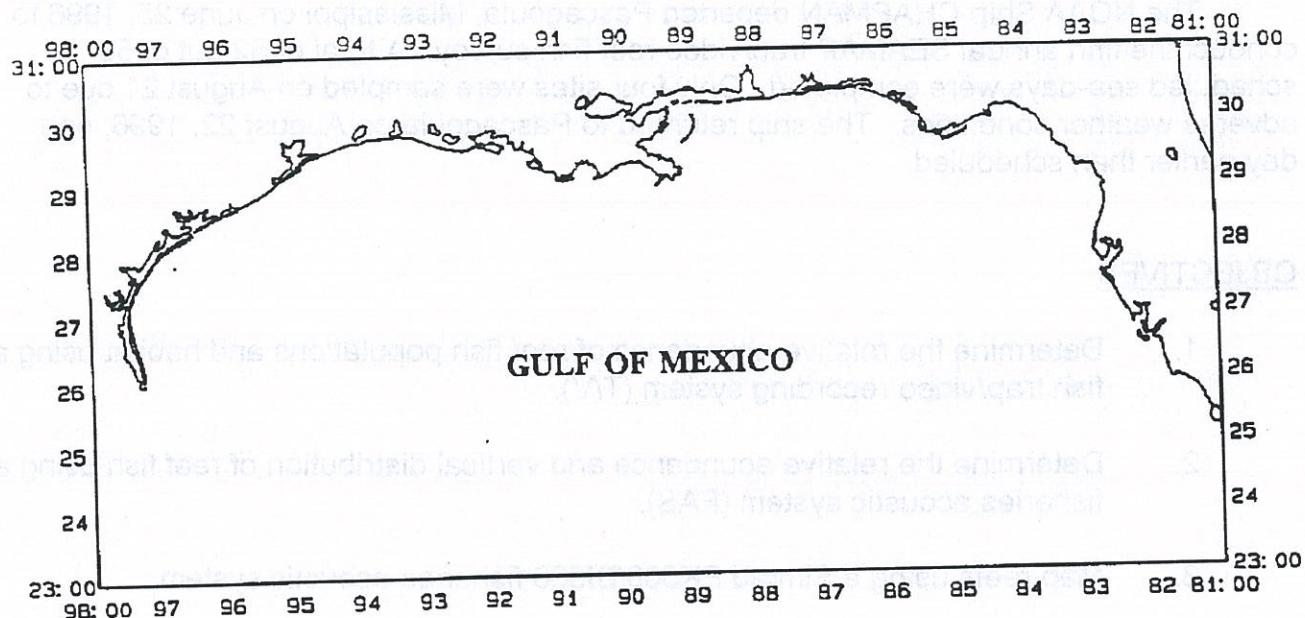


CRUISE RESULTS

Southeast Area Monitoring and Assessment Program (SEAMAP)
5th Annual Trap/Video Reef Fish Survey

NOAA Ship CHAPMAN Cruise CH-96-04 (74)
06/25-08/22/06



U.S. Department of Commerce
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
Southeast Fisheries Science Center
Mississippi Laboratories
Pascagoula Facility
P.O. Drawer 1207
Pascagoula, MS 39568-1207

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Reef Fish Survey
NOAA Ship CHAPMAN Cruise 96-04(74)
6/25/96 - 8/22/96

INTRODUCTION

The NOAA Ship CHAPMAN departed Pascagoula, Mississippi on June 25, 1996 to conduct the fifth annual SEAMAP trap/video reef fish survey. A total of 52 out of 53 scheduled sea-days were completed. Only four sites were sampled on August 21 due to adverse weather conditions. The ship returned to Pascagoula on August 22, 1996; one day earlier than scheduled.

OBJECTIVES

1. Determine the relative abundance of reef fish populations and habitat using a fish trap/video recording system (T/V).
2. Determine the relative abundance and vertical distribution of reef fish using a fisheries acoustic system (FAS).
3. Map reefs using a Simrad EK500/BI500 fisheries acoustic system.
4. Collect environmental data at each station.

METHODS

Natural reef fish habitat from Brownsville, Texas to the southern tip of Florida at $81^{\circ}00' W$ longitude and $24^{\circ}02' N$ latitude between 9 m and 110 m was marked on navigation charts. The Gulf of Mexico within the above boundaries was divided into four areas: Texas (west of $94^{\circ}00' W$ longitude), Louisiana (between $94^{\circ}00' W$ and $89^{\circ}30' W$ longitude), Northeast (east of $89^{\circ}30' W$ longitude and north of $27^{\circ}30' N$ latitude) and Southeast (east of $89^{\circ}30' W$ longitude and south of $27^{\circ}30' N$ latitude). Each of these areas were divided into 10 by 10 nautical mile blocks (Primary Sample Units) and those

blocks containing natural reef fish habitat were available to be selected for sampling. Each reef habitat block was divided into 100-m² sample units and each of those units is then characterized as "reef" or "nonreef". Blocks were scored by the number of reef sample units. Blocks were selected randomly based upon the reef sample unit score and area of the Gulf with blocks containing large number of reef units having a higher probability of selection. Reefs within each selected block were first systematically surveyed at night with the FAS along transects that ran across isobaths. The spacing of transects depended on the size of the area surveyed; and varied from 0.20 nautical mile to 1 nautical mile. Eight reef sites were then selected along transects using a stratified-random procedure, with strata defined by four depth ranges (< 40 m; 40 - 60 m; 60 - 80 m and 80 - 110 m). The number of sites within each depth stratum depended on the depth range of the reef sampled. Sites were selected by first randomly selecting a transect and then randomly selecting a point along that transect within a specified depth range. Navigation used was GPS with P-codes.

Sampling used either a 4-camera rig or a trap/video, and began one hour after sunup and ended one hour before sunset. The 4-camera rig consisted of a frame with 4 Hi-8mm cameras in underwater housings mounted orthogonally, with cameras mounted at a height of 25 cm above the bottom. The trap/video gear consisted of a Hi-8 mm video camera in an underwater housing mounted outside a single funnel fish trap (2.13 m long by 0.76 m square). The trap/video or 4-camera gear were baited with squid and remained on bottom for approximately one hour.

The fisheries acoustic system (Simrad EK500/BI500) was used to survey sample sites, and operated at 38 kHz. A total of three passes over each site were made with the FAS, each pass attempted to replicate the course of the first pass. Transects were 0.1 nautical miles in length centered over the video site. The 4-camera or trap/video gear was deployed during the first pass. Camera soaked on the bottom for 1 hour.

Associated environmental data collected at each site with a CTD included profiles of salinity, temperature, dissolved oxygen, light transmittance, irradiance (PAR), and fluorescence. Surface chlorophyll samples were also taken once a day for CTD verification.

RESULTS

A total of 254 sites were sampled, 115 sites with the trap/video and 139 sites with the 4-camera rig (Figure 1, Tables 1 and 2). Twenty-three primary blocks were sampled east of the Mississippi River and fourteen blocks were sampled west of the river (Table 3).

Temperature, salinity, depth, dissolved oxygen, light transmittance, irradiance (PAR), and fluorescence profiles were measured with a CTD at 255 sites. Only a CTD was used at the first site sampled during the survey to obtain a speed-of-sound profile

A total of sixteen species were captured in the fish traps (Table 4). Fish capture was highest in the Northeast area. Red porgy (*Pagrus pagrus*), vermillion snapper (*Rhomboplites aurorubens*), gray triggerfish (*Balistes capiscus*) and the bank sea bass (*Centropristes ocyurus*) dominated the catch east of the Mississippi River. Vermilion snapper dominated the catch west of the Mississippi River.

Opportunistic sightings of marine mammals and sea turtles were recorded during the course of the cruise. A total of fifteen dolphin sightings (Figure 2) and eight sea turtle sightings (Figure 3) were documented.

CRUISE PARTICIPANTS (NOAA only):

Leg 1: (6/25/96 - 7/6/96): 12 sea-days

Chris Gledhill	Field Party Chief
Kevin Rademacher	Fishery Biologist
Cliff Harper	Electronics Tech.

NMFS, Pascagoula, MS
NMFS, Pascagoula, MS
NMFS, Stennis SC, MS

Leg 2: (7/7/96 - 7/17/96): 10 sea-days

Chris Gledhill	Field Party Chief
Kevin Rademacher	Fishery Biologist
Cliff Harper	Electronic Tech.

NMFS, Pascagoula, MS
NMFS, Pascagoula, MS
NMFS, Stennis SC, MS

Leg 3: (7/23/96 - 8/7/96): 16 sea-days

Chris Gledhill	Field Party Chief
Kevin Rademacher	Fishery Biologist
Ken Wilkinson	Electronics Tech.
David Hanisko	Fishery Biologist

NMFS, Pascagoula, MS
NMFS, Pascagoula, MS
NMFS, Stennis SC, MS
NMFS, Pascagoula, MS

Leg 4: (8/9/96 - 8/22/96): 14 sea-days

Chris Gledhill	Field Party Chief
Kevin Rademacher	Fishery Biologist
Ken Wilkinson	Electronics Tech.
David Hanisko	Fishery Biologist

NMFS, Pascagoula, MS
NMFS, Pascagoula, MS
NMFS, Stennis SC, MS
NMFS, Pascagoula, MS

CRUISE PARTICIPANTS (Cooperators):

Leg 1: (6/25/96 - 7/6/96): 12 sea-days

Mary Carp	Teacher, Florida
Tom Miller	Teacher, Georgia

NOAA Teacher @ Sea
Cooperator

Leg 2: (7/7/96 - 7/17/96): 10 sea-days

Marvin Hedgpeth	Teacher, Virginia
Kim Hoffman	Teacher, Mass.

NOAA Teacher @ Sea
NOAA Teacher @ Sea

Leg 3: (7/23/96 - 8/7/96): 16 sea-days
Marrianne Riddle Teacher, Virginia

NOAA Teacher @ Sea

Leg 4: (8/9/96 - 8/22/96): 14 sea-days
Carolyn Nybell Teacher, Ohio

NOAA Teacher @ Sea

SUBMITTED BY:

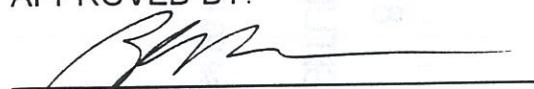


Christopher Gledhill
Field Party Chief

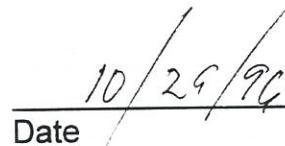


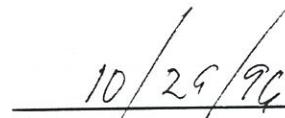
Dr. Scott Nichols, Director
Mississippi Laboratories

APPROVED BY:



Dr. Bradford E. Brown
Director SEFSC


Date


10/29/96

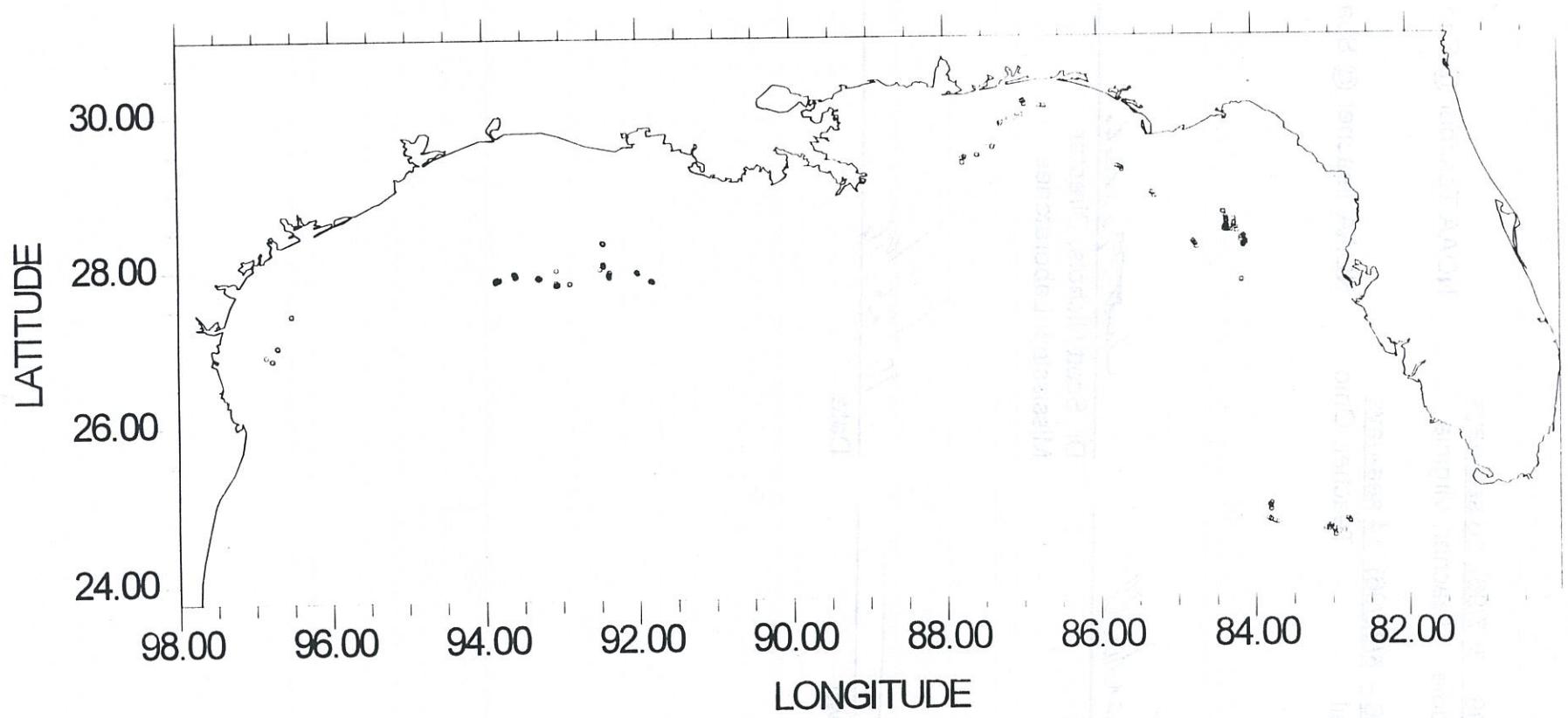


Figure 1. Reef sites sampled during Champan Cruise 96-04 (n=255).

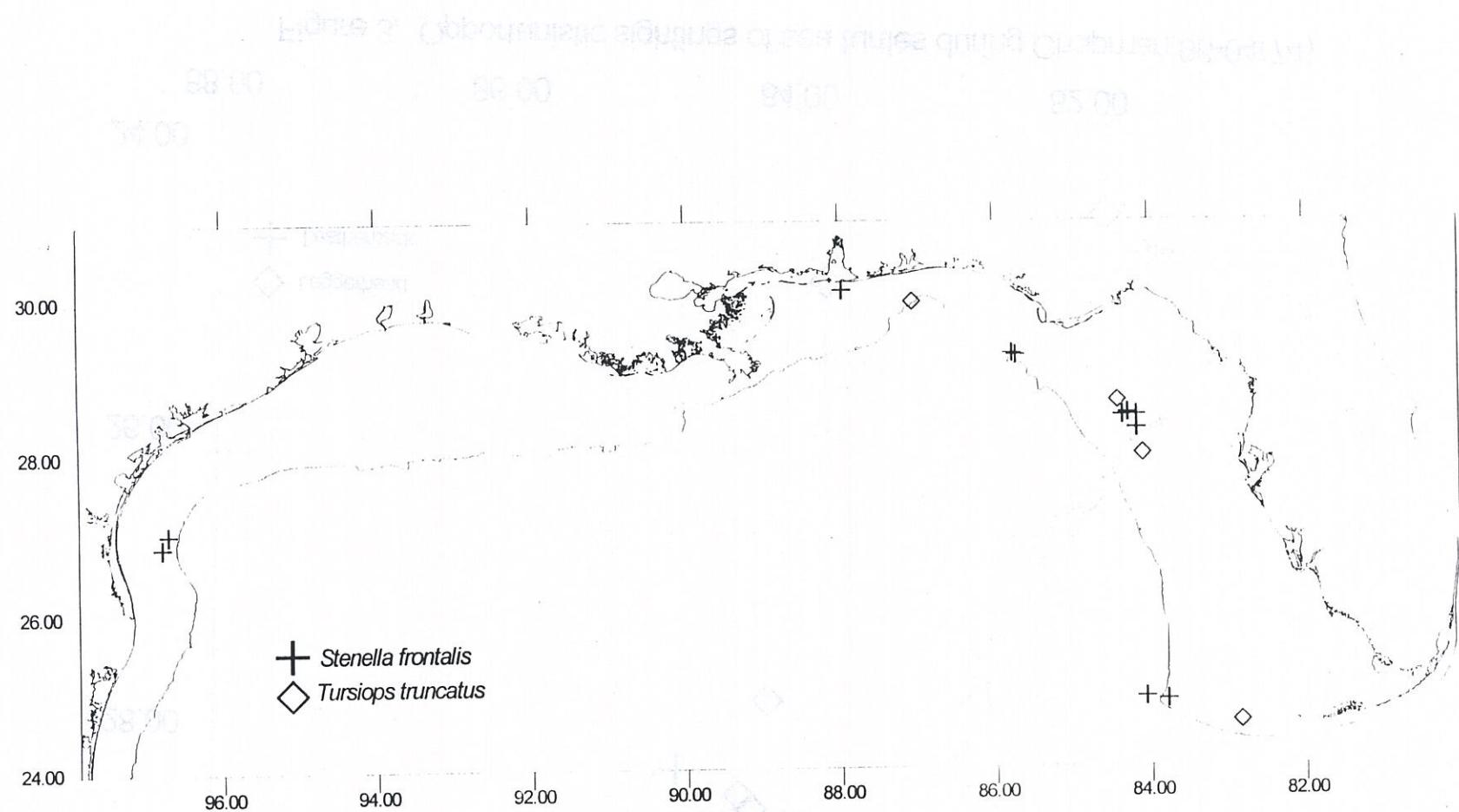


Figure 2. Opportunistic sightings of dolphins from Chapman 96-04(74).

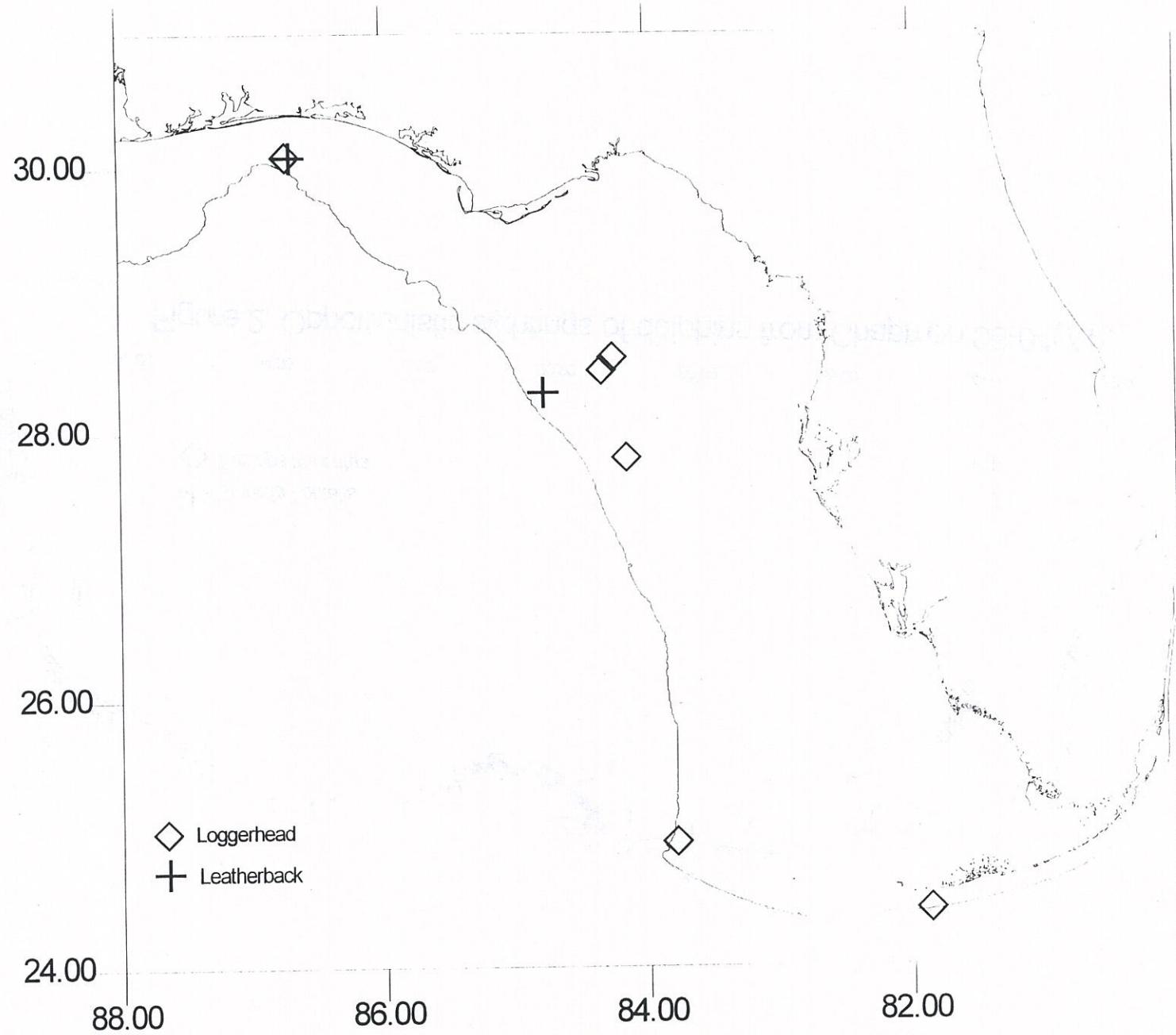


Figure 3. Opportunistic sightings of sea turtles during Chapman 96-04(74).

Table 1. Stations sampled during Chapman Cruise 96-04
 (4C: 4 camera rig; TV: Trap video).

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
001	28 June, 1996	26° 55.45'	96° 51.34'	30.6	CTD
002	29 June, 1996	26° 52.68'	96° 46.35'	36.1	4C
003	29 June, 1996	26° 52.34'	96° 46.18'	38.3	TV
004	29 June, 1996	26° 52.55'	96° 46.64'	35.5	4C
005	29 June, 1996	26° 52.73'	96° 46.66'	35.0	TV
006	29 June, 1996	26° 52.59'	96° 46.85'	37.5	4C
007	29 June, 1996	26° 52.57'	96° 46.64'	32.8	4C
008	30 June, 1996	27° 2.47'	96° 42.80'	38.8	TV
009	30 June, 1996	27° 2.39'	96° 42.59'	37.2	4C
010	30 June, 1996	27° 2.45'	96° 42.39'	36.0	4C
011	30 June, 1996	27° 1.92'	96° 42.20'	39.0	4C
012	30 June, 1996	27° 2.60'	96° 42.22'	35.5	TV
013	30 June, 1996	27° 2.33'	96° 42.10'	43.7	4C
014	30 June, 1996	27° 2.63'	96° 42.31'	36.0	4C
015	01 July, 1996	27° 26.35'	96° 31.39'	33.5	4C
016	01 July, 1996	27° 26.03'	96° 31.61'	37.0	TV
017	01 July, 1996	27° 26.80'	96° 31.19'	38.3	4C
018	01 July, 1996	27° 26.37'	96° 31.50'	31.2	4C
019	01 July, 1996	27° 26.55'	96° 31.32'	34.3	TV
020	01 July, 1996	27° 26.18'	96° 31.30'	35.5	4C
021	01 July, 1996	27° 26.61'	96° 31.60'	37.0	TV
022	01 July, 1996	27° 26.54'	96° 31.51'	36.0	4C
023	03 July, 1996	27° 52.30'	93° 51.22'	26.8	TV
024	03 July, 1996	27° 52.02'	93° 51.49'	29.2	4C
025	03 July, 1996	27° 51.98'	93° 50.94'	42.8	TV
026	03 July, 1996	27° 53.41'	93° 50.46'	50.0	4C
027	03 July, 1996	27° 52.77'	93° 51.23'	45.0	4C
028	03 July, 1996	27° 50.76'	93° 51.46'	46.5	TV
029	03 July, 1996	27° 51.89'	93° 51.64'	39.4	4C
030	03 July, 1996	27° 52.21'	93° 51.40'	29.0	TV
031	04 July, 1996	27° 52.69'	93° 48.23'	39.4	4C
032	04 July, 1996	27° 51.88'	93° 48.44'	44.0	TV
033	04 July, 1996	27° 51.65'	93° 49.48'	40.5	TV
034	04 July, 1996	27° 52.83'	93° 49.95'	47.3	4C
035	04 July, 1996	27° 53.71'	93° 48.70'	41.6	4C
036	04 July, 1996	27° 52.46'	93° 49.11'	12.0	TV

Table 1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
037	04 July, 1996	27° 52.42'	93° 48.67'	27.0	4C
038	05 July, 1996	27° 54.58'	93° 36.22'	16.5	TV
039	05 July, 1996	27° 56.56'	93° 35.50'	32.0	4C
040	05 July, 1996	27° 57.61'	93° 36.58'	41.6	TV
041	05 July, 1996	27° 57.16'	93° 37.59'	47.6	4C
042	05 July, 1996	27° 57.42'	93° 36.19'	41.2	4C
043	05 July, 1996	27° 55.14'	93° 35.14'	27.0	TV
044	05 July, 1996	27° 55.38'	93° 35.87'	26.6	4C
045	08 July, 1996	27° 53.62'	93° 18.47'	26.8	TV
046	08 July, 1996	27° 54.03'	93° 18.02'	32.0	4C
047	08 July, 1996	27° 54.76'	93° 18.00'	43.6	4C
048	08 July, 1996	27° 54.06'	93° 19.00'	50.0	TV
049	08 July, 1996	27° 54.26'	93° 17.46'	34.0	4C
050	08 July, 1996	27° 53.15'	93° 17.95'	39.3	TV
051	08 July, 1996	27° 53.69'	93° 16.92'	29.5	4C
052	08 July, 1996	27° 53.71'	93° 16.50'	33.8	TV
053	09 July, 1996	27° 48.75'	93° 3.00'	30.7	4C
054	09 July, 1996	27° 48.04'	93° 3.00'	37.3	TV
055	09 July, 1996	27° 48.77'	93° 3.46'	42.5	4C
056	09 July, 1996	27° 59.97'	93° 3.98'	50.9	TV
057	09 July, 1996	27° 49.97'	93° 3.96'	44.1	4C
058	09 July, 1996	27° 47.99'	93° 4.52'	32.8	TV
059	09 July, 1996	27° 48.03'	93° 4.06'	31.9	4C
060	09 July, 1996	27° 48.99'	93° 2.52'	40.7	TV
061	10 July, 1996	27° 49.62'	92° 53.65'	35.7	TV
062	10 July, 1996	27° 49.35'	92° 53.34'	42.1	4C
063	10 July, 1996	27° 49.42'	92° 53.07'	50.4	TV
064	10 July, 1996	27° 49.41'	92° 53.23'	46.2	4C
065	10 July, 1996	27° 49.41'	92° 53.52'	43.0	TV
066	10 July, 1996	27° 49.14'	92° 53.70'	38.8	4C
067	10 July, 1996	27° 49.30'	92° 53.45'	35.8	TV
068	11 July, 1996	28° 19.89'	92° 27.14'	30.8	4C
069	11 July, 1996	28° 20.36'	92° 26.88'	30.5	4C
070	11 July, 1996	28° 20.31'	92° 26.99'	25.2	TV
071	11 July, 1996	28° 19.81'	92° 27.20'	33.0	TV
072	11 July, 1996	28° 20.55'	92° 27.39'	30.6	4C
073	11 July, 1996	28° 20.74'	92° 27.61'	28.9	TV

Table1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
074	11 July, 1996	28° 20.92'	92° 28.28'	30.1	4C
075	12 July, 1996	28° 2.69'	92° 27.49'	33.9	4C
076	12 July, 1996	28° 2.55'	92° 26.92'	33.0	TV
077	12 July, 1996	28° 2.95'	92° 26.91'	44.6	4C
078	12 July, 1996	28° 0.63'	92° 29.91'	50.6	TV
079	12 July, 1996	28° 2.59'	92° 27.20'	32.8	4C
080	12 July, 1996	28° 4.13'	92° 27.79'	43.9	TV
081	12 July, 1996	28° 4.26'	92° 27.11'	44.0	4C
082	13 July, 1996	27° 58.38'	92° 22.69'	35.0	4C
083	13 July, 1996	27° 57.95'	92° 22.42'	35.0	4C
084	13 July, 1996	27° 57.39'	92° 22.11'	45.0	TV
085	13 July, 1996	27° 56.26'	92° 23.58'	53.0	TV
086	13 July, 1996	27° 55.98'	92° 22.30'	33.5	TV
087	13 July, 1996	27° 55.10'	92° 23.31'	43.1	4C
088	13 July, 1996	27° 54.01'	92° 22.71'	43.5	4C
089	14 July, 1996	27° 57.70'	91° 59.49'	35.7	4C
090	14 July, 1996	27° 56.73'	92° 0.28'	32.6	TV
091	14 July, 1996	27° 57.89'	92° 0.71'	48.0	4C
092	14 July, 1996	27° 57.62'	92° 1.12'	59.0	TV
093	14 July, 1996	27° 58.03'	92° 1.11'	47.3	TV
094	14 July, 1996	27° 57.97'	92° 1.51'	33.8	4C
095	14 July, 1996	27° 58.59'	92° 1.20'	59.6	TV
096	15 July, 1996	27° 50.79'	91° 50.21'	50.0	4C
097	15 July, 1996	27° 50.58'	91° 50.61'	51.6	TV
098	15 July, 1996	27° 51.25'	91° 50.17'	58.0	TV
099	15 July, 1996	27° 51.52'	91° 49.80'	56.4	4C
100	15 July, 1996	27° 51.24'	91° 49.38'	56.7	TV
101	15 July, 1996	27° 51.07'	91° 48.96'	101.9	4C
102	15 July, 1996	27° 49.90'	91° 48.64'	55.7	TV
103	24 July, 1996	29° 26.14'	87° 43.94'	34.7	4C
104	24 July, 1996	29° 25.17'	87° 44.50'	37.5	4C
105	24 July, 1996	29° 24.66'	87° 44.49'	40.1	TV
106	24 July, 1996	29° 24.46'	87° 45.98'	37.5	4C
107	24 July, 1996	29° 23.91'	87° 46.99'	38.6	TV
108	24 July, 1996	29° 20.68'	87° 45.94'	51.5	4C
109	25 July, 1996	29° 26.63'	87° 33.51'	41.3	TV
110	25 July, 1996	29° 26.72'	87° 34.51'	39.7	4C

Table 1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
111	25 July, 1996	29° 26.16'	87° 34.49'	35.1	TV
112	25 July, 1996	29° 26.52'	87° 34.91'	36.5	4C
113	26 July, 1996	29° 35.50'	87° 27.32'	38.6	4C
114	26 July, 1996	29° 35.51'	87° 25.53'	37.6	TV
115	26 July, 1996	29° 35.48'	87° 20.94'	48.7	4C
116	26 July, 1996	29° 33.53'	87° 21.83'	50.8	TV
117	26 July, 1996	29° 32.53'	87° 22.38'	54.1	4C
118	26 July, 1996	29° 32.54'	87° 22.62'	51.5	TV
119	27 July, 1996	29° 51.62'	87° 15.49'	34.8	TV
120	27 July, 1996	29° 51.43'	87° 16.50'	33.4	4C
121	27 July, 1996	29° 50.33'	87° 18.13'	37.0	4C
122	27 July, 1996	29° 50.28'	87° 16.41'	41.1	TV
123	27 July, 1996	29° 52.00'	87° 15.50'	36.1	4C
124	27 July, 1996	29° 54.73'	87° 12.49'	28.7	TV
125	27 July, 1996	29° 57.10'	87° 17.48'	16.9	4C
126	28 July, 1996	29° 58.09'	87° 0.05'	47.3	4C
127	28 July, 1996	29° 58.43'	87° 2.50'	37.2	4C
128	28 July, 1996	29° 58.24'	87° 2.52'	38.6	TV
129	28 July, 1996	29° 55.88'	87° 3.42'	45.1	4C
130	28 July, 1996	29° 55.73'	87° 3.44'	49.5	TV
131	28 July, 1996	29° 55.53'	87° 4.49'	43.2	TV
132	28 July, 1996	29° 54.83'	87° 9.50'	37.8	4C
133	29 July, 1996	30° 8.20'	86° 59.46'	16.7	TV
134	29 July, 1996	30° 9.00'	86° 58.49'	17.1	4C
135	29 July, 1996	30° 9.60'	86° 57.49'	16.7	4C
136	29 July, 1996	30° 7.94'	86° 58.00'	18.6	TV
137	29 July, 1996	30° 5.71'	86° 57.49'	27.8	4C
138	29 July, 1996	30° 6.22'	86° 57.48'	46.4	TV
139	30 July, 1996	30° 4.71'	86° 41.53'	34.8	TV
140	30 July, 1996	30° 4.83'	86° 41.53'	30.5	4C
141	30 July, 1996	30° 4.84'	86° 42.46'	30.7	4C
142	30 July, 1996	30° 4.92'	86° 43.51'	30.8	TV
143	30 July, 1996	30° 4.94'	86° 45.50'	32.1	4C
144	30 July, 1996	30° 4.87'	86° 45.51'	39.3	TV
145	30 July, 1996	30° 7.67'	86° 49.52'	29.2	4C
146	01 August, 1996	29° 17.58'	85° 45.54'	32.7	TV
147	01 August, 1996	29° 17.24'	85° 44.52'	38.4	4C

Table 1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
148	01 August, 1996	29° 17.29'	85° 44.52'	33.4	TV
149	01 August, 1996	29° 16.88'	85° 43.46'	33.6	4C
150	01 August, 1996	29° 16.27'	85° 42.48'	42.6	TV
151	01 August, 1996	29° 15.52'	85° 41.54'	32.1	4C
152	01 August, 1996	29° 14.28'	85° 41.50'	35.9	TV
153	02 August, 1996	28° 56.63'	85° 19.47'	35.6	4C
154	02 August, 1996	28° 56.55'	85° 18.51'	35.4	TV
155	02 August, 1996	28° 56.60'	85° 18.53'	33.9	4C
156	02 August, 1996	28° 55.94'	85° 17.48'	37.0	TV
157	02 August, 1996	28° 55.90'	85° 17.48'	37.8	4C
158	02 August, 1996	28° 53.33'	85° 16.48'	27.2	TV
159	02 August, 1996	28° 54.45'	85° 14.47'	35.2	4C
160	03 August, 1996	28° 13.59'	84° 44.27'	38.1	4C
161	03 August, 1996	28° 15.51'	84° 45.19'	40.2	TV
162	03 August, 1996	28° 16.51'	84° 45.81'	37.4	4C
163	03 August, 1996	28° 17.50'	84° 46.65'	39.8	4C
164	03 August, 1996	28° 17.50'	84° 46.51'	40.3	TV
165	03 August, 1996	28° 18.49'	84° 47.30'	39.8	4C
166	03 August, 1996	28° 18.48'	84° 47.24'	37.0	TV
167	04 August, 1996	28° 26.47'	84° 20.08'	21.4	TV
168	04 August, 1996	28° 26.96'	84° 22.26'	23.8	4C
169	04 August, 1996	28° 27.51'	84° 22.90'	23.9	TV
170	04 August, 1996	28° 28.49'	84° 22.32'	17.0	4C
171	04 August, 1996	28° 28.51'	84° 20.67'	16.8	TV
172	04 August, 1996	28° 29.53'	84° 22.23'	16.7	4C
173	04 August, 1996	28° 29.98'	84° 21.49'	16.7	TV
174	05 August, 1996	28° 28.46'	84° 13.90'	18.4	4C
175	05 August, 1996	28° 29.99'	84° 15.12'	16.7	4C
176	05 August, 1996	28° 29.52'	84° 18.04'	16.2	TV
177	05 August, 1996	28° 27.97'	84° 18.53'	17.3	TV
178	05 August, 1996	28° 27.03'	84° 19.42'	18.0	4C
179	05 August, 1996	28° 26.53'	84° 17.76'	15.8	TV
180	05 August, 1996	28° 25.99'	84° 12.99'	19.1	4C
181	10 August, 1996	24° 34.47'	82° 51.15'	10.3	TV
182	10 August, 1996	24° 33.48'	82° 55.00'	8.5	4C
183	10 August, 1996	24° 31.46'	82° 57.76'	13.1	4C

Table 1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
184	10 August, 1996	24° 33.46'	82° 57.76'	9.7	TV
185	10 August, 1996	24° 35.46'	82° 58.79'	8.6	4C
186	10 August, 1996	24° 36.43'	82° 58.69'	8.4	TV
187	10 August, 1996	24° 38.25'	82° 58.21'	9.1	4C
188	11 August, 1996	24° 41.64'	82° 46.03'	14.5	TV
189	11 August, 1996	24° 42.34'	82° 46.38'	12.6	4C
190	11 August, 1996	24° 42.41'	82° 46.43'	9.6	TV
191	11 August, 1996	24° 42.49'	82° 46.51'	9.8	4C
192	11 August, 1996	24° 43.71'	82° 47.04'	9.8	4C
193	11 August, 1996	24° 43.69'	82° 47.87'	9.0	TV
194	11 August, 1996	24° 43.72'	82° 48.61'	11.4	4C
195	12 August, 1996	24° 36.51'	83° 5.41'	13.2	TV
196	12 August, 1996	24° 37.00'	83° 4.83'	8.1	4C
197	12 August, 1996	24° 36.00'	83° 3.03'	14.1	4C
198	12 August, 1996	24° 37.00'	83° 2.44'	10.9	TV
199	12 August, 1996	24° 37.98'	83° 2.48'	9.2	4C
200	12 August, 1996	24° 38.99'	83° 2.13'	8.6	4C
201	12 August, 1996	24° 39.52'	83° 0.82'	12.3	TV
202	13 August, 1996	24° 41.49'	83° 41.87'	33.4	4C
203	13 August, 1996	24° 41.49'	83° 43.58'	40.3	TV
204	13 August, 1996	24° 42.44'	83° 45.24'	51.7	4C
205	13 August, 1996	24° 42.48'	83° 45.16'	42.0	4C
206	13 August, 1996	24° 43.51'	83° 48.10'	56.8	TV
207	13 August, 1996	24° 44.52'	83° 49.63'	50.8	4C
208	13 August, 1996	24° 44.49'	83° 49.50'	46.5	TV
209	14 August, 1996	24° 51.51'	83° 47.81'	43.3	TV
210	14 August, 1996	24° 52.85'	83° 49.82'	41.7	4C
211	14 August, 1996	24° 53.49'	83° 47.87'	42.2	TV
212	14 August, 1996	24° 54.55'	83° 48.76'	42.0	4C
213	14 August, 1996	24° 55.54'	83° 47.83'	41.0	4C
214	14 August, 1996	24° 56.49'	83° 47.11'	40.3	TV
215	14 August, 1996	24° 56.46'	83° 47.30'	42.9	4C
216	16 August, 1996	27° 46.49'	84° 9.77'	26.7	4C
217	16 August, 1996	27° 47.02'	84° 9.73'	27.6	TV
218	16 August, 1996	27° 47.51'	84° 9.75'	28.7	4C
219	16 August, 1996	27° 47.52'	84° 9.65'	25.2	TV
220	16 August, 1996	27° 48.00'	84° 9.67'	28.9	4C

Table 1. Continued.

STA	DATE	LATITUDE	LONGITUDE	DEPTH fathoms	GEAR
221	16 August, 1996	27° 48.50'	84° 9.57'	25.4	TV
222	16 August, 1996	27° 48.50'	84° 9.47'	24.4	4C
223	17 August, 1996	28° 14.50'	84° 7.91'	19.4	4C
224	17 August, 1996	28° 15.53'	84° 8.11'	19.7	TV
225	17 August, 1996	28° 15.51'	84° 7.25'	19.8	4C
226	17 August, 1996	28° 16.51'	84° 7.19'	18.4	TV
227	17 August, 1996	28° 16.52'	84° 5.79'	18.6	4C
228	17 August, 1996	28° 17.48'	84° 6.49'	18.8	4C
229	17 August, 1996	28° 18.48'	84° 6.15'	17.7	TV
230	17 August, 1996	28° 18.51'	84° 9.73'	18.5	4C
231	18 August, 1996	28° 20.51'	84° 9.73'	17.8	TV
232	18 August, 1996	28° 20.51'	84° 9.04'	18.0	4C
233	18 August, 1996	28° 20.99'	84° 9.75'	19.4	4C
234	18 August, 1996	28° 21.48'	84° 7.92'	18.0	TV
235	18 August, 1996	28° 22.26'	84° 8.00'	18.4	4C
236	18 August, 1996	28° 22.21'	84° 7.43'	18.5	TV
237	18 August, 1996	28° 23.53'	84° 6.26'	18.5	4C
238	19 August, 1996	28° 30.54'	84° 13.22'	18.8	4C
239	19 August, 1996	28° 31.02'	84° 14.97'	16.9	TV
240	19 August, 1996	28° 32.04'	84° 14.81'	15.5	4C
241	19 August, 1996	28° 31.50'	84° 17.83'	14.5	TV
242	19 August, 1996	28° 32.00'	84° 14.70'	17.2	TV
243	19 August, 1996	28° 34.50'	84° 15.64'	14.9	4C
244	19 August, 1996	28° 35.51'	84° 15.21'	15.1	4C
245	20 August, 1996	28° 32.94'	84° 20.91'	16.1	4C
246	20 August, 1996	28° 33.47'	84° 21.03'	16.2	TV
247	20 August, 1996	28° 33.97'	84° 20.26'	15.9	4C
248	20 August, 1996	28° 34.51'	84° 21.46'	18.6	TV
249	20 August, 1996	28° 35.52'	84° 20.73'	16.9	4C
250	20 August, 1996	28° 36.51'	84° 21.29'	15.7	TV
251	20 August, 1996	28° 38.04'	84° 22.00'	15.1	4C
252	21 August, 1996	28° 42.99'	84° 23.59'	15.4	TV
253	21 August, 1996	28° 40.99'	84° 23.96'	19.2	4C
254	21 August, 1996	28° 41.00'	84° 23.15'	14.7	TV
255	21 August, 1996	28° 40.48'	84° 23.30'	14.8	TV

Table 2. Data collected during Chapman Cruise 96-04.

Data	Number of Stations
Trap/Video drops	115
4 camera drops	139
Fisheries Acoustic	251
CTD	255

Table 3. List of reef fish survey blocks visited during CHAPMAN Cruise 96-04 east and west of the Mississippi River.

<u>EAST GULF</u>		<u>WEST GULF</u>	
BLOCK	REEF	BLOCK	REEF
29	Dry Tortugas	33	Blackfish Bank
30	Dry Tortugas Bank	39	Dream Bank
44	Dry Tortugas	53	Southern Bank
50	SW Florida shelf	69	Elvers Bank
68	SW Florida shelf	70	Geyer Bank
333	The Elbow	92	Sweet Bank
371	Florida Middle Ground	94	Parker Bank
375	NW Tampa shelf	96	Rezak-Sidner Bank
386	Florida Middle Ground	101	Bright Bank
387	Florida Middle Ground	103	East Flower Garden
388	Florida Middle Ground	104	West Flower Garden
403	Florida Middle Ground	105	West Flower Garden
404	Florida Middle Ground	137	Bouma Bank
421	Florida Middle Ground	219	Sonnier Bank
445	Apalachicola shelf	5002 78	5001 AuguA 00
491	Apalachicola shelf	5003 78	5001 AuguA 00
523	Mobile Pinnacles	5004 78	5001 AuguA 00
524	Mobile Pinnacles	5005 78	5001 AuguA 00
553	Desoto Canyon	5006 78	5001 AuguA 00
611	Desoto Canyon	5007 78	5001 AuguA 00
612	Desoto Canyon	5008 78	5001 AuguA 00
632	Desoto Canyon	5009 78	5001 AuguA 00
633	Desoto Canyon	5010 78	5001 AuguA 00

Table 4. Average catch per hour from fish traps by area during Chapman Cruise 96-04.

N= the # of traps fished in an area. No fish were caught in the Texas Area (N=7)

SPECIES	COMMON NAME	NUMBER CAUGHT	WEIGHT(kg)	
			TOTAL	MEAN
<u>Louisiana Area (n=39)</u>				
<i>Lutjanus campechanus</i>	Red snapper	8	11.655	1.457
<i>Pagrus pagrus</i>	Red porgy	5	4.760	0.952
<i>Rhomboplites aurorubens</i>	Vermilion snapper	25	23.292	0.932
<i>Seriola rivoliana</i>	Almaco jack	1	1.732	1.732
<i>Gymnothorax moringa</i>	Spotted moray	1	1.700	1.700
<i>Stenorhynchus seticornis</i>	Yellowline arrowcrab	1	0.002	0.002
<u>Northeast Gulf of Mexico (n=54)</u>				
<i>Balistes capriscus</i>	Gray triggerfish	24	16.678	0.695
<i>Calamus nodosus</i>	Knobbed porgy	3	1.832	0.611
<i>Calamus proridens</i>	Littlehead porgy	1	0.224	0.224
<i>Centropristes ocyurus</i>	Bank sea bass	16	2.076	0.130
<i>Epinephelus morio</i>	Red grouper	6	7.049	1.175
<i>Haemulon aurolineatum</i>	Tomtate	5	0.325	0.065
<i>Haemulon parra</i>	Sailors choice	1	0.943	0.943
<i>Holacanthus bermudensis</i>	Blue angelfish	1	0.605	0.605
<i>Lutjanus campechanus</i>	Red snapper	6	4.102	0.684
<i>Muraena retifera</i>	Reticulated moray	1	0.920	0.920
<i>Mycteroperca phenax</i>	Scamp	1	0.450	0.450
<i>Pagrus pagrus</i>	Red porgy	79	28.940	0.366
<i>Rhomboplites aurorubens</i>	Vermilion snapper	23	6.780	0.295
<u>Eastern Gulf of Mexico (n=15)</u>				
<i>Ocyurus chrysurus</i>	Yellowtail snapper	15	1.891	0.126
<i>Holacanthus bermudensis</i>	Blue Angelfish	2	1.489	0.745
<i>Pomacanthus paru</i>	French Angelfish	1	0.855	0.855