

TRENDS IN RELATIVE ABUNDANCE AND SIZE OF SELECTED FINFISHES
AND SHELLFISHES ALONG THE TEXAS COAST:
NOVEMBER 1975-DECEMBER 2003

by

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TABLE OF CONTENTS

	PAGE
LIST OF TABLES.....	ii
LIST OF FIGURES	iii
LIST OF APPENDICES.....	v
ACKNOWLEDGEMENTS.....	vi
ABSTRACT.....	vii
INTRODUCTION	1
MATERIALS AND METHODS.....	1
RESULTS	3
Gill Net	3
Bay Bag Seine	5
Bay Trawl	6
Gulf Trawl	7
Oyster Dredge.....	7
Hydrologic Data	8
OVERVIEW	8
LITERATURE CITED.....	9
TABLES	10
FIGURES	62
APPENDICES	77

LIST OF TABLES

	PAGE
Table 1. Mean catch rates (No./h) and mean total lengths (mm) of selected fishes and blue crab caught with gill nets (all meshes combined) by bay system during spring 1976-2003.....	10
Table 2. Mean catch rates (No./h) and mean total lengths (mm) of selected fishes and blue crab caught with gill nets (all meshes combined) by bay system during fall 1975-2003.	19
Table 3. Annual mean catch rate (No./ha) and mean total lengths (mm) of selected fishes and shellfishes caught with 18.3-m bag seines by bay system during 1977-2003.....	28
Table 4. Annual mean catch rates (No./h) and mean total lengths (mm) of select fishes and shellfishes caught with 6.1-m trawls in Texas bay systems during 1982-2003	39
Table 5. Annual mean catch rates (No./h) and mean total lengths (mm) of select fishes and shellfishes caught with 6.1-m trawls in the Texas Territorial Sea during 1985-2003	49
Table 6. Annual mean catch rates (No./h) and mean total lengths (mm) by size class of Eastern oyster caught with 46.0-cm wide dredges on “reef” stations in Texas bay systems during 1984-2003.....	59

LIST OF FIGURES

	PAGE
Figure 1.	Texas gulf shoreline and Texas Territorial Sea (TTS)62
Figure 2.	Spring gill net mean catch rates (No./h \pm 1SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1976-2003.63
Figure 3.	Fall gill net mean catch rates (No./h \pm 1SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1975-2003.64
Figure 4.	Spring gill net mean total lengths (mm \pm 1SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1976-2003.65
Figure 5.	Fall gill net mean total lengths (mm \pm 1SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1975-2003.66
Figure 6.	Seasonal bag seine mean catch rates (No./ha) for juvenile red drum (Nov-Mar), black drum (Jun-Jul), spotted seatrout (Jul-Nov) and Atlantic croaker (Feb-May) during 1978-2003. Red drum 35-75 mm spotted seatrout 20-75 mm, black drum 35-110 mm and Atlantic croaker 30-85 mm are considered to be young-of-the-year.....67
Figure 7.	Seasonal bag seine mean total lengths (mm \pm 1SE) for juvenile red drum (Nov-Mar), black drum (Jun-Jul), spotted seatrout (Jul-Nov) and Atlantic croaker (Feb-May) during 1978-2003. Red drum 35-75 mm, spotted seatrout 20-75 mm, black drum 35-110 mm and Atlantic croaker 30-85 mm are considered to be young-of-the-year.....68
Figure 8.	Seasonal bag seine mean catch rates (No./ha) for juvenile brown shrimp (Apr-Jul), white shrimp (Jul-Nov) and blue crab (Mar-Jun) during 1978-2003. Brown and white shrimp 33-82 mm and blue crab 13-42 mm are considered young-of-the-year.....69
Figure 9.	Seasonal bag seine mean total lengths (mm \pm 1SE) for brown shrimp (Apr-Jul), white shrimp (Jul-Nov) and blue crab (Mar-Jun) during 1978-2003. Brown and white shrimp 33-82 mm and blue crab 13-42 mm are considered to be young-of-the-year.....70
Figure 10.	Annual bay trawl catch rates (No./h \pm 1SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1982-2003.71
Figure 11.	Annual bay trawl mean total lengths (mm \pm 1SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1982-2003.72

List of Figures Continued,

Figure 12.	Annual gulf trawl mean catch rates (No./h \pm 1SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1985-2003.	73
Figure 13.	Annual gulf trawl mean total lengths (mm \pm 1SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1985-2003.	74
Figure 14.	Annual mean oyster dredge catch rates (No./h) for Eastern oyster spat (≤ 25 mm), small oysters (26-75 mm) and market oysters (≥ 76 mm) during 1984-2003.	75
Figure 15.	Annual mean oyster dredge total lengths (mm) for small and market Eastern oysters during 1984-2003.	76

LIST OF APPENDICES

	PAGE
Appendix A. Summary of historical sampling dates, gear description, procedures, dates, number of samples collected, weighting factors, and list of species collected.	77
Appendix B. Summary of hydrological data collected for gill net, bay bag seine, oyster dredge and bay and gulf trawl samples	107
Appendix C. Summary of SEAMAP samples by year and depth zone for brown shrimp, white shrimp, pink shrimp and blue crab collected off Texas during 1985-2003	124

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ABSTRACT

Graphic and linear regression analyses were conducted for coastwide annual mean catch rates and mean lengths for all years where information was available. Coastwide spring and fall gill net catch rates and mean length for the total of finfish species sampled increased from the fall of 1975 to the fall of 2003. Red drum, spotted seatrout, and black drum catch rates show a tendency to increase during both seasons. Sheepshead, southern flounder and blue crab gill net catch rates decreased in spring and fall. Atlantic croaker catch rate increased during fall seasons but decreased for spring. Coastwide gill net mean length increased for red drum, black drum, sheepshead, southern flounder, and blue crab in spring and fall, and decreased for spotted seatrout and Atlantic croaker during both seasons.

Coastwide seasonal bag seine catch rates from 1978 to 2003 show a tendency to increase for black drum and brown shrimp while red drum, spotted seatrout, Atlantic croaker, white shrimp and blue crab catch rates tend to decrease. Bag seine mean lengths increased slightly for spotted seatrout and white shrimp, and decreased for red drum, Atlantic croaker, brown shrimp and blue crab. The mean length for black drum caught in bag seines varied over the years, but has a tendency to remain constant.

Coastwide annual bay trawl catch rates from 1982 to 2003 increased for the total of finfish species sampled, Atlantic croaker, brown shrimp and pink shrimp, and decreased for white shrimp and blue crab. Bay trawl mean lengths increased for Atlantic croaker, black drum and red drum, but decreased for total finfish, spotted seatrout and all species of shellfish sampled (brown shrimp, pink shrimp, white shrimp, and blue crab).

Coastwide annual Gulf trawl catch rates from 1985 to 2003 increased for the total of finfish species sampled, Atlantic croaker, pink shrimp and white shrimp, and decreased for brown shrimp and blue crab. Gulf trawl mean lengths decreased for finfish including Atlantic croaker and also decreased for all species of shellfish sampled (brown shrimp, pink shrimp, white shrimp, and blue crab).

Coastwide annual catch rates for eastern oyster spat, small oyster and market oyster increased from 1982 to 2003. Mean length also increased in small and market oyster (length not recorded for spat oyster). Data collected were used to make resource and harvest management decisions.

INTRODUCTION

Fishery independent monitoring data are used to determine relative abundance and size of finfishes and shellfishes in Texas coastal waters to assist in managing and allocating harvest of marine resources in Texas jurisdictional waters. To obtain these data, Texas Parks and Wildlife Department (TPWD) has used various gears systematically in Texas estuaries and the Gulf of Mexico since 1975 (Appendix A, Tables A.1-5). TPWD initiated a standardized fishery independent monitoring program in 1975 using gill nets, in 1977 using bag seines, in 1982 using trawls in bays, in 1984 using oyster dredges on bay oyster reefs and in 1985 using trawls in the Gulf to monitor and assess relative trends in abundance and size of finfishes and shellfishes. Gill nets set during spring (April-June) and fall (September-November), and monthly bag seine, trawl and oyster dredge samples provide a statistically consistent and cost efficient method for obtaining population trend information on juvenile, sub-adult, and adult finfish and shellfish.

The objectives of the present study were to:

1. monitor trends in species composition, size and relative abundance of selected finfishes and shellfishes in Texas coastal bay systems and in the Gulf off Texas.
2. publish the results in a report which will assist resource managers to effectively manage finfishes and shellfishes.

Differences in the information in this report compared to previous reports are due to updating the data base. The present report should be considered the most accurate to date.

MATERIALS AND METHODS

Bag seines, trawls and monofilament gill nets (Appendix A) were used in each of the nine major Texas bay systems: Sabine Lake, Galveston, East Matagorda, Matagorda, San Antonio, Aransas, Corpus Christi, upper Laguna Madre and lower Laguna Madre. Trawls, identical to those used in the bays, were used in five Gulf areas of the Texas Territorial Sea (TTS) ≤ 16.7 km from shore: 24.1 km either side of each of the Sabine Pass jetties (Sabine), Galveston jetties (Galveston), Matagorda jetties (Port O'Connor), Aransas Pass jetties (Port Aransas), and 48.2 km north from the Texas-Mexico border (Port Isabel) (Figure 1). Oyster dredges (Appendix A) were used in the Galveston, Matagorda, San Antonio and Aransas bay systems.

Gill net and bag seines sites were randomly selected from grids (1 minute latitude by 1 minute longitude) that contained ≥ 15.2 m of shoreline. Each selected grid was subdivided into 144 5-second "gridlets". All "gridlets" that contained ≥ 15.2 m of shoreline were used to randomly choose sample sites.

Gill net sets were conducted overnight during each spring and fall season (Appendix A). The spring season began with the 2nd full week in April and extended for 10 full weeks. The fall season began with the 2nd full week in September and extended for 10 full weeks. Between three and five nets (with four different mesh sizes) were set each week in each bay, except in East

Matagorda Bay where only two overnight sets were made during each week. Each sampling week extended from 1 h before sunset on Sunday through 4 h after sunrise the following Sunday. Gill nets were set perpendicular to shore with the smallest mesh shoreward. Nets were set within 1 h before sunset and were retrieved within 4 h after the following sunrise. Total fishing time was recorded (nearest 0.1 h).

One half of the monthly bag seine samples were collected during each of two periods (1-15 and 16-31) of the month (Appendix A). Bag seines were pulled parallel to the shoreline for 15.2 m. The surface area sampled (nearest 0.01 ha) was estimated using distance pulled and length of extension of the bag seine. No grid was sampled more than once in a month.

Trawls were used in bays which were stratified into two zones: Zone 1 (upper bay nearest mouths of rivers) and Zone 2 (lower bay farthest from rivers). Trawl sites in Zones 1 and 2 were randomly selected from bay grids (1 minute latitude by 1 minute longitude) that contained water ≥ 1 m deep in at least 1/3 of the grid and which were known to be free of obstructions. One half of the monthly trawl samples in each zone in each bay system were collected during each of two periods (1-15 and 16-31) of the month (Appendix A). In East Matagorda Bay all water was designated as Zone 1; in each of Sabine Lake, upper and lower Laguna Madre all water was designated as Zone 2. In Zones 1 and 2, trawls were towed in a circular motion near the center of each grid. All trawl tows within bays were 10 minutes in duration. No grid was duplicated in a month.

Gulf trawl sites in each area were randomly selected from grids (1 minute latitude by 1 minute longitude) in the TTS (Figure 1) that contained water ≥ 1.8 m deep in at least 1/3 of the grid and which were known to be free of obstructions. One half of the samples in each area were collected during each of two periods (1-15 and 16-31) of the month (Appendix A). Trawls were towed linearly, parallel to the fathom curve; direction of tow (north or south) was randomly chosen for the initial tow and alternated on subsequent tows. All tows were 10 minutes in duration. No grid was duplicated in a month.

Trawls were used during daylight in the Gulf off Sabine Pass, Galveston, Port O'Connor, Port Aransas, and Port Isabel during June and November 1998-1999 in conjunction with the Southeast Area Monitoring and Assessment Program (SEAMAP). Detailed descriptions of the gear, sample stations, and sample procedures are reported by Rester, et al. (2001).

In each major oyster producing bay (Galveston bay, Matagorda bay, San Antonio bay and Aransas bay) oyster reef areas were mapped for defined reefs. Criteria for defined reefs were Eastern oysters reefs that had ≥ 0.2 m higher than adjacent bottom for a continuous distance of ≥ 91.4 m long and 0.4 m wide. Oyster dredge sites were randomly selected from bay grids containing defined oyster reefs. Each selected grid was divided into 144 5-second "gridlets". All gridlets that contained defined oyster reefs were used to randomly choose sample sites. One half of the oyster samples were collected during each of the two periods (1-15 and 16-31) of the month (Appendix A). Dredges were pulled linearly for 30 seconds. Stations were not duplicated within a month.

Sample catch rates for each species were calculated by dividing total number captured by either total hours fished (gill net, trawl, and oyster dredge) or ha sampled (bag seine). Catch rates for each bay system were then calculated by year or season. Bay specific catch rates were weighted for coastwide estimates (Table A.7). Fish greater than 204 mm long were eliminated from bag seine catch rate calculations based on the findings of McEachron and Green (1986). Live Eastern oysters were grouped into spat (5-25 mm), small oysters (26-75 mm), and market oysters (≥ 76 mm).

Lengths [total (TL) or standard (SL)] of organisms caught were recorded. In gill nets, up to 19 individuals of each species were measured, within each mesh size, on each sampling day. In trawls, up to 50 shrimp (length from tip of rostrum to tip of telson) of each species (brown, white, pink), 35 blue crabs (carapace width between spine tips) and 19 individuals of all other species were measured in each sample. For all other gears, up to 19 specimens were measured for each species in each sample collected.

Mean TL of individual species in gill nets were calculated for each of the four mesh sizes. Mean lengths for the combined meshes were calculated by weighting individual species mean lengths in each mesh by the number of each species caught in each mesh. For all other gears, mean lengths of individual species were calculated from individuals measured in each sample. Coastwide total mean lengths for each species in all gears were weighted according to the catch rate in each bay system, and by bay specific and gear specific weighting factors used for coastwide catch rates.

Surface salinity (ppt), water temperature ($^{\circ}\text{C}$) and turbidity [Nephelometric Units (NTU)] were measured at the set and pickup for each gill net and prior to each bag seine sample. Bottom salinity, water temperature, and turbidity were measured prior to each trawl and oyster dredge sample.

Graphic and linear regression analyses were performed to detect a general trend in coastwide annual catch rates, from the year that sampling begun with each fishing gear, until the end of 2003. For each individual species a graphic was constructed (catch rate vs. years) and a linear regression trend line was added to determine the tendency to increase or decrease over the years. The coefficient of determination (R^2) was also included to indicate the total variation (expressed as percentage) in catch rate that can be accounted for by the regression equation. Generally R^2 values of 0.7 or above are considered to have a good fit or represent a good model.

RESULTS

Gill Net

Coastwide spring red drum (*Sciaenops ocellatus*) catch rate increased ($R^2 = 0.382$), the lowest catch rates (0.3/h) were recorded from 1977 to 1979 and the highest catch rate on record (1.4/h) occurred in 1996 (Table 1; Figure 2). Spring mean length increased ($R^2 = 0.485$) with a minimum of 418 mm TL in 1980 and a maximum of 515 mm TL in 1990 (Table 1; Figure 4).

Coastwide fall red drum catch rates increased too ($R^2 = 0.267$), the lowest catch rates (0.5/h) occurred in 1982 and 1983, and the highest (1.1/h) in 1997 and 2002 (Table 2; Figure 3). Fall mean length increased ($R^2 = 0.588$) from a low value of 373 mm TL in 1975 to 504 mm TL in 2000 (Table 2; Figure 5).

Coastwide spring spotted seatrout (Cynoscion nebulosus) catch rates show a tendency to increase ($R^2 = 0.229$). The lowest catch rate (0.3/h) was recorded in 1979 and 1984, and the highest catch rate (1.1/h) in 1976 (Table 1; Figure 2). Coastwide mean length shows a slight trend to decrease ($R^2 = 0.0268$), the highest value (495 mm TL) was reported in 1979 and the lowest (422 mm TL) in 1977 (Table 1; Figure 4).

Coastwide fall spotted seatrout catch rates have increased ($R^2 = 0.043$) over the years (Table 2; Figure 3). The highest fall coastwide spotted seatrout catch rate (0.7/h) occurred in 1976, while the lowest catch rate of 0.2/h was recorded in 1979 (0.2/h). Mean length shows a slight tendency to decrease ($R^2 = 0.036$), the lowest recorded mean length (428 mm TL) was in 1975 and the highest (467 mm TL) in 1990 (Table 2; Figure 5).

Coastwide spring black drum (Pogonias cromis) catch rate increased considerably ($R^2 = 0.628$). The lowest spring coastwide black drum catch rate (0.3/h) occurred in 1978 and the highest in 2001 (1.7/h) (Table 1; Figure 2). Mean length increased ($R^2 = 0.34$) from 366 mm TL in 1976 to 406 mm TL in 2003 (Table 1; Figure 4).

Coastwide fall black drum catch rate also increased ($R^2 = 0.476$) (Table 2; Figure 3). The lowest fall coastwide black drum catch rates (0.3/h) occurred in 1979 and 1984 and the highest (1.6/h) in 1993. Mean length increased ($R^2 = 0.381$) from a low of 352 mm TL in 1980 to 438 mm TL in 1995 and 1996, the mean length for 2003 was 419 mm TL (Table 2; Figure 5).

Spring coastwide sheepshead (Archosargus probatocephalus) catch rates show a slight decrease ($R^2 = 0.155$); the maximum mean catch rate value (0.3/h) was in 1976 and the minimum (0.04/h) occurred in 1991 and 1994 (Table 1). Sheepshead spring mean lengths increased ($R^2 = 0.743$), the minimum mean length of 311 mm TL was recorded in 1977 and the maximum of 402 mm TL in 1996 (Table 1).

Fall sheepshead catch rates show a similar decrease ($R^2 = 0.352$), the maximum mean catch rate was 0.31/h in 1975 and minimum rates of 0.04/h were recorded in 1990 and 1991 (Table 2). Sheepshead fall mean length increased ($R^2 = 0.645$) from a minimum of 297 mm TL recorded in 1976 to a maximum of 387 mm TL in 1991 (Table 2).

Spring coastwide southern flounder (Paralichthys lethostigma) catch rates show a slight decrease ($R^2 = 0.179$), the highest catch rate of 0.09/h occurred in 1980 and a lowest catch rate of 0.02/h was recorded in 1976 and 1995 (Table 1). Flounder spring mean length has increased ($R^2 = 0.471$) over the years. The minimum annual mean length of 322 mm TL was recorded in 1981 and the maximum of 380 mm TL in 2001 (Table 1).

Fall southern flounder catch rates show a slight decrease ($R^2 = 0.662$), the highest catch rate of 0.14/h occurred in 1982 and the lowest recorded catch rate of 0.04/h in 1998 and 2003 (Table 2). Fall mean length has increased ($R^2 = 0.414$) over the years. The minimum annual mean length of 326 mm TL was recorded in 1984 and 1990, the maximum of 388 mm TL occurred in 1993.

Coastwide spring Atlantic croaker (*Micropogonias undulatus*) catch rates show a slight decrease ($R^2 = 0.123$), the highest registered catch rate was 0.25/h in 1976 and the lowest of 0.02/h occurred in 1989 (Table 1, Figure 2). Spring mean lengths show a decrease in size ($R^2 = 0.139$), the maximum recorded spring mean length (308 mm TL) occurred in 1982 and the minimum (260 mm TL) in 2003 (Table 1, Figure 2).

Fall catch rates increased ($R^2 = 0.136$), the lowest catch rate occurred in 1975 (0.1/h) and the highest fall catch rate on record (0.5/h) occurred in 1993. For the last nine years the catch rate has been relatively uniform fluctuating between 0.3 and 0.4/h (Table 2; Figure 3). Fall mean lengths show a tendency to decrease ($R^2 = 0.281$), the maximum recorded mean length (323 mm TL) occurred in 1982 and the minimum value (268 mm TL) in 1984 (Table 2, Figure 3).

Coastwide spring catch rates for total finfish increased ($R^2 = 0.361$) from a low catch of 3.8/h registered in 1979 to a high of 7.9/h in 1996 (Table 1). Spring total lengths also increased ($R^2 = 0.617$), the minimum mean total length of 377 mm TL was recorded in 1977 and a maximum of 429 mm TL in 1994 (Table 1).

Fall catch rates show a slight increase ($R^2 = 0.341$), the lowest catch (3.7/h) was registered in 1979 and the highest (6.8/h) in 1976 (Table 2). Fall mean total lengths also increased ($R^2 = 0.702$) with the lowest mean total length in 1977 of 353 mm and a highest of 407 mm in 1994 (Table 2).

Spring coastwide catch rates of blue crab (*Callinectes sapidus*) have decreased ($R^2 = 0.473$) from a high catch rate of 0.22/h in 1985 to a low of 0.02/h in 2000 and 2001 (Table 1). Mean length increased ($R^2 = 0.369$) from a low of 136 mm TL in 1989 to 157 mm TL in 2000 (Table 1).

Fall coastwide catch rates of blue crab (*Callinectes sapidus*) have decreased ($R^2 = 0.539$) from a high catch rate of 0.19/h in 1983 to a low of 0.01/h in 1996 and 2000 (Table 2). Fall mean lengths show a slight increase ($R^2 = 0.052$), the lowest mean total length (142 mm) was registered in 1995 and 2002, and the highest mean total length (159 mm) in 1996 (Table 2).

Bay Bag Seine

Annual (calendar year) bag seine catches varied by species and bay (Table 3). Seasonal trends in catch rates and mean lengths are presented for selected species.

Linear regression analysis for most of the data from bag seines reveals only slight trends to increase or decrease over the sampling period (1978-2003) and there is usually a wide variation. The most notorious tendencies are decreases in catch rates for Atlantic croaker, white shrimp and blue crab.

Coastwide red drum seasonal (November-March) catch rates show a slight trend to decrease ($R^2 = 0.005$), with high variability; the maximum catch rate occurred during November 1990-March 1991 and the lowest during November 1989-March 1990 (Figure 6). Coastwide mean lengths also tend to decrease ($R^2 = 0.112$) and fluctuated between 48 and 60 mm TL (Figure 7).

Coastwide spotted seatrout seasonal (July-November) catch rates decreased ($R^2 = 0.003$)

between 1978 and 2003; they were highest 1991 and lowest during 1984-86 (Figure 6). Coastwide seasonal mean lengths fluctuated between 44 and 58 mm TL and have a tendency to increase ($R^2 = 0.064$), specially since 1992 ($R^2 = 0.901$) (Figure 7).

Coastwide black drum seasonal (June-July) catch rates show a slight tendency to increase ($R^2 = 0.001$), the lowest catch was reported in 1993 and the highest in 1997 (Figure 6). Coastwide seasonal mean lengths fluctuated between 54 and 93 mm TL without clear tendency to increase or decrease ($R^2 = 0.002$) (Figure 7).

Coastwide Atlantic croaker seasonal catch rates (February-March) decreased ($R^2 = 0.189$); they were highest in 1982 and lowest in 1989 (Figure 6). Coastwide seasonal mean lengths fluctuated between 48 and 59 mm TL with a very slight tendency to decrease ($R^2 = 0.023$) (Figure 7).

Coastwide brown shrimp (*Penaeus aztecus*) seasonal (April-July) catch rates increased ($R^2 = 0.008$), the lowest catch rate was reported in 1979 and the highest in 1997; (Figure 8). Coastwide seasonal mean lengths fluctuated between 56 and 63 mm TL with a tendency to decrease ($R^2 = 0.051$) (Figure 9).

Coastwide white shrimp (*P. setiferus*) seasonal (July-November) catch rates decreased ($R^2 = 0.079$) between 1975 and 2003; they were highest in 1982 and lowest in 2000 (Figure 8). Coastwide seasonal mean lengths fluctuated between 51 and 60 mm TL and tend to increase ($R^2 = 0.011$) (Figure 9).

Coastwide blue crab seasonal (March-June) catch rates decreased between 1975 and 2003 ($R^2 = 0.185$); they were highest in 1985 and lowest in 1989 (Figure 8). Coastwide seasonal mean widths fluctuated between 24 and 29 mm TL and show a very slight trend to decrease ($R^2 = 0.151$) (Figure 9).

Bay Trawl

Annual coastwide bay trawl catch rates for total finfish show a clear and relatively steady tendency to increase ($R^2 = 0.606$), ranging from 134/h in 1984 to 405/h in 2003 (Table 4). Coastwide mean lengths have remained relatively stable since 1983 with a slight trend to increase ($R^2 = 0.157$).

Coastwide Atlantic croaker catch rates increased ($R^2 = 0.223$), they ranged from 27/h in 1985 to 112/h in 1992 (Table 4; Figure 10). Coastwide mean length also increased ($R^2 = 0.026$) and ranged from 75 mm TL in 1982 to 127 mm TL in 1983 (Table 4; Figure 11).

Annual catch rates of other major species caught in bay trawls varied by species and bay (Table 4).

Coastwide brown shrimp catch rates show a slight tendency to increase ($R^2 = 0.025$) (Table 4; Figure 10), catch rates ranged from 13/h in 1999 to 49/h in 1989. Coastwide mean length decreased ($R^2 = 0.376$) from a maximum of 97 mm TL in 1983 to 81 mm TL in 1995 and 1999 (Table 4; Figure 11).

Coastwide white shrimp catch rates tend to decrease ($R^2 = 0.001$), they have ranged from 14/h in 1996 and 2000 to 46/h in 1982 and 2002 (Table 4; Figure 10). Mean coastwide length decreased ($R^2 = 0.139$), from a maximum of 101 mm TL in 1984 and 1985 to a minimum of 84 mm TL in 1994 (Table 4; Figure 11).

Coastwide pink shrimp (*P. duorarum*) catch rates show a slight tendency to increase ($R^2 = 0.003$), they were highest in 1991 and 1995 (5/h) and lowest in 2003 (0.4/h) (Table 4). Mean length tends to decrease ($R^2 = 0.208$) with a maximum of 104 mm TL in 1986 to a minimum of 84 mm TL in 1994 (Table 4).

Coastwide blue crab bay trawl catch rates decreased ($R^2 = 0.459$) ranging from 6/h in 1999 and 2003 to 24/h in 1992 and 1994 (Table 4; Figure 10). Coastwide mean width also decreased ($R^2 = 0.156$) and ranged from 64 mm TL in 1995 to 90 mm TL in 1984 (Table 4; Figure 11).

Gulf Trawl

Annual coastwide Gulf of Mexico trawl catch rates for total finfish increased ($R^2 = 0.357$) in general and have ranged from 174/h in 1985 to 462/h in 2000 (Table 5). Annual catch rates of other major species caught in Gulf of Mexico trawls varied by species and Gulf area.

Coastwide brown shrimp catch rates slightly decreased ($R^2 = 0.001$) and they have ranged from 59/h in 1989 to 4/h in 1996 (Table 5; Figure 12). Coastwide mean length also decreased ($R^2 = 0.486$) with a range of 109 mm TL in 1985 to 97 mm TL in 1999 (Table 5; Figure 13).

Coastwide annual white shrimp catch rates increased ($R^2 = 0.001$) from 10/h in 1997 to 24/h in 1999 (Table 5; Figure 12). They ranged from 10/h in 1990 and 1994 to 24/h in 1985, 1986, and 1999. Coastwide mean length increased ($R^2 = 0.001$) from 106 mm TL in 1997 to 107 mm TL in 1999 (Table 5, Figure 13). They ranged from 105 mm TL in 1986, 1992 and 1996 to 117 mm TL in 1995.

Coastwide blue crab catch rates show a tendency to decrease ($R^2 = 0.029$) ranging from 0.6/h in 1985 to 5.7/h in 1991. (Table 5, Figure 12). Coastwide mean width decreased ($R^2 = 0.546$) from 127 mm (carapace width) in 1985 to 58 mm (carapace width) in 2002 (Table 5; Figure 13).

Coastwide Atlantic croaker catch rates increased ($R^2 = 0.152$) and ranged from 23/h in 1985 to 203/h in 2001 (Table 5; Figure 12). Coastwide mean length slightly decreased ($R^2 = 0.25$) from 142 mm in 1985 to 113 mm in 1992 and 1993 (Table 5; Figure 13).

Coastwide pink shrimp catch rates show an increase ($R^2 = 0.121$) ranging from 1-4/h (Table 5). Coastwide mean length shows a slight decrease ($R^2 = 0.103$) ranging from 116 mm in 1985 to 104 mm in 1992 and 2000.

Oyster Dredge

Coastwide catch rates of Eastern oyster (*Crassostrea virginica*) spat increased ($R^2 = 0.18$), from a low of 491/h in 1984 to a record high of 8,535/h in 2000 (Table 6; Figure 14).

Coastwide catch rates of small Eastern oysters increased ($R^2 = 0.299$), the lowest catch reported was 1,001/h in 1986 and the highest catch was 3,468/h in 1997 (Table 6; Figure 14). Coastwide mean length increased ($R^2 = 0.197$) from 46 mm TL in 1985 to 55 mm TL in 2000 (Table 6; Figure 15).

Coastwide catch rates of market Eastern oysters increased ($R^2 = 0.503$), the record low occurred in 1990 at 215/h and the record high of 1259/h in 2000 (Table 6; Figure 14). Coastwide mean length has remained relatively stable with a slight tendency to increase ($R^2 = 0.002$), it has ranged from 87 to 91 mm TL (Table 6; Figure 15).

Hydrologic Data

Hydrologic data varied among years, bay systems and gulf areas (Appendix B). Salinity measurements taken while conducting spring and fall gillnets and bay and Gulf trawls indicate that coastwide annual salinity increased in coastal bays and in Gulf of Mexico waters; however, bag seines and oyster dredges show a tendency to decrease (Appendix B; Tables B.1, 4, 7, 10, and 13). Bay salinities were generally higher in lower Laguna Madre than in any other bay. Gulf salinities were highest off Port Isabel and Port Aransas and lower off Sabine.

Coastwide annual surface water temperatures, taken while conducting samplings with gill nets, bag seines and oyster dredges indicate a tendency to increase. Bottom temperatures taken while conducting bay trawls also indicate an increase; however, bottom temperatures from Gulf trawls show no clear tendency over the years (Appendix B; Tables B.2, 5, 8, 11, 13, and 14). Annual mean turbidities by gear are presented in Appendix B (Tables B.3, 6, 9, 12, and 15).

OVERVIEW

TPWD is mandated by the Texas Legislature and the TPWD Commission to annually investigate population trends, habitat variability, socio-economics, commercial and recreational fishing impacts and any other factors or conditions which may result in increases or decreases of finfishes and shellfishes in Texas waters. TPWD long-term trend data based on independent standardized monitoring programs are necessary to assess changes in relative abundance of these populations. Shrimp data were used to recommend dates for the annual "Texas Closure" of Texas Gulf waters to shrimping. Oyster data were used to establish the oyster transplant season in Galveston Bay. Finfish data were used to recommend changes in fishing regulations. These data were also used to develop management plans for shrimp, oysters and blue crabs as mandated by the Texas Legislature. Additionally, these data are used routinely by "outside" scientists in the private and public sector, especially the Gulf of Mexico Fisheries Management Council and Gulf States Marine Fisheries Commission. TPWD database was used extensively by both the Galveston Bay and Corpus Christi Bay National Estuary Programs to determine status and trends of populations. Data in the present report are used to determine long-term trends in abundance and stability of finfishes and shellfish populations in Texas coastal waters and to implement management regulations (Appendix D).

Effective management of marine species populations requires knowledge of the relationship between spawning and subsequent adult abundance (Cushing 1970, Gulland 1977). Since it has been possible to detect changes in annual abundances with bag seines and gill nets, it may be possible to determine stock-recruitment relationships utilizing these gears.

To determine effects of natural or man induced events in Texas coastal ecosystems, standardized monitoring programs used by TPWD should be maintained.

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TABLE 1. Mean catch rates (No./h) and mean total lengths (mm) of selected fishes and blue crab caught with gill nets (all meshes combined) by bay system during spring 1976-2003. Blank indicates no measurement taken; ND = no data.

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Red drum																				
1976	ND		0.1	310	ND		1.0	429	1.0	410	1.0	451	0.6	412	0.1	509	1.2	458	0.7	435
1977	ND		0.3	450	0.2	418	0.1	467	0.3	380	0.4	409	0.4	401	0.1	438	0.5	442	0.3	426
1978	ND		0.1	394	0.4	429	0.5	485	0.2	400	0.2	444	0.3	461	0.2	495	0.5	462	0.3	460
1979	ND		0.2	480	0.1	466	0.2	414	0.2	421	0.4	423	0.3	479	0.2	477	0.3	452	0.3	448
1980	ND		0.9	449	0.4	451	1.1	387	0.7	400	0.4	373	1.0	430	0.8	415	0.6	438	0.8	418
1981	ND		0.3	431	0.2	465	0.2	408	0.6	396	0.4	399	0.3	424	0.3	412	1.0	438	0.4	420
1982	ND		0.9	474	0.4	436	0.5	425	0.4	408	0.4	430	0.5	469	0.3	496	1.0	497	0.6	464
1983	ND		0.9	474	1.0	475	0.6	411	0.7	402	0.5	385	0.4	427	0.2	479	0.8	479	0.6	444
1984	ND		0.9	482	0.7	446	0.1	430	0.2	513	0.3	419	0.8	457	0.3	436	0.7	514	0.5	473
1985	ND		0.6	538	0.5	514	0.2	457	0.2	465	0.4	463	0.6	457	0.3	505	0.6	508	0.4	500
1986	0.4	520	1.4	497	0.8	456	0.8	463	0.6	454	0.6	395	0.7	463	0.3	474	1.0	493	0.8	474
1987	0.2	516	0.6	497	0.6	501	0.9	465	0.7	451	0.6	459	0.6	463	0.4	519	1.1	508	0.7	483
1988	0.3	498	0.7	492	0.9	473	0.7	434	1.1	470	0.5	436	0.6	495	0.6	550	1.2	499	0.8	481
1989	0.5	480	0.7	478	1.7	492	0.6	452	0.7	438	0.7	438	0.5	469	0.4	545	0.9	517	0.7	476
1990	0.5	509	0.5	529	0.8	568	0.4	483	0.3	474	0.5	494	1.0	505	0.2	538	0.8	534	0.5	515
1991	0.5	581	0.3	548	0.5	532	0.3	495	0.3	447	0.4	472	0.9	476	0.3	544	1.2	509	0.5	504
1992	0.7	470	1.2	465	2.1	456	1.3	397	1.3	429	1.6	402	1.2	481	0.7	544	1.5	494	1.3	450
1993	0.4	529	1.2	529	2.6	514	0.9	426	1.6	439	1.2	462	1.1	509	0.6	555	1.3	511	1.1	490
1994	0.4	507	0.5	536	1.6	528	0.6	470	1.3	458	1.2	471	0.6	529	0.8	572	1.8	549	0.9	511
1995	0.5	456	0.7	486	2.4	517	0.9	459	1.4	447	0.8	445	0.6	488	0.4	568	0.9	542	0.9	483
1996	1.2	542	1.4	523	4.4	526	1.1	483	2.0	477	2.2	473	1.5	502	0.6	547	0.7	513	1.4	500
1997	0.5	507	1.4	515	3.2	532	0.7	468	1.0	472	1.7	475	1.3	504	0.4	494	1.2	517	1.2	499
1998	0.9	522	1.3	519	4.7	536	1.3	473	1.4	420	1.3	454	1.2	459	0.9	508	1.0	511	0.7	486
1999	0.4	507	1.0	517	3.6	528	0.5	461	0.9	456	0.9	450	0.7	472	0.6	507	0.8	510	0.6	489
2000	0.5	567	0.6	523	2.3	528	0.6	456	0.6	442	1.0	463	0.8	491	0.5	542	0.6	517	0.7	494
2001	0.7	521	1.2	524	3.9	564	0.7	498	0.5	446	1.0	451	1.3	506	0.8	530	0.8	505	0.9	505
2002	0.7	486	1.2	500	2.0	511	0.7	423	1.0	421	1.2	431	0.8	468	0.5	537	0.7	480	0.9	467
2003	0.5	509	1.3	542	2.6	495	1.0	467	1.3	461	0.9	437	1.4	487	0.4	523	1.3	502	1.1	494
Spotted seatrout																				
1976	ND		<.1	530	ND		0.3	422	0.5	382	3.3	465	0.4	365	<.1	405	3.4	457	1.1	453
1977	ND		0.2	516	2.0	434	0.2	381	0.9	392	1.0	422	0.4	372	1.2	442	1.5	422	0.8	422
1978	ND		0.2	523	0.4	441	0.6	409	1.4	408	0.1	435	0.5	437	0.9	474	1.4	503	0.7	456
1979	ND		0.2	515	0.4	426	0.3	490	0.1	436	0.4	507	0.3	524	0.4	442	0.6	525	0.3	495
1980	ND		0.1	419	0.8	402	0.6	426	0.9	402	0.2	465	0.3	506	0.5	473	0.9	497	0.5	449
1981	ND		0.4	483	1.8	416	0.4	406	0.7	453	0.8	468	0.5	445	0.4	423	2.2	471	0.8	456
1982	ND		0.4	491	0.9	454	0.5	456	0.8	440	0.7	435	0.8	489	0.8	481	2.5	485	0.9	472

Table 1. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
Spotted seatrout (cont.)																					
1983	ND			0.4	510	1.7	441	0.7	452	0.8	444	0.6	447	0.7	478	0.7	509	1.3	500	0.7	476
1984	ND			0.3	498	0.7	468	0.3	439	0.3	483	0.2	435	0.2	473	<.1	483	0.7	475	0.3	472
1985	ND			0.5	506	0.6	467	0.3	424	0.3	457	0.4	430	0.4	471	0.1	427	1.4	485	0.5	473
1986	0.3	460		0.5	449	1.0	432	0.5	441	0.4	426	0.4	430	1.0	447	0.4	449	1.5	488	0.7	456
1987	0.2	339		0.6	449	0.7	436	0.4	434	0.4	447	0.5	456	0.9	478	0.4	490	1.9	508	0.7	474
1988	0.2	386		0.7	459	0.8	456	0.5	430	0.5	435	0.5	458	0.8	478	0.4	507	1.6	498	0.7	470
1989	0.2	441		0.6	481	0.5	494	0.5	428	0.6	459	0.6	463	0.7	487	0.4	514	1.1	485	0.6	474
1990	0.1	441		0.5	457	0.6	510	0.3	432	0.6	480	0.5	442	1.1	447	0.2	468	1.3	455	0.6	456
1991	0.1	467		0.5	449	0.3	498	0.4	431	0.8	440	1.0	467	1.0	460	0.6	447	1.9	461	0.8	455
1992	0.2	406		0.7	446	0.4	511	0.4	440	0.4	449	0.7	443	1.3	463	0.6	529	1.9	483	0.8	467
1993	0.3	415		0.5	460	0.5	501	0.6	428	0.7	477	0.6	456	1.1	440	0.5	507	1.9	459	0.8	459
1994	0.3	408		0.7	460	0.8	496	0.7	418	0.8	438	0.9	447	1.0	454	0.9	465	1.8	483	0.9	458
1995	0.1	462		0.7	456	0.5	490	0.4	431	0.9	446	0.6	448	0.9	471	0.6	452	1.0	467	0.7	455
1996	0.2	411		0.7	438	0.6	514	0.6	414	1.3	429	1.0	425	0.8	457	0.5	493	1.4	473	0.8	446
1997	0.2	428		0.9	454	0.9	468	0.8	443	1.3	444	0.9	429	1.2	453	0.7	446	1.4	449	1.0	446
1998	0.7	418		1.0	449	0.7	420	0.9	448	1.8	429	1.0	462	1.0	466	0.7	476	0.9	448	1.0	450
1999	0.4	443		0.8	439	1.1	502	0.8	431	1.2	449	1.0	474	0.9	468	0.9	488	1.2	457	0.9	457
2000	0.2	446		0.9	452	1.1	458	0.7	429	1.3	440	1.1	460	0.6	456	0.8	496	0.9	459	0.9	454
2001	0.6	432		1.2	455	0.9	489	1.0	440	0.8	441	1.2	433	0.7	447	0.9	456	1.5	462	1.0	449
2002	0.4	464		1.0	461	0.7	478	0.6	443	1.3	463	1.1	451	1.1	449	0.6	448	0.9	470	0.9	457
2003	0.3	441		1.0	474	0.9	492	0.9	434	1.5	462	0.9	453	1.1	492	0.7	469	1.1	468	1.0	464
Black drum																					
1976	ND			0.2	290	ND		0.8	418	1.0	306	0.9	389	0.6	360	0.5	352	0.9	387	0.7	366
1977	ND			0.4	388	0.3	262	0.5	519	1.0	314	1.2	316	0.5	347	0.4	377	0.9	428	0.7	374
1978	ND			0.2	439	0.4	345	0.2	300	0.1	306	0.4	358	0.4	325	0.1	398	0.8	395	0.3	373
1979	ND			0.3	292	0.7	328	0.5	415	<.1	370	0.3	323	0.1	375	0.3	371	0.9	413	0.4	371
1980	ND			0.4	314	1.0	272	0.9	355	0.5	263	1.0	320	0.3	352	0.7	384	0.4	452	0.6	341
1981	ND			0.8	418	0.8	312	0.3	301	0.4	352	0.8	362	0.1	379	1.1	390	0.9	391	0.7	381
1982	ND			0.6	343	0.8	294	0.5	363	0.7	317	1.1	300	0.4	339	0.7	374	1.2	400	0.8	347
1983	ND			0.9	337	2.7	365	0.6	355	0.6	323	1.2	340	0.9	371	1.0	400	1.6	441	1.0	372
1984	ND			0.6	373	1.0	391	0.2	368	0.2	460	0.1	559	0.5	414	0.6	442	0.6	459	0.4	417
1985	ND			0.5	346	0.4	313	0.2	476	0.1	426	0.2	396	0.2	342	0.8	361	0.4	372	0.4	374
1986	0.3			0.5	383	0.6	345	0.3	402	0.1	313	0.4	316	0.6	369	0.7	418	0.4	464	0.4	387
1987	0.1	399		0.5	368	0.6	320	0.4	366	0.2	392	0.5	382	0.5	459	1.1	453	0.5	458	0.7	409
1988	0.1	410		0.4	380	0.7	376	0.4	390	0.4	339	0.4	375	0.8	444	0.7	397	0.3	451	0.5	396
1989	0.2	326		0.6	350	1.8	378	0.4	412	0.3	363	0.6	371	0.4	406	1.0	426	0.5	408	0.6	386
1990	0.2	378		0.5	372	1.5	393	0.8	341	0.3	330	0.7	336	0.6	411	1.4	418	0.7	410	0.7	381

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Black drum (cont.)																				
1991	0.3	318	0.6	356	1.4	347	0.8	354	0.5	294	1.1	308	0.4	361	3.0	366	1.2	369	1.0	350
1992	0.2	366	0.5	370	1.3	391	0.4	339	0.8	388	0.7	335	1.6	374	3.0	349	2.3	408	1.2	372
1993	0.3	360	0.4	377	0.4	345	0.4	374	1.8	449	1.6	417	3.4	400	2.4	376	2.2	397	1.4	401
1994	0.4	376	0.4	415	0.1	363	0.6	418	1.2	489	1.0	469	2.1	431	4.3	398	3.2	429	1.5	427
1995	0.2	330	0.4	381	0.3	332	0.9	418	0.7	395	1.1	444	1.0	454	4.2	420	1.8	442	1.2	424
1996	0.5	381	0.5	378	0.3	375	0.7	391	1.2	395	1.1	383	1.5	474	3.3	451	2.7	508	1.4	444
1997	0.4	412	0.6	376	0.4	373	0.9	405	2.0	432	1.8	409	1.0	472	3.3	408	1.1	501	1.3	423
1998	0.5	384	0.4	367	0.2	346	0.6	412	1.5	412	1.3	390	1.1	442	4.2	389	0.5	479	1.2	402
1999	0.3	354	0.5	344	0.3	351	0.7	367	1.3	399	1.2	394	0.7	420	4.3	388	0.6	484	1.2	392
2000	0.6	376	0.7	367	0.3	334	0.7	388	1.3	366	1.3	369	0.9	408	3.0	420	0.7	472	1.1	395
2001	0.6	338	0.9	356	0.8	294	1.0	368	2.3	380	2.2	363	0.9	404	4.0	421	1.6	466	1.7	393
2002	0.6	348	0.6	394	1.4	362	1.1	383	2.0	369	1.3	383	1.8	415	3.1	433	0.4	483	1.3	402
2003	0.5	376	0.7	371	1.3	368	1.0	389	1.7	397	1.3	395	0.8	436	4.0	423	0.5	475	1.3	406
Sheepshead																				
1976	ND		0.0		ND		0.1	420	0.3	341	0.6	342	0.0		0.3	367	0.3	318	0.2	345
1977	ND		<.1	338	<.1	234	0.1	280	0.2	308	<.1	232	0.1	294	0.1	380	0.1	336	0.1	311
1978	ND		0.0		0.4	296	<.1	278	0.1	313	0.2	354	0.2	356	0.2	394	0.2	358	0.1	350
1979	ND		<.1	305	0.1	297	0.1	391	<.1	402	0.1	320	0.5	362	0.1	370	0.2	340	0.1	350
1980	ND		<.1	353	0.3	347	0.1	334	0.1	320	0.2	352	0.2	322	0.2	369	0.3	343	0.2	345
1981	ND		<.1	393	0.2	326	<.1	453	0.6	335	0.3	349	0.1	319	0.2	390	0.6	325	0.2	342
1982	ND		0.1	332	0.0		0.1	330	0.2	354	<.1	326	0.2	343	0.2	361	0.6	326	0.2	336
1983	ND		0.1	313	0.4	311	0.1	373	0.2	372	0.1	349	0.3	370	0.2	392	0.4	342	0.2	354
1984	ND		0.1	351	0.3	354	0.1	387	0.2	398	<.1	401	0.2	379	0.1	385	0.2	348	0.1	370
1985	ND		<.1	352	0.2	372	<.1	337	<.1	409	<.1	382	0.1	424	<.1	427	0.1	353	0.1	382
1986	<.1	372	<.1	372	0.2	356	<.1	369	0.1	417	<.1	305	0.1	388	<.1	427	0.1	370	0.1	382
1987	<.1	364	<.1	361	0.2	314	<.1	340	<.1	447	<.1	342	<.1	350	<.1	403	0.2	372	0.1	366
1988	0.0		<.1	405	0.1	350	<.1	357	0.1	342	0.1	348	0.1	371	<.1	407	0.1	369	0.1	366
1989	<.0	529	0.1	384	0.3	324	<.1	371	<.1	379	<.1	350	0.2	412	<.1	371	0.2	371	0.1	374
1990	<.1	364	<.1	378	0.3	364	0.1	400	<.1	444	<.1	372	0.2	388	<.1	358	0.1	396	0.1	387
1991	<.1	354	<.1	381	0.2	343	<.1	359	<.1	491	<.1	304	<.1	367	<.1	406	0.1	389	<.1	382
1992	<.1	278	<.1	346	0.1	356	0.1	367	0.1	415	<.1	348	0.1	436	<.1	434	0.2	379	0.1	390
1993	<.1	343	<.1	376	0.2	360	0.1	408	0.1	355	<.1	408	0.1	422	<.1	427	0.1	394	0.1	392
1994	<.1	353	<.1	374	0.2	413	<.1	372	<.1	338	<.1	344	<.1	435	<.1	429	0.1	375	<.1	376
1995	<.1	309	<.1	389	0.1	428	0.1	407	0.3	359	0.1	363	0.3	446	<.1	426	0.1	372	0.1	393
1996	<.1	362	<.1	383	0.2	438	0.2	403	0.5	401	0.1	367	0.2	452	<.1	397	0.1	371	0.1	402
1997	<.1	395	<.1	387	0.1	394	0.1	377	0.3	392	0.2	373	0.1	392	0.1	445	0.1	366	0.1	385
1998	<.1	354	<.1	383	0.1	364	0.1	395	0.3	395	0.2	370	0.1	411	0.1	395	0.1	350	<.1	385
1999	<.1	364	<.1	370	0.1	399	0.1	405	0.2	409	0.1	343	0.2	425	<.1	413	0.1	395	<.1	394

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Sheepshead (cont.)																				
2000	<.1	404	<.1	382	0.3	420	0.3	406	0.4	391	0.2	338	0.1	399	<.1	432	0.1	384	0.1	388
2001	<.1	411	0.1	394	0.1	408	0.1	410	0.3	386	0.1	349	0.2	391	<.1	396	0.1	360	0.1	384
2002	<.1	401	<.1	377	0.2	419	0.2	419	0.3	415	0.1	353	0.2	394	<.1	391	0.1	376	0.1	400
2003	<.1	346	<.1	411	0.2	417	0.2	411	0.3	419	0.3	383	0.5	407	<.1	405	0.1	351	0.2	400
Southern flounder																				
1976	ND		0.0		ND		0.0		0.1	335	0.0		0.0		0.0		0.2	350	<.1	345
1977	ND		<.1	351	0.1	358	<.1	328	<.1	208	0.1	358	<.1	430	0.0		<.1	345	<.1	347
1978	ND		<.1	249	0.1	352	<.1	330	0.1	279	<.1	338	0.1	338	0.1	345	0.1	344	0.1	323
1979	ND		<.1	451	0.1	348	0.1	290	0.1	388	<.1	291	0.1	373	0.1	320	0.2	366	0.1	354
1980	ND		0.1	344	0.1	325	0.1	307	<.1	292	0.1	292	0.1	316	0.1	364	0.1	364	0.1	330
1981	ND		<.1	244	<.1	340	<.1	270	0.1	291	<.1	368	0.1	332	0.1	348	0.1	338	0.1	322
1982	ND		0.1	343	<.1	319	0.1	307	0.1	305	0.1	299	0.1	361	0.1	337	0.1	350	0.1	332
1983	ND		0.1	366	0.1	318	0.1	327	<.1	333	<.1	329	0.1	385	0.1	359	0.1	371	0.1	357
1984	ND		0.1	338	0.1	388	<.1	317	<.1	321	<.1	310	0.1	377	<.1	344	<.1	355	0.1	342
1985	ND		0.1	349	0.1	348	<.1	346	0.1	329	0.1	347	0.1	353	0.1	346	0.1	336	0.1	344
1986	<.1	294	0.1	345	0.2	329	<.1	358	0.1	316	0.1	357	<.1	395	0.1	354	0.1	370	0.1	354
1987	<.1	364	0.1	338	0.1	330	<.1	304	0.1	345	<.1	336	<.1	333	0.1	407	0.1	401	0.1	353
1988	<.1	292	0.1	367	0.1	349	0.1	354	<.1	350	<.1	334	<.1	353	0.1	400	<.1	360	0.1	359
1989	<.1	288	0.1	347	0.1	362	<.1	318	<.1	317	<.1	340	<.1	381	<.1	402	0.1	392	<.1	349
1990	<.1	309	<.1	351	0.1	360	<.1	354	<.1	350	<.1	311	<.1	347	<.1	333	0.1	410	<.1	358
1991	<.1	329	0.1	322	0.1	365	<.1	322	0.1	348	0.1	326	0.1	343	0.1	363	0.1	358	0.1	346
1992	<.1	319	0.1	371	0.1	366	<.1	346	<.1	373	<.1	355	<.1	377	<.1	438	0.1	394	<.1	374
1993	<.1	364	<.1	360	0.1	395	<.1	369	<.1	357	<.1	417	0.1	398	<.1	453	<.1	349	<.1	374
1994	<.1	334	<.1	343	0.1	378	<.1	327	<.1	362	<.1	332	<.1	362	<.1	332	<.1	380	<.1	352
1995	<.1	315	<.1	331	0.1	400	<.1	369	<.1	369	<.1	370	<.1	398	<.1	362	<.1	379	<.1	367
1996	<.1	369	0.1	373	0.1	380	<.1	360	<.1	381	0.1	377	<.1	392	<.1	341	<.1	402	<.1	376
1997	<.1	275	0.1	341	<.1	383	<.1	306	<.1	328	<.1	362	<.1	353	<.1	368	0.1	364	<.1	346
1998	<.1	336	0.1	371	0.1	372	0.1	352	<.1	343	<.1	334	<.1	364	<.1	398	<.1	378	<.1	360
1999	<.1	338	<.1	365	0.1	385	<.1	325	<.1	408	<.1	329	<.1	405	<.1	444	<.1	400	<.1	374
2000	<.1	353	<.1	344	0.1	373	<.1	345	0.1	373	<.1	363	<.1	368	<.1	384	<.1	419	<.1	368
2001	<.1	311	<.1	376	0.1	390	<.1	349	<.1	403	<.1	355	<.1	359	<.1	437	<.1	412	<.1	380
2002	<.1	295	<.1	346	0.1	327	0.1	340	0.1	335	<.1	340	0.1	332	<.1	385	<.1	369	<.1	344
2003	<.1	336	<.1	376	<.1	362	<.1	339	<.1	369	<.1	381	<.1	417	<.1	416	<.1	414	<.1	379
Atlantic croaker																				
1976	ND		0.2	298	ND		0.1		0.2	332	0.0		1.0	277	0.0		0.8	333	0.3	306
1977	ND		0.3	268	0.1	255	0.0		<.1	227	<.1	285	1.0	264	0.4	297	0.2	269	0.2	271
1978	ND		0.1	247	<.1	270	<.1	293	<.1	250	<.1	248	0.1	281	0.2	281	0.1	276	0.1	268
1981	ND		0.1	264	0.1	250	<.1	276	0.0		0.1	289	0.1	266	0.3	302	0.1	277	0.1	282

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Atlantic croaker (cont.)																				
1979	ND		0.2	260	<.1	257	<.1	263	0.0		0.0		0.1	265	0.1	298	0.2	308	0.1	279
1980	ND		0.1	268	0.1	250	0.0		<.1	254	<.1	240	0.1	272	0.3	312	0.1	286	0.1	286
1982	ND		0.2	268	0.1	258	<.1	270	<.1	265	<.1	261	0.1	285	0.2	313	0.4	347	0.1	308
1983	ND		0.3	268	0.1	278	<.1	273	<.1	277	<.1	286	0.2	265	0.2	289	0.4	314	0.1	286
1984	ND		0.1	265	<.1	322	<.1	225	<.1	298	<.1	260	<.1	262	<.1	304	<.1	285	<.1	266
1985	ND		0.2	273	<.1	318	<.1	260	<.1	184	<.1	115	0.1	265	0.2	267	0.1	261	0.1	266
1986	0.1	259	0.4	271	0.1	250	<.1	245	<.1	250	<.1	292	0.3	255	0.2	297	0.1	288	0.1	272
1987	0.1	263	0.2	260	<.1	242	<.1	236	<.1	268	<.1	246	0.1	282	<.1	319	<.1	251	0.1	263
1988	0.1	259	0.1	265	<.1	226	<.1	278	0.0		<.1	260	0.1	261	0.1	337	<.1	296	<.1	276
1989	0.1	268	0.1	264	0.1	280	<.1	250	0.0		<.1	262	<.1	284	<.1	342	<.1	283	<.1	274
1990	<.1	278	0.1	269	0.1	264	<.1	268	<.1	283	<.1	276	<.1	267	<.1	245	<.1	272	<.1	269
1991	0.1	297	0.1	262	<.1	256	<.1	237	<.1	239	<.1	252	0.1	261	<.1	269	0.1	267	0.1	263
1992	0.1	263	0.2	253	0.2	270	<.1	257	0.0		<.1	232	0.1	204	<.1	290	0.1	266	0.1	261
1993	0.1	286	0.2	256	0.1	259	<.1	237	<.1	277	<.1	267	0.1	265	0.1	295	0.1	272	0.1	264
1994	0.1	297	0.1	267	0.1	272	<.1	266	<.1	263	<.1	257	0.1	279	<.1	328	<.1	298	0.1	279
1995	<.1	278	0.2	262	0.1	281	<.1	289	<.1	276	<.1	273	0.1	300	<.1	382	<.1	321	0.1	275
1996	0.1	268	0.3	277	0.1	255	<.1	249	0.1	275	<.1	262	0.1	294	<.1	355	<.1	273	0.1	277
1997	0.1	278	0.1	268	0.1	280	<.1	249	<.1	271	0.1	263	0.1	298	0.1	283	0.1	280	0.1	272
1998	<.1	256	0.4	266	0.3	278	<.1	249	0.1	265	<.1	267	0.2	282	0.1	302	<.1	269	0.1	270
1999	0.1	271	0.3	262	0.1	277	<.1	261	<.1	263	0.1	268	0.1	290	0.1	306	<.1	310	0.1	275
2000	0.1	271	0.4	285	0.1	285	0.1	280	<.1	251	<.1	267	<.1	260	0.1	294	<.1	311	0.1	283
2001	0.1	270	0.3	275	0.1	280	<.1	252	<.1	275	<.1	261	<.1	265	0.1	296	0.1	302	0.1	279
2002	0.1	278	0.3	266	0.2	271	<.1	260	<.1	251	0.1	258	0.2	272	<.1	305	<.1	340	0.1	269
2003	0.1	274	0.3	255	0.2	275	<.1	249	<.1	284	<.1	256	<.1	280	<.1	280	<.1	290	<.1	260
Gafftopsail catfish																				
1976	ND		6.4	504	ND		0.5	494	2.3	456	0.0		0.0		0.0		0.0		1.8	496
1977	ND		0.2	480	0.4	506	0.9	556	3.3	538	3.1	506	0.0		0.0		0.0		1.0	524
1978	ND		0.3	539	0.1	546	1.1	546	1.8	496	0.1	545	<.1	436	0.0		0.0		0.5	521
1979	ND		0.3	520	0.5	534	0.4	553	0.4	534	0.5	544	0.2	551	0.0		0.0		0.3	539
1980	ND		0.2	511	0.2	566	0.5	554	1.2	547	0.4	552	0.1	598	0.0		0.0		0.3	546
1981	ND		0.2	514	0.3	480	0.8	541	0.5	537	1.4	541	0.1	521	<.1	577	0.0		0.4	536
1982	ND		0.4	513	0.2	496	0.4	544	1.4	540	0.9	542	0.3	530	<.1	534	<.1	372	0.5	535
1983	ND		0.2	544	<.1	475	0.3	537	2.0	530	0.9	537	0.1	536	<.1	575	0.0		0.5	534
1984	ND		0.2	527	<.1	580	1.0	529	1.1	530	0.6	550	0.2	532	<.1	472	<.1	211	0.4	533
1985	ND		0.3	532	<.1	467	0.4	517	0.8	537	0.1	557	0.1	507	<.1	413	<.1	388	0.2	530
1986	0.2	490	0.4	515	0.3	468	0.3	533	0.5	554	0.4	529	0.4	534	<.1	374	0.0		0.3	528
1987	<.1	509	0.4	552	0.1	507	0.2	539	0.1	565	0.2	567	0.2	550	<.1	532	<.1	518	0.2	551
1988	0.1	538	0.2	511	0.1	530	0.5	531	0.3	563	0.2	562	0.2	550	0.0		<.1	428	0.2	537

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Gafftopsail catfish (cont.)																				
1989	<.1	494	0.3	536	0.1	535	0.6	530	0.4	557	0.1	569	0.1	533	0.0		<.1	536	0.2	539
1990	<.1	518	0.8	528	0.2	460	0.8	534	0.6	555	0.4	546	0.4	554	0.0		0.0		0.4	537
1991	<.1	520	0.2	504	0.2	528	0.5	531	0.7	527	0.4	565	0.4	530	<.1	546	<.1	454	0.3	532
1992	<.1	519	0.1	521	0.2	556	0.3	530	0.6	578	0.1	559	0.2	530	0.0		<.1	508	0.2	549
1993	<.1	457	0.5	494	0.2	581	0.5	543	0.8	563	0.3	576	0.2	503	0.0		<.1	405	0.3	535
1994	<.1	518	0.1	495	0.2	569	0.8	545	1.2	571	0.2	561	0.2	547	0.0		0.0		0.3	554
1995	<.1	508	0.4	498	0.3	543	0.3	517	0.7	557	0.2	572	0.1	529	0.0		<.1	210	0.3	533
1996	<.1	377	0.3	496	0.1	569	0.5	494	0.6	537	0.2	534	0.2	526	0.0		<.1	456	0.3	513
1997	<.1	465	0.4	519	0.2	557	0.3	502	1.4	525	0.3	496	0.4	524	<.1	422	<.1	455	0.4	515
1998	0.1	514	0.5	523	0.3	576	0.9	512	0.9	534	0.2	508	0.1	505	<.1	515	<.1	235	0.4	522
1999	0.2	504	0.6	494	0.5	573	0.8	538	0.4	547	0.1	504	0.2	514	<.1	331	<.1	448	0.3	521
2000	0.1	494	0.6	476	0.4	553	0.9	526	0.9	529	0.2	505	0.1	511	0		<.1	434	0.4	509
2001	0.3	489	0.4	470	0.8	550	1.2	510	0.4	539	0.1	509	0.2	505	0		<.1	487	0.4	504
2002	0.1	481	0.5	511	0.3	571	1.1	530	1.0	515	0.2	516	0.2	505	0		<.1	482	0.4	520
2003	0.3	508	1.0	507	0.6	551	0.8	545	0.8	534	0.2	528	0.2	507	<.1	505	<.1	490	0.5	523
Gulf menhaden																				
1976	ND		0.2	261	ND		0.1	250	0.1	275	0.0		0.0		0.0		0.0		0.1	261
1977	ND		2.5	251	0.7	299	0.1	245	0.1	233	0.3	247	2.6	255	<.1	282	<.1	229	0.9	253
1978	ND		0.3	242	<.1	194	0.2	245	1.2	258	0.0		0.2	263	1.2	264	<.1	246	0.4	256
1979	ND		1.2	251	0.0		0.1	251	<.1	132	<.1	241	0.1	255	0.2	260	0.0		0.3	251
1980	ND		<.1	193	0.0		<.1	252	0.1	287	<.1	271	<.1	257	0.6	269	<.1	253	0.1	265
1981	ND		0.4	260	0.0		0.2	254	0.1	252	0.2	254	0.1	243	0.1	246	0.1	244	0.2	255
1982	ND		0.4	254	0.0		<.1	248	0.3	252	0.1	249	<.1	250	0.4	268	<.1	303	0.2	257
1983	ND		0.8	252	0.0		0.2	251	0.2	243	0.1	244	0.1	248	0.1	304	0.1	252	0.3	252
1984	ND		0.5	254	0.0		0.1	251	0.2	279	0.2	246	0.1	257	<.1	284	<.1	265	0.2	256
1985	ND		0.8	253	<.1	281	0.5	242	0.3	243	0.4	250	0.6	250	<.1	244	0.8	260	0.5	252
1986	0.1	279	1.3	251	<.1	226	0.1	242	0.1	244	0.2	245	0.4	258	<.1	252	<.1	253	0.4	251
1987	<.1	348	1.2	245	<.1	227	<.1	241	0.0	226	0.0	226	0.2	242	<.1	240	0.1	253	0.3	245
1988	<.1	278	0.1	244	0.0		0.2	244	<.1	278	<.1	236	0.1	253	<.1	257	<.1	290	0.1	249
1989	<.1	269	1.4	249	0.0		0.1	232	<.1	226	0.0	187	0.1	235	0.0		0.0		0.3	248
1990	<.1	270	1.6	242	<.1	237	0.1	216	<.1	263	<.1	255	<.1	237	<.1	308	<.1	239	0.4	242
1991	<.1	253	0.3	252	<.1		0.1	216	0.1	239	<.1	281	0.1	255	0.0	251	0.0	241	0.1	247
1992	<.1	266	0.7	257	0.0		<.1	207	0.1	245	0.1	251	0.1	275	<.1	252	<.1	279	0.2	257
1993	<.1	256	1.5	247	0.0		0.1	257	<.1	217	0.0		<.1	242	<.1	312	<.1	282	0.3	247
1994	0.1	267	0.5	260	0.0		0.1	235	<.1	254	<.1	262	0.1	253	<.1	238	<.1	295	0.1	258
1995	0.1	275	0.2	257	<.1	252	0.3	254	0.2	255	0.1	265	<.1	207	0.0		0.1	269	0.1	257
1996	<.1	256	0.4	252	<.1	241	0.1	241	<.1	269	<.1	243	<.1	253	<.1	238	<.1	306	0.1	251
1997	<.1	264	0.3	249	<.1	246	0.2	231	0.1	242	0.2	257	0.2	248	<.1	248	0.1	298	0.1	249
2000	0.6	272	0.4	248	<.1	246	<.1	246	0.1	243	0.1	245	<.1	243	<.1	239	<.1	258	0.1	251

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Gulf menhaden (cont.)																				
1998	0.1	276	0.9	254	<.1	268	0.1	241	0.2	257	0.1	246	<.1	256	0.0		<.1	313	0.2	254
1999	0.1	256	0.4	255	0.0		0.1	250	<.1	250	<.1	254	<.1	256	<.1	240	<.1	256	0.1	254
2001	0.1	275	0.2	253	<.1	244	0.1	242	0.1	251	0.1	250	0.1	227	0.1	261	0.1	242	0.1	249
2002	0.3	269	0.5	257	<.1	254	0.1	252	0.1	256	0.2	247	0.1	247	<.1	310	0.1	255	0.2	256
2003	0.1	278	1.1	250	<.1	262	0.1	274	0.3	252	0.1	240	0.1	256	0.1	280	<.1	295	0.3	252
Striped mullet																				
1976	ND		0.1	385	ND		0.2	322	0.2	338	0.6	366	0.0		<.1	375	0.0		0.2	358
1977	ND		0.2	322	0.0		0.2	314	0.9	317	0.8	319	0.1	340	0.2	368	0.2	345	0.3	323
1978	ND		0.0		0.1	327	0.4	336	0.2	334	0.2	327	0.2	366	0.1	327	0.1	354	0.2	338
1979	ND		0.2	320	0.1	336	0.1	341	0.7	343	0.2	339	0.1	333	0.1	404	0.1	354	0.2	341
1980	ND		0.1	343	<.1	338	0.4	335	0.2	328	0.1	337	0.1	320	0.2	379	0.2	356	0.2	343
1981	ND		<.1	318	0.1	345	<.1	336	<.1	341	0.1	336	0.1	321	0.2	353	0.2	353	0.1	344
1982	ND		0.2	344	0.2	295	0.2	326	0.2	330	0.2	333	0.2	344	0.2	359	0.3	361	0.2	341
1983	ND		0.2	350	0.1	346	0.1	346	0.2	341	0.2	341	0.1	351	0.3	367	0.2	368	0.2	352
1984	ND		0.2	344	0.2	340	0.3	328	0.2	337	0.4	337	0.1	336	0.6	352	0.5	347	0.3	342
1985	ND		0.2	340	0.2	339	0.3	332	0.1	328	0.3	340	0.1	338	0.2	380	0.1	339	0.2	342
1986	0.1	326	0.2	350	0.2	321	0.2	330	0.1	328	0.2	336	0.1	340	0.1	368	0.1	341	0.1	340
1987	<.1	312	0.2	366	0.1	319	0.2	343	0.2	348	0.2	354	0.1	336	0.1	402	0.2	359	0.2	357
1988	<.1	327	0.1	344	0.2	333	0.1	323	0.2	348	0.1	343	0.1	350	0.1	371	0.1	364	0.1	348
1989	<.1	323	0.2	348	0.4	339	0.2	337	0.1	356	0.2	356	0.1	344	0.1	400	0.1	372	0.2	354
1990	<.1	325	0.2	341	0.3	342	0.4	342	0.2	357	0.2	340	0.2	340	0.5	389	0.4	353	0.3	354
1991	<.1	325	0.1	347	0.2	341	0.2	347	0.2	343	0.3	335	0.1	343	0.2	386	0.1	377	0.2	350
1992	<.1	310	0.1	352	0.3	340	0.3	341	0.2	342	0.4	352	0.2	355	0.2	389	0.2	374	0.2	355
1993	<.1	331	0.1	358	0.3	371	0.2	333	0.3	347	0.4	356	0.2	355	0.2	379	0.1	354	0.2	353
1994	0.1	343	0.1	347	0.1	381	0.3	343	0.3	359	0.2	368	0.1	365	0.2	386	0.2	383	0.2	362
1995	<.1	341	0.3	356	0.2	366	0.5	347	0.3	364	0.2	366	0.1	359	0.2	403	0.1	376	0.3	361
1996	0.1	336	0.3	348	0.2	349	0.2	352	0.3	355	0.2	364	0.1	361	0.2	385	0.1	364	0.2	358
1997	<.1	344	0.2	356	0.2	342	0.4	355	0.3	352	0.3	349	0.1	373	0.6	443	0.1	381	0.3	378
1998	0.1	327	0.2	352	0.3	360	0.2	341	0.2	359	0.2	364	0.1	373	0.3	409	0.1	398	0.2	366
1999	<.1	337	0.2	340	0.2	369	0.2	353	0.7	373	0.2	355	0.1	371	0.3	418	0.1	385	0.2	367
2000	0.1	330	0.1	378	0.2	392	0.1	356	0.1	361	0.2	359	<.1	372	0.4	407	<.1	360	0.2	377
2001	<.1	345	0.2	358	0.3	352	0.4	363	0.3	362	0.3	345	0.1	357	0.2	414	0.1	391	0.2	366
2002	0.1	330	0.2	351	0.1	357	0.3	346	0.1	345	0.2	358	0.1	378	0.1	428	<.1	398	0.2	360
2003	<.1	327	0.2	356	0.2	353	0.3	350	0.4	354	0.2	356	0.1	391	0.3	439	0.1	413	0.2	376
Total finfishes																				
1976	ND		11.1	429	ND		5.2	394	7.6	391	9.5	415	6.2	332	1.1	378	7.1	419	7.3	408
1977	ND		8.8	316	4.3	395	5.9	442	8.2	428	8.1	428	7.6	297	3.8	366	4.3	395	6.7	377
1978	ND		5.0	357	2.4	359	4.8	437	7.7	409	2.0	406	3.4	343	4.6	365	5.0	406	4.6	390

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Total finfishes (cont.)																				
1979	ND		6.8	345	2.5	396	3.4	409	3.2	453	3.2	433	2.7	393	2.2	360	3.2	411	3.8	387
1980	ND		5.0	380	4.2	347	5.4	428	5.2	422	3.1	405	2.8	387	3.9	368	3.5	419	4.3	400
1981	ND		4.6	369	5.5	363	5.3	408	6.1	417	6.0	432	2.8	634	4.2	353	6.5	406	5.2	396
1982	ND		8.1	378	4.7	368	5.3	435	6.8	411	5.8	417	4.6	400	4.5	367	8.8	394	6.4	397
1983	ND		9.0	369	7.6	384	4.5	417	7.2	422	5.5	404	5.5	397	5.0	373	7.5	409	6.6	394
1984	ND		6.2	389	3.7	397	4.3	449	5.6	431	3.9	432	4.8	397	3.2	369	4.6	412	4.7	410
1985	ND		7.6	381	3.8	408	5.2	446	4.1	479	3.6	452	5.0	368	3.6	350	5.2	384	5.1	404
1986	4.9	432	9.3	377	5.4	381	5.0	425	3.5	422	3.2	418	5.7	371	2.9	387	5.2	425	5.3	398
1987	2.0	517	8.7	373	4.3	384	4.0	430	2.9	420	3.4	431	3.8	420	3.0	432	5.9	434	4.8	408
1988	2.5	472	6.7	385	4.6	401	4.5	411	4.7	444	3.0	436	6.4	390	3.2	407	5.4	436	4.8	411
1989	2.6	474	9.0	365	7.4	396	5.1	428	6.4	437	4.2	403	4.4	402	2.8	432	4.7	425	5.5	403
1990	2.5	485	10.5	367	8.2	403	6.6	432	6.1	448	5.1	410	6.8	410	3.5	405	5.2	424	6.5	405
1991	3.1	474	6.9	367	11.7	358	6.4	415	6.1	437	6.0	400	5.8	405	5.3	381	7.2	409	6.4	398
1992	2.6	445	8.4	395	8.8	423	6.3	407	5.9	448	7.1	412	7.0	410	5.7	409	8.4	431	7.0	414
1993	2.4	480	9.8	387	8.7	459	7.0	424	8.6	467	6.9	453	9.7	419	4.8	427	8.3	428	7.8	425
1994	2.7	451	6.6	394	6.8	467	7.2	419	9.0	444	7.2	438	7.4	425	7.7	428	9.7	454	7.5	429
1995	2.3	463	8.4	390	7.4	460	7.8	400	9.9	422	6.8	411	6.7	421	7.2	417	6.3	435	7.5	412
1996	5.1	493	7.9	397	9.1	460	8.2	393	10.9	417	8.4	411	7.4	433	6.0	441	7.1	454	7.9	420
1997	2.7	467	6.4	424	4.9	465	6.1	407	10.4	434	8.5	411	6.8	433	6.3	400	5.6	446	6.9	424
1998	4.9	461	8.1	409	9.3	470	7.9	418	9.4	415	7.0	413	6.4	414	7.4	412	4.3	439	7.3	418
1999	3.5	453	6.8	401	8.2	469	7.2	412	9.0	429	5.9	401	4.3	421	7.7	412	4.0	433	6.4	416
2000	5.8	443	6.7	395	7.2	448	6.6	433	8.6	424	6.9	399	3.9	425	6.6	422	3.6	435	6.2	417
2001	4.4	453	8.6	415	10.9	464	8.9	421	7.4	415	7.1	386	5.2	424	7.4	414	5.9	426	7.4	416
2002	4.1	432	8.6	412	7.6	422	8.4	420	10.0	415	7.4	398	6.2	404	5.3	423	3.8	427	7.2	414
2003	4.1	456	10.2	418	9.8	426	7.1	426	10.0	424	6.4	405	6.4	434	6.8	407	4.9	437	7.5	421
Blue crab																				
1983	ND		0.2	151	0.3	154	0.1	151	0.2	142	0.3	142	0.2	151	0.1	156	0.2	145	0.2	147
1984	ND		0.2	150	0.4	135	0.1	143	0.2	137	0.2	142	0.3	147	0.3	145	0.2	142	0.2	144
1985	ND		0.3	149	0.5	151	0.2	144	0.3	136	0.2	141	0.2	149	0.3	141	0.2	158	0.2	147
1986	0.2	146	0.3	151	0.6	133	0.2	140	0.1	135	0.1	144	0.1	154	<.1	147	0.1	148	0.2	145
1987	0.3	152	0.3	139	0.3	138	0.1	138	0.2	140	0.1	155	0.1	151	<.1	137	0.1	142	0.1	141
1988	0.3	154	0.1	148	0.1	159	<.1	135	0.1	141	0.1	150	0.1	145	<.1	115	0.1	152	0.1	147
1989	0.2	157	0.1	137	0.4	128	<.1	136	<.1	128	<.1	131	<.1	149	<.1	72	<.1	147	0.1	136
1990	0.2	154	0.2	141	0.2	129	<.1	138	0.2	135	0.1	135	0.2	140	<.1	114	0.1	139	0.1	138
1991	0.1	141	0.2	132	0.4	135	0.2	144	0.1	136	0.1	144	0.1	140	<.1	105	0.1	152	0.1	138
1992	0.1	151	0.2	153	0.1	135	<.1	144	0.1	133	0.1	142	0.3	150	0.4	146	0.1	146	0.1	147
1993	0.2	161	0.1	144	0.2	162	0.1	147	0.1	148	0.1	152	0.2	148	0.1	147	<.1	136	0.1	149
1994	0.1	155	<.1	144	0.1	160	<.1	143	0.1	134	<.1	149	0.1	158	<.1	102	<.1	129	<.1	140
1995	0.1	164	0.1	147	0.3	165	<.1	151	<.1	161	<.1	167	<.1	152	<.1	141	<.1	107	<.1	153

Table 1. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Blue crab (cont.)																				
1996	0.2	150	0.1	136	0.2	152	0.1	138	<.1	163	<.1	151	<.1	161	<.1	141	0.1	149	0.1	145
1997	0.1	152	0.2	149	0.4	150	0.1	155	<.1	141	<.1	153	<.1	152	<.1	114	0.1	149	0.1	149
1998	0.1	162	0.1	148	0.2	158	0.1	155	0.1	160	<.1	151	<.1	152	0.1	161	0.1	129	<.1	152
1999	0.1	143	0.1	147	0.2	158	<.1	155	0.1	153	<.1	159	0.1	157	0.1	161	<.1	176	<.1	154
2000	0.1	157	<.1	165	0.1	164	<.1	163	<.1	146	<.1	155	<.1	155	<.1	151	<.1	31	<.1	157
2001	0.1	146	<.1	169	0.1	151	<.1	149	<.1	159	<.1	155	<.1	127	<.1	97	<.1	121	<.1	148
2002	0.1	146	0.1	156	0.3	155	0.1	150	0.1	152	<.1	159	<.1	151	<.1	138	<.1	135	<.1	153
2003	0.2	157	0.1	144	0.9	153	0.1	146	0.1	161	0.1	154	0.3	160	0.2	158	0.1	150	0.1	154

TABLE 2. Mean catch rates (No./h) and mean total lengths (mm) of selected fishes and blue crab caught with gill nets (all meshes combined) by bay system during fall 1975-2003. Blank indicates no measurement taken; ND = no data.

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Red drum																				
1975	0.8	382	1.1	403	ND		1.2	337	0.9	326	1.1	339	0.4	330	0.3	424	0.7	474	0.9	373
1976	ND		1.0	509	1.1	487	0.5	415	1.6	406	0.5	395	0.5	460	0.4	442	1.3	465	0.9	452
1977	ND		0.6	445	0.9	390	0.8	435	1.0	386	0.6	392	0.5	427	0.2	364	0.4	448	0.6	416
1978	ND		0.3	429	0.7	376	1.1	395	0.6	384	1.0	401	0.4	429	0.3	455	0.4	493	0.6	412
1979	ND		0.8	386	0.7	403	1.4	353	1.9	376	0.9	378	0.8	352	0.5	387	0.5	449	1.0	378
1980	ND		0.5	436	0.8	473	0.6	434	0.9	411	1.1	386	0.7	370	0.5	454	0.7	449	0.7	419
1981	ND		0.5	429	0.7	405	0.6	390	0.7	373	0.8	403	0.6	396	0.3	515	0.8	488	0.6	422
1982	ND		0.6	440	0.9	401	0.6	390	0.5	360	0.4	386	0.3	417	0.2	456	0.5	440	0.5	412
1983	ND		0.6	436	0.8	394	0.5	418	0.6	407	0.4	410	0.3	448	0.2	486	0.7	509	0.5	440
1984	ND		0.9	451	1.1	551	0.4	381	0.6	383	0.5	377	0.8	400	0.7	457	0.7	472	0.7	433
1985	ND		0.9	421	1.3	420	0.8	394	1.3	385	0.9	427	0.7	436	0.3	460	0.9	478	0.9	423
1986	0.4	481	0.7	468	0.9	453	0.8	403	1.2	441	0.9	454	0.5	450	0.4	486	0.9	495	0.8	456
1987	0.4	449	0.5	459	0.9	446	0.8	372	1.0	473	0.6	459	0.4	424	0.3	527	1.5	532	0.7	467
1988	0.5	399	0.8	437	1.5	486	0.9	418	1.1	457	0.9	454	0.5	458	0.3	520	1.3	522	0.8	463
1989	0.4	461	0.6	479	1.1	511	0.4	402	1.1	468	0.7	423	0.6	476	0.3	533	1.1	521	0.7	475
1990	0.4	500	0.3	488	0.8	497	0.5	408	1.1	458	1.0	477	0.8	432	0.7	553	1.0	534	0.7	482
1991	1.1	412	0.5	393	0.9	380	0.6	402	1.3	375	1.0	442	1.5	451	0.6	517	1.5	514	0.9	441
1992	0.5	531	0.7	482	2.0	494	0.8	419	0.7	453	1.4	435	1.0	477	0.7	502	1.3	479	0.9	465
1993	0.3	484	0.4	482	1.9	526	0.9	439	1.6	480	1.7	490	1.0	500	0.7	555	1.4	531	1.0	496
1994	0.6	426	0.6	437	1.9	478	0.6	447	1.0	470	1.0	468	0.6	471	0.4	568	1.1	539	0.8	481
1995	0.6	454	0.5	474	2.1	470	0.5	413	0.7	421	0.9	458	0.6	467	0.3	521	0.9	506	0.7	464
1996	0.8	431	0.5	453	2.2	479	0.7	452	1.0	456	1.1	468	0.5	467	0.5	507	1.0	493	0.8	468
1997	0.8	473	0.9	469	2.0	496	1.0	414	1.0	436	1.6	490	0.9	485	0.8	505	1.6	510	1.1	476
1998	0.6	460	0.6	450	1.2	470	1.1	427	1.5	439	1.4	455	0.6	435	0.5	457	1.3	492	1.0	452
1999	0.5	476	0.6	468	2.2	509	0.4	447	1.0	472	1.3	484	0.7	463	0.5	499	1.1	509	0.8	482
2000	0.7	447	0.9	516	1.1	507	0.5	406	1.2	491	1.0	481	1.1	520	0.7	544	1.4	539	0.9	504
2001	0.7	462	1.0	455	1.8	477	0.7	417	1.3	426	0.8	467	0.7	481	0.5	511	0.9	505	0.9	460
2002	1.0	511	1.1	499	1.4	459	1.0	407	1.4	436	1.5	474	0.9	441	0.4	476	1.3	471	1.1	463
2003	0.7	487	0.6	492	1.5	482	1.0	435	1.3	443	1.5	489	0.8	466	0.6	509	1.5	497	1.0	475
Spotted seatrout																				
1975	0.1	413	0.2	447	ND		0.6	419	1.0	389	0.6	474	0.4	479	0.2	455	0.8	413	0.5	428
1976	ND		0.3	463	0.9	451	0.4	437	0.7	427	0.2	448	0.6	387	0.2	455	2.4	431	0.7	433
1977	ND		0.3	501	0.3	461	0.4	455	0.5	387	0.1	485	0.3	483	0.6	412	0.8	464	0.4	449
1978	ND		0.3	544	0.3	400	0.8	406	0.5	387	0.1	383	0.2	417	0.4	431	0.5	437	0.4	432
1979	ND		0.2	449	0.1	385	0.6	418	0.2	439	0.1	476	0.2	413	0.1	434	0.4	472	0.2	438
1980	ND		0.4	476	0.2	418	0.3	406	0.3	435	0.2	446	0.3	465	0.2	434	0.5	490	0.3	458

Table 2. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h
Spotted seatrout (cont.)																				
1981	ND		0.3	483	0.8	419	0.4	437	0.3	428	0.2	442	0.4	437	0.2	469	0.7	486	0.4	457
1982	ND		0.3	456	0.4	468	0.3	430	0.4	428	0.2	446	0.2	458	0.4	435	0.5	453	0.3	445
1983	ND		0.3	464	0.5	420	0.3	438	0.5	425	0.2	459	0.3	435	0.3	459	0.6	476	0.4	452
1984	ND		0.4	465	0.3	459	0.2	430	0.2	420	0.1	453	0.2	467	0.1	400	0.4	458	0.3	453
1985	ND		0.3	470	0.3	418	0.4	439	0.2	430	0.2	438	0.4	432	0.2	443	0.6	475	0.3	453
1986	0.2	395	0.4	438	0.4	444	0.5	419	0.4	432	0.3	442	0.4	464	0.3	437	1.0	472	0.4	446
1987	0.1	410	0.2	459	0.5	425	0.6	425	0.3	422	0.3	452	0.5	461	0.2	456	0.7	461	0.4	446
1988	0.1	420	0.5	444	0.7	432	0.3	439	0.4	438	0.3	430	0.4	442	0.2	428	0.9	479	0.4	449
1989	0.1	430	0.3	441	0.4	447	0.2	435	0.4	457	0.3	446	0.4	475	0.1	464	0.6	460	0.3	453
1990	<.1	399	0.2	460	0.5	461	0.2	427	0.2	479	0.3	459	0.5	474	0.1	505	0.5	477	0.3	467
1991	0.1	378	0.2	442	0.3	473	0.5	406	0.4	415	0.3	436	0.6	449	0.4	482	0.8	466	0.4	443
1992	0.1	392	0.3	418	0.5	452	0.4	417	0.2	436	0.4	457	0.6	463	0.5	508	0.8	443	0.4	448
1993	0.1	450	0.3	446	0.9	472	0.3	428	0.4	430	0.3	441	0.9	427	0.5	468	0.6	447	0.4	444
1994	0.1	398	0.4	434	0.8	465	0.3	417	0.5	431	0.4	435	0.6	442	0.5	448	0.6	429	0.4	436
1995	0.1	397	0.4	439	1.0	474	0.3	438	0.5	431	0.4	429	0.4	454	0.4	451	0.5	432	0.4	440
1996	0.2	405	0.6	430	0.7	490	0.3	416	0.7	426	0.7	427	0.3	460	0.6	426	0.4	436	0.5	432
1997	0.2	420	0.7	431	0.6	526	0.3	424	0.6	425	0.5	432	0.4	477	0.4	430	0.4	429	0.5	436
1998	0.2	414	0.8	420	0.5	497	0.5	457	0.6	428	0.6	442	0.3	438	0.4	454	0.6	439	0.6	436
1999	0.2	442	0.5	429	0.6	469	0.3	436	0.3	436	0.5	440	0.4	446	0.4	434	0.7	434	0.4	436
2000	0.3	417	0.4	445	0.6	444	0.4	419	0.5	435	0.4	450	0.3	476	0.3	453	0.6	469	0.4	446
2001	0.2	421	0.4	453	0.8	474	0.4	426	0.6	425	0.7	430	0.4	441	0.5	435	0.7	449	0.5	439
2002	0.4	441	0.5	469	0.5	496	0.4	410	0.5	423	0.6	433	0.7	453	0.3	435	0.6	449	0.5	442
2003	0.2	446	0.4	433	0.5	460	0.4	411	0.5	420	0.4	455	0.3	453	0.5	432	0.4	437	0.4	434
Black drum																				
1975	0.5	294	0.4	366	ND		0.9	326	0.5	315	0.8	290	0.4	358	1.2	422	1.0	454	0.7	367
1976	ND		0.3	337	0.7	305	0.9	344	1.2	325	0.6	376	0.3	366	1.0	503	2.4	419	0.9	388
1977	ND		0.4	384	0.5	371	0.5	338	0.7	336	0.4	341	0.3	365	0.8	406	2.2	410	0.7	383
1978	ND		0.4	383	1.0	346	0.5	383	0.3	306	0.5	311	0.1	383	0.8	425	0.4	377	0.5	372
1979	ND		0.2	398	0.1	410	0.2	404	0.4	361	0.3	380	0.4	308	0.4	391	0.5	423	0.3	387
1980	ND		0.8	391	0.9	341	0.7	306	1.2	298	0.9	340	0.5	370	0.6	365	1.0	400	0.8	352
1981	ND		0.3	408	0.4	343	0.4	383	0.5	315	0.5	341	0.4	357	0.5	390	0.8	384	0.5	369
1982	ND		0.6	355	2.4	346	0.6	352	1.0	296	1.1	337	0.6	369	0.9	388	1.9	387	1.0	356
1983	ND		0.2	381	1.0	361	0.6	375	0.6	328	0.6	345	0.7	406	0.5	422	0.9	418	0.6	381
1984	ND		0.5	405	0.7	348	0.2	386	0.3	269	0.2	329	0.2	376	0.4	438	0.5	442	0.3	389
1985	ND		0.8	379	0.6	363	0.4	357	0.3	295	0.4	325	0.2	363	0.9	389	0.5	435	0.5	372
1986	0.4	360	0.7	380	0.6	303	0.6	351	0.4	342	0.5	357	0.3	388	0.5	417	0.5	441	0.5	379
1987	0.3	378	0.4	376	1.5	376	0.4	383	0.3	364	0.5	370	0.2	384	0.4	403	0.6	465	0.4	393
1988	0.2	355	0.5	387	1.2	339	0.7	346	1.0	334	0.7	330	0.7	337	1.5	405	0.6	422	0.8	368
1989	0.5	324	2.0	384	1.4	358	0.8	351	1.0	337	1.4	373	1.3	416	1.5	421	1.2	401	1.3	383

Table 2. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Black drum (cont.)																					
1990	0.3	342	0.4	375	0.8	368	0.6	362	1.0	298	1.0	334	0.6	398	1.0	431	1.0	423	0.8	372	
1991	0.3	347	0.5	382	1.0	364	0.6	375	1.3	369	0.7	321	0.9	340	2.2	359	1.8	367	1.0	361	
1992	0.4	373	0.5	402	1.1	422	0.7	394	0.3	352	0.9	372	0.8	372	1.4	363	2.2	366	0.9	375	
1993	0.3	372	0.6	400	1.0	456	0.8	430	1.0	449	1.6	439	1.7	424	3.8	422	2.7	401	1.6	421	
1994	0.5	370	0.5	415	0.3	442	0.7	438	0.9	453	0.9	429	0.9	432	4.9	430	2.2	445	1.4	433	
1995	1.0	347	0.6	358	0.5	461	0.6	354	0.7	398	1.1	408	1.5	472	4.5	461	2.3	480	1.4	438	
1996	0.6	410	0.4	381	0.5	401	1.0	394	1.4	404	1.4	414	1.3	454	4.1	451	2.2	492	1.5	438	
1997	1.2	359	0.3	379	0.7	429	0.6	397	0.7	413	1.1	409	0.6	434	3.6	425	1.2	474	1.1	419	
1998	0.6	350	0.5	367	0.3	414	0.9	377	1.5	467	1.2	387	0.8	421	3.2	381	1.5	442	1.2	390	
1999	0.8	363	0.6	356	0.3	381	0.5	347	1.1	375	1.6	387	0.6	369	2.0	433	1.2	476	1.0	401	
2000	1.6	345	0.6	374	0.2	374	0.7	368	2.0	368	2.1	398	1.3	407	3.5	411	1.1	462	1.5	397	
2001	0.7	353	0.9	397	1.6	389	0.7	376	2.2	370	1.5	375	0.7	408	3.4	402	1.0	500	1.4	397	
2002	0.6	377	0.6	411	0.6	360	0.8	382	1.1	373	1.3	397	0.7	406	3.5	400	0.8	479	1.2	403	
2003	0.8	383	0.4	404	0.7	402	0.7	395	1.4	401	1.1	399	0.6	410	2.4	433	0.7	506	1.0	419	
Sheepshead																					
1975	0.0		<.1	362	ND		0.1	316	0.3	291	1.1	296	0.2	376	0.3	409	0.1	352	0.3	323	
1976	ND		<.1	331	0.2	308	0.2	273	0.4	329	1.0	255	0.1	328	0.2	360	0.4	341	0.3	297	
1977	ND		0.1	342	0.3	316	0.1	314	0.2	321	0.5	267	0.2	335	0.2	406	0.3	356	0.2	323	
1978	ND		0.1	308	0.2	307	0.1	342	0.5	371	0.6	306	0.2	361	0.3	376	0.1	300	0.2	337	
1979	ND		<.1	335	0.2	352	0.1	312	0.5	362	0.8	318	0.2	339	0.1	395	0.2	349	0.2	338	
1980	ND		0.1	283	0.1	309	<.1	353	0.7	296	0.6	307	0.2	361	0.2	382	0.4	330	0.3	316	
1981	ND		<.1	321	0.1	277	0.2	292	0.3	335	0.2	322	0.1	343	0.1	382	0.3	332	0.2	327	
1982	ND		0.1	330	0.3	332	0.1	313	0.1	296	0.2	350	0.1	365	0.2	383	0.3	330	0.1	339	
1983	ND		<.1	342	0.5	345	0.1	338	0.2	302	0.1	355	0.1	361	0.2	395	0.3	340	0.2	346	
1984	ND		0.1	369	0.3	383	<.1	369	<.1	427	<.1	436	<.1	383	0.1	417	0.1	333	0.1	379	
1985	ND		<.1	380	0.2	379	<.1	374	0.1	362	<.1	326	<.1	352	<.1	435	0.1	369	0.1	369	
1986	<.1	340	0.1	359	0.1	297	0.1	336	0.1	329	0.1	304	0.1	359	<.1	407	0.1	351	0.1	336	
1987	<.1	402	<.1	381	0.1	366	0.1	352	0.1	371	0.2	360	0.1	340	<.1	386	0.2	342	0.1	355	
1988	0.0		<.1	368	0.1	340	0.1	358	0.1	346	0.1	304	<.1	354	0.1	398	0.2	382	0.1	359	
1989	<.1	299	0.1	371	0.2	343	<.1	324	0.2	341	0.1	329	0.1	361	<.1	422	0.2	371	0.1	357	
1990	<.1	303	<.1	418	0.3	354	<.1	332	0.1	417	<.1	360	<.1	367	0.1	422	0.1	403	0.1	385	
1991	<.1	336	<.1	435	0.1	392	<.1	359	0.1	365	<.1	353	<.1	413	<.1	446	0.1	384	<.1	387	
1992	<.1	367	<.1	362	0.1	392	0.2	368	<.1	320	0.1	307	<.1	379	<.1	445	0.1	398	0.1	363	
1993	<.1	329	<.1	372	0.2	389	0.1	363	0.1	328	0.1	315	<.1	407	<.1	486	0.1	412	0.1	369	
1994	<.1	310	0.1	426	0.2	390	0.1	367	0.2	371	0.1	365	<.1	406	<.1	453	0.1	377	0.1	383	
1995	0.1	341	<.1	356	0.2	412	0.1	354	0.2	377	0.1	377	<.1	352	<.1	339	0.1	375	0.1	373	
1996	<.1	371	0.1	347	0.2	398	0.1	386	0.3	363	0.1	373	0.1	365	<.1	469	0.1	360	0.1	369	
1997	<.1	363	0.1	352	0.2	406	0.2	353	0.3	368	0.2	362	0.1	372	<.1	397	0.1	365	0.1	365	
1998	<.1	415	0.1	400	0.2	394	0.1	384	0.2	350	0.3	347	0.1	367	<.1	390	0.1	375	<.1	365	
1999	<.1	360	<.1	387	0.3	426	0.1	395	0.2	354	0.2	361	<.1	383	<.1	385	0.1	402	<.1	378	

Table 2. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h
Sheepshead (cont.)																				
2000	<.1	351	0.1	431	0.1	412	0.1	377	0.2	349	0.4	367	0.1	396	<.1	422	0.1	410	0.1	379
2001	<.1	379	<.1	391	0.2	394	0.1	363	0.2	355	0.2	347	<.1	367	0.1	436	0.1	358	0.1	368
2002	<.1	383	<.1	403	0.1	419	0.3	401	0.3	389	0.1	380	0.1	382	0.1	408	0.2	347	0.1	386
2003	<.1	436	<.1	395	0.2	397	<.1	383	0.3	381	0.2	380	0.1	388	<.1	411	0.3	351	0.1	374
Southern flounder																				
1975	0.1	337	<.1	317	ND		0.1	323	0.1	250	0.1	309	0.2	380	0.1	448	0.1	338	0.1	342
1976	ND		<.1	365	0.5	321	0.1	296	0.2	363	0.1	304	0.3	351	0.1	347	0.1	389	0.1	348
1977	ND		0.2	331	0.3	342	<.1	322	0.2	312	0.2	368	0.1	383	<.1	491	0.1	353	0.1	342
1978	ND		0.1	359	0.1	354	<.1	310	0.1	310	0.1	377	0.2	372	0.1	354	0.1	335	0.1	352
1979	ND		<.1	348	0.1	331	0.1	338	0.2	388	0.1	336	0.1	347	0.1	396	0.2	366	0.2	363
1980	ND		0.2	345	0.3	369	0.2	330	0.1	325	0.1	359	0.2	367	0.1	363	0.2	400	0.2	354
1981	ND		0.1	326	0.1	351	0.1	335	0.1	311	0.1	356	0.1	348	0.1	387	0.1	358	0.1	346
1982	ND		0.2	345	0.3	354	0.1	350	0.2	311	0.1	360	0.1	353	0.1	349	0.2	354	0.2	346
1983	ND		0.1	348	0.2	350	0.1	324	0.2	342	0.1	335	0.1	367	0.1	345	0.1	389	0.1	351
1984	ND		0.1	341	0.3	364	0.1	328	0.1	322	0.1	323	0.1	328	0.2	326	0.1	293	0.1	326
1985	ND		0.1	340	0.2	370	0.1	333	0.1	330	0.1	336	0.1	337	0.2	347	0.2	331	0.1	339
1986	0.1	299	0.1	363	0.1	376	0.1	346	0.1	377	<.1	348	0.1	371	0.1	368	0.2	363	0.1	361
1987	0.1	335	0.1	336	0.1	350	0.1	308	0.1	345	0.1	394	0.1	337	<.1	381	0.1	402	0.1	351
1988	0.1	346	0.1	350	0.2	353	0.1	365	0.1	342	0.1	372	<.1	350	<.1	419	0.1	387	0.1	363
1989	0.1	324	0.1	349	0.2	362	0.1	328	0.1	353	0.1	342	<.1	336	<.1	392	0.1	382	0.1	352
1990	<.1	325	0.1	326	0.2	340	0.1	326	0.1	324	0.1	344	0.1	333	0.1	279	0.1	340	0.1	326
1991	<.1	313	0.1	354	0.1	371	0.1	332	0.1	352	0.1	366	0.1	354	0.1	384	0.1	365	0.1	360
1992	<.1	330	0.1	356	0.3	375	0.1	352	<.1	370	0.1	385	0.1	379	<.1	461	0.1	386	0.1	374
1993	<.1	350	0.1	379	0.2	426	0.1	364	0.1	395	0.1	411	0.1	377	<.1	352	0.1	387	0.1	388
1994	<.1	373	0.1	361	0.2	401	0.1	357	0.1	378	0.1	386	0.1	383	<.1	416	<.1	393	0.1	377
1995	0.1	349	<.1	360	0.1	407	0.1	357	0.1	351	0.1	390	0.1	382	<.1	360	<.1	420	0.1	372
1996	<.1	393	0.1	381	0.1	371	<.1	353	0.1	372	<.1	363	0.1	367	<.1	381	<.1	356	0.1	370
1997	<.1	334	0.1	352	0.2	387	<.1	342	0.1	359	<.1	386	0.1	381	<.1	407	0.1	388	0.1	368
1998	<.1	368	<.1	360	0.1	394	<.1	382	<.1	350	<.1	368	<.1	378	<.1	375	0.1	389	<.1	373
1999	0.1	332	0.1	359	0.2	380	0.1	342	0.1	379	0.1	368	<.1	396	<.1	402	0.1	400	<.1	367
2000	0.1	385	0.1	396	0.2	403	<.1	335	0.1	357	0.1	382	0.1	374	<.1	370	0.1	430	<.1	386
2001	<.1	329	0.1	365	0.1	404	<.1	323	0.1	354	0.1	346	<.1	378	<.1	386	<.1	374	<.1	359
2002	<.1	344	0.1	365	0.1	384	0.1	348	0.1	358	0.1	400	0.1	369	0.1	423	0.1	350	<.1	371
2003	<.1	349	<.1	373	0.1	385	<.1	346	0.1	341	<.1	357	<.1	406	<.1	383	<.1	404	<.1	369
Atlantic croaker																				
1975	0.0		<.1	245	ND		0.0		0.1	312	0.2	338	0.4	321	0.1	314	0.1	343	0.1	323
1976	ND		0.2	262	0.1	248	0.3	263	0.4	296	0.2	314	0.6	320	0.5	329	0.3	326	0.3	301
1977	ND		0.1	291	0.1	275	0.2	274	0.2	290	0.8	307	0.6	350	0.7	345	0.2	340	0.3	319
1978	ND		0.1	274	0.1	248	0.2	255	0.1	242	0.5	314	0.4	296	0.4	283	<.1	331	0.2	288
1980	ND		0.2	284	0.1	262	0.2	261	0.1	264	0.3	320	1.7	320	0.1	302	0.2	298	0.3	303

Table 2. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
Atlantic croaker (cont.)																					
1979	ND			<.1	271	0.2	248	0.1	287	0.2	270	0.2	303	0.5	326	0.1	316	0.2	331	0.2	305
1981	ND			0.2	279	0.2	254	0.1	273	0.2	268	0.7	328	0.8	320	0.2	323	0.4	320	0.3	310
1982	ND			0.4	282	0.4	256	0.1	277	0.2	278	0.4	328	1.0	327	0.4	338	0.3	330	0.4	310
1983	ND			0.3	275	0.4	261	0.2	263	0.5	286	0.3	309	1.0	320	0.1	312	0.5	314	0.4	299
1984	ND			0.2	274	0.2	259	0.2	259	0.2	252	0.1	261	0.5	274	0.1	264	0.2	270	0.2	268
1985	ND			0.6	272	0.5	258	0.1	254	0.1	261	0.3	268	0.6	279	0.2	307	0.3	281	0.3	274
1986	0.2	296		0.4	281	0.1	261	0.2	253	0.2	256	0.3	280	1.4	305	0.1	322	0.3	299	0.4	289
1987	0.1	287		0.8	288	0.1	252	0.3	253	<.1	253	0.2	283	1.5	323	0.1	321	0.3	322	0.4	298
1988	0.2	276		0.6	291	0.1	267	0.3	255	0.2	255	0.3	301	0.8	317	0.1	357	0.3	318	0.3	295
1989	0.1	284		0.6	271	0.2	257	0.2	250	0.2	262	0.2	266	0.3	317	<.1	324	0.1	308	0.2	273
1990	0.2	283		0.4	286	0.2	270	0.1	261	<.1	260	0.1	261	0.3	290	<.1	298	0.1	264	0.2	280
1991	0.1	271		0.2	274	0.1	290	0.2	260	0.2	251	0.2	262	0.4	283	<.1	269	1.4	279	0.3	275
1992	0.2	293		0.4	269	0.1	278	0.1	258	0.1	268	0.3	278	1.0	299	0.1	328	0.7	291	0.3	286
1993	0.1	286		1.4	273	0.2	276	0.1	265	0.2	267	0.1	281	1.0	313	<.1	306	0.3	300	0.5	282
1994	0.1	277		0.3	283	0.1	295	0.1	270	0.2	265	0.1	293	1.0	310	0.1	336	0.1	324	0.2	294
1995	0.1	272		0.4	284	0.3	301	0.1	271	0.3	272	0.4	285	0.6	343	0.1	331	0.1	321	0.3	297
1996	0.1	278		0.5	268	0.1	286	0.3	260	0.5	279	0.3	281	0.5	311	<.1	296	0.1	332	0.3	279
1997	0.2	282		0.5	287	0.1	287	0.2	260	0.3	266	0.2	282	0.4	306	0.1	319	0.2	300	0.3	280
1998	0.1	279		0.2	274	0.2	269	0.3	261	0.5	268	0.2	277	0.5	299	0.1	302	0.1	288	0.3	277
1999	0.3	302		0.6	289	0.2	299	0.2	258	0.3	268	0.1	288	0.7	295	0.1	310	0.1	301	0.3	287
2000	0.4	331		0.8	315	0.1	324	0.3	262	0.5	284	0.1	276	0.6	329	0.1	345	0.1	338	0.4	306
2001	0.2	293		0.8	292	0.1	297	0.2	261	0.4	267	0.3	277	0.6	292	0.1	293	0.1	310	0.3	286
2002	0.3	294		0.6	293	0.3	300	0.2	261	0.7	270	0.4	289	0.6	292	0.1	285	0.1	314	0.4	286
2003	0.2	273		0.6	278	0.1	291	0.2	253	0.4	263	0.2	272	1.0	295	0.2	278	0.1	285	0.4	279
Gafftopsail catfish																					
1975	<.1	530		0.0		ND		0.1	571	<.1	493	<.1	552	0.1	575	0.0		0.0		<.1	567
1976	ND			0.1	482	0.0		0.2	526	0.4	498	0.1	587	<.1	475	0.0		0.0		0.1	509
1977	ND			<.1	516	0.0		<.1	499	0.2	526	<.1	385	<.1	600	0.1	529	0.0		<.1	516
1978	ND			0.0		0.0		<.1	514	<.1	543	0.0		0.1	551	0.0		0.0		<.1	534
1979	ND			0.0		0.2	542	0.0		0.1	499	<.1	533	0.0		0.0		<.1	282	<.1	511
1980	ND			0.1	550	0.0		<.1	478	0.3	509	0.1	522	0.1	517	0.0		0.0		0.1	525
1981	ND			0.1	492	0.0		<.1	505	0.1	542	0.1	511	0.1	523	0.0		<.1	379	0.1	507
1982	ND			<.1	423	<.1	616	0.1	520	0.3	527	0.1	533	0.1	545	<.1	541	0.0		0.1	517
1983	ND			<.1	492	0.1	473	<.1	498	0.3	514	0.1	544	0.1	532	0.0		<.1	408	0.1	514
1984	ND			<.1	517	0.1	474	0.1	510	0.3	507	0.1	521	<.1	488	0.0		<.1	315	0.1	509
1985	ND			0.1	525	0.1	482	0.1	498	0.1	546	0.1	556	0.1	519	<.1	556	<.1	511	0.1	528
1986	0.1	462		<.1	521	0.1	473	<.1	474	0.2	485	0.1	532	0.1	514	0.0		<.1	356	0.1	495
1987	<.1	423		0.1	491	0.1	527	0.1	512	<.1	519	0.1	542	<.1	528	0.0		<.1	390	<.1	514
1988	<.1	370		<.1	515	<.1	534	0.2	521	0.1	544	0.1	538	0.1	521	<.1	495	<.1	325	0.1	525
1989	<.1	321		<.1	480	<.1	485	0.2	509	0.1	549	0.1	547	0.1	384	0.0		<.1	358	0.1	524

Table 2. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h
Gafftopsail catfish (cont.)																				
1990	<.1	465	0.1	504	0.1	499	0.2	499	0.2	509	0.1	583	0.1	549	<.1	598	<.1	429	0.1	513
1991	<.1	469	<.1	502	0.1	518	0.1	476	<.1	562	<.1	569	<.1	472	0.0		<.1	299	<.1	513
1992	<.1	464	0.1	444	0.1	556	0.1	519	0.1	565	<.1	541	<.1	496	<.1	495	<.1	406	0.1	508
1993	0.0		0.1	513	0.1	566	0.1	501	0.3	538	<.1	585	0.1	473	0.0		<.1	414	0.1	524
1994	<.1	409	0.1	441	0.1	501	0.2	516	0.2	541	0.1	561	0.1	511	0.0		<.1	419	0.1	509
1995	<.1	380	0.1	408	0.2	511	0.2	503	0.3	522	0.1	565	0.1	462	0.0		<.1	340	0.1	498
1996	<.1	490	0.1	422	<.1	504	0.1	483	0.2	517	<.1	494	0.1	551	0.0		<.1	322	0.1	490
1997	<.1	417	0.3	462	0.1	529	0.1	477	0.2	496	0.1	507	<.1	392	0.0		<.1	377	0.1	474
1998	<.1	512	0.1	471	<.1	475	0.1	507	0.2	492	0.1	521	0.1	523	0.0		<.1	399	0.1	496
1999	<.1	516	0.2	488	0.1	512	0.3	515	0.3	535	0.1	511	0.2	523	<.1		<.1	522	0.2	511
2000	<.1	380	0.1	500	<.1	576	0.2	482	0.1	491	0.1	521	0.1	541	0		<.1	488	<.1	494
2001	0.1	462	0.2	474	0.2	544	0.3	493	0.5	514	0.3	499	0.2	521	<.1	492	<.1	345	0.2	498
2002	<.1	475	0.4	481	0.2	539	0.4	506	0.5	525	0.2	498	0.2	509	<.1	367	<.1	454	0.2	501
2003	0.2	478	0.4	512	0.3	525	0.4	525	0.6	522	0.2	529	0.3	529	0		<.1	466	0.3	519
Gulf menhaden																				
1975	0.0		0.5	272	ND		1.7	302	0.4	221	0.2	307	0.5	284	0.3	280	0.1	312	0.5	286
1976	ND		2.7	240	<.1	270	0.3	246	0.3	275	0.1	267	0.5	275	0.2	304	0.1	275	0.8	255
1977	ND		3.0	246	<.1	248	0.2	244	0.1	240	<.1	237	2.0	254	1.4	258	0.1	211	1.1	249
1978	ND		0.6	249	0.5	249	0.1	241	0.1	239	0.6	242	1.4	250	0.2	254	0.0		0.4	248
1979	ND		0.1	249	0.1	231	0.4	250	<.1	235	0.1	251	0.3	251	0.1	261	0.1	294	0.2	252
1980	ND		0.3	253	0.0		<.1	260	0.1	255	0.1	245	<.1	243	0.6	249	0.1	325	0.2	254
1981	ND		0.7	259	<.1	260	0.1	246	0.1	242	0.1	238	0.3	255	0.7	262	0.1	273	0.3	258
1982	ND		0.6	251	<.1	310	<.1	246	0.1	243	<.1	238	0.8	255	0.1	264	<.1	239	0.2	252
1983	ND		1.7	257	0.1	248	0.1	249	0.2	239	0.2	246	0.2	258	<.1	290	<.1	250	0.5	255
1984	ND		1.0	256	0.2	255	0.4	248	0.4	246	0.6	251	0.5	284	0.2	273	0.2	295	0.5	259
1985	ND		1.5	249	<.1	233	0.1	254	0.1	249	0.1	263	0.5	260	0.2	281	0.1	279	0.5	253
1986	0.2	246	1.5	244	0.1	233	0.3	239	0.1	244	0.2	249	0.8	263	<.1	249	<.1	262	0.5	247
1987	0.1	244	1.8	250	0.0		0.1	244	<.1	278	<.1	250	0.2	259	<.1	256	<.1	278	0.4	250
1988	0.2	268	0.9	244	<.1	206	0.3	233	0.1	241	<.1	252	0.1	264	<.1	249	0.1	317	0.3	247
1989	0.2	253	0.8	245	<.1	236	0.2	231	<.1	240	<.1	276	0.1	252	0.0		<.1	253	0.2	244
1990	0.1	256	1.3	253	<.1	247	0.6	224	<.1	251	0.1	214	<.1	294	0.0		<.1	226	0.4	247
1991	0.3	255	1.4	257	0.0		<.1	217	0.1	239	<.1	229	0.2	256	<.1	287	<.1	240	0.3	256
1992	<.1	299	1.3	257	<.1	232	0.1	239	0.1	245	<.1	257	0.1	271	<.1	266	0.1	237	0.3	256
1993	0.4	283	1.0	254	<.1	255	0.2	269	<.1	300	0.0		0.1	239	<.1	281	0.3	301	0.3	262
1994	0.2	240	0.5	254	<.1	210	0.1	249	<.1	266	<.1	268	0.2	256	<.1	96	<.1	282	0.1	254
1995	0.2	250	2.5	254	<.1	237	0.1	245	0.3	256	<.1	268	0.1	230	<.1	271	<.1	316	0.6	254
1996	0.1	260	2.3	254	<.1	125	0.1	235	0.1	246	<.1	264	0.1	254	<.1	238	<.1	276	0.5	254
1997	0.1	254	1.9	255	0.0		0.1	254	<.1	259	<.1	245	0.3	278	<.1	237	<.1	295	0.4	256
1998	<.1	282	1.3	248	<.1	322	<.1	243	0.2	251	0.1	264	0.2	238	0.1	256	<.1	307	0.3	249
1999	0.2	285	1.5	264	0.0		0.2	251	0.1	245	0.1	242	1.0	266	0.1	256	0.2	274	0.5	263

Table 2. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	
Gulf menhaden (cont.)																				
2000	0.2	265	1.2	251	0		0.1	247	0.1	241	0.1	239	0.1	246	0.2	246	0.1	281	0.4	251
2001	1.3	269	3.1	255	<.1	ND	0.2	239	0.3	247	0.4	231	0.5	261	0.1	264	<.1	270	0.9	254
2002	0.3	311	2.3	250	<.1	241	0.1	253	0.6	243	0.1	247	0.4	260	0.1	272	0.1	275	0.7	252
2003	0.5	282	3.1	245	<.1	269	0.4	270	0.5	245	0.1	250	0.3	248	0.7	234	0.1	271	0.9	247
Striped mullet																				
1975	<.1	390	0.3	331	ND		0.4	347	0.6	322	2.5	328	1.0	382	0.3	358	0.5	345	0.7	339
1976	ND		0.3	346	0.2	320	0.3	349	1.7	331	0.5	360	0.3	342	0.6	402	2.0	397	0.7	367
1977	ND		0.2	345	0.2	380	0.4	330	0.9	343	0.3	321	0.4	371	0.3	396	0.6	354	0.4	348
1978	ND		0.2	423	0.6	330	0.7	342	0.5	322	1.1	336	0.1	336	0.1	364	0.3	387	0.4	347
1979	ND		0.1	351	0.1	338	0.3	340	0.7	344	0.7	344	0.3	353	0.6	410	0.3	365	0.4	357
1980	ND		0.2	363	<.1	319	0.2	343	0.6	357	0.6	357	0.3	340	0.3	360	0.5	346	0.3	353
1981	ND		0.1	395	0.1	349	0.1	332	0.6	341	0.5	334	0.3	353	0.3	364	0.9	363	0.4	352
1982	ND		0.2	376	0.4	329	0.3	330	0.4	341	0.8	331	0.2	345	0.1	348	0.4	372	0.4	347
1983	ND		0.2	370	0.2	335	0.2	339	0.3	334	0.5	350	0.3	347	0.3	383	0.6	375	0.3	358
1984	ND		0.4	362	0.7	328	0.3	331	0.5	350	0.6	342	0.4	357	0.5	376	0.4	356	0.5	352
1985	ND		0.2	338	0.2	326	0.2	323	0.5	355	0.3	343	0.2	342	0.3	397	0.3	375	0.3	354
1986	<.1	328	0.1	377	0.3	328	0.1	337	0.4	369	0.2	356	0.2	358	0.1	370	0.7	359	0.2	359
1987	<.1	325	0.2	375	0.4	333	0.7	319	1.1	360	0.6	348	0.3	338	0.2	391	0.4	382	0.5	351
1988	0.1	331	0.2	362	0.4	344	0.4	326	0.4	347	0.4	365	0.3	370	0.4	409	0.4	396	0.3	366
1989	<.1	329	0.2	349	0.2	334	0.2	328	0.3	350	0.4	348	0.2	359	0.3	394	0.5	366	0.3	357
1990	0.1	334	0.4	341	0.3	368	0.2	344	0.8	369	0.7	358	0.2	353	0.2	387	0.4	383	0.4	361
1991	0.1	331	0.2	333	0.6	366	0.1	343	0.8	364	0.5	351	0.3	368	0.1	383	0.4	401	0.3	363
1992	<.1	328	0.3	376	0.3	387	0.4	330	0.2	350	0.7	364	0.4	360	0.2	389	0.3	383	0.4	362
1993	0.6	328	0.9	364	0.7	377	0.5	352	0.7	374	0.9	365	0.4	376	0.6	422	0.4	402	0.7	373
1994	0.1	353	0.6	372	0.4	384	0.6	347	0.3	358	0.7	365	0.2	379	0.1	398	0.2	400	0.4	367
1995	0.2	353	0.4	371	0.3	397	0.4	356	0.2	347	0.5	370	0.3	368	0.4	421	0.2	375	0.3	374
1996	0.1	358	0.3	358	0.2	401	0.4	355	0.4	368	0.4	360	0.3	393	0.8	432	0.3	403	0.4	385
1997	0.1	347	0.4	356	0.3	408	1.5	343	0.4	374	0.8	377	0.4	395	0.5	436	0.2	392	0.6	368
1998	0.1	357	0.1	356	0.2	387	0.8	352	0.3	368	0.9	378	0.3	386	0.3	409	0.4	393	0.4	373
1999	0.1	340	0.4	365	0.2	406	0.3	351	0.3	375	0.6	382	0.2	376	0.3	433	0.3	393	0.3	380
2000	0.2	349	0.2	374	0.1	407	0.2	347	0.3	379	0.4	359	0.2	375	0.2	397	0.2	383	0.2	371
2001	<.1	381	0.2	357	0.2	395	0.3	345	0.4	358	0.7	362	0.2	379	0.5	413	0.3	388	0.3	370
2002	0.1	344	0.3	362	0.1	369	0.5	352	0.7	369	0.5	376	0.4	378	0.6	435	0.5	390	0.4	379
2003	0.2	339	0.4	369	0.1	386	0.4	338	0.6	364	0.7	374	0.3	387	0.3	430	0.7	405	0.5	377
Total finfishes																				
1975	3.0	383	5.1	396	ND		6.6	355	4.9	339	7.9	345	5.7	343	4.3	374	4.8	394	5.5	365
1976	ND		7.2	334	4.0	385	4.9	388	9.1	365	5.0	363	5.0	349	5.1	383	11.1	400	6.8	369
1977	ND		6.2	334	3.2	362	5.4	389	6.2	348	3.6	344	5.8	326	5.2	343	6.5	381	5.5	353
1978	ND		4.0	342	4.0	325	5.0	359	5.1	383	5.2	341	3.8	322	3.6	358	3.1	395	4.3	355

Table 2. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East</u>		<u>Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	
Total finfishes (cont.)																						
1979	ND			3.5	367	2.0	372	4.3	350	5.6	368	3.8	372	3.5	327	2.6	367	3.5	393	3.7	365	
1980	ND			4.0	371	2.9	375	3.3	346	6.1	342	4.8	350	5.0	336	2.5	354	4.2	390	4.3	357	
1981	ND			4.2	357	3.3	355	3.0	384	4.8	358	4.4	375	4.8	364	3.1	357	5.5	388	4.2	369	
1982	ND			6.2	346	6.2	354	3.7	372	5.1	360	4.5	366	5.1	338	3.5	363	5.9	381	5.0	360	
1983	ND			6.0	350	6.2	341	4.0	378	5.3	352	3.9	396	5.8	356	3.0	362	5.5	399	4.9	367	
1984	ND			6.5	364	5.7	379	4.4	369	3.9	362	3.8	399	4.2	347	3.1	373	4.2	406	4.6	373	
1985	ND			7.1	335	4.5	366	3.7	380	4.2	376	3.3	396	4.0	358	3.4	362	4.6	390	4.6	364	
1986	2.6	395		6.0	349	4.4	390	4.6	379	4.7	408	4.0	378	5.3	347	2.2	381	5.2	404	4.6	377	
1987	2.2	430		5.8	334	4.7	390	5.0	323	5.2	428	3.3	391	4.9	353	1.6	406	4.6	444	4.4	374	
1988	2.5	371		6.2	346	6.5	398	5.5	361	5.8	393	4.3	382	5.0	358	3.1	396	5.7	410	5.2	374	
1989	2.2	394		6.8	363	5.2	387	4.3	361	5.6	402	4.7	374	5.4	388	2.9	417	5.2	408	5.0	382	
1990	2.4	401		5.2	343	4.9	387	4.2	345	5.5	399	4.5	400	4.5	398	2.7	433	4.5	431	4.4	384	
1991	3.1	389		5.4	341	5.4	376	4.9	362	6.5	389	4.9	373	6.3	371	4.0	397	7.6	389	5.5	372	
1992	2.7	439		6.1	356	6.1	439	5.6	366	6.0	408	6.2	419	5.8	377	3.4	425	7.3	399	5.7	391	
1993	2.7	379		6.9	347	7.1	457	5.8	380	7.5	430	6.4	455	7.3	394	6.3	443	7.9	425	6.7	407	
1994	3.1	374		6.4	372	6.7	428	5.2	381	6.4	404	5.4	402	5.5	386	7.0	444	6.1	443	5.9	403	
1995	3.9	391		7.1	333	7.2	417	6.0	361	5.9	374	6.4	383	5.8	403	6.5	443	5.7	435	6.2	383	
1996	3.8	398		7.3	355	5.7	431	5.8	376	8.0	408	6.7	393	5.2	403	6.9	433	5.8	438	6.5	396	
1997	4.0	400		7.4	357	4.9	452	6.0	363	5.6	391	5.7	416	4.0	401	5.9	432	5.1	433	5.8	393	
1998	3.3	460		6.0	354	4.0	420	8.3	383	8.1	400	7.2	392	5.1	366	5.8	382	5.1	424	6.4	386	
1999	3.7	382		6.2	365	5.4	436	4.5	406	5.9	420	5.8	414	5.6	366	4.4	403	5.2	423	5.4	397	
2000	5.5	385		6.0	374	3.2	432	4.0	361	7.5	387	6.5	387	5.2	400	6.0	407	5.2	432	5.7	390	
2001	4.2	384		9.0	357	6.8	415	5.1	384	8.0	395	6.7	378	4.9	385	6.3	397	4.1	443	6.4	384	
2002	4.3	417		7.6	378	5.6	404	5.8	385	7.6	387	7.1	397	5.4	393	6.0	396	5.0	415	6.4	391	
2003	4.0	402		8.5	364	6.4	423	5.9	397	7.8	400	6.4	425	6.2	390	5.8	402	5.1	433	6.6	396	
Blue crab																						
1983	ND			0.1	136	0.3	153	0.1	151	0.1	138	0.2	146	0.2	146	0.3	146	0.3	146	0.2	144	
1984	ND			0.1	151	0.1	140	0.1	147	0.1	147	0.2	145	0.2	141	0.2	138	0.2	148	0.1	145	
1985	ND			0.1	149	0.1	154	<.1	142	0.1	139	0.1	141	0.1	143	0.2	147	0.1	148	0.1	145	
1986	0.2	150		<.1	146	<.1	144	<.1	161	0.1	146	<.1	138	0.1	144	<.1	147	0.1	149	0.1	147	
1987	0.2	154		0.1	140	0.1	158	0.2	154	0.3	153	0.1	158	0.1	157	0.3	157	0.1	152	0.2	153	
1988	0.2	155		0.1	144	0.2	150	0.1	137	0.1	138	0.1	145	0.1	147	<.1	129	0.1	152	0.1	147	
1989	0.1	157		<.1	136	<.1	144	<.1	139	<.1	133	<.1	148	<.1	159	0.0		0.1	152	<.1	143	
1990	0.2	146		0.1	149	0.1	144	0.2	144	0.1	144	0.1	149	0.1	138	0.1	129	0.2	142	0.1	144	
1991	0.1	152		<.1	151	0.1	152	0.1	131	0.2	150	<.1	136	0.1	153	0.1	139	0.2	148	0.1	146	
1992	0.1	161		<.1	143	0.1	156	0.1	153	0.1	136	0.1	140	<.1	148	0.2	138	0.1	152	0.1	144	
1993	0.1	169		<.1	145	0.1	150	<.1	156	<.1	146	<.1	160	0.1	155	<.1	157	<.1	142	<.1	153	
1994	0.1	163		<.1	152	0.1	151	<.1	155	<.1	150	<.1	154	<.1	147	<.1	140	<.1	125	<.1	151	
1995	0.1	158		<.1	146	0.1	151	<.1	127	0.1	154	<.1	144	<.1	150	<.1	124	0.1	136	<.1	142	
1996	<.1	155		<.1	185	<.1	154	<.1	147	<.1	159	<.1	140	<.1	144	<.1	139	<.1	148	<.1	159	

Table 2. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Blue crab (cont.)																				
1997	0.1	160	<.1	142	0.1	156	<.1	152	<.1	161	<.1	159	0.1	149	0.2	149	0.1	139	0.1	149
1998	0.1	146	<.1	146	0.1	148	<.1	151	0.1	147	<.1	143	<.1	144	0.2	151	<.1	133	<.1	147
1999	0.2	152	<.1	158	0.1	150	<.1	159	<.1	142	<.1	159	<.1	158	0.1	151	<.1	155	<.1	154
2000	0.1	160	<.1	155	<.1	143	<.1	150	<.1	140	<.1	146	<.1	149	0		<.1	169	<.1	153
2001	0.1	154	<.1	136	0.1	148	<.1	147	<.1	156	<.1	144	<.1	145	0		<.1	109	<.1	145
2002	0.1	147	0.1	134	0.1	139	<.1	130	0.1	151	0.1	142	0.1	154	<.1	143	<.1	87	<.1	142
2003	0.1	152	<.1	134	0.1	163	<.1	147	<.1	164	<.1	150	0.1	149	0.1	148	<.1	152	<.1	148

TABLE 3. Annual mean catch rates (No./ha) and mean total lengths (mm) of selected fishes and shellfishes caught with 18.3-m bag seines by bay system during 1977-2003. Blank indicates no measurement taken; ND = no data.

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length	No./ha	Length
FINFISHES																				
Red drum																				
1977 ^a	ND		20	35	ND		8	51	85	51	14	44	1	41	0		1	39	18	46
1978	ND		3	67	ND		4	43	13	51	4	94	3	67	11	58	17	52	7	58
1979	ND		17	62	ND		6	92	11	67	5	92	18	85	27	66	15	64	14	70
1980	ND		59	74	ND		8	68	28	50	5	88	16	75	4	82	15	72	23	70
1981	ND		26	52	ND		9	86	29	53	30	38	40	46	5	46	45	56	26	52
1982	ND		53	62	ND		9	76	19	102	26	103	21	62	1	55	16	89	24	76
1983	ND		47	67	11 ^b	66	4	70	7	99	12	98	7	88	2	59	41	92	20 ^b	78
1984	ND		13	66	6	70	2	105	12	56	4	100	4	80	2	52	4	73	6	69
1985	ND		3	131	10	106	7	96	7	114	19	82	9	67	1	61	17	69	9	86
1986	19	66	7	87	8	86	2	78	6	105	1	117	4	98	3	84	22	94	7	90
1987	6	99	45	58	47	61	16	88	15	89	9	59	7	71	2	117	32	63	21	66
1988	13	78	8	78	27	79	3	114	6	89	10	78	9	49	4	66	21	63	10	73
1989	61	44	3	59	24	47	4	92	10	82	8	65	4	83	1	54	18	69	9	63
1990	5	62	17	53	27	50	14	51	19	50	43	40	20	57	4	32	25	39	20	46
1991	6	97	14	73	30	53	30	81	36	79	25	61	28	72	5	88	43	61	24	71
1992	5	71	9	85	23	56	15	77	22	84	23	83	7	74	14	51	13	70	14	76
1993	11	73	28	58	40	48	11	66	17	58	13	60	12	73	9	53	23	62	18	60
1994	7	72	22	59	31	55	6	58	13	69	29	58	53	55	11	61	26	70	21	61
1995	20	69	12	48	18	54	7	69	15	76	15	62	26	62	7	86	29	62	15	63
1996	8	76	16	48	21	56	16	49	27	63	5	65	8	76	11	60	14	66	14	58
1997	11	74	12	76	39	63	17	68	16	62	9	76	13	82	6	113	15	85	13	75
1998	6	94	8	66	21	68	7	77	16	62	17	68	43	60	3	71	24	64	15	65
1999	12	67	7	61	16	65	12	63	15	80	19	69	16	85	12	70	10	67	13	71
2000	9	77	13	66	11	65	3	108	7	70	7	70	12	67	4	76	5	48	8	69
2001	4	113	27	60	24	71	9	76	16	73	12	70	38	49	6	87	22	56	18	62
2002	3	116	17	49	19	71	8	85	15	76	10	97	36	56	13	66	15	71	15	66
2003	3	70	10	67	19	66	6	83	10	76	10	83	21	73	5	122	15	76	10	77
Spotted seatrout																				
1977 ^a	ND		34	87	ND		39	84	50	73	1	99	7	84	16	83	5	85	23	82
1978	ND		35	52	ND		6	86	11	69	8	50	4	59	14	93	2	52	14	61
1979	ND		37	79	ND		3	83	12	70	7	68	12	53	13	80	2	86	14	75
1980	ND		17	72	ND		3	84	21	71	11	74	11	79	3	56	<1	60	10	73
1981	ND		16	85	ND		7	110	9	68	13	70	12	65	4	73	6	84	10	80
1982	ND		37	82	ND		7	99	19	62	15	76	4	75	5	78	3	76	15	79
1983	ND		26	84	4 ^b	101	7	73	8	72	14	81	4	79	5	101	4	80	11 ^b	82
1984	ND		7	71	2	85	3	77	1	83	10	74	1	54	1	88	5	98	4	77

Table 3. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout (cont.)																				
1985	ND		5	80	24	73	11	87	4	64	24	61	3	50	9	70	2	78	9	70
1986	2	67	2	85	17	66	5	71	5	78	12	60	4	68	1	72	2	58	5	68
1987	2	92	22	73	14	68	3	82	19	70	13	69	10	76	1	104	3	63	11	72
1988	7	88	6	88	14	75	5	96	7	67	28	68	7	65	5	65	3	87	9	74
1989	5	63	6	79	14	80	6	69	20	61	16	71	6	71	4	50	2	56	8	68
1990	3	69	5	56	10	74	8	66	8	61	14	61	13	65	2	54	<1	86	7	63
1991	1	67	16	63	13	71	15	70	34	59	20	65	8	72	6	63	2	59	14	64
1992	2	73	6	73	4	82	10	59	42	52	12	64	8	69	18	50	2	54	12	58
1993	5	84	6	61	19	71	6	62	15	54	12	68	7	69	14	59	7	49	9	61
1994	3	73	5	64	13	78	13	68	12	66	28	76	7	69	5	79	1	51	10	71
1995	17	70	5	77	23	76	17	63	16	77	33	68	5	89	19	73	3	75	14	71
1996	3	92	6	52	17	93	11	69	16	67	12	79	3	76	9	74	2	74	8	71
1997	3	96	15	61	17	76	13	64	16	66	29	73	9	67	8	74	2	60	13	68
1998	4	104	11	69	23	82	15	71	18	72	17	76	8	81	18	74	3	56	13	73
1999	4	100	8	71	20	63	11	72	24	66	13	72	5	80	21	67	2	60	12	69
2000	2	77	10	71	7	75	8	70	14	72	9	74	3	94	21	67	2	65	9	71
2001	2	118	7	78	21	80	12	75	15	72	10	79	5	78	6	76	<1	76	8	76
2002	1	80	10	83	21	72	9	78	16	67	13	74	6	75	10	80	1	81	9	76
2003	2	105	6	83	20	84	18	75	15	66	9	82	12	71	15	83	1	66	10	77
Black drum																				
1977 ^a	ND		0		ND		11	147	6	179	1	142	1	150	0		0		3	156
1978	ND		36	95	ND		9	112	22	110	2	165	1	122	4	106	0		13	102
1979	ND		40	83	ND		12	106	5	97	1	85	8	89	6	140	18	98	15	92
1980	ND		4	93	ND		4	102	0		2	100	2	75	3	95	1	142	2	97
1981	ND		12	122	ND		11	110	2	141	5	141	2	113	11	44	6	130	8	108
1982	ND		4	124	ND		5	138	9	90	7	94	1	109	<1	155	2	117	4	110
1983	ND		23	91	3 ^b	123	3	118	1	132	2	145	2	108	2	107	<1	141	7 ^b	98
1984	ND		8	108	1	103	3	156	0		1	140	0		1	82	<1	91	2	115
1985	ND		4	141	3	83	3	113	1	122	<1	124	1	68	6	86	0		2	112
1986	2	141	2	107	5	85	0		1	149	0		<1	96	2	68	1	145	1	110
1987	0		1	106	0		4	130	1	118	0		6	74	44	63	1	89	6	72
1988	2	146	5	107	5	94	6	126	2	132	2	128	2	112	8	90	2	158	4	114
1989	0		4	124	8	87	3	109	1	125	3	116	1	110	11	77	4	150	4	108
1990	3	128	4	99	41	75	14	117	6	123	2	127	15	64	833	45	7	126	102	49
1991	1	124	3	111	10	99	7	155	2	113	<1	174	<1	112	61	77	1	171	9	92
1992	<1	123	<1	142	3	114	1	146	3	23	0		3	70	6	59	4	118	2	80
1993	2	129	1	109	3	99	<1	122	<1	158	<1	99	1	67	1	39	<1	203	1	94
1994	2	119	5	78	31	84	13	71	8	96	6	74	4	78	4	38	1	101	6	76
1995	1	160	1	119	4	76	3	100	3	115	4	111	1	99	77	72	1	161	10	78
1996	1	149	5	77	2	104	1	95	1	86	1	77	<1	106	51	63	1	131	7	68
1997	2	108	8	95	5	96	1	115	3	88	11	75	2	99	192	65	1	115	26	69
1998	<1	147	1	140	7	81	2	103	3	111	2	110	4	96	78	46	2	102	11	56

Table 3. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Black drum (cont.)																				
1999	1	170	3	116	16	75	14	67	7	81	8	103	9	84	16	85	<1	185	8	85
2000	3	120	19	79	19	77	15	87	11	79	9	92	3	107	15	58	<1	97	11	80
2001	1	173	2	115	36	68	6	110	4	97	1	104	4	73	126	63	1	109	17	69
2002	1	121	2	131	6	87	1	155	1	123	2	85	1	108	4	116	0		2	119
2003	<1	191	<1	98	<3	197	3	103	0		1	165	<1	93	1	95	0		<1	110
Sheepshead																				
1977 ^a	ND		0		ND		1	128	0		0		0		0		0		<1	128
1978	ND		0		ND		<1	86	<1	68	1	54	1	59	1	122	1	61	1	70
1979	ND		15	66	ND		1	94	6	63	3	56	13	41	0		1	50	6	61
1980	ND		1	114	ND		1	163	1	41	1	51	0		0		1	60	1	86
1981	ND		1	158	ND		2	68	0		1	95	1	41	0		1	92	1	101
1982	ND		1	174	ND		0		3	67	<1	62	<1	50	0		0		1	90
1983	ND		1	23	<1 ^b	93	<1	50	1	102	<1	67	<1	99	0		3	52	1 ^b	52
1984	ND		0		<1	178	<1	90	1	30	<1	36	<1	30	0		0		<1	43
1985	ND		2	20	1	58	1	157	3	39	1	35	0		0		2	57	1	43
1986	0		<1	114	<1	32	<1	203	1	48	1	50	0		0		1	73	<1	80
1987	0		0		1	91	<1	94	<1	53	0		0		0		1	47	<1	64
1988	0		<1	60	2	69	<1	124	2	58	1	55	3	35	0		<1	40	1	56
1989	1	91	<1	59	1	35	1	116	25	40	0		0		0		<1	89	3	44
1990	<1	153	<1	126	<1	36	<1	79	<1	85	<1	115	0		0		1	48	<1	86
1991	<1	146	1	55	0		<1	101	1	81	<1	29	0		0		<1	70	<1	69
1992	<1	97	0		1	33	1	36	5	39	<1	66	<1	40	0		4	63	1	49
1993	<1	50	<1	147	<1	47	0		1	98	<1	36	<1	19	<1	45	<1	51	<1	77
1994	<1	106	<1	76	<1	131	5	54	2	81	1	33	1	34	<1	24	0		1	54
1995	<1	74	1	86	0		2	71	1	150	2	69	<1	51	<1	32	2	59	1	76
1996	<1	55	<1	37	3	38	<1	167	3	42	1	54	<1	38	0		1	89	1	54
1997	<1	166	1	93	1	77	<1	108	2	67	1	66	1	43	<1	44	<1	82	1	75
1998	0		<1	131	<1	25	0		1	135	0		0		0		<1	68	<1	121
1999	<1	173	<1	156	<1	72	0		7	34	1	37	0		1	49	<1	18	1	43
2000	1	109	1	173	1	32	1	55	1	61	<1	149	<1	154	0		1	69	<1	95
2001	<1	155	<1	193	0		<1	122	0		0		0		<1	42	2	58	<1	79
2002	0		<1	92	1	43	<1	93	<1	144	1	59	1	74	0		1	65	<1	71
2003	1	159	<1	21	<1	115	<1	152	<1	73	<1	24	0		0		0		<1	92
Southern flounder																				
1977 ^a	ND		0		ND		1	171	0		0		0		0		0		<1	171
1978	ND		9	40	ND		<1	43	3	37	<1	98	1	44	<1	128	1	46	3	42
1979	ND		1	85	ND		<1	135	2	85	0		1	122	2	46	1	38	1	71
1980	ND		10	54	ND		1	38	2	55	0		3	64	1	43	5	38	4	51
1981	ND		5	57	ND		7	79	2	53	2	90	1	67	1	66	11	55	4	64
1982	ND		9	67	ND		3	82	6	56	18	37	2	62	1	53	13	39	8	51
1983	ND		9	46	1 ^b	75	2	54	3	58	6	39	1	34	0		2	45	4 ^b	46
1985	ND		4	58	5	78	2	112	1	43	7	55	5	55	<1	71	2	67	3	64

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Southern flounder (cont.)																				
1984	ND		2	83	2	69	1	78	1	67	3	62	3	45	1	86	1	64	2	69
1986	2	83	4	83	6	70	19	66	2	78	4	64	2	54	1	79	12	44	6	63
1987	2	47	21	51	9	54	1	62	3	44	1	103	1	37	<1	69	3	56	6	53
1988	15	66	14	61	3	76	3	85	3	69	5	48	1	65	<1	60	5	60	6	63
1989	10	74	3	62	10	60	3	67	10	51	24	38	8	53	<1	106	2	62	7	50
1990	12	68	22	59	12	55	15	48	11	50	3	55	12	47	4	67	9	51	12	54
1991	7	58	5	34	7	56	3	53	2	94	1	55	2	46	<1	27	2	60	3	49
1992	7	66	3	41	3	67	2	34	3	48	1	41	5	44	<1	22	<1	56	2	46
1993	4	95	6	56	5	45	6	46	3	47	2	57	3	69	<1	130	2	54	4	55
1994	2	94	4	62	3	31	3	58	3	46	5	54	6	42	<1	34	2	78	3	56
1995	4	65	4	59	5	63	3	55	1	42	6	41	5	47	1	58	<1	93	3	53
1996	5	85	9	45	5	88	8	55	9	50	3	53	8	48	1	72	4	54	6	52
1997	4	129	8	61	9	62	8	581	6	61	3	45	7	48	2	63	3	34	6	56
1998	7	83	12	52	6	68	5	52	5	48	6	45	<1	57	1	84	2	50	5	53
1999	2	113	8	78	4	48	3	64	5	46	4	43	2	52	1	84	2	38	4	63
2000	3	80	5	68	1	54	2	41	4	53	1	64	2	60	<1	31	0		2	61
2001	5	75	7	58	4	58	7	55	7	50	2	52	3	53	1	70	5	40	5	54
2002	4	95	6	59	4	47	2	54	7	45	1	104	1	61	<1	121	1	109	3	61
2003	5	64	11	56	3	52	3	44	2	40	3	42	1	95	0		<1	64	4	54
Atlantic croaker																				
1977 ^a	ND		20	96	ND		0		0		1	36	11	50	1	181	4	83	6	88
1978	ND		320	61	ND		239	59	10	100	37	73	1	30	11	86	29	38	121	61
1979	ND		463	52	ND		109	74	52	49	7	76	25	65	3	92	221	44	162	53
1980	ND		1,085	55	ND		82	69	17	89	16	56	24	49	1	40	198	42	290	54
1981	ND		528	57	ND		24	94	26	73	26	42	20	55	1	112	32	46	136	58
1982	ND		1,812	61	ND		165	74	67	67	142	61	32	54	0		49	53	471	62
1983	ND		888	55	56 ^b	79	236	66	67	80	63	62	6	61	2	86	49	51	254 ^b	58
1984	ND		815	59	210	64	483	60	25	83	155	68	1,160	61	4	102	133	59	404	60
1985	ND		242	64	121	63	299	72	13	88	46	78	4	76	11	87	87	42	122	66
1986	126	74	148	77	198	68	2,138	52	17	99	12	72	12	78	<1	89	62	57	364	55
1987	79	70	335	54	110	56	207	78	33	47	9	81	4	40	<1	60	10	62	113	61
1988	154	68	485	53	160	51	60	80	13	66	3	50	8	50	0		15	63	125	56
1989	111	56	36	77	190	45	22	56	9	49	18	62	10	61	0		9	38	27	59
1990	97	67	316	51	117	46	82	68	24	32	58	65	14	59	2	78	46	62	103	55
1991	208	57	635	52	343	47	1,035	58	156	57	63	63	35	66	11	36	169	46	353	55
1992	225	56	505	47	450	47	626	48	430	47	215	44	95	50	13	54	157	44	326	47
1993	232	64	358	50	421	44	216	47	48	47	25	66	25	53	2	67	195	40	165	48
1994	255	52	229	49	186	58	302	43	59	46	74	39	25	37	6	44	123	46	143	46
1995	357	57	112	48	247	50	110	57	37	59	36	69	24	35	2	58	179	41	95	50
1996	765	59	453	47	290	50	147	63	37	54	35	60	6	44	3	65	112	44	179	51
1997	248	49	234	59	286	52	176	50	52	56	57	66	4	56	6	71	223	46	136	54
1998	178	57	275	53	223	48	177	58	30	60	24	50	59	46	26	49	85	49	121	54

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Atlantic croaker (cont.)																				
1999	128	58	223	57	164	52	221	56	65	55	61	51	11	66	11	63	74	47	115	56
2000	261	61	59	68	129	51	70	47	11	60	16	55	9	68	1	41	12	57	41	59
2001	141	65	280	54	212	48	436	56	22	65	51	41	23	31	1	53	63	50	152	54
2002	213	58	153	58	91	53	93	48	18	62	20	61	55	40	1	68	47	44	72	54
2003	209	63	262	50	174	56	214	54	32	51	25	47	61	54	3	65	539	49	158	51
Sand seatrout																				
1977 ^a	ND		0		ND		11	61	0		0		0		0		0		2	61
1978	ND		13	58	ND		3	59	0		0		<1	54	0		0		4	58
1979	ND		35	58	ND		14	70	2	75	<1	33	1	77	0		0		10	61
1980	ND		8	61	ND		7	82	<1	64	<1	89	0		0		0		3	69
1981	ND		21	60	ND		2	72	0		0		1	76	0		<1	78	5	61
1982	ND		47	57	ND		12	67	<1	35	<1	76	<1	73	0		<1	65	13	58
1983	ND		47	53	10 ^b	59	30	64	<1	47	1	70	2	53	0		0		15 ^b	56
1984	ND		49	55	7	66	22	54	0		0		0		0		8	41	15	54
1985	ND		11	60	8	59	12	71	0		<1	67	1	82	0		<1	60	5	65
1986	6	71	9	50	4	60	9	64	0		0		<1	57	0		0		3	57
1987	4	63	16	58	11	61	14	65	1	61	0		0		0		0		6	61
1988	5	54	5	53	38	40	6	66	<1	69	0		0		0		0		3	52
1989	9	54	43	55	7	66	4	68	<1	31	0		<1	106	0		0		10	56
1990	24	52	75	46	10	59	13	56	1	36	0		0		0		0		19	47
1991	7	48	76	55	25	59	39	56	<1	76	3	50	2	42	0		<1	65	23	55
1992	7	54	30	53	10	52	36	54	0	0	<1	81	1	61	0		0		12	53
1993	7	58	53	48	19	53	88	53	4	64	<1	96	1	57	0		2	54	26	51
1994	4	61	34	48	16	70	29	56	<1	70	<1	64	0		0		<1	53	12	52
1995	14	50	59	44	53	38	37	59	<1	56	<1	64	0		0		1	57	20	48
1996	16	63	18	50	20	51	6	57	0		0		1	62	0		0		6	52
1997	11	48	27	54	12	49	36	52	2	55	2	64	<1	71	0		<1	38	12	53
1998	11	54	48	47	19	56	22	47	0		1	64	<1	79	<1	39	1	72	14	48
1999	20	53	50	48	28	52	5	58	0		0		0		0		0		13	49
2000	12	58	11	61	13	51	2	67	<1	51	0		0		1	45	0		3	60
2001	17	54	10	64	16	59	16	51	0		0		<1	44	0		0		5	57
2002	14	49	36	59	34	55	20	51	2	52	1	79	21	81	<1	45	0		14	60
2003	9	52	20	53	8	58	5	64	0		0		1	45	0		0		5	54
Gulf menhaden																				
1977 ^a	ND		21	76	ND		0		0		0		1	58	0		0		5	76
1978	ND		533	31	ND		3,963	47	169	64	3,310	44	1	41	44	42	71	29	1,249	44
1979	ND		122	53	ND		867	43	0		817	38	335	38	6	37	1	31	312	41
1980	ND		14,717	46	ND		115	50	24	52	48	30	7	49	4	40	54	31	3,343	46
1981	ND		196	45	ND		348	51	52	41	355	48	8	41	721	42	11	38	246	45
1982	ND		4,788	50	ND		820	48	1,008	37	137	33	1,068	36	9	31	130	32	1,466	47
1983	ND		4,971	66	1,324 ^b	44	809	44	67	42	16	34	619	33	2	30	5	47	1,312 ^b	62

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Gulf menhaden (cont.)																				
1984	ND		1,839	44	470	48	1,260	45	1,084	42	866	39	553	52	128	49	69	56	928	44
1985	ND		486	42	243	43	3,819	50	868	45	48	39	122	37	62	44	20	49	819	48
1986	3,049	48	3,024	38	1,502	37	10,076	53	612	36	27	34	11	46	36	44	12	36	2,333	48
1987	633	47	264	50	755	49	3,550	60	35	40	68	36	11	34	32	63	18	27	637	57
1988	600	40	2,625	45	438	41	363	60	<1	43	80	30	<1	44	14	31	81	35	660	45
1989	526	48	781	42	386	51	187	45	53	37	43	37	11	43	2	45	71	39	245	43
1990	774	49	5,106	43	640	44	527	56	797	71	943	35	869	32	21	38	<1	38	1,487	44
1991	270	41	4,298	40	1,258	42	3,044	42	296	42	569	41	244	38	123	36	0		1,533	41
1992	593	45	6,025	37	291	36	1,919	38	1,810	35	259	33	43	46	4	30	21	40	1,815	37
1993	1,878	48	7,341	40	509	36	492	46	191	38	634	66	158	38	13	39	108	35	1,827	42
1994	72	51	5,203	48	222	41	418	57	138	39	263	33	15	45	32	33	<1	49	1,212	48
1995	399	46	6,155	39	2,382	50	718	36	140	48	373	37	83	40	133	34	4	48	1,570	39
1996	1,489	44	7,928	39	554	36	1,484	40	202	33	179	41	459	31	68	30	3	32	2,039	39
1997	371	45	1,733	54	551	43	2,297	36	473	46	142	40	472	51	56	51	224	31	875	45
1998	2,288	39	10,246	35	1,112	39	949	50	1,287	38	388	40	886	35	5	36	13	37	2,704	36
1999	954	42	1,822	47	114	37	399	42	22	40	56	36	81	55	484	43	77	39	567	46
2000	986	41	556	57	548	44	72	58	43	38	85	39	14	55	21	36	8	32	197	51
2001	3145	50	1570	43	514	39	4160	51	227	45	84	37	43	52	166	36	3	32	1141	48
2002	3943	44	3630	52	1452	46	244	44	112	42	108	66	289	33	8	38	19	32	1041	50
2003	1346	57	2855	49	366	46	253	48	329	37	91	31	421	35	14	39	176	31	814	47
Pinfish																				
1977 ^a	ND		0		ND		32	114	24	105	22	105	66	93	167	102	13	101	39	103
1978	ND		116	55	ND		24	61	77	75	54	74	133	69	41	84	7	64	65	65
1979	ND		73	75	ND		43	79	60	79	47	85	81	61	13	122	1	107	47	77
1980	ND		151	38	ND		16	50	363	57	167	66	250	61	17	88	153	59	152	55
1981	ND		270	55	ND		68	69	131	70	107	85	267	67	40	84	132	75	151	66
1982	ND		144	67	ND		34	66	590	55	448	67	265	62	100	73	349	57	260	61
1983	ND		138	65	61 ^b	79	115	80	510	49	642	68	533	66	25	82	211	68	279 ^b	64
1984	ND		247	59	180	64	107	71	172	66	471	62	214	54	146	79	120	77	214	64
1985	ND		362	55	401	65	209	71	396	55	274	66	234	67	133	68	261	66	280	62
1986	64	74	183	61	676	64	117	58	161	66	696	59	304	58	245	62	329	63	287	61
1987	8	72	50	64	227	57	44	68	442	63	321	67	463	58	42	56	339	64	206	63
1988	7	84	128	61	373	62	43	77	246	63	589	62	983	54	312	59	660	60	357	60
1989	24	75	80	62	359	58	308	53	607	61	300	63	361	57	60	70	251	61	254	60
1990	37	75	182	58	499	61	251	65	552	52	609	55	566	57	392	62	660	60	415	58
1991	8	79	138	58	307	60	39	68	248	65	119	61	435	63	240	69	696	57	243	61
1992	12	73	96	46	371	56	67	49	431	53	545	59	475	50	174	59	531	58	293	55
1993	27	78	309	49	139	59	150	53	368	60	564	56	482	54	307	59	452	60	344	56
1994	9	71	164	50	285	66	125	57	174	58	463	58	411	58	102	56	358	56	237	57
1995	12	86	159	49	284	52	73	51	308	59	333	64	326	54	165	59	247	60	212	57
1996	77	74	88	51	71	53	35	53	243	50	248	59	420	51	755	59	471	54	272	55
1997	9	75	56	70	200	59	33	61	240	65	371	56	323	62	250	64	395	55	207	60

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pinfish (cont.)																				
1998	52	77	227	55	589	53	81	65	387	59	705	62	551	58	214	59	434	55	342	57
1999	12	87	62	62	288	50	133	53	475	56	317	63	476	66	83	60	204	60	214	60
2000	42	78	128	56	328	58	103	57	478	53	352	57	354	61	29	64	102	70	201	58
2001	50	75	240	60	261	61	282	54	842	57	433	63	968	50	495	59	521	53	465	56
2002	74	79	189	60	689	52	174	63	710	56	581	61	785	55	267	66	552	60	413	59
2003	29	82	251	59	147	59	135	60	642	57	758	59	574	53	722	61	673	54	475	58
Spot																				
1977 ^a	ND		56	100	ND		23	118	0		2	170	12	100	0		1	125	18	105
1978	ND		407	52	ND		182	49	361	48	80	55	310	47	227	59	149	52	253	51
1979	ND		352	42	ND		21	64	201	44	58	60	210	55	103	70	57	59	156	49
1980	ND		269	57	ND		76	56	256	51	101	61	95	58	86	59	165	48	160	55
1981	ND		331	52	ND		154	57	135	64	97	54	121	61	115	63	220	67	185	58
1982	ND		404	62	ND		143	58	467	52	623	54	225	60	180	58	340	66	350	58
1983	ND		459	57	50 ^b	64	95	58	169	47	350	56	135	55	57	60	526	63	273 ^b	58
1984	ND		238	53	96	61	146	58	247	46	659	56	564	58	493	66	948	67	433	60
1985	ND		179	62	158	59	216	59	274	44	254	64	227	55	80	77	169	54	197	58
1986	118	65	135	68	319	56	825	51	102	58	258	51	160	60	114	55	614	54	314	54
1987	19	80	264	60	383	60	83	58	203	49	476	58	359	49	17	70	307	47	239	55
1988	44	82	229	69	210	66	116	64	132	54	361	59	158	65	212	54	270	59	209	62
1989	96	52	87	63	256	58	173	59	264	62	253	53	158	62	271	50	151	64	183	58
1990	16	70	222	62	525	54	330	57	691	51	566	52	831	49	684	57	854	55	525	54
1991	22	65	270	56	304	59	131	49	198	69	295	53	279	52	174	53	950	51	314	54
1992	27	70	211	55	89	61	63	53	194	59	164	53	387	45	219	58	347	54	204	54
1993	35	80	164	56	288	55	123	53	149	50	185	59	281	58	221	62	341	53	197	56
1994	55	78	369	49	161	61	99	61	127	56	310	62	250	59	66	60	369	54	231	55
1995	15	104	171	50	199	56	254	49	77	65	191	59	303	53	145	59	218	57	184	55
1996	185	69	827	43	394	44	340	48	321	50	245	55	524	46	223	54	272	56	417	48
1997	5	102	89	67	174	57	169	47	69	59	229	59	481	55	451	58	782	46	280	53
1998	46	74	217	58	264	57	243	50	391	55	256	58	576	51	197	61	219	60	270	56
1999	18	86	143	52	151	61	92	56	155	57	233	53	340	59	80	57	121	62	152	58
2000	14	72	94	62	168	60	119	60	79	56	105	56	159	62	7	76	53	61	86	60
2001	64	77	312	61	250	59	650	45	518	56	298	63	413	54	343	61	1339	43	519	51
2002	88	75	149	59	184	58	322	43	260	59	235	59	460	49	252	58	394	50	268	53
2003	227	64	366	54	230	50	175	56	234	57	331	52	700	54	273	61	453	52	340	55
Striped mullet																				
1977 ^a	ND		31	140	ND		129	106	129	117	27	132	179	156	15	158	62	103	74	126
1978	ND		56	120	ND		26	124	126	66	68	103	121	76	53	94	105	81	74	90
1979	ND		135	89	ND		93	99	273	66	152	103	202	135	16	102	383	53	174	81
1980	ND		90	117	ND		15	107	41	121	61	102	49	88	57	70	95	85	61	100
1981	ND		229	57	ND		41	92	249	84	205	81	79	85	31	63	161	98	152	76

Striped mullet (cont.)

Table 3. (Cont.)

Species Year	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
1982	ND		128	66	ND		553	118	179	77	177	85	29	110	23	86	43	94	174	98
1983	ND		85	94	62 ^b	104	26	136	57	64	110	106	37	61	15	99	44	84	57 ^b	94
1984	ND		52	95	33	110	34	53	69	73	102	57	142	52	154	68	255	96	106	77
1985	ND		75	110	199	89	49	92	22	134	95	58	22	62	70	53	119	81	72	84
1986	84	103	34	134	20	144	23	86	37	93	22	91	62	67	23	57	41	66	35	92
1987	48	98	244	75	60	89	33	96	63	115	127	73	141	56	94	37	72	103	116	76
1988	42	80	115	115	69	90	44	64	16	116	84	50	189	49	64	62	27	125	74	80
1989	61	68	41	96	40	61	24	82	10	147	77	47	131	49	61	33	78	58	55	61
1990	43	88	194	71	151	81	21	71	47	100	156	41	322	44	226	59	114	89	144	63
1991	83	78	234	80	162	60	79	65	73	97	40	88	138	41	283	50	49	126	133	71
1992	23	94	149	79	97	78	52	78	72	81	132	80	141	50	70	53	44	99	95	75
1993	74	84	105	83	84	74	41	77	62	71	67	86	133	49	70	36	39	78	74	71
1994	56	75	102	66	29	70	59	75	35	92	53	66	137	48	62	47	221	42	91	57
1995	63	99	45	71	73	84	23	70	20	123	57	45	19	59	20	57	29	49	35	68
1996	92	70	166	43	217	44	30	67	7	135	17	73	131	55	24	75	36	58	71	52
1997	37	82	120	66	143	79	62	81	72	94	118	90	151	48	94	73	34	111	92	75
1998	36	79	180	73	41	92	29	80	126	59	50	91	424	48	23	83	76	72	116	65
1999	29	83	23	101	16	112	15	86	19	100	25	61	45	61	26	95	95	75	34	80
2000	32	73	17	88	53	49	16	63	78	58	23	70	13	114	37	60	22	82	29	69
2001	121	64	79	72	190	47	92	67	262	58	45	94	90	53	183	70	543	38	174	54
2002	34	89	41	121	44	63	31	106	52	62	53	97	36	55	73	52	159	58	61	75
2003	51	83	45	95	49	128	13	98	30	84	51	79	104	57	115	61	252	45	80	63
Total finfishes																				
1977 ^a	ND		959	59	ND		489	88	3,106	52	1,383	64	2,788	60	1,780	67	830	59	1,464	61
1978	ND		4,103	53	ND		4,855	67	1,671	65	5,038	64	1,515	66	1,282	62	908	54	3,030	61
1979	ND		3,149	60	ND		1,635	71	3,375	57	3,096	60	2,191	70	1,354	69	2,368	72	2,518	64
1980	ND		18,543	86	ND		632	77	1,879	67	1,407	68	1,490	67	2,116	63	1,070	59	5,241	82
1981	ND		3,334	63	ND		1,093	83	1,781	61	2,020	66	2,213	64	1,792	54	1,267	70	2,028	65
1982	ND		9,007	68	ND		2,077	78	4,321	56	5,021	57	2,596	66	1,355	58	1,342	61	4,194	65
1983	ND		8,725	71	2,078 ^b	63	1,857	80	2,147	55	4,059	63	2,160	59	734	61	1,378	68	3,528 ^b	68
1984	ND		4,644	59	1,617	66	2,625	62	2,687	58	3,574	62	3,353	52	1,817	60	1,906	71	3,044	60
1985	ND		1,995	63	1,921	68	5,152	82	2,200	65	2,514	60	1,389	56	1,534	55	1,458	60	2,383	68
1986	3,776	69	3,916	71	3,329	63	14,493	73	1,849	60	2,294	57	841	62	1,554	51	1,672	61	4,146	69
1987	1,153	67	2,231	64	2,484	63	4,312	79	1,344	65	2,030	58	1,357	55	1,012	46	1,575	60	2,073	66
1988	1,153	62	4,347	71	2,024	63	913	83	1,391	58	3,150	54	2,344	56	2,271	50	2,144	65	2,464	63
1989	1,243	62	2,157	67	2,097	59	1,362	69	1,997	62	2,079	55	2,006	56	2,360	45	2,341	56	2,010	59
1990	1,319	67	7,186	58	2,951	59	2,106	68	3,470	57	3,968	55	3,913	52	5,385	48	2,993	59	4,209	57
1991	719	62	7,525	62	3,452	63	4,982	69	3,090	63	2,300	59	2,273	60	2,971	50	4,012	54	4,138	61
1992	1,143	56	7,886	54	1,924	57	3,414	57	4,687	53	2,622	57	2,373	52	4,251	47	2,893	55	4,188	54
1993	2,526	62	9,393	64	2,536	54	1,700	60	2,284	54	2,839	65	2,393	53	4,103	48	2,752	54	4,050	60
1994	617	62	6,845	54	1,538	63	1,985	63	1,183	60	2,496	57	1,972	58	2,941	44	2,846	50	3,126	54
1995	1,350	65	7,390	59	5,029	69	1,949	58	1,555	64	2,937	59	1,815	57	3,602	48	3,002	49	3,559	57
1996	3,242	61	10,257	54	2,586	52	2,693	62	1,606	55	1,352	60	2,171	50	3,320	46	2,214	49	3,949	54
Total finfishes (cont.)																				

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
1997	974	61	3,120	65	1,922	63	3,260	58	1,795	61	1,898	62	2,425	58	3,598	50	2,430	51	2,609	59
1998	2,834	55	12,198	57	3,451	55	1,873	63	3,477	56	2,151	58	3,134	54	1,968	51	1,546	57	4,432	57
1999	1,660	54	2,832	58	1,712	56	1,592	58	1,825	60	1,340	59	1,551	65	2,124	47	1,378	55	1,882	57
2000	1,710	57	1,362	65	1,872	52	869	58	1,599	53	1,392	56	1,379	60	1,883	47	909	54	1,346	56
2001	3,720	62	2,959	58	2,045	55	6,949	54	2,609	58	1,509	62	2,381	54	2,595	54	3,479	46	3,297	55
2002	4,604	56	4,836	60	3,626	58	1,340	53	2,099	55	1,561	65	2,626	55	2,575	52	2,141	53	2,725	57
2003	2,189	67	4,463	57	1,826	61	1,284	60	2,648	52	1,960	56	3,151	52	2,182	59	2,941	49	2,737	56

SHELLFISHES

Blue crab

1977 ^a	ND		103	43	ND		31	46	51	46	95	56	56	38	16	58	8	63	56	47
1978	ND		66	52	ND		10	38	52	51	57	62	33	43	98	61	19	60	48	55
1979	ND		106	52	ND		27	51	76	49	84	62	152	43	90	48	61	54	83	51
1980	ND		122	54	ND		24	56	119	45	65	52	80	38	65	40	176	46	95	48
1981	ND		58	53	ND		43	44	51	54	85	45	86	40	42	58	167	35	74	44
1982	ND		101	48	ND		31	51	107	42	193	48	52	49	35	54	175	42	102	46
1983	ND		148	43	15	77	35	34	105	40	145	43	48	40	36	59	112	33	94	41
1984	ND		88	58	58	60	58	42	42	46	63	50	62	42	37	61	80	46	64	51
1985	ND		144	49	107	54	56	46	41	42	141	38	184	37	73	52	152	34	113	42
1986	37	79	90	55	86	55	57	53	62	46	30	48	77	40	23	45	91	41	63	49
1987	23	68	163	41	87	38	36	51	64	55	35	35	80	47	50	59	72	44	77	45
1988	44	64	160	46	138	31	29	36	48	42	54	35	89	44	38	43	78	37	78	42
1989	50	45	85	48	121	30	45	25	74	31	56	34	72	43	22	41	31	35	59	38
1990	67	47	141	44	94	46	75	31	98	30	83	35	150	42	37	51	68	40	94	39
1991	46	56	165	47	92	44	58	37	198	38	107	35	158	40	49	45	107	43	117	42
1992	36	55	90	36	54	37	45	26	117	30	140	34	164	38	105	58	129	35	103	37
1993	36	59	116	35	89	27	51	23	89	35	102	41	176	42	67	55	78	36	93	39
1994	28	51	89	38	176	26	96	22	27	34	91	27	210	39	113	47	130	32	102	34
1995	43	46	59	32	194	27	64	22	32	30	56	34	122	37	62	40	97	31	71	32
1996	84	41	106	36	136	25	39	27	39	30	38	33	119	33	48	39	100	27	73	33
1997	76	43	90	42	117	33	63	23	63	35	64	39	122	44	61	47	67	32	76	38
1998	59	57	107	42	129	32	48	27	75	37	51	36	102	38	41	45	81	33	74	38
1999	39	46	93	45	156	32	35	28	57	29	39	38	69	38	57	48	62	29	62	38
2000	113	35	95	35	141	26	44	22	36	31	35	34	65	34	15	35	30	30	54	32
2001	36	46	88	36	219	37	36	23	77	32	50	36	95	33	26	41	59	25	64	33
2002	29	57	72	45	129	38	39	27	54	36	53	40	91	38	33	42	55	27	57	38
2003	41	45	70	39	101	41	31	30	71	29	87	39	114	35	49	54	99	46	71	39

Brown shrimp

1977 ^a	ND		139	46	ND		64	52	200	49	229	54	99	58	9	63	200	53	137	51
1978	ND		540	50	ND		167	63	102	63	152	60	258	56	188	68	120	53	245	56
1979	ND		482	58	ND		194	66	69	63	438	63	499	61	53	59	155	59	285	61

Table 3. (Cont.)

Species Year	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide</u>	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Brown shrimp (cont.)																				
1980	ND		495	52	ND		143	68	553	60	386	60	183	62	64	64	234	56	314	58
1981	ND		719	57	ND		157	74	310	64	355	60	679	53	102	76	1,008	58	490	59
1982	ND		915	64	ND		207	64	599	51	505	54	428	57	62	63	565	61	510	60
1983	ND		484	60	99	76	248	66	310	57	530	60	295	56	57	65	532	50	360	58
1984	ND		628	64	294	65	197	56	244	66	740	66	291	58	82	61	389	63	396	64
1985	ND		522	60	413	59	364	63	306	56	755	61	370	55	288	70	1,007	56	525	59
1986	605	74	166	58	558	63	524	67	137	65	231	63	204	58	193	66	627	54	318	62
1987	401	70	1,162	58	387	56	445	64	158	60	464	62	293	60	417	56	961	58	610	59
1988	248	61	516	62	570	57	208	61	206	53	357	58	394	64	756	73	461	62	416	63
1989	110	70	519	59	889	56	369	54	739	55	726	51	522	54	167	58	411	59	493	56
1990	127	69	356	56	723	61	477	61	482	56	1,005	60	592	62	77	74	2,128	59	694	59
1991	14	68	601	57	790	61	453	60	624	56	511	67	660	70	248	56	1,064	63	591	61
1992	245	71	708	57	455	55	270	52	726	52	455	62	629	58	328	62	926	55	565	57
1993	102	63	541	58	560	54	232	55	321	54	568	64	636	58	279	62	891	59	482	59
1994	302	62	515	60	480	56	403	61	165	57	513	62	713	63	239	58	841	59	477	60
1995	83	68	331	54	392	50	344	57	290	57	359	57	498	60	477	59	728	59	406	57
1996	1,164	65	363	58	419	52	277	55	382	55	387	60	266	58	273	56	518	56	390	58
1997	103	63	552	62	369	52	240	58	436	58	739	58	608	69	1,020	78	1,231	54	640	62
1998	463	62	410	61	548	53	376	57	295	57	522	60	468	61	620	70	392	57	438	61
1999	385	56	698	59	501	52	481	52	466	52	256	57	286	58	283	62	354	54	435	56
2000	378	61	506	62	602	52	448	56	410	53	567	66	420	60	207	59	463	54	444	59
2001	290	63	325	57	906	56	355	61	652	55	416	58	420	56	164	53	214	55	363	57
2002	233	55	414	57	978	51	249	57	580	54	366	61	597	58	170	60	330	54	382	57
2003	602	59	412	57	673	50	346	55	278	53	290	59	458	57	163	56	391	54	355	56
Pink shrimp																				
1977 ^a	ND		0		ND		0		12	41	0		0		48	77	0		7	69
1978	ND		0		ND		0		<1	100	<1	63	0		26	77	0		3	77
1979	ND		0		ND		0		0		0		58	51	12	78	<1	106	7	57
1980	ND		0		ND		0		6	51	13	50	58	55	10	60	2	75	10	55
1981	ND		0		ND		0		28	54	87	44	67	54	8	62	5	49	24	49
1982	ND		0		ND		0		0		124	47	67	46	7	61	3	52	25	48
1983	ND		0		0		0		9	51	50	56	31	47	12	54	0		12	53
1984	ND		0		0		<1	25	1	73	16	48	26	48	14	65	<1	79	6	53
1985	ND		0		0		0		0		17	59	7	49	8	76	0		4	61
1986	0		0		<1	73	0		<1	68	15	39	25	49	6	43	3	65	5	46
1987	0		0		0		<1	32	0		11	52	60	52	14	50	0		8	52
1988	0		0		0		0		<1	38	135	49	106	50	<1	55	6	54	28	50
1989	0		0		0		0		1	52	45	42	64	46	20	59	0		14	47
1990	0		0		<1	131	<1	72	<1	36	99	49	106	48	4	48	15	51	25	49
1991	0		0		<1	142	0		<1	110	61	52	25	46	31	42	1	52	14	49
1992	0		<1	59	0		0		1	40	32	53	77	54	38	55	176	59	38	57
1993	0		<1	34	0		0		<1	44	58	47	53	50	32	55	140	56	34	53

Table 3. (Cont.)

Species Year	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pink shrimp (cont.)																				
1994	0		2	40	52	56	5	38	<1	35	103	49	150	53	9	39	235	59	61	54
1995	0		1	37	16	41	3	33	4	46	88	50	53	50	7	45	179	57	42	53
1996	0		0		<1	32	<1	35	17	54	35	53	25	52	24	51	154	56	31	55
1997	0		1	38	31	44	1	30	12	35	52	57	88	59	13	46	59	53	26	54
1998	0		0		42	48	10	45	28	49	47	50	47	53	23	47	244	55	50	53
1999	0		<1	34	29	45	<1	28	1	39	27	52	39	56	14	56	211	56	37	55
2000	1	40	20	48	<1	33	0		16	42	25	53	34	50	7	53	97	54	26	52
2001	0		0		11	39	1	38	12	54	99	51	32	52	18	55	87	48	32	50
2002	0		0		23	52	<1	44	1	53	12	47	82	51	19	54	56	54	19	52
2003	0		0		0		0		1	35	47	51	38	51	4	42	72	51	20	50
White shrimp																				
1977 ^a	ND		1,586	55	ND		1,054	102	115	47	26	63	84	57	36	85	23	57	553	69
1978	ND		858	66	ND		554	70	130	61	92	49	62	52	21	55	130	53	335	65
1979	ND		1,720	61	ND		543	70	212	56	99	64	817	52	5	53	143	47	608	61
1980	ND		571	64	ND		522	68	291	57	133	61	141	69	62	71	18	45	288	64
1981	ND		1,393	62	ND		805	59	66	64	183	50	173	51	19	56	264	61	527	60
1982	ND		3,560	58	ND		1,750	64	650	51	297	43	369	54	14	51	326	50	1,276	58
1983	ND		1,524	50	348	70	394	65	135	64	129	53	135	42	7	67	218	52	478	53
1984	ND		1,557	59	409	65	1,438	71	166	56	415	53	311	63	17	58	625	58	759	62
1985	ND		307	61	552	61	584	63	37	44	239	44	33	53	6	73	204	54	241	58
1986	308	73	1,389	62	173	65	675	66	140	66	287	44	101	58	2	48	175	49	491	61
1987	682	68	972	53	577	61	579	67	90	54	111	65	152	61	7	37	121	61	386	58
1988	796	63	482	66	429	66	341	68	168	52	425	47	155	61	73	51	534	73	361	63
1989	615	61	559	55	76	59	384	78	145	52	631	60	372	59	2	68	194	54	356	60
1990	425	65	1,698	54	690	57	451	63	335	58	821	50	537	67	35	40	368	49	704	55
1991	385	71	1,723	50	273	51	624	58	236	55	361	71	445	62	77	49	381	61	645	55
1992	463	68	924	54	264	62	643	60	115	68	211	71	167	66	32	58	85	52	383	58
1993	324	68	526	56	449	62	585	61	132	68	96	56	876	69	137	58	750	60	437	61
1994	510	73	985	53	618	55	512	62	327	63	447	64	395	71	55	55	200	59	483	59
1995	789	70	563	53	613	57	607	60	368	75	218	57	268	70	19	51	378	57	401	60
1996	824	61	746	55	439	63	455	62	248	54	94	60	216	71	13	51	356	55	374	58
1997	414	55	603	63	293	50	481	61	93	63	211	68	163	72	2	53	53	57	281	62
1998	743	72	1,331	58	650	59	471	58	216	51	258	59	202	58	15	58	115	65	486	59
1999	6,262	69	640	56	162	52	1,485	56	598	56	103	56	286	61	39	45	213	56	743	61
2000	322	63	285	63	110	50	193	63	86	61	96	61	111	61	2	61	61	51	144	62
2001	587	56	613	59	602	63	344	61	92	64	117	65	343	62	20	51	61	61	281	60
2002	175	64	658	58	981	63	773	63	115	54	89	63	174	66	61	48	284	52	361	59
2003	338	57	698	58	543	59	537	60	213	63	315	64	348	70	25	67	47	56	356	61

^aData for October-December only.^bEast Matagorda Bay data are only for February-September 1983. Coastwide values do not include East Matagorda Bay data.

TABLE 4. Annual mean catch rates (No./h) and mean total lengths (mm) of select fishes and shellfishes caught with 6.1-m trawls in Texas bay systems during 1982-2003. Blank indicates no measurement taken; ND = no data.

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
FINFISHES																					
Atlantic croaker																					
1982 ^a	ND		43	ND	ND		102	ND	10	ND	87	75	110	ND	37	ND	28	ND	62	75	
1983	ND		30	131	ND		31	117	18	110	44	106	43	149	15	157	32	154	30	127	
1984	ND		15	126	ND		30	104	22	87	52	83	120	121	15	137	44	138	35	112	
1985	ND		20	124	ND		41	110	17	105	33	101	42	138	13	151	24	148	27	119	
1986	10	157	31	123	ND		52	114	44	105	57	96	83	125	14	139	28	153	43	117	
1987	25	139	26	117	17 ^c	133	126	103	146	96	87	100	50	129	7	152	44	122	70	106	
1988	45	135	56	98	13	131	43	121	90	109	100	102	38	125	5	137	21	138	55	109	
1989	45	145	36	116	4	98	75	120	88	102	71	99	40	127	2	158	19	131	52	115	
1990	40	113	36	109	12	113	79	118	50	97	45	92	55	125	12	129	66	123	50	112	
1991	31	115	41	106	8	120	135	106	175	93	223	93	74	125	14	127	34	132	94	103	
1992	40	139	54	107	4	120	211	100	155	84	238	87	54	114	17	140	37	140	112	98	
1993	70	131	90	104	15	128	120	104	48	104	123	98	36	131	2	141	27	141	79	106	
1994	34	144	73	111	17	148	99	116	146	78	55	106	18	135	2	137	21	147	72	106	
1995	22	117	47	100	24	123	108	103	88	99	87	117	42	124	2	162	51	146	64	106	
1996	51	120	68	103	16	111	54	118	26	113	60	108	45	142	7	140	59	150	52	114	
1997	87	133	97	102	24	126	136	109	32	112	90	109	60	129	13	145	30	138	85	110	
1998	82	128	93	103	19	129	88	104	51	106	75	105	84	129	10	144	20	146	79	108	
1999	53	120	39	113	22	126	56	113	30	106	94	105	55	139	8	128	21	141	47	115	
2000	60	128	49	119	31	110	38	118	34	117	81	119	54	145	4	157	10	155	46	123	
2001	72	125	133	102	22	117	173	99	34	104	91	114	65	133	6	150	23	133	109	105	
2002	60	120	68	116	29	144	60	113	47	108	115	117	46	136	4	133	14	146	61	117	
2003	124	111	74	108	24	165	83	108	118	96	131	109	87	128	13	145	16	146	87	109	
Black drum																					
1982 ^a	ND		<1	259	ND		0		<1	221	<1	166	2	235	<1	264	0		<1	238	
1983	ND		<1	274	ND		<1	199	<1	192	<1	201	1	347	1	266	<1	440	<1	283	
1984	ND		<1	168	ND		0		0		<1	251	<1	341	1	202	<1	544	<1	258	
1985	ND		<1	242	ND		0		0		<1	403	<1	315	1	280	0		<1	268	
1986	<1	226	<1	233	ND		0		0		<1	334	<1	334	<1	236	<1	335	<1	250	
1987	<1	278	<1	246	0 ^c		0		<1	200	0		<1	186	1	247	<1	160	<1	231	
1988	1	271	<1	271	<1	192	<1	170	<1	154	<1	204	<1	299	1	197	0		<1	256	
1989	2	260	<1	274	<1	192	0		<1	267	<1	170	<1	356	2	212	<1	418	<1	258	
1990	1	272	<1	254	<1	146	<1	930	<1	114	<1	173	<1	560	97	109	<1	169	5	115	
1991	2	268	<1	313	1	218	0		<1	194	<1	247	<1	170	71	152	1	229	4	160	
1992	2	320	<1	210	<1	235	0		<1	212	<1	183	<1	359	10	225	1	233	1	236	
1993	3	283	<1	275	<1	309	0		<1	282	<1	223	<1	379	3	291	<1	357	<1	297	
1994	2	324	<1	291	1	259	<1	280	<1	184	<1	259	<1	401	1	360	<1	408	<1	301	

Table 4. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide^b</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Black drum (cont.)																				
1995	1	306	<1	229	1	257	0		1	221	<1	346	1	325	3	235	0		1	256
1996	2	292	<1	359	1	314	0		2	271	<1	565	<1	326	5	250	<1	397	1	283
1997	3	258	<1	258	1	241	<1	223	2	241	1	249	<1	349	5	227	<1	386	1	244
1998	5	283	<1	238	1	239	<1	172	1	222	1	276	<1	244	2	227	<1	168	<1	244
1999	4	294	<1	245	1	270	<1	370	1	254	1	252	1	214	1	253	0		<1	256
2000	7	321	<1	248	2	211	<1	361	1	255	2	241	1	329	2	323	<1	273	<1	285
2001	8	276	1	322	2	249	0		2	251	1	281	<1	306	4	204	<1	680	<1	276
2002	5	301	<1	304	2	270	<1	411	1	250	1	360	1	276	2	265	0		<1	295
2003	4	326	1	321	3	292	<1	189	1	204	1	347	<1	333	1	330	0		<1	304
Gafftopsail catfish																				
1982 ^a	ND		<1	ND	ND		4	ND	3	ND	3	ND	1	138	1	193	0		2	141
1983	ND		<1	137	ND		1	132	2	123	2	135	<1	175	0		0		1	133
1984	ND		<1	139	ND		1	144	5	121	2	109	<1	218	<1	131	<1	196	1	126
1985	ND		<1	154	ND		2	137	2	128	3	128	1	150	0		<1	210	1	134
1986	0		1	126	ND		2	134	5	128	2	121	<1	92	<1	158	0		1	128
1987	<1	174	<1	145	1 ^c	143	2	138	9	122	2	124	<1	132	<1	183	<1	175	2	127
1988	0		<1	149	1	135	3	14	3	131	3	127	<1	14	0		0		1	124
1989	<1	299	<1	126	<1	139	1	134	4	136	4	139	<1	156	0		0		1	137
1990	0		1	218	1	127	1	137	4	130	2	143	<1	173	0		0		1	159
1991	0		1	145	1	142	2	145	5	127	3	141	<1	206	0		0		2	137
1992	<1	144	<1	161	<1	128	2	125	5	132	10	117	1	126	0		<1	203	2	127
1993	0		1	139	<1	118	2	145	4	123	4	118	<1	183	0		<1	185	2	133
1994	0		2	127	<1	197	2	129	3	119	2	145	1	180	<1	181	0		2	131
1995	<1	275	2	139	<1	176	1	137	4	129	3	142	1	200	0		<1	207	2	141
1996	<1	289	<1	167	1	166	2	129	1	141	1	153	<1	225	0		<1	185	1	145
1997	0		1	138	1	162	4	128	1	142	3	139	1	155	<1	157	0		2	135
1998	<1	126	1	168	1	162	3	143	1	157	2	144	<1	189	0		<1	160	1	152
1999	0		1	151	3	171	5	134	3	148	3	147	1	208	<1	158	<1	190	2	146
2000	<1	217	<1	157	1	153	5	132	3	142	4	136	2	153	0		<1	251	2	139
2001	<1	215	2	135	3	152	5	136	4	134	4	129	1	182	0		<1	146	3	137
2002	<1	173	2	147	6	158	5	144	13	140	6	151	1	208	0		<1	107	4	146
2003	3	133	1	128	3	162	7	148	15	126	8	142	1	205	<1	186	<1	183	5	139
Gulf menhaden																				
1982 ^a	ND		12	ND	ND		10	ND	11	ND	24	ND	2	ND	<1	ND	<1	ND	10	ND
1983	ND		7	103	ND		10	109	17	76	3	89	3	104	1	87	0		8	96
1984	ND		3	98	ND		3	93	23	58	45	44	4	82	6	76	<1	59	9	61
1985	ND		18	112	ND		10	109	27	79	12	92	2	119	4	106	0		14	101
1986	<1	121	17	95	ND		4	79	18	64	8	55	1	156	<1	49	0		9	84
1987	3	101	20	95	15 ^c	84	12	101	34	77	22	62	1	128	<1	92	0		16	88
1988	3	94	22	80	1	96	16	96	11	99	4	106	1	124	1	58	<1	110	13	88

Table 4. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Gulf menhaden (cont.)																					
	1989	3	79	14	107	7	97	3	111	21	103	3	65	7	115	<1	60	<1	78	9	105
	1990	5	68	11	94	2	94	4	121	24	85	19	102	2	97	2	85	<1	111	10	95
	1991	6	83	21	87	4	82	17	98	34	92	16	88	2	128	1	73	<1	98	17	91
	1992	2	95	22	103	7	71	31	103	17	94	38	87	3	102	1	108	1	107	20	100
	1993	2	79	39	84	5	44	10	104	12	68	16	75	4	98	<1	119	<1	136	18	85
	1994	4	84	30	91	4	46	7	120	13	74	3	117	5	91	<1	187	<1	132	14	93
	1995	2	68	23	103	2	48	3	105	19	45	7	71	2	131	<1	108	<1	126	11	90
	1996	16	55	14	101	29	33	6	91	8	79	41	37	2	111	<1	74	<1	141	11	76
	1997	3	76	28	102	7	82	5	123	9	86	20	106	3	123	<1	107	<1	120	13	103
	1998	9	56	17	105	3	64	5	115	11	88	15	103	5	117	<1	96	<1	37	11	103
	1999	6	82	13	85	2	78	8	116	4	92	8	74	3	97	<1	133	0		8	92
	2000	17	83	9	108	1	82	3	133	3	85	11	123	10	129	<1	144	<1	126	7	114
	2001	9	60	40	72	9	68	25	100	19	70	15	53	1	104	<1	65	0		24	78
	2002	13	59	29	91	4	108	30	108	40	89	9	118	6	135	<1	166	<1	31	24	97
	2003	17	91	33	80	2	102	16	107	37	75	13	86	5	139	<1	128	0		22	85
Pinfish																					
	1982 ^a	ND		1	ND	ND		7	ND	5	ND	2	ND	85	ND	44	ND	39	ND	19	ND
	1983	ND		1	121	ND		6	110	14	106	38	106	119	124	20	133	45	109	24	119
	1984	ND		1	121	ND		6	107	7	96	39	96	25	113	67	108	73	111	15	107
	1985	ND		1	120	ND		9	111	23	104	53	110	48	118	18	133	48	110	18	113
	1986	4	117	2	118	ND		10	101	18	98	55	103	100	116	32	109	95	108	27	109
	1987	<1	126	1	122	5 ^c	113	13	103	32	91	83	106	130	121	12	131	56	113	32	112
	1988	4	126	2	114	5	107	18	111	92	104	139	100	272	115	20	112	65	100	59	109
	1989	1	117	2	121	9	98	16	113	53	103	82	103	463	117	16	110	81	104	75	114
	1990	3	109	5	107	5	103	34	109	64	101	109	101	164	107	104	77	282	101	61	102
	1991	1	111	4	120	8	100	6	116	26	102	32	109	247	111	81	105	278	107	52	109
	1992	1	98	2	127	1	112	5	112	10	103	23	101	159	110	48	117	130	109	31	110
	1993	3	119	4	114	3	110	5	103	34	102	91	106	136	117	46	105	139	103	37	110
	1994	1	128	9	109	2	125	9	101	27	103	39	118	77	127	42	114	97	106	26	115
	1995	<1	122	2	137	2	119	6	106	38	97	69	114	138	127	25	115	116	105	34	117
	1996	17	131	3	107	4	114	4	106	19	106	52	106	164	120	55	83	108	105	35	112
	1997	2	116	1	132	9	121	2	111	11	104	59	110	333	117	28	100	105	109	51	115
	1998	13	120	3	109	3	112	20	108	30	107	106	107	239	118	28	113	112	109	52	114
	1999	1	138	4	119	1	119	15	110	57	109	95	110	422	119	25	119	106	113	76	116
	2000	9	132	4	123	7	108	12	107	34	101	202	113	268	124	36	141	144	110	63	118
	2001	5	120	5	111	4	100	18	109	48	97	127	110	158	124	60	99	246	68	50	109
	2002	15	114	13	120	4	122	14	108	76	99	185	106	367	114	44	116	106	110	83	111
	2003	4	128	6	122	1	134	18	104	47	89	156	105	436	115	46	125	83	110	83	111
Red drum																					
	1982 ^a	ND		0		ND		<1	ND	<1	230	<1	102	<1	649	<1	619	0		<1	402

Table 4. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide^b</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Red drum (cont.)																				
1983	ND		0		ND		0		<1	319	<1	224	0		0		<1	280	<1	242
1984	ND		<1	583	ND		<1	305	<1	344	<1	142	<1	81	<1	241	<1	401	<1	304
1985	ND		0		ND		<1	56	0		<1	54	<1	276	<1	475	<1	90	<1	292
1986	<1	212	0		ND		0		<1	35	<1	78	0		<1	630	<1	340	<1	289
1987	<1	405	<1	34	0 ^c		0		0		0		<1	399	0		0		<1	154
1988	<1	272	<1	53	0		0		0		<1	23	0		0		<1	308	<1	72
1989	<1	254	<1	44	0		<1	42	0		0		<1	525	0		<1	68	<1	72
1990	0		<1	320	0		0		<1	53	0		0		<1	40	<1	342	<1	268
1991	0		<1	135	0		0		<1	75	0		<1	264	<1	383	<1	256	<1	211
1992	0		<1	197	0		<1	63	<1	349	<1	369	<1	117	0		<1	303	<1	207
1993	<1	575	0		<1	360	0		<1	250	<1	412	0		<1	415	<1	271	<1	306
1994	0		<1	433	<1	72	0		<1	170	<1	70	0		<1	125	<1	329	<1	277
1995	<1	246	0		0		0		<1	281	0		<1	188	<1	320	<1	382	<1	306
1996	0		0		<1	400	0		<1	93	<1	436	<1	224	<1	330	<1	266	<1	227
1997	<1	679	<1	491	0		<1	330	<1	350	<1	240	0		<1	306	1	252	<1	327
1998	<1	350	0		0		0		0		0		<1	87	0		<1	361	<1	286
1999	0		<1	760	0		0		0		<1	67	0		<1	346	<1	479	<1	542
2000	<1	378	0		<1	82	0		0		0		0		0		<1	582	<1	413
2001	<1	554	<1	80	0		0		0		<1	170	<1	38	0		<1	347	<1	97
2002	<1	479	<1	404	0		<1	270	<1	285	<1	301	<1	68	<1	345	<1	358	<1	316
2003	<1	372	<1	63	<1	361	0		<1	135	<1	843	0		<1	189	<1	298	<1	186
Sand seatrout																				
1982 ^a	ND		4		ND		5	185	<1	141	3	126	14	147	1	201	6	164	5	161
1983	ND		3	134	ND		4	132	<1	108	3	111	9	158	<1	196	1	164	3	140
1984	ND		2	147	ND		1	121	<1	115	1	107	4	141	0		1	161	1	138
1985	ND		4	127	ND		3	126	<1	136	1	119	7	144	1	160	1	117	3	131
1986	1	152	3	141	ND		2	117	<1	112	<1	133	5	148	0		<1	154	2	137
1987	2	121	2	110	2	112	5	114	1	99	1	94	9	134	<1	156	<1	160	3	118
1988	1	140	3	107	1	117	2	126	<1	123	2	107	3	125	<1	109	<1	128	2	115
1989	2	102	10	96	<1	81	3	111	1	110	4	85	12	143	0		2	152	6	109
1990	1	110	5	109	1	96	3	119	<1	117	1	113	3	124	0		2	102	3	113
1991	1	118	7	130	1	103	2	123	1	119	4	113	5	143	0		2	140	4	130
1992	2	113	6	113	<1	150	6	113	2	104	4	128	2	142	<1	209	2	155	4	117
1993	6	108	6	110	3	107	4	119	1	109	5	103	5	125	1	146	1	126	4	113
1994	1	76	8	107	3	124	3	119	<1	123	2	130	3	143	<1	253	2	157	4	114
1995	1	101	8	121	2	104	8	111	1	105	4	126	3	148	0		2	160	5	120
1996	7	151	2	116	3	94	3	119	<1	139	3	106	2	172	0		<1	169	2	127
1997	10	115	8	119	2	87	5	130	<1	105	4	131	2	149	<1	166	<1	146	5	123
1998	20	113	5	125	2	107	3	118	<1	160	5	108	5	124	0		1	146	4	121
1999	5	120	3	122	13	92	2	122	<1	150	6	138	3	156	<1	106	<1	130	2	130
2000	5	122	5	115	3	94	2	121	<1	130	3	158	3	164	0		1	185	3	126

Table 4. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
Sand seatrout (cont.)																					
	2001	7	93	10	119	2	87	5	131	<1	133	2	143	2	179	0	<1	124	5	126	
	2002	3	99	8	129	2	120	4	137	1	104	11	131	8	137	0	<1	155	6	131	
	2003	14	117	4	134	3	112	3	123	1	104	11	132	6	155	0	<1	154	4	134	
Sheepshead																					
	1982 ^a	ND		<1	295	ND		0		<1	119	<1	85	<1	345	1	366	1	241	<1	290
	1983	ND		<1	344	ND		0		<1	113	<1	138	<1	365	1	358	<1	248	<1	323
	1984	ND		<1	339	ND		<1	147	0		<1	157	<1	342	<1	402	<1	300	<1	314
	1985	ND		<1	341	ND		<1	102	<1	112	<1	143	<1	259	<1	412	<1	80	<1	242
	1986	1	215	<1	451	ND		0		0		<1	122	<1	288	<1	356	1	160	<1	228
	1987	<1	279	<1	356	0 ^c		<1	111	<1	124	<1	115	<1	299	<1	377	<1	156	<1	255
	1988	<1	332	<1	423	0		<1	112	<1	80	<1	95	<1	155	<1	247	<1	152	<1	238
	1989	1	252	<1	253	<1	104	<1	120	<1	120	<1	116	<1	251	<1	518	<1	366	<1	240
	1990	3	248	<1	343	0		0		<1	89	<1	99	0		0		<1	234	<1	274
	1991	2	300	<1	339	<1	192	0		<1	145	<1	145	<1	229	0		<1	136	<1	295
	1992	3	267	<1	354	0		<1	65	1	121	<1	149	<1	164	<1	465	<1	187	<1	242
	1993	5	257	<1	311	1	286	0		1	134	<1	101	<1	203	<1	473	1	156	<1	227
	1994	2	281	<1	287	1	309	0		<1	187	<1	133	<1	165	<1	509	1	225	<1	256
	1995	3	244	<1	322	<1	301	<1	123	1	177	<1	139	<1	158	<1	181	1	161	<1	221
	1996	2	300	<1	403	1	328	0		1	181	<1	116	<1	253	<1	464	1	115	<1	274
	1997	2	303	1	312	2	314	<1	119	<1	152	<1	172	<1	288	<1	364	1	252	1	280
	1998	3	333	<1	362	2	331	<1	161	1	177	<1	153	<1	265	<1	295	<1	248	<1	291
	1999	2	307	<1	376	1	315	0		<1	275	<1	150	<1	294	<1	332	<1	119	<1	318
	2000	1	341	<1	324	1	333	<1	195	<1	246	1	185	<1	280	<1	322	3	153	<1	242
	2001	2	282	<1	340	1	354	<1	274	<1	267	<1	252	<1	400	<1	252	2	148	<1	287
	2002	2	329	<1	340	1	348	<1	97	<1	279	<1	237	<1	404	<1	345	2	158	1	298
	2003	1	353	1	353	1	326	0		<1	259	<1	151	<1	238	0		1	206	<1	308
Southern flounder																					
	1982 ^a	ND		<1	158	ND		<1	169	1	155	1	186	1	181	2	203	<1	296	1	176
	1983	ND		<1	175	ND		<1	196	<1	120	1	180	<1	242	<1	203	<1	161	<1	180
	1984	ND		<1	193	ND		<1	194	<1	153	2	148	<1	175	1	145	<1	168	<1	160
	1985	ND		<1	234	ND		<1	202	1	147	1	152	1	221	1	197	<1	261	<1	191
	1986	<1	141	1	161	ND		<1	165	1	141	1	144	1	184	1	262	<1	212	1	166
	1987	<1	168	<1	231	<1 ^c	154	<1	191	<1	160	<1	167	<1	171	0		<1	183	<1	181
	1988	<1	144	<1	195	<1	132	<1	148	<1	118	<1	168	<1	214	<1	226	<1	205	<1	157
	1989	<1	173	<1	166	<1	181	<1	194	<1	130	<1	169	<1	193	<1	348	<1	211	<1	168
	1990	<1	119	<1	174	<1	161	<1	166	<1	121	<1	136	<1	167	1	190	<1	170	<1	145
	1991	<1	152	<1	160	<1	147	<1	242	<1	148	<1	190	<1	228	<1	266	<1	229	<1	180
	1992	<1	185	<1	184	<1	186	<1	210	<1	191	<1	135	0		0		<1	205	<1	188
	1993	<1	198	<1	155	<1	177	<1	142	<1	126	<1	140	<1	232	<1	416	<1	391	<1	154

Southern flounder (cont.)

Table 4. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
	1994	1	214	1	160	<1	230	<1	162	<1	226	<1	189	<1	323	<1	236	<1	223	<1	186
	1995	1	138	<1	192	0		<1	225	1	170	<1	220	<1	111	<1	332	0		<1	186
	1996	1	214	<1	197	<1	162	1	151	<1	156	<1	181	<1	210	<1	163	1	221	<1	173
	1997	1	218	1	219	1	159	1	202	1	178	1	216	<1	188	<1	240	<1	236	1	207
	1998	1	167	1	154	1	216	1	173	1	147	1	223	0	236	<1	200	<1	222	1	164
	1999	2	216	<1	193	<1	161	<1	199	<1	140	1	208	<1	203	<1	170	<1	386	<1	199
	2000	1	192	<1	214	<1	324	<1	187	<1	180	<1	260	<1	305	<1	291	<1	357	<1	216
	2001	1	206	<1	197	<1	144	<1	204	<1	170	1	163	<1	220	<1	190	1	163	<1	190
	2002	2	147	<1	163	<1	290	1	200	<1	180	1	211	<1	364	<1	281	<1	238	<1	192
	2003	2	187	<1	146	<1	167	<1	193	1	164	<1	204	<1	194	<1	236	<1	450	<1	171
Spot	1982 ^a	ND		9	ND	ND		26	ND	5	ND	68	ND	33	ND	10	ND	4	ND	19	ND
	1983	ND		6	120	ND		17	122	5	112	18	118	36	140	2	163	6	135	12	127
	1984	ND		8	115	ND		34	107	35	84	131	91	74	112	82	118	10	108	39	103
	1985	ND		13	121	ND		20	118	13	110	60	116	215	132	24	137	19	129	41	126
	1986	6	120	14	120	ND		29	121	21	99	92	106	115	129	6	118	5	135	35	119
	1987	9	134	11	127	12	119	38	115	34	97	86	117	122	125	4	158	13	112	37	119
	1988	24	113	14	117	5	107	42	127	116	108	151	116	235	127	4	140	18	118	66	120
	1989	19	130	11	123	6	111	85	118	73	105	97	127	240	136	6	129	18	119	68	125
	1990	6	130	8	117	12	95	94	119	117	96	165	101	164	113	71	110	104	104	78	109
	1991	6	124	9	120	6	108	44	124	39	105	52	108	206	116	24	130	82	117	50	116
	1992	10	137	19	125	2	125	71	128	25	119	78	100	66	130	9	149	25	133	40	123
	1993	32	119	16	135	4	131	86	112	30	101	63	102	167	118	4	134	11	134	54	115
	1994	25	129	24	116	4	128	23	122	39	103	61	119	56	135	1	161	9	137	30	120
	1995	6	127	17	127	4	119	38	119	53	110	75	124	41	146	1	141	15	139	32	124
	1996	39	121	8	125	6	129	39	112	23	119	90	107	147	136	4	129	12	130	40	123
	1997	5	149	13	134	25	125	51	125	12	120	86	119	201	123	7	137	10	133	48	124
	1998	53	115	17	129	7	125	117	127	33	106	169	120	147	121	8	152	11	135	72	123
	1999	12	128	12	122	6	122	43	126	71	111	146	120	114	133	7	144	8	147	51	123
	2000	28	133	10	134	3	147	53	135	20	106	128	133	48	147	3	186	9	141	36	134
	2001	20	111	35	103	14	112	95	114	44	103	281	113	91	132	11	126	14	126	76	114
	2002	61	117	29	115	8	136	116	128	88	119	262	126	143	125	8	155	7	141	90	124
	2003	139	114	31	116	11	134	119	124	69	104	246	120	368	122	32	145	16	126	119	120
Spotted seatrout	1982 ^a	ND		<1	173	ND		0		<1	232	<1	163	<1	187	1	166	<1	142	<1	171
	1983	ND		<1	288	ND		<1	155	<1	168	2	207	<1	327	2	188	<1	200	<1	212
	1984	ND		<1	418	ND		<1	174	<1	252	<1	237	<1	385	<1	351	<1	236	<1	329
	1985	ND		<1	286	ND		<1	171	<1	156	1	156	<1	171	1	146	<1	218	<1	188
	1986	<1	187	<1	259	ND		<1	193	<1	170	<1	162	1	176	<1	151	1	196	<1	201
	1987	<1	147	<1	134	<1 ^c	162	<1	143	1	166	1	164	<1	163	1	206	<1	198	<1	167

Table 4. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide^b</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout (cont.)																				
1988	<1	189	<1	172	<1	166	<1	249	<1	159	2	166	<1	175	<1	176	<1	95	<1	172
1989	<1	227	<1	142	<1	128	<1	174	<1	190	1	168	<1	214	1	186	1	139	<1	173
1990	<1	334	<1	118	0		0		<1	119	<1	176	<1	123	<1	114	0		<1	150
1991	<1	251	<1	165	<1	184	<1	134	<1	136	1	154	<1	161	1	124	1	177	<1	155
1992	<1	194	<1	155	<1	150	<1	155	1	149	2	182	<1	219	2	175	1	185	1	167
1993	<1	196	<1	161	<1	130	<1	133	<1	149	1	181	<1	239	2	174	<1	216	<1	170
1994	<1	142	<1	145	<1	220	0		1	127	<1	199	<1	235	1	175	<1	247	<1	159
1995	<1	172	<1	145	<1	190	<1	182	1	156	1	193	<1	218	1	167	1	157	<1	168
1996	<1	180	<1	152	<1	174	<1	140	1	167	1	192	<1	235	1	180	<1	184	<1	178
1997	<1	183	<1	170	<1	140	<1	239	1	175	1	165	<1	165	1	157	<1	126	<1	175
1998	<1	171	<1	166	<1	195	<1	178	<1	174	2	171	<1	175	1	170	<1	222	<1	171
1999	<1	217	<1	184	1	196	<1	202	<1	146	1	188	<1	196	2	156	<1	160	<1	179
2000	<1	239	<1	99	<1	160	<1	132	<1	194	2	205	<1	254	2	122	<1	198	<1	176
2001	<1	244	<1	150	<1	162	<1	100	<1	156	1	158	<1	186	1	118	<1	109	<1	153
2002	<1	178	<1	163	<1	222	<1	189	<1	172	2	176	<1	229	<1	127	<1	128	<1	172
2003	1	165	<1	142	<1	156	<1	163	<1	142	1	187	<1	207	1	183	<1	181	<1	166
Striped mullet																				
1982 ^a	ND		<1		ND		<1		1		2		2	212	1	311	<1		1	232
1983	ND		1	204	ND		<1	131	2	137	3	209	1	211	2	323	1	331	1	210
1984	ND		1	244	ND		<1	204	<1	174	1	192	1	209	6	287	1	307	1	250
1985	ND		2	195	ND		<1	163	<1	136	7	158	<1	168	1	243	<1	254	2	181
1986	<1	187	4	255	ND		<1	116	<1	157	<1	158	1	226	<1	278	<1	266	1	250
1987	1	168	2	292	<1 ^c	158	<1	200	4	145	1	171	1	192	0		0		1	210
1988	2	239	2	294	<1	167	<1	138	1	130	<1	156	3	185	<1	334	0		1	243
1989	5	183	5	249	1	164	<1	237	1	188	<1	187	2	206	0		<1	365	2	234
1990	<1	234	1	192	<1	133	<1	141	<1	136	1	155	<1	239	<1	292	0		<1	180
1991	4	174	3	213	<1	114	<1	178	7	141	2	141	<1	216	2	279	<1	276	2	181
1992	6	232	5	232	0		<1	129	3	145	4	143	1	213	<1	215	<1	178	3	206
1993	1	209	1	260	<1	172	<1	157	1	148	1	168	1	219	<1	334	<1	244	1	214
1994	4	261	1	189	<1	207	<1	141	1	144	3	184	1	260	<1	354	<1	240	1	204
1995	1	190	3	261	<1	333	0		<1	134	2	191	3	196	0		<1	220	2	234
1996	2	209	13	274	1	181	<1	151	1	220	3	243	1	176	<1	350	0		5	268
1997	1	241	5	248	1	222	<1	138	3	195	3	176	<1	215	4	213	<1	172	3	225
1998	4	226	2	300	<1	197	<1	180	1	197	4	172	1	175	<1	299	<1	309	1	247
1999	1	253	1	245	<1	180	<1	168	2	160	8	196	2	204	<1	239	<1	286	1	200
2000	2	247	3	255	3	179	<1	169	1	199	7	231	2	245	1	317	<1	197	2	242
2001	2	277	2	250	1	234	1	125	3	188	7	226	1	191	1	325	<1	271	2	215
2002	6	199	2	248	<1	265	2	156	12	148	14	219	2	216	<1	303	<1	256	4	191
2003	3	213	4	248	2	232	<1	153	2	156	9	200	4	177	3	154	<1	226	3	213

Table 4. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Total finfish																					
1982 ^a	ND			88	199	ND		193	139	48	179	270	119	371	166	313	232	152	183	171	167
1983	ND			63	126	ND		162	99	107	93	174	108	308	139	170	115	143	139	139	116
1984	ND			46	123	ND		111	104	104	82	312	86	294	124	197	123	169	130	134	108
1985	ND			82	117	ND		115	114	96	101	236	99	380	129	96	127	149	128	143	117
1986	28	151		96	122	ND		127	112	118	97	261	104	378	132	86	109	188	132	151	117
1987	53	136		83	121	64 ^c	117	242	107	302	100	354	101	370	131	64	117	157	126	200	112
1988	101	131		138	101	49	122	186	118	363	107	512	108	630	127	76	104	167	119	259	113
1989	98	137		111	119	44	105	265	122	295	106	347	109	857	133	53	103	197	121	272	122
1990	85	122		94	116	41	108	282	118	304	102	381	106	464	123	368	88	564	119	259	113
1991	72	127		176	106	41	109	359	104	347	97	423	102	614	122	208	125	524	123	318	109
1992	94	152		166	121	23	102	455	105	268	98	443	97	335	121	106	130	305	129	281	111
1993	156	142		201	107	55	132	297	108	166	103	365	110	433	131	87	113	269	128	252	114
1994	82	152		194	111	54	150	229	110	295	92	266	104	268	123	85	106	203	130	218	110
1995	59	128		216	103	69	130	371	99	329	101	338	120	331	134	53	122	278	132	273	109
1996	166	123		150	118	85	104	177	106	137	117	320	109	432	136	90	107	257	135	201	120
1997	143	133		216	110	85	135	272	117	102	122	344	116	653	129	69	134	191	130	262	120
1998	214	129		167	115	53	144	332	111	161	116	452	114	567	128	70	124	191	128	277	119
1999	106	135		99	112	87	118	255	105	207	118	426	120	687	135	73	121	176	135	251	121
2000	168	135		124	114	83	131	209	115	134	113	628	126	507	143	106	112	209	128	237	125
2001	182	112		267	103	75	120	427	104	182	107	623	120	415	138	127	107	327	99	335	112
2002	191	121		185	119	73	148	395	111	337	107	739	126	668	132	71	130	181	131	358	120
2003	363	114		189	112	90	158	395	111	370	99	676	118	999	133	132	128	164	132	405	118
SHELLFISHES																					
Blue crab																					
1982 ^a	ND			28	91	ND		5	99	17	81	29	66	7	97	9	148	10	100	17	89
1983	ND			24	88	ND		10	86	21	80	40	81	2	96	7	113	12	97	18	86
1984	ND			19	92	ND		4	88	8	82	31	81	8	88	24	106	50	86	15	90
1985	ND			30	79	ND		10	85	19	76	23	72	5	115	21	103	36	86	21	81
1986	6	132		28	79	ND		13	85	19	85	25	78	14	88	8	100	15	85	19	83
1987	5	135		19	78	28 ^c	87	10	77	40	93	18	84	6	95	8	108	19	88	17	86
1988	5	137		9	71	13	91	3	77	89	75	57	63	7	88	7	98	18	84	22	74
1989	9	135		25	66	51	63	6	80	50	74	24	68	2	94	2	107	9	77	19	72
1990	6	98		31	72	15	79	4	90	39	69	17	71	14	96	5	93	33	91	21	76
1991	7	117		10	64	26	76	6	75	68	58	51	58	7	102	5	105	35	89	20	65
1992	7	139		8	77	2	102	6	65	105	54	38	56	10	81	26	110	27	98	24	65
1993	5	131		16	70	6	93	14	82	50	80	35	78	10	96	16	114	22	88	20	81
1994	4	146		16	74	3	90	23	85	71	47	26	72	3	66	20	83	25	93	24	67
1995	2	133		8	58	3	111	8	74	25	55	11	67	4	69	11	76	17	84	10	64
1996	9	107		14	60	6	107	16	82	14	75	10	72	5	78	4	86	12	87	12	73
1997	4	131		16	52	5	138	18	73	21	70	12	68	4	82	7	99	15	88	14	67

Table 4. (Cont.)

Species	<u>Sabine Lake</u>		<u>Galveston</u>		<u>East Matagorda</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Corpus Christi</u>		<u>Upper Laguna Madre</u>		<u>Lower Laguna Madre</u>		<u>Coastwide^b</u>	
Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Blue crab (cont.)																				
1998	11	126	21	65	8	122	13	76	15	86	20	77	6	83	9	99	13	86	16	74
1999	7	108	5	79	9	93	7	70	3	94	9	76	3	91	8	91	13	80	6	79
2000	4	148	10	71	4	59	6	72	6	84	8	77	2	94	2	92	6	76	7	75
2001	2	135	12	61	2	97	5	69	13	87	12	87	4	71	1	96	6	79	9	72
2002	5	111	10	71	6	132	4	98	10	79	20	77	3	101	2	73	4	81	8	79
2003	4	125	4	88	5	140	4	85	15	75	9	91	2	97	7	104	15	98	6	86
Brown shrimp																				
1982 ^a	ND		23	90	ND		25	94	17	101	54	80	40	90	40	101	6	61	27	91
1983	ND		12	99	ND		26	100	31	99	56	91	8	99	8	102	9	66	21	97
1984	ND		13	102	ND		7	102	58	96	107	80	50	103	25	108	6	74	30	94
1985	ND		33	75	ND		24	89	27	90	67	81	24	96	16	108	11	63	30	83
1986	<1	99	15	94	ND		29	99	69	98	111	96	42	95	7	108	15	64	34	96
1987	4	92	24	88	7 ^c	76	47	91	93	85	101	88	66	94	8	100	5	70	46	89
1988	3	85	24	84	10	91	32	100	124	91	139	86	17	89	6	93	3	73	44	90
1989	8	84	29	84	47	97	39	91	156	90	105	90	17	88	5	92	9	63	49	89
1990	1	113	11	98	40	100	26	96	104	92	78	90	28	88	12	91	27	79	34	92
1991	1	93	13	87	63	96	21	86	51	89	158	91	29	91	19	97	8	80	32	90
1992	3	83	38	82	9	90	23	82	65	82	64	81	30	92	40	110	7	73	37	84
1993	9	79	18	85	14	69	43	94	45	82	95	88	22	87	13	103	5	67	32	88
1994	9	83	29	99	3	69	51	95	101	88	37	85	10	88	18	103	54	58	41	91
1995	1	91	12	83	9	65	54	84	100	75	108	84	23	90	15	91	14	70	41	81
1996	8	89	14	95	25	63	23	101	36	89	69	80	19	94	13	82	7	86	23	91
1997	7	80	12	92	4	62	29	89	23	80	71	78	16	91	24	107	12	68	23	86
1998	51	82	28	87	16	66	17	92	34	86	34	80	53	87	24	106	9	74	30	87
1999	8	69	13	81	12	67	16	84	14	77	22	75	6	84	16	89	2	71	13	81
2000	61	81	59	89	38	69	48	92	49	89	48	79	9	84	17	93	1	76	46	88
2001	16	90	51	89	64	76	31	97	61	85	93	85	23	85	8	78	75	45	46	87
2002	7	78	30	84	13	75	23	87	58	82	38	80	63	87	11	99	1	67	35	84
2003	12	70	32	87	4	72	25	90	182	78	22	81	6	86	30	117	3	70	46	83
Pink shrimp																				
1982 ^a	ND		<1	94	ND		<1	113	<1	96	7	89	2	100	1	96	0		1	94
1983	ND		<1	95	ND		1	112	5	95	9	94	2	103	1	113	1	88	2	99
1984	ND		0		ND		<1	76	<1	72	3	86	3	109	<1	94	<1	71	1	98
1985	ND		<1	88	ND		<1	104	3	98	4	100	5	96	4	107	1	98	2	99
1986	0		<1	118	ND		2	114	4	103	11	101	12	103	1	109	<1	70	3	104
1987	0		<1	111	2 ^c	102	5	95	2	92	6	84	12	101	1	107	2	72	3	95
1988	0		1	79	<1	110	2	89	6	86	20	82	8	93	<1	76	2	77	4	85
1989	0		<1	90	<1	94	1	102	8	93	14	91	8	95	<1	85	1	80	3	93
1990	0		<1	84	0		<1	106	1	97	23	88	4	97	3	71	3	85	3	90
1991	0		<1	101	1	115	2	102	8	84	27	88	8	97	4	103	4	79	5	90

Table 4. (Cont.)

Species	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide ^b		
	Year	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length		
Pink shrimp (cont.)																					
	1992	0		<1	58	<1	101	<1	87	<1	70	7	77	10	95	9	103	20	82	3	89
	1993	0		<1	87	0		<1	100	1	86	5	76	4	91	1	98	4	79	1	85
	1994	0		<1	92	<1	89	3	104	5	78	6	85	5	89	4	93	15	63	3	84
	1995	0		<1	89	2	80	10	97	6	82	4	90	13	100	4	95	7	70	5	94
	1996	0		1	101	2	90	1	113	7	92	4	91	5	100	3	88	5	63	3	94
	1997	0		<1	92	1	76	3	98	4	96	13	94	14	104	2	99	5	78	4	98
	1998	0		<1	94	2	83	2	97	3	85	6	80	14	89	4	83	6	59	4	87
	1999	0		<1	110	2	80	1	85	<1	75	2	85	2	94	6	100	3	74	1	90
	2000	0		2	97	1	82	2	102	4	90	9	81	3	87	3	80	4	63	3	90
	2001	0		1	87	1	83	4	102	6	98	9	86	10	97	6	65	3	79	4	94
	2002	0		<1	90	<1	86	<1	97	<1	79	4	81	6	96	1	114	3	59	1	90
	2003	0		0		0		<1	83	0		1	72	2	94	1	101	2	70	0.4	88
White shrimp																					
	1982 ^a	ND		88	93	ND		39	86	14	99	16	95	26	101	17	110	4	61	46	92
	1983	ND		78	93	ND		20	102	13	96	18	100	14	111	6	112	2	86	36	95
	1984	ND		60	98	ND		15	99	8	99	38	106	24	106	11	126	10	109	32	101
	1985	ND		62	99	ND		21	110	23	91	17	106	22	104	6	120	1	105	33	101
	1986	14	105	45	95	ND		60	98	15	96	13	101	19	98	3	108	5	57	34	97
	1987	23	101	37	97	22 ^c	92	16	97	42	87	10	94	15	99	2	105	2	76	24	95
	1988	39	107	21	91	8	95	16	98	41	93	16	91	12	95	3	102	<1	79	20	94
	1989	29	87	29	89	11	98	9	98	43	99	7	98	9	100	3	97	<1	114	20	93
	1990	50	90	14	98	14	103	16	115	47	97	13	108	22	98	21	100	1	113	21	100
	1991	17	91	76	97	7	99	11	95	27	94	30	89	24	121	14	113	1	107	37	98
	1992	37	88	59	93	5	99	31	96	24	95	53	93	5	111	6	114	1	104	35	94
	1993	11	81	38	91	31	83	17	97	18	88	21	95	10	90	14	96	2	97	23	92
	1994	45	96	95	80	15	97	9	107	44	87	6	101	34	91	10	109	2	94	45	84
	1995	4	93	55	90	34	87	11	101	28	86	9	98	6	103	7	104	8	93	26	92
	1996	31	97	18	98	87	89	14	109	18	95	5	105	3	109	3	105	1	99	14	100
	1997	48	78	51	95	25	95	27	101	37	96	28	91	4	111	2	112	2	72	32	95
	1998	49	87	62	89	168	76	42	84	40	89	35	94	9	100	5	109	1	102	42	88
	1999	18	83	36	92	54	83	22	106	19	94	21	97	18	103	7	112	<1	77	25	96
	2000	22	98	27	93	57	88	8	109	6	102	11	108	3	103	2	113	<1	97	14	97
	2001	46	84	46	88	51	90	27	97	33	89	18	99	3	110	10	86	1	69	30	91
	2002	20	90	68	85	72	95	46	97	35	87	57	92	9	100	5	104	<1	78	46	89
	2003	135	96	47	92	70	84	27	96	38	84	69	95	16	111	6	115	1	100	39	93

^aValues include May-Dec. only.^b1986 values include Sabine Lake; 1987 values include East Matagorda Bay.^cValues include Apr.-Dec. only.

TABLE 5. Annual mean catch rates (No./h) and mean total lengths (mm) of select fishes and shellfishes caught with 6.1-m trawls in the Texas Territorial Sea during 1985-2003. Blank indicates no measurement taken; ND = no data.

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
FINFISHES													
Atlantic croaker													
	1985 ^a	ND		22	145	42	139	17	145	9	149	23	142
	1986	44 ^b	134	45	126	98	136	43	130	9	132	49	132
	1987	9	114	110	119	65	131	28	134	<1	157	44	124
	1988	79	122	78	118	89	132	23	130	2	128	55	125
	1989	64	115	117	117	75	128	28	128	6	137	60	121
	1990	175	117	139	111	69	135	65	131	4	119	91	119
	1991	272	111	153	114	201	121	87	129	4	162	145	117
	1992	229	110	228	116	153	116	81	106	6	126	142	113
	1993	437	111	200	110	74	123	91	121	10	144	162	113
	1994	140	115	109	126	75	141	2	114	14	143	69	126
	1995	80	116	33	123	112	119	20	133	1	121	50	119
	1996	253	118	88	128	29	117	7	117	8	143	77	121
	1997	150	118	94	118	195	134	51	133	18	136	104	126
	1998	240	111	130	115	72	114	48	128	12	140	101	115
	1999	169	116	75	117	49	128	17	124	2	126	61	119
	2000	168	113	178	123	34	129	13	114	1	108	78	119
	2001	273	125	380	112	283	122	66	117	13	151	203	119
	2002	227	103	109	126	113	132	36	118	13	156	99	117
	2003	123	116	87	118	98	128	42	125	32	135	76	122
Black drum													
	1985 ^a	ND		0		0		<1	825	0		<1	825
	1986	0 ^b		0		<1	900	0		0		<1	900
	1987	<1	851	<1	760	<1	680	<1	680	0		<1	741
	1988	0		<1	752	0		0		0		<1	752
	1989	<1	698	0		<1	506	0		0		<1	631
	1990	0		<1	528	0		0		0		<1	538
	1991	0		<1	970	0		0		0		<1	970
	1992	0		0		<1	889	0		0		<1	889
	1993	<1	146	<1	825	0		0		<1	780	<1	632
	1994	0		<1	843	0		0		0		<1	843
	1995	<1	871	<1	142	0		0		0		<1	496
	1996	0		0		0		0		0		0	

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Black drum (cont.)													
	1997	0		0		0		0		0		0	
	1998	<1	903	<1	900	0		<1	930	0		<1	906
	1999	<1	889	0		0		<1	931	0		<1	903
	2000	0		<1	895	0		<1	961	0		<1	921
	2001	<1	545	<1	941	0		0		0		<1	644
	2002	<1	782	<1	859	0		0		0		<1	795
	2003	<1	755	<1	845	0		<1	690	0		<1	797
Gafftopsail catfish													
	1985 ^a	ND		<1	165	<1	156	<1	136	0		<1	160
	1986	13 ^b	121	<1	118	<1	115	<1	176	0		3	121
	1987	3	116	0		<1	158	<1	134	0		1	118
	1988	2	118	<1	169	<1	168	0		<1	180	<1	126
	1989	2	144	1	123	<1	546	<1	187	0		<1	143
	1990	3	119	<1	123	0		0		0		1	119
	1991	1	145	<1	170	<1	181	<1	178	0		<1	150
	1992	12	125	1	148	<1	148	<1	209	0		3	127
	1993	6	123	<1	129	<1	182	<1	145	0		1	127
	1994	6	131	2	152	<1	239	1	204	0		2	143
	1995	5	131	1	141	0		1	155	0		1	135
	1996	5	122	1	137	<1	238	1	190	0		1	138
	1997	5	118	1	241	0		<1	287	0		1	134
	1998	11	124	2	155	<1	199	<1	180	0		3	131
	1999	13	128	3	144	<1	161	<1	165	<1	198	3	132
	2000	6	132	<1	151	<1	225	<1	180	0		1	135
	2001	10	120	2	156	1	150	0		0		3	128
	2002	8	129	5	137	1	207	1	174	0		3	141
	2003	22	120	8	122	2	169	1	177	0		7	126
Gulf menhaden													
	1985 ^a	ND		2	150	1	159	1	151	0		1	152
	1986	4 ^b	125	2	147	<1	180	<1	197	0		1	135
	1987	3	132	5	135	1	146	<1	159	0		2	136
	1988	5	124	10	57	6	107	<1	122	0		4	87
	1989	1	137	1	144	<1	131	<1	177	<1	51	1	138
	1990	2	133	4	136	1	122	<1	162	0		1	134
	1991	7	134	1	144	1	130	<1	148	0		2	135
	1992	4	141	14	116	1	139	1	145	0		4	123

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
	1993	5	142	1	129	<1	159	0		0		1	141
	1994	6	131	3	132	3	117	<1	116	<1	157	2	129
	1995	5	137	4	137	1	159	<1	163	<1	131	2	141
	1996	9	141	1	136	1	155	1	146	<1	205	2	142
	1997	9	124	5	107	3	160	2	150	<1	144	4	128
	1998	238	86	73	80	20	81	17	82	<1	90	70	85
	1999	307	92	116	96	14	98	8	101	0		90	94
	2000	18	133	5	122	1	140	1	153	<1	202	5	132
	2001	6	138	10	115	1	156	<1	147	0		3	126
	2002	9	121	10	130	4	155	1	172	0		5	132
	2003	14	142	3	130	1	179	1	168	0		4	142
King mackerel													
	1985 ^a	ND		<1	173	0		<1	124	0		<1	142
	1986	0 ^b		<1	159	0		0		0		<1	159
	1987	0		0		<1	120	<1	200	0		<1	131
	1988	0		0		0		0		0		0	
	1989	0		0		<1	161	<1	164	0		<1	162
	1990	0		<1	201	<1	223	0		0		<1	210
	1991	0		<1	172	<1	157	<1	99	0		<1	132
	1992	0		<1	149	<1	152	1	136	<1	192	<1	144
	1993	0		0		0		<1	169	0		<1	169
	1994	0		0		0		<1	167	0		<1	167
	1995	0		<1	173	<1	108	<1	177	0		<1	170
	1996	0		0		0		<1	195	0		<1	195
	1997	<1	158	<1	159	1	157	<1	163	0		<1	158
	1998	0		0		<1	117	0		0		<1	117
	1999	0		<1	131	<1	167	0		<1	151	<1	158
	2000	<1	140	0		<1	194	<1	165	<1	236	<1	182
	2001	<1	161	0		<1	156	<1	181	0		<1	164
	2002	<1	156	0		0		1	129	0		<1	130
	2003	<1	176	0		<1	99	<1	162	0		<1	158
Pinfish													
	1985 ^a	ND		<1	124	3	109	4	110	1	135	2	112
	1986	<1 ^b	98	2	104	2	105	4	107	2	103	2	105
	1987	0		<1	100	3	111	3	115	<1	112	1	113
	1988	<1	93	<1	112	8	105	8	110	3	105	4	107
	1989	<1	100	1	108	3	116	7	110	6	105	3	109

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pinfish (cont.)													
	1990	<1	86	1	111	4	110	18	105	2	98	5	105
	1991	<1	121	1	132	2	116	18	113	2	118	4	114
	1992	<1	115	2	121	3	110	6	103	3	107	3	108
	1993	<1	72	<1	102	3	105	6	110	2	111	3	108
	1994	<1	131	1	111	5	107	4	107	6	107	3	107
	1995	0		1	117	3	101	4	121	7	115	3	114
	1996	1	120	<1	126	1	121	4	116	7	110	3	114
	1997	<1	120	<1	122	4	118	13	114	12	107	6	112
	1998	<1	124	1	101	4	110	9	106	2	112	3	108
	1999	0	93	1	106	5	121	5	117	7	112	4	116
	2000	<1	101	<1	113	2	121	5	107	5	114	3	112
	2001	<1	97	2	109	1	111	5	123	4	107	3	113
	2002	<1	116	1	118	7	119	8	123	7	103	5	116
	2003	<1	124	1	118	5	116	5	117	4	112	3	115
Red drum													
	1985 ^a	ND		0		0		<1	84	0		<1	84
	1986	0 ^b		0		0		0		0		0	
	1987	0		0		<1	948	0		<1	42	<1	520
	1988	0		0		0		0		0		0	
	1989	0		<1	1,110	0		0		0		<1	1,110
	1990	0		<1	61	0		0		0		<1	61
	1991	0		0		0		0		0		0	
	1992	0		0		0		0		<1	95	<1	95
	1993	0		<1	1,013	0		0		0		<1	1,013
	1994	0		0		0		0		0		0	
	1995	0		0		<1	811	<1	1,037	0		<1	922
	1996	0		<1	964	0		<1	930	<1	124	<1	467
	1997	0		0		0		0		0		0	
	1998	0		0		0		0		0		0	
	1999	0		<1	1,125	0		0		0		<1	1,125
	2000	0		0		0		0		0		0	
	2001	0		0		0		0		0		0	
	2002	0		<1	875	0		0		0		<1	875
	2003	0		<1	913	0		0		0		<1	913
Red snapper													
	1985 ^a	ND		0		0		2	85	7	89	2	88

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Red snapper (cont.)													
	1986	0 ^b		0		<1	152	1	95	<1	103	<1	100
	1987	0		0	68	<1	88	1	122	<1	83	<1	107
	1988	0		0		0		1	111	1	106	<1	109
	1989	0		<1	74	2	87	4	87	3	90	2	88
	1990	0		0		<1	94	3	105	2	113	1	106
	1991	0		0		0		9	80	2	106	2	84
	1992	0		0		2	79	6	77	2	99	2	81
	1993	0		<1	126	1	76	2	77	3	98	1	88
	1994	0		0		3	89	3	103	5	97	2	96
	1995	0		0		5	70	6	89	8	89	3	84
	1996	0		0		<1	95	2	90	1	101	1	93
	1997	<1	64	0		2	80	2	89	2	99	1	88
	1998	0		<1	166	<1	84	<1	98	2	95	5	95
	1999	0		0		1	71	5	89	4	94	2	88
	2000	0		1	102	2	77	13	96	1	89	3	94
	2001	0		0		<1	67	3	100	2	100	1	99
	2002	0		0		<1	81	2	91	8	91	2	91
	2003	0		0		<1	78	3	83	12	82	3	82
Sand seatrout													
	1985 ^a	ND		10	141	6	168	3	140	<1	221	5	150
	1986	5 ^b	164	4	141	3	151	1	174	0		3	154
	1987	7	131	6	133	5	134	2	162	<1	108	4	135
	1988	3	148	5	114	11	129	1	184	<1	137	4	130
	1989	22	133	41	110	16	127	7	155	2	123	18	122
	1990	50	136	8	126	7	139	2	130	1	118	14	135
	1991	28	130	12	143	7	146	12	129	1	153	12	135
	1992	41	132	11	138	6	148	5	131	<1	161	13	135
	1993	45	129	7	131	15	116	10	112	2	121	16	124
	1994	82	132	3	149	5	148	2	125	1	130	18	134
	1995	23	126	18	129	111	106	16	125	6	88	36	112
	1996	11	138	5	141	8	163	2	130	9	102	7	136
	1997	15	134	7	141	15	134	2	151	6	106	9	133
	1998	26	124	17	136	5	160	4	164	2	115	11	134
	1999	30	129	16	137	9	188	2	163	1	132	12	142
	2000	19	131	23	122	9	132	3	158	3	121	11	128
	2001	36	132	32	120	12	134	11	150	1	153	18	131
	2002	26	105	12	133	10	170	16	144	10	114	15	128
	2003	17	112	8	121	6	181	15	143	4	124	10	132

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Southern flounder													
	1985 ^a	ND		0		<1	280	<1	137	0		<1	199
	1986	1 ^b	162	<1	255	<1	184	<1	311	0		<1	173
	1987	<1	256	<1	197	0		<1	179	<1	168	<1	191
	1988	<1	204	0		<1	214	<1	225	0		<1	214
	1989	0		0		<1	210	<1	298	0		<1	239
	1990	<1	187	0		<1	212	<1	164	<1	250	<1	197
	1991	<1	286	<1	260	<1	194	<1	188	0		<1	220
	1992	<1	143	<1	240	0		<1	284	<1	418	<1	270
	1993	<1	124	0		0		<1	279	0		<1	201
	1994	<1	171	<1	180	<1	215	0		<1	286	<1	205
	1995	0		0		<1	262	0		0		<1	262
	1996	<1	196	0		<1	437	0		0		<1	280
	1997	<1	275	0		0		0		0		<1	275
	1998	<1	204	<1	139	0		<1	265	<1	279	<1	172
	1999	<1	296	<1	306	0		<1	304	0		<1	301
	2000	0		<1	302	<1	458	0		0		<1	380
	2001	0		0		0		0		<1	150	<1	150
	2002	<1	107	<1	282	0		<1	300	0		<1	230
	2003	<1	170	<1	276	0		<1	307	0		<1	194
Spanish mackerel													
	1985 ^a	ND		0		0		0		0		0	
	1986	<1 ^b	200	0		0		0		0		<1	200
	1987	<1	93	<1	183	0		<1	258	0		<1	203
	1988	<1	166	<1	178	<1	182	<1	110	<1	200	<1	180
	1989	<1	206	<1	172	<1	175	<1	175	0		<1	182
	1990	<1	174	1	176	<1	225	<1	192	0		<1	180
	1991	1	184	1	163	<1	144	<1	134	0		<1	168
	1992	<1	158	<1	175	<1	181	<1	164	0		<1	168
	1993	1	167	<1	188	0		<1	237	0		<1	190
	1994	0		0		<1	170	<1	170	0		<1	170
	1995	<1	194	<1	186	<1	135	<1	242	0		<1	192
	1996	<1	289	<1	460	0		0		0		<1	348
	1997	<1	154	<1	135	<1	205	<1	190	0		<1	160
	1998	<1	179	0		0		0		0		<1	179
	1999	<1	220	<1	57	<1	180	0		<1	322	<1	177
	2000	<1	141	<1	150	0		0		0		<1	146
	2001	<1	154	<1	136	<1	151	<1	208	0		<1	157

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spanish mackerel (cont.)													
	2002	0		<1	205	<1	144	<1	178	0		<1	157
	2003	<1	161	<1	187	<1	204	<1	229	0		<1	204
Spot													
	1985 ^a	ND		3	132	20	130	21	141	1	142	11	136
	1986	3 ^b	124	8	128	7	124	25	123	2	125	9	124
	1987	5	140	9	126	4	125	22	129	<1	170	8	129
	1988	4	115	7	116	23	128	23	122	3	110	12	123
	1989	6	120	27	108	18	124	48	121	4	121	21	118
	1990	9	123	25	121	102	125	93	117	4	112	47	125
	1991	18	117	4	125	67	122	37	127	1	129	26	123
	1992	5	127	12	126	6	122	10	126	2	117	7	125
	1993	4	122	14	119	4	126	19	125	4	138	9	124
	1994	13	125	4	131	13	125	4	131	4	129	8	127
	1995	7	115	3	135	30	132	7	150	4	125	10	132
	1996	9	116	4	130	18	137	13	124	5	120	10	128
	1997	4	139	8	134	11	140	32	125	21	124	15	129
	1998	11	120	15	116	5	125	34	121	4	121	14	120
	1999	7	119	7	116	6	127	6	131	1	144	5	124
	2000	7	121	4	128	5	131	5	149	<1	139	4	131
	2001	9	121	52	117	22	124	47	114	9	124	28	118
	2002	11	113	22	131	19	127	14	133	3	152	14	129
	2003	13	113	9	122	9	136	13	141	3	132	9	128
Spotted seatrout													
	1985 ^a	ND		0		0		<1	140	0		<1	140
	1986	<1 ^b	163	<1	172	<1	165	0		0		<1	165
	1987	<1	178	0		0		0		0		<1	178
	1988	0		<1	65	<1	110	0		0		<1	88
	1989	<1	98	0		<1	173	0		0		<1	137
	1990	<1	110	<1	160	<1	122	<1	144	0		<1	132
	1991	0		0		<1	148	0		0		<1	148
	1992	<1	112	0		0		0		0		<1	112
	1993	0		0		<1	160	0		0		<1	160
	1994	<1	187	<1	54	0		0		0		<1	67
	1995	<1	276	0		0		0		0		<1	276
	1996	<1	139	0		0		0		0		<1	139

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spotted seatrout (cont.)													
	1997	<1	280	0		0		<1	144	<1	214	<1	183
	1998	0		0		0		0		0		0	
	1999	0		<1	316	0		0		0		<1	316
	2000	0		0		0		0		0		0	
	2001	0		0		<1	66	0		0		<1	66
	2002	<1	158	0		0		0		0		<1	158
	2003	0		0		0		0		0		0	
Total finfish													
	1985 ^a	ND		148	119	188	118	227	114	130	101	174	114
	1986	159 ^b	122	207	118	215	123	292	119	72	110	190	120
	1987	158	98	289	111	229	118	226	114	80	96	199	110
	1988	153	120	273	104	379	114	291	106	52	103	234	110
	1989	178	114	301	111	350	118	354	113	106	108	261	114
	1990	477	121	355	113	464	138	337	115	80	103	346	122
	1991	427	117	322	125	666	115	458	108	124	102	404	115
	1992	524	115	499	116	523	111	332	103	128	96	406	111
	1993	651	117	324	116	376	102	381	104	135	106	377	110
	1994	408	121	253	121	560	110	447	99	151	105	367	111
	1995	231	119	165	109	900	98	394	109	174	97	380	104
	1996	618	116	279	115	430	108	458	99	196	98	397	109
	1997	472	114	252	111	683	124	325	113	253	108	401	116
	1998	498	113	264	114	357	113	448	106	171	100	348	110
	1999	358	118	222	110	285	122	301	110	133	96	260	114
	2000	328	119	330	118	216	117	228	109	195	93	259	113
	2001	454	123	636	115	554	125	341	112	323	107	462	118
	2002	365	108	304	118	428	120	509	104	336	101	389	110
	2003	385	110	279	114	492	113	301	110	332	99	358	109
SHELLFISHES													
Blue crab													
	1985 ^a	ND		<1	105	1	134	1	127	<1	144	<1	127
	1986	4 ^b	96	6	105	1	141	1	145	1	123	3	110
	1987	3	96	1	112	2	105	<1	142	<1	140	1	106
	1988	2	85	<1	104	1	113	1	128	<1	160	1	105
	1989	4	61	2	72	1	130	<1	134	<1	146	1	78
	1990	15	80	4	63	1	118	1	126	1	127	4	84

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Blue crab (cont.)													
	1991	19	72	6	58	1	102	2	114	<1	121	6	73
	1992	7	58	1	104	<1	85	1	95	<1	123	2	69
	1993	5	78	1	83	2	116	1	130	1	102	2	95
	1994	9	77	2	123	1	115	2	66	1	128	3	87
	1995	8	65	1	61	<1	120	1	122	<1	122	2	70
	1996	5	58	<1	59	<1	115	<1	120	1	107	1	67
	1997	15	67	3	65	<1	83	1	107	1	124	4	71
	1998	4	65	1	52	<1	82	<1	140	<1	112	1	71
	1999	2	68	1	63	<1	115	1	103	<1	140	1	82
	2000	3	64	1	50	<1	50	<1	68	<1	158	1	62
	2001	3	63	2	74	<1	105	<1	121	<1	136	1	76
	2002	7	52	1	62	1	73	<1	108	<1	96	2	58
	2003	2	50	1	74	<1	134	1	117	1	130	1	81
Brown shrimp													
	1985 ^a	ND		7	103	7	125	47	109	18	106	19	109
	1986	10 ^b	107	13	99	6	114	10	105	6	110	9	105
	1987	7	104	24	104	9	108	14	106	1	118	11	106
	1988	15	102	5	109	24	103	28	106	<1	116	15	104
	1989	33	103	50	96	56	105	140	95	12	94	59	98
	1990	34	101	10	108	55	107	58	114	20	106	36	108
	1991	12	90	2	102	12	93	9	101	17	123	10	104
	1992	9	91	20	103	4	96	19	92	2	115	11	97
	1993	23	100	21	97	13	105	9	97	4	109	14	100
	1994	6	100	10	101	5	99	16	94	7	106	9	99
	1995	49	102	5	97	49	101	31	94	2	112	28	100
	1996	10	92	3	103	3	104	4	105	2	107	4	99
	1997	23	94	4	100	7	100	8	104	8	108	10	99
	1998	37	93	16	91	12	96	15	108	18	111	20	99
	1999	32	100	8	98	22	91	7	101	6	113	15	98
	2000	39	91	19	100	37	100	11	93	16	104	25	97
	2001	11	102	26	99	20	108	30	94	8	109	19	101
	2002	17	91	21	96	10	85	22	114	3	101	15	99
	2003	17	98	21	90	47	99	42	100	10	112	27	99
Pink shrimp													
	1985 ^a	ND		<1	120	<1	130	1	119	1	108	1	116
	1986	0 ^b		<1	124	2	110	4	105	3	118	2	111
	1987	0		0		1	114	5	102	1	124	1	108

Table 5. (Cont.)

Species	Year	<u>Sabine</u>		<u>Galveston</u>		<u>Port O'Connor</u>		<u>Port Aransas</u>		<u>Port Isabel</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Pink shrimp (cont.)													
	1988	<1	87	0		1	108	7	103	1	125	2	106
	1989	0		<1	105	1	103	7	100	4	117	2	105
	1990	0		<1	104	1	101	3	118	3	117	1	114
	1991	<1	101	<1	99	1	109	6	112	2	118	2	112
	1992	<1	88	<1	79	<1	114	4	102	<1	122	1	104
	1993	0		<1	104	4	99	5	104	9	112	4	107
	1994	<1	90	<1	116	1	109	10	98	8	116	4	106
	1995	<1	78	0		6	102	6	109	3	112	3	106
	1996	<1	94	0		1	112	1	109	5	116	1	114
	1997	0		<1	93	3	103	4	111	4	118	2	111
	1998	<1	100	<1	110	1	106	3	102	5	113	2	108
	1999	0		0		2	103	5	110	4	108	2	108
	2000	<1	104	0		2	103	5	97	9	109	3	104
	2001	0		<1	100	2	110	5	103	5	109	2	107
	2002	0		<1	89	<1	104	1	96	13	108	3	106
	2003	0		<1	ND	2	105	4	100	6	116	2	109
White shrimp													
	1985 ^a	ND		53	110	26	124	11	126	1	105	24	115
	1986	41 ^b	101	53	101	15	120	8	124	2	137	24	105
	1987	26	105	14	109	16	112	8	119	1	121	13	110
	1988	14	105	17	100	19	110	9	116	<1	133	12	107
	1989	21	102	25	106	22	108	14	113	1	122	17	107
	1990	18	104	11	115	15	118	6	136	2	136	10	115
	1991	28	105	10	117	30	106	6	127	1	122	15	109
	1992	51	98	31	108	11	112	10	118	1	145	21	105
	1993	61	101	10	108	11	121	5	134	1	133	17	106
	1994	17	109	8	109	15	114	9	116	1	128	10	112
	1995	10	110	20	113	14	117	12	125	3	134	12	117
	1996	49	96	22	105	18	118	9	125	5	116	21	105
	1997	59	100	18	104	14	118	9	124	1	122	20	106
	1998	23	110	14	113	13	119	18	125	6	131	15	118
	1999	45	101	47	100	12	130	11	129	3	144	24	107
	2000	43	105	33	102	23	111	11	122	3	131	23	107
	2001	18	95	14	113	15	113	13	110	1	140	12	107
	2002	41	96	50	105	14	115	16	118	1	120	24	105
	2003	67	103	16	111	35	117	12	130	1	142	26	111

^aValues include Feb-Dec only off Port Aransas and Aug-Dec only off all other areas.^bValues include Jun-Dec only.

TABLE 6. Annual mean catch rates (No./h) and mean total lengths (mm) by size class^a of Eastern oyster caught with 46.0-cm wide dredges on “reef” stations in Texas bay systems during 1984-2003. Blank indicates no measurement taken; ND = no data.

Size class	Year	Galveston		Matagorda		San Antonio		Aransas		Coastwide	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Spat	1984	491		ND		ND		ND		491	
	1985	891		ND		ND		ND		891	
	1986	1,010		764		499		551		770	
	1987	1,054		654		66		4,269		1,382	
	1988	1,440		938		439		1,772		1,202	
	1989	1,322		2,019		1,864		3,071		1,880	
	1990	2,147		1,289		1,117		1,611		1,685	
	1991	1,458		718		894		410		1,022	
	1992	3,083		454		268		82		1,487	
	1993	3,194		139		122		0		1,440	
	1994	1,263		329		546		719		860	
	1995	718		1,311		1,493		1,836		1,194	
	1996	7,458		1,497		4,521		1,251		4,740	
	1997	940		816		756		654		830	
	1998	2,147		943		957		1,152		1,625	
	1999	1,947		1,638		3,338		3,269		2,377	
	2000	16,630		957		1,950		4,716		8,535	
	2001	1,604		715		775		2,128		1,424	
	2002	758		1,871		1,743		10,328		2,571	
	2003	768		1,012		735		5,322		1,502	
Small	1984	1,705	47	ND		ND		ND		1,705	47
	1985	2,096	54	ND		ND		ND		2,095	54
	1986	1,316	54	382	51	565	58	1,273	51	1,001	54
	1987	1,070	51	555	51	240	55	2,499	50	1,077	51
	1988	1,500	53	580	52	235	42	2,187	52	1,208	52
	1989	1,086	47	706	48	1,985	50	2,278	49	1,463	48

Table 6. (Cont.)

Size Class	Year	<u>Galveston</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
Small (cont.)											
	1990	2,996	45	417	48	1,401	53	1,495	45	1,971	46
	1991	4,927	48	1,040	51	538	54	1,016	48	2,615	49
	1992	4,601	51	622	52	92	48	263	54	2,168	51
	1993	3,895	54	396	54	500	51	296	59	1,926	54
	1994	3,002	52	805	48	573	47	1,010	46	1,749	50
	1995	2,656	53	1,193	49	987	52	4,192	52	2,354	52
	1996	3,023	47	1,748	50	1,740	47	3,912	52	2,714	49
	1997	5,846	50	1,517	51	689	51	3,160	57	3,468	51
	1998	3,088	58	1,447	51	1,820	49	2,650	59	2,586	56
	1999	2,893	56	1,784	49	2,009	44	3,213	57	2,645	54
	2000	2,734	56	1,783	52	2,581	50	4,062	55	2,799	55
	2001	886	54	891	49	1,054	52	4,570	56	1,495	54
	2002	2,093	51	1,007	47	647	52	6,250	54	2,342	52
	2003	1,336	57	1,717	48	1,058	48	6,279	55	2,102	54
Market											
	1984	447	91	ND	ND	ND		ND		447	91
	1985	674	88	ND	ND	ND		ND		674	88
	1986	617	88	212	92	444	92	191	86	438	89
	1987	370	91	167	91	258	93	411	86	323	90
	1988	397	89	201	91	23	89	402	87	284	88
	1989	232	90	177	90	414	90	282	85	275	89
	1990	179	88	114	89	445	88	99	83	215	88
	1991	502	87	216	89	377	91	65	84	349	88
	1992	796	87	164	88	24	93	40	83	384	87
	1993	1,346	88	204	92	74	87	161	87	652	87
	1994	1,214	90	313	95	287	93	355	93	691	91
	1995	760	89	433	92	415	93	1,056	92	673	91
	1996	683	89	698	90	604	94	1,442	91	803	88

Table 6. (Cont.)

Size Class	Year	<u>Galveston</u>		<u>Matagorda</u>		<u>San Antonio</u>		<u>Aransas</u>		<u>Coastwide</u>	
		No./h	Length	No./h	Length	No./h	Length	No./h	Length	No./h	Length
	1997	837	89	562	91	167	94	1,244	88	729	89
	1998	1,053	86	346	92	230	87	1,734	88	928	87
	1999	1,132	88	487	90	235	88	1,793	87	997	88
	2000	1,326	89	593	91	596	90	2,332	89	1,259	89
	2001	496	91	288	91	431	92	2,121	90	713	91
	2002	566	91	186	90	250	91	2,463	90	758	91
	2003	550	89	339	88	140	91	2,341	88	728	88

^a Spat (5-25 mm), small (26-75 mm), market (≥ 76 mm). Mean total length not calculated for spat.

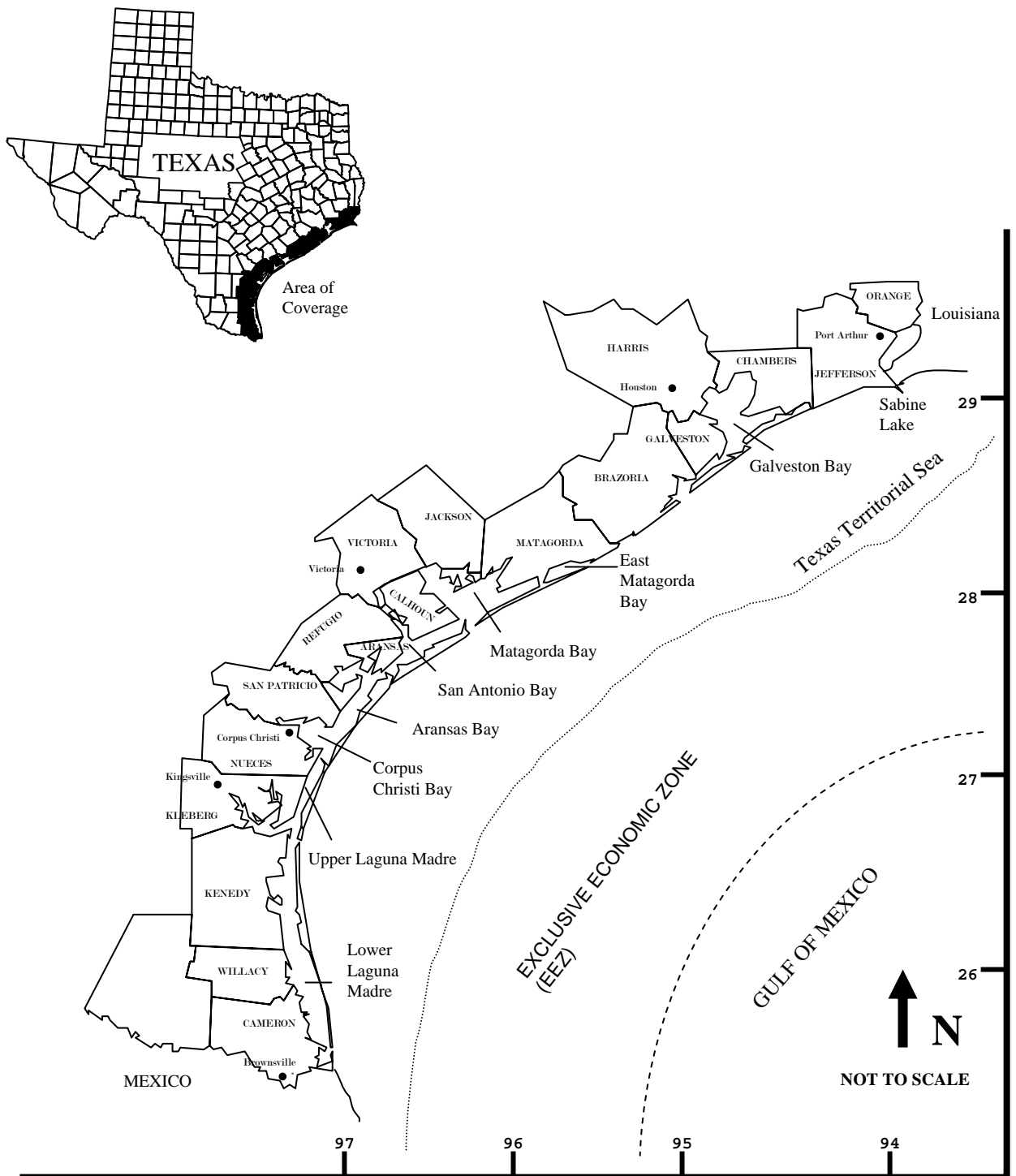


Figure 1. Texas gulf shoreline and Texas Territorial Sea (TTS).

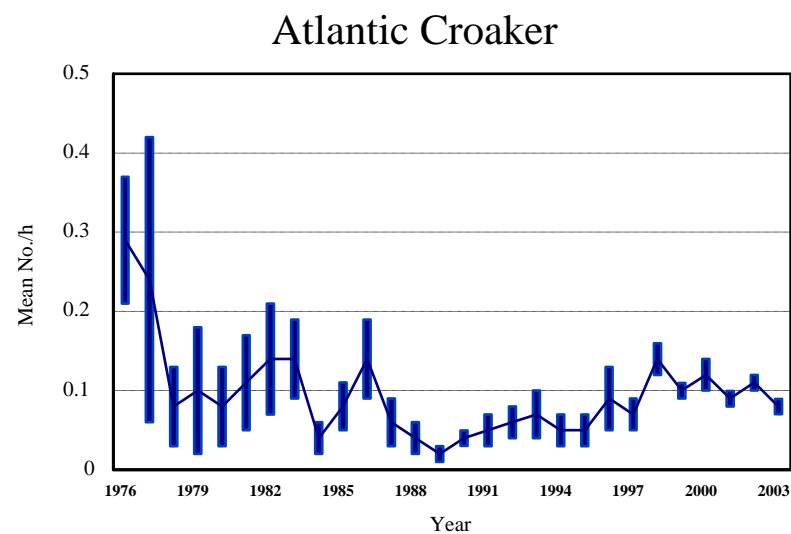
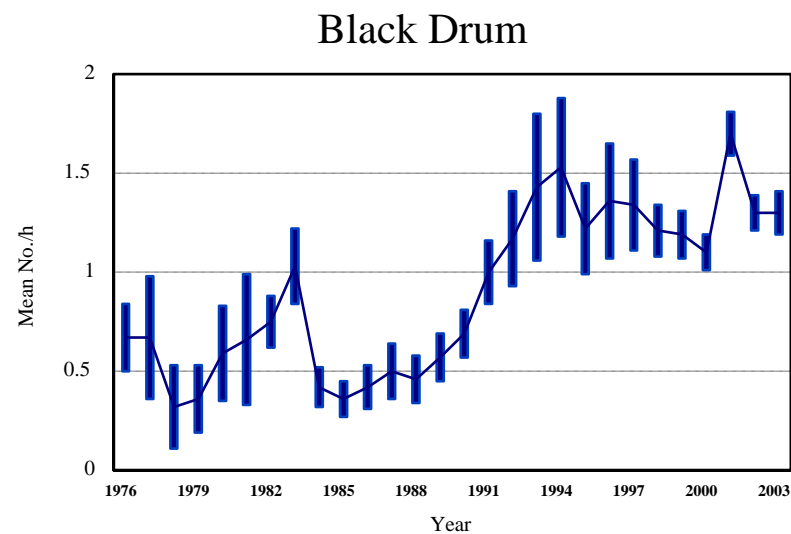
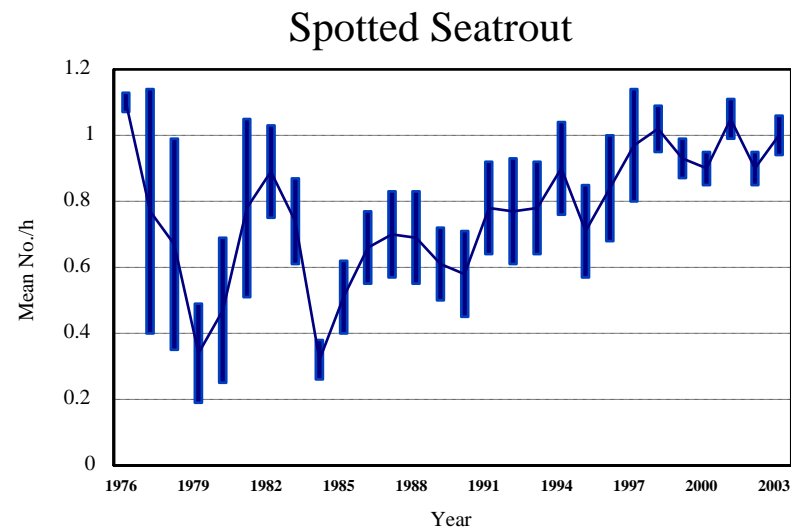
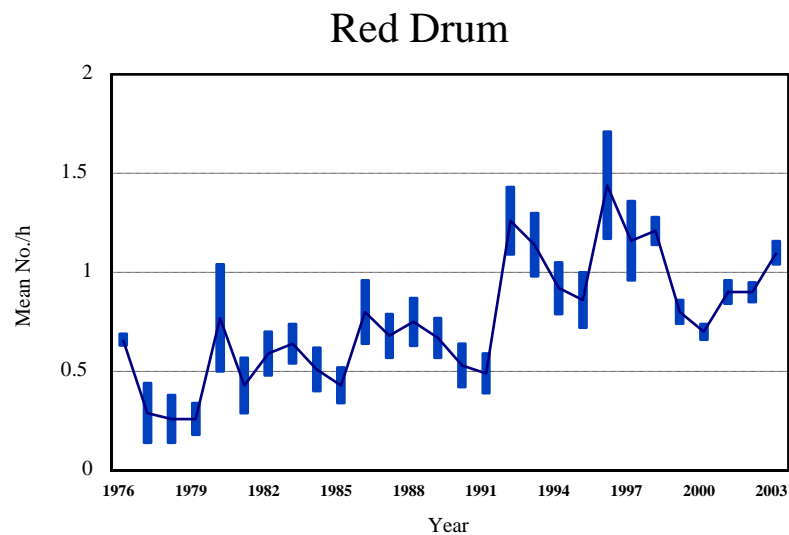


Figure 2. Spring gill net mean catch rate (No./h \pm 1 SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1976-2003.

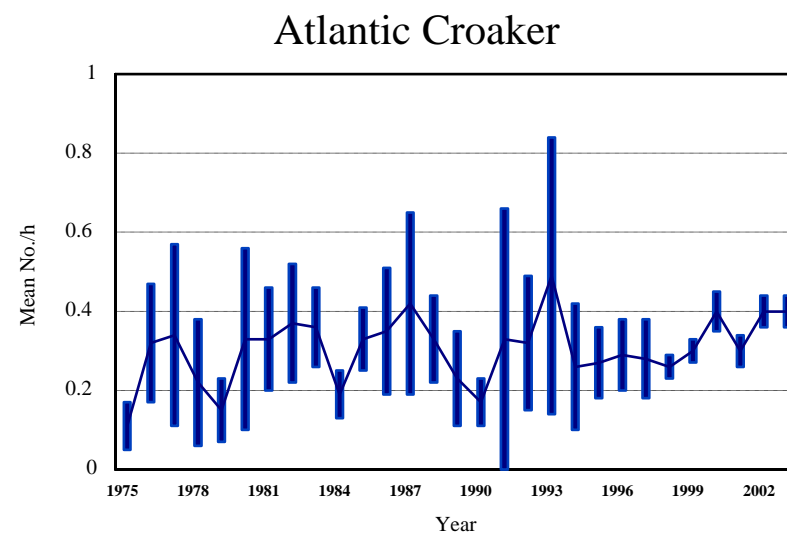
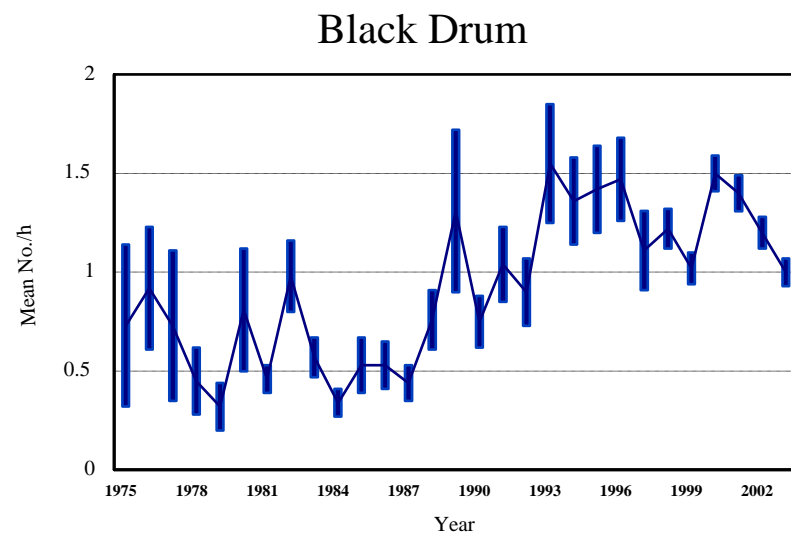
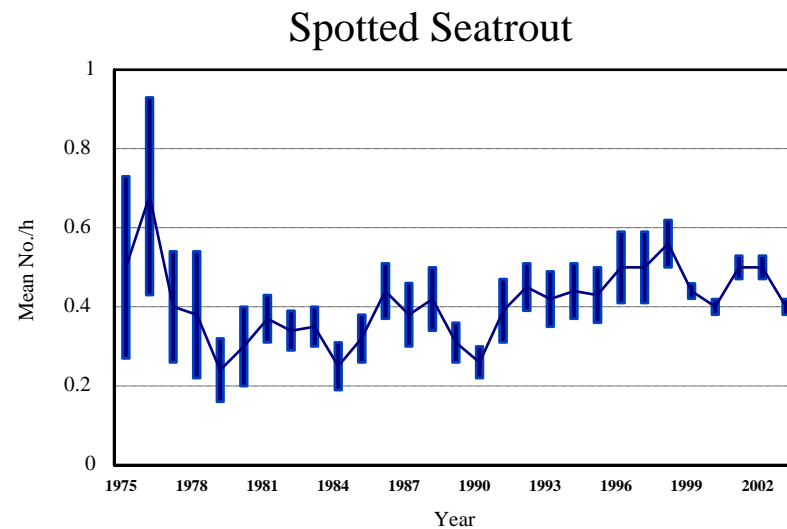
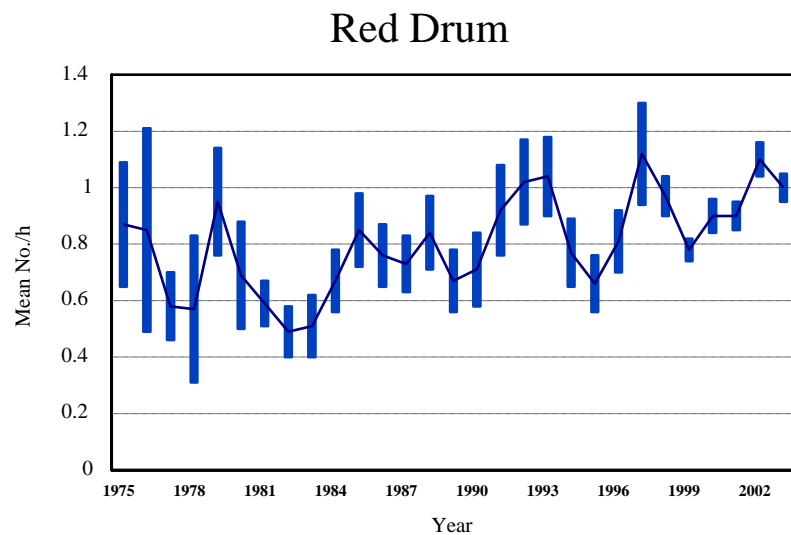


Figure 3. Fall gill net mean catch rate (No./h \pm 1 SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1975-2003.

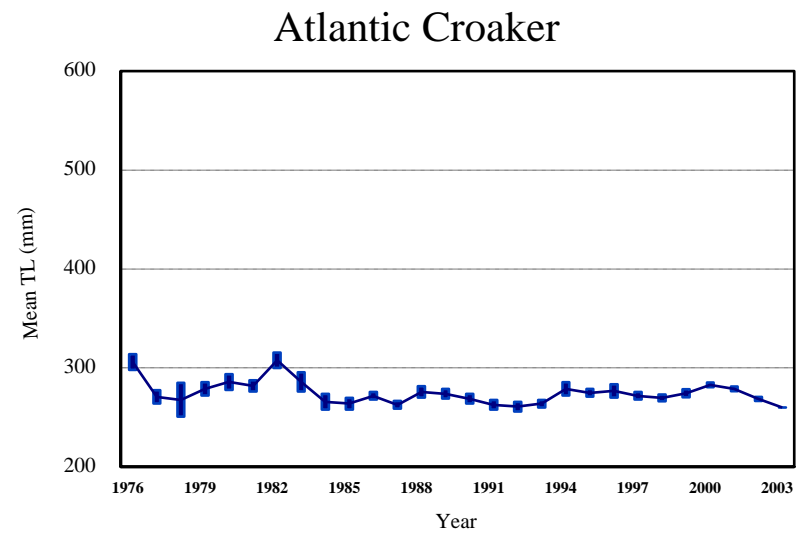
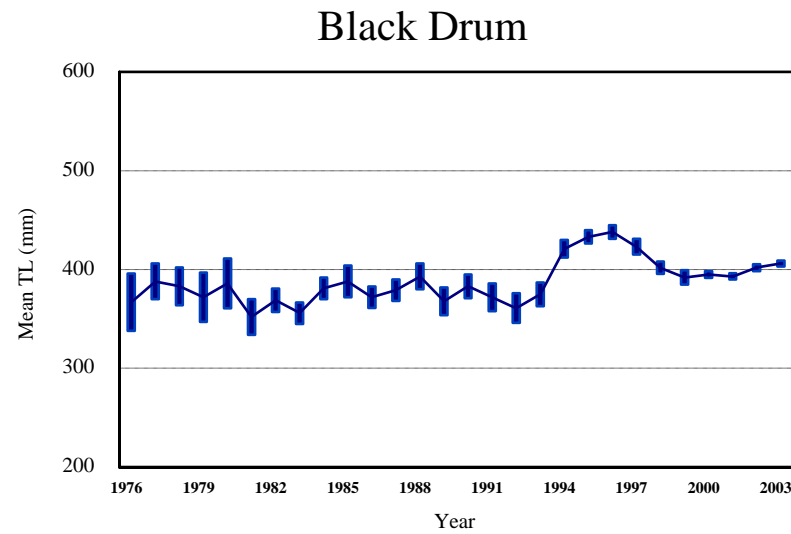
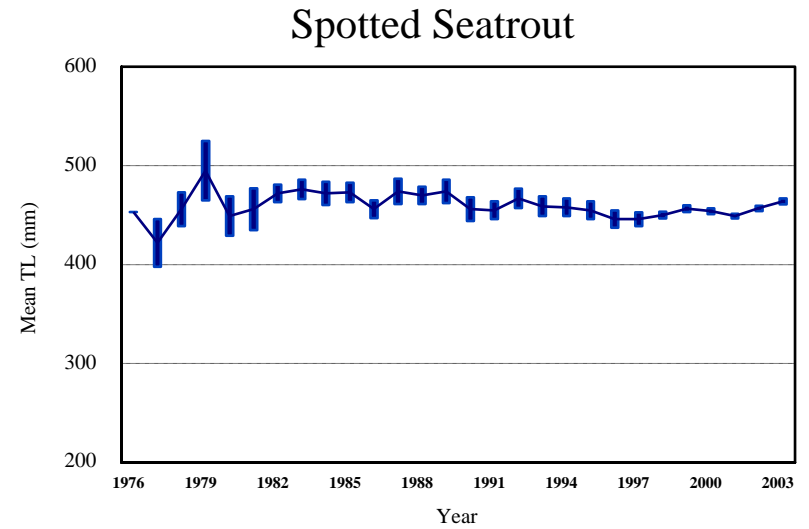
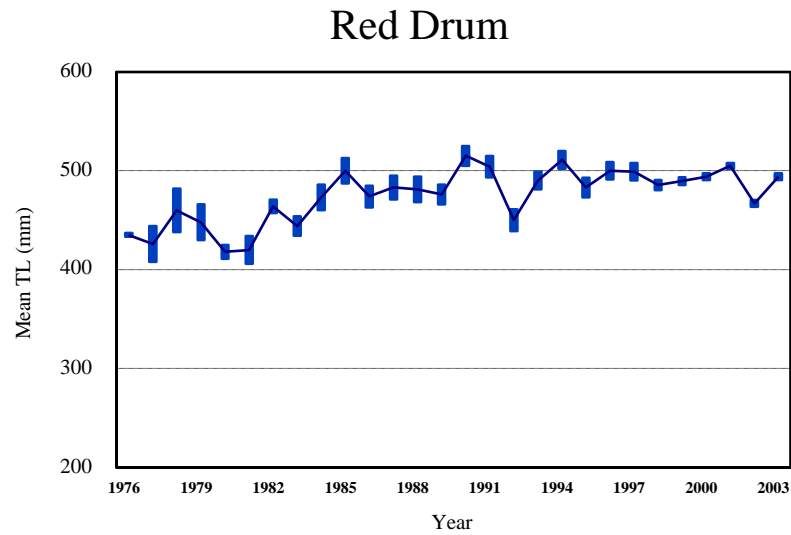


Figure 4. Spring gill net mean total lengths (mm \pm 1 SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1976-2003.

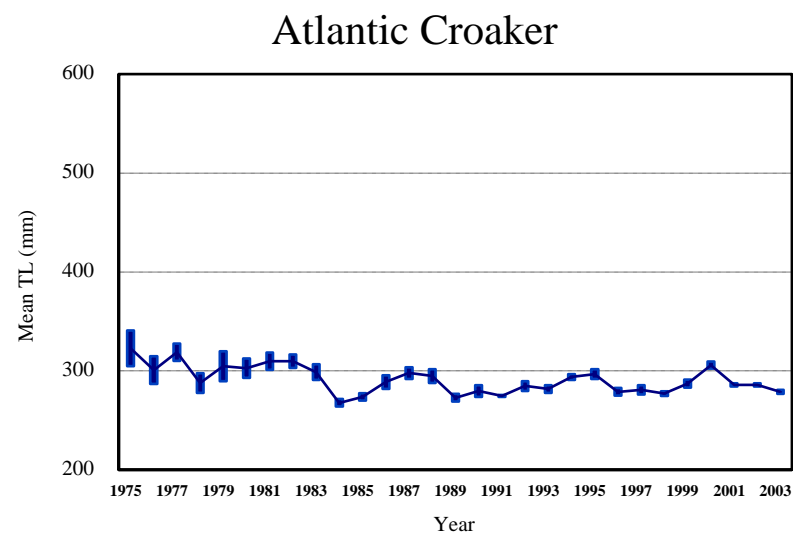
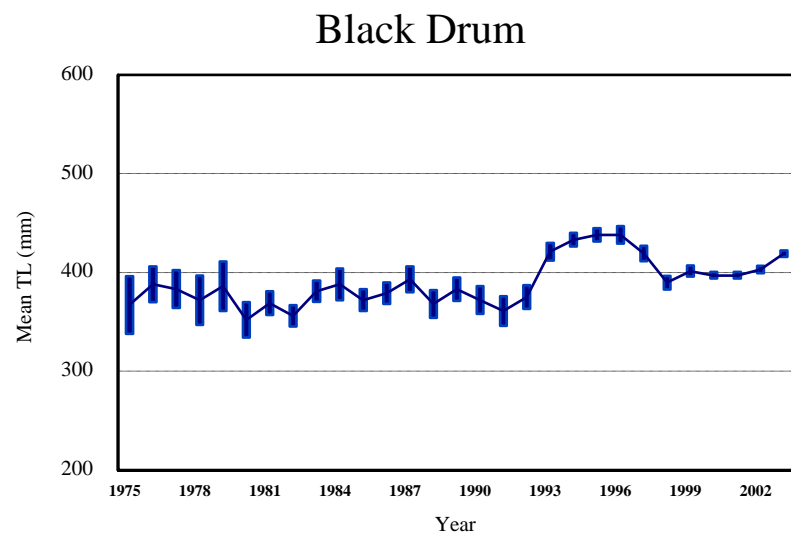
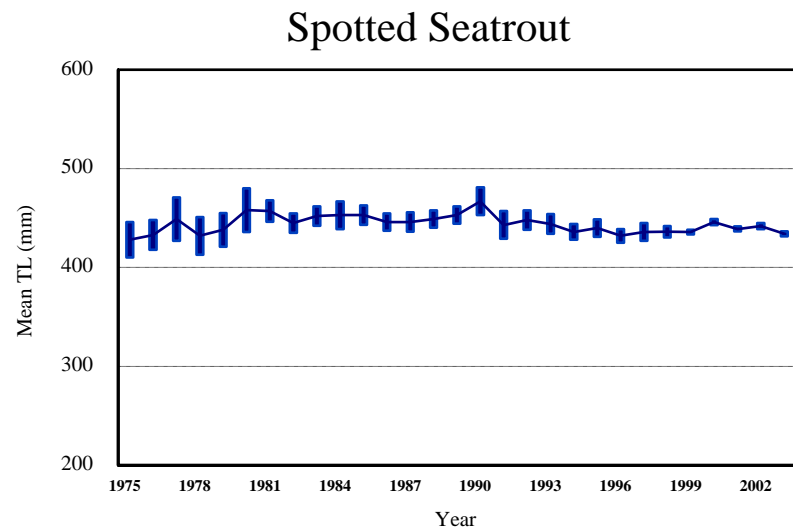
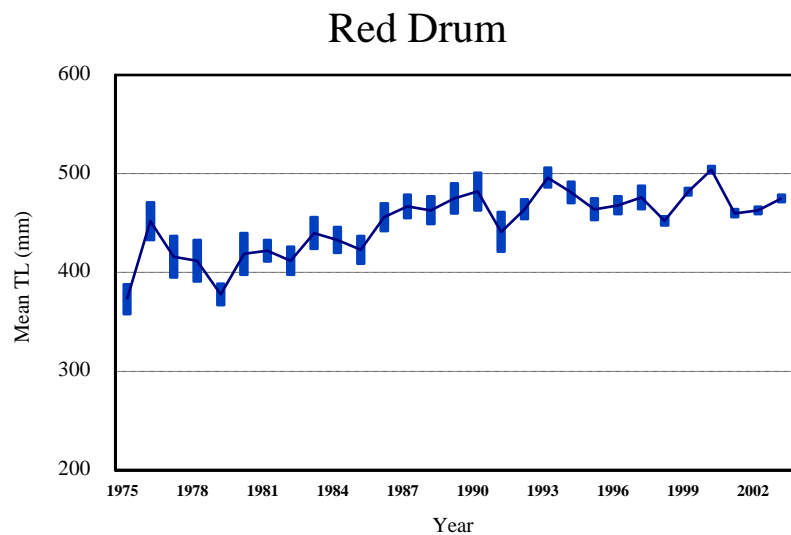


Figure 5. Fall gill net mean total lengths (mm \pm 1 SE) for red drum, black drum, spotted seatrout and Atlantic croaker during 1975-2003.

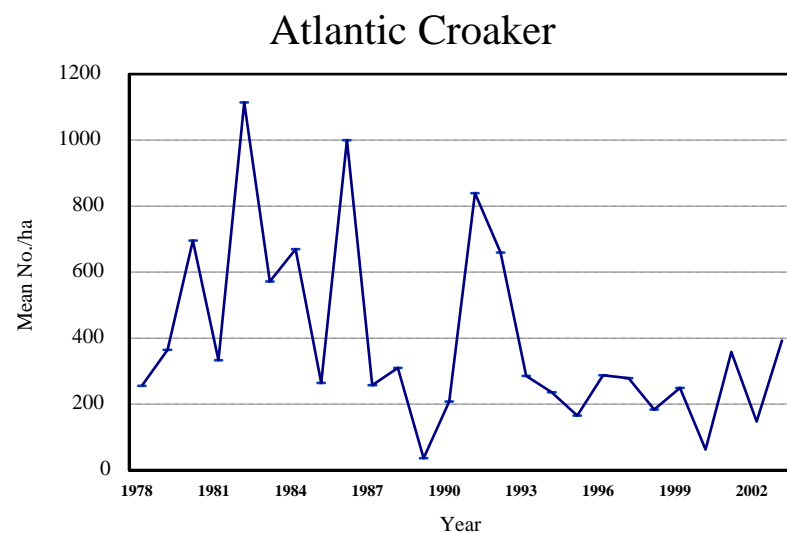
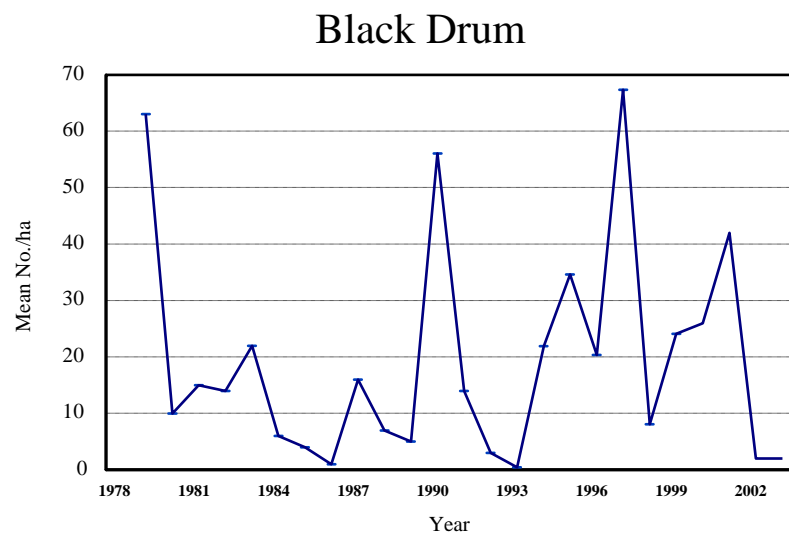
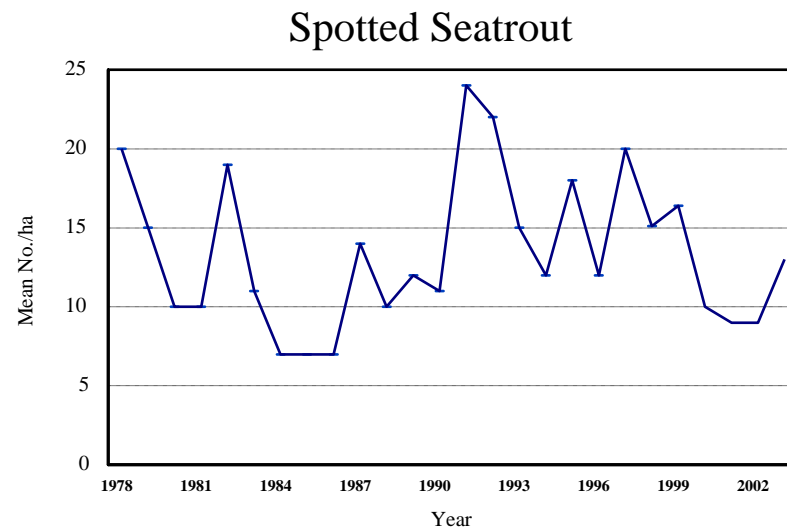
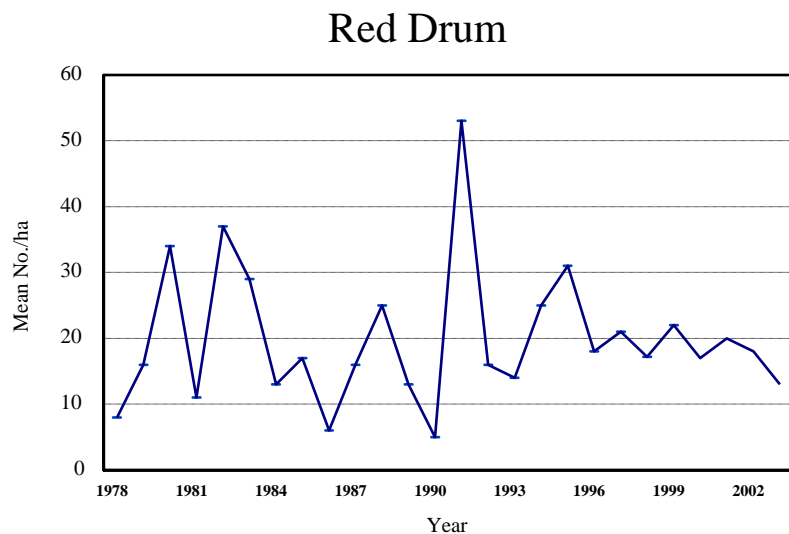


Figure 6. Seasonal bag seine mean catch rates (No./ha) for juvenile red drum (Nov-Mar), black drum (Jun-Jul), spotted seatrout (Jul-Nov) and Atlantic croaker (Feb-May) during 1978-2003. Red drum 35-75 mm, spotted seatrout 20-75 mm, black drum 35-110 mm and Atlantic croaker 30-85 mm are considered young-of-the-year.

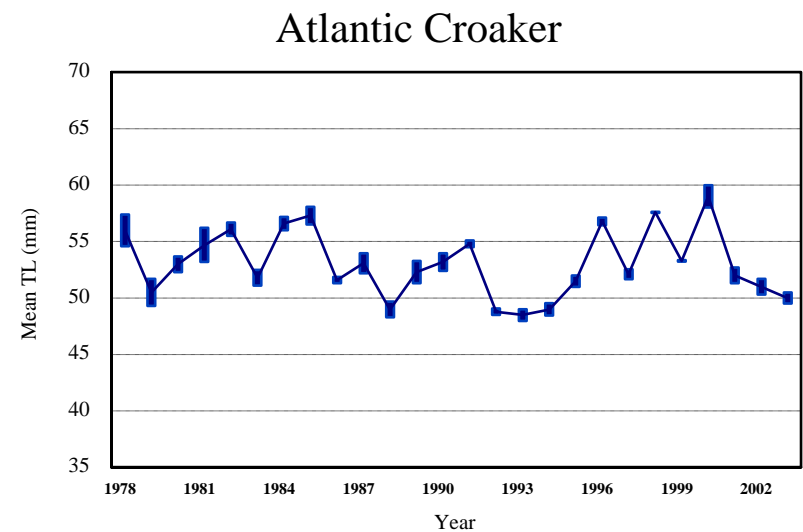
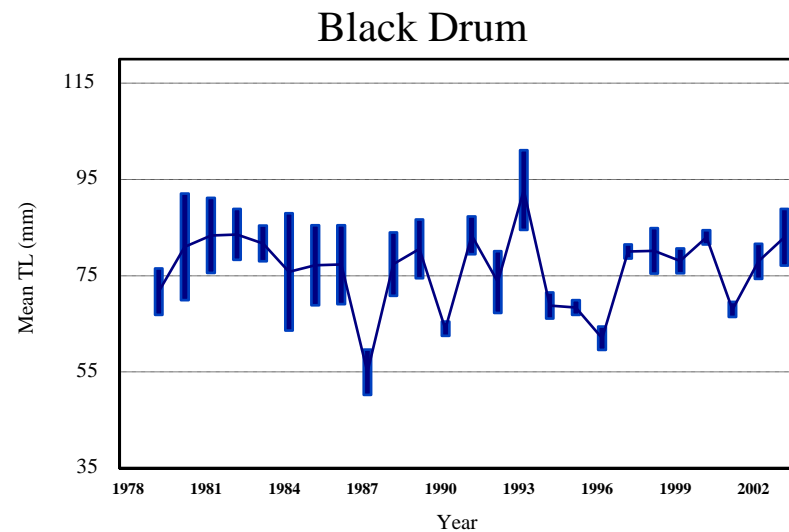
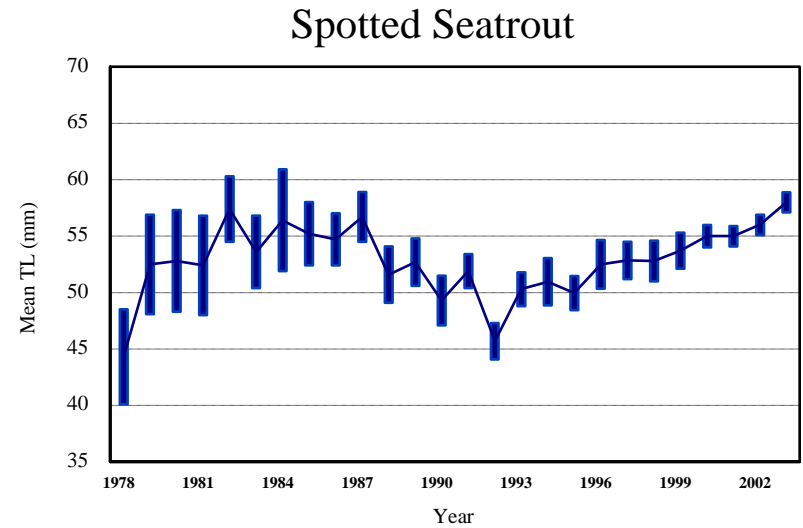
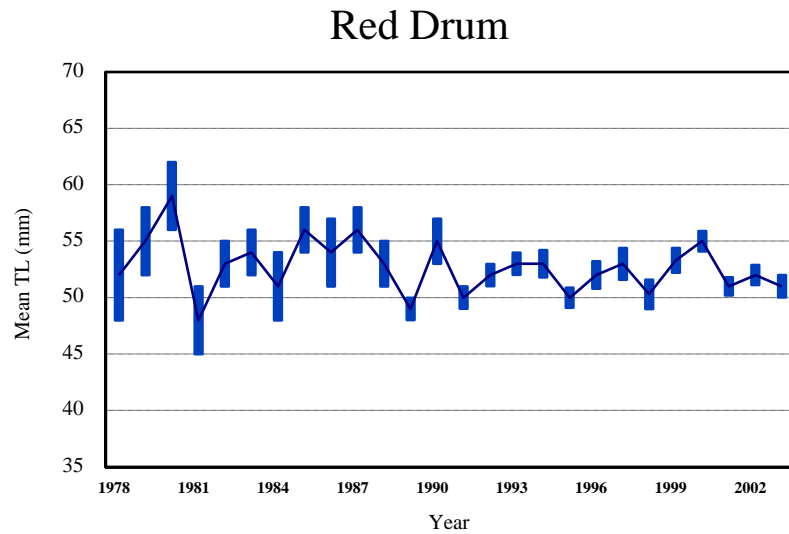


Figure 7. Seasonal bag seine mean total lengths (mm \pm 1 SE) for juvenile red drum (Nov-Mar), black drum (Jun-Jul), spotted seatrout (Jul-Nov) and Atlantic croaker (Feb-May) during 1978-2003. Red drum 35-75 mm, spotted seatrout 20-75 mm, black drum 35-110 mm and Atlantic croaker 30-85 mm are considered young-of-the-year.

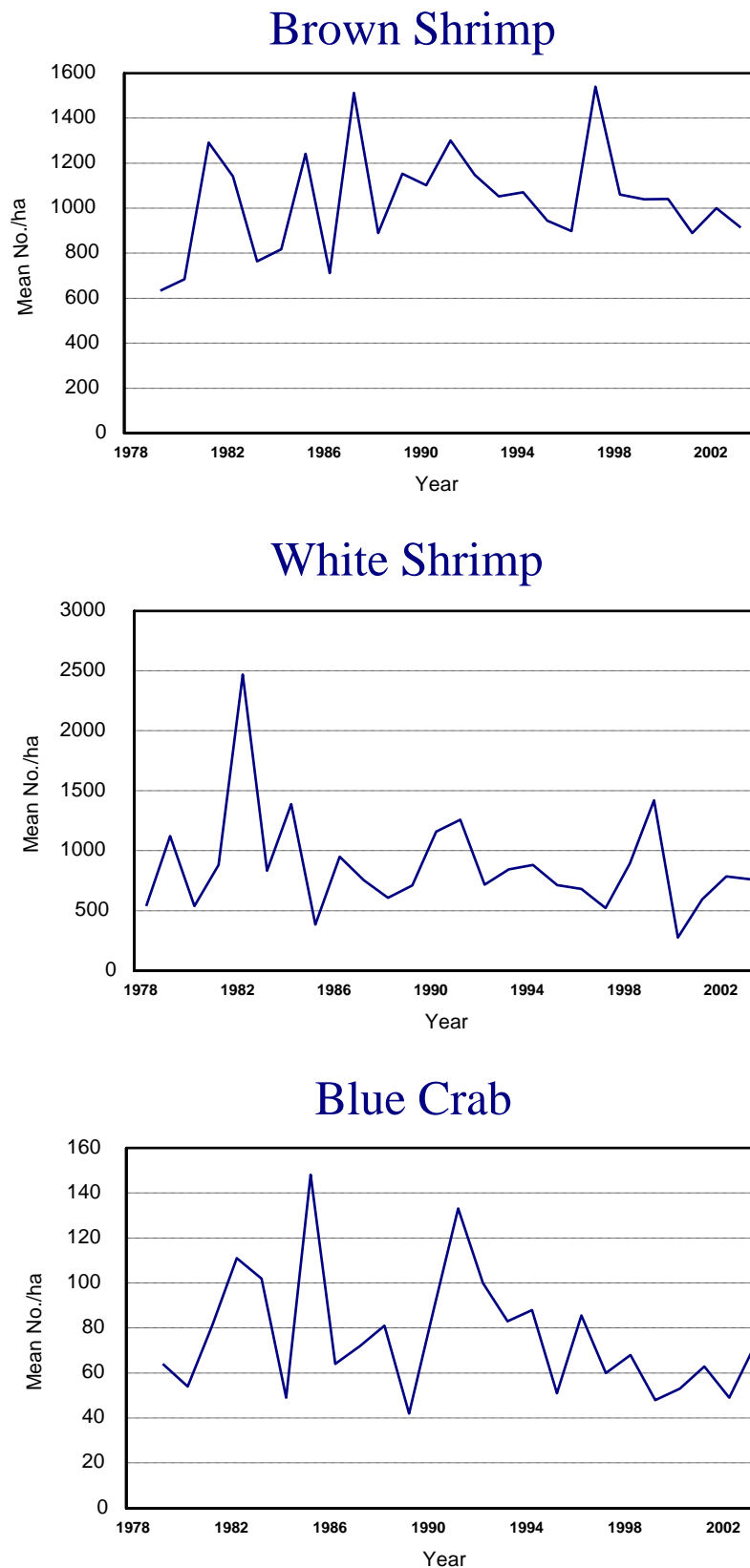
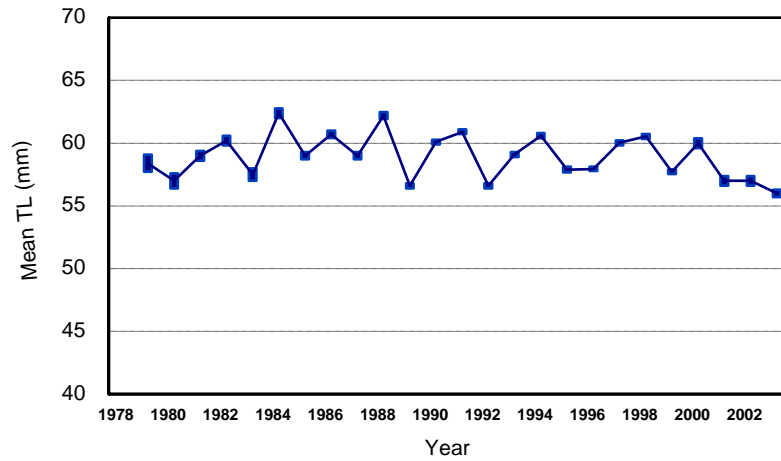
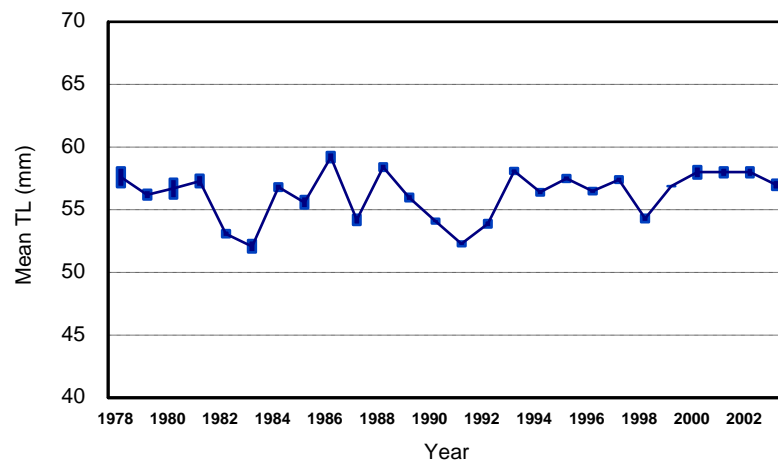


Figure 8. Seasonal bag seine mean catch rates (No./ha) for juvenile brown shrimp (Apr-Jul), white shrimp (Jul-Nov) and blue crab (Mar-Jun) during 1978-2003. Brown and white shrimp 33-82 mm and blue crab 13-42 mm are considered young-of-the-year.

Brown Shrimp



White Shrimp



Blue Crab

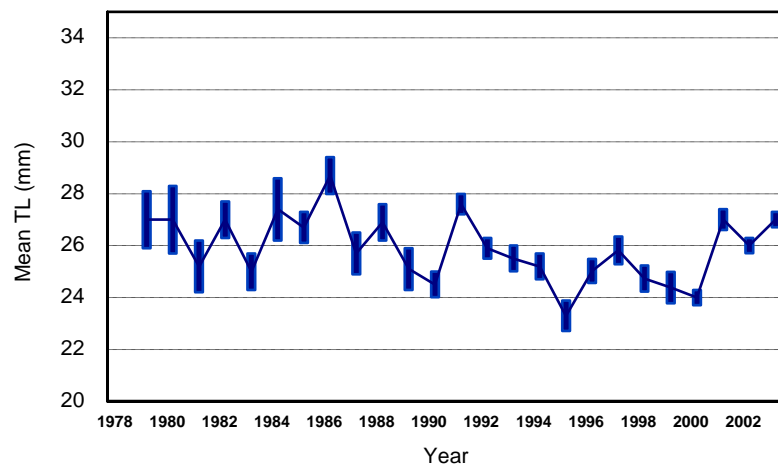


Figure 9. Seasonal bag seine mean total lengths (mm \pm 1 SE) for juvenile brown shrimp (Apr-Jul), white shrimp (Jul-Nov) and blue crab (Mar-Jun) during 1978-2003. Brown and white shrimp 33-82 mm and blue crab 13-42 mm are considered young-of-the-year.

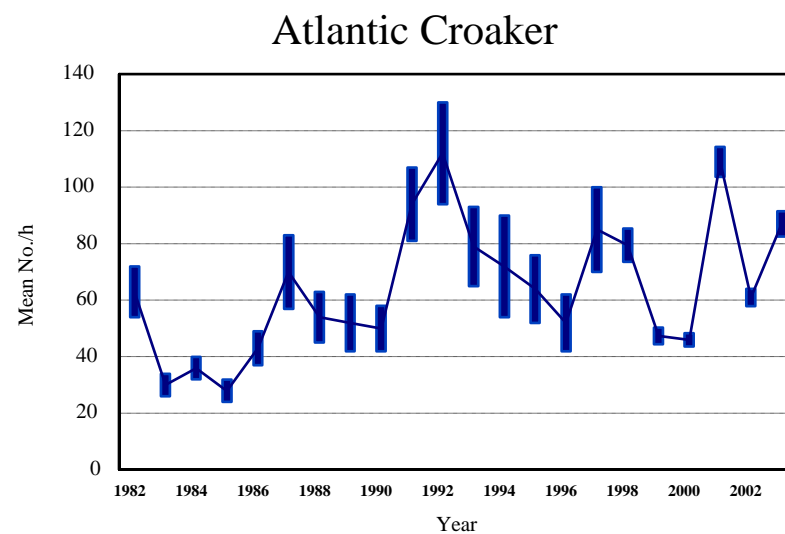
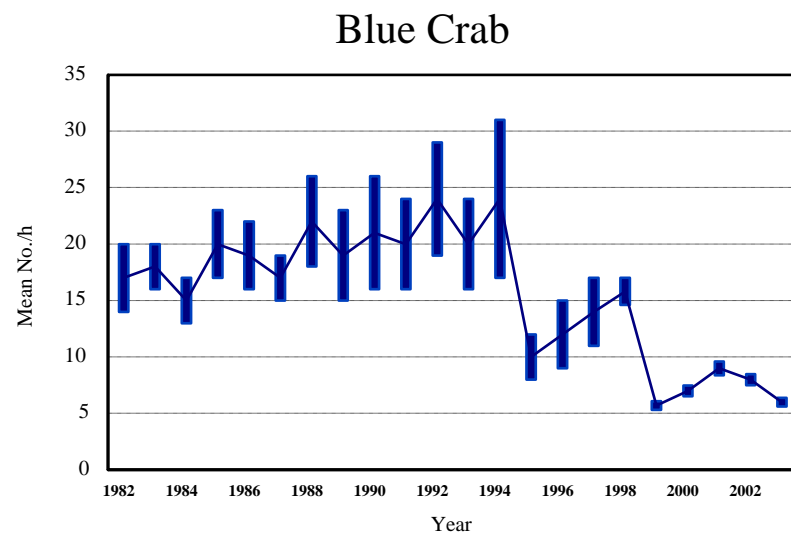
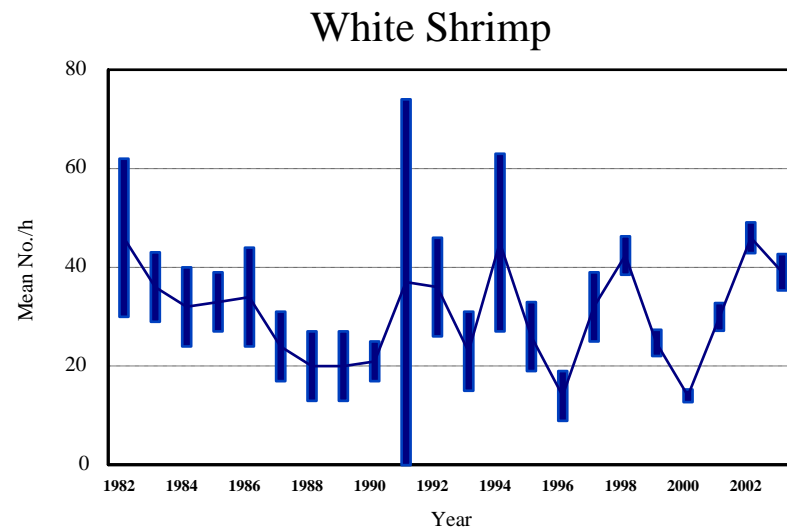
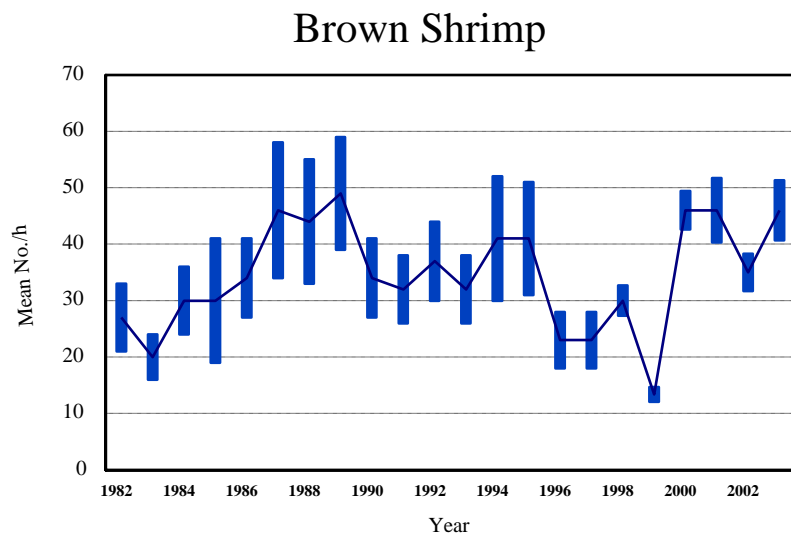


Figure 10. Annual bay trawl catch rates (No./h \pm 1 SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1982-2003.

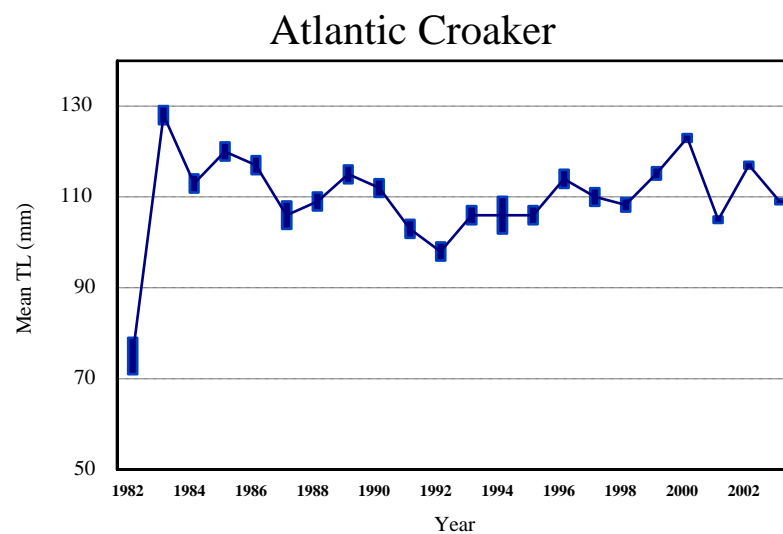
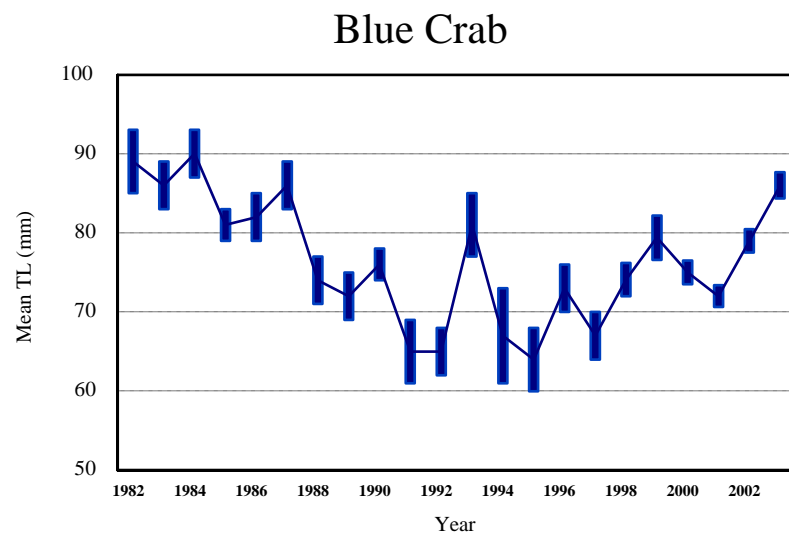
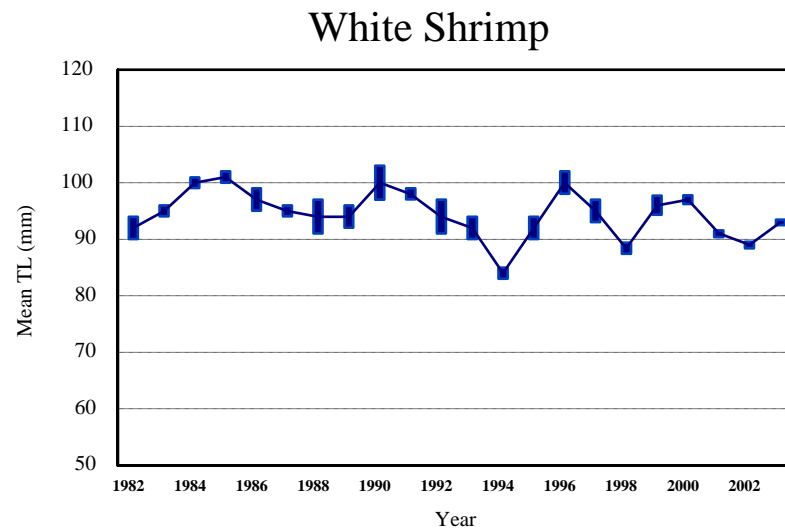
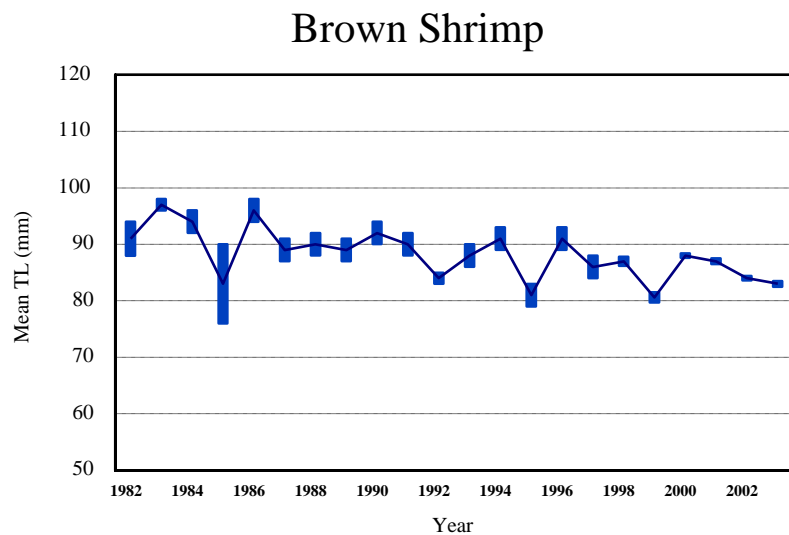


Figure 11. Annual bay trawl mean total lengths ($\text{mm} \pm 1 \text{ SE}$) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1982-2003.

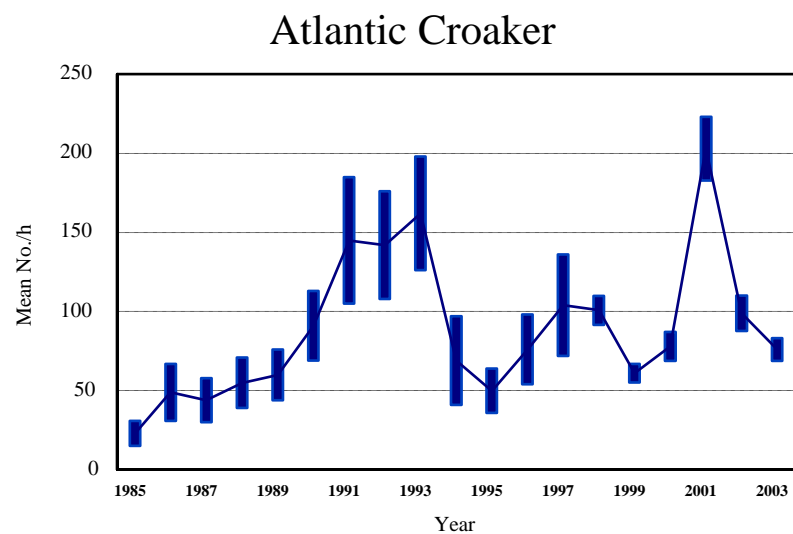
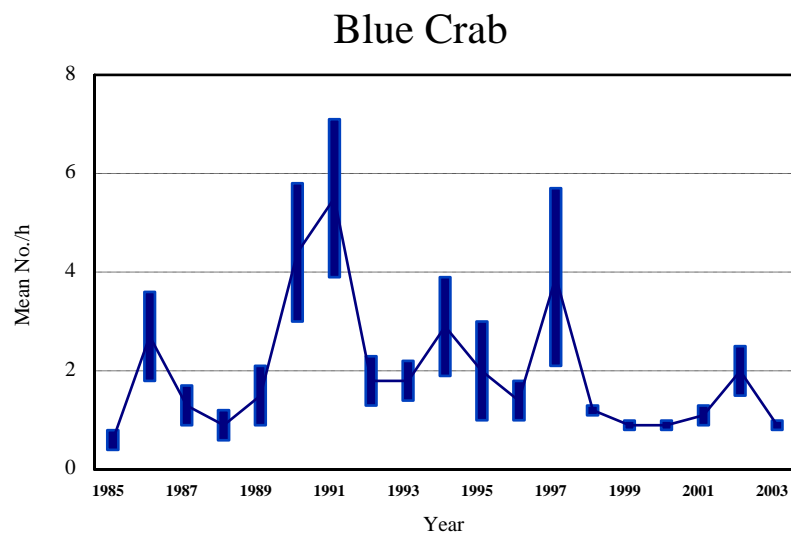
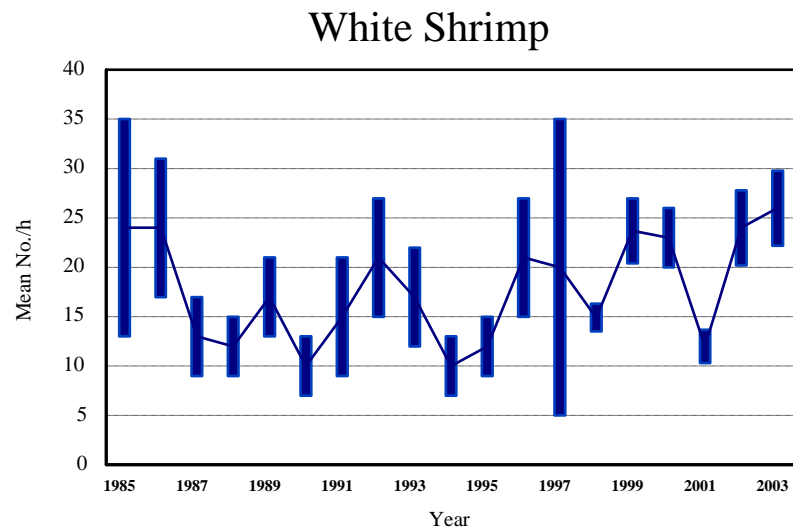
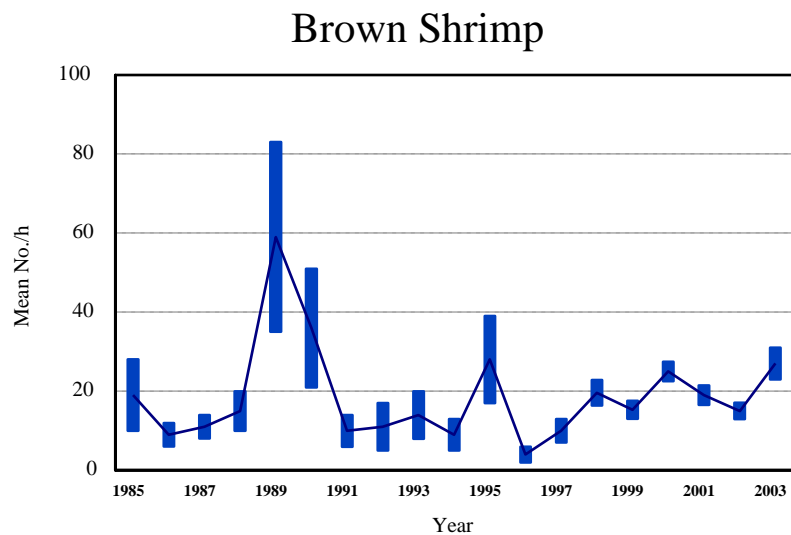


Figure 12. Annual gulf trawl catch rates (No./h \pm 1 SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1982-2003.

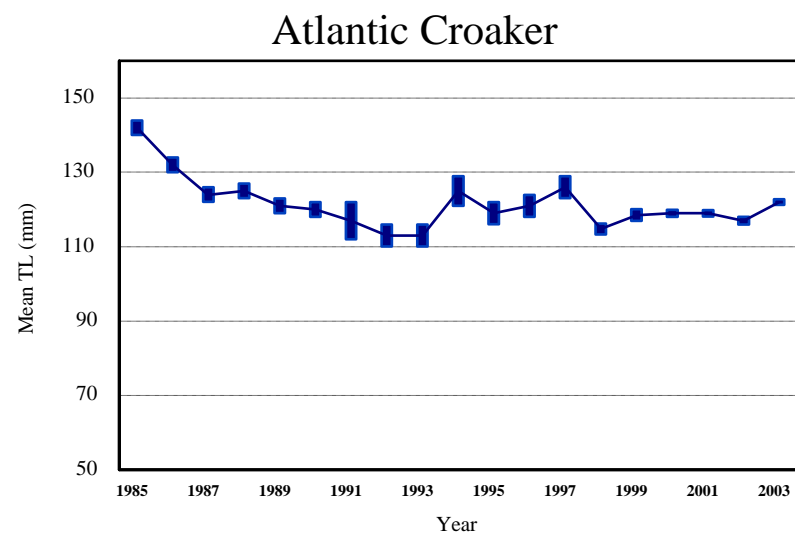
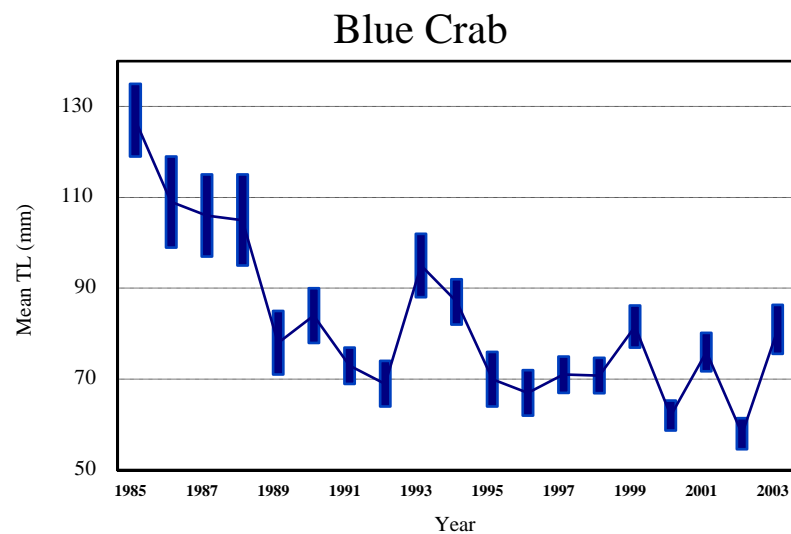
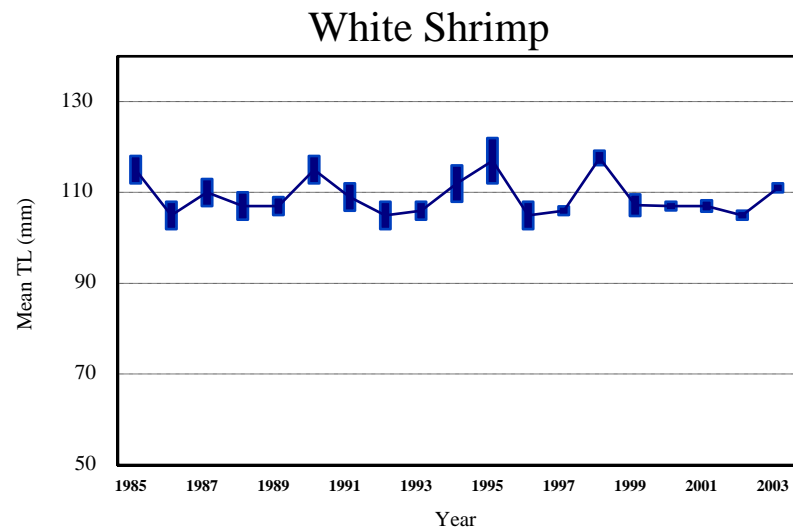
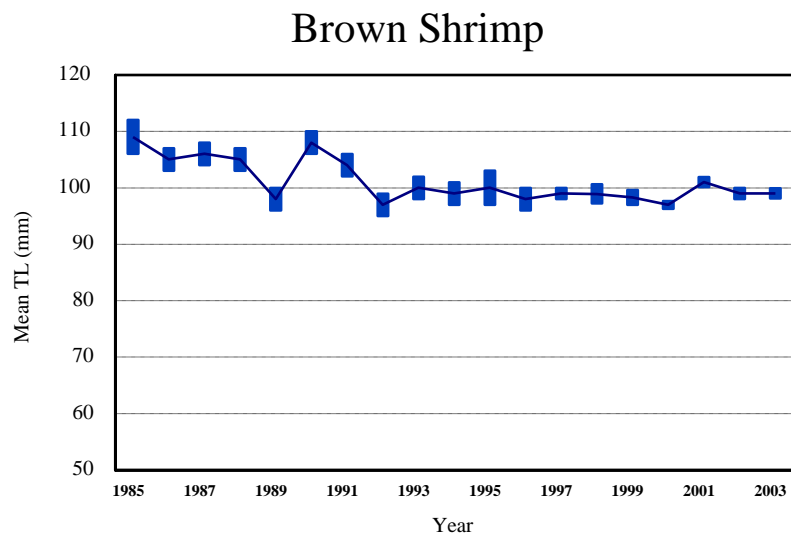
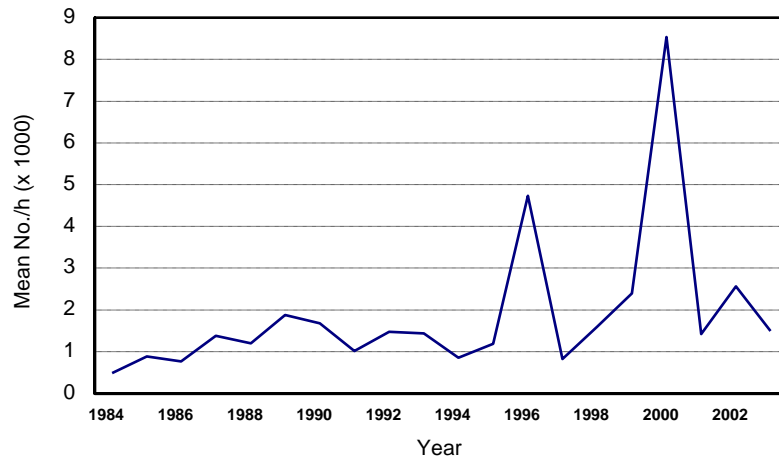
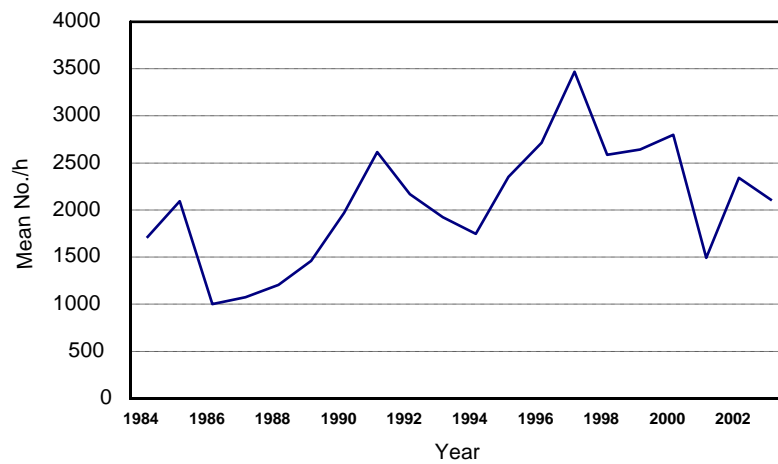


Figure 13. Annual gulf trawl mean total lengths (mm \pm 1 SE) for brown shrimp, white shrimp, blue crab and Atlantic croaker during 1985-2003.

Oyster Spat



Small Oysters



Market Oysters

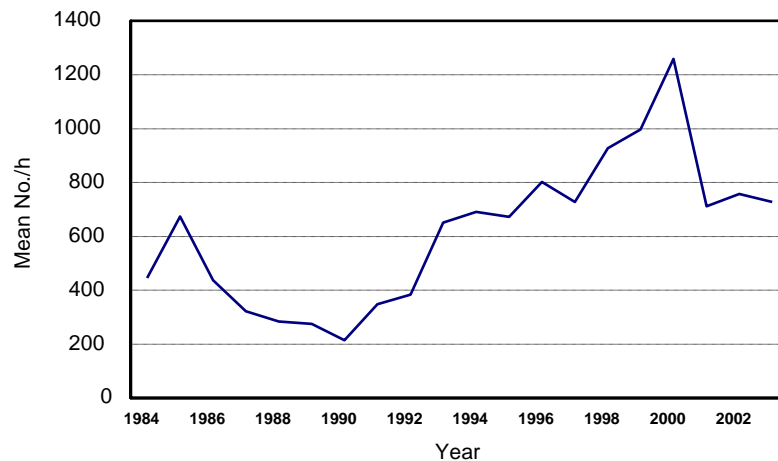


Figure 14. Annual mean oyster dredge catch rates (No./h) for Eastern oyster spat (≤ 25 mm), small oysters (26-75 mm) and market oysters (≥ 75 mm) during 1984-2003.

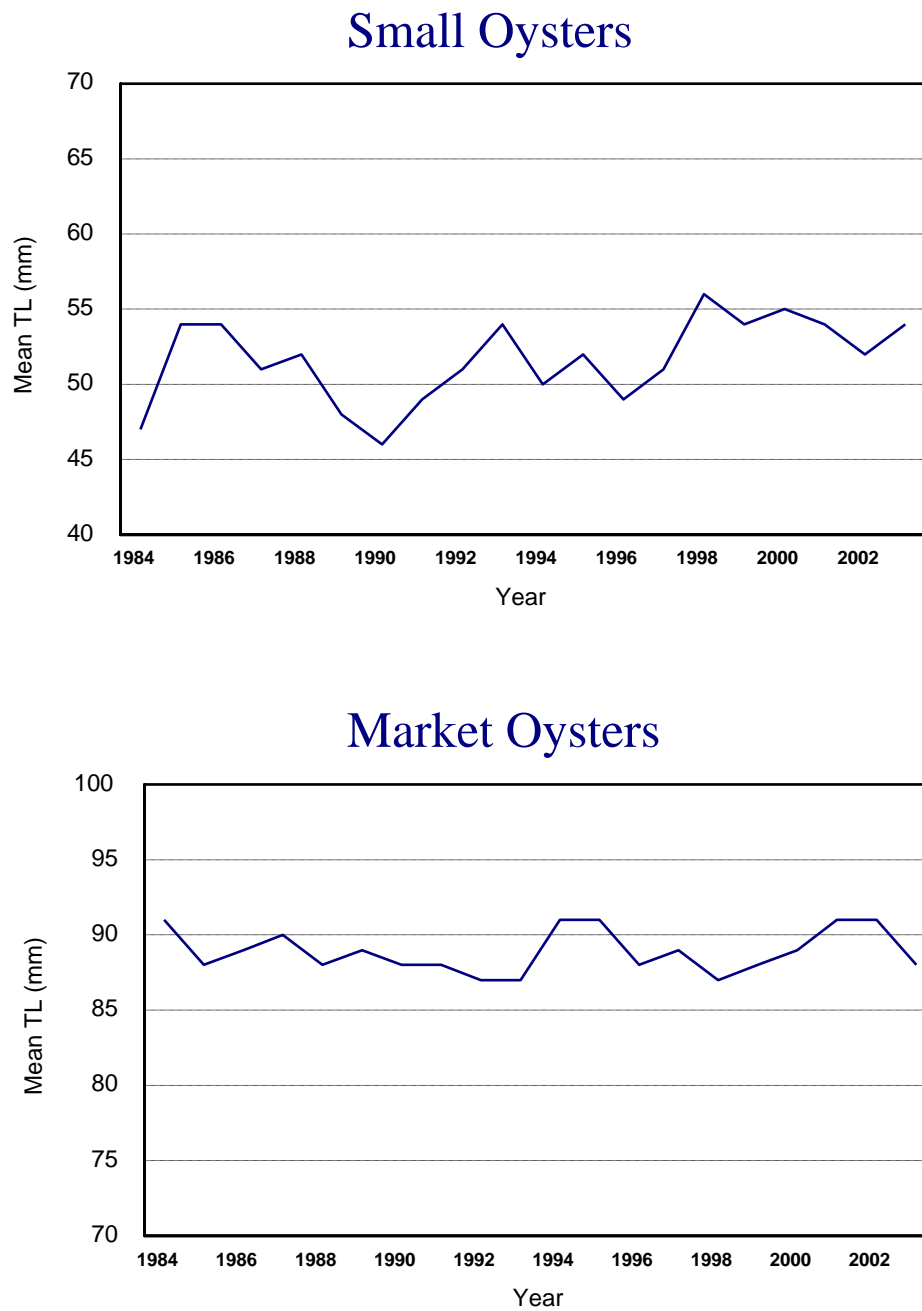


Figure 15. Annual mean oyster dredge total lengths (mm) for small and market Eastern oysters during 1984-2003.

Appendix A. Summary of historical sampling dates, gear description, procedures, dates, number of samples collected, weighting factors, and list of species collected.

Table A.1. Historical sampling dates (month/year) by bay system and gear.

GEAR	SABINE	GALVESTON	EAST MATAGORDA	MATAGORDA	SAN ANTONIO	ARANSAS	CORPUS CHRISTI	UPPER LAGUNA	LOWER LAGUNA
GILL NET	April 1986- Present	Nov. 1975- Present	Oct. 1976- Present	Nov. 1975- Present	Nov. 1975- Present	Nov. 1975- Present	Nov. 1975- Present	Nov. 1975- Present	Nov. 1975- Present
GULF TRAWL	Jul. 1986- Present	Aug. 1985- Present	Not used.	Not used.	Aug. 1985- Present	Not used.	Feb. 1985- Present	Not used.	Aug. 1985- Present
BAY TRAWL	Jan. 1986- Present	Jan. 1982- Present	April 1987- Present	May 1982- Present	Jan. 1982- Present	Jan. 1982- Present	May 1982- Present	May 1982- Present	May 1982- Present
ICWW TRAWL	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995	Jan. Dec. 1992-1995
BEACH SEINE	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995	Not used.	Oct. Nov. 1987-1995	Oct. Nov. 1987-1991	Not used.	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995
BEACH BAG SEINE	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995	Not used.	Oct. Nov. 1987-1995	Oct. Nov. 1987-1991	Not used.	Oct. Nov. 1987-1995	Oct. Nov. 1987-1995
BAY BAG SEINE	Jan. 1986- Present	Oct. 1977- Present	Feb. 1983- Present	Oct. 1977- Present	Oct. 1977- Present	Oct. 1977- Present	Oct. 1977- Present	Oct. 1977- Present	Oct. 1977- Present
OYSTER REEF DREDGE	Jan. 1986- 1991	Oct. 1984- Present	Jan. 1986-1991	Jan. 1986- Present	Jan. 1986- Present	Jan. 1986- Present	Jan. 1986- 1991	Not used.	Jan. 1986- 1991
NON-REEF DREDGE	1986-1989	1985-1989	1986-1989	1986-1989	1986-1989	1986-1989	1986-1989	1986-1988	1986-1988

Table A.2. Gear descriptions.

GEAR	GEAR DESCRIPTION
Gill Net	Monofilament, 183 m long; 1.2 m deep with separate 45.7 m sections of 7.6, 10.2 (#12 monofilament), 12.7 and 15.2 cm (#18 monofilament) stretched mesh tied together in ascending mesh size.
Trawl	6.1 m wide at mouth with 3.8 cm stretched nylon multifilament mesh throughout and doors 1.2 m long and 0.5 m tall.
Beach Seine	60.9 m long; 1.8 m deep with 7.6 cm stretched #12 monofilament mesh.
Bag Seine	18.3 m long; 1.8 m deep with 1.3 cm stretched nylon multifilament mesh in the 1.8 m wide central bag with remaining webbing 1.9 cm stretched mesh.
Oyster Dredge	Louisiana style 9-tooth: 46 cm wide, 25 cm tall with a 36 cm deep bag. Four bottom rows and one top row of linked metal rings 5 cm in diameter; top and bottom rows of 7.6 cm mesh webbing made of 0.8 cm nylon rope.

Table A.3. Historical sampling procedures by gear.

GEAR	HISTORICAL SAMPLING PROCEDURES
Gill Net	<p>Monofilament gill nets have been systematically used in 7 Texas bay systems since November 1975; East Matagorda Bay was added in fall 1976 and Sabine Lake in spring 1986 (Figure 1). Prior to September 1984, sites for setting gill nets during spring (ten week period, generally, 15 April-15 June) and fall (Ten week period, generally, 15 September-15 November) were randomly selected from about 100 stations in each bay system (McEachron and Green 1985). Beginning September 1984, current site selection methods were adopted.</p> <p>Prior to fall 1981, no less than one nor more than 18 overnight gill net sets occurred in each season in each bay system. Since fall 1981, 45 gill nets were set overnight during each season in each bay system except East Matagorda Bay. In East Matagorda Bay, from fall 1981 to spring 1984, not less than six nor more than 12 gill nets were set during each season; since fall 1984, 20 sets were set in each season.</p>
Gulf Trawls	<p>Trawls have been systematically used in 4 Gulf areas of Texas Territorial Seas since August 1985 and a total of 5 areas since July 1986.</p>
ICWW Trawls	<p>From January 1992 through December 1995, 6 monthly samples were collected in each of the 9 bay systems along the Texas coast.</p>
Beach Seine	<p>Beach seines were systematically used on Texas Gulf beaches from October 1987 through November 1995. Six beach seine samples were collected each month (from October 1987-November 1989; from May-November 1990-1995) along Gulf beach shoreline areas. (Dailey <u>et al.</u> 1991)</p>

Table A.3. (Cont.)

GEAR	HISTORICAL SAMPLING PROCEDURES
Beach Bag Seine	Beach bag seine samples were systematically used on Texas Gulf beaches from October 1987 through November 1995. Six beach bag seine samples were collected each month (from October 1987-November 1989; from May-November 1990-1995) along Gulf beach shoreline areas. (Dailey <u>et al.</u> 1991)
Bay Bag Seine	<p>Bay bag seine samples have been systematically collected in 7 Texas bay systems since October 1977; sample collection began in the East Matagorda Bay system February 1983 and Sabine Lake in January 1986. Bay bag seine samples were collected by pulling the seine 15.2-30.5 m parallel to shore prior to September 1984; since then it has been pulled 15.2 m. Prior to September 1984, sites for sampling with bag seines (monthly) were randomly selected from about 100 stations in each bay system (McEachron and Green 1985). Prior to October 1981, six bag seine samples were collected each month in each bay system (except during June 1978 when no samples were collected). From October 1981 through August 1984, 10 bag seine samples were collected each month in each bay system; half of the samples were collected during each of the first and last two fullest weeks of each month (McEachron and Green 1985). Beginning September 1984, half of the monthly samples were collected during the 1st-15th and half during the 16th-31st of each month. From April 1988 through December 1989, 12 bag seine samples were collected each month in each bay system. Beginning January 1990, 16 bag seine samples were collected each month in each bay system. Beginning January 1992, 20 samples were collected in each bay system each month, except in East Matagorda Bay where only 10 samples were collected per month. Seasonal catch rates for selected species were presented beginning in 1990 based on recommendations of McEachron and Green, 1986.</p>
Oyster Reef Dredge	<p>Oyster dredges have been systematically used in Texas bays since January 1986. The number of monthly samples collected in the Galveston Bay system were: 20 in 1984; 80 in 1985; and 56 in 1986-1991. Monthly samples collected in the Aransas Bay system were: 56 in 1986-1989; and 26 in 1990-1991. From 1986 to 1991, 10 samples per month were collected in Sabine Lake and the Lower Laguna Madre and 26 monthly samples were collected in the Matagorda, San Antonio, Corpus Christi and East Matagorda Bay systems. Beginning January 1992, 30 samples were collected each month in the Galveston Bay system, and 20 samples in the Matagorda, San Antonio and Aransas Bay systems. Sampling in other systems were discontinued in January 1992.</p>

Table A.3. (Cont.)

GEAR	HISTORICAL SAMPLING PROCEDURES
Non-Reef Dredge	Non-reef dredge samples were systematically collected in Texas bays from 1985-1989. In 1985, 10 monthly samples were collected in the Galveston Bay system. From 1986-1989, 10 monthly samples were collected in all bay systems.

Table A.4. Number of samples collected during routine monitoring by bay, gear, and year.

Gear	Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coast-wide
Bay Bag Seine	1977	0	22	0	22	22	22	22	22	22	154
	1978	0	66	0	66	66	66	66	66	66	462
	1979	0	72	0	72	72	72	72	72	72	504
	1980	0	72	0	72	72	72	72	72	72	504
	1981	0	84	0	84	84	84	84	84	84	588
	1982	0	120	0	120	120	120	120	120	120	840
	1983	0	120	110	120	120	120	120	120	120	950
	1984	0	120	120	120	120	120	120	120	120	960
	1985	0	120	120	120	120	120	120	120	120	960
	1986	120	120	120	120	120	120	120	120	120	1,080
	1987	120	120	120	120	120	120	120	120	120	1,080
	1988	138	138	138	138	138	138	138	138	138	1,242
	1989	144	144	144	144	144	144	144	144	144	1,296
	1990	192	192	192	192	192	192	192	192	192	1,728
	1991	192	192	192	192	192	192	192	192	192	1,728
	1992	240	240	120	240	240	240	240	240	240	2,040
	1993	240	240	120	240	240	240	240	240	240	2,040
	1994	240	240	120	240	240	240	240	240	240	2,040
	1995	240	240	120	240	240	240	240	240	240	2,040
	1996	240	240	120	240	240	240	240	240	240	2,040
	1997	240	240	120	240	240	240	240	240	240	2,040
	1998	240	240	120	240	240	240	240	240	240	2,040
	1999	240	240	120	240	240	240	240	240	240	2,040
	2000	240	240	120	240	240	240	240	240	240	2,040
	2001	240	240	120	240	240	240	240	240	240	2,040
	2002	240	240	120	240	240	240	240	240	240	2,040
	2003	240	240	120	240	240	240	240	240	240	2,040
Bay Trawl	1977	0	9	0	10	10	0	0	0	10	39
	1978	0	55	0	52	45	0	0	0	55	207
	1979	0	55	0	47	0	0	0	0	55	157
	1980	0	1	0	0	0	0	0	0	0	1
	1981	0	0	0	0	0	0	0	0	0	0
	1982	0	240	0	240	240	160	80	80	160	1,200
	1983	0	240	0	240	240	240	240	120	120	1,440
	1984	0	240	0	240	240	240	240	120	120	1,440

Table A.4. (Cont.)

Gear	Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coast-wide
	1985	0	240	0	240	240	240	240	120	120	1,440
	1986	240	240	0	240	240	240	240	120	120	1,440
	1987	240	240	90	240	240	240	240	120	120	1,770
	1988	240	240	120	240	240	240	240	120	120	1,800
	1989	240	240	120	240	240	240	240	120	120	1,800
	1990	120	240	120	240	240	240	240	120	120	1,680
	1991	120	240	120	240	240	240	240	120	120	1,680
	1992	120	240	120	240	240	240	240	120	120	1,680
	1993	120	240	120	240	240	240	240	120	120	1,680
	1994	120	240	120	240	240	240	240	120	120	1,680
	1995	120	240	120	240	240	240	240	120	120	1,680
	1996	120	240	120	240	240	240	240	120	120	1,680
	1997	120	240	120	240	240	240	240	120	120	1,680
	1998	120	240	120	240	240	240	240	120	120	1,680
	1999	120	240	120	240	240	240	240	120	120	1,680
	2000	120	240	120	240	240	240	240	120	120	1,680
	2001	120	240	120	240	240	240	240	120	120	1,680
	2002	120	240	120	240	240	240	240	120	120	1,680
	2003	120	240	120	240	240	240	240	120	120	1,680
Gill Net (Spring)	1976	0	2	0	1	1	1	2	1	1	9
	1977	0	8	4	4	4	4	6	6	4	40
	1978	0	6	6	8	6	6	6	6	6	50
	1979	0	10	10	11	10	10	8	10	10	79
	1980	0	8	9	9	10	10	10	9	10	75
	1981	0	7	6	7	8	8	7	7	7	57
	1982	0	45	6	45	45	45	45	45	45	321
	1983	0	45	8	45	45	45	45	45	45	323
	1984	0	45	7	45	45	45	45	45	45	322
	1985	0	45	20	45	45	45	45	45	45	335
	1986	45	45	20	45	45	45	45	45	45	380
	1987	45	45	20	45	45	45	45	45	45	380
	1988	45	45	20	45	45	45	45	45	45	380
	1989	45	45	20	45	45	45	45	45	45	380
	1990	45	45	20	45	45	45	45	45	45	380
	1991	45	45	20	45	45	45	45	45	45	380
	1992	45	45	20	45	45	45	45	45	45	380

Table A.4. (Cont.)

Gear	Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coast-wide
	1993	45	45	20	45	45	45	45	45	45	380
	1994	45	45	20	45	45	45	45	45	45	380
	1995	45	45	20	45	45	45	45	45	45	380
	1996	45	45	20	45	45	45	45	45	45	380
	1997	45	45	20	45	45	45	45	45	45	380
	1998	45	45	20	45	45	45	45	45	45	380
	1999	45	45	20	45	45	45	45	45	45	380
	2000	45	45	20	45	45	45	45	45	45	380
	2001	45	45	20	45	45	45	45	45	45	380
	2002	45	45	20	45	45	45	45	45	45	380
	2003	45	45	20	45	45	45	45	45	45	380
Gill Net (Fall)	1975	2	8	0	5	5	5	5	5	5	40
	1976	0	12	4	8	8	8	8	8	8	64
	1977	0	8	8	8	8	8	8	8	8	64
	1978	0	7	7	7	7	8	8	8	7	59
	1979	0	18	9	17	17	16	15	17	16	125
	1980	0	11	10	9	9	10	10	10	10	79
	1981	0	45	8	45	45	45	45	45	45	323
	1982	0	45	11	45	45	45	45	45	45	326
	1983	0	45	12	45	45	45	45	45	45	327
	1984	0	45	20	45	45	45	45	45	45	335
	1985	0	45	20	45	45	45	45	45	45	335
	1986	45	45	20	45	45	45	45	45	45	380
	1987	45	45	20	45	45	45	45	45	45	380
	1988	45	45	20	45	45	45	45	45	45	380
	1989	45	45	20	45	45	45	45	45	45	380
	1990	45	45	20	45	45	45	45	45	45	380
	1991	45	45	20	45	45	45	45	45	45	380
	1992	45	45	20	45	45	45	45	45	45	380
	1993	45	45	20	45	45	45	45	45	45	380
	1994	45	45	20	45	45	45	45	45	45	380
	1995	45	45	20	45	45	45	45	45	45	380
	1996	45	45	20	45	45	45	45	45	45	380
	1997	45	45	20	45	45	45	45	45	45	380
	1998	45	45	20	45	45	45	45	45	45	380
	1999	45	45	20	45	45	45	45	45	45	380

Table A.4. (Cont.)

Gear	Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coast- wide
	2000	45	45	20	45	45	45	45	45	45	380
	2001	45	45	20	45	45	45	45	45	45	380
	2002	45	45	20	45	45	45	45	45	45	380
	2003	45	45	20	45	45	45	45	45	45	380

Table A.5. Number of samples collected by oyster reef dredge during routine monitoring by bay and year.

Gear	Year	Galveston	Matagorda	Antonio	San Aransas	Coastwide
Oyster Dredge	1984	240	0	0	0	240
	1985	959	0	0	0	959
	1986	672	312	312	672	1,968
	1987	672	312	312	672	1,968
	1988	672	312	312	672	1,968
	1989	672	312	312	672	1,968
	1990	672	312	312	672	1,968
	1991	672	312	312	312	1,604
	1992	360	240	240	240	1,080
	1993	360	240	240	240	1,080
	1994	360	240	240	240	1,080
	1995	360	240	240	240	1,080
	1996	360	240	240	240	1,080
	1997	360	240	240	240	1,080
	1998	360	240	240	240	1,080
	1999	360	240	240	240	1,080
	2000	360	240	240	240	1,080
	2001	360	240	240	240	1,080
	2002	360	240	240	240	1,080
	2003	360	240	240	240	1,080

Table A.6. Number of Gulf trawl samples collected during routine monitoring in 5 Gulf zones by Gulf area and year.

Year	Sabine Lake	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
1985	0	80	80	176	80	416
1986	112	192	192	192	192	880
1987	192	192	192	192	192	960
1988	192	192	192	192	184	952
1989	192	192	192	184	189	949
1990	192	192	192	192	192	960
1991	192	192	192	184	192	952
1992	192	192	192	184	192	952
1993	192	192	192	192	192	960
1994	192	192	187	192	192	955
1995	192	192	192	184	192	952
1996	192	192	192	192	192	960
1997	192	192	188	192	192	956
1998	192	184	184	192	192	944
1999	192	192	192	184	192	952
2000	192	189	192	192	192	957
2001	192	192	192	192	192	960
2002	192	184	192	192	192	952
2003	192	192	192	192	192	960

Table A.7. Weighting factors used in calculating coastwide average catch rates.

Area	Gill net and ^a bay bag seine	Bay ^b trawl	ICWW ^c trawl	Oyster ^d dredge	Gulf ^e trawl
BAY SYSTEM					
Sabine	75.6	1.220	57.6		
Galveston	411.2	9.408	61.8	126	
East Matagorda	64.4	0.101	23.4		
Matagorda	284.8	6.288	27.4	42	
San Antonio	225.2	3.680	27.0	66	
Aransas	263.5	2.251	25.2	55	
Corpus Christi	171.3	3.357 ^f	13.8		
Upper Laguna Madre	222.3	1.534	55.1		
Lower Laguna Madre	252.1	1.153	46.6		
Total	1,970.4	28.992	337.9	289	
GULF AREA					
Sabine					266
Galveston					273
Port O'Connor					277
Port Aransas					257
Port Isabel					248
Total					1,317

^a Equals miles of shoreline (Matlock and Osborn 1982).

Table 7 (Cont.)

- ^b Equals total bay surface area (divided by 10,000) minus 1977 estimate of shallow water area (≤ 1.2 m)(for the upper and lower Laguna Madre) or minus the mean of 1972 and 1977 estimates (for other bays)(Matlock and Osborn 1982).
- ^c Equals nautical miles of ICWW, trawls not done after 1995.
- ^d Equals total number of grids containing oyster reef.
- ^e Equals total number of Gulf trawlable grids.
- ^f No estimate was available for 1977 shallow water area, so 1977 area was estimated as proportion of sampling grid zones that are designated as trawls grids, times the total surface area of the bay.

Table A.8. Finfish and invertebrate species caught in Texas marine waters by TPW sampling gear during 1975-2003.

Scientific Name	Common Name
Finfish	
<u>Abudefduf saxatilis</u>	Sergeant major
<u>Achirus lineatus</u>	Lined sole
<u>Adinia xenica</u>	Diamond killifish
<u>Aetobatis narinari</u>	Spotted eagle ray
<u>Agonostomus monticola</u>	Mountain mullet
<u>Albula vulpes</u>	Bonefish
<u>Alectis ciliaris</u>	African pompano
<u>Alosa chrysochloris</u>	Skipjack herring
<u>Aluterus heudeloti</u>	Dotterel filefish
<u>Aluterus schoepfi</u>	Orange filefish
<u>Aluterus scriptus</u>	Scrawled filefish
<u>Ambloplites rupestris</u>	Rock bass
<u>Ameiurus melas</u>	Black bullhead
<u>Ameiurus natalis</u>	Yellow bullhead
<u>Amia calva</u>	Bowfin
<u>Anchoa hepsetus</u>	Striped anchovy
<u>Anchoa lyolepis</u>	Dusky anchovy
<u>Anchoa mitchilli</u>	Bay anchovy
<u>Anchoa nasuta</u>	Longnose anchovy
<u>Ancylopsetta dilecta</u>	Three-eye flounder
<u>Ancylopsetta quadrocellata</u>	Ocellated flounder
<u>Anguilla rostrata</u>	American eel
<u>Antennarius nuttingi</u>	(Frogfish)
<u>Antennarius radiatus</u>	Singlespot frogfish
<u>Antennarius striatus</u>	Striated frogfish
<u>Aplodinotus grunniens</u>	Freshwater drum
<u>Archosargus probatocephalus</u>	Sheepshead
<u>Arius felis</u>	Hardhead catfish
<u>Astroscopus y-graecum</u>	Southern stargazer
<u>Bagre marinus</u>	Gafftopsail catfish
<u>Bairdiella chrysoura</u>	Silver perch
<u>Balistes capriscus</u>	Gray triggerfish
<u>Bascanichthys bascanium</u>	Sooty eel
<u>Bathygobius soporator</u>	Frillfin goby
<u>Bellator militaris</u>	Horned searobin
<u>Bollmannia communis</u>	Ragged goby
<u>Bothus robinsi</u>	Twospot flounder
<u>Brevoortia gunteri</u>	Finescale menhaden
<u>Brevoortia patronus</u>	Gulf menhaden
<u>Brotula barbata</u>	Bearded brotula

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Calamus leucosteus</u>	Whitebone porgy
<u>Cantherhines pullus</u>	Orangespotted filefish
<u>Canthidermis maculata</u>	Rough triggerfish
<u>Caranx bartholomaei</u>	Yellow jack
<u>Caranx crysos</u>	Blue runner
<u>Caranx hippos</u>	Crevalle jack
<u>Caranx latus</u>	Horse-eye jack
<u>Caranx ruber</u>	Bar jack
<u>Carassius auratus</u>	Goldfish
<u>Carcharhinus acronotus</u>	Blacknose shark
<u>Carcharhinus brevipinna</u>	Spinner shark
<u>Carcharhinus falciformis</u>	Silky shark
<u>Carcharhinus isodon</u>	Finetooth shark
<u>Carcharhinus leucas</u>	Bull shark
<u>Carcharhinus limbatus</u>	Blacktip shark
<u>Carcharhinus obscurus</u>	Dusky shark
<u>Carcharhinus plumbeus</u>	Sandbar shark
<u>Carcharhinus porosus</u>	Smalltail shark
<u>Centropomus mexicanus</u>	Largescale fat snook
<u>Centropomus parallelus</u>	Fat snook
<u>Centropomus undecimalis</u>	Common snook
<u>Centropristis ocyurus</u>	Bank sea bass
<u>Centropristis philadelphica</u>	Rock sea bass
<u>Chaetodipterus faber</u>	Atlantic spadefish
<u>Chaetodon ocellatus</u>	Spotfin butterflyfish
<u>Chasmodes bosquianus</u>	Striped blenny
<u>Chilomycterus schoepfi</u>	Striped burrfish
<u>Chloroscombrus chrysurus</u>	Atlantic bumper
<u>Citharichthys macrops</u>	Spotted whiff
<u>Citharichthys spilopterus</u>	Bay whiff
<u>Class Osteichthyes</u>	Class bony fishes
<u>Conodon nobilis</u>	Barred grunt
<u>Coryphaena hippurus</u>	Dolphin
<u>Ctenopharyngodon idella</u>	Grass carp
<u>Cyclopsetta chittendeni</u>	Mexican flounder
<u>Cyclopsetta fimbriata</u>	Spotfin flounder
<u>Cynoscion arenarius</u>	Sand seatrout
<u>Cynoscion nebulosus</u>	Spotted seatrout
<u>Cynoscion nothus</u>	Silver seatrout
<u>Cynoscion sp.</u>	(Seatrout - unidentified)
<u>Cyprinodon variegatus</u>	Sheepshead minnow
<u>Cyprinus carpio</u>	Common carp

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Dactylopterus volitans</u>	Flying gurnard
<u>Dasyatis americana</u>	Southern stingray
<u>Dasyatis centroura</u>	Roughtail stringray
<u>Dasyatis sabina</u>	Atlantic stingray
<u>Dasyatis say</u>	Bluntnose stingray
<u>Decapterus punctatus</u>	Round scad
<u>Diapterus auratus</u>	Irish pompano
<u>Diplectrum bivittatum</u>	Dwarf sand perch
<u>Diplectrum formosum</u>	Sand perch
<u>Diplodus holbrooki</u>	Spottail pinfish
<u>Dormitator maculatus</u>	Fat sleeper
<u>Dorosoma cepedianum</u>	Gizzard shad
<u>Dorosoma petenense</u>	Threadfin shad
<u>Echeneis naucrates</u>	Sharksucker
<u>Eleotris pisonis</u>	Spinycheek sleeper
<u>Elops saurus</u>	Ladyfish
<u>Engyophrys senta</u>	Spiny flounder
<u>Epinephelus adscensionis</u>	Rock hind
<u>Epinephelus nigritus</u>	Warsaw grouper
<u>Epinephelus niveatus</u>	Snowy grouper
<u>Equetus umbrosus</u>	Cubbyu
<u>Erotelis smaragdus</u>	Emerald sleeper
<u>Etropus crossotus</u>	Fringed flounder
<u>Etrumeus teres</u>	Round herring
<u>Eucinostomus argenteus</u>	Spotfin mojarra
<u>Eucinostomus gula</u>	Silver jenny
<u>Eucinostomus lefroyi</u>	Mottled mojarra
<u>Eucinostomus melanopterus</u>	Flagfin mojarra
<u>Evorthodus lyricus</u>	Lyre goby
<u>Family Anguillidae</u>	Family freshwater eels
<u>Family Atherinidae</u>	Family silversides
<u>Family Balistidae</u>	Family leatherjackets
<u>Family Blenniidae</u>	Family combtooth blennies
<u>Family Bothidae</u>	Family lefteye flounders
<u>Family Carangidae</u>	Family jacks
<u>Family Carcharhinidae</u>	Family requiem sharks
<u>Family Catostomidae</u>	Family suckers
<u>Family Centrarchidae</u>	Family sunfishes
<u>Family Clupeidae</u>	Family herrings
<u>Family Cyprinidae</u>	Family carps and minnows
<u>Family Cyprinodontidae</u>	Family killifishes
<u>Family Dasyatidae</u>	Family stingrays
<u>Family Elopidae</u>	Family tarpons

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Family Engraulidae</u>	Family anchovies
<u>Family Ephippidae</u>	Family spadefishes
<u>Family Gerreidae</u>	Family mojarras
<u>Family Gobiidae</u>	Family gobies
<u>Family Haemulidae</u>	Family grunts
<u>Family Labridae</u>	Family wrasses
<u>Family Lepisosteidae</u>	Family gars
<u>Family Lutjanidae</u>	Family snappers
<u>Family Mugilidae</u>	Family mullets
<u>Family Mullidae</u>	Family goatfishes
<u>Family Ogcocephalidae</u>	Family batfishes
<u>Family Ophichthidae</u>	Family snake eels
<u>Family Ophidiidae</u>	Family cusk-eels
<u>Family Percichthyidae</u>	Family temperate basses
<u>Family Poeciliidae</u>	Family livebearers
<u>Family Pomacentridae</u>	Family damselfishes
<u>Family Sciaenidae</u>	Family drums
<u>Family Scombridae</u>	Family mackerels
<u>Family Serranidae</u>	Family sea basses
<u>Family Soleidae</u>	Family soles
<u>Family Sphyraenidae</u>	Family barracudas
<u>Family Sphyrnidae</u>	Family hammerhead sharks
<u>Family Syngnathidae</u>	Family pipefishes
<u>Family Synodontidae</u>	Family lizardfishes
<u>Family Tetraodontidae</u>	Family puffers
<u>Family Triglidae</u>	Family searobins
<u>Fundulus chrysotus</u>	Golden topminnow
<u>Fundulus grandis</u>	Gulf killifish
<u>Fundulus pulvereus</u>	Bayou killifish
<u>Fundulus similis</u>	Longnose killifish
<u>Fundulus sp.</u>	(Killifish - unidentified)
<u>Gambusia affinis</u>	Western mosquitofish
<u>Gerres cinereus</u>	Yellowfin mojarra
<u>Gnathagnus egregius</u>	Freckled stargazer
<u>Gobiesox punctulatus</u>	Stippled clingfish
<u>Gobiesox strumosus</u>	Skilletfish
<u>Gobioides broussoneti</u>	Violet goby
<u>Gobiomorus dormitor</u>	Bigmouth sleeper
<u>Gobionellus boleosoma</u>	Darter goby
<u>Gobionellus oceanicus</u>	Highfin goby
<u>Gobionellus shufeldti</u>	Freshwater goby
<u>Gobiosoma bosc</u>	Naked goby
<u>Gobiosoma robustum</u>	Code goby

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Gunterichthys longipenis</u>	Gold brotula
<u>Gymnachirus texae</u>	Fringed sole
<u>Gymnothorax moringa</u>	Spotted moray
<u>Gymnothorax nigromarginatus</u>	Blackedge moray
<u>Gymnura micrura</u>	Smooth butterfly ray
<u>Haemulon aurolineatum</u>	Tomtate
<u>Halieutichthys aculeatus</u>	Pancake batfish
<u>Harengula jaguana</u>	Scaled sardine
<u>Hemicaranx amblyrhynchus</u>	Bluntnose jack
<u>Hemipteronotus novacula</u>	Pearly razorfish
<u>Hemiramphus balao</u>	Balao
<u>Hemiramphus brasiliensis</u>	Ballyhoo
<u>Hildebrandia flava</u>	Yellow conger
<u>Hippocampus erectus</u>	Lined seahorse
<u>Hippocampus zosterae</u>	Dwarf seahorse
<u>Histrio histrio</u>	Sargassumfish
<u>Hoplunnis tenuis</u>	Spotted pike-conger
<u>Hypleurochilus geminatus</u>	Crested blenny
<u>Hyporhamphus unifasciatus</u>	Silverstripe halfbeak
<u>Hypsoblennius hentz</u>	Feather blenny
<u>Hypsoblennius ionthas</u>	Freckled blenny
<u>Ictalurus furcatus</u>	Blue catfish
<u>Ictalurus punctatus</u>	Channel catfish
<u>Ictiobus bubalus</u>	Smallmouth buffalo
<u>Ictiobus cyprinellus</u>	Bigmouth buffalo
<u>Jenkinsia lamprotaenia</u>	Dwarf herring
<u>Kathetostoma albigutta</u>	Lancer stargazer
<u>Kyphosus incisor</u>	Yellow chub
<u>Kyphosus sectatrix</u>	Bermuda chub
<u>Labrisomus nuchipinnis</u>	Hairy blenny
<u>Lachnolaimus maximus</u>	Hogfish
<u>Lactophrys quadricornis</u>	Scrawled cowfish
<u>Lagocephalus laevigatus</u>	Smooth puffer
<u>Lagodon rhomboides</u>	Pinfish
<u>Larimus fasciatus</u>	Banded drum
<u>Leiostomus xanthurus</u>	Spot
<u>Lepisosteus oculatus</u>	Spotted gar
<u>Lepisosteus osseus</u>	Longnose gar
<u>Lepisosteus platostomus</u>	Shortnose gar
<u>Lepisosteus spatula</u>	Alligator gar
<u>Lepomis cyanellus</u>	Green sunfish
<u>Lepomis gulosus</u>	Warmouth
<u>Lepomis macrochirus</u>	Bluegill

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Lepomis megalotis</u>	Longear sunfish
<u>Lepomis microlophus</u>	Redear sunfish
<u>Lepophidium brevibarbe</u>	Blackedge cusk-eel
<u>Lobotes surinamensis</u>	Tripletail
<u>Lucania parva</u>	Rainwater killifish
<u>Lutjanus analis</u>	Mutton snapper
<u>Lutjanus apodus</u>	Schoolmaster
<u>Lutjanus campechanus</u>	Red snapper
<u>Lutjanus griseus</u>	Gray snapper
<u>Lutjanus jocu</u>	Dog snapper
<u>Lutjanus synagris</u>	Lane snapper
<u>Lutjanus vivanus</u>	Silk snapper
<u>Megalops atlanticus</u>	Tarpon
<u>Membras martinica</u>	Rough silverside
<u>Menidia beryllina</u>	Inland silverside
<u>Menidia clarkhubbsi</u>	Texas silverside
<u>Menidia peninsulae</u>	Tidewater silverside
<u>Menticirrhus americanus</u>	Southern kingfish
<u>Menticirrhus littoralis</u>	Gulf kingfish
<u>Menticirrhus saxatilis</u>	Northern kingfish
<u>Microgobius gulosus</u>	Clown goby
<u>Microgobius thalassinus</u>	Green goby
<u>Micropogonias undulatus</u>	Atlantic croaker
<u>Micropterus salmoides</u>	Largemouth bass
<u>Monacanthus ciliatus</u>	Fringed filefish
<u>Monacanthus hispidus</u>	Planehead filefish
<u>Monacanthus setifer</u>	Pygmy filefish
<u>Morone X</u>	Hybrid bass (striped x white)
<u>Morone americana</u>	White perch
<u>Morone chrysops</u>	White bass
<u>Morone mississippiensis</u>	Yellow bass
<u>Morone saxatilis</u>	Striped bass
<u>Mugil cephalus</u>	Striped mullet
<u>Mugil curema</u>	White mullet
<u>Mullus auratus</u>	Red goatfish
<u>Mustelus canis</u>	Smooth dogfish
<u>Mustelus norrisi</u>	Florida smoothhound
<u>Mycteroperca bonaci</u>	Black grouper
<u>Mycteroperca microlepis</u>	Gag
<u>Mycteroperca phenax</u>	Scamp
<u>Mycteroperca rubra</u>	Comb grouper
<u>Myrophis punctatus</u>	Speckled worm eel
<u>Narcine brasiliensis</u>	Lesser electric ray

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Negaprion brevirostris</u>	Lemon shark
<u>Neomerinthe hemingwayi</u>	Spinycheek scorpionfish
<u>Notemigonus crysoleucas</u>	Golden shiner
<u>Ogcocephalus corniger</u>	Longnose batfish
<u>Ogcocephalus nasutus</u>	Shortnose batfish
<u>Ogcocephalus pantostictus</u>	Spotted batfish
<u>Ogcocephalus parvus</u>	Roughback batfish
<u>Ogcocephalus radiatus</u>	Polka-dot batfish
<u>Ogcocephalus sp.</u>	(Batfish - unidentified)
<u>Oligoplites saurus</u>	Leatherjacket
<u>Ophichthus gomesi</u>	Shrimp eel
<u>Ophichthus ophis</u>	Spotted snake eel
<u>Ophichthus puncticeps</u>	Palespotted eel
<u>Ophichthus rex</u>	King snake eel
<u>Ophidion grayi</u>	Blotched cusk-eel
<u>Ophidion holbrooki</u>	Bank cusk-eel
<u>Ophidion marginatum</u>	Striped cusk-eel
<u>Ophidion welshi</u>	Crested cusk-eel
<u>Opisthonema oglinum</u>	Atlantic thread herring
<u>Opsanus beta</u>	Gulf toadfish
<u>Opsanus pardus</u>	Leopard toadfish
<u>Orthopristis chrysoptera</u>	Pigfish
<u>Parablennius marmoreus</u>	Seaweed blenny
<u>Paraconger caudilimbatus</u>	Margintail conger
<u>Paralichthys albigutta</u>	Gulf flounder
<u>Paralichthys lethostigma</u>	Southern flounder
<u>Paralichthys sp.</u>	(Flounder - unidentified)
<u>Paralichthys squamilentus</u>	Broad flounder
<u>Peprilus alepidotus</u>	Harvestfish
<u>Peprilus burti</u>	Gulf butterfish
<u>Phaeoptyx conklini</u>	Freckled cardinalfish
<u>Platybelone argalus</u>	Keeltail needlefish
<u>Poecilia formosa</u>	Amazon molly
<u>Poecilia latipinna</u>	Sailfin molly
<u>Pogonias cromis</u>	Black drum
<u>Polydactylus octonemus</u>	Atlantic threadfin
<u>Pomacentrus fuscus</u>	Dusky damselfish
<u>Pomacentrus variabilis</u>	Cocoa damselfish
<u>Pomadasys crocro</u>	Burro grunt
<u>Pomatomus saltatrix</u>	Bluefish
<u>Pomoxis annularis</u>	White crappie
<u>Pomoxis nigromaculatus</u>	Black crappie
<u>Pontinus longispinis</u>	Longspine scorpionfish

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Porichthys plectrodon</u>	Atlantic midshipman
<u>Priacanthus arenatus</u>	Bigeye
<u>Prionotus longispinosus</u>	Bigeye searobin
<u>Prionotus martis</u>	Barred searobin
<u>Prionotus ophryas</u>	Bandtail searobin
<u>Prionotus paralatus</u>	Mexican searobin
<u>Prionotus roseus</u>	Bluespotted searobin
<u>Prionotus rubio</u>	Blackwing searobin
<u>Prionotus scitulus</u>	Leopard searobin
<u>Prionotus stearnsi</u>	Shortwing searobin
<u>Prionotus tribulus</u>	Bighead searobin
<u>Pristigenys alta</u>	Short bigeye
<u>Pristipomoides aquilonaris</u>	Wenchman
<u>Pristis pectinata</u>	Smalltooth sawfish
<u>Pylodictis olivaris</u>	Flathead catfish
<u>Rachycentron canadum</u>	Cobia
<u>Raja eglanteria</u>	Clearnose skate
<u>Raja texana</u>	Roundel skate
<u>Remora remora</u>	Remora
<u>Rhinobatos lentiginosus</u>	Atlantic guitarfish
<u>Rhinoptera bonasus</u>	Cownose ray
<u>Rhizoprionodon terraenovae</u>	Atlantic sharpnose shark
<u>Rhomboplites aurorubens</u>	Vermilion snapper
<u>Sardinella aurita</u>	Spanish sardine
<u>Saurida brasiliensis</u>	Largescale lizardfish
<u>Saurida caribbaea</u>	Smallscale lizardfish
<u>Scartella cristata</u>	Molly miller
<u>Sciaenops ocellatus</u>	Red drum
<u>Scomber japonicus</u>	Chub mackerel
<u>Scomberomorus cavalla</u>	King mackerel
<u>Scomberomorus maculatus</u>	Spanish mackerel
<u>Scomberomorus regalis</u>	Cero
<u>Scomberomorus sp.</u>	(Mackerel - unidentified)
<u>Scorpaena brasiliensis</u>	Barbfish
<u>Scorpaena calcarata</u>	Smoothhead scorpionfish
<u>Scorpaena plumieri</u>	Spotted scorpionfish
<u>Scyliorhinus retifer</u>	Chain dogfish
<u>Selar crumenophthalmus</u>	Bigeye scad
<u>Selene setapinnis</u>	Atlantic moonfish
<u>Selene vomer</u>	Lookdown
<u>Seriola dumerili</u>	Greater amberjack
<u>Seriola zonata</u>	Banded rudderfish
<u>Serraniculus pumilio</u>	Pygmy sea bass

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Serranus atrobranchus</u>	Blackear bass
<u>Serranus subligarius</u>	Belted sandfish
<u>Sparisoma radians</u>	Bucktooth parrotfish
<u>Sphoeroides parvus</u>	Least puffer
<u>Sphoeroides spengleri</u>	Bandtail puffer
<u>Sphyraena barracuda</u>	Great barracuda
<u>Sphyraena guachancho</u>	Guaguanche
<u>Sphyrna lewini</u>	Scalloped hammerhead
<u>Sphyrna mokarran</u>	Great hammerhead
<u>Sphyrna tiburo</u>	Bonnethead
<u>Sphyrna tudes</u>	Smalleye hammerhead
<u>Stellifer lanceolatus</u>	Star drum
<u>Stenotomus caprinus</u>	Longspine porgy
<u>Strongylura marina</u>	Atlantic needlefish
<u>Syacium gunteri</u>	Shoal flounder
<u>Syacium papillosum</u>	Dusky flounder
<u>Symphurus civitatus</u>	Offshore tonguefish
<u>Symphurus diomedianus</u>	Spottedfin tonguefish
<u>Symphurus parvus</u>	Pygmy tonguefish
<u>Symphurus plagiusa</u>	Blackcheek tonguefish
<u>Symphurus urospilus</u>	Spottail tonguefish
<u>Syngnathus floridae</u>	Dusky pipefish
<u>Syngnathus louisianae</u>	Chain pipefish
<u>Syngnathus pelagicus</u>	Sargassum pipefish
<u>Syngnathus scovelli</u>	Gulf pipefish
<u>Synodus foetens</u>	Inshore lizardfish
<u>Synodus poeyi</u>	Offshore lizardfish
<u>Tilapia aurea</u>	Blue tilapia
<u>Tilapia sp.</u>	(Tilapia - unidentified)
<u>Trachinocephalus myops</u>	Snakefish
<u>Trachinotus carolinus</u>	Florida pompano
<u>Trachinotus falcatus</u>	Permit
<u>Trachinotus goodei</u>	Palometa
<u>Trachurus lathami</u>	Rough scad
<u>Trichiurus lepturus</u>	Atlantic cutlassfish
<u>Trichopsetta ventralis</u>	Sash flounder
<u>Trinectes maculatus</u>	Hogchoker
<u>Umbrina coroides</u>	Sand drum
<u>Upeneus parvus</u>	Dwarf goatfish
<u>Uroconger syringinus</u>	Threadtail conger
<u>Urophycis cirrata</u>	Gulf hake
<u>Urophycis floridana</u>	Southern hake
<u>Xanthichthys ringens</u>	Sargassum triggerfish

Table A.8. (Cont.)

Scientific Name	Common Name
Invertebrates	
<u>Acetes americanus</u>	Sergestid shrimp
<u>Agriopoma texasianum</u>	Texas venus
<u>Albunea gibbesii</u>	Surf mole crab
<u>Albunea paretii</u>	Beach mole crab
<u>Alpheus armillatus</u>	Banded snapping shrimp
<u>Alpheus estuariensis</u>	Estuarine snapping shrimp
<u>Alpheus formosus</u>	Striped snapping shrimp
<u>Alpheus heterochaelis</u>	Bigclaw snapping shrimp
<u>Amaea mitchelli</u>	Mitchell's wentletrap
<u>Anachis sp.</u>	(Dovesnail - unidentified)
<u>Anadara brasiliana</u>	Incongruous ark
<u>Anadara floridana</u>	Cut-ribbed ark
<u>Anadara ovalis</u>	Blood ark
<u>Anadara transversa</u>	Transverse ark
<u>Anasimus latus</u>	Stilt spider crab
<u>Anatina anatina</u>	Smooth duckclam
<u>Anomalocardia auberiana</u>	Pointed venus
<u>Anomia simplex</u>	Common jingle
<u>Aplysia brasiliana</u>	Mottled seahare
<u>Aplysia sp.</u>	(Seahare - unidentified)
<u>Arbacia punctulata</u>	Red sea urchin
<u>Arca imbricata</u>	Mossy ark
<u>Architectonica nobilis</u>	Common sundial
<u>Arcinella cornuta</u>	Florida spiny jewelbox
<u>Arenaeus cribrarius</u>	Speckled swimming crab
<u>Argopecten gibbus</u>	Atlantic calico scallop
<u>Argopecten irradians</u>	Bay scallop
<u>Armina wattla</u>	(Tigrina armina)
<u>Astropecten duplicatus</u>	Two-spined starfish
<u>Atrina serrata</u>	Sawtooth penshell
<u>Aurelia aurita</u>	Moon jellyfish
<u>Barbatia candida</u>	White-beard ark
<u>Barbatia tenera</u>	Delicaye ark
<u>Beroe ovata</u>	Sea walnut
<u>Brachidontes exustus</u>	Scorched mussel
<u>Brissopsis alta</u>	Heart urchin
<u>Bulla striata</u>	Striate bubble
<u>Bursatella leachii pleii</u>	Ragged seahare
<u>Busycon sinistrum</u>	Lightning whelk
<u>Busycotypus spiratus</u>	Pear whelk
<u>Calappa flammea</u>	Flame box crab

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Calappa ocellata</u>	Ocellated box crab
<u>Calappa sulcata</u>	Yellow box crab
<u>Callianassa louisianensis</u>	Gulf estuarine ghost shrimp
<u>Callichirus islagrande</u>	Beach ghost shrimp
<u>Callinectes marginatus</u>	(Sargassum crab)
<u>Callinectes sapidus</u>	Blue crab
<u>Callinectes similis</u>	Lesser blue crab
<u>Cancellaria reticulata</u>	Common nutmeg
<u>Cantharus cancellarius</u>	Cancellate cantharus
<u>Cerithidea pliculosa</u>	Plicate hornsnail
<u>Cerithiopsis emersonii</u>	Awl miniature cerith
<u>Cerithium lutosum</u>	Variable cerith
<u>Chaetopterus variopedatus</u>	Parchment worm
<u>Chasmocarcinus mississippiensis</u>	Roughwrist soft crab
<u>Chione cancellata</u>	Cross-barred venus
<u>Chiropsalmus quadrumanus</u>	Sea wasp
<u>Chrysaora quinquecirrha</u>	Sea nettle
<u>Claassenia sp.</u>	(Stonefly nymph - unidentified)
<u>Class Ascidiacea</u>	Class sessile tunicates
<u>Class Asteroidea</u>	Class starfish
<u>Class Cephalopoda</u>	Class squids and octopuses
<u>Class Holothuroidea</u>	Class sea cucumbers
<u>Class Malacostraca</u>	(Malacostracan crustacean)
<u>Class Ophiuroidae</u>	Class brittle stars
<u>Class Polychaeta</u>	Polychaete worms
<u>Class Scyphozoa</u>	Class jellyfish
<u>Clibanarius vittatus</u>	Thinstripe hermit
<u>Conus stimpsoni</u>	Yellow cone
<u>Corbula swiftiana</u>	Radial-ridged corbula
<u>Costoanachis avara</u>	Greedy dovesnail
<u>Costoanachis semiplicata</u>	Gulf dovesnail
<u>Crassostrea virginica</u>	Eastern oyster
<u>Crepidula convexa</u>	Convex slippersnail
<u>Crepidula fornicata</u>	Common Atlantic slippersnail
<u>Crepidula plana</u>	Eastern white slippersnail
<u>Cyclinella tenuis</u>	Thin cyclinella
<u>Cyphoma gibbosum</u>	Flamingo tongue
<u>Cyrtopleura costata</u>	Angelwing
<u>Dardanus fucusus</u>	Bareye hermit
<u>Dinocardium robustum</u>	Atlantic giant cockle
<u>Distorsio clathrata</u>	Atlantic distorsio
<u>Donax variabilis</u>	Variable coquina
<u>Dosinia discus</u>	Disk dosinia

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Dromidia antillensis</u>	Hairy sponge crab
<u>Dyspanopeus texana</u>	Gulf grassflat crab
<u>Echinometra lucunter</u>	Rock-boring urchin
<u>Emerita portoricensis</u>	Puerto Rican sand crab
<u>Ensis minor</u>	Minor jackknife
<u>Euceramus praelongus</u>	Olivepit porcelain crab
<u>Eurypanopeus abbreviatus</u>	Lobate mud crab
<u>Eurypanopeus depressus</u>	Flatback mud crab
<u>Exhippolysmata oplophoroides</u>	Redleg humpback shrimp
<u>Family Alpheidae</u>	Family snapping shrimps
<u>Family Amphinomidae</u>	Family bristle worms
<u>Family Astacidae</u>	Family crayfishes
<u>Family Cerithiidae</u>	Family ceriths (snails)
<u>Family Loliginidae</u>	Family long squids
<u>Family Majidae</u>	Family spider crabs
<u>Family Mysidae</u>	Family mysid shrimp
<u>Family Neritidae</u>	Family nerite (snails)
<u>Family Ogyrididae</u>	Family longeye shrimps
<u>Family Paguridae</u>	Family hermit crabs
<u>Family Penaeidae</u>	Family penaeid shrimp
<u>Family Pinnotheridae</u>	Family pinnotherid crabs
<u>Family Porcellanidae</u>	Family porcelain crabs
<u>Family Portunidae</u>	Family portunid crabs
<u>Family Ranellidae</u>	Family tritons
<u>Family Tellinidae</u>	Family tellin shells
<u>Family Unionidae</u>	Family freshwater clams
<u>Family Xanthidae</u>	Family mud crabs
<u>Farfantepenaeus aztecus</u>	Brown shrimp
<u>Farfantepenaeus duorarum</u>	Pink shrimp
<u>Fasciolaria lilium lilium</u>	Banded tulip
<u>Gammarus mucronatus</u>	(Beach hopper amphipod)
<u>Glypturus acanthochirus</u>	Ghost shrimp
<u>Haminoea antillarum</u>	Antilles glassy-bubble
<u>Haminoea succinea</u>	Amber glassy-bubble
<u>Hemiphoris elongata</u>	Brittle star (banded)
<u>Hepatus epheliticus</u>	Calico box crab
<u>Hepatus pudibundus</u>	Flecked box crab
<u>Heterocrypta granulata</u>	Smooth elbow crab
<u>Hexapanopeus angustifrons</u>	Smooth mud crab
<u>Hexapanopeus paulensis</u>	Knobbed mud crab
<u>Hexaplex fulvescens</u>	Giant eastern murex
<u>Hippolyte zostericola</u>	Zostera shrimp
<u>Hypoconcha arcuata</u>	Granulate shellback shrimp

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Hypoconcha sabulosa</u>	Shellback crab (Dromiid)
<u>Iliacantha intermedia</u>	Granulose purse crab
<u>Ischadium recurvum</u>	Hooked mussel
<u>Isocheles wurdemanni</u>	Surf hermit
<u>Isonychia sp.</u>	(Mayfly nymph - unidentified)
<u>Laevicardium mortoni</u>	Yellow eggcockle
<u>Latreutes fucorum</u>	Slender sargassum shrimp
<u>Latreutes parvulus</u>	Sargassum shrimp
<u>Leander tenuicornis</u>	Brown grass shrimp
<u>Leiolambrus nitidus</u>	White elbow crab
<u>Lepidopa benedicti</u>	(Gulf mole crab)
<u>Libinia dubia</u>	Longnose spider crab
<u>Libinia emarginata</u>	Portly spider crab
<u>Lirophora clenchi</u>	Thick-ringed venus
<u>Litopenaeus setiferus</u>	White shrimp
<u>Littoraria irrorata</u>	Marsh periwinkle
<u>Loligo pealeii</u>	Longfin inshore squid
<u>Loligo pleii</u>	Slender inshore squid
<u>Lolliguncula brevis</u>	Atlantic brief squid
<u>Lucifer faxoni</u>	Sergestid shrimp
<u>Lucina pectinata</u>	Thick lucine
<u>Luidia alternata</u>	Banded sea star
<u>Luidia clathrata</u>	Large sea star
<u>Lysiosquilla scabricauda</u>	(Giant) mantis shrimp
<u>Lysmata wurdemanni</u>	Peppermint shrimp
<u>Lytechinus variegatus</u>	Short spined sea urchin
<u>Macoma brevivfrons</u>	Short macoma
<u>Macrobrachium acanthurus</u>	Cinnamon river shrimp
<u>Macrobrachium ohione</u>	Ohio shrimp
<u>Macrocallista maculata</u>	Calico clam
<u>Mactrotoma fragilis</u>	Fragile surfclam
<u>Melampus bidentatus</u>	Eastern melampus
<u>Mellita quinquiesperforata</u>	Five-lunuled sand dollar
<u>Menippe adina</u>	Gulf stone crab
<u>Mercenaria campechiensis</u>	Southern quahog
<u>Mercenaria campechiensis texana</u>	Texas quahog
<u>Metoporphaphis calcarata</u>	False arrow crab
<u>Microphilis atra</u>	Brittle star (grey)
<u>Mnemiopsis mccradyi</u>	Phosphorus jelly
<u>Moira atropus</u>	Mud-burrowing heart urchin
<u>Molgula manhattensis</u>	Sea squirt
<u>Mulinia lateralis</u>	Dwarf surf clam
<u>Nassarius vibex</u>	Bruised nassa

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Nemopsis bachei</u>	(Hydromedusa)
<u>Neritina usnea</u>	Olive nerite
<u>Neritina virginea</u>	Virgin nerite
<u>Neverita duplicata</u>	Shark eye
<u>Noetia ponderosa</u>	Ponderous ark
<u>Octopus vulgaris</u>	Common octopus
<u>Oculina diffusa</u>	Ivory coral
<u>Ocypode quadrata</u>	Atlantic ghost crab
<u>Oliva sayana</u>	Lettered olive
<u>Ophiolepis elegans</u>	Brittle star
<u>Orchestia grillus</u>	Beach flea (amphipod)
<u>Order Actiniaria</u>	Order anemones
<u>Order Gorgonacea</u>	Order whip corals and sea feathers
<u>Order Hydroidea</u>	Order hydroids
<u>Order Isopoda</u>	Order isopods
<u>Order Nudibranchia</u>	Order nudibranchs
<u>Order Pennatulacea</u>	Order sea pens and pansies
<u>Ostrea equestris</u>	Crested oyster
<u>Ovalipes floridanus</u>	Florida lady crab
<u>Paguristes hummi</u>	(Blue-spot hermit crab)
<u>Pagurus annulipes</u>	(Brown-banded hermit crab)
<u>Pagurus brevidactylus</u>	Short-fingered hermit
<u>Pagurus impressus</u>	Dimpled hermit
<u>Pagurus longicarpus</u>	Longwrist hermit
<u>Pagurus pollicaris</u>	Flatclaw hermit
<u>Palaemonetes pugio</u>	Daggerblade grass shrimp
<u>Palaemonetes sp.</u>	(Grass shrimp - unidentified)
<u>Palaemonetes vulgaris</u>	Marsh grass shrimp
<u>Panopeus simpsoni</u>	Oystershell mud crab
<u>Paranthus rapiformis</u>	Onion anemone
<u>Parapenaeus politus</u>	Rose shrimp
<u>Parthenope serrata</u>	Sawtooth elbow crab
<u>Pelia mutica</u>	Cryptic teardrop crab
<u>Perna perna</u>	Mexilhao mussel
<u>Persephona crinita</u>	Pink purse crab
<u>Persephona mediterranea</u>	Mottled purse crab
<u>Petrochirus diogenes</u>	Giant hermit
<u>Petrolisthes armatus</u>	Green porcelain crab
<u>Phalium granulatum</u>	Scotch bonnet
<u>Phylum Annelida</u>	Phylum annelid worms
<u>Phylum Bryozoa</u>	Phylum bryozoans
<u>Phylum Ctenophora</u>	Phylum ctenophores
<u>Phylum Mollusca</u>	Phylum mollusks

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Phylum Nemertinea</u>	Phylum nemerteans
<u>Phylum Porifera</u>	Phylum sponges
<u>Physalia physalis</u>	Portuguese man-of-war
<u>Pinnotheres maculatus</u>	Squatter pea crab
<u>Pleuroploca gigantea</u>	Horse conch
<u>Podochela riisei</u>	Longfinger neck crab
<u>Podochela sidneyi</u>	Shortfinger neck crab
<u>Polia tinctoria</u>	Tinted cantharus
<u>Polymesoda caroliniana</u>	Carolina marshclam
<u>Polymesoda maritima</u>	Southern marshclam
<u>Porcellana sayana</u>	Spotted porcelain crab
<u>Porcellana sigesbeiana</u>	triped porcelain crab
<u>Portunus anceps</u>	Delicate swimming crab
<u>Portunus gibbesii</u>	Iridescent swimming crab
<u>Portunus sayi</u>	Sargassum swimming crab
<u>Portunus spinicarpus</u>	Longspine swimming crab
<u>Portunus spinimanus</u>	Blotched swimming crab
<u>Portunus ventralis</u>	(Portunid swimming crab)
<u>Procambarus clarkii</u>	Red swamp crawfish
<u>Puberella intapurpurea</u>	Lady-in-waiting venus
<u>Rangia cuneata</u>	Atlantic rangia
<u>Rangia flexuosa</u>	Brown rangia
<u>Raninoides louisianensis</u>	Gulf frog crab
<u>Renilla mulleri</u>	Sea pansy
<u>Rhithropanopeus harrisi</u>	Harris mud crab
<u>Scyllaea pelagica</u>	Sargassum nudibranch
<u>Sesarma reticulatum</u>	Heavy marsh crab
<u>Sicyonia brevirostris</u>	Brown rock shrimp
<u>Sicyonia dorsalis</u>	Lesser rock shrimp
<u>Sicyonia stimpsoni</u>	Eyespot rock shrimp
<u>Sicyonia typica</u>	Kinglet rock shrimp
<u>Simnialena marferula</u>	Sea-whip simnia
<u>Sinum perspectivum</u>	White baby ear
<u>Siphonaria pectinata</u>	Striped false limpet
<u>Solariorbis blakei</u>	(Vitrinella)
<u>Solenocera vioscai</u>	Humpback shrimp
<u>Speocarcinus lobatus</u>	Gulf squareback crab
<u>Spisula solidissima</u>	Atlantic surfclam
<u>Squilla chydrea</u>	(Offshore mantis shrimp)
<u>Squilla empusa</u>	Mantis shrimp
<u>Squilla neglecta</u>	Lesser mantis shrimp
<u>Stenorhynchus seticornis</u>	Yellowline arrow crab
<u>Stomolophus meleagris</u>	Cannonball jelly

Table A.8. (Cont.)

Scientific Name	Common Name
<u>Stramonita haemastoma floridana</u>	Florida rocksnail
<u>Strombus alatus</u>	Florida fighting conch
<u>Suborder Reptantia</u>	Suborder reptantia
<u>Synalpheus fritzmuelleri</u>	Speckled snapping shrimp
<u>Tagelus plebeius</u>	Stout tagelus
<u>Tellina alternata</u>	Alternate tellin
<u>Tellina tampaensis</u>	Tampa tellin
<u>Terebra dislocata</u>	Eastern auger
<u>Terebra protexta</u>	Fine-ribbed auger
<u>Thyone mexicana</u>	Sea cucumber
<u>Tonna galea</u>	Giant tun
<u>Tozeuma carolinense</u>	Arrow shrimp
<u>Trachycardium muricatum</u>	Yellow pricklycockle
<u>Trachypenaeus constrictus</u>	Roughneck shrimp
<u>Trachypenaeus similis</u>	Roughback shrimp
<u>Trachypenaeus sp.</u>	(Trachypenaeid shrimp - unidentified)
<u>Uca panacea</u>	Gulf sand fiddler
<u>Uca sp.</u>	(Fiddler crab - unidentified)
<u>Uca spinicarpa</u>	Spined fiddler
<u>Upogebia affinis</u>	Coastal mud shrimp
<u>Velella velella</u>	By-the-wind sailor
<u>Xiphopenaeus kroyeri</u>	Seabob
<u>Zoobotryon verticillatum</u>	(Sauerkraut bryozoan)

Appendix B. Summary of hydrological data collected for gill net, bay bag seine, oyster dredge, and bay and gulf trawl samples.

Table B.1. Mean surface salinity (o/oo) at sampled gill net sites by bay system during spring and fall, 1975-2003. ND = no data.

Year	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1975	ND	ND	ND	13.9	ND	ND	ND	22.3	ND	17.6	ND	18.5	ND	20.0	ND	33.3	ND	25.8	ND	20.5
1976	ND	ND	ND	19.6	ND	20.7	0.0	18.8	ND	17.9	ND	10.9	ND	14.9	35.5	26.0	ND	23.3	12.5	18.9
1977	ND	ND	15.4	23.2	14.2	18.6	19.3	15.0	14.3	19.1	9.0	19.1	18.3	30.9	26.1	37.0	28.5	30.5	18.2	24.0
1978	ND	ND	18.5	21.3	20.8	18.4	19.2	15.6	26.1	13.9	19.0	12.5	26.5	23.6	38.2	39.3	31.8	18.3	24.5	20.4
1979	ND	ND	7.6	13.3	14.0	11.8	11.1	9.6	7.5	12.3	9.4	7.7	18.2	23.4	35.0	28.2	30.3	26.0	15.8	16.2
1980	ND	ND	11.3	22.7	17.0	24.1	14.3	23.4	20.8	18.2	17.4	19.7	30.0	27.0	37.3	24.6	30.3	30.8	21.2	23.6
1981	ND	ND	25.8	10.3	26.8	17.5	20.1	13.7	19.0	10.8	20.3	8.4	29.4	21.5	30.6	25.4	33.1	31.5	25.3	16.4
1982	ND	ND	12.1	20.5	18.3	24.1	12.4	23.0	17.3	26.9	12.1	25.1	23.6	32.8	24.0	39.8	27.0	36.1	17.4	27.9
1983	ND	ND	14.8	11.4	17.5	13.4	20.1	12.7	19.5	17.3	21.6	7.8	29.3	25.1	39.7	34.2	33.7	31.2	24.0	18.4
1984	ND	ND	21.4	19.0	23.1	15.8	23.9	19.0	27.4	29.6	22.1	26.8	30.2	33.6	38.9	44.2	35.1	23.3	27.5	26.1
1985	ND	ND	18.0	22.3	14.7	23.5	11.0	23.3	12.8	23.7	13.4	24.2	22.3	30.4	35.1	39.6	33.0	32.3	20.0	27.0
1986	11.7	13.1	15.0	20.9	25.3	14.1	23.9	22.3	21.9	23.0	21.4	24.4	30.9	36.6	41.7	46.9	34.0	38.3	25.0	27.8
1987	8.2	14.3	19.7	21.5	15.8	13.7	16.1	20.4	12.3	16.1	16.7	13.5	32.8	32.7	28.8	37.5	28.2	34.1	20.6	23.5
1988	7.8	12.1	18.3	21.8	24.9	27.3	25.4	32.4	23.8	23.0	21.3	24.8	33.6	36.9	42.3	47.9	32.8	31.0	26.1	29.1
1989	5.5	8.7	15.9	14.8	26.0	26.4	26.5	28.4	26.5	29.9	30.8	34.3	35.3	36.9	47.2	52.7	30.5	38.3	27.7	30.4
1990	2.0	10.4	12.4	19.3	19.2	27.8	19.6	25.3	23.7	24.3	27.0	22.2	31.5	27.0	41.6	51.9	31.2	39.0	23.9	27.9
1991	0.2	5.4	9.4	17.4	11.7	19.4	11.2	19.5	16.3	25.1	16.9	18.4	26.9	31.0	39.7	36.7	26.1	30.5	18.3	23.4
1992	2.0	12.1	10.4	22.4	11.5	23.4	5.7	23.1	2.7	20.9	4.1	17.6	16.7	26.7	18.9	29.5	24.2	33.5	11.0	23.9
1993	2.1	8.3	12.1	21.2	11.5	25.9	10.8	24.5	9.2	17.5	10.2	18.7	26.5	31.8	26.0	31.6	27.3	32.0	15.7	24.1
1994	1.4	5.1	11.3	12.3	21.7	24.3	18.2	18.8	12.2	18.5	17.3	22.4	27.7	31.2	31.1	39.9	29.9	34.5	19.2	23.0
1995	0.2	8.0	9.9	19.7	14.8	24.6	13.6	21.9	17.4	23.5	18.3	22.8	26.1	28.7	39.5	38.6	32.4	33.3	19.8	25.2
1996	10.7	9.1	23.9	20.1	28.1	20.8	30.4	23.9	26.1	26.4	30.9	31.6	33.8	37.4	44.5	49.2	34.0	30.8	30.1	28.7
1997	2.4	10.7	11.1	18.8	7.6	17.7	6.5	9.3	9.0	11.5	10.7	7.5	27.7	27.0	36.3	30.7	27.9	27.6	16.1	17.9
1998	8.2	8.3	18.0	12.1	19.9	16.5	17.9	10.4	20.4	10.7	20.4	8.0	31.4	23.3	32.0	30.7	33.5	25.0	22.6	16.1
1999	5.4	15.4	16.9	27.7	24.1	33.0	22.3	28.6	17.4	25.2	15.6	20.4	28.2	27.9	34.0	30.4	34.0	33.2	21.9	26.5
2000	11.0	19.1	20.6	28.2	30.8	35.8	25.3	32.6	25.8	31.5	22.5	33.7	32.7	36.9	38.9	49.7	33.3	39.2	26.5	34.0
2001	3.9	2.8	10.5	13.2	18.2	18.1	18.8	12.7	16.3	13.8	19.6	13.3	30.6	32.5	49.8	45.0	35.8	36.3	22.9	21.0
2002	5.0	5.1	12.4	10.6	23.5	13.0	24.1	13.0	17.9	12.9	18.9	8.6	30.9	15.9	43.2	32.7	36.6	32.0	23.6	16.2
2003	5.8	6.1	16.3	14.6	24.0	19.0	21.1	15.3	11.3	17.3	12.5	12.2	27.1	20.5	31.4	28.0	34.9	24.0	20.3	17.3

Table B.2. Mean surface water temperature (C) at sampled gill net sites by bay system during spring and fall, 1975-2003. ND = no data.

Year	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
1975	ND	ND	ND	20.8	ND	ND	ND	21.3	ND	22.4	ND	17.4	ND	23.9	ND	23.0	ND	24.4	ND	21.6
1976	ND	ND	30.0	18.2	ND	14.5	ND	24.8	ND	24.6	ND	24.0	ND	24.2	27.0	19.6	ND	20.8	29.0	21.7
1977	ND	ND	24.9	20.6	25.0	21.3	25.3	23.1	25.8	23.3	25.6	22.7	25.5	23.3	26.4	21.3	26.6	24.1	25.6	22.4
1978	ND	ND	26.5	21.5	25.6	24.2	25.8	24.1	25.1	24.2	26.3	24.7	27.3	23.5	26.4	23.2	27.0	24.6	26.3	23.5
1979	ND	ND	26.5	22.8	27.5	23.4	27.3	23.6	27.3	24.2	26.8	24.0	27.1	24.5	28.1	25.0	27.4	25.6	27.1	24.1
1980	ND	ND	25.9	24.5	25.9	23.6	26.0	25.7	26.8	24.6	26.8	24.1	27.0	25.2	29.0	27.0	28.6	26.2	27.0	25.2
1981	ND	ND	27.1	25.4	27.3	23.1	26.0	24.6	27.4	25.0	27.4	24.7	27.3	25.3	26.9	25.9	26.9	26.3	27.0	25.2
1982	ND	ND	26.1	24.6	26.9	25.1	27.2	24.6	25.7	25.6	26.2	24.1	26.3	24.1	27.8	24.9	27.6	25.8	26.7	24.8
1983	ND	ND	25.7	25.3	25.8	25.9	25.0	25.6	25.6	25.3	26.2	25.2	26.6	25.3	27.4	27.0	26.5	26.8	26.0	25.7
1984	ND	ND	26.7	25.0	25.7	27.2	25.1	25.3	26.0	25.0	25.8	25.2	26.2	25.0	27.3	25.9	27.5	26.8	26.4	25.5
1985	ND	ND	27.9	25.5	28.6	25.6	27.5	25.1	26.3	27.3	27.5	25.8	26.3	26.0	27.6	26.3	28.2	27.4	27.5	26.1
1986	26.8	26.3	26.4	25.1	27.0	23.9	26.3	25.4	27.2	25.4	27.9	24.8	26.2	24.5	26.3	26.6	27.9	25.7	26.9	25.3
1987	25.7	24.0	26.4	24.0	27.1	24.5	26.4	25.1	26.7	26.3	26.4	24.8	25.9	24.8	27.6	26.2	25.2	25.2	26.4	25.0
1988	25.5	26.2	25.3	25.8	26.3	26.3	25.0	26.9	24.9	27.3	26.9	25.9	24.4	25.8	26.6	27.4	27.4	27.5	25.8	26.6
1989	25.0	24.9	25.7	24.0	28.2	25.6	26.4	24.3	26.6	24.1	26.6	24.1	26.8	25.5	26.5	26.4	27.4	27.0	26.5	24.9
1990	23.3	25.7	24.7	23.9	27.8	25.5	26.8	24.7	25.6	25.2	27.0	25.0	25.7	26.3	27.7	27.0	27.5	26.3	26.2	25.3
1991	27.0	24.9	24.3	23.8	27.8	24.1	26.5	23.6	26.7	25.4	27.0	23.2	28.1	25.0	28.3	25.7	28.6	25.8	26.8	24.5
1992	28.0	23.5	26.3	23.0	24.8	24.7	24.6	24.3	26.7	24.3	27.3	24.7	26.8	23.7	28.0	25.3	27.4	25.5	26.6	24.3
1993	25.9	22.9	25.8	22.4	26.9	24.1	25.6	23.2	26.1	24.0	26.3	24.0	25.8	23.7	25.2	24.8	26.7	25.3	26.0	23.8
1994	27.1	25.1	26.7	24.9	27.1	26.3	26.6	26.2	25.4	26.0	27.2	26.5	27.3	26.4	27.9	26.7	27.8	27.3	27.0	26.1
1995	26.0	24.8	26.1	24.7	26.6	25.5	25.8	25.1	26.6	25.2	26.9	25.9	26.8	25.5	27.3	26.4	27.2	26.7	26.6	25.5
1996	27.4	24.7	27.4	25.2	27.9	26.6	27.2	26.0	27.8	26.0	27.6	26.5	27.1	26.7	28.5	27.0	28.3	27.4	27.7	26.2
1997	25.6	22.8	26.4	22.8	26.0	24.5	25.5	23.1	26.7	22.9	27.0	23.7	27.2	23.5	28.1	23.9	27.2	24.5	26.7	23.4
1998	27.4	25.3	26.9	25.6	27.8	27.1	27.0	26.8	26.8	26.9	27.3	26.3	26.6	26.7	27.9	26.9	27.6	27.1	27.2	26.5
1999	27.4	24.5	27.0	25.2	28.2	25.4	27.4	25.8	27.7	25.4	28.0	25.8	27.8	25.7	29.1	25.9	29.1	26.0	28.0	25.5
2000	27.2	24.0	27.4	24.3	28.8	24.8	27.8	24.5	28.0	25.2	28.6	25.3	28.0	24.7	28.8	24.9	28.2	26.5	28.0	24.9
2001	27.0	24.6	26.8	25.2	28.6	26.0	27.6	25.9	27.3	25.7	27.3	25.8	27.2	26.6	27.5	26.8	27.7	26.8	27.4	25.9
2002	27.5	24.6	28.1	25.0	28.7	25.2	28.0	25.2	28.2	25.8	28.2	25.9	28.6	26.7	28.7	26.7	28.3	27.3	28.2	25.9
2003	28.0	24.7	27.7	24.3	28.5	25.0	28.1	25.4	28.0	25.2	28.5	25.9	28.5	26.5	28.5	25.9	28.8	26.8	28.3	25.6

Table B.3. Annual mean surface turbidity at sampled gill net sites by bay system during spring and fall 1975-2003. ND = no data.

Year	Sabine Lake		Galveston		East Matagorda		Matagorda		San Antonio		Aransas		Corpus Christi		Upper Laguna Madre		Lower Laguna Madre		Coastwide	
	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
Jackson Turbidity Units																				
1975	ND	ND	ND	53	ND	ND	ND	30	ND	43	ND	24	ND	27	ND	43	ND	28	ND	37
1976	ND	ND	109	52	ND	157	ND	33	ND	25	ND	64	ND	60	24	51	ND	38	79	50
1977	ND	ND	80	75	118	47	46	68	49	13	41	52	169	47	34	39	40	31	65	50
1978	ND	ND	47	44	36	16	68	74	55	20	55	50	61	47	66	68	37	39	54	48
1979	ND	ND	153	72	38	28	74	66	80	22	70	42	67	51	39	32	34	83	80	55
1980	ND	ND	99	69	67	49	74	33	17	19	53	40	51	36	57	55	64	71	64	49
1981	ND	ND	68	68	63	64	82	64	81	21	43	58	67	39	185	46	87	66	84	55
1982	ND	ND	66	56	82	55	75	47	35	27	91	33	49	38	63	32	113	79	72	47
1983	ND	ND	57	63	61	27	50	40	41	32	49	38	41	42	50	40	59	72	51	48
1984	ND	ND	43	34	27	25	35	45	47	40	40	39	47	38	69	56	113	90	54	47
1985	ND	ND	26	29	59	37	52	51	57	49	46	39	57	41	72	41	98	56	55	42
1986	43	28	32	35	64	37	60	31	46	32	38	41	57	26	61	85	53	60	48	43
Nephelometric Units																				
1987	30	18	18	17	42	19	28	19	26	15	11	7	22	7	14	11	23	13	21	14
1988	21	11	16	11	29	19	16	19	22	21	13	16	24	10	18	14	26	29	19	17
1989	25	9	12	9	16	22	36	15	30	12	22	8	18	12	12	9	45	13	24	11
1990	16	8	9	13	23	13	26	15	38	15	21	13	16	11	24	11	29	14	22	13
1991	15	6	20	8	50	21	29	15	19	13	23	13	13	12	25	18	13	10	21	12
1992	20	11	21	10	22	12	46	17	52	14	41	14	23	11	25	12	22	16	32	13
1993	24	11	24	16	35	14	46	16	29	11	24	15	17	14	18	15	23	14	27	14
1994	13	13	19	23	23	15	27	26	19	9	21	10	18	9	12	11	25	15	20	16
1995	26	8	38	11	47	20	39	20	21	8	22	13	27	13	15	9	36	12	30	13
1996	23	11	27	11	40	26	39	18	30	9	23	13	34	10	23	11	26	12	29	13
1997	20	9	19	18	47	23	44	33	27	24	22	22	14	13	17	12	24	12	25	20
1998	12	11	21	20	42	21	27	42	23	42	26	30	37	14	32	14	25	12	26	23
1999	29	14	26	21	39	24	23	23	29	10	20	11	16	11	26	24	25	11	25	16
2000	20	22	22	21	22	18	37	27	25	16	44	18	19	13	28	19	16	8	26	18
2001	39	44	26	12	55	28	47	26	31	14	27	24	24	17	30	23	21	12	32	22
2002	26	21	26	19	36	24	40	41	28	21	26	34	22	22	24	20	21	15	27	24
2003	21	21	21	18	59	74	49	56	26	10	23	14	17	17	26	7	25	10	28	22

Table B.4. Annual mean surface salinity (o/oo) at sampled bag seine sites by bay system during 1977-2003. ND = no data.

Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
1977	ND	21.9	ND	17.6	17.7	20.9	33.8	39.8	33.0	25.4
1978	ND	21.8	ND	19.7	20.6	19.9	29.5	39.6	29.2	25.0
1979	ND	12.2	ND	11.4	11.8	11.1	23.9	31.9	27.3	17.4
1980	ND	20.9	ND	19.9	21.0	19.8	28.1	29.6	28.8	23.4
1981	ND	18.2	ND	19.2	15.6	12.1	25.0	26.0	28.3	20.1
1982	ND	15.9	ND	18.2	17.0	17.6	27.6	29.8	29.7	21.3
1983	ND	12.2	15.4	16.5	17.3	16.8	27.5	36.4	31.7	21.2
1984	ND	19.5	17.8	21.6	23.2	22.6	31.8	39.5	29.9	25.5
1985	ND	17.0	16.9	19.7	17.5	19.7	28.1	36.7	32.1	23.2
1986	10.1	16.1	20.1	19.8	17.0	23.5	32.6	39.7	34.9	24.2
1987	7.6	18.1	15.3	15.4	10.8	13.7	28.7	31.4	31.5	19.9
1988	7.7	20.2	26.5	27.4	22.6	24.3	35.2	44.9	31.9	27.4
1989	6.6	15.1	26.9	26.9	27.4	31.4	35.6	48.6	34.2	28.5
1990	6.4	16.9	23.6	24.8	23.6	26.7	32.4	47.7	35.8	27.2
1991	2.6	12.4	17.3	16.7	19.3	17.7	30.8	40.0	28.8	21.1
1992	5.3	15.2	15.4	13.5	9.4	10.7	22.4	25.3	28.7	16.8
1993	4.3	12.6	18.2	17.1	13.9	13.8	27.6	27.7	27.5	18.3
1994	4.3	13.5	22.7	18.8	15.4	21.5	30.3	34.7	30.3	21.5
1995	3.4	14.6	19.6	18.5	18.8	21.1	28.9	37.5	31.9	22.3
1996	10.4	20.2	26.2	25.8	26.0	30.9	36.4	44.5	31.4	28.5
1997	7.6	14.7	13.1	10.7	13.8	14.2	28.1	35.0	30.4	19.1
1998	6.3	14.5	18.0	16.6	15.6	16.6	28.9	31.5	30.1	19.9
1999	7.7	21.7	27.4	23.5	18.1	18.6	28.5	32.1	32.2	23.1
2000	13.1	23.8	31.5	28.0	26.0	27.7	33.4	43.2	35.8	29.0
2001	3.4	14.2	18.7	17.5	16.8	19.7	31.9	45.0	37.3	23.0
2002	4.8	12.6	18.3	18.0	13.9	13.3	23.3	35.8	33.7	19.4
2003	6.2	16.0	19.4	18.0	14.5	13.8	24.8	28.9	29.5	19.0

Table B.5. Annual mean surface temperature (C) at sampled bag seine sites by bay system during 1977-2003. ND = no data.

Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
1977	ND	20.3	ND	20.9	21.7	20.8	20.4	20.6	20.5	20.7
1978	ND	21.4	ND	20.2	21.6	22.3	21.3	22.3	22.4	21.6
1979	ND	22.8	ND	22.8	23.3	23.2	23.6	21.8	23.1	22.9
1980	ND	23.9	ND	21.9	23.2	23.6	23.4	24.6	24.3	23.5
1981	ND	22.5	ND	21.5	22.4	23.7	22.6	24.1	24.6	23.0
1982	ND	23.9	ND	23.3	23.1	24.2	23.4	24.1	23.9	23.7
1983	ND	24.0	23.6	21.9	21.7	24.3	24.3	25.4	24.9	23.8
1984	ND	23.9	22.3	22.5	21.9	24.0	23.3	24.0	24.2	23.4
1985	ND	24.4	24.1	23.5	24.0	23.9	23.5	23.5	24.4	24.0
1986	23.7	24.2	23.4	23.3	23.5	25.2	23.6	24.5	25.0	24.2
1987	22.0	22.8	23.8	23.4	22.2	23.1	24.1	24.2	23.8	23.2
1988	21.7	23.4	23.9	23.4	21.1	24.3	23.3	23.9	25.1	23.5
1989	21.4	23.1	22.9	22.3	23.0	22.8	24.3	25.0	25.0	23.4
1990	21.7	22.6	24.7	23.6	23.0	24.4	24.9	24.9	25.5	23.9
1991	22.9	22.3	24.5	22.2	23.2	23.1	24.8	25.0	25.4	23.5
1992	22.2	21.7	22.2	21.4	23.3	22.6	23.4	24.3	25.9	23.0
1993	22.4	22.2	24.3	22.9	22.5	23.9	23.6	23.4	25.1	23.2
1994	23.1	23.1	24.5	23.3	22.8	25.0	25.0	24.6	25.7	24.1
1995	22.2	23.3	25.0	23.9	24.4	24.3	25.2	24.7	25.8	24.3
1996	22.8	23.4	24.4	24.0	23.6	24.7	25.0	25.0	25.5	24.3
1997	22.1	22.8	22.7	22.3	22.4	22.4	23.7	24.6	25.4	23.2
1998	22.9	23.8	24.7	24.6	24.2	24.7	24.8	25.6	26.2	24.6
1999	22.8	24.4	25.2	24.4	24.2	25.1	25.3	26.2	27.1	24.9
2000	22.4	24.3	24.3	24.4	24.3	24.4	24.9	25.4	25.8	24.5
2001	22.2	23.9	24.7	23.8	23.9	24.6	24.0	25.7	25.9	24.3
2002	21.7	23.2	23.8	23.5	23.2	24.4	24.5	25.0	25.8	23.9
2003	22.5	23.5	24.0	23.5	24.3	24.1	24.3	25.2	25.6	24.1

Table B.6. Annual mean surface turbidity at sampled bag seine sites by bay system during 1977-2003. ND = no data.

Year	Sabine Lake	Galveston	Matagorda	East Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
Jackson Turbidity Units										
1977	ND	94	ND	60	27	50	40	50	30	55
1978	ND	78	ND	55	33	41	43	51	34	51
1979	ND	90	ND	70	31	53	44	47	59	60
1980	ND	90	ND	42	24	47	52	75	73	61
1981	ND	87	ND	54	25	65	44	107	95	71
1982	ND	105	ND	50	31	60	46	69	87	69
1983	ND	96	88	54	30	51	46	57	48	58
1984	ND	79	42	41	36	48	41	82	61	57
1985	ND	52	67	45	54	47	40	108	68	59
1986	46	84	59	46	51	46	44	60	80	61
Nephelometric Units										
1987	24	28	39	36	32	9	26	15	17	24
1988	26	26	28	29	29	28	20	22	24	26
1989	25	29	26	25	40	22	20	22	22	26
1990	21	29	26	30	31	23	21	20	23	26
1991	28	25	32	33	42	25	17	21	15	26
1992	24	23	34	41	43	31	21	17	25	29
1993	21	30	27	38	24	30	23	26	36	30
1994	21	24	31	26	25	17	17	10	40	24
1995	27	30	33	32	24	27	17	12	27	26
1996	34	25	44	33	24	21	16	17	25	25
1997	26	26	45	52	31	24	16	18	28	29
1998	26	37	42	40	34	28	24	25	33	32
1999	35	30	43	33	29	21	17	29	18	28
2000	35	32	39	30	27	24	20	28	26	28

Table B.6 (Cont.)

Year	Sabine Lake	Galveston	Matagorda	East Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
2001	41	24	41	59	27	25	23	25	22	31
2002	38	37	40	50	34	40	21	25	30	35
2003	37	39	45	42	21	24	20	20	26	30

Table B.7. Annual mean bottom salinity (o/oo) at sampled oyster dredge “reef” sites in Texas bay systems from 1984-2003. ND = no data.

Year	Galveston	Matagorda	San Antonio	Aransas	Coastwide
1984	16.7	ND	ND	ND	16.7
1985	17.6	ND	ND	ND	17.6
1986	15.5	22.0	18.2	21.0	18.9
1987	16.3	16.6	10.9	14.2	14.5
1988	19.6	28.1	22.9	25.0	23.7
1989	16.0	29.2	27.9	29.7	25.1
1990	16.0	24.4	24.1	26.2	22.3
1991	12.3	17.4	19.5	18.6	16.7
1992	14.9	11.8	9.2	8.7	11.4
1993	13.5	15.9	13.2	14.5	14.2
1994	13.7	19.4	17.4	19.8	16.8
1995	14.7	17.8	18.7	20.2	17.1
1996	22.2	25.6	27.6	29.9	25.2
1997	15.5	10.8	13.5	15.5	14.0
1998	14.6	16.3	14.3	14.7	14.9
1999	18.7	23.5	16.2	16.9	18.8
2000	23.9	28.6	26.2	26.3	26.0
2001	11.9	17.4	14.4	16.8	14.8
2002	13.4	17.9	11.7	11.6	13.6
2003	15.9	17.7	9.9	11.5	14.0

Table B.8. Annual mean bottom temperature (°C) at sampled oyster dredge “reef” sites in Texas bay systems from 1984-2003. ND = no data

Year	Galveston	Matagorda	San Antonio	Aransas	Coastwide
1984	21.0	ND	ND	ND	20.9
1985	22.0	ND	ND	ND	22.0
1986	22.8	22.4	22.3	22.1	22.4
1987	21.2	22.2	21.4	19.9	21.3
1988	21.6	21.8	21.6	22.0	21.7
1989	20.9	20.8	21.6	20.4	21.0
1990	21.7	22.6	22.6	23.0	22.4
1991	21.6	21.9	21.8	21.3	21.7
1992	21.8	20.8	22.6	21.4	21.7
1993	21.4	22.2	21.9	21.0	21.6
1994	22.0	22.5	23.3	21.4	22.2
1995	21.5	22.4	23.4	22.6	22.2
1996	21.7	22.6	22.5	21.8	22.0
1997	22.0	21.8	21.2	21.7	21.8
1998	22.7	23.9	23.6	23.4	23.3
1999	23.1	23.5	23.1	23.4	23.2
2000	22.5	22.7	23.1	22.3	22.6
2001	21.9	23.1	22.8	22.5	22.5
2002	21.9	22.5	22.4	22.8	22.4
2003	22.0	22.9	23.2	23.2	22.7

Table B.9. Annual mean bottom turbidity at sampled oyster dredge “reef sites” in Texas bay systems from 1984-2003. ND = no data.

Year	Galveston	Matagorda	San Antonio	Aransas	Coastwide
Jackson Turbidity Units					
1984	25	ND	ND	ND	25
1985	47	ND	ND	ND	47
1986	40	51	48	37	45
Nephelometric Units					
1987	14	22	30	8	20
1988	15	21	16	16	17
1989	19	20	27	16	21
1990	14	22	26	16	20
1991	16	23	23	20	21
1992	15	32	37	31	26
1993	21	24	20	22	22
1994	17	18	16	16	17
1995	19	20	16	15	18
1996	15	29	21	14	20
1997	16	40	26	20	24
1998	17	28	29	28	25
1999	19	20	16	13	17
2000	25	22	18	20	22
2001	18	29	23	19	22
2002	21	32	29	30	27
2003	23	21	16	23	21

Table B.10. Annual mean bottom salinity (o/oo) at sampled bay trawl sites in Texas bay systems from 1977-2003. ND = no data.

Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
1977	ND	20.5	ND	17.9	13.9	19.5	ND	ND	ND	18.5
1978	ND	20.1	ND	19.3	14.7	20.6	ND	ND	ND	19.0
1979	ND	9.0	ND	10.3	5.7	ND	ND	ND	ND	8.8
1980	ND	22.8	ND	ND	ND	ND	ND	ND	ND	22.8
1981	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1982	ND	16.0	ND	22.4	16.3	19.2	30.3	34.1	35.8	21.3
1983	ND	10.7	ND	20.4	16.9	19.6	29.8	36.9	33.0	19.1
1984	ND	18.5	ND	25.2	22.9	25.2	32.5	40.0	31.0	24.6
1985	ND	17.0	ND	21.0	16.2	21.2	29.8	37.3	33.1	21.5
1986	7.8	14.8	ND	24.5	17.3	22.7	31.1	39.6	36.1	21.6
1987	7.3	15.1	16.7	20.6	9.9	18.1	27.5	31.9	33.3	18.6
1988	7.8	19.2	28.7	29.6	21.7	25.7	34.9	45.0	34.8	25.6
1989	6.2	16.4	27.6	30.2	26.8	30.4	35.4	49.3	35.9	26.1
1990	5.7	15.1	25.8	26.1	21.6	27.0	32.0	48.6	36.3	23.4
1991	2.2	11.9	18.7	20.4	17.7	20.0	29.9	41.4	31.5	19.2
1992	5.5	13.6	16.6	15.0	7.9	10.7	22.9	24.6	30.7	15.0
1993	3.1	13.8	18.9	18.5	12.4	16.9	28.6	28.0	30.9	17.6
1994	3.4	13.2	25.2	21.4	15.7	21.0	30.8	35.4	32.9	19.5
1995	4.5	13.6	21.7	22.1	18.8	20.5	29.7	38.3	32.9	20.2
1996	11.0	21.8	27.2	27.7	25.9	30.7	36.7	45.7	34.5	27.4
1997	5.8	13.5	15.0	13.5	13.8	17.9	29.6	36.5	32.8	17.4
1998	6.6	14.1	19.6	20.3	12.4	17.1	30.6	30.5	32.1	19.9
1999	7.5	18.1	28.4	26.0	16.5	18.9	29.7	30.9	34.4	22.8
2000	13.9	23.5	33.6	30.4	25.2	27.7	34.8	42.7	37.3	29.3
2001	3.7	11.2	20.5	21.2	14.0	18.6	32.7	46.9	37.5	21.7
2002	4.6	12.2	21.3	21.0	11.7	12.7	24.6	36.4	34.8	18.7
2003	6.0	14.5	20.8	22.0	10.2	14.0	27.1	29.3	31.4	18.8

Table B.11. Annual mean bottom temperature (C) at sampled bay trawl sites in Texas bay systems from 1977-2003. ND = no data.

Year	Sabine Lake	Galveston	Matagorda	East Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
1977	ND	18.7	ND	17.9	21.1	17.8	ND	ND	ND	18.8
1978	ND	21.6	ND	23.5	24.2	24.8	ND	ND	ND	22.9
1979	ND	22.5	ND	21.6	25.5	ND	ND	ND	ND	22.8
1980	ND	23.8	ND	ND	ND	ND	ND	ND	ND	23.8
1981	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
1982	ND	21.8	ND	24.8	23.3	23.1	25.0	26.1	25.1	23.5
1983	ND	21.5	ND	21.7	21.7	22.3	22.2	21.8	22.7	21.8
1984	ND	22.2	ND	22.8	21.6	23.4	21.8	22.0	22.8	22.3
1985	ND	21.9	ND	22.5	22.5	21.7	21.9	23.0	22.8	22.2
1986	22.1	22.2	ND	23.3	23.1	22.1	21.8	23.3	22.5	22.6
1987	20.0	21.5	24.3	21.9	21.8	21.3	21.1	22.3	22.6	21.6
1988	21.8	21.8	21.1	20.2	22.1	21.3	22.2	22.1	24.5	21.6
1989	20.8	20.4	21.0	20.5	21.1	20.5	21.8	23.8	23.6	21.0
1990	21.2	21.4	22.7	22.6	21.9	22.6	23.4	23.8	24.2	22.3
1991	21.7	21.5	22.0	21.5	22.2	21.7	22.8	23.4	23.2	21.9
1992	20.7	21.6	20.6	21.1	22.6	21.4	21.4	22.9	23.5	21.7
1993	21.0	20.9	22.2	22.2	22.5	21.8	22.1	21.3	23.7	21.7
1994	22.1	22.2	22.6	22.6	22.7	20.9	23.0	23.6	24.8	22.5
1995	22.0	21.8	22.6	23.0	23.3	22.5	23.5	23.6	23.9	22.7
1996	22.0	21.2	22.4	23.2	22.0	23.0	22.7	23.6	23.8	22.3
1997	21.6	21.6	21.8	21.3	21.3	22.0	21.9	23.6	23.6	21.7
1998	22.4	22.6	23.5	23.3	23.4	23.4	23.6	24.4	24.6	23.4
1999	21.8	23.2	23.0	23.2	23.1	23.6	23.9	24.7	25.0	23.5
2000	22.0	22.4	22.6	22.6	23.1	22.3	23.8	23.7	24.1	22.9
2001	21.6	21.8	23.0	22.4	22.8	22.4	23.0	23.8	24.4	22.7
2002	21.2	21.9	22.4	22.1	22.2	22.6	22.8	23.7	24.0	22.5
2003	21.8	21.8	22.6	22.7	23.0	23.0	23.7	24.2	22.6	22.8

Table B.12. Annual mean bottom turbidity at sampled bay trawl sites in Texas bay systems from 1983-2003. ND = no data.

Year	Sabine Lake	Galveston	East Matagorda	Matagorda	San Antonio	Aransas	Corpus Christi	Upper Laguna Madre	Lower Laguna Madre	Coastwide
Jackson Turbidity Units										
1983	ND	101	ND	25	26	105	77	76	38	67
1984	ND	75	ND	30	30	71	62	70	38	55
1985	ND	41	ND	33	55	42	32	52	59	41
1986	35	37	ND	45	53	41	42	49	67	43
Nephelometric Units										
1987	15	17	19	22	29	7	13	15	12	18
1988	17	14	20	23	17	13	15	14	15	16
1989	16	18	27	19	22	19	15	12	14	18
1990	13	18	20	15	28	17	11	15	13	17
1991	18	16	22	19	22	19	10	10	8	17
1992	19	18	17	24	37	30	12	9	18	21
1993	16	24	17	19	19	22	13	13	47	21
1994	17	19	14	13	17	16	10	9	16	15
1995	17	20	24	18	19	17	14	12	19	18
1996	16	15	26	22	32	13	13	16	15	18
1997	19	18	30	26	34	16	12	22	18	21
1998	19	18	24	17	36	30	19	29	14	23
1999	24	18	35	17	23	17	9	32	8	19
2000	17	25	38	18	21	22	10	27	9	20
2001	24	20	23	21	30	20	11	32	14	21
2002	27	22	26	20	28	34	13	36	21	25
2003	24	22	39	17	17	22	9	21	19	20

Table B.13. Annual mean bottom salinity (o/oo) at sampled gulf trawl sites in the Texas Territorial Sea 1985-2003.
ND = no data.

Year	Sabine Lake	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
1985	ND	30.6	32.3	30.9	31.7	31.4
1986	29.1	29.7	32.4	30.5	32.7	30.9
1987	27.4	28.8	33.5	34.4	34.4	31.7
1988	27.3	28.3	30.7	32.4	35.0	30.7
1989	25.4	29.9	32.9	30.9	33.7	30.6
1990	25.3	29.5	30.5	32.4	33.9	30.3
1991	23.7	28.5	31.0	31.9	31.2	29.3
1992	26.5	29.4	31.5	32.4	30.7	30.1
1993	23.1	27.3	28.9	34.5	30.8	28.9
1994	21.4	27.2	28.1	31.7	33.9	28.4
1995	26.1	28.0	31.5	31.2	33.4	30.0
1996	26.4	30.0	31.7	34.5	34.5	31.4
1997	27.1	27.8	31.1	32.0	33.6	30.3
1998	28.9	29.5	31.9	32.6	34.4	31.5
1999	28.9	30.8	32.4	32.4	35.5	32.0
2000	31.6	33.3	32.9	33.5	35.4	33.3
2001	27.5	29.3	32.4	32.0	33.7	31.0
2002	26.9	27.1	30.3	30.3	33.0	29.6
2003	25.4	27.5	31.3	32.2	33.8	30.0

Table B.14. Annual mean bottom temperature (°C) at sampled gulf trawl sites in the Texas Territorial Sea 1985-2003.
ND = no data.

Year	Sabine Lake	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
1985	ND	23.4	23.6	22.5	25.4	23.7
1986	25.6	22.0	22.8	22.3	22.7	23.1
1987	21.1	21.7	22.1	22.4	21.9	21.8
1988	21.1	21.6	21.2	22.2	21.8	21.6
1989	19.8	21.5	21.3	21.7	21.8	21.2
1990	21.3	21.9	21.8	22.2	21.8	21.8
1991	22.0	22.3	22.1	21.8	21.5	21.9
1992	19.9	21.5	20.9	22.5	20.9	21.1
1993	21.8	21.7	21.8	21.6	21.3	21.7
1994	22.1	22.2	21.9	22.2	22.0	22.1
1995	22.2	21.9	21.8	22.3	22.2	22.1
1996	21.6	21.8	21.8	21.9	21.1	21.7
1997	21.8	21.5	21.3	21.3	20.4	21.3
1998	22.8	22.4	22.7	22.4	22.4	22.5
1999	22.9	23.2	22.8	23.7	22.7	23.0
2000	22.3	22.3	22.4	22.4	21.9	22.3
2001	22.2	22.2	22.3	22.4	21.2	22.1
2002	22.1	22.7	22.7	22.8	21.6	22.4
2003	22.3	22.4	22.3	22.9	21.0	22.2

Table B.15. Annual mean bottom turbidity at sampled gulf trawl sites in the Texas Territorial Sea 1985-2003. ND = no data.

Year	Sabine Lake	Galveston	Port O'Connor	Port Aransas	Port Isabel	Coastwide
Jackson Turbidity Units						
1985	ND	31	37	25	24	30
1986	30	24	29	24	24	26
Nephelometric Units						
1987	10	10	11	4	6	8
1988	6	9	10	4	4	7
1989	7	9	9	7	4	7
1990	9	11	7	8	3	8
1991	11	12	7	8	3	8
1992	13	10	10	10	4	9
1993	12	6	14	7	4	9
1994	10	8	5	5	4	6
1995	13	13	7	5	4	8
1996	14	10	9	6	3	8
1997	14	9	6	9	5	8
1998	20	5	8	9	4	9
1999	21	9	7	7	3	9
2000	23	10	8	7	4	10
2001	25	7	6	6	3	9
2002	30	13	5	6	4	12
2003	31	7	9	4	10	12

Appendix C. Summary of SEAMAP samples by year and depth zone for brown shrimp, white shrimp, pink shrimp and blue crab collected off Texas during 1985-2003.

Table C.1. Mean catch rates (No./h) and mean size (mm) of select shellfishes caught during SEAMAP^a sampling off Texas during June 1985-2003. Blanks indicate no measurement taken.

Year	Depth (m)	Samples (No.)	Brown Shrimp		White Shrimp		Pink Shrimp		Blue Crab	
			No./h	Length	No./h	Length	No./h	Length	No./h	Length
1985	0-18	6	38	114	8	170	0		3	131
	19-37	6	633	105	0		0		3	158
1986	0-18	51	12	103	6	162	1	126	7	125
	19-37	22	70	109	2	157	1	113	5	136
1987	0-18	60	61	102	6	155	2	110	1	140
	19-37	15	26	109	5	161	<1	121	2	170
1988	0-18	66	120	104	4	138	10	105	4	108
	19-37	11	41	110	0		1	98	2	135
1989	0-18	58	348	98	6	161	8	100	5	112
	19-37	17	901	101	<1	170	2	121	2	144
1990	0-18	66	135	107	6	164	<1	119	11	103
	19-37	11	206	113	0		0		7	
1991	0-18	63	32	89	10	143	<1	124	8	79
	19-37	13	82	113	1	175	1	120	0	
1992	0-18	57	65	91	10	146	1	126	3	111
	19-37	17	13	105	0		0		<1	66
1993	0-18	62	60	101	5	157	13	114	5	121
	19-37	12	20	104	0		1	116	1	121

Table C.1. (Cont.)

Year	Depth (m)	Samples (No.)	Brown Shrimp No./h Length		White Shrimp No./h Length		Pink Shrimp No./h Length		Blue Crab No./h Length	
1994	0-18	66	25	99	4	149	3	100	4	120
	19-37	9	53	102	0		10	102	1	102
1995	0-18	58	166	101	7	154	1	91	4	93
	19-37	15	28	107	0		1	196	0	
1996	0-18	62	23	97	4	155	1	124	2	94
	19-37	18	19	104	<1	162	2	99	4	69
1997	0-18	52	61	92	2	157	1	115	5	86
	19-37	20	24	101	0		1	101	<1	60
1998	0-18	62	184	97	11	159	2	105	1	98
	19-37	14	51	120	0		3	94	0	
1999	0-18	57	24	99	9	156	<1	86	<1	93
	19-37	20	87	94	0		1	106	<1	159
2000	0-18	59	64	101	12	156	1	124	2	79
	19-37	17	12	117	0		3	108	0	
2001	0-18	62	73	106	4	172	1	119	3	68
	19-37	11	62	106	1	163	2	125	0	
2002	0-18	63	54	96	10	147	<1	138	1	78
	19-37	14	16	101	0		1	127	4	46
2003	0-18	58	72	94	12	162	<1	100	1	102
	19-37	17	130	102	2	162	3	106	3	117

^a Data presented here were collected by TPWD research vessels with 6.1-m trawl since 1985.

Table C.2. Mean catch rates (No./h) and mean size (mm) of select shellfishes caught during SEAMAP^a sampling off Texas during November 1985-2003. Blanks indicate no measurement taken.

Year	Depth (m)	Samples (No.)	Brown shrimp		White shrimp		Pink shrimp		Blue crab	
			No./h	Length	No./h	Length	No./h	Length	No./h	Length
1985	0-18	44	4	92	38	117	3	109	0	
	19-37	17	10	115	4	151	3	118	0	
1986	0-18	59	<1	85	35	108	1	98	<1	64
	19-37	21	1	102	5	125	1	101	0	
1987	0-18	56	3	93	75	104	6	95	0	
	19-37	17	36	101	7	130	1	100	0	
1988	0-18	56	10	93	27	109	5	99	<1	48
	19-37	11	5	103	33	122	2	94	0	
1989	0-18	57	6	96	77	100	5	110	3	45
	19-37	18	9	109	31	117	6	106	0	
1990	0-18	56	2	101	30	110	1	113	<1	75
	19-37	17	11	109	1	138	0		0	
1991	0-18	61	<1	65	15	110	<1	97	<1	52
	19-37	16	6	120	4	145	2	111	0	
1992	0-18	62	3	102	86	107	1	105	<1	34
	19-37	11	6	115	4	148	1	117	0	
1993	0-18	57	1	99	101	96	3	119	3	46
	19-37	16	7	104	12	145	6	114	0	

Table C.2. (Cont.)

Year	Depth (m)	Samples (No.)	Brown shrimp No./h Length		White shrimp No./h Length		Pink shrimp No./h Length		Blue crab No./h Length	
1994	0-18	60	<1	116	13	101	<1	156	1	92
	19-37	14	6	99	3	124	3	119	0	
1995	0-18	66	0		58	102	2	116	3	54
	19-37	7	0		15	134	3	93	0	
1996	0-18	60	2	89	68	108	5	113	1	55
	19-37	14	5	114	31	120	18	122	0	
1997	0-18	63	1	84	55	106	2	122	9	73
	19-37	12	32	110	13	129	7	107	0	
1998	0-18	59	2	84	28	115	2	112	2	64
	19-37	18	2	82	12	133	3	127	0	
1999	0-18	55	2	100	24	103	2	108	<1	55
	19-37	9	6	108	5	146	0		0	
2000	0-18	60	2	98	55	107	2	108	0	
	19-37	15	46	106	8	145	9	112	0	
2001	0-18	59	<1	63	16	111	<1	80	0	
	19-37	17	2	124	1	162	3	132	0	
2002	0-18	60	2	73	80	100	<1	99	4	47
	19-37	14	8	96	1	136	7	117	0	
2003	0-18	68	2	82	16	109	5	121	0	
	19-37	10	22	108	4	116	31	113	0	

^a Data presented here were collected with 6.1-m trawl by TPWD research vessels.