	
32012	11/21/2005	1147	28 15.47'	-96 20.40'	19	18.8	6.6	6.4	6.1	31.8	31.9	32.7	20.7	20.7	31.7	1.017	0.238	0.045	10	9	38	
32013	11/21/2005	1224	28 12.47'	-96 20.45'	19	21.6	6.5	6.4	6.1	32.5	32.9	33.4	21.3	21.5	21.8	0.229	0.001	0.015	10	7	12	
32014	11/21/2005	1316	28 11.48'	-96 26.48'	19	18.2	6.6	6.4	6.2	32.0	32.7	32.6	20.9	21.3	21.3	0.155	0.025	0.142	10	7	38	
32015	11/21/2005	1349	28 13.50'	-96 27.52'	19	14.9	6.4	6.3	6.0	31.4	31.5	32.3	20.3	20.4	21.2	0.231	0.012	0.062	10	10	34	
32016	11/21/2005	1425	28 16.57'	-96 25.50'	19	12.4	6.8	6.8	6.6	30.8	30.8	30.9	18.6	18.6	18.1	0.495	0.031	0.346	10	11	66	
40 SABINE																						
40001	11/3/2005	820	29 39.58'	-93 51.12'	17	2.7	7.8	7.9	7.5	29.0	28.9	29.0	19.2	19.3	19.3	0.476	0.821	0.287	10	18	100	
40002	11/3/2005	906	29 36.50'	-93 52.78'	17	5.8	7.6	7.4	6.6	28.8	28.8	29.0	19.4	19.4	19.7	0.440	0.023	0.971	10	17	56	
40003	11/3/2005	935	29 36.73'	-93 53.12'	17	5.5	7.5	7.3	5.8	28.8	28.8	29.0	19.6	19.5	19.9	0.254	0.098	3.184	10	14	40	
40004	11/3/2005	1024	29 37.40'	-93 59.18'	17	5.5	7.7	7.4	7.2	29.6	29.6	29.6	20.1	19.8	19.9	0.170	0.018	2.043	10	10	27	

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	LENGTH COUNT	OP
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX							
40 SABINE (cont.)																						
40005	11/3/2005	1053	29 36.55'	-94 00.77'	17	6.7	7.8	7.6	6.8	29.0	29.7	29.9	20.6	20.1	20.4	0.176	0.000	0.125	10	13	24	
40006	11/3/2005	1131	29 38.53'	-94 03.23'	17	4.8	7.8	7.7	7.5	29.7	29.7	29.7	20.6	20.1	20.1	0.628	0.058	0.057	10	10	35	
40007	11/3/2005	1246	29 34.42'	-93 56.75'	17	8.8	7.6	7.2	5.7	29.4	29.4	30.5	20.9	19.8	20.7	2.940	0.087	0.169	10	20	103	
40008	11/3/2005	1323	29 33.55'	-93 54.25'	17	10.6	7.6	6.4	6.5	29.1	30.6	31.7	20.3	20.9	21.4	1.312	0.000	0.315	10	10	75	
40009	11/20/2005	855	29 42.22'	-93 47.27'	17	3.3	8.3	8.4	8.4	26.1	26.0	26.1	15.9	16.0	16.2	0.435	0.215	0.058	10	13	63	
40010	11/20/2005	922	29 41.80'	-93 47.88'	17	3.3	8.5	8.4	8.3	26.1	96.1	26.3	16.0	16.1	16.2	0.328	0.165	0.063	10	12	60	
40011	11/20/2005	955	29 39.50'	-93 47.17'	17	6.7	7.9	7.8	8.0	26.9	26.9	26.9	17.2	17.2	17.1	0.297	0.017	0.177	10	10	49	
40012	11/20/2005	1048	29 38.52'	-93 44.80'	17	8.2	7.8	7.7	7.3	27.2	28.1	29.1	17.8	18.4	18.9	0.136	0.016	0.619	10	8	17	
40013	11/20/2005	1137	29 43.42'	-93 41.20'	17	4.6	8.2	8.1	8.3	25.8	25.9	26.2	16.3	16.4	16.9	0.231	0.048	0.150	10	14	25	
40014	11/20/2005	1234	29 36.45'	-93 37.87'	17	10.4	7.7	7.6	7.4	30.4	30.5	30.2	18.5	18.5	18.8	0.612	0.008	0.138	10	10	49	
40015	11/20/2005	1335	29 34.33'	-93 45.35'	17	11.0	8.1	7.8	7.2	28.5	31.7	32.2	18.3	18.6	19.3	0.303	0.024	1.454	10	17	41	
40016	11/20/2005	1412	29 35.63'	-93 47.65'	17	10.4	7.8	7.5	7.1	27.4	28.6	30.4	17.9	18.9	19.3	0.301	0.018	0.927	10	14	37	
67 NUECES																						
67001	11/2/2005	802	27 50.18'	-97 59.65'	20	11.6	6.5	6.5	6.5	28.6	30.0	30.8	21.6	21.6	21.6	0.326	0.040	1.726	10	11	59	
67002	11/2/2005	841	27 52.75'	-96 56.53'	20	12.8	6.5	6.6	6.6	30.4	30.4	31.4	22.8	22.7	22.6	1.893	0.008	0.033	10	11	59	
67003	11/2/2005	915	27 54.25'	-96 54.62'	20	13.4	6.6	6.7	6.6	30.7	30.7	30.9	22.9	22.9	22.8	1.202	0.007	0.068	10	10	58	
67004	11/2/2005	955	27 59.68'	-96 54.18'	20	7.6	6.8	7.0	6.8	29.7	29.6	29.9	21.5	21.5	21.5	1.798	0.045	0.173	10	19	88	
67005	11/2/2005	1040	27 56.17'	-96 49.65'	20	16.8	6.6	6.5	6.6	31.0	31.1	31.2	23.2	23.2	23.1	1.517	0.037	0.176	10	12	102	
67006	11/2/2005	1117	27 53.78'	-96 52.72'	20	16.2	6.6	6.6	6.5	31.1	31.1	31.1	23.2	23.2	23.6	2.422	0.001	0.105	10	13	84	
67007	11/2/2005	1200	27 49.08'	-96 54.82'	20	18.3	6.5	6.5	6.4	31.4	31.6	31.7	23.5	23.5	23.6	1.667	0.005	0.128	10	15	88	
67008	11/2/2005	1240	27 47.77'	-96 53.90'	20	20.1	6.6	6.6	6.4	31.8	31.8	33.0	23.6	23.6	23.8	1.414	0.051	0.051	10	24	102	
67009	11/21/2005	734	27 47.67'	-96 58.48'	20	16.5	6.9	6.9	6.8	31.9	31.9	91.8	20.5	20.5	20.5	1.499	0.017	0.112	10	10	52	
67010	11/21/2005	805	27 46.67'	-97 00.48'	20	14.9	6.9	7.1	7.0	31.5	31.5	31.6	20.0	20.0	19.4	1.891	0.028	0.199	10	10	77	
67011	11/21/2005	837	27 43.77'	-97 00.45'	20	17.4	7.0	6.9	6.8	31.8	31.8	32.0	20.4	20.5	20.6	0.454	0.035	0.103	10	16	39	
67012	11/21/2005	907	27 42.05'	-97 00.43'	20	18.6	6.7	6.8	6.7	32.4	32.4	32.5	21.4	21.4	21.3	0.224	0.001	0.130	10	10	33	
67013	11/21/2005	939	27 40.78'	-97 03.43'	20	15.8	6.9	6.7	6.7	32.0	31.9	31.9	20.7	20.7	21.4	0.021	0.000	0.009	10	5	7	
67014	11/21/2005	1009	27 38.02'	-97 02.28'	20	19.8	6.8	7.0	6.6	32.9	33.0	33.1	21.8	21.8	21.9	1.234	0.018	0.006	10	11	57	
67015	11/21/2005	1037	27 36.75'	-97 01.50'	20	21.3	6.9	6.7	6.7	33.3	33.3	33.4	22.2	22.2	22.2	0.315	0.032	0.052	10	12	47	
67016	11/21/2005	1121	27 41.18'	-96 58.58'	20	21.3	7.0	7.0	6.7	32.7	32.7	32.7	21.8	21.8	21.9	0.304	0.013	0.150	10	9	43	
69 SAN JACINTO																						
69001	11/13/2005	1202	29 13.44'	-94 43.88'	18	12.0	7.1	7.0	7.0	29.8	30.5	31.2	23.8	23.1	22.8	0.382	0.178	0.233	10	13	50	
69002	11/13/2005	1239	29 12.83'	-94 42.39'	18	13.0	6.9	6.3	6.5	29.8	31.2	35.6	24.0	22.9	22.9	0.488	0.109	0.095	10	20	64	
69003	11/13/2005	1320	29 12.23'	-94 46.87'	18	11.0	7.0	6.8	6.5	29.6	29.5	31.5	24.0	23.2	23.1	0.428	0.102	0.540	10	18	71	
69004	11/13/2005	1405	29 08.85'	-94 47.44'	18	15.0	7.0	7.0	6.7	31.2	31.7	32.6	23.9	23.8	23.2	1.084	0.169	0.064	10	15	86	
69005	11/13/2005	1443	29 07.22'	-94 47.94'	18	16.0	7.1	6.2	6.3	29.6	31.9	32.4	24.3	23.4	23.0	1.152	0.395	0.220	10	19	104	
69006	11/13/2005	1531	29 12.93'	-94 52.28'	18	8.6	7.1	6.9	7.1	29.5	29.4	29.6	24.3	24.3	24.1	0.911	0.254	1.139	10	16	66	
69007	11/13/2005	1602	29 14.38'	-94 49.74'	18	7.9	7.0	7.1	6.8	29.3	29.3	29.5	24.2	24.2	23.5	0.273	0.046	0.665	10	12	63	
69008	11/13/2005	1637	29 16.91'	-94 46.18'	18	6.4	7.1	7.0	6.9	29.4	29.4	29.5	24.3	24.1	23.9	0.214	0.001	0.116	10	7	50	
69009	11/29/2005	1028	29 11.13'	-94 40.72'	18	15.0	6.8	6.8	6.8	32.2	32.3	32.3	18.7	18.6	18.7	0.995	0.409	0.077	10	18	130	
69010	11/29/2005	1109	29 10.77'	-94 40.27'	18	15.0	6.7	6.7	6.6	33.2	32.3	32.3	18.6	18.6	18.7	0.623	0.135	0.030	10	15	80	
69011	11/29/2005	1157	29 12.12'	-94 38.68'	18	15.0	6.4	6.4	6.4	32.2	32.1	32.2	18.3	18.3	18.6	0.720	0.106	0.110	10	19	101	
69012	11/29/2005	1244	29 15.77'	-94 37.15'	18	13.0	6.5	6.4	6.3	32.1	31.2	32.1	18.5	18.7	18.6	0.893	0.644	0.017	10	13	103	

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	LENGTH COUNT	OP
	MM/DD/YY	TIME					SUR	MID	MAX	SUR	MID	MAX	SUR	MID	MAX							
69 SAN JACINTO (cont.)																						
69013	11/29/2005	1355	29 23.35'	-94 28.65'	18	11.0	6.3	6.3	6.2	31.7	31.7	31.6	18.4	18.4	18.3	0.874	0.039	0.322	10	18	91	
69014	11/29/2005	1434	29 24.72'	-94 30.12'	18	10.0	6.3	6.3	6.3	31.5	31.6	31.6	18.4	18.3	18.3	0.529	0.447	0.089	10	17	128	
69015	11/29/2005	1510	29 26.10'	-94 32.80'	18	8.6	6.4	6.4	6.3	31.6	31.6	31.5	18.3	18.4	18.4	0.353	0.194	0.075	10	15	84	
69016	11/29/2005	1543	29 26.80'	-94 33.10'	18	7.6	6.5	6.3	6.4	31.6	31.6	31.6	18.2	18.4	18.3	0.343	0.217	0.947	10	17	84	

Data transfer summary: number of observations in each table.

Station Card	Environmental	Biological Index	General Length Freq.
80	80.0	1008	4895

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