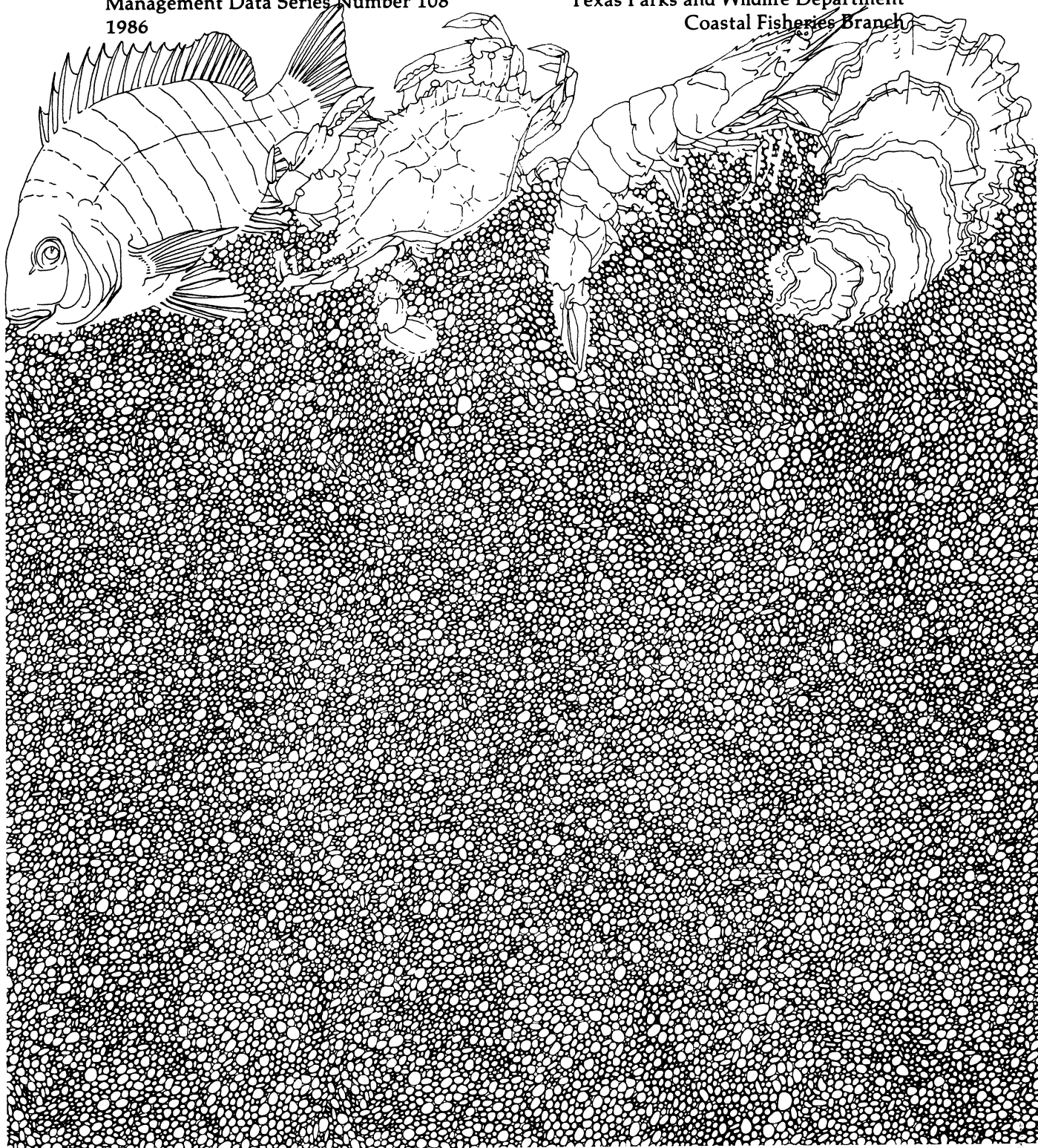


Trends in Relative Abundance of Selected Shellfishes Along the Texas Coast: January 1977-March 1986

by Paul C. Hammerschmidt and L. W. McEachron

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ABSTRACT

Trends in relative abundance and size of brown shrimp (Penaeus aztecus), white shrimp (P. setiferus), pink shrimp (P. duorarum), blue crab (Callinectes sapidus), and Eastern oyster (Crassostrea virginica) in Texas marine waters were monitored using a standardized fishery independent sampling program with bag seines along bay shorelines, trawls in bay water ≥ 1.0 m deep and in Gulf water ≥ 1.8 m deep within the Texas Territorial Sea and oyster dredges in bay "reef" and "non-reef" areas. Brown shrimp catch rates generally increased in bag seines during 1977-1985 and in bay trawls during 1982-1985. White shrimp catch rates in both gears generally declined during the same years. Pink shrimp catch rates declined in bag seines but were similar among years in bay trawls. Catch rates of blue crabs increased in both bag seines and bay trawls. Catch rates of associated finfishes in trawls varied among years. Highest catches of market oysters in Galveston Bay occurred during September-December.

INTRODUCTION

The commercial fishery in Texas is composed of many components but reported landings are dominated by shrimp (Penaeus sp.) followed by blue crab (Callinectes sapidus), Eastern oyster (Crassostrea virginica) and finfishes (Osburn et al. 1985). During 1977-1984 shrimp coastwide annual reported landings averaged 37 million kg worth \$156 million to the fishermen; they consisted of 68.8% brown (P. aztecus) and pink (P. duorarum) shrimps, 31.0% white shrimp (P. setiferus) and < 0.2% other species (Osburn et al. 1985). Eastern oyster and blue crab coastwide annual reported landings averaged 1.4 million kg (\$4.5 million) and 3.6 million kg (\$2.2 million), respectively, during 1977-1984 (Osburn et al. 1985).

The shrimp fishery is regulated primarily by the Texas Legislature through the Shrimp Conservation Act. In addition, the Texas Parks and Wildlife (TPW) Commission has the responsibility for adjusting the Gulf shrimping season dates and has regulatory authority in four of the 18 coastal counties. The TPW Commission has regulatory authority for the harvest of blue crab in all Texas waters and for the harvest of oysters in 10 of the 18 coastal counties. In 1985, the Texas Legislature provided the TPW Commission regulatory authority for the harvest of shrimp and oysters in all Texas waters after shrimp and oyster management plans are developed by the Texas Parks and Wildlife Department (TPWD) and approved by the TPW Commission.

The Texas Legislature mandated that sound management of the shellfish resources be based on statistically reliable data. Penaeid shrimp populations have been monitored in at least some bays since 1958 (Benefield and Baker 1980). Oyster populations have been monitored in Galveston Bay since 1951 (Hofstetter 1977). Blue crab populations have been monitored since 1977 (Hammerschmidt 1982). The TPWD initiated a standardized fishery-independent monitoring program in 1975 using gill nets, in 1977 using bag seines, in 1982 using trawls in bays, in 1984 using oyster dredges, and in 1985 using trawls in the Gulf to monitor trends and assess the relative abundance and size of shellfish and finfish in Texas marine waters. This sampling program provides a statistically sound and cost-effective method for obtaining information on shellfish and finfish populations. These data are used to determine relative abundance and size in order to formulate management regulations.

The TPWD collects information on all species captured in all gears in the standardized monitoring program. Finfishes caught in bag seines and gill nets are reported in McEachron and Green (1986) and Crowe et al. (In press). To date, finfishes caught in trawls have not been reported. Therefore, to provide fishery managers with additional information on relative abundance and size of finfishes, these data will be presented in this report.

The objectives of this study were to:

1. monitor trends in brown shrimp, white shrimp, pink shrimp, blue crab and Eastern oyster relative abundance and size in Texas bay systems and in the Gulf of Mexico off Texas, and
2. publish the results in a report which will assist resource managers to effectively manage selected shellfishes.

Differences in the statistics in this report compared to previous versions are due to updating the data base and this report should be considered the most accurate to date.

MATERIALS AND METHODS

Monofilament gill nets and bag seines were used along shorelines in eight bay systems (Fig. 1-8) during November 1975-June 1985 and during October 1977-March 1986, respectively. Detailed descriptions of the gears, sample stations and sample procedures are reported by McEachron and Green (1986).

Trawls (6.1 m wide at mouth with 3.8-cm stretched mesh throughout, and doors 1.2 m long and 0.6 m tall) were used in seven bay systems during January 1982-March 1986 (Fig. 1-7). Bays were stratified into three zones: Zone 1 (upper bay nearest mouths of rivers), Zone 2 (lower bay farthest from rivers) and Zone 3 [bay passes located at: Galveston (Bolivar Roads), Matagorda (Pass Cavallo and Matagorda Ship Channel), Corpus Christi (Lydia Ann Channel), and lower Laguna Madre (Brazos Santiago Pass)]. Trawl sites in each Zone were randomly selected from bay grids (1 minute longitude by 1 minute latitude) that contained water ≥ 1 m deep in at least 1/3 of the grid and which were known to be free of obstructions (Appendix A). Five stations were sampled in each of Zone 1 and Zone 2 in each bay system during the 1st-15th and during the 16th-31st of each month except in the upper and lower Laguna Madre systems. In both the upper and lower Laguna Madre systems all water was designated as Zone 2. Two stations were sampled each week in Zone 3. No station was duplicated in a month in Zones 1 and 2; stations were duplicated in Zone 3. Trawls were pulled in a circular motion near the center of each grid in Zones 1 and 2. Trawls were pulled linearly in Zone 3 and direction of tow (Gulfward or bayward) was randomly chosen for the initial tow and alternated on the subsequent tow. All tows were 15.0 minutes long except in upper Laguna Madre (7.5 min). Sampling was discontinued in Zone 3 in August 1985 to improve the operational economic efficiency.

Trawls, identical to those used in the bays, were used in the Texas Territorial Sea (≤ 16.7 km from shore) during February 1985-March 1986 (Fig. 9). Four Gulf areas were selected for sampling: 24.1 km either

side of each of the Galveston jetties (Galveston), Matagorda jetties (Port O'Connor), and Aransas Pass jetties (Port Aransas), and 48.2 km north from the Texas-Mexico border (Port Isabel). The area off Port Aransas was sampled beginning in February 1985; all other areas were sampled beginning in August. Trawl sites in each area were randomly selected from Gulf grids that contained water ≥ 1.8 m deep in at least 1/3 of the grid and which also were in the Texas Territorial Sea and free from known obstructions (Appendix B). Eight stations were sampled in each area during the 1st-15th and during the 16th-31st of each month. No station was duplicated in a month. Trawls were pulled linearly and direction of tow (north or south) was randomly chosen for the initial tow and alternated on subsequent tows. All tows were 15.0 minutes long.

Trawls (12.2 m wide at mouth) were used at night in the Gulf off Galveston, Port O'Connor, Port Aransas and Port Mansfield-Port Isabel during 1 June-6 July 1985 in conjunction with the Southeastern Monitoring and Assessment Program (SEAMAP). Detailed descriptions of the gear, sample stations and sample procedures are reported by Stuntz et al. (1984).

Oyster dredges [8-tooth Louisiana style: 46 cm wide, 25 cm tall with a 36 cm deep bag (6 bottom rows of linked metal rings 5 cm in diameter; four top rows of 7.6-cm mesh webbing made of 0.8-cm nylon rope)] were used in Galveston Bay during October 1984-December 1985 (Fig. 1). The bay was stratified into "reef" (mapped area in which Eastern oysters form reefs and are ≥ 0.2 m higher than adjacent bottom for a continuous distance of ≥ 1.4 m long and 0.4 m wide) and "non-reef" (remaining bay bottom ≥ 1 m deep) areas. Oyster dredge sites in each "reef" and "non-reef" area were randomly selected from bay grids (Appendix C). Each selected grid was divided into 144-5 sec "gridlets". All "gridlets" that contained the respective "reef" or "non-reef" area were used to randomly choose sample sites. Fifty stations (40 "reef"; 10 "non-reef") were sampled during the 1st-15th and during the 16th-31st of each month. No station was duplicated in a month. Dredges were pulled linearly for 30 seconds.

Historical oyster reef sites (TPWD unpublished data) were sampled with an oyster dredge during September and October 1985 prior to the opening of the oyster season to determine availability of oysters. Ten sites were sampled in Galveston Bay (Redfish reef), three sites in East Matagorda Bay (Dressing Point Reef, Chinquapin Reef, and Raymond Shoal Reef), four sites in each of Matagorda (Gallinipper Reef, Cox Bay, Keller Bay, Carancuhua Bay) and San Antonio (Chickenfoot Reef, Panther Point Reef, Middleground Reef, South Pass Reef) Bays and five sites in Aransas Bay (Long Reef, Halfmoon Reef, Thompson Reef, Lap Reef, Copano Reef).

Each sampling week for trawls and oyster dredges extended from sunrise Monday through sunset the following Sunday. Collections were made during daylight hours only.

Blue crab gill net catch rates were calculated by dividing the total number caught by the total hours fished from all samples in a season. Trawl and bag seine catch rates of blue crab, brown shrimp, pink shrimp, and white shrimp were calculated by dividing the total number of each species by the total hours fished (trawl) or hectares sampled (bag seine) from all samples in a month. Catch rates of associated finfishes caught in trawls were calculated identically to those for shellfish. Eastern oysters were grouped into spat (5-25 mm), small oysters (26-75 mm) and market oysters (> 76 mm); catch rates were calculated by dividing the total number captured by the total hours fished from all samples in a month. Coastwide catch rates were weighted by the length of each bay system's shoreline (gill net, bag seine), by the amount of surface area ≥ 1 m deep (Matlock and Ferguson 1982) in each bay system (bay trawl) or by the total number of trawlable grids (Gulf trawl). Both annual bag seine and trawl catch rates were calculated from monthly means (unweighted by sample size).

Total length (carapace width measured from spine to spine) of blue crab caught in gill nets were obtained for the first 19 individuals caught in each mesh size each week in each bay system; mean lengths were calculated for each of the four mesh sizes in each sample. Mean lengths for the combined gill net meshes were calculated by weighting the mean lengths in each mesh by the proportion of blue crabs caught in each mesh. Total lengths (shrimp: tip of rostrum to tip of telson) for brown shrimp, pink shrimp, white shrimp and blue crab caught in bag seines were obtained from a random selection of no more than 19 individuals of each species in each sample. Total lengths of selected shrimps and blue crab caught in trawls were obtained from a random selection of no more than 50 shrimp of each species and 35 blue crabs in each sample. Total lengths of associated finfishes caught in trawls were obtained from a random selection of no more than 19 individuals of each species in each sample. Total lengths (hinge to bill) of Eastern oysters caught in oyster dredges were obtained from a random selection of no more than 19 live oysters in each sample. Coastwide lengths (nearest 1 mm) of all organisms were weighted according to the catch rate in each bay system.

Bottom salinity, water temperature, dissolved oxygen and turbidity were measured prior to each trawl and oyster dredge sample; means were calculated for each month. Surface salinity, water temperature, dissolved oxygen and turbidity were measured at the set and pickup for each gill net and prior to each bag seine sample. Hydrologic parameter means for gill nets (season) and bag seines (month) are reported by Crowe et al. (In press).

RESULTS

Gill Net

Spring and fall coastwide blue crab catch rates were $\leq 0.2/h$ in all years (Tables 1 and 2). Catch rates among bay systems ranged from $<.1/h$ in both upper Laguna Madre during spring 1983 and Matagorda Bay during fall 1985 to $0.5/h$ in East Matagorda Bay during spring 1985.

Bag Seine

Coastwide annual blue crab bag seine catch rates fluctuated from 49/ha in 1978 to 114/ha in 1985 (Table 3). Catch rates among bay systems ranged from 9/ha in lower Laguna Madre during 1977 to 193/ha in Aransas Bay during 1982.

Coastwide annual brown shrimp catch rates increased from 136/ha in 1977 to 511/ha in 1982, decreased to 336/ha in 1983 then increased to 528/ha in 1985 (Table 3). Catch rates among bay systems ranged from 9/ha in upper Laguna Madre during 1977 to 1024/ha in lower Laguna Madre during 1985.

The highest coastwide annual pink shrimp catch rates occurred during 1981 (24/ha) and 1982 (26/ha); they ranged from 3-12/ha in all other years (Table 3). Highest catch rates generally occurred in Aransas Bay (0-124/ha), Corpus Christi Bay (0-67/ha) and upper Laguna Madre (7-48/ha). Catch rates in all other bay systems were $\leq 13/ha$ except for San Antonio Bay during 1981 (28/ha).

The highest coastwide annual white shrimp catch rate occurred during 1982 (1277/ha); they fluctuated from 226-758/ha in all other years (Table 3). Catch rates among bay systems ranged from 3/ha in upper Laguna Madre during 1983 to 3560/ha in Galveston Bay during 1982.

Coastwide monthly bag seine catch rates during January 1985-March 1986 indicated seasonal peaks in abundance varied among species (Appendix D). Blue crab coastwide catch rates were highest during March-June 1985 and March 1986. Coastwide brown shrimp catch rates were highest during April-June 1985. Highest coastwide pink shrimp catch rates occurred during March and October 1985 and March 1986; none were caught in Galveston, Matagorda and San Antonio Bays. Coastwide white shrimp catch rates were highest during June-November 1985.

Bay Trawl

Zones 1 and 2 combined

Coastwide annual blue crab bay trawl catch rates ranged from 15/h in 1984 to 21/h in 1985 (Table 4). Catch rates among bay systems ranged from 2/h in Corpus Christi Bay during 1983 to 50/h in lower Laguna Madre during 1984.

Coastwide annual brown shrimp catch rates were lower in 1982 (27/h) and 1983 (20/h) than in 1984 and 1985 (30/h each year) (Table 4). Catch rates among bay systems ranged from 6/h in lower Laguna Madre during both 1982 and 1984 to 106/h in Aransas Bay during 1984.

Coastwide annual pink shrimp catch rates were ≤ 2 /h in all years (Table 4). Catch rates among bay systems ranged from 0/h in both Galveston Bay during 1984 and lower Laguna Madre during 1982 to 9/h in Aransas Bay during 1983.

Coastwide annual white shrimp catch rates decreased from 47/h in 1982 to 32/h and 33/h in 1984 and 1985, respectively (Table 4). Catch rates among bay systems ranged from 1/h in lower Laguna Madre during 1985 to 87/h in Galveston Bay during 1982.

Coastwide monthly bay trawl shellfish catch rates during January 1985-March 1986 indicated seasonal peaks in abundance varied among species (Appendix D). Blue crab coastwide catch rates were highest during March-June 1985. Coastwide brown shrimp catch rates were highest during May-June 1985. The highest catch rate of pink shrimp occurred during April 1985. Coastwide white shrimp catch rates were highest during January and August-December 1985.

Individual finfish coastwide and monthly catch rates and mean lengths varied among species, among bays, among years and among months (Table 4; Appendix D).

Hydrologic parameters varied among months and among bay systems (Appendix E). Coastwide salinities ranged from 16.2 o/oo in April to 27.3 o/oo in September. Individual bay system salinities were generally higher (29.5-42.0 o/oo) in upper and lower Laguna Madre than in any other bay system (7.9-34.1 o/oo). Water temperatures followed seasonal trends increasing from the lowest values during January (9.7-12.0 C) to highest values during August (29.4-31.4 C) then declining through December (11.7-16.5 C). Dissolved oxygen ranged from 7-11 ppm coastwide and ranged from 6-14 ppm among bay systems. Turbidities were ≤ 56 Jackson Turbidity Units (JTU) coastwide; they ranged from 25-183 JTU's among bay systems.

Zone 3

Monthly catch rates indicate seasonal peaks in abundance varied among species and among passes (Appendix D). Highest blue crab catch rates occurred in the Galveston Bay pass during February (234/h); peaks of abundance occurred during April in both the Matagorda Bay (13/h) and lower Laguna Madre (24/h) passes and during July in both the Aransas Bay (78/h) and Corpus Christi (29/h) Bay passes. Monthly brown shrimp catch rates were generally highest during May-June (< 1 -421/h) in all

passes. Pink shrimp catch rates were $\leq 6/h$ in all passes and months except during April in the Aransas Bay pass (51/h). White shrimp catch rates were generally higher in the Galveston Bay pass (2-212/h) than the other passes (0-38/h) during each respective month.

Individual finfish monthly catch rates varied among species, among passes and among months (Appendix D).

Hydrologic parameters varied among months and among passes (Appendix E). Coastwide salinities ranged from 21.9 o/oo in March to 30.7 o/oo in June. Salinities generally increased during March-July in all passes. Water temperatures followed seasonal trends increasing from a coastwide low of 11.6 C in January to a high of 28.6 C in July. Dissolved oxygen ranged from 7-9 ppm coastwide and from 6-12 ppm among passes. Turbidities were ≤ 50 JTU's coastwide; they ranged from 25-118 JTU's among passes.

Gulf Trawls

Coastwide and individual area annual blue crab Gulf trawl catch rates were $\leq 1/h$ during 1985 in all areas (Table 5). Coastwide monthly catch rates were highest (4/h) during June (Appendix D).

Coastwide annual brown shrimp catch rates were 19/h in 1985; they ranged from 7/h off both Galveston and Port O'Connor to 45/h off Port Aransas (Table 5). Coastwide monthly catch rates were highest (437/h) during June (Appendix D).

Coastwide and individual area annual pink shrimp catch rates were $\leq 1/h$ in 1985 (Table 7). Coastwide monthly catch rates were highest (3-4/h) during February and November 1985 and March 1986 (Appendix D).

Coastwide annual white shrimp catch rates were 24/h in 1985; they ranged from 1/h off Port Isabel to 53/h off Galveston (Table 5). Coastwide monthly catch rates were highest (67/h) during December 1985 and January 1986 (Appendix D).

Individual finfish coastwide and monthly catch rates and mean lengths varied among species, among Gulf areas and among months (Appendix D).

Hydrologic parameters varied among months and among Gulf areas (Appendix E). Coastwide salinities ranged from 26.9 o/oo in March to 35.6 o/oo in August. Water temperatures followed seasonal trends increasing from lowest values in February (13.6 C) to highest values in September (28.8 C). Dissolved oxygen ranged from 7-10 ppm coastwide with a range of 6-14 ppm among Gulf areas. Turbidities were ≤ 41 JTU's; they ranged from 24-58 JTU's among Gulf areas.

SEAMAP

Catch rates of brown shrimp by depth zone ranged from 1362/h in 19-37 m to 36/h in 74-91 m during 1985 (Appendix F). Catch rates in most depth zones during 1985 were generally less than those recorded during 1982-1984.

White shrimp were caught primarily in waters from 0-18 m deep during all years (Appendix F). Catch rates increased each year from 15/h in 1982 to 41/h in 1985 in the 0-18 m depth zone.

Pink shrimp were captured in waters from 0-55 m deep (0-195/h) during all years (Appendix F). They were caught predominately in waters 0-37 m deep.

Blue crabs were caught primarily in the 0-18 m zone (Appendix F). Catch rates ranged from 0-20/h in all years.

Oyster Dredge

Random samples

Overall monthly catch rates of Eastern oyster in "reef" areas in Galveston Bay ranged from 3588/h during April 1985 to 9984/h during September 1985 (Table 6). Catch rates of spat ranged from 24/h in May 1985 to 5640/h during July 1985. Catch rates of small oysters ranged from 2520/h during December 1984 to 6684/h during September 1985. Highest catch rates of market oysters occurred during September-December 1985 (1446-1932/h); they ranged from 660-1248/h in all other months.

Combined monthly catch rates of Eastern oyster in "non-reef" areas ranged from 0/h in both December 1984 and August 1985 to 756/h in October 1985 (Table 7). Catch rates of spat ranged from 0-84/h in all months. The highest catch of small oysters occurred during October 1985 (600/h); all other catch rates were \leq 180/h. The highest catches of market oysters occurred during March (120/h) and October (96/h) 1985; all other catch rates were \leq 48/h.

Salinities varied among months ranging from 8.4 o/oo during March to 24.0 o/oo during both August and September (Appendix E). Water temperatures followed seasonal trends increasing from lowest values in January (9.3 C) to highest values in August (30.6 C) then decreasing through December (14.0 C).

Historical samples

Catch rates of Eastern oysters at historical reef stations ranged from 108/h in East Matagorda Bay during 1984 to 18,444/h in Matagorda

Bay during 1984 (Appendix G). The overall Eastern oyster catch rate decreased in Matagorda (18,444/h to 5202/h), San Antonio (9046/h to 3072/h) and Aransas (10,133/h to 8059/h) Bays but increased in Galveston (2988/h to 6694/h) and East Matagorda (108/h to 3592/h) Bays from 1984 to 1985. Highest catches of spat (4918/h), small oysters (12,758/h) and market oysters (768/h) occurred in Matagorda Bay during 1984.

DISCUSSION

The TPWD is mandated by the Texas Legislature and the TPW Commission to investigate the supply, economic value, environment, breeding habits, sex ratios, effects of fishing and other factors or conditions causing increases or decreases in the supply of shellfish and finfish in Texas waters. Long-term trend data based on independent standardized monitoring programs are necessary to assess changes in relative abundance of these populations. Data in this report can be used to determine long-term trends in abundance and stability of shellfish and finfish populations in Texas coastal waters. It is, therefore, imperative that the standardized monitoring program used by the TPWD be maintained.

Data obtained during this study were used to implement management regulations. Shrimp data were used to recommend the 1983, 1984 and 1985 dates for the closure of Texas Gulf waters to shrimping (Bryan 1985, 1986, In preparation). Oyster data were used to implement a shorter oyster season in Galveston Bay (1 November 1983-31 March 1984) and to delay the opening of the oyster season from 1 November 1984 to 15 January 1985 (TPWD unpublished data). Additionally, oyster data were used to establish the oyster transplant season in Galveston Bay (TPWD unpublished data). These data are being used to develop management plans for shrimp and oysters as mandated by the Texas Legislature, and for blue crabs and selected finfishes as part of the TPWD's 6-year plan.

Relative abundance of shellfishes is not uniform throughout the year. The monthly bag seine, trawl and oyster dredge catches in this report indicate specific periods of high abundance for brown shrimp, white shrimp, pink shrimp, blue crab and Eastern oyster. A more efficient method of estimating abundance from year to year (estimate having the highest precision for effort expended) would be to identify and pool data for months which do not have significantly different catch rates. It is recommended that periods of high abundance in bag seines, trawls and oyster dredges be statistically determined for each of the species for the appropriate gear and that these "seasonal" catch rates be presented in future reports.

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Table 1. Annual mean catch rate (No./h) and mean total lengths (mm), of blue crab (Callinectes sapidus) caught with 183-m gill nets during spring in Texas bay systems during 1983-1985.

Bay system	Year	Mesh Size					Total				
		7.6-cm	10.2-cm	12.7-cm	15.2-cm						
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Galveston	1983	<.1	137	0.1	153	0.1	155	<.1	155	0.2	151
	1984	<.1	129	0.1	155	<.1	147	<.1	177	0.2	150
	1985	0.1	136	0.1	153	0.1	150	<.1	164	0.3	149
East Matagorda	1983	0.1	132	0.2	159	0.1	161	<.1	172	0.3	154
	1984	0.1	120	0.2	135	0.1	151	0.0		0.4	135
	1985	0.1	132	0.2	150	0.2	159	<.1	171	0.5	151
Matagorda	1983	<.1	150	<.1	150	<.1	155	<.1	140	0.1	151
	1984	<.1	127	0.1	150	<.1	155	<.1	137	0.1	144
	1985	<.1	140	<.1	144	<.1	156	<.1	144	0.1	144
San Antonio	1983	0.1	123	0.1	144	0.1	151	<.1	153	0.3	142
	1984	0.1	119	0.1	143	<.1	151	<.1	142	0.2	137
	1985	0.1	136	0.1	131	0.1	143	<.1	130	0.3	136
Aransas	1983	0.1	131	0.1	147	0.1	146	<.1	139	0.3	142
	1984	0.1	133	0.1	143	<.1	165	<.1	156	0.2	142
	1985	0.1	130	0.1	144	<.1	151	<.1	151	0.2	141
Corpus Christi	1983	<.1	149	0.1	146	<.1	159	<.1	176	0.2	151
	1984	0.1	136	0.1	147	0.1	154	<.1	156	0.3	147
	1985	0.1	140	0.1	150	0.1	156	<.1	155	0.2	149
Upper Laguna Madre	1983	<.1	145	<.1	164	<.1	164	<.1	168	<.1	158
	1984	0.1	134	0.1	145	0.1	148	<.1	164	0.3	146
	1985	0.1	145	<.1	141	<.1	134	<.1	132	0.1	141
Lower Laguna Madre	1983	<.1	133	0.1	147	<.1	154	<.1	158	0.2	145
	1984	0.1	127	0.1	145	<.1	157	<.1	132	0.2	142
	1985	<.1	155	0.1	157	0.1	161	<.1	153	0.2	158
Coastwide	1983	<.1	133	0.1	151	<.1	154	<.1	153	0.2	148
	1984	0.1	128	0.1	144	<.1	152	<.1	157	0.2	142
	1985	0.1	137	0.1	147	0.1	154	<.1	155	0.2	147

Table 2. Annual mean catch rate (No./h) and mean total lengths (mm), of blue crab (Callinectes sapidus) caught with 183-m gill nets during fall in Texas bay systems during 1983-1985.

Bay system	Year	Mesh Size					Total				
		7.6-cm No./h Length	10.2-cm No./h Length	12.7-cm No./h Length	15.2-cm No./h Length	No./h Length					
Galveston	1983	0.1	134	0.1	140	<.1	135	<.1	130	0.2	136
	1984	<.1	141	<.1	158	<.1	169	<.1	156	0.1	151
	1985	<.1	150	<.1	154	<.1	131	<.1	152	0.1	148
East Matagorda	1983	<.1	132	0.1	150	0.1	163	<.1	158	0.3	153
	1984	<.1	137	<.1	136	<.1	138	<.1	180	0.1	140
	1985	<.1	154	<.1	149	<.1	156	<.1	156	0.1	154
Matagorda	1983	<.1	149	0.1	152	<.1	154	<.1	141	0.1	151
	1984	<.1	145	<.1	152	<.1	146	<.1	139	0.1	146
	1985	<.1	148	<.1	137	<.1	122	<.1	168	<.1	142
San Antonio	1983	<.1	134	<.1	140	<.1	137	<.1	160	0.1	138
	1984	<.1	143	<.1	149	<.1	152	<.1	142	0.1	147
	1985	<.1	133	<.1	143	<.1	149	<.1	154	0.1	139
Aransas	1983	0.1	137	0.1	149	<.1	155	<.1	153	0.2	145
	1984	<.1	140	<.1	143	<.1	151	<.1	157	0.2	145
	1985	<.1	134	<.1	138	<.1	147	<.1	148	0.1	145
Corpus Christi	1983	<.1	139	0.1	150	0.1	147	<.1	142	0.2	145
	1984	0.1	137	<.1	140	<.1	148	<.1	150	0.2	141
	1985	<.1	139	<.1	145	<.1	156	<.1	144	0.1	144
Upper Laguna Madre	1983	0.1	140	0.1	146	<.1	153	<.1	162	0.3	146
	1984	0.1	135	0.1	139	<.1	135	<.1	143	0.2	137
	1985	0.1	147	0.1	145	<.1	150	<.1	151	0.2	147
Lower Laguna Madre	1983	0.1	143	0.1	145	0.1	151	<.1	150	0.3	146
	1984	<.1	143	0.1	148	<.1	149	<.1	161	0.2	148
	1985	<.1	137	<.1	155	<.1	167	<.1	157	0.1	149
Coastwide	1983	0.1	139	0.1	147	<.1	152	<.1	150	0.2	146
	1984	<.1	139	<.1	144	<.1	148	<.1	153	0.1	144
	1985	<.1	142	<.1	146	<.1	150	<.1	153	0.1	146

Table 3. Annual mean catch rates (No./ha) and mean total lengths (mm) of select shellfishes caught with 18.3-m bag seines by bay system during 1977-1985. Blank indicates no measurement taken; ND = no data.

Species	Year	East						Upper						Lower						
		Galveston		Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Laguna Madre		Laguna Madre		Coastwide		
		No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	
Blue crab	1977 ^a	106	44	ND	29	46	52	46	95	56	38	16	58	9	63	57	48			
	1978	66	52	ND	11	38	52	51	57	62	43	98	61	19	60	49	55			
	1979	106	52	ND	27	51	76	49	84	62	43	90	48	61	54	83	51			
	1980	122	54	ND	24	56	114	45	65	52	39	65	40	176	46	94	47			
	1981	58	53	ND	44	44	51	54	85	45	40	42	58	167	35	75	42			
	1982	101	48	ND	31	51	107	42	193	48	52	49	35	54	42	102	45			
	1983	148	43	15	35	34	106	40	145	43	49	40	37	59	115	33	95	40		
	1984	88	58	58	58	42	43	46	62	50	62	42	37	61	80	46	64	49		
	1985	144	49	107	57	46	42	41	141	38	184	37	73	52	155	34	114	41		
	Mud crab	1977 ^a	146	46	ND	61	52	188	50	229	54	58	9	63	200	53	136	52		
1978		540	50	ND	172	63	102	63	152	60	56	188	68	120	53	247	57			
1979		482	58	ND	194	66	69	63	438	63	61	53	59	155	59	285	61			
1980		495	52	ND	143	68	561	60	386	60	62	64	64	234	56	315	58			
1981		719	57	ND	157	74	310	64	354	60	53	102	76	1008	58	490	59	13		
1982		915	64	ND	207	64	609	51	505	54	428	62	63	565	61	511	59			
1983		374	61	100	250	66	285	55	534	60	300	57	65	541	50	336	58			
1984		628	64	294	198	56	278	66	745	66	290	58	83	389	63	397	63			
1985		522	60	412	370	63	308	56	755	61	370	55	288	1024	56	528	59			
Mud shrimp		1977 ^a	0	ND	ND	0	0	13	41	0	0	0	48	77	0	7	59			
	1978	0	ND	ND	0	0	<1	100	<1	63	0	26	77	0	3	80				
	1979	0	ND	ND	0	0	0	0	0	0	58	12	78	<1	106	7	78			
	1980	0	ND	ND	0	0	1	42	13	50	58	10	60	2	75	9	56			
	1981	0	ND	ND	0	0	28	54	87	44	67	8	62	6	49	24	53			
	1982	0	ND	ND	0	0	0	0	124	47	67	7	61	3	52	26	52			
	1983	0	0	0	0	0	9	51	51	56	32	12	54	0	12	12	52			
	1984	0	0	0	<1	25	<1	73	15	48	26	48	14	65	<1	79	6	56		
	1985	0	0	0	0	0	0	0	18	59	8	8	76	0	4	4	56			

BS w/OS
X=371

Table 3. (Cont'd.).

Species	Year	Galveston		East		San Antonio		Aransas		Upper		Lower		Coastwide				
		No./ha	Length	Matagorda	Matagorda	No./ha	Length	No./ha	Length	Corpus Christi	Laguna Madre	Laguna Madre	Laguna Madre	No./ha	Length	No./ha	Length	
White shrimp	1977 ^a	1656	55	ND	994	102	127	47	26	63	84	57	36	85	23	57	561	71
	1978	858	66	ND	571	70	130	61	92	49	63	52	21	55	130	53	337	65
	1979	1720	61	ND	543	70	212	56	99	64	817	52	5	53	143	47	608	60
	1980	571	64	ND	522	68	295	57	133	61	141	69	62	71	18	45	288	64
	1981	1393	62	ND	805	59	66	64	183	50	173	51	19	56	264	61	527	60
	1982	3560	58	ND	1750	64	663	51	297	43	369	54	14	51	326	50	1277	58
	1983	1524	50	348	397	65	136	64	130	53	136	42	3	71	226	52	479	55
	1984	1557	59	407	1438	71	169	56	410	53	311	63	17	58	625	58	758	63
	1985	307	61	552	477	63	37	44	239	44	33	53	6	73	207	54	226	58

^a Values collected for Oct-Dec only.

Table 4. Annual mean catch rate (No./h) and mean total lengths (mm) of select organisms caught with 6.1-m trawls (Zones 1 and 2 combined) by bay system during 1982-1985. Blank indicates no measurement taken.

Species	Year	Galveston				Matagorda				San Antonio				Aransas				Corpus Christi				Upper				Lower			
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
SHELLFISHES																													
Blue crab	1982 ^a	28	91	5	100	16	81	28	66	7	97	9	148	10	100	17	87												
	1983	23	88	10	86	22	80	41	80	2	96	7	113	12	96	18	86												
	1984	19	92	4	88	8	82	31	81	8	88	24	106	50	86	15	94												
	1985	30	79	10	85	19	76	23	71	5	115	21	103	36	86	21	85												
Brown shrimp	1982 ^a	23	89	25	95	16	101	54	80	40	90	40	101	6	61	27	89												
	1983	12	99	24	101	32	99	57	91	8	99	8	102	9	66	20	94												
	1984	13	102	7	102	58	96	106	80	50	103	25	108	6	74	30	92												
	1985	33	75	24	89	27	90	68	81	24	96	16	108	11	63	30	84												
Pink shrimp	1982 ^a	<1	94	<1	113	<1	96	7	89	2	100	1	96	0		1	92												
	1983	<1	95	1	113	5	95	9	95	2	103	1	113	1	88	2	98												
	1984	0		<1	76	<1	72	3	86	3	109	<1	94	<1	71	1	96												
	1985	<1	88	<1	105	3	98	4	100	5	96	4	107	1	98	2	101												
White shrimp	1982 ^a	87	92	40	85	14	100	16	95	26	101	17	110	4	64	47	93												
	1983	79	93	20	101	13	96	18	100	14	111	6	112	2	85	37	100												
	1984	60	98	15	99	8	99	38	106	24	107	10	126	10	109	32	104												
	1985	62	99	21	110	23	91	18	106	22	104	6	120	1	105	33	103												
FINFISHES																													
Atlantic croaker	1982 ^a	43		102		10		86	75	112	37		28			62	75												
	1983	29	131	31	117	19	110	44	106	43	149	15	156	32	154	30	132												
	1984	15	126	30	104	22	87	52	83	120	121	15	137	44	138	35	114												
	1985	20	124	41	110	17	105	33	101	42	138	13	151	24	148	27	126												
Black drum	1982 ^a	<1	259	0		<1	221	<1	166	1	235	<1	264	0		<1	235												
	1983	<1	275	<1	199	<1	192	<1	201	<1	347	<1	254	<1	440	<1	276												
	1984	<1	168	0		0	<1	251	<1	341	1	202	<1	544	<1	255													
	1985	<1	242	0		0	<1	403	<1	315	1	280	<1		<1	282													

$\bar{x} = 113$
 $\bar{x} = 113$
 $\bar{x} = 113$

15

$\frac{149}{4} = 37$

Table 4. (Cont'd.)

Species	Year	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Gafftopsail cattfish	1982 ^a	<1		4		3		3		<1	138	<1	193	0		2	144
	1983	<1	137	1	134	2	123	2	135	<1	175	0		0		1	134
	1984	<1	139	1	144	5	121	2	109	<1	218	<1	131	<1	196	1	123
	1985	<1	154	2	137	2	128	3	128	1	150	0		<1	210	1	133
	1982 ^a	12		10		11		24		2		<1		<1		10	
Gulf menhaden	1983	7	103	10	109	17	76	3	89	3	104	1	87	0		8	90
	1984	3	98	3	93	23	58	44	44	4	82	6	76	<1	59	9	56
	1985	18	112	10	109	27	79	12	92	2	119	4	106	0		14	104
	1982 ^a	1		3		2		8		29		25		6		7	
Hardhead cattfish	1983	1	177	2	182	2	205	8	125	26	191	12	205	5	196	6	186
	1984	1	186	2	169	1	199	5	128	21	186	7	215	5	193	4	184
	1985	2	159	4	149	1	165	4	145	14	171	5	207	5	176	4	172
	1982 ^a	1		7		5		21		84		44		39		17	
	1983	1	121	6	111	14	106	38	106	119	124	20	133	45	109	22	118
Pinfish	1984	1	121	6	107	7	97	38	96	25	113	67	108	73	111	15	107
	1985	1	120	9	111	23	104	53	110	48	118	18	133	48	110	18	114
	1982 ^a	0		<1		<1	230	<1	102	<1	649	<1	619	0		<1	412
	1983	0		0		<1	319	<1	224	0		0		<1	200	<1	225
	1984	<1	583	<1	305	<1	344	<1	142	<1	81	<1	241	<1	401	<1	271
1985	0		<1	56	0		<1	54	<1	276	<1	475	<1	91	<1	327	
Sand seatrout	1982 ^a	4		5	185	<1	141	3	126	14	147	1	201	5	164	5	133
	1983	2	134	4	134	<1	108	3	111	9	158	<1	196	1	164	3	145
	1984	2	147	1	121	<1	115	1	107	4	141	0		1	161	1	139
	1985	4	127	3	126	<1	136	1	119	7	144	1	160	1	117	3	135
	1982 ^a	<1	295	0		<1	119	<1	85	<1	345	1	366	1	241	<1	286
Sheepshead	1983	<1	344	0		<1	113	<1	138	<1	365	1	357	<1	248	<1	313
	1984	<1	339	<1	147	0		<1	157	<1	342	<1	402	<1	300	<1	297
	1985	<1	341	<1	102	<1	112	<1	143	<1	259	<1	412	<1	80	<1	180

Table 4. (Cont'd.)

Species	Year	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower		Coastwide			
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	Laguna Madre	Length	No./h	Length
Southern flounder	1982 ^a	<1	158	<1	169	1	155	1	186	1	181	2	203	<1	272	<1	272	1	187
	1983	<1	175	<1	197	<1	120	1	180	<1	242	<1	203	<1	161	<1	161	<1	179
	1984	<1	193	<1	194	<1	153	2	148	<1	175	1	145	<1	168	<1	168	<1	154
	1985	<1	234	<1	202	1	147	1	152	1	221	1	197	<1	261	<1	261	<1	192
	1982 ^a	0		<1	326	0	0	0	0	0	0	0	0	0	0	0	0	<1	326
Spanish mackerel	1983	0		0		0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1984	0		1	202	0	0	0	0	0	0	0	0	0	0	0	0	<1	202
	1985	0		<1	171	0	0	0	0	<1	233	0	0	0	0	0	0	<1	196
	1982 ^a	9		26		5		68	128	33		10		4		4		19	128
	1983	6	121	18	122	6	112	18	116	36	140	2	164	6	135	6	135	12	129
Spot	1984	8	115	34	107	35	84	130	91	74	112	81	118	10	108	10	108	39	103
	1985	13	121	20	118	13	110	60	116	215	132	24	137	19	129	19	129	41	128
	1982 ^a	<1	173	0		<1	232	<1	160	<1	187	1	166	<1	142	<1	142	<1	165
	1983	<1	288	<1	155	<1	168	2	207	<1	327	1	181	<1	200	<1	200	<1	203
	1984	<1	418	<1	174	<1	252	<1	237	<1	385	<1	351	<1	236	<1	236	<1	298
Spotted seatrout	1985	<1	286	<1	171	<1	156	1	156	<1	171	1	146	<1	218	<1	218	<1	168
	1982 ^a	<1		<1		1		2		1	212	1	311	<1		<1		1	247
	1983	1	204	<1	131	2	137	3	209	1	211	2	326	1	331	1	331	1	236
	1984	1	244	<1	204	<1	174	1	192	1	209	6	287	1	307	1	307	1	266
	1985	2	195	<1	163	<1	136	7	158	<1	168	1	243	<1	254	<1	254	2	174
Striped mullet	1982 ^a	17	197	35	104	9	83	57	67	93	113	192	204	69	219	69	219	43	162
	1983	13	103	92	80	47	73	52	87	69	121	115	89	52	144	52	144	52	97
	1984	14	112	34	95	11	73	33	77	44	92	13	65	35	138	35	138	24	97
	1985	22	98	25	103	11	84	62	60	51	116	27	67	50	131	50	131	29	95
	1982 ^a	88	216	193	141	47	174	268	119	372	201	313	232	180	152	180	152	167	182
Total finfishes	1983	63	126	165	99	109	92	175	108	309	139	171	133	143	223	143	223	137	133
	1984	44	123	111	104	105	82	311	86	294	124	193	123	169	130	169	130	131	110
	1985	82	117	115	114	96	101	237	99	380	129	96	127	149	128	149	128	140	118

^aValues calculated May-Dec only.

Table 5. Annual mean catch rates (No./h) and mean total lengths (mm) of select shellfishes and finfishes caught with 6.1-m trawls in the Texas Territorial Sea during 1985.^a Blank indicates no measurement taken.

Species	Galveston		Port O'Connor		Port Aransas		Port Isabel		Coastwide	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
SHELLFISHES										
Blue crab	<1	105	1	134	1	127	<1	144	1	127
Brown shrimp	7	103	7	125	45	109	18	106	19	109
Pink shrimp	<1	120	<1	130	1	119	1	108	1	116
White shrimp	53	109	26	124	12	124	1	105	24	115
FINFISHES										
Atlantic croaker	22	145	42	139	17	145	9	149	23	143
Black drum	0		0		<1	825	0		<1	825
Gafftopsail catfish	<1	165	<1	156	<1	136	0		<1	160
Gulf menhaden	2	150	1	159	1	151	0		1	152
Hardhead catfish	2	157	3	143	9	157	<1	256	4	154
King mackerel	<1	173	0		<1	124	0		<1	141
Pinfish	<1	124	3	109	4	110	1	135	2	113
Red drum	0		0		<1	84	0		<1	84
Red snapper	0		0		2	85	7	89	2	88
Sand seatrout	10	141	6	168	3	140	<1	221	5	150
Sheepshead	0		0		0		0		0	
Southern flounder	0		<1	280	<1	137	0		<1	197

Table 5. (Cont'd.).

Species	Galveston		Port O'Connor		Port Aransas		Port Isabel		Coastwide	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spanish mackerel	0		0		0		0		0	
Spot	3	132	20	130	21	141	1	142	12	136
Spotted seatrout	0		0		<1	140	0		<1	140
Striped mullet	0		0		0		0		0	
Other finfishes	108	109	111	106	170	106	113	97	125	105
Total finfishes	148	119	187	118	226	114	130	101	174	114

^aSampling began in February off Port Aransas and in August off all other areas.

Table 6. Monthly mean catch rate (No./h) by size class (mm)^a of Eastern oyster (*Crassostrea virginica*) caught with 46.0-cm wide dredges in Galveston Bay reef stations during October 1984-December 1985.

Month	Spat	Small	Market	Total
Oct 1984	1248	3636	996	5880
Nov	648	2868	660	4176
Dec	312	2520	876	3708
Jan 1985	240	3108	996	4344
Feb	252	2809	756	3817
Mar	144	3408	852	4404
Apr	120	2808	660	3588
May	24	3852	1140	5016
Jun	2868	4080	1248	8196
Jul	5640	2784	900	9324
Aug	1276	3228	804	5308
Sep	1692	6684	1608	9984
Oct	2976	4416	1932	9324
Nov	1080	4380	1536	6996
Dec	3492	3540	1446	8478

^aSpat (5-25mm), small (26-75mm), market (\geq 76 mm).

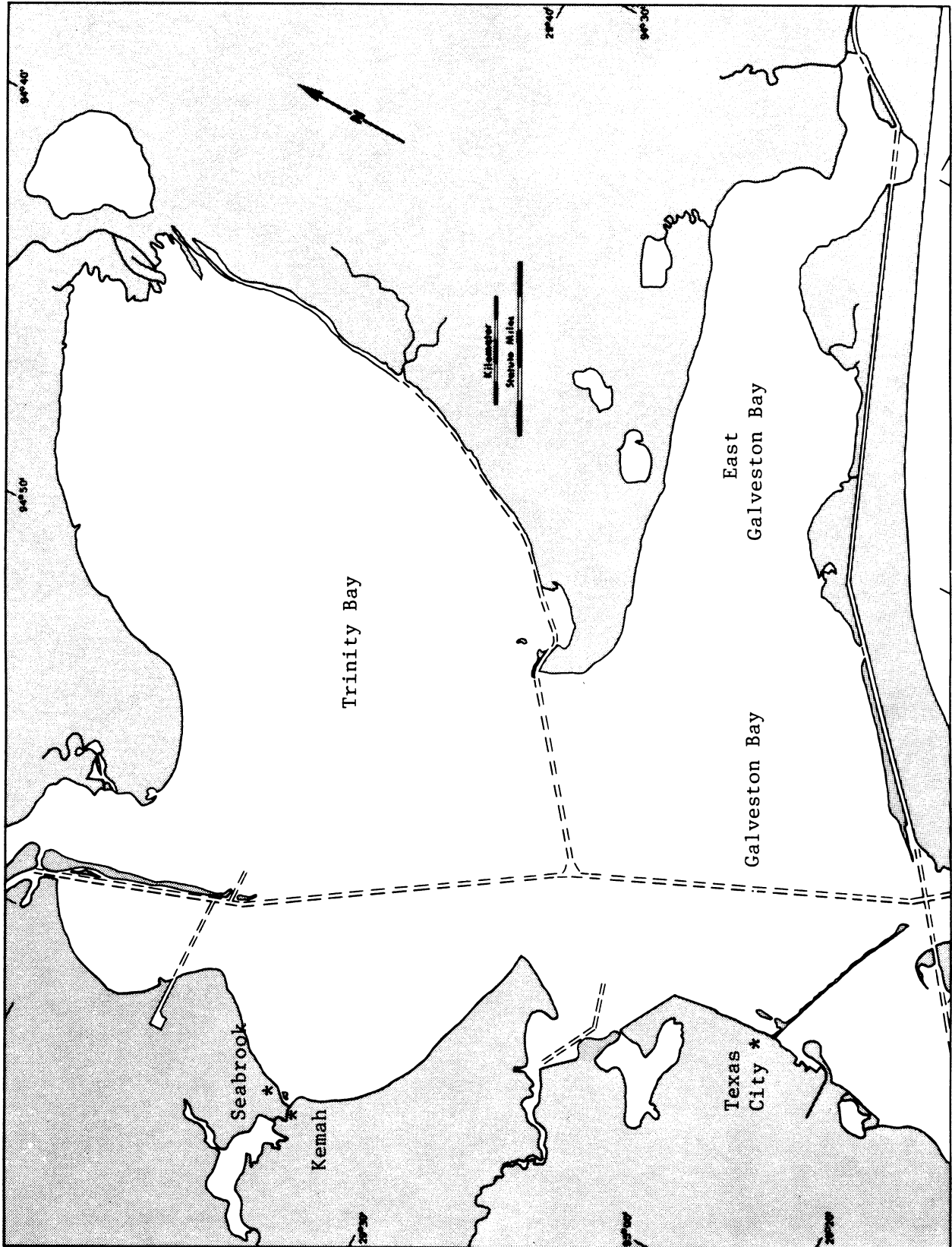
Table 7. Monthly mean catch rate (No./h) by size class (mm)^a of Eastern oyster (*Crassostrea virginica*) caught with 46.0-cm wide dredges in Galveston Bay non-reef stations during October 1984-December 1985.

Month	Spat	Small	Market	Total
Oct 1984	12	36	12	60
Nov	24	96	36	156
Dec	0	0	0	0
Jan 1985	12	180	0	192
Feb	6	36	24	66
Mar	0	168	120	288
Apr	0	6	6	12
May	84	60	24	168
Jun	0	156	48	204
Jul	12	0	36	48
Aug	0	0	0	0
Sep	6	96	12	114
Oct	60	600	96	756
Nov	0	84	24	108
Dec	6	0	0	6

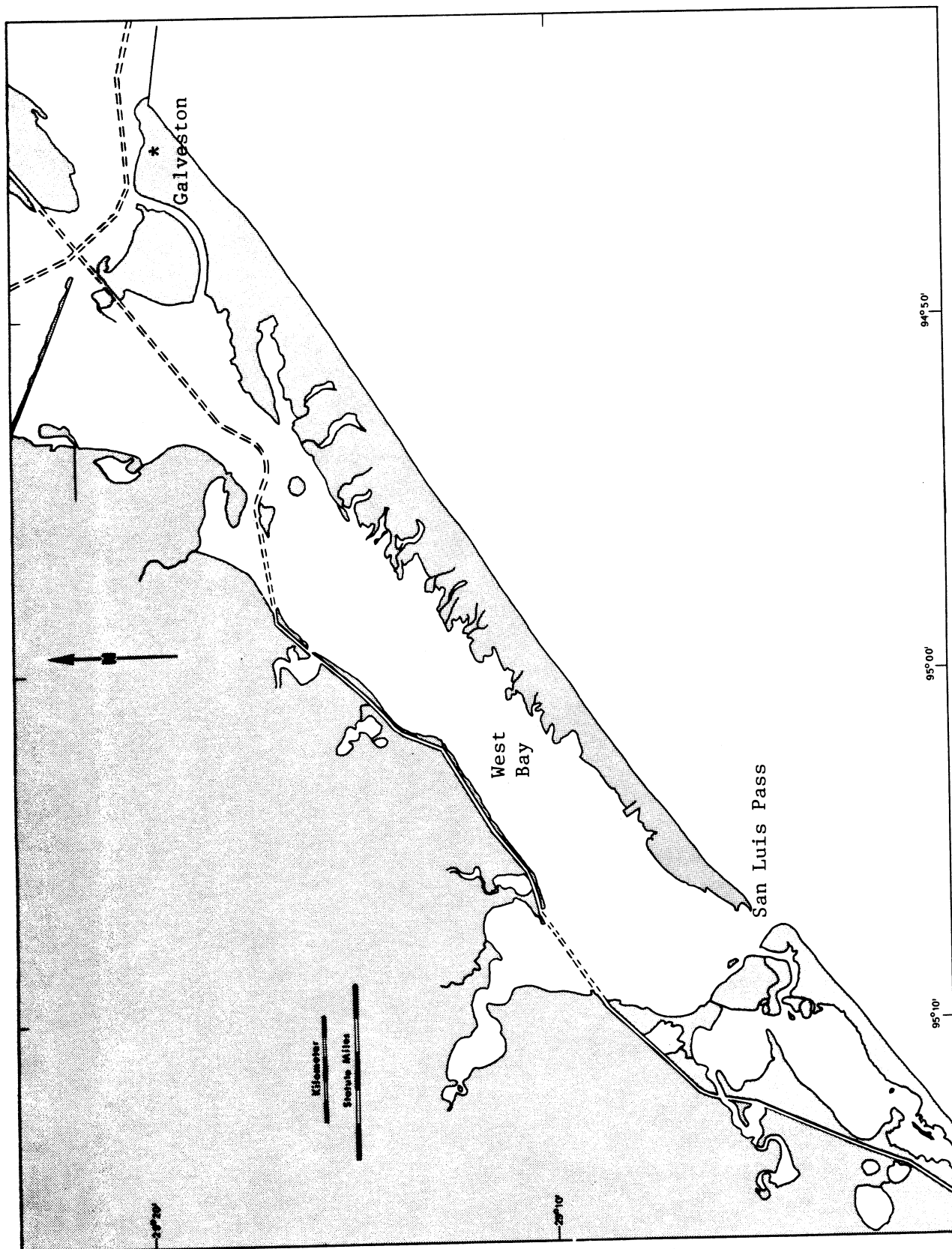
^aSpat (5-25mm), small (26-75mm), market (\geq 76mm).

Figure 1. Galveston Bay System.

- (A) Trinity, upper Galveston and East Bays
- (B) West Bay



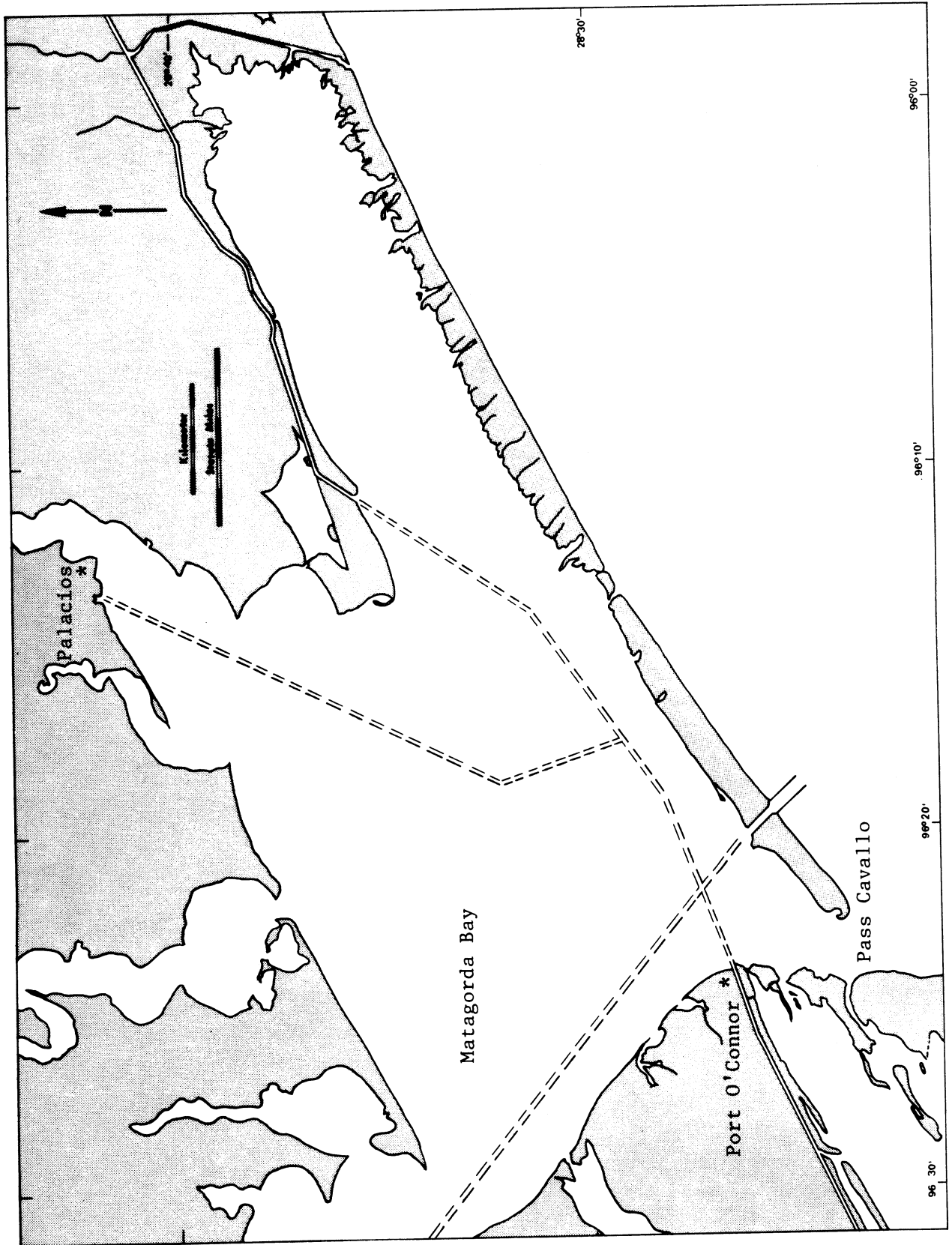
(A)



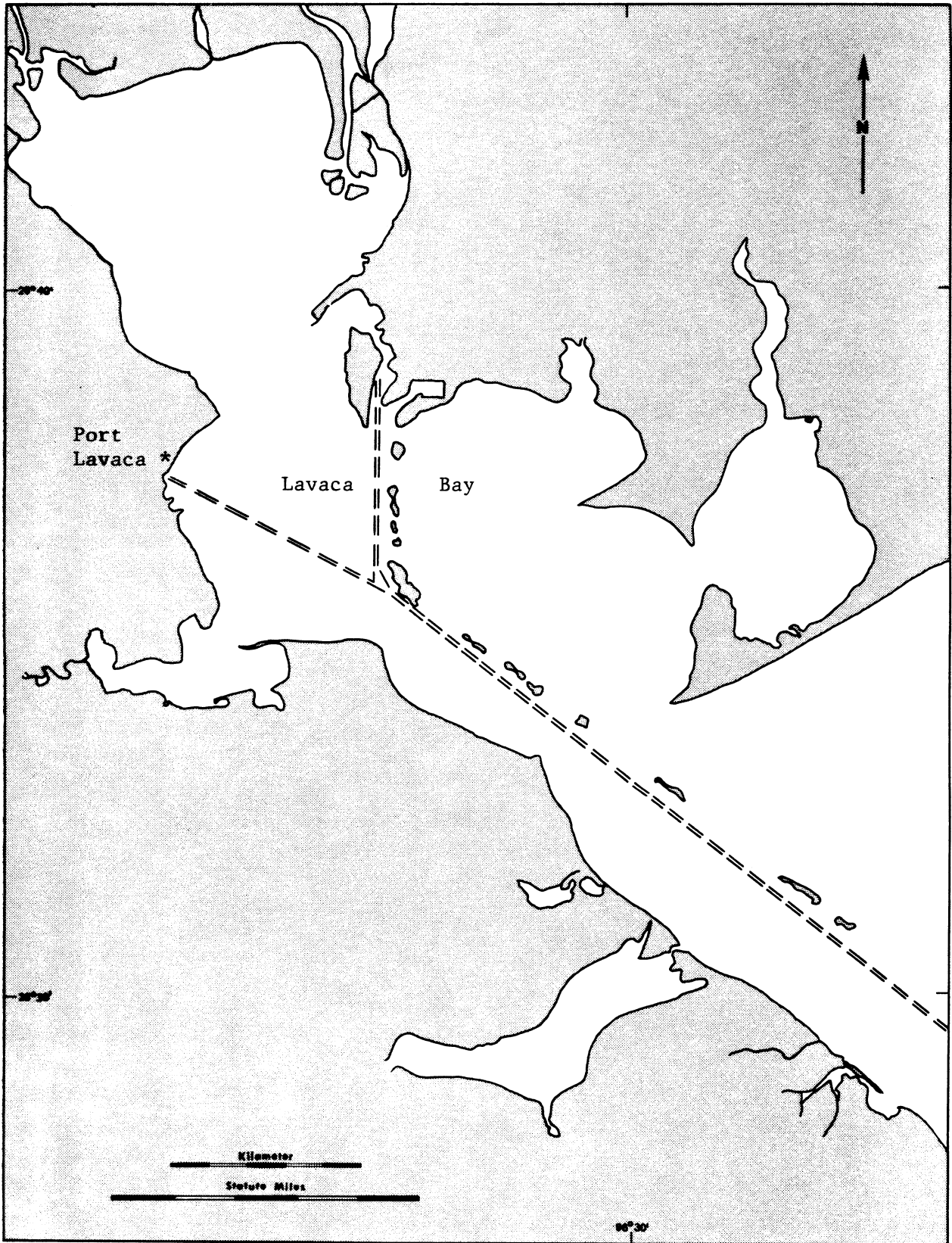
(B)

Figure 2. Matagorda Bay System.

- (A) Matagorda Bay
- (B) Lavaca Bay



(A)



(B)

Figure 3. San Antonio Bay System.

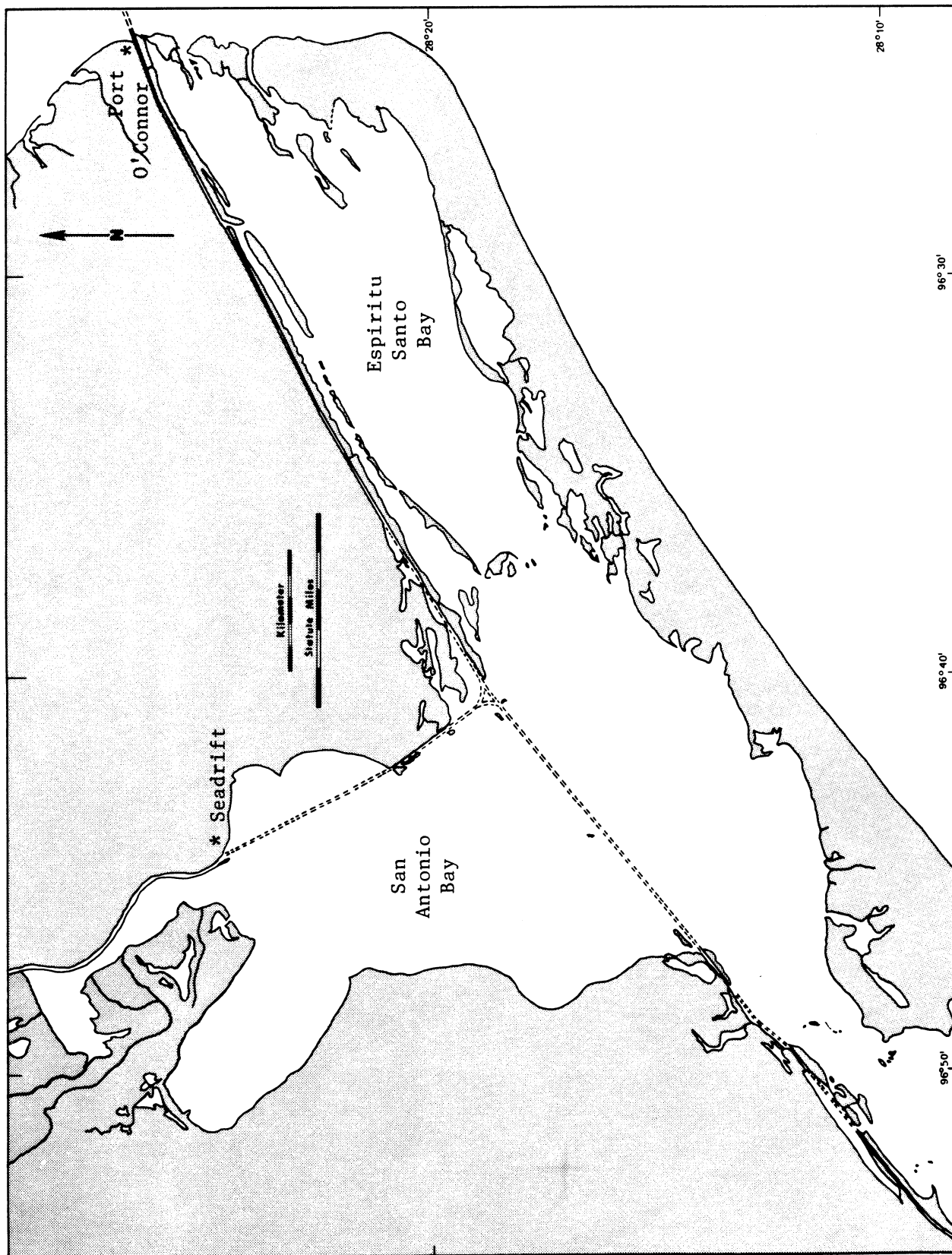


Figure 4. Aransas Bay System.

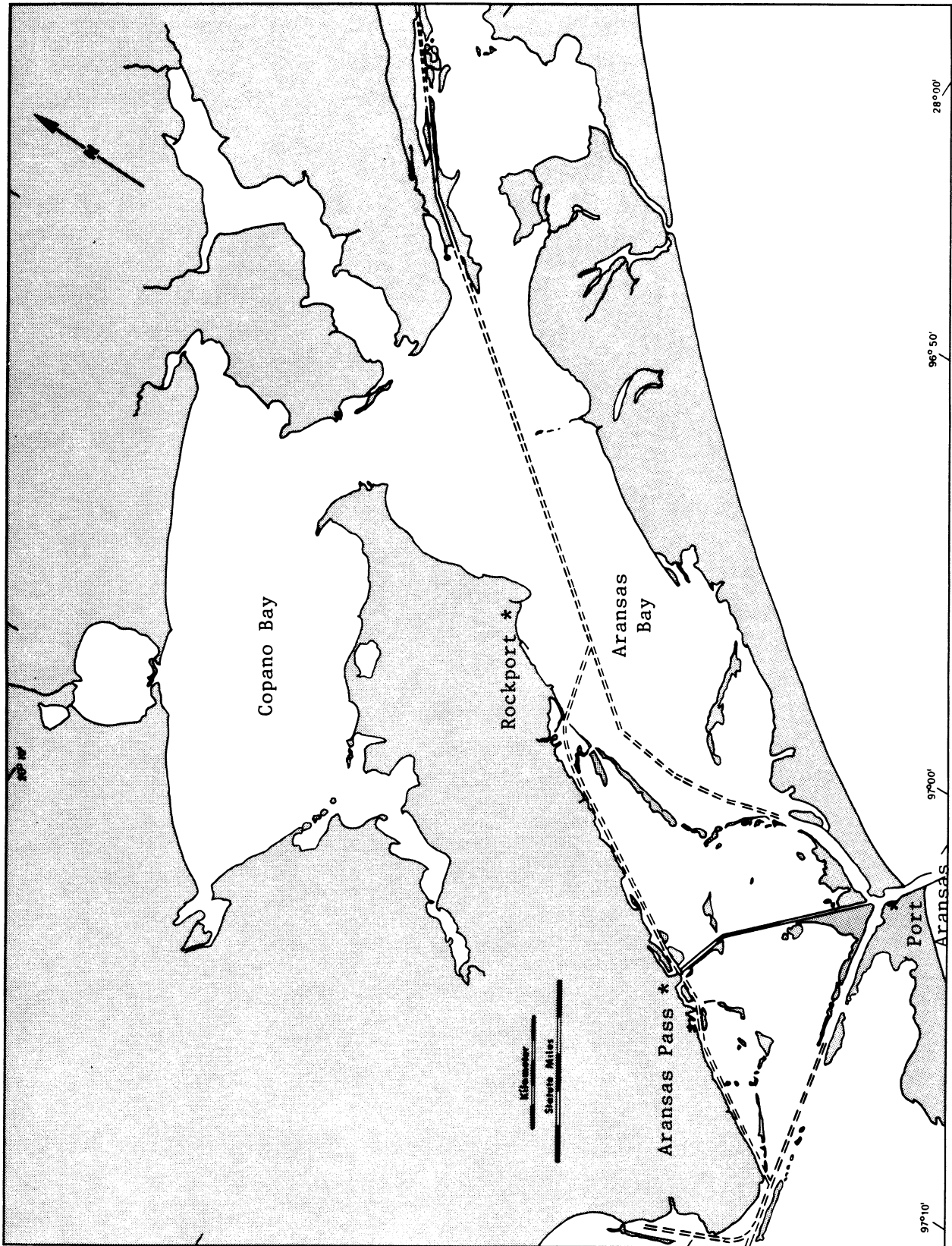


Figure 5. Corpus Christi Bay System.

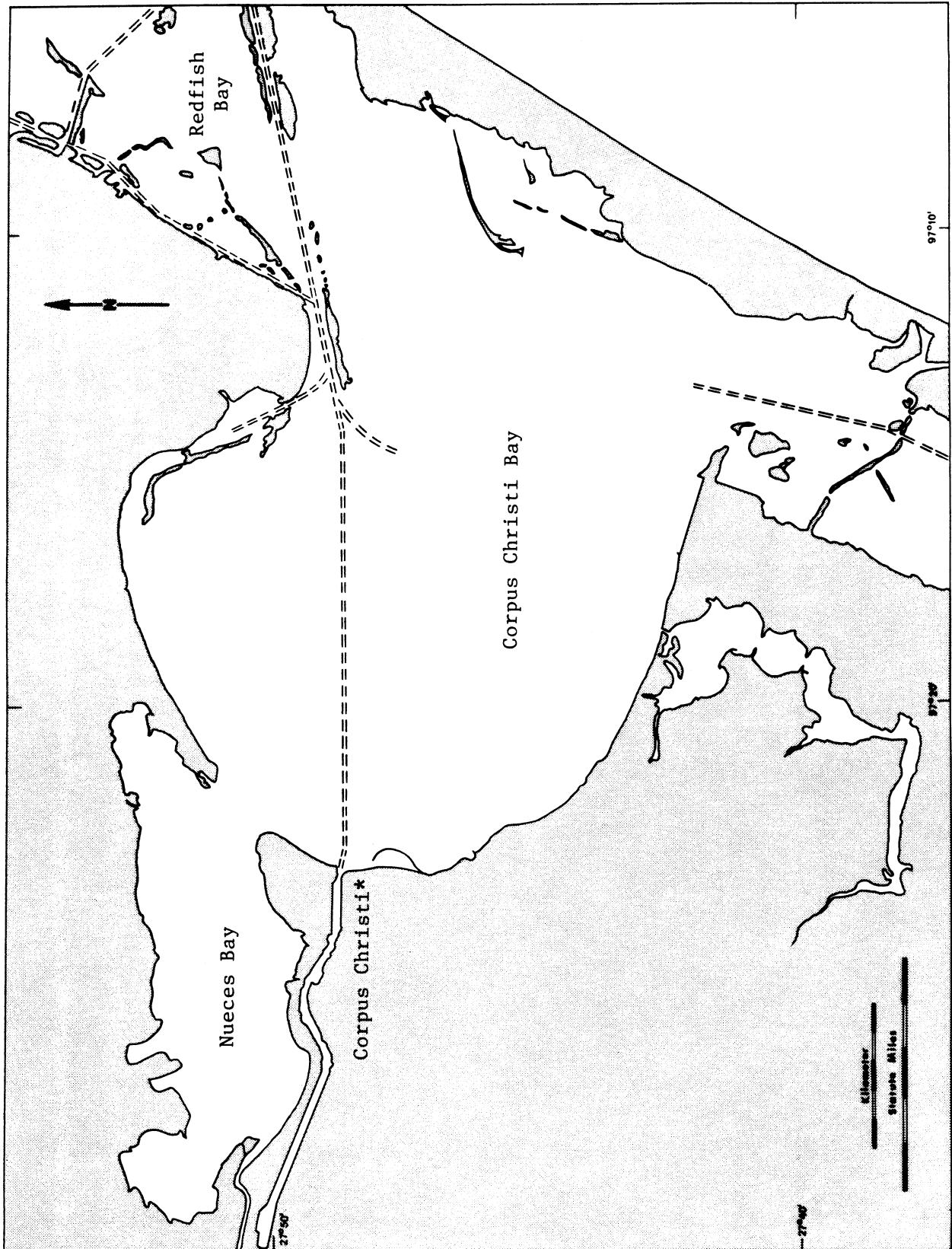


Figure 6. Upper Laguna Madre System.

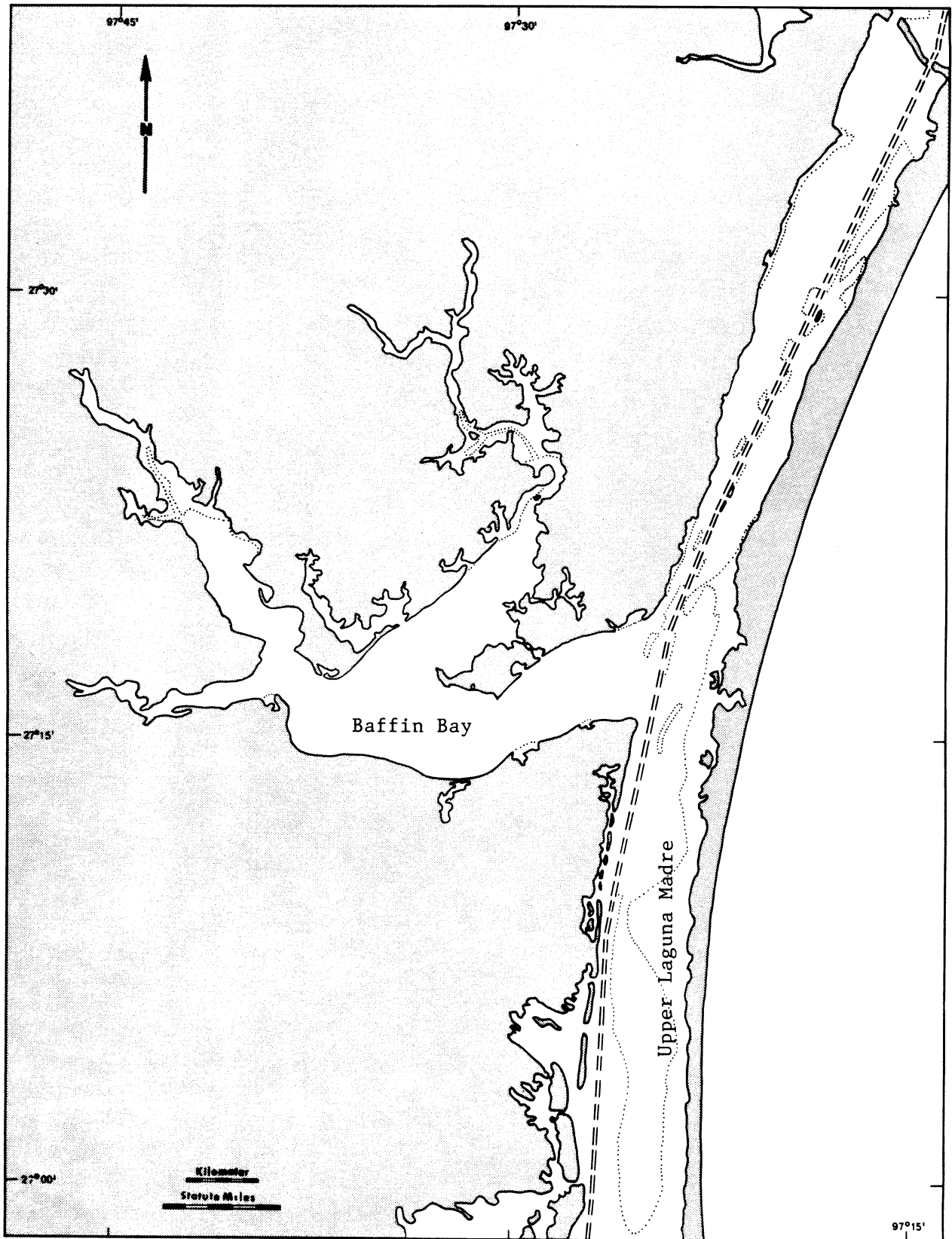
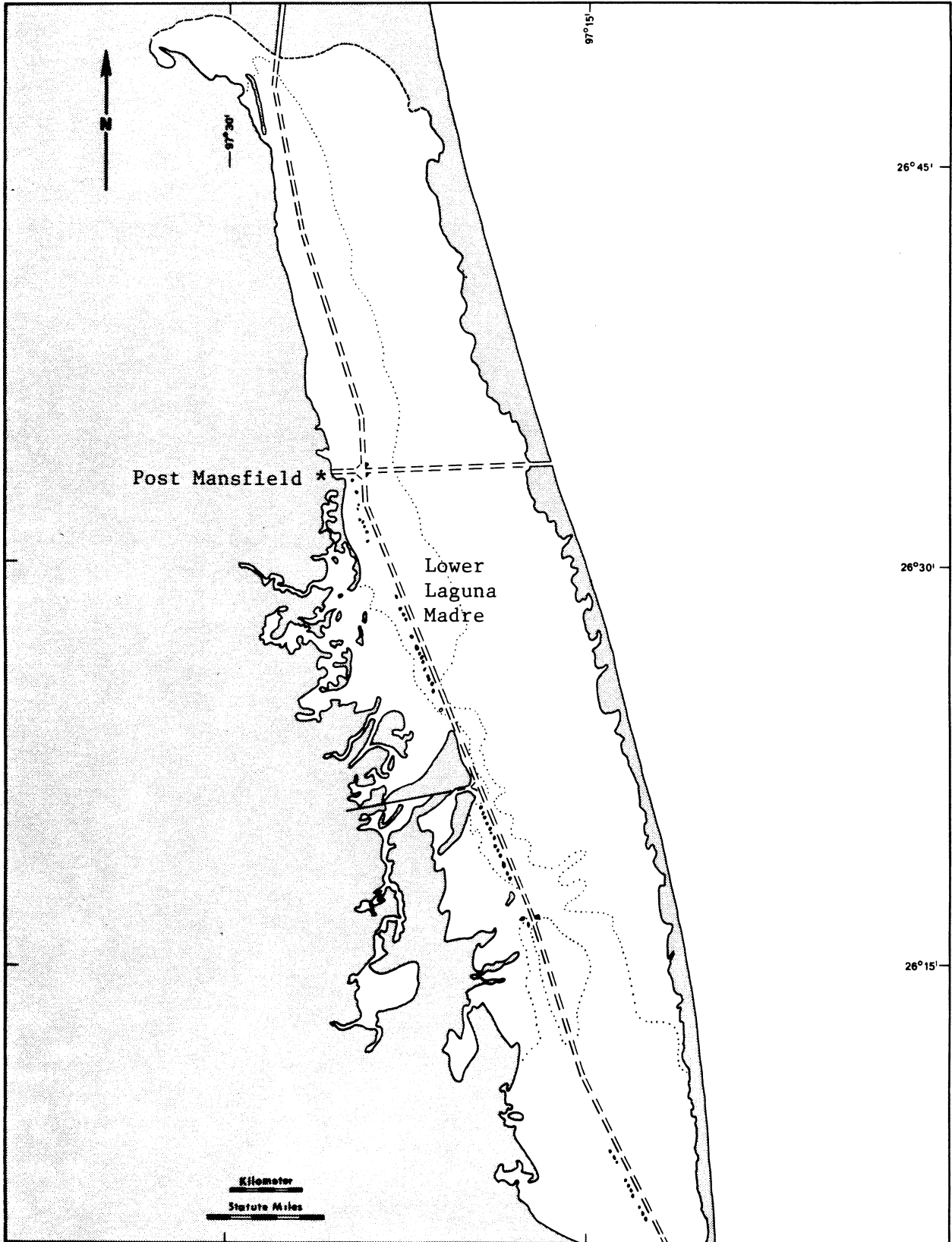
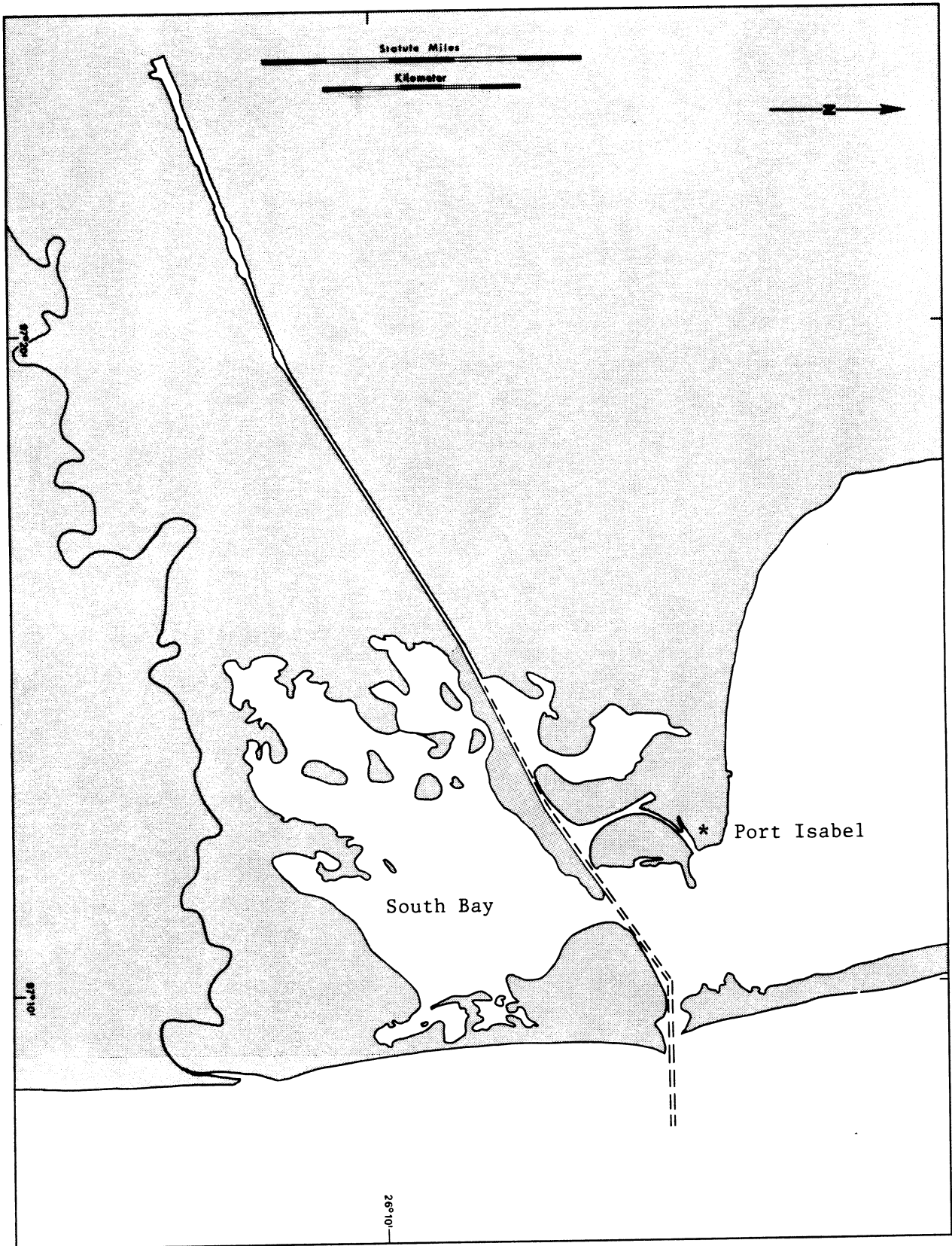


Figure 7. Lower Laguna Madre System.

- (A) Lower Laguna Madre
- (B) South Bay



(A)



(B)

Figure 8. East Matagorda Bay System.

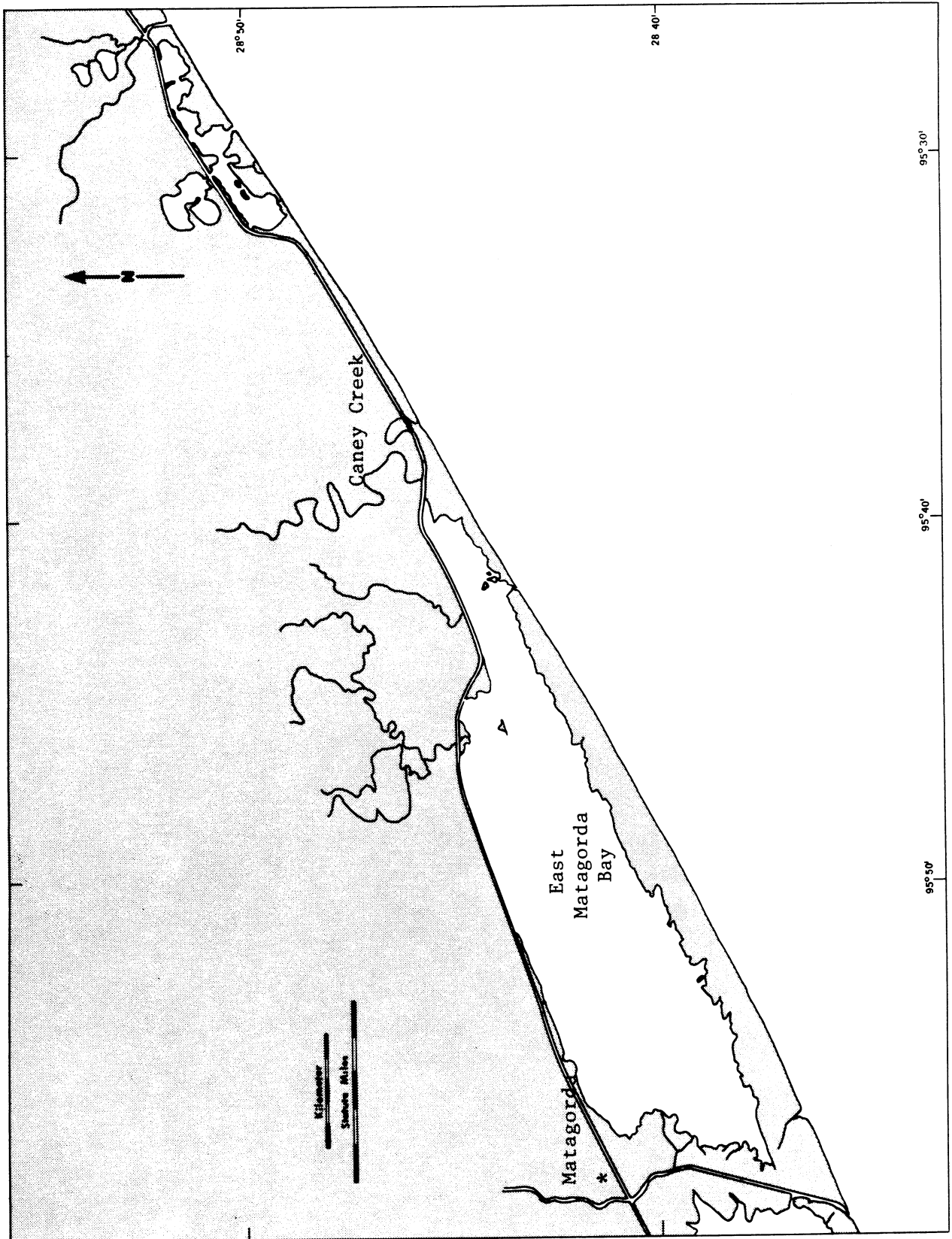
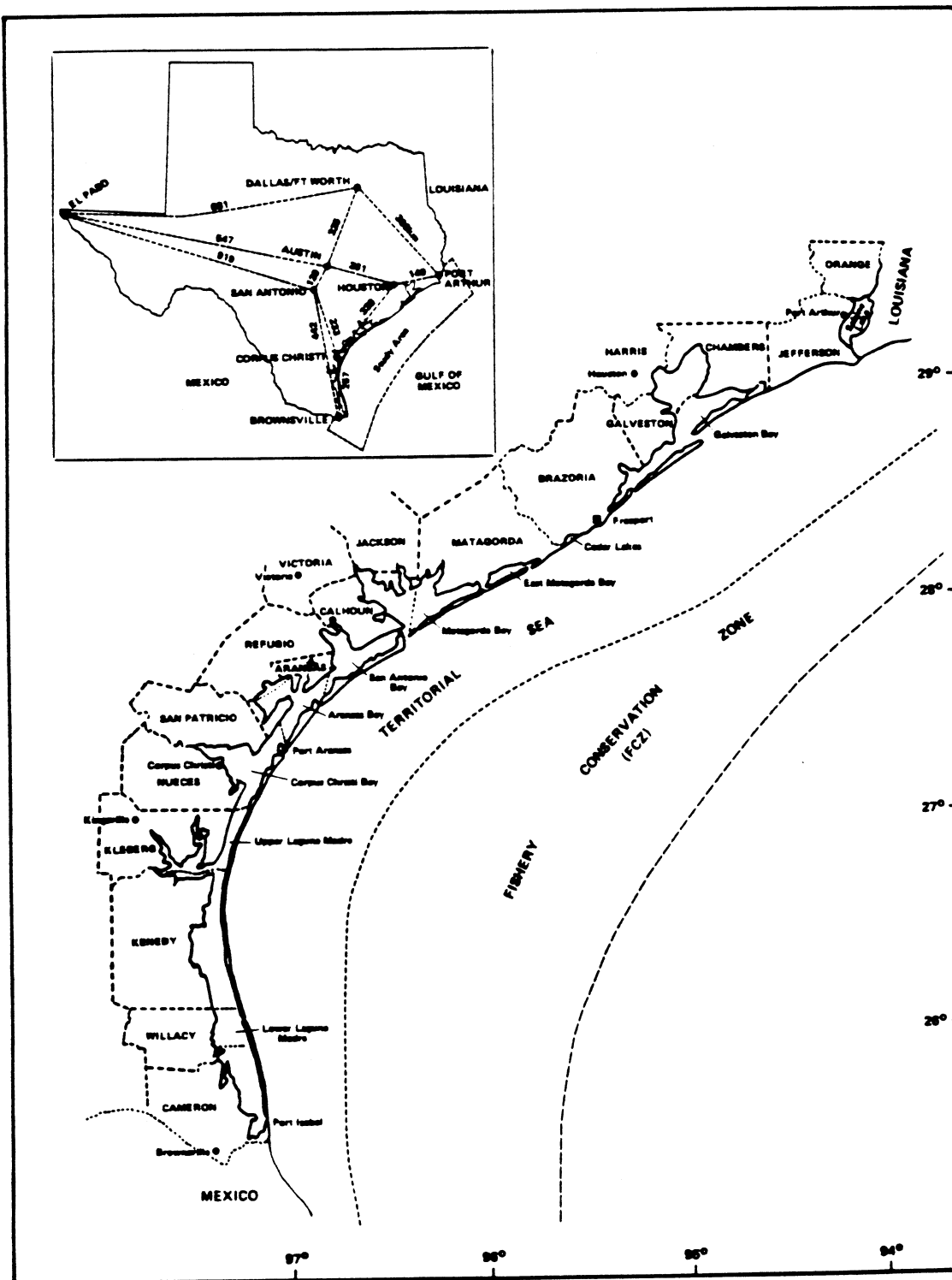


Figure 9. Texas Territorial Sea.



Appendix A. Bay trawl site identification.

Table A.1. Bay trawl grids in each bay system.

Bay	Grid	Latitude	Longitude
Galveston	17	29 45 30	94 46 30
	18	29 45 30	94 45 30
	27	29 44 30	94 48 30
	28	29 44 30	94 47 30
	29	29 44 30	94 46 30
	30	29 44 30	94 45 30
	31	29 44 30	94 44 30
	38	29 43 30	94 50 30
	39	29 43 30	94 49 30
	40	29 43 30	94 48 30
	41	29 43 30	94 47 30
	42	29 43 30	94 46 30
	43	29 43 30	94 45 30
	44	29 43 30	94 44 30
	45	29 43 30	94 43 30
	56	29 42 30	94 50 30
	57	29 42 30	94 49 30
	58	29 42 30	94 48 30
	59	29 42 30	94 47 30
	60	29 42 30	94 46 30
	61	29 42 30	94 45 30
	62	29 42 30	94 44 30
	63	29 42 30	94 43 30
	64	29 42 30	94 42 30
	70	29 41 30	94 57 30
	71	29 41 30	94 56 30
	75	29 41 30	94 51 30
	76	29 41 30	94 50 30
	77	29 41 30	94 49 30
	78	29 41 30	94 48 30
	79	29 41 30	94 47 30
	80	29 41 30	94 46 30
81	29 41 30	94 45 30	
82	29 41 30	94 44 30	
83	29 41 30	94 43 30	
84	29 41 30	94 42 30	
89	29 40 30	94 57 30	
90	29 40 30	94 56 30	
93	29 40 30	94 51 30	
94	29 40 30	94 50 30	
95	29 40 30	94 49 30	
96	29 40 30	94 48 30	
97	29 40 30	94 47 30	
98	29 40 30	94 46 30	
99	29 40 30	94 45 30	
100	29 40 30	94 44 30	
101	29 40 30	94 43 30	
102	29 40 30	94 42 30	
105	29 39 30	94 59 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	106	29 39 30	94 58 30
	107	29 39 30	94 57 30
	108	29 39 30	94 56 30
	111	29 39 30	94 53 30
	112	29 39 30	94 52 30
	113	29 39 30	94 51 30
	114	29 39 30	94 50 30
	115	29 39 30	94 49 30
	116	29 39 30	94 48 30
	117	29 39 30	94 47 30
	118	29 39 30	94 46 30
	119	29 39 30	94 45 30
	120	29 39 30	94 44 30
	121	29 39 30	94 43 30
	122	29 39 30	94 42 30
	125	29 38 30	95 0 30
	126	29 38 30	94 59 30
	127	29 38 30	94 58 30
	129	29 38 30	94 56 30
	130	29 38 30	94 55 30
	131	29 38 30	94 54 30
	132	29 38 30	94 53 30
	133	29 38 30	94 52 30
	134	29 38 30	94 51 30
	135	29 38 30	94 50 30
	136	29 38 30	94 49 30
	137	29 38 30	94 48 30
	138	29 38 30	94 47 30
	139	29 38 30	94 46 30
	140	29 38 30	94 45 30
	141	29 38 30	94 44 30
	142	29 38 30	94 43 30
	147	29 37 30	94 59 30
	148	29 37 30	94 58 30
	150	29 37 30	94 56 30
	151	29 37 30	94 55 30
	152	29 37 30	94 54 30
	153	29 37 30	94 53 30
	154	29 37 30	94 52 30
	155	29 37 30	94 51 30
	156	29 37 30	94 50 30
	157	29 37 30	94 49 30
	158	29 37 30	94 48 30
	159	29 37 30	94 47 30
	160	29 37 30	94 46 30
	161	29 37 30	94 45 30
	162	29 37 30	94 44 30
	163	29 37 30	94 43 30
	168	29 36 30	94 58 30

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	169	29 36 30	94 57 30
	171	29 36 30	94 55 30
	172	29 36 30	94 54 30
	173	29 36 30	94 53 30
	174	29 36 30	94 52 30
	175	29 36 30	94 51 30
	176	29 36 30	94 50 30
	177	29 36 30	94 49 30
	178	29 36 30	94 48 30
	179	29 36 30	94 47 30
	180	29 36 30	94 46 30
	181	29 36 30	94 45 30
	182	29 36 30	94 44 30
	183	29 36 30	94 43 30
	189	29 35 30	94 58 30
	190	29 35 30	94 57 30
	192	29 35 30	94 55 30
	193	29 35 30	94 54 30
	194	29 35 30	94 53 30
	195	29 35 30	94 52 30
	196	29 35 30	94 51 30
	197	29 35 30	94 50 30
	198	29 35 30	94 49 30
	199	29 35 30	94 48 30
	200	29 35 30	94 47 30
	201	29 35 30	94 46 30
	202	29 35 30	94 45 30
	203	29 35 30	94 44 30
	209	29 34 30	94 59 30
	210	29 34 30	94 58 30
	211	29 34 30	94 57 30
	212	29 34 30	94 56 30
	214	29 34 30	94 54 30
	215	29 34 30	94 53 30
	216	29 34 30	94 52 30
	217	29 34 30	94 51 30
	218	29 34 30	94 50 30
	219	29 34 30	94 49 30
	220	29 34 30	94 48 30
221	29 34 30	94 47 30	
222	29 34 30	94 46 30	
223	29 34 30	94 45 30	
232	29 33 30	95 3 30	
233	29 33 30	95 2 30	
235	29 33 30	95 0 30	
236	29 33 30	94 59 30	
237	29 33 30	94 58 30	
238	29 33 30	94 57 30	
239	29 33 30	94 56 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	240	29 33 30	94 55 30
	242	29 33 30	94 53 30
	243	29 33 30	94 52 30
	244	29 33 30	94 51 30
	245	29 33 30	94 50 30
	246	29 33 30	94 49 30
	247	29 33 30	94 48 30
	248	29 33 30	94 47 30
	256	29 33 30	94 34 30
	268	29 32 30	95 0 30
	269	29 32 30	94 59 30
	270	29 32 30	94 58 30
	271	29 32 30	94 57 30
	272	29 32 30	94 56 30
	273	29 32 30	94 55 30
	275	29 32 30	94 53 30
	276	29 32 30	94 52 30
	277	29 32 30	94 51 30
	278	29 32 30	94 50 30
	279	29 32 30	94 49 30
	280	29 32 30	94 48 30
	289	29 32 30	94 38 30
	290	29 32 30	94 37 30
	291	29 32 30	94 36 30
	292	29 32 30	94 35 30
	293	29 32 30	94 34 30
	294	29 32 30	94 33 30
	295	29 32 30	94 32 30
	303	29 31 30	94 59 30
	304	29 31 30	94 58 30
	305	29 31 30	94 57 30
	306	29 31 30	94 56 30
	307	29 31 30	94 55 30
	308	29 31 30	94 54 30
	310	29 31 30	94 52 30
	311	29 31 30	94 51 30
	312	29 31 30	94 50 30
	313	29 31 30	94 49 30
	314	29 31 30	94 48 30
	315	29 31 30	94 47 30
	316	29 31 30	94 46 30
	319	29 31 30	94 43 30
	320	29 31 30	94 42 30
	321	29 31 30	94 41 30
	322	29 31 30	94 40 30
	323	29 31 30	94 39 30
	324	29 31 30	94 38 30
	325	29 31 30	94 37 30
	326	29 31 30	94 36 30

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	327	29 31 30	94 35 30
	337	29 30 30	94 57 30
	338	29 30 30	94 56 30
	339	29 30 30	94 55 30
	340	29 30 30	94 54 30
	341	29 30 30	94 53 30
	343	29 30 30	94 51 30
	344	29 30 30	94 50 30
	345	29 30 30	94 49 30
	346	29 30 30	94 48 30
	347	29 30 30	94 47 30
	348	29 30 30	94 46 30
	349	29 30 30	94 45 30
	350	29 30 30	94 44 30
	351	29 30 30	94 43 30
	352	29 30 30	94 42 30
	353	29 30 30	94 41 30
	354	29 30 30	94 40 30
	355	29 30 30	94 39 30
	356	29 30 30	94 38 30
	357	29 30 30	94 37 30
	358	29 30 30	94 36 30
	369	29 29 30	94 52 30
	370	29 29 30	94 51 30
	371	29 29 30	94 50 30
	372	29 29 30	94 49 30
	373	29 29 30	94 48 30
	374	29 29 30	94 47 30
	375	29 29 30	94 46 30
	376	29 29 30	94 45 30
	377	29 29 30	94 44 30
	378	29 29 30	94 43 30
	379	29 29 30	94 42 30
	380	29 29 30	94 41 30
	381	29 29 30	94 40 30
	382	29 29 30	94 39 30
	383	29 29 30	94 38 30
	384	29 29 30	94 37 30
	385	29 29 30	94 36 30
	391	29 28 30	94 56 30
	393	29 28 30	94 54 30
	394	29 28 30	94 53 30
395	29 28 30	94 52 30	
397	29 28 30	94 50 30	
398	29 28 30	94 49 30	
399	29 28 30	94 48 30	
400	29 28 30	94 47 30	
401	29 28 30	94 46 30	
402	29 28 30	94 45 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	403	29 28 30	94 44 30
	404	29 28 30	94 43 30
	405	29 28 30	94 42 30
	406	29 28 30	94 41 30
	416	29 27 30	94 54 30
	417	29 27 30	94 53 30
	418	29 27 30	94 52 30
	419	29 27 30	94 51 30
	420	29 27 30	94 50 30
	421	29 27 30	94 49 30
	422	29 27 30	94 48 30
	423	29 27 30	94 47 30
	424	29 27 30	94 46 30
	425	29 27 30	94 45 30
	426	29 27 30	94 44 30
	427	29 27 30	94 43 30
	428	29 27 30	94 42 30
	435	29 26 30	94 54 30
	436	29 26 30	94 53 30
	437	29 26 30	94 52 30
	438	29 26 30	94 51 30
	440	29 26 30	94 49 30
	441	29 26 30	94 48 30
	442	29 26 30	94 47 30
	443	29 26 30	94 46 30
	444	29 26 30	94 45 30
	445	29 26 30	94 44 30
	446	29 26 30	94 43 30
	453	29 25 30	94 54 30
	455	29 25 30	94 52 30
	456	29 25 30	94 51 30
	457	29 25 30	94 50 30
	458	29 25 30	94 49 30
	459	29 25 30	94 48 30
	460	29 25 30	94 47 30
	461	29 25 30	94 46 30
	462	29 25 30	94 45 30
	463	29 25 30	94 44 30
	469	29 24 30	94 52 30
	470	29 24 30	94 51 30
	471	29 24 30	94 50 30
	473	29 24 30	94 48 30
	474	29 24 30	94 47 30
	475	29 24 30	94 46 30
	476	29 24 30	94 45 30
	480	29 23 30	94 52 30
	481	29 23 30	94 51 30
	482	29 23 30	94 50 30
	483	29 23 30	94 49 30

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	484	29 23 30	94 48 30
	485	29 23 30	94 47 30
	486	29 23 30	94 46 30
	491	29 22 30	94 50 30
	492	29 22 30	94 49 30
	494	29 22 30	94 47 30
	500	29 21 30	94 52 30
	501	29 21 30	94 51 30
	502	29 21 30	94 50 30
	503	29 21 30	94 49 30
	506	29 21 30	94 46 30
	507	29 21 30	94 45 30
	508	29 21 30	94 44 30
	513	29 20 30	94 52 30
	514	29 20 30	94 51 30
	515	29 20 30	94 50 30
	521	29 20 30	94 44 30
	526	29 19 30	94 53 30
	527	29 19 30	94 52 30
	528	29 19 30	94 51 30
	542	29 18 30	94 51 30
	561	29 16 30	94 58 30
	562	29 16 30	94 57 30
	563	29 16 30	94 56 30
	574	29 15 30	94 59 30
	575	29 15 30	94 58 30
	576	29 15 30	94 57 30
	577	29 15 30	94 56 30
	587	29 14 30	94 59 30
	588	29 14 30	94 58 30
	589	29 14 30	94 57 30
	598	29 13 30	95 1 30
	599	29 13 30	95 0 30
	600	29 13 30	94 59 30
	601	29 13 30	94 58 30
	609	29 12 30	95 10 30
	616	29 12 30	95 1 30
	617	29 12 30	95 0 30
	623	29 11 30	95 10 30
	626	29 11 30	95 7 30
	630	29 11 30	95 3 30
	631	29 11 30	95 2 30
	632	29 11 30	95 1 30
	638	29 10 30	95 8 30
639	29 10 30	95 7 30	
641	29 10 30	95 5 30	
642	29 10 30	95 4 30	
643	29 10 30	95 3 30	
644	29 10 30	95 2 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Galveston (Cont'd.)	649	29 9 30	95 8 30
	650	29 9 30	95 7 30
	651	29 9 30	95 6 30
	652	29 9 30	95 5 30
	653	29 9 30	95 4 30
	654	29 9 30	95 3 30
	658	29 8 30	95 9 30
	659	29 8 30	95 8 30
	660	29 8 30	95 7 30
	661	29 8 30	95 6 30
	662	29 8 30	95 5 30
	663	29 8 30	95 4 30
	669	29 7 30	95 9 30
	670	29 7 30	95 8 30
	671	29 7 30	95 7 30
	672	29 7 30	95 6 30
	709	29 3 30	95 11 30
	731	29 46 30	95 3 30
	732	29 46 30	95 2 30
	733	29 45 30	95 3 30
736	29 44 30	95 2 30	
742	29 42 30	95 2 30	
Matagorda	46	28 42 30	96 36 30
	47	28 42 30	96 35 30
	58	28 42 30	96 11 30
	61	28 41 30	96 38 30
	62	28 41 30	96 37 30
	63	28 41 30	96 36 30
	68	28 41 30	96 24 30
	74	28 41 30	96 13 30
	75	28 41 30	96 12 30
	82	28 40 30	96 37 30
	83	28 40 30	96 36 30
	88	28 40 30	96 24 30
	92	28 40 30	96 17 30
	94	28 40 30	96 15 30
	96	28 40 30	96 13 30
	97	28 40 30	96 12 30
	106	28 39 30	96 37 30
	107	28 39 30	96 36 30
	116	28 39 30	96 24 30
	117	28 39 30	96 23 30
118	28 39 30	96 22 30	
121	28 39 30	96 17 30	
122	28 39 30	96 16 30	
123	28 39 30	96 15 30	
124	28 39 30	96 14 30	
125	28 39 30	96 13 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Matagorda (Cont'd.)	148	28 38 30	96 24 30
	149	28 38 30	96 23 30
	150	28 38 30	96 22 30
	151	28 38 30	96 21 30
	154	28 38 30	96 18 30
	155	28 38 30	96 17 30
	156	28 38 30	96 16 30
	173	28 37 30	96 35 30
	174	28 37 30	96 34 30
	176	28 37 30	96 32 30
	177	28 37 30	96 31 30
	178	28 37 30	96 30 30
	181	28 37 30	96 27 30
	188	28 37 30	96 20 30
	189	28 37 30	96 19 30
	190	28 37 30	96 18 30
	191	28 37 30	96 17 30
	192	28 37 30	96 16 30
	193	28 37 30	96 15 30
	194	28 37 30	96 14 30
	195	28 37 30	96 13 30
	208	28 37 30	96 0 30
	212	28 36 30	96 36 30
	214	28 36 30	96 34 30
	215	28 36 30	96 33 30
	216	28 36 30	96 32 30
	217	28 36 30	96 31 30
	218	28 36 30	96 30 30
	219	28 36 30	96 29 30
	220	28 36 30	96 28 30
	221	28 36 30	96 27 30
	222	28 36 30	96 26 30
	225	28 36 30	96 23 30
	226	28 36 30	96 22 30
	227	28 36 30	96 21 30
	228	28 36 30	96 20 30
	229	28 36 30	96 19 30
	230	28 36 30	96 18 30
	231	28 36 30	96 17 30
	233	28 36 30	96 15 30
234	28 36 30	96 14 30	
235	28 36 30	96 13 30	
240	28 36 30	96 8 30	
241	28 36 30	96 7 30	
242	28 36 30	96 6 30	
243	28 36 30	96 5 30	
244	28 36 30	96 4 30	
245	28 36 30	96 3 30	
246	28 36 30	96 2 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Matagorda (Cont'd.)	247	28 36 30	96 1 30
	248	28 36 30	96 0 30
	253	28 35 30	96 35 30
	254	28 35 30	96 34 30
	256	28 35 30	96 32 30
	257	28 35 30	96 31 30
	258	28 35 30	96 30 30
	259	28 35 30	96 29 30
	261	28 35 30	96 27 30
	263	28 35 30	96 25 30
	264	28 35 30	96 24 30
	265	28 35 30	96 23 30
	266	28 35 30	96 22 30
	267	28 35 30	96 21 30
	268	28 35 30	96 20 30
	269	28 35 30	96 19 30
	270	28 35 30	96 18 30
	271	28 35 30	96 17 30
	272	28 35 30	96 16 30
	273	28 35 30	96 15 30
	274	28 35 30	96 14 30
	278	28 35 30	96 10 30
	279	28 35 30	96 9 30
	280	28 35 30	96 8 30
	281	28 35 30	96 7 30
	282	28 35 30	96 6 30
	283	28 35 30	96 5 30
	284	28 35 30	96 4 30
	285	28 35 30	96 3 30
	286	28 35 30	96 2 30
	287	28 35 30	96 1 30
	298	28 34 30	96 32 30
	300	28 34 30	96 30 30
	301	28 34 30	96 29 30
	303	28 34 30	96 27 30
	304	28 34 30	96 26 30
	305	28 34 30	96 25 30
	306	28 34 30	96 24 30
307	28 34 30	96 23 30	
308	28 34 30	96 22 30	
309	28 34 30	96 21 30	
310	28 34 30	96 20 30	
311	28 34 30	96 19 30	
312	28 34 30	96 18 30	
314	28 34 30	96 16 30	
315	28 34 30	96 15 30	
316	28 34 30	96 14 30	
317	28 34 30	96 13 30	
318	28 34 30	96 12 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Matagorda (Cont'd.)	320	28 34 30	96 10 30
	321	28 34 30	96 9 30
	322	28 34 30	96 8 30
	323	28 34 30	96 7 30
	324	28 34 30	96 6 30
	325	28 34 30	96 5 30
	326	28 34 30	96 4 30
	334	28 33 30	96 29 30
	335	28 33 30	96 28 30
	336	28 33 30	96 27 30
	337	28 33 30	96 26 30
	338	28 33 30	96 25 30
	339	28 33 30	96 24 30
	340	28 33 30	96 23 30
	341	28 33 30	96 22 30
	342	28 33 30	96 21 30
	343	28 33 30	96 20 30
	344	28 33 30	96 19 30
	345	28 33 30	96 18 30
	346	28 33 30	96 17 30
	347	28 33 30	96 16 30
	348	28 33 30	96 15 30
	349	28 33 30	96 14 30
	350	28 33 30	96 13 30
	352	28 33 30	96 11 30
	353	28 33 30	96 10 30
	354	28 33 30	96 9 30
	355	28 33 30	96 8 30
	356	28 33 30	96 7 30
	364	28 32 30	96 30 30
	366	28 32 30	96 28 30
	367	28 32 30	96 27 30
	368	28 32 30	96 26 30
	369	28 32 30	96 25 30
	370	28 32 30	96 24 30
	371	28 32 30	96 23 30
	372	28 32 30	96 22 30
	373	28 32 30	96 21 30
	374	28 32 30	96 20 30
375	28 32 30	96 19 30	
377	28 32 30	96 17 30	
378	28 32 30	96 16 30	
380	28 32 30	96 14 30	
381	28 32 30	96 13 30	
383	28 32 30	96 11 30	
384	28 32 30	96 10 30	
390	28 31 30	96 29 30	
391	28 31 30	96 28 30	
393	28 31 30	96 26 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Matagorda (Cont'd.)	394	28 31 30	96 25 30
	395	28 31 30	96 24 30
	396	28 31 30	96 23 30
	397	28 31 30	96 22 30
	398	28 31 30	96 21 30
	399	28 31 30	96 20 30
	400	28 31 30	96 19 30
	402	28 31 30	96 17 30
	403	28 31 30	96 16 30
	404	28 31 30	96 15 30
	405	28 31 30	96 14 30
	407	28 31 30	96 12 30
	408	28 31 30	96 11 30
	411	28 30 30	96 31 30
	412	28 30 30	96 30 30
	414	28 30 30	96 28 30
	415	28 30 30	96 27 30
	417	28 30 30	96 25 30
	418	28 30 30	96 24 30
	419	28 30 30	96 23 30
	420	28 30 30	96 22 30
	421	28 30 30	96 21 30
	422	28 30 30	96 20 30
	423	28 30 30	96 19 30
	425	28 30 30	96 17 30
	426	28 30 30	96 16 30
	438	28 29 30	96 26 30
	439	28 29 30	96 25 30
	441	28 29 30	96 23 30
	442	28 29 30	96 22 30
	443	28 29 30	96 21 30
	444	28 29 30	96 20 30
	445	28 29 30	96 19 30
	446	28 29 30	96 18 30
	448	28 29 30	96 16 30
	449	28 29 30	96 15 30
	459	28 28 30	96 24 30
	461	28 28 30	96 22 30
	462	28 28 30	96 21 30
	463	28 28 30	96 20 30
	464	28 28 30	96 19 30
	466	28 28 30	96 17 30
	471	28 27 30	96 23 30
	474	28 27 30	96 20 30
	475	28 27 30	96 19 30
	476	28 27 30	96 18 30
	480	28 26 30	96 22 30
	481	28 26 30	96 21 30
482	28 26 30	96 20 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Matagorda (Cont'd.)	488	28 25 30	96 21 30
	492	28 24 30	96 23 30
	493	28 24 30	96 22 30
San Antonio	27	28 25 30	96 45 30
	35	28 24 30	96 45 30
	37	28 24 30	96 43 30
	40	28 23 30	96 49 30
	41	28 23 30	96 48 30
	42	28 23 30	96 47 30
	43	28 23 30	96 46 30
	44	28 23 30	96 45 30
	45	28 23 30	96 44 30
	50	28 22 30	96 48 30
	51	28 22 30	96 47 30
	52	28 22 30	96 46 30
	54	28 22 30	96 44 30
	56	28 22 30	96 42 30
	60	28 21 30	96 46 30
	61	28 21 30	96 45 30
	62	28 21 30	96 44 30
	63	28 21 30	96 43 30
	68	28 20 30	96 46 30
	69	28 20 30	96 45 30
	70	28 20 30	96 44 30
	71	28 20 30	96 43 30
	79	28 19 30	96 46 30
	80	28 19 30	96 45 30
	81	28 19 30	96 44 30
	82	28 19 30	96 43 30
	83	28 19 30	96 42 30
90	28 18 30	96 46 30	
91	28 18 30	96 45 30	
92	28 18 30	96 44 30	
93	28 18 30	96 43 30	
94	28 18 30	96 42 30	
96	28 18 30	96 40 30	
97	28 18 30	96 39 30	
98	28 18 30	96 38 30	
101	28 17 30	96 47 30	
102	28 17 30	96 46 30	
103	28 17 30	96 45 30	
104	28 17 30	96 44 30	
105	28 17 30	96 43 30	
106	28 17 30	96 42 30	
107	28 17 30	96 41 30	
108	28 17 30	96 40 30	
109	28 17 30	96 39 30	
110	28 17 30	96 38 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
San Antonio (Cont'd.)	111	28 17 30	96 37 30
	112	28 17 30	96 36 30
	119	28 16 30	96 47 30
	120	28 16 30	96 46 30
	121	28 16 30	96 45 30
	122	28 16 30	96 44 30
	123	28 16 30	96 43 30
	124	28 16 30	96 42 30
	125	28 16 30	96 41 30
	126	28 16 30	96 40 30
	127	28 16 30	96 39 30
	128	28 16 30	96 38 30
	129	28 16 30	96 37 30
	136	28 15 30	96 46 30
	137	28 15 30	96 45 30
	138	28 15 30	96 44 30
	139	28 15 30	96 43 30
	140	28 15 30	96 42 30
	141	28 15 30	96 41 30
	142	28 15 30	96 40 30
	143	28 15 30	96 39 30
	144	28 15 30	96 38 30
	153	28 14 30	96 45 30
	154	28 14 30	96 44 30
	155	28 14 30	96 43 30
	156	28 14 30	96 42 30
	157	28 14 30	96 41 30
	158	28 14 30	96 40 30
	166	28 13 30	96 46 30
	167	28 13 30	96 45 30
168	28 13 30	96 44 30	
169	28 13 30	96 43 30	
170	28 13 30	96 42 30	
171	28 13 30	96 41 30	
177	28 12 30	96 48 30	
178	28 12 30	96 47 30	
179	28 12 30	96 46 30	
180	28 12 30	96 45 30	
181	28 12 30	96 44 30	
182	28 12 30	96 43 30	
183	28 12 30	96 42 30	
188	28 11 30	96 48 30	
212	28 25 30	96 25 30	
217	28 24 30	96 27 30	
218	28 24 30	96 26 30	
219	28 24 30	96 25 30	
224	28 23 30	96 29 30	
225	28 23 30	96 28 30	
226	28 23 30	96 27 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
San Antonio (Cont'd.)	233	28 22 30	96 31 30
	234	28 22 30	96 30 30
	235	28 22 30	96 29 30
	236	28 22 30	96 28 30
	247	28 21 30	96 33 30
	248	28 21 30	96 32 30
	249	28 21 30	96 31 30
	250	28 21 30	96 30 30
	251	28 21 30	96 29 30
	252	28 21 30	96 28 30
	253	28 21 30	96 27 30
	259	28 20 30	96 35 30
	260	28 20 30	96 34 30
	261	28 20 30	96 33 30
	262	28 20 30	96 32 30
	263	28 20 30	96 31 30
	264	28 20 30	96 30 30
	265	28 20 30	96 29 30
	266	28 20 30	96 28 30
	267	28 20 30	96 27 30
	271	28 19 30	96 36 30
	272	28 19 30	96 35 30
	273	28 19 30	96 34 30
	274	28 19 30	96 33 30
	275	28 19 30	96 32 30
	276	28 19 30	96 31 30
	281	28 18 30	96 36 30
	282	28 18 30	96 35 30
283	28 18 30	96 34 30	
284	28 18 30	96 33 30	
Aransas	31	28 11 30	97 1 30
	34	28 11 30	96 56 30
	45	28 10 30	97 3 30
	46	28 10 30	97 2 30
	47	28 10 30	97 1 30
	50	28 10 30	96 57 30
	65	28 9 30	97 6 30
	66	28 9 30	97 5 30
	67	28 9 30	97 4 30
	68	28 9 30	97 3 30
	69	28 9 30	97 2 30
	70	28 9 30	97 1 30
	73	28 9 30	96 57 30
	78	28 9 30	96 51 30
	79	28 9 30	96 50 30
	88	28 8 30	97 7 30
89	28 8 30	97 6 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Aransas (Cont'd.)	90	28 8 30	97 5 30
	91	28 8 30	97 4 30
	92	28 8 30	97 3 30
	93	28 8 30	97 2 30
	94	28 8 30	97 1 30
	98	28 8 30	96 57 30
	104	28 8 30	96 51 30
	105	28 8 30	96 50 30
	112	28 7 30	97 9 30
	113	28 7 30	97 8 30
	114	28 7 30	97 7 30
	115	28 7 30	97 6 30
	116	28 7 30	97 5 30
	117	28 7 30	97 4 30
	118	28 7 30	97 3 30
	119	28 7 30	97 2 30
	120	28 7 30	97 1 30
	121	28 7 30	97 0 30
	122	28 7 30	96 59 30
	124	28 7 30	96 57 30
	130	28 7 30	96 51 30
	131	28 7 30	96 50 30
	132	28 7 30	96 49 30
	136	28 6 30	97 11 30
	137	28 6 30	97 10 30
	138	28 6 30	97 9 30
	139	28 6 30	97 8 30
	140	28 6 30	97 7 30
	141	28 6 30	97 6 30
	142	28 6 30	97 5 30
	143	28 6 30	97 4 30
	144	28 6 30	97 3 30
	147	28 6 30	97 0 30
148	28 6 30	96 59 30	
149	28 6 30	96 58 30	
150	28 6 30	96 57 30	
151	28 6 30	96 56 30	
152	28 6 30	96 55 30	
160	28 5 30	97 12 30	
161	28 5 30	97 11 30	
162	28 5 30	97 10 30	
163	28 5 30	97 9 30	
164	28 5 30	97 8 30	
165	28 5 30	97 7 30	
166	28 5 30	97 6 30	
167	28 5 30	97 5 30	
168	28 5 30	97 4 30	
169	28 5 30	97 3 30	
171	28 5 30	97 1 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Aransas (Cont'd.)	172	28 5 30	97 0 30
	173	28 5 30	96 59 30
	174	28 5 30	96 58 30
	175	28 5 30	96 57 30
	176	28 5 30	96 56 30
	177	28 5 30	96 55 30
	186	28 4 30	97 12 30
	187	28 4 30	97 11 30
	188	28 4 30	97 10 30
	189	28 4 30	97 9 30
	190	28 4 30	97 8 30
	191	28 4 30	97 7 30
	192	28 4 30	97 6 30
	196	28 4 30	97 1 30
	197	28 4 30	97 0 30
	198	28 4 30	96 59 30
	199	28 4 30	96 58 30
	200	28 4 30	96 57 30
	201	28 4 30	96 56 30
	212	28 3 30	97 10 30
	213	28 3 30	97 9 30
	214	28 3 30	97 8 30
	220	28 3 30	97 1 30
	221	28 3 30	97 0 30
	222	28 3 30	96 59 30
	223	28 3 30	96 58 30
	224	28 3 30	96 57 30
	225	28 3 30	96 56 30
	232	28 2 30	97 9 30
	233	28 2 30	97 8 30
	237	28 2 30	97 1 30
	238	28 2 30	97 0 30
	239	28 2 30	96 59 30
	240	28 2 30	96 58 30
	241	28 2 30	96 57 30
	250	28 1 30	97 2 30
	251	28 1 30	97 1 30
	252	28 1 30	97 0 30
	253	28 1 30	96 59 30
	254	28 1 30	96 58 30
	263	28 0 30	97 2 30
	264	28 0 30	97 1 30
	265	28 0 30	97 0 30
	266	28 0 30	96 59 30
	267	28 0 30	96 58 30
	275	27 59 30	97 3 30
	276	27 59 30	97 2 30
	277	27 59 30	97 1 30
	278	27 59 30	97 0 30

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Aransas (Cont'd.)	279	27 59 30	96 59 30
	286	27 58 30	97 3 30
	287	27 58 30	97 2 30
	288	27 58 30	97 1 30
	289	27 58 30	97 0 30
	290	27 58 30	96 59 30
	291	27 58 30	96 58 30
	296	27 57 30	97 3 30
	297	27 57 30	97 2 30
	298	27 57 30	97 1 30
	299	27 57 30	97 0 30
	300	27 57 30	96 59 30
	304	27 56 30	97 4 30
	305	27 56 30	97 3 30
	306	27 56 30	97 2 30
	307	27 56 30	97 1 30
	308	27 56 30	97 0 30
	313	27 55 30	97 4 30
	314	27 55 30	97 3 30
	315	27 55 30	97 2 30
316	27 55 30	97 1 30	
323	27 54 30	97 3 30	
324	27 54 30	97 2 30	
Corpus Christi	21	27 51 30	97 27 30
	22	27 51 30	97 26 30
	23	27 51 30	97 25 30
	24	27 51 30	97 24 30
	25	27 51 30	97 23 30
	31	27 50 30	97 28 30
	32	27 50 30	97 27 30
	33	27 50 30	97 26 30
	34	27 50 30	97 25 30
	35	27 50 30	97 24 30
	36	27 50 30	97 23 30
	59	27 52 30	97 17 30
	60	27 52 30	97 16 30
	68	27 51 30	97 20 30
	69	27 51 30	97 19 30
	70	27 51 30	97 18 30
	71	27 51 30	97 17 30
	72	27 51 30	97 16 30
73	27 51 30	97 15 30	
83	27 50 30	97 21 30	
84	27 50 30	97 20 30	
85	27 50 30	97 19 30	
86	27 50 30	97 18 30	
87	27 50 30	97 17 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Corpus Christi (Cont'd.)	88	27 50 30	97 16 30
	89	27 50 30	97 15 30
	93	27 50 30	97 9 30
	94	27 50 30	97 8 30
	96	27 50 30	97 6 30
	97	27 50 30	97 5 30
	101	27 49 30	97 22 30
	102	27 49 30	97 21 30
	103	27 49 30	97 20 30
	104	27 49 30	97 19 30
	105	27 49 30	97 18 30
	106	27 49 30	97 17 30
	107	27 49 30	97 16 30
	108	27 49 30	97 15 30
	109	27 49 30	97 14 30
	114	27 49 30	97 9 30
	116	27 49 30	97 7 30
	123	27 48 30	97 20 30
	124	27 48 30	97 19 30
	125	27 48 30	97 18 30
	126	27 48 30	97 17 30
	127	27 48 30	97 16 30
	128	27 48 30	97 15 30
	129	27 48 30	97 14 30
	132	27 48 30	97 11 30
	133	27 48 30	97 10 30
	134	27 48 30	97 9 30
	135	27 48 30	97 8 30
	141	27 47 30	97 22 30
	142	27 47 30	97 21 30
	143	27 47 30	97 20 30
	144	27 47 30	97 19 30
	145	27 47 30	97 18 30
146	27 47 30	97 17 30	
147	27 47 30	97 16 30	
148	27 47 30	97 15 30	
149	27 47 30	97 14 30	
150	27 47 30	97 13 30	
151	27 47 30	97 12 30	
152	27 47 30	97 11 30	
153	27 47 30	97 10 30	
154	27 47 30	97 9 30	
160	27 46 30	97 22 30	
161	27 46 30	97 21 30	
162	27 46 30	97 20 30	
163	27 46 30	97 19 30	
164	27 46 30	97 18 30	
165	27 46 30	97 17 30	
166	27 46 30	97 16 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Corpus Christi (Cont'd.)	167	27 46 30	97 15 30
	168	27 46 30	97 14 30
	169	27 46 30	97 13 30
	170	27 46 30	97 12 30
	171	27 46 30	97 11 30
	172	27 46 30	97 10 30
	173	27 46 30	97 9 30
	179	27 45 30	97 21 30
	180	27 45 30	97 20 30
	181	27 45 30	97 19 30
	182	27 45 30	97 18 30
	183	27 45 30	97 17 30
	184	27 45 30	97 16 30
	185	27 45 30	97 15 30
	186	27 45 30	97 14 30
	187	27 45 30	97 13 30
	188	27 45 30	97 12 30
	189	27 45 30	97 11 30
	190	27 45 30	97 10 30
	191	27 45 30	97 9 30
	195	27 44 30	97 21 30
	196	27 44 30	97 20 30
	197	27 44 30	97 19 30
	198	27 44 30	97 18 30
	199	27 44 30	97 17 30
	200	27 44 30	97 16 30
	201	27 44 30	97 15 30
	202	27 44 30	97 14 30
	203	27 44 30	97 13 30
	204	27 44 30	97 12 30
	205	27 44 30	97 11 30
	206	27 44 30	97 10 30
	211	27 43 30	97 20 30
	212	27 43 30	97 19 30
	213	27 43 30	97 18 30
	214	27 43 30	97 17 30
	215	27 43 30	97 16 30
	216	27 43 30	97 15 30
	217	27 43 30	97 14 30
	218	27 43 30	97 13 30
	219	27 43 30	97 12 30
	220	27 43 30	97 11 30
	221	27 43 30	97 10 30
	227	27 42 30	97 17 30
	228	27 42 30	97 16 30
	229	27 42 30	97 15 30
	230	27 42 30	97 14 30
	231	27 42 30	97 13 30
	232	27 42 30	97 12 30

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Corpus Christi (Cont'd.)	233	27 42 30	97 11 30
	241	27 41 30	97 12 30
Upper Laguna Madre	1	27 41 30	97 15 30
	2	27 41 30	97 14 30
	7	27 40 30	97 15 30
	8	27 40 30	97 14 30
	40	27 35 30	97 17 30
	46	27 34 30	97 18 30
	47	27 34 30	97 17 30
	49	27 34 30	97 15 30
	51	27 33 30	97 19 30
	52	27 33 30	97 18 30
	54	27 33 30	97 16 30
	57	27 32 30	97 19 30
	62	27 31 30	97 19 30
	63	27 31 30	97 18 30
	66	27 30 30	97 20 30
	67	27 30 30	97 19 30
	71	27 29 30	97 20 30
	72	27 29 30	97 19 30
	76	27 28 30	97 20 30
	77	27 28 30	97 19 30
	79	27 27 30	97 21 30
	80	27 27 30	97 20 30
	81	27 27 30	97 19 30
	84	27 26 30	97 21 30
	85	27 26 30	97 20 30
	86	27 26 30	97 19 30
	88	27 25 30	97 21 30
	89	27 25 30	97 20 30
	92	27 24 30	97 21 30
	93	27 24 30	97 20 30
	95	27 23 30	97 22 30
	96	27 23 30	97 21 30
	97	27 23 30	97 20 30
99	27 22 30	97 22 30	
102	27 21 30	97 23 30	
103	27 21 30	97 22 30	
106	27 20 30	97 23 30	
125	27 21 30	97 41 30	
126	27 21 30	97 40 30	
132	27 20 30	97 40 30	
133	27 20 30	97 39 30	
135	27 20 30	97 31 30	
141	27 19 30	97 40 30	
142	27 19 30	97 39 30	
143	27 19 30	97 38 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Upper Laguna Madre (Cont'd.)	147	27 19 30	97 33 30
	148	27 19 30	97 32 30
	149	27 19 30	97 31 30
	155	27 18 30	97 39 30
	156	27 18 30	97 38 30
	160	27 18 30	97 34 30
	161	27 18 30	97 33 30
	162	27 18 30	97 32 30
	167	27 18 30	97 27 30
	176	27 17 30	97 39 30
	177	27 17 30	97 38 30
	178	27 17 30	97 37 30
	180	27 17 30	97 35 30
	181	27 17 30	97 34 30
	182	27 17 30	97 33 30
	186	27 17 30	97 28 30
	187	27 17 30	97 27 30
	188	27 17 30	97 26 30
	189	27 17 30	97 25 30
	197	27 16 30	97 41 30
	198	27 16 30	97 40 30
	199	27 16 30	97 39 30
	200	27 16 30	97 38 30
	201	27 16 30	97 37 30
	202	27 16 30	97 36 30
	203	27 16 30	97 35 30
	204	27 16 30	97 34 30
	205	27 16 30	97 33 30
	206	27 16 30	97 32 30
	209	27 16 30	97 29 30
	210	27 16 30	97 28 30
	211	27 16 30	97 27 30
221	27 15 30	97 38 30	
222	27 15 30	97 37 30	
223	27 15 30	97 36 30	
224	27 15 30	97 35 30	
225	27 15 30	97 34 30	
226	27 15 30	97 33 30	
227	27 15 30	97 30 30	
228	27 15 30	97 31 30	
229	27 15 30	97 30 30	
230	27 15 30	97 29 30	
231	27 15 30	97 28 30	
239	27 14 30	97 37 30	
241	27 14 30	97 35 30	
243	27 14 30	97 33 30	
244	27 14 30	97 32 30	
245	27 14 30	97 31 30	
246	27 14 30	97 30 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Upper Laguna Madre (Cont'd.)	258	27 13 30	97 24 30
	263	27 12 30	97 24 30
	267	27 11 30	97 25 30
	268	27 11 30	97 24 30
	272	27 10 30	97 25 30
	273	27 10 30	97 24 30
	Lower Laguna Madre	10	26 46 30
11		26 46 30	97 27 30
16		26 45 30	97 27 30
17		26 45 30	97 26 30
21		26 44 30	97 27 30
22		26 44 30	97 26 30
26		26 43 30	97 27 30
27		26 43 30	97 26 30
32		26 42 30	97 27 30
33		26 42 30	97 26 30
37		26 41 30	97 27 30
38		26 41 30	97 26 30
39		26 41 30	97 25 30
42		26 40 30	97 27 30
43		26 40 30	97 26 30
44		26 40 30	97 25 30
48		26 39 30	97 26 30
49		26 39 30	97 25 30
50		26 39 30	97 24 30
54		26 38 30	97 26 30
55		26 38 30	97 25 30
56		26 38 30	97 24 30
60		26 37 30	97 26 30
61		26 37 30	97 25 30
62		26 37 30	97 24 30
66		26 36 30	97 26 30
67		26 36 30	97 25 30
68		26 36 30	97 24 30
69		26 36 30	97 23 30
74		26 35 30	97 25 30
75		26 35 30	97 24 30
76	26 35 30	97 23 30	
80	26 34 30	97 25 30	
81	26 34 30	97 24 30	
82	26 34 30	97 23 30	
87	26 33 30	97 25 30	
88	26 33 30	97 24 30	
89	26 33 30	97 23 30	
98	26 32 30	97 24 30	
99	26 32 30	97 23 30	
105	26 31 30	97 24 30	
106	26 31 30	97 23 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Lower Laguna Madre (Cont'd.)	112	26 30 30	97 24 30
	113	26 30 30	97 23 30
	120	26 29 30	97 23 30
	270	26 12 30	97 15 30
	271	26 12 30	97 14 30
	272	26 12 30	97 13 30
	273	26 12 30	97 12 30
	277	26 11 30	97 15 30
	278	26 11 30	97 14 30
	279	26 11 30	97 13 30
	280	26 11 30	97 12 30
	284	26 10 30	97 16 30
	285	26 10 30	97 15 30
	286	26 10 30	97 14 30
	287	26 10 30	97 13 30
	288	26 10 30	97 12 30
	293	26 9 30	97 16 30
	294	26 9 30	97 15 30
	295	26 9 30	97 14 30
	296	26 9 30	97 13 30
	297	26 9 30	97 12 30
	298	26 9 30	97 11 30
	301	26 8 30	97 16 30
	302	26 8 30	97 15 30
	303	26 8 30	97 14 30
	304	26 8 30	97 13 30
	305	26 8 30	97 12 30
	306	26 8 30	97 11 30
	310	26 7 30	97 16 30
	311	26 7 30	97 15 30
	312	26 7 30	97 14 30
	313	26 7 30	97 13 30
	314	26 7 30	97 12 30
	315	26 7 30	97 11 30
	319	26 6 30	97 16 30
	320	26 6 30	97 15 30
	321	26 6 30	97 14 30
322	26 6 30	97 13 30	
323	26 6 30	97 12 30	
324	26 6 30	97 11 30	
325	26 6 30	97 10 30	
329	26 5 30	97 16 30	
330	26 5 30	97 15 30	
331	26 5 30	97 14 30	
332	26 5 30	97 13 30	
333	26 5 30	97 12 30	
334	26 5 30	97 11 30	
335	26 5 30	97 10 30	
347	26 4 30	97 11 30	

Table A.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Lower Laguna Madre	348	26 4 30	97 10 30
(Cont'd.)	360	26 3 30	97 11 30
	361	26 3 30	97 10 30

Appendix B. Gulf trawl site identification.

Table B.1. Gulf trawl grids.

Bay	Grid	Latitude	Longitude
Gulf of Mexico	213	29 31 30	94 26 30
	214	29 31 30	94 25 30
	271	29 29 30	94 31 30
	297	29 28 30	94 34 30
	298	29 28 30	94 33 30
	299	29 28 30	94 32 30
	300	29 28 30	94 31 30
	301	29 28 30	94 30 30
	323	29 27 30	94 36 30
	324	29 27 30	94 35 30
	325	29 27 30	94 34 30
	326	29 27 30	94 33 30
	327	29 27 30	94 32 30
	328	29 27 30	94 31 30
	329	29 27 30	94 30 30
	349	29 26 30	94 38 30
	350	29 26 30	94 37 30
	351	29 26 30	94 36 30
	352	29 26 30	94 35 30
	353	29 26 30	94 34 30
	354	29 26 30	94 33 30
	355	29 26 30	94 32 30
	356	29 26 30	94 31 30
	357	29 26 30	94 30 30
	358	29 26 30	94 29 30
	374	29 25 30	94 40 30
	375	29 25 30	94 39 30
	376	29 25 30	94 38 30
	377	29 25 30	94 37 30
	378	29 25 30	94 36 30
	379	29 25 30	94 35 30
	380	29 25 30	94 34 30
	381	29 25 30	94 33 30
	382	29 25 30	94 32 30
	383	29 25 30	94 31 30
	384	29 25 30	94 30 30
	385	29 25 30	94 29 30
	399	29 24 30	94 41 30
	400	29 24 30	94 40 30
	401	29 24 30	94 39 30
	402	29 24 30	94 38 30
403	29 24 30	94 37 30	
404	29 24 30	94 36 30	
405	29 24 30	94 35 30	
406	29 24 30	94 34 30	
407	29 24 30	94 33 30	
408	29 24 30	94 32 30	
409	29 24 30	94 31 30	
410	29 24 30	94 30 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	411	29 24 30	94 29 30
	412	29 24 30	94 28 30
	422	29 23 30	94 42 30
	423	29 23 30	94 41 30
	424	29 23 30	94 40 30
	425	29 23 30	94 39 30
	426	29 23 30	94 38 30
	427	29 23 30	94 37 30
	428	29 23 30	94 36 30
	429	29 23 30	94 35 30
	430	29 23 30	94 34 30
	431	29 23 30	94 33 30
	432	29 23 30	94 32 30
	433	29 23 30	94 31 30
	434	29 23 30	94 30 30
	435	29 23 30	94 29 30
	436	29 23 30	94 28 30
	443	29 22 30	94 42 30
	444	29 22 30	94 41 30
	445	29 22 30	94 40 30
	446	29 22 30	94 39 30
	447	29 22 30	94 38 30
	448	29 22 30	94 37 30
	449	29 22 30	94 36 30
	450	29 22 30	94 35 30
	451	29 22 30	94 34 30
	452	29 22 30	94 33 30
	453	29 22 30	94 32 30
	454	29 22 30	94 31 30
	455	29 22 30	94 30 30
	456	29 22 30	94 29 30
	457	29 22 30	94 28 30
	458	29 22 30	94 27 30
	461	29 21 30	94 42 30
	462	29 21 30	94 41 30
	463	29 21 30	94 40 30
464	29 21 30	94 39 30	
465	29 21 30	94 38 30	
466	29 21 30	94 37 30	
467	29 21 30	94 36 30	
468	29 21 30	94 35 30	
469	29 21 30	94 34 30	
470	29 21 30	94 33 30	
471	29 21 30	94 32 30	
472	29 21 30	94 31 30	
473	29 21 30	94 30 30	
474	29 21 30	94 29 30	
475	29 21 30	94 28 30	
476	29 21 30	94 27 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	477	29 20 30	94 40 30
	478	29 20 30	94 39 30
	479	29 20 30	94 38 30
	480	29 20 30	94 37 30
	481	29 20 30	94 36 30
	482	29 20 30	94 35 30
	483	29 20 30	94 34 30
	484	29 20 30	94 33 30
	485	29 20 30	94 32 30
	486	29 20 30	94 31 30
	487	29 20 30	94 30 30
	488	29 19 30	94 43 30
	489	29 19 30	94 42 30
	490	29 19 30	94 41 30
	491	29 19 30	94 40 30
	492	29 19 30	94 39 30
	493	29 19 30	94 38 30
	494	29 19 30	94 37 30
	495	29 19 30	94 36 30
	496	29 19 30	94 35 30
	497	29 19 30	94 34 30
	498	29 19 30	94 33 30
	499	29 19 30	94 32 30
	500	29 18 30	94 45 30
	501	29 18 30	94 44 30
	502	29 18 30	94 43 30
	503	29 18 30	94 42 30
	504	29 18 30	94 41 30
	505	29 18 30	94 40 30
	506	29 18 30	94 39 30
	507	29 18 30	94 38 30
	508	29 18 30	94 37 30
	509	29 18 30	94 36 30
	510	29 18 30	94 35 30
	511	29 18 30	94 34 30
	512	29 17 30	94 46 30
	513	29 17 30	94 45 30
	514	29 17 30	94 44 30
	515	29 17 30	94 43 30
	516	29 17 30	94 42 30
	517	29 17 30	94 41 30
	518	29 17 30	94 40 30
	519	29 17 30	94 39 30
	520	29 17 30	94 38 30
	521	29 17 30	94 37 30
	522	29 17 30	94 36 30
	523	29 17 30	94 35 30
	524	29 16 30	94 47 30
	525	29 16 30	94 46 30

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	526	29 16 30	94 45 30
	527	29 16 30	94 44 30
	528	29 16 30	94 43 30
	529	29 16 30	94 42 30
	530	29 16 30	94 41 30
	531	29 16 30	94 40 30
	532	29 16 30	94 39 30
	533	29 16 30	94 38 30
	534	29 16 30	94 37 30
	535	29 16 30	94 36 30
	536	29 15 30	94 49 30
	537	29 15 30	94 48 30
	538	29 15 30	94 47 30
	539	29 15 30	94 46 30
	540	29 15 30	94 45 30
	541	29 15 30	94 44 30
	542	29 15 30	94 43 30
	543	29 15 30	94 42 30
	544	29 15 30	94 41 30
	545	29 15 30	94 40 30
	546	29 15 30	94 39 30
	547	29 15 30	94 38 30
	548	29 15 30	94 37 30
	549	29 15 30	94 36 30
	550	29 14 30	94 51 30
	551	29 14 30	94 50 30
	552	29 14 30	94 49 30
	553	29 14 30	94 48 30
	554	29 14 30	94 47 30
	555	29 14 30	94 46 30
	556	29 14 30	94 45 30
	557	29 14 30	94 44 30
	558	29 14 30	94 43 30
	559	29 14 30	94 42 30
	560	29 14 30	94 41 30
	561	29 14 30	94 40 30
	562	29 14 30	94 39 30
	563	29 14 30	94 38 30
	564	29 14 30	94 37 30
	565	29 13 30	94 53 30
	566	29 13 30	94 52 30
	567	29 13 30	94 51 30
	568	29 13 30	94 50 30
	569	29 13 30	94 49 30
	570	29 13 30	94 48 30
	571	29 13 30	94 47 30
	572	29 13 30	94 46 30
	573	29 13 30	94 45 30
	574	29 13 30	94 44 30

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	575	29 13 30	94 43 30
	576	29 13 30	94 42 30
	577	29 13 30	94 41 30
	578	29 13 30	94 40 30
	579	29 13 30	94 39 30
	580	29 13 30	94 38 30
	581	29 13 30	94 37 30
	584	29 12 30	94 53 30
	585	29 12 30	94 52 30
	586	29 12 30	94 51 30
	587	29 12 30	94 50 30
	588	29 12 30	94 49 30
	589	29 12 30	94 48 30
	590	29 12 30	94 47 30
	591	29 12 30	94 46 30
	592	29 12 30	94 45 30
	593	29 12 30	94 44 30
	594	29 12 30	94 43 30
	595	29 12 30	94 42 30
	596	29 12 30	94 41 30
	597	29 12 30	94 40 30
	598	29 12 30	94 39 30
	599	29 12 30	94 38 30
	603	29 11 30	94 53 30
	604	29 11 30	94 52 30
	605	29 11 30	94 51 30
	606	29 11 30	94 50 30
	607	29 11 30	94 49 30
	608	29 11 30	94 48 30
	609	29 11 30	94 47 30
	610	29 11 30	94 46 30
	611	29 11 30	94 45 30
	612	29 11 30	94 44 30
	613	29 11 30	94 43 30
614	29 11 30	94 42 30	
615	29 11 30	94 41 30	
616	29 11 30	94 40 30	
617	29 11 30	94 39 30	
624	29 10 30	94 52 30	
625	29 10 30	94 51 30	
626	29 10 30	94 50 30	
627	29 10 30	94 49 30	
628	29 10 30	94 48 30	
629	29 10 30	94 47 30	
630	29 10 30	94 46 30	
631	29 10 30	94 45 30	
632	29 10 30	94 44 30	
633	29 10 30	94 43 30	
634	29 10 30	94 42 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	635	29 10 30	94 41 30
	636	29 10 30	94 40 30
	646	29 9 30	94 51 30
	647	29 9 30	94 50 30
	648	29 9 30	94 49 30
	649	29 9 30	94 48 30
	650	29 9 30	94 47 30
	651	29 9 30	94 46 30
	652	29 9 30	94 45 30
	653	29 9 30	94 44 30
	654	29 9 30	94 43 30
	655	29 9 30	94 42 30
	666	29 8 30	94 51 30
	667	29 8 30	94 50 30
	668	29 8 30	94 49 30
	669	29 8 30	94 48 30
	670	29 8 30	94 47 30
	671	29 8 30	94 46 30
	672	29 8 30	94 45 30
	673	29 8 30	94 44 30
	674	29 8 30	94 43 30
	688	29 7 30	94 50 30
	689	29 7 30	94 49 30
	690	29 7 30	94 48 30
	691	29 7 30	94 47 30
	692	29 7 30	94 46 30
	693	29 7 30	94 45 30
	709	29 6 30	94 49 30
	710	29 6 30	94 48 30
	711	29 6 30	94 47 30
	1357	28 31 30	96 8 30
	1358	28 31 30	96 7 30
	1359	28 31 30	96 6 30
	1381	28 30 30	96 10 30
	1382	28 30 30	96 9 30
	1383	28 30 30	96 8 30
	1384	28 30 30	96 7 30
	1385	28 30 30	96 6 30
	1386	28 30 30	96 5 30
	1406	28 29 30	96 12 30
	1407	28 29 30	96 11 30
	1408	28 29 30	96 10 30
	1409	28 29 30	96 9 30
1410	28 29 30	96 8 30	
1411	28 29 30	96 7 30	
1412	28 29 30	96 6 30	
1413	28 29 30	96 5 30	
1430	28 28 30	96 14 30	
1431	28 28 30	96 13 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1432	28 28 30	96 12 30
	1433	28 28 30	96 11 30
	1434	28 28 30	96 10 30
	1435	28 28 30	96 9 30
	1436	28 28 30	96 8 30
	1437	28 28 30	96 7 30
	1438	28 28 30	96 6 30
	1439	28 28 30	96 5 30
	1440	28 28 30	96 4 30
	1453	28 27 30	96 16 30
	1454	28 27 30	96 15 30
	1455	28 27 30	96 14 30
	1456	28 27 30	96 13 30
	1457	28 27 30	96 12 30
	1458	28 27 30	96 11 30
	1459	28 27 30	96 10 30
	1460	28 27 30	96 9 30
	1461	28 27 30	96 8 30
	1462	28 27 30	96 7 30
	1463	28 27 30	96 6 30
	1464	28 27 30	96 5 30
	1465	28 27 30	96 4 30
	1466	28 27 30	96 3 30
	1476	28 26 30	96 17 30
	1477	28 26 30	96 16 30
	1478	28 26 30	96 15 30
	1479	28 26 30	96 14 30
	1480	28 26 30	96 13 30
	1481	28 26 30	96 12 30
	1482	28 26 30	96 11 30
	1483	28 26 30	96 10 30
	1484	28 26 30	96 9 30
1485	28 26 30	96 8 30	
1486	28 26 30	96 7 30	
1487	28 26 30	96 6 30	
1488	28 26 30	96 5 30	
1489	28 26 30	96 4 30	
1490	28 26 30	96 3 30	
1497	28 25 30	96 18 30	
1498	28 25 30	96 17 30	
1499	28 25 30	96 16 30	
1500	28 25 30	96 15 30	
1501	28 25 30	96 14 30	
1502	28 25 30	96 13 30	
1503	28 25 30	96 12 30	
1504	28 25 30	96 11 30	
1505	28 25 30	96 10 30	
1506	28 25 30	96 9 30	
1507	28 25 30	96 8 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1508	28 25 30	96 7 30
	1509	28 25 30	96 6 30
	1510	28 25 30	96 5 30
	1511	28 25 30	96 4 30
	1512	28 25 30	96 3 30
	1513	28 25 30	96 2 30
	1517	28 24 30	96 20 30
	1518	28 24 30	96 19 30
	1519	28 24 30	96 18 30
	1520	28 24 30	96 17 30
	1521	28 24 30	96 16 30
	1522	28 24 30	96 15 30
	1523	28 24 30	96 14 30
	1524	28 24 30	96 13 30
	1525	28 24 30	96 12 30
	1526	28 24 30	96 11 30
	1527	28 24 30	96 10 30
	1528	28 24 30	96 9 30
	1529	28 24 30	96 8 30
	1530	28 24 30	96 7 30
	1531	28 24 30	96 6 30
	1532	28 24 30	96 5 30
	1533	28 24 30	96 4 30
	1534	28 24 30	96 3 30
	1535	28 24 30	96 2 30
	1537	28 23 30	96 21 30
	1538	28 23 30	96 20 30
	1539	28 23 30	96 19 30
	1540	28 23 30	96 18 30
	1541	28 23 30	96 17 30
	1542	28 23 30	96 16 30
	1543	28 23 30	96 15 30
	1544	28 23 30	96 14 30
	1545	28 23 30	96 13 30
	1546	28 23 30	96 12 30
	1547	28 23 30	96 11 30
	1548	28 23 30	96 10 30
	1549	28 23 30	96 9 30
	1550	28 23 30	96 8 30
	1551	28 23 30	96 7 30
1552	28 23 30	96 6 30	
1553	28 23 30	96 5 30	
1554	28 23 30	96 4 30	
1555	28 23 30	96 3 30	
1556	28 22 30	96 22 30	
1557	28 22 30	96 21 30	
1558	28 22 30	96 20 30	
1559	28 22 30	96 19 30	
1560	28 22 30	96 18 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1561	28 22 30	96 17 30
	1562	28 22 30	96 16 30
	1563	28 22 30	96 15 30
	1564	28 22 30	96 14 30
	1565	28 22 30	96 13 30
	1566	28 22 30	96 12 30
	1567	28 22 30	96 11 30
	1568	28 22 30	96 10 30
	1569	28 22 30	96 9 30
	1570	28 22 30	96 8 30
	1571	28 22 30	96 7 30
	1572	28 22 30	96 6 30
	1573	28 21 30	96 22 30
	1574	28 21 30	96 21 30
	1575	28 21 30	96 20 30
	1576	28 21 30	96 19 30
	1577	28 21 30	96 18 30
	1578	28 21 30	96 17 30
	1579	28 21 30	96 16 30
	1580	28 21 30	96 15 30
	1581	28 21 30	96 14 30
	1582	28 21 30	96 13 30
	1583	28 21 30	96 12 30
	1584	28 21 30	96 11 30
	1585	28 21 30	96 10 30
	1586	28 21 30	96 9 30
	1587	28 21 30	96 8 30
	1588	28 20 30	96 22 30
	1589	28 20 30	96 21 30
	1590	28 20 30	96 20 30
	1591	28 20 30	96 19 30
	1592	28 20 30	96 18 30
	1593	28 20 30	96 17 30
	1594	28 20 30	96 16 30
	1595	28 20 30	96 15 30
	1596	28 20 30	96 14 30
	1597	28 20 30	96 13 30
	1598	28 20 30	96 12 30
	1599	28 20 30	96 11 30
	1600	28 20 30	96 10 30
	1603	28 19 30	96 23 30
1604	28 19 30	96 22 30	
1605	28 19 30	96 21 30	
1606	28 19 30	96 20 30	
1607	28 19 30	96 19 30	
1608	28 19 30	96 18 30	
1609	28 19 30	96 17 30	
1610	28 19 30	96 16 30	
1611	28 19 30	96 15 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1612	28 19 30	96 14 30
	1613	28 19 30	96 13 30
	1614	28 19 30	96 12 30
	1615	28 19 30	96 11 30
	1616	28 18 30	96 27 30
	1617	28 18 30	96 26 30
	1618	28 18 30	96 25 30
	1619	28 18 30	96 24 30
	1620	28 18 30	96 23 30
	1621	28 18 30	96 22 30
	1622	28 18 30	96 21 30
	1623	28 18 30	96 20 30
	1624	28 18 30	96 19 30
	1625	28 18 30	96 18 30
	1626	28 18 30	96 17 30
	1627	28 18 30	96 16 30
	1628	28 18 30	96 15 30
	1629	28 18 30	96 14 30
	1630	28 18 30	96 13 30
	1631	28 17 30	96 29 30
	1632	28 17 30	96 28 30
	1633	28 17 30	96 27 30
	1634	28 17 30	96 26 30
	1635	28 17 30	96 25 30
	1636	28 17 30	96 24 30
	1637	28 17 30	96 23 30
	1638	28 17 30	96 22 30
	1639	28 17 30	96 21 30
	1640	28 17 30	96 20 30
	1641	28 17 30	96 19 30
	1642	28 17 30	96 18 30
	1643	28 17 30	96 17 30
	1644	28 17 30	96 16 30
	1645	28 17 30	96 15 30
	1646	28 17 30	96 14 30
	1648	28 16 30	96 30 30
	1649	28 16 30	96 29 30
	1650	28 16 30	96 28 30
	1651	28 16 30	96 27 30
	1652	28 16 30	96 26 30
1653	28 16 30	96 25 30	
1654	28 16 30	96 24 30	
1655	28 16 30	96 23 30	
1656	28 16 30	96 22 30	
1657	28 16 30	96 21 30	
1658	28 16 30	96 20 30	
1659	28 16 30	96 19 30	
1660	28 16 30	96 18 30	
1661	28 16 30	96 17 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1662	28 16 30	96 16 30
	1663	28 16 30	96 15 30
	1668	28 15 30	96 29 30
	1669	28 15 30	96 28 30
	1670	28 15 30	96 27 30
	1671	28 15 30	96 26 30
	1672	28 15 30	96 25 30
	1673	28 15 30	96 24 30
	1674	28 15 30	96 23 30
	1675	28 15 30	96 22 30
	1676	28 15 30	96 21 30
	1677	28 15 30	96 20 30
	1678	28 15 30	96 19 30
	1679	28 15 30	96 18 30
	1680	28 15 30	96 17 30
	1681	28 15 30	96 16 30
	1689	28 14 30	96 28 30
	1690	28 14 30	96 27 30
	1691	28 14 30	96 26 30
	1692	28 14 30	96 25 30
	1693	28 14 30	96 24 30
	1694	28 14 30	96 23 30
	1695	28 14 30	96 22 30
	1696	28 14 30	96 21 30
	1697	28 14 30	96 20 30
	1698	28 14 30	96 19 30
	1699	28 14 30	96 18 30
	1700	28 14 30	96 17 30
	1701	28 14 30	96 16 30
	1711	28 13 30	96 28 30
	1712	28 13 30	96 27 30
	1713	28 13 30	96 26 30
	1714	28 13 30	96 25 30
	1715	28 13 30	96 24 30
	1716	28 13 30	96 23 30
	1717	28 13 30	96 22 30
	1718	28 13 30	96 21 30
	1719	28 13 30	96 20 30
	1720	28 13 30	96 19 30
	1721	28 13 30	96 18 30
	1722	28 13 30	96 17 30
1734	28 12 30	96 27 30	
1735	28 12 30	96 26 30	
1736	28 12 30	96 25 30	
1737	28 12 30	96 24 30	
1738	28 12 30	96 23 30	
1739	28 12 30	96 22 30	
1740	28 12 30	96 21 30	
1741	28 12 30	96 20 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	1742	28 12 30	96 19 30
	1757	28 11 30	96 26 30
	1758	28 11 30	96 25 30
	1759	28 11 30	96 24 30
	1760	28 11 30	96 23 30
	1761	28 11 30	96 22 30
	1762	28 11 30	96 21 30
	1763	28 11 30	96 20 30
	1779	28 10 30	96 26 30
	1780	28 10 30	96 25 30
	1781	28 10 30	96 24 30
	1782	28 10 30	96 23 30
	1801	28 9 30	96 25 30
	1935	28 0 30	96 54 30
	1936	28 0 30	96 53 30
	1950	27 59 30	96 55 30
	1951	27 59 30	96 54 30
	1952	27 59 30	96 53 30
	1953	27 59 30	96 52 30
	1965	27 58 30	96 56 30
	1966	27 58 30	96 55 30
	1967	27 58 30	96 54 30
	1968	27 58 30	96 53 30
	1969	27 58 30	96 52 30
	1970	27 58 30	96 51 30
	1980	27 57 30	96 57 30
	1981	27 57 30	96 56 30
	1982	27 57 30	96 55 30
	1983	27 57 30	96 54 30
	1984	27 57 30	96 53 30
	1985	27 57 30	96 52 30
	1986	27 57 30	96 51 30
1987	27 57 30	96 50 30	
1995	27 56 30	96 57 30	
1996	27 56 30	96 56 30	
1997	27 56 30	96 55 30	
1998	27 56 30	96 54 30	
1999	27 56 30	96 53 30	
2000	27 56 30	96 52 30	
2001	27 56 30	96 51 30	
2002	27 56 30	96 50 30	
2003	27 56 30	96 49 30	
2008	27 55 30	96 58 30	
2009	27 55 30	96 57 30	
2010	27 55 30	96 56 30	
2011	27 55 30	96 55 30	
2012	27 55 30	96 54 30	
2013	27 55 30	96 53 30	
2014	27 55 30	96 52 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	2015	27 55 30	96 51 30
	2016	27 55 30	96 50 30
	2017	27 55 30	96 49 30
	2018	27 55 30	96 48 30
	2021	27 54 30	96 59 30
	2022	27 54 30	96 58 30
	2023	27 54 30	96 57 30
	2024	27 54 30	96 56 30
	2025	27 54 30	96 55 30
	2026	27 54 30	96 54 30
	2027	27 54 30	96 53 30
	2028	27 54 30	96 52 30
	2029	27 54 30	96 51 30
	2030	27 54 30	96 50 30
	2031	27 54 30	96 49 30
	2032	27 54 30	96 48 30
	2033	27 54 30	96 47 30
	2034	27 53 30	97 0 30
	2035	27 53 30	96 59 30
	2036	27 53 30	96 58 30
	2037	27 53 30	96 57 30
	2038	27 53 30	96 56 30
	2039	27 53 30	96 55 30
	2040	27 53 30	96 54 30
	2041	27 53 30	96 53 30
	2042	27 53 30	96 52 30
	2043	27 53 30	96 51 30
	2044	27 53 30	96 50 30
	2045	27 53 30	96 49 30
	2046	27 53 30	96 48 30
	2047	27 52 30	97 1 30
	2048	27 52 30	97 0 30
	2049	27 52 30	96 59 30
	2050	27 52 30	96 58 30
	2051	27 52 30	96 57 30
	2052	27 52 30	96 56 30
	2053	27 52 30	96 55 30
	2054	27 52 30	96 54 30
	2055	27 52 30	96 53 30
	2056	27 52 30	96 52 30
2057	27 52 30	96 51 30	
2058	27 52 30	96 50 30	
2059	27 52 30	96 49 30	
2060	27 51 30	97 1 30	
2061	27 51 30	97 0 30	
2062	27 51 30	96 59 30	
2063	27 51 30	96 58 30	
2064	27 51 30	96 57 30	
2065	27 51 30	96 56 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	2066	27 51 30	96 55 30
	2067	27 51 30	96 54 30
	2068	27 51 30	96 53 30
	2069	27 51 30	96 52 30
	2070	27 51 30	96 51 30
	2071	27 51 30	96 50 30
	2072	27 50 30	97 2 30
	2073	27 50 30	97 1 30
	2074	27 50 30	97 0 30
	2075	27 50 30	96 59 30
	2076	27 50 30	96 58 30
	2077	27 50 30	96 57 30
	2078	27 50 30	96 56 30
	2079	27 50 30	96 55 30
	2080	27 50 30	96 54 30
	2081	27 50 30	96 53 30
	2082	27 50 30	96 52 30
	2083	27 50 30	96 51 30
	2084	27 49 30	97 2 30
	2085	27 49 30	97 1 30
	2086	27 49 30	97 0 30
	2087	27 49 30	96 59 30
	2088	27 49 30	96 58 30
	2089	27 49 30	96 57 30
	2090	27 49 30	96 56 30
	2091	27 49 30	96 55 30
	2092	27 49 30	96 54 30
	2093	27 49 30	96 53 30
	2094	27 49 30	96 52 30
	2095	27 48 30	97 3 30
	2096	27 48 30	97 2 30
	2097	27 48 30	97 1 30
	2098	27 48 30	97 0 30
	2099	27 48 30	96 59 30
	2100	27 48 30	96 58 30
	2101	27 48 30	96 57 30
	2102	27 48 30	96 56 30
	2103	27 48 30	96 55 30
	2104	27 48 30	96 54 30
	2105	27 48 30	96 53 30
2106	27 48 30	96 52 30	
2107	27 47 30	97 4 30	
2108	27 47 30	97 3 30	
2109	27 47 30	97 2 30	
2110	27 47 30	97 1 30	
2111	27 47 30	97 0 30	
2112	27 47 30	96 59 30	
2113	27 47 30	96 58 30	
2114	27 47 30	96 57 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	2115	27 47 30	96 56 30
	2116	27 47 30	96 55 30
	2117	27 47 30	96 54 30
	2118	27 47 30	96 53 30
	2119	27 46 30	97 5 30
	2120	27 46 30	97 4 30
	2121	27 46 30	97 3 30
	2122	27 46 30	97 2 30
	2123	27 46 30	97 1 30
	2124	27 46 30	97 0 30
	2125	27 46 30	96 59 30
	2126	27 46 30	96 58 30
	2127	27 46 30	96 57 30
	2128	27 46 30	96 56 30
	2129	27 46 30	96 55 30
	2130	27 46 30	96 54 30
	2131	27 46 30	96 53 30
	2132	27 45 30	97 6 30
	2133	27 45 30	97 5 30
	2134	27 45 30	97 4 30
	2135	27 45 30	97 3 30
	2136	27 45 30	97 2 30
	2137	27 45 30	97 1 30
	2138	27 45 30	97 0 30
	2139	27 45 30	96 59 30
	2140	27 45 30	96 58 30
	2141	27 45 30	96 57 30
	2142	27 45 30	96 56 30
	2143	27 45 30	96 55 30
	2144	27 45 30	96 54 30
	2145	27 44 30	97 6 30
	2146	27 44 30	97 5 30
	2147	27 44 30	97 4 30
	2148	27 44 30	97 3 30
	2149	27 44 30	97 2 30
	2150	27 44 30	97 1 30
	2151	27 44 30	97 0 30
	2152	27 44 30	96 59 30
	2153	27 44 30	96 58 30
	2154	27 44 30	96 57 30
	2155	27 44 30	96 56 30
	2156	27 44 30	96 55 30
	2157	27 43 30	97 7 30
	2158	27 43 30	97 6 30
	2159	27 43 30	97 5 30
	2160	27 43 30	97 4 30
	2161	27 43 30	97 3 30
	2162	27 43 30	97 2 30
	2163	27 43 30	97 1 30

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	2164	27 43 30	97 0 30
	2165	27 43 30	96 59 30
	2166	27 43 30	96 58 30
	2167	27 43 30	96 57 30
	2168	27 43 30	96 56 30
	2169	27 42 30	97 8 30
	2170	27 42 30	97 7 30
	2171	27 42 30	97 6 30
	2172	27 42 30	97 5 30
	2173	27 42 30	97 4 30
	2174	27 42 30	97 3 30
	2175	27 42 30	97 2 30
	2176	27 42 30	97 1 30
	2177	27 42 30	97 0 30
	2178	27 42 30	96 59 30
	2179	27 42 30	96 58 30
	2180	27 42 30	96 57 30
	2181	27 41 30	97 8 30
	2182	27 41 30	97 7 30
	2183	27 41 30	97 6 30
	2184	27 41 30	97 5 30
	2185	27 41 30	97 4 30
	2186	27 41 30	97 3 30
	2187	27 41 30	97 2 30
	2188	27 41 30	97 1 30
	2189	27 41 30	97 0 30
	2190	27 41 30	96 59 30
	2191	27 41 30	96 58 30
	2192	27 41 30	96 57 30
	2193	27 40 30	97 9 30
	2194	27 40 30	97 8 30
	2195	27 40 30	97 7 30
2196	27 40 30	97 6 30	
2197	27 40 30	97 5 30	
2198	27 40 30	97 4 30	
2199	27 40 30	97 3 30	
2200	27 40 30	97 2 30	
2201	27 40 30	97 1 30	
2202	27 40 30	97 0 30	
2203	27 40 30	96 59 30	
2204	27 40 30	96 58 30	
2205	27 39 30	97 9 30	
2206	27 39 30	97 8 30	
2207	27 39 30	97 7 30	
2208	27 39 30	97 6 30	
2209	27 39 30	97 5 30	
2210	27 39 30	97 4 30	
2211	27 39 30	97 3 30	
2212	27 39 30	97 2 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	2213	27 39 30	97 1 30
	2214	27 39 30	97 0 30
	2215	27 39 30	96 59 30
	2218	27 38 30	97 8 30
	2219	27 38 30	97 7 30
	2220	27 38 30	97 6 30
	2221	27 38 30	97 5 30
	2222	27 38 30	97 4 30
	2223	27 38 30	97 3 30
	2224	27 38 30	97 2 30
	2225	27 38 30	97 1 30
	2226	27 38 30	97 0 30
	2232	27 37 30	97 6 30
	2233	27 37 30	97 5 30
	2234	27 37 30	97 4 30
	2235	27 37 30	97 3 30
	2236	27 37 30	97 2 30
	2237	27 37 30	97 1 30
	2238	27 37 30	97 0 30
	2246	27 36 30	97 4 30
	2247	27 36 30	97 3 30
	2248	27 36 30	97 2 30
	2249	27 36 30	97 1 30
	2260	27 35 30	97 2 30
	2261	27 35 30	97 1 30
	3024	26 21 30	97 11 30
	3025	26 21 30	97 10 30
	3026	26 21 30	97 9 30
	3027	26 21 30	97 8 30
	3028	26 21 30	97 7 30
	3029	26 21 30	97 6 30
	3030	26 21 30	97 5 30
	3031	26 21 30	97 4 30
	3032	26 21 30	97 3 30
	3033	26 21 30	97 2 30
	3034	26 20 30	97 11 30
	3035	26 20 30	97 10 30
	3036	26 20 30	97 9 30
	3037	26 20 30	97 8 30
	3038	26 20 30	97 7 30
	3039	26 20 30	97 6 30
	3040	26 20 30	97 5 30
	3041	26 20 30	97 4 30
	3042	26 20 30	97 3 30
	3043	26 20 30	97 2 30
	3044	26 19 30	97 11 30
	3045	26 19 30	97 10 30
3046	26 19 30	97 9 30	
3047	26 19 30	97 8 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3048	26 19 30	97 7 30
	3049	26 19 30	97 6 30
	3050	26 19 30	97 5 30
	3051	26 19 30	97 4 30
	3052	26 19 30	97 3 30
	3053	26 19 30	97 2 30
	3054	26 18 30	97 11 30
	3055	26 18 30	97 10 30
	3056	26 18 30	97 9 30
	3057	26 18 30	97 8 30
	3058	26 18 30	97 7 30
	3059	26 18 30	97 6 30
	3060	26 18 30	97 5 30
	3061	26 18 30	97 4 30
	3062	26 18 30	97 3 30
	3063	26 18 30	97 2 30
	3064	26 18 30	97 1 30
	3065	26 17 30	97 11 30
	3066	26 17 30	97 10 30
	3067	26 17 30	97 9 30
	3068	26 17 30	97 8 30
	3069	26 17 30	97 7 30
	3070	26 17 30	97 6 30
	3071	26 17 30	97 5 30
	3072	26 17 30	97 4 30
	3073	26 17 30	97 3 30
	3074	26 17 30	97 2 30
	3075	26 17 30	97 1 30
	3076	26 16 30	97 10 30
	3077	26 16 30	97 9 30
	3078	26 16 30	97 8 30
	3079	26 16 30	97 7 30
3080	26 16 30	97 6 30	
3081	26 16 30	97 5 30	
3082	26 16 30	97 4 30	
3083	26 16 30	97 3 30	
3084	26 16 30	97 2 30	
3085	26 16 30	97 1 30	
3086	26 15 30	97 10 30	
3087	26 15 30	97 9 30	
3088	26 15 30	97 8 30	
3089	26 15 30	97 7 30	
3090	26 15 30	97 6 30	
3091	26 15 30	97 5 30	
3092	26 15 30	97 4 30	
3093	26 15 30	97 3 30	
3094	26 15 30	97 2 30	
3095	26 15 30	97 1 30	
3096	26 14 30	97 10 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3097	26 14 30	97 9 30
	3098	26 14 30	97 8 30
	3099	26 14 30	97 7 30
	3100	26 14 30	97 6 30
	3101	26 14 30	97 5 30
	3102	26 14 30	97 4 30
	3103	26 14 30	97 3 30
	3104	26 14 30	97 2 30
	3105	26 14 30	97 1 30
	3106	26 13 30	97 10 30
	3107	26 13 30	97 9 30
	3108	26 13 30	97 8 30
	3109	26 13 30	97 7 30
	3110	26 13 30	97 6 30
	3111	26 13 30	97 5 30
	3112	26 13 30	97 4 30
	3113	26 13 30	97 3 30
	3114	26 13 30	97 2 30
	3115	26 13 30	97 1 30
	3116	26 12 30	97 10 30
	3117	26 12 30	97 9 30
	3118	26 12 30	97 8 30
	3119	26 12 30	97 7 30
	3120	26 12 30	97 6 30
	3121	26 12 30	97 5 30
	3122	26 12 30	97 4 30
	3123	26 12 30	97 3 30
	3124	26 12 30	97 2 30
	3125	26 12 30	97 1 30
	3126	26 12 30	97 0 30
	3127	26 11 30	97 9 30
3128	26 11 30	97 8 30	
3129	26 11 30	97 7 30	
3130	26 11 30	97 6 30	
3131	26 11 30	97 5 30	
3132	26 11 30	97 4 30	
3133	26 11 30	97 3 30	
3134	26 11 30	97 2 30	
3135	26 11 30	97 1 30	
3136	26 11 30	97 0 30	
3137	26 10 30	97 9 30	
3138	26 10 30	97 8 30	
3139	26 10 30	97 7 30	
3140	26 10 30	97 6 30	
3141	26 10 30	97 5 30	
3142	26 10 30	97 4 30	
3143	26 10 30	97 3 30	
3144	26 10 30	97 2 30	
3145	26 10 30	97 1 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3146	26 10 30	97 0 30
	3147	26 9 30	97 9 30
	3148	26 9 30	97 8 30
	3149	26 9 30	97 7 30
	3150	26 9 30	97 6 30
	3151	26 9 30	97 5 30
	3152	26 9 30	97 4 30
	3153	26 9 30	97 3 30
	3154	26 9 30	97 2 30
	3155	26 9 30	97 1 30
	3156	26 9 30	97 0 30
	3157	26 8 30	97 9 30
	3158	26 8 30	97 8 30
	3159	26 8 30	97 7 30
	3160	26 8 30	97 6 30
	3161	26 8 30	97 5 30
	3162	26 8 30	97 4 30
	3163	26 8 30	97 3 30
	3164	26 8 30	97 2 30
	3165	26 8 30	97 1 30
	3166	26 8 30	97 0 30
	3167	26 7 30	97 9 30
	3168	26 7 30	97 8 30
	3169	26 7 30	97 7 30
	3170	26 7 30	97 6 30
	3171	26 7 30	97 5 30
	3172	26 7 30	97 4 30
	3173	26 7 30	97 3 30
	3174	26 7 30	97 2 30
	3175	26 7 30	97 1 30
	3176	26 7 30	97 0 30
3177	26 6 30	97 9 30	
3178	26 6 30	97 8 30	
3179	26 6 30	97 7 30	
3180	26 6 30	97 6 30	
3181	26 6 30	97 5 30	
3182	26 6 30	97 4 30	
3183	26 6 30	97 3 30	
3184	26 6 30	97 2 30	
3185	26 6 30	97 1 30	
3186	26 6 30	97 0 30	
3187	26 6 30	96 59 30	
3188	26 5 30	97 9 30	
3189	26 5 30	97 8 30	
3190	26 5 30	97 7 30	
3191	26 5 30	97 6 30	
3192	26 5 30	97 5 30	
3193	26 5 30	97 4 30	
3194	26 5 30	97 3 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3195	26 5 30	97 2 30
	3196	26 5 30	97 1 30
	3197	26 5 30	97 0 30
	3198	26 5 30	96 59 30
	3199	26 4 30	97 8 30
	3200	26 4 30	97 7 30
	3201	26 4 30	97 6 30
	3202	26 4 30	97 5 30
	3203	26 4 30	97 4 30
	3204	26 4 30	97 3 30
	3205	26 4 30	97 2 30
	3206	26 4 30	97 1 30
	3207	26 4 30	97 0 30
	3208	26 4 30	96 59 30
	3209	26 3 30	97 8 30
	3210	26 3 30	97 7 30
	3211	26 3 30	97 6 30
	3212	26 3 30	97 5 30
	3213	26 3 30	97 4 30
	3214	26 3 30	97 3 30
	3215	26 3 30	97 2 30
	3216	26 3 30	97 1 30
	3217	26 3 30	97 0 30
	3218	26 3 30	96 59 30
	3219	26 2 30	97 8 30
	3220	26 2 30	97 7 30
	3221	26 2 30	97 6 30
	3222	26 2 30	97 5 30
	3223	26 2 30	97 4 30
	3224	26 2 30	97 3 30
	3225	26 2 30	97 2 30
	3226	26 2 30	97 1 30
	3227	26 2 30	97 0 30
	3228	26 2 30	96 59 30
	3229	26 1 30	97 8 30
	3230	26 1 30	97 7 30
	3231	26 1 30	97 6 30
	3232	26 1 30	97 5 30
	3233	26 1 30	97 4 30
	3234	26 1 30	97 3 30
	3235	26 1 30	97 2 30
	3236	26 1 30	97 1 30
	3237	26 1 30	97 0 30
3238	26 1 30	96 59 30	
3239	26 0 30	97 8 30	
3240	26 0 30	97 7 30	
3241	26 0 30	97 6 30	
3242	26 0 30	97 5 30	
3243	26 0 30	97 4 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3244	26 0 30	97 3 30
	3245	26 0 30	97 2 30
	3246	26 0 30	97 1 30
	3247	26 0 30	97 0 30
	3248	26 0 30	96 59 30
	3249	25 59 30	97 8 30
	3250	25 59 30	97 7 30
	3251	25 59 30	97 6 30
	3252	25 59 30	97 5 30
	3253	25 59 30	97 4 30
	3254	25 59 30	97 3 30
	3255	25 59 30	97 2 30
	3256	25 59 30	97 1 30
	3257	25 59 30	97 0 30
	3258	25 59 30	96 59 30
	3259	25 58 30	97 8 30
	3260	25 58 30	97 7 30
	3261	25 58 30	97 6 30
	3262	25 58 30	97 5 30
	3263	25 58 30	97 4 30
	3264	25 58 30	97 3 30
	3265	25 58 30	97 2 30
	3266	25 58 30	97 1 30
	3267	25 58 30	97 0 30
	3268	25 58 30	96 59 30
	3269	25 57 30	97 7 30
	3270	25 57 30	97 6 30
	3271	25 57 30	97 5 30
	3648	29 44 30	93 40 30
	3649	29 44 30	93 39 30
	3650	29 44 30	93 38 30
	3651	29 44 30	93 37 30
	3652	29 44 30	93 36 30
	3657	29 43 30	93 44 30
	3658	29 43 30	93 43 30
	3659	29 43 30	93 42 30
	3660	29 43 30	93 41 30
	3661	29 43 30	93 40 30
	3662	29 43 30	93 39 30
	3663	29 43 30	93 38 30
	3664	29 43 30	93 37 30
	3665	29 43 30	93 36 30
	3666	29 43 30	93 35 30
	3669	29 42 30	93 47 30
3670	29 42 30	93 46 30	
3671	29 42 30	93 45 30	
3672	29 42 30	93 44 30	
3673	29 42 30	93 43 30	
3674	29 42 30	93 42 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3675	29 42 30	93 41 30
	3676	29 42 30	93 40 30
	3677	29 42 30	93 39 30
	3678	29 42 30	93 38 30
	3679	29 42 30	93 37 30
	3680	29 42 30	93 36 30
	3681	29 42 30	93 35 30
	3683	29 41 30	93 48 30
	3684	29 41 30	93 47 30
	3685	29 41 30	93 46 30
	3686	29 41 30	93 45 30
	3687	29 41 30	93 44 30
	3689	29 41 30	93 42 30
	3690	29 41 30	93 41 30
	3691	29 41 30	93 40 30
	3692	29 41 30	93 39 30
	3693	29 41 30	93 38 30
	3694	29 41 30	93 37 30
	3695	29 41 30	93 36 30
	3696	29 41 30	93 35 30
	3699	29 40 30	93 48 30
	3700	29 40 30	93 47 30
	3701	29 40 30	93 46 30
	3702	29 40 30	93 45 30
	3705	29 40 30	93 42 30
	3706	29 40 30	93 41 30
	3707	29 40 30	93 40 30
	3708	29 40 30	93 39 30
	3709	29 40 30	93 38 30
3710	29 40 30	93 37 30	
3711	29 40 30	93 36 30	
3712	29 40 30	93 35 30	
3713	29 40 30	93 34 30	
3714	29 39 30	93 48 30	
3715	29 39 30	93 47 30	
3716	29 39 30	93 46 30	
3717	29 39 30	93 45 30	
3718	29 39 30	93 44 30	
3719	29 39 30	93 43 30	
3720	29 39 30	93 42 30	
3721	29 39 30	93 41 30	
3722	29 39 30	93 40 30	
3723	29 39 30	93 39 30	
3724	29 39 30	93 38 30	
3725	29 39 30	93 37 30	
3726	29 39 30	93 36 30	
3727	29 39 30	93 35 30	
3728	29 39 30	93 34 30	
3729	29 38 30	93 48 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3730	29 38 30	93 47 30
	3731	29 38 30	93 46 30
	3732	29 38 30	93 45 30
	3733	29 38 30	93 44 30
	3734	29 38 30	93 43 30
	3735	29 38 30	93 42 30
	3736	29 38 30	93 41 30
	3737	29 38 30	93 40 30
	3738	29 38 30	93 39 30
	3739	29 38 30	93 38 30
	3740	29 38 30	93 37 30
	3741	29 38 30	93 36 30
	3742	29 38 30	93 35 30
	3743	29 38 30	93 34 30
	3744	29 37 30	93 48 30
	3745	29 37 30	93 47 30
	3746	29 37 30	93 46 30
	3747	29 37 30	93 45 30
	3748	29 37 30	93 44 30
	3749	29 37 30	93 43 30
	3750	29 37 30	93 42 30
	3751	29 37 30	93 41 30
	3752	29 37 30	93 40 30
	3753	29 37 30	93 39 30
	3754	29 37 30	93 38 30
	3755	29 37 30	93 37 30
	3756	29 37 30	93 36 30
	3757	29 37 30	93 35 30
	3758	29 37 30	93 34 30
	3759	29 36 30	93 47 30
	3760	29 36 30	93 46 30
	3761	29 36 30	93 45 30
	3762	29 36 30	93 44 30
	3763	29 36 30	93 43 30
	3764	29 36 30	93 42 30
	3765	29 36 30	93 41 30
	3766	29 36 30	93 40 30
	3767	29 36 30	93 39 30
	3768	29 36 30	93 38 30
	3769	29 36 30	93 37 30
3770	29 36 30	93 36 30	
3771	29 36 30	93 35 30	
3772	29 36 30	93 34 30	
3773	29 35 30	93 47 30	
3774	29 35 30	93 46 30	
3775	29 35 30	93 45 30	
3776	29 35 30	93 44 30	
3777	29 35 30	93 43 30	
3778	29 35 30	93 42 30	

Table B.1. (Cont'd.)

Bay	Grid	Latitude	Longitude
Gulf of Mexico (Cont'd.)	3779	29 35 30	93 41 30
	3783	29 34 30	93 47 30
	3784	29 34 30	93 46 30
	3785	29 34 30	93 45 30
	3786	29 34 30	93 44 30
	3789	29 33 30	93 46 30
	3790	29 33 30	93 45 30

Appendix C. Galveston Bay oyster dredge reef site and non-reef site identification.

Table C.1. Oyster reef grids in Galveston Bay.

Grid	Latitude	Longitude
88	29 40 30	94 58 30
90	29 40 30	94 56 30
110	29 39 30	94 54 30
112	29 39 30	94 52 30
113	29 39 30	94 51 30
114	29 39 30	94 50 30
125	29 38 30	95 0 30
131	29 38 30	94 54 30
132	29 38 30	94 53 30
133	29 38 30	94 52 30
134	29 38 30	94 51 30
147	29 37 30	94 59 30
156	29 37 30	94 50 30
168	29 36 30	94 58 30
169	29 36 30	94 57 30
174	29 36 30	94 52 30
175	29 36 30	94 51 30
176	29 36 30	94 50 30
189	29 35 30	94 58 30
196	29 35 30	94 51 30
198	29 35 30	94 49 30
199	29 35 30	94 48 30
202	29 35 30	94 45 30
209	29 34 30	94 59 30
210	29 34 30	94 58 30
235	29 33 30	95 0 30
237	29 33 30	94 58 30
241	29 33 30	94 54 30
248	29 33 30	94 47 30
249	29 33 30	94 46 30
274	29 32 30	94 54 30
275	29 32 30	94 53 30
278	29 32 30	94 50 30
279	29 32 30	94 49 30
280	29 32 30	94 48 30
286	29 32 30	94 41 30
287	29 32 30	94 40 30
288	29 32 30	94 39 30
289	29 32 30	94 38 30
290	29 32 30	94 37 30
303	29 31 30	94 59 30
308	29 31 30	94 54 30
309	29 31 30	94 53 30
310	29 31 30	94 52 30
311	29 31 30	94 51 30
312	29 31 30	94 50 30
313	29 31 30	94 49 30
314	29 31 30	94 48 30
315	29 31 30	94 47 30

Table C.1. (Cont'd.)

Grid	Latitude	Longitude
316	29 31 30	94 46 30
318	29 31 30	94 44 30
319	29 31 30	94 43 30
321	29 31 30	94 41 30
322	29 31 30	94 40 30
323	29 31 30	94 39 30
326	29 31 30	94 36 30
327	29 31 30	94 35 30
338	29 30 30	94 56 30
339	29 30 30	94 55 30
340	29 30 30	94 54 30
341	29 30 30	94 53 30
342	29 30 30	94 52 30
343	29 30 30	94 51 30
344	29 30 30	94 50 30
345	29 30 30	94 49 30
346	29 30 30	94 48 30
347	29 30 30	94 47 30
349	29 30 30	94 45 30
350	29 30 30	94 44 30
354	29 30 30	94 40 30
355	29 30 30	94 39 30
358	29 30 30	94 36 30
359	29 30 30	94 35 30
367	29 29 30	94 54 30
368	29 29 30	94 53 30
369	29 29 30	94 52 30
370	29 29 30	94 51 30
371	29 29 30	94 50 30
372	29 29 30	94 49 30
373	29 29 30	94 48 30
374	29 29 30	94 47 30
375	29 29 30	94 46 30
376	29 29 30	94 45 30
377	29 29 30	94 44 30
378	29 29 30	94 43 30
379	29 29 30	94 42 30
382	29 29 30	94 39 30
383	29 29 30	94 38 30
392	29 28 30	94 55 30
393	29 28 30	94 54 30
398	29 28 30	94 49 30
402	29 28 30	94 45 30
403	29 28 30	94 44 30
404	29 28 30	94 43 30
405	29 28 30	94 42 30
406	29 28 30	94 41 30
415	29 27 30	94 55 30
416	29 27 30	94 54 30

Table C.1. (Cont'd.)

Grid	Latitude	Longitude
418	29 27 30	94 52 30
420	29 27 30	94 50 30
428	29 27 30	94 42 30
429	29 27 30	94 41 30
435	29 26 30	94 54 30
436	29 26 30	94 53 30
437	29 26 30	94 52 30
470	29 24 30	94 51 30
471	29 24 30	94 50 30
481	29 23 30	94 51 30
482	29 23 30	94 50 30
577	29 15 30	94 56 30
599	29 13 30	95 0 30
617	29 12 30	95 0 30
618	29 12 30	94 59 30
633	29 11 30	95 0 30
679	29 6 30	95 11 30
680	29 6 30	95 10 30
691	29 5 30	95 11 30
692	29 5 30	95 10 30
717	29 2 30	95 11 30

Table C.2. Oyster non-reef grids in Galveston Bay.

Grid	Latitude	Longitude
26	29 44 30	94 49 30
27	29 44 30	94 48 30
28	29 44 30	94 47 30
29	29 44 30	94 46 30
30	29 44 30	94 45 30
31	29 44 30	94 44 30
32	29 44 30	94 43 30
38	29 43 30	94 50 30
39	29 43 30	94 49 30
40	29 43 30	94 48 30
41	29 43 30	94 47 30
42	29 43 30	94 46 30
43	29 43 30	94 45 30
44	29 43 30	94 44 30
45	29 43 30	94 43 30
46	29 43 30	94 42 30
48	29 42 30	95 1 30
49	29 42 30	95 0 30
55	29 42 30	94 51 30
56	29 42 30	94 50 30
57	29 42 30	94 49 30
58	29 42 30	94 48 30
59	29 42 30	94 47 30
60	29 42 30	94 46 30
61	29 42 30	94 45 30
62	29 42 30	94 44 30
63	29 42 30	94 43 30
64	29 42 30	94 42 30
65	29 42 30	94 41 30
68	29 41 30	94 59 30
69	29 41 30	94 58 30
70	29 41 30	94 57 30
71	29 41 30	94 56 30
75	29 41 30	94 51 30
76	29 41 30	94 50 30
77	29 41 30	94 49 30
78	29 41 30	94 48 30
79	29 41 30	94 47 30
80	29 41 30	94 46 30
81	29 41 30	94 45 30
82	29 41 30	94 44 30
83	29 41 30	94 43 30
84	29 41 30	94 42 30
85	29 41 30	94 41 30
87	29 40 30	94 59 30
88	29 40 30	94 58 30
89	29 40 30	94 57 30
90	29 40 30	94 56 30
92	29 40 30	94 52 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
93	29 40 30	94 51 30
94	29 40 30	94 50 30
95	29 40 30	94 49 30
96	29 40 30	94 48 30
97	29 40 30	94 47 30
98	29 40 30	94 46 30
99	29 40 30	94 45 30
100	29 40 30	94 44 30
101	29 40 30	94 43 30
102	29 40 30	94 42 30
104	29 39 30	95 0 30
105	29 39 30	94 59 30
106	29 39 30	94 58 30
107	29 39 30	94 57 30
108	29 39 30	94 56 30
109	29 39 30	94 55 30
110	29 39 30	94 54 30
111	29 39 30	94 53 30
112	29 39 30	94 52 30
113	29 39 30	94 51 30
114	29 39 30	94 50 30
115	29 39 30	94 49 30
116	29 39 30	94 48 30
117	29 39 30	94 47 30
118	29 39 30	94 46 30
119	29 39 30	94 45 30
120	29 39 30	94 44 30
121	29 39 30	94 43 30
122	29 39 30	94 42 30
125	29 38 30	95 0 30
126	29 38 30	94 59 30
127	29 38 30	94 58 30
128	29 38 30	94 57 30
129	29 38 30	94 56 30
130	29 38 30	94 55 30
131	29 38 30	94 54 30
132	29 38 30	94 53 30
133	29 38 30	94 52 30
134	29 38 30	94 51 30
135	29 38 30	94 50 30
136	29 38 30	94 49 30
137	29 38 30	94 48 30
138	29 38 30	94 47 30
139	29 38 30	94 46 30
140	29 38 30	94 45 30
141	29 38 30	94 44 30
142	29 38 30	94 43 30
143	29 38 30	94 42 30
146	29 37 30	95 0 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
147	29 37 30	94 59 30
148	29 37 30	94 58 30
149	29 37 30	94 57 30
150	29 37 30	94 56 30
151	29 37 30	94 55 30
152	29 37 30	94 54 30
153	29 37 30	94 53 30
154	29 37 30	94 52 30
155	29 37 30	94 51 30
156	29 37 30	94 50 30
157	29 37 30	94 49 30
158	29 37 30	94 48 30
159	29 37 30	94 47 30
160	29 37 30	94 46 30
161	29 37 30	94 45 30
162	29 37 30	94 44 30
163	29 37 30	94 43 30
164	29 37 30	94 42 30
165	29 36 30	95 1 30
166	29 36 30	95 0 30
167	29 36 30	94 59 30
168	29 36 30	94 58 30
169	29 36 30	94 57 30
170	29 36 30	94 56 30
171	29 36 30	94 55 30
172	29 36 30	94 54 30
173	29 36 30	94 53 30
174	29 36 30	94 52 30
175	29 36 30	94 51 30
176	29 36 30	94 50 30
177	29 36 30	94 49 30
178	29 36 30	94 48 30
179	29 36 30	94 47 30
180	29 36 30	94 46 30
181	29 36 30	94 45 30
182	29 36 30	94 44 30
183	29 36 30	94 43 30
188	29 35 30	94 59 30
189	29 35 30	94 58 30
190	29 35 30	94 57 30
191	29 35 30	94 56 30
192	29 35 30	94 55 30
193	29 35 30	94 54 30
194	29 35 30	94 53 30
195	29 35 30	94 52 30
196	29 35 30	94 51 30
197	29 35 30	94 50 30
198	29 35 30	94 49 30
199	29 35 30	94 48 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
200	29 35 30	94 47 30
201	29 35 30	94 46 30
202	29 35 30	94 45 30
203	29 35 30	94 44 30
208	29 34 30	95 0 30
209	29 34 30	94 59 30
210	29 34 30	94 58 30
211	29 34 30	94 57 30
212	29 34 30	94 56 30
213	29 34 30	94 55 30
214	29 34 30	94 54 30
215	29 34 30	94 53 30
216	29 34 30	94 52 30
217	29 34 30	94 51 30
218	29 34 30	94 50 30
219	29 34 30	94 49 30
220	29 34 30	94 48 30
221	29 34 30	94 47 30
222	29 34 30	94 46 30
223	29 34 30	94 45 30
231	29 33 30	95 4 30
232	29 33 30	95 3 30
233	29 33 30	95 2 30
234	29 33 30	95 1 30
235	29 33 30	95 0 30
236	29 33 30	94 59 30
237	29 33 30	94 58 30
238	29 33 30	94 57 30
239	29 33 30	94 56 30
240	29 33 30	94 55 30
241	29 33 30	94 54 30
242	29 33 30	94 53 30
243	29 33 30	94 52 30
244	29 33 30	94 51 30
245	29 33 30	94 50 30
246	29 33 30	94 49 30
247	29 33 30	94 48 30
248	29 33 30	94 47 30
249	29 33 30	94 46 30
250	29 33 30	94 45 30
254	29 33 30	94 36 30
255	29 33 30	94 35 30
256	29 33 30	94 34 30
257	29 33 30	94 33 30
258	29 33 30	94 32 30
266	29 32 30	95 2 30
267	29 32 30	95 1 30
268	29 32 30	95 0 30
269	29 32 30	94 59 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
270	29 32 30	94 58 30
271	29 32 30	94 57 30
272	29 32 30	94 56 30
273	29 32 30	94 55 30
274	29 32 30	94 54 30
275	29 32 30	94 53 30
276	29 32 30	94 52 30
277	29 32 30	94 51 30
278	29 32 30	94 50 30
279	29 32 30	94 49 30
280	29 32 30	94 48 30
281	29 32 30	94 47 30
282	29 32 30	94 46 30
283	29 32 30	94 45 30
287	29 32 30	94 40 30
288	29 32 30	94 39 30
289	29 32 30	94 38 30
290	29 32 30	94 37 30
291	29 32 30	94 36 30
292	29 32 30	94 35 30
293	29 32 30	94 34 30
294	29 32 30	94 33 30
295	29 32 30	94 32 30
296	29 32 30	94 31 30
302	29 31 30	95 0 30
303	29 31 30	94 59 30
304	29 31 30	94 58 30
305	29 31 30	94 57 30
306	29 31 30	94 56 30
307	29 31 30	94 55 30
308	29 31 30	94 54 30
309	29 31 30	94 53 30
310	29 31 30	94 52 30
311	29 31 30	94 51 30
312	29 31 30	94 50 30
313	29 31 30	94 49 30
314	29 31 30	94 48 30
315	29 31 30	94 47 30
316	29 31 30	94 46 30
317	29 31 30	94 45 30
318	29 31 30	94 44 30
319	29 31 30	94 43 30
320	29 31 30	94 42 30
321	29 31 30	94 41 30
322	29 31 30	94 40 30
323	29 31 30	94 39 30
324	29 31 30	94 38 30
325	29 31 30	94 37 30
326	29 31 30	94 36 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
327	29 31 30	94 35 30
328	29 31 30	94 34 30
330	29 31 30	94 32 30
331	29 31 30	94 31 30
336	29 30 30	94 58 30
337	29 30 30	94 57 30
338	29 30 30	94 56 30
339	29 30 30	94 55 30
340	29 30 30	94 54 30
341	29 30 30	94 53 30
342	29 30 30	94 52 30
343	29 30 30	94 51 30
344	29 30 30	94 50 30
345	29 30 30	94 49 30
346	29 30 30	94 48 30
347	29 30 30	94 47 30
348	29 30 30	94 46 30
349	29 30 30	94 45 30
350	29 30 30	94 44 30
351	29 30 30	94 43 30
352	29 30 30	94 42 30
353	29 30 30	94 41 30
354	29 30 30	94 40 30
355	29 30 30	94 39 30
356	29 30 30	94 38 30
357	29 30 30	94 37 30
358	29 30 30	94 36 30
359	29 30 30	94 35 30
367	29 29 30	94 54 30
368	29 29 30	94 53 30
369	29 29 30	94 52 30
370	29 29 30	94 51 30
371	29 29 30	94 50 30
372	29 29 30	94 49 30
373	29 29 30	94 48 30
374	29 29 30	94 47 30
375	29 29 30	94 46 30
376	29 29 30	94 45 30
377	29 29 30	94 44 30
378	29 29 30	94 43 30
379	29 29 30	94 42 30
380	29 29 30	94 41 30
381	29 29 30	94 40 30
382	29 29 30	94 39 30
383	29 29 30	94 38 30
384	29 29 30	94 37 30
385	29 29 30	94 36 30
390	29 28 30	94 57 30
391	29 28 30	94 56 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
392	29 28 30	94 55 30
393	29 28 30	94 54 30
394	29 28 30	94 53 30
395	29 28 30	94 52 30
396	29 28 30	94 51 30
397	29 28 30	94 50 30
398	29 28 30	94 49 30
399	29 28 30	94 48 30
400	29 28 30	94 47 30
401	29 28 30	94 46 30
402	29 28 30	94 45 30
403	29 28 30	94 44 30
404	29 28 30	94 43 30
405	29 28 30	94 42 30
406	29 28 30	94 41 30
407	29 28 30	94 40 30
408	29 28 30	94 39 30
409	29 28 30	94 38 30
410	29 28 30	94 37 30
412	29 27 30	94 58 30
413	29 27 30	94 57 30
414	29 27 30	94 56 30
415	29 27 30	94 55 30
416	29 27 30	94 54 30
417	29 27 30	94 53 30
418	29 27 30	94 52 30
419	29 27 30	94 51 30
420	29 27 30	94 50 30
421	29 27 30	94 49 30
422	29 27 30	94 48 30
423	29 27 30	94 47 30
424	29 27 30	94 46 30
425	29 27 30	94 45 30
426	29 27 30	94 44 30
427	29 27 30	94 43 30
428	29 27 30	94 42 30
429	29 27 30	94 41 30
434	29 26 30	94 55 30
435	29 26 30	94 54 30
436	29 26 30	94 53 30
437	29 26 30	94 52 30
438	29 26 30	94 51 30
439	29 26 30	94 50 30
440	29 26 30	94 49 30
441	29 26 30	94 48 30
442	29 26 30	94 47 30
443	29 26 30	94 46 30
444	29 26 30	94 45 30
445	29 26 30	94 44 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
446	29 26 30	94 43 30
447	29 26 30	94 42 30
451	29 25 30	94 56 30
452	29 25 30	94 55 30
453	29 25 30	94 54 30
454	29 25 30	94 53 30
455	29 25 30	94 52 30
456	29 25 30	94 51 30
457	29 25 30	94 50 30
458	29 25 30	94 49 30
459	29 25 30	94 48 30
460	29 25 30	94 47 30
461	29 25 30	94 46 30
462	29 25 30	94 45 30
463	29 25 30	94 44 30
464	29 25 30	94 43 30
468	29 24 30	94 53 30
469	29 24 30	94 52 30
470	29 24 30	94 51 30
471	29 24 30	94 50 30
472	29 24 30	94 49 30
473	29 24 30	94 48 30
474	29 24 30	94 47 30
475	29 24 30	94 46 30
476	29 24 30	94 45 30
477	29 24 30	94 44 30
480	29 23 30	94 52 30
481	29 23 30	94 51 30
482	29 23 30	94 50 30
483	29 23 30	94 49 30
484	29 23 30	94 48 30
485	29 23 30	94 47 30
486	29 23 30	94 46 30
488	29 22 30	94 53 30
489	29 22 30	94 52 30
490	29 22 30	94 51 30
491	29 22 30	94 50 30
492	29 22 30	94 49 30
493	29 22 30	94 48 30
494	29 22 30	94 47 30
499	29 21 30	94 53 30
500	29 21 30	94 52 30
501	29 21 30	94 51 30
502	29 21 30	94 50 30
503	29 21 30	94 49 30
504	29 21 30	94 48 30
505	29 21 30	94 47 30
506	29 21 30	94 46 30
507	29 21 30	94 45 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
508	29 21 30	94 44 30
512	29 20 30	94 53 30
513	29 20 30	94 52 30
514	29 20 30	94 51 30
515	29 20 30	94 50 30
516	29 20 30	94 49 30
518	29 20 30	94 47 30
519	29 20 30	94 46 30
520	29 20 30	94 45 30
521	29 20 30	94 44 30
526	29 19 30	94 53 30
527	29 19 30	94 52 30
528	29 19 30	94 51 30
529	29 19 30	94 50 30
530	29 19 30	94 49 30
533	29 19 30	94 46 30
540	29 18 30	94 53 30
541	29 18 30	94 52 30
542	29 18 30	94 51 30
543	29 18 30	94 50 30
544	29 18 30	94 49 30
545	29 18 30	94 48 30
546	29 18 30	94 47 30
553	29 17 30	94 54 30
554	29 17 30	94 53 30
555	29 17 30	94 52 30
556	29 17 30	94 51 30
557	29 17 30	94 50 30
561	29 16 30	94 58 30
562	29 16 30	94 57 30
563	29 16 30	94 56 30
564	29 16 30	94 55 30
565	29 16 30	94 54 30
566	29 16 30	94 53 30
567	29 16 30	94 52 30
568	29 16 30	94 51 30
569	29 16 30	94 50 30
574	29 15 30	94 59 30
575	29 15 30	94 58 30
576	29 15 30	94 57 30
577	29 15 30	94 56 30
578	29 15 30	94 55 30
579	29 15 30	94 54 30
586	29 14 30	95 0 30
587	29 14 30	94 59 30
588	29 14 30	94 58 30
589	29 14 30	94 57 30
590	29 14 30	94 56 30
598	29 13 30	95 1 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
599	29 13 30	95 0 30
600	29 13 30	94 59 30
601	29 13 30	94 58 30
606	29 12 30	95 13 30
607	29 12 30	95 12 30
608	29 12 30	95 11 30
609	29 12 30	95 10 30
610	29 12 30	95 9 30
615	29 12 30	95 2 30
616	29 12 30	95 1 30
617	29 12 30	95 0 30
618	29 12 30	94 59 30
619	29 12 30	94 58 30
623	29 11 30	95 10 30
624	29 11 30	95 9 30
625	29 11 30	95 8 30
626	29 11 30	95 7 30
629	29 11 30	95 4 30
630	29 11 30	95 3 30
631	29 11 30	95 2 30
632	29 11 30	95 1 30
633	29 11 30	95 0 30
638	29 10 30	95 8 30
639	29 10 30	95 7 30
640	29 10 30	95 6 30
641	29 10 30	95 5 30
642	29 10 30	95 4 30
643	29 10 30	95 3 30
644	29 10 30	95 2 30
645	29 10 30	95 1 30
649	29 9 30	95 8 30
650	29 9 30	95 7 30
651	29 9 30	95 6 30
652	29 9 30	95 5 30
653	29 9 30	95 4 30
654	29 9 30	95 3 30
655	29 9 30	95 2 30
658	29 8 30	95 9 30
659	29 8 30	95 8 30
660	29 8 30	95 7 30
661	29 8 30	95 6 30
662	29 8 30	95 5 30
663	29 8 30	95 4 30
664	29 8 30	95 3 30
669	29 7 30	95 9 30
670	29 7 30	95 8 30
671	29 7 30	95 7 30
672	29 7 30	95 6 30
673	29 7 30	95 5 30

Table C.2. (Cont'd.)

Grid	Latitude	Longitude
679	29 6 30	95 11 30
680	29 6 30	95 10 30
681	29 6 30	95 9 30
682	29 6 30	95 8 30
683	29 6 30	95 7 30
684	29 6 30	95 6 30
686	29 5 30	95 16 30
687	29 5 30	95 15 30
688	29 5 30	95 14 30
689	29 5 30	95 13 30
690	29 5 30	95 12 30
691	29 5 30	95 11 30
692	29 5 30	95 10 30
697	29 4 30	95 16 30
698	29 4 30	95 15 30
699	29 4 30	95 14 30
701	29 4 30	95 12 30
702	29 4 30	95 11 30
703	29 4 30	95 10 30
704	29 4 30	95 9 30
705	29 4 30	95 8 30
708	29 3 30	95 12 30
709	29 3 30	95 11 30
715	29 2 30	95 13 30
716	29 2 30	95 12 30
717	29 2 30	95 11 30
718	29 2 30	95 10 30
723	29 1 30	95 12 30

Appendix D. Mean catch rates of selected shellfishes and finfishes in bag seines (No./ha), bay trawls (No./h) and Gulf trawls (No./h) by month and bay system.

Table D.1. Monthly mean catch rates (No./ha) and mean total lengths (mm) of select shellfishes caught with 18.3-m bag seines by bay systems during January 1985-March 1986. Blank indicates no measurement taken.

Species	Month	East												Upper						Lower					
		Galveston		Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Laguna Madre		Laguna Madre		Laguna Madre		Coastwide					
		No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length				
Blue crab	Jan 1985	345	58	50	29	7	20	10	30	30	17	73	26	3	23	10	40	91	48						
	Feb	15	46	77	29	53	24	10	27	17	42	110	36	30	53	157	37	52	35						
	Mar	476	48	293	71	147	41	190	36	480	30	577	34	293	55	370	46	360	45						
	Apr	340	53	77	48	115	45	30	32	167	40	400	32	57	51	150	23	183	39						
	May	77	60	177	62	123	58	44	45	200	45	197	38	137	39	733	26	206	39						
	Jun	70	70	153	80	37	39	40	57	343	35	177	43	217	42	153	42	140	53						
	Jul	197	31	3	20	43	82	57	47	57	39	147	48	73	69	50	42	92	47						
	Aug	170	39	147	66	27	98	43	57	190	40	37	40	30	68	41	43	90	55						
	Sep	33	57	67	34	37	48	20	34	50	61	37	70	13	116	13	71	31	50						
	Oct	83	38	97	18	3	135	10	29	70	71	210	52	13	76	22	43	56	40						
	Nov	43	49	130	27	80	22	17	32	43	34	33	18	0	44	103	38	51	31						
	Dec	3	90	13	39	13	18	30	50	47	42	217	29	10	27	26	26	38	34						
Jan 1986	70	30	20	57	7	17	3	31	7	20	3	54	13	30	53	26	27	31							
Feb	20	30	50	49	152	30	110	38	7	18	19	22	37	27	107	37	63	34							
Mar	277	48	410	39	167	37	419	40	77	52	423	40	63	54	567	40	281	41							
Brown shrimp	Jan 1985	40	48	0	0	0	0	0	0	0	0	3	32	0	3	3	67	9	48						
	Feb	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	39	<1	39						
	Mar	5	23	0	0	0	0	0	0	0	0	0	0	3	82	20	42	4	40						
	Apr	1137	46	197	38	748	55	297	49	2967	56	200	52	3	56	1083	46	976	48						
	May	1660	66	1893	58	2203	63	930	60	3150	61	2080	56	1580	66	6907	57	2597	60						
	Jun	2053	64	1753	65	910	69	1337	61	1387	66	903	57	950	66	1097	58	1333	63						
	Jul	213	70	123	64	237	68	610	55	303	70	377	55	663	89	1177	47	469	61						
	Aug	167	52	230	61	90	61	47	47	497	68	173	51	100	55	422	51	230	52						
	Sep	160	52	200	51	178	49	340	42	667	66	147	48	20	37	83	46	228	45						
	Oct	248	55	273	55	10	55	197	52	80	53	433	57	107	64	422	56	207	56						
	Nov	80	54	263	54	80	48	0	0	7	73	33	58	30	78	847	68	158	63						
	Dec	0	0	17	64	0	0	0	0	7	54	87	45	0	0	100	62	23	53						
Jan 1986	0	0	0	0	0	0	<1	50	0	0	0	0	<1	30	<1	56	<1	45							
Feb	0	0	7	40	11	35	27	54	3	37	4	54	23	40	147	46	28	46							
Mar	17	32	180	37	60	34	0	0	13	51	197	51	3	42	727	51	135	48							

Table D.1. (Cont'd.)

Specie	Month	East										Upper				Lower						
		Galveston		Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Laguna Madre		Laguna Madre		Coastwide				
		No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length			
Pink shrimp	Jan 1985	0		0		0		0		0		0		0		0		0		0		
	Feb	0		0		0		0		0		0		0		0		0		0		
	Mar	0		0		0		0	147	68	0		77	83	0		29		29		28	
	Apr	0		0		0		0	23	28	13	33	0		0		4		4		12	
	May	0		0		0		0	0		0		0		0		0		0		0	
	Jun	0		0		0		0	0		0		0		0		0		0		0	
	Jul	0		0		0		0	0		0		17	44	0		2		2		44	
	Aug	0		0		0		0	0		0		0		0		0		0		0	
	Sep	0		0		0		0	0		3	49	0		0		<1		<1		49	
	Oct	0		0		0		0	37	42	60	53	0		0		11		11		33	
	Nov	0		0		0		0	3	59	0		3	65	0		1		1		33	
	Dec	0		0		0		0	0		13	47	0		0		1		1		47	
	Jan 1986	0		3	73	0		0	0		0		0		0		<1		<1		73	
Feb	0		0		0		0	0		0		0		0		0		0		0		
Mar	0		0		0		0	150	37	33	56	17	32	40	65	31		31		44	111	
White shrimp	Jan 1985	5	51	33	75	0		0		0		0		0		0		0		0		72
	Feb	0		0		0		0		0		3	74	0		<1		<1		0		74
	Mar	0		0		0		0		0		0		0		0		0		0		0
	Apr	3	126	0		0		0		0		0		0		1		1		1		126
	May	0		0		0		0		0		0		0		0		0		0		0
	Jun	183	45	1863	57	727	53	39	47	1207	40	39	20		0		388		388		50	
	Jul	90	69	647	61	993	65	42	27	63	62	53	20	54	670	36	303		303		55	
	Aug	683	60	1230	64	657	81	147	47	1193	43	42	13	94	7	56	477		477		60	
	Sep	493	79	537	62	644	63	103	42	297	56	60	3	44	127	43	297		297		61	
	Oct	883	62	807	80	827	83	67	47	33	57	55	30	85	448	63	431		431		71	
	Nov	1027	55	887	52	1620	49	47	43	47	45	56	3	35	1173	63	670		670		54	
	Dec	37	55	623	52	220	70	3	61	23	48	51	0		67	47	77		77		56	
	Jan 1986	0		0		0		0		0		0	0		0		0		0		0	
Feb	3	103	0		0		0		0		0	0		0		3		3		66		
Mar	0		0		0		0		0		17	57	0	0		2		2		57		

Table D.2. Monthly mean catch rate (No./h) and mean total lengths (mm) of select shellfishes and finfishes caught with 6.1-m trawls (Zones 1 and 2 combined) by bay system during January 1985-March 1986. Blank indicates no measurement taken.

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide		
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	
Blue crab	Jan 1985	5	102	4	55	6	53	3	85	<1	82	0	3	122	3	122	4	79
	Feb	10	100	3	65	26	68	6	47	1	87	3	25	93	25	93	10	81
	Mar	70	64	12	63	32	64	68	40	9	96	11	50	110	50	110	41	70
	Apr	74	74	6	84	61	64	57	68	2	88	18	210	76	210	76	50	75
	May	57	85	50	84	30	83	11	73	2	102	94	44	84	44	84	44	89
	Jun	51	88	29	100	<1	93	55	89	15	124	52	38	88	38	88	35	92
	Jul	23	93	3	101	15	92	18	104	12	109	26	19	93	19	93	16	96
	Aug	18	81	4	104	4	102	10	94	5	140	8	17	96	17	96	10	100
	Sep	9	93	<1	92	11	99	21	89	3	116	7	7	142	3	105	7	101
	Oct	9	85	1	74	7	104	2	93	6	133	2	13	106	13	106	6	105
	Nov	24	64	5	71	6	77	14	79	5	111	9	4	56	4	56	13	82
	Dec	11	75	1	102	9	86	12	82	1	139	2	2	123	3	123	7	89
	Jan 1986	7	59	1	115	7	85	5	77	0	64	0	4	128	1	145	4	79
Feb	10	82	11	51	10	77	9	61	8	77	4	6	95	6	95	9	74	
Mar	16	70	10	54	18	65	46	70	13	77	18	5	82	5	90	17	71	
Brown shrimp	Jan 1985	1	84	1	90	2	90	1	87	2	107	1	118	1	86	1	86	95
	Feb	0	80	0	86	0	72	0	66	<1	103	0	0	0	0	<1	<1	103
	Mar	<1	62	<1	85	20	89	0	83	<1	101	0	0	3	99	<1	<1	98
	Apr	8	63	0	93	111	93	199	66	<1	90	0	0	14	75	23	23	67
	May	216	91	151	98	31	100	196	82	94	101	13	104	20	57	153	153	81
	Jun	77	95	114	98	1	111	173	82	34	97	36	107	36	56	76	76	87
	Jul	54	94	8	104	31	100	76	100	32	99	25	115	<1	52	36	36	100
	Aug	5	88	4	101	11	91	15	100	20	99	11	121	7	51	7	51	100
	Sep	2	82	1	76	13	79	52	82	3	99	28	110	3	50	3	50	91
	Oct	20	86	7	108	25	90	25	91	38	75	5	81	17	60	17	60	78
	Nov	5	82	1	79	24	94	26	84	21	91	30	101	6	69	6	69	91
	Dec	6	90	1	111	3	89	46	93	25	102	34	109	20	76	20	76	95
	Jan 1986	<1	82	0	104	0	70	1	74	2	107	5	103	1	74	1	74	97
Feb	0	98	8	111	1	89	2	85	15	104	6	104	0	104	0	104	104	
Mar	2	98	2	104	8	89	22	97	10	105	32	123	8	83	8	83	7	

SHELLFISHES

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower		Coastwide		
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	Laguna Madre	Length		No./h	Length
Pink shrimp	Jan 1985	0		1	89	0		<1	74	1	96	0	<1	76	<1	76		
	Feb	0		0		<1	94	<1	103	7	100	2	0	106	0	101		
	Mar	<1	103	1	98	<1	115	14	96	18	106	9	1	113	1	111		
	Apr	<1	98	1	131	21	101	20	110	3	105	14	5	124	5	106		
	May	0		1	120	9	99	1	107	1	114	2	0	142	0	107		
	Jun	0		0		<1	121	0		<1	88	0	0		0	<1	88	
	Jul	0		0		0		0		0		0	0		0	0		
	Aug	0		0		0		0		0		0	0		0	0		
	Sep	<1		27	0		0		1	94	<1	83	0	0		0	<1	78
	Oct	0		2	91	4	85	2	81	15	81	0	0		2	77	3	82
	Nov	<1	115	<1	110	0		3	77	4	98	25	0		94	0	2	93
	Dec	0		<1	119	0		4	88	6	96	0	0		99	1	1	94
	Jan 1986	0		0		<1	103	1	78	1	103	1	0	86	0	<1	91	
Feb	0		1	131	0		2	83	5	99	0	0		0	0	1	99	
Mar	0		6	115	7	100	15	101	9	105	0	0		0	0	4	104	
White shrimp	Jan 1985	51	92	12	88	12	88	7	108	12	105	37	1	124	1	153	26	103
	Feb	3	89	0		0		0		<1	96	0	0		0	1	1	90
	Mar	18	99	4	99	0		3	101	3	105	0	1	113	1	113	8	100
	Apr	46	115	3	117	<1	126	1	124	<1	143	0	2	130	2	130	17	116
	May	28	124	4	141	0		<1	160	2	144	0	0		0	0	11	128
	Jun	2	118	<1	156	0		1	142	<1	169	0	0		0	0	1	130
	Jul	52	98	24	101	4	84	29	108	6	104	2	0	86	0	0	28	101
	Aug	117	99	62	121	22	114	13	116	20	115	7	<1	127	<1	164	62	109
	Sep	52	102	13	104	52	86	20	121	11	116	23	0	117	0	0	32	103
	Oct	98	103	41	122	27	108	18	117	65	110	0	0		3	88	56	109
	Nov	143	100	11	104	80	90	28	96	78	101	2	0	110	0	0	74	98
	Dec	127	88	18	93	74	85	90	101	60	95	2	2	114	2	75	73	92
	Jan 1986	12	81	0		2	80	<1	97	1	99	0	0		0	0	4	83
Feb	7	85	2	88	1	72	<1	87	5	100	2	0	107	0	0	4	91	
Mar	15	97	16	106	4	65	1	59	3	105	6	0	114	0	0	10	99	

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Atlantic croaker	Jan 1985	4	105	1	104	1	67	1	90	10	122	2	219	10	98	3	116
	Feb	10	114	9	55	4	64	3	66	7	144	12	171	23	98	9	109
	Mar	40	122	7	67	11	83	20	62	14	137	5	167	16	139	21	110
	Apr	64	117	30	85	84	97	102	89	6	130	11	140	35	132	52	103
	May	37	123	155	102	30	108	53	97	44	129	40	129	37	141	65	113
	Jun	13	138	86	109	<1	113	87	107	69	127	17	142	80	163	43	127
	Jul	21	122	26	116	15	125	54	115	78	132	18	159	35	145	30	129
	Aug	12	134	81	123	8	139	23	126	147	137	18	160	24	177	43	137
	Sep	15	145	13	125	2	123	29	134	55	149	15	187	20	175	18	150
	Oct	8	156	19	133	1	155	6	142	47	159	0	187	12	173	13	154
	Nov	6	135	4	132	0	56	3	62	17	159	7	156	1	179	5	144
	Dec	6	118	4	108	1	59	10	57	7	113	6	117	<1	63	5	95
Jan 1986	6	91	1	74	4	59	1	47	7	108	3	138	2	122	4	97	
Feb	4	92	14	74	16	69	10	45	24	108	15	127	5	112	11	91	
Mar	29	109	35	79	39	82	74	67	77	112	7	141	9	114	39	92	
Black drum	Jan 1985	<1	236	0		0		<1	940	1	494	6	254	0		1	291
	Feb	1	241	0		0		<1	243	<1	281	0		0		<1	249
	Mar	1	233	0		0		0		0	0	2	260	0		<1	250
	Apr	<1	328	0		0		0		0	0	0		0		<1	328
	May	0		0		0		0		0	0	0		0		0	
	Jun	0		0		0		0		0	0	0		0		0	
	Jul	0		0		0		0		0	0	0		0		0	
	Aug	0		0		0		0		0	0	0		0		0	
	Sep	0		0		0		0		0	0	0		0		0	
	Oct	<1	168	0		0		0		<1	180	0		0		<1	180
	Nov	0		0		0		<1	25	0	0	0		0		<1	168
	Dec	<1	264	0		0		0		0	0	2	359	0		<1	334
Jan 1986	<1	256	0		0		0		1	242	1	288	0		<1	263	
Feb	0		0		0		0		0	0	0		0		<1	256	
Mar	<1	245	0		0		0		0	0	0		<1	250	<1	250	
										269	0			1	285	<1	271

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower		Coastwide		
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	
Gafftopsail cattfish	Jan 1985	0		0		0		0		0		0		0		0		
	Feb	0		0		0		0		0		0		0		0		
	Mar	0		0		0		0		0		0		0		0		
	Apr	0		0		0		0		1	200	0		0		<1	200	
	May	<1	190	0		0		0		1	211	0		<1	210	<1	208	
	Jun	0		0		0		0		0		0		0		0		
	Jul	<1	112	1	106	6	115	8	112	3	115	0		0		0	113	
	Aug	<1	141	12	129	13	123	21	130	2	149	0		0		0	129	
	Sep	0		1	150	1	147	3	153	1	156	0		0		0	152	
	Oct	<1	171	1	160	0		0		<1	185	0		0		0	<1	164
	Nov	0		0		0		0		0		0		0		0	0	
	Dec	0		0		0		0		0		0		0		0	0	
	Jan 1986	0		0		0		0		0		0		0		0	0	
Feb	0		0		0		0		0		0		0		0	0		
Mar	0		0		0		0		0		0		0		0	0		
Gulf menhaden	Jan 1985	8	86	10	76	97	73	2	68	1	73	31	107	0		20	81	
	Feb	11	90	2	68	7	66	44	56	1	36	2	79	0		9	63	
	Mar	12	91	6	76	10	44	14	84	0		1	102	0		8	76	
	Apr	20	114	2	105	2	66	4	43	5	116	2	52	0		9	100	
	May	17	111	50	110	2	62	6	63	2	140	0		0		18	106	
	Jun	6	116	17	121	<1	99	11	102	1	88	0		0		7	113	
	Jul	3	103	9	108	7	64	2	99	4	110	0		0		5	95	
	Aug	5	107	5	120	7	88	2	108	1	132	2	137	0		4	109	
	Sep	3	122	2	115	15	82	2	135	1	190	5	117	0		4	101	
	Oct	5	117	4	129	11	71	<1	108	1	139	0		0		4	98	
	Nov	5	125	2	124	8	81	<1	92	<1	138	0		0		3	102	
	Dec	115	116	7	120	158	85	57	124	2	165	0		0		68	103	
	Jan 1986	36	88	1	88	4	77	<1	103	<1	151	0		0		13	88	
Feb	11	99	12	59	1	35	7	34	0		2	26	0		7	64		
Mar	18	86	2	66	54	38	40	46	0		0		0		17	49		

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower			
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	Laguna Madre	Length	Coastwide	
Hardhead catfish	Jan 1985	0		0		0		0		<1	78	2	261	0		<1	241
	Feb	0		0		0		<1	92	0		0		0		<1	92
	Mar	1	241	3	207	2	232	4	189	10	196	6	268	2	198	3	215
	Apr	2	220	9	156	1	204	8	141	11	171	12	197	26	167	6	171
	May	1	222	8	138	1	259	2	193	4	185	10	195	16	189	4	183
	Jun	2	205	3	182	<1	89	3	156	5	182	8	204	4	169	3	186
	Jul	4	173	1	283	<1	143	3	184	10	187	10	212	3	189	4	194
	Aug	2	149	16	145	2	157	4	176	33	200	5	187	5	174	9	180
	Sep	3	148	1	110	8	115	11	95	53	151	6	189	3	153	9	142
	Oct	11	125	2	114	1	200	7	140	33	163	1	310	1	205	9	155
	Nov	0		2	155	2	258	4	162	4	152	4	186	<1	154	2	175
	Dec	<1	109	<1	113	<1	107	<1	145	0		0		0		<1	119
Jan 1986	0		0		0		0		<1	243	0		<1	396	<1	320	
Feb	2	259	1	162	<1	331	<1	320	1	181	0		2	207	1	229	
Mar	29	168	4	166	<1	151	4	195	24	182	17	257	<1	250	15	193	
Pinfish	Jan 1985	1	150	6	97	<1	96	31	115	50	114	43	117	125	114	17	114
	Feb	1	114	0		0		1	32	123	108	15	123	89	112	18	110
	Mar	<1	146	0		0		<1	28	105	119	7	122	40	117	13	118
	Apr	0		<1	116	7	120	8	119	28	126	12	140	16	132	6	128
	May	<1	47	4	124	1	76	30	122	18	130	6	150	21	125	7	126
	Jun	1	105	1	108	<1	99	17	100	7	130	12	150	5	138	4	123
	Jul	3	100	2	91	11	96	77	102	12	125	10	130	31	120	12	109
	Aug	<1	118	42	109	37	99	59	111	42	123	39	132	42	99	28	112
	Sep	1	123	2	117	72	107	143	111	19	129	20	146	30	105	27	113
	Oct	2	146	5	107	35	117	167	112	25	148	32	141	82	98	29	115
	Nov	<1	148	29	114	93	100	81	108	34	119	17	134	23	105	32	109
	Dec	<1	135	12	107	8	100	19	100	108	111	0		77	108	20	108
Jan 1986	<1	159	1	100	1	97	1	91	78	106	1	132	51	121	11	112	
Feb	2	126	2	92	1	100	1	104	52	111	1	157	18	117	7	113	
Mar	1	113	1	101	3	97	3	108	56	117	4	136	29	111	9	115	

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	No./h	Length	No./h	Length
Red drum	Jan 1985	0		<1	56	0		<1	54	0		0		1	90	<1	75
	Feb	0		0		0		0		0		1	645	0		<1	645
	Mar	0		0		0		0		0		0		0		0	
	Apr	0		0		0		0		0		1	461	0		<1	461
	May	0		0		0		0		0		0		0		0	
	Jun	0		0		0		0		0		0		0		0	
	Jul	0		0		0		0		<1	276	0		0		<1	276
	Aug	0		0		0		0		0		0		0		0	
	Sep	0		0		0		0		0		0		0		0	
	Oct	0		0		0		0		0		0		0		0	
	Nov	0		0		0		0		0		1	319	0		<1	319
	Dec	0		0		0		0		0		0		0		0	
Jan 1986	Jan	0		0		0		<1	78	0		0		0		<1	78
	Feb	0		0		0		0		0		0		0		0	
	Mar	0		0		0		0		0		0		0		0	
Sand seatrout	Jan 1985	1	106	<1	132	0		0		1	134	0		2	136	<1	59
	Feb	<1	105	0		0		0		0		0		0		<1	105
	Mar	1	110	0		0		0		<1	79	0		0		<1	106
	Apr	6	141	1	144	1	128	<1	128	1	163	0		0		2	141
	May	6	131	17	125	<1	131	1	118	4	166	0		2	126	6	124
	Jun	4	144	8	117	<1	95	6	105	15	113	0		2	112	6	111
	Jul	3	122	3	113	0		2	138	18	130	6	158	1	113	4	128
	Aug	5	139	5	119	1	125	1	107	21	149	2	169	3	89	6	132
	Sep	4	129	1	136	<1	105	1	144	14	152	0		0		3	146
	Oct	5	119	2	177	<1	274	<1	268	10	158	0		0		3	151
	Nov	5	118	2	116	0		1	129	2	170	0		1	164	3	133
	Dec	5	108	0		0		1	116	4	200	0		0		2	148
Jan 1986	Jan	1	82	0		0		0		0		0		0		<1	82
	Feb	0		<1	154	0		0		2	213	0		0		<1	201
	Mar	1	132	3	121	0		<1	157	<1	135	0		0		1	128

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	No./h	Length	No./h	Length
Sheepshead	Jan 1985	1	313	<1	102	<1	81	0	0	1	268	0	0	0	<1	244	
	Feb	1	335	<1		<1	138	0	0	0		0	0	0	<1	286	
	Mar	0		0		0		0	0	1	122	0	0	0	<1	122	
	Apr	0		0		<1	117	0	0	0		0	0	0	<1	117	
	May	0		0		0		0	0	0		0	0	0	0		
	Jun	0		0		0		1	167	0		0	0	0	<1	167	
	Jul	0		0		0		0	0	0		0	0	0	0		
	Aug	0		0		0		<1	120	0		0	1	103	<1	105	
	Sep	0		0		0		<1	178	0		0	0	0	<1	178	
	Oct	<1	401	0		0		0	0	0		0	0	2	<1	97	
	Nov	0		0		0		1	143	<1	425	0	0	0	<1	214	
	Dec	<1	385	0		0		1	104	<1	468	0	0	0	<1	220	
	Jan 1986	0		0		0		0	0	0		0	0	1	80		
Feb	<1	400	0		0		0	0	0		0	0	<1	340	<1	370	
Mar	0		0		0		<1	96	<1	141	0	0	<1	205	<1	147	
Southern flounder	Jan 1985	0		<1	190	<1	140	1	142	0		1	175	<1	142	<1	157
	Feb	<1	378	<1	218	2	159	<1	310	<1	233	2	143	2	276	1	195
	March	1	301	0		0		1	141	1	202	1	338	<1	195	<1	228
	Apr	<1	267	0		2	176	4	105	0		2	171	0		1	145
	May	<1	225	<1	144	0		1	184	<1	201	1	157	<1	280	<1	189
	Jun	<1	277	<1	171	<1	105	3	135	0		1	217	0		<1	157
	Jul	1	150	0		<1	109	2	168	2	203	1	237	0		1	184
	Aug	1	185	1	168	0		1	166	<1	152	0		1	196	<1	177
	Sep	<1	236	<1	305	1	145	1	222	1	185	0		0		<1	200
	Oct	<1	212	0		0		1	150	2	198	0		<1	495	<1	231
	Nov	0		0		0		1	207	2	236	1	257	0		<1	233
	Dec	0		1	232	0		1	144	1	320	1	233	0		<1	228
	Jan 1986	0		<1	231	<1	210	<1	127	0		1	252	0		<1	214
Feb	0		0		0		<1	194	1	220	2	214	0		<1	213	
Mar	0		1	216	<1	108	1	137	<1	94	0		0		<1	151	

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower			
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
Spanish mackerel	Jan 1985	0		0		0		0		0		0		0			
	Feb	0		0		0		0		0		0		0			
	Mar	0		0		0		0		0		0		0			
	Apr	0		0		0		0		0		0		0			
	May	0		0		0		0		0		0		0			
	Jun	0		0		0		0		0		0		0			
	Jul	0		<1	156	0		0		<1	233	0		0		<1	195
	Aug	0		0		0		0		0		0		0		0	
	Sep	0		0		0		0		0		0		0		0	
	Oct	0		<1	186	0		0		0		0		0		<1	186
	Nov	0		0		0		0		0		0		0		0	
	Dec	0		0		0		0		0		0		0		0	
	Jan 1986	0		0		0		0		0		0		0		0	
Feb	0		0		0		0		0		0		0		0		
Mar	0		0		0		0		0		0		0		0		
Spot	Jan 1985	18	120	47	124	2	125	135	119	164	119	172	134	110	126	60	125
	Feb	25	124	1	112	0		3	112	1381	132	14	155	75	130	159	132
	Mar	42	127	52	118	1	126	99	119	248	126	14	168	11	144	62	125
	Apr	5	129	11	123	17	83	69	89	31	127	5	186	5	156	16	106
	May	8	78	14	97	9	90	28	84	7	136	9	172	6	135	11	104
	Jun	4	106	34	104	<1	81	24	94	19	110	12	109	2	121	14	104
	Jul	8	107	3	108	2	97	62	102	84	115	10	123	11	122	19	111
	Aug	9	112	28	107	15	105	25	117	58	123	22	125	2	111	21	117
	Sep	2	118	4	130	30	111	32	126	121	136	2	156	4	113	21	130
	Oct	3	127	14	135	12	118	49	125	154	141	12	135	3	134	27	136
	Nov	10	131	5	139	33	121	150	129	108	147	3	145	1	142	33	135
	Dec	17	129	9	135	24	130	53	128	204	140	5	166	0	163	37	137
	Jan 1986	16	133	18	128	0		0		61	155	0		2	163	16	146
Feb	8	132	55	130	<1	159	4	134	51	152	1	174	0		21	140	
Mar	8	154	72	132	10	73	13	125	45	157	2	163	1	148	15	137	

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout	Jan 1985	1	304	0		0		2	151	<1	151	0	0	<1	179	<1	184
	Feb	<1	630	0		<1	287	1	189	0		1	192	<1	225	<1	245
	Mar	<1	168	0		0		<1	124	<1	138	0		<1	230	<1	178
	Apr	<1	274	<1	172	0		0		0		0		0		<1	223
	May	0		0		0		<1	174	0		1	171	0		<1	172
	Jun	0		0		0		0		0		1	62	0		<1	62
	Jul	0		0		0		<1	264	<1	329	0		<1	310	<1	303
	Aug	0		0		0		<1	310	<1	249	0		0		<1	280
	Sep	0		0		0		1	48	0		4	169	0		<1	145
	Oct	0		0		<1	95	0		<1	80	0		0		<1	90
	Nov	<1	172	0		<1	150	<1	182	1	168	1	174	<1	239	<1	181
	Dec	<1	133	<1	170	1	156	4	166	1	152	1	93	<1	123	1	152
	Jan 1986	1	221	1	184	1	149	<1	126	<1	103	1	133	4	247	1	199
	Feb	<1	170	<1	137	0		<1	179	2	158	1	195	0		<1	168
Mar	<1	194	0		0		1	159	2	179	0		0		<1	175	
Striped mullet	Jan 1985	20	172	<1	191	0		5	41	1	159	6	221	1	289	8	163
	Feb	3	246	0		<1	124	71	168	1	157	0		<1	185	7	171
	Mar	0		0		0		0		0		0		0		0	
	Apr	0		0		0		<1	148	0		0		0		<1	148
	May	0		0		0		0		<1	186	0		0		<1	186
	Jun	0		0		0		0		0		1	265	0		<1	265
	Jul	0		0		0		0		1	230	0		0		<1	230
	Aug	0		0		0		1	156	0		0		0		<1	156
	Sep	0		0		0		<1	250	0		0		0		<1	250
	Oct	0		<1	135	0		1	171	<1	221	0		0		<1	173
	Nov	<1	291	0		0		2	145	<1	172	1	246	0		<1	187
	Dec	6	243	0		1	138	5	126	2	149	2	288	0		3	194
	Jan 1986	21	260	0		0		0		<1	147	0		1	274	8	258
	Feb	0		0		<1	214	0		<1	382	0		0		<1	298
Mar	<1	317	0		0		0		1	295	0		0		<1	302	

Table D.2. (Cont'd.)

Species	Month	Galveston		Matagorda		San Antonio		Aransas		Corpus Christi		Upper		Lower			
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	Laguna Madre	Length	Laguna Madre	Length	Coastwide	
Other finfishes	Jan 1985	12	86	41	75	8	60	44	54	46	74	10	80	12	97	24	71
	Feb	10	83	24	38	24	38	315	37	31	63	47	49	11	115	45	43
	Mar	13	170	19	107	4	75	17	77	24	135	2	137	21	142	14	123
	Apr	11	154	24	114	17	93	30	83	25	133	23	50	52	145	20	113
	May	8	114	27	154	3	154	31	59	24	160	5	95	50	134	17	124
	Jun	11	102	17	127	<1	80	35	85	51	125	29	42	71	146	21	113
	Jul	22	98	17	139	11	82	25	88	47	116	26	69	45	131	24	107
	Aug	28	103	38	128	15	133	22	109	60	108	16	98	81	130	33	118
	Sep	29	99	4	108	7	108	50	114	104	135	23	104	23	126	30	121
	Oct	47	82	24	76	13	109	23	123	75	106	35	64	81	111	39	98
	Nov	47	94	26	85	13	110	27	81	72	114	84	69	73	145	42	102
	Dec	31	77	16	104	14	50	121	51	57	124	14	83	78	118	36	86
	Jan 1986	25	48	6	108	16	53	7	43	5	98	34	47	5	100	15	57
	Feb	7	120	23	94	5	56	11	67	20	128	60	51	6	111	15	78
	Mar	15	106	33	95	16	75	39	77	29	126	57	80	15	118	25	93
Total finfishes	Jan 1985	65	121	106	100	109	82	220	98	275	115	274	137	261	116	136	113
	Feb	62	121	37	48	38	57	437	61	1545	122	95	106	200	115	249	108
	Mar	110	128	87	109	28	79	155	105	403	133	37	180	91	133	124	126
	Apr	108	126	78	111	130	99	225	91	107	135	68	126	135	145	113	115
	May	77	118	275	118	47	109	152	89	104	142	72	144	131	142	129	121
	Jun	42	126	166	115	<1	103	186	98	166	124	81	112	163	152	97	121
	Jul	65	114	61	122	53	100	237	108	259	127	79	128	127	133	101	120
	Aug	62	116	228	124	97	120	158	120	365	131	103	133	160	134	151	127
	Sep	58	118	27	123	137	108	275	120	368	142	74	144	78	132	114	129
	Oct	83	105	73	113	73	111	254	126	347	140	79	108	181	112	126	123
	Nov	73	107	69	108	149	112	271	115	241	134	121	102	100	135	121	118
	Dec	180	113	48	115	208	95	270	93	387	129	30	138	157	113	174	111
	Jan 1986	106	122	28	122	19	65	11	57	153	126	40	62	66	133	68	115
	Feb	35	122	108	104	23	71	34	66	152	131	82	74	30	123	64	106
	Mar	101	124	101	102	122	61	176	75	235	133	87	124	56	119	122	105

Table D.3. Monthly mean catch rate (No./h) and mean total lengths (mm) of select shellfishes and finfishes caught with 6.1-m trawls (Zone 3) by bay system during January-July 1985. Blank indicates no measurement taken.

Species	Month	Galveston		Matagorda		Aransas		Corpus Christi		Lower Laguna Madre	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
SHELLFISHES											
Blue crab	Jan	118	75	3	118	3	75	41	112	1	132
	Feb	234	64	2	56	27	87	<1	21	8	84
	Mar	130	67	5	109	12	102	4	84	10	155
	Apr	78	63	13	101	8	81	12	84	24	85
	May	30	85	6	97	4	98	8	71	8	101
	Jun	23	137	2	101	24	104	20	93	12	88
	Jul	37	145	0		78	129	29	112	6	116
Brown shrimp	Jan	2	73	0		0		<1	75	<1	75
	Feb	1	85	0		0		0		5	87
	Mar	<1	76	0		0		0		2	105
	Apr	2	103	0		0		0		30	74
	May	14	76	2	100	30	101	2	60	4	67
	Jun	7	101	<1	112	421	92	<1	68	45	64
	Jul	4	105	<1	101	2	114	1	87	2	53
Pink shrimp	Jan	<1	117	1	110	3	79	<1	72	0	
	Feb	<1	122	0		1	98	<1	96	0	
	Mar	<1	135	0		6	102	3	81	<1	90
	Apr	1	108	2	112	51	111	2	97	6	86
	May	6	110	<1	116	0		0		0	
	Jun	0		0		0		0		0	
	Jul	0		0		0		0		0	
White shrimp	Jan	212	80	38	98	1	81	<1	82	0	
	Feb	28	89	1	109	2	80	<1	91	<1	103
	Mar	18	107	<1	112	4	95	<1	85	0	
	Apr	19	132	<1	140	4	134	0		2	143
	May	11	140	<1	161	0		0		<1	137
	Jun	2	150	0		0		0		0	
	Jul	3	90	0		0		0		0	

Table D.3. (Cont'd.)

Species	Month	Galveston		Matagorda		Aransas		Corpus Christi		Lower Laguna Madre	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Atlantic croaker	Jan	26	129	2	140	6	90	8	27	8	134
	Feb	102	97	0		<1	29	<1	38	2	109
	Mar	0		4	72	0		0		<1	75
	Apr	20	90	2	78	<1	45	0		20	144
	May	6	126	4	125	4	136	0		14	150
	Jun	5	138	3	136	28	112	0		4	166
	Jul	2	156	0		0		0		1	149
Black drum	Jan	0		0		0		0		0	
	Feb	<1	215	0		0		0		0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	0		0		0		0		0	
	Jul	0		0		0		0		0	
Gafftopsail catfish	Jan	0		0		0		0		0	
	Feb	0		0		0		0		0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	0		0		0		0		0	
	Jul	0		0		0		0		0	
Gulf menhaden	Jan	32	102	10	89	13	82	10	59	0	
	Feb	2	85	0		25	74	<1	37	1	110
	Mar	11	107	0		4	96	8	77	0	
	Apr	5	119	0		<1	195	2	162	0	
	May	1	123	0		0		0		1	160
	Jun	0		0		0		<1	65	<1	160
	Jul	0		0		0		0		0	

Table D.3. (Cont'd.).

Species	Month	Galveston		Matagorda		Aransas		Corpus Christi		Lower Laguna Madre	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Hardhead catfish	Jan	0		0		0		<1	88	0	
	Feb	1	201	0		0		0		2	193
	Mar	31	203	0		<1	221	<1	104	0	
	Apr	86	146	4	213	<1	325	0		4	207
	May	16	174	4	228	2	232	1	242	1	196
	Jun	45	197	1	213	4	220	<1	191	2	234
	Ju1	34	230	4	246	1	230	<1	265	4	144
Pinfish	Jan	1	118	10	105	21	110	2	53	13	113
	Feb	2	119	0		3	107	<1	54	24	99
	Mar	28	116	1	126	14	115	2	108	12	104
	Apr	0		5	110	3	120	50	106	92	113
	May	1	164	1	114	2	126	12	116	24	116
	Jun	1	129	8	98	43	123	40	125	68	85
	Ju1	3	113	2	98	17	113	36	118	22	110
Red drum	Jan	0		0		12	66	3	54	0	
	Feb	0		0		1	56	<1	56	0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	0		0		0		<1	173	0	
	Ju1	0		0		0		<1	211	0	
Sand seatrout	Jan	4	129	<1	95	<1	98	0		0	
	Feb	0		0		<1	113	<1	108	0	
	Mar	1	114	0		0		0		0	
	Apr	8	141	8	140	1	142	<1	140	6	159
	May	6	140	0		0		0		1	66
	Jun	<1	151	4	86	4	139	0		2	186
	Ju1	0		0		<1	107	0		0	

Table D.3. (Cont'd.).

Species	Month	Galveston		Matagorda		Aransas		Corpus Christi		Lower Laguna Madre	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Sheepshead	Jan	0		0		0		0		1	302
	Feb	0		0		0		0		0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		<1	373
	May	0		0		0		0		0	
	Jun	<1	434	0		0		0		0	
	Ju1	1	463	0		0		0		0	
Southern flounder	Jan	2	236	0		1	132	<1	176	<1	220
	Feb	2	222	0		<1	127	<1	191	<1	322
	Mar	1	215	0		<1	124	0		0	
	Apr	<1	207	0		<1	147	1	186	0	
	May	1	147	0		<1	157	0		0	
	Jun	2	164	0		2	133	2	137	<1	156
	Ju1	<1	192	0		1	158	<1	148	0	
Spanish mackere1	Jan	0		0		0		<1	230	0	
	Feb	0		0		0		0		0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	0		0		0		0		0	
	Ju1	0		0		0		0		0	
Spot	Jan	472	125	106	126	48	116	4	65	14	137
	Feb	354	121	<1	185	91	116	1	129	16	130
	Mar	82	129	<1	119	188	129	3	131	1	142
	Apr	36	136	10	143	89	130	4	137	21	123
	May	1	81	0		2	80	0		5	96
	Jun	11	115	4	110	63	108	2	108	4	160
	Ju1	0		1	109	2	126	0		0	

Table D.3. (Cont'd.).

Species	Month	Galveston		Matagorda		Aransas		Corpus Christi		Lower Laguna Madre	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout	Jan	1	162	0		7	172	1	134	2	176
	Feb	6	131	0		<1	136	<1	121	0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	<1	365	0		0		0		0	
	Jul	0		0		0		0		0	
Striped mullet	Jan	0		0		2	144	0		0	
	Feb	<1	288	0		0		<1	32	0	
	Mar	0		0		0		0		0	
	Apr	0		0		0		0		0	
	May	0		0		0		0		0	
	Jun	0		<1	250	0		0		0	
	Jul	0		0		0		0		0	
Other finfishes	Jan	68	80	80	107	86	67	308	52	21	143
	Feb	54	80	26	131	88	53	6	63	28	154
	Mar	62	113	21	70	24	103	68	66	12	138
	Apr	41	114	50	107	21	108	9	112	32	146
	May	65	119	16	115	17	117	45	83	80	143
	Jun	28	109	12	114	69	97	47	75	44	107
	Jul	31	122	2	115	14	127	44	113	7	159
Total finfishes	Jan	604	102	209	111	197	94	337	52	58	137
	Feb	526	112	27	132	210	82	8	70	73	132
	Mar	216	132	26	73	231	117	83	74	26	122
	Apr	196	128	78	121	115	128	66	113	174	133
	May	97	130	26	136	28	128	58	93	125	135
	Jun	93	152	32	114	215	112	92	100	124	113
	Jul	70	176	9	171	36	123	82	118	34	123

Table D.4. Monthly mean catch rates (No./h) and mean total lengths (mm) of select shellfishes and finfishes caught with 6.1-m trawls in the Texas Territorial Sea during January 1985-March 1986. Blank indicates no measurement taken.

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
SHELLFISHES											
Blue crab	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		1	54	ND		ND	54
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		<1	163	ND		<1	163
	May	ND		ND		0		ND		0	
	Jun	ND		ND		4	128	ND		4	128
	Jul	ND		ND		2	135	ND		2	135
	Aug	<1	130	4	139	2	130	1	156	2	138
	Sep	<1	127	0		0		1	132	<1	130
	Oct	1	90	0		0		0		<1	90
	Nov	0		0		0		0		0	
	Dec	<1	106	<1	54	0		0		<1	80
	Jan 1986	<1	54	0		0		0		<1	54
Feb	12	61	0		0		0		0	61	
Mar	2	99	<1	163	0		<1	70	1	104	
Brown shrimp	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		1	119	ND		1	119
	May	ND		ND		<1	94	ND		<1	94
	Jun	ND		ND		437	109	ND		437	109
	Jul	ND		ND		2	111	ND		2	111
	Aug	14	117	18	130	4	126	1	94	9	124
	Sep	14	96	16	123	32	114	65	106	31	109
	Oct	4	83	4	108	3	98	<1	106	3	97
	Nov	0		0		10	92	11	115	5	104
	Dec	1	82	0		3	104	13	96	4	97
	Jan 1986	0		<1	97	<1	99	0		<1	98
Feb	<1	89	0		<1	93	0		<1	91	
Mar	2	113	3	116	1	122	12	116	5	116	

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Arkansas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pink shrimp	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		3	111	ND		3	111
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		<1	119	ND		<1	119
	May	ND		ND		<1	130	ND		<1	130
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		1	155	<1	152	0		<1	154
	Sep	0		0		2	130	0		<1	130
	Oct	0		0		2	131	0		1	131
	Nov	<1	120	<1	85	7	109	3	121	3	112
	Dec	0		<1	115	1	157	2	92	1	114
	Jan 1986	0		0		0		<1	116	<1	116
Feb	0		0		<1	116	7	121	2	121	
Mar	1	124	1	114	9	107	4	117	4	111	
White shrimp	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		38	105	ND		38	105
	Mar	ND		ND		2	118	ND		2	118
	Apr	ND		ND		<1	146	ND		<1	146
	May	ND		ND		<1	155	ND		<1	155
	Jun	ND		ND		3	170	ND		3	170
	Jul	ND		ND		0		ND		0	
	Aug	2	168	1	179	<1	152	0		1	168
	Sep	37	124	23	122	7	151	0		17	126
	Oct	11	124	10	153	20	142	0		10	140
	Nov	38	112	46	118	27	129	<1	166	29	119
	Dec	178	105	48	123	32	121	3	100	67	110
	Jan 1986	247	94	8	120	6	118	<1	117	67	95
Feb	49	93	58	118	24	113	5	126	35	108	
Mar	6	133	22	116	9	130	2	130	10	123	

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O' Connor		Arkansas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
FINFISHES											
Atlantic croaker	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		<1	100	ND		<1	100
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		<1	143	ND		<1	143
	May	ND		ND		0		ND		0	
	Jun	ND		ND		34	129	ND		34	129
	Ju1	ND		ND		10	128	ND		10	128
	Aug	92	144	156	136	96	144	5	135	89	140
	Sep	13	149	41	144	36	164	34	149	31	141
	Oct	3	152	13	156	11	162	3	165	7	145
	Nov	1	150	0		4	143	<1	180	1	148
	Dec	<1	182	1	145	0		1	178	<1	166
	Jan 1986	2	99	<1	134	2	127	0		1	115
Feb	<1	144	<1	67	<1	168	0		<1	126	
Mar	<1	65	2	69	1	127	<1	98	1	87	
Black drum	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		<1	825	ND		<1	825
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Ju1	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		<1	900	0		0		<1	900
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide		
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	
Gafftopsail catfish	Jan 1985	ND		ND		ND		ND		ND		
	Feb	ND		ND		0		ND		0		
	Mar	ND		ND		0		ND		0		
	Apr	ND		ND		0		ND		0		
	May	ND		ND		0		ND		0		
	Jun	ND		ND		0		ND		0		
	Jul	ND		ND		0		ND		0		
	Aug	0		0		0		0		0		
	Sep	2	152	<1	157	1	136	0		0	1	147
	Oct	0		1	175	0		0		0	<1	175
	Nov	1	193	<1	101	0		0		0	<1	162
	Dec	0		0		0		0		0	0	
	Jan 1986	0		0		0		0		0	0	
Feb	0		0		0		0		0	0		
Mar	0		0		0		0		0	0		
Gulf menhaden	Jan 1985	ND		ND		ND		ND		ND		
	Feb	ND		ND		2	146	ND		2	146	
	Mar	ND		ND		1	188	ND		1	188	
	Apr	ND		ND		1	182	ND		1	182	
	May	ND		ND		0		ND		0		
	Jun	ND		ND		0		ND		0		
	Jul	ND		ND		1	156	ND		1	156	
	Aug	<1	170	0		1	94	ND		<1	106	
	Sep	2	152	1	158	<1	146	0		1	153	
	Oct	1	177	<1	222	0		0		<1	192	
	Nov	2	163	<1	194	<1	203	0		1	175	
	Dec	5	137	1	133	0		0		2	136	
	Jan 1986	2	127	<1	191	0		0		1	140	
Feb	2	141	0		0		0		0	141		
Mar	<1	137	0		0		0		<1	137		

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Hardhead catfish	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		<1	208	ND		<1	208
	Mar	ND		ND		1	291	ND		1	291
	Apr	ND		ND		1	230	ND		1	230
	May	ND		ND		<1	240	ND		<1	240
	Jun	ND		ND		<1	79	ND		<1	79
	Jul	ND		ND		10	172	ND		10	172
	Aug	3	159	1	232	5	187	0		2	182
	Sep	1	250	1	166	5	172	<1	261	2	188
	Oct	0		2	165	1	224	<1	252	1	194
	Nov	4	137	4	164	14	145	0		5	147
	Dec	2	151	10	123	56	148	0		17	144
	Jan 1986	<1	102	<1	91	0		1	201	<1	149
	Feb	1	100	17	154	32	146	0		13	148
	Mar	1	115	2	169	3	217	0		2	184
King mackerel	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		<1	107	ND		<1	107
	Aug	<1	173	0		0		0		<1	173
	Sep	0		0		1	129	0		<1	129
	Oct	0		0		0		0		<1	129
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		0		0		0		0	
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pinfish	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		1	110	ND		1	110
	Mar	ND		ND		1	121	ND		1	121
	Apr	ND		ND		<1	115	ND		<1	115
	May	ND		ND		1	124	ND		1	124
	Jun	ND		ND		2	136	ND		2	136
	Jul	ND		ND		2	134	ND		2	134
	Aug	1	120	3	120	8	107	<1	104	3	113
	Sep	0		1	115	0		<1	142	<1	111
	Oct	<1	129	<1	134	1	140	2	142	1	139
	Nov	0		1	116	2	121	0		1	119
	Dec	<1	130	10	102	24	104	2	129	9	105
	Jan 1986	0		1	96	1	109	4	101	2	102
	Feb	0		0		<1	114	0		<1	114
	Mar	0		<1	105	1	116	3	109	1	110
Red drum	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		2	84	0		<1	84
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		0		0		0		0	
	Feb	0		0		0		0		0	
	Mar	0		0		0		0		0	

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Arkansas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Red snapper	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		<1	117	ND		<1	117
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		<1	116	ND		<1	116
	Aug	0		0		0		2	94	<1	94
	Sep	0		0		18	81	8	99	6	87
	Oct	0		0		3	95	18	86	5	87
	Nov	0		0		0		3	87	1	87
	Dec	0		0		0		3	85	1	85
	Jan 1986	0		0		0		0		0	
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		
Sand seatrout	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		1	111	ND		1	111
	Mar	ND		ND		1	140	ND		1	140
	Apr	ND		ND		4	160	ND		4	160
	May	ND		ND		0		ND		0	
	Jun	ND		ND		<1	194	ND		<1	194
	Jul	ND		ND		<1	55	ND		<1	55
	Aug	12	184	16	157	<1	220	0		7	169
	Sep	6	118	4	155	2	179	0		3	140
	Oct	2	118	7	208	1	201	0		3	189
	Nov	12	150	2	161	3	127	0		4	147
	Dec	22	123	5	160	4	188	<1	221	8	139
	Jan 1986	13	133	6	144	2	191	0		5	142
Feb	2	94	5	134	1	139	0		2	125	
Mar	3	191	4	143	1	114	0		2	157	

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Sheepshead	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		0		0		0		0	
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		
Southern flounder	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		<1	147	ND		<1	147
	Jul	ND		ND		<1	117	ND		<1	117
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		<1	280	0		0		<1	280
	Jan 1986	0		0		0		0		0	
Feb	0		<1	194	0		0		<1	194	
Mar	0		0		0		0		0		

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O' Connor		Arkansas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spanish mackere1	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		0		0		0		0	
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		
Spot	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		44	129	ND		44	129
	Mar	ND		ND		7	148	ND		7	148
	Apr	ND		ND		2	131	ND		2	131
	May	ND		ND		4	122	ND		4	122
	Jun	ND		ND		19	133	ND		19	133
	Jul	ND		ND		<1	103	ND		<1	103
	Aug	12	128	36	137	117	144	2	126	42	141
	Sep	<1	152	2	144	1	154	2	156	1	151
	Oct	0		0		1	171	<1	136	<1	159
	Nov	<1	154	1	165	2	157	0		1	159
	Dec	2	149	62	126	36	148	0		26	134
	Jan 1986	23	133	23	127	<1	174	1	163	12	131
Feb	3	137	7	140	17	132	0		7	135	
Mar	2	153	0		7	143	<1	159	3	146	

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		0		<1	140	0		<1	140
	Jan 1986	<1	172	<1	165	0		0		<1	148
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		
Striped mullet	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		0		ND		0	
	Mar	ND		ND		0		ND		0	
	Apr	ND		ND		0		ND		0	
	May	ND		ND		0		ND		0	
	Jun	ND		ND		0		ND		0	
	Jul	ND		ND		0		ND		0	
	Aug	0		0		0		0		0	
	Sep	0		0		0		0		0	
	Oct	0		0		0		0		0	
	Nov	0		0		0		0		0	
	Dec	0		0		0		0		0	
	Jan 1986	0		0		0		0		0	
Feb	0		0		0		0		0		
Mar	0		0		0		0		0		

Table D.4. (Cont'd.).

Species	Month	Galveston		Port O'Connor		Aransas		Port Isabel		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Other finfishes	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		66	91	ND		66	91
	Mar	ND		ND		44	95	ND		44	95
	Apr	ND		ND		73	110	ND		73	110
	May	ND		ND		695	108	ND		695	108
	Jun	ND		ND		115	121	ND		115	121
	Jul	ND		ND		55	97	ND		55	97
	Aug	92	138	165	106	157	109	143	92	139	109
	Sep	62	105	120	103	162	106	143	104	121	105
	Oct	76	77	98	121	82	100	70	105	82	102
	Nov	156	96	91	100	252	101	103	91	151	98
	Dec	154	123	82	100	165	108	105	94	126	108
	Jan 1986	118	97	45	108	107	113	34	114	76	106
	Feb	81	92	67	101	76	117	61	108	72	104
	Mar	122	117	101	116	230	118	95	105	137	115
Total finfishes	Jan 1985	ND		ND		ND		ND		ND	
	Feb	ND		ND		128	105	ND		128	105
	Mar	ND		ND		55	112	ND		55	112
	Apr	ND		ND		83	116	ND		83	116
	May	ND		ND		700	108	ND		700	108
	Jun	ND		ND		171	124	ND		171	124
	Jul	ND		ND		80	112	ND		80	112
	Aug	212	142	376	122	383	127	151	94	283	121
	Sep	86	117	170	115	226	116	188	113	166	115
	Oct	82	82	121	132	102	110	94	104	100	110
	Nov	176	103	99	105	276	104	106	91	165	102
	Dec	186	124	171	109	286	119	110	95	189	114
	Jan 1986	159	109	76	119	112	114	40	116	98	113
	Feb	90	97	97	117	128	125	62	107	95	113
	Mar	129	120	110	117	243	124	99	106	146	119

Appendix E. Hydrological summary for bay trawl, oyster dredge and Gulf trawl.

Table E.1. Monthly mean bottom salinity (o/oo) at sampled bay trawl sites (Zones 1 and 2 combined) by bay system during January 1985-March 1986.

Month	Upper					Lower				
	Galveston	Matagorda	San Antonio	Aransas	Corpus Christi	Laguna Madre	Laguna Madre	Laguna Madre	Coastwide	
Jan 1985	15.9	20.0	20.9	22.3	30.2	40.5	29.5	21.5	21.5	
Feb	15.4	21.5	20.7	19.5	28.7	34.3	31.2	21.0	21.0	
Mar	7.9	16.6	17.8	20.4	28.3	36.7	31.8	17.1	17.1	
Apr	10.5	15.0	8.4	20.4	27.2	36.6	32.0	16.2	16.2	
May	16.6	18.2	8.0	16.3	27.5	37.7	33.6	18.9	18.9	
Jun	20.4	18.5	16.5	18.6	29.9	35.9	36.4	21.9	21.9	
Jul	17.1	18.9	9.6	20.7	29.2	35.0	35.7	19.9	19.9	
Aug	20.8	22.2	16.0	23.2	33.0	39.0	37.1	23.7	23.7	
Sep	25.6	25.9	20.2	26.6	34.0	42.0	37.1	27.3	27.3	
Oct	22.7	25.6	21.2	23.2	34.1	40.1	32.1	25.8	25.8	
Nov	17.4	28.1	18.0	26.0	29.2	35.6	31.5	23.5	23.5	
Dec	9.5	22.2	13.7	18.8	25.7	35.4	32.6	17.9	17.9	
Jan 1986	16.4	24.4	16.6	17.9	28.1	32.4	33.3	21.2	21.2	
Feb	14.7	24.0	16.3	18.1	26.4	33.5	32.8	20.4	20.4	
Mar	15.5	25.2	15.8	21.8	30.0	35.9	32.8	21.7	21.7	

Table E.2. Monthly mean bottom temperature (C) at sampled bay trawl sites (Zones 1 and 2 combined) by bay system during January 1985-March 1986.

Month	Upper					Lower				
	Galveston	Matagorda	San Antonio	Aransas	Corpus Christi	Laguna Madre	Laguna Madre	Laguna Madre	Coastwide	
Jan 1985	9.7	11.3	11.7	11.4	11.5	11.4	12.0	10.9	10.9	
Feb	11.0	12.6	11.8	10.7	11.8	11.9	17.2	11.8	11.8	
Mar	18.7	19.4	18.0	18.1	17.9	19.8	19.3	18.7	18.7	
Apr	22.3	23.0	23.6	23.3	21.8	22.4	23.6	22.7	22.7	
May	25.8	26.7	25.3	27.1	26.2	26.0	26.7	26.1	26.1	
Jun	29.0	28.7	27.6	28.4	28.4	28.5	29.8	28.6	28.6	
Jul	29.0	28.8	28.4	30.1	29.1	28.9	28.9	29.0	29.0	
Aug	29.7	29.4	29.9	31.4	29.6	29.7	29.7	29.8	29.8	
Sep	27.9	28.7	29.3	29.2	29.8	29.2	29.5	28.7	28.7	
Oct	24.9	23.7	23.8	25.9	25.2	25.9	25.7	24.7	24.7	
Nov	21.0	20.5	20.3	23.1	22.0	21.6	24.0	21.2	21.2	
Dec	11.7	16.5	16.3	13.0	14.7	15.2	13.9	14.1	14.1	
Jan 1986	11.6	11.3	15.4	13.1	13.9	14.0	14.0	13.0	13.0	
Feb	17.5	17.0	18.6	17.7	17.9	19.5	19.3	17.7	17.7	
Mar	18.0	19.0	18.9	19.3	17.7	19.6	18.1	18.7	18.7	

Table E.3. Monthly mean bottom dissolved oxygen (ppm) at sampled bay trawl sites (Zones 1 and 2 combined) by bay system during January 1985-March 1986.

Month	Galveston	Matagorda	San Antonio	Aransas	Upper			Lower		
					Corpus Christi	Laguna Madre	Coastwide	Laguna Madre	Laguna Madre	Coastwide
Jan 1985	11	8	8	7	9	7	7	10	9	9
Feb	7	7	7	6	8	8	8	9	7	7
Mar	9	7	7	8	9	7	7	8	8	8
Apr	12	8	9	9	9	8	8	7	10	10
May	10	8	8	9	8	6	6	8	8	8
Jun	6	7	8	8	7	7	7	8	7	7
Jul	11	7	8	7	8	7	7	7	9	9
Aug	11	7	7	7	7	6	6	7	8	8
Sep	11	6	9	7	7	7	7	8	8	8
Oct	9	7	6	8	8	8	8	8	8	8
Nov	13	7	8	9	9	9	9	9	10	10
Dec	14	8	12	8	7	8	10	10	11	11
Jan 1986	12	11	10	11	11	11	11	10	11	11
Feb	11	10	10	8	8	9	9	9	10	10
Mar	11	9	9	9	9	7	7	10	10	10

Table E.4. Monthly mean bottom turbidity (JTU) at sampled bay trawl sites (Zones 1 and 2 combined) by bay system during January 1985-March 1986.

Month	Galveston	Matagorda	San Antonio	Aransas	Upper			Lower		
					Corpus Christi	Laguna Madre	Coastwide	Laguna Madre	Laguna Madre	Coastwide
Jan 1985	35	25	41	24	29	89	67	67	37	37
Feb	51	25	39	31	30	41	96	96	41	41
Mar	69	33	51	85	29	62	56	56	55	55
Apr	66	64	63	31	31	33	40	40	56	56
May	45	40	48	39	33	43	47	47	42	42
Jun	30	32	83	73	31	49	79	79	45	45
Jul	34	24	58	31	33	28	33	33	34	34
Aug	37	31	32	35	38	42	38	38	35	35
Sep	42	34	48	33	34	75	37	37	41	41
Oct	30	28	110	29	24	26	108	108	43	43
Nov	25	24	31	56	34	64	65	65	33	33
Dec	36	26	38	41	31	54	25	25	35	35
Jan 1986	32	26	39	33	25	72	183	183	40	40
Feb	36	42	35	25	56	46	24	24	39	39
Mar	32	30	42	46	50	69	53	53	39	39

Table E.5. Monthly mean bottom salinity (o/oo) at sampled pass trawl sites (Zone 3) by bay system during January-July 1985.

Month	Lower				
	Galveston	Matagorda	Aransas	Corpus Christi	Coastwide
Jan	21.9	24.0	27.1	28.6	30.8
Feb	24.2	28.1	27.1	28.1	30.8
Mar	17.4	24.0	25.5	26.0	30.0
Apr	22.0	24.2	25.6	28.9	33.3
May	23.5	28.9	29.6	30.8	34.5
Jun	29.1	32.5	30.1	30.4	35.9
Jul	28.4	30.5	31.9	32.2	34.9

Table E.6. Monthly mean bottom temperature (C) at sampled pass trawl sites (Zone 3) by bay system during January-July 1985.

Month	Lower				
	Galveston	Matagorda	Aransas	Corpus Christi	Coastwide
Jan	11.8	11.3	11.8	12.0	10.7
Feb	11.9	13.9	13.2	14.2	14.2
Mar	18.5	20.1	19.7	19.7	18.9
Apr	21.9	22.5	23.2	23.3	22.9
May	25.9	26.5	26.2	26.4	25.6
Jun	28.1	28.1	26.8	26.8	26.8
Jul	28.6	28.6	28.8	29.2	27.2

Table E.7. Monthly mean dissolved oxygen (ppm) at sampled pass trawl sites (Zone 3) by bay system during January-July 1985.

Month	Galveston	Matagorda	Aransas	Lower			Coastwide
				Corpus Christi	Laguna Madre		
Jan	10	7	6	7	10		8
Feb	7	7	6	6	10		7
Mar	8	7	9	9	9		8
Apr	12	6	9	8	8		9
May	9	7	8	9	8		8
Jun	6	6	7	7	7		7
Jul	11	8	9	8	8		9

Table E.8. Monthly mean bottom turbidity (JTU) at sampled pass trawl sites (Zone 3) by bay system during January-July 1985.

Month	Galveston	Matagorda	Aransas	Lower			Coastwide
				Corpus Christi	Laguna Madre		
Jan	38	34	27	25	56		35
Feb	64	27	41	30	118		50
Mar	53	32	31	24	46		41
Apr	54	28	39	42	51		43
May	30	31	26	24	50		30
Jun	29	25	38	27	59		30
Jul	25	25	30	25	24		25

Table E.9. Monthly mean bottom salinity (o/oo) at sampled Gulf trawl sites in the Texas Territorial Sea during February 1985-March 1986. ND = no data.

Month	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
Jan 1985	ND	ND	ND	ND	ND
Feb	ND	ND	29.9	ND	29.9
Mar	ND	ND	26.9	ND	26.9
Apr	ND	ND	29.4	ND	29.4
May	ND	ND	31.4	ND	31.4
Jun	ND	ND	34.2	ND	34.2
Jul	ND	ND	32.1	ND	32.1
Aug	37.5	36.1	33.0	35.8	35.6
Sep	28.8	34.4	33.1	33.1	32.3
Oct	29.4	30.8	30.0	30.3	30.1
Nov	27.8	31.5	31.7	31.7	30.6
Dec	31.1	30.1	28.8	27.8	29.5
Jan 1986	29.0	30.4	30.2	29.2	29.7
Feb	28.8	30.7	30.5	30.7	30.2
Mar	30.6	30.7	31.3	32.8	31.3

Table E.10. Monthly mean bottom temperature (C) at sampled Gulf trawl sites in the Texas Territorial Sea during February 1985-March 1986. ND = no data.

Month	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
Jan 1985	ND	ND	ND	ND	ND
Feb	ND	ND	13.6	ND	13.6
Mar	ND	ND	16.8	ND	16.8
Apr	ND	ND	21.2	ND	21.2
May	ND	ND	25.2	ND	25.2
Jun	ND	ND	27.2	ND	27.2
Jul	ND	ND	27.8	ND	27.8
Aug	29.7	27.5	27.1	26.0	27.6
Sep	27.5	28.3	30.1	29.5	28.8
Oct	24.8	24.8	25.2	28.3	25.7
Nov	21.0	23.2	24.2	23.7	23.0
Dec	15.2	17.4	17.7	19.7	17.4
Jan 1986	11.8	15.6	15.4	14.5	14.3
Feb	13.7	16.5	16.5	16.2	15.7
Mar	18.2	18.5	19.6	19.9	19.0

Table E.11. Monthly mean bottom dissolved oxygen (ppm) at sampled Gulf trawl sites in the Texas Territorial Sea during February 1985-March 1986. ND = no data.

Month	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
Jan 1985	ND	ND	ND	ND	ND
Feb	ND	ND	7	ND	7
Mar	ND	ND	8	ND	8
Apr	ND	ND	8	ND	8
May	ND	ND	7	ND	7
Jun	ND	ND	8	ND	8
Jul	ND	ND	8	ND	8
Aug	10	7	8	7	8
Sep	10	7	8	7	8
Oct	10	5	7	8	7
Nov	10	6	8	8	8
Dec	12	10	6	9	9
Jan 1986	10	10	9	10	10
Feb	14	10	8	10	10
Mar	10	9	10	9	9

Table E.12. Monthly mean bottom turbidity (JTU) at sampled Gulf trawl sites in the Texas Territorial Sea during February 1985-March 1986. ND = no data.

Month	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
Jan 1985	ND	ND	ND	ND	ND
Feb	ND	ND	28	ND	28
Mar	ND	ND	24	ND	24
Apr	ND	ND	24	ND	24
May	ND	ND	24	ND	24
Jun	ND	ND	24	ND	24
Jul	ND	ND	24	ND	24
Aug	56	58	24	24	41
Sep	30	24	31	24	27
Oct	24	29	24	24	25
Nov	24	40	24	24	28
Dec	24	35	24	26	27
Jan 1986	24	50	24	24	31
Feb	30	55	26	24	34
Mar	24	24	25	24	24

Table E.13. Monthly mean bottom salinity (o/oo) and temperature (C) recorded at oyster dredge sample stations in Galveston Bay during October 1984-December 1985.

Month	Salinity	Temperature
Oct 1984	20.7	26.2
Nov	12.0	17.7
Dec	16.2	19.0
Jan 1985	18.3	9.3
Feb	15.4	11.8
Mar	8.4	21.1
Apr	10.4	23.0
May	14.0	27.2
Jun	17.1	29.0
Jul	19.8	29.1
Aug	24.0	30.6
Sep	24.0	27.8
Oct	21.1	25.6
Nov	16.4	20.3
Dec	11.4	14.0

Appendix F. Summary of SEAMAP samples by year and depth zone for brown shrimp (Penaeus aztecus), white shrimp (P. setiferus), pink shrimp (P. duorarum) and blue crab (Callinectes sapidus) off the Texas coast during 1982-1985.

Table F.1. Mean catch rates (No./h) and mean size (mm) of select shellfishes caught during SEAMAP^a sampling off the Texas coast during June-July 1982-1985. Blanks = No measurement taken.

Year	Depth (m)	Samples (No.)	Brown Shrimp		White Shrimp		Pink Shrimp		Blue Crab	
			No./h	Length	No./h	Length	No./h	Length	No./h	Length
1982	0-18	22	1222	108	15	173	161	136	8	
	19-37	50	1427	115	0		20	138	1	
	38-55	29	138	145	0		<1	126	0	
	56-73	5	117	179	0		0		0	
	74-91	3	79	182	0		0		0	
1983	0-18	28	254	99	20	153	195	127	8	
	19-37	47	1445	119	1	167	87	121	4	
	38-55	24	304	132	0		1	118	1	
	56-73	8	66	156	0		0		0	
	74-91	2	71	168	0		0		0	
1984	0-18	16	733	116	30	174	4	151	6	
	19-37	40	1594	116	1	168	3	150	0	
	38-55	16	544	131	0		0		0	
	56-73	12	194	138	0		0		0	
	74-91	5	86	151	0		0		0	
1985	0-18	30	450	98	41	168	15	135	20	
	19-37	40	1362	112	2	167	10	131	4	
	38-55	14	150	127	0		<1	127	0	
	56-73	5	154	144	0		0		0	
	74-91	1	36	179	0		0		0	

^a Data presented here were collected by R/V OREGON II (NMFS), R/V WESTERN GULF (TPWD) and R/V Aransas Bay. The data were made available by the Southeast Area Monitoring and Assessment Program (SEAMAP). Samples collected with 12.2-m trawl.

Appendix G. Mean catch rates (No./h) of Eastern oyster (Crassostrea virginica) caught with oyster dredges at selected stations by bay system and year.

Table G.1. Mean catch rate (No./h) by size class (mm)^a of Eastern oyster (*Crassostrea virginica*) caught with 46.0-cm wide dredges at selected historical stations in Texas bays during September-October 1984 and 1985.

Bay	Year	No./h			Total
		Spat	Small	Market	
Galveston	1984	462	1912	614	2988
	1985	1130	4954	610	6694
East Matagorda	1984	37	50	20	108
	1985	1624	1536	432	3592
Matagorda	1984	4918	12,758	768	18,444
	1985	3222	1614	366	5202
San Antonio	1984	1302	7396	348	9046
	1985	54	2232	300	3072
Aransas	1984	b	9554 ^b	578	10,133
	1985	1877	5928	254	8059

^aSpat (5-25mm), small (26-75mm), market (\geq 76mm).

^bSpat and small combined.

