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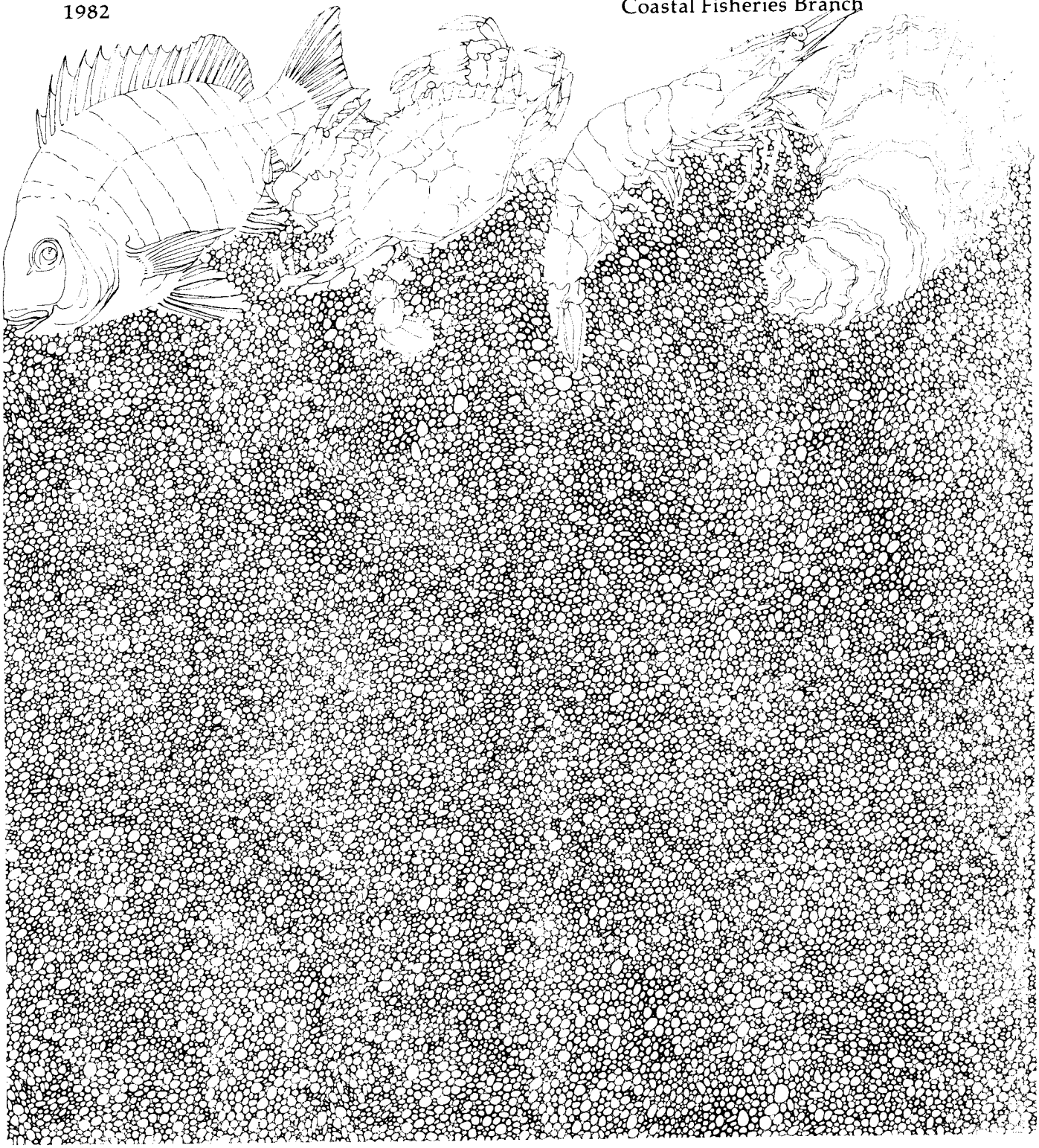
Texas Parks and Wildlife
Coastal Fisheries Branch



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EVALUATION OF 732-M TRAMMEL NET FOR ESTIMATING FINFISH ABUNDANCE IN TEXAS BAYS

ABSTRACT

A 732-mm (1200 feet) trammel net was evaluated as a fish population sampling device in water $\leq$ 1.2 m (4 feet) deep in eight Texas bay systems. Although the gear apparently yielded satisfactory results from a biological standpoint, it may not be economically feasible for routinely estimating adult finfish populations because of the lack of personnel, time, finance and number of available sampling sites required as well as possible equipment damage, adverse weather effects and sample size constraints.

Catch data were summarized by bay system by station type by month. Hydrological and meterorological data were summarized by date.

INTRODUCTION

Finfish in Texas bays support important recreational and commercial industries. Recreational fishermen in the Sabine Lake, Galveston, Matagorda, San Antonio, Aransas, Corpus Christi and Laguna Madre Bay systems harvested an estimated 8,016,800 fish weighing 3,523,551 kg from September 1974 through August 1976 (Heffernan and Green 1977). During the same period commercial fishermen removed a reported 2,395,830 kg of fish from these bay systems. Five species--spotted seatrout (Cynoscion nebulosus), red drum (Sciaenops ocellata), black drum (Pogonias cromis) sheepshead (Archosargus probatocephalus) and southern flounder (Paralichthys lethostigma) accounted for 70.1% of the total weight caught by recreational fishermen and 97.7% of the total weight caught by commercial fishermen.

Effective management of estuarine fishes depends on sustained monitoring of the resource using an unbiased measuring system (Radovich 1975). In November 1975 the Coastal Fisheries Branch of the Texas Parks and Wildlife Department began a coastwide sampling program to obtain baseline data on adult finfish abundance (Matlock et al. 1978a). Simultaneously, a gear evaluation program was initiated (Matlock et al. 1978b). For an accurate fish population estimate, a quantitative estimate of fish occupying all habitat types within the bay must be obtained. During fall 1975 through spring 1976, shoreline and open-water areas were sampled with gill nets while trammel nets were used in the shoreline areas only. Gill nets were considered unsatisfactory for routinely sampling in open-water areas (Matlock et al. 1978a, 1978b). To determine "actual" abundance of finfishes in the open-water (1.2 m deep) areas, a 732-m-long trammel net was set in the shape of a square during fall (October-November) 1976 and spring (April-May) 1977. Trammel nets (732 m) were also set along the shoreline in the shape of a rectangle (91 x 549 m) to examine the distribution of fish within each bay system with respect to water depth. This report summarizes and compares catch-per-area data obtained in the shoreline and open-water areas of each bay system during the fall 1976 and spring 1977.

MATERIALS AND METHODS

During October and November 1976 and April and May 1977, trammel nets were used in Galveston (Figs. 1a-b), East Matagorda (Fig. 2), Matagorda (Fig. 3), San Antonio (Fig. 4), Aransas (Fig. 5) and Corpus Christi Bays (Fig. 6) and upper Laguna Madre (Fig. 7) and lower (Fig. 8) Laguna Madre systems. These systems were described by Matlock et al. (1978a). Each nylon multifilament trammel net was 1.2 m deep and 732 m long with a 7.6-cm stretched mesh inner panel sandwiched between two 30.5-cm stretched mesh outer panels.

For each bay system, monthly sample sites were randomly selected from a list of no more than 20 sites (no more than 40 sites in Galveston Bay system) in each of two station types (Appendix A):

1. Shoreline station: a near-shore sample site where the water depth was between 0.6 m and 1.2 m at a distance of 91.4 m from shore and throughout a distance of 548.6 m parallel to shore.

2. Open-water station: a sample site where the water depth was between 0.6 m and 1.2 m at all points along the perimeter of a square area (182.9 m per side).

Four different stations of each type were sampled monthly in Galveston Bay system, two different stations of each type in East Matagorda Bay system and three different stations of each type in all other bay systems (Appendix B). All stations in the Galveston Bay, East Matagorda Bay, and upper and lower Laguna Madre systems were sampled before the 15th of each month; all stations in the other bay systems sampled after the 15th of each month.

At shoreline stations, trammel nets were set during daylight hours by placing one end of the net on shore, proceeding 91.4 m perpendicular to shore, making a 90^{o} turn, proceeding 548.6 m parallel to shore, making a 90^{o} turn and returning 91.4 m to shore. At open-water stations, trammel nets were set in the shape of a square with 182.9 m per side. Immediately after each net was set, one of three randomly selected striking methods was initiated:

1. Noise strike: two outboard motor powered skiffs traveled the length of the net four times disturbing the water as much as possible.

2. Rotenone strike: 7.6 liters of rotenone (Nox Fish) was applied to the area.

3. Potassium permanganate ($KMnO_4$) strike: $KMnO_4$ (0.9 kg) was applied to the area.

In each bay system each of the striking methods were used once at each station type monthly, except that in Galveston Bay system one striking method was also used twice at each station type and that in East Matagorda Bay system only two striking methods were used at each station type.

When possible, all captured fish were identified to species (Parker et al. 1972), counted and measured (total length to the nearest millimeter). All data were key-punched and stored on magnetic tape at the Texas Parks and Wildlife Department's Data Processing Section, Austin, Texas. The common names used are those of Bailey et al. (1970).

At each site sampled, selected surface (0-15 cm below surface) hydrological parameters were measured--including turbidity (to the nearest 1 JTU), water temperature (to the nearest 0.5 C), salinity (to the nearest 0.1 o/oo), and dissolved oxygen (to the nearest 1 ppm) (Appendix C). Tidal state (slack, ebb or flood) and sea condition (calm, choppy or rough) were estimated visually. The depth range (to the nearest 0.1 m) was determined by measuring the depth at randomly selected places along the net. Turbidity was determined with Jackson turbidimeters; temperature measured with stem

thermometers, salinity with refractometers; dissolved oxygen with Hach kits. The bottom type (mud, sand, shell and/or clay) and the amount of vegetation (none, sparse, moderate or dense) were subjectively determined at each site sampled.

Selected meteorological parameters associated with each sample were also recorded (Appendix D). Wind speed (to the nearest 1 mile/h and converted to the nearest km/h) was obtained from the nearest available source. Wind direction was determined using a hand-held compass. The percentage of cloud cover, the precipitation (none, slight or heavy) and the fog (present or absent) were estimated visually. The air temperature (to the nearest 0.5 C) was determined using stem thermometers. The barometric pressure (to the nearest 0.01 inches of Hg and converted to the nearest mm Hg) was obtained from the nearest available source.

Abundance estimates (to the nearest 0.01 fish/acre) for each species and for all species combined were calculated using ratio estimators (total fish caught/total area sampled) for each station type in each bay system each month and for all bays combined. Seasonal mean abundance for each species and all species combined in each bay system and all bays combined were also calculated using ratio estimators. The mean size (total length to the nearest mm) of each species for the above categories was also calculated using the ratio estimator. No statistical analyses were conducted, so comparisons of mean catches or total lengths are based solely on the magnitudes of the estimates involved. No significant differences are implied.

RESULTS

Galveston Bay

Thirty-two 732-m trammel net sets covering 133.76 ha in the Galveston Bay system yielded 3107 fish representing 26 species (Table 1). A large variation occurred among mean catches of each species each month. Species composition in the fall was similar to that in the spring, with black drum (4.79 and 2.41 fish/ha), gizzard shad (4.98 and 3.10 fish/ha) and sea catfish (5.37 and 11.71 fish/ha) dominating the catch during both seasons. Atlantic stingray (3.40 fish/ha) were abundant in the spring but few (0.08 fish/ha) were caught in the fall. Total catch of all fish during each season approximated 23 fish/ha.

During the fall, catches at shoreline stations (20.82 fish/ha) approximated those at open-water stations (22.19 fish/ha). Sea catfish (6.57 fish/ha) dominated the shoreline catch and gizzard shad (7.82 fish/ha) dominated the open-water catch (Table 2). The mean length of each species caught except spotted seatrout and sheepshead were similar at each station type. Spotted seatrout and sheepshead caught at shoreline stations were about 100 mm larger than those at open-water stations.

During the spring, catches at shoreline stations (34.74 fish/ha) exceeded those at open-water stations (13.22 fish/ha) by about three times primarily because of large catches of sea catfish (17.41 fish/ha) and Atlantic stingray (5.43 fish/ha) (Table 3). The mean length of each species caught except black drum were similar at each station type. Black caught at open-water stations (503 $\pm$ 40 mm) were about twice as large as those at shoreline stations (256 $\pm$ 2 mm.

East Matagorda Bay

Sixteen 732-m trammel net sets covering 33.44 ha in East Matagorda Bay system yielded 578 fish representing 13 species (Table 4). Substantial variation occurred among catches of each species each month. Species composition in the fall was similar to that in the spring with red drum (1.68 and 0.72 fish/ha), black drum (6.25 and 1.62 fish/ha), southern flounder (0.72 and 1.23 fish/ha), sea catfish (0.48 and 1.08 fish/ha) and striped mullet (0.87 and 0.63 fish/ha) accounting for most of the catch during both seasons. Total catch of all fish during fall (10.96 fish/ha) was about 1.5 times higher than in spring (6.80 fish/ha).

During the fall, catches at shoreline stations (14.24 fish/ha) exceeded those at open-water stations (5.99 fish/ha) by about two times with black drum comprising about one-half of total catch at each station type (Table 5). The mean length of most species caught at shoreline stations was usually different from that of those caught at open-water stations with no apparent pattern among species.

During the spring, catches at shoreline stations (8.72 fish/ha) exceeded those at open-water stations (2.77 fish/ha) by about three times because the catch of each species except spot was greater at shoreline than open-water stations (Table 6). The catch of spot was about the same at the two station types ($\sim$ 0.06 fish/ha). The mean length of each species caught were similar at each station type.

Matagorda Bay

Twenty-four 732-m trammel net sets covering 100.32 ha in the Matagorda Bay system yielded 1546 fish representing 23 species (Table 7). A large variation occurred among mean catches of each species each month. Species composition in the fall was similar to that in the spring except that many more gizzard shad and striped mullet were caught in the fall than in the spring (2.55 shad/ha in fall; 0.32 shad/ha in spring and 3.69 mullet/ha in fall; 0.92 mullet/ha in spring). Black drum (4.81 fish/ha in fall; 2.77 fish/ha in spring), red drum (3.41 fish/ha in fall; 2.07 fish/ha in spring) and spotted seatrout (2.70 fish/ha in fall; 1.75 fish/ha in spring) were the only other species caught at > 1 fish/ha in the fall or spring. Total catch of all fish during fall (19.74 fish/ha) was about 1.8 times higher than in spring (11.11 fish/ha).

During the fall, catches at shoreline stations (16.29 fish/ha) were about 50% less than those at open-water stations (27.41 fish/ha). Black drum (6.37 fish/ha), red drum (5.24 fish/ha) and striped mullet (2.62 fish/ha) dominated the shoreline catch while striped mullet (5.89 fish/ha), gizzard shad (5.54 fish/ha), spotted seatrout (5.49 fish/ha) and black drum (3.54 fish/ha) dominated the open-water catch (Table 8). The mean length of each species caught except red drum were similar at each station type. Red drum were about 60 mm larger at shoreline stations than at open-water stations.

During the spring, catches at shoreline stations (8.57 fish/ha) were about 40% less than those at open-water stations (14.92 fish/ha). Black drum, spotted seatrout and red drum dominated the catches at both shoreline and open-water stations with catches of each species at each station type $\geq$ 1.45 fish/ha (Table 9). Spot were also abundant in the open-water catches (2.00 fish/ha), but were not caught at shoreline stations. The mean length of each species caught except southern flounder and alligator gar were similar at each station type. Southern flounder caught at shoreline stations (338 $\pm$ 34 mm) were about 40 mm larger than those caught at open-water stations (296 $\pm$ 27 mm). Alligator gar caught at shoreline stations (846 $\pm$ 34 mm) were 364 mm shorter than those caught at open-water stations (1210 $\pm$ 0 mm).

San Antonio Bay

Twenty-four 732-m trammel net sets covering 100.32 ha in the San Antonio Bay system yielded 1538 fish representing 31 species (Table 10). Substantial variation occurred between catches of each species each month. Species composition in the fall was considerably different from that in the spring. Spotted seatrout (2.99 fish/ha), red drum (2.62 fish/ha) and gizzard shad (2.61 fish/ha) were the most abundant species caught in the fall, whereas sea catfish (5.72 fish/ha) and spotted seatrout (2.11 fish/ha) were the most abundant species caught in the spring. Total catch of all fish during each season approximated 15 fish/ha.

During the fall, catches at shoreline stations (13.41 fish/ha) approximated those at open-water stations (15.87 fish/ha). Red drum (3.62 fish/ha) and spotted seatrout (2.09 fish/ha) dominated the shoreline catch and gizzard shad (6.19 fish/ha) and spotted seatrout (4.34 fish/ha) dominated the open-water catch (Table 11). The mean length of each species caught except red drum and southern flounder were similar at each station type. Both red drum and southern flounder were larger at shoreline stations than at open-water stations.

During the spring, catches at shoreline stations (10.79 fish/ha) were about 56% less than catches at open-water stations (24.52 fish/ha). Sea catfish dominated the shoreline (3.45 fish/ha) and the open-water (9.13 fish/ha) catches (Table 12). Gafftopsail catfish (3.30 fish/ha), gulf menhaden (3.15 fish/ha) and spotted seatrout (3.00 fish/ha) were also abundant at open-water stations, but not at shoreline stations. The mean length of each species caught was generally greater for fish at open-water stations than at shoreline stations. However, the reverse was true for sheepshead.

Aransas Bay

Twenty-four 732-m trammel net sets covering 100.32 ha in the Aransas Bay system yielded 1685 fish representing 22 species (Table 13). Substantial variation occurred between catches of each species each month. Species composition in the fall was considerably different from that in the spring. Gizzard shad (9.30 fish/ha), black drum (5.74 fish/ha), striped mullet (3.41 fish/ha) and red drum (3.02 fish/ha) were the most abundant species caught in the fall, whereas striped mullet (1.90 fish/ha) and spotted seatrout (1.44 fish/ha) were the most abundant species caught in the spring. Total catch of all species was about four times higher in the fall (26.43 fish/ha) than in the spring (7.44 fish/ha).

During the fall, catches at shoreline stations (23.74 fish/ha) approximated those at open-water stations (29.84 fish/ha). Black drum (6.18 fish/ha) and striped mullet (5.28 fish/ha) dominated the shoreline catch while gizzard shad (18.56 fish/ha) and black drum (5.09 fish/ha) dominated the open-water catch (Table 14). The mean length of each species caught except southern flounder and striped mullet was greater for fish caught at shoreline stations than for fish caught at open-water stations. Southern flounder caught at shoreline stations (381 $\pm$ 34 mm) were smaller than those caught at open-water stations (398 $\pm$ 87). Striped mullet caught at the two station types were about the same size.

During the spring, catches at shoreline stations (8.86 fish/ha) approximated those at open-water stations (5.25 fish/ha). Striped mullet (3.12 fish/ha) dominated the shoreline catch and spotted seatrout (1.65 fish/ha) dominated the open-water catch (Table 15). The mean length of each species caught were similar at each station type.

Corpus Christi Bay

Twenty-four 732-m trammel net sets covering 100.32 ha in the Corpus Christi Bay system yielded 2026 fish representing 29 species (Table 16). Substantial variation occurred between catches of each species each month. Species composition in the fall was considerably different from that in the spring. Spotted seatrout (4.55 fish/ha) and spot (3.39 fish/ha) dominated the fall catch, whereas Atlantic croaker (5.72 fish/ha), sea catfish (5.34 fish/ha) and gulf menhaden (2.10 fish/ha) were the most abundant species caught in the spring. Total catch of all fish during each season approximated 20 fish/ha.

During the fall, catches at shoreline stations (18.59 fish/ha) approximated those at open-water stations (19.71 fish/ha). Spotted seatrout (4.02 fish/ha) and pinfish (2.49 fish/ha) dominated the shoreline catch and spot (6.59 fish/ha), spotted seatrout (5.34 fish/ha) and gulf menhaden (3.59 fish/ha) dominated the open-water catch (Table 17). The mean length of each species caught except southern flounder, sheepshead and gizzard shad were similar at each station type. Southern flounder and sheepshead caught at shoreline stations were about 100 and 50 mm, respectively, larger than those caught at open-water stations; the reverse was true for gizzard shad ($\sim$ 100 mm difference).

During the spring, catches at shoreline stations (13.31 fish/ha) were about 33% of those at open-water stations (33.43 fish/ha). Atlantic croaker (4.65 fish/ha) and gulf menhaden (2.09 fish/ha) dominated the shoreline catch while sea catfish (12.62 fish/ha), Atlantic croaker (7.34 fish/ha) and red drum (2.15 fish/ha) dominated the open-water catch (Table 18). The mean length of each species caught were similar at each station type.

Upper Laguna Madre

Twenty-four 732-m trammel net sets covering 100.32 ha in the upper Laguna Madre system yielded 1009 fish representing 20 species (Table 19). Substantial variation occurred between catches of each species each month. Species composition in the fall was considerably different from that in the spring. Black drum (2.02 fish/ha) was the most abundant specie caught in the fall, whereas Atlantic croaker (3.05 fish/ha) and striped mullet (2.87 fish/ha) were the most abundant species caught in the spring. Total catch of all fish was about 1.5 times greater in the spring (12.32 fish/ha) than in the fall (7.82 fish/ha).

During the fall, catches at shoreline stations (9.26 fish/ha) were about 60% higher than at open-water stations (5.64 fish/ha). Black drum (3.32 fish/ha) dominated the shoreline catch and red drum (1.80 fish/ha) dominated the open-water catch (Table 20). No pattern in the mean length of each species caught at shoreline and open-water stations was evident.

During the spring, catches at shoreline stations (11.29 fish/ha) approximated those at open-water stations (13.82 fish/ha). Atlantic croaker (3.85 fish/ha) dominated the shoreline catch while striped mullet (5.39 fish/ha) dominated the open-water catch (Table 21). The mean length of each species except black drum, spot and sea catfish were generally larger for fish caught at shoreline stations than for those at open-water stations. Black drum were larger at open-water stations; spot and sea catfish were about the same size at the two station types.

Lower Laguna Madre

Twenty-four 732-m trammel net sets covering 100.32 ha in the lower Laguna Madre system yielded 2940 fish representing 33 species (Table 22). Substantial variation occurred between catches of each species each month. Species composition in the fall was similar to that in the spring, with spot (7.78 and 1.20 fish/ha), striped mullet (4.17 and 2.46 fish/ha), Atlantic croaker (3.53 and 10.01 fish/ha), spotted seatrout (2.75 and 2.39 fish/ha), sea catfish (2.34 and 1.16 fish/ha) and red drum (2.06 and 1.08 fish/ha) dominating the catch during both seasons. Pinfish were also abundant in the fall (2.24 fish/ha) with few (0.34 fish/ha) caught in the spring. Total catch of all fish was approximately 1.5 times greater in the fall (34.14 fish/ha) than in the spring (24.58 fish/ha).

During the fall, catches at shoreline stations (39.74 fish/ha) were about 1.6 times greater than catches at open-water stations (25.55 fish/ha). Spot (9.36 fish/ha at shoreline stations; 5.39 fish/ha at open-water stations) dominated the catch at both station types (Table 23). No pattern in the mean length of each species caught at shoreline and open-water stations was evident.

During the spring, catches at shoreline stations (28.49 fish/ha) were about 1.5 times greater than catches at open-water stations (18.61 fish/ha). Atlantic croaker (14.51 fish/ha at shoreline stations; 3.24 fish/ha at open-water stations) dominated the catches at both station types (Table 24). However, spotted seatrout catches (3.09 fish/ha) at open-water stations approximated the Atlantic croaker catches at that station type. The mean length of each species were generally similar at each station type.

Texas Coast

One hundred ninety-two trammel net sets covering 802.56 ha in Texas bays yielded 14,429 fish representing 52 species (Table 25). Only 13 species were caught in all eight bay systems, including: red drum, black drum, spotted seatrout, southern flounder, sheepshead, Atlantic croaker, gulf menhaden, gizzard shad, spot, sea catfish, striped mullet, pinfish and Atlantic stingray. These species comprised 88% of the total catch in all samples collected. The San Antonio Bay and the lower Laguna Madre systems yielded the greatest number of species, 31 and 33, respectively.

The total catch of all fish at both station types in all bays and both seasons combined was about 17.5 fish/ha. At both shoreline and open-water stations the magnitude of total fish catch was higher in the fall ($\sim$ 19.5 fish/ha) than in the spring ($\sim$ 16 fish/ha) (Table 26). In addition, for most of the species caught at least once in each bay system, the catch in the fall was higher than that in the spring at both shoreline and open-water stations. Only three species--Atlantic croaker, gulf menhaden and sea catfish were represented by lower catches in the fall than in the spring.

During the fall, the mean catch per area of most species caught in at least four bay systems generally varied greatly between bays (Table 27). The greatest catch of any one species occurred in the Aransas Bay system with 9.30 gizzard shad/ha caught. However, the greatest total catch occurred in the lower Laguna Madre system with 34.13 fish/ha caught. The species composition in the fall varied greatly between bay systems. Red drum and black durm only were consistently caught in larger numbers with mean catches exceeding 1.00 fish/ha in every bay system.

During the spring, the mean catch per area of most species caught in at least four bay systems generally varied greatly between bays (Table 28). Black drum, spotted seatrout and sea catfish were the only species caught consistently in large numbers in every bay system. The greatest catch of any one species occurred in the Galveston Bay system with 11.71 sea catfish/ha caught. The greatest total catch also occurred in the Galveston Bay system with 25.61 fish/ha caught. The total catch in the lower Laguna Madre system (24.58 fish/ha) approximated that of the Galveston Bay system.

DISCUSSION

Matlock et al. (1978b) concluded that a 366-m and a 1463-m trammel net gave similar estimates of fish abundance but that the community structures reflected by the two nets were different. Perhaps the 732-m trammel net represents an acceptable compromise for monitoring both population abundance and community structure. In spring 1976 the mean catch per area of all fish in trammel nets of both lengths in shoreline areas of Texas bays was about 23 fish/ha. The mean catch of all fish in the 732-m trammel nets in spring 1977 was about 16 fish/ha. In addition, the mean number of species represented in spring 1977 in 732-m trammel nets in the sampled bays was 16 $\pm$ 1; in spring 1976 there were 13 $\pm$ 3 species in the 1463-m net and 7 $\pm$ 3 in the 366-m net. However, each 732-m net sample required four people, two boats and about 3 h to complete. The number of suitable sampling sites, especially shoreline sites, in each bay system was limited because 0.55 km of uninterrupted shoreline was required for each station. The variation in total catch among samples was large (CV = 47% at both shoreline and open-water stations) and the need for additional samples to detect changes in fish abundance is apparent. The number of samples required to detect a 10% difference between two means with 90% certainty at the 5% level of significance is 20 in each season (Sokal and Rohlf 1969), which is almost double the number collected in each bay system during this study. With these considerations in mind, the routine use of a 732-m net may not be economically feasible. Additional comparisons of the catches in 732-m and 366-m trammel nets would be required to examine the feasibility of using one net instead of the other.

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Table 1. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in Galveston Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	1.67	1.41	1.54	0.15	0.41	0.27
Black drum	5.26	4.31	4.79	1.91	2.90	2.41
Spotted seatrout	0.75	0.60	0.68	0.09	0.48	0.29
Southern flounder	0.42	0.06	0.24	0.36	0.12	0.24
Sheepshead	0.87	0.42	0.65	0.33	0.36	0.35
Atlantic croaker	2.18	0.06	1.14	0.15	2.36	1.26
Gulf menhaden	0.60	0.33	0.47	0.12	0.66	0.39
Gizzard shad	6.55	3.41	4.98	0.03	6.16	3.10
Spot	0.33	0.09	0.21	0.03	0.42	0.23
Sea catfish	10.20	0.54	5.37	13.97	9.45	11.71
Gafftopsail catfish	0.00	0.00	0.00	0.03	0.03	0.03
Striped mullet	0.48	1.05	0.77	0.84	0.60	0.72
Sand seatrout	0.39	0.06	0.23	0.00	0.00	0.00
Blue catfish	0.00	0.00	0.00	0.15	0.03	0.23
Pinfish	0.21	0.00	0.11	0.00	0.00	0.00
Atlantic spadefish	0.09	0.00	0.05	0.00	0.18	0.09
Atlantic threadfin	0.09	0.00	0.05	0.00	0.03	0.02
Pigfish	0.06	0.00	0.03	0.00	0.00	0.00
Carp	0.03	0.00	0.02	0.00	0.00	0.00
Alligator gar	0.06	0.00	0.03	0.03	0.81	0.42
Harvestfish	0.00	0.00	0.00	0.00	0.09	0.05
Atlantic stingray	0.15	0.00	0.09	6.58	0.27	3.40
Spotted gar	0.00	0.03	0.02	0.00	0.00	0.00
Bluefish	0.00	0.00	0.00	0.00	0.49	0.25
Gulf flounder	0.00	0.00	0.00	0.06	0.00	0.03
Blacktip shark	0.00	0.00	0.00	0.00	0.03	0.02
All species	30.39	12.37	21.44	24.83	26.01	25.61

Table 2. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in Galveston Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	2.74	481 ±13 (55)	1.15	601 ±33 (23)	1.94	516 ±6 (78)	0.07	668 (1)	1.80	534 ±2 (24)	0.94	539 ±10 (25)
Black drum	7.07	328 ±20 (141)	2.59	362 ±12 (52)	4.83	338 ±8 (193)	2.54	273 ±22 (34)	6.89	371 ±14 (92)	4.72	345 ±17 (126)
Spotted seatrout	1.15	565 ±15 (23)	0.25	537 ±0 (5)	0.70	560 ±15 (28)	0.15	424 ±0 (2)	1.12	464 ±17 (15)	0.64	459 ±11 (17)
Southern flounder	0.65	381 ±28 (13)	0.10	330 ±0 (2)	0.37	375 ±20 (15)	0.07	304 (1)	0.00	(0)	0.04	304 (1)
Sheepshead	1.34	362 ±18 (27)	0.25	359 ±8 (5)	0.80	361 ±15 (32)	0.15	233 ±22 (2)	0.67	264 ±46 (9)	0.41	259 ±35 (11)
Atlantic croaker	2.34	264 ±4 (47)	0.00	(0)	1.17	264 ±4 (47)	1.95	271 ±2 (26)	0.15	275 ±5 (2)	1.05	271 ±2 (28)
Gizzard shad	5.73	311 ±4 (114)	0.45	303 ±11 (9)	3.09	310 ±3 (123)	7.78	319 ±2 (103)	7.86	303 ±1 (104)	7.82	311 ±6 (207)
Spot	0.10	235 ±0 (2)	0.00	(0)	0.05	235 ±0 (2)	0.67	230 ±4 (9)	0.22	233 ±0 (3)	0.45	230 ±3 (12)
Sea catfish	12.45	342 ±2 (234)	0.70	321 ±6 (14)	6.57	341 ±1 (248)	6.81	337 ±0 (90)	0.30	345 ±8 (4)	3.56	337 ±0 (94)

Table 2. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	0.55	335 ±6 (11)	0.80	325 ±11 (16)	0.67	329 ±7 (27)	0.37	336 ±19 (5)	1.42	361 ±20 (19)	0.90	356 ±19 (24)
Sand seatrout	0.60	333 ±0 (12)	0.00	(0)	0.30	333 ±0 (12)	0.07	377 (1)	0.15	378 ±0 (2)	0.11	378 ±0 (3)
Pinfish	0.10	211 ±0 (2)	0.00	(0)	0.05	211 ±0 (2)	0.37	214 ±1 (5)	0.00	(0)	0.19	214 ±1 (5)
Atlantic threadfin	0.15	154 ±0 (3)	0.00	(0)	0.07	154 ±0 (3)	0.00	(0)	0.00	(0)	0.00	(0)
Pigfish	0.05	234 (1)	0.00	(0)	0.02	234 (1)	0.07	231 (1)	0.00	(0)	0.04	231 (1)
Carp	0.05	582 (1)	0.00	(0)	0.02	582 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Alligator gar	0.05	737 (1)	0.00	(0)	0.02	737 (1)	0.07	980 (1)	0.00	(0)	0.04	980 (1)
Atlantic stingray[a]	0.20	220 ±30 (4)	0.00	(0)	0.10	220 ±30 (4)	0.07	134 (1)	0.00	(0)	0.04	134 (1)
Spotted gar	0.00	(0)	0.05	507 (1)	0.02	507 (1)	0.00	(0)	0.00	(0)	0.00	(0)

Table 2. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	1.50	273 +5 ($2\bar{0}$)	0.82	271 +0 ($1\bar{1}$)	1.16	272 +3 ($3\bar{1}$)
Atlantic spadefish	0.00	(0)	0.00	(0)	0.00	(0)	0.22	105 +0 ($\bar{3}$)	0.00	(0)	0.11	105 +0 ($3\bar{}$)
All species	35.32		6.34		20.82		22.93		21.40		22.19	

[a]Length measurements are from wing tip to wing tip.

Table 3. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in Galveston Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	0.05	622 (1)	0.55	522 ±36 (11)	0.30	530 ±33 (12)	0.40	446 ±45 (4)	0.20	623 ±136 (2)	0.30	505 ±70 (6)
Black drum	2.64	257 ±4 (53)	3.78	255 ±3 (76)	3.21	256 ±2 (129)	1.10	314 ±6 (11)	2.00	607 ±83 (20)	1.55	503 ±40 (31)
Spotted seatrout	0.10	607 ±56 (2)	0.70	544 ±10 (14)	0.40	552 ±11 (16)	0.10	458 (1)	0.20	579 ±0 (2)	0.15	539 ±41 (3)
Southern flounder	0.50	352 ±19 (10)	0.10	300 ±20 (2)	0.30	344 ±20 (12)	0.20	265 ±0 (2)	0.20	338 ±0 (2)	0.20	301 ±28 (4)
Sheepshead	0.45	262 ±0 (9)	0.50	247 ±27 (10)	0.47	254 ±10 (19)	0.20	307 ±0 (2)	0.10	385 (1)	0.15	333 ±27 (3)
Atlantic croaker	0.05	73 (1)	3.44	262 ±2 (68)	1.74	260 ±2 (69)	0.40	250 ±1 (4)	0.70	270 ±5 (7)	0.55	262 ±4 (11)
Gulf menhaden	0.00	(0)	1.10	235 ±6 (22)	0.55	235 ±6 (22)	0.40	251 ±17 (4)	0.00	(0)	0.20	251 ±17 (4)
Gizzard shad	0.00	(0)	6.32	282 ±1 (107)	3.16	282 ±1 (107)	0.10	280 (1)	7.88	276 ±1 (79)	3.99	276 ±0 (80)

Table 3. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Sea catfish	20.57	338 ±1 (209)	14.24	343 ±4 (162)	17.41	340 ±2 (371)	5.39	339 ±0 (54)	2.59	331 ±4 (26)	3.99	336 ±3 (80)
Gafftopsail catfish	0.00	(0)	0.05	416 (1)	0.02	416 (1)	0.10	590 (1)	0.00	(0)	0.05	590 (1)
Striped mullet	0.70	360 ±8 (14)	0.50	361 ±14 (10)	0.60	360 ±3 (24)	1.40	341 ±12 (14)	0.40	355 ±12 (4)	0.90	344 ±11 (18)
Alligator gar	0.05	1125 (1)	1.15	990 ±21 (22)	0.60	995 ±20 (23)	0.00	(0)	0.40	860 ±47 (4)	0.20	860 ±47 (4)
Harvestfish	0.00	(0)	0.05	216 (1)	0.02	216 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf flounder	0.10	208 ±0 (2)	0.00	(0)	0.05	208 ±0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Blacktip shark	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	(0)	0.05	(0)
Spot	0.05	227 (1)	0.65	236 ±4 (13)	0.35	236 ±4 (14)	0.00	(0)	0.10	218 (1)	0.05	218 (1)
Blue catfish	0.00	(0)	0.05	300 (1)	0.02	300 (1)	0.05	320 ±0 (5)	0.00	(0)	0.25	320 ±0 (5)

Table 3. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Atlantic spadefish	0.00	(0)	0.15	143 ±26 (3)	0.07	143 ±26 (3)	0.00	(0)	0.20	231 ±0 (2)	0.10	231 ±0 (2)
Atlantic threadfin	0.00	(0)	0.05	110 (1)	0.02	110 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	10.81	289 ±1 (105)	0.05	300 (1)	5.43	289 ±1 (106)	0.30	189 ±0 (3)	0.60	309 ±10 (6)	0.45	269 ±28 (9)
Bluefish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	212 ±0 (2)	0.10	212 ±0 (2)
All species	36.12		33.43		34.74		10.59		15.87		13.22	

[a]Length measurements are from wing tip to wing tip.

Table 4. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in East Matagorda Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	0.84	2.51	1.68	1.14	0.30	0.72
Black drum	6.46	6.04	6.25	2.63	0.60	1.62
Spotted seatrout	0.12	0.54	0.33	0.00	0.66	0.33
Southern flounder	0.96	0.48	0.72	0.90	1.56	1.23
Sheepshead	0.30	0.18	0.24	0.06	0.24	0.15
Atlantic croaker	0.06	0.00	0.03	0.49	0.66	0.58
Gulf menhaden	0.18	0.00	0.09	0.00	0.06	0.03
Gizzard shad	0.00	0.06	0.03	0.00	0.24	0.12
Spot	0.12	0.00	0.06	0.49	0.06	0.28
Sea catfish	0.84	0.12	0.48	0.00	2.15	1.08
Striped mullet	0.12	1.61	0.87	0.72	0.54	0.63
Pinfish	0.36	0.00	0.18	0.00	0.00	0.00
Atlantic stingray	0.00	0.00	0.00	0.00	0.06	0.03
All species	10.36	11.54	10.96	6.43	7.13	6.80

Table 5. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in East Matagorda Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	1.29	382 ±24 (13)	4.08	484 ±1 (41)	2.69	459 ±0 (54)	0.15	336 (1)	0.15	840 (1)	0.15	588 ±252 (2)
Black drum	9.46	360 ±10 (95)	6.08	325 ±12 (61)	7.77	347 ±11 (156)	1.95	294 ±0 (12)	5.99	244 ±2 (40)	3.97	256 ±2 (52)
Spotted seatrout	0.20	524 ±0 (2)	0.20	512 ±0 (2)	0.20	518 ±0 (4)	0.00	(0)	1.05	398 ±2 (7)	0.52	398 ±2 (7)
Southern flounder	1.20	322 ±12 (12)	0.80	289 ±36 (8)	1.00	309 ±9 (20)	0.60	386 ±67 (4)	0.00	(0)	0.30	386 ±67 (4)
Sheepshead	0.40	379 ±0 (4)	0.30	274 ±0 (3)	0.35	334 ±42 (7)	0.15	202 (1)	0.00	(0)	0.07	202 (1)
Atlantic croaker	0.10	260 (1)	0.00	(0)	0.05	260 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gizzard shad	0.00	(0)	0.10	278 (1)	0.05	278 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Spot	0.10	204 (1)	0.00	(0)	0.05	204 (1)	0.15	242 (1)	0.00	(0)	0.07	242 (1)
Sea catfish	1.39	323 ±0 (14)	0.20	313 ±0 (2)	0.80	321 ±2 (16)	0.00	(0)	0.00	(0)	0.00	(0)

Table 5. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	0.10	300 (1)	2.19	349 ±8 (21)	1.15	343 ±5 (22)	0.15	397 (1)	0.75	336 ±0 (5)	0.45	346 ±0 (6)
Pinfish	0.30	151 ±0 (3)	0.00	(0)	0.15	151 ±0 (3)	0.45	150 ±0 (3)	0.00	(0)	0.22	150 ±0 (3)
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.45	264 ±0 (2)	0.00	(0)	0.22	264 ±0 (2)
All species	14.54		13.95		14.24		4.05		7.94		5.99	

Table 6. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in East Matagorda Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	1.39	444 ±12 (14)	0.50	441 ±0 (5)	0.95	443 ±9 (19)	0.75	372 ±2 (5)	0.00	(0)	0.37	372 ±2 (5)
Black drum	3.19	274 ±3 (32)	0.90	307 ±0 (9)	2.04	281 ±7 (41)	1.80	290 ±3 (12)	0.15	241 (1)	0.97	286 ±1 (13)
Spotted seatrout	0.00	(0)	0.90	418 ±18 (9)	0.45	418 ±18 (9)	0.00	(0)	0.30	492 ±0 (2)	0.15	492 ±0 (2)
Southern flounder	0.70	327 ±0 (7)	2.39	313 ±20 (24)	1.54	316 ±16 (31)	1.20	280 ±0 (8)	0.30	251 ±11 (2)	0.75	274 ±2 (10)
Sheepshead	0.10	234 (1)	0.30	267 ±74 (3)	0.20	258 ±52 (4)	0.00	(0)	0.15	382 (1)	0.07	382 (1)
Atlantic croaker	0.00	(0)	1.10	265 ±1 (11)	0.55	265 ±1 (11)	0.15	53 (1)	0.00	(0)	0.07	53 (1)
Gulf menhaden	0.00	(0)	0.10	236 (1)	0.05	236 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gizzard shad	0.00	(0)	0.40	308 ±0 (4)	0.20	308 ±0 (4)	0.00	(0)	0.00	(0)	0.00	(0)
Spot	0.00	(0)	0.10	253 (1)	0.05	253 (1)	0.15	50 (1)	0.00	(0)	0.07	50 (1)
Sea catfish	0.00	(0)	3.49	319 ±7 (35)	1.74	319 ±7 (35)	0.00	(0)	0.15	353 (1)	0.07	353 (1)

Table 6. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	1.00	338 +0 (10)	0.80	353 +0 (7)	0.90	344 +4 (17)	0.30	329 +17 (2)	0.15	331 (1)	0.22	330 +9 (3)
Atlantic stingray[a]	0.00	(0)	0.10	146 (1)	0.05	146 (1)	0.00	(0)	0.00	(0)	0.00	(0)
All species	6.38		11.08		8.72		4.35		1.20		2.77	

[a]Length measurements are from wing tip to wing tip.

Table 7. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in Matagorda Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	1.75	5.06	3.41	1.67	2.47	2.07
Black drum	5.18	4.43	4.81	3.75	1.79	2.77
Spotted seatrout	4.15	1.24	2.70	1.59	1.91	1.75
Southern flounder	0.80	0.00	0.40	0.24	0.24	0.24
Sheepshead	0.28	0.28	0.28	0.44	0.44	0.44
Atlantic croaker	0.12	0.00	0.06	0.04	0.32	0.18
Gulf menhaden	0.00	0.00	0.00	0.04	0.16	0.10
Gizzard shad	4.70	0.40	2.55	0.48	0.16	0.32
Spot	1.32	0.00	0.66	0.00	1.59	0.80
Sea catfish	0.80	0.00	0.40	0.68	0.60	0.64
Gafftopsail catfish	0.00	0.00	0.00	0.20	0.00	0.10
Striped mullet	1.24	6.14	3.69	0.56	1.28	0.92
Pinfish	0.12	0.00	0.06	0.00	0.20	0.10
Pigfish	0.56	0.00	0.28	0.00	0.12	0.06
Finescale menhaden	0.00	0.00	0.00	0.08	0.00	0.04
Cownose ray	0.00	0.00	0.00	0.04	0.00	0.02
Alligator gar	0.28	0.00	0.14	0.40	0.08	0.24
Harvestfish	0.00	0.00	0.00	0.00	0.16	0.08
Longnose gar	0.00	0.00	0.00	0.04	0.00	0.02
Atlantic stingray	0.24	0.00	0.12	0.24	0.16	0.20
Bull shark	0.32	0.00	0.16	0.00	0.00	0.00
White mullet	0.04	0.00	0.02	0.00	0.00	0.00
Gulf flounder	0.00	0.00	0.00	0.00	0.04	0.02
All species	21.90	17.55	19.74	10.49	11.72	11.11

Table 8. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in Matagorda Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	2.92	470 ±21 (44)	7.57	439 ±11 (114)	5.24	448 ±10 (158)	1.60	396 ±8 (15)	1.30	370 ±31 (13)	1.45	384 ±16 (28)
Black drum	9.29	282 ±5 (141)	3.45	279 ±25 (52)	6.37	280 ±2 (193)	1.20	270 ±32 (12)	5.89	294 ±2 (59)	3.54	290 ±4 (71)
Spotted seatrout	0.66	506 ±27 (10)	1.00	410 ±49 (15)	0.83	448 ±24 (25)	9.38	403 ±4 (90)	1.60	401 ±26 (16)	5.49	402 ±0 (106)
Southern flounder	1.00	322 ±20 (15)	0.00	(0)	0.50	322 ±20 (15)	0.60	371 ±1 (6)	0.00	(0)	0.30	371 ±1 (6)
Sheepshead	0.07	292 (1)	0.07	305 (1)	0.07	298 ±6 (2)	0.60	438 ±17 (6)	0.60	199 ±0 (6)	0.60	318 ±8 (12)
Atlantic croaker	0.13	280 ±6 (2)	0.00	(0)	0.06	280 ±6 (2)	0.10	257 (1)	0.00	(0)	0.05	257 (1)
Gizzard shad	1.13	296 ±3 (17)	0.00	(0)	0.56	296 ±3 (17)	10.08	288 ±1 (101)	1.00	280 ±0 (10)	5.54	298 ±1 (111)
Spot	0.00	(0)	0.00	(0)	0.00	(0)	3.29	231 ±1 (32)	0.00	(0)	1.64	231 ±1 (32)
Sea catfish	0.00	(0)	0.00	(0)	0.00	(0)	2.00	320 ±4 (18)	0.00	(0)	1.00	320 ±4 (18)

Table 8. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	2.59	330 +5 (39)	2.66	353 +3 (39)	2.62	342 +4 (78)	0.40	336 +10 (4)	11.38	344 +3 (113)	5.89	344 +2 (117)
Pinfish	0.00	(0)	0.00	(0)	0.00	(0)	0.30	236 +0 (3)	0.00	(0)	0.15	236 +0 (3)
Pigfish	0.00	(0)	0.00	(0)	0.00	(0)	1.40	229 +0 (14)	0.00	(0)	0.70	229 +0 (14)
Alligator gar	0.00	(0)	0.00	(0)	0.00	(0)	0.70	1218 +73 (7)	0.00	(0)	0.35	1218 +73 (7)
Atlantic stingray[a]	0.07	345 (1)	0.00	(0)	0.04	345 (1)	0.50	252 +0 (5)	0.00	(0)	0.25	252 +0 (5)
Bull shark	0.00	(0)	0.00	(0)	0.00	(0)	0.80	838 +0 (8)	0.00	(0)	0.40	838 +0 (8)
White mullet	0.00	(0)	0.00	(0)	0.00	(0)	0.10	331 (1)	0.00	(0)	0.05	331 (1)
All species	17.86		14.75		16.29		33.05		21.77		27.41	

[a]Length measurements are from wing tip to wing tip.

Table 9 . Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in Matagorda Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	2.66	455 ±24 (40)	0.33	461 ±27 (5)	1.49	456 ±21 (45)	0.20	395 ±0 (2)	5.69	435 ±6 (57)	2.94	433 ±5 (59)
Black drum	3.45	248 ±4 (52)	0.80	282 ±14 (12)	2.12	254 ±6 (64)	4.19	254 ±8 (42)	3.29	323 ±10 (33)	3.74	284 ±24 (75)
Spotted seatrout	2.46	431 ±9 (37)	1.46	398 ±6 (22)	1.96	419 ±6 (59)	0.30	481 ±13 (3)	2.59	402 ±6 (26)	1.45	410 ±2 (29)
Southern flounder	0.27	341 ±45 (4)	0.07	327 (1)	0.17	338 ±34 (5)	0.20	283 ±5 (2)	0.50	301 ±41 (5)	0.35	296 ±27 (7)
Sheepshead	0.73	276 ±0 (11)	0.00	(0)	0.37	276 ±0 (11)	0.00	(0)	1.10	255 ±15 (11)	0.55	255 ±15 (11)
Atlantic croaker	0.07	256 (1)	0.33	243 ±7 (5)	0.20	246 ±7 (6)	0.00	(0)	0.30	258 ±0 (3)	0.15	258 ±0 (3)
Gulf menhaden	0.00	(0)	0.27	267 ±0 (4)	0.13	267 ±0 (4)	0.10	235 (1)	0.00	(0)	0.05	235 (1)
Gizzard shad	0.66	315 ±1 (10)	0.13	308 ±0 (2)	0.40	313 ±2 (12)	0.20	306 ±0 (2)	0.20	289 ±7 (2)	0.20	297 ±7 (4)
Sea catfish	0.27	335 ±16 (4)	0.27	320 ±5 (4)	0.27	328 ±8 (8)	1.30	321 ±2 (13)	1.10	312 ±2 (9)	1.20	318 ±3 (22)

Table 9. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Gafftopsail catfish	0.13	545 ±0 (2)	0.00	(0)	0.07	545 ±0 (2)	0.30	555 ±0 (3)	0.00	(0)	0.15	555 ±0 (3)
Striped mullet	0.93	334 ±9 (14)	0.73	318 ±2 (11)	0.83	327 ±2 (25)	0.00	(0)	2.10	344 ±0 (20)	1.05	344 ±0 (20)
Pinfish	0.13	224 ±0 (2)	0.00	(0)	0.07	224 ±0 (2)	0.00	(0)	0.30	241 ±6 (3)	0.15	241 ±6 (3)
Alligator gar	0.46	874 ±0 (7)	0.13	748 ±0 (2)	0.30	846 ±34 (9)	0.30	1210 ±0 (3)	0.00	(0)	0.15	1210 ±0 (3)
Harvestfish	0.00	(0)	0.27	136 ±0 (4)	0.13	136 ±0 (4)	0.00	(0)	0.00	(0)	0.00	(0)
Spotted gar	0.07	586 (1)	0.00	(0)	0.03	586 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf flounder	0.00	(0)	0.07	227 (1)	0.03	227 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Spot	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	3.99	237 ±0 (40)	2.00	237 ±0 (40)
Pigfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.30	257 ±2 (3)	0.15	257 ±2 (3)

Table 9. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Finescale menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	281 ±0 (2)	0.10	281 ±0 (2)
Cownose ray[a]	0.00	(0)	0.00	(0)	0.00	(0)	0.10	783 (6)	0.00	(4)	0.05	783 (1)
Atlantic stingray[a]	0.00	(0)	0.00	(0)	0.00	(0)	0.60	218 ±0 (6)	0.40	245 ±17 (4)	0.50	228 ±11 (10)
All species	12.23		4.79		8.57		7.79		22.06		14.92	

[a]Length measurements are from wing tip to wing tip.

Table 10. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in San Antonio Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	4.35	0.88	2.62	0.48	0.24	0.36
Black drum	1.36	0.88	1.12	1.24	0.16	0.70
Spotted seatrout	2.75	3.23	2.99	2.11	2.11	2.11
Southern flounder	0.28	0.12	0.20	1.00	0.52	0.76
Sheepshead	1.12	0.60	0.86	1.44	0.04	0.74
Atlantic croaker	0.00	0.00	0.00	0.04	0.28	0.16
Gulf menhaden	0.00	0.00	0.00	0.12	2.43	1.28
Gizzard shad	5.10	0.12	2.61	0.32	0.24	0.28
Spot	0.72	0.00	0.36	0.08	0.44	0.26
Sea catfish	3.11	0.00	1.56	5.38	6.06	5.72
Gafftopsail catfish	0.00	0.00	0.00	0.24	2.75	1.50
Striped mullet	1.12	0.52	0.82	0.48	0.96	0.72
Hogchoker	0.00	0.00	0.00	0.04	0.00	0.02
Crevalle jack	0.04	0.00	0.02	0.08	0.04	0.06
Pinfish	0.16	0.12	0.14	0.00	0.04	0.02
Atlantic spadefish	0.00	0.00	0.00	0.04	0.04	0.04
Southern stingray	0.00	0.00	0.00	0.08	0.04	0.06
Pigfish	0.16	0.08	0.12	0.00	0.08	0.04
Finescale menhaden	0.00	0.04	0.02	0.28	0.04	0.16
Ladyfish	0.00	0.00	0.00	0.00	0.04	0.02
Alligator gar	0.00	0.00	0.00	0.04	0.00	0.02
Gulf kingfish	0.00	0.04	0.02	0.00	0.00	0.00
Striped burrfish	0.00	0.00	0.00	0.04	0.00	0.02
Skipjack herring	0.04	0.00	0.02	0.00	0.00	0.00
Atlantic stingray	1.40	0.28	0.84	1.40	0.64	1.02
Bonnethead	0.00	0.00	0.00	0.04	0.00	0.02
Spotted gar	0.00	0.00	0.00	0.04	0.00	0.02
Florida pompano	0.04	0.00	0.02	0.00	0.00	0.00
Bull shark	0.00	0.00	0.00	0.08	0.04	0.06
Southern kingfish	0.00	0.00	0.00	0.04	0.00	0.02
Gulf flounder	0.12	0.04	0.08	0.24	0.00	0.12
All species	21.87	6.95	14.42	15.37	17.23	16.31

Table 11. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in San Antonio Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	5.84	416 ±6 (87)	1.39	385 ±50 (21)	3.62	410 ±16 (108)	2.10	336 ±30 (21)	0.10	324 (1)	1.10	335 ±26 (22)
Black drum	1.39	311 ±17 (21)	1.13	291 ±53 (17)	1.26	302 ±28 (38)	1.30	286 ±6 (13)	0.50	370 ±43 (5)	0.90	309 ±18 (18)
Spotted seatrout	1.86	417 ±15 (28)	2.32	437 ±6 (35)	2.09	428 ±13 (63)	4.98	394 ±14 (41)	4.59	430 ±12 (46)	4.34	413 ±7 (87)
Southern flounder	0.33	393 ±17 (5)	0.20	439 ±54 (3)	0.27	410 ±28 (8)	0.20	247 ±0 (2)	0.00	(0)	0.10	247 ±0 (2)
Sheepshead	1.39	300 ±22 (21)	1.00	282 ±24 (15)	1.20	293 ±21 (36)	0.70	296 ±50 (7)	0.00	(0)	0.35	296 ±50 (7)
Gizzard shad	0.27	275 ±0 (4)	0.20	283 ±3 (3)	0.23	278 ±0 (7)	12.38	268 ±0 (122)	0.00	(0)	6.19	268 ±0 (122)
Spot	0.07	235 (1)	0.00	(0)	0.03	235 (1)	1.70	235 ±1 (17)	0.00	(0)	0.85	235 ±1 (17)
Sea catfish	3.65	348 ±0 (55)	0.00	(0)	1.83	348 ±0 (55)	2.30	331 ±4 (22)	0.00	(0)	1.15	331 ±4 (22)
Striped mullet	1.73	351 ±0 (25)	0.86	331 ±0 (13)	1.29	344 ±6 (38)	0.20	312 ±0 (2)	0.00	(0)	0.10	312 ±0 (2)

Table 11. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Crevalle jack	0.07	1030 (1)	0.00	(0)	0.03	1030 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Pinfish	0.13	174 +0 (2)	0.07	222 (1)	0.10	190 +0 (3)	0.20	236 +0 (2)	0.20	214 +0 (2)	0.20	225 +0 (4)
Skipjack herring	0.07	330 (1)	0.00	(0)	0.03	330 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	2.26	189 +8 (32)	0.33	253 +0 (5)	1.29	197 +16 (37)	0.10	261 (1)	0.20	193 +55 (2)	0.15	216 +21 (3)
Florida pompano	0.07	440 (1)	0.00	(0)	0.03	440 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf flounder	0.20	273 +0 (3)	0.00	(0)	0.10	273 +0 (3)	0.00	(0)	0.10	288 (1)	0.05	288 (1)
Pigfish	0.00	(0)	0.00	(0)	0.00	(0)	0.40	224 +1 (4)	0.20	253 +0 (2)	0.30	234 +4 (6)
Finescale menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	321 (1)	0.05	321 (1)
Gulf kingfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	291 (1)	0.05	291 (1)
All species	19.33		7.50		13.41		25.67		6.09		15.87	

[a]Length measurements are from wing tip to wing tip.

Table 12. Mean catch per area and mean total length (mm) ±1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in San Antonio Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	0.80	497 ±31 (12)	0.20	433 ±2 (3)	0.50	484 ±29 (15)	0.00	(0)	0.30	500 ±42 (3)	0.15	500 ±42 (3)
Black drum	2.06	271 ±52 (31)	0.07	235 (1)	1.06	270 ±54 (32)	0.00	(0)	0.30	511 (1)	0.15	511 (1)
Spotted seatrout	2.66	395 ±27 (40)	0.40	395 ±12 (3)	1.53	395 ±24 (43)	1.30	444 ±58 (13)	4.69	393 ±9 (42)	3.00	405 ±19 (55)
Southern flounder	1.66	224 ±0 (25)	0.13	328 ±98 (2)	0.90	232 ±84 (27)	0.00	(0)	1.10	313 ±5 (11)	0.55	313 ±5 (11)
Sheepshead	1.53	340 ±18 (23)	0.07	505 (1)	0.80	346 ±14 (24)	1.30	279 ±0 (13)	0.00	(0)	0.65	279 ±0 (13)
Atlantic croaker	0.00	(0)	0.20	252 ±9 (3)	0.10	252 ±9 (3)	0.10	376 (1)	0.40	243 ±11 (4)	0.25	269 ±9 (5)
Gulf menhaden	0.07	198 (1)	0.00	(0)	0.03	198 (1)	0.20	235 ±0 (2)	6.09	263 ±1 (61)	3.15	262 ±2 (63)
Gizzard shad	0.53	267 ±0 (8)	0.40	280 ±4 (6)	0.46	274 ±2 (14)	0.00	(0)	0.00	(0)	0.00	(0)
Spot	0.07	212 (1)	0.00	(0)	0.03	212 (1)	0.10	250 (1)	1.10	234 ±0 (10)	0.60	235 ±5 (11)
Sea catfish	5.64	358 ±1 (85)	1.26	330 ±5 (19)	3.45	353 ±1 (104)	4.99	325 ±1 (50)	13.27	320 ±8 (131)	9.13	322 ±5 (181)

Table 12. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Gafftopsail catfish	0.27	542 +0 (4)	0.33	526 +36 (5)	0.30	534 +30 (9)	0.20	538 +20 (2)	6.39	509 +13 (61)	3.30	510 +11 (63)
Striped mullet	0.73	331 +15 (11)	0.13	324 (1)	0.43	330 +14 (12)	0.10	338 (1)	2.20	350 +11 (18)	1.15	349 +1 (19)
Hogchoker	0.07	149 (1)	0.00	(0)	0.03	149 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic spadefish	0.07	216 (1)	0.00	(0)	0.03	216 (1)	0.00	(0)	0.10	202 (1)	0.05	202 (1)
Alligator gar	0.07	741 (1)	0.00	(0)	0.03	741 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Striped burrfish	0.07	190 (1)	0.00	(0)	0.03	190 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	1.53	239 +12 (23)	0.07	272 +19 (4)	0.90	244 +19 (27)	1.20	208 +4 (12)	1.20	169 +0 (12)	1.20	189 +9 (24)
Spotted gar	0.07	500 (1)	0.00	(0)	0.03	500 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf flounder	0.27	269 +0 (4)	0.00	(0)	0.13	269 +0 (4)	0.20	237 +0 (2)	0.00	(0)	0.10	237 +0 (2)
Ladyfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	528 (1)	0.05	528 (1)

Table 12. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Pigfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	232 (1)	0.10	232 (1)
Crevalle jack	0.00	(0)	0.00	(0)	0.00	(0)	0.20	1014 ±0 ($\bar{2}$)	0.10	1057 (1)	0.15	1029 ±15 ($\bar{3}$)
Southern stingray[a]	0.00	(0)	0.00	(0)	0.00	(0)	0.20	345 ±0 ($\bar{2}$)	0.10	467 (1)	0.15	386 ±0 ($\bar{3}$)
Finescale menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.70	288 ±0 ($\bar{7}$)	0.10	295 (1)	0.40	288 ±0 ($\bar{8}$)
Bonnethead	0.00	(0)	0.00	(0)	0.00	(0)	0.10	686 (1)	0.00	(0)	0.05	686 (1)
Bull shark	0.00	(0)	0.00	(0)	0.00	(0)	0.20	1394 ±42 ($\bar{2}$)	0.10	905 (1)	0.15	1231 ±109 ($\bar{3}$)
Southern kingfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	298 (1)	0.00	(0)	0.05	298 (1)
All species	18.17		3.46		10.79		11.19		37.84		24.52	

[a]Length measurements are from wing tip to wing tip.

Table 13. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in Aransas Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	1.48	4.55	3.02	0.84	0.36	0.60
Black drum	1.91	9.57	5.74	0.48	0.52	0.50
Spotted seatrout	0.64	3.15	1.90	1.08	1.79	1.44
Southern flounder	0.36	0.08	0.44	0.24	0.36	0.30
Sheepshead	0.92	2.47	1.70	0.28	0.24	0.26
Atlantic croaker	0.12	0.00	0.06	0.00	0.44	0.22
Gulf menhaden	0.28	0.00	0.14	0.08	0.52	0.30
Gizzard shad	1.52	17.07	9.30	0.00	0.24	0.12
Spot	0.68	0.08	0.38	0.00	0.20	0.10
Sea catfish	0.08	0.00	0.04	0.60	0.64	0.62
Gafftopsail catfish	0.00	0.00	0.00	0.00	0.04	0.02
Striped mullet	2.27	4.55	3.41	2.31	1.48	1.90
Pinfish	0.00	0.00	0.00	0.00	0.52	0.26
Bighead searobin	0.00	0.04	0.02	0.00	0.00	0.00
Inshore lizardfish	0.04	0.00	0.02	0.00	0.00	0.00
Finescale menhaden	0.12	0.00	0.06	0.00	0.04	0.02
Alligator gar	0.00	0.08	0.04	0.00	0.08	0.04
Harvestfish	0.00	0.00	0.00	0.04	0.00	0.02
Gulf toadfish	0.00	0.00	0.00	0.00	0.04	0.02
Atlantic stingray	0.32	0.00	0.16	0.96	0.32	0.64
Bull shark	0.00	0.00	0.00	0.00	0.08	0.04
Southern kingfish	0.00	0.00	0.00	0.00	0.04	0.02
All species	10.74	41.64	26.43	6.91	7.95	7.44

Table 14. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in Aransas Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	2.26	399 +49 (34)	5.71	385 +1 (84)	3.98	389 +14 (118)	0.30	343 +0 (3)	2.79	362 +6 (26)	1.55	360 +5 (29)
Black drum	2.06	347 +31 (30)	10.29	284 +3 (149)	6.18	294 +11 (179)	1.70	296 +12 (17)	8.48	240 +6 (83)	5.09	249 +9 (100)
Spotted seatrout	0.73	427 +11 (10)	4.38	472 +33 (64)	2.56	466 +29 (74)	0.50	449 +28 (5)	1.30	393 +33 (13)	0.90	409 +28 (18)
Southern flounder	0.53	381 +34 (8)	0.00	(0)	0.27	381 +34 (8)	0.10	623 (1)	0.20	286 +48 (2)	0.15	398 +87 (3)
Sheepshead	0.27	250 +18 (4)	3.32	213 +5 (49)	1.79	216 +5 (53)	1.90	205 +0 (19)	1.20	221 +0 (12)	1.55	211 +0 (31)
Gizzard shad	2.46	280 +0 (37)	3.78	285 +0 (46)	3.12	283 +0 (83)	0.10	240 (1)	37.03	262 +6 (127)	18.56	262 +6 (128)
Spot	0.86	228 +0 (11)	0.00	(0)	0.43	228 +0 (11)	0.40	214 +29 (4)	0.20	213 +0 (2)	0.30	214 +17 (6)
Striped mullet	3.59	327 +5 (51)	6.97	322 +2 (91)	5.28	324 +2 (142)	0.30	321 +15 (3)	0.90	329 +0 (9)	0.60	327 +2 (12)
Atlantic stingray[a]	0.27	270 +13 (4)	0.00	(0)	0.13	270 +13 (4)	0.40	226 +10 (4)	0.00	(0)	0.20	226 +10 (4)

Table 14. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Atlantic croaker	0.00	(0)	0.00	(0)	0.00	(0)	0.30	294 ±33 ($\bar{3}$)	0.00	(0)	0.30	294 ±33 ($\bar{3}$)
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.70	256 ±2 ($\bar{7}$)	0.00	(0)	0.35	256 ±2 ($\bar{7}$)
Sea catfish	0.00	(0)	0.00	(0)	0.00	(0)	0.20	314 ±0 ($\bar{2}$)	0.00	(0)	0.10	314 ±0 ($\bar{2}$)
Bighead searobin	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	204 (1)	0.05	204 (1)
Inshore lizardfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	212 (1)	0.00	(0)	0.05	212 (1)
Finescale menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.30	283 ±19 ($\bar{3}$)	0.00	(0)	0.15	283 ±19 ($\bar{3}$)
Alligator gar	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	1100 ±0 ($\bar{2}$)	0.10	1100 ±0 ($\bar{2}$)
All species	13.03		34.45		23.74		7.30		52.40		29.84	

[a]Length measurements are from wing tip to wing tip.

Table 15. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in Aransas Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	1.26	395 ±15 (19)	0.60	388 ±4 (0)	0.93	393 ±10 (28)	0.20	360 ±12 (2)	0.00	(0)	0.10	360 ±12 (2)
Black drum	0.20	247 ±0 (3)	0.86	315 ±20 (13)	0.53	302 ±28 (16)	0.90	317 ±7 (0)	0.00	(0)	0.45	317 ±7 (9)
Spotted seatrout	0.27	398 ±0 (4)	2.32	420 ±16 (35)	1.29	418 ±15 (39)	2.30	404 ±23 (23)	1.00	391 ±0 (7)	1.65	401 ±17 (30)
Southern flounder	0.20	325 ±0 (3)	0.27	329 ±7 (4)	0.23	327 ±4 (7)	0.30	288 ±34 (3)	0.50	254 ±4 (5)	0.40	267 ±12 (8)
Sheepshead	0.33	307 ±0 (5)	0.20	280 ±34 (3)	0.27	297 ±18 (8)	0.20	207 ±11 (2)	0.30	395 ±205 (2)	0.25	301 ±75 (4)
Atlantic croaker	0.00	(0)	0.73	279 ±1 (11)	0.37	279 ±1 (11)	0.00	(0)	0.00	(0)	0.00	(0)
Gizzard shad	0.00	(0)	0.40	270 ±0 (6)	0.20	270 ±0 (6)	0.00	(0)	0.00	(0)	0.00	(0)
Spot	0.00	(0)	0.33	237 ±3 (5)	0.17	237 ±3 (5)	0.00	(0)	0.00	(0)	0.00	(0)
Sea catfish	0.66	358 ±0 (10)	0.73	321 ±6 (11)	0.70	339 ±6 (21)	0.50	314 ±0 (5)	0.50	313 ±0 (3)	0.50	314 ±0 (8)

Table 15. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	3.85	340 +0 (50)	2.39	342 +3 (36)	3.12	341 +1 (86)	0.00	(0)	0.10	365 (1)	0.05	365 (1)
Pinfish	0.00	(0)	0.86	201 +4 (13)	0.43	201 +4 (13)	0.00	(0)	0.00	(0)	0.00	(0)
Alligator gar	0.00	(0)	0.07	780 (1)	0.03	780 (1)	0.00	(0)	0.10	(0)	0.05	(0)
Gulf toadfish	0.00	(0)	0.07	195 (1)	0.03	195 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	0.86	222 +0 (13)	0.27	231 +16 (4)	0.56	224 +3 (17)	1.10	202 +14 (11)	0.40	201 +21 (4)	0.75	202 +7 (15)
Gafftopsail catfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	(0)	0.05	(0)
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.20	259 +0 (2)	1.30	261 +0 (11)	0.75	261 +0 (13)
Harvestfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	200 (1)	0.00	(0)	0.05	200 (1)
Finescale menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	236 (1)	0.05	236 (1)

Table 15. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Bull shark	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	(0)	0.10	(0)
Southern kingfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	344 (1)	0.05	344 (1)
All species	7.63		10.10		8.86		5.80		4.70		5.25	

[a]Length measurements are from wing tip to wing tip.

Table 16. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in Corpus Christi Bay system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	1.95	1.04	1.50	0.92	2.27	1.60
Black drum	1.52	0.72	1.12	0.36	0.24	0.30
Spotted seatrout	5.82	3.27	4.55	0.52	1.48	1.00
Southern flounder	0.32	0.00	0.16	0.04	0.28	0.16
Sheepshead	1.95	0.56	1.26	0.16	0.12	0.14
Atlantic croaker	0.88	0.04	0.46	1.91	9.53	5.72
Gulf menhaden	2.91	0.08	1.50	1.28	2.91	2.10
Gizzard shad	0.28	0.08	0.18	0.08	0.12	0.10
Spot	6.70	0.08	3.39	0.36	1.59	0.98
Sea catfish	1.12	0.00	0.56	9.05	1.63	5.34
Striped mullet	1.00	0.52	0.76	0.36	0.80	0.58
Sand seatrout	0.00	0.00	0.00	0.04	0.04	0.04
Pinfish	3.39	0.12	1.76	0.40	1.36	0.88
Atlantic spadefish	0.04	0.00	0.02	0.00	0.00	0.00
Pigfish	2.19	0.00	1.10	0.24	0.96	0.60
Ocellated flounder	0.04	0.00	0.02	0.00	0.00	0.00
Carp	0.04	0.00	0.02	0.00	0.00	0.00
Finescale menhaden	0.16	0.00	0.08	0.64	1.32	0.98
Ladyfish	0.00	0.00	0.00	0.00	0.04	0.02
Alligator gar	0.00	0.00	0.00	0.04	0.00	0.02
Atlantic cutlassfish	0.00	0.00	0.00	0.04	0.00	0.02
Harvestfish	0.04	0.00	0.02	0.00	0.04	0.02
Striped burrfish	0.00	0.00	0.00	0.08	0.00	0.04
Gulf toadfish	0.08	0.00	0.04	0.00	0.08	0.04
Southern stargazer	0.04	0.00	0.02	0.00	0.00	0.00
Atlantic stingray	0.36	0.00	0.18	0.64	0.60	0.62
Florida pompano	0.08	0.00	0.04	0.00	0.00	0.00
Gulf flounder	0.04	0.04	0.02	0.00	0.16	0.08
All species	31.55	6.55	19.06	17.16	25.57	21.38

Table 17. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in Corpus Christi Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	2.92	478 ±3 (43)	0.93	419 ±0 (14)	1.93	464 ±4 (57)	0.50	492 ±48 (5)	1.20	463 ±31 (12)	0.85	472 ±4 (17)
Black drum	2.26	283 ±36 (33)	0.60	302 ±0 (9)	1.43	287 ±27 (42)	0.40	223 ±8 (4)	0.90	260 ±51 (9)	0.65	249 ±26 (13)
Spotted seatrout	2.66	478 ±38 (39)	5.38	449 ±0 (81)	4.02	458 ±15 (120)	10.58	509 ±1 (106)	0.10	350 (1)	5.34	507 ±2 (107)
Southern flounder	0.33	460 ±55 (5)	0.00	(0)	0.17	460 ±55 (5)	0.30	363 ±96 (3)	0.00	(0)	0.15	363 ±96 (3)
Sheepshead	2.99	329 ±4 (45)	0.46	352 ±0 (7)	1.73	332 ±3 (52)	0.40	234 ±6 (4)	0.70	276 ±21 (7)	0.55	261 ±13 (11)
Atlantic croaker	1.33	292 ±15 (20)	0.00	(0)	0.66	292 ±15 (20)	0.20	362 ±22 (2)	0.10	222 (1)	0.15	315 ±11 (3)
Gulf menhaden	0.07	260 (1)	0.13	256 ±0 (2)	0.10	257 ±1 (3)	7.19	271 ±0 (72)	0.00	(0)	3.59	271 ±0 (72)
Gizzard shad	0.46	334 ±22 (7)	0.00	(0)	0.23	334 ±22 (7)	0.00	(0)	0.20	248 ±0 (2)	0.10	248 ±0 (2)
Spot	2.39	231 ±0 (36)	0.13	266 ±0 (2)	1.26	233 ±2 (38)	13.17	232 ±0 (132)	0.00	(0)	6.59	232 ±0 (132)

Table 17. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Sea catfish	1.66	334 ±11 (25)	0.00	(0)	0.83	334 ±11 (25)	0.30	308 ±0 (3)	0.00	(0)	0.15	308 ±0 (3)
Striped mullet	1.26	324 ±5 (19)	0.80	344 ±4 (12)	1.03	332 ±4 (31)	0.60	364 ±34 (6)	0.10	366 (1)	0.35	364 ±27 (7)
Pinfish	4.85	217 ±1 (72)	0.13	258 ±0 (2)	2.49	218 ±1 (74)	1.20	225 ±2 (12)	0.10	245 (1)	0.65	227 ±1 (13)
Atlantic spadefish	0.07	180 (1)	0.00	(0)	0.03	180 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Pigfish	3.19	240 ±0 (48)	0.00	(0)	1.59	240 ±0 (48)	0.70	249 ±0 (7)	0.00	(0)	0.35	249 ±0 (7)
Ocellated flounder	0.07	238 (1)	0.00	(0)	0.03	238 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Finescale menhaden	0.13	315 ±0 (2)	0.00	(0)	0.07	315 ±0 (2)	0.20	325 ±26 (2)	0.00	(0)	0.10	325 ±26 (2)
Gulf toadfish	0.13	264 ±0 (2)	0.00	(0)	0.07	264 ±0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Southern stargazer	0.07	220 (1)	0.00	(0)	0.03	220 (1)	0.00	(0)	0.00	(0)	0.00	(0)

Table 17. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Atlantic stingray[a]	0.60	210 ±18 (9)	0.00	(0)	0.30	210 ±18 (9)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf flounder	1.00	262 ±14 (15)	0.07	367 (1)	0.54	275 ±17 (16)	0.10	190 (1)	0.00	(0)	0.05	190 (1)
Florida pompano	0.13	217 ±0 (2)	0.00	(0)	0.07	217 ±0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Carp	0.00	(0)	0.00	(0)	0.00	(0)	0.10	255 (1)	0.00	(0)	0.05	255 (1)
Harvestfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	220 (1)	0.00	(0)	0.05	220 (1)
All species	28.57		8.63		18.59		35.94		3.40		19.71	

[a]Length measurements are from wing tip to wing tip.

Table 18. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May 1977 in Corpus Christi Bay (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	1.46	398 ±15 (22)	1.00	466 ±16 (15)	1.23	426 ±16 (37)	0.10	345 (1)	4.19	426 ±0 (41)	2.15	424 ±3 (42)
Black drum	0.20	236 ±0 (2)	0.13	280 (1)	0.17	251 ±0 (3)	0.60	305 ±23 (6)	0.40	297 ±38 (4)	0.50	302 ±25 (10)
Spotted seatrout	0.60	386 ±27 (9)	1.26	411 ±9 (17)	0.93	402 ±12 (26)	0.40	465 ±59 (4)	1.80	411 ±14 (18)	1.10	421 ±12 (22)
Southern flounder	0.07	307 (1)	0.13	381 ±55 (2)	0.10	356 ±46 (3)	0.00	(0)	0.00	(0)	0.00	(0)
Sheepshead	0.07	300 (1)	0.07	210 (1)	0.07	255 ±35 (2)	0.30	279 ±104 (3)	0.20	202 ±12 (2)	0.25	248 ±61 (5)
Atlantic croaker	0.66	281 ±1 (10)	8.63	266 ±1 (128)	4.65	267 ±0 (138)	3.79	276 ±6 (38)	10.88	259 ±6 (106)	7.34	264 ±4 (144)
Gulf menhaden	0.13	280 ±0 (2)	4.05	258 ±1 (61)	2.09	259 ±0 (63)	2.99	271 ±0 (30)	1.20	245 ±0 (12)	2.10	263 ±0 (42)
Spot	0.46	221 ±1 (6)	0.27	243 ±8 (4)	0.37	230 ±7 (10)	0.20	206 ±5 (2)	3.59	236 ±4 (35)	1.90	234 ±3 (37)
Sea catfish	0.13	385 (1)	0.86	329 ±7 (13)	0.50	332 ±9 (14)	22.46	359 ±1 (211)	2.79	323 ±3 (28)	12.62	354 ±5 (239)

Table 18. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	0.33	345 +0 (5)	0.46	345 +0 (7)	0.40	345 +0 (12)	0.40	355 +0 (4)	1.30	337 +21 (13)	0.85	342 +14 (17)
Sand seatrout	0.00	(0)	0.07	320 (1)	0.03	320 (1)	0.10	325 (1)	0.00	(0)	0.05	325 (1)
Pinfish	0.40	208 +4 (6)	0.13	244 +1 (2)	0.27	217 +5 (8)	0.40	195 +3 (4)	3.19	211 +3 (31)	1.80	209 +1 (35)
Pigfish	0.40	246 +0 (6)	0.00	(0)	0.20	246 +0 (6)	0.00	(0)	2.40	248 +5 (24)	1.20	248 +5 (24)
Finescale menhaden	1.06	308 +0 (16)	2.19	299 +0 (33)	1.63	302 +3 (49)	0.00	(0)	0.00	(0)	0.00	(0)
Ladyfish	0.00	(0)	0.07	516 (1)	0.03	516 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Harvestfish	0.00	(0)	0.07	208 (1)	0.03	208 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Striped burrfish	0.13	198 +0 (2)	0.00	(0)	0.07	198 +0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	0.93	209 +13 (14)	0.13	281 +0 (2)	0.53	218 +16 (16)	0.20	185 +0 (2)	1.30	279 +4 (13)	0.75	266 +18 (15)

Table 18. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Gulf flounder	0.00	(0)	0.07	272 (1)	0.03	272 (1)	0.00	(0)	0.80	336 ±7 ($\bar{5}$)	0.40	336 ±7 ($\bar{5}$)
Gizzard shad	0.00	(0)	0.00	(0)	0.00	(0)	0.20	269 ±0 ($\bar{2}$)	0.30	246 ±0 ($\bar{3}$)	0.25	255 ±9 ($\bar{5}$)
Alligator gar	0.00	(0)	0.00	(0)	0.00	(0)	0.10	950 (1)	0.00	(0)	0.05	950 (1)
Atlantic cutlassfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	982 (1)	0.00	(0)	0.05	982 (1)
Gulf toadfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.20	265 ±17 ($\bar{2}$)	0.10	265 ±17 ($\bar{2}$)
All species	7.03		19.59		13.31		32.34		34.54		33.43	

[a]Length measurements are from wing tip to wing tip.

Table 19. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in upper Laguna Madre system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	1.63	0.52	1.08	0.48	0.40	0.44
Black drum	3.87	0.16	2.02	1.16	2.71	1.94
Spotted seatrout	0.84	0.60	0.72	0.92	1.16	1.04
Southern flounder	0.00	0.12	0.06	0.00	0.16	0.08
Sheepshead	0.12	0.08	0.10	0.36	0.12	0.24
Atlantic croaker	1.63	0.40	1.02	0.48	5.62	3.05
Gulf menhaden	0.00	0.32	0.16	0.00	0.16	0.08
Gizzard shad	0.00	0.00	0.00	0.40	0.08	0.24
Spot	0.96	0.08	0.52	0.84	0.72	0.78
Sea catfish	1.71	0.16	0.94	1.40	0.80	1.10
Striped mullet	0.92	0.48	0.70	3.15	2.59	2.87
Pinfish	0.48	0.20	0.34	0.00	0.08	0.04
Pigfish	0.00	0.00	0.00	0.00	0.04	0.02
Bighead searobin	0.00	0.00	0.00	0.00	0.04	0.02
Finescale menhaden	0.00	0.00	0.00	0.04	0.08	0.06
Striped burrfish	0.00	0.04	0.02	0.00	0.04	0.02
Gulf toadfish	0.00	0.04	0.02	0.28	0.00	0.14
Atlantic stingray	0.04	0.12	0.08	0.16	0.08	0.12
Blackfin searobin	0.04	0.00	0.02	0.00	0.00	0.00
Hogchoker	0.00	0.04	0.02	0.00	0.00	0.00
Gulf flounder	0.04	0.00	0.02	0.04	0.04	0.04
All species	12.28	3.32	7.82	9.71	14.92	12.32

Table 20. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in upper Laguna Madre (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	0.66	432 +19 (10)	0.53	403 +33 (8)	0.60	419 +21 (18)	3.09	506 +1 (31)	0.50	463 +12 (5)	1.80	500 +7 (36)
Black drum	6.44	595 +44 (96)	0.20	301 +0 (3)	3.32	586 +50 (99)	0.00	(0)	0.10	225 (1)	0.05	225 (1)
Spotted seatrout	0.86	440 +9 (13)	0.53	442 +6 (8)	0.70	441 +6 (21)	0.80	502 +0 (8)	0.70	485 +12 (7)	0.75	494 +8 (15)
Southern flounder	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.30	393 +79 (3)	0.15	393 +79 (3)
Sheepshead	0.20	467 +0 (3)	0.00	(0)	0.10	467 +0 (3)	0.00	(0)	0.20	415 +0 (2)	0.10	415 +0 (2)
Atlantic croaker	2.72	278 +2 (38)	0.00	(0)	1.36	278 +2 (38)	0.00	(0)	1.00	254 +2 (10)	0.50	254 +2 (10)
Spot	1.53	233 +1 (22)	0.00	(0)	0.76	233 +1 (22)	0.10	245 (1)	0.20	237 +0 (2)	0.15	240 +0 (3)
Sea catfish	2.72	319 +6 (40)	0.00	(0)	1.36	319 +6 (40)	0.20	312 +11 (2)	0.40	315 +0 (4)	0.30	314 +4 (6)
Striped mullet	1.13	362 +15 (17)	0.40	361 +7 (6)	0.76	361 +8 (23)	0.60	406 +17 (6)	0.60	365 +9 (6)	0.60	385 +9 (12)

Table 20. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Pinfish	0.13	212 +0 (2)	0.33	145 +26 (5)	0.23	164 +12 (7)	1.00	221 +2 (10)	0.00	(0)	0.50	221 +2 (10)
Gulf toadfish	0.00	(0)	0.07	280 (1)	0.03	280 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Blackfin searobin	0.07	280 (1)	0.00	(0)	0.03	280 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.80	237 +0 (8)	0.40	237 +0 (8)
Hogchoker	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	(0)	0.05	(0)
Striped burrfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	280 (1)	0.05	280 (1)
Atlantic stingray[a]	0.00	(0)	0.00	(0)	0.00	(0)	0.10	(0)	0.30	167 +0 (3)	0.20	167 +0 (3)
Gulf flounder	0.00	(0)	0.00	(0)	0.00	(0)	0.10	360 (1)	0.00	(0)	0.05	360 (1)
All species	16.46		2.06		9.26		5.99		5.30		5.64	

[a]Length measurements are from wing tip to wing tip.

Table 21. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in upper Laguna Madre (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	0.46	484 ±22 (7)	0.33	456 ±0 (5)	0.40	472 ±10 (12)	0.50	393 ±16 (5)	0.50	407 ±22 (5)	0.50	400 ±18 (10)
Black drum	1.20	220 ±0 (18)	2.66	266 ±1 (40)	1.93	252 ±15 (58)	1.10	256 ±43 (11)	2.79	333 ±13 (28)	1.95	311 ±39 (39)
Spotted seatrout	1.06	528 ±28 (16)	1.39	500 ±48 (21)	1.23	512 ±20 (37)	0.70	445 ±25 (7)	0.80	452 ±12 (8)	0.75	449 ±16 (15)
Southern flounder	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.40	283 ±0 (4)	0.20	283 ±0 (4)
Sheepshead	0.60	358 ±0 (9)	0.07	349 (1)	0.33	357 ±0 (10)	0.00	(0)	0.20	312 ±0 (2)	0.10	312 ±0 (2)
Atlantic croaker	0.60	301 ±5 (9)	7.10	302 ±4 (107)	3.85	302 ±3 (116)	0.30	311 ±20 (3)	3.39	274 ±10 (34)	1.85	277 ±11 (37)
Gizzard shad	0.27	279 ±12 (4)	0.07	246 (1)	0.17	273 ±3 (5)	0.60	258 ±4 (6)	0.10	265 (1)	0.35	259 ±3 (7)
Spot	0.66	225 ±6 (10)	0.60	226 ±0 (9)	0.63	226 ±3 (19)	1.10	231 ±0 (11)	0.90	233 ±3 (9)	1.00	232 ±2 (20)
Sea catfish	1.46	324 ±2 (22)	0.53	324 ±0 (8)	1.00	324 ±1 (30)	1.30	324 ±5 (13)	1.20	321 ±5 (12)	1.25	323 ±4 (25)

Table 21. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	0.80	366 ±4 (12)	1.59	412 ±5 (24)	1.20	397 ±8 (36)	6.69	361 ±12 (67)	4.09	361 ±8 (41)	5.39	361 ±6 (108)
Pinfish	0.00	(0)	0.13	214 ±0 (2)	0.08	214 ±0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Pigfish	0.00	(0)	0.07	242 (1)	0.03	242 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Finescale menhaden	0.07	323 (1)	0.07	320 (1)	0.07	322 ±1 (2)	0.00	(0)	0.10	302 (1)	0.05	302 (1)
Gulf toadfish	0.40	280 ±9 (6)	0.00	(0)	0.20	280 ±9 (6)	0.10	237 (1)	0.00	(0)	0.05	237 (1)
Atlantic stingray[a]	0.27	231 ±7 (4)	0.07	236 (1)	0.17	232 ±4 (5)	0.00	(0)	0.10	172 (1)	0.05	172 (1)
Gulf flounder	0.07	299 (1)	0.00	(0)	0.03	299 (1)	0.00	(0)	0.10	306 (1)	0.05	306 (1)
Gulf menhaden	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.40	256 ±0 (4)	0.20	256 ±0 (4)
Bighead searobin	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	283 (1)	0.05	283 (1)

Table 21. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped burrfish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	183 (1)	0.05	183 (1)
All species	7.92		14.68		11.29		12.39		15.27		13.82	

[a]Length measurements are from wing tip to wing tip.

Table 22. Mean catch per area (no/ha) of fishes caught in all 732-m trammel net sets during fall (October-November) 1976 and spring (April-May) 1977 in lower Laguna Madre system.

Species	Oct.	Nov.	Fall	April	May	Spring
Red drum	3.35	0.76	2.06	1.04	1.12	1.08
Black drum	1.44	2.19	1.82	0.20	0.04	0.12
Spotted seatrout	3.63	1.87	2.75	2.11	2.67	2.39
Southern flounder	1.36	0.36	0.86	0.24	0.16	0.20
Sheepshead	0.56	0.72	0.64	0.28	0.96	0.62
Atlantic croaker	3.79	3.27	3.53	0.64	19.38	10.01
Gulf menhaden	0.20	0.24	0.22	0.00	2.67	1.34
Gizzard shad	0.32	0.48	0.40	0.04	0.24	0.14
Spot	13.52	2.03	7.78	0.68	1.71	1.20
Sea catfish	3.19	1.48	2.34	0.76	1.56	1.16
Striped mullet	6.90	1.44	4.17	3.39	1.52	2.46
Sand seatrout	0.00	0.04	0.02	0.00	0.00	0.00
Pinfish	4.07	0.40	2.24	0.20	0.48	0.34
Atlantic spadefish	0.00	0.00	0.00	0.00	0.04	0.02
Pigfish	2,19	1.36	1.78	0.04	0.00	0.02
Bighead searobin	0.00	0.08	0.04	0.00	0.00	0.00
Inshore lizardfish	0.04	0.04	0.04	0.00	0.00	0.00
Bay whiff	0.00	0.04	0.02	0.00	0.00	0.00
Finescale menhaden	0.20	1.20	0.70	1.48	0.88	1.18
Ladyfish	0 08	0.00	0.04	0.04	0.16	0.10
Cownose ray	0.00	0 04	0.02	0.00	0.00	0.00
Gulf kingfish	0.00	0.08	0.04	0.00	0.00	0.00
Spanish mackerel	0.00	0.04	0.02	0.00	0.00	0.00
Harvestfish	0.00	0.00	0.00	0.04	0.04	0.04
Striped burrfish	0.20	0.64	0.42	0.52	0.48	0.50
Gulf toadfish	0.00	0.04	0.02	0.04	0.12	0.08
Snook	0.40	0.00	0.20	0.00	0.00	0.00
Atlantic stingray	2.07	0.64	1.36	2,59	0.44	1.52
Florida pompano	0.00	0.00	0.00	0.00	0.04	0.02
Mottled mojarra	0.04	0.00	0.02	0.00	0.00	0.00
Southern kingfish	0.00	0.16	0.08	0.00	0.00	0.00
Leopard searobin	0.00	0.76	0.38	0.00	0.00	0.00
Gulf flounder	0.24	0.00	0.12	0.04	0.04	0.04
All species	47.79	20.40	34.13	14.37	34.75	24.58

Table 23. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during fall (October-November) 1976 in lower Laguna Madre (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	4.52	414 ±52 (66)	1.06	362 ±18 (15)	2.79	405 ±39 (81)	1.60	333 ±19 (15)	0.30	354 ±1 (3)	0.95	337 ±13 (18)
Black drum	2.12	339 ±35 (31)	2.72	290 ±5 (40)	2.42	312 ±20 (71)	0.40	384 ±0 (4)	1.40	274 ±23 (14)	0.90	298 ±35 (18)
Spotted seatrout	2.52	465 ±18 (38)	2.06	430 ±23 (31)	2.29	449 ±2 (69)	5.29	397 ±14 (51)	1.60	396 ±6 (15)	3.44	397 ±9 (66)
Southern flounder	1.93	316 ±31 (28)	0.53	377 ±18 (8)	1.23	329 ±26 (36)	0.50	291 ±0 (5)	0.10	440 (1)	0.30	316 ±32 (6)
Sheepshead	0.80	305 ±17 (12)	0.80	308 ±35 (12)	0.80	306 ±23 (24)	0.20	220 ±35 (2)	0.60	273 ±17 (6)	0.40	260 ±12 (8)
Atlantic croaker	5.05	301 ±4 (72)	3.59	259 ±4 (53)	4.32	283 ±11 (125)	1.90	273 ±0 (18)	2.79	244 ±6 (27)	2.35	256 ±8 (45)
Gulf menhaden	0.07	240 (1)	0.33	279 ±0 (5)	0.20	272 ±8 (6)	0.40	278 ±0 (4)	0.10	315 (1)	0.25	285 ±0 (5)
Gizzard shad	0.40	312 ±0 (6)	0.73	287 ±0 (11)	0.56	296 ±9 (17)	0.20	310 ±0 (2)	0.10	350 (1)	0.15	323 ±14 (3)
Spot	15.94	243 ±10 (222)	2.79	242 ±4 (39)	9.36	243 ±8 (261)	9.88	249 ±3 (95)	0.90	240 ±12 (9)	5.39	249 ±2 (104)

Table 23. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Sea catfish	3.32	318 +2 (47)	2.26	312 +1 (32)	2.79	316 +1 (79)	2.99	328 +0 (30)	0.30	330 +0 (3)	1.65	328 +0 (33)
Striped mullet	8.96	354 +3 (126)	2.26	348 +4 (34)	5.61	353 +3 (160)	3.79	356 +4 (38)	0.20	410 +43 (2)	2.00	359 +0 (40)
Pinfish	3.78	209 +1 (57)	0.27	219 +17 (4)	2.03	209 +0 (61)	4.49	216 +4 (45)	0.60	210 +0 (5)	2.54	215 +2 (50)
Pigfish	0.86	228 +1 (13)	1.53	230 +1 (21)	1.19	230 +1 (34)	4.19	219 +2 (42)	1.10	225 +2 (11)	2.64	220 +2 (53)
Bighead searobin	0.00	(0)	0.13	228 +0 (2)	0.07	228 +0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Inshore lizardfish	0.00	(0)	0.07	325 (1)	0.03	325 (1)	0.10	305 (1)	0.00	(0)	0.05	305 (1)
Bay whiff	0.00	(0)	0.07	145 (1)	0.03	145 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Finescale menhaden	0.13	305 +0 (2)	1.26	306 +0 (19)	0.70	306 +0 (21)	0.30	302 +0 (3)	1.10	319 +0 (11)	0.70	315 +4 (14)
Ladyfish	0.13	508 +20 (2)	0.00	(0)	0.07	508 +20 (2)	0.00	(0)	0.00	(0)	0.00	(0)

Table 23. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Cownose ray[a]	0.00	(0)	0.07	410 (1)	0.03	410 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Gulf kingfish	0.00	(0)	0.13	325 ±0 (2)	0.07	325 ±0 (2)	0.00	(0)	0.00	(0)	0.00	(0)
Striped burrfish	0.13	202 ±15 (2)	0.53	172 ±15 (8)	0.33	178 ±10 (10)	0.30	177 ±25 (3)	0.80	163 ±0 (8)	0.55	167 ±6 (11)
Gulf toadfish	0.00	(0)	0.07	235 (1)	0.03	235 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Snook	0.66	486 ±0 (10)	0.00	(0)	0.33	486 ±0 (10)	0.00	(0)	0.00	(0)	0.00	(0)
Atlantic stingray[a]	2.52	226 ±12 (35)	0.73	227 ±0 (10)	1.63	227 ±9 (45)	1.40	216 ±12 (14)	0.50	232 ±0 (4)	0.95	220 ±5 (18)
Mottled mojarra	0.07	190 (1)	0.00	(0)	0.03	190 (1)	0.00	(0)	0.00	(0)	0.00	(0)
Southern kingfish	0.00	(0)	0.27	304 ±0 (4)	0.13	304 ±0 (4)	0.00	(0)	0.00	(0)	0.00	(0)
Leopard searobin	0.00	(0)	1.13	230 ±7 (17)	0.56	230 ±7 (17)	0.00	(0)	0.20	222 ±0 (2)	0.10	222 ±0 (2)
Gulf flounder	0.20	327 ±31 (3)	0.00	(0)	0.10	327 ±31 (3)	0.30	360 ±3 (3)	0.00	(0)	0.15	360 ±3 (3)

Table 23. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	October		November		Fall		October		November		Fall	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Sand seatrout	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	375 (1)	0.05	375 (1)
Spanish mackerel	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	610 (1)	0.05	610 (1)
All species	54.11		25.39		39.74		38.23		12.89		25.55	

[a]Length measurements are from wing tip to wing tip.

Table 24. Mean catch per area and mean total length (mm) ± 1 S.E. of fishes caught in 732-m trammel nets during spring (April-May) 1977 in lower Laguna Madre (number in parenthesis indicates number of fish measured).

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Red drum	1.59	414 ±35 (24)	1.79	416 ±4 (27)	1.69	415 ±16 (51)	0.20	400 ±10 (2)	0.10	413 (1)	0.15	404 ±4 (3)
Black drum	0.00	(0)	0.00	(0)	0.00	(0)	0.50	359 ±4 (5)	0.10	269 (1)	0.30	344 ±16 (6)
Spotted seatrout	1.00	560 ±54 (15)	2.86	450 ±15 (43)	1.93	479 ±22 (58)	3.79	412 ±2 (38)	2.40	407 ±1 (24)	3.09	410 ±1 (62)
Southern flounder	0.13	391 ±62 (2)	0.20	407 ±32 (3)	0.17	401 ±34 (5)	0.40	356 ±0 (4)	0.10	382 (1)	0.25	362 ±6 (5)
Sheepshead	0.33	293 ±49 (5)	0.13	265 ±0 (2)	0.23	285 ±33 (7)	0.20	296 ±63 (2)	2.20	271 ±16 (22)	1.20	273 ±16 (24)
Atlantic croaker	0.00	(0)	29.02	270 ±1 (209)	14.51	270 ±2 (209)	1.60	259 ±4 (16)	4.89	267 ±11 (49)	3.24	265 ±8 (65)
Gulf menhaden	0.00	(0)	4.18	267 ±1 (63)	2.09	267 ±1 (63)	0.00	(0)	0.40	268 ±3 (4)	0.20	268 ±3 (4)
Spot	0.20	218 ±2 (3)	1.06	232 ±2 (16)	0.63	230 ±1 (19)	1.40	233 ±0 (14)	2.69	230 ±3 (27)	2.05	231 ±1 (41)
Sea catfish	0.66	360 ±0 (10)	0.80	332 ±11 (12)	0.73	345 ±12 (22)	0.90	315 ±5 (9)	2.69	332 ±8 (27)	1.80	328 ±6 (36)

Table 24. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Striped mullet	4.18	353 ±5 (63)	1.59	363 ±4 (24)	2.89	356 ±3 (87)	2.20	335 ±4 (22)	1.40	358 ±0 (14)	1.80	344 ±7 (36)
Pinfish	0.00	(0)	0.40	205 ±1 (6)	0.20	205 ±1 (6)	0.50	201 ±13 (5)	0.60	202 ±0 (6)	0.55	202 ±5 (11)
Finescale menhaden	0.27	304 ±0 (4)	0.73	291 ±0 (11)	0.50	294 ±4 (15)	3.29	317 ±5 (33)	1.10	287 ±3 (11)	2.20	309 ±1 (44)
Ladyfish	0.07	518 (1)	0.07	564 (1)	0.07	541 ±18 (2)	0.00	(0)	0.30	488 ±34 (3)	0.15	488 ±34 (3)
Harvestfish	0.00	(0)	0.07	232 (1)	0.03	232 (1)	0.10	250 (1)	0.00	(0)	0.05	250 (1)
Striped burrfish	0.33	161 ±0 (5)	0.46	200 ±4 (7)	0.40	184 ±6 (12)	0.80	179 ±8 (8)	0.50	166 ±2 (5)	0.65	174 ±6 (13)
Gulf toadfish	0.07	250 (1)	0.00	(0)	0.03	250 (1)	0.00	(0)	0.30	246 ±0 (3)	0.15	246 ±0 (3)
Atlantic stingray[a]	4.18	251 ±14 (63)	0.53	223 ±3 (8)	2.36	248 ±13 (71)	0.20	184 ±29 (2)	0.30	286 ±28 (3)	0.25	245 ±37 (5)
Florida pompano	0.00	(0)	0.07	282 (1)	0.03	282 (1)	0.00	(0)	0.00	(0)	0.00	(0)

Table 24. (Cont'd.)

Species	Shoreline stations						Open-water stations					
	April		May		Spring		April		May		Spring	
	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length	No/ha	Length
Gizzard shad	0.00	(0)	0.00	(0)	0.00	(0)	0.10	305 (1)	0.60	277 ±4 (6)	0.35	281 ±4 (7)
Atlantic spadefish	0.00	(0)	0.00	(0)	0.00	(0)	0.00	(0)	0.10	103 (1)	0.05	103 (1)
Pigfish	0.00	(0)	0.00	(0)	0.00	(0)	0.10	210 (1)	0.00	(0)	0.05	210 (1)
Gulf flounder	0.00	(0)	0.00	(0)	0.00	(0)	0.10	303 (1)	0.10	333 (1)	0.10	318 ±12 (2)
All species	13.01		43.96		28.49		16.38		20.87		18.61	

[a]Length measurements are from wing tip to wing tip.

Table 25. List of species caught in 732-m trammel net sets in each bay system during October-November 1976 and April-May 1977. (X indicates at least one fish caught; blank indicates no fish caught.)

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
Red drum	X	X	X	X	X	X	X	X
Black drum	X	X	X	X	X	X	X	X
Spotted seatrout	X	X	X	X	X	X	X	X
Southern flounder	X	X	X	X	X	X	X	X
Sheepshead	X	X	X	X	X	X	X	X
Atlantic croaker	X	X	X	X	X	X	X	X
Gulf menhaden	X	X	X	X	X	X	X	X
Gizzard shad	X	X	X	X	X	X	X	X
Spot	X	X	X	X	X	X	X	X
Sea catfish	X	X	X	X	X	X	X	X
Gafftopsail catfish	X		X	X	X			
Striped mullet	X	X	X	X	X	X	X	X
Sand seatrout	X					X		X
Blue catfish	X							
Pinfish	X	X	X	X	X	X	X	X
Atlantic spadefish	X			X		X		X
Atlantic threadfin	X							
Pigfish	X		X	X		X	X	X
Carp	X					X		
Alligator gar	X		X	X	X	X		
Harvestfish	X		X		X	X		X
Atlantic stingray	X	X	X	X	X	X	X	X
Spotted gar	X		X	X				
Bluefish	X							
Gulf flounder	X		X	X		X	X	X
Blacktip shark	X							

Table 25 (Cont'd.)

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
Bull shark			X	X	X			
White mullet			X					
Finescale menhaden			X	X	X	X	X	X
Cownose ray			X					X
Crevalle jack				X				
Skipjack herring				X				
Florida pompano				X		X		X
Gulf kingfish				X				X
Hogchoker				X			X	
Striped burrfish				X		X	X	X
Ladyfish				X		X		X
Southern stingray				X				
Bonnethead				X				
Southern kingfish				X	X			X
Bighead searobin					X		X	X
Inshore lizardfish					X			X
Gulf toadfish					X	X	X	X
Ocellated flounder						X		
Southern stargazer						X		
Atlantic cutlassfish						X		
Blackfin searobin							X	
Bay whiff								X
Snook								X
Mottled mojarra								X
Leopard searobin								X
Spanish mackerel								X
Total	26	13	23	31	22	28	21	33

Table 26. Mean catch (no/ha) of each species caught each season at each station type for those species caught at least once in each of the eight bay systems.

Species	Shoreline		Open-water		All stations	
	Fall	Spring	Fall	Spring	Fall	Spring
Red drum	2.85	0.94	1.10	0.83	2.11	0.89
Black drum	4.20	1.38	2.48	1.20	3.46	1.30
Spotted seatrout	1.67	1.22	2.68	1.42	2.08	1.29
Southern flounder	0.48	0.43	0.19	0.34	0.37	0.40
Sheepshead	0.86	0.34	0.50	0.40	0.72	0.37
Atlantic croaker	0.95	3.25	0.55	1.68	0.79	2.65
Gulf menhaden	0.04	0.62	0.72	0.83	0.32	0.71
Gizzard shad	0.98	0.57	4.80	0.64	2.51	0.55
Spot	2.11	0.28	1.93	0.96	1.67	0.58
Sea catfish	1.77	3.23	0.99	3.82	1.26	3.42
Striped mullet	2.30	1.30	1.36	1.43	1.90	1.35
Pinfish	0.63	0.08	0.56	0.31	0.60	0.21
All species[a]	22.29	15.61	20.81	15.82	21.55	15.69

[a]Includes all fish caught in all trammel net samples (i.e. those listed above and all others not listed).

Table 27. Mean catches (no/ha) of each species caught in each bay system in 732-m trammel nets during fall 1976.

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
Red drum	1.54	1.68	3.41	2.62	3.02	1.50	1.08	2.06
Black drum	4.79	6.25	4.81	1.12	5.74	1.12	2.02	1.82
Spotted seatrout	0.68	0.33	2.70	2.99	1.90	4.55	0.72	2.75
Southern flounder	0.24	0.72	0.40	0.20	0.44	0.16	0.06	0.86
Sheepshead	0.65	0.24	0.28	0.86	1.70	1.26	0.10	0.64
Atlantic croaker	1.14	0.03	0.06	0.00	0.06	0.46	1.02	3.53
Gulf menhaden	0.47	0.09	0.00	0.00	0.14	1.50	0.16	0.22
Gizzard shad	4.98	0.03	2.55	2.61	9.30	0.18	0.00	0.40
Spot	0.21	0.06	0.66	0.36	0.38	3.39	0.52	7.78
Sea catfish	5.37	0.48	0.40	1.56	0.04	0.56	0.94	2.34
Leopard searobin	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.38
Striped mullet	0.77	0.87	3.69	0.82	3.41	0.76	0.70	4.17
Sand seatrout	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Pinfish	0.11	0.18	0.06	0.14	0.00	1.76	0.34	2.24
Atlantic spadefish	0.05	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Atlantic threadfin	0.05	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pigfish	0.03	0.00	0.28	0.12	0.00	1.10	0.00	1.78
Carp	0.02	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Alligator gar	0.03	0.00	0.14	0.00	0.04	0.00	0.00	0.00
Harvestfish	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Atlantic stingray	0.09	0.00	0.12	0.84	0.16	0.00	0.08	1.36
Spotted gar	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gulf flounder	0.00	0.00	0.00	0.08	0.00	0.02	0.02	0.12
Finescale menhaden	0.00	0.00	0.00	0.02	0.06	0.08	0.00	0.70
Cownose ray	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Bull shark	0.00	0.00	0.16	0.00	0.00	0.00	0.00	0.00

Table 27. (Cont'd.)

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
White mullet	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Hogchoker	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Crevalle jack	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Ladyfish	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.04
Gulf kingfish	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.04
Striped burrfish	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.42
Skipjack herring	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Florida pompano	0.00	0.00	0.00	0.02	0.00	0.04	0.00	0.00
Southern kingfish	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.08
Bighead searobin	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04
Inshore lizardfish	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.04
Gulf toadfish	0.00	0.00	0.00	0.00	0.00	0.04	0.02	0.02
Ocellated flounder	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Southern stargazer	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
Blackfin searobin	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Bay whiff	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Spanish mackerel	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Snook	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.20
Mottled mojarra	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
All species	21.44	10.96	19.74	14.42	26.43	19.06	7.82	34.13

Table 28. Mean catches (no/ha) of each species caught in each bay system in 732-m trammel nets during spring 1977.

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
Red drum	0.27	0.72	2.07	0.36	0.60	1.60	0.44	1.08
Black drum	2.41	1.62	2.77	0.70	0.50	0.30	1.94	0.12
Spotted seatrout	0.29	0.33	1.75	2.11	1.44	1.00	1.04	2.39
Southern flounder	0.24	1.23	0.24	0.76	0.30	0.16	0.08	0.20
Sheepshead	0.35	0.15	0.44	0.74	0.26	0.14	0.24	0.62
Atlantic croaker	1.26	0.58	0.08	0.16	0.22	5.72	3.05	10.01
Gulf menhaden	0.39	0.03	0.10	1.28	0.30	2.10	0.08	1.34
Gizzard shad	3.10	0.12	0.32	0.28	0.12	0.10	0.24	0.14
Spot	0.23	0.28	0.80	0.26	0.10	0.98	0.78	1.20
Sea catfish	11.71	1.08	0.64	5.72	0.62	5.34	1.10	1.16
Gafftopsail catfish	0.03	0.00	0.10	1.50	0.02	0.00	2.87	2.46
Striped mullet	0.72	0.63	0.92	0.72	1.90	0.58	0.00	0.00
Sand seatrout	0.00	0.00	0.00	0.00	0.00	0.04	0.00	0.00
Blue catfish	0.23	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pinfish	0.00	0.00	0.10	0.02	0.00	0.88	0.04	0.34
Atlantic spadefish	0.09	0.00	0.00	0.04	0.00	0.00	0.00	0.02
Atlantic threadfin	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pigfish	0.00	0.00	0.06	0.04	0.26	0.60	0.02	0.02
Alligator gar	0.42	0.00	0.24	0.02	0.04	0.02	0.00	0.00
Harvestfish	0.05	0.00	0.08	0.00	0.02	0.02	0.00	0.04
Atlantic stingray	3.40	0.03	0.20	1.02	0.64	0.62	0.12	1.52
Bluefish	0.25	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Gulf flounder	0.03	0.00	0.02	0.12	0.00	0.08	0.04	0.04
Blacktip shark	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Finescale menhaden	0.00	0.00	0.04	0.16	0.02	0.98	0.06	1.18

Table 28. (Cont'd.)

Species	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre
Cownose ray	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Longnose gar	0.00	0.00	0.02	0.00	0.00	0.00	0.00	0.00
Bull shark	0.00	0.00	0.00	0.06	0.04	0.00	0.00	0.00
Hogchoker	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Crevalle jack	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Southern stingray	0.00	0.00	0.00	0.06	0.00	0.00	0.00	0.00
Ladyfish	0.00	0.00	0.00	0.02	0.00	0.02	0.00	0.10
Striped burrfish	0.00	0.00	0.00	0.02	0.00	0.04	0.02	0.50
Bonnethead	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Spotted gar	0.00	0.00	0.00	0.02	0.00	0.00	0.00	0.00
Florida pompano	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.02
Southern kingfish	0.00	0.00	0.00	0.02	0.02	0.00	0.00	0.00
Bighead searobin	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.00
Gulf toadfish	0.00	0.00	0.00	0.00	0.02	0.04	0.14	0.08
Atlantic cutlassfish	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00
All species	25.61	6.80	11.11	16.31	7.44	21.38	12.32	24.58

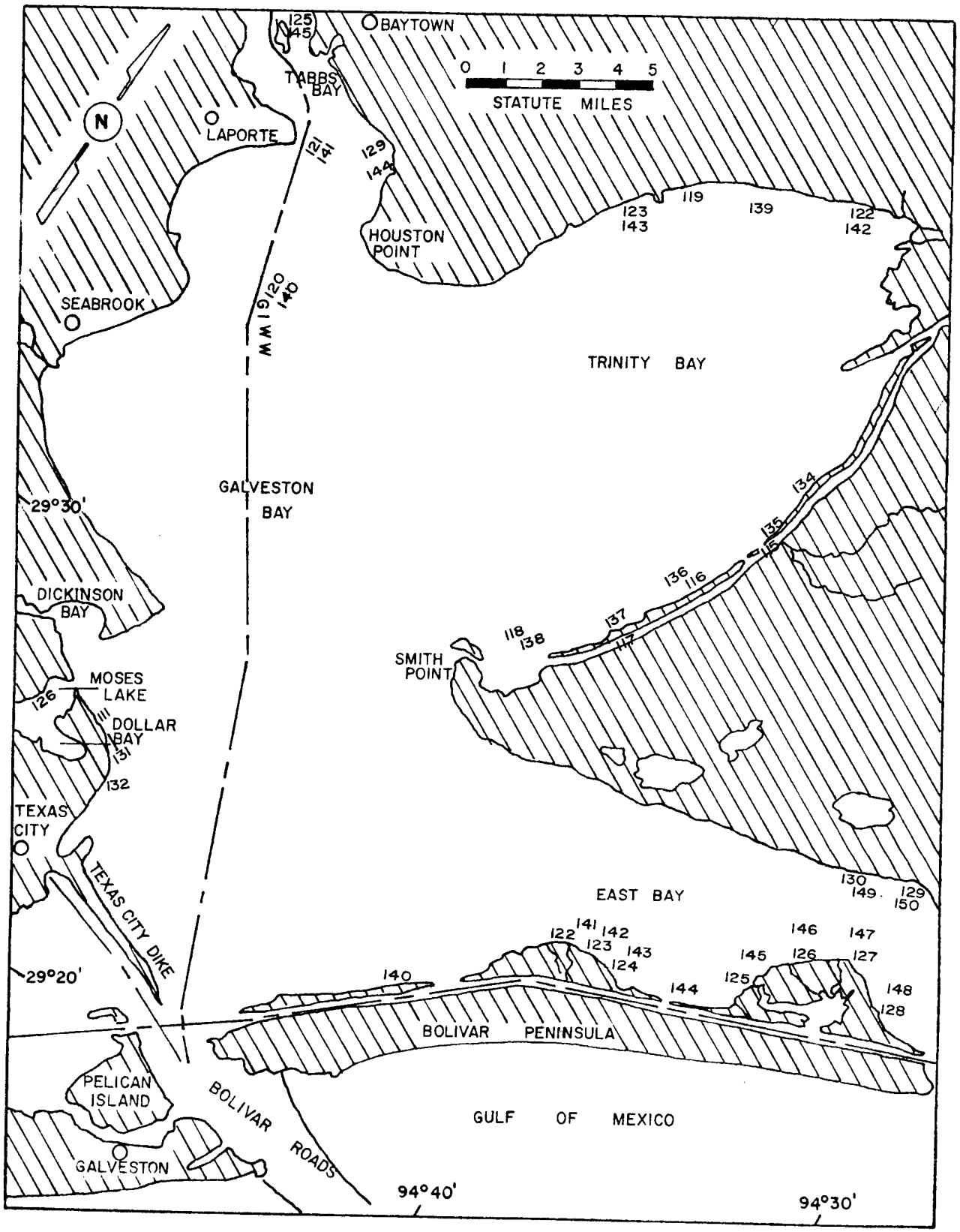

Figure 1A. Map of Galveston Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

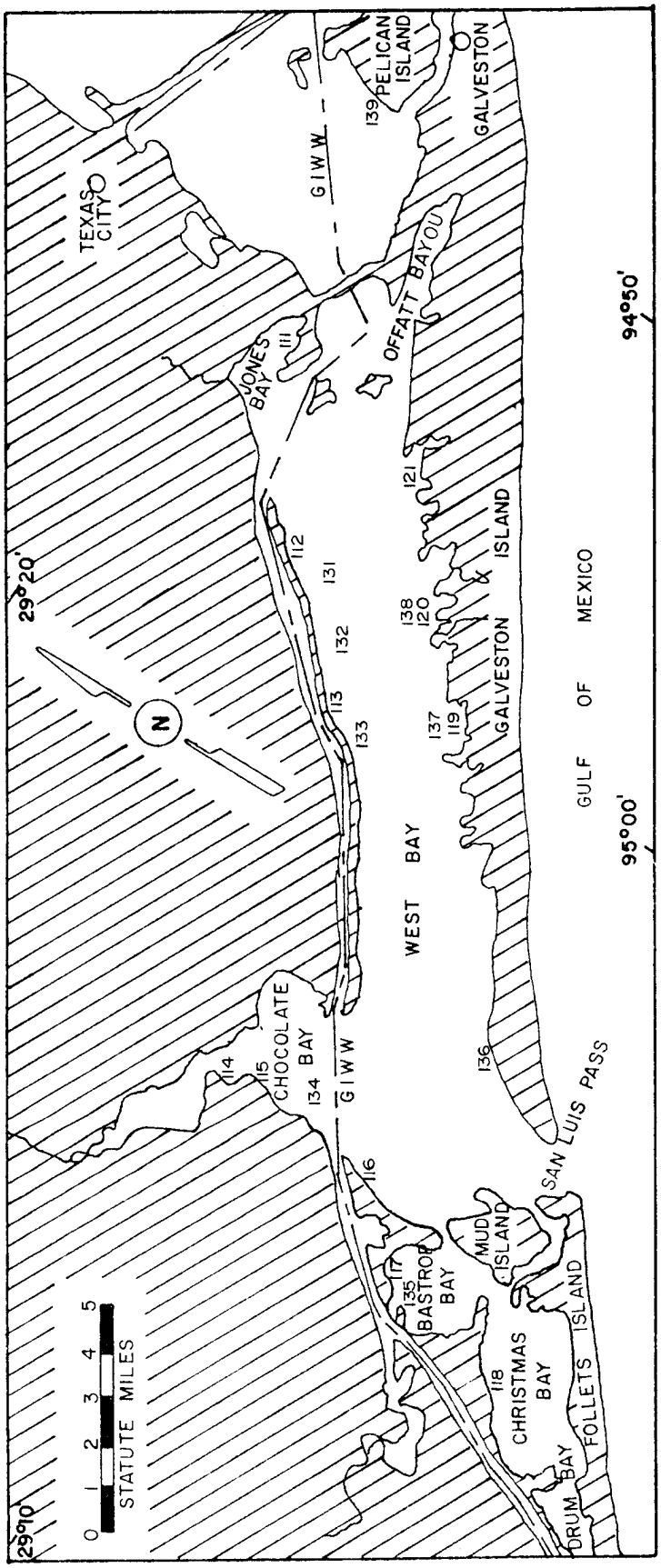

Figure 1B. Map of Galveston Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

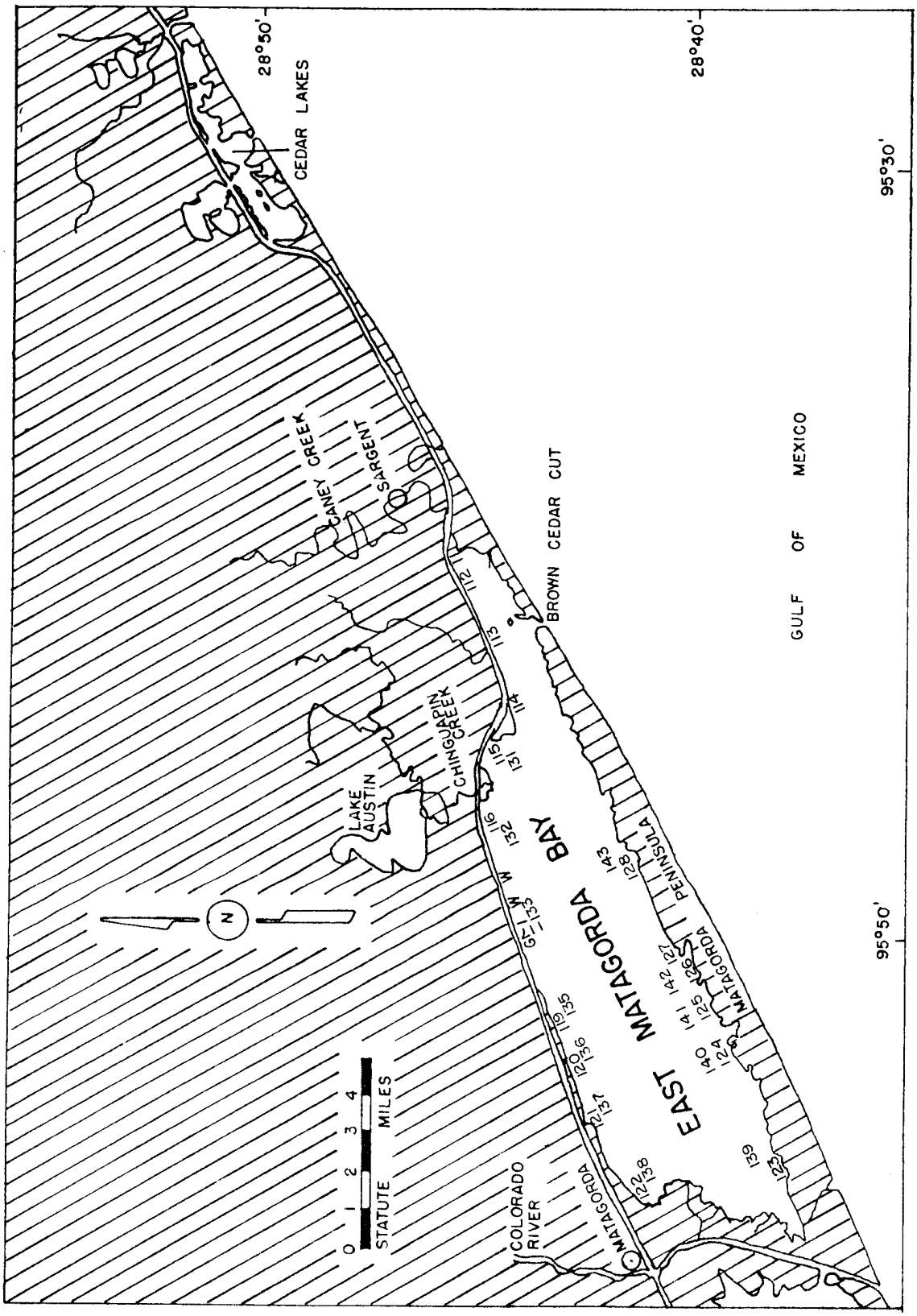

Figure 2. Map of East Matagorda Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

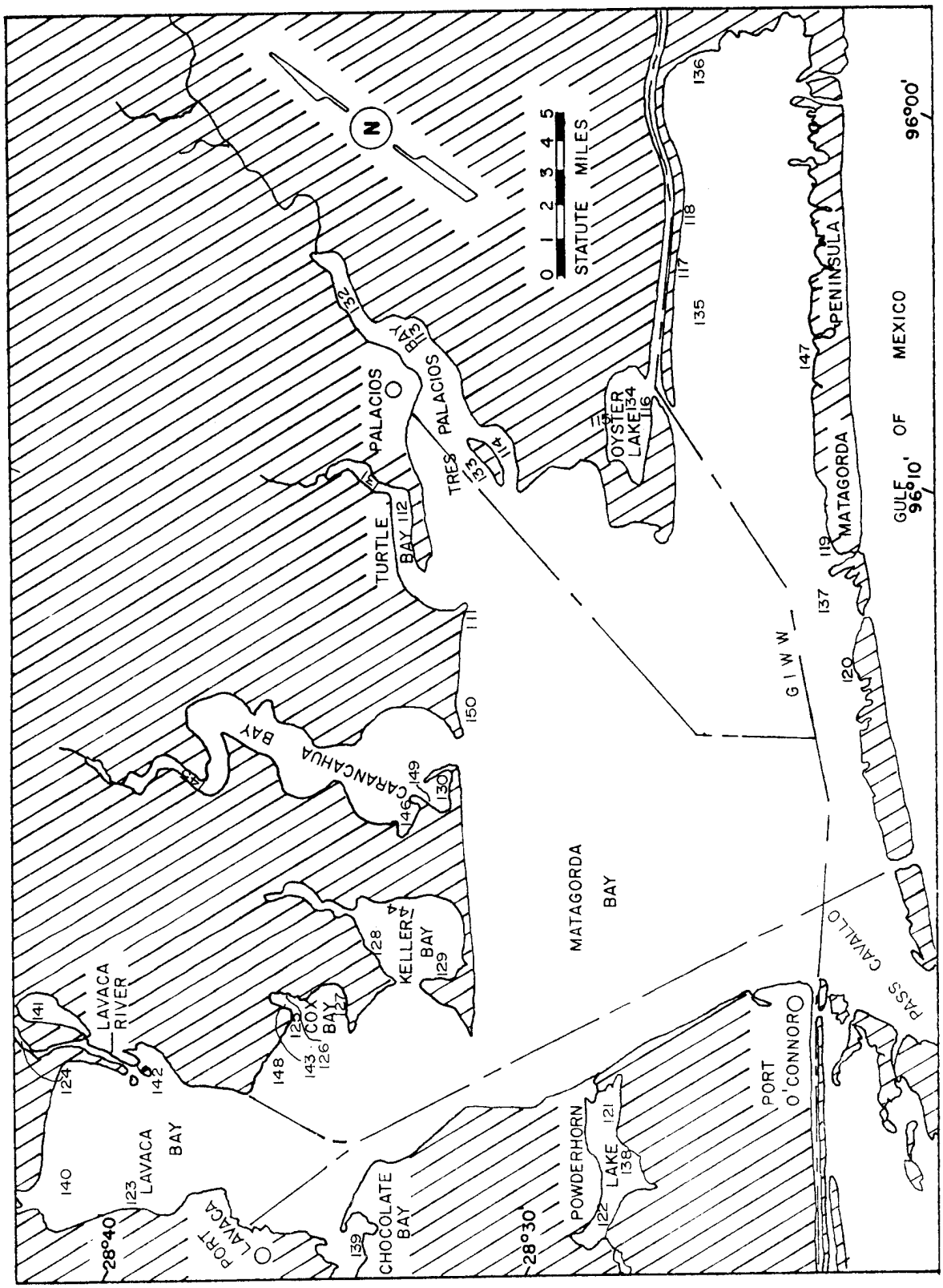

Figure 3. Map of Matagorda Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and Apri -May 1977).

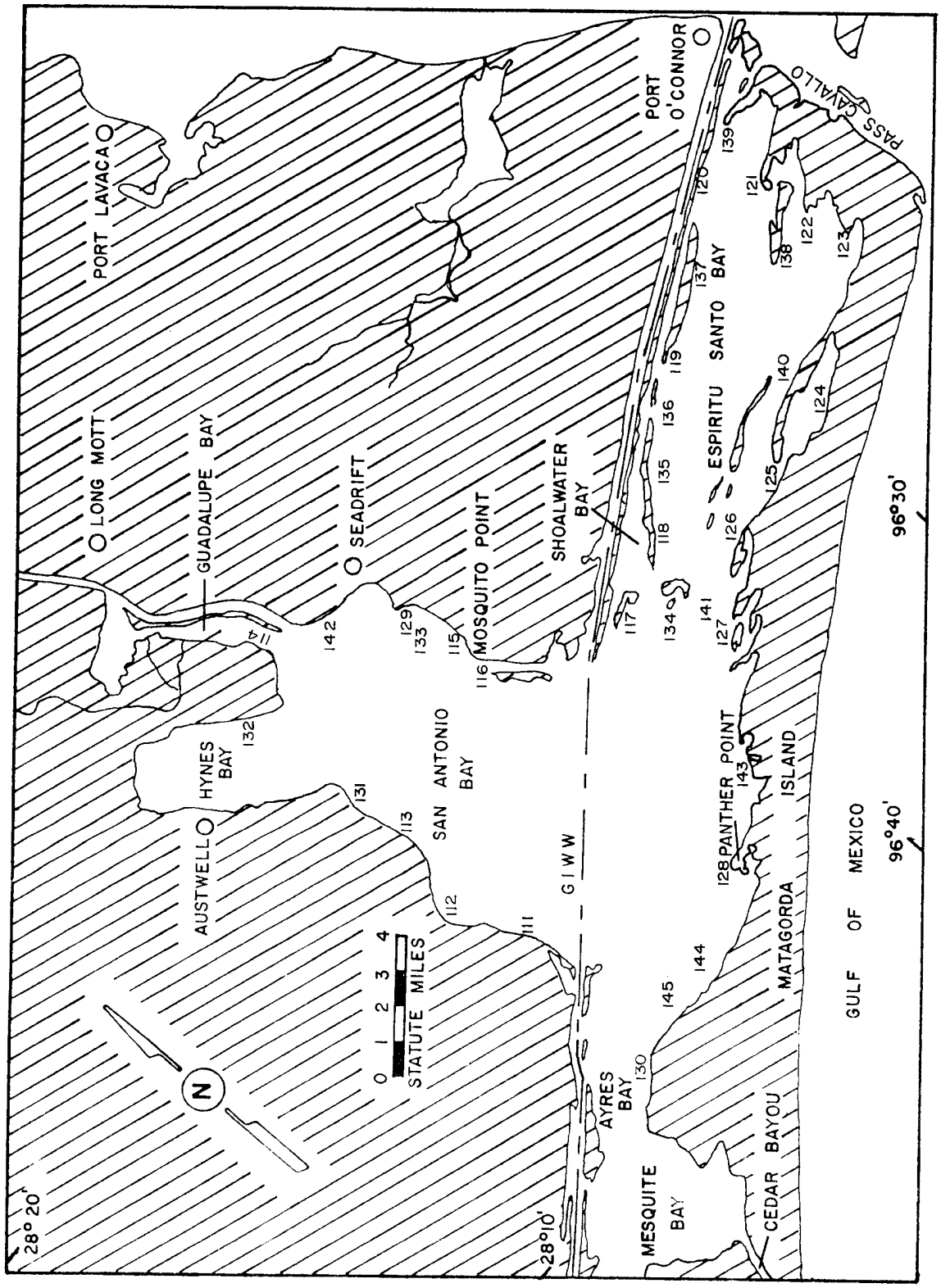

Figure 4. Map of San Antonio Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

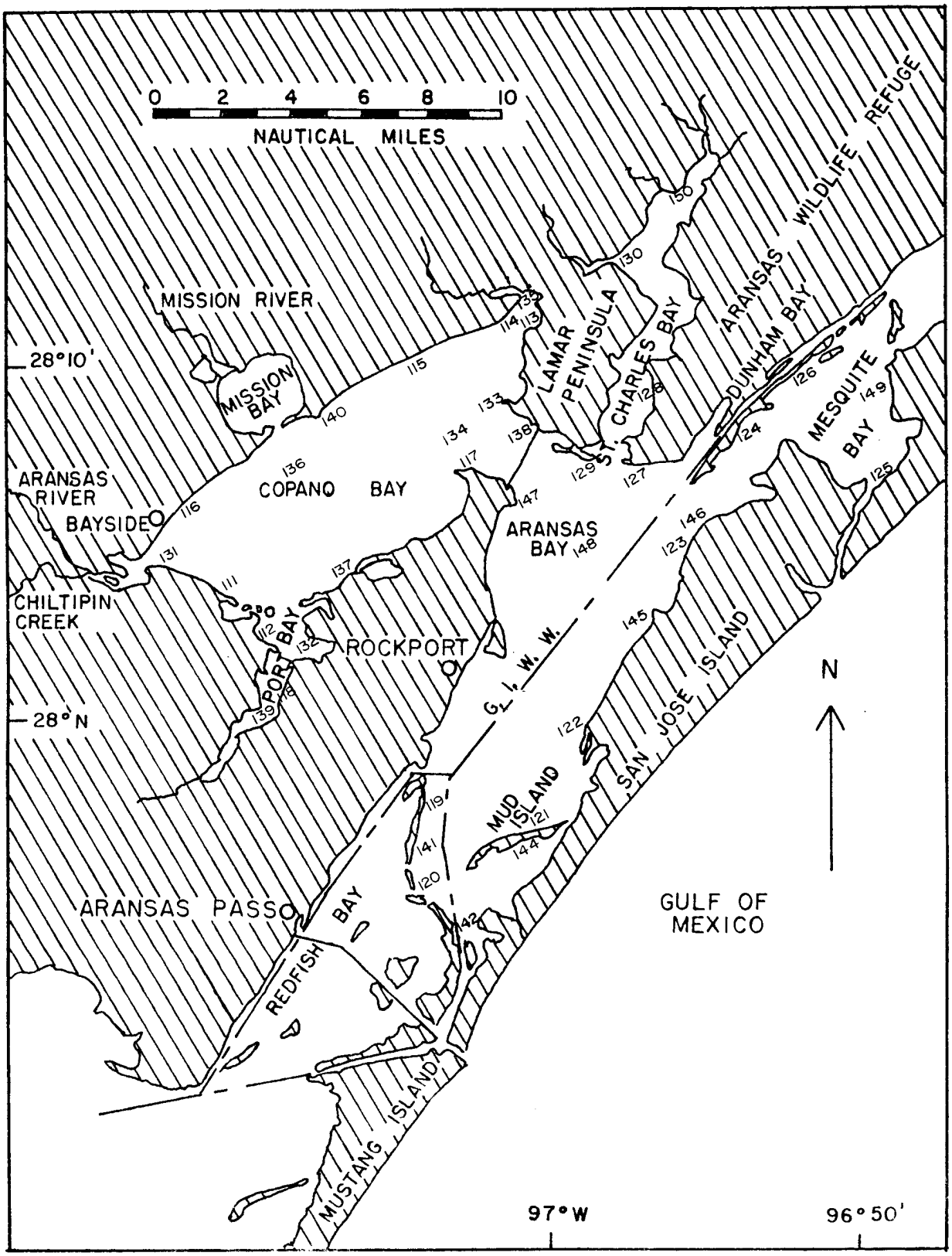

Figure 5. Map of Aransas Bay system with 732-m trammel net stations indicated (nov.-Dec. 1976 and April-May 1977).

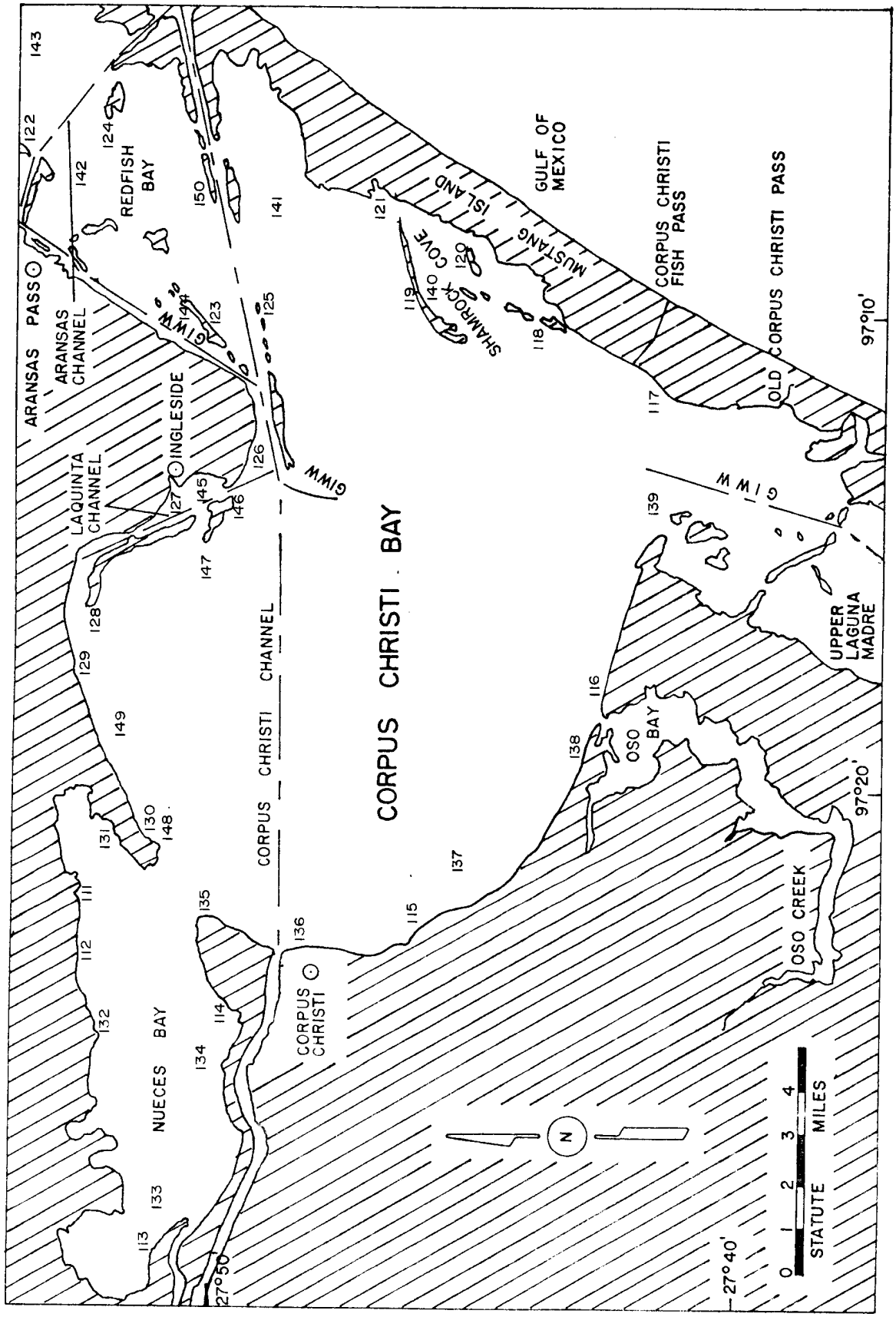

Figure 6. Map of Corpus Christi Bay system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

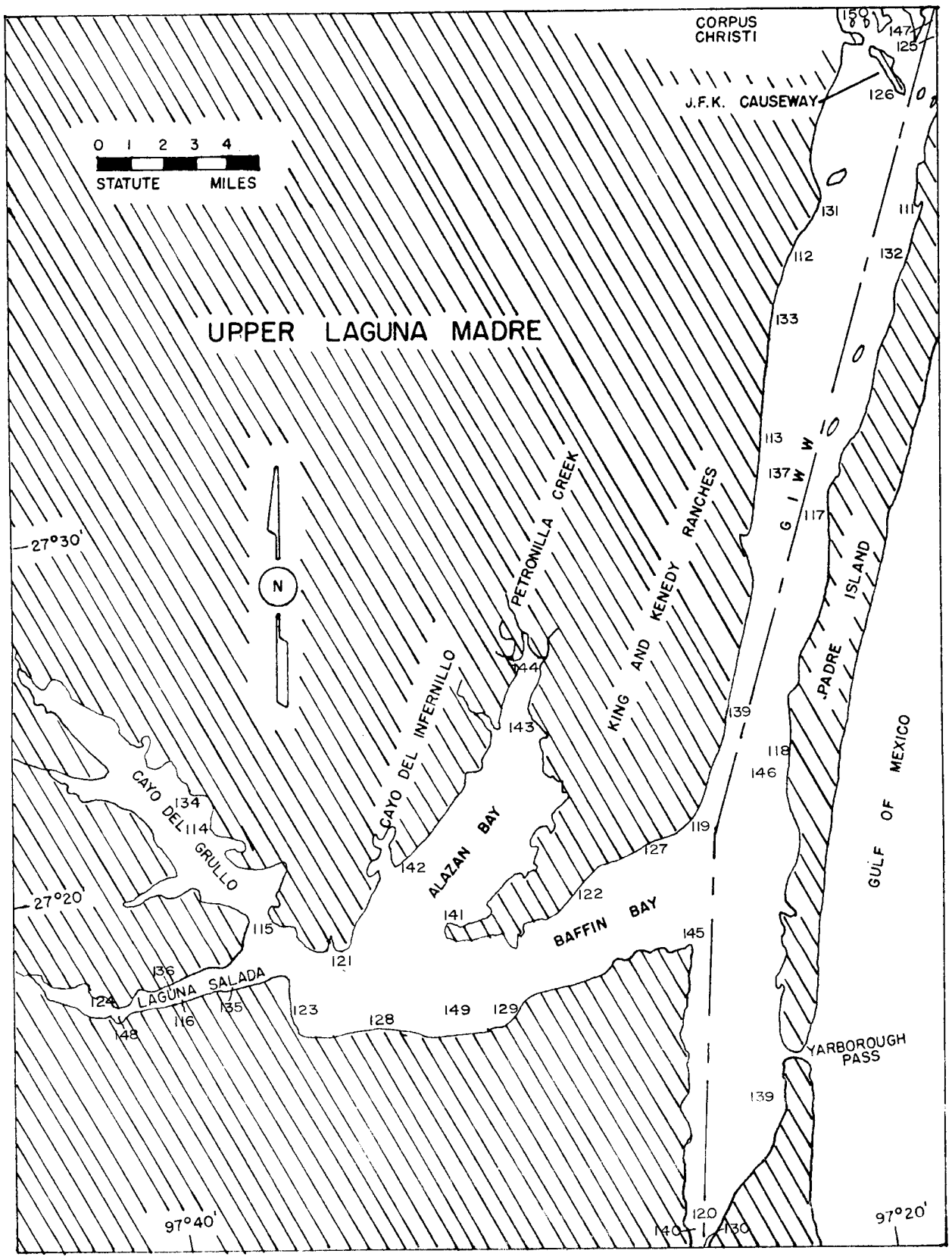

Figure 7. Map of upper Laguna Madre system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

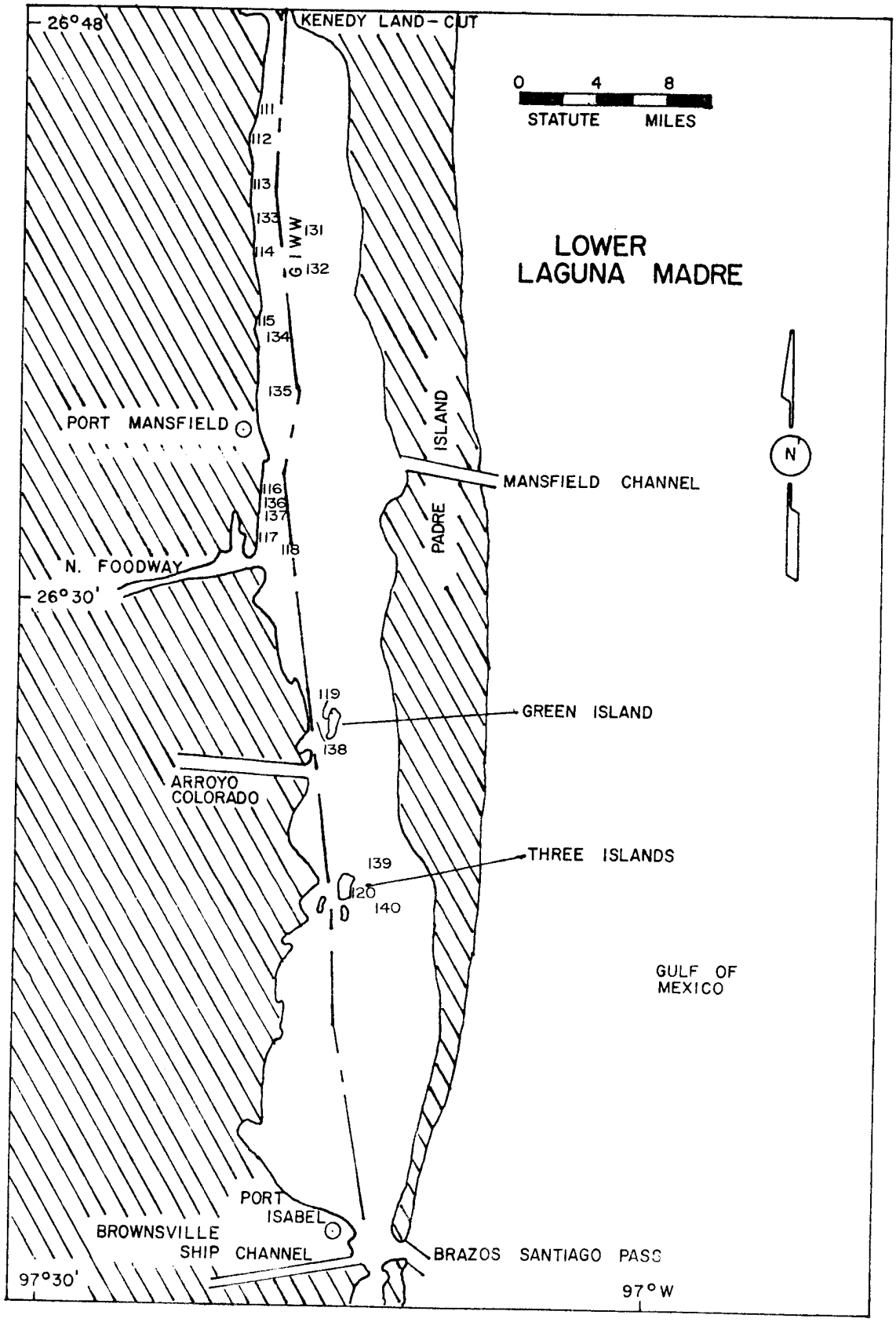

Figure 8. Map of lower Laguna Madre system with 732-m trammel net stations indicated (Nov.-Dec. 1976 and April-May 1977).

Appendix A. Trammel net station locations.

Appendix Table 1. Trammel net (732-m) station locations in each bay system in October-November 1976 and April-May 1977.

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Galveston	Galveston	Shoreline	111	29°26'25"	94°54'15"	Dollar Point
	Galveston	Shoreline	112	29°24'35"	94°53'00"	Texas City
	Galveston	Shoreline	113	29°22'50"	94°51'10"	Texas City dike
	Trinity	Shoreline	114	29°42'00"	94°41'30"	Ash Point
	Trinity	Shoreline	115	29°39'05"	94°42'10"	Double Bayou
	Trinity	Shoreline	116	29°36'40"	94°43'00"	Lone Oak Bayou
	Trinity	Shoreline	117	29°34'45"	94°44'10"	Clam Shell Island
	Trinity	Shoreline	118	29°33'30"	94°46'40"	Ving-et-une Island
	Galveston	Shoreline	119	29°30'20"	94°57'10"	Houston Lighting and Power intake (Bacliff)
	Galveston	Shoreline	120	29°36'50"	94°57'00"	5 Mile Pass
	Galveston	Shoreline	121	29°39'00"	94°57'25"	Atkinson Island
	Trinity	Shoreline	122	29°44'20"	94°41'55"	Trinity Delta
	Trinity	Shoreline	123	29°43'00"	94°51'20"	Old dredge
	Galveston	Shoreline	124	29°39'30"	94°56'15"	Mesquite Knoll
	Galveston	Shoreline	125	29°42'35"	94°59'00"	Tabbs Bay
	Moses Lake	Shoreline	126	29°25'40"	94°57'50"	Moses Lake
	Galveston	Open-water	131	29°26'25"	94°54'15"	Dollar Point
	Galveston	Open-water	132	29°24'35°	94°53'00"	Texas City
	Galveston	Open-water	133	29°22'50"	94°51'10"	Texas City dike
	Trinity	Open-water	134	29°42'00"	94°42'10"	Ash Point
	Trinity	Open-water	135	29°39'05"	94°42'20"	Double Bayou
	Trinity	Open-water	136	29°37'05"	94°43'05"	Lone Oak Bayou
	Trinity	Open-water	137	29°33'30"	94°43'00"	Clam Shell Island
	Trinity	Open-water	138	29°33'30"	94°46'40"	Vingt-et-une Island
	Galveston	Open-water	139	29°30'25"	94°57'05"	Houston Lighting and Power intake (Bacliff)
	Galveston	Open-water	140	29°36'20"	94°56'25"	5 Mile Pass
	Galveston	Open-water	141	29°39'00"	94°57'25"	Atkinson Island
	Trinity	Open-water	142	29°44'20"	94°41'55"	Trinity Delta
	Trinity	Open-water	143	29°43'00"	94°50'25"	Old dredge
	Galveston	Open-water	144	29°41'50"	94°56'45"	Mesquite Knoll

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Galveston	Jones Lake	Shoreline	111	29°18'39"	94°55'15"	N shore of Jones Lake
	West	Shoreline	112	29°15'43"	94°59'30"	Green's Cut
	West	Shoreline	113	29°14'10"	95°01'05"	Carancahua Cut
	Chocolate	Shoreline	114	29°11'25"	95°09'30"	Horse Grove Point
	Chocolate	Shoreline	115	29°10'25"	95°09'05"	Wharton Camp Bayou
	West	Shoreline	116	29°07'25"	95°09'50"	Mud Cut
	Bastrop	Shoreline	117	29°06'40"	95°11'05"	N shore of Bastrop Bay
	Christmas	Shoreline	118	29°02'45"	95°13'25"	2.5 miles S of Christmas Point
	West	Shoreline	119	29°11'17"	94°59'43"	Jumbile Cove
	West	Shoreline	120	29°12'47"	94°58'00"	Dana Cove
	West	Shoreline	121	29°14'10"	94°56'35"	Starvation Cove
	East	Shoreline	122	29°28'30"	94°40'45"	1.5 miles W of Elmgrove Point
	East	Shoreline	123	29°28'40"	94°40'00"	Elmgrove Point
	East	Shoreline	124	29°28'35"	94°39'00"	Bob's Cut Cove
	East	Shoreline	125	29°30'00"	94°35'50"	Yates Bayou
	East	Shoreline	126	29°31'15"	94°35'00"	1.5 miles W of Marsh Point
	East	Shoreline	127	29°31'50"	94°33'28"	Marsh Point
	East	Shoreline	128	29°31'10"	94!32'23"	Rollover Pass
	East	Shoreline	129	29°34'20"	94°33'50"	Anahuac Bayou
	East	Shoreline	130	29°34'00"	94°35'00"	Robinson Bayou
	West	Open-water	131	29°15'43"	94°59'30"	Green's Cut
	West	Open-water	132	29°14'10"	95°01'05"	Just W of Carancahua Cut
	West	Open-water	133	29°14'25"	95°00'18"	Just E of Carancahua Cut
	Chocolate	Open-water	134	29°10'25"	95°09'05"	Wharton Camp Bayou
	Bastrop	Open-water	135	29°06'40"	95°11'05"	N corner of Bastrop Bay
	West	Open-water	136	29°12'45"	94°58'18"	1.0 mile W of Bay Harbor

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Galveston	West	Open-water	137	29°11'17"	94°59'43"	Jumbile Cove
	West	Open-water	138	29°12'47"	95°58'00"	Dana Cove
	Galveston	Open-water	139	29°20'15"	94°49'25"	Pelican Island
	Galveston	Open-water	140	29°25'00"	94°44'10"	W of Sievers Cut
	East	Open-water	141	29°28'30"	94°40'45"	1.5 miles W of Elmgrove Point
	East	Open-water	142	29°28'40"	94°40'00"	Elmgrove Point
	East	Open-water	143	29°28'35"	94°39'00"	Bob's Cut Cove
	East	Open-water	144	29°29'00"	94°36'59"	Stingaree Cut
	East	Open-water	145	29°30'00"	94°35'50"	Big Pasture Bayou
	East	Open-water	146	29°31'15"	94°35'00"	1.0 mile W of Marsh Point
	East	Open-water	147	29°31'50"	94°33'28"	1.0 mile E of Marsh Point
	East	Open-water	148	29°31'10"	94°32'23"	Frozen Point
	East	Open-water	149	29°34'20"	94°33'50"	Anahuac Bayou
	East	Open-water	150	29°34'00"	94°35'00"	Robinson Bayou

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
East Matagorda	East Matagorda	Shoreline	111	28°43'20"	95°43'25"	W of Brown Cedar Cut
	East Matagorda	Shoreline	112	28°45'25"	95°40'28"	Caney Creek
	East Matagorda	Shoreline	113	28°45'00"	95°41'25"	Boggy Bayou
	East Matagorda	Shoreline	114	28°44'10"	95°44'07"	N shore, W of Brown Cedar Cut
	Live Oak	Shoreline	115	28°44'50"	95°44'55"	Live Oak Bay
	East Matagorda	Shoreline	116	28°44'50"	95°46'59"	Mouth of Pelton Lake
	East Matagorda	Shoreline	117	28°44'10"	95°49'20"	E of Big Boggy Bayou
	East Matagorda	Shoreline	118	28°43'20"	95°50'45"	W of Big Boggy Bayou
	East Matagorda	Shoreline	119	28°43'00"	95°52'42"	E of Little Boggy Bayou
	East Matagorda	Shoreline	120	28°42'40"	95°53'45"	W of Little Boggy Bayou
	East Matagorda	Shoreline	121	28°42'15"	95°54'43"	Little Boggy Bayou
	East Matagorda	Shoreline	122	28°40'55"	95°56'38"	Egret Island
	East Matagorda	Shoreline	123	28°38'05"	95°55'37"	Burkhart Cove
	East Matagorda	Shoreline	124	28°39'10"	95°52'35"	Hog Island
	East Matagorda	Shoreline	125	28°39'25"	95°51'50"	Cleveland Bayou
	East Matagorda	Shoreline	126	28°39'50"	95°51'07"	W of Kain Cove
	East Matagorda	Shoreline	127	28°40'15"	95°50'20"	Kain Cove
	East Matagorda	Shoreline	128	28°41'15"	95°47'25"	Eidelbach Flat
	Live Oak	Open-water	131	28°44'50"	95°44'55"	Live Oak Bay
	East Matagorda	Open-water	132	28°44'50"	95°46'59"	W of Chinguapin Creek
	East Matagorda	Open-water	133	28°44'10"	95°49'20"	E of Big Boggy Bayou
	East Matagorda	Open-water	134	28°43'20"	95°50'45"	W of Big Boggy Bayou
	East Matagorda	Open-water	135	28°43'00"	95°52'40"	E of Little Boggy Bayou
	East Matagorda	Open-water	136	28°42'40"	95°53'45"	W of Little Boggy Bayou
	East Matagorda	Open-water	137	28°42'15"	95°54'43"	Little Boggy Bayou
	East Matagorda	Open-water	138	28°40'55"	95°56'38"	Egret Island
	East Matagorda	Open-water	139	28°38'05"	95°55'37"	Burkhart Cove
	East Matagorda	Open-water	140	28°39'10"	95°52'35"	Hog Island
	East Matagorda	Open-water	141	28°39'25"	95°51'50"	Cleveland Bayou
	East Matagorda	Open-water	142	28°39'50"	95°51'07"	W of Kain Cove
	East Matagorda	Open-water	143	28°41'15"	95°47'25"	Eidelbach Flat

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Matagorda	Matagorda	Shoreline	111	28°38'36"	96°18'12"	Well Point
	Turtle	Shoreline	112	28°40'36"	96°16'06"	Turtle Point
	Tres Palacios	Shoreline	113	28°42'12"	96°11'06"	Fence Post Reef
	Coon Island	Shoreline	114	28°39'12"	96°13'12"	Coon Island Bay
	Oyster Lake	Shoreline	115	28°37'24"	96°10'48"	N shore of Oyster Lake
	Oyster Lake	Shoreline	116	28°35'12"	96°11'54"	S shore of Oyster Lake
	Matagorda	Shoreline	117	28°37'42"	96°05'18"	Mad Island Reef
	Matagorda	Shoreline	118	28°38'12"	96°04'42"	Shell Island Reef
	Matagorda	Shoreline	119	28°30'36"	96°13'24"	Cotton Bayou
	Matagorda	Shoreline	120	28°29'12"	96°13"42"	Green's Bayou
	Powderhorn Lake	Shoreline	121	28°30'00"	96°30'54	Powderhorn Bayou
	Powderhorn Lake	Shoreline	122	28°28'36"	96°31'30"	N shore of Powderhorn Lake
	Lavaca	Shoreline	123	28°39'48"	96°31'30"	El Campo Club
	Swan Lake	Shoreline	124	28°44'36"	96°34'18"	Swan Lake
	Cox	Shoreline	125	28°38'18"	96°31'06"	Cox Point
	Cox	Shoreline	126	28°38'54"	96°30'36"	Huisache Cove
	Cox	Shoreline	127	28°37'24"	96°29'42"	1 mile N of Rhodes Point
	Keller	Shoreline	128	28°35'30"	96°28'24"	W shore of Keller Bay
	Keller	Shoreline	129	28°35'00"	96°28'24"	Smith Point
	Redfish Lake	Shoreline	130	28°37'30"	96°23'06"	Redfish Lake
	Turtle	Open-water	131	28°41'42"	96°15'48"	N end of Turtle Bay
	Tres Palacios	Open-water	132	28°43'54"	96°11'42"	Tawrey Reef
	Coon Island	Open-water	133	28°39'12"	96°13'43"	Coon Island
	Oyster Lake	Open-water	134	28°36'42"	96°11'46"	Rattlesnake Island
	Matagorda	Open-water	135	28°36'54"	96°06'24"	W of Mad Island Reef
	Matagorda	Open-water	136	28°38'54"	96°59'30"	Dog Island Reef
	Matagorda	Open-water	137	28°28'30"	96°14'54"	Green's Bayou
	Powderhorn Lake	Open-water	138	28"28'42"	96°31'12"	S shore of Powderhorn Lake
	Chocolate	Open-water	139	28°34'36"	96°35'42"	E pocket of Chocolate Bay

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station Type	Station number	Latitude	Longitude	Station identification
Matagorda	Lavaca	Open-water	140	28°42'30"	96°39'12"	Garcitas Cove
	Swan Lake	Open-water	141	28°44'30"	96°34'30"	Swan Lake
	Lavaca	Open-water	142	28°41'30"	96°34'48"	Catfish Cove
	Cox	Open-water	143	28°38'48"	96°30'48"	Huisache Cove
	Keller	Open-water	144	28°37'48"	96°27'12"	Olivia
	Carancahua	Open-water	145	28°44'36"	96°26'00"	N end of Carancahua Bay
	Salt Lake	Open-water	146	28°37'42"	96°24'30"	Salt Lake
	Matagorda	Open-water	147	28°33'30"	96°08'00"	Watermelon Mott
	Lavaca	Open-water	148	28°38'24"	96°33'36"	CP&L Discharge Canal
	Redfish Lake	Open-water	149	28°37'40"	96°24'18"	Redfish Lake
	Matagorda	Open-water	150	28°38'12"	96°19'42"	1 mile W of Well Point

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	Shoreline	111	28°15'42"	96°47'24"	Live Oak Point
	San Antonio	Shoreline	112	28°17°34"	96°48'32"	2 miles S of Webb Point
	San Antonio	Shoreline	113	28°19'07"	96°47'24"	Webb Point
	Guadalupe	Shoreline	114	28°25'16"	96°45'00"	Marsh Point
	San Antonio	Shoreline	115	28°21'55"	96°42'00"	Mosquito Cove
	San Antonio	Shoreline	116	28°20'44"	96°42'25"	Mosquito Point
	San Antonio	Shoreline	117	28°19'00"	96°39'00"	Grass Island
	Espiritu Santo	Shoreline	118	28°19'10"	96°37'00"	S end of Long Island
	Espiritu Santo	Shoreline	119	28°22'47"	96°31'10"	Dewberry Island
	Espiritu Santo	Shoreline	120	28°24'00"	96°28'00"	Blackberry Island
	Espiritu Santo	Shoreline	121	28°23'10"	96°27'05"	Bayucous Point
	Espiritu Santo	Shoreline	122	28°21'35"	96°27'25"	Farwell Island
	Espiritu Santo	Shoreline	123	28°21'15"	96°26'25"	Big Pocket
	Pringle Lake	Shoreline	124	28°18'15"	96°31'00"	S side of Pringle Lake
	Espiritu Santo	Shoreline	125	28°18'05"	96°32'10"	Rahal Bayou
	South Pass Lake	Shoreline	126	28°17'30"	96°35'10"	South Pass Lake
	Pat's	Shoreline	127	28°15'35"	96°37'40"	Pat's Bay
	San Antonio	Shoreline	128	28°13'02"	96°42'00"	Panther Point
	San Antonio	Shoreline	129	28°23'16"	96°42'35"	Swan Point
	San Antonio	Shoreline	130	28°10'36"	96°48'35"	S of Ayres Point
	San Antonio	Open-water	131	28°20'00"	96°47'15"	1 mile S of Hopper's Landing
	Hynes	Open-water	132	28°24'18"	96°47'50"	Swan Lake Bayou
	San Antonio	Open-water	133	28°22'13"	96°41'50"	Mosquito Cove
	San Antonio	Open-water	134	28°18'25"	96°37'30"	Steamboat Island
	Espiritu Santo	Open-water	135	28°20'25"	96°35'46"	Long Island, 2 miles S of Fulgham Cut
	Espiritu Santo	Open-water	136	28°21'45"	96°33'35"	Long Island, 1 mile N of Folgham Cut
	Espiritu Santo	Open-water	137	28°23'45"	96°29'15"	Dewberry Island
	Espiritu Santo	Open-water	138	28°22'10"	96°27'00"	Farwell Island
	Espiritu Santo	Open-water	139	28°24'50"	96°26'00"	John Day Reef
	Espiritu Santo	Open-water	140	28°19'35"	96°30'45"	Vandervere Island

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
San Antonio	San Antonio	Open-water	141	28°16'22"	96°37'50"	1 mile S of mouth of Long Lake
	San Antonio	Open-water	142	28°24'31"	96°44'15"	Parker Brothers Harbor
	San Antonio	Open-water	143	28°14'22"	96°40'00"	S lake of Twin Lakes
	San Antonio	Open-water	144	28°11'29"	96°44'20"	Cottonwood Bayou
	San Antonio	Open-water	145	28°11'38"	96°46'40"	Ayres Point

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Aransas	Copano	Shoreline	111	28°03'38"	97°13'00"	2 miles SE of Aransas River bridge
	Copano	Shoreline	112	28°02'10"	97°09'05"	Hey Camp Bend
	Copano	Shoreline	113	28°11'00"	97°00'55"	Shell Point
	Copano	Shoreline	114	28°11'49"	97°01'15"	Turtle Pen Point
	Copano	Shoreline	115	28°09'50"	97°05'48"	Lap Reef Bank
	Copano	Shoreline	116	28°06'30"	97°11'33"	2.5 miles NE of Aransas River bridge
	Copano	Shoreline	117	28°07'09"	97°03'01"	Redfish Point
	Port	Shoreline	118	28°01'10"	97°08'30"	About 0.5 mile S of E end of old bridge ruins
	Aransas	Shoreline	119	27°58'37"	97°04'06"	Turtle Bayou
	Aransas	Shoreline	120	27°55'27"	97°04'29"	Corpus Christi Bayou
	Aransas	Shoreline	121	27°56'46"	97°01'19"	Mud Island
	Aransas	Shoreline	122	27°59'40"	96°58'48"	Allyn's Lake
	Aransas	Shoreline	123	28°05'24"	96°55'58"	Jay Bird Reef
	Carlos	Shoreline	124	28°08'12"	96°54'07"	1 mile N of Carlos Dugout on E shore of Bludworth Island
	Mesquite	Shoreline	125	28°06'55"	96°49'24"	0.25 mile S of ranch house on Matagorda Island
	Mesquite	Shoreline	126	28°09'44"	96°52'37"	1 mile SW of Sundown Bay pass on S shore of Bludworth Island
	Aransas	Shoreline	127	28°07'20"	96°56'49"	Blackjack Point
	St. Charles	Shoreline	128	28°10'00"	96°56'59"	Egg Point
	Aransas	Shoreline	129	28°07'27"	96°58'53"	Goose Island
	St. Charles	Shoreline	130	28°13'00"	96°57'56"	Cavasso Creek
	Copano	Open-water	131	28°04'30"	97°12'43"	About 0.5 mile E of Aransas River bridge
	Port	Open-water	132	28°02'06"	97°07'33"	Italian Bend

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Aransas	Copano	Open-water	133	28°09'03"	97°01'51"	Newcomb Point
	Copano	Open-water	134	28°08'10"	97°03'06"	Lap Reef
	Copano	Open-water	135	28°12'03"	97°00'41"	1 mile N of Shell Point
	Copano	Open-water	136	28°06'12"	97°08'47"	Shell Bank Reef
	Copano	Open-water	137	28°04'12"	97°06'42"	Lone Tree Point
	Copano	Open-water	138	28°08'15"	97°00'48"	0.25 mile W of N end of Copano Causeway
	Port	Open-water	139	28°00'48"	97°09'21"	1.25 miles SW of S end of old bridge ruins
	Mission	Open-water	140	28°08'28"	97°07'37"	Mouth of Mission Bay
	Aransas	Open-water	141	27°57'03"	97°04'12"	Traylor Island
	Aransas	Open-water	142	27°53'51"	97°02'27"	NE side of Lydia Ann Island
	Aransas	Open-water	143	28°01'47"	97°01'26"	Nine Mile Point
	Aransas	Open-water	144	27°56'22"	97°00'00"	SE tip of Mud Island
	Aransas	Open-water	145	28°02'48"	96°56'48"	S of Long Reef
	Aransas	Open-water	146	28°05'24"	96°55'54"	Jay Bird Reef
	Aransas	Open-water	147	28°06'11"	97°01'05"	Live Oak Point
	Aransas	Open-water	148	28°05'13"	97°00'18"	Half Moon Reef
	Mesquite	Open-water	149	28°09'38"	96°49'42"	NW of Ayres Dugout
	St. Charles	Open-water	150	28°14'57"	96°56'12"	Mouth of Salt Creek

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Corpus Christi	Nueces	Shoreline	111	27°52'28"	97°22'38"	Just W of mouth of clay pits
	Nueces	Shoreline	112	27°52'29"	97°23'38"	Just W of easterly powerlines
	Nueces	Shoreline	113	27°51'10"	97°30'00"	0.5 mile W of Nueces River mouth along S shoreline
	Nueces	Shoreline	114	27°49'32"	97°24'53"	Avery Point
	Corpus Christi	Shoreline	115	27°45'45"	97°22'42"	Between end of Cole Park and first house of Ocean Drive
	Corpus Christi	Shoreline	116	27°42'24"	97°17'33"	0.75 mile E of Oso Bay bridge and 0.75 mile W from Naval Air Station
	Corpus Christi	Shoreline	117	27°41'34"	97°11'26"	0.25 mile S of Water Exchange Pass on Mustang Island
	Corpus Christi	Shoreline	118	27°43'55"	97°10'00"	1.0 mile S of Wilson's Cut
	Corpus Christi	Shoreline	119	27°46'03"	97°09'45"	On N side of easterly tip of Shamrock Island
	Corpus Christi	Shoreline	120	27°45'10"	97°08'17"	0.25 mile from green cabin in Shamrock Cove
	Corpus Christi	Shoreline	121	27°46'40"	97°07'47"	2.75 miles due S of Point of Mustang
	Redfish	Shoreline	122	27°54'10"	97°05'55"	N side of Hog Island
	Redfish	Shoreline	123	27°50'15"	97°10'00"	S side of Dagger Island
	Redfish	Shoreline	124	27°52'12"	97°06'37"	Harbor Island
	Corpus Christi	Shoreline	125	27°49'05"	97°09'25"	Near ICWW Marker 22
	Corpus Christi	Shoreline	126	27°49'20"	97°13'00"	Between beach club and seawall at McGloin's Bluff

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Corpus Christi	Corpus Christi	Shoreline	127	27°50'51"	97°14'09"	Welder Point
	Corpus Christi	Shoreline	128	27°52'02"	97°15'57"	N end of La Quinta spoil island
	Corpus Christi	Shoreline	129	27°52'40"	97°17'23"	About 3 miles due E of Portland
	Corpus Christi	Shoreline	130	27°51'22"	97°20'50"	About 0.5 mile NW of Indian Point Fishing Pier
	Corpus Christi	Open-water	131	27°52'04"	97°21'02"	About 1.5 miles NW of Gunderland's
	Nueces	Open-water	132	27°51'55"	97°24'42"	About 1 mile E of westerly power lines
	Nueces	Open-water	133	27°51'00"	97°28'46"	About 0.75 mile E of Nueces River mouth and 1 mile S of White Point
	Nueces	Open-water	134	27°50'00"	97°27'00"	About 3 miles SE from Nueces River mouth
	Corpus Christi	Open-water	135	27°50'00"	97°23'37"	On E side of S end of Nueces Bay Causeway
	Corpus Christi	Open-water	136	27°48'20"	97°23'09"	1 mile N of boat ramp at S "L"-head on E side of spoil island
	Corpus Christi	Open-water	137	27°46'02"	97°21"34"	Alta Vista Reef
	Corpus Christi	Open-water	138	27°43'05"	97°19'32"	Texas A & I University
	Corpus Christi	Open-water	139	27°41'29"	97°14"13"	About 0.75 mile from ICWW Marker 3
	Corpus Christi	Open-water	140	27°45'56"	97°09'43"	Off NE tip of Shamrock Island
	Corpus Christi	Open-water	141	27°48'25"	97°07'20"	About 0.75 mile SE of Point of Mustang
	Corpus Christi	Open-water	142	27°52'49"	97°07'31"	Cumming's Cut
	Redfish	Open-water	143	27°54'28"	97°04'49"	Hog Island

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Corpus Christi	Redfish	Open-water	144	27°50'26"	97°10'14"	About 0.25 mile due E of ICWW Marker 59
	Corpus Christi	Open-water	145	27°15'13"	97°13'33"	Ingleside Cove
	Corpus Christi	Open-water	146	27°49'32"	97°13'47"	Ingleside Point
	Corpus Christi	Open-water	147	27°50'15"	97°14'47"	Long Reef
	Corpus Christi	Open-water	148	27°50'36"	97°20'52"	About 0.5 mile SE of Indian Point pier
	Corpus Christi	Open-water	149	27°51'45"	97°19'35"	About 0.5 mile NE of Indian Point pier
	Corpus Christi	Open-water	150	27°50'00"	97°07'52"	About 0.5 mile N of Point of Mustang

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Laguna Madre	Upper Laguna Madre	Shoreline	111	27°34'20"	97°15'26"	2.4 miles W of Bob Hall Pier
	Upper Laguna Madre	Shoreline	112	27°34'05"	97°19'04"	2.8 miles SSE of CP&L Co. Barney Davis Generating Station
	Upper Laguna Madre	Shoreline	113	27°29'50"	97°20'55"	2.5 miles W of South Bird Island
	Cayo del Grullo	Shoreline	114	27°19'42"	97°39'30"	1.6 miles ENE of Kleberg County Kaufer Park
	Baffin	Shoreline	115	27°18'20"	97°39'26"	1.3 miles NNE of Riviera Beach
	Laguna Salada	Shoreline	116	27°16'10"	97°41'20"	1.4 miles ESE of Williamson's boat dock
	Upper Laguna Madre	Shoreline	117	27°26'27"	97°19'40"	3.8 miles SSW of South Bird Island
	Upper Laguna Madre	Shoreline	118	27°21'45"	97°21'50"	W of ICWW Marker 89
	Upper Laguna Madre	Shoreline	119	27°19'45"	97°24'22"	Point of Rocks
	Upper Laguna Madre	Shoreline	120	27°10'08"	97°25'52"	E of ICWW Marker 175
	Baffin	Shoreline	121	27°17'05"	97°37'00"	Kleberg Point
	Baffin	Shoreline	122	27°17'40"	97°29'10"	1.2 miles NE of East Kleberg Point
	Baffin	Shoreline	123	27°15'50"	97°38'20"	2.2 miles SW of Kleberg Point
	Laguna Salada	Shoreline	124	27°16'27"	97°43'00"	0.5 mile SW of Williamson's boat dock
	Upper Laguna Madre	Shoreline	125	27°39'30"	97°11'55"	0.7 mile NNW of Corpus Christi Pass Bridge on Mustang Island
	Upper Laguna Madre	Shoreline	126	27°38'00"	97°15'40"	2.6 miles NE of Pita Island
	Baffin	Shoreline	127	27°18'15"	97°28'00"	4.0 miles NW of Penascal Point

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Laguna Madre	Laguna Salada	Shoreline	128	27°14'30"	97°35'00"	3.5 miles SSE of Kleberg Point
	Baffin	Shoreline	129	27°14'20"	97°30'15"	2.5 miles S of East Kleberg Point
	Upper Laguna Madre	Shoreline	130	27°08'30"	97°26'35"	0.1 mile E of ICWW Flasher 18F
	Upper Laguna Madre	Open-water	131	27°34'30"	97°18'22"	2.0 miles SW of Pita Island
	Upper Laguna Madre	Open-water	132	27°33'33"	97°16'10"	3.2 miles SSE of Pita Island
	Upper Laguna Madre	Open-water	133	27°32'50"	97°19'45"	0.4 mile NE of American Petrofina docks
	Cayo del Grullo	Open-water	134	27°20'37"	97°40'08"	1.7 miles ENE of Loyola Beach
	Laguna Salada	Open-water	135	27°16'16"	97°40'20"	1.2 miles SW of Kleberg County Riviera Beach Pier
	Laguna Salada	Open-water	136	27°16'30"	97°41'48"	2.2 miles WSW of Kleberg County Riviera Beach Pier
	Upper Laguna Madre	Open-water	137	27°27'50"	97°21'28"	3.5 miles WSW of South Bird Island
	Upper Laguna Madre	Open-water	138	27°23'18"	97°22'35"	0.5 mile NW of ICWW Flasher 83
	Upper Laguna Madre	Open-water	139	27°11'04"	97°23'30"	1.4 miles SSW of Yarborough Boat Dock
	Upper Laguna Madre	Open-water	140	27°09'54"	97°26'28"	0.4 mile WSW of ICWW Flasher 175
	Alazan	Open-water	141	27°17'40"	97°32'40"	0.3 mile N of Starvation Point
	Alazan	Open-water	142	27°19'00"	97°33'40"	2.0 miles NNW of Starvation Point

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station Number	Latitude	Longitude	Station identification
Laguna Madre	Alazan	Open-water	143	27°20'10"	97°29'30"	4.5 miles NNE of East Kleberg Point
	Alazan	Open-water	144	27°21'25"	97°30'45"	6.0 miles N of East Kleberg Point
	Upper Laguna Madre	Open-water	145	27°15'30"	97°25'15"	Penascal Point
	Upper Laguna Madre	Open-water	146	27°21'20"	97°22'00"	0.8 mile ESE of ICWW Flasher 89
	Upper Laguna Madre	Open-water	147	27°39'35"	97°12'10"	1.0 mile NW of Corpus Christi Pass Bridge
	Laguna Salada	Open-water	148	27°15'57"	97°42'45"	0.8 mile SSW of Williamson's Boat Dock
	Baffin	Open-water	149	27°14'00"	97°32'00"	3.2 miles SSW of East Kleberg Point
	Upper Laguna Madre	Open-water	150	27°40'25"	97°15'35"	1.4 miles SSW of Demit Island

Appendix Table 1. (Cont'd.)

Bay system	Bay	Station type	Station number	Latitude	Longitude	Station identification
Laguna Madre	Lower Laguna Madre	Shoreline	111	26°44'00"	97°28'10"	ICWW Marker 241
	Lower Laguna Madre	Shoreline	112	26°42'30"	97°28'00"	ICWW Marker 245
	Lower Laguna Madre	Shoreline	113	26°40'40"	97°27'30"	ICWW Marker 253
	Lower Laguna Madre	Shoreline	114	26°39'10"	97°27'10"	ICWW Marker 260
	Lower Laguna Madre	Shoreline	115	26°38'15"	97°26'45"	ICWW Marker 265
	Lower Laguna Madre	Shoreline	116	26°31'40"	97°25'11"	ICWW Marker 289
	Lower Laguna Madre	Shoreline	117	26°30'15"	97°24'20"	ICWW Marker 293A
	Lower Laguna Madre	Shoreline	118	26°29'50"	97°23'30"	ICWW Marker 297
	Lower Laguna Madre	Shoreline	119	26°23'20"	97°19'30"	W side of Green Island
	Lower Laguna Madre	Shoreline	120	26°17'10"	97°17'20"	E side of Three Islands
	Lower Laguna Madre	Shoreline	121	26°17'50"	97°18'00"	Three Islands, W of Marker 31
	Lower Laguna Madre	Open-water	131	26°40'00"	97°25'00"	E of ICWW Marker 259
	Lower Laguna Madre	Open-water	132	26°38'50"	97°24'20"	E of ICWW Marker 263A
	Lower Laguna Madre	Open-water	133	26°39'40"	97°27'10"	W of ICWW Marker 257A
	Lower Laguna Madre	Open-water	134	26°37'20"	97°26'20"	W of ICWW Marker 267
	Lower Laguna Madre	Open-water	135	26°35'10"	97°25'40"	W of ICWW Marker 275
	Lower Laguna Madre	Open-water	136	26°31'45"	97°24'40"	W of ICWW Marker 289
	Lower Laguna Madre	Open-water	137	26°31'00"	97°24'30"	W of ICWW Marker 291A
	Lower Laguna Madre	Open-water	138	26°23'20"	97°19'50"	E of ICWW Marker 321A
	Lower Laguna Madre	Open-water	139	26°18'10"	97°16'50"	E of Three Islands, ICWW Marker 31
	Lower Laguna Madre	Open-water	140	26°17'30"	97°16'10"	E of Three Islands, ICWW Marker 39

Appendix B. List of 732-m trammel net stations sampled each month.

Table 1. List of 732-m trammel net stations sampled in each bay system during October-November 1976 and April-May 1977.

Bay system	Date	Station type	Station number	Striking method
Galveston	10-5-76	Shoreline	114	Rotenone
	10-4-76	"	116	$KMnO_4$
	10-9-76	"	111	Noise
	10-12-76	"	117 (West Bay)	$KMnO_4$
	10-9-76	Open-water	132	Rotenone
	10-4-76	"	138	$KMnO_4$
	10-9-76	"	131	Noise
	10-12-76	"	135 (West Bay)	$KMnO_4$
	11-1-76	Shoreline	122	Rotenone
	11-1-76	"	116	$KMnO_4$
	11-2-76	"	111	Noise
	11-8-76	"	122 (East Bay)	Rotenone
	11-2-76	Open-water	139	Rotenone
	11-1-76	"	136	$KMnO_4$
	11-2-76	"	131	Noise
	11-8-76	"	146 (East Bay)	Rotenone
	4-11-77	Shoreline	120 (West Bay)	Rotenone
	4-5-77	"	119	"
	4-7-77	"	111	"
	4-7-77	"	113	Noise
	4-11-77	Open-water	138 (West Bay)	Rotenone
	4-4-77	"	143	"
	4-7-77	"	132	"
	4-4-77	"	142	Noise
	5-2-77	Shoreline	116	Rotenone
	5-3-77	"	111	"
	5-11-77	"	125 (East Bay)	Noise
	5-3-77	"	113	"
	5-3-77	Open-water	132	Rotenone
	5-4-77	"	144	"
	5-11-77	"	145	Noise
	5-4-77	"	145 (East Bay)	"
East Matagorda	10-13-76	Shoreline	127	Rotenone
	10-14-76	"	118	Noise
	10-13-76	Open-water	140	Rotenone
	10-13-76	"	136	Noise
	11-9-76	Shoreline	113	$KMnO_4$
	11-10-76	"	115	Noise
	11-9-76	Open-water	134	Noise
	11-9-76	"	136	$KMnO_4$
	4-12-77	Shoreline	123	Rotenone
	4-12-77	"	124	Noise
	4-12-77	Open-water	140	Rotenone
	4-12-77	"	141	Noise

Table 1. (Cont'd.)

Bay system	Date	Station type	Station number	Striking method
East Matagorda (cont'd.)	5-12-77	Shoreline	112	Rotenone
	5-12-77	"	114	"
	5-12-77	Open-water	141	"
	5-12-77	"	143	"
Matagorda	10-21-76	Shoreline	117	Rotenone
	10-21-76	"	118	$KMnO_4$
	10-18-76	"	127	Noise
	10-18-76	Open-water	148	Rotenone
	10-19-76	"	149	$KMnO_4$
	10-20-76	"	142	Noise
	11-15-76	Shoreline	121	Rotenone
	11-15-76	"	126	$KMnO_4$
	11-16-76	"	123	Noise
	11-15-76	Open-water	142	Rotenone
	11-17-76	"	136	$KMnO_4$
	11-17-76	"	135	Noise
	4-18-77	Shoreline	116	Rotenone
	4-19-77	"	124	"
	4-18-77	"	130	Noise
	4-18-77	Open-water	146	Rotenone
	4-19-77	"	142	"
	4-19-77	"	131	Noise
	5-16-77	Shoreline	121	Rotenone
	5-17-77	"	124	"
	5-18-77	"	129	Noise
	5-17-77	Open-water	142	Rotenone
	5-19-77	"	149	"
	5-19-77	"	146	Noise
San Antonio	10-25-76	Shoreline	118	Rotenone
	10-26-76	"	122	$KMnO_4$
	10-25-76	"	116	Noise
	10-25-76	Open-water	133	Rotenone
	10-27-76	"	134	$KMnO_4$
	10-29-76	"	139	Noise
	11-22-76	Shoreline	115	Rotenone
	11-22-76	"	116	$KMnO_4$
	11-23-76	"	127	Noise
	11-23-76	Open-water	139	Rotenone
	11-23-76	"	138	$KMnO_4$
	11-24-76	"	144	Noise
	4-27-77	Shoreline	115	Rotenone
	4-25-77	"	122	"
	4-26-77	"	130	Noise
	4-25-77	Open-water	139	Rotenone
	4-26-77	"	145	"
	4-25-77	"	138	Noise
	5-23-77	Shoreline	124	Rotenone

Table 1. (Cont'd.)

Bay system	Date	Station type	Station number	Striking method
San Antonio (cont'd.)	5-24-77	Shoreline	130	Rotenone
	5-24-77	"	115	Noise
	5-24-77	Open-water	145	Rotenone
	5-23-77	"	138	"
	5-23-77	"	140	Noise
Aransas	10-25-76	Shoreline	127	Rotenone
	10-27-76	"	118	$KMnO_4$
	10-25-76	"	113	Noise
	10-26-76	Open-water	147	Rotenone
	10-26-76	"	146	$KMnO_4$
	10-27-76	"	132	Noise
	11-22-76	Shoreline	129	Rotenone
	11-22-76	"	113	$KMnO_4$
	11-23-76	"	117	Noise
	11-23-76	Open-water	131	Rotenone
	11-22-76	"	135	$KMnO_4$
	11-23-76	"	150	Noise
	4-25-77	Shoreline	119	Rotenone
	4-25-77	"	127	"
	4-25-77	"	115	Noise
	4-25-77	Open-water	133	Rotenone
	4-26-77	"	145	"
	4-26-77	"	143	Noise
	5-23-77	Shoreline	119	Rotenone
	5-24-77	"	111	"
	5-24-77	"	128	Noise
	5-24-77	Open-water	147	Rotenone
	5-24-77	"	135	"
	5-23-77	"	131	Noise
Corpus Christi	10-18-76	Shoreline	115	Rotenone
	10-21-76	"	111	$KMnO_4$
	10-19-76	"	122	Noise
	10-21-76	Open-water	133	Rotenone
	10-19-76	"	139	$KMnO_4$
	10-18-76	"	136	Noise
	11-15-76	Shoreline	126	Rotenone
	11-15-76	"	120	$KMnO_4$
	11-18-76	"	116	Noise
	11-18-76	Open-water	131	Noise
	11-18-76	"	132	Rotenone
	11-16-76	"	145	$KMnO_4$
	4-19-77	Shoreline	125	Rotenone
	4-19-77	"	127	"
	4-19-77	"	122	Noise
	4-18-77	Open-water	131	Rotenone

Table 1. (Cont'd.)

Bay system	Date	Station type	Station number	Striking method
Corpus Christi (cont'd.)	4-18-77	Open-water	134	Rotenone
	4-18-77	"	139	Noise
	5-19-77	Shoreline	121	Rotenone
	5-16-77	"	122	"
	5-19-77	"	114	Noise
	5-16-77	Open-water	144	Rotenone
	5-20-77	"	145	"
	5-19-77	"	131	Noise
Upper Laguna Madre	10-14-76	Shoreline	115	Rotenone
	10-13-76	"	116	$KMnO_4$
	10-12-76	"	112	Noise
	10-14-76	Open-water	136	Rotenone
	10-12-76	"	132	$KMnO_4$
	10-12-76	"	133	Noise
	11-10-76	Shoreline	117	Rotenone
	11-9-76	"	111	$KMnO_4$
	11-9-76	"	124	Noise
	11-10-76	Open-water	146	Rotenone
	11-10-76	"	139	$KMnO_4$
	11-9-76	"	149	Noise
	4-12-77	Shoreline	123	Rotenone
	4-13-77	"	117	"
	4-11-77	"	116	Noise
	4-11-77	Open-water	135	Rotenone
	4-13-77	"	132	"
	4-12-77	"	148	Noise
	5-9-77	Shoreline	123	Rotenone
	5-9-77	"	116	"
	5-11-77	"	113	Noise
	5-10-77	Open-water	144	Rotenone
	5-11-77	"	150	"
	5-10-77	"	142	Noise
Lower Laguna Madre	10-5-76	Shoreline	119	Rotenone
	10-6-76	"	116	$KMnO_4$
	10-7-76	"	114	Noise
	10-7-76	Open-water	131	Rotenone
	10-7-76	"	132	$KMnO_4$
	10-5-76	"	138	Noise
	11-2-76	Shoreline	118	Rotenone
	11-3-76	"	111	$KMnO_4$
	11-3-76	"	114	Noise
	11-2-76	Open-water	136	Rotenone
	11-2-76	"	137	$KMnO_4$
	11-3-76	"	131	Noise
	4-5-77	Shoreline	114	Rotenone

Table 1. (Cont'd.)

Bay system	Date	Station type	Station number	Striking method
Lower Laguna Madre (cont'd.)	4-5-77	Shoreline	115	Rotenone
	4-4-77	"	120	Noise
	4-5-77	Open-water	136	Rotenone
	4-6-77	"	135	"
	4-6-77	"	131	Noise
	5-3-77	Shoreline	111	Rotenone
	5-3-77	"	113	"
	5-3-77	"	114	Noise
	5-4-77	Open-water	137	Rotenone
	5-4-77	"	136	"
	5-2-77	"	138	Noise

Appendix C. Summary of hydrological data.

Table 1. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the Galveston Bay system during October-November 1976 and April-May 1977. (Stations in East and West Bays denoted with an asterisk.)

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
138	10-04-76	0845	2	2	0.9-0.9	36	24.0	13.3	8.0	2	1
116	10-04-76	1225	2	2	0.0-0.7	65	26.0	8.9	9.0	3,4	1
114	10-05-76	1145	2	2	0.0-0.5	71	24.0	6.7	8.0	4	3
111	10-09-76	0635	2	1	0.0-0.6	24	13.0	15.5	11.0	2,3	1
132	10-09-76	1134	3	1	0.6-0.8	24	18.0	15.5	11.0	2	1
131	10-09-76	1030	2	1	1.0-1.0	24	17.0	15.5	11.0	2,3	1
135*	10-12-76	0930	3	2	0.7-1.1	54	21.0	24.4	7.0	2,3	1
117*	10-12-76	0715	3	2	0.0-1.0	51	21.0	24.4	6.0	2,3	1
116	11-01-76	0950	2	1	0.0-0.7	49	15.5	4.4	12.0	4	1
136	11-01-76	1115	2	1	0.5-0.7	44	15.0	6.7	11.0	4	1
122	11-01-76	1335	3	1	0.0-0.8	20	17.0	5.6	13.0	4	2
139	11-02-76	0930	2	1	0.5-1.2	24	14.5	15.4	9.0	2,4	1
111	11-02-76	1117	2	1	0.0-0.8	36	16.0	16.1	9.0	3,4	1
131	11-02-76	1318	3	1	0.7-1.1	44	16.0	16.1	10.0	3,4	1
146*	11-08-76	1305	3	3	0.9-1.1	64	16.0	12.2	9.0	1,2	1
122*	11-08-76	1512	3	2	0.0-0.9	59	16.5	13.3	9.0	1,2,3,4	1
143	04-04-77	1000	2	3	0.5-1.3	32	19.0	2.8	6.0	2	1
142	04-04-77	1125	2	3	0.9-1.4	77	20.5	1.1	5.0	2	1
119	04-05-77	1325	2	1	0.0-019	32	25.0	15.5	9.0	2	1
111	04-07-77	0825	3	1	0.0-0.7	24	19.5	15.5	9.0	2,3,4	1
132	04-07-77	1125	3	2	0.7-1.3	30	20.5	16.7	11.0	2,4	1
113	04-07-77	1245	3	2	0.1-0.7	24	21.5	17.8	11.0	1,3,4	1
120*	04-11-77	0645	2	3	0.0-0.9	88	21.0	25.5	7.0	2	1
138*	04-11-77	0815	2	3	0.7-1.1	86	22.0	25.0	9.0	2	1
116	05-02-77	0945	3	1	0.3-1.4	30	25.0	1.1	6.0	1,4	1

Table 1. (Cont'd.)

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
113	05-03-77	1210	2	2	0.0-1.3	26	26.0	14.4	10.0	1,2,4	1
132	05-03-77	0920	2	1	0.6-1.0	24	26.0	12.2	8.0	2,4	1
111	05-03-77	0715	2	1	0.0-1.2	36	22.5	11.1	7.0	1,3,4	1
145	05-04-77	1105	2	2	0.6-1.1	32	25.0	4.4	11.0	1	1
144	05-04-77	0730	3	3	0.8-1.0	36	24.0	2.2	10.0	1	1
125*	05-11-77	0645	3	2	0.0-1.1	104	24.0	13.3	5.0	1,2,3	1
145*	05-11-77	1045	3	2	0.7-1.1	68	24.0	12.2	8.0	1,2,3	1

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 2. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the East Matagorda Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
127	10-13-76	0900	3	2	0.0-0.7	30	22.0	21.1	8.0	2,3	1
140	10-13-76	1150	3	2	0.6-0.9	39	23.0	17.8	7.0	2,3	1
136	10-13-76	1330	2	3	0.5-0.7	75	24.0	17.8	8.0	1	1
118	10-14-76	0800	3	1	0.0-0.8	47	20.0	17.8	7.0	2	1
113	11-09-76	1405	3	2	0.0-0.6	49	20.0	14.4	10.0	1,3	3
115	11-10-76	0700	1	1	0.0-0.6	90	19.0	16.7	8.0	1,2,3	1
134	11-09-76	1055	3	1	1.0-1.2	30	17.0	16.7	9.0	1,2	1
136	11-09-76	0910	3	1	1.0-1.0	24	12.0	15.5	10.0	1,3	1
123	04-12-77	1300	3	3	0.0-0.8	54	25.0	18.3	8.0	1,2,3	1
124	04-12-77	0730	2	2	0.0-1.0	51	21.0	19.4	7.0	1,2	1
140	04-12-77	0930	2	2	0.3-0.8	51	21.0	19.4	7.0	1,2	1
141	04-12-77	1120	2	3	0.6-0.6	26	22.5	18.9	9.0	2,3	1
112	05-12-77	0655	3	1	0.0-0.8	30	22.0	18.9	7.0	1,3	1
114	05-12-77	0915	3	1	0.0-1.0	30	24.0	17.8	8.0	3,4	1
141	05-12-77	1415	3	3	0.8-1.0	49	27.0	17.8	6.0	1,2,3	1
143	05-12-77	1300	3	3	0.7-0.8	26	24.0	18.9	8.0	2	1

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 3. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the Matagorda Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
127	10-18-76	1139	2	2	0.0-1.1	24	20.0	20.0	9.0	1,3	1
148	10-18-76	0750	2	2	0.6-1.2	24	18.5	23.0	9.0	1	1
149	10-19-76	0646	1	1	1.2-1.4	24	20.0	20.0	8.0	1,2	2
142	10-20-76	0747	2	2	0.6-0.6	30	12.0	4.0	10.0	1,3	1
117	10-21-76	1235	2	2	0.0-0.6	100	18.0	20.0	10.0	1,3	1
118	10-21-76	0715	2	1	0.0-0.6	24	12.5	18.0	9.0	1,3	1
142	11-15-76	1545	2	3	0.9-0.9	50	13.0	12.0	11.0	1,3	1
121	11-15-76	0835	2	2	0.1-1.0	45	7.0	20.0	10.0	1,2,3	1
126	11-15-76	1250	3	3	0.1-1.0	24	12.0	19.0	11.0	1,3	1
123	11-16-76	1530	2	1	0.0-1.2	24	10.0	25.0	11.0	2,3	1
135	11-17-76	1230	2	3	0.6-1.0	40	11.0	18.0	11.0	1	1
136	11-17-76	0910	2	3	0.6-0.6	24	8.0	20.0	10.0	1,3	1
116	04-18-77	1530	2	2	0.1-0.8	40	20.0	18.0	9.0	1,3	1
130	04-18-77	1130	3	1	0.2-1.0	24	24.0	23.0	9.0	2	2
146	04-18-77	0900	3	1	1.0-1.0	25	27.0	23.0	10.0	1,2	3
131	04-19-77	0624	3	2	1.0-1.2	30	23.5	20.0	9.0	1	1
124	04-19-77	0915	2	2	0.6-1.2	50	23.0	5.0	8.0	1,4	1
142	04-19-77	1145	2	3	0.6-0.6	180	24.0	2.0	8.0	1,3	1
121	05-16-77	0950	3	3	0.1-0.9	50	26.0	20.0	10.0	2,3,4	1
142	05-17-77	0535	3	3	0.5-1.2	50	25.0	6.0	8.0	1,3	1
124	05-17-77	0714	3	3	0.2-1.3	25	25.0	4.0	8.0	1,4	1
129	05-18-77	0623	3	3	0.2-1.3	40	25.0	17.9	8.0	2,3,4	1
146	05-19-77	0830	3	3	1.0-1.3	45	26.0	18.0	10.0	1,4	2
149	05-19-77	0600	3	3	1.2-1.3	24	25.0	19.0	9.0	2,4	2

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 4. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the San Antonio Bay system during October-November 1976 and April-May 1977. (ND = No data.)

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
133	10-25-76	0800	2	1	0.8-1.2	24	20.0	8.0	9.0	2	1
116	10-25-76	1030	2	2	0.0-1.2	24	20.0	7.0	11.0	1,2,3	1
118	10-25-76	1345	2	2	0.0-1.2	24	20.0	22.0	10.0	2,3	1
122	10-26-76	0820	2	2	0.0-0.8	24	16.5	27.0	7.0	2,3	3
134	10-27-76	0830	2	3	0.6-1.0	105	18.5	24.0	8.0	1,2,3	1
139	10-29-76	0800	ND	1	0.6-1.0	80	ND	30.0	9.0	1,3	1
115	11-22-76	1000	2	2	0.0-0.8	24	12.5	10.0	9.0	1,2,4	1
116	11-22-76	1250	2	2	0.0-1.0	60	14.0	5.0	10.0	2,3	1
127	11-23-76	0825	3	2	0.0-1.2	24	12.5	27.0	8.0	2,3	2
138	11-23-76	1130	3	2	0.8-1.0	24	13.5	25.0	9.0	2,3	2
139	11-23-76	1330	3	2	0.6-1.3	24	13.5	30.0	8.0	2	1
144	11-24-76	0730	3	1	0.8-1.0	24	13.5	7.0	8.0	2	1
139	04-25-77	0635	2	1	0.5-1.3	24	22.0	24.4	8.0	1	1
138	04-25-77	1130	2	2	0.8-1.1	24	24.0	21.0	8.0	1,2,3	2
122	04-25-77	1230	2	2	0.0-0.8	24	24.0	18.8	10.0	2,3	3
130	04-26-77	0700	3	2	0.0-0.8	24	21.5	12.2	8.0	1	2
145	04-26-77	0915	3	2	0.9-1.2	24	22.0	11.6	6.0	2	1
115	04-27-77	0615	2	2	0.0-0.8	75	22.0	1.7	8.0	1,4	1
115	05-24-77	1330	3	2	0.0-1.1	25	27.5	2.2	7.0	1,4	1
145	05-24-77	0826	3	2	0.7-1.1	45	26.0	2.2	7.0	1,2,3	1
130	05-24-77	0700	3	2	0.4-0.7	24	25.0	2.2	7.0	1,2	2
140	05-23-77	1125	2	2	0.8-1.2	24	26.0	11.1	7.0	2	ND
124	05-23-77	0955	2	2	0.0-0.7	24	26.0	11.1	7.0	1,2	3
138	05-23-77	0625	2	2	0.6-0.8	24	24.5	16.0	6.0	1	3

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 5. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the Aransas Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
113	10-25-76	0700	1	1	0.0-1.6	24	20.0	8.0	8.0	1,2	3
127	10-25-76	1120	2	2	0.0-1.2	62	20.0	10.0	10.0	2	2
146	10-26-76	0645	3	2	0.8-1.1	34	18.5	12.0	9.0	3	1
147	10-26-76	1015	2	2	0.6-1.6	24	19.5	11.0	9.0	2,3	2
132	10-27-76	0645	3	3	0.6-1.1	24	20.0	8.0	9.0	1,3	1
118	10-27-76	0755	3	3	0.0-0.8	24	20.0	8.0	7.0	1,2	4
129	11-22-76	0715	2	1	0.0-1.0	24	12.0	6.0	11.0	2,3	2
135	11-22-76	1205	2	2	0.9-1.3	51	14.0	5.0	11.0	2	4
113	11-22-76	1545	2	2	0.0-0.8	44	14.0	5.0	10.0	1,2,3	3
131	11-23-76	0730	2	2	0.8-1.5	250	13.0	1.0	10.0	1,2,3	2
150	11-23-76	1110	1	2	0.8-1.2	34	13.0	4.0	11.0	1,2	4
117	11-23-76	1330	3	1	0.0-1.2	24	13.0	6.0	11.0	2,3	2
143	04-26-77	0855	3	2	0.8-1.4	25	26.5	10.0	8.0	2	1
145	04-26-77	0700	3	2	0.8-1.7	25	24.0	13.0	8.0	1,3	2
119	04-25-77	1440	2	2	0.0-1.0	48	26.0	12.0	10.0	2	3
133	04-25-77	0845	3	2	1.0-1.2	57	22.5	8.0	8.0	1,2,3	2
115	04-25-77	0645	2	1	0.0-1.6	34	21.5	7.0	8.0	1,2	1
127	04-25-77	1145	2	2	0.0-0.6	30	24.0	9.0	9.0	2	1
119	05-23-77	1100	3	2	0.0-0.8	34	26.0	10.0	8.0	1,2	2
111	05-23-77	0745	3	2	0.0-1.0	92	24.5	5.0	8.0	1,2,4	3
131	05-23-77	0630	3	2	0.8-2.0	98	24.0	2.0	7.0	1	2
147	05-24-77	0630	3	3	1.0-1.4	113	25.0	4.0	7.0	2,3	2
135	05-24-77	0930	3	2	1.0-1.7	24	26.0	4.0	7.0	2,3	2
128	05-24-77	1150	3	2	0.0-1.0	37	26.0	2.0	8.0	2	3

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 6. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the Corpus Christi Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
115	10-18-76	0850	3	2	0.0-1.1	24	20.0	20.0	9.0	1,2	1
136	10-18-76	1250	1	2	0.8-1.4	24	22.0	17.0	10.0	2,3	1
139	10-19-76	0800	2	1	0.8-1.7	24	21.0	28.0	8.0	2,3	3
133	10-21-76	0658	1	2	1.2-1.5	54	15.5	1.0	9.0	1	1
111	10-21-76	1100	2	2	0.0-1.4	110	19.5	14.0	8.0	1	1
122	10-19-76	1205	2	1	0.0-1.4	24	22.0	18.0	9.0	1,3	4
126	11-15-76	0730	3	1	0.0-1.5	24	12.5	22.0	10.0	1,2	3
120	11-15-76	1330	1	2	0.0-0.8	24	12.0	25.0	11.0	1,2	4
145	11-16-76	0715	1	1	0.4-0.8	24	10.0	22.0	10.0	1,2	2
132	11-18-76	0845	2	1	1.4-1.5	60	10.0	1.0	11.0	1	1
131	11-18-76	1030	2	1	0.8-0.8	42	10.0	2.0	11.0	1,2	1
116	11-18-76	1210	2	2	0.0-1.2	38	10.0	14.0	10.0	2	1
139	04-18-77	0735	2	1	1.0-2.0	28	22.5	26.0	9.0	2	2
131	04-18-77	1340	1	2	0.6-1.1	45	24.0	23.0	9.0	1	2
134	04-18-77	1010	3	1	1.0-1.2	26	23.0	20.0	9.0	1,2	1
125	04-19-77	0625	2	2	0.0-2.4	35	23.0	28.0	8.0	2	2
122	04-19-77	1155	1	2	0.0-1.4	38	24.5	18.0	8.0	1,2,3	2
127	04-19-77	0900	3	2	0.0-1.6	24	23.5	27.0	8.0	1,2	1
122	05-16-77	0615	3	2	0.0-1.8	24	24.5	17.0	8.0	2,3	3
144	05-16-77	0945	3	3	0.8-1.2	50	25.0	22.0	9.0	1,3	4
121	05-19-77	0615	1	2	0.0-1.6	30	25.0	23.0	8.0	2	1
114	05-19-77	0935	3	1	0.0-1.2	90	25.5	5.0	8.0	1,2	2
131	05-19-77	1215	3	2	0.9-1.2	80	27.5	8.0	10.0	1	2
145	05-20-77	0745	1	2	0.8-1.4	33	25.5	22.0	8.0	1,2	2

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 7. Summary of hydrological data collected at the water surface at each 732-m trammel net station sampled in the upper Laguna Madre system during October-November 1976 and April-May 1977. (ND = No data.)

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
112	10-12-76	0715	2	1	0.0-1.0	24	22.0	32.8	5.5	1,2,3	4
133	10-12-76	1040	2	1	0.8-1.1	24	22.0	32.8	6.5	1,2,3	3
132	10-12-76	1215	2	2	0.8-1.0	24	23.0	31.6	8.0	1,2,3	3
116	10-13-76	0730	2	1	0.0-1.2	120	21.5	21.1	7.0	1,2,4	2
115	10-14-76	0700	2	1	0.0-1.0	72	21.0	18.3	6.0	1,2,4	2
136	10-14-76	1245	1	2	0.6-1.1	24	24.5	20.5	8.0	1,2,3	3
124	11-09-76	0710	3	1	0.0-0.8	24	19.0	18.9	ND	2	3
149	11-09-76	0940	3	1	0.4-0.8	24	19.5	21.7	ND	2	3
111	11-09-76	1640	3	2	0.1-0.8	24	23.0	26.1	7.0	1,2,3	3
139	11-10-76	0945	3	1	0.7-1.2	24	21.0	29.4	7.0	1,2,3	3
146	11-10-76	1300	2	1	0.4-1.2	24	23.0	27.2	4.0	2	2
117	11-10-76	1430	2	1	0.0-0.9	24	24.5	28.9	ND	2	3
116	04-11-77	1330	3	3	0.0-1.1	81	24.0	16.7	7.0	1,2	2
135	04-11-77	1010	3	3	0.5-1.2	35	22.0	16.7	8.0	1,2	2
123	04-12-77	0700	2	2	0.0-1.2	81	21.5	17.8	7.0	2	2
148	04-12-77	0910	2	3	0.5-0.8	110	22.0	17.2	9.0	1	2
132	04-13-77	1000	2	2	0.6-0.8	24	23.5	28.9	6.0	1,2	4
117	04-13-77	0630	2	2	0.0-1.0	40	22.0	22.2	6.0	1	2
123	05-09-77	1100	2	2	0.0-1.1	32	25.5	17.8	8.0	2	2
116	05-09-77	1308	2	1	0.0-1.0	27	27.5	18.9	7.0	2	2
142	05-10-77	0630	3	1	0.8-0.9	36	25.9	18.9	8.0	1,2	3
144	05-10-77	0850	3	1	0.7-0.9	82	25.5	16.7	7.0	1,2,3	1
113	05-11-77	0630	3	2	0.0-1.0	24	25.5	22.2	6.5	1,2,3	3
150	05-11-77	1015	3	1	0.7-1.2	24	24.5	22.2	6.0	1,2,3	3

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Table 8. Summary of hydrological data collected at the water surface at each 732-m trammel net stations sampled in the lower Laguna Madre system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Tide[a]	Sea condition[b]	Water depth range (m)	Turbidity[c] (JTU)	Water temperature (°C)	Salinity (o/oo)	Dissolved oxygen (ppm)	Bottom type[d]	Vegetation[e]
119	10-05-76	0800	3	2	0.0-1.0	50	24.0	32.0	8.0	1	3
138	10-05-76	1245	2	3	0.8-1.0	55	23.0	32.0	8.0	1	3
116	10-06-76	1000	2	3	0.0-0.5	60	21.5	18.0	7.0	1	2
132	10-07-76	0730	3	1	0.8-1.0	30	21.5	28.0	10.0	2	3
131	10-07-76	1000	3	1	0.7-0.9	28	22.0	28.0	9.0	2	3
114	10-07-76	1300	2	1	0.0-0.5	30	22.0	22.0	8.0	1,2	4
137	11-02-76	0915	2	2	1.0-1.0	28	17.5	24.0	8.0	1	2
136	11-02-76	1045	2	2	0.8-1.0	34	18.0	27.0	7.0	1	2
118	11-02-76	1300	2	2	0.0-1.0	42	18.0	27.0	8.0	1	2
111	11-03-76	0745	2	1	0.0-0.8	28	16.5	28.0	8.0	1,2	3
131	11-03-76	1000	2	1	1.0-1.0	35	17.0	28.0	10.0	1,2	3
114	11-03-76	1215	2	1	0.0-0.6	42	19.0	25.0	7.0	1,2	3
120	04-04-77	1445	2	3	0.0-0.6	65	23.0	31.0	7.5	1	3
136	04-05-77	1115	2	2	0.7-1.2	38	20.0	27.0	7.0	1	1
114	04-05-77	0730	1	2	0.0-1.1	24	18.0	25.0	6.0	2	3
115	04-05-77	0935	2	2	0.0-1.1	24	19.0	26.0	6.5	1,2	3
135	04-06-77	0835	3	1	0.7-1.2	24	20.0	25.0	7.0	1,2	2
131	04-06-77	0700	3	1	0.8-1.2	24	19.0	30.0	6.5	2	3
138	05-02-77	1240	3	3	0.8-1.0	40	27.0	31.0	7.0	1	4
111	05-03-77	0620	3	3	0.0-1.1	30	24.5	23.0	8.0	1,2	3
113	05-03-77	1000	3	3	0.0-1.0	28	26.0	22.0	7.5	1,2	3
114	05-03-77	1205	3	3	0.0-0.9	32	26.5	22.0	8.0	1,2	3
136	05-04-77	0630	2	3	0.8-1.1	46	24.0	29.0	6.0	1	2
137	05-04-77	0845	2	3	0.7-1.0	45	26.0	30.0	7.0	1	2

[a] 1 = Slack; 2 = Ebb; 3 = Flood.
[b] 1 = Calm; 2 = Choppy; 3 = Rough.
[c] Turbidities < 25 JTU are recorded as 24.
[d] 1 = Mud; 2 = Sand; 3 = Shell; 4 = Clay.
[e] 1 = None; 2 = Sparse; 3 = Moderate; 4 = Dense.

Appendix D. Summary of meteorological data.

Table 1. Summary of meteorological data associated with each 732-m trammel net sample collected in the Galveston Bay system during October-November 1976 and April-May 1977. (Stations in East and West Bays denoted with an asterisk.)

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
138	10-04-87	0845	24	S	1	3	2	26.5	759
116	10-04-76	1225	32	S	1	3	2	28.0	759
114	10-05-76	1145	24	W	1	3	2	23.5	760
111	10-09-76	0635	8	SW	1	3	2	10.0	767
132	10-09-76	1134	5	SE	1	3	2	17.5	766
131	10-09-76	1030	8	SW	1	3	2	17.0	767
135*	10-12-76	0930	16	S	3	3	2	20.0	767
117*	10-12-76	0715	8	E	4	3	2	19.0	766
116	11-01-76	0950	13	E	1	3	2	15.0	770
136	11-01-76	1115	13	NE	1	3	2	15.0	770
122	11-01-76	1335	2	N	1	3	2	16.5	769
139	11-02-76	0930	5	NE	1	3	2	14.5	771
111	11-02-76	1117	2	NE	1	3	2	15.0	771
131	11-02-76	1318	2	NE	1	3	2	15.0	769
146*	11-08-76	1305	24	E	1	3	2	13.0	772
122*	11-08-76	1512	16	E	1	3	2	14.0	771
143	04-04-77	1000	24	NW	6	3	2	16.5	762
142	04-04-77	1125	40	NW	1	3	2	20.0	763
119	04-05-77	1325	8	N	1	3	2	19.0	764
111	04-07-77	0825	5	W	1	3	2	22.0	772
132	04-07-77	1125	21	SE	1	3	2	24.5	773
113	04-07-77	1245	23	SE	1	3	2	25.0	773
120*	04-11-77	0645	32	SE	1	3	2	21.0	769
138*	04-11-77	0815	32	SE	1	3	2	21.0	770

Table 1. (Cont'd.)

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
116	05-02-77	0945	5	S	6	3	2	26.5	763
113	05-03-77	1210	16	SE	4	3	2	28.5	764
132	05-03-77	0920	13	E	6	3	2	26.0	764
111	05-03-77	0715	8	E	6	3	2	23.0	763
145	05-04-77	1105	29	SE	4	3	2	26.0	762
144	05-04-77	0730	31	SE	2	3	2	24.5	761
125*	05-11-77	0645	24	E	5	3	2	21.0	760
145*	05-11-77	1045	19	E	5	3	2	22.0	761

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 2. Summary of meteorological data associated with each 732-m trammel net sample collected in the East Matagorda Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
127	10-13-76	0900	16	N	5	3	2	22.0	767
140	10-13-76	1150	16	E	6	3	1	23.0	767
136	10-13-76	1330	24	E	6	3	2	23.0	766
118	10-14-76	0800	0		1	3	2	19.0	764
113	11-09-76	1405	8	SE	1	3	2	21.5	765
115	11-10-76	0700	0		6	1	2	19.0	765
134	11-09-76	1055	8	SE	1	3	2	19.5	767
136	11-09-76	0910	0		1	3	2	19.0	768
123	04-12-77	1300	40	SE	5	3	2	23.5	768
124	04-12-77	0730	24	SE	6	3	2	21.0	769
140	04-12-77	0930	24	SE	6	3	2	21.0	769
141	04-12-77	1120	40	SE	1	3	2	24.0	769
112	05-12-77	0655	8	NE	1	3	2	21.0	763
114	05-12-77	0915	16	E	1	3	2	28.0	764
141	05-12-77	1415	32	E	1	3	2	24.0	764
143	05-12-77	1300	32	SE	1	3	2	27.0	764

[a]Direction the wind was blowing from.
[b]1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c]1 = Slight; 2 = Heavy; 3 = None.
[d]1 = Yes; 2 = No.

Table 3. Summary of meteorological data associated with each 732-m trammel net sample collected in the Matagorda Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (^{o}C)	Barometric pressure (mm Hg)
127	10-18-76	1139	19	E	1	3	2	22.0	767
148	10-18-76	0750	19	NE	1	3	2	15.5	766
149	10-19-76	0646	13	NE	4	3	2	18.5	765
142	10-20-76	0747	19	N	1	3	2	8.0	771
117	10-21-76	1235	16	E	4	3	2	12.5	768
118	10-21-76	0715	13	N	4	3	2	9.0	770
142	11-15-76	1545	24	NE	3	3	2	12.0	765
121	11-15-76	0835	23	NE	1	3	2	7.0	765
126	11-15-76	1250	24	NE	3	3	2	19.0	765
123	11-16-76	1530	16	N	6	1	2	9.5	767
135	11-17-76	1230	29	N	5	1	2	11.0	768
136	11-17-76	0910	24	N	5	3	2	8.0	768
116	04-18-77	1530	16	SE	3	3	2	25.0	759
130	04-18-77	1130	13	S	3	3	2	24.0	762
146	04-18-77	0900	13	S	6	3	2	28.0	762
131	04-19-77	0624	16	SE	6	3	2	22.0	761
124	04-19-77	0915	19	SE	6	3	2	24.0	761
142	04-19-77	1145	24	SE	6	3	2	25.0	759
121	05-16-77	0950	40	SE	3	3	2	29.0	765
142	05-17-77	0535	40	SE	4	3	2	24.0	766
124	05-17-77	0714	40	SE	4	3	2	26.0	766
129	05-18-77	0623	40	SE	6	3	2	25.0	763
146	05-19-77	0830	32	SE	5	3	2	26.5	763
149	05-19-77	0600	32	SE	6	3	2	25.0	762

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 4. Summary of meteorological data associated with each 732-m trammel net sample collected in the San Antonio Bay system during October-November 1976 and April-May 1977. (ND = No data.)

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
133	10-25-76	0800	19	NW	2	3	2	19.5	ND
116	10-25-76	1030	24	N	2	3	2	18.5	ND
118	10-25-76	1345	19	N	2	3	2	25.0	ND
122	10-26-76	0820	19	NE	2	3	2	17.0	ND
134	10-27-76	0830	48	NE	6	3	2	7.2	ND
139	10-29-76	0800	6	W	6	1	2	14.0	ND
115	11-22-76	1000	29	NE	1	3	2	16.5	ND
116	11-22-76	1250	29	NE	1	3	2	18.0	ND
127	11-23-76	0825	13	E	6	3	2	13.0	ND
138	11-23-76	1130	13	E	6	3	2	13.5	ND
139	11-23-76	1330	13	E	6	3	2	16.0	ND
144	11-24-76	0730	8	NE	6	1	1	13.5	ND
139	04-25-77	0635	8	NW	1	3	2	18.0	766
138	04-25-77	1130	29	NE	1	3	2	23.0	766
122	04-25-77	1230	24	NE	1	3	2	29.5	766
130	04-26-77	0700	19	E	1	3	2	19.0	765
145	04-26-77	0915	19	E	1	3	2	23.0	765
115	04-27-77	0615	19	SW	1	3	2	19.0	765
115	05-24-77	1330	40	SE	1	3	2	27.0	763
145	05-24-77	0826	24	SE	5	3	2	26.5	763
130	05-24-77	0700	35	SE	5	1	2	25.0	763
140	05-23-77	1125	32	SE	6	3	2	31.0	763
124	05-23-77	0955	32	SE	6	3	2	27.0	763
138	05-23-77	0625	24	SE	6	3	2	24.5	763

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 5. Summary of meteorological data associated with each 732-m trammel net sample collected in the Aransas Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
113	10-25-76	0700	13	N	6	3	2	18.0	760
127	10-25-76	1120	24	N	6	3	2	18.0	760
146	10-26-76	0645	19	N	2	3	2	15.0	762
147	10-26-76	1015	16	NE	6	3	2	17.0	762
132	10-27-76	0645	40	NE	6	2	2	19.5	761
118	10-27-76	0755	32	NE	6	2	2	19.5	761
129	11-22-76	0715	14	NE	1	3	2	7.5	769
135	11-22-76	1205	32	NE	1	3	2	13.5	769
113	11-22-76	1545	29	NE	1	3	2	12.0	769
131	11-23-76	0730	24	NE	6	3	2	13.0	769
150	11-23-76	1110	24	NE	6	3	2	13.0	769
117	11-23-76	1330	16	E	6	3	2	15.0	768
143	04-26-77	0855	19	E	1	3	2	23.0	763
145	04-26-77	0700	13	NE	1	3	2	20.0	763
119	04-25-77	1440	19	N	1	3	2	28.0	766
133	04-25-77	0845	26	NE	1	3	2	20.5	766
115	04-25-77	0645	13	NW	1	3	2	18.0	766
127	04-25-77	1145	24	N	1	3	2	27.0	766
119	05-23-77	1100	29	SE	3	3	2	28.0	760
111	05-23-77	0745	19	SE	3	3	2	25.0	760
131	05-23-77	0630	16	SE	4	3	2	24.0	760
147	05-24-77	0630	19	SE	3	3	2	25.0	760
135	05-24-77	0930	29	SE	5	3	2	25.0	761
128	05-24-77	1150	24	SE	6	1	2	25.0	761

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 6. Summary of meteorological data associated with each 732-m trammel net sample collected in the Corpus Christi Bay system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
115	10-18-76	0850	13	NE	1	3	2	19.0	765
136	10-18-76	1250	19	E	3	3	2	24.0	762
139	10-19-76	0800	0		6	3	2	22.0	761
133	10-21-76	0658	11	NE	2	3	2	11.0	769
111	10-21-76	1100	16	NE	6	3	2	17.5	769
122	10-19-76	1205	3	N	6	3	2	27.0	761
126	11-15-76	0730	13	N	3	3	1	15.5	763
120	11-15-76	1330	19	NE	1	3	2	19.5	763
145	11-16-76	0715	19	NE	6	3	2	6.0	766
132	11-18-76	0845	13	N	6	1	2	10.0	766
131	11-18-76	1030	13	N	6	1	2	10.5	766
116	11-18-76	1210	10	N	6	2	2	10.0	766
139	04-18-77	0735	6	SE	5	3	2	22.5	755
131	04-18-77	1340	24	E	5	3	2	26.5	755
134	04-18-77	1010	10	N	3	3	2	28.0	755
125	04-19-77	0625	16	SE	5	3	2	23.0	759
122	04-19-77	1155	19	SE	6	3	2	27.0	759
127	04-19-77	0900	24	SE	6	3	2	24.5	759
122	05-16-77	0615	35	SE	4	3	2	25.0	763
144	05-16-77	0945	45	SE	3	3	2	25.0	763
121	05-19-77	0615	26	SE	4	3	2	25.5	761
114	05-19-77	0935	29	SE	5	3	2	27.5	761
131	05-19-77	1215	32	SE	6	3	2	29.0	761
145	05-20-77	0745	29	SE	5	3	2	26.5	760

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 7. Summary of meteorological data associated with each 732-m trammel net sample collected in the upper Laguna Madre system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
112	10-12-76	0715	5	W	4	3	2	19.5	765
133	10-12-76	1040	13	SE	2	3	2	20.0	765
132	10-12-76	1215	19	SE	3	3	2	22.0	764
116	10-13-76	0730	5	NE	5	3	2	21.0	766
115	10-14-76	0700	10	NE	1	3	1	20.0	763
136	10-14-76	1245	16	SE	2	3	2	25.5	761
124	11-09-76	0710	6	NW	2	3	1	15.5	767
149	11-09-76	0940	16	SE	2	3	2	22.0	767
111	11-09-76	1640	29	SE	5	3	2	20.5	764
139	11-10-76	0945	8	SE	3	3	2	22.0	764
146	11-10-76	1300	16	SE	3	3	2	25.0	762
117	11-10-76	1430	16	SE	2	3	2	25.5	761
116	04-11-77	1330	43	SE	4	3	2	26.0	767
135	04-11-77	1010	40	SE	4	3	2	23.5	768
123	04-12-77	0700	19	SE	4	3	2	21.5	767
148	04-12-77	0910	47	SE	4	3	2	22.0	767
132	04-13-77	1000	29	SE	4	3	2	23.0	765
117	04-13-77	0630	21	E	6	3	2	24.5	764
123	05-09-77	1100	19	NE	4	3	2	25.0	758
116	05-09-77	1308	13	E	3	3	2	29.0	758
142	05-10-77	0630	16	NE	6	3	2	23.5	758
144	05-10-77	0850	19	N	5	3	2	25.5	758
113	05-11-77	0630	19	E	6	3	2	24.0	758
150	05-11-77	1015	19	NE	6	1	2	25.0	760

[a] Direction the wind was blowing from.
[b] 1 = 0-9%; 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c] 1 = Slight; 2 = Heavy; 3 = None.
[d] 1 = Yes; 2 = No.

Table 8. Summary of meteorological data associated with each 732-m trammel net sample collected in the lower Laguna Madre system during October-November 1976 and April-May 1977.

Station number	Date	Time (CST)	Wind speed (km/h)	Wind direction[a]	Cloud cover[b]	Precipitation[c]	Fog[d]	Air temperature (°C)	Barometric pressure (mm Hg)
119	10-05-76	0800	26	SE	6	1	2	23.0	758
138	10-05-76	1245	29	SE	5	3	2	23.0	763
116	10-06-76	1000	29	NE	2	3	2	19.5	764
132	10-07-76	0730	13	SE	2	3	2	21.0	761
131	10-07-76	1000	13	NE	2	3	2	22.5	761
114	10-07-76	1300	13	SE	2	3	2	24.0	761
137	11-02-76	0915	19	NE	1	3	2	18.0	761
136	11-02-76	1045	19	NE	1	3	2	19.5	761
118	11-02-76	1300	16	NE	1	3	2	19.5	761
111	11-03-76	0745	13	NE	1	3	2	13.5	762
131	11-03-76	1000	16	NE	1	3	2	16.0	762
114	11-03-76	1215	13	NE	1	3	2	22.0	762
120	04-04-77	1445	48	NE	1	3	2	18.5	762
136	04-05-77	1145	24	NE	1	3	2	15.0	770
114	04-05-77	0730	21	NE	1	3	2	10.0	770
115	04-05-77	0935	26	NW	1	3	2	15.0	770
135	04-06-77	0835	8	SE	1	3	2	19.0	770
131	04-06-77	0700	5	E	1	3	2	16.0	770
138	05-02-77	1240	39	SE	6	3	2	26.5	761
111	05-03-77	0620	26	SE	4	3	2	23.0	761
113	05-03-77	1000	32	SE	5	3	2	26.0	761
114	05-03-77	1205	40	SE	3	3	2	28.0	761
136	05-04-77	0630	29	SE	5	3	2	23.0	762
137	05-04-77	0845	40	SE	4	3	2	24.0	762

[a]Direction the wind was blowing from.
[b]1 = 0-9%, 2 = 10-25%; 3 = 26-50%; 4 = 51-75%; 5 = 76-90%; 6 = 91-100%.
[c]1 = Slight; 2 = Heavy; 3 = None.
[d]1 = Yes; 2 = No.

PWD 3000-129
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