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SEAMAP ENVIRONMENTAL AND BIOLOGICAL ATLAS OF THE GULF OF MEXICO, 1997

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January 1999
Number 63

This project was supported in part by the National Oceanic and Atmospheric Administration, National Marine Fisheries Service, under State/Federal Project Number NA47FS0038.

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ACKNOWLEDGMENTS

The 1997 SEAMAP Atlas was developed as a cooperative effort between the five Gulf States fishery management agencies and the National Marine Fisheries Service (NMFS), to present information collected during SEAMAP research survey activities in the Gulf of Mexico. The SEAMAP Data Coordinating Work Group would like to thank the following agencies for their participation in the project: Florida Department of Environmental Protection, Alabama Department of Conservation and Natural Resources, University of Southern Mississippi Institute of Marine Science, Gulf Coast Research Laboratory (representing the Mississippi Department of Marine Resources), Louisiana Department of Wildlife and Fisheries, Texas Parks and Wildlife Department, and NMFS-Southeast Fisheries Science Center.

Special thanks go to Rosanne Brasher with Johnson Controls and to Cheryl Noble of the Gulf States Marine Fisheries Commission staff for their assistance in preparing this atlas.

INTRODUCTION

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a State/Federal/university program for the collection, management and dissemination of fishery-independent data (information collected without direct reliance on statistics reported by commercial or recreational fishermen) in United States waters of the Gulf of Mexico (Eldridge 1988). A major SEAMAP objective is to provide a large, standardized data base needed by management agencies, industry and scientists to wisely manage and develop fishery resources for the least possible cost. To accomplish this goal, survey data must be disseminated in a useful format to SEAMAP participants, cooperators and other interested organizations.

The SEAMAP Program began in March 1981 when the National Marine Fisheries Service (NMFS), Southeast Fisheries Science Center (SEFSC), presented a SEAMAP Strategic Plan (1981) to the Gulf States Marine Fisheries Commission (GSMFC). This strategic plan outlined the proposed program organization (goals, objectives, procedures, resource requirements, etc.); within the existing framework of the GSMFC, a SEAMAP Subcommittee was then formed. The Subcommittee consists of one representative from each state fishery management agency [Florida Department of Environmental Protection (FDEP); Alabama Department of Conservation and Natural Resources (ADCNR); Mississippi Department of Marine Resources (MDMR) represented by the University of Southern Mississippi Institute of Marine Science, Gulf Coast Research Laboratory (USM/IMS/GCRL); Louisiana Department of Wildlife and Fisheries (LDWF) and Texas Parks and Wildlife Department (TPWD)], one from NMFS Southeast Fisheries Science Center and a non-voting member representing the Gulf of Mexico Fishery Management Council (GMFMC). The Subcommittee organized and successfully coordinated a number of surveys between 1982 through 1996 (Table 1). The data are published in atlases for the surveys in 1982 (Stuntz et al. 1985); 1983 (Thompson and Bane 1986a); 1984 (Thompson and Bane 1986b); 1985 (Thompson et al. 1988); 1986 (Sanders et al. 1990a); 1987 (Sanders et al. 1990b); 1988 (Sanders et al. 1991a); 1989 (Sanders et al. 1991b); 1990 (Sanders et al. 1992); 1991 (Donaldson et. al. 1993); 1992 (Donaldson et. al. 1994); 1993 (Donaldson et. al. 1996); 1994 (Donaldson et. al. 1997a); 1995 (Donaldson et. al. 1997b); and 1996 (Donaldson et. al. 1998). Environmental assessment activities occurred with each of the surveys found in Table 1.

In March 1997, the SEAMAP Subcommittee identified and began to plan the year's SEAMAP survey activities for the Gulf of Mexico. In keeping with the program goal of establishing a coordinated long-term resource data base, it was decided to continue the same types of survey activities conducted in 1982 through 1996. Overall survey objectives in 1982 to 1996 were to assess the distribution and abundance of recreational and commercial organisms collected by plankton, trap/video and trawl gears and document environmental factors that might affect their distribution and abundance. The basis for plankton work was primarily assessment of selected finfish and invertebrate eggs and larvae across the northern Gulf of Mexico (Sherman et al. 1983). The basis for the trawl surveys which started with the Texas Closure (Nichols 1982, 1984; Nichols and Poffenberger 1987), was to establish a seasonal data base to assess the abundance and distribution of the shrimp and groundfish stocks across the northern Gulf of Mexico. The basis for the Reef Fish Survey is to determine the relative abundance of reef fish populations and habitat using a fish trap/video recording system (Russell, unpublished report) and a fisheries acoustic system.

A major purpose of SEAMAP is to provide resource survey data to State and Federal management agencies and universities participating in SEAMAP activities. This sixteenth in a series of SEAMAP environmental and biological atlases presents such data, in a summarized form, collected during the 1997 SEAMAP surveys. The area covered in the Gulf of Mexico for all SEAMAP survey activities during 1997 is shown in Figure 1.

MATERIALS AND METHODS

Methodology for the 1997 SEAMAP surveys is similar to that of the 1982 through 1996 surveys. Sampling was conducted within the U.S. Exclusive Economic Zone (EEZ) and state territorial waters. Vessels that participated in collecting plankton and environmental data during the Spring Plankton Survey included the NOAA Ship OREGON II (April 17-June 9) and the Florida vessel SUNCOASTER (May 16-18).

Vessels that participated in the Summer Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the USM/IMS/GCRL vessel TOMMY MUNRO (June 6-8, 16-17 and July 8-11); the NOAA Ship OREGON II (June 13 - July 16); and the Louisiana vessel PELICAN (June 29-July 2). The TPWD vessels ARANSAS BAY, MATAGORDA BAY, LAGUNA MADRE, GALVESTON BAY and SABINE (June 2-26) and the Alabama vessel A.E. VERRILL (June 4) did not sample plankton in conjunction with the summer survey.

Vessels that participated in the Reef Fish Survey and concurrently sampled environmental data included the Alabama vessel A.E. VERRILL (July 15-16; August 5-6; August 20; and November 10) and the NOAA Ship CHAPMAN (June 20-August 17).

Vessels that participated in collecting plankton and environmental data during the Fall Plankton Survey included the NOAA Ship CHAPMAN (September 7-27); the USM/IMS/GCRL vessel TOMMY MUNRO (September 20-22); the Alabama vessel A.E. VERRILL (September 16); the Florida vessel SUNCOASTER (October 2-6) and the Louisiana vessel PELICAN (October 4-7).

Vessels that participated in the Fall Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the NOAA Ship OREGON II (October 10-November 20); the USM/IMS/GCRL vessel TOMMY MUNRO (November 7-11) and the Louisiana vessel PELICAN (December 1-4). The Alabama vessel A.E. VERRILL (October 21); and the TPWD vessels ARANSAS BAY, MATAGORDA BAY, LAGUNA MADRE, GALVESTON BAY and SABINE (November 3-25) did not sample plankton in conjunction with the fall survey.

The Winter Plankton Survey has been identified as a priority by the SEAMAP Subcommittee; however, due to limited funding, a long term survey has not yet been implemented. Therefore, winter sampling is opportunistic and does not occur on a regular basis. Due to lack of funding, the Winter Plankton Survey did not occur in 1997.

PLANKTON SURVEYS

Plankton samples were taken at stations arranged in a systematic grid across the Gulf of Mexico. Such a grid was chosen because of the large survey area. Stations were set at minimum intervals of 30 miles (1/2 degree) and during the Fall Plankton Survey, Mississippi sampled stations set at an interval of 6 nautical miles.

Sampling gear and procedures were similar to those recommended by Kramer et al. (1972), Smith and Richardson (1977) and Posgay and Marak (1980). Plankton sampling gear consisted of standard 61-cm bongos and a 2x1-m neuston net for the large vessels. The bongos were fitted with 0.333-mm mesh nets with either hard (PVC) or soft (0.333-mm mesh net) cod ends. The Tucker trawl, with 1 m^2 mouth, is outfitted with 0.335 micron mesh net. A flowmeter was mounted off-center in the mouth of each net to record the volume of water filtered. A 50-lb weight was attached approximately 1 m below the bongo frame attachment. The neuston net consisted of a 2x1-m pipe frame fitted with a 0.948-mm mesh net on which the cod end was tied off.

At each designated plankton station, either an oblique bongo/surface neuston tow or a surface neuston tow was made. In deep water bongo stations (more than 95 m) a standard oblique tow was made to 200 m, or

to 2 m off the bottom at depths less than 200 m, with a payout speed of 50 m/min, 30-second settling time depths under 100 m and a 1-minute settling time for depths over 100 m, and a retrieval speed of 20 m/min, at a vessel speed of 1.5 knots to maintain a 45° angle. Neuston tows were made at the surface with the net half-submerged for 10 minutes at a vessel speed of 1.5 knots. Tucker trawls fitted with three 0.335-mm mesh nets sampled the water column in the following method: net 1 was fished obliquely from the surface to near-bottom; net 2 was opened at the near bottom and fished for three minutes; and net 3 was fished during trawl retrieval from near bottom to the surface.

Samples were preserved initially in 10% buffered formalin. After a 48-hr period, all plankton samples were transferred to 95% ethyl alcohol for final preservation. The Pascagoula Laboratory curated and computerized the sample data. The right bongo sample and the neuston sample from each station were transshipped to the Polish Sorting and Identification Center in Szczecin, Poland, for sorting and identification. Plankton samples from Louisiana vessels were retained by LDWF for sorting and identification at their facilities. All ichthyoplankton components (eggs and larvae) were removed from each sample and the fish larvae identified to the lowest feasible taxon (families in most cases).

Sorted ichthyoplankton specimens from the Polish Sorting and Identification Center were returned to the SEAMAP Archiving Center, managed in conjunction with the FDEP, for long-term storage under museum-like conditions. Sorted ichthyoplankton samples from 1982 through 1997 are available for loan to researchers throughout the country. Plankton volumes were determined according to procedures in Smith and Richardson (1977). The alternate bongo sample from each station was retained at USM/IMS/GCRL as a backup for those samples transshipped to the Polish Sorting and Identification Center, in case of loss or damage during transit. These backup unsorted plankton samples containing zooplankton and phytoplankton are stored at the SEAMAP Invertebrate Plankton Archiving Center, managed in conjunction with USM/IMS/GCRL, for use by researchers.

ENVIRONMENTAL DATA

Standardized methodology was used although the actual parameters measured varied among vessels participating in each survey. These parameters were measured based on equipment availability. The following parameters were recorded:

Vessel: Vessel code for each vessel.
Station: Station identifiers varied by state and vessel.
Cruise: Cruise numbers varied by state and vessels.
Date: Month/Day/Year.
Time: Local time and time zone, recorded at the start of sampling.
Latitude/longitude: Recorded to seconds.
Barometric pressure: Recorded in millibars.
Wave height: Estimated visually in meters.
Wind speed and direction: Recorded in knots with direction recorded in compass degrees from which the wind was blowing.
Air temperature: Recorded in Centigrade.
Cloud cover: Estimated visually in percent cloud cover.
Secchi depth: Secchi depth in meters, estimated at each daylight station. Standard oceanographic 30-cm white discs were lowered until no longer visible, then raised until visible. If different depths were recorded, an average was used.
Water Color: Forel-Ule data was recorded.

The following parameters were measured at the surface, mid-depth and bottom; for bottom depths greater than 200 m, samples were taken at surface, 100 m and 200 m:

Water temperature: Temperatures were measured by a hand-held thermometer or by in situ electronic sensors onboard ship. No attempt was made to intercalibrate the various instruments used on individual vessels although several vessels did sample together to calibrate other sampling gear. Some error can be expected.

Salinity: Salinity samples were collected by Niskin bottles and stored for laboratory analysis with a salinometer. Conductivity probes or refractometers were used on some vessels. Salinity samples were also measured with in situ electronic sensors.

Chlorophyll: Chlorophyll samples were collected and frozen for later laboratory analysis. The general procedure for shipboard collection of chlorophyll was to collect more than 9 liters of water from the surface. This was kept stirred by bubbling air through it while filtration was being done. Three samples, to each of which a 1 ml, 1% (W/V), suspension of $MgCO_3$ was added, of up to 3 liters of water from the 9 liter sample were filtered through GF/C filters. The three filters were placed individually in Petri dishes, wrapped in opaque material and frozen until analysis. Each of the three samples was analyzed separately in the laboratory. Values in the tables that follow, are the mean of the three samples.

Laboratory analyses for chlorophyll a and phaeophytin a (chlorophyll degradation product) were conducted by fluorometry and spectrophotometry. The general extraction procedures prior to measurement were similar. Samples analyzed by spectrophotometer included other chlorophyllous products but these have not been included as data in this report. The methodology used is described in Strickland and Parsons (1972) and Jeffrey and Humphrey (1975). Some of the values have been deleted from the data base because of analytical errors. In addition, chlorophyll samples were also collected using a Seabird CTD. This method only obtains measures of chlorophyll a and is a measure of fluorescence (FL).

Dissolved oxygen: Dissolved oxygen values were measured by electronic probes or by the Winkler titration method. No attempts were made to intercalibrate the methods. When oxygen was measured in samples collected from a Niskin sampler, the oxygen bottles were allowed to overflow a minimum of 10 seconds to eliminate oxygen contamination. The tubing which delivered the water sample was inserted to the bottom of the bottle and withdrawn while the sample was still flowing. The oxygen bottles were sealed with a ground-glass stopper and analyzed onboard the vessels.

Turbidity: Turbidity values were measured by electronic probes when equipment was available.

TRAWL SURVEYS

Summer Shrimp/Groundfish Survey

The sampling strategy and a description of the statistical rationale for the sampling design as described by Nichols in the 1982 SEAMAP Atlas (Stuntz et al. 1985) has been modified. Since 1987, the strategy has been that day/night sampling sites were chosen randomly in areas stratified by depth and statistical area. These areas are shrimp statistical zones 10, 11 and 13 through 22 (Figure 2). Trawl stations for NMFS, Alabama, Mississippi and Louisiana vessels are made with a standard SEAMAP 40-ft net, and 20-ft net for Texas vessels. Depth strata consisted of 1 fm intervals from 5 to 20 fm, a 2 fm interval from 20 to 22 fm, a 3 fm interval from 22 to 25 fm, 5 fm intervals from 25 to 50 fm and a 10 fm interval from 50 to 60 fm. Additionally, the USM/IMS/GCRL vessel TOMMY MUNRO sampled 1 fm intervals from 2 to 5 fm off Louisiana in July. Trawls were towed perpendicularly to the depth contours and covered the entire depth stratum on each station. Single tows were for a maximum of 60 minutes; for certain stations, a series of consecutive trawl tows was necessary to cover a given depth stratum, with a minimum individual tow across

each stratum of 10 minutes and a maximum tow of 60 minutes. The Texas vessels towed 10 minutes parallel to the depth stratum. The Louisiana vessels did not cover a complete depth stratum on several stations because of the distance between depth strata.

All Penaeus spp. shrimp were separated from the trawl catch at each station. Total count and weight by species were recorded for each station. A sample of up to 200 shrimp of each species from every trawl was sexed and measured to obtain length-frequency information. Estimated total numbers were derived from the total weights of those processed. Other species of fishes and invertebrates were identified, enumerated and weighed. Weights and individual measurements on selected species other than commercial shrimp were also recorded.

Fall Shrimp/Groundfish Survey

The design of the fall survey was similar to the Summer Shrimp/Groundfish Survey. During the Fall survey trawl stations were made with the standard 40-ft and 20-ft SEAMAP nets and covered NMFS shrimp statistical zones 11 and 13 through 22 (Figure 2). Catch rates on all the vessels sampling were treated in the same manner as the Summer Shrimp/Groundfish Survey with the exception to shrimp catches where only 20 shrimp of each species from every trawl were measured, although Louisiana measures a minimum of 50 shrimp.

REEF FISH SURVEY

The primary purpose of this survey is to assess relative abundance and compute population estimates of reef fishes found on natural reef fish habitat in the Gulf of Mexico. Two types of gear are used to deploy video cameras: 1) a single-funnel fish trap (2.13 m long by 0.76 m square) with the camera mounted at a height of 0.25 cm above the bottom of the trap; or 2) a 4 camera array with 4 cameras mounted orthogonal to each other at a height of 25 cm above the bottom. Both gears are baited with squid before deployment. The resultant video recordings (typically of one hour duration) are processed back at the laboratory where fishes are identified and counted independently by two tape readers. Final counts are entered into the SEAMAP reef fish database along with additional observations on habitat, and fish activity.

The hardbottom database from which sampling sites for this survey are chosen was developed in the following manner. Areas of natural reef habitat from Brownsville, Texas to the southern tip of Florida (at 81°00' W longitude and 24°02' N latitude) and between 9 and 110 m water depth were first inscribed on navigation charts, then divided into 10 by 10 nautical mile blocks (primary sample units). Each block was subdivided into 100-m^2, secondary sample units that were numbered and initially classified as being "reef" or "nonreef", then entered into a database. Prior to the survey, blocks are selected from this database in the eastern and western Gulf with probability proportional to the number of "reef" sample units within a block. Within each selected block, 100 sample sites are randomly selected. During the survey each selected block is occupied for one 24-h period, where night hours are devoted to ship's echo sounder surveys of up to 100 sites and daytime hours to trap/video sampling. Each potential sample site surveyed at night is given a final determination as being either a reef site or not based on echo patterns, vertical relief and other characteristics. Up to 8 actual "reef" sites are then randomly selected for sampling during that day (Russell, unpublished report). Trap/video sampling begins one hour after sunrise and ends one hour before sunset. Trap soak time is one hour.

Associated environmental data collected at each site usually includes profiles of salinity, temperature, and surface chlorophyll; and may also include profiles of dissolved oxygen, light transmittance, and fluorescence. Additional environmental and meteorological observations taken on stations follow standard SEAMAP methodology. During the NMFS component of the reef fish survey fish abundance is also measured with a fisheries acoustic device.

RESULTS

PLANKTON SURVEYS

Thirteen thousand seven hundred and seventy (13,770) identified ichthyoplankton lots were received at the SEAMAP Archiving Center in 1997. Most of these samples have been accessioned into the SEAMAP Archiving Center computer systems and the remaining samples are being prepared for accession; both in dBase and SEAMAP Data Management System.

Plankton stations for the Spring Plankton Survey in conjunction with environmental stations are shown in Figure 3, the Summer Shrimp/Groundfish Survey stations are shown in Figure 4, the Fall Plankton Survey Stations in conjunction with environmental stations are shown in Figure 5, the Fall Shrimp/Groundfish survey stations are shown in Figure 6. Forty-six additional collections were taken by Mississippi during the fall plankton survey in waters of the east Louisiana-Mississippi-Alabama shelf.

ENVIRONMENTAL DATA

Environmental data were collected in conjunction with each plankton station for the Spring (Figure 3) and Fall (Figure 5) plankton surveys. Environmental data stations for the Summer Shrimp/Groundfish Survey are shown in Figure 7 and the Fall Shrimp/Groundfish Survey in Figure 8. Environmental sampling locations are summarized in Figures 7 and 8 by 10-minute squares. A complete listing of environmental stations and dates of sampling by vessel for all SEAMAP surveys is shown in Table 2. In Table 2 under statistical zone, the 99 codes are stations located outside the shrimp statistical zones. Additional environmental information (Secchi readings, Forel-Ule, cloud cover, etc.) may be obtained from the SEAMAP Information System by contacting the SEAMAP Data Manager.

TRAWL SURVEYS

Summer Shrimp/Groundfish Survey

Shrimp and groundfish sampling was conducted during June and July from off Gulf Shores, Alabama to Brownsville, Texas and summarized by 10-minute squares in Figure 9. The Summer Shrimp/Groundfish Survey consisted primarily of biological trawl data and concomitant environmental and plankton data. A species composition listing from the 40-ft and 20-ft trawls is presented in Table 3, ranked in order of abundance, within the categories of finfish, crustaceans and other invertebrates.

Tables 4a-14a present the biological data, from the 40-ft and 20-ft nets, of the eight most abundant fish, six most abundant invertebrates and squid within NMFS shrimp statistical zones 11 and 13 through 22, by depth stratum. Tables 4b-14b list the total catch and environmental data from the 40-ft and 20-ft nets within NMFS statistical zones listed above, by depth stratum.

For all catch rate tables, the standard error of the mean (SEM) was calculated with the equation:

$$SEM = \frac{\alpha}{\sqrt{n}}$$

where α = population standard deviation
n = number of samples

On all tables, NUM = number per hour; all weights shown are in kilograms per hour.

For all "b" tables, discrepancies between catch and environmental data may appear in the number of samples (n). These discrepancies may be due to different sampling depths for trawl and environmental stations, unsuccessful trawl stations and/or stations where only plankton data were collected.

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant non-Penaeus invertebrates and squid species, taken from Table 3 are displayed in plots of number/hour and lb/hour in Figures 12-51. Data for the biological plots were computed from the 40-ft and 20-ft trawl data, standardized to 40-ft trawls using relative headrope length. In the plots of lb/hour, a zero value indicates less than 0.5 lb/hr taken; only stations where some of the species were taken are shown. During this time frame, the state of Florida did not participate in any SEAMAP survey activities.

Fall Shrimp/Groundfish Survey

Shrimp and groundfish sampling was conducted during October through December from off Mobile Bay, Alabama to Brownsville, Texas and summarized by 10-minute squares in Figure 10. The Fall Shrimp/Groundfish Survey consisted of biological trawl data and concomitant environmental and plankton data. A species composition listing from the 40-ft and 20 ft trawls is presented in Table 15. The species lists for Table 15 are ranked in order of abundance within the categories of finfish, crustaceans and other invertebrates.

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant non-Penaeus invertebrates and squid species, taken from Table 15 are displayed in plots of number/hour and lb/hour in Figures 52 to 91. Data for the biological plots were computed from the 40-ft and 20-ft trawl data, standardized to 40-ft trawls using relative headrope length. In the plots of lb/hour, a zero value indicates less than 0.5 lb/hr taken; only stations where some of the species were taken are shown. During this time frame, the state of Florida did not participate in any SEAMAP survey activities.

Tables 16a-26a present the biological data, from the 40-ft and 20-ft nets, of the eight most abundant fish, six most abundant invertebrates and squid species within NMFS shrimp statistical zones 11 and 13 through 22, by depth stratum. Tables 16b-26b list the total catch and environmental data from the 40-ft and 20-ft nets within the NMFS statistical zone listed above, by depth stratum.

The catch data were calculated using the same equation that was used to compute catch rates for the Summer Shrimp/Groundfish Survey. And, as in the Summer Shrimp/Groundfish Survey, discrepancies in the "b" tables may have occurred.

REAL-TIME DATA MANAGEMENT

The SEAMAP Subcommittee agreed it was imperative to the success of the SEAMAP Program to distribute data on a near real-time basis to the fishing industry and others interested in SEAMAP. To distribute near real-time data, NMFS utilized a cellular phone and/or satellite communications aboard the NOAA Ship OREGON II. This enabled personnel aboard the vessel to transmit daily catch rates and environmental data to the NMFS computer system located at the NMFS Mississippi Laboratories in Pascagoula.

Summarized data were distributed weekly to approximately 285 individuals during the Summer Shrimp/Groundfish Survey. The summarized data in the form of computer plots and data listings were sent to management agencies and industry members. These plots showed station locations, catches of brown, pink and white shrimp in lb/hr and count/lb and total finfish catch in lb/hr.

REEF FISH SURVEY

Primary data collection and sampling for reef fish assessment was conducted during July to August from the Texas Flower Garden Banks to the Florida Keys by NMFS personnel; and throughout the year by personnel of the State of Alabama in artificial reef zones off their state. Station data for these observations can be found in Table 2 and station locations are plotted in Figure 11. A species composition listing from the traps is presented in Table 27. The species list for Table 27 is ranked in order of abundance. Video tapes from all sources were analyzed using NMFS standardized protocols.

DISCUSSION

The quasisynoptic SEAMAP sampling program and the intended long-term nature of the sampling programs have been designed to provide the baseline data set needed for fishery management and conservation. In 1985, the SEAMAP long-term baseline data was disrupted by the loss of the Spring Gulf-wide plankton and Fall Mackerel Survey. In 1986, the SEAMAP Subcommittee renewed its commitment for the collection of baseline plankton data. These ichthyoplankton samples are and will be used by researchers studying taxonomy, age and growth, bioenergetics and other life history aspects, as well as spawning biomass and recruitment. Information on species' relative distributions within the Gulf of Mexico can be analyzed with respect to environmental data to assess population abundance as a function of environmental change.

Similar analyses and investigations are being undertaken with Summer and Fall Shrimp/Groundfish Survey data. These data sets will be utilized in resource management decisions, and because of the program's ability to process data quickly, the capability exists to optimize some fisheries on a real-time basis. The long-term data set on all of the species collected, not just those of commercial and recreational importance, offers an opportunity to examine ecological relationships, with the eventual goal of developing management models that take into account the multi-species nature of most Gulf fisheries. The value of the SEAMAP program lies in its use for both immediate and long-range management. In addition, there are many studies and other uses for SEAMAP data that are not mentioned here.

Much use has already been made of SEAMAP data. For example, during the past SEAMAP surveys an area of very low dissolved bottom oxygen was found off Louisiana in the summers of 1982, 1985-1997. The presence of this phenomenon and some of the related conditions and biological effects were reported by Leming and Stuntz (1984) and Hanifen et al. (1995) , and during such occurrences, SEAMAP has distributed special environmental bulletins and news releases to management agencies and the shrimp industry. In addition, SEAMAP data were used to assist in the identification of the minimum 1997 reduction in red snapper shrimp trawl bycatch mortality rate that would enable the red snapper fishery to still recover to the 20% spawning potential ratio (SPR) by the year 2019 (Goodyear 1997). This analysis was requested and supported by the Gulf of Mexico Fishery Management Council to address the issue of red snapper bycatch. SEAMAP data were also used by some coastal states to determine the status of shrimp stocks and their movements just as the shrimping seasons were to be opened and SEAMAP data were used to develop a guide to the grouper species of the western North Atlantic Ocean (Grace et al. 1994). The primary purpose of the guide is for species identification with projects that deploy underwater video camera systems.

Richards et al. 1984, Kelley et al. 1985, Kelley et al. 1990, and Kelley et al. 1993 used SEAMAP ichthyoplankton data to identify larval abundance and distribution of key Gulf of Mexico species. SEAMAP ichthyoplankton data were also used to estimate spawning stock sizes of bluefin tuna in the Gulf of Mexico (McGowan and Richards 1986; Scott et al. 1990; Scott and Turner 1991). The results of this work were recognized by the International Commission for the Conservation of Atlantic Tunas as a reliable index of stock size. Continuation of the ichthyoplankton surveys each spring by SEAMAP will provide information on Gulf of Mexico tuna stocks.

The SEAMAP data collected during the Summer Shrimp/Groundfish Survey continues to be used extensively for fishery management purposes. In 1981, the Gulf of Mexico Fishery Management Council's plan for shrimp was implemented (Center for Wetland Resources 1980), with one management measure calling for the temporary closure to shrimping of the EEZ off Texas. This closure complements the traditional closure of the Texas territorial sea, normally May 15 through early July of each year. The GMFMC determined that this type of closure would still allow small brown shrimp to be protected from harvest but would allow the taking of larger brown shrimp by fishermen in deeper waters.

National Marine Fisheries Service was charged with evaluating the effects of the Texas Closure and submitted a report (Nance 1997) to the GMFMC in December 1997. This report contained the results and

an overview of the effect of the 1997 Texas Closure. After review of these data and other information, the GMFMC voted to continue the Texas Closure for 1998.

DATA REQUESTS

It is the policy of the SEAMAP Subcommittee that all verified non-confidential SEAMAP data, collected specimens and samples shall be available to all SEAMAP participants, other fishery researchers and management organizations approved by the Subcommittee. This atlas presents, to those individuals interested in the data or specimens, a chance to review the data in a summary form.

Data and specimen requests from SEAMAP participants, cooperators and others will normally be handled on a first-come, first-served and time-available basis. Because of personnel and funding limitations, however, certain priorities must be assigned to the data and specimen requests. These priorities are reviewed by the SEAMAP Subcommittee. For further information on SEAMAP data management, see the Southeast Area Monitoring and Assessment Program (SEAMAP) Management Plan: 1996-2000 (ASMFC 1996).

Data requests and inquiries, as well as requests for plankton samples, can be made by contacting Jeff Rester, the SEAMAP Coordinator, Gulf States Marine Fisheries Commission, P.O. Box 726, Ocean Springs, MS 39566-0726; 228/875-5912 or via e-mail at jrester@gsmfc.org.

Table 1. List of SEAMAP survey activities from 1982 to 1996.

SEAMAP SURVEY ACTIVITIES

YEAR	SPRING PLANKTON	SUMMER SHRIMP/GROUNDFISH	BUTTERFISH	FALL PLANKTON	FALL SHRIMP/GROUNDFISH	WINTER PLANKTON	REEF FISH
1982	APRIL-MAY	JUNE-JULY	--	--	--	--	--
1983	APRIL-MAY	JUNE-JULY	--	--	--	DECEMBER	--
1984	APRIL-MAY	JUNE-JULY	--	AUGUST	--	DECEMBER	--
1985	--	JUNE-JULY	JULY-AUGUST	SEPTEMBER	SEPTEMBER-DECEMBER	--	--
1986	APRIL-MAY	JUNE-JULY	MAY-JUNE	SEPTEMBER	OCTOBER-DECEMBER	--	--
1987	APRIL-MAY	JUNE-JULY	--	SEPTEMBER	SEPTEMBER-DECEMBER	--	--
1988	MARCH-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	--
1989	APRIL-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	--
1990	APRIL-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	--
1991	APRIL-MAY	JUNE-JULY	--	AUGUST-SEPTEMBER	SEPTEMBER-DECEMBER	--	--
1992	APRIL-MAY	JUNE-JULY	--	AUGUST-OCTOBER	OCTOBER-DECEMBER	--	MAY-JUNE
1993	APRIL-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	MAY-JULY, SEPTEMBER/NOVEMBER
1994	APRIL-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-NOVEMBER	--	MAY-JULY, AUGUST-OCTOBER, DECEMBER
1995	APRIL-JUNE	JUNE-JULY	--	SEPTEMBER	OCTOBER-DECEMBER	--	JANUARY, JUNE-AUGUST, DECEMBER
1996	APRIL-JUNE	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	DECEMBER	JULY, AUGUST, NOVEMBER

Table 2. Selected environmental parameters measured during 1997 SEAMAP surveys in the Gulf of Mexico, by individual vessel and survey.
(Gear codes: ST = trawl; PN = bongo and/or neuston; TV = trap/video; EV = environmental).

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04001	4/17/97	0702	2959.9	8660.0	9	72	36	71	20.0	20.0	18.7	35.8	35.8	36.2		7.375	6.5	6.5	4.5	PN
04002	4/17/97	1147	2929.9	8630.0	99	203	101	201	20.8	19.3	14.2	35.8	36.3	35.8		4.982	6.3	4.6	3.0	PN
04003	4/17/97	1647	2859.8	8600.1	99	240	101	200	21.4	18.9	13.7	36.2	36.1	35.8		3.077	6.3	5.3	3.2	PN
04004	4/17/97	2154	2830.0	8529.9	99	193	96	193	21.1	19.1	14.4	36.0	36.3	35.9		3.175	6.3	4.0	3.2	PN
04005	4/18/97	0205	2800.1	8500.1	99	256	100	200	22.2	19.9	15.1	36.3	36.3	36.0		3.736	6.1	5.4	3.4	EV
04006	4/18/97	0528	2730.1	8500.1	99	384	100	200	21.8	19.6	15.0	36.3	36.3	36.0		3.053	6.2	5.4	3.4	PN
04007	4/18/97	0915	2659.9	8500.0	99	828	100	201	22.4	20.8	15.5	36.3	36.3	36.0		2.247	6.1	5.7	3.4	PN
04008	4/18/97	1311	2630.1	8500.1	99	2275	101	201	21.8	20.0	15.6	36.3	36.3	36.1		2.271	6.2	5.8	3.5	PN
04009	4/18/97	1655	2559.9	8500.1	99	3300	100	200	24.6	21.1	15.5	36.2	36.3	36.0		2.442	5.8	5.9	3.6	PN
04010	4/18/97	2038	2600.3	8429.0	99	210	100	200	24.0	18.0	14.6	36.3	36.4	35.9		3.053	5.6	3.7	3.5	PN
04011	4/18/97	2345	2600.2	8359.8	4	131	65	130	22.8	20.5	17.0	36.3	36.4	36.3		2.857	6.1	4.3	3.6	PN
04012	4/19/97	0319	2530.0	8360.0	3	134	67	133	24.8	21.3	17.2	36.1	36.4	36.3		2.857	5.6	6.1	3.7	PN
04013	4/19/97	0715	2500.1	8400.1	99	127	64	126	23.9	22.9	17.9	36.1	36.8	36.4		2.686	5.9	4.6	3.5	PN
04014	4/19/97	1154	2430.0	8359.8	99	2300	100	201	24.6	21.3	15.8	36.1	36.3	36.1		2.002	5.9	5.9	3.8	PN
04015	4/19/97	1651	2430.0	8430.0	99	3440	100	200	26.9	26.1	19.5	36.0	36.3	36.6		2.247	5.5	5.4	4.1	PN
04016	4/19/97	2125	2430.0	8500.1	99	3300	100	200	26.5	26.2	22.4	36.0	36.0	36.9		2.393	5.6	2.8	4.3	PN
04017	4/20/97	0103	2500.1	8500.0	99	3350	101	201	26.8	26.0	19.9	36.0	36.3	36.7		2.418	5.6	5.2	4.1	PN
04018	4/20/97	0500	2500.0	8530.0	99	3300	100	200	26.9	26.5	21.2	36.0	36.2	36.8		2.466	5.4	5.6	4.2	PN
04019	4/20/97	0849	2500.0	8559.9	99	3300	100	201	26.9	26.4	21.9	35.9	36.1	36.9		2.271	5.6	5.5	4.2	PN
04020	4/20/97	1449	2530.1	8559.9	99	3200	100	201	27.1	26.3	21.3	36.1	36.2	36.9		2.002	5.7	5.4	4.5	PN
04021	4/20/97	1845	2529.9	8628.1	99	3257	100	201	27.4	26.1	21.0	36.1	36.4	36.9		2.271	5.6	5.4	4.4	PN
04022	4/20/97	2227	2600.1	8559.7	99	3200	100	202	26.9	24.7	17.3	36.2	36.8	36.3		2.442	5.4	4.8	3.3	PN
04023	4/21/97	0217	2630.1	8559.2	99	3200	100	200	25.3	20.7	15.4	36.2	36.2	36.0		2.369	5.7	5.9	3.2	PN
04024	4/21/97	0526	2700.1	8600.0	99	3200	100	200	25.2	21.0	15.5	36.2	36.4	36.0		0.296	5.7	5.5	3.4	PN
04025	4/21/97	0933	2730.1	8600.1	99	3200	100	201	25.1	20.7	15.0	36.2	36.3	36.0		1.978	5.8	5.5	3.4	PN
04026	4/21/97	1322	2800.0	8559.9	99	975	100	200	23.5	20.9	15.6	36.3	36.4	36.1		2.247	6.0	5.7	3.5	PN
04027	4/21/97	1908	2830.1	8600.0	99	327	100	201	22.2	19.5	15.0	36.3	36.2	36.0		3.248	6.6	5.4	3.5	PN
04028	4/21/97	2325	2859.9	8630.0	99	370	100	200	22.5	20.8	15.4	36.4	36.4	36.0		2.613	6.1	5.1	3.4	PN
04029	4/22/97	0221	2900.1	8700.1	99	665	101	201	21.5	19.7	14.7	34.9	36.3	35.9		4.103	7.1	5.4	3.8	PN
04030	4/22/97	0609	2830.2	8700.0	99	825	100	200	21.9	20.8	15.4	35.0	36.3	36.0		3.541	6.3	5.5	3.4	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04031	4/22/97	1127	2800.0	8660.0	99	2791	100	200	22.5	21.0	15.7	36.3	36.4	36.1		1.709	6.2	5.8	3.5	PN
04032	4/22/97	1555	2730.1	8700.0	99	3040	100	200	24.8	20.4	14.3	36.3	36.4	35.9		2.173	5.5	4.3	3.4	PN
04033	4/22/97	1942	2659.7	8659.7	99	2900	100	201	24.3	19.5	13.2	36.4	36.4	35.7		2.466	5.8	3.8	3.5	PN
04034	4/22/97	2345	2630.0	8700.0	99	2955	102	200	25.9	18.7	14.1	36.3	36.5	35.8		2.491	5.6	3.6	3.7	PN
04035	4/23/97	0154	2616.1	8700.2	99	3091	100	200	25.0	19.6	13.7	36.4	36.4	35.7		2.393	5.8	3.9	3.6	PN
04036	4/23/97	0618	2559.9	8730.4	99	3150	100	200	25.6	17.4	13.0	36.2	36.3	35.6		2.833	5.6	4.0	3.5	PN
04037	4/23/97	0918	2600.0	8759.7	99	2955	100	202	24.0	18.2	11.4	36.4	36.3	35.4		2.002	5.9	3.4	3.1	PN
04038	4/23/97	1350	2630.0	8800.0	99	2707	100	200	23.9	17.4	13.0	36.4	36.3	35.6		2.002	5.9	3.4	3.3	PN
04039	4/23/97	1806	2659.8	8800.2	99	2750	100	200	23.7	18.8	14.0	36.4	36.4	35.8		2.466	5.9	3.5	3.2	PN
04040	4/23/97	2203	2730.1	8800.2	99	2600	100	200	22.3	20.7	15.4	35.9	36.3	36.0		3.321	6.1	5.6	3.4	PN
04041	4/24/97	0128	2800.0	8800.1	99	2432	99	200	22.4	21.3	16.4	36.3	36.4	36.2		2.466	6.1	5.8	3.5	PN
04042	4/24/97	0529	2830.0	8759.7	99	2288	101	200	22.3	20.8	15.3	33.0	36.3	36.0		6.740	6.8	5.7	3.3	PN
04043	4/24/97	0902	2900.0	8800.0	99	1275	98	201	21.0	20.0	14.0	34.5	36.4	35.8		3.565	6.5	4.8	3.6	PN
04044	4/24/97	1302	2930.1	8800.2	11	43	21	43	20.7	20.7	20.6	32.8	34.5	35.8		5.006	7.4	7.1	6.0	PN
04045	4/24/97	1851	2859.8	8830.1	99	605	100	201	22.2	19.3	14.6	28.6	36.4	35.9		1.000	10.1	4.3	3.8	PN
04046	4/24/97	2325	2829.9	8859.9	99	810	100	200	22.4	21.1	15.2	36.3	36.4	36.0		4.591	5.9	5.8	3.4	PN
04047	4/25/97	0248	2800.0	8859.9	99	1250	102	200	22.5	22.0	18.4	36.4	36.4	36.5		2.662	6.0	5.8	3.4	PN
04048	4/25/97	0653	2730.1	8900.1	99	1760	101	201	22.6	22.1	18.4	36.4	36.4	36.4		2.222	6.0	5.9	3.7	PN
04049	4/25/97	0826	2659.9	8900.1	99	2377	100	200	24.6	20.2	14.6	36.4	36.5	35.9		2.295	6.1	4.7	3.8	PN
04050	4/25/97	1257	2629.9	8859.9	99	2853	101	200	22.9	19.8	14.4	36.3	36.4	35.9		2.076	6.4	4.8	3.4	PN
04051	4/25/97	1630	2600.0	8859.5	99	3110	100	200	23.2	18.6	13.8	36.4	36.5	35.8		2.540	5.9	3.7	3.2	PN
04052	4/25/97	2028	2600.0	8930.1	99	3300	100	201	23.2	19.9	14.5	36.3	36.4	35.9		3.419	5.7	4.1	3.4	PN
04053	4/25/97	2321	2600.1	9000.1	99	2880	100	200	23.6	20.8	13.7	36.2	36.3	35.8		3.077	5.8	5.3	3.1	PN
04054	4/26/97	0255	2630.1	8960.0	99	2652	100	200	23.8	20.6	14.7	36.4	36.3	35.9			5.9	5.5	3.3	PN
04055	4/26/97	0610	2659.8	8959.6	99	2290	102	201	22.7	20.5	15.5	36.3	36.4	36.0		2.540	6.1	4.7	3.4	PN
04056	4/26/97	0958	2730.2	9000.1	99	1150	100	202	23.0	20.9	15.9	36.3	36.3	36.1		3.053	5.8	5.8	3.3	PN
04057	4/26/97	1329	2800.0	9000.0	99	525	100	202	22.8	20.8	15.5	36.3	36.3	36.0		3.590	6.0	5.7	3.3	PN
04058	4/26/97	1705	2800.0	9030.0	14	300	100	200	23.0	19.9	14.1	36.2	36.3	35.9		4.127	6.0	4.7	3.2	PN
04059	4/26/97	2028	2800.0	9100.0	99	144	72	143	23.0	21.4	15.9	35.6	36.3	36.1		4.103	5.8	5.9	3.3	PN
04060	4/27/97	0019	2730.1	9100.1	99	1080	100	200	23.0	21.0	16.0	36.3	36.4	36.1		3.394	5.9	5.6	3.2	PN
04061	4/27/97	0351	2659.9	9059.8	99	1700	101	201	24.2	21.1	15.6	36.4	36.4	36.1		2.369	5.7	5.7	3.3	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04062	4/27/97	0757	2630.1	9100.0	99	1150	101	202	24.4	21.0	15.2	36.4	36.2	36.0		2.369	5.8	5.6	3.2	PN
04063	4/27/97	1212	2600.0	9100.0	99	2926	101	202	24.1	20.6	14.6	36.0	36.3	35.9		2.295	5.8	5.6	3.4	PN
04064	4/27/97	1552	2600.0	9129.8	99	2200	101	200	24.7	19.4	15.0	36.3	36.1	36.0		2.344	6.7	6.6	3.3	EV
04065	4/27/97	1909	2559.9	9159.8	99	2200	100	200	24.4	21.4	17.0	36.4	36.3	36.3		2.589	5.6	5.3	3.2	PN
04066	4/27/97	2333	2629.9	9200.0	99	1878	100	200	24.5	20.8	15.7	36.1	36.3	36.0		4.103	5.7	4.9	3.0	PN
04067	4/28/97	0259	2700.1	9159.9	99	1463	100	200	23.5	18.9	13.7	35.6	36.2	35.7		4.029	5.8	5.1	2.9	PN
04068	4/28/97	2107	2700.0	9300.0	99	1300	100	200	23.2	18.7	12.9	35.6	36.3	35.6		3.712	5.9	3.2	3.0	PN
04069	4/29/97	0140	2630.0	9300.0	99	1737	100	200	23.2	18.5	13.9	35.4	36.4	35.8		4.005	5.9	3.3	2.9	PN
04070	4/29/97	0518	2600.0	9300.1	99	2200	100	200	23.5	20.1	15.6	35.7	36.3	36.0		4.200	5.9	5.5	3.1	PN
04071	4/29/97	0906	2600.0	9330.2	99	2600	100	201	23.3	18.4	13.8	35.4	36.4	35.8		2.833	5.9	3.2	3.0	PN
04072	4/29/97	1346	2559.8	9400.0	99	2835	100	202	23.6	18.6	12.3	35.3	36.3	35.5		1.758	5.4	3.3	2.8	PN
04073	4/29/97	1752	2629.8	9400.1	99	1445	100	200	23.4	18.6	12.4	35.8	36.3	35.6		2.735	5.9	3.2	3.0	PN
04074	4/29/97	2123	2700.1	9400.1	99	975	100	200	23.0	18.1	13.6	36.0	36.3	35.7		2.955	6.0	3.2	3.1	PN
04075	4/30/97	0114	2729.9	9400.1	99	800	100	200	22.8	19.0	14.2	36.1	36.4	35.8		2.515	6.0	3.5	3.2	PN
04076	4/30/97	0419	2800.0	9400.2	99	82	41	81	21.8	21.6	20.2	36.2	36.2	36.3		3.004	6.1	6.2	5.3	PN
04077	4/30/97	0721	2800.0	9430.1	99	71	35	70	21.9	21.8	20.3	36.2	36.2	36.3		2.418	5.9	6.0	5.2	PN
04078	4/30/97	1008	2800.4	9459.7	18	74	37	73	22.0	22.0	20.2	36.2	36.2	36.2		2.100	6.0	6.0	5.6	PN
04079	4/30/97	1451	2730.0	9459.9	99	850	101	201	22.4	19.1	14.3	36.2	36.4	35.9		1.783	6.1	3.5	3.0	PN
04080	4/30/97	1847	2700.0	9500.0	99	1400	100	200	22.5	20.0	14.5	36.2	36.3	35.9		2.247	6.3	5.9	3.1	PN
04081	4/30/97	2229	2629.9	9500.0	99	1640	100	200	22.5	18.8	14.2	36.2	36.3	35.8		2.369	6.1	3.4	3.0	PN
04082	5/ 1/97	0126	2600.8	9500.1	99	2341	100	200	23.2	18.6	13.4	35.8	36.3	35.7		2.442	5.9	3.4	2.9	PN
04083	5/ 1/97	0442	2601.7	9530.1	99	1360	100	200	23.1	18.7	14.0	35.8	36.4	35.8		2.491	6.5	3.8	3.8	PN
04084	5/ 1/97	0730	2601.6	9600.1	99	980	100	200	22.9	19.1	14.1	36.0	36.4	35.8		2.320	7.1	4.5	3.8	PN
04085	5/ 1/97	1141	2630.0	9600.0	99	1025	100	201	22.4	19.4	14.7	35.6	36.3	35.9		2.466	7.2	4.7	3.6	PN
04086	5/ 1/97	1514	2659.9	9559.9	99	775	100	201	22.3	18.9	14.2	36.1	36.4	35.8		2.491	7.7	4.7	3.0	PN
04087	5/ 1/97	1831	2729.8	9600.0	99	209	100	200	22.3	18.8	14.1	36.2	36.4	35.8		2.466	5.7	3.3	3.0	PN
04088	5/ 1/97	2249	2800.3	9600.0	19	41	20	40	21.5	20.5	20.5	30.5	35.6	36.0		3.744	7.0	5.4	5.6	PN
04089	5/ 2/97	1921	2729.8	9300.1	99	1370	100	200	23.4	18.2	13.7	35.8	36.3	35.8		2.711	5.9	3.2	3.1	PN
04090	5/ 2/97	2247	2800.4	9259.3	16	100	51	100	22.4	21.2	18.5	36.2	36.2	36.4		3.004	6.0	6.1	3.8	PN
04091	5/ 3/97	153	2800	9230	99	107	53	106	23.4	22	18.1	35.9	36.2	36.3		3.126	5.9	6.1	3.5	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04092	5/ 3/97	0436	2800.1	9159.9	15	121	61	120	23.4	21.6	17.3	35.9	36.3	36.2		2.955	5.9	6.1	3.2	PN
04093	5/ 3/97	0841	2730.1	9160.0	99	738	101	201	23.6	19.0	13.9	35.7	36.3	35.8		3.248	5.9	3.6	2.9	PN
04094	5/ 9/97	0040	3000.2	8700.0	10	70	35	70	22.2	21.6	19.8	35.0	35.9	36.1		4.005	6.1	6.0	4.9	PN
04095	5/ 9/97	0446	2929.9	8629.7	99	202	101	201	22.2	19.4	13.4	35.1	36.4	35.7		3.932	6.1	3.9	2.9	PN
04096	5/ 9/97	0823	2859.9	8630.0	99	372	101	201	22.6	19.6	14.9	35.4	36.3	36.0		3.516	6.1	4.7	3.3	PN
04097	5/ 9/97	1426	2912.0	8600.2	99	187	94	187	22.7	20.0	13.6	35.5	36.4	35.8		2.466	5.9	4.2	2.9	PN
04098	5/ 9/97	2000	2839.9	8529.8	8	170	85	169	22.1	19.1	14.8	35.8	36.2	35.9		3.712	6.0	4.7	2.9	PN
04099	5/ 9/97	2303	2829.9	8600.0	99	329	101	201	24.2	20.3	14.9	36.0	36.3	36.0		2.833	5.9	5.0	3.2	PN
04100	5/10/97	0219	2800.0	8559.8	99	975	101	201	25.5	21.0	15.7	36.3	36.4	36.1		2.295	5.6	5.7	3.7	PN
04101	5/10/97	0603	2729.9	8600.0	99	3500	100	200	25.3	21.1	14.6	36.4	36.4	35.9		2.589	6.5	6.5	3.8	PN
04102	5/10/97	1103	2659.9	8600.1	99	3190	100	201	25.5	18.9	14.0	36.4	36.4	35.8		1.099	5.5	3.5	3.3	PN
04103	5/10/97	1504	2629.9	8559.8	99	3200	100	200	27.1	21.1	16.2	36.2	36.4	36.2		1.954	5.5	5.3	3.4	PN
04104	5/10/97	1853	2600.0	8600.0	99	3500	101	202	27.6	26.1	21.5	36.1	36.4	36.9		2.076	5.4	5.2	4.1	PN
04105	5/11/97	0019	2530.1	8600.1	99	3200	101	201	26.9	26.5	22.5	36.1	36.0	36.9		1.978	5.4	5.4	4.2	PN
04106	5/11/97	0324	2500.0	8600.0	99	3292	101	201	26.9	26.6	23.3	36.1	36.1	36.9		2.125	5.5	5.5	4.4	PN
04107	5/11/97	0820	2530.1	8630.0	99	3175	100	202	26.7	26.5	22.1	36.0	36.0	36.9		2.002	5.5	5.5	4.3	PN
04108	5/11/97	1258	2600.1	8700.0	99	3200	100	201	27.5	25.6	19.9	36.1	36.6	36.7		2.466	5.4	5.0	4.3	PN
04109	5/11/97	1730	2630.0	8659.8	99	3200	100	200	27.3	23.6	17.5	36.1	36.8	36.4		2.686	5.4	4.5	4.0	PN
04110	5/11/97	2123	2700.0	8659.9	99	2920	101	201	24.6	19.0	13.3	36.4	36.5	35.7		3.248	5.7	3.5	3.3	PN
04111	5/12/97	0111	2730.0	8659.9	99	3054	102	200	25.5	18.8	13.8	36.4	36.4	35.8		2.662	5.6	3.6	3.5	PN
04112	5/12/97	0414	2800.2	8659.8	99	2855	100	200	23.5	19.8	14.6	36.3	36.3	35.9		2.735	5.8	4.7	3.3	PN
04113	5/12/97	0829	2830.0	8700.1	99	850	100	201	25.2	21.0	15.1	36.4	36.4	36.0		2.784	5.6	4.9	3.4	PN
04114	5/12/97	1218	2900.0	8700.0	99	667	101	201	22.6	21.0	15.1	36.1	36.3	36.0		2.906	5.9	5.4	3.3	PN
04115	5/12/97	2127	2929.9	8800.1	11	44	22	43	21.7	21.9	20.9	34.0	35.5	35.8		5.543	6.0	6.1	5.3	PN
04116	5/13/97	0133	2900.0	8829.9	99	611	100	201	23.0	19.6	13.6	34.5	36.4	35.8		6.520	5.9	4.0	3.1	PN
04117	5/13/97	0409	2900.1	8759.9	99	1360	100	200	22.8	20.6	14.2	34.8	36.3	35.8		4.860	5.9	4.9	3.2	PN
04118	5/13/97	0843	2829.9	8800.0	99	2290	101	200	22.9	20.0	15.1	34.9	36.4	36.0		4.933	5.9	4.3	3.3	PN
04119	5/13/97	1216	2800.0	8760.0	99	2432	100	201	23.4	21.2	15.6	36.1	36.4	36.1		2.295	5.9	5.6	3.3	PN
04120	5/13/97	1710	2729.9	8800.3	99	2562	101	202	23.6	21.0	15.3	36.0	36.3	36.0		3.150	5.9	5.5	3.3	PN
04121	5/13/97	2107	2659.8	8800.1	99	2700	100	200	25.6	19.5	13.7	36.4	36.5	35.8		2.808	5.6	3.7	3.1	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04122	5/14/97	0120	2630.0	8800.0	99	2707	100	200	26.3	17.6	13.2	36.3	36.3	35.7		2.686	5.6	3.9	3.5	PN
04123	5/14/97	0451	2600.1	8759.9	99	2983	100	200	26.1	19.4	13.2	36.3	36.6	35.7		2.466	5.5	3.9	3.4	PN
04124	5/14/97	0924	2600.0	8830.0	99	2982	101	201	24.8	18.4	13.4	36.1	36.4	35.7		2.222	5.7	3.6	3.1	PN
04125	5/14/97	1427	2600.0	8900.0	99	3200	100	201	24.9	18.8	13.4	36.4	36.5	35.7		1.538	5.8	3.5	3.2	PN
04126	5/14/97	1937	2629.8	8900.1	99	2790	101	201	25.1	18.6	13.9	36.4	36.4	35.8		2.466	6.9	4.3	3.8	PN
04127	5/14/97	2317	2659.9	8900.0	99	2220	101	201	23.9	20.7	15.1	36.1	36.3	36.0		2.759	5.9	5.3	3.3	PN
04128	5/15/97	0325	2730.0	8900.0	99	1748	100	200	23.6	22.0	17.6	36.5	36.4	36.4		2.247	5.9	5.8	3.7	PN
04129	5/15/97	0723	2759.9	8859.9	99	1280	101	201	23.3	22.0	18.2	36.4	36.4	36.4		2.027	5.9	5.7	3.6	PN
04130	5/15/97	1224	2830.1	8859.9	99	788	100	201	23.9	21.0	16.1	36.3	36.3	36.1		1.978	5.9	5.5	3.5	PN
04131	5/15/97	1924	2800.2	8930.0	99	940	100	201	23.6	21.4	17.0	36.1	36.4	36.3		2.515	5.9	5.7	3.5	PN
04132	5/15/97	2301	2800.0	9000.0	14	530	101	201	24.1	21.2	16.0	36.3	36.4	36.2		2.613	5.9	5.7	3.5	PN
04133	5/16/97	0323	2730.1	9000.0	99	1142	100	201	24.4	21.2	15.7	36.3	36.4	36.1		2.857	5.7	5.7	3.4	PN
04134	5/16/97	0710	2659.8	8959.9	99	2450	100	200	24.5	20.1	15.0	36.3	36.3	36.0		3.126	5.8	4.7	3.3	PN
04135	5/16/97	1133	2629.9	8959.9	99	2688	100	201	24.9	20.0	14.7	36.4	36.4	35.9		2.295	5.9	4.5	3.7	PN
04136	5/16/97	1507	2600.0	8959.9	99	2908	100	201	25.1	20.6	14.5	36.1	36.3	35.9		2.344	6.2	5.1	3.4	PN
04137	5/16/97	2304	2600.1	9030.0	99	3346	101	200	24.8	20.9	14.1	36.2	36.4	35.9		3.101	2.9	5.3	3.5	PN
04138	5/17/97	0230	2600.0	9059.9	99	2744	105	205	24.7	21.5	15.4	36.0	36.3	36.1		2.808	6.4	6.4	3.5	PN
04139	5/17/97	0648	2629.9	9059.9	99	2105	100	201	24.6	20.8	14.8	36.3	36.3	35.9		2.418	5.7	5.1	3.1	PN
04140	5/17/97	1029	2700.2	9059.9	99	1600	100	201	24.5	21.1	15.6	36.2	36.4	36.1		2.344	5.8	5.7	3.4	PN
04141	5/17/97	1436	2730.1	9100.0	99	1080	100	201	24.5	20.7	15.4	36.3	36.4	36.1		2.173	5.8	5.4	3.4	PN
04142	5/17/97	1811	2800.1	9100.0	14	146	72	145	24.3	21.3	17.5	35.7	36.2	36.4		2.955	5.8	5.9	3.5	PN
04143	5/17/97	2150	2759.9	9130.0	99	158	79	158	24.6	20.2	15.7	35.5	36.2	36.1		3.394	5.7	5.0	3.2	PN
04144	5/18/97	0057	2800.0	9200.0	15	121	60	120	24.7	21.3	17.7	35.6	36.2	36.3		3.028	5.8	6.0	3.0	PN
04145	5/18/97	0504	2729.9	9159.8	99	748	100	200	25.3	18.9	14.1	34.7	36.3	35.8		4.029	5.7	3.7	2.9	PN
04146	5/18/97	1041	2700.1	9159.9	99	1440	100	201	25.7	21.3	15.5	35.5	36.3	36.0		2.051	6.1	5.4	3.4	PN
04147	5/19/97	1907	2759.9	9600.1	20	45	23	41	24.1	21.3	20.7	30.9	34.5	35.9		1.028	6.3	5.1	5.0	PN
04148	5/19/97	2235	2729.9	9559.9	99	209	100	200	25.1	18.9	14.5	34.1	36.4	35.9		4.005	6.3	3.9	3.3	PN
04149	5/20/97	0138	2700.0	9600.0	99	774	100	200	25.0	19.1	14.2	32.7	36.3	35.8		4.444	5.9	3.9	3.0	PN
04150	5/20/97	0506	2630.0	9559.9	99	1040	100	200	25.6	19.7	14.2	33.6	36.3	35.8		3.614	5.7	4.6	2.9	PN
04151	5/20/97	0834	2601.6	9600.1	99	973	101	201	25.5	20.0	14.8	36.0	36.3	35.9		2.320	5.7	4.7	3.0	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04152	5/20/97	1243	2601.6	9530.0	99	1385	101	200	25.5	18.4	13.8	35.9	36.4	35.8		2.344	5.7	3.2	3.1	PN
04153	5/20/97	1637	2601.3	9500.0	99	2343	100	201	26.1	18.3	13.4	35.1	36.3	35.7		2.686	5.8	3.3	3.1	PN
04154	5/20/97	2031	2629.9	9459.8	99	1635	100	200	26.0	18.0	13.4	35.3	36.3	35.7		2.759	6.2	3.3	3.3	PN
04155	5/21/97	0018	2659.9	9500.0	99	1426	100	200	25.7	18.7	13.6	35.2	36.3	35.8		4.396	5.9	3.6	3.1	PN
04156	5/21/97	0429	2730.1	9500.1	99	850	100	200	25.4	18.9	14.1	35.8	36.4	35.8		2.735	6.4	3.9	3.1	PN
04157	5/21/97	0818	2800.3	9459.7	18	78	39	77	24.2	22.7	20.1	35.9	36.2	36.3		3.004	6.2	6.4	5.1	PN
04158	5/21/97	1403	2800.0	9430.0	18	68	34	67	25.6	22.8	19.9	35.9	36.1	36.3		2.271	5.8	6.1	4.4	PN
04159	5/21/97	1702	2800.2	9359.9	17	79	34	78	25.5	22.5	20.3	35.9	36.2	36.3		3.346	5.9	6.1	5.7	PN
04160	5/21/97	2055	2730.0	9400.1	99	795	100	200	25.8	17.9	13.7	35.4	36.3	35.8		2.735	5.8	3.1	2.9	PN
04161	5/22/97	0026	2700.1	9359.9	99	954	100	200	26.0	19.1	11.4	35.4	36.3	35.5		2.613	5.8	3.3	2.8	PN
04162	5/22/97	0420	2630.1	9359.9	99	1556	101	200	26.2	19.0	12.0	35.4	36.4	35.5		2.369	5.6	3.4	2.8	PN
04163	5/22/97	0813	2600.1	9359.9	99	2400	101	201	26.6	18.5	13.8	33.7	36.3	35.8		4.029	5.6	3.2	3.0	PN
04164	5/22/97	1200	2559.9	9329.9	99	2377	100	201	26.1	20.9	15.7	35.1	36.2	36.1		2.564	5.6	5.9	3.1	PN
04165	5/22/97	1741	2559.9	9300.0	99	2194	100	201	26.6	22.0	16.9	36.4	36.4	36.2		2.051	5.6	5.4	3.1	PN
04166	5/22/97	2125	2600.0	9230.0	99	2200	100	201	26.3	21.6	17.4	36.4	36.3	36.3		2.173	5.6	5.3	3.2	PN
04167	5/23/97	0055	2600.0	9200.0	99	2012	101	201	26.1	21.6	16.8	36.4	36.3	36.2		2.125	5.6	5.1	3.1	PN
04168	5/23/97	0501	2630.8	9159.5	99	1830	100	200	26.4	21.4	17.4	36.4	36.3	36.3		2.173	5.5	5.3	3.1	PN
04169	5/23/97	1156	2630.1	9300.0	99	1801	100	200	26.7	20.9	16.0	35.1	36.3	36.1		2.051	5.6	5.3	3.0	PN
04170	5/23/97	1726	2659.9	9300.0	99	1199	100	200	27.2	19.0	14.0	34.0	36.3	35.8		3.272	5.6	3.6	3.0	PN
04171	5/23/97	2150	2730.1	9259.9	99	780	99	201	26.7	18.4	13.3	34.9	36.3	35.7		3.346	5.7	3.1	3.1	PN
04172	5/23/97	0140	2800.0	9300.2	99	108	54	108	25.6	21.6	18.1	35.6	36.2	36.3		2.589	5.7	6.1	3.2	PN
04175	5/31/97	0430	2831.9	8457.9	6	82	41	82	24.6	21.3	17.6	35.6	36.1	36.2			5.8	6.2	3.3	PN
04177	5/31/97	2021	2740.0	8539.2	99	2000	425	851	26.6	9.6	5.5	36.2	35.1	34.9			5.6	2.9	4.0	PN
04178	6/ 1/97	0417	2739.8	8539.3	99	2000	100	201	26.5	20.6	15.1	36.2	36.4	35.9			5.3	4.8	3.1	PN
04180	6/ 1/97	1947	2851.1	8544.1	99	185	92	185	24.9	19.6	13.6	34.0	36.3	35.8			5.8	4.1	2.8	PN
04181	6/ 2/97	0420	2852.5	8544.6	99	185	92	185	24.8	18.8	13.4	34.8	36.4	35.7			5.7	3.6	2.9	PN
04184	6/ 2/97	1942	2815.3	8610.2	99	611	251	501	26.3	12.9	8.4	36.2	35.6	35.0			5.6	3.4	3.4	PN
04185	6/ 3/97	0415	2815.0	8610.8	99	611	100	201	26.0	20.8	14.6	36.2	36.3	35.9			5.5	5.2	3.6	PN
04188	6/ 3/97	2019	2942.2	8617.4	9	85	43	85	25.3	21.3	19.2	32.1	35.9	36.3			5.9	5.6	3.9	PN
04189	6/ 4/97	0410	2941.3	8617.2	9	71	36	71	24.9	21.4	19.9	32.3	35.7	36.3			5.8	5.8	4.6	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
04191	6/ 4/97	2012	2915.4	8637.2	99	382	191	382	25.7	15.1	19.8	32.7	36.0	35.2			5.8	3.4	2.9	PN
04192	6/ 5/97	0410	2916.6	8634.1	99	349	100	202	25.4	20.1	14.6	32.9	36.3	35.9			5.7	4.5	3.3	PN
04195	6/ 5/97	2006	2840.4	8651.8	99	635	101	202	25.4	20.8	15.2	35.4	36.3	36.0			5.6	5.3	3.2	PN
04196	6/ 6/97	0418	2835.9	8652.6	99	672	101	201	25.3	20.4	14.6	35.7	36.3	35.9			5.6	4.9	3.2	PN
04201	6/ 7/97	2001	2822.3	8724.2	99	2560	428	857	26.6	8.6	5.4	36.2	35.0	34.9			5.6	2.9	4.1	PN
04202	6/ 8/97	0405	2815.1	8736.2	99	2525	100	202	26.4	18.9	13.1	36.3	36.4	35.7			6.1	3.9	3.8	PN
04205	6/ 9/97	0400	2919.8	8759.5	99	115	56	115	25.9	22.0	15.5	35.7	36.2	36.0			5.6	5.9	3.2	PN

Table 2. Selected environmental parameters (continued)

SUNCOASTER, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
26001	5/16/97	0040	2800.0	8500.0	6	252	100	200	23.3	19.8	14.6	35.7	36.3	36.0	0.147		5.5	3.9	2.7	PN
26002	5/16/97	0539	2730.0	8500.0	5	241	100	200	23.5	19.0	14.7	36.0	36.3	36.0	0.063		5.6	3.5	2.7	PN
26003	5/16/97	1001	2700.0	8500.0	99	900	100	200	24.7	19.3	14.1	36.2	36.5	36.0	0.065		5.5	3.0	2.6	PN
26004	5/16/97	1424	2630.0	8500.0	99	900	100	200	25.3	18.5	13.5	36.4	36.5	35.8	0.071		5.5	2.7	2.6	PN
26005	5/16/97	1824	2600.0	8500.0	99	3000	100	200	26.5	20.3	15.2	36.3	36.5	36.1	0.073		4.7	3.6	2.8	PN
26006	5/16/97	2219	2600.0	8430.0	99	220	100	200	26.0	18.8	12.7	36.2	36.5	35.6	0.039		3.6	2.9	2.6	PN
26007	5/17/97	0204	2600.0	8400.0	99	132	66	132	24.7	20.3	16.1	36.1	36.4	36.2	0.057		5.4	4.9	2.7	PN
26008	5/17/97	0631	2530.0	8400.0	3	138	68	137	24.7	20.5	17.1	36.3	37.7	38.7	0.048		5.0	4.2	2.7	PN
26009	5/17/97	1025	2500.0	8400.0	3	126	63	125	26.1	21.3	15.3	36.3	36.4	36.6	0.042		5.0	4.5	2.6	PN
26010	5/17/97	1425	2500.0	8430.0	99	1980	100	200	27.5	22.8	16.3	36.1	36.7	36.2	0.060		5.6	3.8	2.8	PN
26011	5/17/97	1850	2500.0	8500.0	99	229	100	200	27.4	26.1	20.5	36.1	36.3	36.9	0.037		5.0	4.1	3.2	PN
26012	5/17/97	2250	2500.0	8530.0	99	1980	100	200	26.9	26.5	22.7	36.0	36.1	37.0	0.115		5.3	4.2	3.4	PN
26013	5/18/97	0306	2430.0	8530.0	99	1980	100	200	27.0	26.6	23.5	35.9	36.0	36.9	0.028		5.0	4.2	3.4	PN
26014	5/18/97	0715	2430.0	8500.0	99	1980	100	200	27.0	26.3	21.9	36.0	36.2	36.9	0.042		5.2	4.2	3.2	PN
26015	5/18/97	1111	2430.0	8430.0	99	1980	100	200	27.5	25.4	18.9	36.1	36.6	36.8	0.055		5.3	3.8	3.2	PN
26016	5/18/97	1541	2359.9	8359.9	99	1285	100	200	26.8	19.5	14.5	36.2	36.5	35.9	0.037		5.2	3.0	3.0	PN
26017	5/18/97	1954	2430.0	8400.0	99	2880	100	200	26.6	19.4	13.0	36.2	36.4	35.7	0.050		5.2	3.6	2.7	PN
26018	5/18/97	2346	2430.0	8330.0	2	280	100	200	26.4	17.2	12.1	36.4	36.4	35.6	0.025		4.5	2.9	2.6	PN

Table 2. Selected environmental parameters (continued)

ARANSAS BAY, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
31001	6/ 4/97	0848	2751.6	9700.5	20	10	5	10	27.2	27.2	24.6	26.9	27.5	21.8			6.2	5.9	3.3	ST
31002	6/ 4/97	0928	2753.4	9658.6	20	12	6	12	27.2	26.8	22.7	26.9	27.7	32.9			5.7	4.8	3.9	ST
31003	6/ 4/97	1003	2753.7	9657.4	20	13	7	13	27.2	26.6	22.6	27.0	28.5	33.1			5.8	4.7	2.7	ST
31004	6/ 4/97	1038	2752.6	9656.5	20	14	7	14	27.6	27.0	24.7	26.6	27.4	34.2			6.3	6.3	4.4	ST
31005	6/ 4/97	1147	2758.8	9651.1	20	13	6	13	28.1	27.0	29.9	26.9	26.9	33.5			6.2	6.3	3.7	ST
31006	6/ 4/97	1224	2755.5	9648.4	20	19	10	19	27.9	25.8	23.0	26.7	26.2	32.5			6.3	6.6	3.9	ST
31007	6/ 4/97	1340	2751.9	9653.4	20	18	9	18	28.7	26.8	21.7	26.1	27.6	34.8			6.5	6.5	2.4	ST
31008	6/ 4/97	1431	2748.6	9653.4	20	21	11	21	27.6	26.7	21.0	27.1	28.4	31.4			6.4	6.5	2.8	ST
31009	6/26/97	0846	2747.3	9702.4	20	11	6	11	28.7	28.2	27.5	30.4	31.7	34.1			6.1	6.1	5.8	ST
31010	6/26/97	0918	2746.6	9703.4	20	11	6	11	28.7	28.1	27.7	31.0	32.8	33.5			6.1	6.0	5.9	ST
31011	6/26/97	1014	2740.3	9701.6	20	19	10	19	28.2	26.4	23.8	33.1	34.1	34.8			6.3	5.6	4.1	ST
31012	6/26/97	1118	2741.4	9657.5	20	23	12	23	27.8	26.4	21.8	34.0	34.2	35.4			6.2	6.4	4.1	ST
31013	6/26/97	1200	2745.2	9657.6	20	20	10	20	28.6	27.3	22.9	31.4	33.9	34.7			6.4	6.4	3.7	ST
31014	6/26/97	1235	2746.5	9657.4	20	19	10	19	29.0	27.1	24.1	31.4	33.6	34.7			6.4	6.4	3.9	ST
31015	6/26/97	1328	2748.3	9656.5	20	18	9	18	29.1	27.2	25.6	32.0	33.7	34.3			6.5	6.5	5.0	ST
31016	6/26/97	1442	2749.6	9656.4	20	17	9	17	28.9	27.2	26.6	32.7	32.0	33.9			6.6	6.4	5.4	ST

Table 2. Selected environmental parameters (continued)

MATAGORDA BAY, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
32001	6/ 2/97	0946	2821.4	9617.5	19	15	8	15	26.8	26.7	26.2	23.8	24.5	28.5			6.7	6.6	6.3	ST
32002	6/ 2/97	1047	2819.6	9611.3	19	20	10	20	26.7	26.6	21.6	26.4	26.5	33.7			4.9	5.6	8.4	ST
32003	6/ 2/97	1119	2820.7	9610.4	19	19	10	19	26.8	26.6	21.4	26.3	26.4	33.8			4.7	4.9	6.5	ST
32004	6/ 2/97	1230	2828.5	9604.3	19	14	7	14	27.4	26.6	24.0	25.7	25.7	28.2			3.8	5.5	6.0	ST
32005	6/ 2/97	1312	2828.5	9606.6	19	13	7	13	27.3	26.7	23.9	26.1	26.1	30.3			4.9	4.7	5.6	ST
32006	6/ 2/97	1345	2829.6	9607.4	19	12	6	12	27.4	26.8	25.1	25.9	26.0	26.6			5.7	5.3	6.4	ST
32007	6/ 2/97	1515	2822.5	9616.6	19	15	7	15	27.7	27.2	22.9	24.2	27.1	27.3			6.1	4.1	5.0	ST
32008	6/ 2/97	1547	2823.6	9616.4	19	12	6	12	27.7	26.8	25.0	21.6	25.8	27.3			6.1	5.6	6.9	ST
32009	6/25/97	1003	2816.6	9615.8	19	21	11	21	27.6	27.3	21.5	32.1	35.0	35.1			4.1	6.5	7.7	ST
32010	6/25/97	1039	2814.5	9617.5	19	22	11	22	28.0	26.8	21.6	32.3	32.9	35.1			3.3	9.2	6.5	ST
32011	6/25/97	1134	2811.5	9622.7	19	23	11	23	28.3	27.9	21.7	33.3	35.1	35.1			5.4	4.5	7.5	ST
32012	6/25/97	1221	2810.5	9625.4	19	20	10	20	28.5	26.7	21.7	33.0	35.1	35.0			3.8	9.5	6.9	ST
32013	6/25/97	1308	2814.5	9623.7	19	19	9	19	28.6	28.1	26.6	29.1	33.0	34.9			5.6	3.6	8.6	ST
32014	6/25/97	1352	2814.5	9621.6	19	20	10	20	29.8	26.6	23.1	20.7	35.0	35.1			4.1	9.7	8.7	ST
32015	6/25/97	1420	2815.4	9620.9	19	20	10	20	30.4	26.3	21.8	29.9	32.7	35.1			3.7	9.8	7.3	ST
32016	6/25/97	1503	2817.5	9618.6	19	19	9	19	30.3	27.8	24.6	28.5	33.0	35.0			6.6	3.2	8.4	ST

Table 2. Selected environmental parameters (continued)

LAGUNA MADRE, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
33001	6/ 2/97	0810	2559.4	9708.5	22	7	4	7	26.5	26.5	26.4	30.5	30.5	30.6			6.4	6.4	6.3	ST
33002	6/ 2/97	0845	2558.6	9705.5	22	18	9	18	26.5	26.4	23.4	30.4	31.1	31.9			6.5	6.6	5.6	ST
33003	6/ 2/97	0921	2558.3	9703.4	22	23	11	23	26.3	23.4	21.4	30.8	32.6	33.2			6.8	6.1	5.3	ST
33004	6/ 2/97	1017	2601.7	9659.6	21	27	14	27	26.7	23.5	20.7	32.3	32.6	34.6			6.7	6.5	5.1	ST
33005	6/ 2/97	1120	2607.3	9703.6	21	21	11	21	26.3	23.3	22.1	31.3	32.5	33.7			6.8	6.5	6.7	ST
33006	6/ 2/97	1210	2610.8	9701.5	21	24	12	24	26.9	26.5	21.8	31.5	31.5	31.9			6.7	6.7	6.6	ST
33007	6/ 2/97	1248	2613.3	9701.7	21	24	12	24	27.0	26.5	21.9	33.9	31.4	31.7			6.7	6.8	6.8	ST
33008	6/ 2/97	1401	2605.6	9709.3	21	5	3	5	27.3	27.2	21.9	33.3	30.5	30.3			6.8	7.1	7.0	ST
33009	6/19/97	0841	2613.9	9710.5	21	5	3	5	23.7	22.8	21.8	30.5	36.0	36.0			6.3	6.1	6.1	ST
33010	6/19/97	0908	2614.8	9710.5	21	8	4	8	23.9	22.2	21.6	36.1	36.0	36.0			6.4	6.4	6.5	ST
33011	6/19/97	0950	2617.1	9708.6	21	15	8	15	25.8	22.9	21.6	36.1	36.0	36.0			6.2	6.6	6.7	ST
33012	6/19/97	1100	2619.9	9707.4	21	17	9	17	26.4	25.9	21.8	35.9	35.9	36.1			6.4	6.6	7.0	ST
33013	6/19/97	1147	2621.6	9706.6	21	18	9	18	26.8	26.2	21.7	35.9	35.9	36.0			6.4	6.5	6.9	ST
33014	6/19/97	1230	2621.0	9705.3	21	20	10	20	27.0	26.2	21.6	35.9	35.9	36.0			6.3	6.5	6.6	ST
33015	6/19/97	1355	2617.9	9703.5	21	19	9	19	26.8	26.1	21.5	35.8	36.0	36.0			6.5	6.6	7.1	ST
33016	6/19/97	1440	2616.0	9701.5	21	25	13	25	27.0	26.6	21.7	35.9	36.1	36.1			6.5	6.5	6.7	ST

Table 2. Selected environmental parameters (continued)

GALVESTON BAY, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
34001	6/ 3/97	0949	2918.9	9439.4	18	9	5	9	27.3	27.1	27.2	23.1	24.6	25.1			6.1	6.1	5.8	ST
34002	6/ 3/97	1019	2916.6	9440.2	18	11	6	11	31.2	28.9	28.7	23.3	25.0	33.0			6.2	6.5	6.8	ST
34003	6/ 3/97	1054	2913.9	9441.3	18	15	8	15	27.7	27.5	31.1	23.1	25.6	26.3			6.8	6.7	6.6	ST
34004	6/ 3/97	1131	2911.5	9441.5	18	15	8	15	31.2	27.4	27.6	23.4	25.5	30.1			6.2	6.3	6.2	ST
34005	6/ 3/97	1200	2909.9	9446.1	18	15	8	15	30.8	30.0	28.5	23.1	25.7	30.6			6.0	6.6	6.2	ST
34006	6/ 3/97	1225	2912.6	9446.5	18	13	7	13	29.0	28.7	27.9	23.2	26.2	34.3			6.6	6.2	6.4	ST
34007	6/ 3/97	1303	2908.9	9449.8	18	15	8	15	26.8	26.2	26.5	23.3	26.6	34.0			7.1	6.6	6.1	ST
34008	6/ 3/97	1323	2907.7	9449.3	18	15	8	15	27.0	26.8	26.6	23.3	26.6	34.2			7.0	6.6	6.2	ST
34009	6/18/97	1010	2922.1	9441.8	18	6	3	6	25.9	25.8	24.9	31.3	31.3	31.3			5.9	5.4	2.8	ST
34010	6/25/97	1040	2921.2	9437.9	18	10	10	10	30.3	30.3	30.2	26.4	26.4	29.4			9.4	9.5	9.3	ST
34011	6/25/97	1113	2919.7	9437.6	18	10	5	10	30.2	29.6	29.7	26.4	28.9	29.1			4.3	4.4	4.1	ST
34012	6/25/97	1148	2920.1	9432.7	18	13	7	13	31.1	29.4	29.5	27.1	28.5	28.6			3.6	4.0	4.5	ST
34013	6/25/97	1221	2926.6	9431.6	18	9	5	9	31.5	30.1	29.5	26.6	27.7	28.4			4.9	5.2	5.5	ST
34014	6/25/97	1310	2916.0	9436.5	18	15	8	15	32.6	31.2	30.5	26.0	28.3	29.0			4.4	4.9	5.0	ST
34015	6/25/97	1346	2919.6	9442.0	18	6	3	6	33.1	32.0	31.4	26.9	27.0	28.3			5.8	6.2	6.5	ST
34016	6/25/97	1421	2914.8	9450.8	18	5	3	5	33.6	32.0	32.0	27.4	27.7	28.8			5.2	5.3	5.4	ST

Table 2. Selected environmental parameters (continued)

SABINE, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
40001	6/ 3/97	0900	2936.3	9345.3	17	10	5	10	26.6	25.7	23.9	20.9	23.7	30.3			5.4	3.6	1.1	ST
40002	6/ 3/97	0936	2935.5	9347.1	17	11	6	11	26.4	26.2	23.8	22.1					6.7	5.5	1.7	ST
40003	6/ 3/97	1015	2935.5	9350.8	17	8	4	8	26.6	26.3	23.8	21.3	21.3	29.7			6.1	5.6	1.3	ST
40004	6/ 3/97	1044	2936.4	9350.2	17	7	4	7	26.5	24.1	24.1	22.4	22.9	24.3			6.6	6.1	2.3	ST
40005	6/ 3/97	1140	2939.5	9356.6	17	4	2	4	26.8	25.4	25.3	22.9	24.7	26.2			7.0	2.2	2.0	ST
40006	6/ 3/97	1232	2939.4	9359.2	17	4	2	4	27.0	25.6	24.9	23.7	23.9	27.0			5.0	2.6	2.0	ST
40007	6/ 3/97	1354	2936.5	9402.4	18	7	4	7	27.5	26.1	23.9	22.6	27.8	30.0			7.4	6.5	1.0	ST
40008	6/ 3/97	1429	2935.6	9400.0	18	7	4	7	27.9	26.3	23.5	21.6	21.9	30.5			6.3	6.0	1.7	ST
40009	6/24/97	0852	2940.3	9348.3	17	6	3	6	28.8	28.8	29.0	18.9	18.9	19.8			6.9	6.8	6.8	ST
40010	6/24/97	0938	2939.3	9347.5	17	7	4	7	29.1	28.9	28.9	18.9	18.8	20.8			6.6	6.1	5.8	ST
40011	6/24/97	1016	2939.3	9346.3	17	8	4	8	29.1	28.8	29.1	16.3	18.0	20.0			7.7	6.2	5.8	ST
40012	6/24/97	1109	2938.3	9342.6	17	9	4	9	29.3	28.9	28.9	14.3	20.5	22.3			6.7	5.5	5.3	ST
40013	6/24/97	1211	2940.3	9341.3	17	8	4	8	30.5	29.0	28.7	13.8	18.6	21.9			5.0	5.4	4.2	ST
40014	6/24/97	1252	2942.3	9341.3	17	6	3	6	30.0	29.1	29.2	13.3	15.8	16.5			7.7	6.2	5.7	ST
40015	6/24/97	1333	2944.2	9341.2	17	3	2	3	30.5	30.3	30.3	14.5	15.0	15.9			9.8	9.3	8.4	ST
40016	6/24/97	1424	2943.4	9337.2	17	6	3	6	31.1	29.1	29.1	12.3	14.1	16.0			9.9	6.4	6.1	ST

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
2301	6/ 4/97	0843	3009.4	8801.1	11	14	7	14	25.0	22.4	22.2	29.7	34.8	35.0			4.6	4.4	4.1	ST
2302	6/ 4/97	1110	3011.3	8818.6	11	13	6	13	26.0	24.8	22.0	21.1	31.0	34.6			7.6	5.3	0.8	ST
2303	6/ 4/97	1245	3005.3	8825.1	11	18	9	18	26.4	24.9	22.0	21.9	32.2	35.7			7.0	6.5	3.9	ST
2304	6/ 4/97	1411	3002.3	8827.6	11	22	11	22	26.7	23.5	22.2	24.0	35.5	36.1			7.0	6.0	4.5	ST
2305	6/ 4/97	1622	2951.8	8820.4	11	34	17	34	27.7	23.0	22.1	28.0	36.0	36.1			6.6	4.7	4.9	ST
2306	6/ 4/97	1945	3000.4	8815.1	11	27	14	27	26.9	23.3	22.6	25.2	35.4	36.1			6.9	6.5	5.0	ST
2307	6/ 4/97	2028	3002.0	8813.0	11	24	12	24	26.5	23.5	22.4	25.5	34.9	36.1			6.8	6.8	4.6	ST
2308	6/ 4/97	2221	3006.4	8806.0	11	20	10	20	27.1	22.5	21.8	19.2	34.6	35.0			7.1	4.7	2.2	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	6/ 6/97	0946	2914.1	8842.7	11	67	34	66	26.0	26.0	24.7	32.0	32.0	35.7			6.4	6.0	5.4	ST
17002	6/ 6/97	1231	2922.4	8847.7	11	39	19	38	26.5	23.2	21.5	27.2	36.0	36.3			6.4	6.2	5.8	ST
17003	6/ 6/97	1520	2923.4	8847.2	11	31	15	30	26.7	22.7	21.8	26.7	35.9	36.3			6.6	5.0	5.2	ST
17004	6/ 6/97	1652	2924.2	8846.5	11	31	15	30	26.8	22.9	22.0	26.5	35.7	36.3			6.0	4.5	4.2	ST
17005	6/ 6/97	1834	2925.8	8844.9	11	29	14	27	26.8	22.9	22.3	26.5	35.4	35.4			6.4	4.3	4.6	ST
17006	6/ 6/97	1941	2927.8	8847.9	11	17	8	16	27.0	25.5	23.3	25.6	29.8	34.6			6.6	5.2	3.8	ST
17007	6/ 6/97	2046	2924.6	8845.9	11	31	15	30	27.0	22.8	21.7	26.7	35.5	36.2			6.5	4.5	4.7	ST
17008	6/ 6/97	2206	2922.7	8852.6	11	21	10	20	26.6	23.8	23.0	25.2		35.7			6.3	4.4	4.6	ST
17009	6/ 6/97	2338	2914.6	8853.7	11	46	23	45	26.8	21.2	20.1	14.9	36.1	36.2			8.8	4.4	5.0	ST
17010	6/ 7/97	0315	2911.4	8852.1	11	56	27	55	26.1	21.2	19.6	14.9	36.2	36.3			6.5	4.4	4.6	ST
17011	6/ 7/97	0520	2910.4	8844.0	11	73	36	72	26.2	22.4	20.2	21.1	36.1	36.3			6.1	5.4	5.4	ST
17012	6/ 7/97	0846	2927.6	8838.3	11	43	22	42	26.4	21.3	21.1	27.2	36.2	36.2			6.6	4.6	4.6	ST
17013	6/ 7/97	1046	2937.3	8835.7	11	22	11	21	26.2	24.8	22.6	27.6	33.9	36.0			5.0	4.8	3.5	ST
17014	6/ 7/97	1407	3000.1	8830.2	11	26	13	25	25.6	22.2	22.1	29.7	35.8	35.9			5.2	3.8	3.8	PN
17015	6/ 7/97	1801	2930.0	8830.1	11	50	25	49	26.1	21.1	20.7	27.7	36.3	36.3			6.0	4.4	4.6	PN
17016	6/ 7/97	2004	2928.6	8839.8	11	37	18	36	26.3	24.0	21.7	26.9	32.9	36.2			5.6	4.2	4.3	ST
17017	6/ 7/97	2255	2936.7	8826.5	11	41	20	40	26.0	22.6	21.3	28.5	36.1	36.2			5.6	4.9	4.8	ST
17018	6/ 8/97	0154	2941.7	8826.9	11	36	18	35	26.0	23.1	21.7	28.5	36.0	36.2			5.2	4.8	4.4	ST
17019	6/ 8/97	0459	2942.9	8845.2	11	14	7	13	25.5	25.5	23.2	26.1	26.3	32.5			5.3	5.8	3.4	ST
17020	6/ 8/97	0807	2947.6	8835.6	11	24	12	23	25.6	22.1	22.1	24.9	35.2	35.5			6.2	3.8	3.3	ST
17021	6/ 8/97	1121	2958.1	8847.9	11	10	5	9	25.9	25.6	25.0	22.8	24.8	28.6			6.0	4.8	3.4	ST
17022	6/ 8/97	1304	3003.3	8851.3	11	7	4	6	26.0	26.0	26.0	20.1	20.2	21.5			5.2	5.2	5.4	ST
17023	6/ 8/97	1400	3004.6	8849.7	11	11	5	10	26.2	25.7	24.2	21.2	24.3	30.2			6.0	5.8	3.2	ST
17024	6/16/97	2023	2954.6	8847.0	11	9	5	8	28.2	27.1	26.5	22.9	28.5	29.9			5.6	4.6	5.1	ST
17025	6/16/97	2203	2954.8	8834.7	11	24	12	23	28.0	26.0	24.5	23.0	32.1	33.0			5.0	5.1	4.6	ST
17026	6/17/97	0021	2953.2	8826.4	11	32	16	31	28.1	24.1	22.6	23.8	35.1	35.9			5.3	4.9	4.6	ST
17027	6/17/97	0221	2958.0	8828.0	11	29	14	28	28.1	25.8	22.7	31.8	31.7	35.8			6.0	5.9	3.7	ST
17028	6/17/97	0413	3006.1	8828.6	11	16	8	15	27.7	25.6	23.2	22.5	29.6	34.5			5.6	5.8	4.9	ST
17029	6/17/97	0536	3011.2	8824.7	11	12	5	11	28.0	26.2	27.8	21.4	28.9				5.5	5.2	5.6	ST
17030	7/ 8/97	0459	2913.9	8938.4	13	6	3	5	29.8	29.2	29.2	11.1		21.2			5.2	4.3	4.5	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17031	7/ 8/97	0703	2916.3	8951.7	13	5	2	4	29.5	30.0	30.1	11.4	12.6	15.2			7.4	6.2	5.2	ST
17032	7/ 8/97	1457	2901.6	9055.5	14	4	1	2	29.1	29.0	28.8	19.2	21.1	21.4			7.6	5.2	5.5	ST
17033	7/ 8/97	2007	2911.1	9124.5	15	4	2	3	28.8	29.1	29.4	10.6	12.9	16.3			7.0	6.1	5.9	ST
17034	7/ 9/97	0630	2908.1	9151.5	15	7	3	6	29.5	29.3	28.0	22.5	22.5	30.3			4.8	5.1	3.0	ST
17035	7/ 9/97	1250	2930.8	9227.2	16	5	2	4	30.2	29.7	29.7	19.8	20.7	21.1			5.6	5.0	5.4	ST
17036	7/ 9/97	1433	2931.7	9234.6	16	7	3	6	31.3	29.9	30.0	21.5	22.0	25.9			6.6	4.8	5.1	ST
17037	7/ 9/97	2035	2938.0	9249.0	16	3	2	3	30.8	30.7	30.8	25.0	25.1	25.1			6.2	6.2	6.0	ST
17038	7/ 9/97	2257	2937.5	9251.8	16	6	3	5	31.0	30.8	29.8	26.5	26.5	26.5			6.6	6.4	5.2	ST
17039	7/10/97	0131	2942.4	9304.4	17	6	3	5	29.9	29.9	30.0	26.3	26.3	26.3			5.0	4.5	5.3	ST
17040	7/10/97	0633	2945.3	9333.4	17	4	2	3	29.3	29.1	29.3	26.0	26.0	26.0			4.5	4.4	4.4	ST
17041	7/11/97	0158	2904.0	9015.9	14	6	3	5	29.8	29.7	29.7	16.8	18.9	23.3			6.8	4.7	3.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00001	6/13/97	2037	2959.6	8759.9	10	26	12	25	26.5	25.1	22.2	29.9	32.1	34.7		8.547	6.0	5.9	3.6	PN
00002	6/13/97	2336	2948.8	8800.7	11	35	17	35	26.4	25.7	21.9	31.9	35.5	35.6		0.381	5.7	5.6	4.8	ST
00003	6/14/97	159	2930.1	8800.1	11	43	21	42	26.7	24.9	22.2	34.5	35.9	36.0		0.396	5.4	5.7	4.6	PN
00004	6/14/97	416	2921.4	8807.8	11	82	41	81	26.5	23.1	19.9	33.4	36.2	36.3		0.476	5.6	6.1	4.6	ST
00005	6/14/97	846	2922.4	8823.1	11	57	28	57	26.5	23.2	21.2	36.5	36.0	36.3		0.525	5.8	5.6	5.1	ST
00007	6/14/97	1206	2915.2	8828.5	11	75	37	74	27.0	23.5	20.7	33.3	36.3	36.3		0.806	5.6	6.1	5.3	ST
00008	6/14/97	1343	2911.5	8834.5	11	63	31	62	26.9	23.5	21.2	34.8	36.2	36.3		1.270	5.7	6.1	6.0	ST
00009	6/14/97	1525	2907.7	8840.5	11	87	43	86	28.1	22.5	19.7	26.1	36.3	36.3		9.929	8.1	6.1	4.6	ST
00010	6/14/97	1811	2908.0	8854.1	11	57	31	57	27.2	22.9	19.5	24.4	36.1	36.3		3.346	5.8	5.0	4.1	ST
00011	6/14/97	1949	2905.0	8859.8	11	29	15	29	25.7	23.2	22.5	29.5	35.6	36.0		1.792	4.6	4.0	4.0	PN
00012	6/14/97	2111	2900.0	8900.0	11	72	35	71	25.7	21.9	18.6	29.4	36.2	36.3		5.707	4.4	4.3	3.8	PN
00013	6/15/97	12	2906.5	8842.7	11	92	46	92	28.2	22.0	19.3	19.9	36.2	36.3		1.000	8.7	4.6	4.2	ST
00015	6/15/97	848	2944.8	8802.2	11	35	17	34	26.5	25.7	21.8	32.2	35.5	35.8		0.322	4.4	5.7	4.2	ST
00016	6/15/97	1152	2949.1	8832.6	11	29	14	29	27.5	25.1	22.6	24.7	32.9	36.1		1.162	5.9	5.6	3.8	ST
00017	6/20/97	1924	2605.0	9707.9	21	15	6	13	23.6	23.0	21.7	36.0	36.0	36.0		6.422	5.8	5.9	5.6	ST
00018	6/20/97	2106	2602.5	9707.7	21	14	7	13	23.5	22.4	21.6	36.0	36.0	36.6		3.560	5.8	5.9	4.5	ST
00019	6/20/97	2321	2600.6	9659.4	21	27	13	26	25.5	21.6	21.3	36.2	36.1	36.1		0.755	5.6	5.5	4.7	PN
00020	6/21/97	204	2612.4	9658.0	21	27	13	27	26.7	24.6	21.2	36.0	35.7	36.1		0.515	5.4	5.6	5.9	ST
00021	6/21/97	323	2613.6	9703.2	21	19	10	18	26.4	26.5	21.5	36.0	36.1	36.1		0.423	5.6	5.7	6.1	ST
00022	6/21/97	507	2618.1	9657.2	21	35	17	35	26.6	21.7	21.2	36.0	36.2	36.1		0.491	5.7	5.9	5.7	ST
00023	6/21/97	911	2628.6	9705.2	21	22	11	21	26.4	26.3	21.5	36.0	36.0	36.1		0.464	5.7	5.6	6.1	ST
00025	6/21/97	1215	2633.8	9653.2	21	43	21	43	27.3	24.4	21.2	36.2	36.3	36.1		0.259	5.4	6.1	5.6	ST
00026	6/21/97	1430	2638.3	9659.5	21	39	19	39	27.3	24.4	21.2	36.0	35.9	36.1		0.259	5.6	5.9	5.7	ST
00027	6/21/97	1604	2638.6	9702.7	21	34	17	34	26.9	24.1	21.2	36.0	36.4	36.1		0.586	5.6	6.0	5.4	ST
00028	6/21/97	1851	2634.0	9713.8	21	17	9	16	22.9	21.9	21.5	36.0	36.0	36.0		1.382	5.6	5.9	5.7	ST
00029	6/21/97	2058	2631.4	9710.3	21	18	9	17	22.9	22.8	21.8	36.0	36.0	36.0		1.145	5.9	6.0	5.8	ST
00030	6/21/97	2303	2627.4	9657.3	21	36	18	36	26.9	22.1	21.2	36.0	36.0	36.1		0.520	5.7	5.9	5.7	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00031	6/22/97	113	2630.1	9659.8	21	35	17	35	26.7	22.9	21.3	36.0	36.1	36.0		0.506	5.7	5.9	5.6	PN
00032	6/22/97	543	2629.4	9625.9	21	101	50	100	27.0	22.4	17.4	36.0	36.2	36.2		0.388	5.7	6.4	3.5	ST
00033	6/22/97	1101	2638.3	9646.8	21	56	27	55	26.7	22.0	20.5	36.1	35.9	36.1		0.413	5.7	6.1	4.8	ST
00035	6/22/97	1457	2646.4	9641.0	21	87	43	87	26.8	21.7	19.1	36.1	36.1	36.8		0.376	3.9	4.4	2.8	ST
00036	6/22/97	1833	2643.6	9705.3	21	33	16	32	25.5	23.6	21.2	36.1	36.3	36.1		0.352	5.1	5.7	5.3	ST
00037	6/22/97	2059	2641.4	9709.3	21	24	12	23	24.0	22.5	21.4	36.0	36.3	36.1		0.567	6.0	5.9	5.4	ST
00038	6/22/97	2310	2649.1	9718.8	21	16	8	15	22.1	21.5	21.1	35.9	35.9	36.0		3.211	5.4	3.9	3.5	ST
00039	6/23/97	145	2653.7	9703.9	21	34	16	34	25.7	23.1	21.2	36.1	36.1	36.1		0.493	5.8	6.0	5.6	ST
00040	6/23/97	430	2646.2	9701.0	21	37	17	35	26.7	22.7	21.3	36.0	35.6	36.1		0.471	5.6	6.0	5.6	ST
00041	6/23/97	700	2641.1	9707.2	21	30	15	29	24.4	22.7	21.3	36.1	36.2	36.1		0.554	5.8	6.1	5.5	ST
00042	6/23/97	900	2650.0	9720.3	21	12	6	11	21.8	21.8	21.1	35.9	35.9	36.0		4.205	5.0	5.0	3.7	ST
00043	6/23/97	1102	2651.2	9712.4	21	26	13	25	23.1	21.6	21.4	35.9	36.0	36.1		1.802	5.7	5.9	5.6	ST
00044	6/23/97	1244	2700.7	9711.0	20	27	13	27	23.7	21.6	21.3	35.8	36.0	36.0		0.703	5.8	5.9	5.5	PN
00045	6/23/97	1441	2659.9	9659.8	21	42	21	42	26.5	24.9	21.1	36.1	36.2	36.1		0.466	5.7	6.0	5.3	PN
00046	6/23/97	1654	2653.3	9652.7	21	55	27	55	27.1	22.8	20.9	36.0	36.2	36.1		0.415	5.6	6.3	5.3	ST
00048	6/23/97	2056	2643.6	9657.2	21	41	20	40	27.0	23.5	21.0	36.1	36.2	36.1		0.459	5.5	6.0	5.5	ST
00049	6/23/97	2348	2652.0	9656.1	21	47	23	46	26.9	22.7	21.0	35.9	36.2	36.1		0.327	5.6	6.3	5.5	ST
00051	6/24/97	344	2706.2	9647.2	20	65	32	65	26.5	22.7	21.1	35.9	36.1	36.1		0.530	5.6	6.3	5.2	ST
00052	6/24/97	647	2659.9	9630.2	21	134	67	133	27.1	20.3	16.3	33.6	36.2	36.1		0.471	5.7	5.6	3.3	PN
00053	6/24/97	837	2700.4	9635.2	20	101	51	100	27.4	21.1	18.9	33.1	36.2	36.3		0.444	5.6	6.0	3.4	PN
00054	6/24/97	1105	2701.1	9637.6	20	95	47	94	27.5	21.3	19.3	33.1	36.2	36.3		0.413	5.6	6.1	3.7	ST
00055	6/24/97	1528	2721.8	9700.3	20	34	17	34	26.1	22.8	21.1	35.8	35.5	35.9		0.598	5.9	6.0	4.4	ST
00056	6/24/97	1916	2705.4	9721.0	20	13	6	13	24.2	23.5	22.5	35.6	35.8	35.8		0.779	6.0	6.0	5.0	ST
00057	6/24/97	2044	2703.9	9720.4	20	15	7	15	24.5	23.1	22.5	35.6	35.8	35.8		0.696	5.9	5.9	5.4	ST
00058	6/24/97	2158	2704.2	9718.6	20	16	8	15	25.0	23.4	22.0	35.6	35.7	35.7		0.530	6.0	5.9	4.5	ST
00059	6/24/97	2346	2659.2	9714.2	21	24	12	23	25.5	21.3	21.3	35.6	35.9	35.9		0.693	5.9	5.3	5.0	ST
00060	6/25/97	131	2700.9	9710.1	20	28	14	28	25.2	21.4	21.3	35.7	35.9	36.0		1.070	6.0	5.8	5.6	ST
00061	6/25/97	528	2718.1	9701.1	20	34	17	33	25.4	22.5	21.0	35.5	35.9	35.9		0.606	5.8	6.0	3.9	ST
00062	6/25/97	736	2719.1	9713.4	20	21	10	21	25.5	24.2	22.3	35.1	35.4	35.6		0.767	5.7	4.7	3.6	ST
00063	6/25/97	1013	2728.3	9712.2	20	16	8	16	26.5	25.9	26.0	34.8	34.9	35.2		0.471	5.2	5.3	5.0	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00064	6/25/97	1201	2729.8	9659.8	20	28	14	28	26.4	23.7	21.3	35.2	35.3	35.8		0.288	5.7	5.7	4.1	PN
00065	6/25/97	1505	2726.9	9637.3	20	64	32	64	28.0	21.6	20.9	33.7	35.9	36.2		0.234	5.5	6.0	5.3	ST
00067	6/25/97	1845	2727.9	9624.0	20	93	46	93	28.4	22.0	19.1	33.1	36.2	36.3		0.447	5.6	6.3	3.9	ST
00069	6/25/97	2245	2717.9	9625.8	20	114	57	113	28.5	21.0	17.0	32.3	36.1	36.2		0.432	5.6	5.8	3.1	ST
00071	6/26/97	308	2731.9	9628.5	20	80	40	80	28.2	21.5	20.5	32.8	36.1	36.2		0.410	5.4	6.1	5.1	PN
00072	6/26/97	455	2731.3	9624.8	20	86	43	86	28.1	22.0	19.4	33.1	36.2	36.3		0.415	5.5	6.2	4.1	ST
00073	6/26/97	812	2745.6	9630.3	20	47	23	47	27.1	22.2	21.4	34.4	36.0	36.0		0.381	5.2	5.6	4.6	ST
00074	6/26/97	1108	2747.0	9646.9	20	26	13	25	28.2	26.7	21.5	33.5	34.0	35.5		0.430	5.5	5.6	2.6	ST
00075	6/26/97	1251	2750.8	9647.8	20	23	11	23	28.2	27.0	22.0	33.6	34.0	35.2		0.383	5.6	5.5	1.9	ST
00076	6/26/97	1542	2759.9	9630.0	20	27	13	27	28.3	27.7	21.8	33.8	34.0	35.3		0.400	5.5	5.6	2.5	PN
00077	6/26/97	1730	2803.3	9635.8	19	20	10	20	29.1	27.9	22.4	32.6	34.0	35.1		1.006	5.4	5.5	2.2	ST
00078	6/26/97	2038	2759.2	9653.5	20	11	5	11	29.9	29.9	27.6	29.0	29.1	32.9		2.906	6.2	6.3	3.6	ST
00079	6/26/97	2228	2800.4	9647.8	19	15	7	14	28.4	28.4	27.5	33.7	33.7	34.2		1.272	5.9	5.9	5.2	ST
00080	6/27/97	214	2817.1	9626.0	19	10	5	9	30.0	28.5	28.0	26.1	31.5	32.0		2.654	6.0	5.6	4.5	ST
00081	6/27/97	343	2819.4	9621.8	19	13	7	13	29.0	28.1	27.7	30.0	30.0	32.2		1.353	5.7	5.7	5.2	ST
00082	6/27/97	508	2819.4	9619.9	19	14	7	14	28.3	27.8	27.5	31.5	31.9	32.3		1.341	5.6	5.6	4.9	PN
00083	6/27/97	748	2812.1	9630.6	19	14	7	14	28.6	28.4	27.9	29.9	31.3	32.4		1.919	5.8	5.8	5.0	ST
00084	6/27/97	927	2809.3	9624.8	19	23	11	23	27.8	28.0	22.2	32.4	33.8	35.1		1.138	5.6	5.5	1.7	ST
00085	6/27/97	1306	2811.9	9604.0	19	27	13	27	27.8	26.0	22.5	31.1	33.8	35.6		0.608	5.7	5.8	4.9	ST
00086	6/27/97	1447	2806.3	9603.3	19	34	17	34	28.3	24.5	21.7	34.6	35.8	36.0		0.335	5.4	5.8	4.3	ST
00087	6/27/97	1614	2759.9	9600.1	20	46	23	46	28.1	21.4	21.1	34.3	35.6	36.1		0.339	5.5	5.1	5.2	PN
00088	6/27/97	2037	2759.9	9616.8	20	34	17	33	28.9	24.7	21.5	33.6	34.7	35.9		0.554	5.6	5.8	3.9	ST
00089	6/27/97	2308	2747.6	9619.5	20	56	29	56	28.5	23.0	21.1	33.2	35.9	36.1		0.354	5.6	6.2	4.6	ST
00091	6/28/97	326	2745.7	9559.1	20	76	38	76	28.5	22.9	20.8	33.0	36.0	36.1		0.352	5.6	6.1	4.4	ST
00092	6/28/97	551	2743.8	9544.3	20	83	42	82	28.4	22.6	18.7	33.2	36.1	36.3		0.359	5.6	6.3	3.7	ST
00093	6/28/97	756	2745.0	9545.0	20	78	38	77	28.3	22.8	19.2	33.1	36.1	36.3		0.374	5.6	6.3	3.9	ST
00094	6/28/97	1108	2747.9	9532.3	20	89	44	89	29.0	21.8	18.7	31.4	36.1	36.3		0.376	5.3	5.8	3.6	ST
00096	6/28/97	1414	2751.8	9534.4	20	68	34	68	29.0	22.4	20.5	32.2	36.0	36.2		0.376	5.6	6.1	4.6	ST
00098	6/28/97	1730	2800.1	9529.8	19	55	28	55	29.3	22.9	21.1	31.8	36.0	36.1		0.359	5.6	6.1	4.7	PN
00099	6/28/97	2038	2750.2	9538.4	20	70	35	70	28.6	22.3	19.9	33.4	36.1	36.3		0.386	4.7	6.0	2.9	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00101	6/29/97	40	2802.4	9544.3	19	49	24	48	28.2	22.2	21.4	33.7	36.1	36.1		0.444	5.6	6.1	5.3	ST
00102	6/29/97	249	2814.0	9545.5	19	32	15	31	28.7	25.9	22.2	32.0	34.4	35.8		0.435	5.6	5.9	4.6	ST
00103	6/29/97	515	2818.9	9531.7	19	32	16	32	28.8	27.2	22.0	32.2	32.9	35.7		0.405	5.5	5.5	3.4	ST
00104	6/29/97	701	2816.9	9524.7	19	38	19	38	28.6	25.2	21.6	31.2	34.9	35.8		0.794	5.9	5.9	3.6	ST
00105	6/29/97	1034	2808.7	9536.3	19	42	21	42	28.4	24.0	21.7	33.1	35.2	36.0		0.332	5.6	5.9	4.6	ST
00106	6/29/97	1304	2811.9	9546.6	19	35	17	35	28.4	24.5	22.2	33.9	34.8	36.0		0.325	5.6	5.8	5.2	ST
00107	6/29/97	1559	2830.0	9559.9	19	14	7	14	29.8	28.1	28.0	29.6	32.2	32.6		1.673	5.9	5.7	5.4	PN
00108	6/29/97	1721	2833.6	9600.9	19	12	6	12	30.0	28.6	27.4	29.0	31.4	33.2		2.623	5.6	6.0	4.8	ST
00109	6/29/97	2032	2830.8	9556.2	19	15	7	14	29.3	28.0	26.3	30.5	32.5	33.3		2.120	6.0	5.5	3.0	ST
00110	6/29/97	2253	2816.0	9548.2	19	29	15	29	28.6	24.8	22.3	32.9	34.9	35.7		0.432	5.6	6.0	4.8	ST
00111	6/30/97	134	2824.4	9545.3	19	25	12	24	29.0	26.4	22.6	32.2	34.5	35.7		0.469	5.6	5.9	4.4	ST
00112	6/30/97	307	2830.6	9545.8	19	18	9	18	28.4	28.1	22.7	32.0	32.4	35.0		1.187	5.7	5.7	1.5	ST
00113	6/30/97	556	2834.7	9528.4	19	23	11	23	28.4	28.4	22.8	32.6	32.7	35.0		0.525	5.6	5.5	1.0	ST
00114	6/30/97	723	2829.9	9529.9	19	26	13	26	28.6	28.4	22.6	32.2	32.7	35.1		0.440	5.5	5.6	1.6	PN
00115	6/30/97	953	2837.9	9535.2	19	15	7	15	28.4	28.4	24.8	31.9	32.4	34.3		1.184	5.8	5.6	4.2	ST
00117	6/30/97	1343	2849.5	9521.3	19	12	6	12	29.0	28.9	23.9	31.2	35.2	34.2		5.399	5.3	5.1	0.2	ST
00118	6/30/97	1555	2838.3	9516.0	19	25	12	25	28.9	28.2	22.7	31.7	31.6	35.4		0.789	5.7	5.9	3.2	ST
00119	6/30/97	1721	2829.7	9512.9	19	32	16	32	29.4	28.0	22.0	31.0	32.6	35.6		1.011	5.9	5.7	3.4	ST
00120	6/30/97	2147	2808.3	9524.9	19	48	24	47	29.1	23.5	21.4	31.7	36.0	36.1		0.379	5.6	6.2	4.6	ST
00123	7/ 1/97	424	2825.3	9509.9	19	36	18	35	29.4	24.6	22.0	31.1	35.5	35.9		0.530	5.5	6.1	4.7	ST
00124	7/ 1/97	655	2830.1	9459.8	18	34	17	34	29.3	27.5	22.3	29.8	31.8	35.8		0.669	5.6	5.6	4.1	PN
00125	7/ 1/97	958	2818.8	9500.5	19	42	21	42	29.0	23.9	21.6	31.4	35.4	36.1		0.755	5.6	6.0	4.7	ST
00126	7/ 1/97	1254	2814.6	9502.2	19	47	23	47	29.1	23.5	21.7	31.6	35.6	36.1		0.532	5.7	6.1	5.0	ST
00129	7/ 1/97	1847	2800.2	9440.5	18	72	36	72	29.9	23.1	20.2	30.8	36.1	36.3		0.452	5.5	6.2	4.5	ST
00130	7/ 1/97	2130	2800.0	9500.2	19	82	41	81	29.3	22.0	19.9	31.6	36.1	36.3		0.461	5.6	6.2	4.6	PN
00131	7/ 2/97	202	2835.1	9457.7	18	30	15	30	29.3	29.1	22.6	30.0	30.9	35.8		0.527	5.6	5.9	4.5	ST
00132	7/ 2/97	512	2900.1	9459.8	18	17	8	16	29.0	28.7	24.1	31.4	32.5	34.8		2.002	5.7	5.6	4.1	PN
00133	7/ 3/97	2056	2904.9	9412.6	18	18	9	16	30.2	29.5	25.3	30.2	30.3	33.8		0.979	5.7	5.9	2.8	ST
00134	7/ 3/97	2348	2850.2	9422.4	18	25	12	24	29.7	29.2	23.4	30.4	30.9	35.6		0.606	5.7	5.9	2.9	ST
00135	7/ 4/97	0330	2832.4	9406.1	18	38	19	37	29.7	24.5	22.4	30.6	35.6	36.0		0.713	5.6	5.8	4.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00136	7/ 4/97	0716	2830.2	9429.9	18	38	18	36	29.6	27.8	22.0	29.8	31.7	35.9		0.635	5.5	5.6	3.5	PN
00137	7/ 4/97	0921	2838.4	9435.3	18	30	15	30	29.5	28.4	23.0	29.8	30.8	35.5		0.544	5.5	5.6	3.7	ST
00138	7/ 4/97	1305	2859.7	9429.8	18	19	9	19	29.7	29.3	24.8	31.0	31.3	34.7		0.786	5.7	5.7	3.8	PN
00139	7/ 4/97	1600	2858.0	9420.1	18	17	8	17	29.9	29.3	24.9	30.6	30.8	34.7		0.527	5.6	5.7	4.0	EV
00140	7/ 4/97	1810	2859.1	9405.1	18	20	10	19	29.9	29.5	24.4	30.3	30.3	35.1		0.955	5.8	5.8	2.7	ST
00141	7/ 4/97	1922	2856.7	9400.3	18	23	10	23	30.3	29.6	23.6	30.0	30.2	35.5		0.852	5.6	5.7	2.2	ST
00142	7/ 4/97	2120	2900.0	9400.0	18	20	9	19	30.0	29.6	24.8	30.3	30.4	34.9		1.197	5.6	5.7	2.5	PN
00143	7/ 5/97	0031	2909.1	9343.2	17	19	9	18	30.5	30.0	26.4	28.7	29.8	33.2		1.057	5.7	5.5	3.6	ST
00144	7/ 5/97	0355	2929.7	9358.9	17	12	6	12	28.8	28.8	28.5	30.9	30.9	30.8		3.106	4.8	4.6	4.4	PN
00145	7/ 5/97	0725	2930.1	9329.0	17	11	4	10	30.0	30.0	27.8	28.2	28.2	30.3		1.284	3.2	5.3	1.7	PN
00146	7/ 5/97	1005	2916.2	9328.7	17	14	7	14	30.1	29.9	25.8	28.7	28.9	32.7		1.687	5.7	5.7	1.2	ST
00147	7/ 5/97	1143	2914.4	9335.9	17	15	6	15	30.1	30.4	25.9	29.2	29.2	33.4		1.187	5.6	5.6	1.8	ST
00148	7/ 5/97	1504	2910.1	9357.4	17	17	9	17	31.3	29.9	25.8	29.9	30.1	33.9		0.674	5.7	5.7	2.5	ST
00149	7/ 5/97	1735	2856.8	9359.3	17	20	8	19	30.5	29.9	23.7	30.3	30.2	35.5		0.940	5.8	5.6	1.9	ST
00151	7/ 5/97	2150	2839.8	9352.1	17	28	15	28	30.6	30.0	23.0	30.2	33.8	35.9		0.589	5.6	5.6	3.4	ST
00152	7/ 6/97	0011	2837.0	9350.1	17	30	15	30	30.0	28.3	23.0	30.5	33.4	35.9		0.635	5.6	5.5	3.4	ST
00153	7/ 6/97	0205	2827.4	9357.2	17	45	22	44	30.5	24.4	22.0	30.3	35.6	36.1		0.596	5.4	5.8	5.1	PN
00157	7/ 6/97	0945	2759.9	9428.9	18	72	36	72	29.7	24.0	19.5	32.1	36.0	36.3		0.405	5.4	6.3	4.0	PN
00158	7/ 6/97	1210	2756.2	9419.4	18	117	59	117	30.0	21.4	17.4	31.2	36.2	36.3		0.396	5.4	6.3	3.3	ST
00159	7/ 6/97	1533	2757.6	9357.1	17	87	43	86	30.5	22.4	18.5	30.6	36.2	36.3		0.423	5.5	6.3	3.4	PN
00161	7/ 6/97	2017	2751.3	9411.4	18	150	62	150	30.3	21.4	15.7	31.6	36.3	36.1		0.479	5.4	6.2	3.3	ST
00162	7/ 6/97	2327	2801.5	9400.5	18	80	40	80	30.4	23.1	19.0	30.6	35.9	36.3		0.481	5.4	6.1	3.8	ST
00164	7/ 7/97	0434	2802.0	9349.5	17	76	38	74	30.0	22.6	18.5	30.5	36.1	36.3		0.610	5.5	6.2	3.4	ST
00165	7/ 7/97	0556	2757.1	9352.3	17	116	57	113	30.2	21.5	17.0	30.3	36.2	36.2		0.510	5.4	6.3	3.2	ST
00166	7/ 7/97	0915	2800.1	9329.8	17	96	48	95	30.5	22.1	18.0	31.0	36.2	36.3		0.398	5.4	6.3	3.3	PN
00167	7/ 7/97	1224	2802.1	9320.7	17	93	46	92	30.7	22.4	18.3	32.1	36.2	36.3		0.320	5.4	6.4	3.3	ST
00169	7/ 7/97	1648	2800.1	9259.8	16	108	54	107	30.8	22.1	18.1	19.4	36.2	36.3		0.606	5.5	6.3	3.3	PN
00170	7/ 7/97	1918	2809.4	9301.8	17	75	37	73	30.8	24.8	19.0	30.3	36.0	36.3		0.608	5.1	6.1	3.8	ST
00171	7/ 7/97	2244	2807.4	9322.4	17	78	39	78	30.6	23.0	18.7	30.4	36.2	36.3		0.540	5.4	6.3	3.2	ST
00173	7/ 8/97	0129	2815.7	9324.0	17	57	29	57	30.0	24.0	21.3	30.6	35.9	36.2		0.549	5.5	6.1	5.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00174	7/ 8/97	0444	2830.8	9330.4	17	42	21	41	30.5	24.2	21.9	28.6	35.1	36.2		0.659	5.3	3.2	4.1	PN
00175	7/ 8/97	0651	2835.1	9341.0	17	36	18	36	30.1	26.5	22.6	30.8	35.4	36.0		0.574	5.1	5.5	3.8	ST
00176	7/ 8/97	0950	2839.4	9324.3	17	32	16	32	30.5	27.9	22.6	28.5	34.3	36.1		0.896	5.4	5.4	3.7	ST
00177	7/ 8/97	1207	2842.3	9312.4	17	31	15	31	30.4	29.8	23.3	28.0	32.8	36.1		1.028	5.5	5.4	3.8	ST
00179	7/ 8/97	1558	2833.7	9302.2	17	42	21	41	30.6	28.5	22.6	28.5	35.2	36.1		0.689	5.5	5.5	4.5	ST
00181	7/ 8/97	1914	2834.8	9254.8	16	36	19	36	30.4	25.1	22.6	27.5	35.5	36.1		0.996	5.5	5.3	4.7	ST
00182	7/ 8/97	2043	2834.9	9254.1	16	36	18	36	30.4	25.7	22.6	27.5	35.0	36.1		1.023	5.5	5.2	4.7	ST
00183	7/ 8/97	2301	2842.0	9306.8	17	33	16	32	30.3	26.8	23.6	27.6	32.4	36.1		0.918	5.5	3.4	4.0	ST
00184	7/ 9/97	0108	2848.2	9315.9	17	27	13	26	30.4	28.8	23.6	27.7	30.1	36.0		0.830	5.4	4.7	3.1	ST
00187	7/ 9/97	0601	2900.6	9330.6	17	24	12	23	30.1	30.0	24.3	29.7	29.8	34.9		0.813	5.6	5.6	1.6	PN
00188	7/ 9/97	0845	2900.0	9259.6	16	25	12	24	30.1	30.1	24.1	28.7	29.3	34.9		0.901	5.5	5.5	0.5	PN
00189	7/ 9/97	1215	2929.9	9300.1	17	14	7	13	30.0	30.0	26.7	26.6	27.7	31.7		4.288	5.7	5.5	0.9	PN
00190	7/ 9/97	1418	2932.9	9310.1	17	13	6	12	29.9	29.9	26.5	28.7	28.9	31.8		3.011	5.5	5.4	0.3	ST
00192	7/ 9/97	1853	2933.7	9254.6	16	12	6	10	30.0	29.7	27.5	26.4	26.9	29.9		6.195	6.0	5.4	0.4	ST
00193	7/ 9/97	2055	2933.1	9249.9	16	11	6	11	30.8	29.6	27.7	26.5	26.5	29.7		5.287	6.5	5.7	0.1	ST
00194	7/ 9/97	2251	2930.3	9249.3	16	13	6	12	29.9	29.0	26.6	26.8	28.2	31.2		4.159	6.0	2.7	0.1	ST
00196	7/10/97	0126	2925.9	9252.9	16	15	7	14	30.6	30.1	25.4	27.0	27.0	33.5		1.123	5.5	5.5	0.2	ST
00199	7/10/97	0646	2913.2	9245.7	16	19	9	17	29.8	29.8	24.1	28.7	28.7	35.3		0.813	5.4	5.4	0.1	ST
00200	7/10/97	0914	2902.8	9244.0	16	24	13	24	30.3	29.8	24.1	28.9	29.2	35.6		0.992	5.5	5.4	0.9	ST
00203	7/10/97	1501	2859.9	9229.9	16	26	13	25	31.2	30.1	24.6	27.5	28.5	35.7		1.805	5.6	5.3	2.5	PN
00204	7/10/97	2015	2929.1	9229.6	16	10	4	8	30.6	29.6	29.1	21.3	24.9	27.3		7.917	6.3	4.8	1.6	ST/PN
00205	7/11/97	0017	2903.6	9220.3	16	20	11	20	30.6	25.4	24.4	27.6	33.6	35.6		1.473	5.6	0.7	1.0	ST
00206	7/11/97	0403	2907.6	9158.3	15	12	6	11	30.2	28.5	25.6	23.5	29.1	34.8		4.686	4.6	2.9	0.1	ST
00207	7/11/97	0630	2900.8	9147.9	15	15	7	14	30.1	29.9	24.9	25.8	26.1	35.3		4.203	5.4	5.3	0.1	ST
00208	7/11/97	0844	2900.2	9129.9	15	10	5	10	30.4	30.3	26.6	24.7	24.8	33.4		2.525	6.0	6.0	0.1	PN
00209	7/11/97	1231	2846.5	9150.2	15	29	14	28	30.2	28.1	23.6	26.2	29.8	36.1		1.314	5.8	4.6	3.1	ST
00210	7/11/97	1524	2848.0	9205.2	16	31	16	30	30.7	25.5	23.7	27.0	34.2	36.1		0.610	5.4	4.1	3.5	ST
00211	7/11/97	1819	2856.4	9203.1	16	23	11	22	31.8	27.0	23.7	25.8	32.5	36.0		3.009	6.1	3.1	1.4	ST/PN
00212	7/11/97	2242	2902.9	9237.2	16	25	12	24	30.7	28.9	24.5	28.2	29.8	35.6		1.272	5.6	4.9	1.8	ST
00213	7/12/97	0146	2913.0	9251.5	16	19	9	19	30.5	30.4	24.3	28.2	28.8	34.8		2.017	5.6	5.5	0.7	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00214	7/12/97	0525	2852.3	9246.9	16	27	12	25	30.6	29.6	24.5	28.3	29.6	35.9		0.698	5.1	5.1	2.8	ST
00215	7/12/97	0906	2829.6	9258.7	16	47	23	47	30.6	24.9	21.7	29.1	35.5	36.2		0.606	5.3	5.6	4.6	PN
00216	7/12/97	1142	2817.4	9301.8	17	58	28	58	30.2	25.9	20.2	30.7	35.4	36.3		0.391	5.3	5.7	3.6	ST
00218	7/12/97	1433	2813.3	9256.2	16	67	33	66	30.4	26.0	19.5	32.3	35.7	36.3		0.435	5.2	6.0	3.5	ST
00220	7/12/97	2007	2843.0	9230.8	16	34	17	33	31.2	26.5	23.2	28.3	34.9	36.2		0.723	5.4	5.3	4.1	ST
00221	7/12/97	2153	2839.1	9228.9	16	36	19	36	31.0	26.4	22.9	28.0	35.8	36.2		0.701	5.4	5.6	4.2	ST
00222	7/12/97	2335	2834.1	9224.3	16	40	20	40	30.8	26.0	22.2	26.8	35.4	36.2		1.221	5.1	5.3	4.5	ST
00223	7/13/97	0350	2844.3	9155.0	15	32	16	31	31.0	26.7	23.5	27.2	34.0	36.2		0.818	5.5	4.2	4.4	ST
00224	7/13/97	0844	2836.6	9232.0	16	36	17	36	30.5	25.8	22.9	30.8	35.3	36.2		0.559	5.2	5.4	4.4	ST
00225	7/13/97	1040	2831.5	9234.8	16	48	24	48	30.5	24.2	22.0	28.5	36.1	36.2		0.657	5.3	5.8	4.4	ST/PN
00228	7/13/97	1705	2808.1	9159.4	15	80	40	78	31.5	22.8	18.9	29.1	36.2	36.3		0.672	5.4	6.1	3.8	ST
00229	7/13/97	1810	2805.4	9159.7	15	84	41	84	31.2	22.6	19.4	29.4	36.2	36.3		0.730	5.4	6.1	4.2	PN
00230	7/13/97	2004	2808.2	9200.6	16	84	42	82	31.1	22.8	18.7	29.5	36.2	36.3		0.686	5.2	6.0	3.6	ST
00231	7/13/97	2329	2804.6	9134.5	15	95	47	94	30.5	22.9	18.2	32.0	36.2	36.3		0.481	5.2	6.1	3.3	ST
00232	7/14/97	0125	2810.3	9135.4	15	85	42	84	30.5	22.8	18.4	31.8	36.2	36.3		0.581	5.2	6.0	3.2	ST
00233	7/14/97	0434	2820.8	9138.8	15	63	30	62	30.3	23.7	18.9	30.3	36.1	36.3		0.586	5.2	6.0	3.0	ST
00235	7/14/97	0948	2803.6	9150.9	15	98	49	97	30.5	23.0	17.1	29.0	36.4	36.2		0.840	5.1	5.6	3.1	ST
00236	7/14/97	1344	2819.5	9136.7	15	66	33	65	30.3	23.5	18.9	29.6	36.2	36.3		1.026	5.2	6.0	2.9	ST
00238	7/14/97	1734	2830.8	9139.9	15	48	25	46	30.6	24.3	21.5	24.6	36.2	36.2		2.410	5.5	5.5	3.7	ST/PN
00240	7/14/97	2217	2835.6	9126.5	15	34	17	34	30.3	26.7	22.2	24.6	35.5	36.2		2.093	5.4	5.2	3.9	ST
00241	7/15/97	0002	2842.0	9121.3	15	22	11	22	30.2	27.9	24.5	26.5	31.8	35.9		1.961	5.5	3.5	0.2	ST
00242	7/15/97	0141	2846.7	9114.1	15	13	6	12	30.3	30.3	26.9	24.1	26.1	33.4		2.444	5.7	5.0	0.2	ST
00243	7/15/97	0352	2838.7	9115.8	15	24	12	23	29.6	27.9	24.0	25.0	34.0	35.9		1.709	5.4	4.6	0.3	ST
00244	7/15/97	0804	2815.2	9105.7	15	75	38	74	29.7	23.9	18.4	27.1	36.1	36.3		1.377	5.3	6.1	3.2	ST
00245	7/15/97	1242	2831.9	9049.2	14	28	14	27	30.3	27.1	23.1	24.8	34.9	36.2		1.534	5.5	4.0	1.6	ST/PN
00246	7/15/97	1404	2830.4	9047.3	14	32	16	32	30.4	26.2	22.5	25.2	35.3	36.2		2.755	5.6	3.3	1.7	ST
00247	7/15/97	1530	2824.8	9043.1	14	41	20	39	30.3	24.2	21.7	26.1	36.2	36.2		1.060	5.4	5.5	3.8	ST
00248	7/15/97	1808	2815.3	9038.1	14	68	33	67	30.5	24.6	19.7	26.6	36.1	36.3		1.070	5.4	5.7	3.9	ST
00249	7/15/97	2009	2813.5	9044.5	14	78	38	76	30.4	23.8	18.6	26.5	36.1	36.3		1.106	5.4	6.0	3.5	ST
00250	7/15/97	2236	2827.0	9047.2	14	38	18	38	30.3	26.4	22.0	25.6	35.3	36.2		1.314	5.4	3.7	3.8	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00251	7/16/97	0037	2832.8	9040.7	14	27	13	26	30.3	27.5	22.9	21.7	35.2	36.0		2.574	5.7	4.9	0.5	ST
00252	7/16/97	0111	2833.4	9042.1	14	21	10	21	30.4	28.1	24.9	21.7	34.8	35.7		2.398	5.4	4.8	2.1	ST
00253	7/16/97	0235	2835.1	9043.2	14	21	10	20	30.2	28.0	25.2	21.8	34.7	35.7		2.413	5.5	4.5	2.1	ST
00254	7/16/97	0626	2832.3	9029.0	14	36	18	36	30.2	26.0	22.2	22.2	35.6	36.2		2.232	5.3	3.5	1.4	ST/PN
00255	7/16/97	0955	2848.3	9100.5	15	11	5	10	30.0	30.0	27.3	24.8	25.0	32.4		2.691	5.0	5.0	0.2	PN
00256	7/16/97	1424	2900.8	9029.9	14	11	5	10	30.3	30.0	28.4	20.5	21.5	30.1		5.255	6.2	5.5	0.8	ST/PN
00257	7/16/97	1613	2852.5	9026.4	14	19	8	18	30.2	29.6	25.0	21.2	30.0	35.0		5.443	5.9	3.6	0.1	ST
00258	7/16/97	1838	2850.2	9020.2	14	25	12	24	30.4	28.6	23.3	22.6	34.0	35.8		3.568	5.7	4.7	0.1	ST

Table 2. Selected environmental parameters (continued)

PELICAN, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37460	6/29/97	1350	2900.0	9100.0	14	6	3	6	30.4	29.9	27.3	16.9	22.1	26.8	8.946		6.3	5.4	0.1	PN
37461	6/29/97	1727	2900.0	9130.0	15	10	5	10	29.9	29.6	28.3	12.4	24.1	31.6	4.428		6.8	4.7	4.1	PN
37462	6/29/97	1953	2855.0	9125.1	15	12	6	12	30.4	29.5	25.6	21.7	29.2	34.8	3.825		5.6	5.5	0.8	ST
37463	6/29/97	2100	2854.9	9125.3	15	12	6	12	30.3	29.4	25.6	21.3	29.4	34.8	4.237		5.9	5.5	0.8	ST
37464	6/29/97	2320	2844.0	9120.4	15	19	10	19	29.9	28.4	24.9	29.2	31.7	35.6	0.251		5.4	5.1	0.3	ST
37465	6/30/97	0128	2835.9	9116.4	15	30	15	30	30.2	26.9	23.0	28.7	34.5	36.2	0.487		5.3	4.8	2.6	ST
37466	6/30/97	0435	2838.9	9055.4	14	16	8	16	29.9	28.5	24.4	26.6	31.0	35.4	0.607		5.5	5.1	0.2	ST
37467	6/30/97	0835	2843.9	9120.2	15	19	10	19	29.9	29.2	25.1	29.5	30.4	35.5	0.376		5.3	5.2	0.3	ST
37468	6/30/97	1035	2835.2	9116.8	15	29	16	29	30.1	27.7	23.0	29.2	32.8	36.2	0.489		5.4	4.7	2.5	ST
37469	6/30/97	1321	2838.0	9055.2	14	16	8	16	30.1	28.6	24.5	27.9	30.7	35.4	0.530		5.3	4.8	0.8	ST
37470	6/30/97	1531	2829.9	9100.0	14	33	16	33	30.4	25.8	22.5	27.4	34.6	36.2	0.747		5.3	2.4	2.7	PN
37471	6/30/97	1638	2829.0	9057.4	14	35	17	35	30.0	26.1	22.2	28.5	34.8	36.2	0.756		5.2	3.3	3.3	ST
37472	6/30/97	1903	2831.1	9048.4	14	28	14	28	30.2	24.4	22.8	26.4	25.1	36.2	1.043		5.2	2.9	2.1	ST
37473	6/30/97	2048	2828.7	9057.2	14	35	17	35	30.0	26.1	22.2	28.5	34.8	36.2	0.671		5.2	3.2	3.2	ST
37474	6/30/97	2248	2830.6	9048.1	14	32	17	32	29.2	25.3	22.5	29.2	35.3	36.2	0.739		5.4	5.4	2.4	ST
37475	7/ 1/97	0151	2837.4	9032.8	14	22	11	22	30.1	27.9	23.9	25.8	35.1	35.8	1.560		5.4	5.1	2.1	ST
37476	7/ 1/97	0308	2837.5	9026.5	14	25	13	25	30.0	27.6	22.6	26.5	34.9	36.0	0.738		5.2	5.0	0.4	ST
37477	7/ 1/97	0501	2844.2	9016.9	14	27	14	27	29.3	28.1	22.0	24.5	34.2	36.1	1.383		5.2	4.5	0.6	ST
37478	7/ 1/97	0757	2829.9	9030.0	14	38	19	38	30.4	26.3	22.1	27.2	35.6	36.2	0.598		5.1	4.9	3.4	PN
37479	7/ 1/97	0943	2836.9	9032.7	14	23	12	23	30.1	28.2	23.2	25.3	35.0	35.9	2.802		5.2	5.0	1.0	ST
37480	7/ 1/97	1114	2837.3	9026.4	14	26	14	26	29.9	27.9	22.4	26.9	35.5	36.1	1.154		5.1	4.8	1.0	ST
37481	7/ 1/97	1314	2843.7	9017.2	14	28	14	28	30.2	28.1	22.0	27.1	33.4	36.1	0.684		5.1	4.2	0.7	ST
37482	7/ 1/97	1614	2856.6	9005.1	14	24	13	24	30.6	26.0	22.3	17.4	35.1	36.1	11.691		7.0	2.9	0.5	ST
37483	7/ 1/97	1737	2900.0	9000.0	13	24	12	24	30.4	26.2	22.4	18.4	34.7	36.0	16.389		6.3	3.0	0.8	PN
37484	7/ 1/97	2043	2856.6	9005.3	14	24	13	24	30.3	25.9	22.3	18.4	35.2	36.1	10.250		5.9	2.9	0.8	ST
37485	7/ 2/97	0005	2908.9	8945.9	13	17	8	17	30.4	27.5	23.3	18.5	30.5	35.5	11.158		5.9	3.0	0.0	ST
37486	7/ 2/97	0147	2906.6	8937.7	13	14	7	14	30.0	27.8	25.7	17.8	27.9	34.6	14.408		5.7	2.9	2.3	ST
37487	7/ 2/97	0623	2859.9	8929.9	13	15	7	15	29.7	28.3	23.1	14.2	27.3	25.6	17.470		5.9	3.0	2.1	PN
37488	7/ 2/97	0838	2906.3	8937.4	13	15	8	15	30.0	27.9	24.4	15.4	29.0	35.1	19.769		5.3	3.1	1.3	ST
37489	7/ 2/97	1036	2908.9	8946.0	13	18	9	18	29.7	26.9	22.9	18.8	32.5	35.8	17.119		5.7	2.5	0.1	ST
37490	7/ 2/97	1553	2859.9	9030.0	14	10	5	10	30.3	29.9	26.7	26.8	27.0	32.6	1.939		5.1	5.0	0.4	PN

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00001	6/20/97	2250	3010.1	8659.1	9	26	13	26	26.5	25.5	21.7	30.2	33.6	35.3		1.143	6.7	6.7	7.1	
00002	6/21/97	0718	3005.8	8657.4	9	50	25	50	27.4	22.4	20.9	29.3	34.9	36.3		0.698	5.4	5.3	4.9	TV
00003	6/21/97	0831	3005.6	8657.9	9	54	27	54	27.4	22.5	20.5	29.4	35.0	36.3		0.613	2.7	5.3	4.8	TV
00004	6/21/97	1015	3009.4	8657.8	9	32	17	32	27.8	25.4	21.2	29.0	33.6	36.1		0.679	4.5	11.1	4.8	TV
00005	6/21/97	1115	3008.4	8659.3	9	34	17	34	27.9	25.5	21.2	29.4	33.9	36.1		0.559	6.2	5.9	4.9	TV
00006	6/22/97	0718	3010.1	8648.8	9	31	16	31	27.7	24.9	21.4	29.2	33.8	36.0		0.706	2.9	5.5	5.4	TV
00007	6/22/97	0853	3009.8	8649.2	9	31	15	31	27.7	24.7	21.4	28.9	33.9	36.1		0.684	6.1	5.8	5.5	TV
00008	6/22/97	1017	3008.3	8649.2	9	44	22	43	27.7	24.4	20.9	28.5	35.0	36.3		0.647	6.2	6.0	5.1	TV
00009	6/22/97	1129	3007.5	8647.8	9	56	28	56	27.8	28.1	19.9	29.7	35.8	36.3		0.486	5.9	5.9	4.6	TV
00010	6/22/97	1241	3007.6	8647.2	9	48	24	48	28.2	24.1	20.2	28.4	36.2	36.3		0.567	2.4	5.9	4.7	TV
00011	6/22/97	1400	3007.1	8646.3	9	43	22	42	28.6	22.5	20.6	28.3	35.6	36.3		0.571	5.8	6.0	5.0	TV
00012	6/22/97	1530	3005.6	8644.2	9	55	27	55	28.9	27.4	20.0	29.2	36.1	36.3		0.466	5.7	6.3	4.5	TV
00013	6/22/97	1712	3004.8	8644.2	9	57	28	57	29.3	28.5	19.9	29.2	36.2	36.4		0.523	6.2	6.4	4.5	TV
00014	6/23/97	0710	2916.4	8542.7	8	67	33	67	27.7	23.3	17.0	33.7	35.8	36.3		0.273	6.1	6.2	3.3	TV
00015	6/23/97	0838	2916.1	8542.2	8	68	34	68	27.8	23.2	16.8	33.7	35.6	36.2		0.244	5.8	8.7	14.0	TV
00016	6/23/97	0955	2916.1	8542.2	8	75	37	74	27.9	21.9	16.8	33.7	35.9	36.2		0.232	6.1	5.9	3.3	TV
00017	6/23/97	1115	2914.4	8542.2	8	70	35	70	28.5	23.2	17.0	33.7	35.8	36.2		0.193	6.1	5.9	3.4	TV
00018	6/23/97	1216	2914.3	8541.6	8	67	34	67	29.0	23.9	17.0	33.8	35.5	36.2		0.193	2.2	8.7	3.4	TV
00019	6/23/97	1405	2915.2	8541.1	8	63	31	63	28.2	24.1	17.0	33.8	35.4	36.2		0.215	5.7	6.5	3.5	TV
00020	6/23/97	1506	2914.8	8541.2	8	60	31	60	28.8	24.2	17.7	33.7	35.3	36.5		0.215	5.2	6.3	4.3	TV
00021	6/23/97	1610	2914.6	8540.2	8	63	31	63	28.6	24.0	17.2	33.7	35.5	36.2		0.232	6.1	6.2	3.5	TV
00022	6/24/97	0715	2859.5	8529.0	8	67	34	67	27.8	23.7	16.3	33.7	35.5	36.3		0.273	6.2	6.4	3.6	TV
00023	6/24/97	0826	2859.0	8528.8	8	74	37	73	27.8	23.8	16.6	33.9	35.5	36.3		0.269	6.2	6.4	3.6	TV
00024	6/24/97	0944	2858.7	8528.5	8	108	53	108	27.9	19.4	14.0	34.0	36.5	35.8		0.239	6.2	4.9	3.3	TV
00025	6/24/97	1104	2859.5	8528.2	8	59	29	59	28.0	23.9	18.6	34.1	35.6	36.6		0.234	6.1	6.4	4.4	TV
00026	6/25/97	0713	2842.6	8426.4	6	32	16	32	27.6	26.8	25.3	36.2	36.3	36.4		0.156	5.9	5.9	6.0	TV
00027	6/25/97	0854	2842.4	8426.4	6	33	16	32	27.7	26.8	25.4	36.3	36.3	36.4		0.147	6.4	11.7	11.9	TV
00028	6/25/97	0956	2841.5	8427.5	6	35	17	35	27.9	27.3	25.4	36.2	36.3	36.4		0.144	6.1	11.7	15.5	TV
00029	6/25/97	1123	2841.1	8423.8	6	28	14	27	28.0	27.4	25.4	36.2	36.2	36.4		0.142				TV
00030	6/25/97	1217	2840.9	8423.5	6	26	13	26	28.0	27.4	25.4	36.1	36.2	36.4		0.129	5.5	5.8	6.7	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00031	6/25/97	1317	2840.7	8423.5	6	27	13	27	28.1	27.2	25.4	36.2	36.2	36.4		0.124	5.9	6.0	6.7	TV
00032	6/25/97	1410	2840.6	8423.9	6	29	15	29	27.9	27.0	25.4	36.3	36.3	36.4		0.151	5.9	6.0	6.5	TV
00033	6/25/97	1513	2840.3	8423.5	6	27	14	27	28.1	27.5	25.4	36.2	36.2	36.5		0.137	5.9	5.6	6.6	TV
00034	6/25/97	1603	2840.1	8423.9	6	29	14	29	28.5	27.5	25.5	36.1	36.3	36.4		0.147	5.0	8.0	11.4	TV
00035	6/26/97	0706	2830.8	8421.1	6	30	15	29	29.7	27.1	25.7	36.3	36.4	36.4		0.186	5.7	5.9	5.9	TV
00036	6/26/97	0831	2831.7	8420.1	6	27	14	27	27.7	26.6	25.8	36.3	36.5	36.4		0.176	5.9	6.0	6.2	TV
00037	6/26/97	0938	2832.3	8420.5	6	29	15	29	27.8	26.4	25.8	36.3	36.4	36.3		0.147	5.9	6.1	6.3	TV
00038	6/26/97	1036	2832.8	8420.9	6	28	14	27	28.5	27.4	25.9	36.2	36.2	36.3		0.144	5.7	5.9	6.6	TV
00039	6/26/97	1143	2833.8	8420.1	6	30	15	29	27.9	26.8	25.5	36.2	36.2	36.3		0.134	5.9	6.1	6.5	TV
00040	6/26/97	1255	2835.7	8420.5	6	29	14	29	28.4	27.1	25.4	36.3	36.3	36.4		0.124	5.9	6.0	6.4	TV
00041	6/26/97	1421	2837.7	8424.1	6	35	17	35	28.8	26.5	25.7	36.3	36.3	36.4		0.142	5.9	6.1	6.3	TV
00042	6/26/97	1555	2838.8	8422.7	6	33	16	33	28.7	27.0	25.6	35.6	36.4	36.4		0.156	6.0	7.6		TV
00043	6/26/97	1655	2839.3	8423.5	6	31	15	31	28.7	26.6	25.7	36.0	36.2	36.4		0.176	5.5	6.0	6.7	TV
00044	6/27/97	0712	2831.8	8419.0	6	28	14	27	27.7	26.5	26.0	36.4	36.3	36.4		0.181	5.9	6.1	6.4	TV
00045	6/27/97	0847	2832.9	8415.1	6	29	15	29	28.1	26.9	25.9	36.3	36.4	36.3		0.186	6.2	11.8	6.2	TV
00046	6/27/97	0946	2832.9	8414.8	6	30	15	29	28.3	26.9	25.8	36.3	36.2	36.4		0.176	5.7	8.1	12.0	TV
00047	6/27/97	1042	2833.3	8415.0	6	32	16	31	28.5	26.3	25.8	36.2	36.3	36.4		0.166				TV
00048	6/27/97	1225	2833.8	8415.8	6	26	13	26	28.8	26.9	25.9	36.2	36.5	36.3		0.156	5.6	6.3	7.2	TV
00049	6/27/97	1317	2834.2	8416.3	6	23	11	23	28.3	27.7	25.9	36.2	36.2	36.4		0.161	6.2			TV
00050	6/27/97	1416	2835.2	8415.6	6	25	12	25	29.0	27.6	25.8	36.3	36.2	36.4		0.169	5.7	6.0	6.7	TV
00051	6/27/97	1533	2837.2	8415.8	6	30	15	30	29.2	26.7	25.6	36.2	36.3	36.4		0.156	5.7	6.2	6.2	TV
00052	6/27/97	1624	2837.7	8416.4	6	27	14	27	29.0	27.6	25.7	35.9	36.4	36.4		0.178	4.5	5.9	6.8	TV
00053	6/28/97	0708	2829.7	8420.6	6	30	15	30	28.5	26.9	25.9	36.2	36.3	36.4		0.191	5.3	6.0	6.1	TV
00054	6/28/97	0805	2829.6	8422.1	6	34	16	33	28.6	27.4	25.3	36.0	36.3	36.4		0.176	3.1	5.3	5.8	TV
00055	6/28/97	0900	2829.2	8421.9	6	30	15	30	28.8	27.5	25.7	36.1	36.3	36.4		0.169	5.8	5.9	6.1	TV
00056	6/28/97	1027	2828.7	8422.2	6	30	15	30	28.8	27.8	25.5	36.0	36.3	36.4		0.149	6.2			TV
00057	6/28/97	1213	2827.0	8422.2	6	38	18	38	28.8	27.4	25.4	36.0	36.3	36.4		0.161	5.8	5.9	6.2	TV
00058	6/28/97	1312	2827.4	8420.4	6	43	20	42	28.8	26.6	25.4	36.0	36.4	36.3		0.166	5.6	6.0	6.1	TV
00059	6/28/97	1425	2826.7	8421.2	6	42	21	41	29.0	26.2	25.0	36.1	36.4	36.5		0.249	5.7	6.1	6.3	TV
00060	6/28/97	1517	2826.2	8420.7	6	44	23	44	29.4	25.8	25.1	36.0	36.4	36.4		0.151	5.7	6.1	6.1	TV
00061	6/28/97	1636	2826.8	8420.1	6	39	20	39	30.0	26.1	25.1	35.3	36.4	36.4		0.173				TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00062	6/29/97	0705	2824.8	8413.7	6	36	18	36	28.5	26.1	25.6	36.2	36.3	36.4		0.198	5.8	6.1	6.2	TV
00063	6/29/97	0835	2826.3	8419.3	6	33	16	33	28.9	27.5	25.5	36.0	36.3	36.4		0.151	5.8	6.0	5.9	TV
00064	6/29/97	0949	2827.2	8418.1	6	30	15	30	28.7	27.7	25.9	32.2	36.3	36.4		0.176	5.8	5.9	6.0	TV
00065	6/29/97	1049	2828.3	8418.8	6	30	15	30	29.8	27.1	25.9	36.7	36.3	36.4		0.122	5.8	6.1	6.2	TV
00066	6/29/97	1148	2828.3	8417.0	6	32	16	31	28.6	26.7	26.2	36.5	36.4	36.3		0.144	5.8	6.1	6.3	TV
00067	6/29/97	1240	2828.7	8416.9	6	28	14	28	28.8	26.3	26.1	36.2	36.4	36.3		0.161	5.6	6.0	6.2	TV
00068	6/29/97	1405	2827.8	8414.8	6	28	14	28	29.8	27.3	26.0	36.5	36.3	36.4		0.149	5.8	6.1	6.3	TV
00069	6/29/97	1502	2829.3	8415.2	6	28	14	28	29.8	27.3	26.0	36.7	36.2	36.4		0.159	5.6	6.0	6.3	TV
00070	6/30/97	0707	2820.8	8409.8	6	33	17	33	29.3	27.3	25.7	36.0	36.5	36.4		0.205	5.7	6.0	6.1	TV
00071	6/30/97	0815	2821.3	8408.1	6	32	16	32	29.1	27.6	25.9	36.2	36.5	36.4		0.166	5.8	6.0	6.2	TV
00072	6/30/97	0927	2821.3	8406.5	6	33	16	32	29.3	27.7	25.7	36.5	36.5	36.4		0.137	5.5	6.0	6.2	TV
00073	6/30/97	1031	2821.7	8406.7	6	38	19	38	29.2	27.1	25.7	36.4	36.6	36.4		0.154	5.8	6.0	6.3	TV
00074	6/30/97	1136	2821.8	8408.4	6	33	16	33	29.4	27.9	25.8	36.3	36.4	36.4		0.144	5.6	5.9	6.3	TV
00075	6/30/97	1252	2822.4	8409.3	6	34	17	34	29.5	27.3	25.8	36.5	36.3	36.4		0.129	5.8	6.1	6.4	TV
00076	6/30/97	1353	2822.1	8409.7	6	33	16	33	29.4	27.2	25.9	36.4	36.4	36.4		0.147	5.6	6.0	6.3	TV
00077	6/30/97	1500	2823.2	8406.7	6	34	16	34	29.8	28.0	25.7	36.6	36.4	36.4		0.147	5.6	5.8	6.4	TV
00078	6/30/97	1605	2823.8	8406.0	6	33	16	33	29.7	28.0	25.8	37.2	36.5	36.4		0.164	5.5	5.9	7.4	TV
00079	7/ 1/97	0707	2819.5	8408.0	6	38	19	38	29.0	26.1	25.9	36.1	36.4	36.4		0.166	5.7	6.2	6.2	TV
00080	7/ 1/97	0817	2819.4	8409.5	6	33	17	33	28.8	28.0	25.7	36.2	36.3	36.4		0.161	5.8	5.9	6.1	TV
00081	7/ 1/97	0938	2817.9	8406.5	6	36	18	35	29.2	27.6	25.9	36.3	36.4	36.4		0.156	5.8	6.0	6.2	TV
00082	7/ 1/97	1041	2817.4	8406.5	6	33	16	32	29.3	28.0	25.8	36.3	36.4	36.4		0.151	5.7	6.0	6.3	TV
00083	7/ 1/97	1213	2815.5	8410.0	6	38	19	38	29.2	27.8	25.3	36.1	36.4	36.4		0.129	5.6	5.9	6.4	TV
00084	7/ 1/97	1307	2814.6	8408.9	6	40	20	40	29.5	27.5	25.6	36.1	36.3	36.4		0.137	5.8	6.1	6.3	TV
00085	7/ 1/97	1402	2814.3	8409.0	6	33	17	33	29.6	28.1	25.6	36.2	36.4	36.4		0.147	5.7	5.9	6.3	TV
00086	7/ 1/97	1450	2814.4	8408.4	6	37	18	37	29.6	27.8	25.7	36.3	36.3	36.4		0.171	5.1	6.0	6.4	TV
00087	7/ 1/97	1547	2813.6	8410.0	6	39	20	39	29.4	27.3	25.4	36.1	36.3	36.4		0.156	5.5	6.1	6.4	TV
00088	7/ 6/97	0705	2432.0	8259.0	2	25	13	24	29.5	29.5	26.7	36.3	36.3	37.2		0.259	5.4	5.6	5.8	TV
00089	7/ 6/97	0846	2430.0	8258.0	2	29	14	29	29.1	29.0	25.5	36.1	36.1	37.2		0.166	5.7	5.7	5.9	TV
00090	7/ 6/97	0947	2430.0	8256.4	2	22	11	22	29.3	29.2	27.9	36.1	36.1	36.3		0.147	5.6	5.7	5.9	TV
00091	7/ 6/97	1108	2432.0	8257.2	2	22	11	22	29.8	29.6	26.6	36.3	36.3	36.4		0.200	5.7	5.7	6.0	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00092	7/ 6/97	1208	2432.5	8257.2	2	23	12	23	29.9	29.6	28.0	36.3	36.3	36.7		0.191	5.7	5.7	6.1	TV
00093	7/ 6/97	1317	2432.5	8256.3	2	21	10	21	30.1	29.7	29.2	36.3	36.3	36.3		0.195	5.6	5.7	5.8	TV
00094	7/ 6/97	1434	2431.5	8255.3	2	27	14	27	30.1	29.6	26.7	36.2	36.3	36.3		0.171	3.6	5.5	6.3	TV
00095	7/ 6/97	1611	2431.0	8253.2	2	22	11	22	30.4	29.5	29.2	36.3	36.3	36.4		0.225	5.2	5.2	5.7	TV
00096	7/ 6/97	1715	2431.5	8252.8	2	23	12	23	30.5	29.5	29.3	36.3	36.2	36.2		0.256	5.6	5.8	5.8	TV
00097	7/ 7/97	0735	2441.3	8245.9	2	24	12	24	29.6	29.6	26.9	36.3	36.2	36.4		0.256	5.9	5.4	6.3	TV
00098	7/ 7/97	0906	2442.5	8246.8	2	14	7	13	29.5	29.5	29.5	36.2	36.2	36.2		0.332	4.8	4.4	5.6	TV
00099	7/ 7/97	1030	2443.5	8246.6	2	26	12	26	29.8	29.5	26.3	36.3	36.3	36.4		0.195	5.4	5.6	6.3	TV
00100	7/ 7/97	1141	2443.1	8247.3	2	10	5	10	29.8	29.8	29.5	36.3	36.2	36.2		0.298	5.6	5.8	6.0	TV
00101	7/ 7/97	1250	2444.2	8247.0	2	24	12	24	29.9	29.6	26.5	36.2	36.2	36.3		0.220	4.4	5.4	6.2	TV
00102	7/ 7/97	1419	2443.8	8247.5	2	13	6	13	30.0	29.9	29.1	36.2	36.2	36.2		0.252	5.8	5.8	6.0	TV
00103	7/ 7/97	1513	2444.0	8247.7	2	18	9	18	29.9	29.8	28.5	36.2	36.2	36.2		0.225	5.8	5.8	6.4	TV
00104	7/ 7/97	1644	2443.6	8249.0	2	24	12	24	29.9	29.5	27.0	36.2	36.3	36.3		0.281	6.5	5.6	6.3	TV
00105	7/ 8/97	0743	2443.4	8250.5	2	16	8	16	29.7	29.7	29.2	36.2	36.2	36.2		0.454	6.4	5.7	5.4	TV
00106	7/ 8/97	0900	2443.3	8250.8	2	15	8	15	29.6	29.6	29.2	36.2	36.2	36.2		0.366	5.7	5.7	5.6	TV
00107	7/ 8/97	1012	2443.1	8252.1	2	13	7	13	30.0	29.8	29.5	36.3	36.2	36.2		0.342	5.3	5.5	5.6	TV
00108	7/ 8/97	1120	2442.8	8253.1	2	13	7	13	30.1	29.9	29.4	36.2	36.2	36.2		0.288	5.7	5.6	5.8	TV
00109	7/ 8/97	1233	2442.3	8254.0	2	13	6	13	30.1	29.7	29.7	36.3	36.3	36.3		0.242	5.7	5.8	5.8	TV
00110	7/ 8/97	1344	2442.2	8255.0	2	15	7	15	30.3	29.8	29.5	36.3	36.3	36.3		0.205	5.8	8.8	6.5	TV
00111	7/ 8/97	1554	2440.0	8259.8	2	19	9	19	30.1	29.6	29.4	36.3	36.3	36.3		0.249	5.6	5.6	5.8	TV
00112	7/ 8/97	1734	2440.0	8259.9	2	19	10	19	30.1	29.5	29.2	36.2	36.2	36.3		0.347	4.7	7.0	5.6	TV
00113	7/ 9/97	0713	2441.0	8300.5	2	20	10	20	29.7	29.7	29.5	36.2	36.2	36.2		0.354	3.6	5.1	5.3	TV
00114	7/ 9/97	0814	2440.5	8301.0	2	18	9	18	29.7	26.6	29.6	36.2	36.2	36.2		0.349	2.7	5.2	5.2	TV
00115	7/ 9/97	0905	2440.5	8301.4	2	18	9	18	29.7	29.7	29.7	36.2	36.2	36.2		0.344	2.6	5.1	5.4	TV
00116	7/ 9/97	1001	2440.0	8301.3	2	21	11	21	29.9	29.7	29.7	36.3	36.3	36.3		0.234	5.3	5.3	5.4	TV
00117	7/ 9/97	1109	2440.0	8303.6	2	16	8	16	30.0	29.8	29.7	36.2	36.2	36.2		0.232	5.5	5.6	5.7	TV
00118	7/ 9/97	1204	2439.6	8304.2	2	16	8	16	29.8	29.7	29.6	36.3	36.2	36.2		0.252	5.4	5.5	5.5	TV
00119	7/ 9/97	1252	2440.6	8304.2	2	17	8	17	30.1	29.7	29.7	36.0	36.2	36.2		0.239	4.1	5.1	5.6	TV
00120	7/ 9/97	1341	2441.1	8304.2	2	17	8	17	30.1	29.7	29.5	36.4	36.2	36.3		0.247	5.5	5.4	5.7	TV
00121	7/10/97	0749	2520.5	8339.8	3	79	39	78	29.9	22.6	18.1	35.4	36.2	36.4		0.154	5.8	6.7	4.1	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00122	7/10/97	0918	2521.6	8337.7	3	75	37	75	29.8	23.2	18.1	35.1	36.3	36.4		0.229	5.9	7.0	4.0	TV
00123	7/10/97	1152	2522.4	8336.9	3	77	40	77	30.3	22.8	18.2	35.1	36.1	36.4		0.139	6.0	7.0	4.0	TV
00124	7/10/97	1306	2522.5	8338.0	3	74	36	74	30.4	23.3	18.0	35.1	36.2	36.4		0.142	2.6	6.8	4.2	TV
00125	7/11/97	0749	2531.0	8338.9	3	78	40	77	29.8	22.8	18.4	35.6	36.2	36.5		0.147	5.5	6.9	4.2	TV
00126	7/11/97	0916	2533.0	8338.7	3	78	38	77	29.7	22.8	18.4	35.5	36.5	36.5		0.137	5.9	6.9	4.2	TV
00127	7/11/97	1117	2536.9	8339.5	3	80	40	80	30.6	23.2	18.4	35.2	36.1	36.5		0.124	5.8	6.7	4.2	TV
00128	7/11/97	1246	2538.0	8339.7	3	77	39	77	31.0	23.1	18.4	35.7	35.8	36.5		0.122	5.8	6.7	4.2	TV
00129	7/12/97	1219	2742.9	8410.2	5	54	28	54	30.2	24.8	17.8	35.6	36.5	36.1		0.132	5.9	6.7	4.5	TV
00130	7/12/97	1358	2744.9	8410.2	5	51	26	51	29.9	25.6	17.8	35.1	36.3	36.2		0.151	5.8	6.5	4.7	TV
00131	7/12/97	1515	2745.0	8410.2	5	51	26	51	30.0	26.8	18.6	35.5	36.4	36.2		0.149	5.8	6.3	4.9	TV
00132	7/12/97	1625	2745.1	8410.2	5	52	26	51	30.4	26.8	17.5	35.0	36.4	36.2		0.171	5.9	6.3	4.4	TV
00133	7/12/97	1723	2745.1	8410.3	5	49	25	49	30.3	27.1	20.1	35.1	36.3	37.2		0.181	5.8	6.2	6.0	TV
00134	7/13/97	0715	2743.0	8409.6	5	54	27	53	29.8	25.6	19.3	35.3	36.3	36.3		0.208	3.1	6.3	4.9	TV
00135	7/13/97	0854	2746.3	8409.8	5	52	26	51	29.7	25.3	19.9	35.0	36.3	36.2		0.195	5.7	6.5	5.2	TV
00136	7/13/97	0953	2746.7	8409.8	5	54	27	54	29.7	25.0	20.4	34.9	36.4	36.3		0.176	5.6	6.5	5.6	TV
00137	7/13/97	1057	2747.3	8409.7	5	52	26	52	29.8	24.9	20.4	34.9	36.3	36.2		0.159	2.8	6.7	5.5	TV
00138	7/13/97	1204	2747.7	8409.7	5	48	25	48	29.9	25.1	19.7	34.9	36.3	36.3		0.159	5.8	6.5	5.3	TV
00139	7/13/97	1412	2748.2	8409.1	5	50	25	50	26.9	25.3	19.5	37.3	36.4	36.2		0.056	4.6	6.5	5.1	TV
00140	7/13/97	1526	2748.7	8409.5	5	53	26	52	29.9	24.8	17.3	34.9	35.9	36.1		0.215	5.0	6.5	4.9	TV
00141	7/13/97	1632	2749.2	8409.2	5	51	25	51	30.0	24.1	17.9	34.9	35.9	36.4		0.215	5.8	6.4	4.5	TV
00142	7/14/97	0727	2830.5	8451.9	6	60	30	60	29.5	25.7	16.8	34.8	36.4	36.1		0.232	3.0	6.4	3.9	TV
00143	7/14/97	0902	2831.5	8454.7	6	69	34	68	29.5	24.3	16.5	35.1	36.3	36.1		0.193	5.9	6.5	3.7	TV
00144	7/14/97	1038	2834.6	8457.5	6	72	35	70	29.4	24.7	16.6	33.4	36.3	36.1		0.374	6.0	6.6	3.7	TV
00145	7/14/97	1243	2834.6	8458.1	6	76	38	76	29.5	24.7	16.6	33.3	36.3	36.2		0.296	6.0	6.5	3.7	TV
00146	7/14/97	1416	2835.5	8458.8	6	77	38	76	29.8	24.2	16.6	33.2	36.3	36.2		0.298	6.0	6.5	3.7	TV
00147	7/15/97	0710	2855.9	8516.7	8	68	34	67	29.7	23.7	16.1	29.4	36.1	36.1		0.813	6.0	6.3	3.4	TV
00148	7/15/97	0816	2855.3	8516.8	8	73	36	72	29.8	23.6	16.1	29.3	36.3	36.1		0.816	6.1	6.1	3.5	TV
00149	7/15/97	0951	2851.7	8516.8	8	93	45	92	29.9	21.7	15.6	29.4	36.2	36.1		0.762	6.1	5.6	3.5	TV
00150	7/15/97	1127	2855.8	8517.2	8	65	32	65	30.2	23.4	16.1	29.8	35.9	36.1		0.400	6.1	5.6	3.6	TV
00151	7/15/97	1312	2854.5	8517.8	8	66	33	66	30.5	23.3	16.0	30.4	36.1	36.2		0.376	6.0	5.8	7.6	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00152	7/15/97	1417	2854.6	8518.2	8	69	35	69	30.7	23.2	16.1	30.5	36.1	36.1		0.322	6.0	5.8	3.7	TV
00153	7/15/97	1538	2857.7	8518.7	8	62	30	62	31.0	24.6	16.3	30.5	36.2	36.1		0.469	3.0	6.4	3.7	TV
00154	7/15/97	1654	2856.6	8519.3	8	63	33	63	31.0	23.3	16.2	30.9	35.9	36.1		0.464	6.0	5.6	3.7	TV
00155	7/16/97	0722	2900.5	8532.0	8	87	44	87	30.5	22.3	16.0	27.7	36.3	36.1		1.306	6.1	6.0	3.7	TV
00156	7/16/97	0925	2905.0	8530.2	8	67	33	67	30.7	22.6	16.1	27.3	36.0	36.1		1.189	6.1	4.3	3.8	TV
00157	7/16/97	1033	2905.5	8530.2	8	68	34	67	30.6	22.6	15.9	27.7	36.0	36.1		1.360	6.1	4.0	3.7	TV
00158	7/17/97	0706	2919.3	8550.0	8	61	30	60	30.5	23.8	17.4	30.6	36.0	36.2		1.529	5.4	5.4	2.9	TV
00159	7/17/97	0849	2918.1	8551.5	8	64	32	63	30.8	23.1	17.5	30.6	35.8	36.2		1.184	5.5	4.9	3.0	TV
00160	7/17/97	1009	2918.6	8552.0	8	64	32	63	30.9	22.9	17.7	30.9	36.0	36.2		0.105	5.1	4.2	3.1	TV
00161	7/17/97	1121	2917.9	8552.5	8	67	33	66	31.2	23.4	17.7	30.5	36.2	36.5			5.4	5.6	3.1	TV
00162	7/17/97	1312	2916.4	8553.0	8	70	35	70	31.3	22.7	18.6	30.7	36.2	36.4			5.4	5.7	3.4	TV
00163	7/17/97	1503	2918.6	8554.0	8	63	32	63	31.0	23.3	18.2	30.5	36.2	36.3			5.5	5.5	3.2	TV
00164	7/17/97	1622	2919.6	8555.0	8	64	32	64	31.0	24.1	18.3	30.0	36.2	36.3			3.9	5.7	3.2	TV
00165	7/17/97	1727	2918.5	8555.5	8	74	37	74	31.0	22.7	17.5	29.8	36.2	36.3			5.0	5.6	3.1	TV
00166	7/26/97	0733	2702.8	9642.9	20	72	36	72	28.8	23.3	20.2	35.9	36.2	36.3			5.0	5.8	4.4	TV
00167	7/26/97	0923	2702.8	9642.7	20	71	36	71	29.0	23.1	20.2	35.9	36.1	36.3			5.0	5.8	4.5	TV
00168	7/26/97	1042	2702.5	9642.2	20	75	38	74	29.0	22.8	20.3	36.0	36.2	36.3			5.0	5.7	4.7	TV
00169	7/26/97	1229	2702.5	9642.5	20	65	32	65	29.6	23.9	20.6	35.9	36.1	36.2			4.6	5.8	5.0	TV
00170	7/26/97	1344	2702.5	9643.0	20	71	35	71	29.8	23.4	19.9	36.7	36.2	36.3			5.0	5.8	4.1	TV
00171	7/26/97	1501	2702.3	9642.7	20	72	36	72	29.9	23.4	20.5	35.8	36.1	36.3			4.3	5.7	4.9	TV
00172	7/26/97	1624	2702.0	9642.2	20	79	38	79	29.8	22.9	19.8	35.8	36.1	36.3			4.9	5.6	3.9	TV
00173	7/26/97	1734	2702.0	9642.0	20	71	34	71	29.8	23.5	20.2	35.8	36.1	36.3			5.0	5.8	4.6	TV
00174	7/27/97	0755	2726.1	9631.4	20	79	40	79	28.8	22.7	19.7	36.2	36.1	36.3			5.0	5.7	3.6	TV
00175	7/27/97	0937	2726.3	9631.3	20	74	36	73	28.9	23.9	20.4	36.2	36.1	36.2			4.3	5.6	4.7	TV
00176	7/27/97	1052	2726.2	9631.6	20	58	29	57	29.0	23.6	20.9	36.1	36.4	36.3			5.0	5.8	5.3	TV
00177	7/27/97	1222	2726.3	9631.7	20	63	32	63	29.1	23.5	20.9	36.1	36.0	36.2			4.7	6.2	5.4	TV
00178	7/27/97	1338	2726.5	9631.7	20	68	34	68	29.3	23.1	20.5	36.2	36.2	36.3			5.0	5.8	5.1	TV
00179	7/27/97	1455	2726.5	9631.4	20	64	32	64	29.4	23.6	20.8	36.0	36.1	36.2						TV
00180	7/27/97	1612	2726.5	9631.2	20	81	40	81	29.4	22.3	19.8	36.2	36.2	36.2			5.0	5.6	3.5	TV
00181	7/27/97	1810	2726.7	9631.3	20	81	39	81	29.3	22.1	19.7	36.2	36.1	36.3			3.4	5.6	3.4	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00182	7/28/97	0743	2735.6	9627.0	20	62	31	61	28.7	23.6	20.8	36.3	36.0	36.2			5.0	5.8	5.0	TV
00183	7/28/97	0925	2735.5	9627.2	20	61	31	60	28.6	23.7	20.8	36.3	36.0	36.2			3.4	5.6	5.4	TV
00184	7/28/97	1048	2734.8	9628.9	20	60	30	59	29.0	23.4	21.0	36.3	36.1	36.2			5.1	5.8	5.3	TV
00185	7/28/97	1300	2734.4	9628.4	20	58	29	57	29.3	23.3	21.1	36.1	36.1	36.2			3.0	5.8	5.5	TV
00186	7/28/97	1430	2734.1	9628.6	20	70	35	70	29.4	22.7	20.3	36.3	36.2	36.3			4.7	5.7	4.4	TV
00187	7/28/97	1607	2733.1	9628.7	20	58	29	58	29.3	23.7	21.1	36.2	36.0	36.2			3.0	5.9	5.4	TV
00188	7/28/97	1720	2732.6	9628.9	20	62	31	62	29.3	24.1	20.8	36.2	36.2	36.2			5.0	5.8	5.1	TV
00189	7/30/97	1154	2751.2	9416.3	99	100	50	99	30.2	22.7	19.7	35.0	36.3	36.4			4.9	5.8	4.0	TV
00190	7/30/97	1311	2751.4	9415.7	99	98	49	97	30.1	23.0	19.0	35.0	36.3	36.8			4.9	5.8	3.9	TV
00191	7/30/97	1434	2751.5	9415.3	99	77	39	77	30.2	24.9	21.2	35.1	36.4	36.4			4.9	5.9	5.6	TV
00192	7/30/97	1550	2752.5	9414.7	99	93	46	92	30.3	23.8	19.5	35.2	36.3	36.4			4.9	5.8	3.9	TV
00193	7/30/97	1653	2751.9	9414.2	99	91	45	91	30.3	23.7	19.3	35.2	36.4	36.5			4.9	5.8	7.2	TV
00194	7/31/97	0739	2751.0	9352.1	99	95	47	95	30.1	24.2	18.7	34.8	36.1	36.4			5.0	6.0	3.2	TV
00195	7/31/97	0942	2750.5	9350.3	99	84	42	84	30.0	24.3	19.1	34.8	36.2	36.4			5.0	6.0	3.4	TV
00196	7/31/97	1054	2751.0	9350.3	99	78	36	78	30.0	26.2	20.8	34.7	36.2	36.3			4.9	5.8	5.0	TV
00197	7/31/97	1215	2750.8	9351.4	99	78	39	77	30.1	25.2	21.4	34.9	36.1	36.3			3.2	5.8	5.6	TV
00198	7/31/97	1349	2751.5	9352.2	99	87	43	87	30.0	24.3	20.2	35.0	36.2	36.3			4.9	5.9	4.6	TV
00199	7/31/97	1510	2752.0	9351.4	99	66	33	66	30.0	27.0	21.8	35.0	36.2	36.2			4.9	5.6	5.6	TV
00200	7/31/97	1615	2752.3	9351.0	99	72	34	72	29.9	27.1	21.5	34.9	36.3	36.3			4.9	5.6	8.5	TV
00201	7/31/97	1803	2752.8	9350.6	99	77	35	77	30.0	27.2	21.2	34.8	36.1	36.2			4.9	5.5	5.3	TV
00202	8/ 1/97	0810	2752.5	9349.0	99	22	11	22	29.9	29.9	29.2	34.9	35.1	35.9			2.8	5.9	4.7	TV
00203	8/ 1/97	1026	2752.3	9349.5	99	43	20	42	29.8	29.6	24.8	35.1	35.9	36.2			2.1	4.3	5.7	TV
00204	8/ 1/97	1140	2752.0	9349.0	99	64	32	62	29.8	26.6	22.4	34.9	36.2	36.3			4.8	5.6	5.6	TV
00205	8/ 1/97	1302	2751.5	9347.8	99	93	46	92	29.8	23.8	19.2	34.9	36.2	36.3			4.9	5.9	5.5	TV
00206	8/ 1/97	1456	2753.0	9348.5	99	54	27	54	30.0	29.1	23.2	34.8	35.9	36.2			4.9	5.2	5.9	TV
00207	8/ 1/97	1613	2753.8	9349.3	99	74	36	74	30.0	25.9	21.0	34.8	36.3	36.3			4.6	5.9	7.6	TV
00208	8/ 2/97	0829	2754.6	9335.9	99	20	10	19	29.7	30.0	29.6	34.6	35.2	35.8			6.3	9.4	9.4	TV
00209	8/ 2/97	0959	2753.5	9337.0	99	85	42	84	29.8	24.7	18.1	32.7	36.1	36.8			5.0	5.9	3.1	TV
00210	8/ 2/97	1120	2753.0	9337.0	99	111	55	110	29.7	22.8	17.4	31.8	36.2	36.3			5.1	5.9	2.6	TV
00211	8/ 2/97	1315	2755.0	9337.1	99	53	25	52	29.8	28.3	23.1	35.1	35.9	36.2			2.6	5.3	5.8	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00212	8/ 2/97	1419	2757.9	9336.9	99	87	43	87	30.1	23.6	18.9	35.0	36.3	36.4			4.9	5.9	3.3	TV
00213	8/ 2/97	1546	2756.0	9335.5	99	61	30	61	30.3	27.5	22.6	34.4	36.0	36.3			4.9	5.5	6.0	TV
00214	8/ 2/97	1642	2755.5	9336.1	99	32	17	32	29.9	30.2	26.1	34.3	35.6	36.1			4.9	4.9	5.6	TV
00215	8/ 2/97	1812	2757.0	9335.6	99	55	27	55	30.3	28.4	22.8	34.7	36.0	36.3			4.9	5.3	5.8	TV
00216	8/ 3/97	0730	2818.8	9407.6	18	49	24	48	29.5	28.3	21.5	34.8	36.0	36.2			2.8	4.7	4.1	TV
00217	8/ 3/97	0844	2818.8	9407.8	18	50	24	49	29.5	27.2	21.4	34.8	36.1	36.2			4.9	5.3		TV
00218	8/ 3/97	1006	2819.7	9408.3	18	44	22	43	29.5	27.7	22.0	34.9	36.0	36.1			4.8	5.2	4.9	TV
00219	8/ 3/97	1111	2819.2	9408.5	18	43	21	42	29.7	27.6	22.0	35.3	35.4	36.1			4.7	4.8	4.7	TV
00220	8/ 3/97	1210	2819.7	9408.7	18	37	18	36	29.6	28.7	22.1	35.3	35.6	36.2			4.9	5.0	5.0	TV
00221	8/ 3/97	1340	2819.4	9409.0	18	37	18	37	29.6	28.5	22.1	34.9	35.6	36.1			4.9	5.0	5.7	TV
00222	8/ 3/97	1450	2819.5	9409.5	18	49	25	49	29.8	25.8	21.6	35.1	35.9	36.2			4.9	5.3	4.3	TV
00223	8/ 3/97	1607	2820.0	9409.8	18	46	23	46	29.8	26.5	22.0	35.3	35.7	36.1			5.0	5.0	4.9	TV
00224	8/ 3/97	1714	2819.8	9410.0	18	46	23	46	29.9	25.9	21.8	35.3	35.9	36.2			5.0	5.1	4.8	TV
00225	8/ 7/97	0737	2808.2	9330.0	17	57	28	56	29.9	29.0	21.7	35.1	36.1	36.2			6.4	7.0	7.4	TV
00226	8/ 7/97	0931	2808.3	9330.0	17	57	28	57	29.9	28.3	21.7	35.1	36.1	36.2			6.4	7.2	7.5	TV
00227	8/ 7/97	1103	2808.6	9329.5	17	54	26	54	29.9	28.7	21.9	35.1	36.1	36.2			6.4	7.0	7.7	TV
00228	8/ 7/97	1303	2808.7	9329.5	17	55	27	55	29.9	28.9	21.7	35.0	36.1	36.3			6.4	6.8	7.3	TV
00229	8/ 7/97	1429	2808.5	9328.9	17	58	28	58	30.0	28.0	21.7	35.0	36.1	36.3			6.4	6.9	7.5	TV
00230	8/ 7/97	1549	2808.3	9329.2	17	55	27	55	30.3	28.4	21.6	35.1	36.2	36.3			4.8	5.2	5.2	TV
00231	8/ 7/97	1719	2807.9	9329.0	17	66	33	66	30.2	25.5	20.6	35.2	36.1	36.2			4.8	5.3	4.7	TV
00232	8/ 8/97	0739	2753.7	9327.5	99	65	32	65	29.8	28.3	21.8	34.8	36.0	36.4			4.8	5.3	6.0	TV
00233	8/ 8/97	0907	2753.4	9327.0	99	77	38	77	29.8	27.7	21.0	34.9	36.2	36.4			4.9	5.7	5.3	TV
00234	8/ 8/97	1027	2751.8	9326.9	99	99	48	98	29.9	25.1	18.7	34.9	36.2	36.5			4.9	5.8	3.1	TV
00235	8/ 8/97	1143	2751.5	9326.5	99	110	55	110	30.1	24.0	18.2	34.9	36.1	37.0			4.9	5.8	2.8	TV
00236	8/ 8/97	1310	2751.6	9325.0	99	106	53	106	30.5	24.0	18.3	34.8	36.1	36.3			4.8	5.9	2.8	TV
00237	8/ 8/97	1618	2754.7	9325.0	99	96	46	96	30.4	24.5	18.9	34.9	36.2	36.3			4.9	5.8	3.4	TV
00238	8/ 8/97	1734	2754.7	9326.0	99	80	40	80	30.5	25.3	20.2	34.8	36.2	36.7			4.8	5.8	5.0	TV
00239	8/ 9/97	0738	2752.6	9317.8	99	49	24	49	30.0	29.3	23.3	35.1	36.0	36.3			4.8	5.1	5.8	TV
00240	8/ 9/97	0917	2753.2	9316.8	99	84	42	84	30.1	25.6	20.2	35.2	36.3	36.3			4.8	5.8	4.4	TV
00241	8/ 9/97	1053	2752.8	9317.0	99	70	35	70	30.0	27.0	21.7	35.0	36.1	36.2			4.9	5.6	5.4	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00242	8/ 9/97	1223	2752.8	9316.2	99	109	55	109	30.0	23.5	19.0	34.9	36.2	36.3			4.9	5.8	3.3	TV
00243	8/ 9/97	1406	2754.5	9317.0	99	100	50	100	30.1	24.0	19.1	35.0	36.3	36.3			4.6	5.8	3.4	TV
00244	8/ 9/97	1548	2755.0	9317.4	99	117	58	117	30.2	23.1	17.8	35.0	36.2	36.3			4.9	5.7	2.6	TV
00245	8/ 9/97	1712	2754.5	9318.2	99	62	30	62	30.2	27.8	22.9	35.0	36.3	36.2			4.9	5.4	5.7	TV
00246	8/10/97	0745	2750.9	9303.8	99	39	19	39	30.1	30.0	26.3	34.7	35.7	36.4			4.8	5.0	5.6	TV
00247	8/10/97	1058	2751.5	9304.3	99	76	38	76	30.3	26.4	21.4	34.9	36.1	36.3			2.2	5.7	5.3	TV
00248	8/10/97	1234	2751.1	9304.3	99	71	35	71	30.5	27.0	21.7	35.2	36.2	36.4			4.9	5.6	5.6	TV
00249	8/10/97	1413	2750.5	9303.6	99	109	54	109	30.6	23.0	19.9	35.1	36.3	36.4			4.8	5.7	3.7	TV
00250	8/10/97	1542	2750.7	9304.1	99	79	37	79	30.6	26.9	21.1	35.1	36.1	36.4			4.9	5.6	5.0	TV
00251	8/10/97	1653	2750.9	9304.3	99	78	39	78	30.6	26.0	21.4	35.1	36.3	36.4			4.9	5.8	5.2	TV
00252	8/10/97	1804	2750.3	9304.4	99	78	38	78	30.6	25.7	21.5	35.1	36.4	36.4			4.9	5.8	5.2	TV
00253	8/11/97	0752	2747.5	9303.7	99	73	37	73	30.2	26.8	21.8	35.1	36.2	36.2			4.9	5.7	5.5	TV
00254	8/11/97	0916	2747.9	9304.0	99	59	30	59	30.3	28.5	22.0	35.1	36.0	36.3			5.0	5.4	5.6	TV
00255	8/11/97	1043	2748.3	9304.0	99	78	39	78	30.4	25.7	21.5	35.1	36.1	36.4			4.7	5.8	5.1	TV
00256	8/11/97	1211	2748.1	9303.3	99	57	28	57	30.4	28.6	22.2	35.1	36.0	36.3			4.9	5.3	5.8	TV
00257	8/11/97	1324	2748.5	9303.1	99	57	31	57	30.4	27.6	22.6	35.1	36.1	36.3			4.9	5.5	5.7	TV
00258	8/11/97	1434	2748.8	9303.7	99	79	40	79	30.8	25.7	21.4	35.0	36.1	36.4			4.7	5.4	4.7	TV
00259	8/11/97	1553	2749.2	9303.6	99	75	37	75	31.0	26.9	21.7	35.1	36.3	36.3			4.4	5.4	5.2	TV
00260	8/11/97	1704	2749.7	9303.8	99	64	33	64	31.1	27.5	22.4	35.0	36.1	36.3			4.7	5.4	5.4	TV
00261	8/12/97	0742	2751.2	9255.0	99	94	47	94	30.1	24.2	20.2	35.0	36.3	36.5			4.9	5.8	4.0	TV
00262	8/12/97	0859	2751.0	9255.2	99	93	47	93	30.1	23.8	19.8	34.9	36.2	36.4			4.9	5.8	3.7	TV
00263	8/12/97	1018	2750.5	9253.9	99	116	58	116	30.1	22.5	18.0	34.9	36.3	36.4			4.9	5.7	2.9	TV
00264	8/12/97	1131	2750.0	9254.0	99	121	60	121	30.4	22.4	18.1	34.5	36.2	36.4			4.7	5.7	3.0	TV
00265	8/12/97	1302	2750.3	9253.6	99	127	64	127	30.5	22.5	17.7	34.7	36.2	36.4			4.8	5.7	2.9	TV
00266	8/12/97	1521	2750.6	9253.0	99	112	56	112	30.6	22.9	18.8	34.8	36.3	36.4			4.8	5.8	3.1	TV
00267	8/12/97	1645	2750.8	9252.1	99	111	55	111	30.7	22.9	18.7	34.7	36.2	36.3			4.9	5.7	3.0	TV
00268	8/13/97	0739	2803.5	9228.0	16	66	33	66	30.6	24.5	20.5	32.9	36.0	36.4			4.8	5.8	4.2	TV
00269	8/13/97	0904	2804.1	9227.5	16	82	41	82	30.5	23.6	19.2	33.0	36.2	36.3			4.1	5.8	3.4	TV
00270	8/13/97	1033	2801.7	9227.5	16	86	43	86	30.8	23.0	19.5	33.0	36.1	36.3			5.0	5.5	3.7	TV
00271	8/13/97	1207	2800.4	9227.0	16	91	44	91	30.9	22.8	19.1	32.9	36.2	36.4			5.0	5.7	3.3	TV
00272	8/13/97	1351	2800.7	9227.0	16	88	44	87	31.5	23.1	19.6	33.0	36.1	36.4			5.0	5.7	3.7	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00273	8/13/97	1512	2802.9	9226.9	16	80	40	80	31.3	23.8	19.8	33.0	36.2	36.4			5.0	5.8	3.9	TV
00274	8/13/97	1627	2802.4	9226.5	16	95	48	95	31.5	22.5	18.2	32.9	36.3	36.3			2.8	5.7	2.6	TV
00275	8/14/97	0735	2804.0	9152.0	15	88	44	88	30.5	22.9	17.8	32.1	36.0	36.3			4.8	5.4	2.6	TV
00276	8/14/97	0855	2804.3	9152.5	15	78	39	78	30.6	24.1	17.8	32.3	36.0	36.3			5.0	5.7	2.5	TV
00277	8/14/97	1016	2802.6	9153.0	15	89	44	89	30.8	23.7	17.6	33.3	36.1	36.3			4.9	5.7	2.7	TV
00278	8/14/97	1124	2802.4	9153.5	15	80	40	79	30.8	24.5	18.9	33.4	36.1	36.4			4.9	5.7	3.0	TV
00279	8/14/97	1249	2802.1	9154.0	15	90	45	90	30.9	23.3	17.6	33.5	36.2	36.3			5.0	5.7	2.7	TV
00280	8/14/97	1421	2804.8	9154.5	15	87	44	87	31.1	23.7	18.3	33.6	36.2	36.3			4.9	5.8	2.5	TV
00281	8/14/97	1610	2805.4	9159.2	15	76	38	76	31.2	25.6	19.6	33.3	36.4	36.3			4.9	5.6	3.5	TV
00282	8/14/97	1714	2804.7	9159.7	15	66	33	66	31.2	26.1	21.0	33.1	36.4	36.4			4.8	5.6	5.2	TV
00283	8/15/97	0737	2758.0	9201.9	99	72	36	72	30.7	25.2	20.9	33.3	36.5	36.3			4.9	5.6	4.7	TV
00284	8/15/97	0912	2757.5	9158.8	99	93	46	93	30.7	24.2	19.0	33.5	36.5	36.5			4.9	5.5	3.2	TV
00285	8/15/97	1040	2757.5	9157.9	99	107	53	107	30.8	23.4	17.4	33.5	36.4	36.3			4.9	5.4	2.8	TV
00286	8/15/97	1212	2758.5	9200.7	99	113	56	113	30.8	22.4	17.6	33.3	36.5	36.3			4.4	5.2	2.9	TV
00287	8/15/97	1333	2757.0	9201.4	99	57	27	57	30.7	26.9	22.7	33.1	36.3	36.5			4.9	5.4	5.2	TV
00288	8/15/97	1440	2756.5	9202.8	99	77	38	77	30.8	25.0	21.0	32.7	36.4	36.4			4.8	5.4	4.6	TV
00289	8/15/97	1556	2756.0	9201.9	99	83	41	83	30.8	24.7	19.6	32.7	36.5	36.4			4.9	5.5	3.7	TV
00290	8/15/97	1722	2755.5	9159.8	99	126	63	126	30.9	22.1	16.7	33.1	36.6	36.2			4.8	5.3	3.0	TV
00291	8/16/97	0746	2750.0	9148.0	99	108	54	108	30.5	24.1	17.0	34.0	36.4	36.2			4.7	5.6	3.1	TV
00292	8/16/97	0936	2750.3	9150.4	99	89	45	89	30.5	24.5	19.2	33.9	36.5	36.3			4.9	5.6	3.3	TV
00293	8/16/97	1118	2750.4	9150.5	99	77	38	76	30.6	25.7	20.7	33.8	36.4	36.3			4.9	5.6	4.5	TV
00294	8/16/97	1239	2750.8	9150.2	99	98	49	98	30.8	23.9	17.3	34.0	36.3	36.3			4.8	5.7	3.1	TV
00295	8/16/97	1402	2751.0	9149.0	99	99	50	99	31.0	23.7	17.6	33.9	36.3	36.4			4.9	5.8	3.1	TV
00296	8/16/97	1519	2751.3	9149.3	99	105	52	105	30.9	23.2	17.1	33.9	36.3	36.3			4.9	5.8	3.1	TV
00297	8/17/97	0742	2805.8	9101.5	15	65	32	65	30.9	24.6	20.8	29.8	36.2	36.7			5.0	5.6	4.1	TV
00298	8/17/97	0857	2805.6	9102.4	15	58	29	58	31.0	25.7	21.0	30.2	36.3	36.4			5.0	5.7	4.4	TV
00299	8/17/97	1022	2804.9	9103.0	15	89	42	89	31.0	23.0	18.3	30.5	36.1	36.3			5.1	5.7	2.8	TV
00300	8/17/97	1140	2804.8	9101.9	15	77	38	77	31.2	29.6	18.6	30.5	36.0	36.4			5.0	5.7	2.8	TV
00301	8/17/97	1246	2805.2	9101.5	15	64	32	64	31.1	24.6	21.1	30.6	36.3	36.3			5.0	5.7	4.4	TV
00302	8/17/97	1417	2807.6	9101.0	15	94	47	94	31.6	22.8	17.8	30.4	36.4	36.3			5.1	5.6	2.8	TV
00303	8/17/97	1539	2804.4	9100.5	15	83	42	83	31.3	23.2	18.4	30.6	36.1	36.4			5.0	5.7	2.8	TV

Table 2. Selected environmental parameters (continued)

ALABAMA INSHORE VESSELS, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
2301	7/15/97	0900	3000.4	8800.2	11	23	12	23	30.0	27.5	28.0	23.0	30.0	32.0			6.4	4.8	5.0	TV
2302	7/15/97	1050	2958.3	8800.6	11	32	16	32	31.0	29.0	30.0	17.0	28.0	28.0			7.0	6.2	4.8	TV
2303	7/15/97	1256	2958.2	8802.5	11	33	17	33	32.0	29.0	29.0	20.0	29.0	30.0			7.0	6.4	4.8	TV
2304	7/16/97	0909	2959.6	8744.8	10	30	15	30	32.0	28.5	28.5	20.0	29.0	29.0			7.0	4.8	5.0	TV
2305	7/16/97	1058	2958.6	8744.7	10	32	16	32	33.0	29.0	29.0	21.0	28.0	29.0			5.8	5.0	6.8	TV
2306	8/ 5/97	1005	2958.1	8804.5	11	27	13	27	29.5	28.0	28.0	29.0	32.0	32.0			6.2	5.2	5.6	TV
2307	8/ 6/97	0933	2957.5	8744.7	10	27	13	27	29.1	29.5	28.5	29.0	32.0	32.0			7.2	6.6	5.8	TV
2308	8/ 6/97	1136	2959.6	8745.7	10	27	13	27	30.0	29.0	28.5	28.0	31.0	32.0			7.0	6.2	5.6	TV
2309	8/20/97	1020	2958.1	8804.5	11	27	13	27	32.0	30.0	29.8	27.0	30.0	31.0			7.4	7.6	7.2	TV
2310	11/10/97	1357	3000.6	8741.8	10	27	14	27	21.0	21.0	22.0	32.0	32.0	33.0			7.0	6.6	7.0	TV

Table 2. Selected environmental parameters (continued)

CHAPMAN, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28001	9/ 7/97	0112	2600.1	9629.9	99	63	32	61	29.2	23.1	21.5	36.0	36.4	36.2			6.2	7.0	6.9	PN
28002	9/ 7/97	0555	2600.1	9700.0	21	27	13	26	28.8	28.7	28.6	36.3	36.3	36.3			5.3	6.2	6.0	PN
28003	9/ 7/97	0957	2629.6	9659.9	21	34	16	33	29.0	28.9	28.8	36.3	36.3	36.3			3.5	6.0		PN
28004	9/ 7/97	1337	2629.8	9630.3	21	79	37	77	29.7	23.4	19.1	36.1	36.0	36.4			6.3	7.6	4.6	PN
28005	9/ 7/97	1931	2659.9	9640.1	21	85	42	84	29.6	22.9	19.8	36.0	36.3	36.3			6.2	7.7	7.2	PN
28006	9/ 7/97	2330	2700.0	9712.0	20	27	13	25	29.4	29.3	29.3	36.2	36.2	36.2			6.4	6.4	6.2	PN
28007	9/ 8/97	0352	2729.6	9700.1	20	28	14	27	29.5	29.5	29.4	36.1	36.1	36.2			3.5	6.1	5.9	PN
28008	9/ 8/97	0738	2730.0	9630.3	20	71	35	70	29.4	24.1	20.6	36.2	36.3	36.2			6.5	7.5	6.0	PN
28009	9/ 8/97	1139	2735.1	9600.2	20	138	68	137	29.8	21.8	17.0	36.0	36.2	36.4			6.5	6.9	3.9	PN
28010	9/ 8/97	1632	2759.9	9630.0	20	27	12	25	30.5	29.9	29.9	35.5	35.5	35.5			3.8	6.5	11.4	PN
28011	9/ 8/97	2014	2800.0	9600.5	19	44	22	42	29.8	29.4	24.7	35.6	36.1	36.3			6.2	6.4	4.6	PN
28012	9/ 8/97	2357	2819.9	9619.9	19	16	8	14	30.2	30.2	30.1	33.1	33.1	33.4			6.5	10.9	8.9	PN
28013	9/ 9/97	0321	2829.9	9600.2	19	15	7	14	30.2	30.2	30.2	31.6	31.6	31.6			3.8	6.6	6.8	PN
28014	9/ 9/97	0715	2829.8	9530.2	19	26	13	25	30.0	30.0	30.0	34.6	34.5	34.6			3.4	6.2	6.2	PN
28015	9/ 9/97	1107	2800.0	9530.0	19	53	26	51	29.5	29.4	23.0	36.0	36.0	36.3			5.0	6.4	6.2	PN
28016	9/ 9/97	1343	2745.1	9529.9	99	103	50	101	30.4	25.9	22.2	36.0	36.5	36.5			6.4	7.6	7.0	PN
28017	9/ 9/97	1746	2800.0	9500.3	19	78	38	77	30.2	28.4	21.0	36.0	36.2	36.5			6.1	6.6	6.9	PN
28018	9/ 9/97	2127	2800.0	9430.2	18	68	34	67	29.7	27.5	21.5	36.1	36.2	36.4			6.4	7.2	6.7	PN
28019	9/10/97	0125	2829.9	9430.0	18	37	18	36	30.0	29.8	24.0	33.7	34.9	36.0			3.3	6.2	5.1	PN
28020	9/10/97	0525	2830.0	9459.9	18	33	16	32	29.9	29.6	26.5	34.6	35.2	35.8			3.6	6.0	5.1	PN
28021	9/10/97	0926	2859.8	9500.1	19	17	7	15	29.7	30.0	30.1	32.3	32.6	33.0			6.1	9.5	12.1	PN
28022	9/10/97	1308	2859.9	9430.0	18	19	8	17	30.1	30.0	30.0	32.7	32.8	32.9			6.5	6.7	6.6	PN
28023	9/10/97	1723	2925.0	9430.1	18	11	5	10	29.7	29.6	29.9	27.9	28.1	29.5			3.8	4.0	6.4	PN
28024	9/10/97	2114	2929.5	9400.3	18	13	6	12	30.0	29.7	30.0	28.1	29.4	30.7			7.1	7.0	5.5	PN
28025	9/11/97	0053	2900.1	9359.5	17	20	10	19	30.0	30.0	30.1	32.4	32.4	33.5			6.0	9.9	6.1	PN
28026	9/11/97	0504	2829.9	9359.9	17	40	20	39	29.6	28.9	23.0	35.2	36.0	36.1			3.4	6.5		PN
28027	9/11/97	0915	2800.1	9400.0	18	77	38	76	29.7	27.2	20.7	36.1	36.1	36.3			6.5	7.4	5.2	PN
28028	9/11/97	1252	2759.9	9330.1	99	90	44	89	30.0	23.8	19.4	34.0	36.1	36.3			6.5	6.6	4.3	PN
28029	9/11/97	1703	2830.0	9329.9	17	41	19	38	30.3	29.7	23.0	35.4	36.0	36.5			6.1	6.4	7.1	PN
28030	9/11/97	2133	2902.0	9329.2	17	21	10	20	29.9	29.9	29.8	30.8	32.2	34.4			6.5	6.2	3.9	PN

Table 2. Selected environmental parameters (continued)

CHAPMAN, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28031	9/12/97	0106	2930.0	9330.0	17	11	5	10	29.4	29.6	29.8	25.6	25.9	27.6			6.6	6.7	5.2	PN
28032	9/12/97	0456	2930.0	9300.0	17	14	7	13	29.3	29.5	29.7	27.1	27.3	32.1			6.4	6.4	4.4	PN
28033	9/12/97	0907	2900.3	9300.2	17	24	12	23	29.6	29.8	26.2	31.8	33.0	35.7			6.1	6.1	2.2	PN
28034	9/12/97	1316	2830.2	9300.0	17	43	22	41	30.0	29.8	22.5	33.1	35.9	36.2			5.5	7.6	4.9	PN
28035	9/12/97	1735	2800.2	9259.9	16	101	50	100	30.1	22.5	19.3	36.1	36.2	36.3			6.5	7.1	4.0	PN
28036	9/12/97	2107	2759.8	9230.2	99	104	52	103	30.0	22.3	18.2	35.8	36.2	36.4			6.3	7.0	4.2	PN
28037	9/13/97	0101	2829.9	9230.1	16	49	24	48	29.5	26.3	21.7	33.9	36.1	36.2			6.1	6.8		PN
28038	9/13/97	0459	2859.5	9230.1	16	25	13	24	29.4	29.7	26.7	34.1	35.1	35.8			3.1		4.6	PN
28039	9/13/97	0827	2925.1	9229.9	16	12	5	10	29.0	29.4	29.8	24.0	27.6	29.8			5.9	7.9	10.8	PN
28040	9/13/97	1340	2900.2	9200.1	16	19	9	18	29.8	29.9	29.2	32.9	34.3	35.3			3.1	11.5	5.6	PN
28041	9/13/97	1753	2830.1	9159.9	15	47	23	45	30.0	29.9	22.7	31.1	35.6	36.1			6.5	6.5	6.2	PN
28042	9/13/97	2155	2800.1	9200.0	16	111	55	110	30.0	21.1	18.5	30.4	36.3	36.4			6.6	4.9	4.3	PN
28043	9/14/97	0145	2800.0	9130.2	15	154	74	148	29.9	20.1	17.5	33.5	36.4	36.3						PN
28044	9/14/97	0544	2830.1	9130.0	15	43	21	42	29.4	29.1	22.5	29.1	35.3	36.2						PN
28045	9/14/97	1038	2800.4	9100.1	15	135	67	132	30.0	21.4	18.0	32.9	36.3	36.3						PN
28046	9/14/97	1415	2804.9	9030.2	14	136	69	136	30.1	21.3	16.7	34.8	36.3	36.2						PN
28047	9/14/97	1808	2820.1	9000.0	14	104	52	102	29.8	23.2	18.8	32.1	36.4	36.4						PN
28048	9/14/97	1945	2830.0	9000.0	14	79	39	77	31.0	24.1	20.4	21.4	36.1	36.4						PN
28049	9/14/97	2344	2835.2	8930.1	13	86	43	84	30.2	23.5	19.9	27.5	36.4	36.4			5.4	6.8	5.2	PN
28050	9/15/97	0529	2904.6	8858.7	11	39	19	38	29.4	29.7	22.5	21.2	35.1	36.2			3.6	6.3	2.9	PN
28051	9/15/97	0932	2913.0	8830.0	11	113	56	112	28.8	21.2	18.0	32.3	36.4	36.4			4.0	6.3	4.2	PN
28052	9/15/97	1403	2914.9	8800.1	11	236	100	200	29.4	19.1	14.0	31.8	36.4	35.8			6.8	4.4	4.3	PN
28053	9/15/97	1836	2930.0	8730.0	10	66	32	65	29.0	24.3	20.4	33.5	36.3	36.4			5.6	7.0	8.2	PN
28054	9/15/97	2205	2930.0	8800.0	11	42	21	41	29.1	26.7	22.5	33.5	35.9	36.4			4.9	6.8	5.6	PN
28055	9/16/97	0152	2930.0	8829.8	11	48	24	47	29.1	23.8	22.3	31.6	36.2	36.4			4.8	6.9	0.1	PN
28085	9/17/97	1247	3014.7	8730.3	10	11	4	8	29.6	29.0	29.0	31.7	32.2	32.4			5.2	6.6	7.9	PN
28086	9/17/97	1622	3020.0	8659.2	9	17	8	16	29.3	28.6	27.7	32.9	33.3	34.2			6.7	6.8	6.1	PN
28087	9/17/97	1952	3020.0	8630.0	9	24	12	23	28.8	28.5	27.9	32.9	33.6	34.3			6.5	6.9	6.7	PN
28088	9/17/97	2328	3000.1	8600.1	9	30	15	29	28.9	28.7	23.6	33.6	33.6	36.3			2.7	6.4	6.6	PN
28089	9/18/97	0315	2930.1	8600.1	9	54	27	53	29.2	26.6	22.3	34.0	36.0	36.6			6.5	7.0	5.9	PN

Table 2. Selected environmental parameters (continued)

CHAPMAN, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28090	9/18/97	0648	2929.9	8629.9	99	192	96	191	29.0	18.8	15.2	33.9	36.5	36.0			6.6	4.4	4.5	PN
28091	9/18/97	1202	2959.9	8629.9	9	53	26	51	28.7	25.0	22.0	33.6	36.0	36.4			6.2	6.4	6.3	PN
28092	9/18/97	1600	2948.1	8700.0	10	176	87	174	29.5	19.5	15.6	33.3	36.4	36.1			6.7	4.7	4.2	PN
28093	9/18/97	1813	3000.1	8659.9	9	66	33	65	29.1	24.4	21.2	33.6	36.2	36.4			6.3	7.1	5.5	PN
28094	9/18/97	2227	3000.2	8729.2	10	25	13	24	29.4	28.9	26.5	33.3	33.4	35.6			3.7	6.0	6.9	PN
28095	9/23/97	1011	2912.2	8600.5	99	186	92	185	29.4	19.5	15.1	34.9	36.5	36.0			6.6	4.8	4.2	PN
28096	9/23/97	1501	2900.1	8530.1	8	69	35	68	29.2	26.4	21.7	34.1	36.5	36.4			6.4	7.3	6.0	PN
28097	9/23/97	1826	2840.1	8529.9	8	173	86	171	29.3	20.6	15.8	34.8	36.4	36.1			6.6	5.5	4.0	PN
28098	9/23/97	2250	2830.3	8500.4	8	100	50	99	29.2	22.6	19.5	34.8	36.5	36.4			6.6	6.9	4.3	PN
28099	9/24/97	0326	2801.0	8459.9	6	238	100	200	29.3	19.6	14.9	35.1	36.5	36.0			6.5	4.8	4.2	PN
28100	9/24/97	0928	2730.0	8429.1	5	123	61	123	29.1	23.0	18.4	34.7	36.6	36.4			6.5	6.9	4.2	PN
28101	9/24/97	1301	2730.0	8400.0	5	60	30	59	29.3	26.3	19.9	34.7	36.3	36.4			6.6	7.5	4.5	PN
28102	9/24/97	1639	2730.0	8330.2	5	40	20	39	29.3	29.6	20.7	34.7	36.0	36.2			6.4	6.8	4.6	PN
28103	9/24/97	2018	2730.0	8300.1	5	17	8	16	29.8	30.1	29.8	35.9	36.1	36.3			6.1	6.1	6.4	PN
28104	9/25/97	0028	2800.0	8300.0	6	12	6	12	29.8	29.8	29.8	36.3	36.3	36.3			6.7	8.8	7.1	PN
28105	9/25/97	0419	2759.8	8330.0	5	31	15	30	29.3	29.8	29.8	34.9	36.1	36.2			5.6	7.5	5.8	PN
28106	9/25/97	0801	2759.9	8359.8	5	46	23	46	29.5	29.9	20.6	35.4	36.3	36.3			6.5	6.7	4.9	PN
28107	9/25/97	1144	2800.6	8429.3	6	74	37	73	29.2	24.1	19.9	34.8	36.4	36.3			6.4	7.1	3.7	PN
28108	9/25/97	1616	2830.1	8429.7	6	48	23	47	29.4	22.8	21.3	34.8	36.6	36.4			6.5	6.8	4.7	PN
28109	9/25/97	1950	2830.0	8400.4	6	34	17	33	29.5	29.6	26.8	35.3	35.7	36.3			6.5	6.5	4.6	PN
28110	9/25/97	2321	2830.0	8330.2	6	24	12	23	29.7	29.7	29.8	36.0	36.0	36.1			5.9	5.2	5.6	PN
28111	9/26/97	0244	2830.0	8302.2	6	11	6	10	29.5	29.5	29.5	37.7	35.7	35.7			5.1	6.6	6.1	PN
28112	9/26/97	0606	2849.6	8312.5	6	11	5	10	29.5	29.5	29.5	35.3	35.3	35.3			5.1	6.6	7.2	PN
28113	9/26/97	0853	2859.6	8330.1	6	17	8	16	29.6	29.6	29.6	35.8	35.9	35.9			7.3	10.8	6.9	PN
28114	9/26/97	1226	2924.9	8334.7	7	12	6	11	29.3	29.3	29.3	33.7	34.0	34.1			6.1	10.2	12.0	PN
28115	9/26/97	1619	2944.9	8400.1	7	11	6	10	29.1	29.1	29.1	33.9	34.0	34.0			6.1	6.3	6.3	PN
28116	9/26/97	1832	2929.9	8400.0	7	20	10	19	29.4	29.4	29.3	35.1	35.1	35.1			6.2	6.2	5.9	PN
28117	9/26/97	2230	2900.2	8400.1	7	28	14	27	29.4	29.4	29.4	35.7	35.7	36.0			6.4	6.4	5.1	PN
28118	9/27/97	0159	2900.0	8429.7	6	32	16	31	29.1	29.1	26.5	35.2	35.2	36.6			3.2	6.1	5.2	PN
28119	9/27/97	0532	2900.1	8500.1	8	38	19	37	29.0	29.0	23.1	34.5	34.4	36.4			3.5	5.9	5.7	PN

Table 2. Selected environmental parameters (continued)

CHAPMAN, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28120	9/27/97	1028	2929.9	8430.1	7	24	10	21	28.9	28.9	29.2	34.8	34.8	35.2			5.9	6.0	3.6	PN
28121	9/27/97	1337	2925.0	8459.9	7	16	8	15	29.0	28.7	28.7	34.4	34.4	34.4			6.0	6.1	6.2	PN
28122	9/27/97	1658	2930.1	8529.8	8	14	7	14	28.6	28.4	28.4	33.9	39.9	33.9			6.4	6.6	6.7	PN
28123	9/27/97	1923	2948.1	8530.1	8	20	10	19	28.4	28.2	28.5	33.4	33.4	33.6			6.1	6.4	6.4	PN

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
2301	9/16/97	821	3012.6	8802.5	11	15	8	15	28.4	29.0	28.7	25.2	30.3	31.8	2.630		6.4	5.6	4.8	PN
2302	9/16/97	0929	3013.9	8807.9	11	8	4	8	28.9	29.1	29.0	29.9	31.3	31.0	1.308		6.2	6.0	3.7	PN
2303	9/16/97	1026	3007.9	8807.1	11	17	9	17	28.8	28.7	27.8	30.5	32.0	33.3	2.093		6.3	6.1	3.6	PN
2304	9/16/97	1103	3007.4	8804.1	11	19	9	19	29.1	29.0	27.8	30.4	32.7	33.6	1.420		6.2	6.0	5.1	PN
2305	9/16/97	1151	3007.3	8759.0	10	17	9	17	29.1	28.8	28.1	29.4	32.5	33.5	2.318		6.3	6.0	5.7	PN
2306	9/16/97	1242	3012.9	8758.9	10	10	5	10	29.2	28.7	28.5	30.9	32.7	32.8	20.746		6.3	5.6	4.0	PN
2307	9/16/97	1402	3015.7	8759.1	10	5	3	5	29.1	29.0	29.1	25.4	26.7	29.5	2.430		6.8	6.6	5.9	PN
2308	9/16/97	1435	3016.4	8802.2	11	15	8	15	29.3	28.9	28.4	24.7	30.7	31.6	1.589		6.0	5.6	7.7	PN
2309	9/16/97	1505	3016.9	8804.9	11	4	2	4	29.0	28.8	28.9	21.8	22.8	27.2	4.355		6.9	7.0	5.7	PN

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	9/20/97	0809	2958.8	8744.1	10	31			28.6			29.6								PN
17002	9/20/97	0900	3004.9	8744.0	10	17			28.9			29.7								PN
17003	9/20/97	1039	3010.9	8744.0	10	10			29.5			30.2								PN
17004	9/20/97	1153	3010.8	8756.3	10	14			29.9			27.8								PN
17005	9/20/97	1300	3004.9	8756.6	10	16			28.7			28.6								PN
17006	9/20/97	1415	3000.4	8758.3	10	20	10	20	29.5	29.2	28.0	30.3	30.7	31.5			5.9	6.1	5.6	PN
17007	9/20/97	1623	2952.9	8756.6	10	29			29.5			30.4								PN
17008	9/20/97	1742	2953.0	8808.3	11	33			29.3			30.3								PN
17009	9/20/97	1838	2958.9	8808.1	11	26			29.5			30.7								PN
17010	9/20/97	1931	3004.9	8808.0	11	20			29.5			29.4								PN
17011	9/20/97	2017	3010.9	8808.0	11	12			29.6			27.5								PN
17012	9/20/97	2140	3011.0	8820.4	11	12			29.4			28.8								PN
17013	9/20/97	2239	3005.0	8820.0	11	19			29.1			29.5								PN
17014	9/20/97	2332	2959.0	8820.0	11	29			29.1			30.7								PN
17015	9/21/97	0034	2952.9	8820.4	11	33			29.3			30.8								PN
17016	9/21/97	0130	2946.8	8820.4	11	35			28.8			31.1								PN
17017	9/21/97	0321	2940.7	8832.2	11	29			29.0			30.3								PN
17018	9/21/97	0424	2946.9	8832.3	11	27			29.0			30.3								PN
17019	9/21/97	0527	2952.9	8832.1	11	26			29.2			29.5								PN
17020	9/21/97	0658	3000.0	8830.0	11	26	13	25	28.6	29.0	24.2	29.4	30.5	33.3			5.9	5.4	4.7	PN
17021	9/21/97	0855	3004.8	8832.1	11	17			29.1			30.1								PN
17022	9/21/97	0947	3010.9	8832.0	11	12			29.1			27.3								PN
17023	9/21/97	1110	3010.9	8843.9	11	12			29.3			27.6								PN
17024	9/21/97	1201	3004.8	8844.0	11	15			29.6			27.5								PN
17025	9/21/97	1300	2958.8	8844.3	11	15			29.5			28.4								PN
17026	9/21/97	1356	2952.9	8844.1	11	15			29.9			29.4								PN
17027	9/21/97	1451	2946.9	8844.5	11	15			30.9			29.9								PN
17028	9/21/97	1542	2941.0	8844.2	11	15			30.3			28.9								PN
17029	9/21/97	2036	2934.9	8844.0	11	15			29.5			29.9								PN
17030	9/21/97	2123	2929.0	8844.0	11	19			29.6			29.6								PN

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17031	9/21/97	2259	2923.0	8856.1	11	17			29.2			30.0								PN
17032	9/21/97	2355	2929.0	8856.2	11	12			29.4			29.8								PN
17033	9/22/97	0055	2928.9	8901.2	12	10		9	29.2		28.8	29.0		30.1			4.6		3.8	PN
17034	9/22/97	0321	2922.7	8908.1	12	9			28.1			9.3								PN
17035	9/22/97	0445	2924.2	8916.0	12	6			28.7			12.7								PN
17036	9/22/97	0611	2930.8	8915.2	12	5			29.3			18.5								PN
17037	9/22/97	0700	2934.2	8911.4	12	5			29.3			21.2								PN
17038	9/22/97	0745	2937.9	8909.3	12	4			29.0			22.8								PN
17039	9/22/97	0828	2941.9	8907.0	12	4			29.5			20.5								PN
17040	9/22/97	0915	2946.2	8903.5	12	5			29.3			21.9								PN
17041	9/22/97	0956	2950.5	8901.5	12	5			30.0			21.3								PN
17042	9/22/97	1034	2954.6	8859.0	11	5			30.6			22.6								PN
17043	9/22/97	1115	2959.3	8858.9	11	5		4	30.6		30.0	22.1		27.7			6.2		5.4	PN
17044	9/22/97	1242	3003.5	8859.4	11	6			31.4			23.7								PN
17045	9/22/97	1324	3008.1	8900.3	12	8			30.3			26.1								PN
17046	9/22/97	1422	3009.4	8851.6	11	11			31.7			27.4								PN

Table 2. Selected environmental parameters (continued)

SUNCOASTER, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
26019	10/ 2/97	1544	2700.0	8300.0	5	31	15	30	29.9	29.2	29.2	35.8	35.9	35.8	0.326		5.0	2.7	2.3	PN
26020	10/ 2/97	1955	2700.0	8330.0	5	50	23	46							0.140					PN
26021	10/ 3/97	2335	2659.9	8359.9	4	81	38	76	29.0	25.7	20.5	35.2	36.5	36.4	0.074		5.1	4.0	3.0	PN
26022	10/ 3/97	0324	2700.0	8430.0	99	175	86	172	29.0	20.8	14.0	35.2	36.5	35.8	0.055		3.7	3.3	2.6	PN
26023	10/ 3/97	0803	2630.0	8429.9	99	200	100	200	28.9	19.5	12.6	34.7	36.6	35.6	0.073		3.5	2.9	2.6	PN
26024	10/ 3/97	1153	2629.9	8400.1	99	123	60	120	29.0	22.3	16.8	34.9	36.6	36.2	0.089		3.4	4.0	2.5	PN
26025	10/ 3/97	1540	2630.0	8330.0	4	57	28	56	29.0	26.1	19.9	34.8	35.6	36.3	0.092		3.4	2.7	2.6	PN
26026	10/ 3/97	1921	2630.0	8300.0	4	38	18	36	28.9	29.7	23.0	34.4	35.1	37.4	0.126		3.8	2.8	3.8	PN
26027	10/ 3/97	2230	2630.0	8230.0	4	19	8	16	28.7	29.3	29.2	35.6	36.0	36.1	0.287		5.7	2.9	2.9	PN
26028	10/ 4/97	0202	2600.0	8230.0	4	27	13	27	29.2	29.3	29.3	35.7	35.8	35.8	0.354		3.0	3.0	2.8	PN
26029	10/ 4/97	0526	2600.0	8259.9	4	43	19	38	28.9	29.0	20.6	34.2	35.5	36.4	0.142		4.2	3.3	2.5	PN
26030	10/ 4/97	0849	2559.9	8329.9	3	62	30	60	28.7	25.5	20.4	34.8	36.6	36.3	0.091		3.2	3.9	2.7	PN
26031	10/ 4/97	1223	2600.0	8400.0	4	135	68	135	28.6	21.8	15.6	34.9	36.6	36.1	0.091		2.2	3.6	2.6	PN
26032	10/ 4/97	1618	2600.0	8430.0	99	71	35	71	28.9	24.2	20.1	35.1	36.5	36.5	0.072		3.6	3.8	3.0	PN
26035	10/ 5/97	0609	2529.9	8330.0	3	68									0.107					PN
26036	10/ 6/97	2358	2529.9	8300.0	3	50									0.142					PN
26037	10/ 6/97	0447	2530.0	8231.2	3	30									0.199					PN

Table 2. Selected environmental parameters (continued)

PELICAN, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37491	10/ 4/97	0900	2900.1	9030.2	14	10	5	10	27.5	27.5	27.5	29.8	29.8	29.9	1.211		3.2	3.2	3.3	PN
37492	10/ 4/97	1213	2900.0	9100.0	14	7	4	7	26.9	26.9	26.9	28.3	28.3	28.3	0.916		3.5	3.5	3.5	PN
37493	10/ 4/97	1533	2900.0	9130.0	15	10	5	10	27.1	27.3	28.2	26.1	27.0	30.3	0.762		3.5	3.3	2.7	PN
37494	10/ 4/97	1708	2857.3	9125.2	15	10	5	10	27.4	27.4	28.0	27.2	27.3	29.8	0.684		3.5	3.5	2.6	ST
37495	10/ 4/97	1922	2857.2	9125.4	15	11	5	11	27.4	27.5	28.0	27.8	27.8	29.7	0.713		3.4	3.4	2.6	ST
37496	10/ 5/97	0050	2831.8	9051.7	14	27	14	27	27.2	27.7	23.9	31.7	32.3	36.1	0.315		3.2	3.3	1.1	ST
37497	10/ 5/97	0245	2831.3	9044.6	14	29	14	29	27.9	28.7	24.3	32.2	34.5	36.2	0.219		3.2	3.0	2.1	ST
37498	10/ 5/97	0543	2837.4	9028.7	14	23	12	23	27.5	28.1	27.0	32.0	35.0	35.7	0.116		2.8	3.1	3.2	ST
37499	10/ 5/97	0705	2837.1	9029.0	14	24	12	24	26.9	28.8	27.4	32.0	34.9	35.0	0.200		3.1	3.2	2.8	ST
37500	10/ 5/97	0822	2830.1	9030.1	14	37	18	37	27.8	26.6	23.0	32.6	35.8	36.2	0.143		3.1	2.7	1.7	PN
37501	10/ 5/97	1039	2830.9	9044.9	14	28	14	28	27.3	28.2	24.5	32.0	35.6	36.1	0.255		3.3	3.0	1.5	ST
37502	10/ 5/97	1112	2831.4	9051.5	14	28	14	28	28.2	29.6	24.4	32.2	33.8	36.1	0.344		3.1	2.8	1.1	ST
37503	10/ 5/97	1328	2830.0	9100.1	15	31	17	31	27.3	28.3	23.4	30.2	33.2	36.2	0.355		3.4	1.6	0.7	PN
37504	10/ 5/97	2015	2843.0	9009.0	14	31	15	31	27.9	28.2	24.6	33.6	35.5	36.1	0.088		3.1	3.1	1.4	ST
37505	10/ 5/97	2208	2849.5	9003.1	14	34	17	34	28.1	28.1	23.6	33.7	34.6	36.2	0.180		3.1	3.1	1.3	ST
37506	10/ 6/97	0110	2902.9	9001.5	14	18	10	18	27.7	27.7	28.2	30.3	32.7	35.3	0.827		3.4	3.3	0.9	ST
37507	10/ 6/97	0239	2903.3	8958.8	13	20	10	20	27.6	27.8	27.9	31.1	33.4	35.4	0.771		3.4	3.2	1.1	ST
37508	10/ 6/97	0414	2905.4	9002.1	14	15	8	15	27.5	27.5	29.0	28.6	28.7	33.7	0.985		3.4	3.5	0.4	ST
37509	10/ 6/97	0711	2905.1	9002.3	14	15	7	15	27.3	27.4	28.6	28.6	28.8	34.5	1.449		3.3	3.2	0.3	ST
37510	10/ 6/97	0850	2902.7	8958.8	13	19	9	19	27.9	27.9	28.1	32.1	33.6	35.4	1.123		3.1	3.0	1.4	ST
37511	10/ 6/97	1015	2902.6	9001.5	14	18	8	18	27.6	27.8	28.6	30.8	33.0	35.3	1.094		3.3	3.2	2.1	ST
37512	10/ 6/97	1113	2900.0	9000.2	14	24	12	24	27.8	27.6	27.4	33.2	33.6	35.7	0.350		3.2	3.1	1.7	PN
37513	10/ 6/97	1351	2847.8	9009.0	14	30	15	30	28.1	28.3	24.5	34.3	35.3	36.1	0.332		3.1	3.1	1.0	ST
37514	10/ 6/97	1548	2850.6	9004.3	14	32	15	32	28.3	28.2	24.0	33.6	35.1	36.2	0.358		3.0	2.6	0.4	ST
37515	10/ 6/97	1835	2857.8	8953.7	13	32	17	32	27.8	27.9	24.5	34.5	34.6	36.1	0.143		3.2	3.1	1.1	ST
37516	10/ 6/97	1950	2858.3	8953.8	13	32	17	32	27.8	27.8	24.5	34.5	34.6	36.1	0.143		3.2	3.1	1.1	ST
37517	10/ 6/97	2146	2906.7	8948.8	13	23	11	23	27.8	28.0	28.2	29.2	31.2	35.2	2.874		3.6	3.4	3.2	ST
37518	10/ 6/97	2324	2905.3	8945.6	13	24	12	24	27.7	27.9	28.6	28.3	30.7	35.0	2.096		3.6	3.3	2.0	ST
37519	10/ 7/97	0645	2859.9	8929.9	13	15	9	15	27.1	28.6	28.3	26.8	34.0	34.3	7.256		3.0	1.2	2.1	PN
37520	10/ 7/97	0918	2905.4	8945.7	13	26	13	26	27.4	27.9	28.2	30.0	30.7	35.1	4.532		3.2	3.2	1.8	ST
37521	10/ 7/97	1035	2906.4	8948.6	13	22	9	22	27.4	27.7	28.1	29.7	31.5	33.9	2.550		3.1	3.1	2.7	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00001	10/10/97	1618	2624.1	9622.0	21	90	44	88	27.8	24.3	21.4	33.9	36.4	36.3		0.005	5.8	6.7	5.7	ST
00002	10/10/97	1832	2630.1	9630.0	21	85	37	84	27.7	25.7	22.1	33.3	36.5	36.2			6.2	7.1	4.9	PN
00003	10/10/97	2318	2612.3	9624.3	21	70	36	70	27.9	24.8	22.3	34.8	36.3	36.3			6.0	6.6	6.1	ST
00004	10/11/97	0422	2602.7	9630.7	21	55	27	54	28.0	28.0	23.4	34.9	35.9	36.3			6.0	5.7	6.4	ST
00006	10/11/97	0812	2600.5	9651.5	21	36	17	35	28.1	28.5	28.5	32.9	34.6	35.3			4.5	4.7	4.3	ST
00007	10/11/97	1130	2607.9	9659.0	21	28	13	25	27.9	27.9	27.9	31.1	32.2	32.3			5.9	5.9	5.2	ST
00008	10/11/97	1328	2608.7	9705.4	21	19	9	17	27.9	27.9	27.9	31.7	31.7	31.7			5.7	6.2	6.3	ST
00009	10/11/97	1517	2613.6	9708.8	21	14	7	13	27.8	27.8	27.8	30.4	30.6	30.7			6.6	6.6	6.8	ST
00010	10/11/97	1607	2615.0	9709.5	21	15	8	15	27.8	27.8	27.7	26.4	26.1	26.0			6.5	5.4	6.5	ST
00011	10/11/97	1856	2613.0	9703.1	21	19	10	18	27.7	27.8	27.8	27.9	27.9	27.8			6.0	5.7	6.3	ST
00012	10/11/97	2023	2615.6	9702.7	21	20	10	20	27.6	27.7	27.9	28.7	28.8	28.6			6.4	6.4	6.1	ST
00013	10/11/97	2359	2633.1	9714.3	21	16	8	15	27.5	27.7	27.6	29.2	29.1	29.2			6.2	6.2	5.7	ST
00014	10/12/97	0143	2640.2	9717.3	21	15	7	14	27.4	27.4	27.6	29.2	29.2	29.1			6.3	6.1	6.0	ST
00015	10/12/97	0453	2630.9	9705.1	21	25	12	23	27.4	27.5	27.9	29.9	29.9	29.4			5.9	6.4	5.8	ST
00016	10/12/97	0751	2627.9	9705.7	21	21	10	20	27.5	27.5	27.9	30.0	30.0	29.6			6.2	6.1	5.3	ST
00017	10/12/97	1003	2636.4	9700.0	21	36	18	36	27.2	27.8	27.9	32.0	31.8	30.6			6.2	6.1	6.2	ST
00018	10/12/97	1315	2649.6	9658.8	21	42	20	40	26.8	27.8	27.9	32.8	32.5	31.8			6.3	6.3	6.2	ST
00019	10/12/97	1954	2643.7	9713.8	21	19	10	19	27.5	27.5	27.7	31.7	31.8	31.7			5.9	6.3	5.7	ST
00020	10/12/97	2251	2653.8	9707.0	21	32	6	32	26.8	27.4	27.5	32.0	31.8	31.5			6.3	5.3	5.8	ST
00021	10/13/97	0020	2655.0	9705.4	21	34	17	32	26.7	27.4	27.9	32.5	32.3	31.9			6.0	6.1	6.2	ST
00022	10/13/97	0102	2654.9	9700.6	21	42	21	40	26.8	27.8	27.9	33.7	33.0	32.3			6.5	6.1	6.4	ST
00023	10/13/97	0511	2636.8	9651.3	21	44	22	42	26.9	27.9	28.0	33.4	33.1	32.9			5.9	6.2	5.9	ST
00025	10/13/97	0836	2637.9	9647.0	21	50	25	49	27.0	27.9	27.4	34.0	33.5	33.4			6.5	5.4	5.8	ST
00027	10/13/97	1237	2634.8	9639.9	21	65	33	63	26.9	27.9	24.6	34.2	33.4	34.5			6.5	6.3	6.3	ST
00029	10/13/97	1937	2634.9	9635.2	21	91	46	86	27.0	25.1	21.7	32.8	36.1	36.3			6.6	6.7	5.8	ST
00030	10/16/97	2336	2743.2	9701.2	20	17	8	17	24.6	24.7	24.9	28.9	38.9	29.1			5.8	5.8	5.6	ST
00031	10/17/97	0109	2741.4	9708.3	20	11	6	11	23.7	23.6	23.8	25.9	25.9	26.1			5.9	6.0	6.0	ST
00032	10/17/97	0356	2725.1	9705.0	20	26	13	26	25.6	25.6	25.7	32.1	32.1	32.1			5.6	5.6	5.7	ST
00033	10/17/97	0454	2724.0	9703.5	20	30	15	30	25.5	25.6	25.7	32.7	32.8	32.8			5.3	5.7	5.7	ST
00034	10/17/97	0832	2710.1	9718.2	20	15	7	15	24.2	24.2	24.9	27.1	27.1	27.9			5.9	5.8	5.7	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00035	10/17/97	0941	2710.1	9715.2	20	21	11	21	24.2	24.9	20.5	27.8	29.2	29.8			5.9	5.8	5.6	ST
00036	10/17/97	1133	2709.4	9710.7	20	26	11	25	24.8	25.1	26.0	29.1	29.7	32.6			5.8	5.6	5.5	ST
00037	10/17/97	1256	2707.0	9713.4	20	24	13	24	25.0	25.2	25.7	29.3	30.1	32.1		2.369	5.9	5.6	5.6	ST
00038	10/17/97	1457	2703.8	9720.4	20	14	6	14	24.5	24.4	24.6	27.0	27.1	27.6		3.089	6.1	6.0	5.6	ST
00039	10/17/97	1606	2659.0	9721.6	21	13	6	13	23.8	23.6	23.0	26.9	26.8	26.7			5.9	5.9	6.0	ST
00040	10/17/97	1903	2711.0	9719.3	20	14	7	14	24.5	24.3	24.5	26.9	26.9	27.3		3.277	6.2	5.9	5.2	ST
00041	10/18/97	0723	2732.7	9654.4	20	31	15	31	24.9	25.7	25.9	32.2	33.5	34.1		2.244	5.8	5.8	5.4	ST
00042	10/18/97	0930	2725.9	9648.0	20	47	23	46	26.0	26.3	26.6	34.6	34.8	35.3		0.896	5.7	5.5	5.3	ST
00044	10/18/97	1315	2711.6	9641.9	20	72	36	72	27.1	27.0	26.1	36.0	36.0	36.1		0.520	5.4	5.4	4.9	ST
00051	10/19/97	1511	2810.2	9636.4	19	12	6	12	23.9	24.3	24.7	27.4	29.6	30.5		4.173	5.7	5.5	5.1	ST
00052	10/19/97	1714	2756.0	9625.7	20	35	18	35	24.1	25.6	26.1	27.0	34.3	35.1		7.995	4.5	5.9	5.4	ST
00053	10/19/97	1909	2750.0	9633.9	20	35	17	35	24.7	26.0	26.4	29.9	34.7	35.5		4.855	6.8	5.5	5.3	ST
00054	10/19/97	2048	2747.7	9642.6	20	29	14	29	24.9	25.6	25.9	31.5	33.0	34.4		3.512	6.5	5.6	5.5	ST
00055	10/19/97	2332	2803.4	9630.6	19	24	12	24	24.4	25.1	26.0	26.4	31.6	34.5		8.628	7.2	5.6	5.4	ST
00056	10/20/97	0331	2810.1	9601.3	19	31	15	30	24.8	25.7	26.0	33.0	34.4	35.6		1.255	6.1	5.5	5.2	ST
00057	10/20/97	0418	2809.2	9600.7	19	34	16	33	25.3	27.0	26.0	34.3	35.2	35.6		1.250	5.8	5.4	5.2	ST
00058	10/20/97	0757	2801.1	9612.1	19	38	18	36	24.5	26.2	26.2	31.8	35.3	35.5		2.083	6.2	5.4	5.2	ST
00059	10/20/97	1102	2808.6	9601.4	19	31	15	31	25.5	25.9	26.0	34.1	35.1	35.6		1.416	5.8	5.3	4.9	ST
00060	10/20/97	1406	2827.0	9602.2	19	17	8	16	23.8	23.8	25.0	28.0	29.1	32.8		3.685	6.6	6.4	5.1	ST
00061	10/20/97	1538	2833.0	9560.0	19	12	6	12	23.7	24.1	24.9	26.8	28.9	32.1		7.458	6.5	5.6	4.2	ST
00062	10/20/97	1805	2831.0	9546.1	19	19	10	18	24.4	24.3	25.2	27.4	31.9	33.9		9.504	7.1	5.8	4.9	ST
00063	10/20/97	2215	2827.4	9614.5	19	11	5	10	24.2	24.6	24.6	28.0	30.6	31.1		7.074	5.3	4.8	4.7	ST
00064	10/21/97	0013	2829.5	9602.1	19	14	7	14	23.8	24.3	25.0	27.1	29.0	32.3		3.502	6.1	5.1	3.8	ST
00065	10/21/97	0430	2842.8	9533.5	19	13	6	11	23.8	23.9	24.4	26.7	26.9	31.3		2.816	5.3	5.0	3.9	ST
00066	10/21/97	0634	2848.0	9524.1	19	11	5	10	23.7	23.8	24.2	26.8	27.0	30.6		4.303	5.8	5.6	4.2	ST
00067	10/21/97	1025	2826.7	9551.3	19	20	10	20	23.8	24.0	25.4	27.8	29.3	34.5		4.247	5.4	5.1	4.2	ST
00068	10/21/97	1424	2758.7	9531.1	20	55	26	55	26.3	25.9	24.6	35.7	35.7	36.0		0.361	5.0	4.9	3.7	ST
00070	10/21/97	1806	2813.0	9521.5	19	40	20	40	26.1	26.0	26.0	35.7	35.6	35.6		1.889	5.0	4.8	4.6	ST
00071	10/21/97	2043	2818.9	9524.9	19	35	17	35	25.9	25.9	25.7	35.6	35.6	35.6		0.825	5.2	5.2	4.9	ST
00072	10/21/97	2231	2829.4	9522.2	19	30	15	30	24.1	25.3	25.7	32.1	35.0	35.4		0.618	4.8	4.1	3.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00073	10/21/97	2359	2837.7	9519.1	19	23	11	21	23.9	24.3	25.2	29.8	32.5	34.9		2.918	5.2	4.9	4.0	ST
00074	10/24/97	1329	2849.9	9432.7	18	20	10	20	24.8	24.5	24.5	34.7	34.7	34.7		0.696	5.8	5.8	5.7	ST
00075	10/24/97	1509	2841.4	9435.9	18	28	13	26	24.7	25.0	25.0	34.3	35.3	35.3		1.189	5.6	5.7	5.6	ST
00076	10/24/97	1744	2837.4	9426.6	18	32	16	31	25.6	25.4	25.5	35.5	35.6	35.7		0.855	5.6	5.6	5.4	ST
00077	10/24/97	2033	2848.0	9420.7	18	27	13	26	25.0	24.9	25.0	35.0	35.1	35.2		1.043	5.7	5.6	5.6	ST
00078	10/25/97	0054	2902.3	9456.0	18	17	8	16	23.8	23.4	24.3	28.7	28.8	34.0		3.685	5.0	4.9	3.4	ST
00079	10/25/97	0418	2846.8	9459.8	18	20	10	20	23.8	24.1	25.1	29.7	31.1	35.0		2.759	4.9	4.5	3.7	ST
00080	10/25/97	0739	2843.2	9507.9	19	23	11	22	24.1	24.3	25.0	31.3	33.4	34.7		1.319	4.0	3.7	3.3	ST
00081	10/25/97	0940	2842.0	9459.4	18	26	13	25	24.0	24.4	25.0	30.9	34.0	34.9		2.484	4.8	4.3	3.4	ST
00082	10/25/97	1238	2832.2	9448.5	18	33	16	33	25.4	25.5	25.5	35.1	35.4	35.6		0.625	4.7	4.6	4.1	ST
00083	10/25/97	1558	2820.1	9507.0	19	34	17	34	24.7	25.8	25.8	33.5	35.6	35.7		0.904	5.7	5.3	4.8	ST
00084	10/25/97	1846	2819.4	9511.0	19	35	17	34	24.9	25.8	25.8	31.7	35.5	35.8		3.136	6.0	5.2	5.0	ST
00085	10/25/97	2128	2804.8	9513.6	19	55	27	54	25.4	26.0	22.4	33.7	35.7	36.2		0.564	5.0	4.7	3.7	ST
00087	10/26/97	0011	2801.2	9505.4	19	77	38	77	26.0	26.3	19.8	35.7	36.0	36.4		0.435	4.8	5.2	3.6	ST
00088	10/26/97	0248	2757.5	9517.2	20	72	35	71	25.5	26.2	19.7	34.0	35.9	36.4		0.496	5.1	5.4	3.6	ST
00089	10/26/97	0449	2753.9	9515.0	20	91	45	91	26.1	25.9	18.7	35.9	35.9	36.4		0.337	5.2	5.4	3.3	ST
00090	10/26/97	2213	2855.9	9407.0	18	20	10	20	24.2	24.2	24.2	34.8	34.9	34.9		1.407	4.8	5.5	5.5	ST
00091	10/27/97	0727	2932.2	9402.2	18	10	5	10	21.5	21.5	22.6	28.2	28.2	30.5		4.049	5.8	5.8	2.9	ST
00092	10/27/97	0956	2919.9	9404.0	18	11	5	10	21.6	21.6	22.9	29.7	29.7	31.8		3.814	5.8	5.9	5.7	ST
00093	10/27/97	1144	2915.1	9358.3	17	11	5	10	22.3	22.3	22.3	32.3	32.3	32.3		1.792	5.5	4.7	5.6	ST
00094	10/27/97	1219	2914.1	9358.2	17	15	7	15	22.5	22.5	22.8	32.7	32.7	33.0		1.624	5.5	5.6	5.4	ST
00095	10/27/97	1309	2912.8	9358.3	17	16	8	16	22.8	22.9	22.9	33.3	33.3	33.4		2.051	5.7	5.6	5.6	ST
00096	10/27/97	1716	2843.4	9410.4	18	26	13	26	24.6	24.6	24.6	35.5	35.5	35.5		1.153	5.4	5.5	5.5	ST
00097	10/27/97	1911	2835.4	9409.1	18	34	16	33	25.0	25.0	25.0	35.8	35.8	35.8		1.004	5.3	5.4	5.4	ST
00098	10/27/97	2146	2833.0	9358.3	17	36	17	35	25.2	25.2	25.2	35.9	35.9	35.8		0.891	5.3	5.3	5.3	ST
00099	10/28/97	0038	2828.6	9407.1	18	39	19	38	25.2	25.2	25.2	35.9	35.9	35.9		0.994	5.3	5.3	5.3	ST
00103	10/28/97	0540	2819.5	9402.0	18	54	27	54	25.2	25.3	22.2	35.9	36.0	36.3		0.640	5.2	5.2	3.5	ST
00104	10/28/97	0750	2824.6	9401.7	18	45	22	45	25.3	25.3	25.3	36.0	36.0	36.0		0.791	5.2	5.3	5.2	ST
00106	10/29/97	1810	2838.8	9337.3	17	33	16	32	24.6	24.7	24.7	35.4	35.4	35.4		1.365	5.0	4.9	4.6	ST
00107	10/29/97	2117	2830.7	9352.1	17	41	21	40	24.9	24.9	24.9	35.6	35.6	35.7		0.921	5.1	5.1	4.9	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00108	10/30/97	0248	2759.9	9422.6	18	82	41	82	25.6	25.6	21.3	35.9	35.9	36.3		0.650	4.9	4.7	3.6	ST
00109	10/30/97	0637	2757.5	9437.3	18	84	42	84	25.5	25.4	20.8	35.9	35.9	36.3		0.442	5.1	5.1	4.1	ST
00110	10/30/97	0918	2756.9	9442.6	18	89	45	88	25.3	25.2	20.2	35.9	36.0	36.3		0.325	5.1	5.1	3.9	ST
00111	10/30/97	1119	2758.4	9442.2	18	87	43	86	25.4	25.4	20.4	35.9	35.9	36.3		0.278	5.1	5.0	4.0	ST
00112	10/30/97	1454	2803.3	9421.2	18	60	30	60	25.7	25.3	22.0	35.8	36.0	36.3		0.342	5.2	5.1	3.8	ST
00113	10/30/97	2027	2810.4	9331.9	17	65	32	65	24.8	25.0	21.8	35.6	35.8	36.3		0.996	4.8	4.6	3.2	ST
00114	10/31/97	0647	2806.3	9255.0	16	84	42	84	25.1	22.8	20.0	35.8	36.3	36.4		0.396	3.6	3.3	2.8	ST
00115	10/31/97	0938	2806.9	9304.5	17	86	43	86	25.0	23.1	19.8	35.8	36.2	36.4		0.305	4.4	3.6	3.1	ST
00117	10/31/97	1323	2759.0	9305.5	17	116	58	116	25.2	21.5	17.9	35.7	36.4	36.3		0.308	4.8	3.9	3.3	ST
00118	10/31/97	1611	2812.7	9311.1	17	64	32	63	25.1	24.8	21.9	35.7	35.7	36.3		0.574	4.9	4.8	3.5	ST
00120	10/31/97	2225	2820.5	9333.1	17	57	28	56	24.9	24.8	23.1	35.6	35.6	36.2		0.918	3.7	3.6	2.8	ST
00123	11/ 1/97	0430	2835.3	9325.5	17	38	19	38	24.8	24.8	24.7	35.4	35.4	35.5		0.657	3.0	2.9	2.9	ST
00124	11/ 1/97	0734	2827.0	9332.4	17	48	24	48	24.9	24.9	24.9	35.6	35.7	35.8		0.872	3.2	3.0	2.9	ST
00126	11/ 1/97	1354	2842.5	9306.3	17	33	16	33	24.4	24.3	24.4	35.1	35.1	35.3		0.608	2.8	2.3	1.8	ST
00127	11/ 1/97	1613	2851.4	9305.2	17	27	13	26	23.8	23.8	23.5	34.9	34.9	34.9		0.930	5.6	5.6	5.4	ST
00128	11/ 1/97	1956	2847.6	9325.8	17	27	13	26	24.3	24.3	24.3	35.2	35.2	35.2		0.962	4.9	5.1	4.8	ST
00129	11/ 1/97	2226	2844.4	9317.6	17	29	13	28	24.3	24.3	24.3	35.2	35.2	35.2		0.821	5.0	4.8	4.2	ST
00131	11/ 2/97	0640	2904.6	9310.3	17	23	11	23	23.1	23.1	23.1	34.6	34.6	34.6		0.972	2.6	2.6	2.4	ST
00132	11/ 2/97	0852	2906.5	9301.0	17	22	10	21	23.1	23.1	23.1	34.6	34.6	34.6		1.077	2.9	2.7	2.4	ST
00133	11/ 2/97	0955	2907.4	9302.6	17	16	8	15	23.0	23.0	23.0	34.5	34.5	34.5		0.830	4.0	3.7	3.4	ST
00134	11/ 2/97	1212	2906.4	9244.9	16	22	11	22	22.5	22.5	23.4	33.5	33.5	34.5		1.805	3.9	3.4	2.9	ST
00135	11/ 2/97	1631	2930.2	9237.1	16	11	5	10	20.4	20.9	21.8	29.5	30.1	32.0		4.266	3.5	3.0	2.5	ST
00136	11/ 2/97	1755	2929.4	9234.7	16	11	6	11	20.5	21.4	21.8	30.1	31.9	32.0		3.841	2.8	2.3	2.1	ST
00137	11/ 2/97	1958	2930.6	9239.3	16	11	5	10	20.5	20.7	21.5	30.3	30.8	31.8		3.140	3.5	3.0	2.5	ST
00138	11/ 2/97	2310	2910.7	9240.3	16	20	10	19	22.3	22.3	22.7	33.4	33.4	33.7		2.144	2.8	2.5	2.1	ST
00139	11/ 3/97	0240	2910.5	9228.1	16	17	8	17	21.2	21.2	21.8	32.7	32.7	33.2		2.542	2.6	2.2	2.0	ST
00140	11/ 3/97	0447	2903.1	9227.2	16	22	11	22	22.4	22.4	22.4	34.1	34.1	34.1		1.946	2.7	2.5	2.1	ST
00141	11/ 3/97	0724	2853.3	9218.1	16	28	14	28	23.0	23.0	23.0	34.8	34.8	34.8		2.122	2.2	2.1	1.9	ST
00142	11/ 3/97	1000	2850.7	9205.6	16	28	13	27	23.3	23.3	23.3	34.8	34.8	34.8		1.050	4.2	4.1	3.9	ST
00143	11/ 3/97	1201	2844.3	9211.1	16	35	18	35	24.1	24.1	24.1	35.5	35.5	35.4		0.916	4.3	4.1	3.8	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00144	11/ 3/97	1341	2846.7	9215.3	16	34	17	34	24.0	24.0	24.0	35.4	35.4	35.4		0.901	3.9	3.7	3.4	ST
00145	11/ 3/97	1643	2841.6	9234.3	16	34	17	34	23.9	23.9	23.9	35.4	35.4	35.4		1.021	3.6	3.2	2.9	ST
00146	11/ 3/97	2021	2852.9	9226.5	16	30	15	30	23.0	23.1	23.1	34.8	34.8	34.8		1.702	4.1	3.8	3.4	ST
00147	11/ 3/97	2315	2904.2	9214.8	16	18	9	18	20.9	21.2	22.5	32.4	32.7	34.1		2.552	2.7	2.3	2.0	ST
00148	11/ 4/97	0105	2905.7	9205.0	16	14	7	14	20.2	21.1	21.9	31.2	32.9	33.3		3.211	2.5	2.3	2.1	ST
00149	11/ 4/97	0200	2900.9	9206.5	16	20	10	20	20.9	22.5	22.8	32.3	34.0	34.4		2.630	3.1	2.7	2.4	ST
00150	11/ 4/97	0435	2847.5	9201.8	16	30	15	30	23.1	23.1	23.1	35.0	35.0	35.0		1.184	4.3	4.2	4.0	ST
00151	11/ 4/97	0703	2835.6	9203.7	16	41	20	41	24.2	24.2	24.2	35.5	35.5	35.5		1.016	4.4	4.3	4.2	ST
00153	11/ 4/97	1226	2836.3	9230.6	16	38	18	37	23.9	23.8	23.8	35.4	35.4	35.4		0.652	4.0	3.8	3.4	ST
00156	11/ 4/97	1644	2819.0	9237.9	16	60	30	60	24.5	24.5	21.8	35.9	35.9	36.4		1.072	4.3	4.1	3.1	ST
00157	11/ 4/97	1945	2810.2	9229.9	16	75	38	75	24.4	24.4	19.9	35.9	35.9	36.4		0.938	4.4	4.2	2.9	ST
00158	11/ 4/97	2206	2805.3	9223.9	16	93	47	92	24.3	24.4	18.2	35.8	35.8	36.4		0.527	3.8	3.6	2.7	ST
00160	11/ 5/97	0126	2807.5	9221.1	16	83	41	83	24.3	24.3	19.1	35.8	35.8	36.4		0.576	4.2	3.9	2.8	ST
00161	11/ 5/97	0638	2819.1	9238.0	16	60	30	60	24.4	24.4	22.0	35.9	35.9	36.4		1.199	3.6	3.2	2.3	ST
00163	11/ 5/97	1250	2759.9	9200.2	16	120	60	120	24.8	22.0	17.9	36.0	36.4	36.3		0.227	4.3	3.8	3.2	PN
00164	11/ 5/97	1704	2800.1	9130.5	99	172	85	170	25.3	21.1	14.9	36.1	36.4	36.0		0.288	4.4	3.5	3.4	PN
00165	11/ 5/97	2008	2812.9	9120.2	15	84	42	83	24.6	24.6	19.3	35.9	35.9	36.5		1.048	4.7	4.6	3.1	ST
00167	11/ 6/97	0046	2809.9	9108.3	15	93	41	93	24.6	24.6	19.2	36.0	36.0	36.5		0.415	4.1	3.8	2.7	ST
00169	11/ 6/97	0429	2759.8	9059.8	14	154	77	154	24.5	22.4	14.9	35.9	36.4	36.0		0.383	4.1	3.8	3.3	PN
00170	11/ 6/97	0747	2805.1	9028.2	14	158	79	158	24.7	21.0	14.3	36.0	36.4	35.9		0.352	4.1	3.7	3.1	PN
00171	11/ 6/97	1100	2820.1	9000.3	14	109	54	109	24.6	24.5	17.5	35.9	35.9	36.3		0.520	4.6	4.5	3.3	PN
00172	11/ 6/97	1248	2829.9	9000.0	14	92	46	92	24.4	24.5	18.4	35.6	36.0	36.4		0.488	4.7	4.5	3.2	PN
00173	11/ 6/97	1555	2830.1	8929.9	13	474	100	200	24.7	19.9	14.4	36.0	36.5	35.8		0.330	5.1	3.4	3.4	PN
00174	11/ 6/97	2049	2900.1	8859.4	11	72	36	72	23.0	22.0	19.1	30.5	36.4	36.4		5.792	4.3	4.1	2.7	PN
00175	11/11/97	1646	2829.6	9159.5	15	49	24	49	23.4	23.4	23.4	35.8	35.8	35.8		0.987	5.2	5.3	4.5	PN
00176	11/11/97	1952	2826.6	9208.7	16	56	27	56	23.7	23.7	23.7	36.0	36.0	36.0		1.377	4.5	5.1	4.1	ST
00178	11/12/97	0030	2846.6	9213.3	16	34	17	34	22.4	22.4	22.4	35.4	35.4	35.4		1.480	4.5	4.3	3.4	ST
00179	11/12/97	0439	2859.7	9148.4	15	16	7	15	19.4	19.5	19.7	31.6	31.7	31.9		1.255	4.4	4.5	5.0	ST
00180	11/12/97	0717	2900.0	9159.7	15	19	7	19	20.1	20.2	20.2	33.1	33.2	33.2		1.121	4.6	4.3	3.8	PN
00181	11/12/97	0955	2902.6	9148.2	15	13	6	12	18.8	18.9	18.9	30.3	30.4	30.4		1.753	5.3	5.2	5.1	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00182	11/12/97	1212	2856.1	9148.6	15	19	8	19	20.1	20.3	20.5	32.8	33.0	33.2		0.889	4.5	4.4	4.7	ST
00183	11/12/97	1537	2847.2	9142.0	15	25	12	25	21.4	21.9	21.9	33.7	34.3	34.3		1.487	4.7	4.5	4.2	ST
00184	11/12/97	1825	2837.0	9154.8	15	41	20	39	23.1	23.1	23.2	35.4	35.6	35.6		1.512	4.9	4.9	4.6	ST
00185	11/12/97	2236	2858.1	9135.7	15	15	7	14	20.3	20.3	20.4	32.2	32.3	32.3		2.022	3.0	2.9	2.8	ST
00186	11/12/97	2349	2859.9	9132.2	15	11	5	10	18.8	18.9	19.4	31.1	31.1	31.3		2.427	4.2	3.9	3.7	PN
00187	11/13/97	0306	2840.9	9141.8	15	32	16	32	22.4	22.4	22.3	34.7	34.7	34.7		1.050	3.8	3.7	3.4	ST
00188	11/13/97	0533	2830.2	9130.1	15	46	23	46	23.0	23.4	23.4	35.3	35.6	36.0		0.928	2.2	2.2	1.9	PN
00189	11/13/97	0713	2825.2	9130.1	15	56	28	56	23.1	23.6	23.3	35.1	35.7	36.1		0.828	3.0	2.8	2.3	ST
00191	11/13/97	1210	2810.0	9113.8	15	94	47	93	24.8	24.6	18.2	36.1	36.1	36.4		0.249	3.2	3.0	2.4	ST
00192	11/13/97	1602	2805.9	9129.8	15	112	56	112	24.4	23.0	16.5	36.0	36.4	36.2		0.452	3.6	3.7	3.1	ST
00193	11/13/97	2012	2815.2	9134.6	15	75	37	75	23.8	23.9	20.0	36.0	36.0	36.4		0.784	3.5	3.1	2.5	ST
00195	11/13/97	2344	2819.9	9138.6	15	66	34	64	23.3	23.6	21.0	35.6	36.0	36.4		1.087	2.5	2.3	1.9	ST
00197	11/14/97	0441	2836.3	9117.5	15	29	15	29	21.4	21.9	23.8	33.8	34.2	35.3		1.001	2.0	1.9	1.7	ST
00198	11/14/97	0716	2832.6	9108.1	15	31	15	30	21.9	21.8	21.9	34.3	34.4	34.6		1.204	1.7	1.7	1.6	ST
00199	11/14/97	0939	2839.8	9116.6	15	22	10	22	20.9	20.9	21.4	33.6	33.6	33.9		1.426	1.9	1.8	1.6	ST
00200	11/14/97	1122	2845.4	9116.0	15	16	7	15	20.4	20.4	20.4	33.2	33.2	33.2		1.824	3.0	2.8	2.4	ST
00201	11/14/97	1405	2851.0	9100.2	15	10	5	9	19.7	19.6	19.6	32.8	32.9	32.9		2.759	3.1	3.1	2.9	ST
00202	11/14/97	1610	2851.5	9047.8	14	14	7	13	20.8	20.8	20.3	33.6	33.6	33.6		2.686	3.5	3.3	3.2	ST
00203	11/14/97	1754	2852.2	9054.1	14	8	4	8	19.6	19.6	19.9	32.9	33.0	33.4		2.601	2.9	2.7	2.5	ST
00204	11/14/97	1924	2849.3	9054.6	14	15	7	13	20.4	20.8	20.9	33.5	33.5	33.7		2.139	2.9	2.6	2.4	ST
00205	11/14/97	2331	2838.0	9117.1	15	27	13	25	21.1	21.1	22.3	33.7	33.7	34.3		1.756	3.0	2.9	2.7	ST
00206	11/15/97	0213	2831.8	9110.0	15	33	16	32	21.3	21.5	23.6	34.2	34.3	35.5		1.617	2.9	3.0	2.7	ST
00207	11/15/97	0355	2830.0	9059.6	14	33	16	33	22.9	22.9	24.4	34.8	34.8	35.6		1.665	3.0	2.9	2.6	PN
00208	11/15/97	0732	2829.8	9029.6	14	39	19	38	22.9	22.9	23.6	35.2	35.2	35.8		1.123	2.9	2.6	2.1	PN
00209	11/15/97	1000	2817.1	9023.8	14	66	33	64	24.0	24.3	20.8	35.9	36.0	36.4		0.423	3.7	3.2	2.3	ST
00210	11/15/97	1135	2815.0	9023.3	14	77	38	75	24.0	24.0	19.8	36.0	36.0	36.4		0.349	4.7	4.3	3.0	ST
00211	11/15/97	1236	2811.0	9023.5	14	120	60	120	24.0	22.6	17.3	36.0	36.3	36.3		0.484	4.9	4.6	3.2	ST
00212	11/15/97	1534	2820.4	9023.8	14	56	27	55	23.9	23.9	21.7	35.9	35.9	36.4		0.542	4.1	4.7	3.2	ST
00214	11/15/97	2014	2825.3	9037.8	14	41	20	40	23.0	23.0	23.9	35.3	35.3	35.9		1.372	3.8	3.6	3.0	ST
00215	11/15/97	2219	2827.4	9047.4	14	37	20	36	23.0	23.0	24.0	35.2	35.2	35.7		1.680	4.8	4.7	4.0	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00216	11/15/97	2358	2835.2	9046.4	14	21	10	19	21.9	21.9	21.9	34.6	34.6	34.6		1.707	4.0	3.9	3.6	ST
00217	11/16/97	235	2837.9	9033.3	14	20	10	20	21.9	21.9	21.9	34.4	34.4	34.4		1.761	3.3	3.1	2.8	ST
00218	11/16/97	425	2839.0	9023.6	14	20	10	19	22.1	22.2	22.3	34.8	34.8	34.7		1.221	2.4	2.2	2.1	ST
00219	11/16/97	555	2843.9	9016.9	14	27	13	27	21.9	22.0	22.6	34.1	34.2	35.0		1.509	3.4	3.4	3.2	ST
00221	11/16/97	1134	2835.9	9027.9	14	29	14	28	22.2	22.2	22.2	35.0	35.0	35.0		1.057	4.1	3.7	3.2	ST
00222	11/16/97	1453	2844.5	9007.3	14	36	18	36	22.5	22.6	22.7	34.7	33.0	36.1		2.964	3.4	3.5	2.9	ST
00223	11/16/97	1537	2842.3	9006.3	14	46	23	45	23.2	23.2	22.9	35.7	35.7	36.1		1.148	2.2	4.4	3.3	ST
00224	11/16/97	1950	2907.8	9004.0	14	11	4	9	18.3	18.3	19.5	31.5	31.9	31.9		3.868	4.2	3.7	3.7	ST
00225	11/16/97	2253	2904.8	8942.8	13	26	13	24	20.2	20.3	24.3	31.6	31.7	35.9		4.928	4.3	3.9	2.4	ST
00226	11/17/97	25	2858.9	8937.8	13	46	23	45	19.2	23.5	22.6	27.6	34.9	36.3		1.846	3.9	3.3	2.1	ST
00227	11/17/97	250	2857.9	8929.1	13	27	14	27	19.5	19.8	21.3	28.9	32.0	33.5		1.753	2.9	2.7	2.2	PN
00228	11/17/97	628	2858.8	8932.7	13	37	18	36	20.1	19.9	24.2	30.4	31.9	35.6		1.753	1.2	2.5	1.9	ST
00229	11/17/97	0736	2859.9	8935.1	13	22	11	21	19.7	20.1	22.1	30.3	31.6	33.9		1.995	3.3	3.1	2.7	ST
00230	11/17/97	0908	2902.4	8944.0	13	36	15	34	19.4	20.0	23.6	29.7	30.7	36.2		2.486	3.1	3.1	2.0	ST
00231	11/17/97	1108	2906.7	8940.3	13	19	9	18	19.8	21.4	23.0	31.5	32.8	34.1		3.902	3.8	3.2	2.4	ST
00232	11/17/97	1340	2903.5	8955.5	13	24	12	23	19.0	19.3	22.6	28.1	30.1	34.0		3.143	2.9	2.7	2.0	ST
00233	11/17/97	1544	2859.1	8959.8	13	25	13	25	19.8	21.1	23.5	30.8	31.8	35.7		3.214	2.9	2.6	1.7	ST/PN
00234	11/17/97	2014	2847.6	8933.0	13	82	37	82	20.3	23.6	19.9	32.1	35.8	36.4		3.856	4.1	3.1	2.1	ST
00235	11/18/97	0219	2901.3	8900.8	13	46	23	46	17.4	21.2	22.2	29.3	34.3	35.6		2.327	2.8	2.5	2.1	ST/PN
00236	11/18/97	0636	2923.1	8827.0	11	54	27	54	22.2	23.4	21.4	35.2	35.9	36.4		2.071	2.7	2.5	2.2	ST
00238	11/18/97	0946	2915.3	8822.1	11	87	43	86	19.9	20.1	17.4	33.0	36.4	36.3		3.441	3.8	2.7	2.5	ST
00239	11/18/97	1059	2916.8	8822.2	11	69	34	68	20.2	21.1	18.5	33.3	36.4	36.4		2.940	4.9	3.5	2.9	ST
00240	11/18/97	1239	2917.1	8817.6	11	76	38	76	20.6	21.9	18.7	33.7	36.4	36.4		2.611	4.6	3.4	2.6	ST
00241	11/18/97	1605	2924.3	8803.9	11	59	29	58	22.7	23.0	20.6	35.4	35.6	36.4		0.977	4.5	3.9	2.9	ST
00242	11/18/97	1722	2929.7	8800.1	11	45	23	44	22.3	22.5	23.0	35.1	35.2	36.1		0.911	5.0	4.5	3.6	PN
00243	11/18/97	1953	2934.1	8812.2	11	41	20	39	22.3	22.4	23.1	35.2	35.4	36.1		0.581	3.2	3.2	2.7	ST
00245	11/18/97	2350	2915.2	8828.7	11	84	41	83	20.3	23.4	17.6	34.0	36.0	36.8		1.595	3.6	3.1	2.5	ST/PN
00246	11/19/97	0624	2933.2	8825.7	11	46	23	46	23.0	23.0	21.1	35.7	35.7	36.4		1.057	2.7	2.7	2.3	ST
00250	11/19/97	1300	2931.5	8815.5	11	46	23	46	21.6	22.6	22.6	34.9	35.7	36.2		1.057	2.6	2.5	2.2	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
00252	11/19/97	1506	2935.1	8810.2	11	40	20	39	22.3	22.3	23.3	35.1	35.2	36.2		0.794	1.8	1.8	1.5	ST
00253	11/19/97	1858	2954.3	8809.3	11	34	16	32	21.4	21.5	21.9	35.4	35.4	36.3		1.758	2.6	2.2	1.5	ST
00254	11/19/97	2030	2959.8	8800.4	11	23	11	22	19.8	19.8	20.3	34.3	34.3	34.5		1.661	2.3	2.1	1.9	PN
00255	11/19/97	2246	2959.4	8813.5	11	27	13	26	19.9	19.9	20.6	34.2	34.3	34.7		1.805	2.8	2.7	2.5	ST
00256	11/20/97	0214	3012.8	8843.1	11	11	11	11	16.7	16.7	16.7	31.3	31.3	31.3		5.755	1.9	1.9	1.9	ST

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
2301	10/21/97	0951	3010.8	8817.0	11	14	7	14	22.3	22.9	23.1	32.6	33.0	33.1			6.9	6.6	6.6	ST
2302	10/21/97	1147	3005.3	8824.9	11	18	9	18	24.2	24.1	24.1	33.5	33.5	33.5			6.6	6.6	6.6	ST
2303	10/21/97	1309	3001.6	8823.0	11	24	12	24	25.6	25.3	25.3	34.0	34.2	34.2			6.5	6.4	6.4	ST
2304	10/21/97	1507	2951.5	8819.6	11	34	17	34	25.0	25.6	24.9	34.5	35.1	35.8			6.5	6.1	5.4	ST
2305	10/21/97	1705	3000.6	8820.1	11	28	14	28	25.6	25.3	25.5	34.3	34.3	34.6			6.4	6.4	6.2	ST
2306	10/21/97	1815	3001.7	8820.2	11	24	12	24	25.3	25.3	25.5	34.0	34.3	34.5			6.5	6.5	6.2	ST
2307	10/21/97	2009	3013.6	8815.0	11	9	5	9	22.9	23.2	23.3	31.9	32.8	33.0			7.1	7.0	6.9	ST
2308	10/21/97	2101	3011.9	8812.0	11	14	7	14	22.4	22.8	23.5	29.5	32.6	33.2			7.4	7.0	6.7	ST

Table 2. Selected environmental parameters (continued)

ARANSAS BAY, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
31001	11/13/97	0834	2753.5	9700.5	20	3	2	3	18.3	18.4	18.4	33.2	32.1	32.1			7.0	7.2	7.0	ST
31002	11/13/97	0907	2753.7	9658.4	20	11	6	11	19.1	19.2	19.2	32.6	32.5	32.5			6.2	6.4	6.3	ST
31003	11/13/97	0941	2755.6	9657.7	20	10	5	10	18.5	18.6	18.6	32.0	32.0	31.8			7.0	7.1	7.1	ST
31004	11/13/97	1038	2753.7	9651.5	20	18	9	18	20.5	20.5	20.6	33.5	33.5	33.5			6.8	6.7	6.6	ST
31005	11/13/97	1116	2752.5	9653.7	20	17	9	17	20.4	20.5	20.5	33.5	33.4	33.5			6.7	6.7	6.6	ST
31006	11/13/97	1235	2742.4	9701.7	20	18	9	18	20.1	20.4	20.4	33.4	33.5	33.5			6.9	6.7	6.7	ST
31007	11/13/97	1326	2745.6	9703.6	20	12	6	12	18.2	19.1	19.6	30.7	32.8	33.2			7.4	7.0	6.9	ST
31008	11/13/97	1409	2745.6	9702.5	20	13	7	13	18.5	19.8	19.8	30.9	33.0	33.2			7.3	6.8	6.9	ST
31009	11/20/97	0925	2742.7	9706.5	20	12	6	12	15.0	15.1	15.5	31.4	31.5	32.3			8.1	8.0	8.2	ST
31010	11/20/97	0954	2742.6	9707.6	20	10	5	10	14.9	15.0	15.1	31.2	31.2	31.4			8.1	8.1	8.1	ST
31011	11/20/97	1036	2740.6	9705.6	20	15	8	15	15.9	16.4	16.4	32.2	32.5	33.0			7.8	7.6	7.6	ST
31012	11/20/97	1109	2739.5	9706.7	20	15	8	15	15.8	16.1	16.1	31.9	32.3	32.8			7.8	7.5	7.6	ST
31013	11/20/97	1147	2737.8	9706.6	20	16	8	16	16.1	16.9	17.1	32.2	32.9	33.2			7.6	7.5	7.3	ST
31014	11/20/97	1232	2736.5	9702.9	20	22	11	22	18.2	18.3	18.3	33.7	33.8	33.9			7.1	7.1	7.0	ST
31015	11/20/97	1319	2739.7	9702.6	20	20	10	20	17.2	17.1	17.2	33.1	33.2	33.3			7.2	7.3	7.2	ST
31016	11/20/97	1407	2741.4	9658.9	20	22	11	22	18.4	18.3	18.2	33.8	33.8	33.9			7.1	7.0	7.0	ST

Table 2. Selected environmental parameters (continued)

MATAGORDA BAY, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
32001	11/ 3/97	1021	2830.3	9605.2	19	11	5	11	22.4	22.4	22.9	33.0	33.0	34.0			4.4	4.3	7.7	ST
32002	11/ 3/97	1054	2829.3	9605.3	19	12	6	12	21.9	22.7	23.2	31.8	32.8	34.3			4.5	4.2	7.5	ST
32003	11/ 3/97	1123	2828.3	9605.2	19	13	7	13	22.3	22.5	23.8	31.5	32.4	34.8			5.2	4.4	7.0	ST
32004	11/ 3/97	1202	2827.3	9607.3	19	13	7	13	22.8	22.7	24.6	31.6	34.5	35.5			3.6	3.9	6.3	ST
32005	11/ 3/97	1250	2826.3	9606.2	19	15	7	15	23.0	22.9	24.6	31.8	34.4	35.7			3.9	3.9	7.8	ST
32006	11/ 3/97	1335	2823.3	9603.4	19	19	9	19	23.4	24.0	25.0	32.0	32.0	36.0			3.2	7.7	6.4	ST
32007	11/ 3/97	1424	2821.4	9608.2	19	19	9	19	23.5	23.4	25.3	32.0	35.6	36.2			3.3	3.8	6.5	ST
32008	11/ 3/97	1517	2824.3	9612.3	19	15	7	15	23.1	23.2	25.0	28.7	32.0	35.9			2.3	3.0	4.7	ST
32009	11/20/97	0949	2821.3	9617.4	19	15	7	15	16.3	16.4	17.0	31.6	32.5	32.8			6.7	6.5	10.7	ST
32010	11/20/97	1033	2819.3	9621.3	19	13	7	13	16.4	16.5	16.7	31.7	31.8	32.2			6.7	6.4	10.5	ST
32011	11/20/97	1116	2818.3	9625.3	19	6	3	6	15.6	15.6	16.3	29.7	30.7	31.4			6.3	6.2	6.0	ST
32012	11/20/97	1233	2818.3	9616.3	19	19	9	19	18.8	18.9	18.1	34.1	34.1	34.2			4.5	3.5	9.7	ST
32013	11/20/97	1305	2819.3	9615.4	19	19	9	19	18.7	18.7	18.1	34.0	34.0	34.2			4.7	4.4	9.7	ST
32014	11/20/97	1350	2821.3	9613.3	19	17	9	17	18.8	18.9	18.0	33.8	33.8	33.9			4.1	3.3	10.0	ST
32015	11/20/97	1424	2823.3	9614.4	19	15	7	15	17.8	17.6	17.2	32.8	32.7	33.0			5.4	5.3	10.7	ST
32016	11/20/97	1458	2824.3	9614.3	19	14	7	14	17.4	17.4	17.0	32.3	32.3	32.5			4.6	4.4	10.7	ST

Table 2. Selected environmental parameters (continued)

LAGUNA MADRE, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
33001	11/13/97	0835	2608.3	9709.1	21	10	5	10	20.5	20.5	20.4	35.2	35.3	35.2			6.7	6.7	6.8	ST
33002	11/13/97	0905	2608.3	9708.2	21	15	8	15	21.5	21.5	21.5	35.5	35.5	35.4			6.4	6.4	6.5	ST
33003	11/13/97	0948	2608.1	9704.2	21	20	10	20	22.1	22.1	22.1	35.5	35.5	35.5			6.5	6.5	6.5	ST
33004	11/13/97	1035	2605.1	9706.3	21	17	9	17	21.8	21.8	21.8	35.5	35.7	35.7			6.3	6.4	6.4	ST
33005	11/13/97	1105	2604.3	9704.2	21	20	10	20	22.1	22.1	22.0	35.6	35.6	35.6			6.4	6.3	6.4	ST
33006	11/13/97	1145	2602.2	9704.2	21	21	11	21	22.1	22.1	22.0	35.7	35.7	35.8			6.5	6.3	6.5	ST
33007	11/13/97	1227	2600.3	9707.3	21	13	7	13	20.5	20.8	20.6	35.0	35.3	35.5			6.8	6.7	6.5	ST
33008	11/13/97	1300	2558.2	9708.3	22	6	3	6	21.0	20.7	20.6	35.5	35.6	35.6			6.7	6.7	7.0	ST
33009	11/21/97	0844	2606.4	9700.3	21	25	13	25	19.5	20.1	19.9	33.9	34.2	34.3			7.0	6.8	6.8	ST
33010	11/21/97	0920	2607.4	9700.3	21	26	13	26	20.2	20.2	20.8	34.3	34.4	34.4			7.0	6.9	6.6	ST
33011	11/21/97	1001	2608.4	9700.3	21	28	14	28	20.5	20.4	20.8	34.5	34.4	34.7			7.8	7.7	7.2	ST
33012	11/21/97	1048	2608.4	9702.3	21	22	11	22	20.1	20.1	19.8	34.0	34.3	34.3			8.0	7.7	8.0	ST
33013	11/21/97	1147	2613.4	9701.3	21	24	12	24	19.5	20.0	20.5	33.7	34.1	34.5			7.5	7.3	8.3	ST
33014	11/21/97	1258	2621.0	9703.2	21	22	11	22	20.6	20.0	20.1	34.0	34.1	34.3			7.3	7.2	8.4	ST
33015	11/21/97	1355	2619.3	9707.3	21	17	9	17	18.6	18.6	19.8	32.8	32.7	34.1			7.8	7.4	7.0	ST
33016	11/21/97	1505	2612.4	9710.2	21	5	3	5	18.2	17.9	17.8	32.9	32.9	32.9			8.0	7.9	7.7	ST

Table 2. Selected environmental parameters (continued)

GALVESTON BAY, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
34001	11/11/97	1026	2915.6	9438.1	18	10	5	10	18.6	18.6	18.6	31.6	31.7	31.8			7.0	6.9	6.8	ST
34002	11/11/97	1055	2915.6	9442.5	18	10	5	10	18.2	18.2	18.3	31.1	31.1	31.3			6.8	7.0	6.9	ST
34003	11/11/97	1128	2915.0	9447.3	18	7	3	7	16.2	17.0	17.4	31.2	31.5	31.5			8.0	7.0	7.0	ST
34004	11/11/97	1214	2918.1	9444.0	18	6	3	6	17.7	17.9	17.9	30.9	31.0	31.2			7.1	6.9	6.9	ST
34005	11/11/97	1239	2919.6	9443.2	18	4	2	4	17.7	17.7	17.7	31.1	31.0	30.9			7.0	7.1	7.0	ST
34006	11/11/97	1307	2919.4	9441.5	18	10	5	10	17.8	17.8	17.9	30.2	30.1	30.8			7.1	7.1	7.1	ST
34007	11/11/97	1333	2919.1	9439.0	18	12	6	12	17.9	18.2	18.3	30.5	31.0	31.5			6.8	6.8	6.8	ST
34008	11/11/97	1405	2921.5	9440.1	18	10	5	10	18.3	18.3	18.4	31.5	31.4	31.5			6.9	6.9	6.4	ST
34009	11/25/97	1012	2925.1	9436.9	18	7	4	7	15.2	15.0	15.1	31.1	31.3	31.3			11.4	11.4	10.7	ST
34010	11/25/97	1036	2925.0	9435.4	18	9	5	9	15.5	15.2	15.2	31.6	31.5	31.6			11.4	11.4	10.9	ST
34011	11/25/97	1108	2928.1	9431.7	18	7	4	7	15.4	15.0	15.0	31.3	31.4	31.3			11.6	11.7	11.0	ST
34012	11/25/97	1138	2926.5	9433.6	18	8	4	8	15.5	15.2	15.2	31.6	31.6	31.7			11.4	11.2	11.1	ST
34013	11/25/97	1210	2924.0	9431.8	18	11	6	11	16.4	16.0	15.0	32.5	32.5	32.6			10.9	10.9	10.8	ST
34014	11/25/97	1300	2910.8	9446.6	18	13	7	13	15.8	16.3	16.3	30.7	31.8	33.4			7.9	10.8	10.7	ST
34015	11/25/97	1330	2907.1	9449.7	18	13	7	13	15.6	16.5	16.5	31.1	32.3	33.8			11.4	10.5	10.4	ST
34016	11/25/97	1356	2908.8	9449.3	18	14	7	14	16.1	16.5	16.5	31.1	33.2	33.5			7.6	10.6	10.5	ST

Table 2. Selected environmental parameters (continued)

SABINE , FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
40001	11/ 4/97	0952	2939.4	9354.3	17	3	2	3	19.1	19.1	19.1	31.0	31.0	31.0			8.1	8.1	8.2	ST
40002	11/ 4/97	1047	2936.3	9352.2	17	6	3	6	19.5	19.5	19.6	30.3	30.5	30.2			7.8	7.5	7.5	ST
40003	11/ 4/97	1142	2936.3	9355.4	17	6	3	6	19.9	19.8	19.8	30.8	30.8	30.9			7.0	7.1	6.9	ST
40004	11/ 4/97	1243	2935.3	9358.3	17	7	4	7	20.2	20.1	20.1	30.9	30.9	30.9			7.1	6.9	6.7	ST
40005	11/ 4/97	1333	2933.4	9400.3	18	9	4	9	20.7	20.6	20.6	31.5	31.5	32.5			7.0	6.8	6.5	ST
40006	11/ 4/97	1427	2934.4	9356.5	17	8	4	8	20.4	20.4	20.4	31.3	31.2	31.2			7.1	6.9	6.8	ST
40007	11/ 4/97	1537	2931.5	9355.5	17	12	6	12	20.7	20.7	20.9	31.9	32.6	32.9			7.1	7.1	6.8	ST
40008	11/ 4/97	1728	2932.4	9353.4	17	12	6	12	20.4	20.4	20.4	31.5	31.5	31.7			7.0	7.3	7.0	ST
40009	11/20/97	0914	2945.3	9341.3	17	6	3	6	14.4	14.4	14.4	32.1	32.1	32.2			8.1	7.9	7.8	ST
40010	11/20/97	1014	2941.3	9339.5	17	8	4	8	15.0	15.0	15.0	32.2	32.2	32.2			7.9	8.2	7.9	ST
40011	11/20/97	1110	2943.3	9338.2	17	6	3	6	14.0	13.9	13.9	31.8	31.7	31.8			7.7	8.3	8.1	ST
40012	11/20/97	1150	2944.3	9336.4	17	4	2	4	14.1	13.8	13.9	31.2	31.3	31.5			8.7	8.3	7.6	ST
40013	11/20/97	1250	2940.3	9336.3	17	9	4	9	16.0	15.4	15.3	32.0	32.0	32.1			8.8	8.5	8.0	ST
40014	11/20/97	1428	2933.3	9348.5	17	12	6	12	16.5	16.2	16.0	33.1	33.1	33.1			8.8	8.6	8.6	ST
40015	11/20/97	1528	2937.1	9349.3	17	7	4	7	13.4	14.4	14.6	25.0	31.9	32.2			7.9	7.7	7.3	ST
40016	11/20/97	1606	2938.3	9350.5	17	4	2	4	14.7	14.3	14.1	31.4	31.8	32.0			8.2	8.1	7.3	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	11/ 7/97	2001	2906.4	8841.3	11	96	48	95	23.8	23.0	19.1	33.5	34.6	34.7			4.8	4.8	3.4	ST
17002	11/ 8/97	1545	3002.4	8847.0	11	10	5	9	19.9	19.4	19.8	32.5	32.2	32.2			6.0	6.2	6.2	ST
17003	11/ 8/97	1704	3000.1	8848.1	11	8	4	7	18.3	18.2	18.4	31.2	31.2	31.4			6.3	6.5	6.5	ST
17004	11/ 8/97	1809	2959.2	8845.6	11	15	6	12	19.7	20.0	20.0	31.8	31.8	32.4			4.4	4.5	4.4	ST
17005	11/ 8/97	2048	2957.6	8831.9	11	26	13	25	20.8	22.1	22.5	32.3	32.5	34.4			5.1	4.7	3.3	ST
17006	11/ 9/97	0040	2942.3	8853.7	11	7	3	6	17.1	17.0	17.1	31.2	31.2	31.0			6.2	6.3	6.3	ST
17007	11/ 9/97	0323	2936.3	8835.8	11	21	10	20	22.1	22.2	21.7	33.1	32.8	33.3			5.8	5.7	5.4	ST
17008	11/ 9/97	0507	2929.0	8844.4	11	19	9	18	22.5	21.7	21.0	32.9	32.9	34.8			5.6	5.7	4.2	ST
17009	11/ 9/97	0758	2944.6	8846.3	11	13	6	12	20.0	20.0	19.9	32.4	32.3	32.4			5.2	5.2	4.6	ST
17010	11/ 9/97	1001	2938.4	8835.2	11	23	11	22	22.7	22.6	22.1	31.5	32.7	33.9			5.6	5.2	3.8	ST
17011	11/ 9/97	1233	2925.3	8845.4	11	30	15	29	21.1	22.8	20.1	31.4	32.6	34.0			6.2	5.4	4.4	ST
17012	11/ 9/97	1427	2917.6	8854.1	11	35	17	34	19.6	20.7	19.6	26.2	31.6	34.2			7.0	6.1	4.4	ST
17013	11/ 9/97	1815	2908.9	8840.8	11	84	42	83	21.9	23.9	18.7	32.3	34.2	34.3			4.6	4.1	3.8	ST
17014	11/ 9/97	2028	2912.5	8850.8	11	66	33	65	20.0	19.3	16.8	27.9	33.9	34.0			5.8	3.4	3.6	ST
17015	11/ 9/97	2307	2919.1	8853.0	11	33	16	32	19.6	20.5	19.6	27.3	31.8	34.3			5.0	4.0	3.0	ST
17016	11/10/97	0056	2920.7	8851.9	11	29	14	28	18.9	20.7	20.0	27.3	31.7	34.1			6.2	5.4	4.2	ST
17017	11/10/97	0359	2922.5	8849.6	11	33	16	32	18.6	20.8	19.8	27.7	32.1	34.6			6.2	5.3	4.0	ST
17018	11/10/97	0536	2922.0	8842.0	11	48	24	47	19.8	20.5	19.0	29.2	34.6	34.6			5.6	3.8	3.8	ST
17019	11/10/97	0801	2930.1	8829.9	11	50	25	49	21.5	22.2	20.7	30.8	34.6	34.9			5.0	4.1	4.0	PN
17020	11/10/97	1105	2950.7	8828.0	11	31	15	30	22.6	22.8	20.5	33.2	33.2	34.8			4.7	4.3	3.0	ST
17021	11/10/97	1319	2949.3	8832.5	11	27	14	26	22.6	21.4	21.3	33.2	33.1	34.5			5.4	5.5	4.3	ST
17022	11/10/97	1800	2924.2	8844.5	11	37	18	36	20.4	20.6	19.8	32.5	32.6	34.7			6.2	6.3	4.2	ST
17023	11/10/97	1933	2923.0	8850.5	11	24	12	23	19.5	21.2	20.4	30.2	32.4	34.3			6.0	4.5	3.0	ST
17024	11/10/97	2036	2923.1	8856.5	11	16	8	15	19.8	19.8	20.4	31.8	31.3	31.9			5.6	6.3	5.6	ST
17025	11/11/97	0130	2957.5	8832.2	11	26	13	25	20.5	20.7	20.7	32.8	33.4	33.6			7.3	6.6	6.6	
17026	11/11/97	0435	3011.1	8830.5	11	12	6	11	18.1	18.2	19.3	30.8	30.8	31.5			7.6	7.2	6.8	ST
17027	11/11/97	0607	3005.7	8832.6	11	17	8	16	19.1	19.0	20.4	31.0	31.8	32.4			4.8	4.7	4.6	ST
17028	11/11/97	0719	3000.1	8830.1	11	26	13	25	20.0	21.2	22.0	31.4	32.7	34.6			4.8	4.6	3.3	PN
17029	11/11/97	0910	2951.6	8837.2	11	22	11	21	21.1	21.3	21.2	33.3	33.6	33.2			4.4	4.7	4.3	ST
17030	11/11/97	1103	2954.2	8847.3	11	9	4	8	19.3	19.2	19.2	32.3	32.1	31.5			4.8	4.8	4.7	ST
17031	11/11/97	1223	2953.6	8848.5	11	5	2	4	18.1	18.1	18.0	31.8	31.5	30.0			5.9	6.2	6.2	ST

Table 2. Selected environmental parameters (continued)

PELICAN, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	CL, MG/M3 SUR	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37522	12/ 1/97	0835	2900.0	9030.0	14	10	5	10	20.0	20.0	21.7	32.0	32.0	34.7	2.685		7.5	7.3	7.3	PN
37523	12/ 1/97	1150	2900.1	9100.0	15	6	4	6	18.1	18.1	18.1	30.4	30.4	30.3	5.912		8.8	8.7	9.0	PN
37524	12/ 1/97	1525	2900.0	9130.0	15	10	5	10	19.1	19.2	20.8	31.6	32.3	34.2	1.711		7.9	8.1	7.1	PN
37525	12/ 1/97	1929	2837.9	9109.9	15	21	10	21	20.5	20.4	21.7	33.5	33.6	35.2	0.840		7.4	7.2	7.0	ST
37526	12/ 1/97	2132	2836.6	9057.5	14	19	9	19	20.0	20.5	21.6	32.8	33.4	35.2	0.612		7.8	7.5	6.4	ST
37527	12/ 2/97	0008	2829.1	9042.1	14	34	17	34	21.8	21.8	21.8	35.7	35.7	35.7	0.694		6.9	6.8	7.0	ST
37528	12/ 2/97	0714	2837.9	9109.8	15	21	12	21	20.0	20.2	21.8	33.3	33.4	35.3	0.956		7.3	7.3	6.5	ST
37529	12/ 2/97	0923	2836.6	9057.4	14	19	10	19	20.1	20.4	21.7	33.5	33.8	35.3	0.692		7.3	7.1	7.1	ST
37530	12/ 2/97	1034	2830.0	9100.0	15	32	18	32	22.4	22.0	22.4	35.8	35.5	35.8	0.759		7.5	7.1	7.1	PN
37531	12/ 2/97	1331	2828.9	9042.2	14	35	16	35	21.4	21.6	21.7	35.4	35.6	35.6	0.817		7.2	6.9	6.8	ST
37532	12/ 2/97	1536	2830.0	9030.2	14	38	21	38	22.6	22.6	22.5	36.0	36.0	36.0	0.428		7.5	7.1	6.8	PN
37533	12/ 2/97	1848	2840.4	9014.6	14	33	17	33	21.5	22.1	23.0	34.8	35.2	36.0	0.571		7.6	7.1	6.4	ST
37534	12/ 2/97	2028	2843.4	9016.5	14	28	14	28	21.6	21.8	23.0	34.6	34.7	35.9	0.781		7.7	7.4	6.6	ST
37535	12/ 2/97	2323	2854.2	9030.2	14	15	8	15	20.4	20.4	20.6	32.7	32.7	33.0	1.678		7.8	7.8	8.0	ST
37536	12/ 3/97	0113	2857.3	9034.0	14	11	5	11	20.2	20.2	20.2	32.5	32.5	32.5	1.257		7.6	7.7	7.5	ST
37537	12/ 3/97	0703	2857.3	9034.0	14	10	7	10	20.2	20.2	20.2	32.6	32.6	32.6	1.126		7.5	7.4	7.5	ST
37538	12/ 3/97	0952	2854.3	9030.2	14	14	6	14	20.3	20.2	20.2	32.3	32.3	32.4	1.829		7.5	7.5	7.7	ST
37539	12/ 3/97	1203	2843.1	9016.3	14	26	16	26	21.6	21.6	23.1	34.7	34.9	36.0	0.787		6.6	6.3	6.3	ST
37540	12/ 3/97	1323	2840.4	9014.6	14	31	18	31	21.7	22.2	22.9	35.0	35.5	36.0	0.555		7.2	7.1	6.5	ST
37541	12/ 3/97	1635	2900.0	9000.1	14	24	12	24	20.3	21.2	22.9	31.8	33.0	35.7	6.778		8.9	8.0	6.3	PN
37542	12/ 3/97	1741	2859.7	8958.9	13	26	12	26	20.8	21.1	22.9	32.1	32.8	35.8	8.922		8.1	8.0	6.3	ST
37543	12/ 3/97	1917	2905.0	8959.1	13	17	9	17	19.7	19.7	22.7	31.0	31.1	35.1	3.680		8.7	6.7	6.4	ST
37544	12/ 3/97	2111	2902.6	8951.1	13	29	14	29	19.5	22.6	23.2	29.9	34.9	35.9	11.496		8.9	6.5	5.1	ST
37545	12/ 3/97	2305	2906.4	8946.7	13	25	13	25	19.1	21.6	23.2	29.2	33.5	35.8	3.468		7.0	5.3	5.2	ST
37546	12/ 4/97	0013	2903.5	8946.4	13	29	16	29	19.1	23.0	23.3	28.9	35.4	36.0	11.267		8.9	6.7	5.4	ST
37547	12/ 4/97	0652	2900.0	8930.0	13	14	9	14	18.9	22.6	23.4	28.5	34.6	35.9	6.068		7.0	10.0	10.0	PN
37548	12/ 4/97	0933	2906.5	8946.6	13	23	14	23	18.9	21.8	23.3	29.6	33.7	35.9	8.851		9.7	7.6	5.7	ST
37549	12/ 4/97	1032	2903.6	8946.3	13	30	16	30	19.1	22.7	23.2	29.6	35.0	36.0	9.660		9.0	6.7	5.0	ST
37550	12/ 4/97	1153	2902.7	8951.0	13	28	15	28	19.0	22.5	23.2	29.2	34.8	35.9	10.857		4.8	4.2	3.9	ST
37551	12/ 4/97	1346	2905.0	8959.2	13	18	10	18	19.8	19.7	22.5	31.3	31.3	35.1	3.783		3.3	4.0	4.0	ST
37552	12/ 4/97	1516	2859.6	8958.9	13	26	14	26	19.5	20.9	22.8	30.0	32.6	35.7	10.102		9.2	8.0	6.0	ST

Table 3. 1997 Summer Shrimp Groundfish Survey species composition list, 360 trawl stations, for those vessels that used either a 40-ft or 20-ft trawl. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Stenotomus caprinus	longspine porgy	114096	2260.1	217	60.3
Micropogonias undulatus	Atlantic croaker	92389	2398.5	144	40.0
Peprilus burti	gulf butterfish	50880	1505.0	201	55.8
Trachurus lathami	rough scad	50697	1082.1	167	46.4
Prionotus longispinosus	bigeye searobin	38884	237.4	128	35.6
Chloroscombrus chrysurus	Atlantic bumper	32687	578.5	113	31.4
Cynoscion nothus	silver seatrout	11156	402.5	87	24.2
Serranus atrobranchus	blackear bass	6554	83.1	102	28.3
Cynoscion arenarius	sand seatrout	5908	187.3	128	35.6
Trichiurus lepturus	Atlantic cutlassfish	5531	293.3	116	32.2
Centropristis philadelphica	rock sea bass	5400	150.9	151	41.9
Sphoeroides parvus	least puffer	4673	20.8	87	24.2
Leiostomus xanthurus	spot	4486	247.8	78	21.7
Prionotus stearnsi	shortwing searobin	3863	37.7	108	30.0
Polydactylus octonemus	Atlantic threadfin	3815	57.0	75	20.8
Pristipomoides aquilonaris	wenchman	3759	274.5	104	28.9
Saurida brasiliensis	largescale lizardfish	3270	26.5	134	37.2
Peprilus alepidotus	harvestfish	3192	32.9	51	14.2
Upeneus parvus	dwarf goatfish	3095	79.5	122	33.9
Lagodon rhomboides	pinfish	3011	135.5	104	28.9
Syacium gunteri	shoal flounder	2880	57.6	157	43.6
Prionotus paralatus	Mexican searobin	2554	51.8	92	25.6
Synodus foetens	inshore lizardfish	2524	278.3	169	46.9
Diplectrum bivittatum	dwarf sand perch	2070	59.9	92	25.6
Halieutichthys aculeatus	pancake batfish	1987	12.5	87	24.2
Larimus fasciatus	banded drum	1752	38.9	30	8.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Stellifer lanceolatus	star drum	1531	21.5	30	8.3
Etropus crossotus	fringed flounder	1461	22.9	60	16.7
Lepophidium brevibarbe	blackedge cusk-eel	1235	38.7	77	21.4
Harengula jaguana	scaled sardine	1221	36.2	35	9.7
Anchoa hepsetus	striped anchovy	1196	23.9	54	15.0
Trichopsetta ventralis	sash flounder	1026	27.1	47	13.1
Brevoortia patronus	gulf menhaden	903	59.9	41	11.4
Selene setapinnis	Atlantic moonfish	842	44.5	89	24.7
Lutjanus campechanus	red snapper	790	72.1	102	28.3
Porichthys plectrodon	Atlantic midshipman	725	17.0	59	16.4
Anchoa mitchilli	bay anchovy	642	1.7	21	5.8
Prionotus rubio	blackwing searobin	605	17.5	48	13.3
Anchoa lyolepis	dusky anchovy	547	0.5	9	2.5
Lagocephalus laevigatus	smooth puffer	546	14.6	69	19.2
Urophycis floridana	southern hake	516	36.7	70	19.4
Mullus auratus	red goatfish	515	31.7	27	7.5
Etrumeus teres	round herring	476	6.3	24	6.7
Menticirrhus americanus	southern kingfish	450	41.4	28	7.8
Monacanthus hispidus	planehead filefish	414	6.4	70	19.4
Cyclopsetta chittendeni	Mexican flounder	366	23.3	49	13.6
Opisthonema oglinum	Atlantic thread herring	353	24.9	22	6.1
Bollmannia communis	ragged goby	323	5.5	24	6.7
Symphurus plagiusa	blackcheek tonguefish	308	7.3	46	12.8
Bagre marinus	gafftopsail catfish	288	26.2	7	1.9
Citharichthys spilopterus	bay whiff	286	5.4	28	7.8
Engyophrys senta	spiny flounder	250	3.5	31	8.6
Arius felis	hardhead catfish	237	67.0	20	5.6
Synodus poeyi	offshore lizardfish	229	3.6	38	10.6
Syacium papillosum	dusky flounder	229	11.0	17	4.7
Hildebrandia flava	yellow conger	228	15.8	34	9.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Sardinella aurita	Spanish sardine	227	10.6	19	5.3
Scorpaena calcarata	smoothhead scorpionfish	215	2.9	16	4.4
Antennarius radiosus	singlespot frogfish	195	2.6	43	11.9
Anchoa nasuta	longnose anchovy	184	0.2	3	0.8
Ogcocephalus spp.	batfishes	179	4.0	26	7.2
Engraulis eurystole	silver anchovy	176	0.9	9	2.5
Ancylopsetta dilecta	three-eye flounder	176	9.5	39	10.8
Haemulon aurolineatum	tomtate	173	9.0	14	3.9
Prionotus tribulus	bighead searobin	154	4.9	26	7.2
Lepophidium jeannae	mottled cusk-eel	149	4.6	9	2.5
Urophycis cirrata	gulf hake	148	3.9	24	6.7
Conodon nobilis	barred grunt	139	6.5	2	0.6
Lutjanus synagris	lane snapper	130	12.6	24	6.7
Rhomboplites aurorubens	vermilion snapper	129	14.8	14	3.9
Hoplunnis macrurus	freckled pike-conger	118	2.4	33	9.2
Brotula barbata	bearded brotula	118	24.5	33	9.2
Symphurus civitatus	offshore tonguefish	116	2.0	10	2.8
Equetus umbrosus	cubbyu	115	9.8	22	6.1
Diplectrum formosum	sand perch	102	9.3	11	3.1
Balistes capriscus	gray triggerfish	102	17.3	34	9.4
Caulolatilus intermedius	anchor tilefish	101	13.4	21	5.8
Symphurus diomedianus	spottedfin tonguefish	100	3.1	17	4.7
Bellator militaris	horned searobin	98	1.4	14	3.9
Eucinostomus gula	silver jenny	93	4.0	17	4.7
Chaetodipterus faber	Atlantic spadefish	93	0.9	9	2.5
Pontinus longispinis	longspine scorpionfish	90	1.5	10	2.8
Citharichthys macrops	spotted whiff	86	1.1	10	2.8
Sphyraena guachancho	guaguanche	83	13.2	17	4.7
Ophidion welshi	crested cusk-eel	83	3.8	11	3.1
Priacanthus arenatus	bigeye	77	3.1	22	6.1

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Decapterus punctatus	round scad	71	2.5	12	3.3
Paralichthys lethostigma	southern flounder	71	18.2	24	6.7
Raja texana	roundel skate	69	27.5	28	7.8
Ancylopsetta quadrocellata	ocellated flounder	68	6.7	24	6.7
Prionotus scitulus	leopard searobin	62	1.2	8	2.2
Orthopristis chrysoptera	pigfish	61	6.2	3	0.8
Selar crumenophthalmus	bigeye scad	60	3.1	10	2.8
Kathetostoma albigutta	lancer stargazer	58	3.2	18	5.0
Sphoeroides nephelus	southern puffer	53	0.2	4	1.1
Seriola dumerili	greater amberjack	48	8.0	6	1.7
Scomber japonicus	chub mackerel	48	3.2	2	0.6
Paralichthys squamilentus	broad flounder	48	6.1	5	1.4
Rhizoprionodon terraenovae	Atlantic sharpnose shark	46	30.8	16	4.4
Anchoviella perfasciata	flat anchovy	41	0.2	1	0.3
Bregmaceros atlanticus	antenna codlet	37	0.1	11	3.1
Peristedion gracile	slender searobin	37	1.0	9	2.5
Astroscopus y-graecum	southern stargazer	37	2.0	8	2.2
Scomberomorus cavalla	king mackerel	35	2.0	7	1.9
Centropristis ocyura	bank sea bass	34	3.5	3	0.8
Etropus cyclosquamus	shelf flounder	33	0.2	9	2.5
Achirus lineatus	lined sole	32	0.5	4	1.1
Pogonias cromis	black drum	30	1.3	3	0.8
Bairdiella chrysoura	silver perch	28	2.1	5	1.4
Ogcocephalus radiatus	polka-dot batfish	28	0.8	11	3.1
Serraniculus pumilio	pygmy sea bass	25	0.1	7	1.9
Gymnachirus texae	fringed sole	24	0.7	9	2.5
Caranx crysos	blue runner	23	1.0	8	2.2
Ogcocephalus declivirostris	slantbrow batfish	23	5.2	7	1.9
Neomerinthe hemingwayi	spinycheek scorpionfish	22	6.5	7	1.9
Gobionellus hastatus	sharptail goby	22	0.0	6	1.7

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Decodon puellaris	red hogfish	21	1.7	5	1.4
Scomberomorus maculatus	Spanish mackerel	21	1.2	9	2.5
Eucinostomus argenteus	spotfin mojarra	20	0.6	5	1.4
Syacium spp.	lefteye flounders	20	0.3	3	0.8
Squatina dumeril	Atlantic angel shark	19	25.4	14	3.9
Gymnothorax nigromarginatus	blackedge moray	19	2.4	10	2.8
Narcine brasiliensis	lesser electric ray	17	2.4	4	1.1
Citharichthys cornutus	horned whiff	17	0.2	2	0.6
Trinectes maculatus	hogchoker	17	0.2	7	1.9
Ophichthus gomesi	shrimp eel	15	1.7	6	1.7
Carcharhinus acronotus	blacknose shark	14	4.7	2	0.6
Mustelus canis	smooth dogfish	14	37.5	12	3.3
Cynoscion spp.	seatrouts	14	0.5	3	0.8
Ophidion holbrooki	bank cusk-eel	14	0.5	4	1.1
Histrio histrio	sargassumfish	14	0.1	1	0.3
Syngnathus louisianae	chain pipefish	13	0.0	3	0.8
Bathyanthias mexicanus	yellowtail bass	13	0.4	6	1.7
Equetus iwamotoi	blackbar drum	13	1.5	4	1.1
Chilomycterus schoepfi	striped burrfish	13	4.8	9	2.5
Steindachneria argentea	luminous hake	12	0.1	3	0.8
Seriola fasciata	lesser amberjack	12	1.2	6	1.7
Prionotus ophryas	bandtail searobin	11	0.5	5	1.4
Neobythites gillii	cusk-eel	11	0.2	4	1.1
Ophidion selenops	mooneye cusk-eel	11	0.4	3	0.8
Gymnachirus melas	naked sole	11	0.1	3	0.8
Sphoeroides dorsalis	marbled puffer	10	0.3	2	0.6
Gymnothorax ocellatus	ocellated moray	9	1.6	2	0.6
Carcharhinus limbatus	blacktip shark	8	2.5	4	1.1
Epinephelus niveatus	snowy grouper	7	0.1	2	0.6
Rypticus maculatus	whitespotted soapfish	7	0.5	6	1.7

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Calamus calamus	saucereye porgy	7	5.4	5	1.4
Mustelus norrisi	Florida smoothhound	6	12.5	4	1.1
Hippocampus erectus	lined seahorse	6	0.1	4	1.1
Prionotus roseus	bluespotted searobin	6	0.2	3	0.8
Antennarius striatus	striated frogfish	6	0.2	2	0.6
Epinephelus flavolimbatus	yellowedge grouper	5	0.2	3	0.8
Hemicaranx amblyrhynchus	bluntnose jack	5	0.2	4	1.1
Dasyatis americana	southern stingray	4	1.1	2	0.6
Rhinoptera bonasus	cownose ray	4	19.3	3	0.8
Trachinocephalus myops	snakefish	4	0.4	3	0.8
Serranus phoebe	tattler	4	0.0	1	0.3
Hemanthias aureorubens	streamer bass	4	0.1	2	0.6
Menticirrhus littoralis	gulf kingfish	4	0.2	2	0.6
Ophidiidae	cusk-eels	4	0.0	1	0.3
Lepophidium spp.	cusk-eels	4	0.2	1	0.3
Sphyrna tiburo	bonnethead	3	6.9	2	0.6
Raja olseni	spreadfin skate	3	3.8	2	0.6
Dasyatis sabina	Atlantic stringray	3	1.3	2	0.6
Ophichthus spp.	snake eels	3	0.7	1	0.3
Pomatomus saltatrix	bluefish	3	0.6	2	0.6
Pagrus pagrus	red porgy	3	2.1	1	0.3
Aluterus scriptus	scrawled filefish	3	0.1	1	0.3
Lactophrys quadricornis	scrawled cowfish	3	0.7	2	0.6
Sphyrna lewini	scalloped hammerhead	2	2.2	2	0.6
Torpedo nobiliana	Atlantic torpedo	2	0.4	1	0.3
Prionotus martis	barred searobin	2	0.0	1	0.3
Rachycentron canadum	cobia	2	16.5	2	0.6
Ssciaenidae	drums	2	0.0	1	0.3
Calamus penna	sheepshead porgy	2	1.0	1	0.3
Cyclopsetta fimbriata	spotfin flounder	2	0.0	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Ogcocephalus nasutus	shortnose batfish	2	0.0	2	0.6
Dasyatis centroura	roughtail stingray	1	63.8	1	0.3
Dasyatis say	bluntnose stingray	1	0.3	1	0.3
Gymnura micrura	smooth butterfly ray	1	4.5	1	0.3
Alosa chrysochloris	skipjack herring	1	0.1	1	0.3
Dorosoma petenense	threadfin shad	1	0.0	1	0.3
Synodontidae	lizardfish	1	0.0	1	0.3
Gymnothorax kolpos	blacktail moray	1	0.4	1	0.3
Echiophis intertinctus	spotted spoon-nose eel	1	0.2	1	0.3
Fistularia tabacaria	bluespotted cornetfish	1	0.3	1	0.3
Mugil cephalus	striped mullet	1	0.3	1	0.3
Scorpaena brasiliensis	barbfish	1	0.3	1	0.3
Serranus notospilus	saddle bass	1	0.0	1	0.3
Hemanthias vivanus	red barbier	1	0.0	1	0.3
Hemanthias leptus	longtail bass	1	0.0	1	0.3
Rypticus saponaceus	greater soapfish	1	0.1	1	0.3
Pristigenys alta	short bigeye	1	0.3	1	0.3
Apogon spp.	cardinalfishes	1	0.0	1	0.3
Caranx hippos	crevalle jack	1	0.0	1	0.3
Trachinotus carolinus	Florida pompano	1	0.0	1	0.3
Equetus acuminatus	high-hat	1	0.0	1	0.3
Bothus robinsi	twospot flounder	1	0.0	1	0.3
Paralichthys albigutta	gulf flounder	1	0.2	1	0.3
Aluterus schoepfi	orange filefish	1	0.0	1	0.3
Chilomycterus atinga	spotted burrfish	1	0.0	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Crustaceans					
Trachypenaeus similis	roughback shrimp	70362	323.3	146	40.6
Penaeus aztecus	brown shrimp	16015	218.0	263	73.1
Callinectes similis	lesser blue crab	10097	153.8	215	59.7
Squilla empusa	mantis shrimp	9156	95.4	155	43.1
Sicyonia dorsalis	lesser rock shrimp	7194	20.6	116	32.2
Sicyonia brevirostris	brown rock shrimp	6889	67.3	98	27.2
Trachypenaeus constrictus	roughneck shrimp	4848	20.1	25	6.9
Portunus gibbesii	irridescent swimming crab	4494	25.7	119	33.1
Portunus spinicarpus	longspine swimming crab	4125	21.6	93	25.8
Solenocera vioscai	humpback shrimp	2424	15.1	52	14.4
Penaeus duorarum	pink shrimp	2398	50.0	79	21.9
Squilla chydaea	mantis shrimp	2238	16.3	92	25.6
Xiphopenaeus kroyeri	seabob	743	3.3	12	3.3
Portunus spinimanus	blotched swimming crab	443	11.1	69	19.2
Penaeus setiferus	white shrimp	413	20.7	45	12.5
Callinectes sapidus	blue crab	398	38.1	47	13.1
Calappa sulcata	yellow box crab	263	55.1	70	19.4
Parapenaeus politus	deepwater rose shrimp	184	0.4	14	3.9
Ovalipes floridanus	Florida lady crab	168	2.2	24	6.7
Anasimus latus	stilt spider crab	142	1.2	31	8.6
Arenaeus cribrarius	speckled swimming crab	138	5.4	7	1.9
Raninoides louisianensis	gulf frog crab	111	1.0	16	4.4
Paguristes triangulatus	hermit crab	82	0.5	4	1.1
Squilla neglecta	mantis shrimp	72	0.7	7	1.9
Sicyonia burkenroadi	spiny rock shrimp	54	0.0	14	3.9
Hepatus epheliticus	calico crab	47	2.3	23	6.4
Libinia dubia	longnose spider crab	45	0.5	16	4.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Libinia emarginata	portly spider crab	37	2.5	16	4.4
Porcellana sayana	spotted porcelain crab	25	0.0	4	1.1
Porcellana sigsbeiana	striped porcelain crab	23	0.0	4	1.1
Pagurus pollicaris	flatclaw hermit crab	22	0.0	12	3.3
Portunus sayi	sargassum swimming crab	22	0.0	10	2.8
Parthenope granulata	bladetooth elbow crab	21	0.0	5	1.4
Podochela sidneyi	shortfinger neck crab	16	0.0	11	3.1
Metoporhaphis calcarata	false arrow crab	16	0.0	9	2.5
Pagurus bullisi	hermit crab	15	0.3	5	1.4
Stenorhynchus seticornis	yellowline arrow crab	14	0.1	6	1.7
Speocarcinus lobatus	gulf squareback crab	14	0.0	2	0.6
Persephona crinita	pink purse crab	13	0.1	6	1.7
Speocarcinus spp.	squareback crabs	12	0.0	4	1.1
Parapenaeus spp.	penaeid shrimps	11	0.0	2	0.6
Paguristes sericeus	blue-eyed hermit	11	0.1	1	0.3
Petrochirus diogenes	giant hermit crab	9	1.3	4	1.1
Dardanus insignis	red brocade hermit	8	0.8	3	0.8
Dyspanopeus texana	gulf grassflat crab	7	0.1	2	0.6
Stenocionops coelata	spider crab	7	0.2	4	1.1
Leiolambrus nitidus	white elbow crab	7	0.0	5	1.4
Myropsis quinquespinosa	fivespine purse crab	6	0.0	2	0.6
Plesionika longicauda	pandalid shrimp	5	0.0	1	0.3
Persephona mediterranea	mottled purse crab	5	0.0	5	1.4
Ovalipes stephensoni	coarsehand lady crab	5	0.0	2	0.6
Scyllarides nodifer	ridged slipper lobster	5	1.2	4	1.1
Solenocera necopina	deepwater humpback shrimp	4	0.0	1	0.3
Xanthidae	mud crabs	4	0.1	3	0.8
Portunus anceps	delicate swimming crab	4	0.0	3	0.8
Axiidae	lobster shrimps	4	0.0	1	0.3
Acanthocarpus alexandri	gladiator box crab	4	0.0	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Raninoides loevis	furrowed frog crab	4	0.0	3	0.8
Manucomplanus curallinus	right-handed hermit crab	3	0.0	1	0.3
Dromidia antillensis	hairy sponge crab	3	0.0	2	0.6
Stenopus scutellatus	golden coral shrimp	2	0.0	1	0.3
Inachoides forceps	spider crab	2	0.0	1	0.3
Collodes robustus	spider crab	2	0.0	1	0.3
Calappa flammea	flame box crab	2	0.3	1	0.3
Euphrosynoplax clausa	craggy bathyal crab	2	0.0	1	0.3
Parasquilla coccinea	mantis shrimp	1	0.0	1	0.3
Lysiosquilla scabricauda	mantis shrimp	1	0.0	1	0.3
Lysmata wurdemanni	peppermint shrimp	1	0.0	1	0.3
Latreutes fucorum	slender sargassum shrimp	1	0.0	1	0.3
Latreutes parvulus	sargassum shrimp	1	0.0	1	0.3
Sicyonia typica	kinglet rock shrimp	1	0.0	1	0.3
Eurypanopeus depressus	flatback mud crab	1	0.0	1	0.3
Panopeus spp.	mud crabs	1	0.0	1	0.3
Rhithropanopeus harrisii	Harris mud crab	1	0.0	1	0.3
Manucomplanus ungulatus	hermit crab	1	0.0	1	0.3
Stenocionops spinimanus	prickly spider crab	1	0.1	1	0.3
Stenocionops spinosissimus	tenspine spider crab	1	0.3	1	0.3
Parthenope serrata	sawtooth elbow crab	1	0.0	1	0.3
Others					
Loligo pleii	arrow squid	17991	305.8	162	45.0
Loligo pealeii	longfin squid	11242	187.5	82	22.8
Amusium papyraceum	paper scallop	3368	29.6	69	19.2
Astropecten duplicatus	spiny beaded sea star	3240	4.9	68	18.9
Lolliguncula brevis	Atlantic brief squid	3194	37.0	122	33.9
Chrysaora quinquecirrha	sea nettle	1259	23.9	48	13.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Loligo spp.	squids	812	13.5	11	3.1
Renilla mulleri	short-stemmed sea pansy	750	8.0	38	10.6
Holothuroidea	sea cucumbers	546	0.5	7	1.9
Ophiolepis elegans	brittle star	363	1.0	28	7.8
Astropecten cingulatus	starfish	338	2.5	29	8.1
Luidia clathrata	sea star	303	8.8	36	10.0
Holothuriidae	sea cucumbers	278	0.3	2	0.6
Porifera	sponges	117	7.0	6	1.7
Chione clenchi	Clench venus	104	0.8	5	1.4
Actinidae	sea anemones	102	0.5	27	7.5
Pitar cordatus	Schwengel's pitar	90	2.1	8	2.2
Polystira albida	white giant turris	87	1.0	8	2.2
Asteroidea	starfishes	57	0.6	4	1.1
Sargassaceae	sargassum	45	15.9	45	12.5
Anadara baughmani	Baughman's ark	44	1.1	5	1.4
Clypeaster ravenelii	cake urchin	32	4.5	6	1.7
Anthozoa	anthozoans	27	0.3	2	0.6
Encope aberrans	sand dollar	19	1.0	4	1.1
Conus austini	cone shell	17	0.2	4	1.1
Distorsio clathrata	Atlantic distorsio	16	0.1	3	0.8
Thais haemastoma	rocksnail	16	0.3	5	1.4
Cantharus cancellarius	cancellate cantharus	14	0.0	9	2.5
Stomolophus meleagris	many-mouthed sea jelly	12	4.3	5	1.4
Polystira tellea	delicate giant turret	11	0.1	3	0.8
Arcinella cornuta	Florida spiny jewelbox	11	0.1	1	0.3
Tethyaster grandis	starfish	10	0.7	6	1.7
Paranthus rapiformis	onion anemone	9	0.0	3	0.8
Luidia alternata	banded luidia	9	0.7	6	1.7
Clypeaster prostratus	sea biscuit	9	1.7	1	0.3
Muricanthus fulvescens	giant eastern murex	8	0.1	2	0.6

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Calliactris tricolor	common sea anemone	8	0.1	3	0.8
Neverita duplicata	shark eye	7	0.1	5	1.4
Glaucus atlanticus	blue glaucus	7	0.0	3	0.8
Aplysia willcoxi	seahare	6	1.6	3	0.8
Anadara transversa	transverse ark	6	0.0	1	0.3
Laevicardium laevigatum	egg cockle	6	0.3	1	0.3
Echinaster spp.	thorny sea stars	6	0.0	1	0.3
Schizaster orbignyanus	heart urchin	6	0.3	1	0.3
Ophiuroidea	brittlestars	6	0.0	1	0.3
Aurelia aurita	moon jellyfish	5	0.3	3	0.8
Gorgonellidae	sea fans	5	0.0	1	0.3
Asteroporpa annulata	starfish	5	0.2	3	0.8
Thyonella gemmata	sea cucumber	5	0.0	2	0.6
Molpadia barbouri	sea cucumber	5	0.2	2	0.6
Argopecten gibbus	calico scallop	4	0.0	1	0.3
Echinaster serpentarius	starfish	4	0.0	1	0.3
Molpadia spp.	sea cucumber	4	0.2	1	0.3
Strombus alatus	Florida fighting conch	3	0.0	2	0.6
Octopus vulgaris	common Atlantic octopus	3	0.6	3	0.8
Hydroidae	hydras	3	0.0	1	0.3
Busycon sinistrum	lightning whelk	2	0.1	2	0.6
Aplysia spp.	sea hares	2	0.4	1	0.3
Armina tigrina	tiger armina	2	0.0	2	0.6
Anatina anatina	smooth duckclam	2	0.0	1	0.3
Semirossia equalis	greater shining bobtail	2	0.0	2	0.6
Coelenterata	coelenterates	2	0.1	2	0.6
Gorgonidae	gorgonians	2	0.0	2	0.6
Ctenophora	comb jellies	2	0.1	1	0.3
Stylocidaris affinis	sea urchin	2	0.1	1	0.3
Moira atropos	mud heart-urchin	2	0.0	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Phalium granulatum	scotch bonnet	1	0.0	1	0.3
Tonna galea	giant tun	1	0.5	1	0.3
Oliva sayana	lettered olive	1	0.0	1	0.3
Polyceridae	money shell	1	0.0	1	0.3
Anadara ovalis	blood ark	1	0.0	1	0.3
Noetia ponderosa	ponderous ark	1	0.0	1	0.3
Octopoda	octopuses	1	0.4	1	0.3
Zoobotryon	bryozoan	1	0.0	1	0.3
Astropecten articulatus	plated-margined sea star	1	0.0	1	0.3
Arbacia punctulata	purple sea-urchin	1	0.0	1	0.3

Table 4a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	16.7	15.13	0.0	0.04	8	788.2	439.87	2.4	1.25	21
Portunus spinicarpus	0.0	0.00	0.0	0.00	3	1.8	1.49	0.0	0.00	8	44.3	25.97	0.1	0.06	21
Squilla spp.	0.0	0.00	0.0	0.00	3	4.5	3.52	0.0	0.03	8	72.6	22.90	0.6	0.20	21
Penaeus aztecus	23.3	23.33	0.2	0.23	3	68.4	50.26	0.7	0.56	8	49.2	15.19	0.7	0.22	21
Solenocera vioscai	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	8	18.1	13.02	0.0	0.03	21
Sicyonia dorsalis	0.0	0.00	0.0	0.00	3	2.9	1.47	0.0	0.00	8	87.9	47.37	0.2	0.09	21
Stenotomus caprinus	6.7	6.67	0.0	0.00	3	40.2	28.85	0.3	0.18	8	458.6	121.46	5.0	1.49	21
Peprilus burti	0.0	0.00	0.0	0.00	3	17.7	8.83	0.0	0.02	8	98.6	61.21	1.1	0.64	21
Centropristis philadelphica	0.0	0.00	0.0	0.00	3	12.9	12.56	0.1	0.05	8	69.9	22.43	0.6	0.19	21
Chloroscombrus chrysurus	1011.7	775.74	25.3	18.26	3	165.6	145.45	4.2	3.44	8	0.0	0.00	0.0	0.00	21
Trachurus lathami	0.0	0.00	0.0	0.00	3	8.7	8.12	0.0	0.03	8	136.6	86.52	1.7	0.91	21
Serranus atrobranchus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	8	74.1	48.33	0.4	0.25	21
Prionotus longispinosus	1.7	1.67	0.0	0.00	3	3.9	1.62	0.0	0.00	8	74.7	26.09	1.2	0.39	21
Anchoa hepsetus	3.3	3.33	0.0	0.00	3	60.7	44.53	0.9	0.61	8	80.1	32.11	1.4	0.60	21
Squid	81.0	72.19	0.7	0.57	3	392.1	292.03	8.4	7.46	8	265.1	60.51	3.1	0.80	21

Table 4a (continued)

Statistical Zone 11

Summary of dominant organisms taken in statistical zone11 during the 1997Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	196.8	112.14	0.8	0.45	6	0.0	0.00	0.0	0.00	5	54.7	54.74	0.1	0.10	3
Portunus spinicarpus	557.0	326.41	1.9	1.26	6	38.9	25.09	0.2	0.13	5	9.3	4.95	0.1	0.03	3
Squilla spp.	283.0	150.41	2.2	1.15	6	9.6	9.60	0.1	0.15	5	26.8	26.84	0.4	0.36	3
Penaeus aztecus	17.1	10.85	0.3	0.16	6	20.0	10.83	1.4	0.73	5	2.0	2.00	0.0	0.00	3
Solenocera vioscai	115.3	76.00	0.6	0.44	6	0.0	0.00	0.0	0.00	5	155.3	155.26	0.9	0.93	3
Sicyonia dorsalis	21.6	14.86	0.0	0.03	6	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	266.3	92.72	11.1	4.60	6	812.8	354.06	39.8	15.55	5	1752.7	1170.24	131.2	80.66	3
Peprilus burti	201.2	128.29	13.0	7.99	6	58.4	42.64	4.8	3.54	5	0.0	0.00	0.0	0.00	3
Centropristis philadelphica	174.0	106.80	5.3	4.03	6	6.8	6.26	0.4	0.35	5	1.1	1.05	0.1	0.07	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Trachurus lathami	35.2	17.69	1.8	0.91	6	17.5	10.18	1.0	0.63	5	9.2	7.65	0.9	0.74	3
Serranus atrobranchus	128.3	79.52	1.9	1.38	6	9.2	8.24	0.1	0.15	5	102.6	74.67	2.7	1.62	3
Prionotus longispinosus	22.5	9.26	0.5	0.20	6	13.5	7.60	0.8	0.43	5	3.7	3.68	0.1	0.12	3
Anchoa hepsetus	0.6	0.59	0.0	0.00	6	2.0	2.00	0.0	0.04	5	0.0	0.00	0.0	0.00	3
Squid	114.6	63.92	0.8	0.53	6	58.6	18.62	0.3	0.16	5	87.5	63.10	0.7	0.50	3

Table 4b

Statistical Zone 11

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	42.7	29.09	3	18.9	8.53	8	30.2	3.12	21	61.0	8.16	6	71.6	26.57	5	206.8	101.80	3
Total finfish kg	25.9	17.09	3	8.9	5.37	8	20.6	2.78	21	52.1	8.81	6	68.2	25.76	5	203.4	102.51	3
Total crustacean kg	0.8	0.76	3	1.0	0.58	8	5.8	1.96	21	7.4	2.81	6	2.9	1.13	5	2.5	1.70	3
Total others kg	16.8	10.69	3	9.0	7.24	8	4.3	0.95	21	1.5	0.52	6	0.5	0.21	5	1.2	0.81	3
Surface temperature	26.7	0.75	3	26.5	0.37	8	26.8	0.16	22	26.4	0.13	6	26.4	0.20	7	27.4	0.41	4
Midwater temperature	26.2	0.45	3	25.1	0.41	8	23.8	0.26	22	22.4	0.61	6	23.0	0.58	7	22.8	0.33	4
Bottom temperature	25.8	0.44	3	23.5	0.67	8	22.3	0.13	22	21.1	0.29	6	20.7	0.75	7	19.9	0.30	4
Surface salinity	22.0	0.92	3	23.7	1.10	8	26.7	0.66	22	26.7	2.61	6	27.6	2.95	7	28.2	3.26	4
Midwater salinity	24.5	2.39	3	29.6	1.15	8	34.8	0.29	21	36.1	0.06	6	35.5	0.60	7	36.2	0.03	4
Bottom salinity	26.7	2.59	3	33.9	0.72	7	35.8	0.15	22	36.2	0.05	6	36.2	0.09	7	36.3	0.00	4
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	0.0	0.00	0	0.9	0.35	4	0.4	0.00	1	2.7	1.16	4	3.1	2.29	4
Surface oxygen	5.6	0.23	3	6.0	0.35	8	5.9	0.17	22	6.5	0.50	6	5.8	0.26	7	7.0	0.82	4
Midwater oxygen	4.9	0.18	3	5.5	0.22	8	5.0	0.18	22	5.0	0.31	6	5.3	0.27	7	5.7	0.37	4
Bottom oxygen	4.6	0.62	3	3.7	0.50	8	4.3	0.14	22	4.9	0.19	6	4.9	0.30	7	4.7	0.23	4

Table 5a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 10 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Squilla spp.	0.0	0.00	0.0	0.00	2	53.0	22.58	0.3	0.11	4	0.0	0.00	0.00	0	0
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	20.0	11.89	0.1	0.09	4	0.0	0.00	0.00	0	0
Callinectes similis	2.1	2.14	0.0	0.00	2	14.5	13.20	0.2	0.18	4	0.0	0.00	0.00	0	0
Penaeus aztecus	36.4	36.43	0.4	0.39	2	0.5	0.50	0.0	0.00	4	0.0	0.00	0.00	0	0
Speocarcinus lobatus	0.0	0.00	0.0	0.00	2	6.5	6.50	0.0	0.00	4	0.0	0.00	0.00	0	0
Portunus gibbesii	0.0	0.00	0.0	0.00	2	1.5	1.50	0.0	0.00	4	0.0	0.00	0.00	0	0
Prionotus longispinosus	0.0	0.00	0.0	0.00	2	1144.5	806.90	5.1	3.15	4	0.0	0.00	0.00	0	0
Anchoa mitchilli	45.5	35.98	0.0	0.00	2	240.0	236.68	0.6	0.61	4	0.0	0.00	0.00	0	0
Cynoscion arenarius	24.6	18.27	0.8	0.78	2	132.0	76.49	1.3	0.80	4	0.0	0.00	0.00	0	0
Peprilus burti	0.0	0.00	0.0	0.00	2	123.0	115.14	0.9	0.69	4	0.0	0.00	0.00	0	0
Micropogonias undulatus	57.3	54.14	1.8	1.75	2	83.0	43.58	1.7	0.81	4	0.0	0.00	0.00	0	0
Anchoa nasuta	0.0	0.00	0.0	0.00	2	90.0	90.00	0.1	0.09	4	0.0	0.00	0.00	0	0
Etropus crossotus	0.0	0.00	0.0	0.00	2	15.5	14.20	0.4	0.26	4	0.0	0.00	0.00	0	0
Chloroscombrus chrysurus	25.7	25.71	0.9	0.88	2	6.5	6.50	0.4	0.39	4	0.0	0.00	0.00	0	0
Squid	173.0	169.85	2.4	2.44	2	60.5	59.17	0.5	0.50	4	0.0	0.00	0.00	0	0

Table 5b

Statistical Zone 13

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 10 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	10.5	9.02	2	12.0	6.53	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	7.5	6.10	2	11.1	6.28	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	2	0.7	0.44	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	1.9	1.95	2	0.5	0.45	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	29.6	0.15	2	30.0	0.14	5	30.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	29.6	0.40	2	27.7	0.25	5	26.2	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	29.7	0.45	2	23.9	0.52	5	22.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	11.2	0.15	2	16.9	0.91	5	18.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	12.6	0.00	1	29.4	0.94	5	34.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	18.2	3.03	2	33.3	1.93	5	36.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	16.0	1.48	5	16.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.3	1.10	2	5.7	0.11	5	6.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	5.3	0.95	2	2.9	0.10	5	3.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	4.8	0.35	2	1.2	0.48	5	0.8	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 6a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 40 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	347.6	345.57	2.4	2.44	4	735.4	309.71	2.8	1.19	19
Sicyonia dorsalis	0.0	0.00	0.0	0.00	3	20.3	18.98	0.1	0.12	4	311.9	178.93	0.9	0.53	19
Penaeus aztecus	24.4	24.44	0.3	0.30	3	10.2	10.18	0.2	0.17	4	178.0	158.70	0.7	0.44	19
Squilla spp.	0.9	0.91	0.0	0.04	3	81.6	74.42	0.9	0.82	4	200.4	75.41	2.0	0.78	19
Portunus gibbesii	2.7	2.73	0.0	0.04	3	41.0	28.56	0.2	0.16	4	229.0	96.81	0.9	0.38	19
Callinectes similis	23.4	12.73	0.1	0.08	3	23.3	16.41	0.6	0.45	4	125.4	66.71	2.2	1.08	19
Prionotus longispinosus	2.9	1.73	0.0	0.00	3	29.2	24.63	0.7	0.65	4	1464.5	488.16	13.9	4.72	19
Micropogonias undulatus	48.0	26.15	1.4	0.72	3	6.4	6.43	0.5	0.49	4	756.3	289.49	36.3	15.69	19
Stenotomus caprinus	0.0	0.00	0.0	0.00	3	461.3	461.25	5.5	5.50	4	180.9	67.62	2.0	0.77	19
Sphoeroides parvus	0.0	0.00	0.0	0.00	3	5.7	3.35	0.0	0.02	4	333.5	153.61	1.2	0.51	19
Trichiurus lepturus	0.0	0.00	0.0	0.00	3	1.6	1.61	0.0	0.02	4	275.8	106.82	16.3	8.89	19
Serranus atrobranchus	0.0	0.00	0.0	0.00	3	101.2	99.85	0.8	0.80	4	172.9	106.13	1.1	0.64	19
Centropristis philadelphica	0.0	0.00	0.0	0.00	3	32.5	29.93	0.8	0.80	4	135.9	32.31	1.6	0.39	19
Peprilus burti	0.0	0.00	0.0	0.00	3	0.5	0.50	0.0	0.00	4	66.2	39.59	1.2	0.58	19
Squid	18.9	18.89	0.1	0.05	3	1.0	1.00	0.0	0.02	4	117.9	42.61	1.7	0.74	19

Table 6a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 40 fm.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Sicyonia dorsalis	28.2	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Penaeus aztecus	42.4	0.00	1.2	0.00	1	17.4	0.00	0.6	0.00	1	0.0	0.00	0.00	0	0
Squilla spp.	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Portunus gibbesii	3.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Callinectes similis	7.1	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Prionotus longispinosus	21.2	0.00	0.4	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	17.4	0.00	3.4	0.00	1	0.0	0.00	0.00	0	0
Stenotomus caprinus	232.9	0.00	7.4	0.00	1	134.2	0.00	6.5	0.00	1	0.0	0.00	0.00	0	0
Sphoeroides parvus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Trichiurus lepturus	31.8	0.00	1.4	0.00	1	14.2	0.00	0.4	0.00	1	0.0	0.00	0.00	0	0
Serranus atrobranchus	17.6	0.00	0.3	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	0
Centropristis philadelphica	14.1	0.00	1.1	0.00	1	3.2	0.00	0.4	0.00	1	0.0	0.00	0.00	0	0
Peprilus burti	105.9	0.00	6.7	0.00	1	432.6	0.00	35.8	0.00	1	0.0	0.00	0.00	0	0
Squid	45.9	0.00	1.4	0.00	1	31.6	0.00	0.1	0.00	1	0.0	0.00	0.00	0	0

Table 6b

Statistical Zone 14

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 40 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	5.5	0.32	3	24.4	22.11	4	99.9	21.09	19	45.7	0.00	1	75.4	0.00	1	0.0	0.00	0
Total finfish kg	5.5	0.32	3	18.7	18.12	4	87.7	21.36	19	42.9	0.00	1	74.6	0.00	1	0.0	0.00	0
Total crustacean kg	0.5	0.51	3	5.7	4.08	4	10.4	3.17	19	1.2	0.00	1	0.7	0.00	1	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	4	1.6	0.75	19	1.6	0.00	1	0.0	0.00	1	0.0	0.00	0
Surface temperature	29.9	0.29	4	30.1	0.08	4	30.1	0.08	20	30.3	0.03	3	30.5	0.00	1	30.4	0.00	1
Midwater temperature	29.6	0.21	4	29.2	0.36	4	26.9	0.27	20	25.6	0.73	3	24.6	0.00	1	23.8	0.00	1
Bottom temperature	28.1	0.69	4	25.6	0.95	4	22.8	0.20	20	21.9	0.10	3	19.7	0.00	1	18.6	0.00	1
Surface salinity	19.9	2.35	4	24.1	1.87	4	24.6	0.74	20	26.3	0.49	3	26.6	0.00	1	26.5	0.00	1
Midwater salinity	22.3	1.72	4	28.3	2.27	4	34.4	0.50	20	35.7	0.24	3	36.1	0.00	1	36.1	0.00	1
Bottom salinity	26.0	2.46	4	34.0	1.31	4	36.1	0.04	20	36.2	0.00	3	36.3	0.00	1	36.3	0.00	1
Surface chlorophyll	5.4	3.50	2	0.6	0.04	2	2.6	1.04	13	0.6	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	3.6	0.00	2	4.5	0.52	4	3.2	0.14	20	2.0	0.80	3	1.1	0.00	1	1.1	0.00	1
Surface oxygen	6.5	0.52	4	5.7	0.20	4	5.5	0.10	20	5.3	0.10	3	5.4	0.00	1	5.4	0.00	1
Midwater oxygen	5.1	0.15	4	4.8	0.41	4	4.1	0.21	20	4.7	0.53	3	5.7	0.00	1	6.0	0.00	1
Bottom oxygen	2.3	1.29	4	0.5	0.19	4	1.5	0.21	20	3.7	0.13	3	3.9	0.00	1	3.5	0.00	1

Table 7a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	6.0	6.00	0.0	0.04	5	1443.3	740.22	8.0	4.50	9
Squilla spp.	1.3	1.30	0.0	0.00	2	27.8	16.96	0.1	0.07	5	590.1	189.69	4.5	1.46	9
Callinectes similis	137.9	130.09	0.9	0.91	2	9.3	5.21	0.1	0.03	5	272.1	162.53	4.3	2.14	9
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	292.2	142.90	0.7	0.34	9
Penaeus aztecus	82.0	82.00	0.7	0.73	2	0.0	0.00	0.0	0.00	5	75.0	49.89	1.3	0.89	9
Portunus gibbesii	1.3	1.30	0.0	0.00	2	4.1	3.61	0.0	0.00	5	153.9	79.76	0.5	0.25	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	687.3	276.73	5.9	2.61	9
Prionotus longispinosus	42.3	39.70	0.0	0.05	2	26.3	11.41	0.2	0.11	5	858.3	435.68	6.3	3.10	9
Peprilus burti	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	274.5	240.82	11.7	10.63	9
Trachurus lathami	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	122.2	119.51	2.1	1.99	9
Micropogonias undulatus	1254.0	1254.00	30.1	30.14	2	1.4	1.38	0.0	0.04	5	29.0	26.12	0.7	0.66	9
Cynoscion arenarius	156.0	156.00	1.0	1.05	2	0.0	0.00	0.0	0.00	5	217.9	121.48	3.0	1.63	9
Centropristis philadelphica	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	230.1	154.89	2.7	1.71	9
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	156.7	82.75	1.2	0.75	9
Squid	10.0	10.00	0.0	0.05	2	8.7	8.21	0.2	0.21	5	160.4	76.71	2.0	1.00	9

Table 7a (continued)
Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	4.0	0.14	0.0	0.03	2	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Squilla spp.	5.4	1.29	0.1	0.03	2	18.4	7.11	0.3	0.14	4	0.6	0.60	0.0	0.01	4
Callinectes similis	10.1	3.26	0.4	0.17	2	71.8	58.17	1.1	0.90	4	0.0	0.00	0.0	0.00	4
Sicyonia dorsalis	4.0	0.14	0.0	0.03	2	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Penaeus aztecus	81.2	10.26	1.4	0.08	2	64.3	34.54	2.0	0.78	4	10.5	7.94	0.5	0.40	4
Portunus gibbesii	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	43.6	23.11	1.4	0.32	2	357.2	146.15	12.2	4.40	4	258.3	20.61	12.2	1.13	4
Prionotus longispinosus	7.3	3.19	0.4	0.17	2	16.2	6.43	0.5	0.19	4	1.8	1.78	0.1	0.09	4
Peprilus burti	560.8	12.58	33.5	0.56	2	94.8	51.91	7.4	3.87	4	44.8	26.77	4.4	2.73	4
Trachurus lathami	190.7	110.68	4.6	2.58	2	136.7	99.75	2.6	1.66	4	18.6	11.25	1.0	0.65	4
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	2.3	0.88	0.2	0.13	4	3.2	1.67	0.6	0.32	4
Cynoscion arenarius	0.0	0.00	0.0	0.00	2	0.8	0.75	0.1	0.07	4	4.2	1.57	1.2	0.52	4
Centropristis philadelphica	32.3	1.81	0.8	0.16	2	23.1	14.22	0.9	0.62	4	7.4	4.64	1.2	0.72	4
Serranus atrobranchus	28.9	4.39	0.4	0.01	2	43.3	21.76	0.6	0.31	4	54.6	23.47	1.8	1.22	4
Squid	83.0	12.49	1.2	0.14	2	138.7	72.38	1.2	0.62	4	14.4	7.88	0.2	0.08	4

Table 7b

Statistical Zone 15

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	41.6	39.27	2	2.8	1.91	5	67.9	17.25	9	57.6	1.23	2	45.1	11.89	4	48.0	4.43	4
Total finfish kg	38.2	38.18	2	1.2	1.02	5	45.1	15.09	9	54.5	0.53	2	38.1	12.33	4	44.5	4.92	4
Total crustacean kg	1.8	1.82	2	0.4	0.24	5	20.5	6.67	9	2.2	0.37	2	4.6	2.29	4	0.7	0.42	4
Total others kg	0.6	0.59	2	0.8	0.84	5	2.1	1.04	9	1.3	0.03	2	2.5	0.75	4	2.6	0.73	4
Surface temperature	29.6	0.33	4	30.1	0.06	8	30.3	0.16	7	30.6	0.00	1	30.3	0.01	2	30.7	0.25	6
Midwater temperature	29.6	0.26	4	29.4	0.24	8	27.4	0.23	7	24.3	0.00	1	23.6	0.10	2	23.0	0.19	6
Bottom temperature	28.1	0.58	4	25.7	0.32	8	23.4	0.29	7	21.5	0.00	1	18.9	0.01	2	18.4	0.31	6
Surface salinity	17.5	3.54	4	25.0	1.08	8	26.8	0.66	7	24.6	0.00	1	30.0	0.31	2	29.7	0.76	6
Midwater salinity	21.1	2.76	4	28.4	0.83	8	33.2	0.73	7	36.2	0.00	1	36.1	0.01	2	36.2	0.04	6
Bottom salinity	27.9	3.91	4	34.6	0.40	8	36.1	0.06	7	36.2	0.00	1	36.3	0.01	2	36.3	0.01	6
Surface chlorophyll	4.4	0.00	1	2.2	1.08	4	0.5	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	2.6	0.08	2	3.1	0.30	8	1.9	0.26	7	2.4	0.00	1	0.8	0.22	2	0.8	0.13	6
Surface oxygen	6.1	0.50	4	5.4	0.15	8	5.5	0.06	7	5.5	0.00	1	5.2	0.00	2	5.3	0.05	6
Midwater oxygen	5.5	0.34	4	4.9	0.30	8	4.5	0.20	7	5.5	0.00	1	6.0	0.00	2	6.0	0.08	6
Bottom oxygen	3.3	1.22	4	0.3	0.10	8	2.4	0.62	7	3.7	0.00	1	3.0	0.05	2	3.5	0.18	6

Table 8a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	5	0.1	0.10	0.0	0.00	9	1654.2	1265.58	3.5	2.53	11
Squilla spp.	0.4	0.35	0.0	0.00	5	1.0	1.05	0.0	0.01	9	122.3	65.44	0.7	0.29	11
Sicyonia brevirostris	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	9	84.2	56.08	1.3	0.90	11
Callinectes similis	130.3	38.20	0.6	0.23	5	1.9	1.06	0.2	0.13	9	54.6	30.28	1.1	0.45	11
Penaeus aztecus	139.2	37.93	0.9	0.29	5	0.5	0.45	0.0	0.02	9	20.6	9.69	0.5	0.21	11
Portunus gibbesii	0.4	0.35	0.0	0.00	5	3.5	3.52	0.0	0.01	9	68.2	35.13	0.5	0.21	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	0.2	0.19	0.0	0.00	9	5287.0	3087.70	66.6	36.11	11
Micropogonias undulatus	722.6	386.33	14.0	7.50	5	76.1	64.87	2.0	1.69	9	4352.4	3282.50	97.4	67.89	11
Peprilus burti	8.1	8.12	0.0	0.03	5	2.5	2.49	0.2	0.19	9	2081.3	1935.29	57.1	50.24	11
Prionotus longispinosus	0.0	0.00	0.0	0.00	5	2.7	2.67	0.0	0.01	9	2201.0	1514.69	8.0	5.54	11
Trachurus lathami	0.7	0.71	0.0	0.02	5	0.2	0.22	0.0	0.01	9	985.8	600.17	23.0	13.18	11
Chloroscombrus chrysurus	153.4	47.62	1.8	0.66	5	76.4	71.82	1.5	1.44	9	333.6	232.79	10.1	6.89	11
Cynoscion nothus	44.8	35.45	2.0	1.64	5	52.9	51.38	2.6	2.58	9	372.0	255.07	11.4	6.76	11
Peprilus alepidotus	1210.9	552.25	10.3	4.63	5	16.2	12.23	0.4	0.31	9	43.0	37.10	0.6	0.47	11
Squid	30.1	18.14	0.3	0.18	5	0.0	0.00	0.0	0.00	9	173.9	71.48	3.1	1.23	11

Table 8a (continued)
Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	5.1	5.07	0.0	0.04	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Squilla spp.	42.6	41.35	0.6	0.57	5	0.0	0.00	0.0	0.00	2	14.6	0.00	0.1	0.00	1
Sicyonia brevirostris	127.6	98.87	1.8	1.49	5	0.0	0.00	0.0	0.00	2	1.6	0.00	0.1	0.00	1
Callinectes similis	19.7	16.77	0.3	0.22	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Penaeus aztecus	40.9	30.14	1.1	0.73	5	7.4	0.56	0.5	0.05	2	35.7	0.00	2.1	0.00	1
Portunus gibbesii	9.2	7.72	0.1	0.06	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	368.8	101.97	22.5	6.95	5	188.8	20.75	8.8	2.11	2	227.0	0.00	11.4	0.00	1
Micropogonias undulatus	2.1	0.77	0.2	0.09	5	0.0	0.00	0.0	0.00	2	3.2	0.00	0.5	0.00	1
Peprilus burti	83.9	36.30	6.0	2.52	5	40.8	40.82	3.0	3.04	2	4.9	0.00	0.5	0.00	1
Prionotus longispinosus	0.9	0.89	0.1	0.10	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Trachurus lathami	90.2	51.18	1.9	1.17	5	33.0	25.02	0.9	0.51	2	1.6	0.00	0.1	0.00	1
Chloroscombrus chrysurus	10.2	10.22	0.5	0.51	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Cynoscion nothus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Peprilus alepidotus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Squid	135.4	41.56	1.1	0.26	5	182.0	125.97	1.4	1.00	2	97.3	0.00	0.6	0.00	1

Table 8b

Statistical Zone 16

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	66.7	15.25	5	20.6	16.09	9	321.2	178.47	11	55.4	14.36	5	24.7	11.97	2	27.3	0.00	1
Total finfish kg	55.3	13.64	5	20.2	15.97	9	309.6	178.49	11	50.0	15.33	5	22.2	13.11	2	22.9	0.00	1
Total crustacean kg	10.1	3.78	5	0.2	0.20	9	8.2	2.92	11	3.9	3.12	5	0.2	0.22	2	2.9	0.00	1
Total others kg	1.1	0.76	5	0.2	0.13	9	3.4	1.29	11	1.3	0.27	5	2.3	1.37	2	1.5	0.00	1
Surface temperature	30.8	0.18	5	30.3	0.17	6	30.7	0.13	13	30.6	0.09	3	30.4	0.00	1	31.0	0.12	2
Midwater temperature	30.1	0.25	5	29.8	0.20	6	27.4	0.55	13	25.0	0.55	3	26.0	0.00	1	22.5	0.35	2
Bottom temperature	29.9	0.27	5	25.9	0.63	6	23.7	0.21	13	22.0	0.13	3	19.5	0.00	1	18.4	0.32	2
Surface salinity	22.8	1.26	5	27.3	0.39	6	28.0	0.32	13	28.1	0.69	3	32.3	0.00	1	24.5	5.02	2
Midwater salinity	23.8	1.09	5	27.7	0.40	6	32.5	0.79	13	35.7	0.20	3	35.7	0.00	1	36.2	0.02	2
Bottom salinity	25.2	1.09	5	32.4	1.01	6	35.9	0.11	13	36.2	0.01	3	36.3	0.00	1	36.3	0.01	2
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	7.9	0.00	1	3.3	0.92	6	1.1	0.19	13	0.8	0.20	3	0.4	0.00	1	0.6	0.04	2
Surface oxygen	6.3	0.18	5	5.8	0.17	6	5.5	0.07	13	5.2	0.07	3	5.2	0.00	1	5.3	0.15	2
Midwater oxygen	5.4	0.35	5	5.0	0.47	6	4.7	0.38	13	5.6	0.15	3	6.0	0.00	1	6.2	0.15	2
Bottom oxygen	4.7	0.78	5	0.3	0.10	6	2.8	0.43	13	4.5	0.06	3	3.5	0.00	1	3.4	0.15	2

Table 9a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8	212.1	108.37	2.2	1.02	11
Trachypenaeus similis	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8	195.6	79.74	1.3	0.52	11
Penaeus aztecus	243.8	51.48	1.5	0.30	14	4.6	3.73	0.0	0.03	8	39.2	16.44	0.6	0.22	11
Squilla spp.	0.0	0.00	0.0	0.00	14	9.7	7.72	0.0	0.04	8	59.9	19.79	1.0	0.32	11
Portunus spinicarpus	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	11
Callinectes similis	57.8	21.07	0.3	0.17	14	1.1	0.78	0.0	0.01	8	23.5	7.85	0.5	0.15	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	14	132.4	115.49	1.4	1.28	8	1572.0	273.04	36.4	5.00	11
Chloroscombrus chrysurus	22.4	14.22	0.1	0.06	14	967.6	679.17	25.5	17.75	8	50.7	27.82	1.9	1.09	11
Trachurus lathami	0.0	0.00	0.0	0.00	14	101.2	78.67	1.7	1.48	8	782.2	587.14	11.0	7.21	11
Peprilus burti	0.4	0.43	0.0	0.02	14	145.0	97.72	1.9	1.34	8	410.8	209.91	15.0	10.03	11
Micropogonias undulatus	365.2	103.99	5.7	1.73	14	0.0	0.00	0.0	0.00	8	44.3	14.74	2.3	0.82	11
Centropristis philadelphica	0.0	0.00	0.0	0.00	14	3.3	2.42	0.2	0.11	8	63.5	37.16	0.9	0.37	11
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8	23.4	13.17	0.8	0.41	11
Prionotus paralatus	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8	38.2	26.18	0.3	0.18	11
Squid	9.8	4.04	0.1	0.04	14	88.8	52.56	2.0	1.27	8	166.6	91.75	3.5	2.11	11

Table 9a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	145.4	78.73	2.0	1.10	6	38.4	17.53	0.6	0.35	6	0.0	0.00	0.0	0.00	4
Trachypenaeus similis	18.1	9.32	0.1	0.08	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Penaeus aztecus	38.7	15.51	1.9	0.83	6	24.1	5.36	1.3	0.29	6	4.5	3.97	0.4	0.33	4
Squilla spp.	14.9	9.99	0.2	0.12	6	2.1	0.47	0.0	0.01	6	0.3	0.25	0.0	0.00	4
Portunus spinicarpus	28.4	15.41	0.2	0.10	6	53.6	46.83	0.2	0.19	6	20.6	16.42	0.1	0.08	4
Callinectes similis	3.5	1.65	0.1	0.05	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	464.5	126.78	27.1	7.41	6	289.6	17.72	15.1	1.08	6	247.7	66.74	13.0	3.38	4
Chloroscombrus chrysurus	2.8	2.29	0.1	0.10	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Trachurus lathami	95.0	67.54	1.9	1.34	6	86.8	61.91	1.9	1.37	6	73.4	20.54	3.5	1.75	4
Peprilus burti	33.2	15.55	2.1	1.08	6	19.1	9.61	1.5	0.79	6	113.3	59.51	9.0	4.83	4
Micropogonias undulatus	69.5	46.61	6.0	4.20	6	9.5	6.91	1.0	0.68	6	1.0	1.02	0.1	0.09	4
Centropristis philadelphica	43.2	22.32	3.2	1.77	6	46.3	23.68	2.4	1.44	6	3.4	2.54	0.1	0.07	4
Pristipomoides aquilonaris	16.8	7.08	0.5	0.24	6	49.5	17.78	2.4	0.99	6	46.8	19.49	6.5	2.54	4
Prionotus paralatus	24.9	13.06	0.3	0.15	6	42.8	10.98	1.3	0.65	6	6.7	4.18	0.3	0.15	4
Squid	178.5	64.88	1.8	0.51	6	86.3	81.41	1.2	0.97	6	91.8	46.88	0.7	0.31	4

Table 9b

Statistical Zone 17

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	16.5	2.27	14	38.2	23.79	8	105.7	15.49	11	61.4	13.20	6	49.3	4.48	6	40.9	8.37	4
Total finfish kg	10.7	2.24	14	35.3	22.43	8	94.6	16.28	11	53.5	12.16	6	44.9	4.87	6	39.1	8.16	4
Total crustacean kg	3.5	0.72	14	0.4	0.23	8	6.3	1.91	11	5.7	2.51	6	2.2	0.57	6	0.5	0.46	4
Total others kg	2.5	0.88	14	2.6	1.20	8	5.0	2.60	11	2.2	0.44	6	1.9	0.92	6	1.2	0.31	4
Surface temperature	28.7	0.42	15	29.7	0.46	9	30.3	0.07	9	30.5	0.03	3	30.1	0.09	2	30.5	0.10	7
Midwater temperature	27.9	0.50	15	29.4	0.43	9	28.7	0.45	9	25.7	1.38	3	25.0	0.92	2	22.7	0.39	7
Bottom temperature	27.6	0.63	15	26.4	0.45	9	23.3	0.19	9	22.2	0.20	3	20.7	0.55	2	18.3	0.25	7
Surface salinity	19.0	1.22	15	28.1	0.85	9	29.3	0.43	9	29.1	0.58	3	30.6	0.03	2	30.7	0.25	7
Midwater salinity	20.6	1.02	15	29.2	0.37	8	32.5	0.68	9	35.3	0.13	3	35.6	0.25	2	36.2	0.03	7
Bottom salinity	22.9	1.22	15	32.2	0.45	8	35.8	0.13	9	36.1	0.01	3	36.3	0.01	2	36.3	0.01	7
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	2.0	0.45	8	0.8	0.06	9	0.6	0.03	3	0.5	0.08	2	0.5	0.04	7
Surface oxygen	6.7	0.42	15	5.4	0.32	9	5.5	0.06	9	5.4	0.06	3	5.4	0.10	2	5.4	0.05	7
Midwater oxygen	5.4	0.46	15	5.4	0.11	9	5.2	0.24	9	4.8	0.82	3	5.9	0.20	2	6.3	0.04	7
Bottom oxygen	4.4	0.57	15	2.0	0.43	9	3.2	0.29	9	4.6	0.29	3	4.5	0.90	2	3.4	0.08	7

Table 10a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	8	3.0	1.73	0.0	0.00	12	1618.0	933.46	15.1	8.64	5
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	8	209.5	209.55	0.8	0.84	12	0.0	0.00	0.0	0.00	5
Sicyonia brevirostris	0.0	0.00	0.0	0.00	8	2.0	2.05	0.0	0.01	12	136.3	116.77	0.9	0.69	5
Penaeus aztecus	2.3	2.25	0.0	0.03	8	9.0	7.40	0.1	0.07	12	125.7	77.59	2.0	1.13	5
Squilla spp.	0.0	0.00	0.0	0.00	8	7.5	4.54	0.1	0.05	12	103.3	50.73	1.5	0.70	5
Sicyonia dorsalis	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	82.2	53.24	0.4	0.22	5
Stenotomus caprinus	0.0	0.00	0.0	0.00	8	133.2	127.82	1.3	1.28	12	1467.4	413.11	16.3	2.85	5
Trachurus lathami	0.0	0.00	0.0	0.00	8	1.6	1.59	0.1	0.05	12	1292.4	1077.16	27.7	23.82	5
Peprilus burti	0.0	0.00	0.0	0.00	8	141.2	121.81	1.7	1.23	12	281.4	169.19	3.9	2.85	5
Halieutichthys aculeatus	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	16.4	7.65	0.2	0.12	5
Micropogonias undulatus	282.8	203.73	6.4	4.55	8	175.9	104.08	4.4	2.60	12	6.1	4.17	0.4	0.26	5
Centropristis philadelphica	0.0	0.00	0.0	0.00	8	36.6	36.59	0.4	0.44	12	42.5	20.73	1.8	0.82	5
Prionotus paralatus	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	28.7	24.85	0.3	0.24	5
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	14.4	14.40	0.6	0.59	5
Squid	0.0	0.00	0.0	0.00	8	97.9	27.26	1.8	0.61	12	874.3	737.50	4.5	1.58	5

Table 10a (continued)
Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Sicyonia brevirostris	0.0	0.00	0.0	0.00	0	6.4	3.21	0.1	0.03	3	0.0	0.00	0.0	0.00	1
Penaeus aztecus	0.0	0.00	0.0	0.00	0	35.8	17.41	2.0	0.96	3	0.0	0.00	0.0	0.00	1
Squilla spp.	0.0	0.00	0.0	0.00	0	15.2	13.76	0.2	0.15	3	0.0	0.00	0.0	0.00	1
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	419.0	33.27	24.3	5.37	3	178.2	0.00	9.8	0.00	1
Trachurus lathami	0.0	0.00	0.0	0.00	0	178.1	176.59	5.2	5.05	3	107.3	0.00	7.4	0.00	1
Peprilus burti	0.0	0.00	0.0	0.00	0	206.7	198.55	13.8	13.10	3	0.0	0.00	0.0	0.00	1
Halieutichthys aculeatus	0.0	0.00	0.0	0.00	0	296.3	241.42	1.4	0.90	3	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	32.9	31.44	3.2	2.98	3	0.0	0.00	0.0	0.00	1
Centropristis philadelphica	0.0	0.00	0.0	0.00	0	69.8	33.30	3.7	1.26	3	0.0	0.00	0.0	0.00	1
Prionotus paralatus	0.0	0.00	0.0	0.00	0	101.5	43.48	2.2	1.01	3	32.7	0.00	1.5	0.00	1
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	0	98.6	31.33	6.2	1.80	3	41.8	0.00	5.5	0.00	1
Squid	0.0	0.00	0.0	0.00	0	5.0	2.79	0.4	0.20	3	10.9	0.00	0.1	0.00	1

Table 10b

Statistical Zone 18

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	10.2	5.76	8	18.7	6.94	12	95.7	25.03	5	0.0	0.00	0	82.1	9.33	3	45.5	0.00	1
Total finfish kg	8.9	5.47	8	15.0	5.76	12	69.7	29.34	5	0.0	0.00	0	76.9	10.80	3	44.6	0.00	1
Total crustacean kg	0.0	0.00	8	1.5	1.24	12	21.5	10.48	5	0.0	0.00	0	3.6	1.27	3	0.8	0.00	1
Total others kg	1.0	0.50	8	2.5	0.85	12	4.4	1.52	5	0.0	0.00	0	1.6	0.80	3	0.0	0.00	1
Surface temperature	29.7	0.90	9	29.7	0.49	13	29.7	0.13	7	29.6	0.05	2	29.8	0.07	2	30.2	0.12	3
Midwater temperature	28.8	0.84	9	28.7	0.38	13	29.0	0.29	7	26.2	1.63	2	23.5	0.42	2	22.0	0.57	3
Bottom temperature	28.0	1.09	9	27.4	0.62	13	23.5	0.34	7	22.2	0.18	2	19.9	0.36	2	17.4	0.94	3
Surface salinity	25.8	0.99	9	26.1	0.97	13	30.1	0.10	7	30.2	0.40	2	31.4	0.68	2	31.2	0.30	3
Midwater salinity	27.0	0.88	9	27.9	0.70	13	30.7	0.20	7	33.6	1.94	2	36.0	0.02	2	36.1	0.12	3
Bottom salinity	29.0	0.59	9	32.2	0.80	13	35.5	0.13	7	36.0	0.07	2	36.3	0.00	2	36.2	0.07	3
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	1.1	0.32	4	0.8	0.09	7	0.7	0.04	2	0.4	0.02	2	0.5	0.03	3
Surface oxygen	6.1	0.50	9	5.9	0.28	13	5.6	0.04	7	5.6	0.05	2	5.4	0.05	2	5.4	0.00	3
Midwater oxygen	6.1	0.48	9	5.9	0.22	13	5.7	0.05	7	5.7	0.10	2	6.3	0.05	2	6.2	0.06	3
Bottom oxygen	4.7	0.86	9	5.3	0.36	13	3.2	0.33	7	4.0	0.45	2	4.3	0.25	2	3.5	0.17	3

Table 11a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 30 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	6.0	6.00	0.1	0.05	2	42.0	21.82	0.1	0.06	15	1140.2	389.47	5.9	2.10	23
Penaeus aztecus	72.6	41.40	0.2	0.03	2	97.3	34.97	0.8	0.32	15	261.7	118.61	2.8	1.25	23
Squilla spp.	45.0	45.00	0.4	0.41	2	39.1	15.38	0.3	0.12	15	115.4	43.65	1.3	0.52	23
Callinectes similis	45.0	45.00	0.1	0.14	2	42.2	25.16	0.6	0.37	15	57.1	8.38	0.5	0.12	23
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	15	49.9	19.15	0.1	0.04	23
Portunus gibbesii	456.0	456.00	4.4	4.36	2	3.3	2.35	0.0	0.01	15	8.0	3.88	0.1	0.03	23
Micropogonias undulatus	4324.8	1591.20	115.5	38.84	2	4407.3	2135.97	124.7	60.99	15	0.8	0.60	0.0	0.02	23
Chloroscombrus chrysurus	5092.2	5074.20	76.6	76.09	2	2219.2	1717.20	13.9	6.17	15	36.9	33.99	1.0	0.89	23
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	15	273.9	104.38	3.1	1.53	23
Peprilus burti	24.0	24.00	0.6	0.60	2	344.2	177.22	11.3	5.75	15	389.6	137.01	4.9	1.47	23
Trachurus lathami	12.0	12.00	0.2	0.22	2	2.8	1.70	0.1	0.05	15	811.7	339.42	16.0	6.89	23
Cynoscion nothus	532.2	253.80	18.7	7.77	2	679.9	240.39	23.2	9.36	15	20.9	8.59	0.3	0.14	23
Trichiurus lepturus	387.6	159.60	23.2	10.88	2	311.4	262.56	16.2	13.73	15	20.1	8.94	0.3	0.13	23
Cynoscion arenarius	12.0	12.00	0.2	0.22	2	109.5	40.40	2.3	1.51	15	69.2	36.02	1.1	0.66	23
Squid	120.0	72.00	2.1	1.45	2	219.6	43.33	3.3	0.62	15	440.4	70.62	6.0	0.98	23

Table 11a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 30 fm.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	192.1	142.47	0.9	0.59	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Penaeus aztecus	31.2	10.04	0.9	0.30	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Squilla spp.	25.0	10.69	0.3	0.16	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Callinectes similis	19.6	7.97	0.2	0.13	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Sicyonia dorsalis	2.3	1.42	0.0	0.01	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Portunus gibbesii	4.0	2.05	0.0	0.02	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Micropogonias undulatus	0.4	0.40	0.0	0.02	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Stenotomus caprinus	1013.0	306.12	28.3	6.57	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Peprilus burti	294.4	239.15	5.5	3.84	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Trachurus lathami	94.8	43.18	1.7	1.02	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Cynoscion nothus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Trichiurus lepturus	0.6	0.56	0.0	0.03	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Cynoscion arenarius	1.2	0.64	0.3	0.14	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Squid	99.5	34.57	2.2	0.51	9	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0

Table 11b

Statistical Zone 19

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 30 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	322.9	26.18	2	225.8	84.05	15	53.5	9.20	23	66.7	18.16	9	0.0	0.00	0	0.0	0.00	0
Total finfish kg	306.5	15.27	2	216.2	83.14	15	34.4	8.82	23	60.9	18.51	9	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	15.0	9.55	2	3.9	1.99	15	11.2	3.82	23	3.2	1.11	9	0.0	0.00	0	0.0	0.00	0
Total others kg	1.9	0.82	2	5.9	1.09	15	7.8	0.98	23	2.7	0.62	9	0.0	0.00	0	0.0	0.00	0
Surface temperature	30.0	0.00	1	28.4	0.24	19	28.6	0.18	21	28.8	0.16	7	0.0	0.00	0	29.3	0.00	1
Midwater temperature	28.5	0.00	1	27.7	0.18	19	26.7	0.28	21	23.6	0.35	7	0.0	0.00	0	22.0	0.00	1
Bottom temperature	28.0	0.00	1	25.4	0.46	19	22.2	0.10	21	21.5	0.08	7	0.0	0.00	0	19.9	0.00	1
Surface salinity	26.1	0.00	1	28.4	0.75	19	31.4	0.64	21	32.1	0.36	7	0.0	0.00	0	31.6	0.00	1
Midwater salinity	31.5	0.00	1	30.0	0.78	19	33.6	0.44	21	35.6	0.17	7	0.0	0.00	0	36.1	0.00	1
Bottom salinity	32.0	0.00	1	31.9	0.66	19	35.3	0.11	21	36.0	0.04	7	0.0	0.00	0	36.3	0.00	1
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	2.7	0.00	1	2.0	0.41	10	0.6	0.07	14	0.5	0.07	7	0.0	0.00	0	0.5	0.00	1
Surface oxygen	6.0	0.00	1	5.7	0.15	19	5.1	0.17	21	5.7	0.04	7	0.0	0.00	0	5.6	0.00	1
Midwater oxygen	5.6	0.00	1	5.3	0.19	19	6.4	0.35	21	6.0	0.04	7	0.0	0.00	0	6.2	0.00	1
Bottom oxygen	4.5	0.00	1	5.2	0.47	19	4.9	0.50	21	4.6	0.20	7	0.0	0.00	0	4.6	0.00	1

Table 12a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	11.1	4.76	0.0	0.01	16	818.1	491.02	3.0	1.58	12
Penaeus aztecus	0.0	0.00	0.0	0.00	0	84.4	43.35	0.8	0.48	16	215.6	79.13	2.5	0.92	12
Callinectes similis	0.0	0.00	0.0	0.00	0	93.5	48.81	0.7	0.34	16	55.4	21.43	1.0	0.60	12
Penaeus duorarum	0.0	0.00	0.0	0.00	0	135.9	94.18	3.0	2.08	16	0.6	0.56	0.0	0.03	12
Solenocera vioscai	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	16	0.5	0.45	0.0	0.00	12
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	16	0.5	0.51	0.0	0.01	12
Trachurus lathami	0.0	0.00	0.0	0.00	0	1.0	0.74	0.0	0.02	16	433.7	220.93	11.0	5.79	12
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	856.8	629.38	21.8	16.83	16	137.0	132.17	3.5	3.45	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	65.2	63.14	0.2	0.19	16	254.7	171.17	1.0	0.54	12
Peprilus burti	0.0	0.00	0.0	0.00	0	37.4	16.99	0.8	0.36	16	416.7	306.46	11.5	8.03	12
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	268.5	158.62	6.8	4.41	16	66.5	49.28	1.2	0.91	12
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	16	3.9	2.68	0.1	0.06	12
Cynoscion nothus	0.0	0.00	0.0	0.00	0	141.4	81.50	6.2	3.68	16	86.3	79.02	3.8	3.66	12
Prionotus stearnsi	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	16	36.1	33.47	0.1	0.04	12
Squid	0.0	0.00	0.0	0.00	0	116.7	29.19	1.6	0.30	16	372.6	110.91	8.0	2.66	12

Table 12a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	251.1	226.89	2.5	2.29	2	11.0	7.26	0.1	0.05	10	0.0	0.00	0.0	0.00	8
Penaeus aztecus	30.5	8.47	0.4	0.15	2	44.9	12.18	1.5	0.36	10	22.2	12.71	1.2	0.56	8
Callinectes similis	179.7	112.32	3.2	2.11	2	24.5	21.22	0.1	0.05	10	0.0	0.00	0.0	0.00	8
Penaeus duorarum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	8
Solenocera vioscai	119.5	119.50	0.4	0.36	2	53.5	29.15	0.3	0.13	10	90.4	51.50	0.6	0.32	8
Portunus spinicarpus	23.5	2.47	0.1	0.03	2	95.1	26.81	0.6	0.22	10	36.5	17.46	0.3	0.13	8
Trachurus lathami	1092.1	1073.13	24.2	23.95	2	602.3	423.65	11.8	8.47	10	181.9	83.69	6.1	2.71	8
Micropogonias undulatus	1.0	1.00	0.1	0.11	2	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	8
Stenotomus caprinus	76.8	66.24	2.2	2.09	2	269.9	52.24	10.2	1.95	10	211.3	34.31	11.6	2.01	8
Peprilus burti	98.7	88.68	2.4	2.23	2	78.6	46.97	3.5	1.88	10	78.6	39.21	6.4	3.65	8
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	4.3	4.30	0.1	0.15	10	0.0	0.00	0.0	0.00	8
Pristipomoides aquilonaris	53.4	15.55	1.6	0.54	2	59.3	14.90	2.7	0.57	10	178.6	54.01	21.0	6.41	8
Cynoscion nothus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	8
Prionotus stearnsi	30.1	5.89	0.3	0.18	2	77.5	22.81	1.0	0.35	10	95.2	46.94	1.2	0.62	8
Squid	348.7	319.71	7.4	6.37	2	259.6	125.25	5.6	1.75	10	245.3	84.26	3.8	1.07	8

Table 12b

Statistical Zone 20

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths less than 6 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	67.3	29.20	16	59.6	17.93	12	56.7	21.27	2	51.9	9.71	10	79.6	7.03	8
Total finfish kg	0.0	0.00	0	55.6	27.67	16	42.6	16.41	12	41.8	19.95	2	41.3	9.58	10	72.7	7.71	8
Total crustacean kg	0.0	0.00	0	7.4	3.84	16	7.3	3.04	12	7.6	5.17	2	3.6	0.85	10	2.5	0.94	8
Total others kg	0.0	0.00	0	4.2	0.76	16	9.5	2.64	12	7.4	6.48	2	6.7	1.68	10	4.7	1.13	8
Surface temperature	27.2	0.00	1	27.6	0.41	17	26.9	0.45	13	27.6	0.47	2	28.1	0.43	5	28.2	0.14	10
Midwater temperature	27.2	0.00	1	26.5	0.43	17	24.8	0.63	13	21.8	0.39	2	22.4	0.24	5	21.9	0.22	10
Bottom temperature	24.6	0.00	1	24.7	0.60	17	21.6	0.15	13	21.2	0.12	2	20.7	0.24	5	19.2	0.32	10
Surface salinity	26.9	0.00	1	30.7	0.86	17	33.9	0.66	13	34.3	0.04	2	33.7	0.61	5	32.8	0.18	10
Midwater salinity	27.5	0.00	1	31.4	0.85	17	34.4	0.55	13	35.8	0.21	2	36.0	0.05	5	36.1	0.02	10
Bottom salinity	21.8	0.00	1	34.2	0.25	17	35.3	0.34	13	36.1	0.06	2	36.2	0.04	5	36.3	0.02	10
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	1.1	0.46	5	0.6	0.07	10	0.4	0.02	2	0.4	0.05	5	0.4	0.01	10
Surface oxygen	6.2	0.00	1	6.1	0.08	17	5.9	0.09	13	5.3	0.15	2	5.4	0.18	5	5.5	0.03	10
Midwater oxygen	5.9	0.00	1	6.0	0.14	17	5.8	0.13	13	5.3	0.25	2	6.1	0.06	5	6.1	0.06	10
Bottom oxygen	3.3	0.00	1	4.4	0.24	17	3.7	0.30	13	4.9	0.30	2	4.5	0.43	5	3.9	0.18	10

Table 13a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	5	2.5	1.51	0.0	0.00	9	333.8	128.99	1.6	0.65	20
Penaeus aztecus	14.0	7.38	0.2	0.06	5	283.9	120.89	3.4	2.42	9	435.6	165.62	4.4	1.49	20
Callinectes similis	5.6	3.66	0.1	0.11	5	182.0	148.88	1.6	1.31	9	282.9	98.24	4.4	1.49	20
Trachypenaeus constrictus	6.4	4.12	0.0	0.00	5	121.5	104.36	0.9	0.72	9	254.2	223.69	1.0	0.90	20
Sicyonia brevirostris	0.0	0.00	0.0	0.00	5	57.1	37.84	0.4	0.27	9	229.8	187.19	1.8	1.50	20
Sicyonia dorsalis	0.0	0.00	0.0	0.00	5	17.5	10.98	0.0	0.02	9	51.3	11.59	0.1	0.05	20
Trachurus lathami	8.4	8.40	0.1	0.11	5	45.4	39.07	0.9	0.81	9	427.2	179.64	7.8	3.48	20
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	58.7	35.00	0.4	0.18	9	255.2	116.01	1.7	0.73	20
Peprilus burti	66.0	66.00	1.8	1.80	5	42.9	35.72	1.0	0.75	9	24.5	20.36	0.5	0.43	20
Prionotus stearnsi	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	9	54.8	25.67	0.4	0.20	20
Micropogonias undulatus	220.2	197.08	4.3	3.99	5	430.9	429.36	6.1	6.03	9	1.3	1.16	0.0	0.02	20
Upeneus parvus	0.0	0.00	0.0	0.00	5	12.6	8.57	0.1	0.06	9	67.7	17.10	1.0	0.26	20
Syacium gunteri	10.6	7.03	0.1	0.09	5	25.2	15.08	0.3	0.12	9	65.8	24.32	1.2	0.45	20
Harengula jaguana	66.0	66.00	1.7	1.69	5	66.4	57.40	2.1	1.81	9	45.6	29.87	1.7	1.15	20
Squid	21.2	18.80	0.3	0.33	5	35.5	24.30	0.5	0.31	9	464.2	185.03	9.0	3.91	20

Table 13a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	242.6	113.90	1.4	0.69	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Penaeus aztecus	5.6	1.71	0.2	0.05	7	0.0	0.00	0.0	0.00	1	36.7	0.00	1.7	0.00	1
Callinectes similis	73.9	31.87	2.0	0.68	7	5.0	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	1
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Sicyonia brevirostris	5.7	1.75	0.1	0.03	7	10.0	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	1
Sicyonia dorsalis	335.0	238.20	0.7	0.46	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Trachurus lathami	75.9	63.89	1.9	1.53	7	77.5	0.00	1.6	0.00	1	88.9	0.00	3.5	0.00	1
Stenotomus caprinus	19.9	10.59	0.4	0.29	7	380.0	0.00	13.4	0.00	1	25.6	0.00	0.7	0.00	1
Peprilus burti	73.9	52.36	5.1	3.36	7	1272.5	0.00	60.3	0.00	1	121.1	0.00	9.2	0.00	1
Prionotus stearnsi	134.2	60.24	1.0	0.47	7	117.5	0.00	1.0	0.00	1	28.9	0.00	0.2	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Upeneus parvus	32.6	19.52	0.8	0.53	7	155.0	0.00	7.3	0.00	1	56.7	0.00	1.9	0.00	1
Syacium gunteri	38.0	16.65	0.6	0.32	7	5.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Harengula jaguana	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Squid	406.4	123.09	10.4	2.03	7	922.5	0.00	22.2	0.00	1	18.9	0.00	0.3	0.00	1

Table 13b

Statistical Zone 21

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	57.2	38.69	5	36.0	16.60	9	47.6	9.94	20	37.9	3.95	7	117.0	0.00	1	40.4	0.00	1
Total finfish kg	48.6	32.89	5	20.4	10.59	9	19.6	5.00	20	19.8	3.82	7	92.0	0.00	1	37.9	0.00	1
Total crustacean kg	7.5	6.12	5	12.9	6.53	9	17.5	6.03	20	7.5	1.85	7	3.4	0.00	1	2.0	0.00	1
Total others kg	1.1	1.09	5	2.4	1.20	9	10.1	3.97	20	10.8	2.06	7	22.7	0.00	1	0.5	0.00	1
Surface temperature	25.0	1.17	3	24.5	0.60	11	26.1	0.25	20	27.0	0.12	6	26.7	0.00	1	27.0	0.10	3
Midwater temperature	24.1	1.58	3	23.7	0.60	11	23.7	0.41	20	23.8	0.37	6	22.0	0.00	1	21.5	0.60	3
Bottom temperature	21.8	0.09	3	21.5	0.07	11	21.4	0.07	20	21.1	0.04	6	20.5	0.00	1	17.6	0.82	3
Surface salinity	33.3	1.62	3	35.9	0.02	11	35.2	0.36	20	36.0	0.04	6	36.1	0.00	1	35.2	0.81	3
Midwater salinity	34.2	1.81	3	36.0	0.02	11	35.2	0.38	20	36.2	0.05	6	35.9	0.00	1	36.2	0.03	3
Bottom salinity	34.1	1.89	3	36.1	0.06	11	35.4	0.31	20	36.1	0.01	6	36.1	0.00	1	36.4	0.21	3
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	2.9	0.79	7	0.6	0.09	14	0.4	0.04	6	0.4	0.00	1	0.4	0.03	3
Surface oxygen	6.5	0.15	3	5.9	0.14	11	5.9	0.11	20	5.6	0.04	6	5.7	0.00	1	5.1	0.60	3
Midwater oxygen	6.5	0.30	3	5.9	0.25	11	6.0	0.09	20	6.1	0.07	6	6.1	0.00	1	5.5	0.58	3
Bottom oxygen	6.5	0.26	3	5.7	0.39	11	5.8	0.14	20	5.5	0.07	6	4.8	0.00	1	3.2	0.21	3

Table 14a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 20 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia dorsalis	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1	54.0	0.00	0.00	0	1
Penaeus aztecus	0.0	0.00	0.0	0.00	1	18.0	0.00	0.0	0.00	1	6.0	0.00	0.00	0	1
Squilla spp.	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	1
Portunus spinimanus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	6.0	0.00	0.00	0	1
Persephona mediterranea	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	6.0	0.00	0.00	0	1
Portunus gibbesii	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1	0.0	0.00	0.00	0	1
Chloroscombrus chrysurus	96.0	0.00	1.1	0.00	1	66.0	0.00	0.8	0.00	1	6.0	0.00	0.00	0	1
Syacium gunteri	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1	48.0	0.00	0.80	0	1
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	48.0	0.00	0.30	0	1
Cynoscion arenarius	0.0	0.00	0.0	0.00	1	42.0	0.00	1.6	0.00	1	0.0	0.00	0.00	0	1
Larimus fasciatus	0.0	0.00	0.0	0.00	1	30.0	0.00	0.5	0.00	1	0.0	0.00	0.00	0	1
Symphurus plagiusa	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	18.0	0.00	0.50	0	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	18.0	0.00	0.5	0.00	1	0.0	0.00	0.00	0	1
Trichiurus lepturus	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1	12.0	0.00	0.00	0	1
Squid	0.0	0.00	0.0	0.00	1	24.0	0.00	0.5	0.00	1	54.0	0.00	0.80	0	1

Table 14b

Statistical Zone 22

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	1	8.2	0.00	1	5.5	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	1	2.7	0.00	1	2.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	1	0.0	0.00	1	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	1	5.5	0.00	1	2.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	26.5	0.00	1	26.5	0.00	1	26.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	26.5	0.00	1	26.4	0.00	1	23.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	26.4	0.00	1	23.4	0.00	1	21.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	30.5	0.00	1	30.4	0.00	1	30.8	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	30.5	0.00	1	31.1	0.00	1	32.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	30.6	0.00	1	31.9	0.00	1	33.2	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.4	0.00	1	6.5	0.00	1	6.8	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.4	0.00	1	6.6	0.00	1	6.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	6.3	0.00	1	5.6	0.00	1	5.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 15. 1997 Fall Shrimp Groundfish Survey species composition list, 365 trawl stations, for those vessels that used either a 40-ft or 20-ft trawl. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Chloroscombrus chrysurus	Atlantic bumper	48574	463.5	153	41.9
Stenotomus caprinus	longspine porgy	41841	1445.2	177	48.5
Micropogonias undulatus	Atlantic croaker	25311	1556.5	224	61.4
Peprilus burti	gulf butterfish	9717	635.5	174	47.7
Trachurus lathami	rough scad	8205	301.2	104	28.5
Leiostomus xanthurus	spot	4683	490.3	167	45.8
Serranus atrobranchus	blackear bass	4492	63.8	108	29.6
Centropristis philadelphica	rock sea bass	4206	207.0	182	49.9
Diplectrum bivittatum	dwarf sand perch	4027	58.5	110	30.1
Prionotus longispinosus	bigeye searobin	3905	120.0	150	41.1
Lutjanus campechanus	red snapper	3302	120.5	176	48.2
Arius felis	hardhead catfish	2939	770.8	79	21.6
Cynoscion spp.	seatrouts	2733	4.1	30	8.2
Synodus foetens	inshore lizardfish	2467	366.2	181	49.6
Cynoscion nothus	silver seatrout	2375	148.0	171	46.8
Sphoeroides parvus	least puffer	2250	17.5	120	32.9
Cynoscion arenarius	sand seatrout	2090	230.0	189	51.8
Lagodon rhomboides	pinfish	2073	127.1	132	36.2
Pristipomoides aquilonaris	wenchman	1994	123.1	73	20.0
Trichiurus lepturus	Atlantic cutlassfish	1589	91.0	95	26.0
Prionotus paralatus	Mexican searobin	1391	48.0	59	16.2
Syacium gunteri	shoal flounder	1358	27.1	124	34.0
Upeneus parvus	dwarf goatfish	1218	54.1	67	18.4
Saurida brasiliensis	largescale lizardfish	1208	6.0	73	20.0
Harengula jaguana	scaled sardine	1145	24.5	60	16.4
Halieutichthys aculeatus	pancake batfish	1126	11.9	105	28.8

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Lutjanus synagris	lane snapper	1111	69.4	67	18.4
Brevoortia patronus	gulf menhaden	1090	59.2	39	10.7
Anchoa hepsetus	striped anchovy	1048	18.9	55	15.1
Trichopsetta ventralis	sash flounder	1016	28.3	50	13.7
Lepophidium brevibarbe	blackedge cusk-eel	817	34.6	77	21.1
Stellifer lanceolatus	star drum	803	12.4	43	11.8
Prionotus stearnsi	shortwing searobin	796	12.4	47	12.9
Etropus crossotus	fringed flounder	655	10.6	90	24.7
Mullus auratus	red goatfish	638	42.5	37	10.1
Chaetodipterus faber	Atlantic spadefish	638	35.2	103	28.2
Eucinostomus gula	silver jenny	540	16.9	60	16.4
Porichthys plectrodon	Atlantic midshipman	532	8.8	87	23.8
Citharichthys spilopterus	bay whiff	502	9.1	57	15.6
Peprilus alepidotus	harvestfish	481	8.0	80	21.9
Scorpaena calcarata	smoothhead scorpionfish	457	7.4	41	11.2
Anchoa mitchilli	bay anchovy	432	1.1	24	6.6
Polydactylus octonemus	Atlantic threadfin	425	17.8	31	8.5
Opisthonema oglinum	Atlantic thread herring	395	22.0	36	9.9
Cyclopsetta chittendeni	Mexican flounder	386	39.2	78	21.4
Prionotus rubio	blackwing searobin	349	12.0	33	9.0
Selene setapinnis	Atlantic moonfish	327	20.7	63	17.3
Lagocephalus laevigatus	smooth puffer	290	49.5	64	17.5
Decapterus punctatus	round scad	289	7.4	14	3.8
Syacium papillosum	dusky flounder	281	9.1	17	4.7
Haemulon aurolineatum	tomtate	249	19.1	10	2.7
Etrumeus teres	round herring	235	5.4	21	5.8
Anchoa nasuta	longnose anchovy	225	3.4	9	2.5
Menticirrhus americanus	southern kingfish	206	24.7	38	10.4
Syacium spp.	lefteye flounders	202	10.9	16	4.4
Bollmannia communis	ragged goby	200	1.3	24	6.6

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Caranx crysos	blue runner	196	15.3	29	7.9
Diplectrum formosum	sand perch	195	18.4	21	5.8
Synodus poeyi	offshore lizardfish	193	1.3	33	9.0
Balistes capriscus	gray triggerfish	178	29.1	44	12.1
Larimus fasciatus	banded drum	174	9.0	33	9.0
Monacanthus hispidus	planehead filefish	171	5.9	30	8.2
Orthopristis chrysoptera	pigfish	156	12.0	33	9.0
Selar crumenophthalmus	bigeye scad	150	6.8	14	3.8
Sphyraena guachancho	guaguanche	142	12.2	21	5.8
Gymnachirus texae	fringed sole	137	3.2	35	9.6
Symphurus plagiusa	blackcheek tonguefish	131	2.5	47	12.9
Hoplunnis macrurus	freckled pike-conger	121	1.9	36	9.9
Hildebrandia flava	yellow conger	117	11.7	29	7.9
Ancylopsetta dilecta	three-eye flounder	116	6.5	24	6.6
Priacanthus arenatus	bigeye	113	12.4	18	4.9
Equetus iwamotoi	blackbar drum	105	9.4	14	3.8
Anchoa lyolepis	dusky anchovy	104	0.2	2	0.5
Steindachneria argentea	luminous hake	101	0.5	4	1.1
Ogcocephalus declivirostris	slantbrow batfish	100	4.7	19	5.2
Bagre marinus	gafftopsail catfish	99	29.8	18	4.9
Pontinus longispinis	longspine scorpionfish	91	5.1	8	2.2
Ophidion welshi	crested cusk-eel	89	3.0	19	5.2
Bellator egretta	streamer searobin	87	1.7	10	2.7
Prionotus ophryas	bandtail searobin	83	1.9	18	4.9
Sardinella aurita	Spanish sardine	81	4.6	18	4.9
Bellator militaris	horned searobin	80	0.8	8	2.2
Caulolatilus intermedius	anchor tilefish	79	8.1	20	5.5
Brotula barbata	bearded brotula	76	13.6	28	7.7
Urophycis floridana	southern hake	75	11.8	18	4.9
Etropus cyclosquamus	shelf flounder	70	0.7	13	3.6

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Lepophidium jeannae	mottled cusk-eel	66	6.9	10	2.7
Menticirrhus littoralis	gulf kingfish	63	7.4	14	3.8
Mugil cephalus	striped mullet	59	3.2	3	0.8
Prionotus roseus	bluespotted searobin	59	1.9	8	2.2
Ophidion holbrooki	bank cusk-eel	53	5.6	9	2.5
Raja texana	roundel skate	52	17.5	26	7.1
Kathetostoma albigutta	lancer stargazer	52	2.6	16	4.4
Ancylopsetta quadrocellata	ocellated flounder	50	10.5	18	4.9
Paralichthys lethostigma	southern flounder	49	16.5	38	10.4
Equetus umbrosus	cubbyu	48	2.5	12	3.3
Urophycis cirrata	gulf hake	47	3.7	5	1.4
Rhizoprionodon terraenovae	Atlantic sharpnose shark	45	47.1	25	6.8
Symphurus civitatus	offshore tonguefish	44	1.0	15	4.1
Ophidion grayi	blotched cusk-eel	39	3.8	4	1.1
Antennarius radiosus	singlespot frogfish	38	0.7	14	3.8
Bairdiella chrysoura	silver perch	36	0.9	11	3.0
Scomberomorus maculatus	Spanish mackerel	36	7.1	16	4.4
Sphoeroides dorsalis	marbled puffer	36	1.0	11	3.0
Scomberomorus cavalla	king mackerel	35	5.0	18	4.9
Symphurus diomedianus	spottedfin tonguefish	35	0.7	11	3.0
Neomerinthe hemingwayi	spinycheek scorpionfish	34	9.4	11	3.0
Sciaenops ocellatus	red drum	34	228.2	9	2.5
Selene vomer	lookdown	33	0.6	12	3.3
Engyophrys senta	spiny flounder	33	0.2	12	3.3
Rhomboplites aurorubens	vermilion snapper	32	2.0	6	1.6
Rachycentron canadum	cobia	28	16.0	15	4.1
Ogcocephalus spp.	batfishes	28	1.5	10	2.7
Centropristis ocyura	bank sea bass	27	2.2	5	1.4
Trachinocephalus myops	snakefish	20	1.2	5	1.4
Engraulis eurystole	silver anchovy	19	0.0	2	0.5

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Prionotus tribulus	bighead searobin	19	1.6	9	2.5
Seriola dumerili	greater amberjack	19	7.8	3	0.8
Aluterus schoepfi	orange filefish	19	2.2	2	0.5
Bothus ocellatus	eyed flounder	18	0.5	4	1.1
Paralichthys squamilentus	broad flounder	17	3.9	7	1.9
Hemicaranx amblyrhynchus	bluntnose jack	16	0.1	13	3.6
Prionotus scitulus	leopard searobin	14	0.4	2	0.5
Gymnothorax nigromarginatus	blackedge moray	13	0.8	4	1.1
Dorosoma petenense	threadfin shad	12	0.5	6	1.6
Conodon nobilis	barred grunt	12	1.2	2	0.5
Squatina dumeril	Atlantic angel shark	11	33.3	6	1.6
Sphyrna tiburo	bonnethead	11	10.3	8	2.2
Hemanthias aureorubens	streamer bass	11	0.2	3	0.8
Pristigenys alta	short bigeye	11	0.3	6	1.6
Echeneis naucrates	sharksucker	11	3.0	9	2.5
Mustelus norrisi	Florida smoothhound	9	36.0	7	1.9
Eucinostomus argenteus	spotfin mojarra	9	0.1	6	1.6
Peprilus triacanthus	butterfish	9	0.7	1	0.3
Narcine brasiliensis	lesser electric ray	8	3.1	6	1.6
Sphoeroides spengleri	bandtail puffer	8	0.3	3	0.8
Pogonias cromis	black drum	7	35.9	4	1.1
Citharichthys macrops	spotted whiff	7	0.2	4	1.1
Etropus rimosus	gray flounder	7	0.0	2	0.5
Mugil curema	white mullet	6	0.2	3	0.8
Peristedion gracile	slender searobin	6	0.1	1	0.3
Haemulon plumieri	white grunt	6	0.9	2	0.5
Ogcocephalus radiatus	polka-dot batfish	6	0.8	4	1.1
Mustelus canis	smooth dogfish	5	4.6	4	1.1
Dasyatis americana	southern stingray	5	14.4	4	1.1
Gymnothorax saxicola	honeycomb moray	5	0.5	3	0.8

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Scorpaena dispar	hunchback scorpionfish	5	0.5	3	0.8
Bellator brachychir	shortfin searobin	5	0.0	2	0.5
Bathyanthias mexicanus	yellowtail bass	5	0.1	2	0.5
Caranx hippos	crevalle jack	5	0.6	2	0.5
Calamus leucosteus	whitebone porgy	5	1.2	3	0.8
Decodon puellaris	red hogfish	5	0.4	3	0.8
Achirus lineatus	lined sole	5	0.0	4	1.1
Lactophrys quadricornis	scrawled cowfish	5	0.0	3	0.8
Raja eglanteria	clearnose skate	4	4.9	2	0.5
Conger oceanicus	conger eel	4	0.5	2	0.5
Myrophis punctatus	speckled worm eel	4	0.0	1	0.3
Scorpaena agassizi	longfin scorpionfish	4	3.0	1	0.3
Hemanthias leptus	longtail bass	4	0.2	2	0.5
Trachinotus carolinus	Florida pompano	4	1.3	4	1.1
Archosargus probatocephalus	sheepshead	4	6.0	1	0.3
Opistognathus spp.	jawfishes	4	0.1	2	0.5
Citharichthys cornutus	horned whiff	4	0.0	2	0.5
Trinectes maculatus	hogchoker	4	0.1	3	0.8
Ogcocephalus pantostictus	spotted batfish	4	1.2	3	0.8
Carcharhinus falciformis	silky shark	3	17.8	1	0.3
Dasyatis sabina	Atlantic stingray	3	2.5	2	0.5
Rhinoptera bonasus	cownose ray	3	17.9	3	0.8
Ophichthus gomesi	shrimp eel	3	0.2	1	0.3
Physiculus fulvus	metallic codling	3	0.0	2	0.5
Fistularia tabacaria	bluespotted cornetfish	3	0.4	2	0.5
Serraniculus pumilio	pygmy sea bass	3	0.1	2	0.5
Pomatomus saltatrix	bluefish	3	1.2	3	0.8
Equetus lanceolatus	jackknife fish	3	0.0	1	0.3
Calamus nodosus	knobbed porgy	3	0.1	1	0.3
Pagrus pagrus	red porgy	3	0.3	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Etropus microstomus	smallmouth flounder	3	0.0	1	0.3
Symphurus spp.	tonguefishes	3	0.1	1	0.3
Chilomycterus schoepfi	striped burrfish	3	0.1	1	0.3
Antennarius striatus	striated frogfish	3	0.0	1	0.3
Myliobatis fremin	bullnose ray	2	1.2	2	0.5
Elops saurus	ladyfish	2	0.2	1	0.3
Echiophis punctifer	snapper eel	2	0.4	1	0.3
Apogonidae	cardinalfishes	2	0.0	1	0.3
Opsanus beta	gulf toadfish	2	0.3	2	0.5
Ogcocephalus parvus	roughback batfish	2	0.1	1	0.3
Carcharhinus acronotus	blacknose shark	1	3.0	1	0.3
Carcharhinus brevipinna	spinner shark	1	3.5	1	0.3
Raja olseni	spreadfin skate	1	0.0	1	0.3
Raja oregoni	skate	1	1.7	1	0.3
Synodus intermedius	sand diver	1	0.1	1	0.3
Gymnothorax vicinus	purplemouth moray	1	0.2	1	0.3
Bregmaceros atlanticus	antenna codlet	1	0.0	1	0.3
Epinephelus flavolimbatus	yellowedge grouper	1	0.5	1	0.3
Serranus phoebe	tattler	1	0.0	1	0.3
Rypticus maculatus	whitespotted soapfish	1	0.0	1	0.3
Remora remora	remora	1	0.8	1	0.3
Alectis ciliaris	African pompano	1	0.1	1	0.3
Oligoplites saurus	leatherjack	1	0.0	1	0.3
Lutjanidae	snappers	1	0.0	1	0.3
Haemulon parra	sailors choice	1	0.2	1	0.3
Chaetodon aya	bank butterflyfish	1	0.0	1	0.3
Hemipteronotus novacula	pearly razorfish	1	0.0	1	0.3
Lonchopisthus micrognathus	swordtail jawfish	1	0.0	1	0.3
Astroscopus y-graecum	southern stargazer	1	0.1	1	0.3
Dactylopterus volitans	flying gurnard	1	0.1	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Syacium micrurum	channel flounder	1	0.0	1	0.3
Symphurus pelicanus	longtail tonguefish	1	0.0	1	0.3
Aluterus monoceros	unicorn filefish	1	0.4	1	0.3
Opsanus pardus	leopard toadfish	1	0.0	1	0.3
Crustaceans					
Penaeus aztecus	brown shrimp	10973	250.0	247	67.7
Callinectes similis	lesser blue crab	5938	137.9	226	61.9
Trachypenaeus similis	roughback shrimp	5407	19.5	139	38.1
Portunus gibbesii	irridescent swimming crab	4979	29.0	207	56.7
Sicyonia brevirostris	brown rock shrimp	4551	73.9	101	27.7
Portunus spinicarpus	longspine swimming crab	3330	29.2	70	19.2
Squilla empusa	mantis shrimp	2819	30.7	164	44.9
Penaeus setiferus	white shrimp	2560	48.2	138	37.8
Solenocera vioscai	humpback shrimp	1618	10.4	41	11.2
Squilla chydaea	mantis shrimp	1117	10.0	66	18.1
Sicyonia dorsalis	lesser rock shrimp	1016	3.7	80	21.9
Xiphopenaeus kroyeri	seabob	994	3.9	17	4.7
Parapenaeus politus	deepwater rose shrimp	934	2.7	8	2.2
Portunus spinimanus	blotched swimming crab	714	10.4	55	15.1
Penaeus duorarum	pink shrimp	629	16.6	66	18.1
Trachypenaeus constrictus	roughneck shrimp	219	0.5	21	5.8
Anasimus latus	stilt spider crab	167	1.6	28	7.7
Calappa sulcata	yellow box crab	133	30.5	55	15.1
Callinectes sapidus	blue crab	105	4.8	14	3.8
Raninoides louisianensis	gulf frog crab	94	0.9	19	5.2
Trachypenaeus spp.	roughneck shrimps	82	0.1	3	0.8
Pagurus pollicaris	flatclaw hermit crab	60	1.1	27	7.4
Stenorhynchus seticornis	yellowline arrow crab	47	0.2	17	4.7

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Raninoides loevis	furrowed frog crab	34	0.2	1	0.3
Hepatus epheliticus	calico crab	31	1.6	12	3.3
Arenaeus cribrarius	speckled swimming crab	30	1.3	9	2.5
Pagurus bullisi	hermit crab	24	0.2	6	1.6
Ovalipes floridanus	Florida lady crab	24	0.3	8	2.2
Podochela sidneyi	shortfinger neck crab	18	0.1	6	1.6
Petrochirus diogenes	giant hermit crab	17	0.1	9	2.5
Dardanus insignis	red brocade hermit	17	0.0	5	1.4
Persephona crinita	pink purse crab	16	0.0	12	3.3
Paguristes triangulatus	hermit crab	16	0.0	2	0.5
Plesionika longicauda	pandalid shrimp	13	0.0	3	0.8
Libinia emarginata	portly spider crab	12	2.2	8	2.2
Persephona mediterranea	mottled purse crab	11	0.0	10	2.7
Speocarcinus spp.	squareback crabs	10	0.1	4	1.1
Porcellana spp.	porcelain crabs	9	0.0	2	0.5
Porcellana sigsbeiana	striped porcelain crab	8	0.0	1	0.3
Diogenidae	left handed hermit crabs	8	0.0	2	0.5
Libinia dubia	longnose spider crab	7	0.0	7	1.9
Parthenope serrata	sawtooth elbow crab	7	0.0	6	1.6
Parthenope granulata	bladetooth elbow crab	7	0.0	5	1.4
Sicyonia burkenroadi	spiny rock shrimp	6	0.0	2	0.5
Stenocionops spinosissimus	tenspine spider crab	5	2.0	1	0.3
Metoporhaphis calcarata	false arrow crab	5	0.0	4	1.1
Leiolambrus nitidus	white elbow crab	5	0.0	1	0.3
Parasquilla coccinea	mantis shrimp	4	0.0	2	0.5
Lysiosquilla scabricauda	mantis shrimp	4	0.2	2	0.5
Myropsis quinquespinosa	fivespine purse crab	4	0.0	2	0.5
Scyllarides nodifer	ridged slipper lobster	4	1.5	3	0.8
Collodes robustus	spider crab	4	0.0	2	0.5
Stenocionops furcata	furcate crab	4	0.0	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Sicyonia laevigata	rock shrimp	3	0.0	1	0.3
Axiopsis hirsutimana	lobster shrimp	3	0.0	1	0.3
Dromidia antillensis	hairy sponge crab	3	0.0	1	0.3
Calappa flammea	flame box crab	3	0.2	3	0.8
Xanthidae	mud crabs	2	0.0	2	0.5
Menippe adina	Gulf stone crab	2	0.0	1	0.3
Munida forceps	squat lobster	2	0.0	1	0.3
Nibilia antilocapra	shorthorn spiny crab	2	0.0	1	0.3
Euphrosynoplax clausa	craggy bathyal crab	2	0.0	1	0.3
Synalpheus townsendi	Townsend snapping shrimp	1	0.0	1	0.3
Stenocionops spinimanus	prickly spider crab	1	0.4	1	0.3
Hypoconcha arcuata	granulate shellback crab	1	0.0	1	0.3
Others					
Amusium papyraceum	paper scallop	7268	77.5	72	19.7
Aurelia aurita	moon jellyfish	4079	1440.1	147	40.3
Loligo pealeii	longfin squid	1150	52.8	107	29.3
Lolliguncula brevis	Atlantic brief squid	1063	9.3	108	29.6
Aurelia spp.	jellyfishes	965	541.6	6	1.6
Loligo pleii	arrow squid	856	6.0	78	21.4
Astropecten duplicatus	spiny beaded sea star	664	1.2	54	14.8
Astropecten cingulatus	starfish	464	4.3	39	10.7
Luidia clathrata	sea star	406	5.7	62	17.0
Renilla mulleri	short-stemmed sea pansy	398	2.2	39	10.7
Loligo spp.	squids	333	1.8	20	5.5
Chrysaora quinquecirrha	sea nettle	330	17.2	46	12.6
Ophiolepis elegans	brittle star	212	0.3	18	4.9
Moira atropos	mud heart-urchin	129	1.5	2	0.5
Anadara baughmani	Baughman's ark	107	1.2	10	2.7

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Pitar cordatus	Schwengel's pitar	90	2.0	8	2.2
Polystira albida	white giant turris	79	0.5	16	4.4
Holothuroidea	sea cucumbers	50	0.0	2	0.5
Stomolophus meleagris	many-mouthed sea jelly	46	46.1	9	2.5
Neverita duplicata	shark eye	37	0.4	12	3.3
Actinidae	sea anemones	31	0.0	13	3.6
Tethyaster grandis	starfish	23	2.6	10	2.7
Tamoya haplonema	sea wasp	21	2.6	6	1.6
Argopecten gibbus	calico scallop	20	0.2	1	0.3
Styela plicata	tunicate	20	0.1	3	0.8
Mellita quinquiesperforata	five-slotted sand dollar	20	0.1	4	1.1
Encope aberrans	sand dollar	19	2.0	3	0.8
Porifera	sponges	18	0.7	5	1.4
Sconsia striata	royal bonnet	13	0.1	5	1.4
Clypeaster prostratus	sea biscuit	13	1.3	5	1.4
Anthozoa	anthozoans	12	0.1	3	0.8
Hydrozoa	hydroids	11	0.1	1	0.3
Muricanthus fulvescens	giant eastern murex	10	0.8	5	1.4
Clypeaster ravenelii	cake urchin	10	0.8	4	1.1
Mollusca	molluscs	8	0.0	1	0.3
Distorsio clathrata	Atlantic distorsio	8	0.0	4	1.1
Cantharus cancellarius	cancellate cantharus	7	0.0	4	1.1
Pecten raveneli	Ravenel's scallop	7	0.0	2	0.5
Pennatulidae	sea pens	7	0.2	7	1.9
Luidia alternata	banded luidia	7	0.1	5	1.4
Anadara ovalis	blood ark	6	0.0	1	0.3
Thais haemastoma	rocksnail	5	0.0	4	1.1
Conus austini	cone shell	5	0.0	3	0.8
Arcinella cornuta	Florida spiny jewelbox	5	0.2	1	0.3
Laevicardium laevigatum	egg cockle	5	0.3	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Macoma brevifrons	short macoma	5	0.1	3	0.8
Virgularia presbytes	sea pen	5	0.0	2	0.5
Bryozoa	moss animals	5	0.0	5	1.4
Busycotypus spiratus	pearwhelk	4	0.1	2	0.5
Octopus vulgaris	common Atlantic octopus	4	0.2	2	0.5
Gorgonidae	gorgonians	4	0.0	3	0.8
Asteroporpa annulata	starfish	4	0.1	3	0.8
Busycon sinistrum	lightning whelk	3	0.5	2	0.5
Lyonsia beana	pearly entodesma	3	0.0	1	0.3
Distaplia spp.	tunicate	3	0.2	1	0.3
Echinaster spp.	thorny sea stars	3	0.0	1	0.3
Schizaster orbignyanus	heart urchin	3	0.2	1	0.3
Chione clenchi	Clench venus	2	0.0	2	0.5
Semirossia equalis	greater shining bobtail	2	0.0	1	0.3
Stichopus	sea cucumber	2	0.0	1	0.3
Anthenoides piercei	starfish	2	0.2	1	0.3
Gastropoda	snails	1	0.0	1	0.3
Sinum perspectivum	white baby-ear	1	0.0	1	0.3
Murex florifer	murex shell	1	0.0	1	0.3
Lepidochelys kempi	Atlantic ridley	1	49.7	1	0.3
Tunicata	tunicates	1	0.0	1	0.3
Paranthus rapiformis	onion anemone	1	0.0	1	0.3
Renilla muelleri	Muller's sea pansy	1	0.0	1	0.3
Amphinomidae	fire worm	1	0.0	1	0.3
Limulus polyphemus	horseshoe crab	1	1.2	1	0.3
Asteroidea	starfishes	1	0.0	1	0.3
Clypeaster spp.	cake urchins	1	0.3	1	0.3
Sargassaceae	sargassum	1	0.0	1	0.3

Table 16a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	1.0	1.00	0.0	0.00	6	148.9	86.15	2.1	1.23	10	52.9	19.45	1.0	0.34	18
Solenocera vioscai	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	10	11.3	9.95	0.0	0.03	18
Portunus spinicarpus	0.0	0.00	0.0	0.00	6	0.8	0.48	0.0	0.00	10	12.7	9.72	0.1	0.08	18
Squilla spp.	18.6	13.84	0.3	0.22	6	4.2	2.81	0.0	0.02	10	44.8	17.80	0.3	0.14	18
Callinectes similis	9.3	6.37	0.2	0.19	6	2.0	1.40	0.0	0.03	10	124.4	83.81	1.6	0.96	18
Parapenaeus politus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	10	2.3	2.33	0.0	0.00	18
Stenotomus caprinus	1.5	1.54	0.0	0.03	6	0.0	0.00	0.0	0.00	10	111.0	71.26	4.1	2.91	18
Micropogonias undulatus	32.4	25.65	1.4	1.07	6	11.2	4.25	0.6	0.22	10	248.1	71.64	14.7	4.15	18
Leiostomus xanthurus	150.8	117.77	13.5	12.24	6	0.9	0.92	0.0	0.04	10	276.0	93.81	28.3	9.77	18
Peprilus burti	14.9	12.12	0.1	0.06	6	2.5	1.30	0.1	0.06	10	10.4	7.79	0.7	0.56	18
Chloroscombrus chrysurus	2.5	1.66	0.0	0.00	6	39.5	30.29	0.4	0.31	10	70.6	44.64	1.7	1.13	18
Serranus atrobranchus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	10	34.9	14.93	0.4	0.15	18
Lagodon rhomboides	59.0	59.00	2.0	1.95	6	8.1	4.10	0.4	0.23	10	82.2	24.35	4.5	1.31	18
Arius felis	12.5	6.68	2.8	1.50	6	130.5	79.55	26.9	15.61	10	18.9	11.63	5.7	3.56	18
Squid	24.6	11.54	0.2	0.14	6	24.6	12.53	0.2	0.11	10	5.6	2.21	0.1	0.08	18

Table 16a (continued)
Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	24.6	17.25	0.7	0.43	9	28.1	13.19	1.0	0.47	5	17.3	15.10	0.6	0.54	4
Solenocera vioscai	7.8	7.78	0.0	0.04	9	47.2	47.20	0.5	0.47	5	572.5	572.50	3.6	3.58	4
Portunus spinicarpus	9.6	5.39	0.1	0.04	9	94.2	62.10	0.7	0.46	5	219.4	219.38	2.1	2.07	4
Squilla spp.	13.6	12.81	0.1	0.13	9	89.3	88.18	0.9	0.85	5	30.6	17.69	0.3	0.16	4
Callinectes similis	4.4	2.39	0.1	0.07	9	7.5	7.13	0.1	0.09	5	13.8	12.14	0.2	0.17	4
Parapenaeus politus	0.0	0.00	0.0	0.00	9	76.4	70.55	0.4	0.38	5	163.8	163.75	0.3	0.34	4
Stenotomus caprinus	378.0	158.49	21.1	9.01	9	198.5	121.97	10.5	6.49	5	890.7	856.67	19.0	16.83	4
Micropogonias undulatus	64.2	29.94	5.1	2.35	9	202.5	202.50	12.5	12.55	5	0.2	0.21	0.0	0.03	4
Leiostomus xanthurus	13.3	6.11	1.5	0.71	9	37.2	36.65	4.0	3.94	5	0.2	0.21	0.0	0.03	4
Peprilus burti	143.2	71.65	13.3	6.55	9	9.7	9.66	1.0	1.00	5	8.2	6.66	0.8	0.62	4
Chloroscombrus chrysurus	10.8	7.22	0.9	0.65	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	4
Serranus atrobranchus	60.4	54.52	0.8	0.71	9	59.5	55.68	0.9	0.89	5	156.3	100.42	3.4	2.47	4
Lagodon rhomboides	32.8	12.87	2.4	0.88	9	3.9	2.91	0.2	0.13	5	0.0	0.00	0.0	0.00	4
Arius felis	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	4
Squid	2.8	1.21	0.1	0.06	9	14.6	7.14	0.3	0.20	5	43.6	34.50	0.5	0.38	4

Table 16b

Statistical Zone 11

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	468.7	325.32	6	104.0	37.48	10	94.4	21.45	18	67.9	10.50	9	65.0	20.83	5	79.2	34.45	4
Total finfish kg	37.1	18.58	6	37.6	16.93	10	88.2	21.15	18	63.6	10.19	9	57.7	19.84	5	66.8	30.46	4
Total crustacean kg	1.8	0.93	6	3.1	1.50	10	4.6	1.47	18	2.0	0.77	9	4.4	2.59	5	9.4	5.42	4
Total others kg	429.6	310.48	6	62.8	34.51	10	1.7	0.86	18	2.5	2.03	9	3.2	2.63	5	3.0	1.61	4
Surface temperature	19.3	0.83	6	20.5	0.73	10	21.5	0.47	22	21.9	0.34	8	21.5	0.79	4	21.3	0.71	5
Midwater temperature	19.2	0.87	6	20.5	0.73	10	22.0	0.39	22	22.4	0.30	8	21.3	0.78	4	22.5	0.67	5
Bottom temperature	19.3	0.89	6	20.8	0.70	10	21.6	0.42	22	21.8	0.53	8	18.8	0.78	4	18.3	0.33	5
Surface salinity	31.8	0.22	6	31.8	0.37	10	32.0	0.57	22	33.9	0.87	8	31.8	1.64	4	33.3	0.30	5
Midwater salinity	31.8	0.26	6	32.1	0.28	10	33.2	0.23	22	35.3	0.17	8	35.6	0.59	4	35.5	0.47	5
Bottom salinity	31.5	0.42	6	32.7	0.33	10	34.4	0.15	22	35.9	0.25	8	35.8	0.60	4	35.7	0.50	5
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	5.8	0.00	1	1.7	0.04	3	1.1	0.21	6	3.2	1.40	3	2.5	0.53	3
Surface oxygen	6.1	0.30	6	5.6	0.54	10	5.4	0.30	22	3.6	0.50	8	4.9	0.33	4	4.3	0.24	5
Midwater oxygen	6.2	0.30	6	5.6	0.50	10	5.0	0.29	22	3.1	0.33	8	3.7	0.17	4	3.6	0.37	5
Bottom oxygen	6.1	0.31	6	5.2	0.50	10	4.2	0.31	22	2.8	0.32	8	3.0	0.20	4	3.0	0.27	5

Table 17a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	91.5	90.25	0.1	0.12	3	217.3	103.22	0.4	0.16	14
Callinectes similis	0.0	0.00	0.0	0.00	0	20.2	14.08	0.2	0.16	3	87.7	27.77	2.1	0.84	14
Squilla spp.	0.0	0.00	0.0	0.00	0	61.0	57.51	0.5	0.45	3	75.1	36.45	0.6	0.29	14
Parapenaeus politus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	14
Solenocera vioscai	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	0.9	0.58	0.0	0.00	14
Penaeus aztecus	0.0	0.00	0.0	0.00	0	3.3	2.40	0.0	0.03	3	21.2	7.44	0.3	0.10	14
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	52.0	38.00	2.5	1.79	3	195.6	52.64	11.0	3.09	14
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	47.5	27.05	2.5	1.33	3	80.7	26.12	6.5	2.24	14
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	27.8	12.70	0.5	0.24	3	100.5	42.52	3.0	1.38	14
Sphoeroides parvus	0.0	0.00	0.0	0.00	0	14.0	13.01	0.1	0.06	3	48.6	15.48	0.2	0.08	14
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	2.0	2.00	0.2	0.15	3	20.5	7.01	1.8	0.77	14
Porichthys plectrodon	0.0	0.00	0.0	0.00	0	1.3	1.33	0.0	0.03	3	29.7	9.37	0.3	0.08	14
Halieutichthys aculeatus	0.0	0.00	0.0	0.00	0	1.3	1.33	0.0	0.00	3	0.0	0.00	0.0	0.00	14
Anchoa hepsetus	0.0	0.00	0.0	0.00	0	62.7	62.67	1.2	1.15	3	11.8	7.13	0.2	0.13	14
Squid	0.0	0.00	0.0	0.00	0	67.3	43.97	0.5	0.24	3	26.5	9.67	0.2	0.06	14

Table 17a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	154.9	15.91	0.6	0.02	2	0.0	0.00	0.0	0.00	0	6.4	0.00	0.0	0.00	1
Callinectes similis	332.4	133.93	9.0	5.89	2	0.0	0.00	0.0	0.00	0	3.2	0.00	0.1	0.00	1
Squilla spp.	249.8	14.41	2.4	0.29	2	0.0	0.00	0.0	0.00	0	83.6	0.00	1.0	0.00	1
Parapenaeus politus	243.9	240.73	0.4	0.42	2	0.0	0.00	0.0	0.00	0	537.9	0.00	1.4	0.00	1
Solenocera vioscai	67.9	7.89	0.3	0.06	2	0.0	0.00	0.0	0.00	0	463.9	0.00	3.7	0.00	1
Penaeus aztecus	184.0	74.49	2.5	0.62	2	0.0	0.00	0.0	0.00	0	117.9	0.00	3.2	0.00	1
Micropogonias undulatus	14.6	5.38	1.3	0.69	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	16.1	2.39	3.6	1.06	2	0.0	0.00	0.0	0.00	0	30.0	0.00	3.4	0.00	1
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Sphoeroides parvus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Cynoscion arenarius	226.2	179.92	22.7	16.08	2	0.0	0.00	0.0	0.00	0	60.0	0.00	8.8	0.00	1
Porichthys plectrodon	32.5	23.28	0.4	0.23	2	0.0	0.00	0.0	0.00	0	26.8	0.00	0.3	0.00	1
Halieutichthys aculeatus	94.6	94.62	1.2	1.15	2	0.0	0.00	0.0	0.00	0	121.1	0.00	1.4	0.00	1
Anchoa hepsetus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Squid	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1

Table 17b

Statistical Zone 13

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths less than 6 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	10.2	4.02	3	37.3	7.37	14	58.6	12.70	2	0.0	0.00	0	50.6	0.00	1
Total finfish kg	0.0	0.00	0	8.3	3.56	3	30.0	6.15	14	40.0	16.60	2	0.0	0.00	0	39.0	0.00	1
Total crustacean kg	0.0	0.00	0	1.5	1.09	3	4.8	1.32	14	18.1	3.42	2	0.0	0.00	0	11.7	0.00	1
Total others kg	0.0	0.00	0	0.7	0.35	3	2.6	1.14	14	0.2	0.24	2	0.0	0.00	0	0.5	0.00	1
Surface temperature	0.0	0.00	0	19.5	0.22	4	19.5	0.14	15	18.3	0.92	2	0.0	0.00	0	22.5	2.21	2
Midwater temperature	0.0	0.00	0	20.9	0.69	4	21.1	0.31	15	22.3	1.14	2	0.0	0.00	0	21.7	1.86	2
Bottom temperature	0.0	0.00	0	22.9	0.20	4	23.1	0.19	15	22.4	0.17	2	0.0	0.00	0	17.2	2.77	2
Surface salinity	0.0	0.00	0	30.6	0.71	4	29.9	0.27	15	28.4	0.86	2	0.0	0.00	0	34.1	1.95	2
Midwater salinity	0.0	0.00	0	32.4	0.82	4	32.8	0.43	15	34.6	0.30	2	0.0	0.00	0	36.1	0.34	2
Bottom salinity	0.0	0.00	0	35.1	0.36	4	35.4	0.23	15	36.0	0.37	2	0.0	0.00	0	36.1	0.29	2
Surface chlorophyll	0.0	0.00	0	4.5	0.78	3	9.3	0.91	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	2.7	0.39	4	2.5	0.20	15	2.1	0.24	2	0.0	0.00	0	2.1	1.76	2
Surface oxygen	0.0	0.00	0	5.7	1.29	4	5.7	0.77	15	3.3	0.55	2	0.0	0.00	0	4.6	0.50	2
Midwater oxygen	0.0	0.00	0	6.0	1.54	4	4.9	0.55	15	2.9	0.40	2	0.0	0.00	0	3.3	0.15	2
Bottom oxygen	0.0	0.00	0	5.7	1.65	4	3.8	0.45	15	2.1	0.00	2	0.0	0.00	0	2.8	0.65	2

Table 18a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	9.5	0.00	0.1	0.00	1	28.7	14.95	0.4	0.26	7	23.8	8.44	0.5	0.17	15
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	35.9	16.36	0.1	0.04	7	9.8	6.49	0.0	0.02	15
Callinectes similis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	7	8.2	3.34	0.2	0.07	15
Portunus spinimanus	0.0	0.00	0.0	0.00	1	14.0	7.09	0.1	0.03	7	3.1	2.67	0.0	0.01	15
Penaeus setiferus	34.7	0.00	1.3	0.00	1	21.1	11.23	0.4	0.17	7	0.3	0.33	0.0	0.01	15
Portunus gibbesii	0.0	0.00	0.0	0.00	1	8.8	4.90	0.0	0.02	7	4.5	1.64	0.0	0.01	15
Micropogonias undulatus	1222.1	0.00	74.2	0.00	1	738.1	357.49	40.1	18.71	7	922.2	528.38	57.3	33.82	15
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.3	0.29	0.0	0.01	7	99.9	18.30	4.6	1.20	15
Arius felis	34.7	0.00	12.1	0.00	1	296.1	238.36	97.5	76.36	7	0.9	0.68	0.4	0.27	15
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	14.0	8.47	0.5	0.29	7	71.8	25.79	1.7	0.51	15
Sphoeroides parvus	0.0	0.00	0.0	0.00	1	52.2	16.49	0.3	0.09	7	62.9	33.38	0.5	0.24	15
Centropristis philadelphica	0.0	0.00	0.0	0.00	1	4.0	2.59	0.2	0.11	7	7.9	2.71	0.4	0.14	15
Cynoscion nothus	378.9	0.00	27.7	0.00	1	39.5	18.48	2.1	1.48	7	14.5	7.93	1.9	1.23	15
Leiostomus xanthurus	15.8	0.00	1.7	0.00	1	10.1	4.25	0.8	0.31	7	40.7	23.65	3.5	2.13	15
Squid	0.0	0.00	0.0	0.00	1	59.5	21.31	0.8	0.24	7	31.7	12.34	0.2	0.07	15

Table 18a (continued)
Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	32.0	11.26	0.9	0.27	5	5.0	2.84	0.3	0.19	2	0.0	0.00	0.0	0.00	1
Trachypenaeus similis	1.0	0.98	0.0	0.01	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Callinectes similis	11.6	7.74	0.3	0.16	5	2.0	1.96	0.1	0.06	2	0.0	0.00	0.0	0.00	1
Portunus spinimanus	3.6	1.69	0.1	0.05	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Penaeus setiferus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Portunus gibbesii	6.6	6.60	0.1	0.05	5	7.4	3.07	0.0	0.03	2	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	463.8	350.42	31.1	21.77	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	337.8	129.99	16.4	6.69	5	169.5	23.39	9.6	2.00	2	123.4	0.00	6.4	0.00	1
Arius felis	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Prionotus longispinosus	40.7	22.91	1.8	0.86	5	0.0	0.00	0.0	0.00	2	1.7	0.00	0.0	0.00	1
Sphoeroides parvus	1.8	1.80	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Centropristis philadelphica	97.2	40.45	5.9	2.34	5	3.0	0.89	0.3	0.16	2	3.4	0.00	0.3	0.00	1
Cynoscion nothus	26.6	9.82	2.7	0.94	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	42.3	19.38	4.7	2.02	5	0.0	0.00	0.0	0.00	2	3.4	0.00	0.5	0.00	1
Squid	7.3	5.60	0.0	0.02	5	39.7	3.31	0.6	0.32	2	42.9	0.00	2.1	0.00	1

Table 18b

Statistical Zone 14

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	592.8	0.00	1	168.6	85.14	7	88.5	35.99	15	84.5	28.59	5	20.6	0.15	2	57.7	0.00	1
Total finfish kg	126.3	0.00	1	165.7	85.23	7	86.8	36.07	15	81.4	27.33	5	18.0	0.42	2	55.3	0.00	1
Total crustacean kg	1.4	0.00	1	1.2	0.29	7	1.1	0.43	15	2.5	0.91	5	0.3	0.30	2	0.0	0.00	1
Total others kg	465.1	0.00	1	2.1	0.83	7	0.4	0.24	15	0.8	0.37	5	1.6	0.38	2	2.3	0.00	1
Surface temperature	19.9	0.18	3	20.1	0.26	8	21.9	0.17	15	22.9	0.12	4	23.9	0.02	2	24.4	0.12	6
Midwater temperature	19.9	0.17	3	20.2	0.28	8	22.1	0.13	15	22.9	0.13	4	24.1	0.18	2	23.2	0.58	6
Bottom temperature	20.6	0.53	3	20.6	0.27	8	22.7	0.20	15	23.3	0.32	4	21.3	0.47	2	17.0	0.85	6
Surface salinity	32.5	0.27	3	32.8	0.26	8	34.6	0.23	15	35.6	0.18	4	35.9	0.01	2	35.9	0.06	6
Midwater salinity	32.5	0.27	3	33.0	0.25	8	34.7	0.21	15	35.6	0.18	4	35.9	0.08	2	36.2	0.09	6
Bottom salinity	33.5	0.61	3	33.5	0.45	8	35.5	0.15	15	35.9	0.06	4	36.4	0.01	2	36.2	0.10	6
Surface chlorophyll	1.9	0.78	2	1.2	0.25	5	1.6	0.87	7	0.4	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	3.4	0.42	3	3.5	0.24	8	2.7	0.31	15	1.9	0.67	4	0.5	0.06	2	0.4	0.03	6
Surface oxygen	6.0	1.53	3	6.1	0.76	8	5.4	0.55	15	4.1	1.18	4	3.9	0.20	2	4.5	0.14	6
Midwater oxygen	5.8	1.55	3	5.9	0.80	8	5.1	0.51	15	4.4	0.96	4	3.9	0.75	2	4.2	0.16	6
Bottom oxygen	5.8	1.63	3	5.8	0.80	8	4.7	0.48	15	3.8	1.03	4	2.8	0.45	2	3.2	0.05	6

Table 19a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	7.7	0.00	0.1	0.00	1	64.1	45.15	0.5	0.32	4	176.7	42.45	3.7	0.98	11
Callinectes similis	0.0	0.00	0.0	0.00	1	49.6	37.09	0.2	0.15	4	18.3	6.50	0.3	0.11	11
Portunus gibbesii	13.5	0.00	0.0	0.00	1	14.5	1.70	0.0	0.02	4	40.4	17.61	0.2	0.09	11
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	11
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	34.5	15.99	0.1	0.01	4	18.6	13.20	0.1	0.06	11
Penaeus setiferus	19.4	0.00	0.4	0.00	1	43.5	18.95	1.6	0.51	4	6.1	3.31	0.4	0.24	11
Micropogonias undulatus	9.7	0.00	0.8	0.00	1	1700.6	1226.57	87.4	60.82	4	303.8	107.40	18.0	5.78	11
Chloroscombrus chrysurus	145.2	0.00	1.1	0.00	1	13.6	12.14	0.2	0.19	4	480.3	475.58	4.8	4.76	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	52.5	22.57	1.3	0.60	11
Serranus atrobranchus	0.0	0.00	0.0	0.00	1	0.5	0.45	0.0	0.00	4	8.1	7.34	0.1	0.09	11
Centropristis philadelphica	0.0	0.00	0.0	0.00	1	4.3	3.45	0.1	0.06	4	37.2	15.20	1.0	0.41	11
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	77.4	45.69	1.4	0.85	4	47.2	18.10	1.0	0.33	11
Cynoscion arenarius	11.6	0.00	1.1	0.00	1	38.9	31.54	2.5	1.77	4	11.5	4.77	1.4	0.45	11
Trachurus lathami	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	12.1	7.97	0.5	0.26	11
Squid	17.4	0.00	0.0	0.00	1	13.7	8.52	0.2	0.08	4	28.6	12.50	0.5	0.18	11

Table 19a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	24.6	0.00	0.7	0.00	1	112.7	26.54	4.1	0.96	6	5.9	2.93	0.3	0.19	3
Callinectes similis	9.8	0.00	0.2	0.00	1	4.7	2.33	0.1	0.04	6	0.0	0.00	0.0	0.00	3
Portunus gibbesii	11.8	0.00	0.1	0.00	1	0.2	0.23	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	8.2	7.56	0.1	0.07	6	47.0	30.07	0.2	0.12	3
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	1.0	1.02	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Penaeus setiferus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	11.8	0.00	1.1	0.00	1	6.1	4.74	0.7	0.51	6	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	81.6	0.00	2.2	0.00	1	239.0	79.43	9.4	2.11	6	118.6	4.66	7.3	0.64	3
Serranus atrobranchus	2.0	0.00	0.0	0.00	1	104.4	22.70	1.4	0.31	6	94.4	49.90	1.4	0.86	3
Centropristis philadelphica	1.0	0.00	0.0	0.00	1	75.3	15.78	4.2	1.35	6	19.7	9.89	2.3	1.14	3
Prionotus longispinosus	2.0	0.00	0.1	0.00	1	33.3	14.95	1.7	0.55	6	10.7	5.39	0.5	0.27	3
Cynoscion arenarius	3.0	0.00	0.3	0.00	1	23.6	6.67	3.4	0.92	6	9.8	5.88	2.7	1.46	3
Trachurus lathami	118.0	0.00	4.5	0.00	1	16.2	11.04	0.6	0.43	6	11.3	5.69	0.8	0.42	3
Squid	12.8	0.00	0.0	0.00	1	2.9	1.30	0.1	0.04	6	12.4	10.47	0.4	0.25	3

Table 19b

Statistical Zone 15

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	29.0	0.00	1	103.9	61.64	4	47.3	7.82	11	21.9	0.00	1	43.1	2.79	6	39.6	0.70	3
Total finfish kg	26.4	0.00	1	100.1	60.61	4	38.3	7.25	11	20.6	0.00	1	36.4	1.81	6	34.1	2.76	3
Total crustacean kg	0.9	0.00	1	2.7	0.24	4	5.0	1.22	11	0.9	0.00	1	4.5	0.88	6	0.7	0.13	3
Total others kg	1.8	0.00	1	1.1	0.81	4	4.0	1.75	11	0.4	0.00	1	2.2	0.86	6	4.6	2.04	3
Surface temperature	19.0	0.46	3	19.7	0.26	7	21.3	0.24	10	23.2	0.13	3	23.2	0.11	2	24.4	0.17	5
Midwater temperature	19.0	0.45	3	19.8	0.26	7	21.4	0.24	10	23.3	0.10	3	23.6	0.01	2	24.1	0.32	5
Bottom temperature	19.5	0.80	3	19.9	0.23	7	22.3	0.25	10	23.3	0.08	3	22.2	1.17	2	18.6	0.62	5
Surface salinity	31.6	0.72	3	32.1	0.41	7	34.1	0.24	10	35.5	0.14	3	35.3	0.23	2	36.0	0.04	5
Midwater salinity	31.8	0.76	3	32.1	0.42	7	34.2	0.20	10	35.7	0.07	3	35.9	0.11	2	36.1	0.08	5
Bottom salinity	32.5	1.13	3	32.2	0.41	7	34.9	0.19	10	35.8	0.12	3	36.2	0.16	2	36.4	0.05	5
Surface chlorophyll	3.8	2.10	2	0.0	0.00	0	0.9	0.06	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	2.0	0.38	3	1.6	0.21	7	1.4	0.08	10	1.1	0.19	3	1.0	0.13	2	0.6	0.14	5
Surface oxygen	6.6	1.77	3	4.1	0.32	7	4.2	0.75	10	4.1	0.95	3	2.8	0.25	2	3.8	0.26	5
Midwater oxygen	6.6	1.78	3	4.0	0.33	7	4.1	0.73	10	4.1	0.97	3	2.5	0.25	2	3.6	0.29	5
Bottom oxygen	6.3	1.80	3	3.9	0.40	7	3.8	0.71	10	3.7	0.88	3	2.1	0.20	2	2.8	0.15	5

Table 20a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.9	0.94	0.0	0.00	2	84.8	71.28	0.6	0.47	5	129.4	49.36	2.1	0.88	12
Squilla spp.	304.5	301.15	2.6	2.56	2	206.3	129.98	1.6	0.97	5	3.9	1.47	0.0	0.01	12
Trachypenaeus similis	72.7	66.04	0.1	0.09	2	252.2	55.32	0.7	0.18	5	10.0	5.02	0.0	0.03	12
Callinectes similis	31.9	31.88	0.1	0.09	2	72.1	44.58	0.5	0.40	5	14.9	4.40	0.3	0.13	12
Portunus gibbesii	48.1	23.13	0.2	0.09	2	61.5	19.95	0.3	0.06	5	14.4	4.83	0.1	0.03	12
Penaeus setiferus	62.7	46.04	0.9	0.78	2	56.1	20.93	1.7	0.63	5	3.2	3.20	0.1	0.13	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	28.0	28.00	0.4	0.40	5	596.4	120.57	16.4	4.00	12
Peprilus burti	134.3	132.40	7.4	7.31	2	2.7	1.79	0.1	0.08	5	139.0	65.58	9.4	4.16	12
Chloroscombrus chrysurus	13.4	11.56	0.1	0.08	2	0.4	0.44	0.0	0.00	5	270.8	151.80	4.2	1.90	12
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	7.2	1.58	0.3	0.14	5	245.9	89.77	14.8	4.88	12
Prionotus longispinosus	0.0	0.00	0.0	0.00	2	319.4	191.07	5.5	2.89	5	57.5	32.72	1.0	0.49	12
Trachurus lathami	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	44.5	27.89	1.8	1.21	12
Centropristis philadelphica	11.9	6.88	0.2	0.01	2	27.2	13.36	0.4	0.23	5	53.1	24.46	1.4	0.62	12
Synodus foetens	0.0	0.00	0.0	0.00	2	1.3	1.33	0.1	0.06	5	28.3	4.44	3.9	0.63	12
Squid	15.9	14.06	0.2	0.15	2	15.5	5.81	0.2	0.10	5	4.7	1.94	0.3	0.13	12

Table 20a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	55.2	27.71	1.4	0.72	6	54.7	16.95	2.7	0.68	4	7.9	3.54	0.5	0.24	4
Squilla spp.	3.9	2.88	0.0	0.03	6	1.7	1.09	0.0	0.00	4	11.7	8.48	0.2	0.17	4
Trachypenaeus similis	0.5	0.37	0.0	0.00	6	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Callinectes similis	7.3	2.52	0.1	0.04	6	2.6	1.77	0.1	0.07	4	0.0	0.00	0.0	0.00	4
Portunus gibbesii	1.8	0.90	0.0	0.00	6	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Penaeus setiferus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	540.8	166.14	20.4	5.85	6	838.0	313.21	28.6	9.03	4	173.0	9.69	8.8	0.49	4
Peprilus burti	81.7	53.46	5.8	3.77	6	335.1	193.43	24.9	13.89	4	39.0	34.96	2.6	2.21	4
Chloroscombrus chrysurus	8.1	6.20	0.4	0.35	6	0.7	0.71	0.1	0.08	4	0.0	0.00	0.0	0.00	4
Micropogonias undulatus	50.4	20.85	3.8	1.50	6	1.5	0.85	0.2	0.09	4	0.0	0.00	0.0	0.00	4
Prionotus longispinosus	7.2	2.72	0.2	0.09	6	3.8	2.30	0.2	0.10	4	5.1	2.98	0.5	0.29	4
Trachurus lathami	42.2	32.12	1.8	1.38	6	95.3	55.59	4.7	3.07	4	37.4	35.48	1.3	1.11	4
Centropristis philadelphica	32.3	14.74	1.1	0.36	6	13.2	10.34	0.8	0.67	4	15.3	7.79	1.8	0.87	4
Synodus foetens	34.6	10.57	6.1	2.16	6	26.8	12.52	3.5	1.90	4	10.8	6.59	3.1	2.07	4
Squid	15.4	5.73	0.3	0.13	6	12.4	6.67	0.1	0.07	4	35.0	35.00	1.5	1.50	4

Table 20b

Statistical Zone 16

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	42.8	9.52	2	43.5	7.72	5	91.4	16.78	12	78.9	25.16	6	102.0	34.23	4	54.1	2.10	4
Total finfish kg	16.1	6.68	2	19.5	6.50	5	85.7	17.61	12	76.1	25.82	6	98.1	34.05	4	49.5	3.95	4
Total crustacean kg	3.8	3.84	2	5.7	1.41	5	2.7	0.97	12	2.0	0.88	6	2.9	0.60	4	1.8	0.79	4
Total others kg	23.3	6.25	2	18.8	8.85	5	3.0	2.47	12	0.5	0.17	6	1.0	0.61	4	2.8	1.61	4
Surface temperature	0.0	0.00	0	20.6	0.15	6	22.9	0.26	12	24.0	0.17	2	24.2	0.25	3	24.6	0.16	5
Midwater temperature	0.0	0.00	0	21.1	0.10	6	23.1	0.19	12	24.0	0.20	2	24.2	0.25	3	23.6	0.50	5
Bottom temperature	0.0	0.00	0	21.8	0.14	6	23.2	0.17	12	24.0	0.20	2	22.5	0.59	3	19.0	0.44	5
Surface salinity	0.0	0.00	0	31.1	0.53	6	34.5	0.29	12	35.5	0.06	2	35.9	0.02	3	35.9	0.03	5
Midwater salinity	0.0	0.00	0	31.8	0.48	6	34.7	0.21	12	35.5	0.07	2	35.9	0.02	3	36.0	0.13	5
Bottom salinity	0.0	0.00	0	32.7	0.37	6	34.8	0.16	12	35.5	0.05	2	36.2	0.13	3	36.4	0.02	5
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	3.3	0.28	6	1.6	0.16	12	0.8	0.18	2	1.2	0.09	3	0.5	0.12	5
Surface oxygen	0.0	0.00	0	2.9	0.18	6	3.6	0.22	12	4.2	0.20	2	4.1	0.27	3	4.1	0.15	5
Midwater oxygen	0.0	0.00	0	2.5	0.15	6	3.4	0.22	12	4.1	0.25	2	4.1	0.55	3	3.8	0.15	5
Bottom oxygen	0.0	0.00	0	2.2	0.10	6	3.0	0.22	12	3.8	0.40	2	3.2	0.52	3	2.9	0.09	5

Table 21a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	105.6	43.02	1.7	0.69	9
Xiphopenaeus kroyeri	435.0	193.06	1.7	0.78	12	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	9
Penaeus aztecus	0.0	0.00	0.0	0.00	12	0.4	0.37	0.0	0.00	7	31.0	13.01	0.9	0.38	9
Portunus spinicarpus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	0.9	0.59	0.0	0.00	9
Callinectes similis	14.0	5.92	0.0	0.02	12	0.9	0.86	0.0	0.00	7	12.2	6.96	0.2	0.14	9
Portunus gibbesii	41.5	16.39	0.2	0.06	12	0.9	0.86	0.0	0.00	7	7.6	5.99	0.1	0.04	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	432.5	152.18	20.4	7.98	9
Chloroscombrus chrysurus	1.0	1.00	0.0	0.00	12	9.9	6.45	0.2	0.15	7	260.7	175.90	4.1	2.52	9
Trachurus lathami	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	114.7	92.00	4.0	3.25	9
Micropogonias undulatus	5.5	5.50	0.2	0.16	12	1.7	1.71	0.0	0.04	7	132.9	76.86	11.3	6.26	9
Peprilus burti	4.5	1.83	0.0	0.00	12	15.1	7.94	0.3	0.13	7	55.4	30.69	3.9	2.11	9
Leiostomus xanthurus	0.0	0.00	0.0	0.00	12	1.0	0.95	0.1	0.09	7	79.1	66.29	9.4	7.67	9
Centropristis philadelphica	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	21.3	9.05	1.2	0.63	9
Lutjanus synagris	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	31.5	15.55	1.6	0.97	9
Squid	11.0	2.75	0.2	0.05	12	10.0	5.61	0.1	0.08	7	3.1	1.20	0.0	0.03	9

Table 21a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	72.5	50.08	1.3	0.93	4	67.4	26.56	1.0	0.38	5	0.0	0.00	0.0	0.00	3
Xiphopenaeus kroyeri	0.5	0.50	0.0	0.00	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Penaeus aztecus	34.7	15.02	1.8	0.68	4	52.9	14.74	3.0	0.81	5	3.6	2.68	0.3	0.33	3
Portunus spinicarpus	5.0	5.00	0.0	0.05	4	90.6	27.82	0.6	0.20	5	5.4	0.83	0.1	0.01	3
Callinectes similis	6.4	3.36	0.2	0.10	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Portunus gibbesii	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	572.1	306.01	11.3	1.39	4	319.8	56.88	14.1	1.56	5	198.5	66.45	11.3	3.93	3
Chloroscombrus chrysurus	9.2	4.78	0.6	0.43	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Trachurus lathami	4.1	4.14	0.0	0.05	4	73.9	65.51	2.4	2.23	5	105.1	40.40	3.9	0.71	3
Micropogonias undulatus	62.1	58.76	5.4	5.05	4	1.2	0.48	0.3	0.17	5	0.0	0.00	0.0	0.00	3
Peprilus burti	6.9	3.31	0.7	0.36	4	4.4	3.92	0.3	0.31	5	136.0	97.00	8.5	6.11	3
Leiostomus xanthurus	31.0	25.36	3.4	2.75	4	46.0	39.46	6.4	5.60	5	0.0	0.00	0.0	0.00	3
Centropristis philadelphica	39.7	23.85	1.8	0.70	4	86.8	36.18	3.4	1.35	5	6.7	1.54	0.8	0.53	3
Lutjanus synagris	48.8	15.52	3.3	0.89	4	13.9	9.08	1.0	0.61	5	0.0	0.00	0.0	0.00	3
Squid	6.4	1.37	0.5	0.12	4	7.8	4.46	0.6	0.37	5	38.6	6.23	2.2	0.78	3

Table 21b

Statistical Zone 17

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	54.8	30.23	12	34.2	14.36	7	80.9	18.32	9	45.2	13.59	4	56.6	4.74	5	56.6	6.83	3
Total finfish kg	8.2	6.48	12	7.3	2.93	7	77.0	18.76	9	39.0	10.80	4	49.3	4.80	5	51.4	8.04	3
Total crustacean kg	3.4	1.26	12	0.0	0.00	7	3.3	1.34	9	3.6	1.63	4	5.2	1.50	5	0.4	0.26	3
Total others kg	43.0	25.57	12	26.7	14.91	7	0.5	0.32	9	2.5	1.26	4	2.0	0.47	5	4.6	1.50	3
Surface temperature	16.7	0.81	12	21.2	0.87	7	24.1	0.25	8	24.9	0.05	3	24.9	0.07	3	25.1	0.07	2
Midwater temperature	16.7	0.81	12	21.1	0.91	7	24.1	0.25	8	24.9	0.05	3	24.9	0.08	3	22.3	0.78	2
Bottom temperature	16.7	0.81	12	21.2	0.95	7	24.1	0.26	8	24.8	0.07	3	22.3	0.43	3	18.9	0.97	2
Surface salinity	30.8	0.55	12	32.7	0.37	7	35.1	0.15	8	35.6	0.07	3	35.6	0.04	3	35.7	0.04	2
Midwater salinity	31.4	0.16	12	32.8	0.35	7	35.1	0.15	8	35.6	0.09	3	35.7	0.06	3	36.3	0.07	2
Bottom salinity	31.5	0.19	12	33.0	0.33	7	35.1	0.15	8	35.6	0.09	3	36.3	0.03	3	36.4	0.05	2
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	1.6	0.26	4	1.0	0.08	8	0.8	0.08	3	0.8	0.13	3	0.3	0.00	2
Surface oxygen	7.9	0.17	12	6.2	0.58	7	4.3	0.45	8	3.8	0.67	3	4.5	0.38	3	4.6	0.20	2
Midwater oxygen	7.8	0.16	12	6.1	0.63	7	4.2	0.49	8	3.7	0.72	3	4.3	0.37	3	3.8	0.15	2
Bottom oxygen	7.5	0.15	12	6.1	0.61	7	3.9	0.51	8	3.6	0.67	3	3.2	0.20	3	3.2	0.10	2

Table 22a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	0.0	0.00	0.0	0.00	11	0.4	0.43	0.0	0.01	9	50.3	22.85	0.6	0.31	9
Callinectes similis	73.1	55.97	0.2	0.20	11	82.7	38.24	0.5	0.26	9	109.5	76.93	2.3	1.67	9
Penaeus aztecus	0.5	0.55	0.0	0.00	11	19.0	11.75	0.3	0.24	9	65.8	21.67	1.2	0.29	9
Portunus gibbesii	29.5	10.69	0.0	0.03	11	64.9	30.04	0.2	0.09	9	71.3	39.51	0.4	0.18	9
Trachypenaeus similis	1.1	1.09	0.0	0.00	11	8.9	5.46	0.0	0.01	9	86.9	64.74	0.2	0.18	9
Penaeus setiferus	150.0	44.30	1.0	0.32	11	49.5	24.71	0.6	0.37	9	3.8	3.78	0.2	0.20	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	9	426.3	306.77	10.4	6.16	9
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	11	91.9	67.13	2.2	1.42	9	179.9	71.59	5.2	1.78	9
Trachurus lathami	0.0	0.00	0.0	0.00	11	0.3	0.28	0.0	0.01	9	115.8	74.50	3.4	2.13	9
Peprilus burti	6.5	2.97	0.0	0.03	11	14.1	10.23	0.7	0.74	9	50.2	21.35	3.0	1.17	9
Centropristis philadelphica	0.0	0.00	0.0	0.00	11	0.9	0.79	0.0	0.02	9	33.8	14.00	0.8	0.36	9
Micropogonias undulatus	1.6	0.85	0.1	0.04	11	3.8	1.60	0.3	0.16	9	46.3	12.36	3.8	1.01	9
Diplectrum bivittatum	0.0	0.00	0.0	0.00	11	0.7	0.71	0.0	0.01	9	69.7	32.08	1.3	0.52	9
Lutjanus campechanus	0.0	0.00	0.0	0.00	11	0.3	0.28	0.0	0.00	9	33.6	7.86	1.6	0.58	9
Squid	14.2	4.80	0.1	0.04	11	11.3	5.96	0.1	0.06	9	2.2	0.92	0.1	0.06	9

Table 22a (continued)
Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Sicyonia brevirostris	218.3	65.48	3.7	1.07	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Callinectes similis	6.5	3.03	0.5	0.21	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Penaeus aztecus	47.5	11.73	2.2	0.58	7	9.5	0.00	0.5	0.00	1	16.4	13.64	1.1	1.08	2
Portunus gibbesii	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Trachypenaeus similis	4.9	3.75	0.0	0.02	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Penaeus setiferus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	373.5	84.48	17.6	3.47	7	138.9	0.00	5.3	0.00	1	280.6	103.94	16.4	3.85	2
Chloroscombrus chrysurus	6.4	4.39	0.3	0.18	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Trachurus lathami	5.6	3.69	0.1	0.08	7	91.6	0.00	2.7	0.00	1	256.4	250.86	8.5	8.30	2
Peprilus burti	28.7	18.41	1.7	1.09	7	5.3	0.00	0.2	0.00	1	28.6	28.64	1.9	1.92	2
Centropristis philadelphica	35.3	12.27	1.1	0.32	7	4.2	0.00	0.3	0.00	1	91.8	72.68	8.5	5.84	2
Micropogonias undulatus	30.1	13.65	2.8	1.30	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Diplectrum bivittatum	1.5	1.00	0.0	0.01	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Lutjanus campechanus	25.5	3.85	1.3	0.22	7	0.0	0.00	0.0	0.00	1	4.1	4.09	1.1	1.15	2
Squid	6.0	3.04	0.1	0.06	7	14.7	0.00	0.1	0.00	1	12.3	6.77	0.7	0.43	2

Table 22b

Statistical Zone 18

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	65.0	28.00	11	28.3	7.88	9	54.0	10.62	9	73.5	13.94	7	18.7	0.00	1	64.6	3.54	2
Total finfish kg	1.5	0.77	11	10.2	4.45	9	45.9	10.58	9	39.7	5.49	7	17.7	0.00	1	61.1	4.57	2
Total crustacean kg	1.7	0.55	11	2.5	1.01	9	6.6	2.51	9	6.8	1.84	7	0.5	0.00	1	1.3	1.26	2
Total others kg	60.7	28.37	11	15.2	5.61	9	1.4	0.61	9	27.2	18.06	7	0.5	0.00	1	2.2	0.23	2
Surface temperature	17.6	0.56	13	18.2	1.23	7	24.7	0.19	10	25.2	0.04	3	25.7	0.00	1	25.4	0.07	4
Midwater temperature	17.5	0.58	13	18.4	1.12	7	24.8	0.15	10	25.3	0.03	3	25.3	0.00	1	25.4	0.09	4
Bottom temperature	17.7	0.62	13	18.6	1.37	7	24.9	0.13	10	24.3	1.02	3	22.0	0.00	1	20.7	0.25	4
Surface salinity	31.0	0.26	13	30.6	0.45	7	34.1	0.66	10	35.9	0.02	3	35.8	0.00	1	35.9	0.01	4
Midwater salinity	31.0	0.26	13	31.3	0.61	7	34.7	0.44	10	35.9	0.02	3	36.0	0.00	1	35.9	0.03	4
Bottom salinity	31.4	0.14	13	32.9	0.37	7	35.3	0.12	10	36.0	0.11	3	36.3	0.00	1	36.3	0.01	4
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	4.0	0.00	1	3.7	0.06	2	1.3	0.23	10	0.8	0.10	3	0.3	0.00	1	0.4	0.08	4
Surface oxygen	8.3	0.61	13	7.9	0.92	7	5.3	0.13	10	5.2	0.03	3	5.2	0.00	1	5.1	0.05	4
Midwater oxygen	8.2	0.62	13	8.6	1.00	7	5.3	0.18	10	5.3	0.03	3	5.1	0.00	1	5.0	0.09	4
Bottom oxygen	7.8	0.68	13	8.3	1.14	7	5.0	0.28	10	4.7	0.58	3	3.8	0.00	1	3.9	0.11	4

Table 23a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 40 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	3	9.1	5.49	0.1	0.06	21	164.0	39.76	2.9	0.65	12
Callinectes similis	5.3	3.53	0.0	0.00	3	36.2	15.61	0.1	0.06	21	44.0	10.66	0.9	0.25	12
Trachypenaeus similis	36.7	36.67	0.0	0.00	3	35.8	11.63	0.0	0.02	21	58.2	18.78	0.2	0.07	12
Portunus gibbesii	126.0	64.16	0.4	0.26	3	46.2	18.06	0.2	0.08	21	22.9	6.10	0.1	0.05	12
Penaeus setiferus	269.0	113.95	3.4	1.37	3	37.4	13.47	0.5	0.13	21	3.7	2.51	0.1	0.07	12
Squilla spp.	50.7	26.96	0.8	0.47	3	51.0	18.25	0.5	0.17	21	20.3	6.10	0.2	0.07	12
Chloroscombrus chrysurus	307.7	303.68	1.8	1.82	3	3266.0	2988.99	13.1	11.63	21	451.0	311.88	7.2	3.25	12
Diplectrum bivittatum	0.0	0.00	0.0	0.00	3	0.3	0.30	0.0	0.00	21	309.2	136.50	3.3	1.32	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	21	145.0	43.88	3.7	1.41	12
Cynoscion spp.	383.3	216.67	1.2	0.89	3	162.3	91.06	0.2	0.09	21	3.3	2.48	0.0	0.00	12
Micropogonias undulatus	9.3	9.33	0.8	0.79	3	9.1	4.00	0.5	0.17	21	91.7	32.06	6.1	1.98	12
Peprilus burti	4.0	4.00	0.1	0.12	3	7.0	2.48	0.3	0.09	21	89.3	38.67	4.2	1.70	12
Lutjanus campechanus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	21	100.4	20.34	1.6	0.31	12
Cynoscion nothus	0.0	0.00	0.0	0.00	3	51.8	17.88	1.5	0.44	21	54.4	38.09	3.6	2.26	12
Squid	118.0	61.02	0.6	0.08	3	134.7	31.72	1.0	0.26	21	20.0	7.09	0.5	0.20	12

Table 23a (continued)
Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 40 fm.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	23.3	17.34	1.2	0.86	2	41.4	4.23	3.8	0.98	2	0.0	0.00	0.00	0	0
Callinectes similis	160.0	156.97	4.4	4.43	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Portunus gibbesii	1.5	1.53	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Penaeus setiferus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Squilla spp.	4.0	0.97	0.0	0.05	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Chloroscombrus chrysurus	26.5	24.48	0.8	0.66	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Diplectrum bivittatum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Stenotomus caprinus	383.2	241.82	13.9	6.23	2	171.5	22.91	8.6	0.56	2	0.0	0.00	0.00	0	0
Cynoscion spp.	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Micropogonias undulatus	11.5	11.50	0.7	0.70	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Peprilus burti	39.5	39.50	3.3	3.27	2	2.6	0.23	0.2	0.02	2	0.0	0.00	0.00	0	0
Lutjanus campechanus	21.7	1.33	0.6	0.22	2	2.6	0.23	0.1	0.05	2	0.0	0.00	0.00	0	0
Cynoscion nothus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.00	0	0
Squid	8.0	5.98	0.3	0.13	2	3.8	0.97	0.6	0.36	2	0.0	0.00	0.00	0	0

Table 23b

Statistical Zone 19

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 40 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	32.6	7.58	3	45.8	14.71	21	51.6	9.93	12	47.5	22.52	2	61.2	8.88	2	0.0	0.00	0
Total finfish kg	20.3	8.37	3	21.3	12.19	21	44.9	10.53	12	40.2	18.91	2	47.6	8.29	2	0.0	0.00	0
Total crustacean kg	4.8	2.64	3	1.4	0.49	21	4.8	1.02	12	6.2	3.39	2	9.6	0.83	2	0.0	0.00	0
Total others kg	7.4	4.49	3	22.9	10.31	21	1.7	0.94	12	1.1	0.22	2	3.5	0.88	2	0.0	0.00	0
Surface temperature	15.6	0.00	1	21.6	0.58	23	24.7	0.21	11	25.3	0.47	3	0.0	0.00	0	26.0	0.00	1
Midwater temperature	15.6	0.00	1	21.8	0.59	23	25.3	0.27	11	26.0	0.06	3	0.0	0.00	0	26.3	0.00	1
Bottom temperature	16.3	0.00	1	22.4	0.71	23	25.7	0.11	11	24.9	1.24	3	0.0	0.00	0	19.8	0.00	1
Surface salinity	29.7	0.00	1	30.5	0.55	23	31.8	0.85	11	33.7	1.11	3	0.0	0.00	0	35.7	0.00	1
Midwater salinity	30.7	0.00	1	31.8	0.50	23	33.9	0.62	11	35.5	0.12	3	0.0	0.00	0	36.0	0.00	1
Bottom salinity	31.4	0.00	1	33.5	0.37	23	35.3	0.15	11	35.8	0.23	3	0.0	0.00	0	36.4	0.00	1
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	5.3	0.84	8	2.4	0.71	11	1.5	0.48	3	0.0	0.00	0	0.4	0.00	1
Surface oxygen	6.3	0.00	1	5.0	0.27	23	5.6	0.25	11	5.4	0.40	3	0.0	0.00	0	4.8	0.00	1
Midwater oxygen	6.2	0.00	1	4.9	0.24	23	5.0	0.18	11	5.0	0.22	3	0.0	0.00	0	5.2	0.00	1
Bottom oxygen	6.0	0.00	1	7.0	0.52	23	4.6	0.22	11	4.5	0.44	3	0.0	0.00	0	3.6	0.00	1

Table 24a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	2.0	2.00	0.0	0.00	3	7.3	5.54	0.0	0.02	15	164.2	53.13	1.9	0.66	13
Trachypenaeus similis	30.0	30.00	0.1	0.09	3	38.3	18.80	0.1	0.06	15	144.8	46.22	0.5	0.17	13
Callinectes similis	18.0	15.10	0.2	0.18	3	28.0	14.35	0.2	0.09	15	28.0	10.40	0.2	0.08	13
Portunus gibbesii	26.0	14.42	0.1	0.09	3	69.6	32.81	0.3	0.11	15	39.8	11.71	0.2	0.07	13
Penaeus setiferus	126.0	99.74	2.0	1.73	3	95.9	25.78	1.3	0.35	15	18.3	11.07	0.4	0.18	13
Portunus spinicarpus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	15	0.4	0.36	0.0	0.00	13
Stenotomus caprinus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	15	55.0	42.16	0.8	0.68	13
Chloroscombrus chrysurus	32.0	32.00	0.1	0.09	3	24.9	16.92	0.2	0.13	15	735.3	380.68	10.3	4.05	13
Peprilus burti	6.0	6.00	0.2	0.18	3	7.8	2.84	0.3	0.13	15	76.5	31.53	2.9	1.23	13
Micropogonias undulatus	2.0	2.00	0.1	0.09	3	10.2	9.99	0.5	0.51	15	80.2	31.04	5.3	1.91	13
Lutjanus campechanus	0.0	0.00	0.0	0.00	3	3.7	3.35	0.0	0.04	15	58.3	27.58	0.7	0.37	13
Saurida brasiliensis	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	15	39.3	20.57	0.2	0.10	13
Trachurus lathami	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	15	39.8	24.62	0.9	0.56	13
Diplectrum bivittatum	0.0	0.00	0.0	0.00	3	3.5	2.80	0.0	0.03	15	72.8	44.24	0.9	0.46	13
Squid	8.0	5.29	0.0	0.00	3	26.4	8.39	0.3	0.12	15	45.3	15.11	0.7	0.39	13

Table 24a (continued)
Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	61.4	45.61	1.5	1.25	4	12.0	4.97	0.9	0.59	3	5.8	2.99	0.3	0.18	3
Trachypenaeus similis	56.4	51.24	0.4	0.37	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Callinectes similis	88.6	32.36	1.7	0.76	4	2.5	1.26	0.1	0.06	3	2.1	2.11	0.0	0.02	3
Portunus gibbesii	11.5	5.18	0.1	0.02	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Penaeus setiferus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	41.1	38.20	0.4	0.38	4	88.7	82.97	1.3	1.26	3	43.8	6.98	0.7	0.25	3
Stenotomus caprinus	1425.4	885.59	9.9	4.08	4	174.9	70.22	9.6	4.24	3	210.0	59.93	10.8	3.08	3
Chloroscombrus chrysurus	129.5	87.40	2.7	1.89	4	10.9	10.05	1.0	0.88	3	5.6	5.56	0.4	0.35	3
Peprilus burti	259.3	176.83	8.6	5.27	4	12.1	5.61	1.0	0.67	3	35.3	17.66	1.3	0.69	3
Micropogonias undulatus	21.5	19.53	1.5	1.33	4	1.3	1.33	0.1	0.14	3	0.0	0.00	0.0	0.00	3
Lutjanus campechanus	148.7	114.46	1.3	0.67	4	4.7	4.71	0.5	0.53	3	2.2	2.22	0.4	0.35	3
Saurida brasiliensis	71.4	41.02	0.4	0.24	4	23.8	21.17	0.1	0.06	3	37.3	34.03	0.2	0.19	3
Trachurus lathami	13.9	9.23	0.3	0.18	4	40.7	30.75	0.6	0.47	3	26.5	13.79	0.7	0.37	3
Diplectrum bivittatum	39.9	24.13	0.7	0.32	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Squid	100.5	45.24	1.6	0.69	4	19.5	12.29	0.4	0.20	3	7.6	2.09	0.6	0.15	3

Table 24b

Statistical Zone 20

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	17.3	10.72	3	69.4	22.21	15	42.3	9.63	13	42.2	9.15	4	37.8	6.22	3	57.5	10.83	3
Total finfish kg	8.2	4.17	3	16.6	8.02	15	30.0	7.18	13	35.7	8.86	4	33.7	5.77	3	45.8	9.35	3
Total crustacean kg	2.7	2.73	3	2.2	0.77	15	3.9	0.91	13	4.7	2.74	4	2.6	1.71	3	3.2	0.10	3
Total others kg	7.3	4.81	3	50.3	22.93	15	8.3	4.90	13	1.9	0.76	4	1.6	0.14	3	8.5	3.72	3
Surface temperature	17.2	1.17	3	20.1	0.91	15	23.1	0.92	12	26.1	0.14	2	26.3	0.77	2	26.1	0.00	1
Midwater temperature	17.3	1.17	3	20.3	0.85	15	23.6	1.00	12	26.1	0.18	2	26.6	0.39	2	25.9	0.00	1
Bottom temperature	17.4	1.13	3	20.5	0.87	15	23.5	1.07	12	25.6	0.97	2	22.9	3.19	2	18.7	0.00	1
Surface salinity	32.1	0.59	3	30.5	0.69	15	31.0	0.67	12	35.2	0.56	2	35.0	0.96	2	35.9	0.00	1
Midwater salinity	31.8	0.28	3	31.6	0.89	15	32.5	0.54	12	35.3	0.48	2	36.0	0.02	2	35.9	0.00	1
Bottom salinity	31.8	0.21	3	31.2	0.71	15	33.3	0.44	12	35.7	0.36	2	36.2	0.17	2	36.4	0.00	1
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	3.2	0.09	2	4.2	1.06	5	0.6	0.27	2	0.5	0.01	2	0.3	0.00	1
Surface oxygen	7.4	0.37	3	6.8	0.20	15	6.1	0.24	12	5.3	0.35	2	5.3	0.15	2	5.2	0.00	1
Midwater oxygen	7.5	0.32	3	6.7	0.19	15	6.0	0.19	12	5.2	0.30	2	5.4	0.00	2	5.4	0.00	1
Bottom oxygen	7.4	0.35	3	6.6	0.22	15	5.9	0.21	12	4.5	0.80	2	4.3	0.65	2	3.3	0.00	1

Table 25a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus gibbesii	38.0	19.08	0.1	0.09	3	56.2	33.45	0.8	0.41	11	420.0	176.71	2.8	1.12	17
Sicyonia brevirostris	0.0	0.00	0.0	0.00	3	17.9	11.32	0.2	0.16	11	96.7	57.85	1.3	0.74	17
Callinectes similis	0.0	0.00	0.0	0.00	3	16.2	11.22	0.2	0.13	11	106.9	49.17	3.8	1.75	17
Penaeus aztecus	2.0	2.00	0.0	0.00	3	19.4	14.42	0.3	0.25	11	121.5	51.61	1.8	0.65	17
Portunus spinicarpus	0.0	0.00	0.0	0.00	3	1.8	1.82	0.0	0.00	11	0.0	0.00	0.0	0.00	17
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	4.8	3.37	0.0	0.04	11	32.2	13.61	0.1	0.07	17
Chloroscombrus chrysurus	762.0	744.03	3.0	3.00	3	589.0	289.53	9.4	4.49	11	312.5	298.44	4.8	4.55	17
Stenotomus caprinus	4.0	4.00	0.0	0.00	3	105.1	104.39	3.1	3.15	11	22.1	7.97	0.4	0.21	17
Trachurus lathami	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	11	0.4	0.35	0.0	0.02	17
Serranus atrobranchus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	11	2.1	1.45	0.0	0.02	17
Peprilus burti	20.0	20.00	0.8	0.82	3	0.0	0.00	0.0	0.00	11	9.4	5.78	0.4	0.28	17
Leiostomus xanthurus	10.0	5.29	0.9	0.78	3	22.1	10.48	1.6	0.81	11	51.5	31.64	4.2	2.55	17
Diplectrum bivittatum	0.0	0.00	0.0	0.00	3	22.7	20.46	0.3	0.32	11	108.5	48.76	2.0	0.80	17
Micropogonias undulatus	0.0	0.00	0.0	0.00	3	2.8	1.55	0.2	0.10	11	51.3	24.87	4.0	1.79	17
Squid	10.0	7.21	0.1	0.09	3	0.0	0.00	0.0	0.00	11	1.1	0.77	0.0	0.00	17

Table 25a (continued)
Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 FM					31-40 FM					>40 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus gibbesii	18.7	6.73	0.2	0.09	4	0.0	0.00	0.0	0.00	5	25.5	25.50	0.1	0.14	2
Sicyonia brevirostris	27.0	15.66	0.5	0.33	4	163.2	110.58	2.7	1.76	5	61.4	60.40	0.8	0.71	2
Callinectes similis	125.4	64.67	7.3	5.21	4	31.9	30.80	1.1	0.99	5	2.2	2.24	0.0	0.02	2
Penaeus aztecus	147.8	69.16	4.9	0.97	4	25.3	6.29	1.4	0.42	5	10.9	8.85	0.6	0.44	2
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	61.0	36.23	0.6	0.36	5	340.7	340.75	1.7	1.71	2
Trachypenaeus similis	114.2	76.51	1.4	1.17	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	44.9	33.89	1.8	1.73	4	56.3	42.86	4.0	3.38	5	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	283.8	182.90	6.4	3.09	4	377.8	105.03	16.7	4.23	5	81.4	74.41	2.5	2.35	2
Trachurus lathami	236.1	230.49	7.8	7.71	4	498.1	307.85	19.4	12.11	5	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	65.1	31.21	1.7	0.91	4	142.1	103.85	2.1	1.44	5	234.0	160.01	3.8	0.63	2
Peprilus burti	66.7	37.94	4.2	2.83	4	193.6	106.20	12.6	7.46	5	2.2	2.24	0.1	0.12	2
Leiostomus xanthurus	65.6	26.62	7.0	2.99	4	15.5	15.50	1.3	1.27	5	0.0	0.00	0.0	0.00	2
Diplectrum bivittatum	23.0	18.45	0.2	0.15	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	59.1	20.49	4.8	1.78	4	23.3	21.42	1.8	1.73	5	0.0	0.00	0.0	0.00	2
Squid	14.1	4.97	0.2	0.11	4	34.7	9.08	1.4	0.27	5	13.4	6.35	0.7	0.28	2

Table 25b

Statistical Zone 21

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	14.5	10.48	3	89.0	38.14	11	70.3	25.71	17	64.8	17.20	4	85.4	19.37	5	30.5	7.34	2
Total finfish kg	11.8	9.23	3	50.1	17.17	11	27.4	9.86	17	46.5	16.55	4	74.5	22.69	5	24.9	4.43	2
Total crustacean kg	0.9	0.91	3	2.8	1.12	11	12.4	3.16	17	17.5	9.48	4	6.2	3.14	5	4.0	2.14	2
Total others kg	0.9	0.91	3	35.5	33.65	11	30.4	18.53	17	0.6	0.21	4	4.3	1.95	5	1.7	0.77	2
Surface temperature	19.4	I.15	2	25.0	1.01	12	23.9	0.85	17	27.1	0.22	5	27.4	0.49	2	27.5	0.23	3
Midwater temperature	19.2	1.30	2	25.0	1.01	12	24.0	0.88	17	27.9	0.04	5	26.3	1.55	2	25.0	0.42	3
Bottom temperature	19.1	1.30	2	25.1	0.97	12	24.2	0.89	17	26.9	0.89	5	23.4	1.13	2	21.7	0.22	3
Surface salinity	34.0	1.14	2	31.0	0.93	12	33.0	0.51	17	33.8	0.35	5	34.5	0.26	2	33.3	0.33	3
Midwater salinity	34.1	1.17	2	31.0	0.97	12	33.2	0.52	17	33.6	0.61	5	34.8	1.44	2	36.3	0.10	3
Bottom salinity	34.1	1.13	2	31.1	1.00	12	33.1	0.58	17	33.3	0.80	5	35.4	0.89	2	36.3	0.02	3
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1
Surface oxygen	7.3	0.65	2	6.4	0.16	12	6.6	0.20	17	6.2	0.12	5	6.3	0.25	2	6.2	0.23	3
Midwater oxygen	7.3	0.60	2	6.3	0.15	12	6.5	0.19	17	5.9	0.17	5	6.4	0.15	2	6.8	0.13	3
Bottom oxygen	7.3	0.45	2	6.3	0.12	12	6.4	0.26	17	6.1	0.12	5	6.2	0.10	2	5.5	0.28	3

Table 26a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No samples were taken in depths greater than 5 fm.

	0- 5 FM					6-10 FM					11-20 FM				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Arenaeus cribrarius	6.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Chloroscombrus chrysurus	144.0	0.00	0.5	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Selene setapinnis	54.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Leiostomus xanthurus	12.0	0.00	0.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Micropogonias undulatus	6.0	0.00	0.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0
Peprilus alepidotus	6.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.00	0	0

Table 26b

Statistical Zone 22

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 1997 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	21.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	20.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	20.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	35.5	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	35.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	35.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface fluorescence	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	7.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 27. 1997 Reef Fish Survey species composition list, 69 stations where a fish trap was used. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF SETS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Lutjanus campechanus	red snapper	105	71.1	14	20.3
Pagrus pagrus	red porgy	81	24.5	9	13
Balistes capriscus	gray triggerfish	18	14.4	5	7.2
Rhomboplites aurorubens	vermilion snapper	6	2.9	4	5.8
Centropristis ocyura	bank sea bass	5	0.7	3	4.3
Haemulon aurolineatum	tomtate	3	0.3	3	4.3
Rypticus maculatus	whitespotted soapfish	2	0.2	2	2.9
Ocyurus chrysurus	yellowtail snapper	2	0.5	1	1.4
Pristipomoides aquilonaris	wenchman	2	0.1	2	2.9
Gymnothorax kolpos	blacktail moray	1	0.4	1	1.4
Epinephelus morio	red grouper	1	1.5	1	1.4
Mycteroperca phenax	scamp	1	1.8	1	1.4
Haemulon plumieri	white grunt	1	0.3	1	1.4
Equetus umbrosus	cubbyu	1	0.2	1	1.4
Calamus nodosus	knobbed porgy	1	0.7	1	1.4
Chaetodipterus faber	Atlantic spadefish	1	0.2	1	1.4
Chaetodon sedentarius	reef butterflyfish	1	0	1	1.4

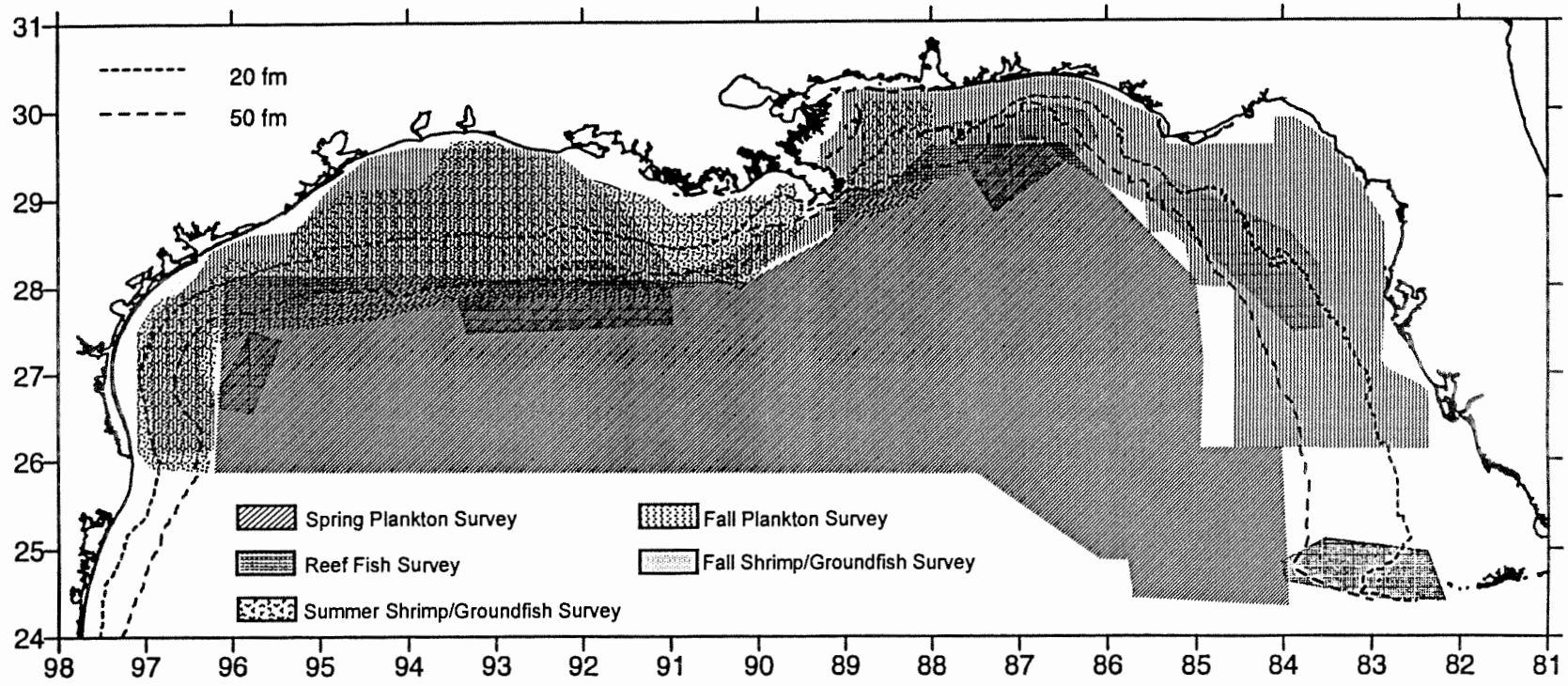

Figure 1. 1997 SEAMAP Surveys, Gulf of Mexico.

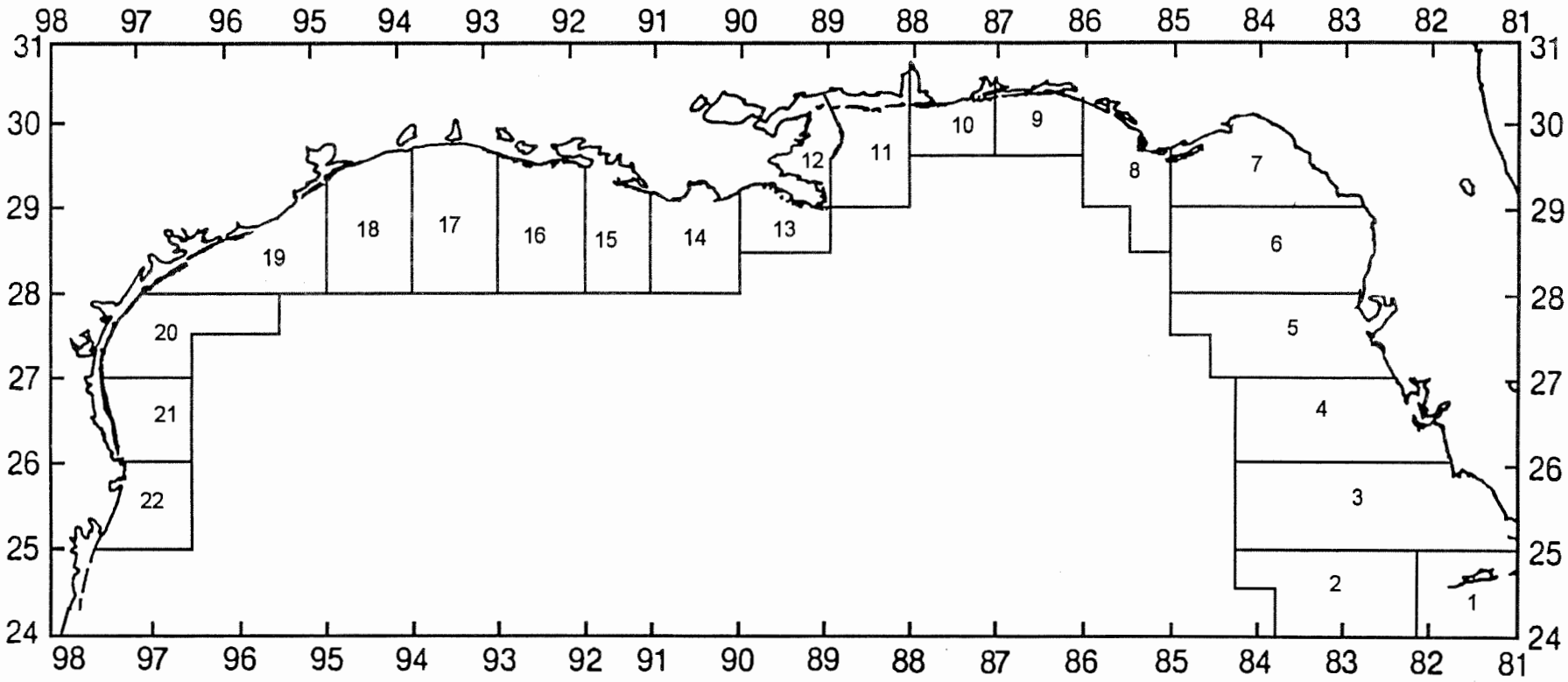

Figure 2. Statistical zones for shrimp in the Gulf of Mexico.

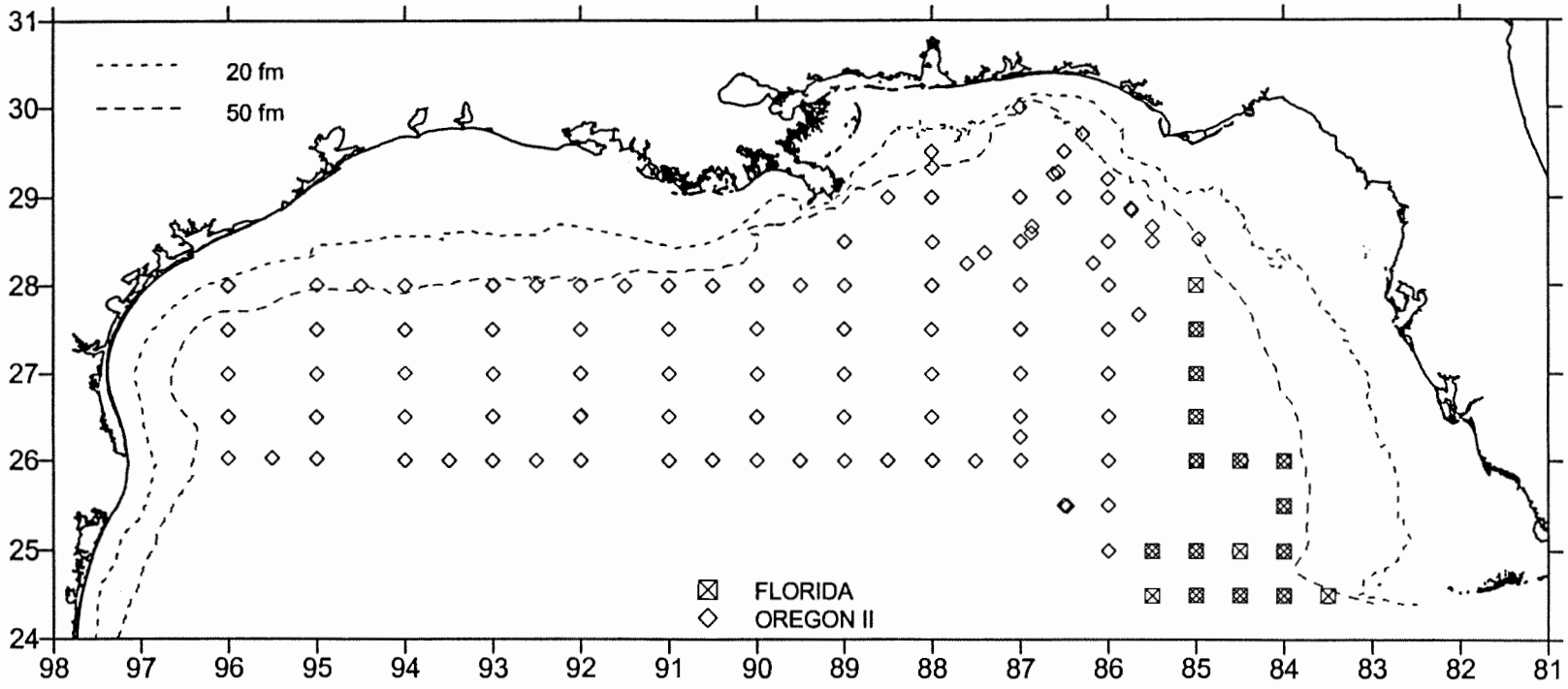

Figure 3. Locations of plankton and environmental stations during 1997 Spring Plankton Survey.

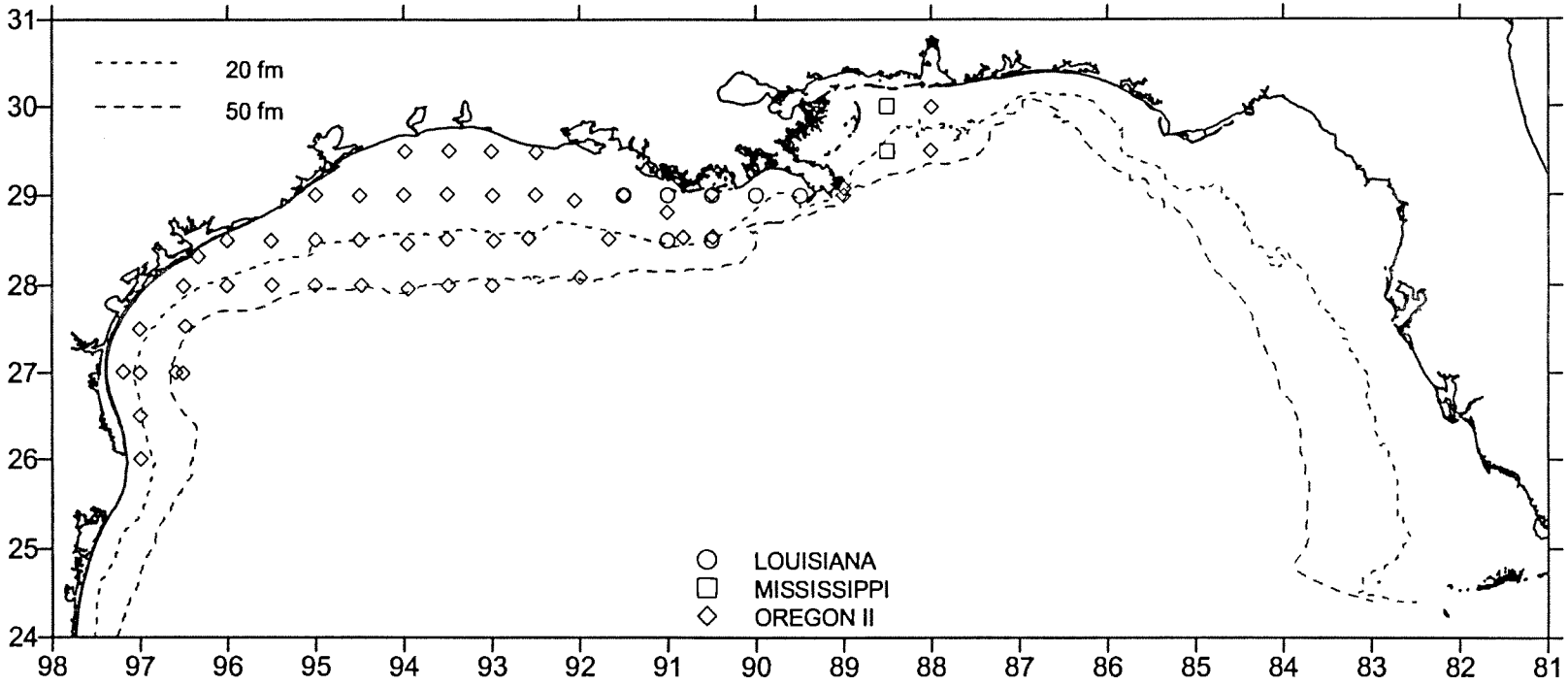

Figure 4. Locations of plankton stations during 1997 Summer Shrimp/Groundfish Survey.

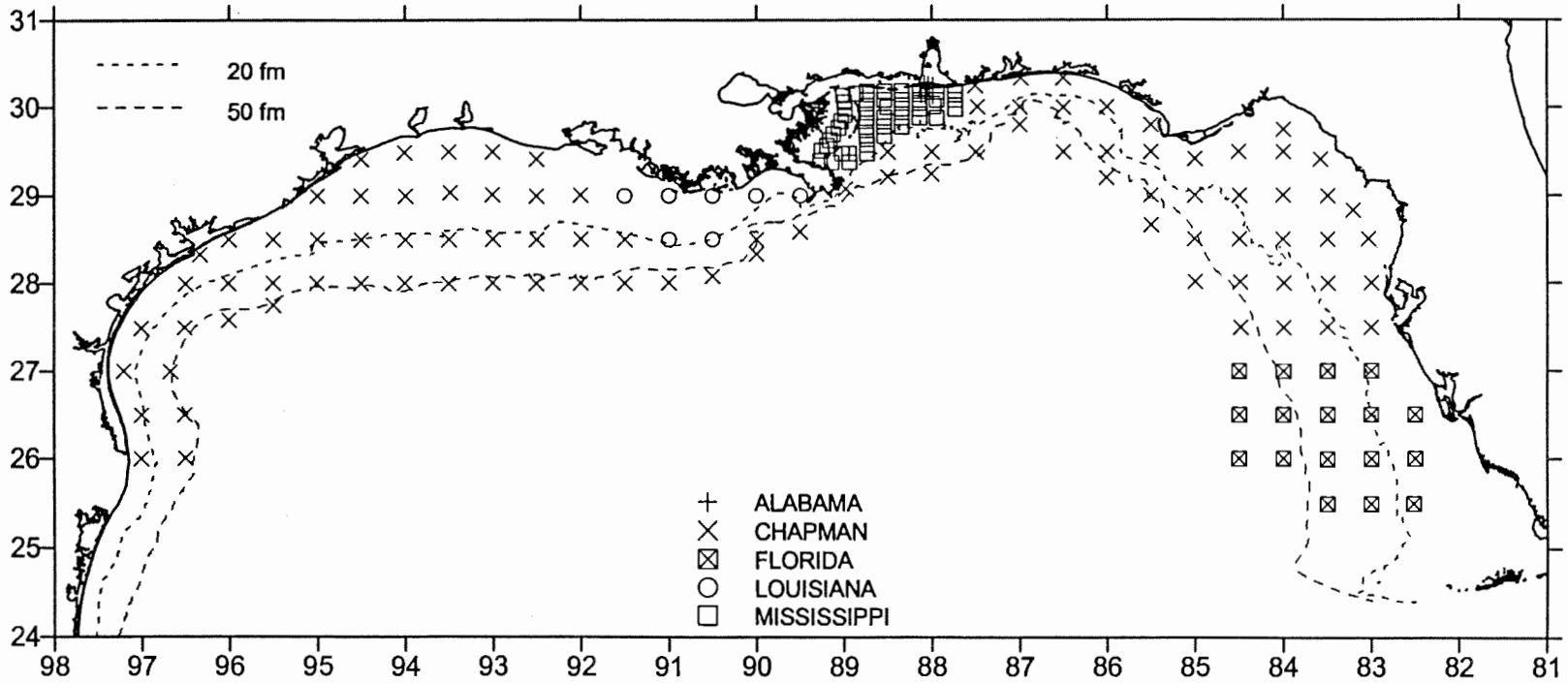

Figure 5. Locations of plankton and environmental stations during 1997 Fall Plankton Survey.

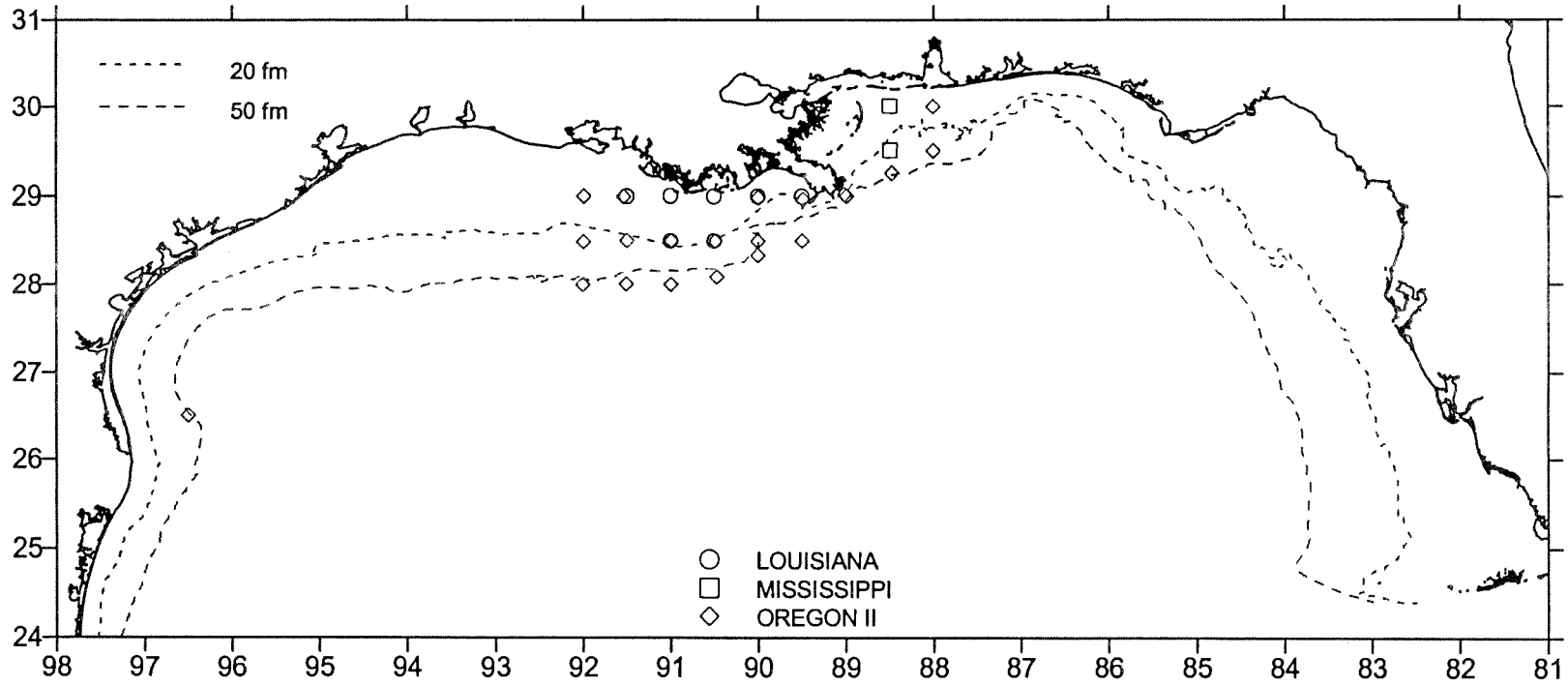

Figure 6. Locations of plankton stations during 1997 Fall Shrimp/Groundfish Survey.

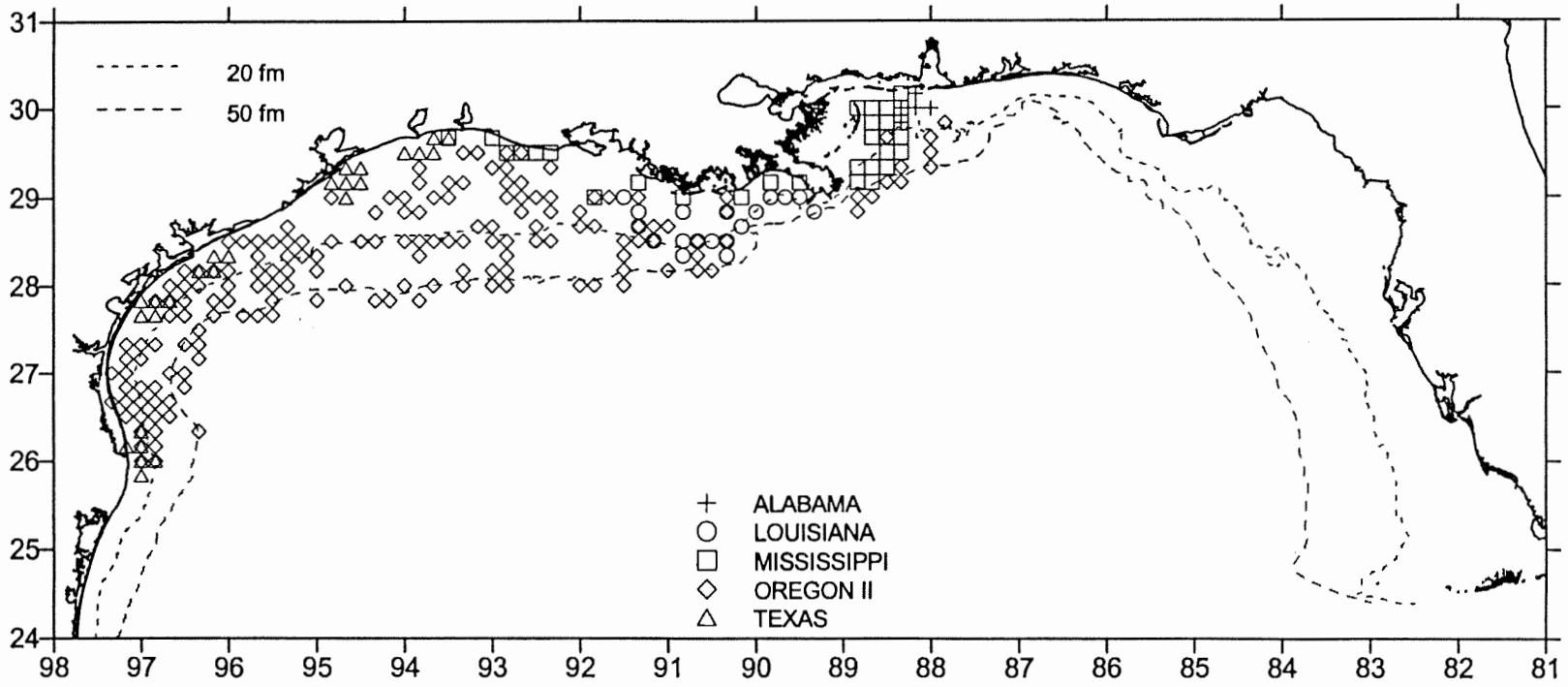

Figure 7. Locations of environmental stations during the 1997 Summer Shrimp/Groundfish Survey summarized by 10-minute squares.

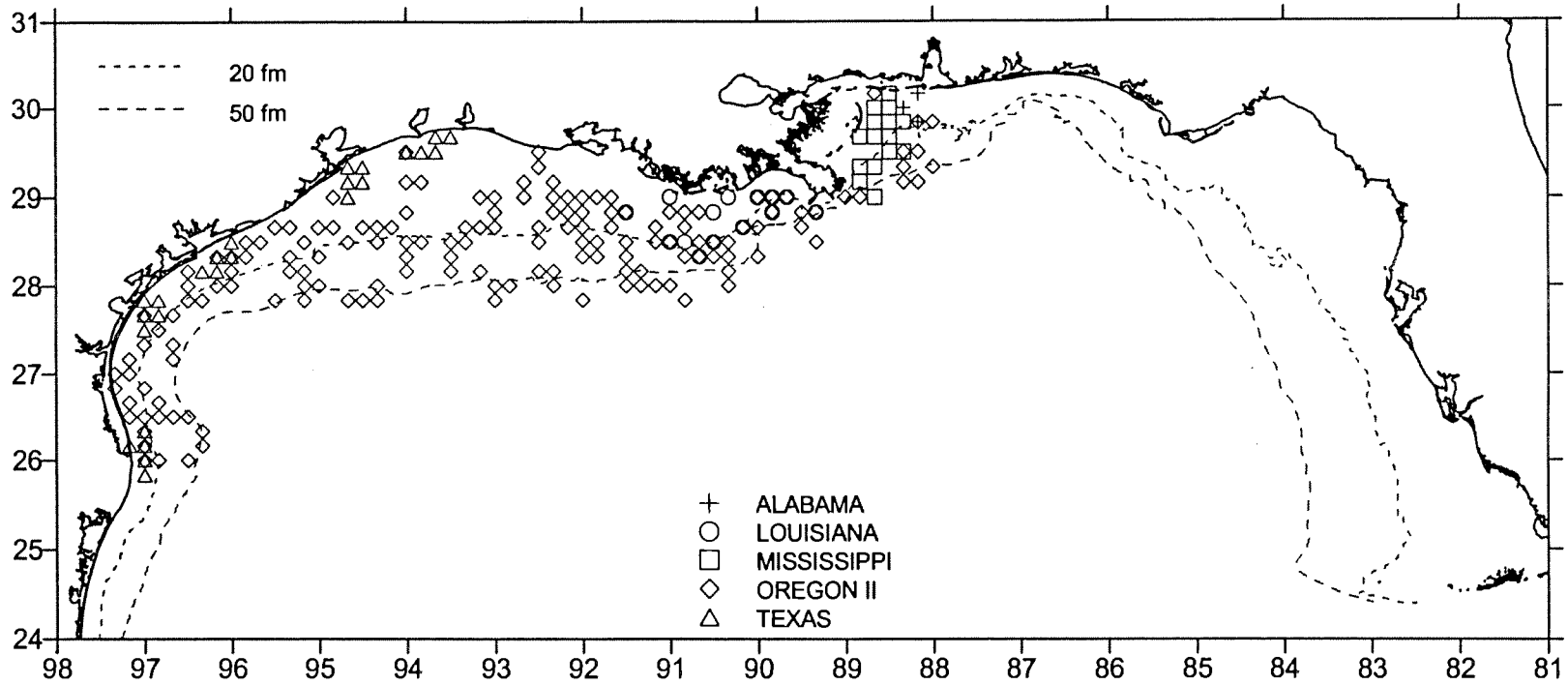

Figure 8. Locations of environmental stations during the 1997 Fall Shrimp/Groundfish Survey summarized by 10-minute squares.

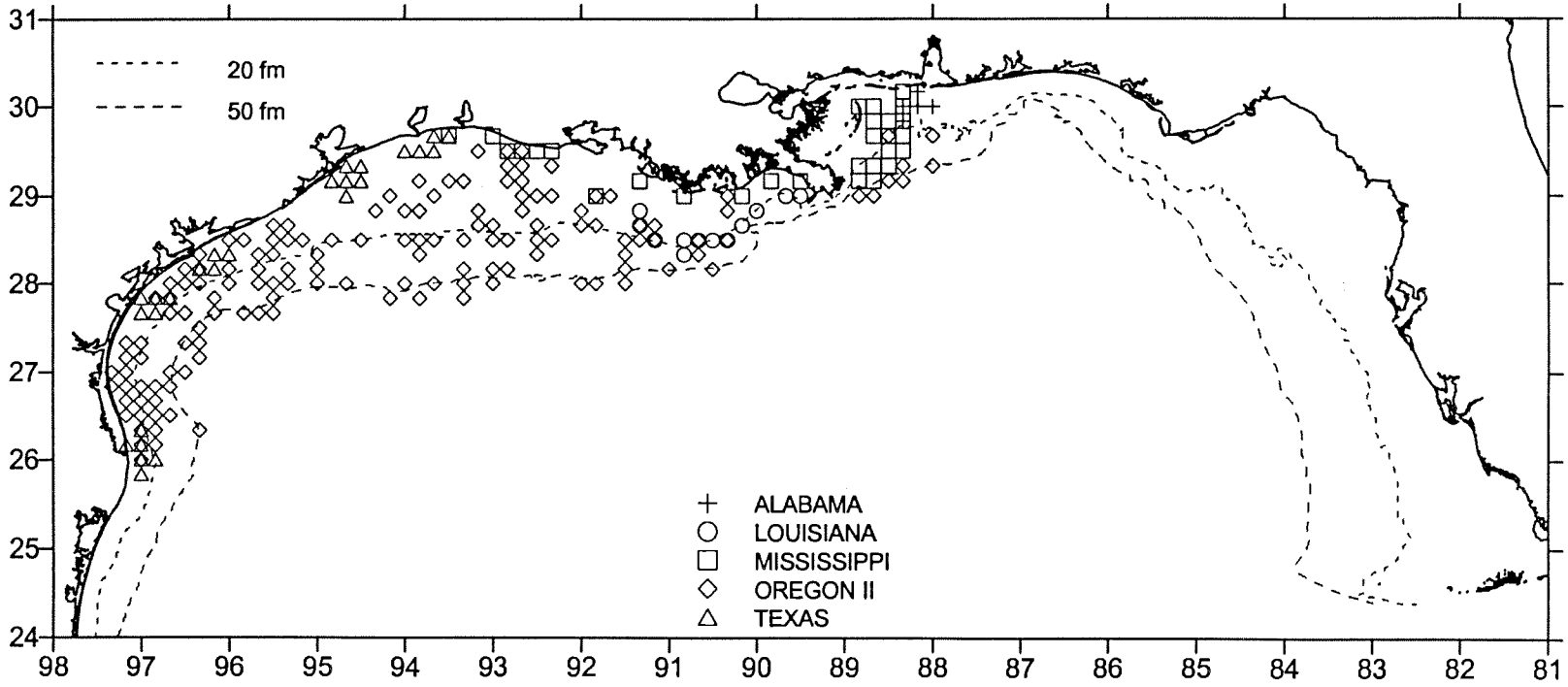

Figure 9. Locations of trawl stations during the 1997 Summer Shrimp/Groundfish Survey summarized by 10-minute squares.

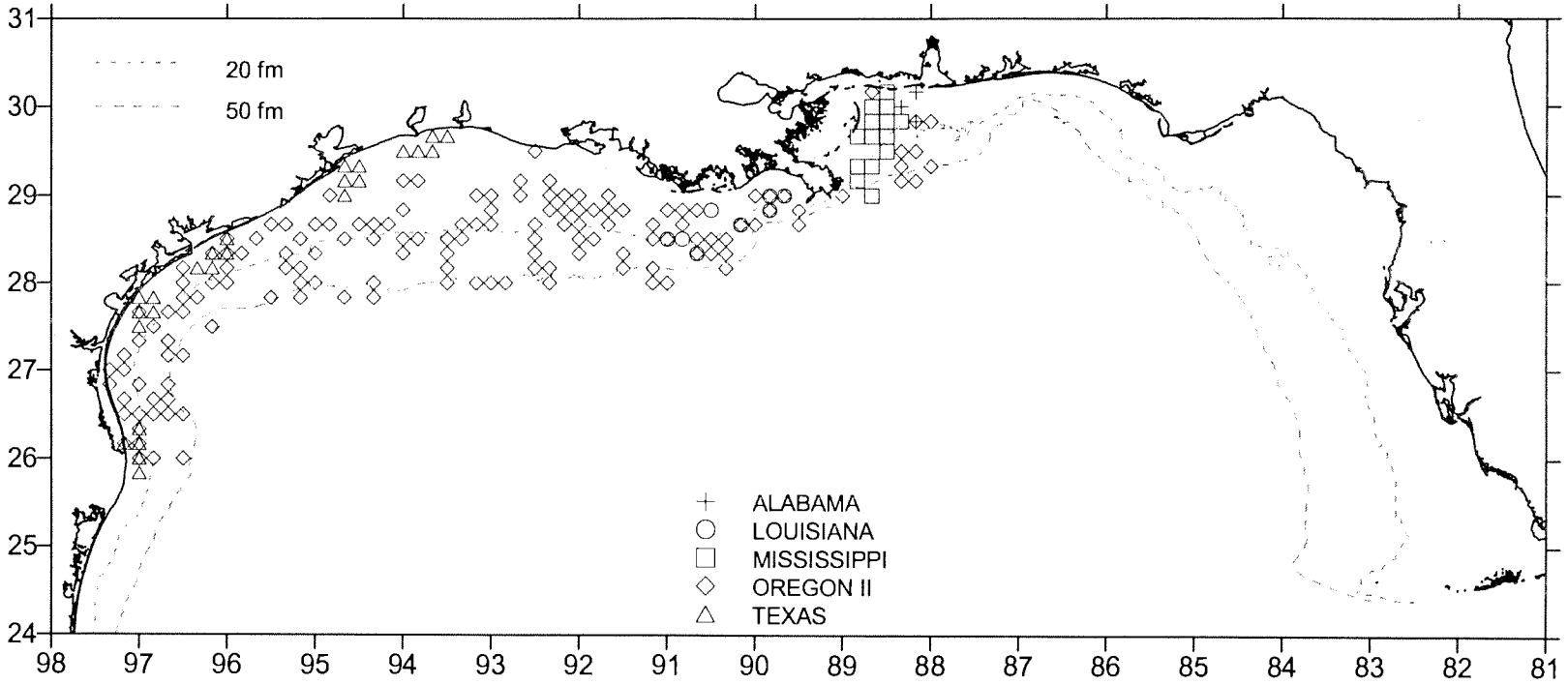

Figure 10. Locations of trawl stations during the 1997 Fall Shrimp/Groundfish Survey summarized by 10-minute squares.

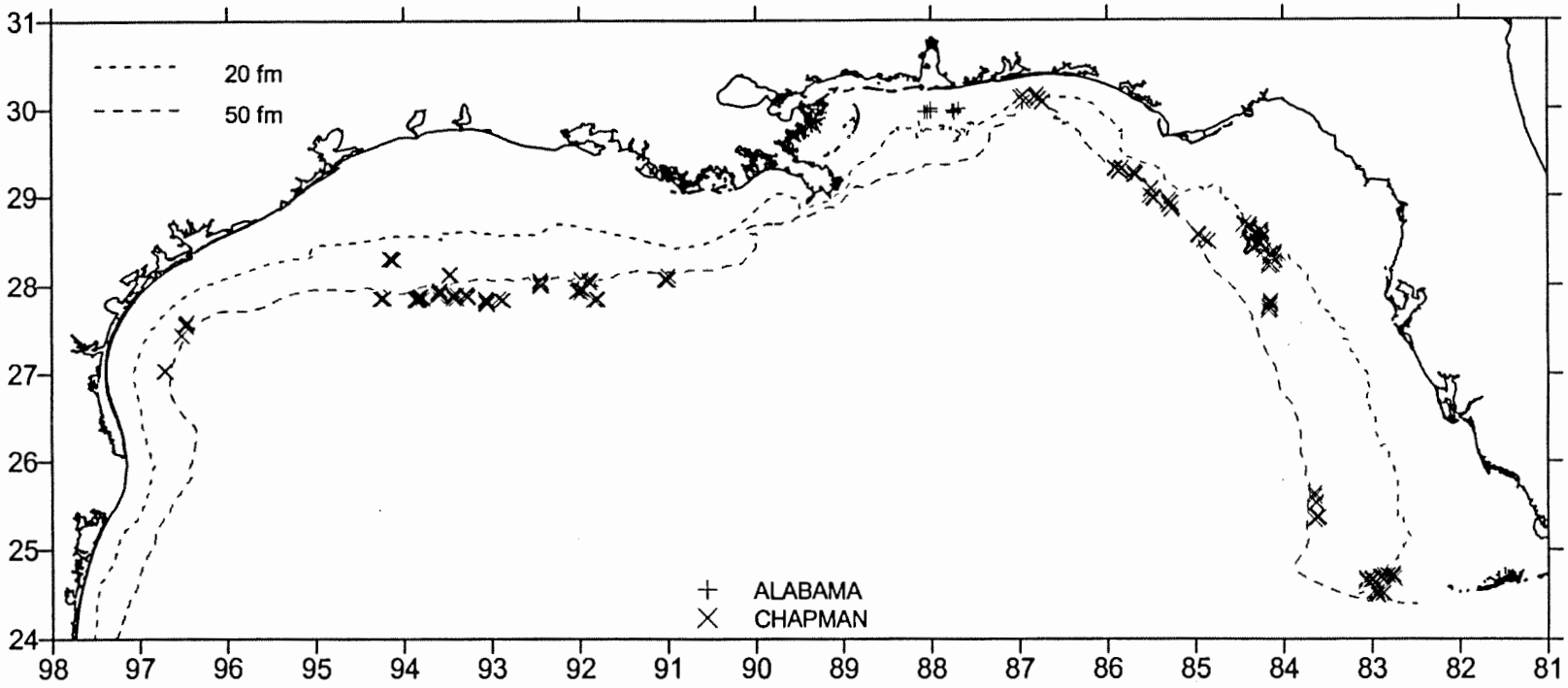

Figure 11. Locations of trap stations during the 1997 Spring Reef Fish Survey.

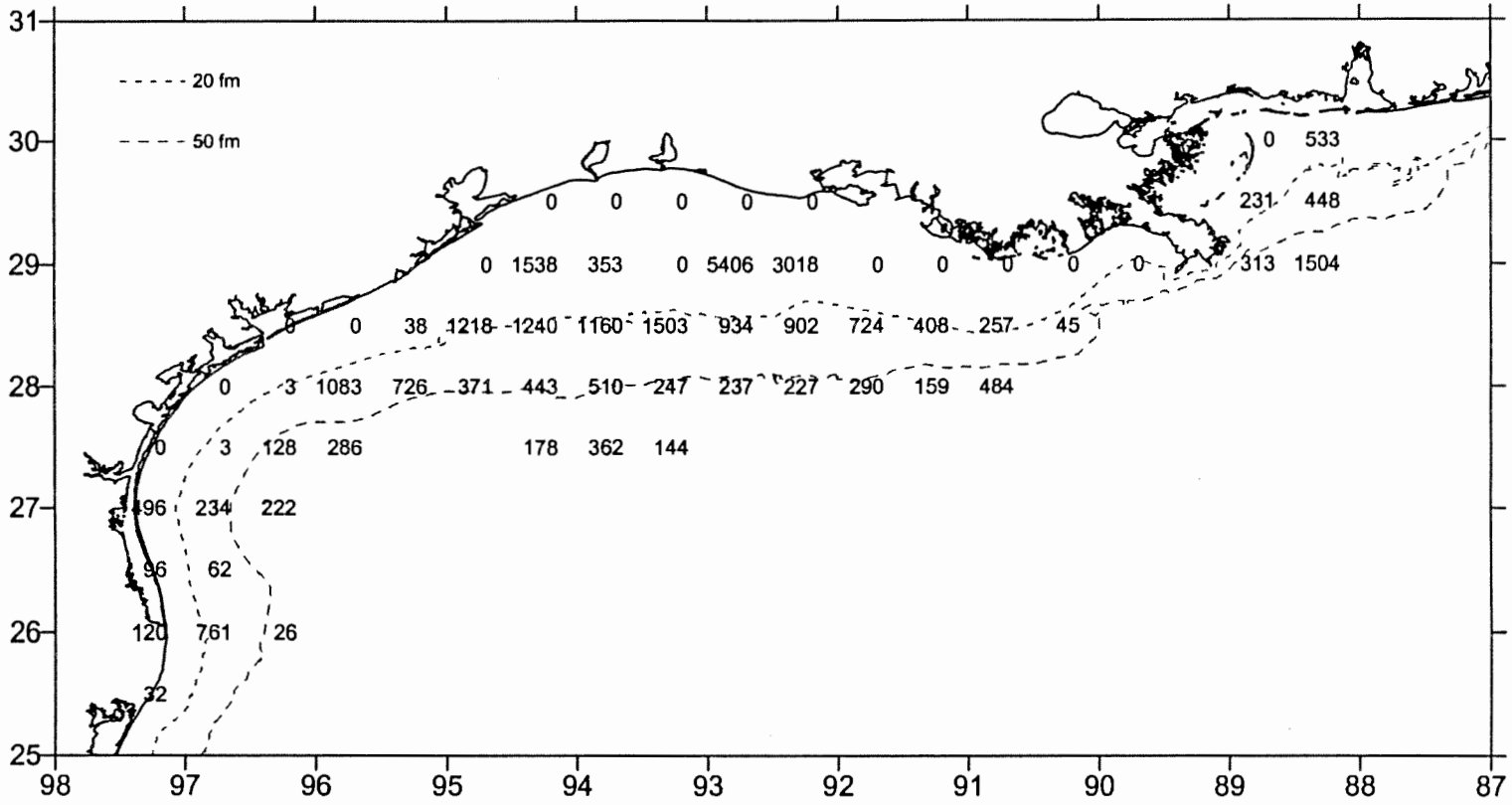

Figure 12. Longspine porgy, Stenotomus caprinus, number/hour for June-July 1997.

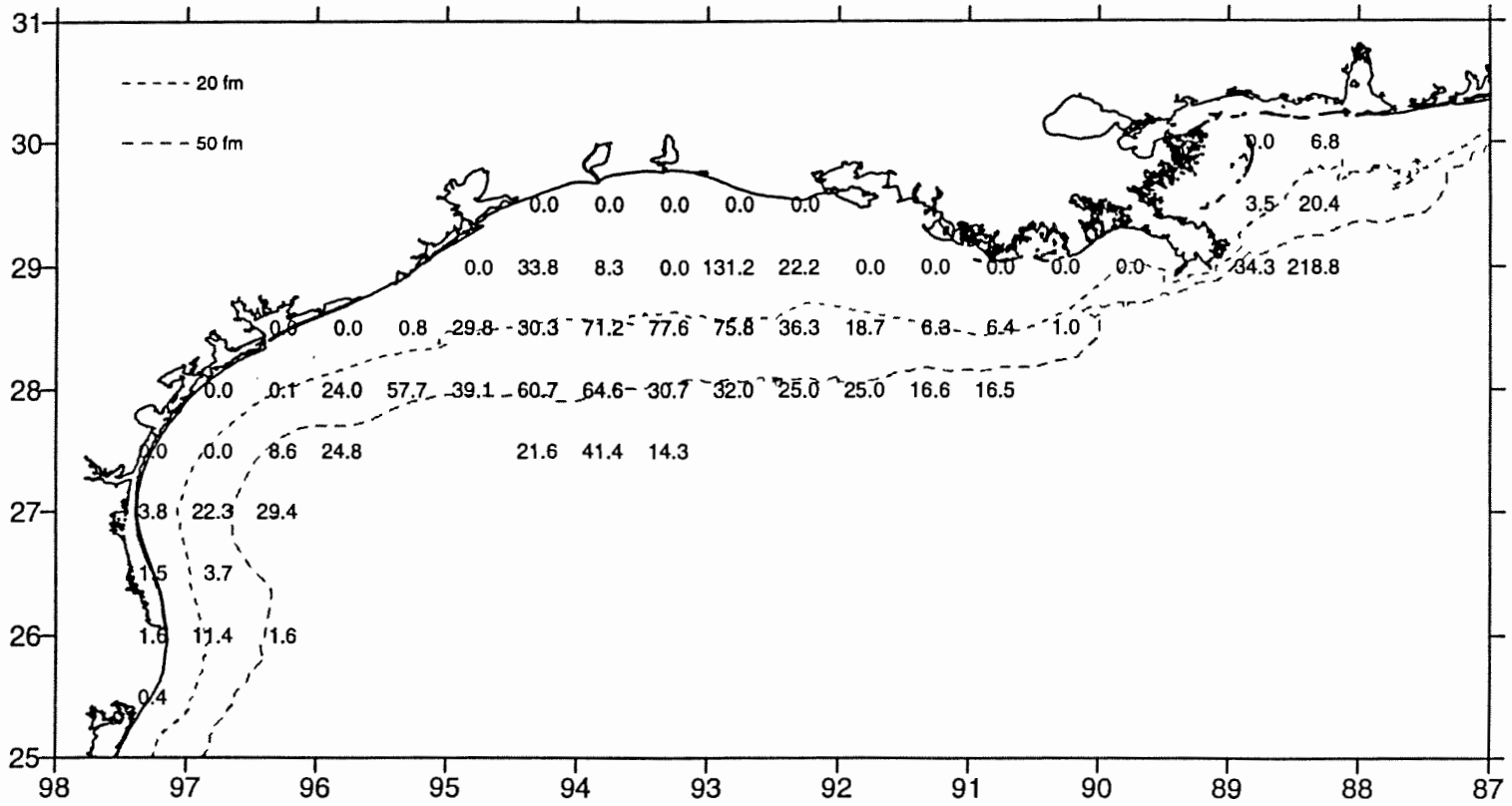

Figure 13. Longspine porgy, Stenotomus caprinus, lb/hour for June-July 1997.

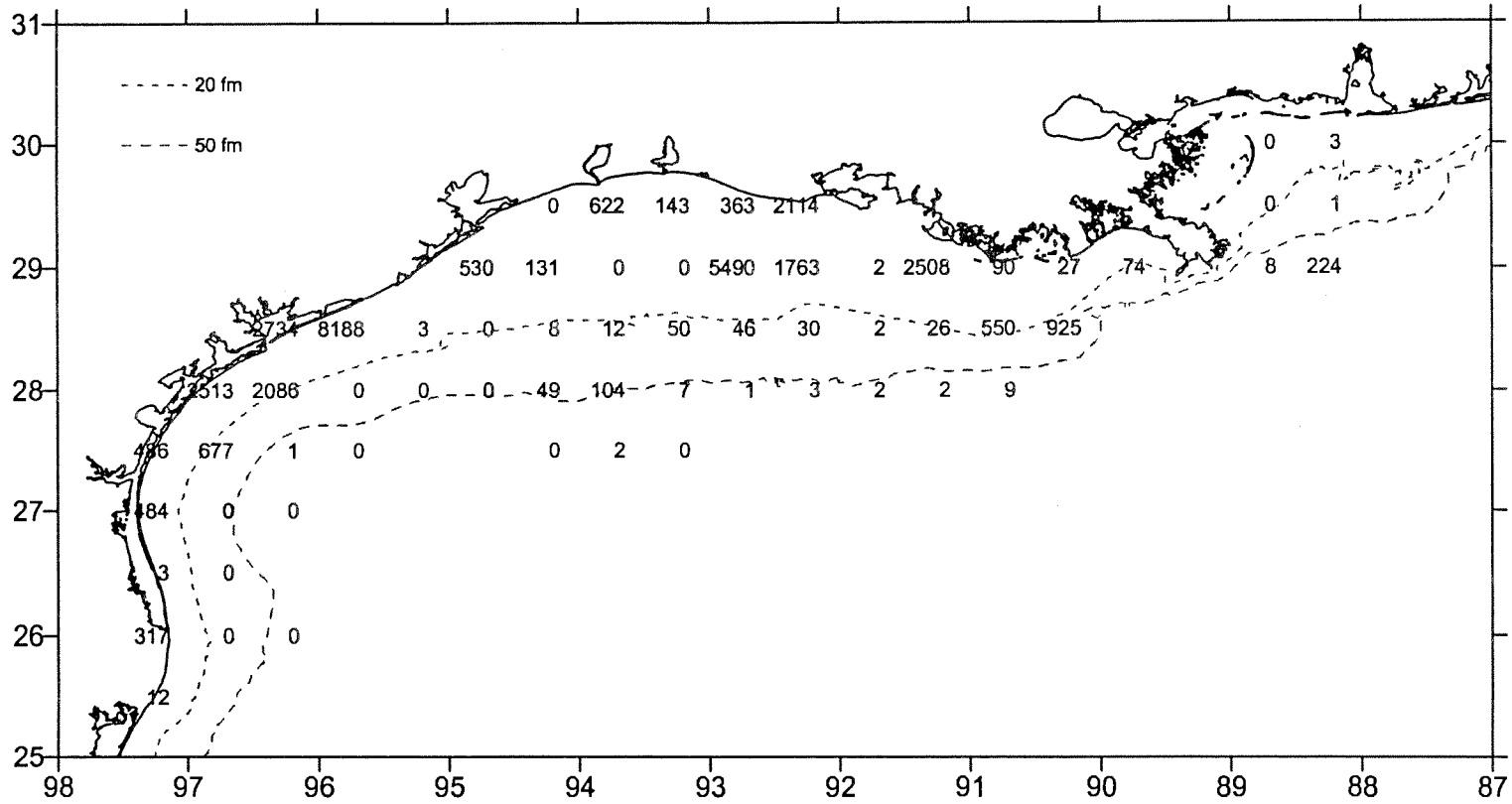

Figure 14. Atlantic croaker, Micropogonias undulatus, number/hour for June-July 1997.

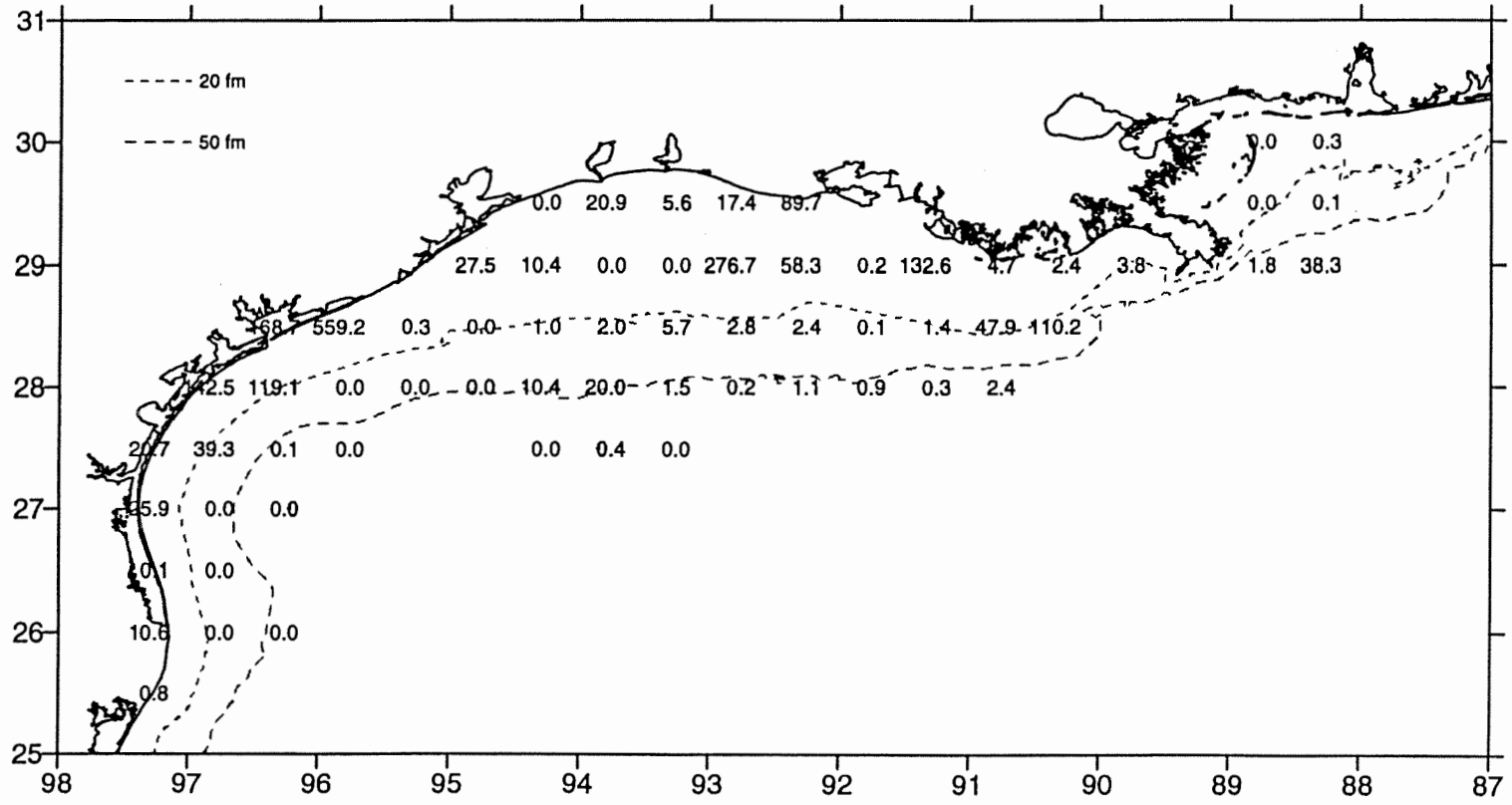

Figure 15. Atlantic croaker, Micropogonias undulatus, lb/hour for June-July 1997.

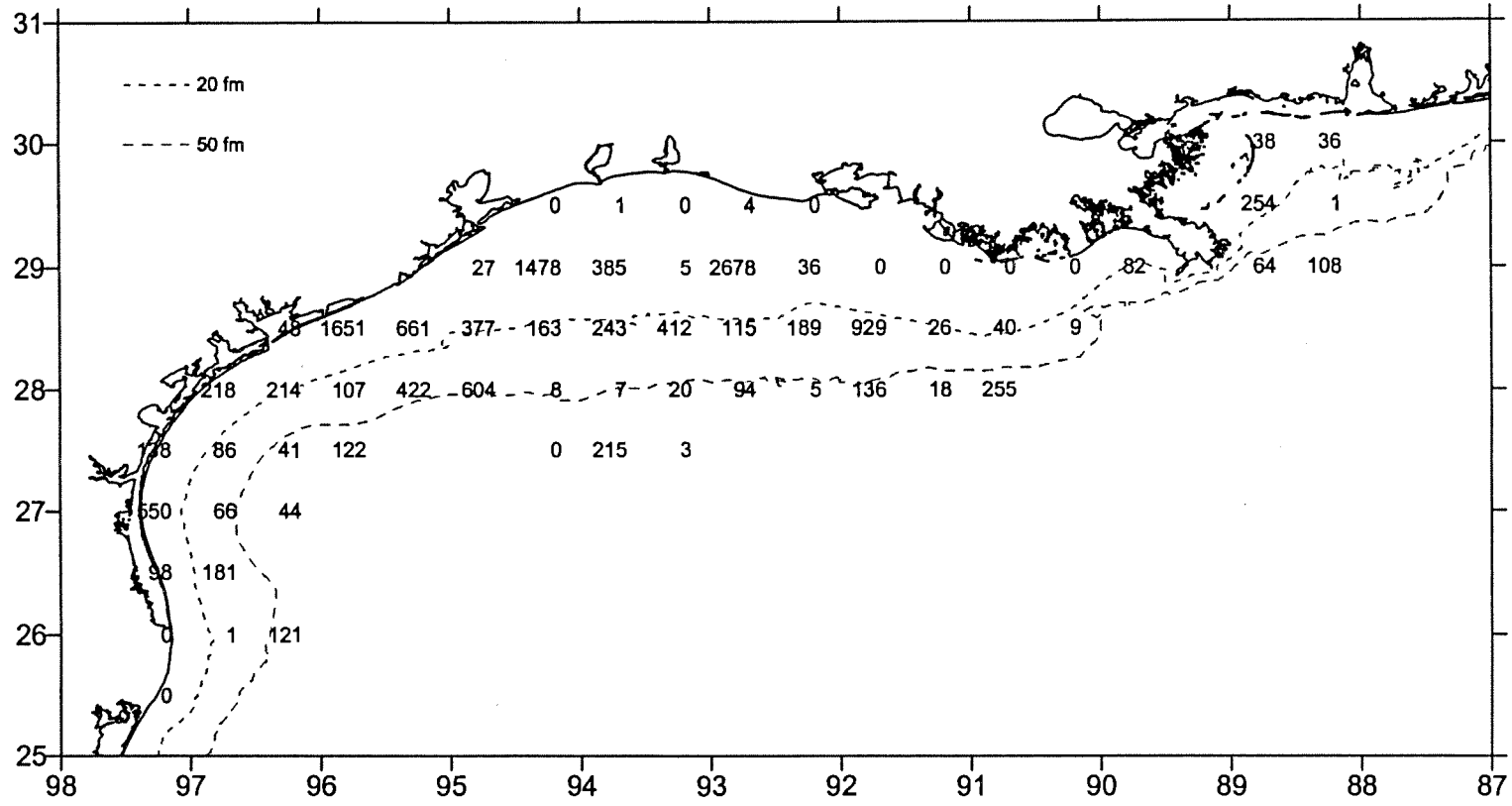

Figure 16. Gulf butterfish, Peprilus burti, number/hour for June-July 1997.

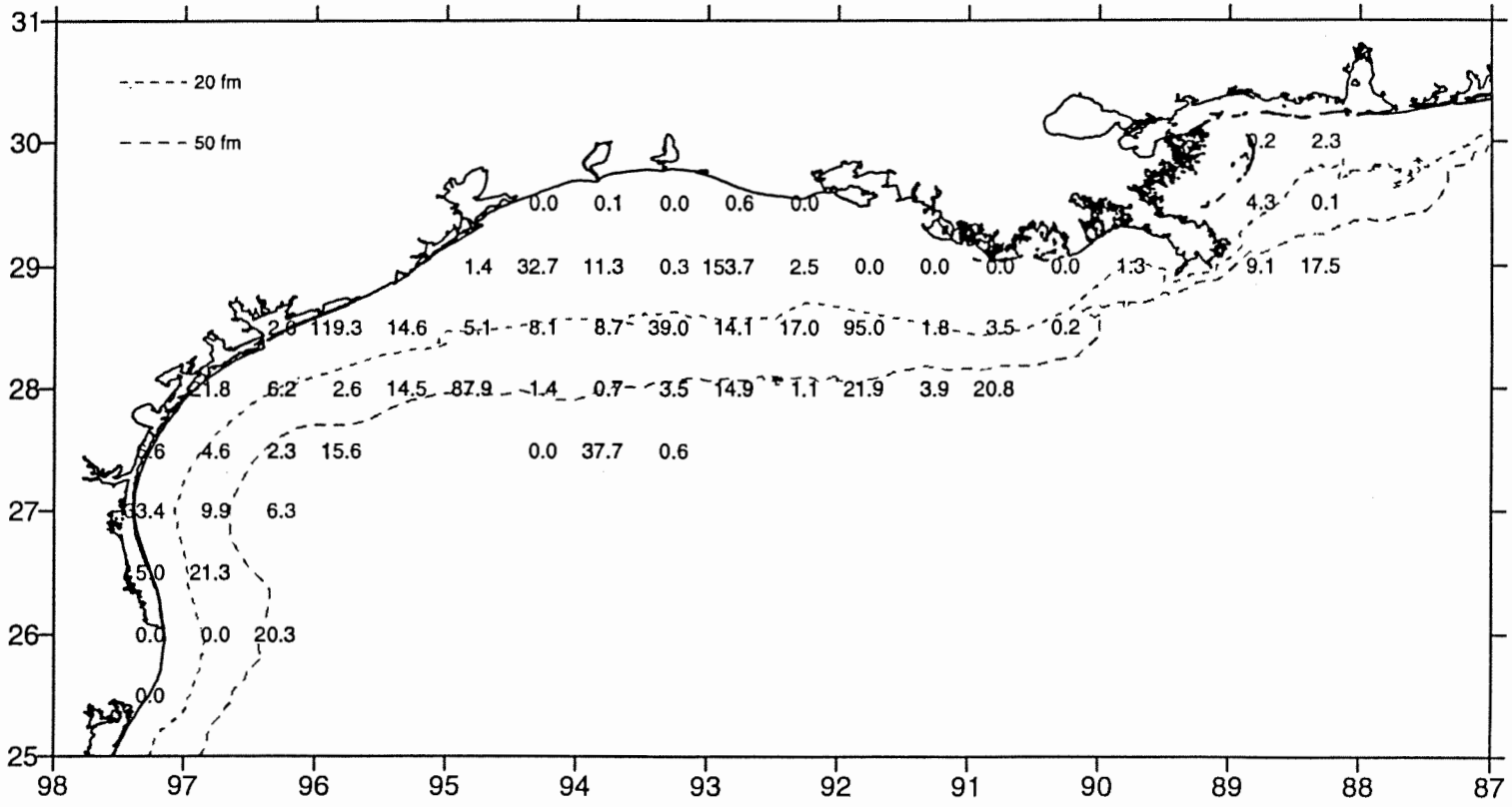

Figure 17. Gulf butterfish, Peprilus burti, lb/hour for June-July 1997.

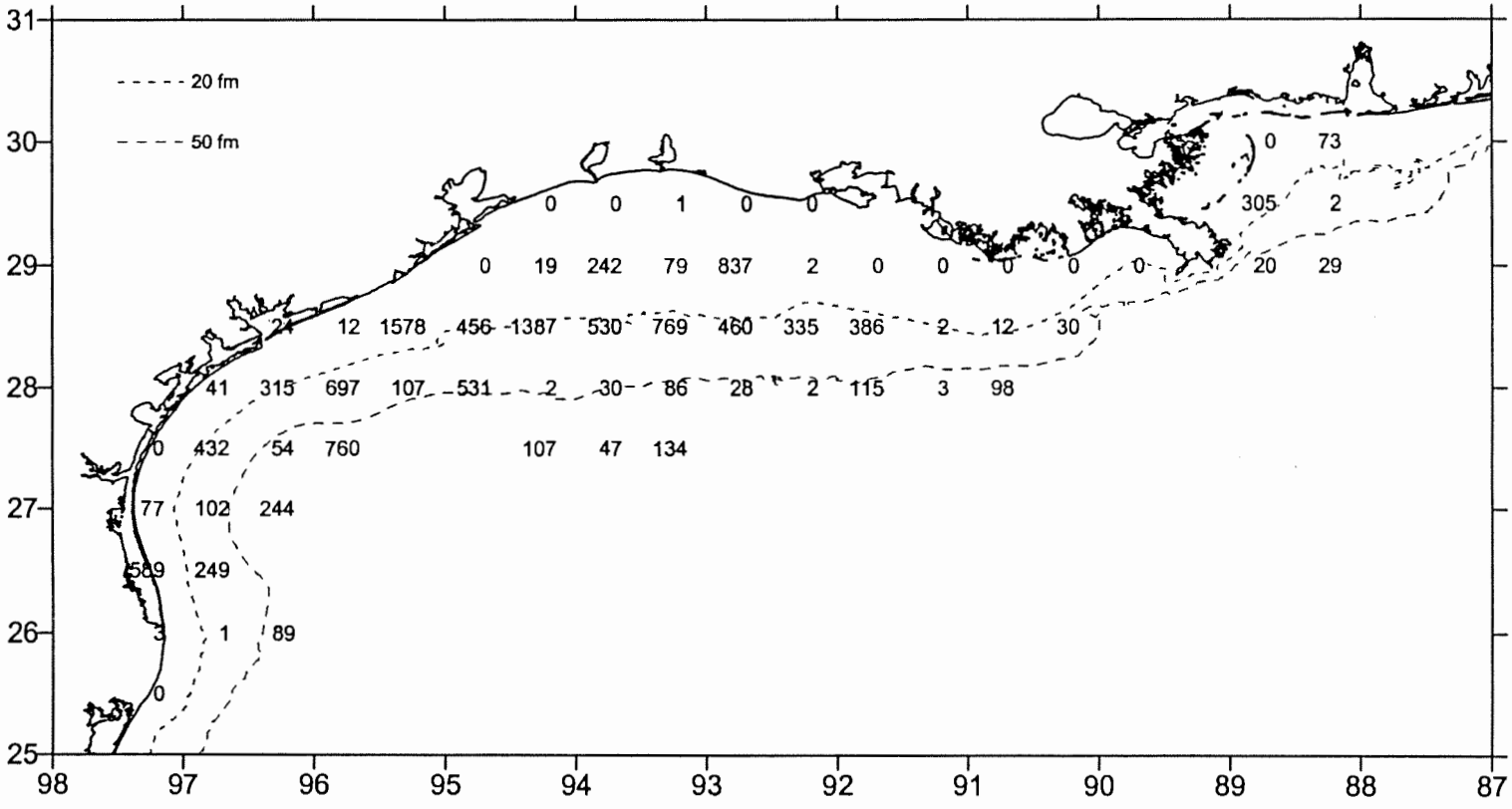

Figure 18. Rough scad, Trachurus lathami, number/hour for June-July 1997.

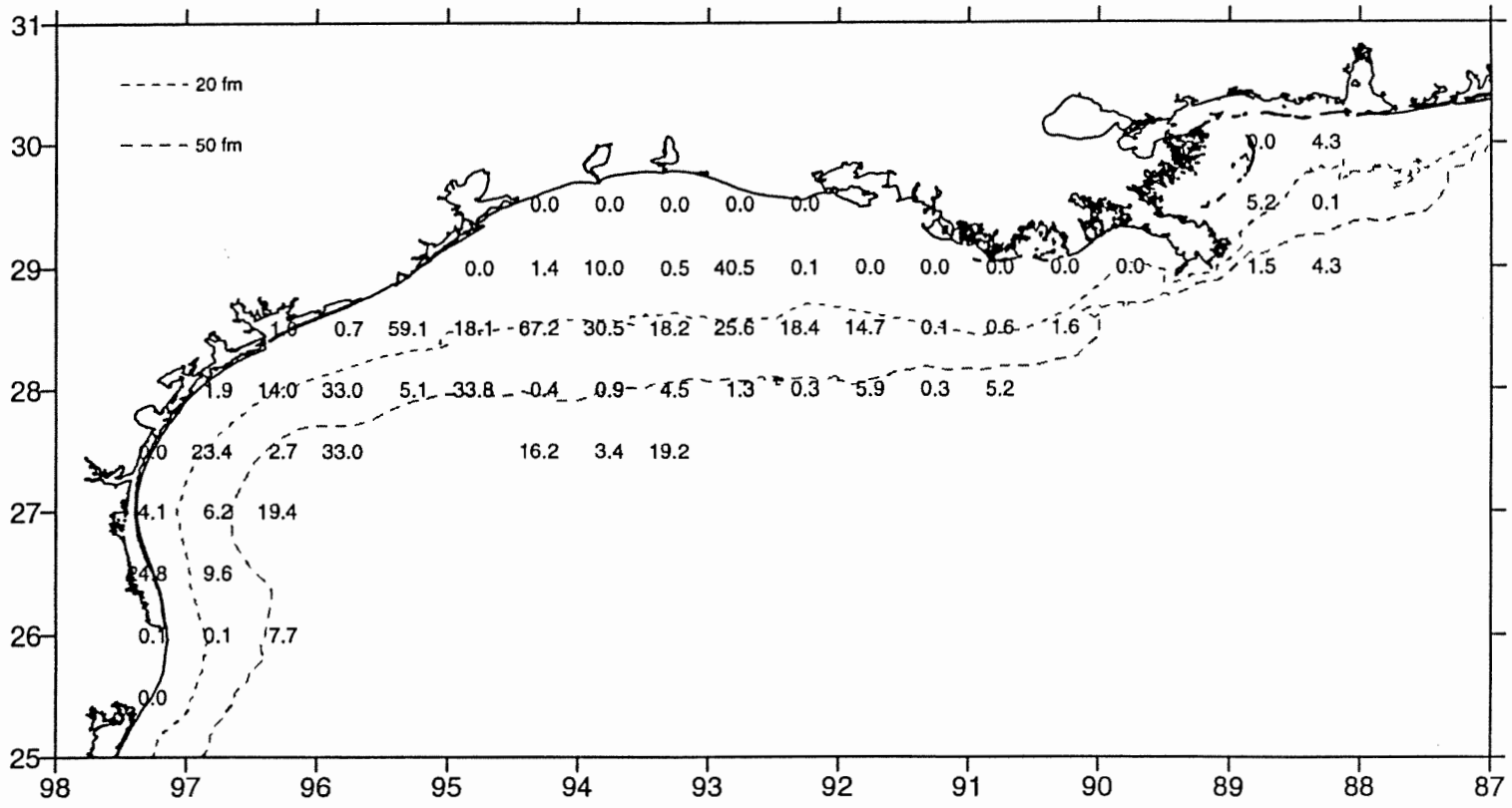

Figure 19. Rough scad, Trachurus lathami, lb/hour for June-July 1997.

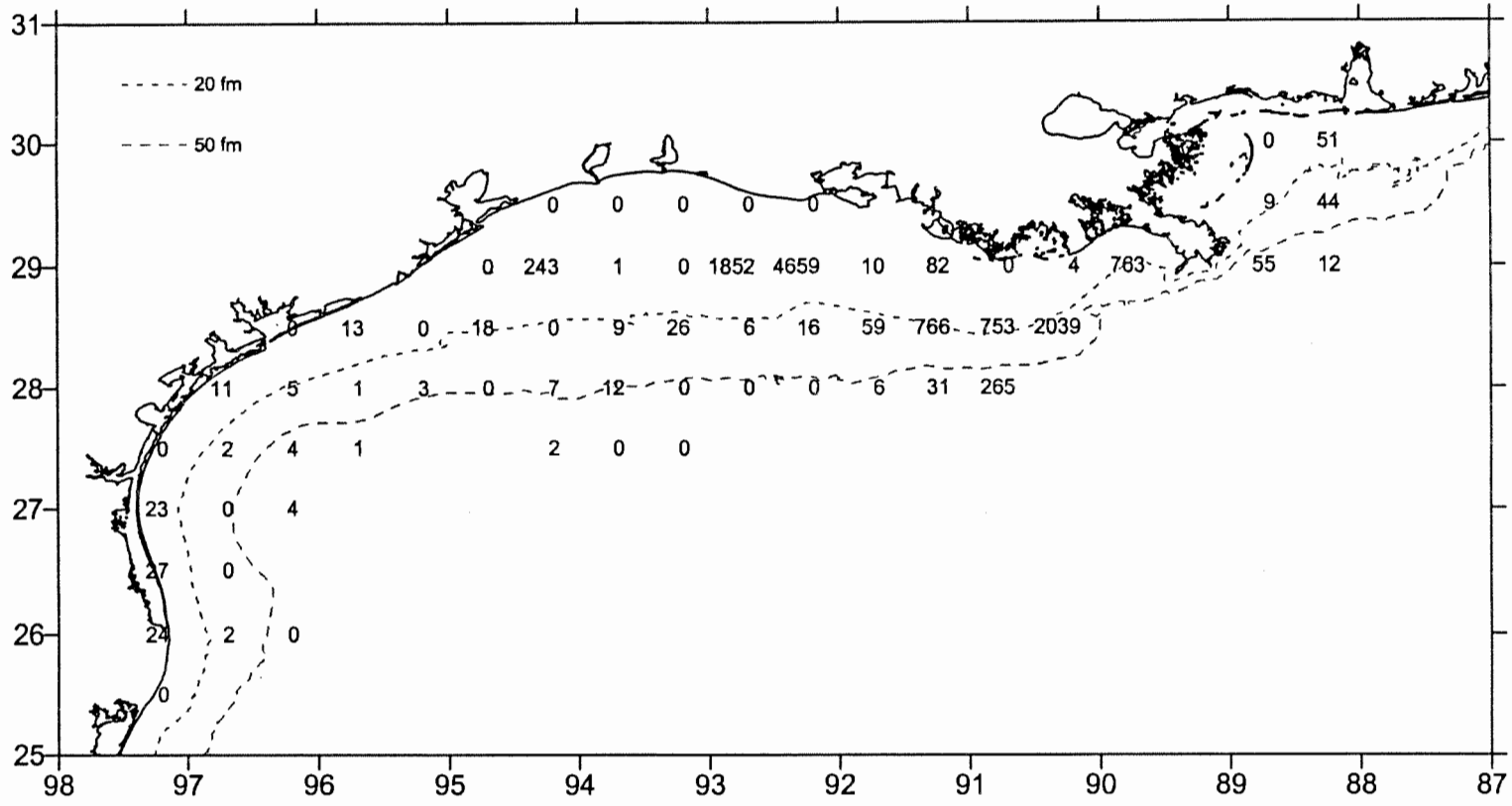

Figure 20. Bigeye searobin, Prionotus longispinosus, number/hour for June-July 1997.

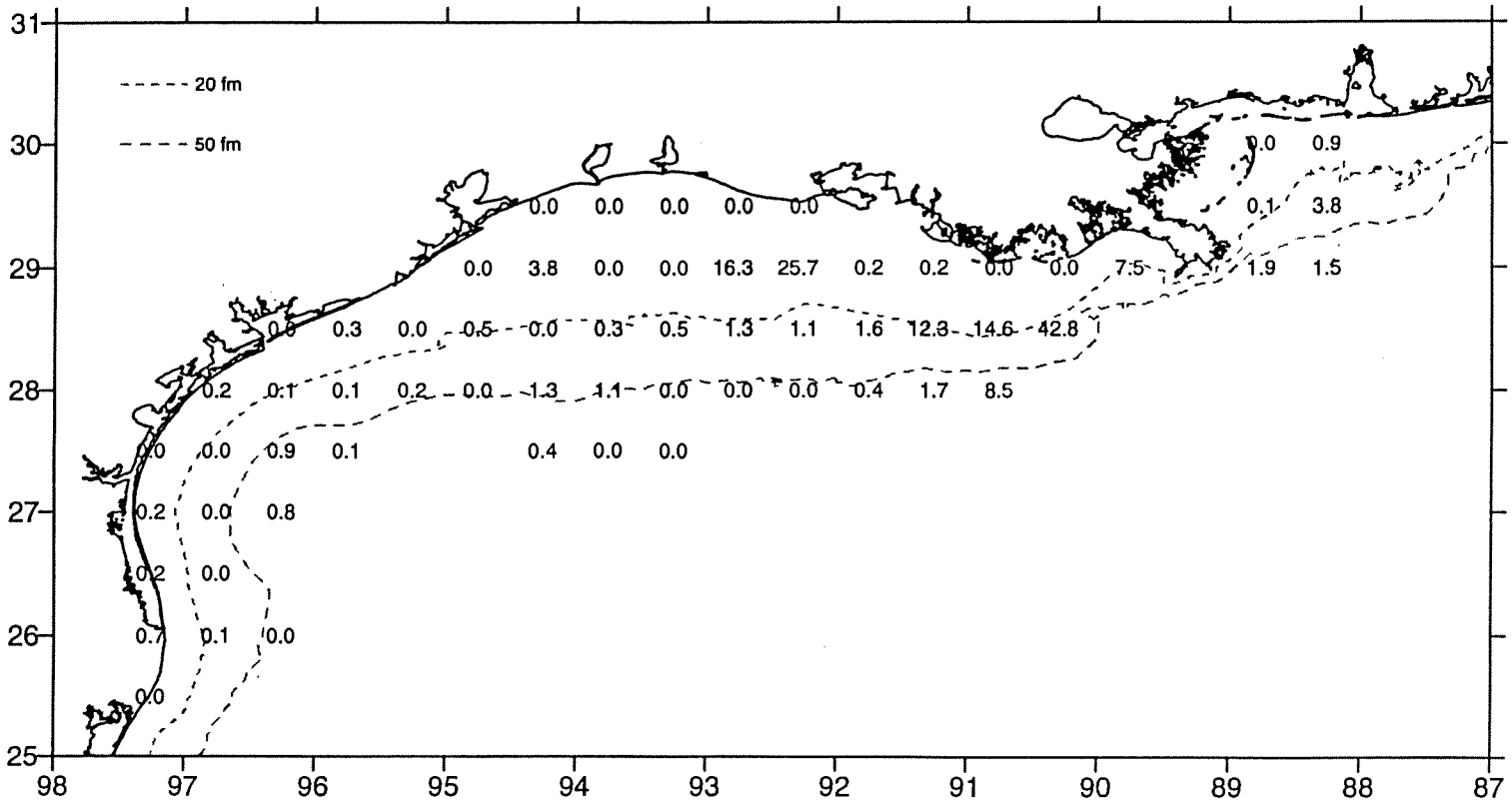

Figure 21. Bigeye searobin, Prionotus longispinosus, lb/hour for June-July 1997.

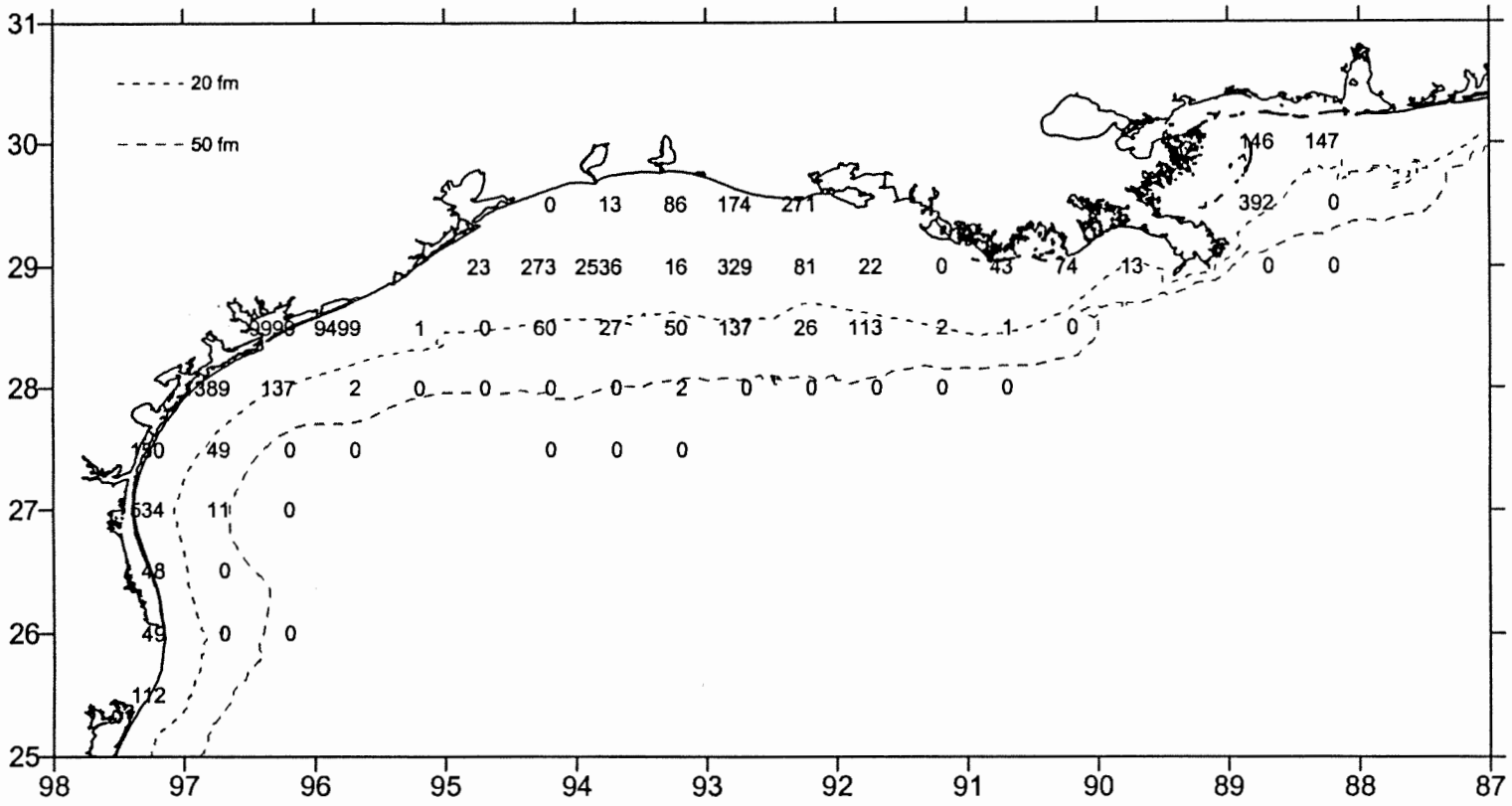

Figure 22. Atlantic bumper, Chloroscombrus chrysurus, number/hour for June-July 1997.

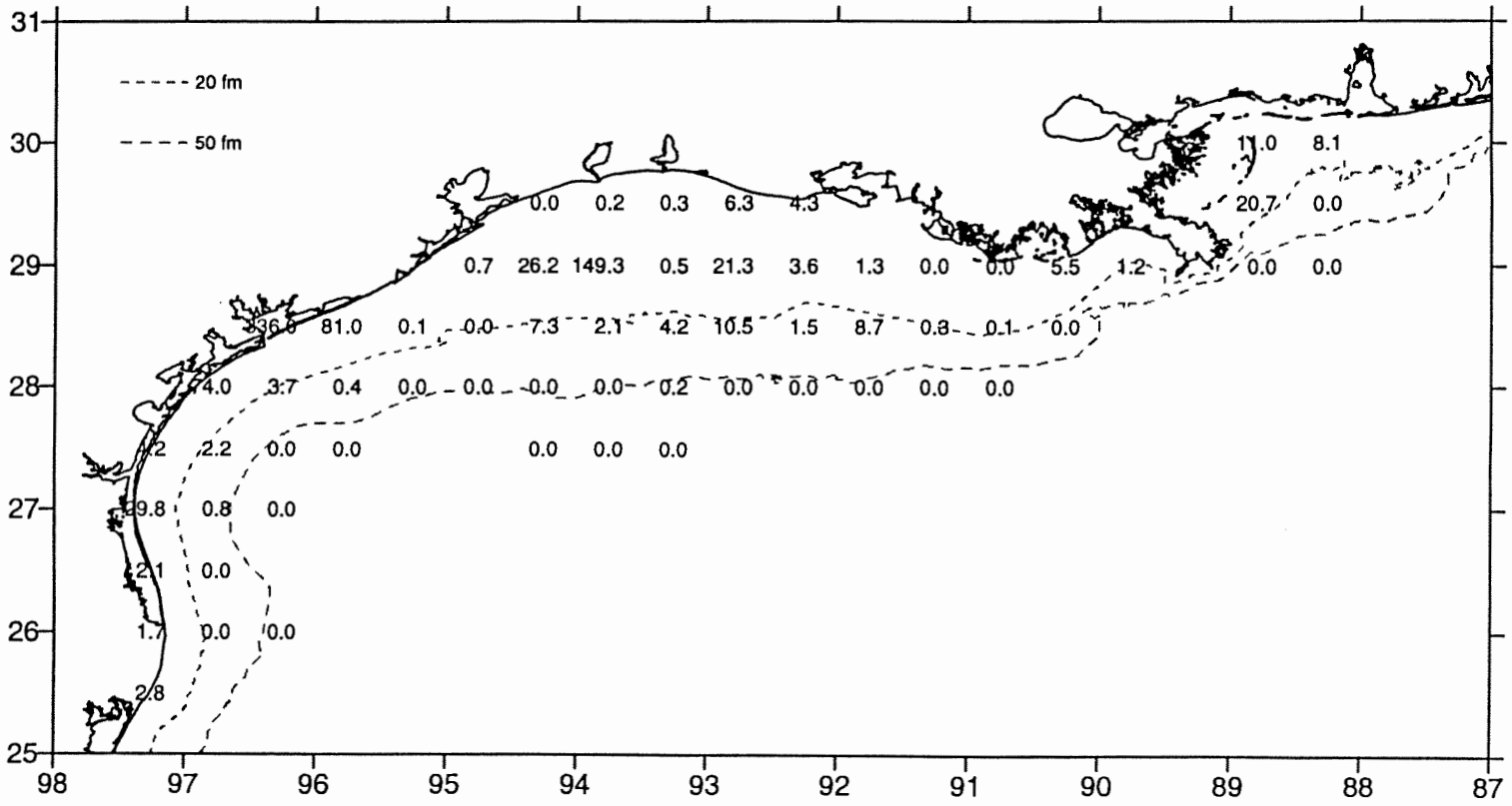

Figure 23. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for June-July 1997.

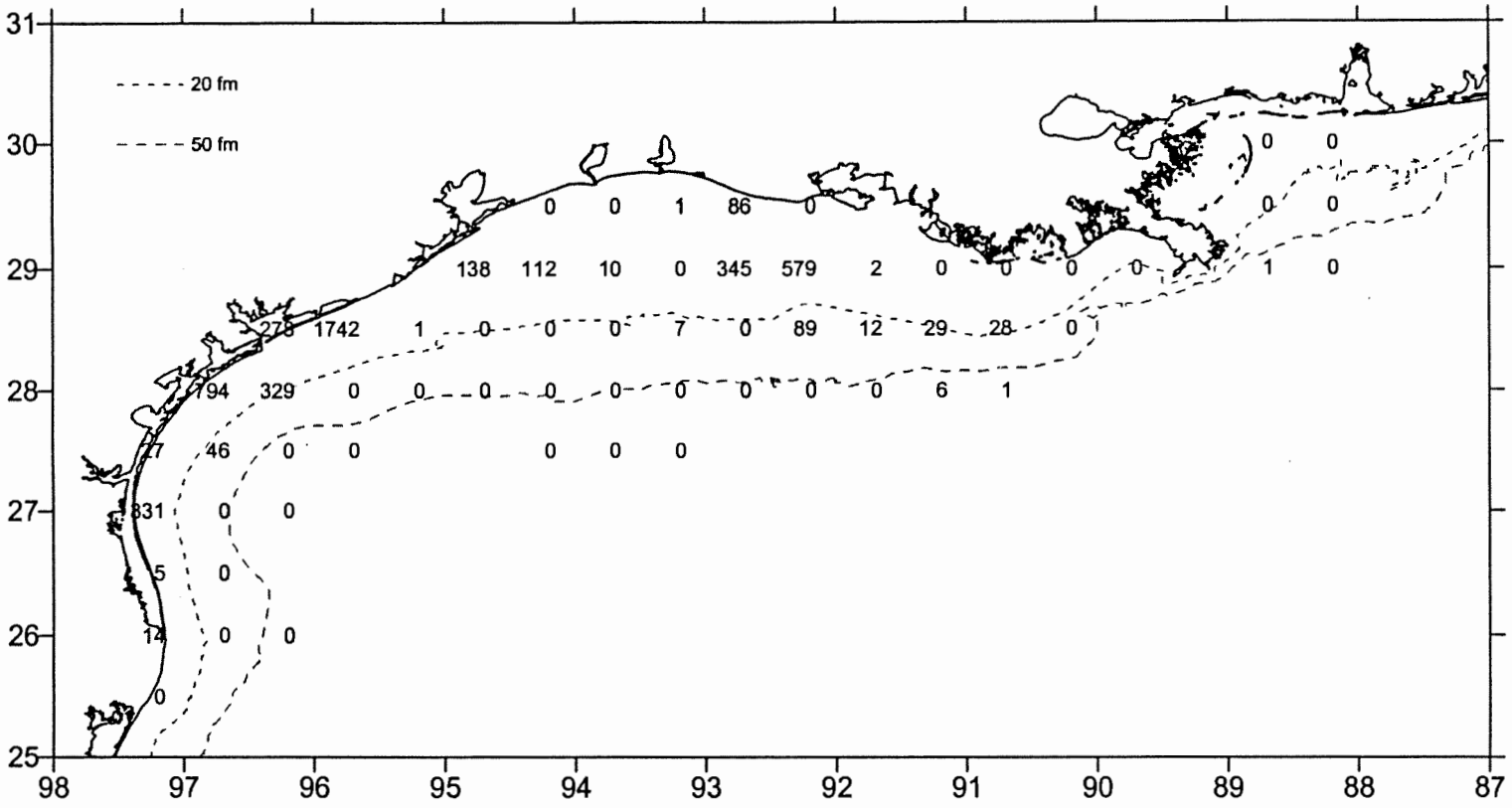

Figure 24. Silver seatrout, Cynoscion nothus, number/hour for June-July 1997.

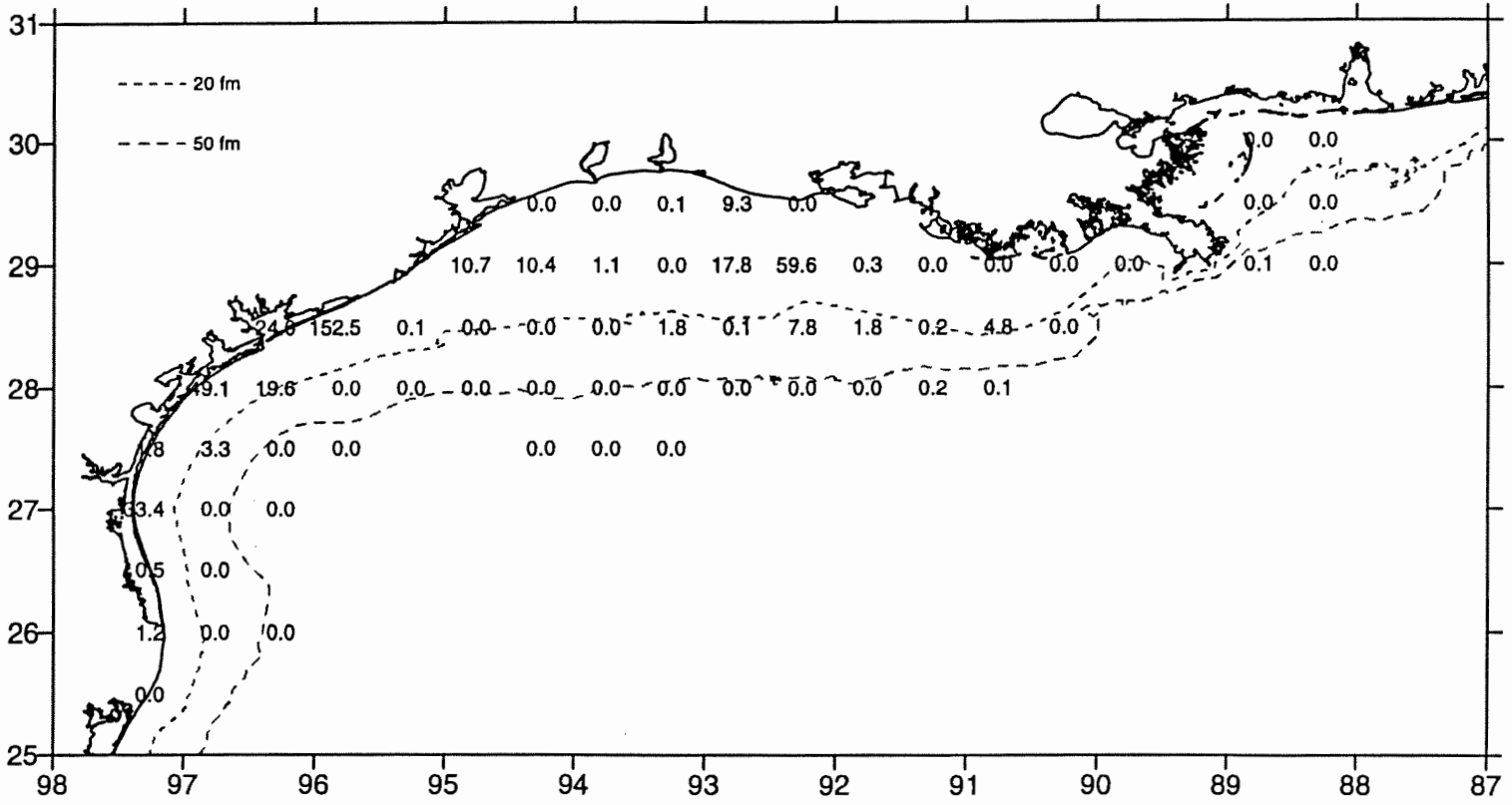

Figure 25. Silver seatrout, Cynoscion nothus, lb/hour for June-July 1997.

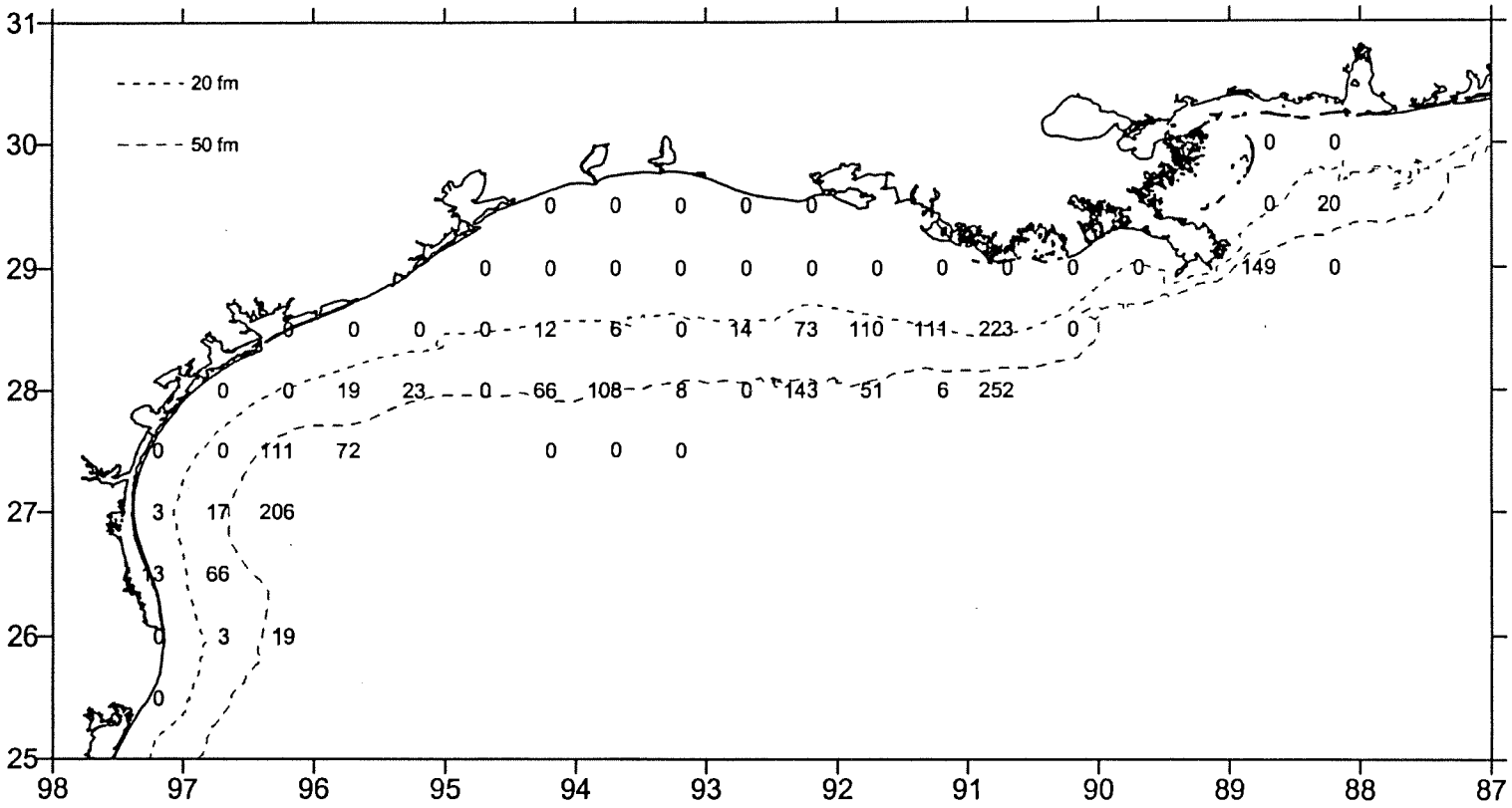

Figure 26. Blackear bass, Serranus atrobranchus, number/hour for June-July 1997.

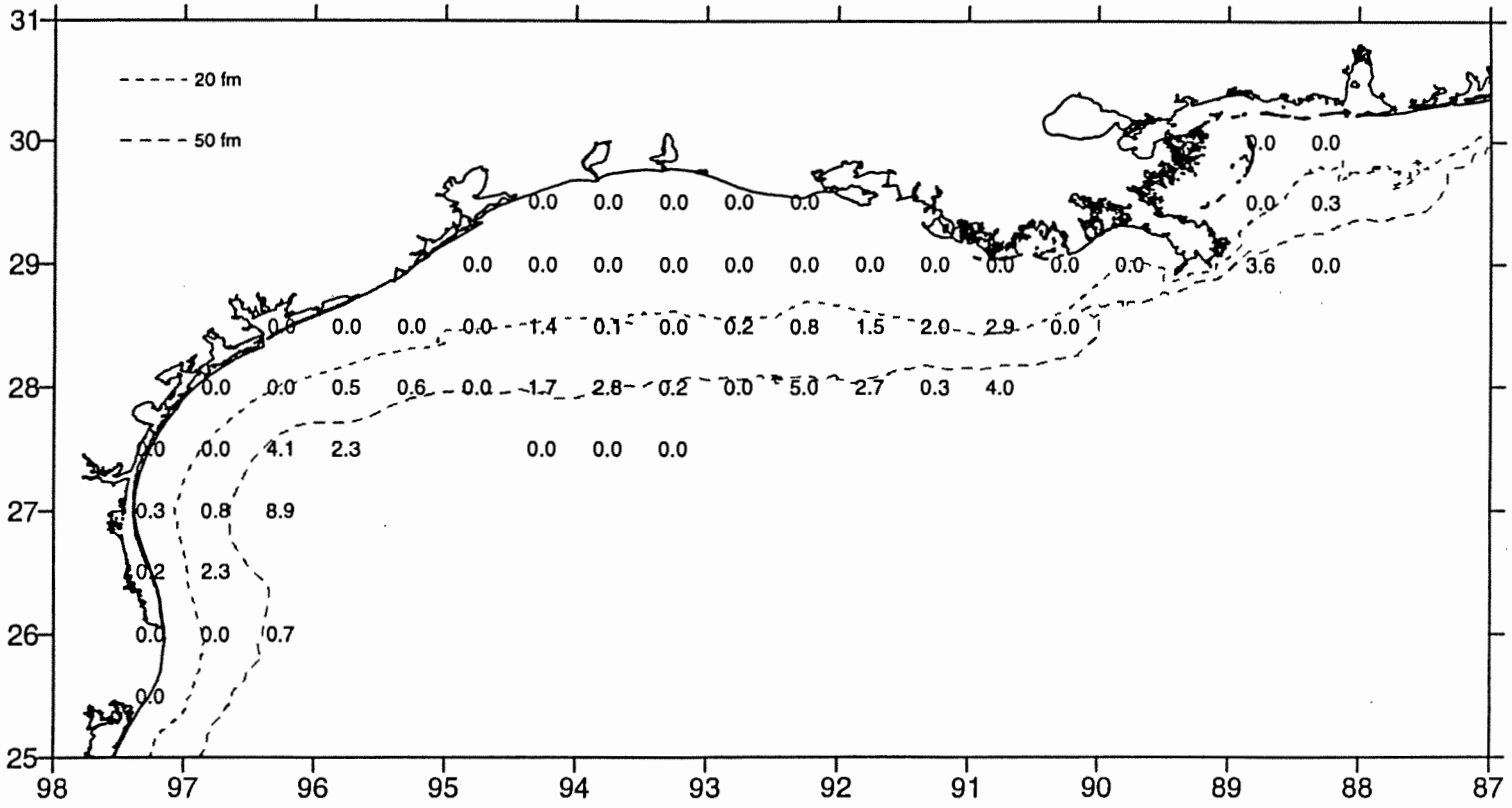

Figure 27. Blackear bass, Serranus atrobranchus, lb/hour for June-July 1997.

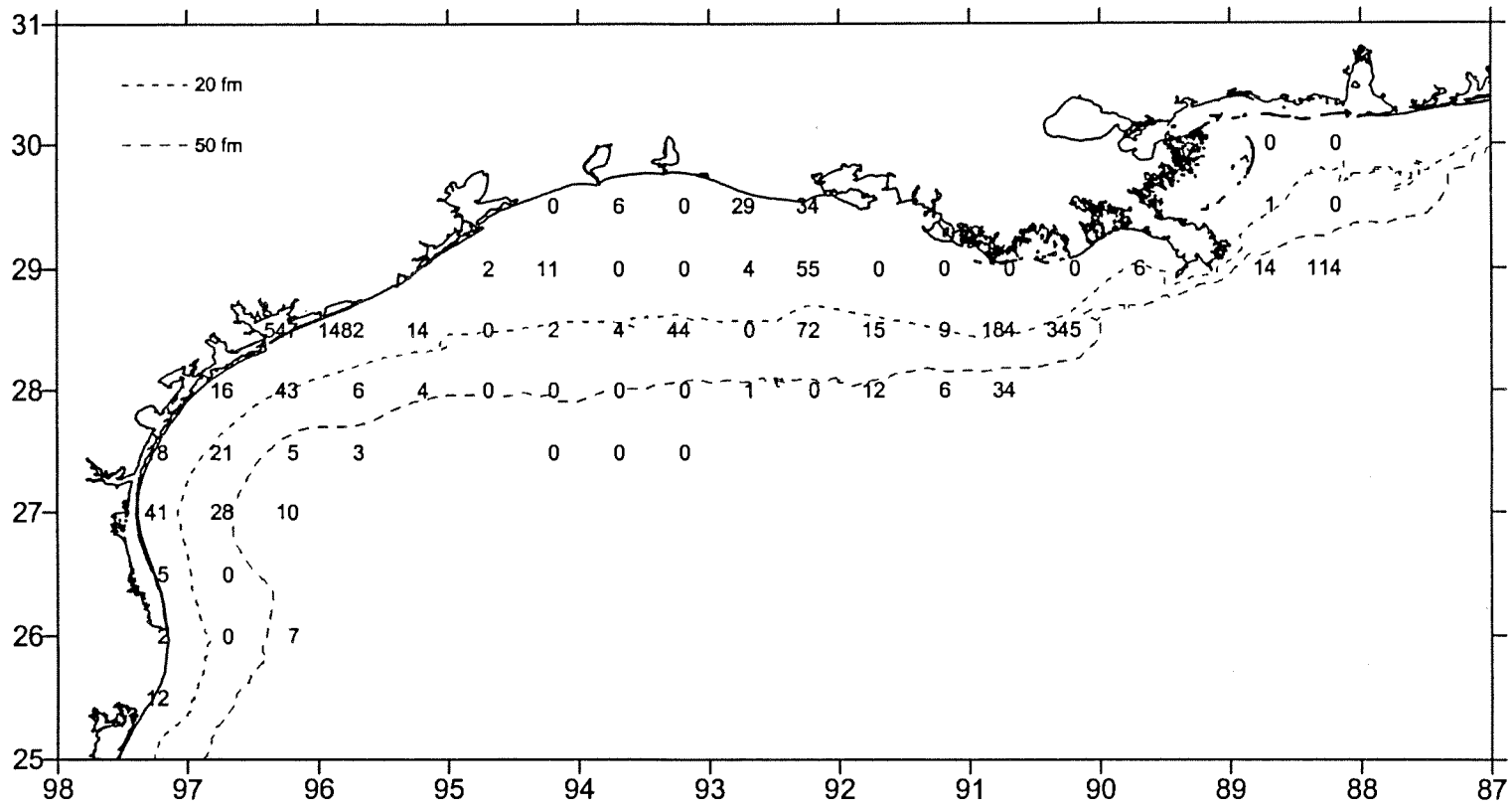

Figure 30. Atlantic cutlassfish, Trichiurus lepturus, number/hour for June-July 1997.

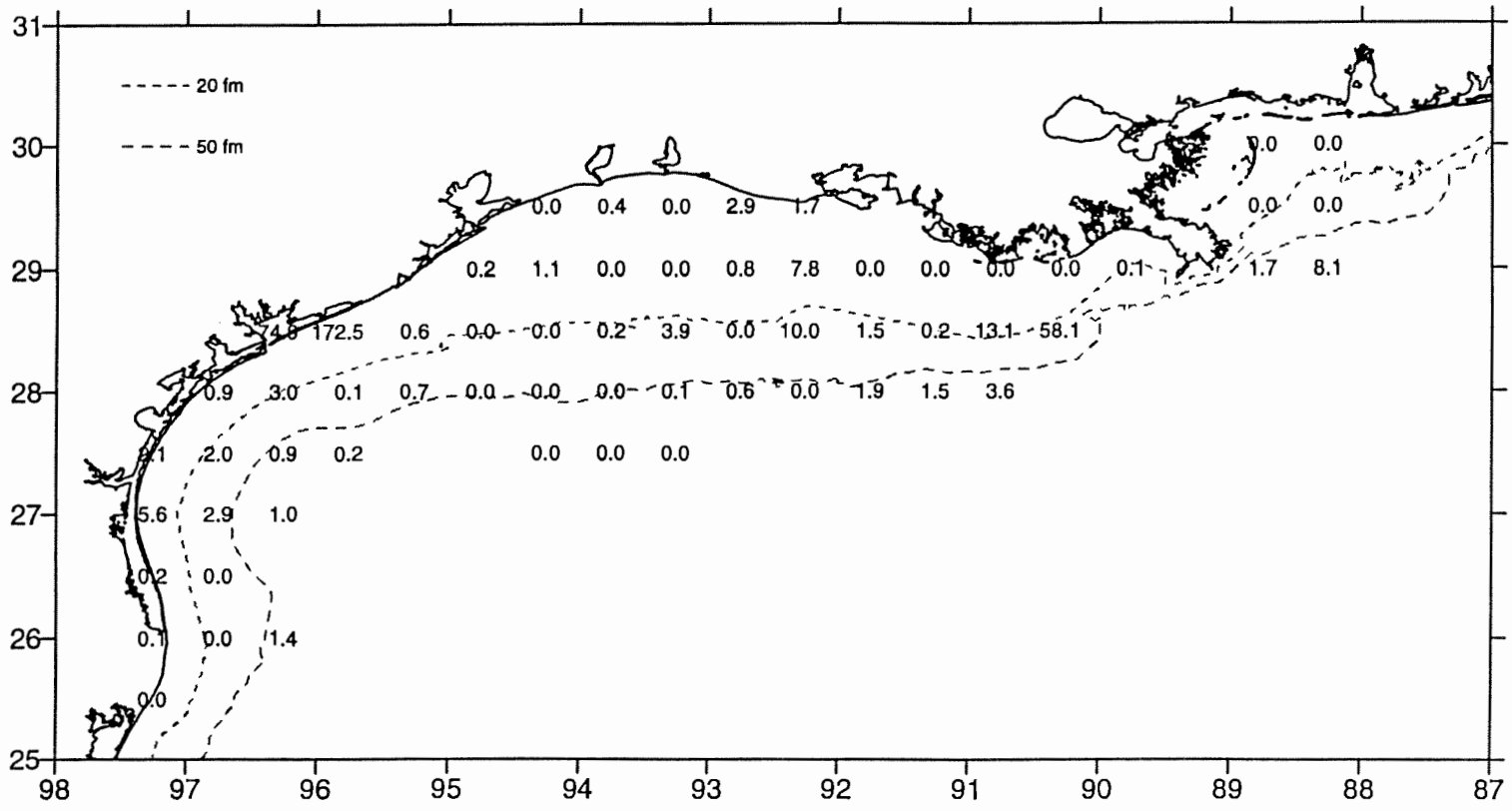

Figure 31. Atlantic cutlassfish, Trichiurus lepturus, lb/hour for June-July 1997.

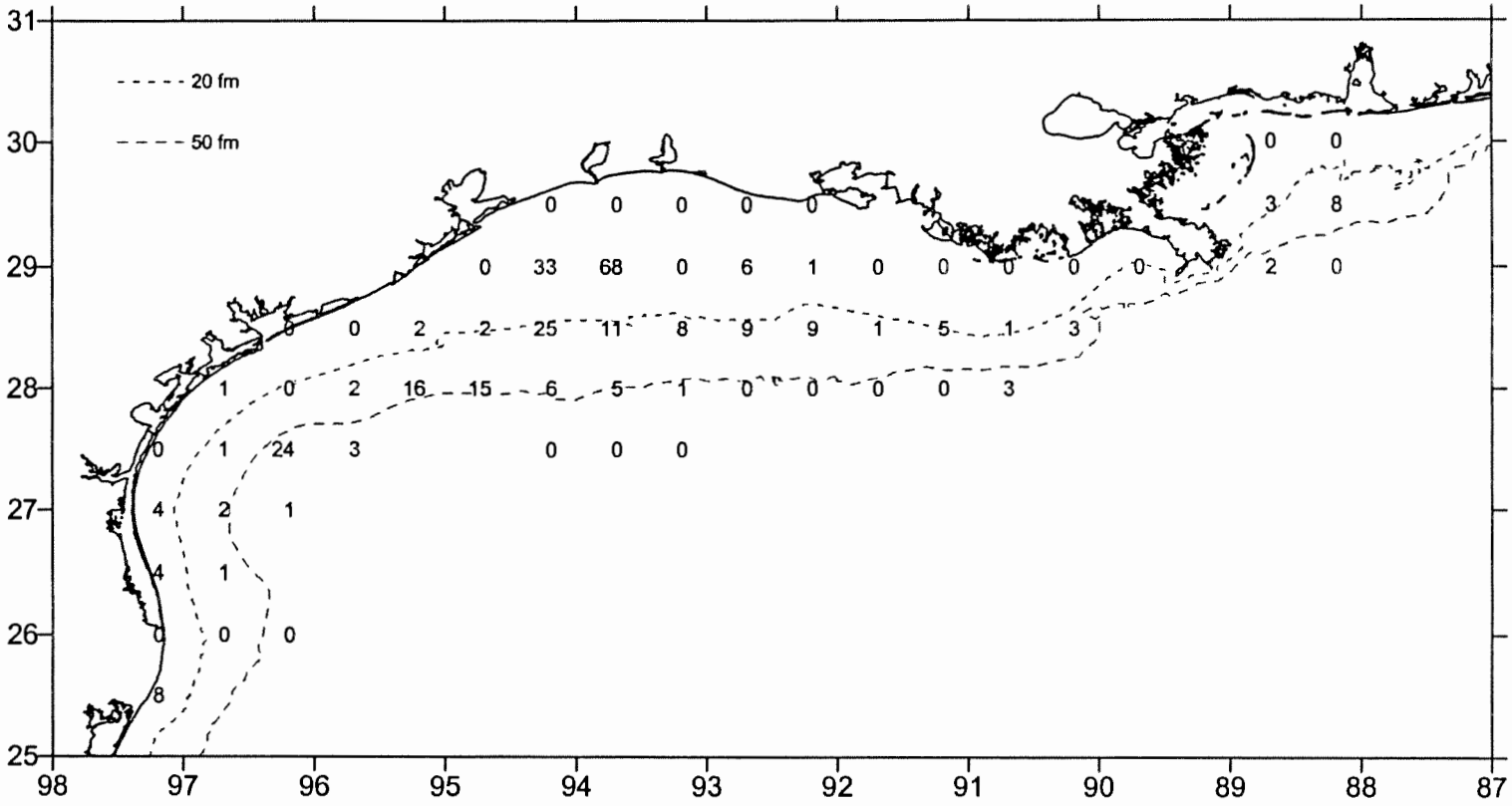

Figure 32. Red snapper, Lutjanus campechanus, number/hour for June-July 1997.

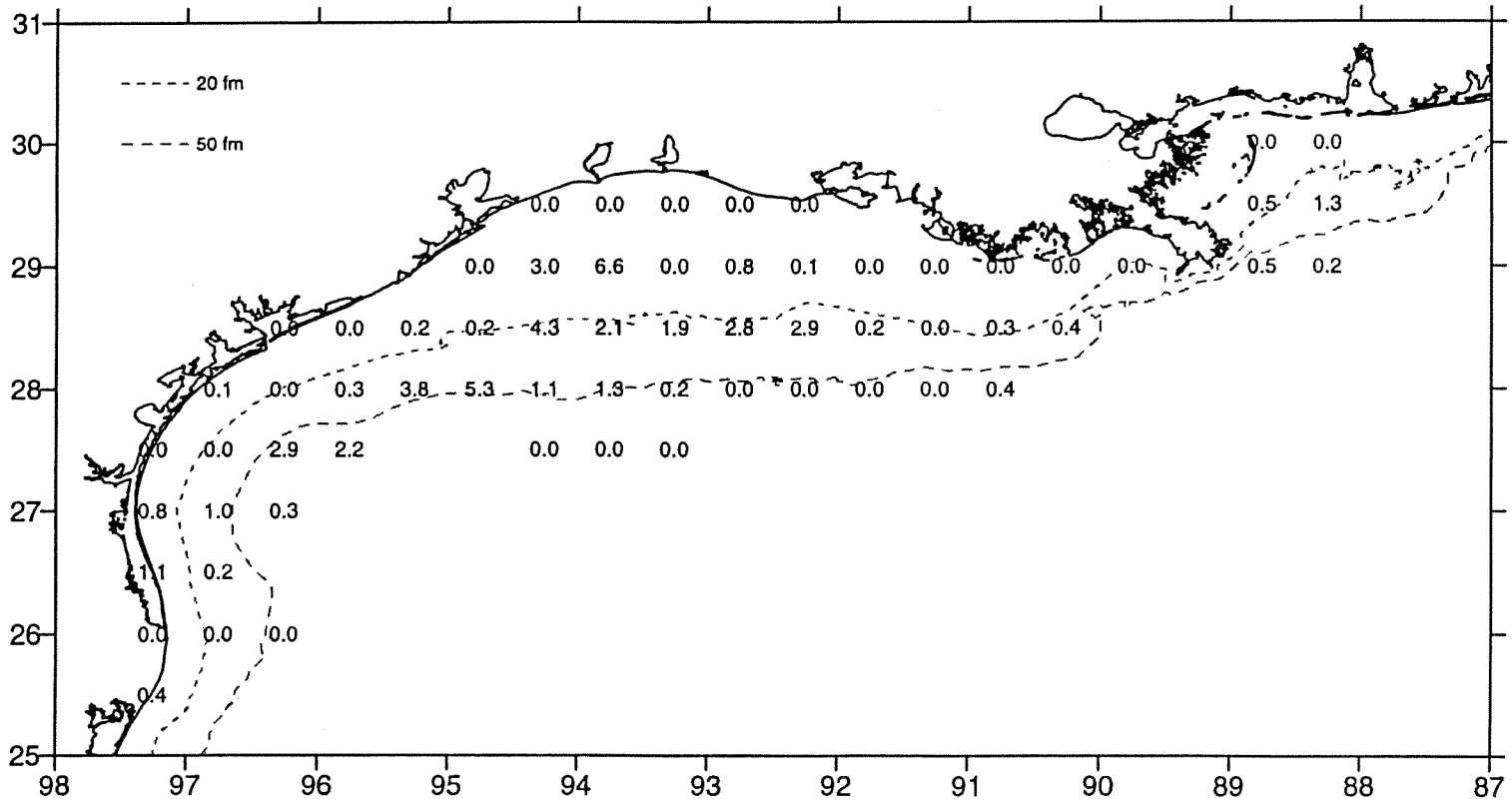

Figure 33. Red snapper, Lutjanus campechanus, lb/hour for June-July 1997.

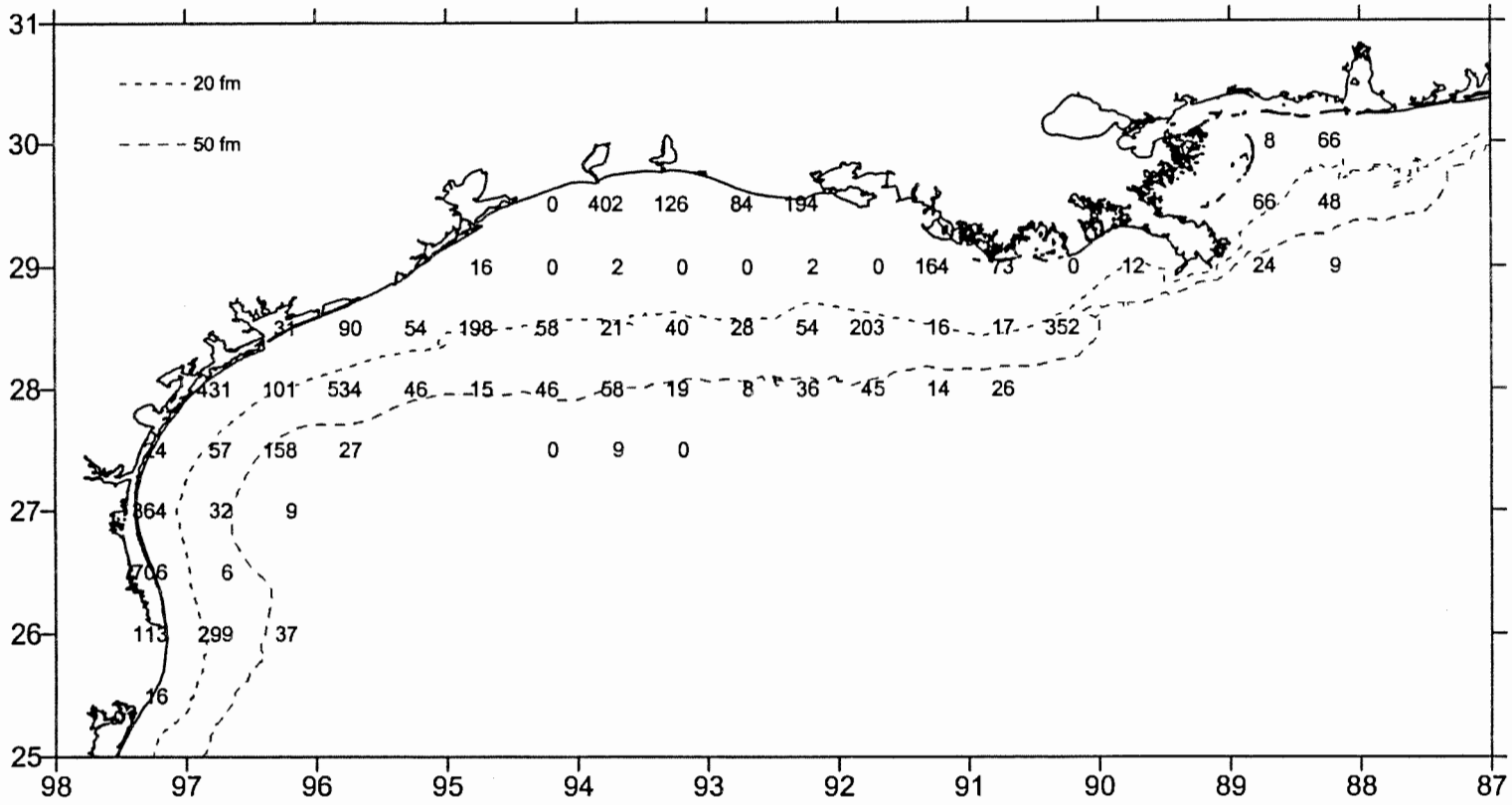

Figure 34. Brown shrimp, Penaeus aztecus, number/hour for June-July 1997.

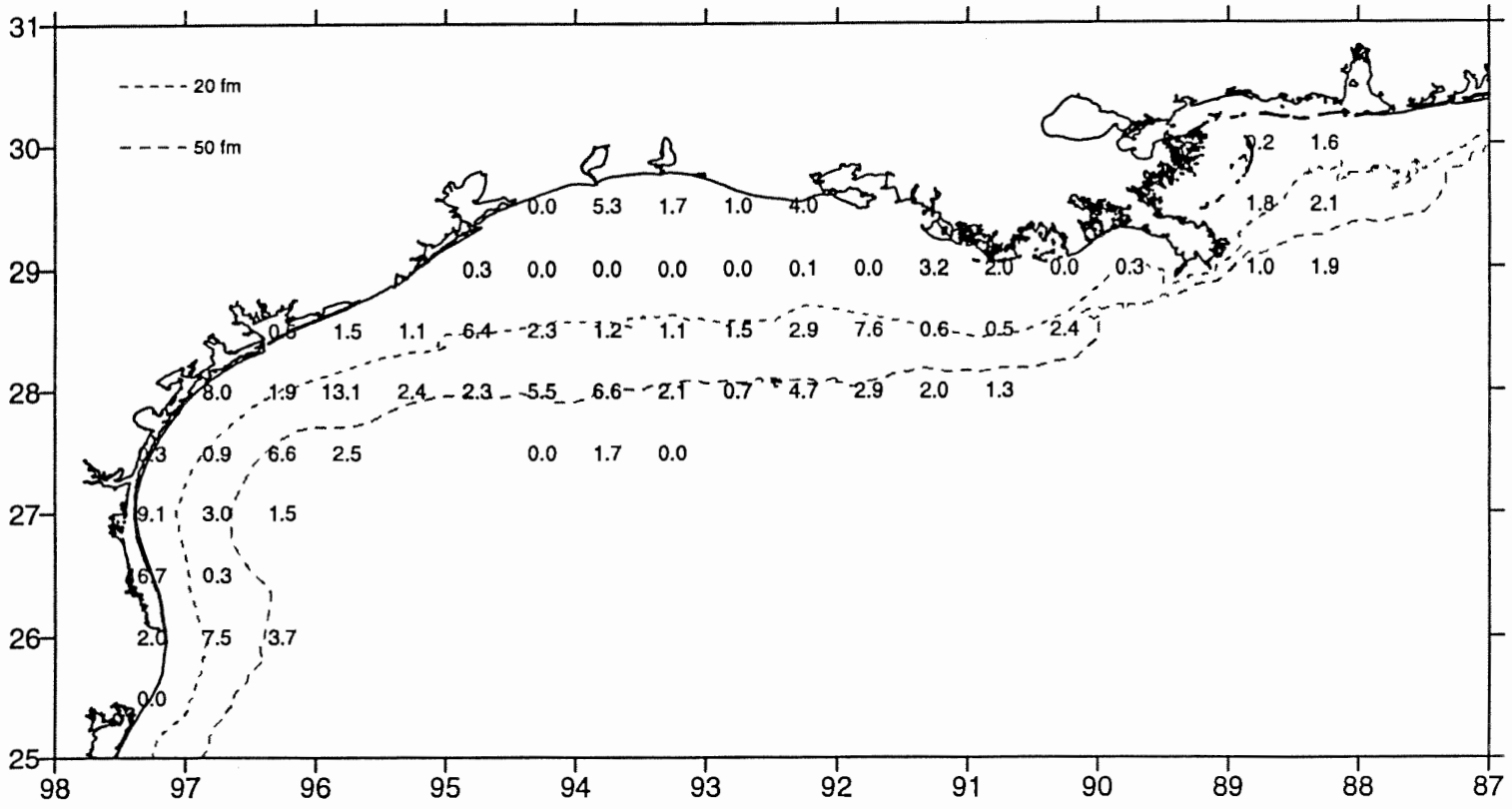

Figure 35. Brown shrimp, Penaeus aztecus, lb/hour for June-July 1997.

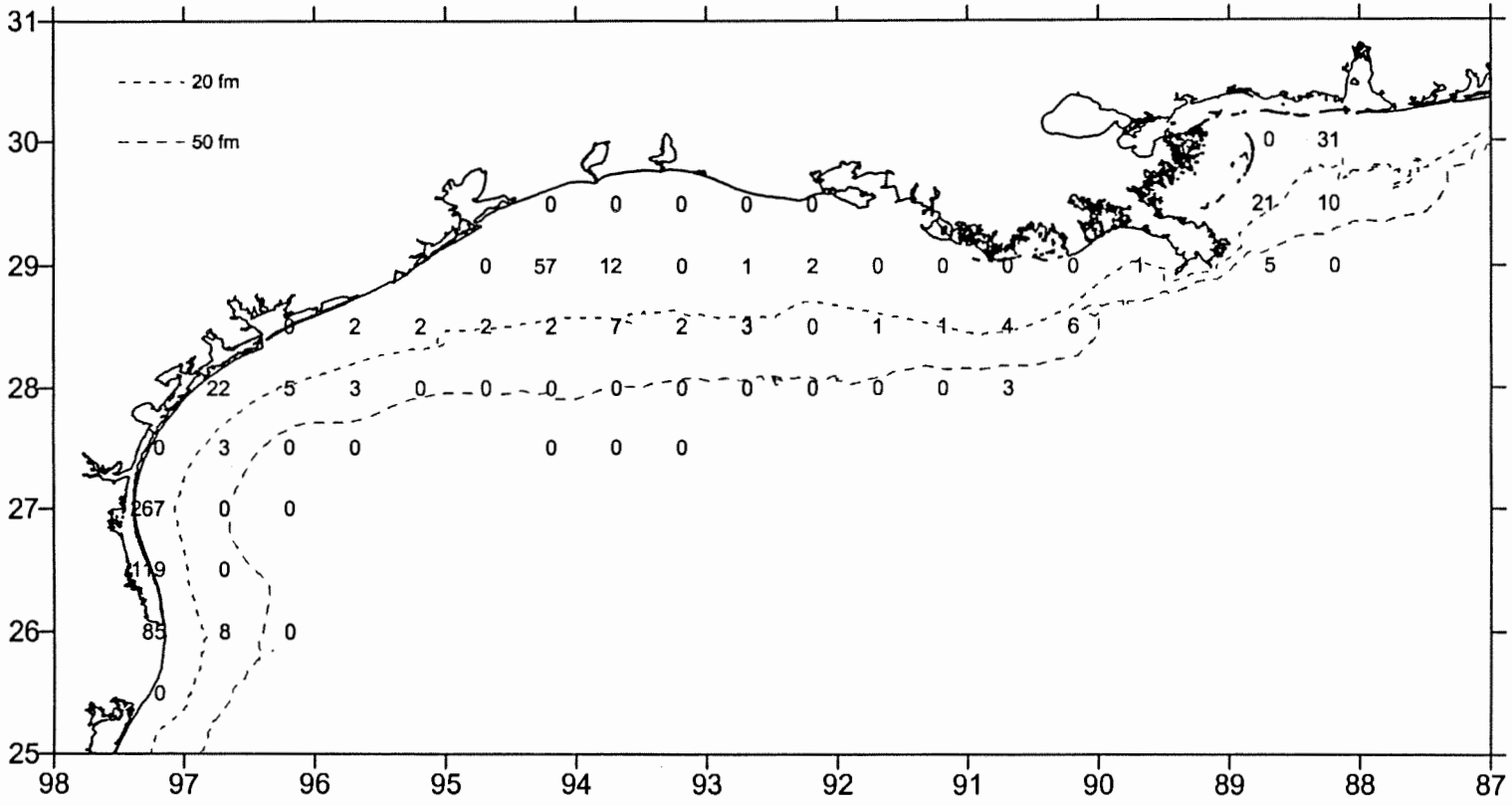

Figure 36. Pink shrimp, Penaeus duorarum, number/hour for June-July 1997.

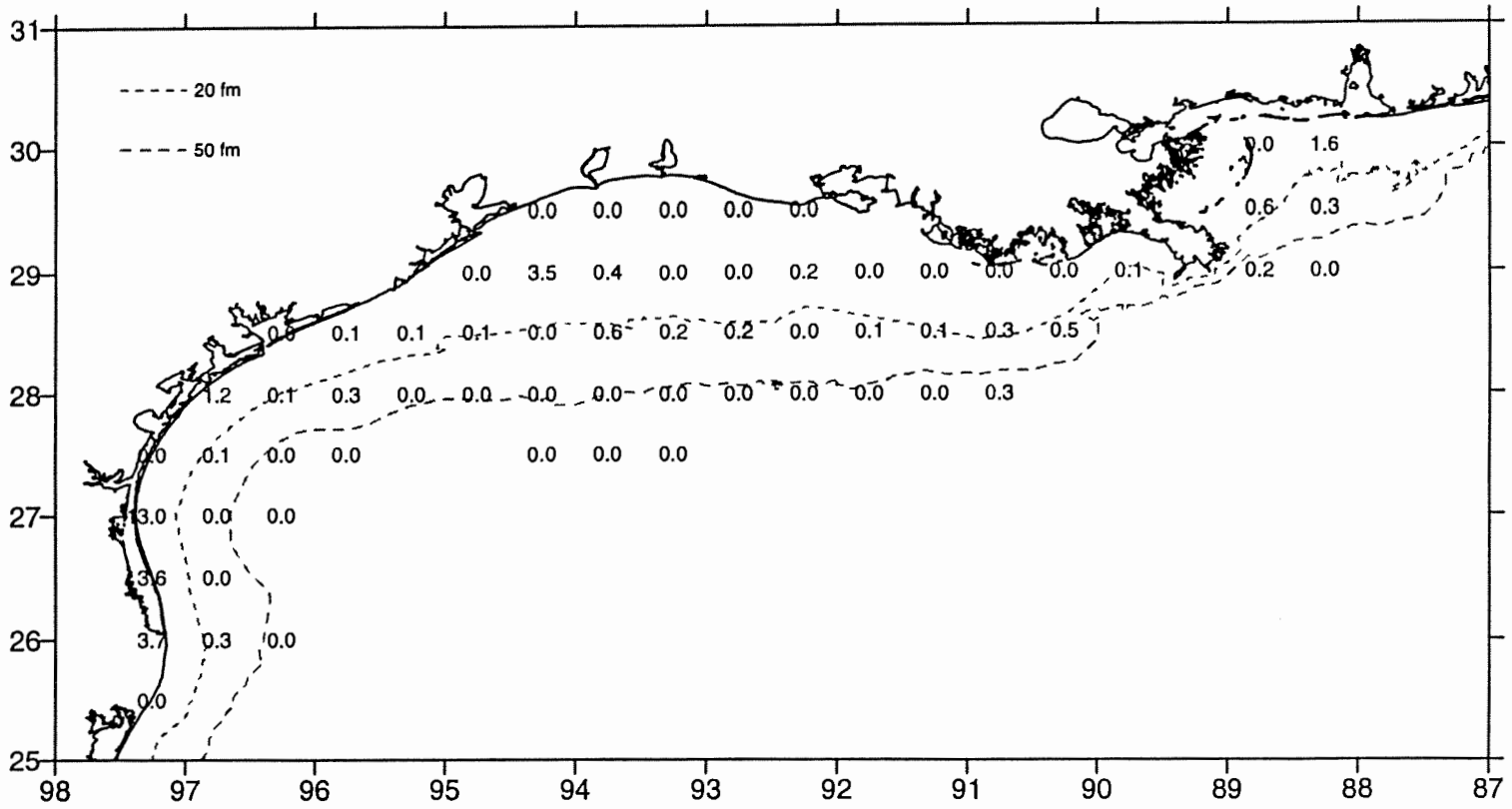

Figure 37. Pink shrimp, Penaeus duorarum, lb/hour for June-July 1997.

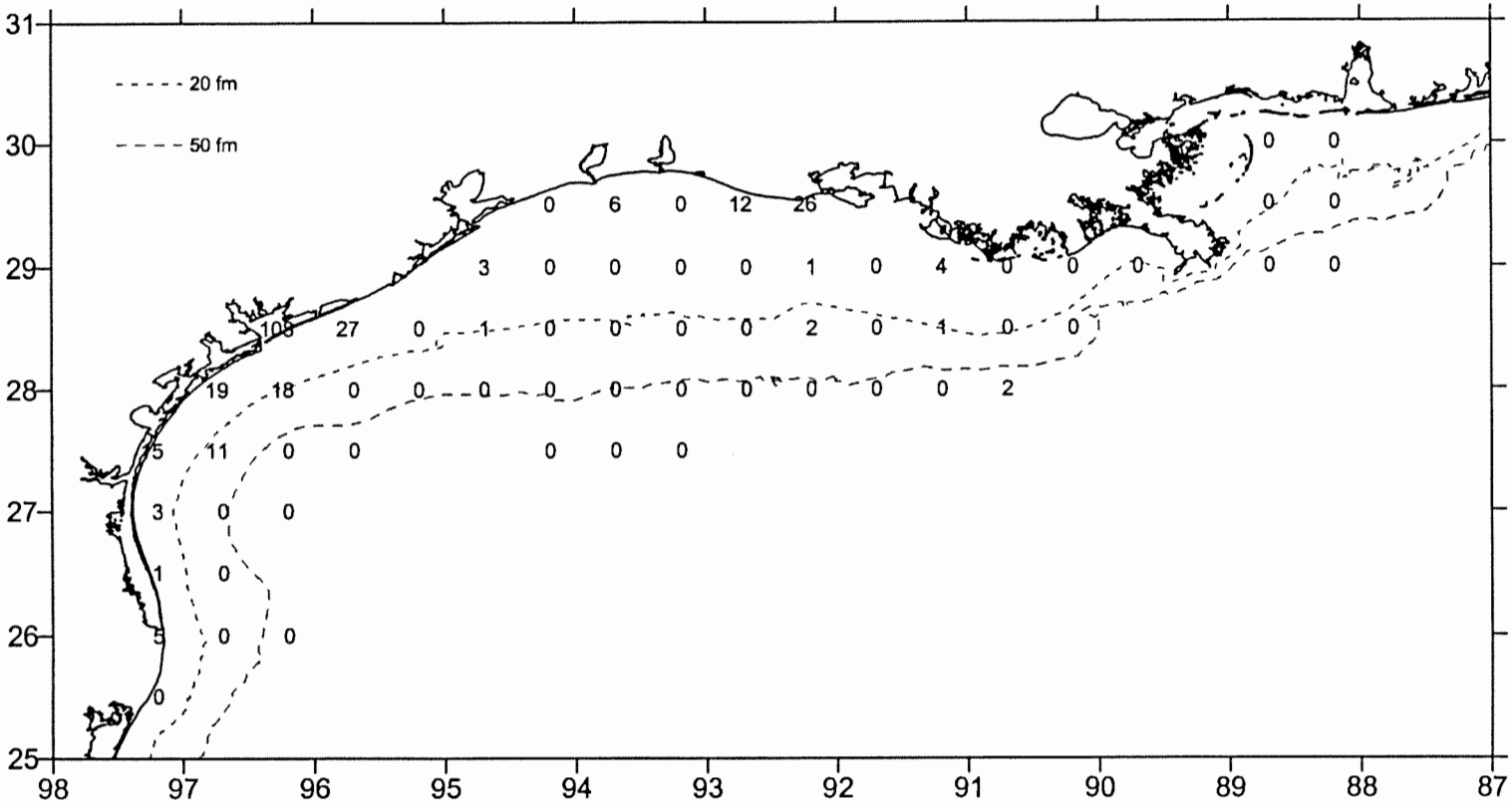

Figure 38. White shrimp, Penaeus setiferus, number/hour for June-July 1997.

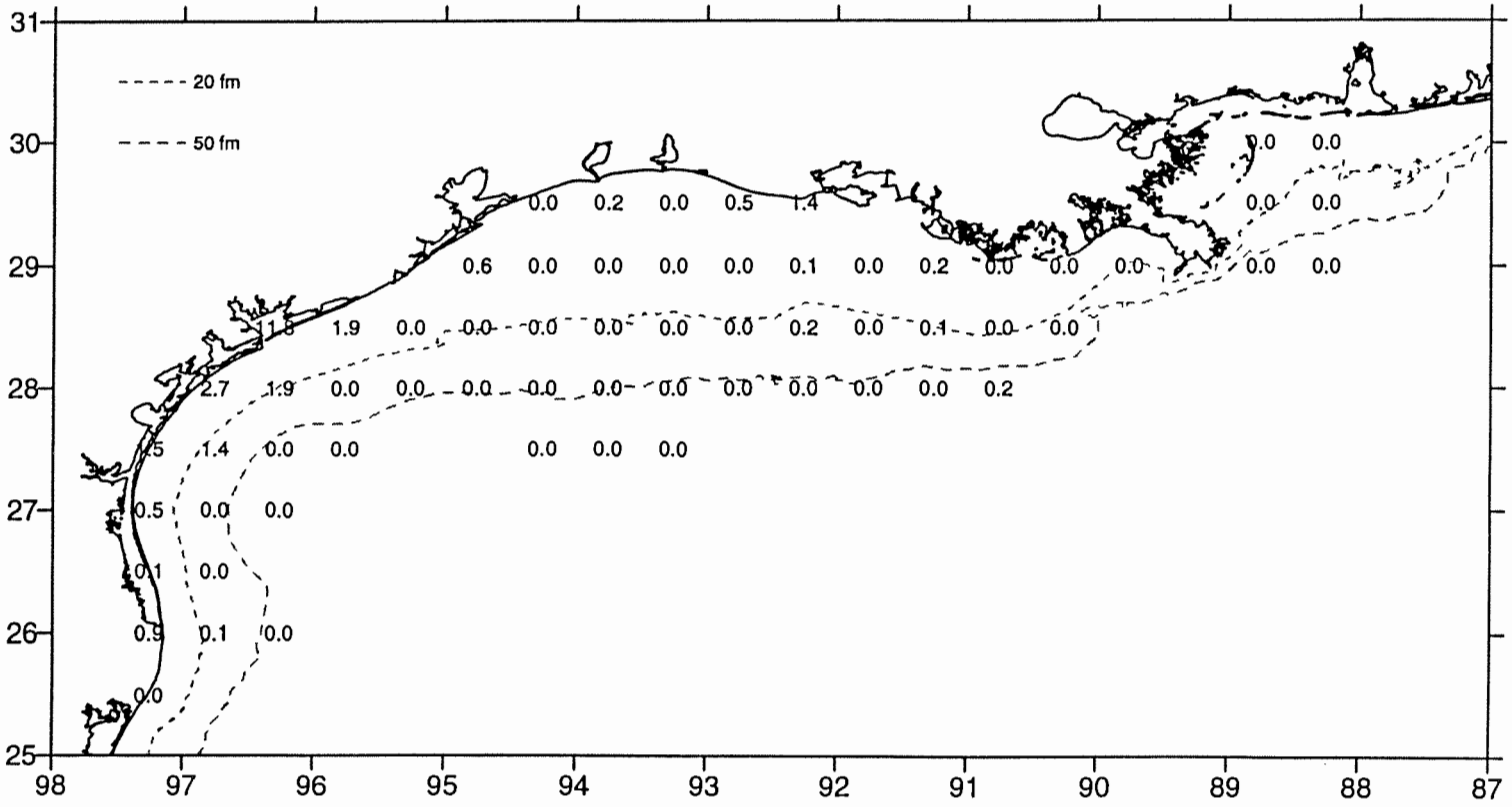

Figure 39. White shrimp, Penaeus setiferus, lb/hour for June-July 1997.

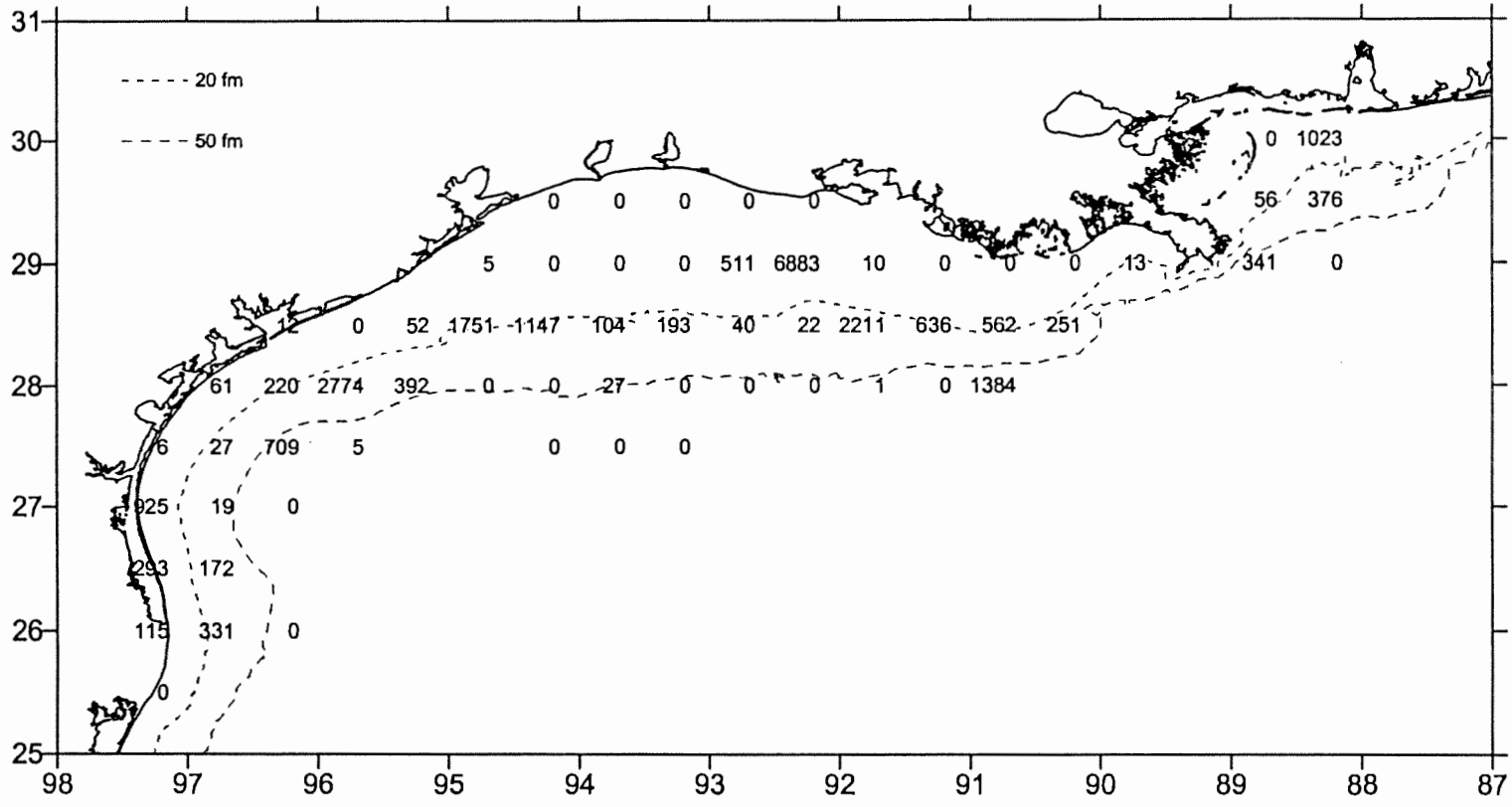

Figure 40. Roughback shrimp, Trachypenaeus similis, number/hour for June-July 1997.

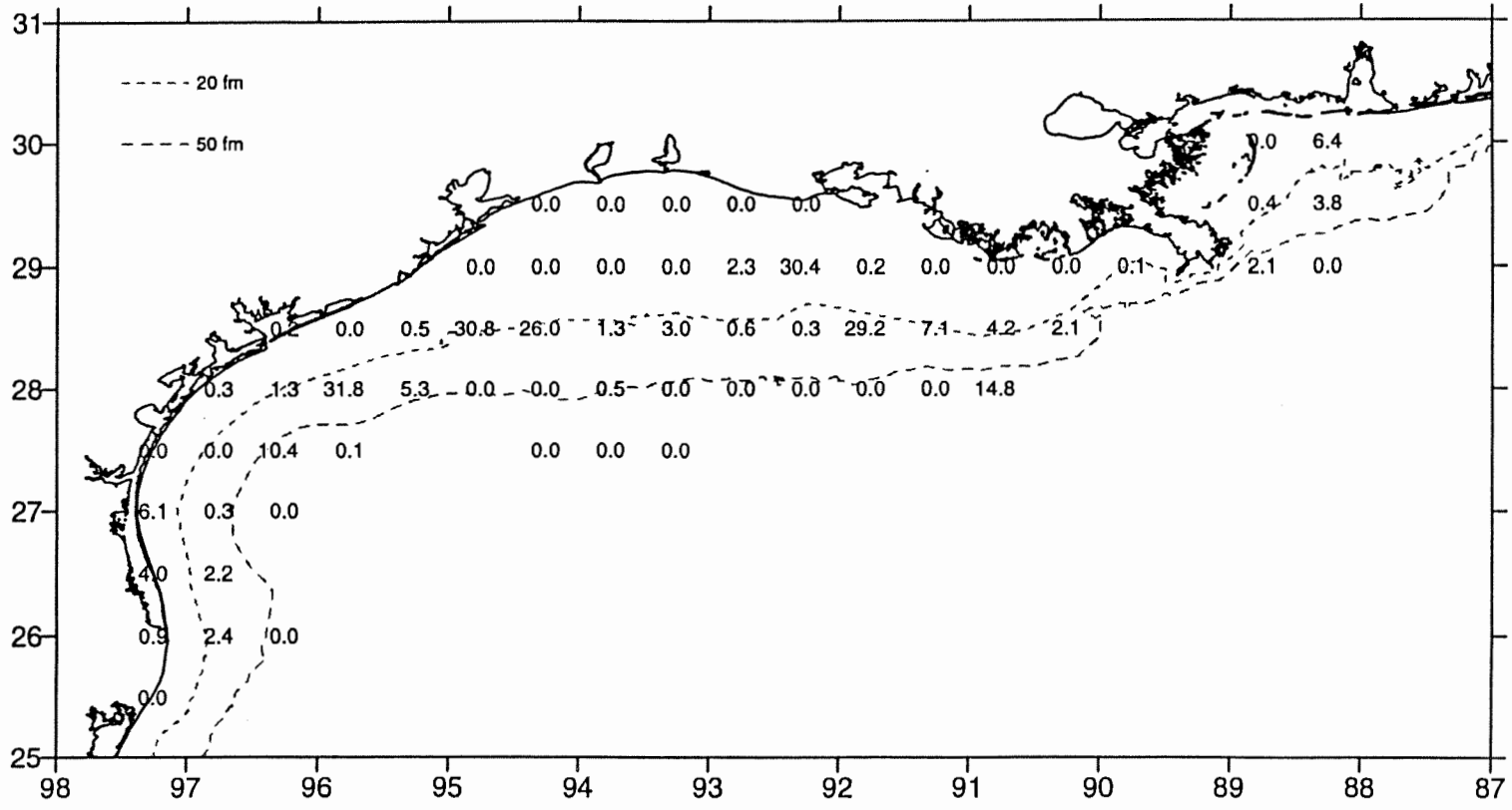

Figure 41. Roughback shrimp, Trachypenaeus similis, lb/hour for June-July 1997.

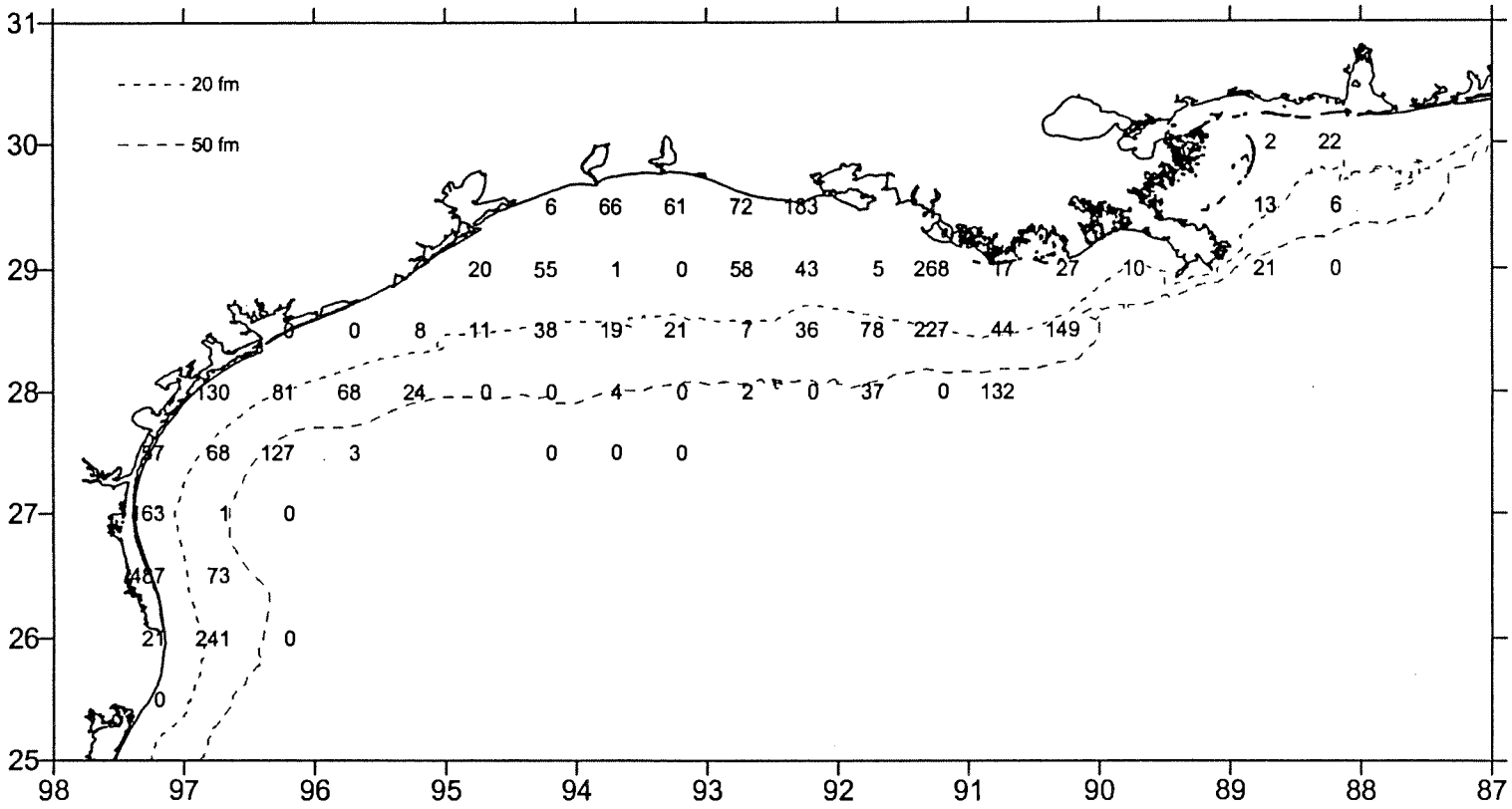

Figure 42. Lesser blue crab, Callinectes similis, number/hour for June-July 1997.

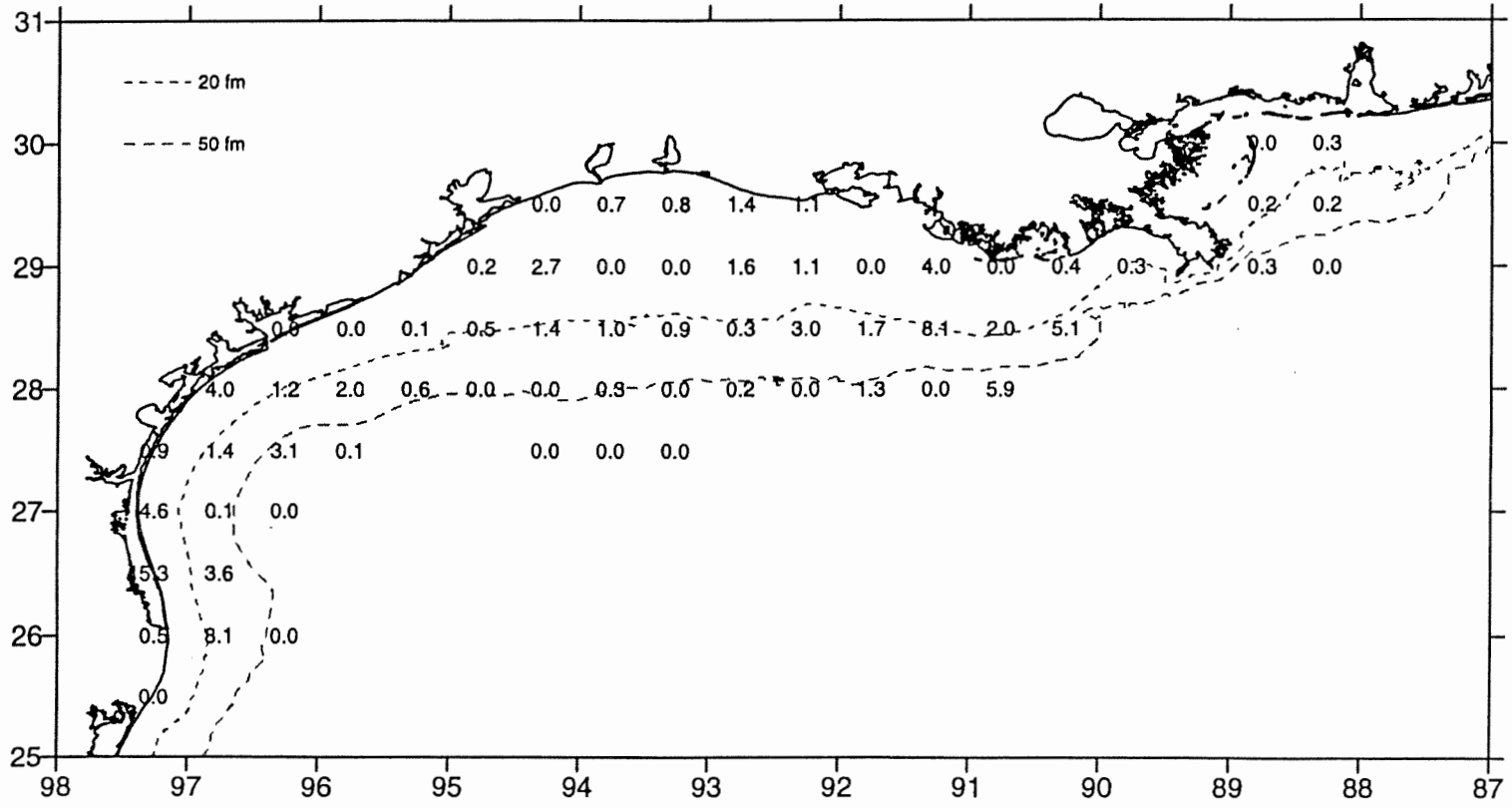

Figure 43. Lesser blue crab, Callinectes similis, lb/hour for June-July 1997.

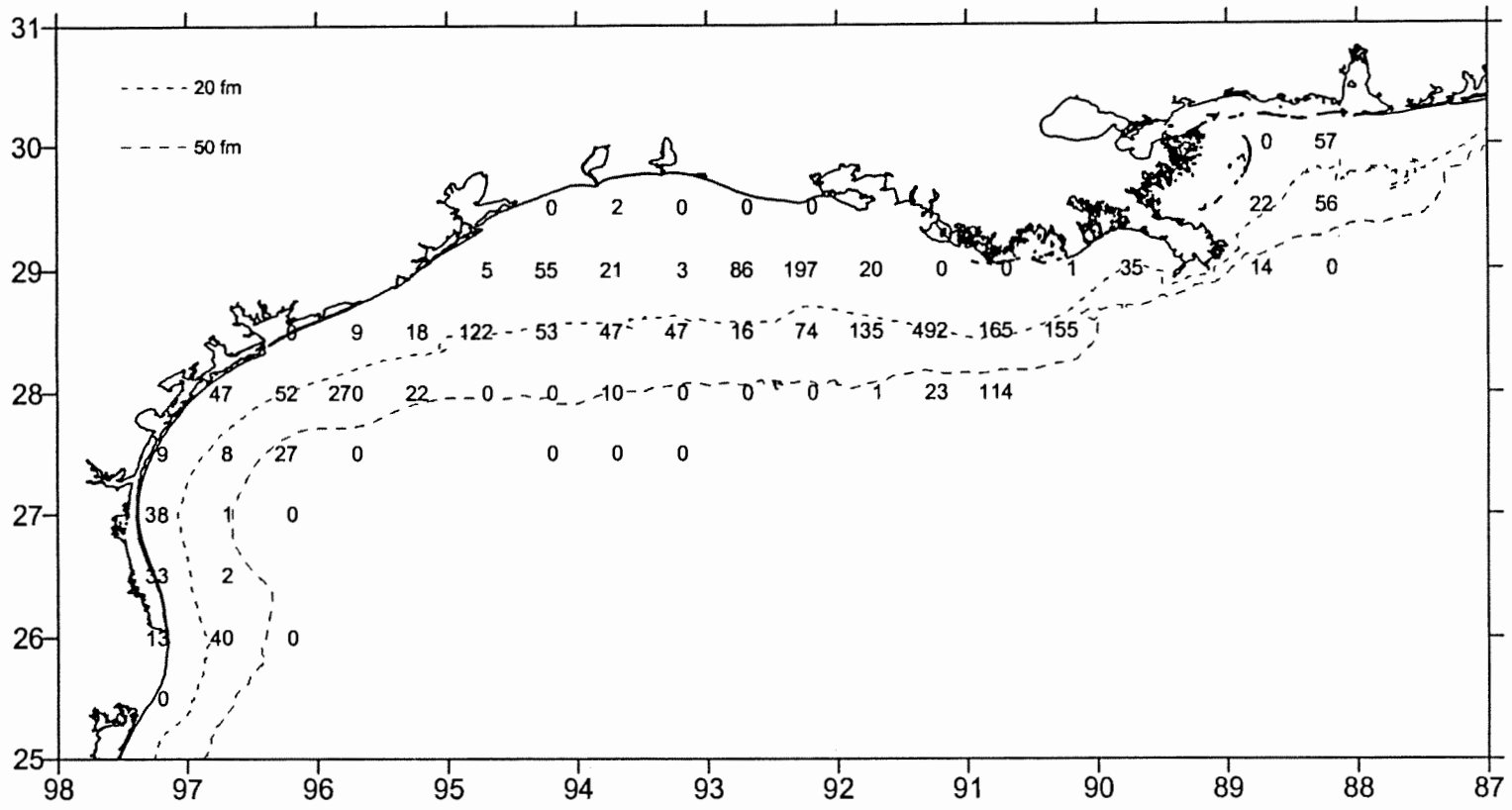

Figure 44. Mantis shrimp, Squilla empusa, number/hour for June-July 1997.

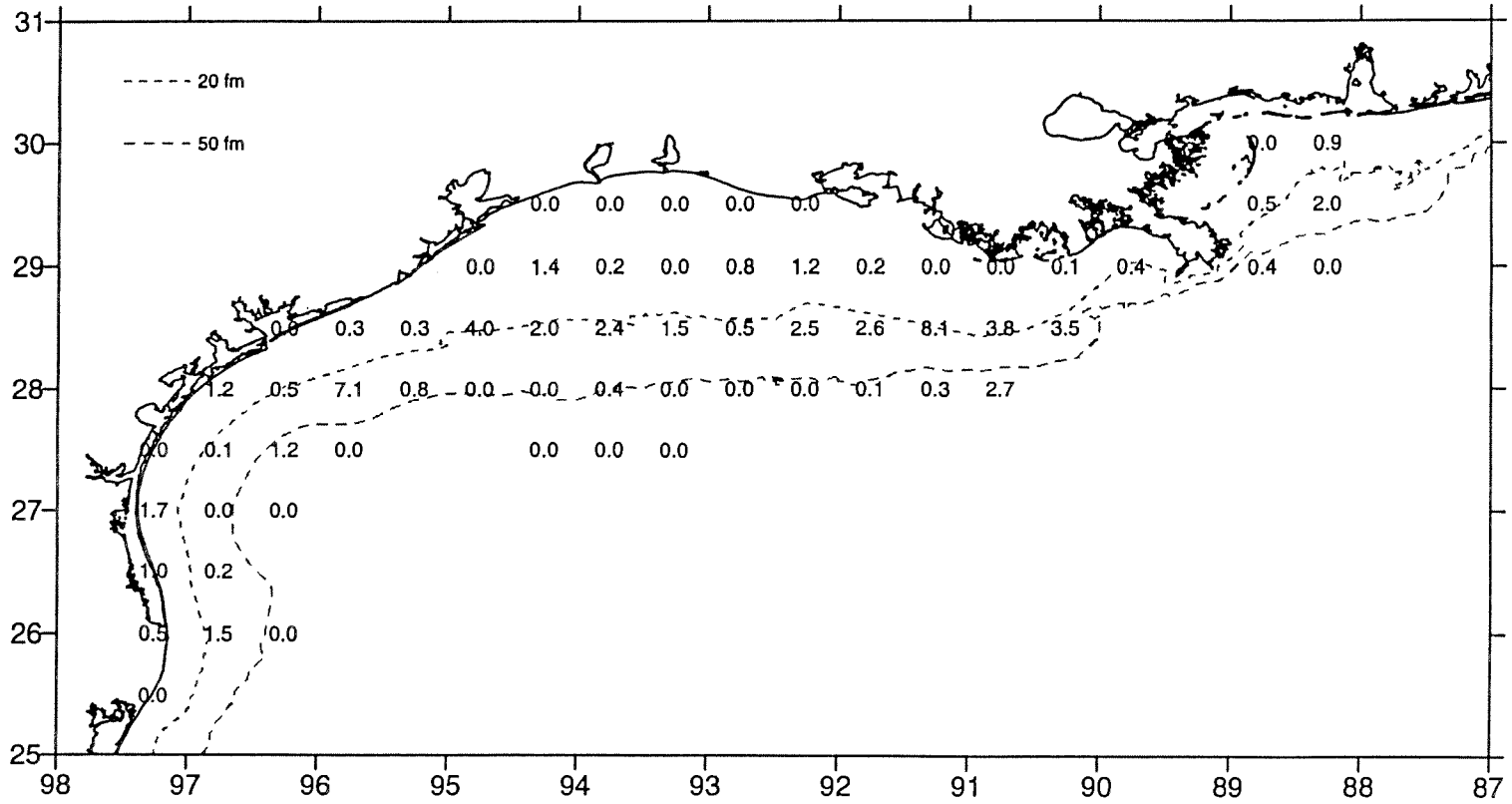

Figure 45. Mantis shrimp, Squilla empusa, lb/hour for June-July 1997.

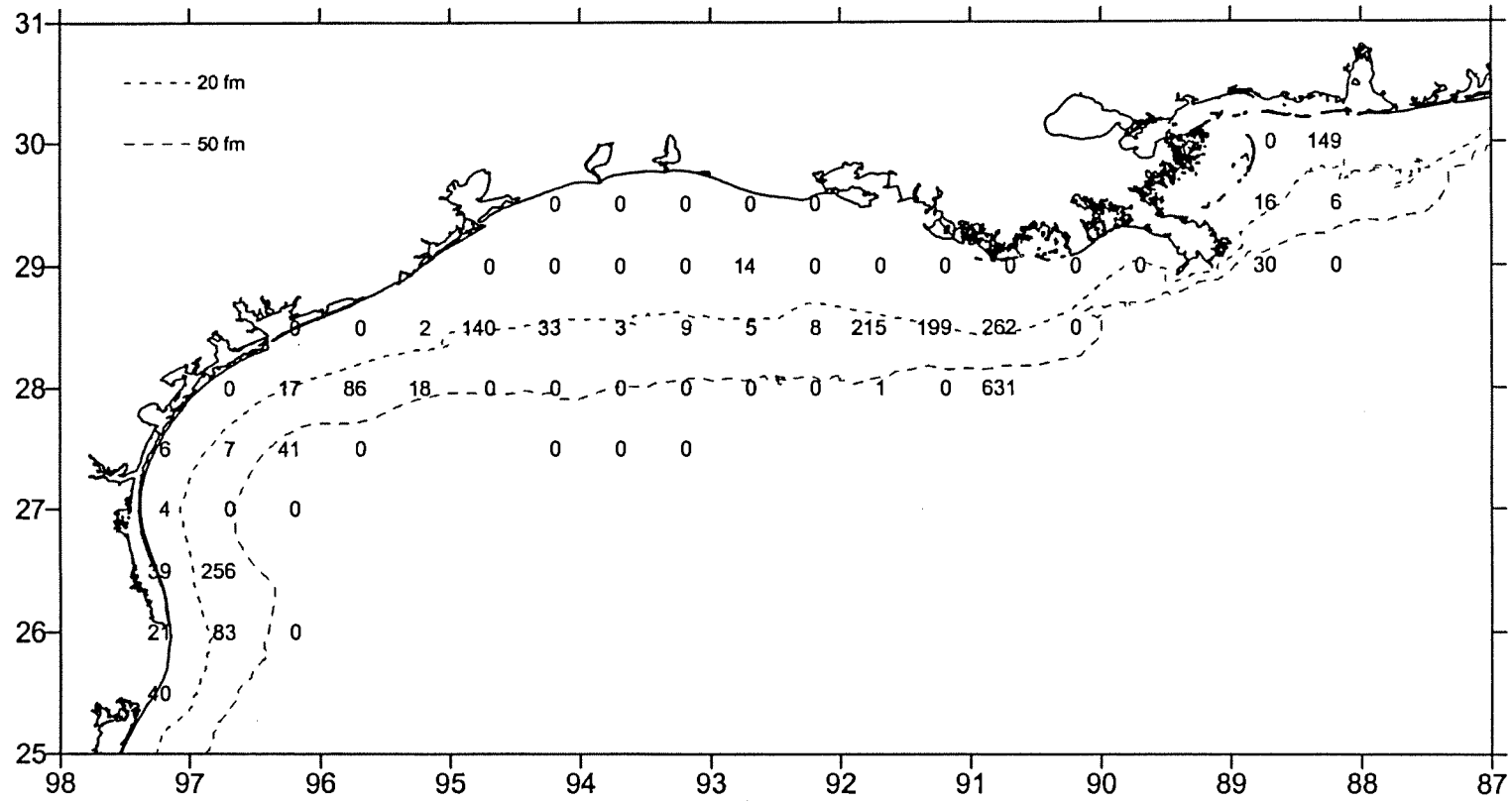

Figure 46. Lesser rock shrimp, Sicyonia dorsalis, number/hour for June-July 1997.

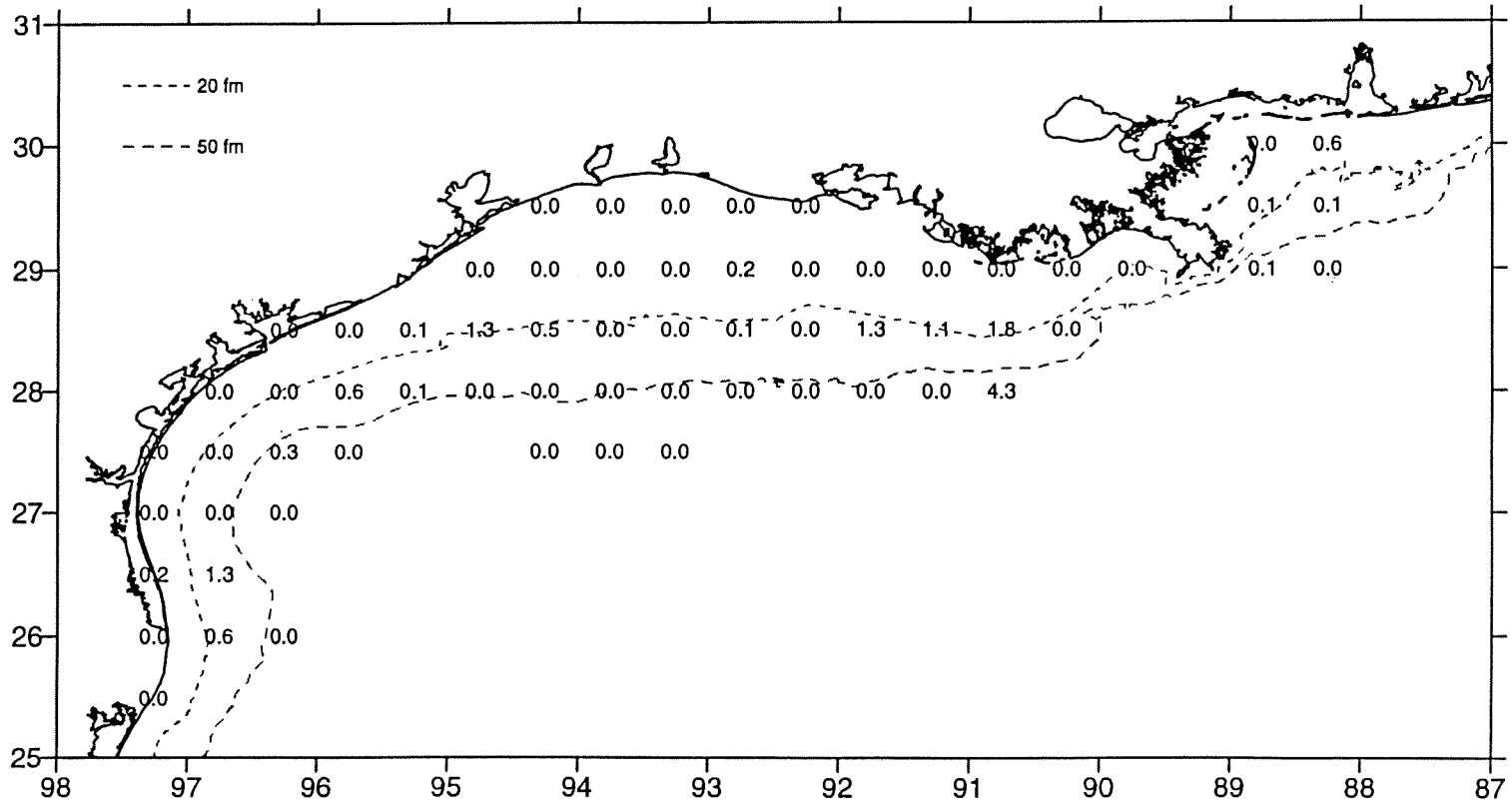

Figure 47. Lesser rock shrimp, Sicyonia dorsalis, lb/hour for June-July 1997.

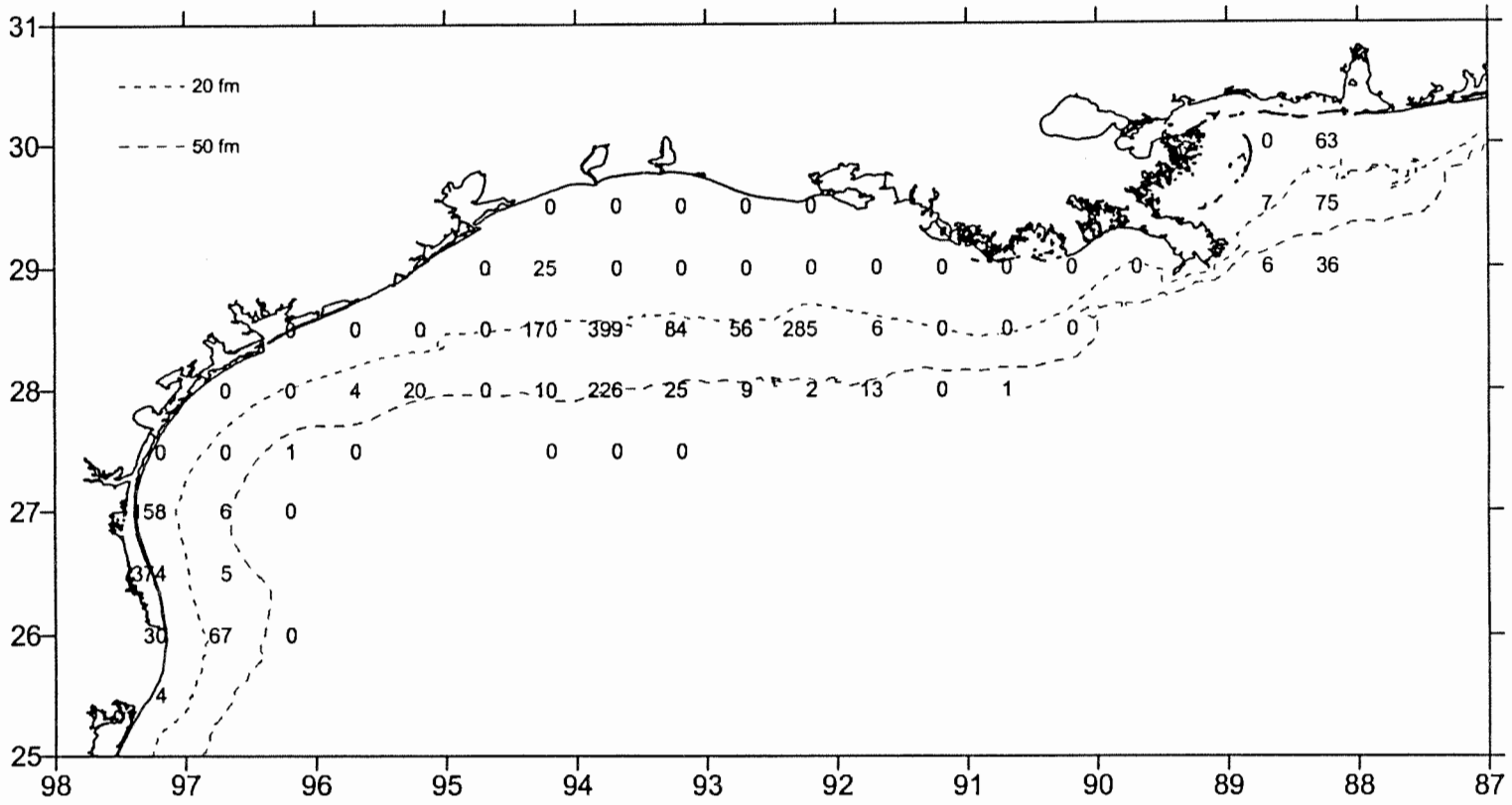

Figure 48. Brown rock shrimp, Sicyonia brevirostris, number/hour for June-July 1997.

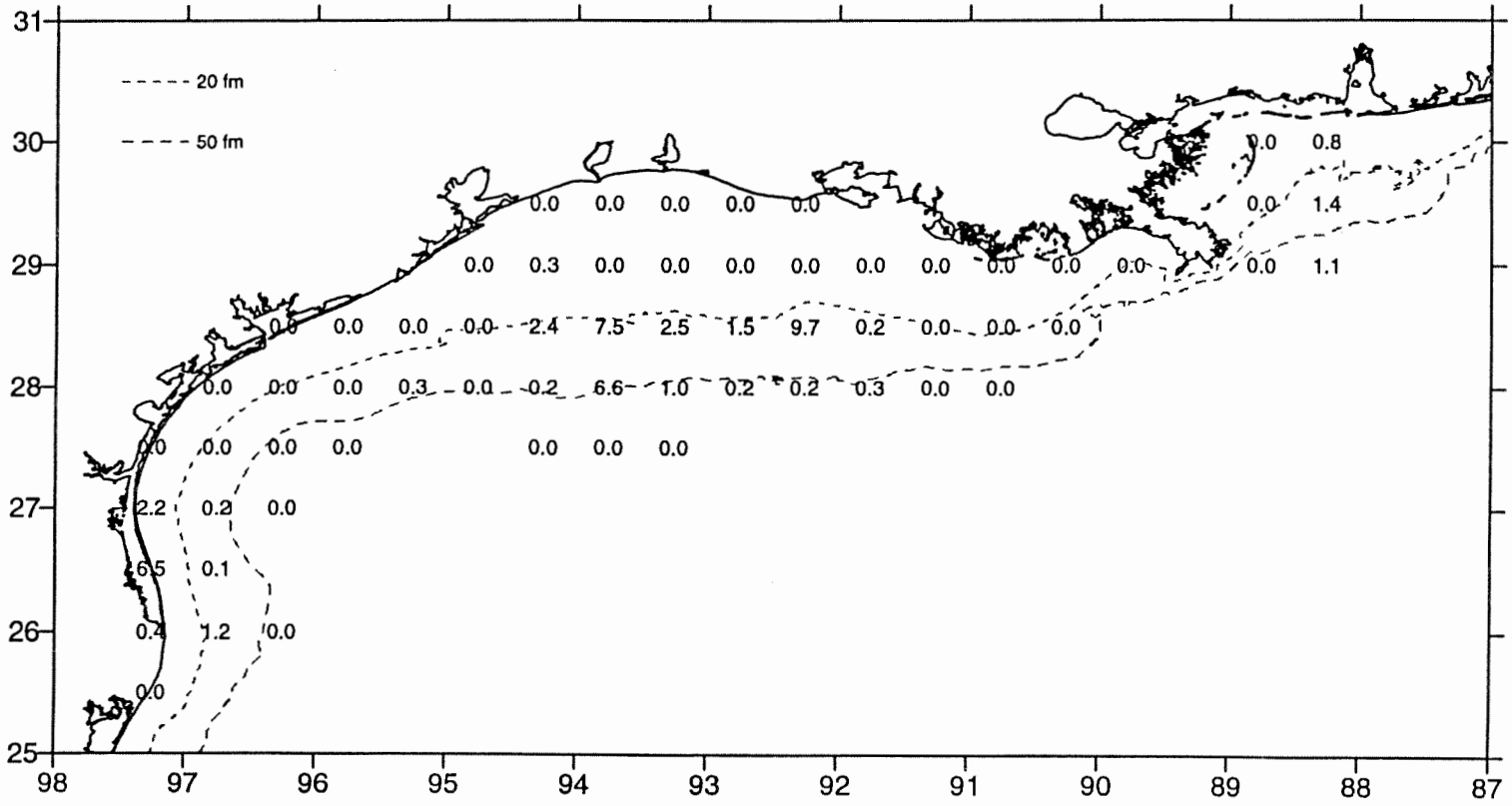

Figure 49. Brown rock shrimp, Sicyonia brevirostris, lb/hour for June-July 1997.

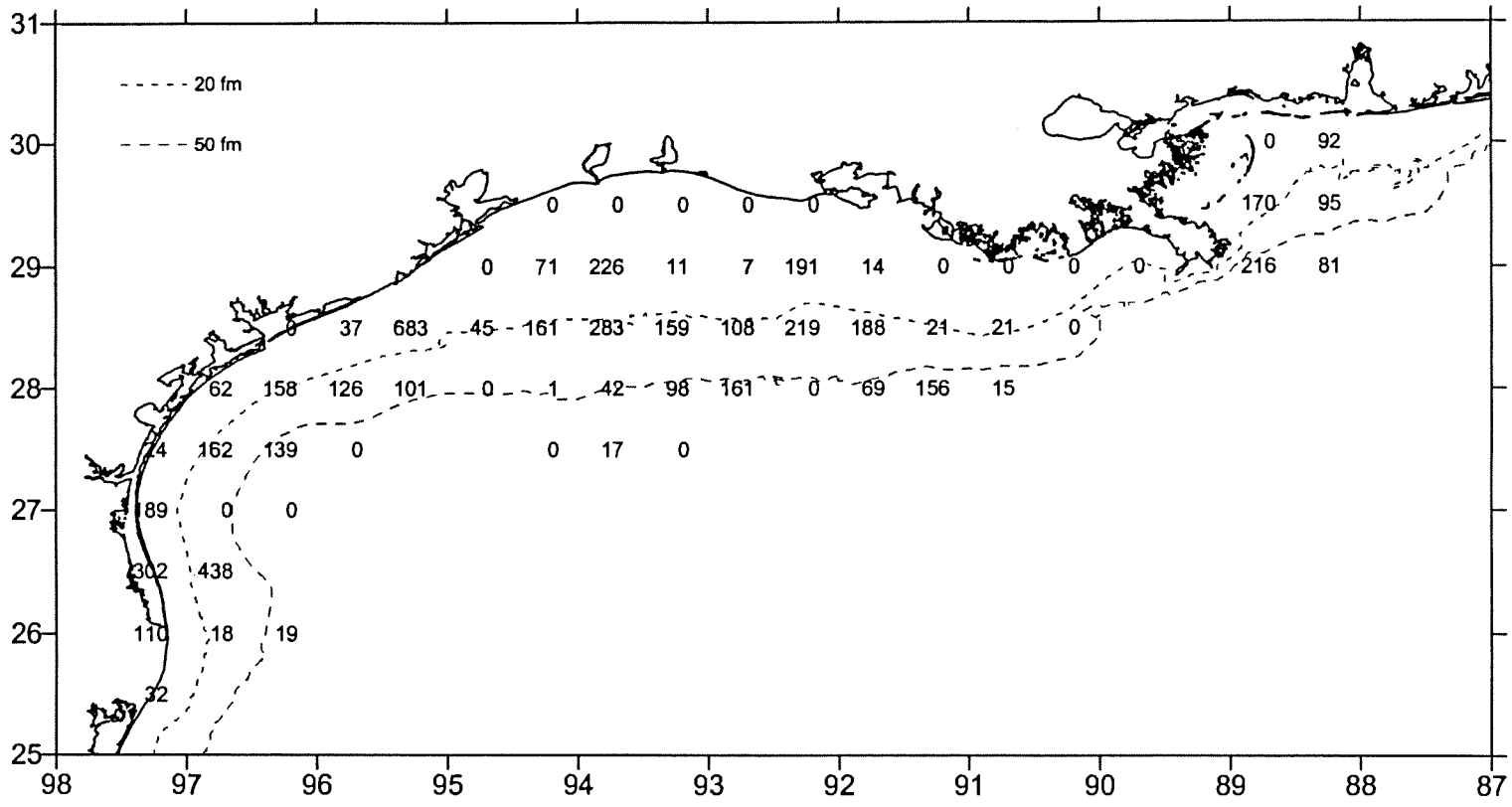

Figure 50. Arrow squid, Loligo pleii, number/hour for June-July 1997.

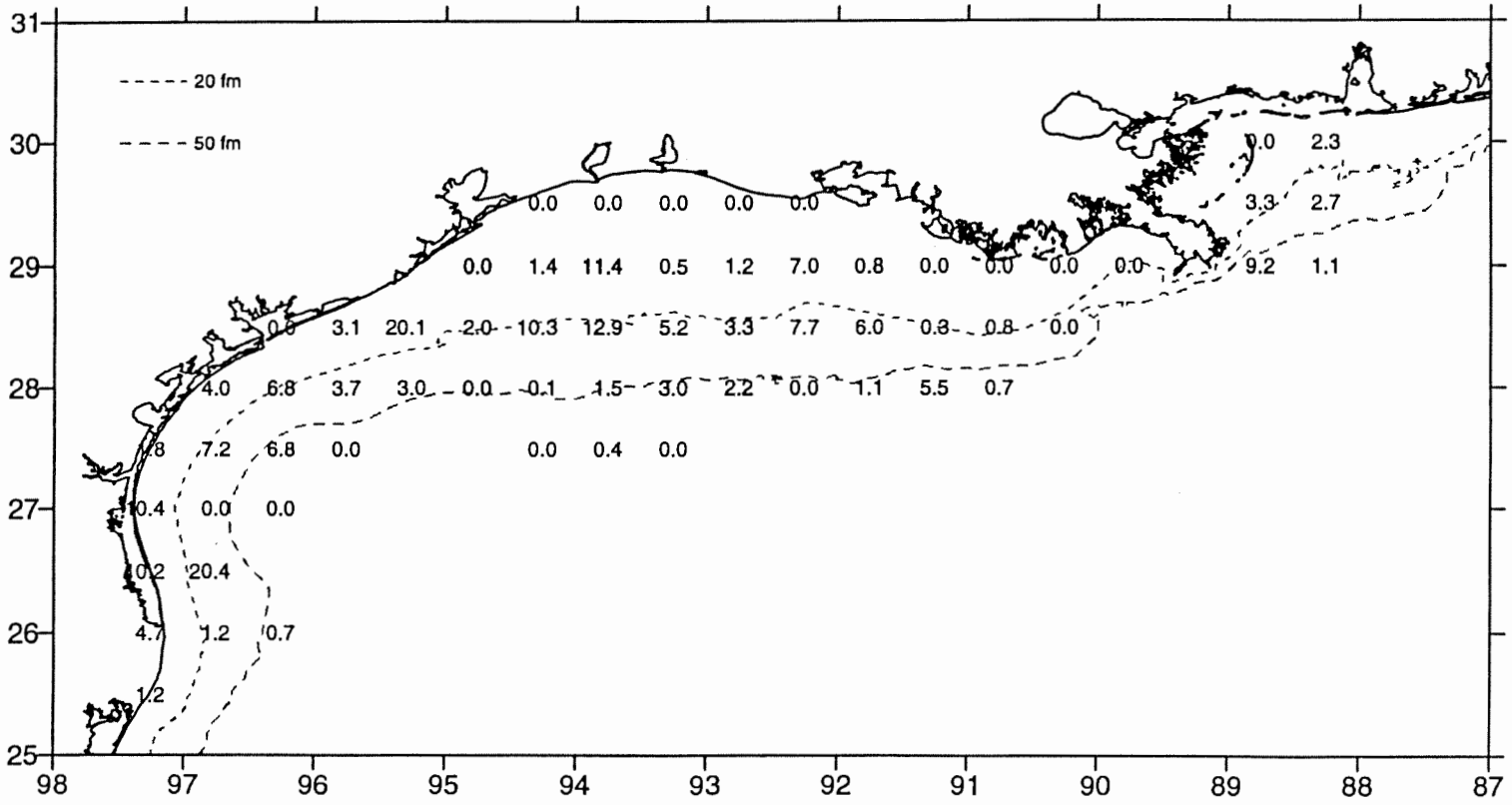

Figure 51. Arrow squid, Loligo pleii, lb/hour for June-July 1997.

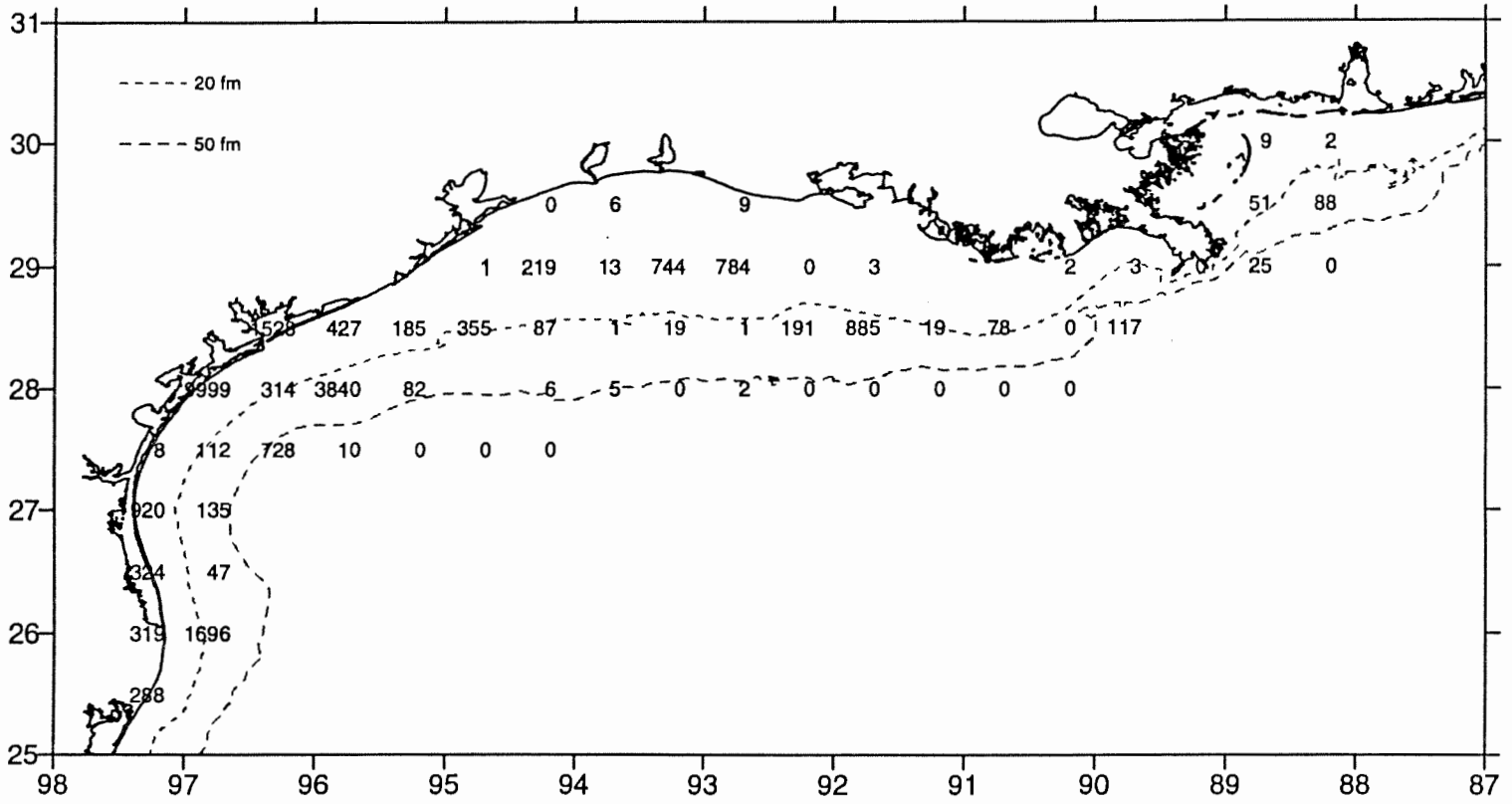

Figure 52. Atlantic bumper, Chloroscombrus chrysurus, number/hour for October-December 1997.

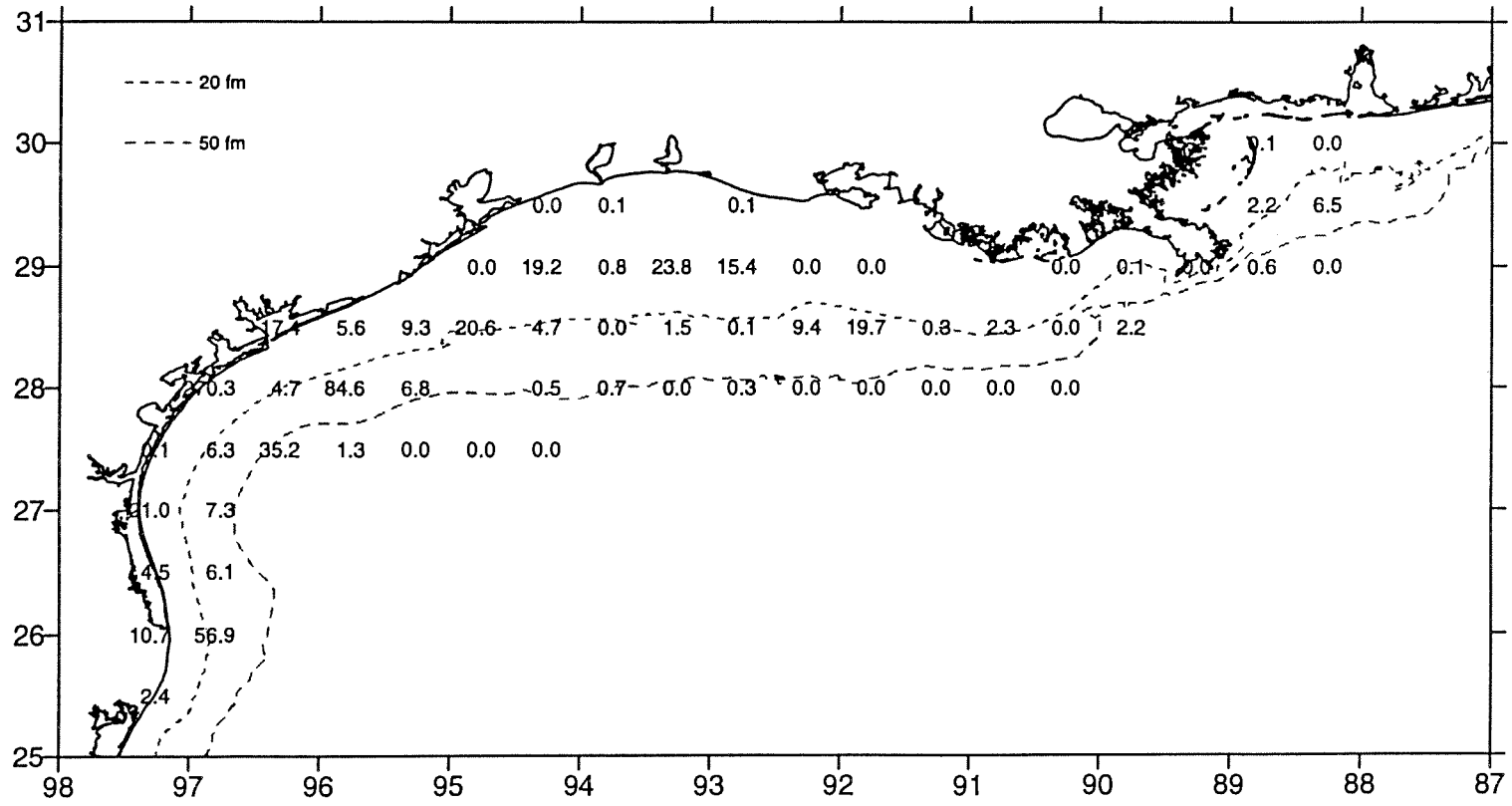

Figure 53. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for October-December 1997.

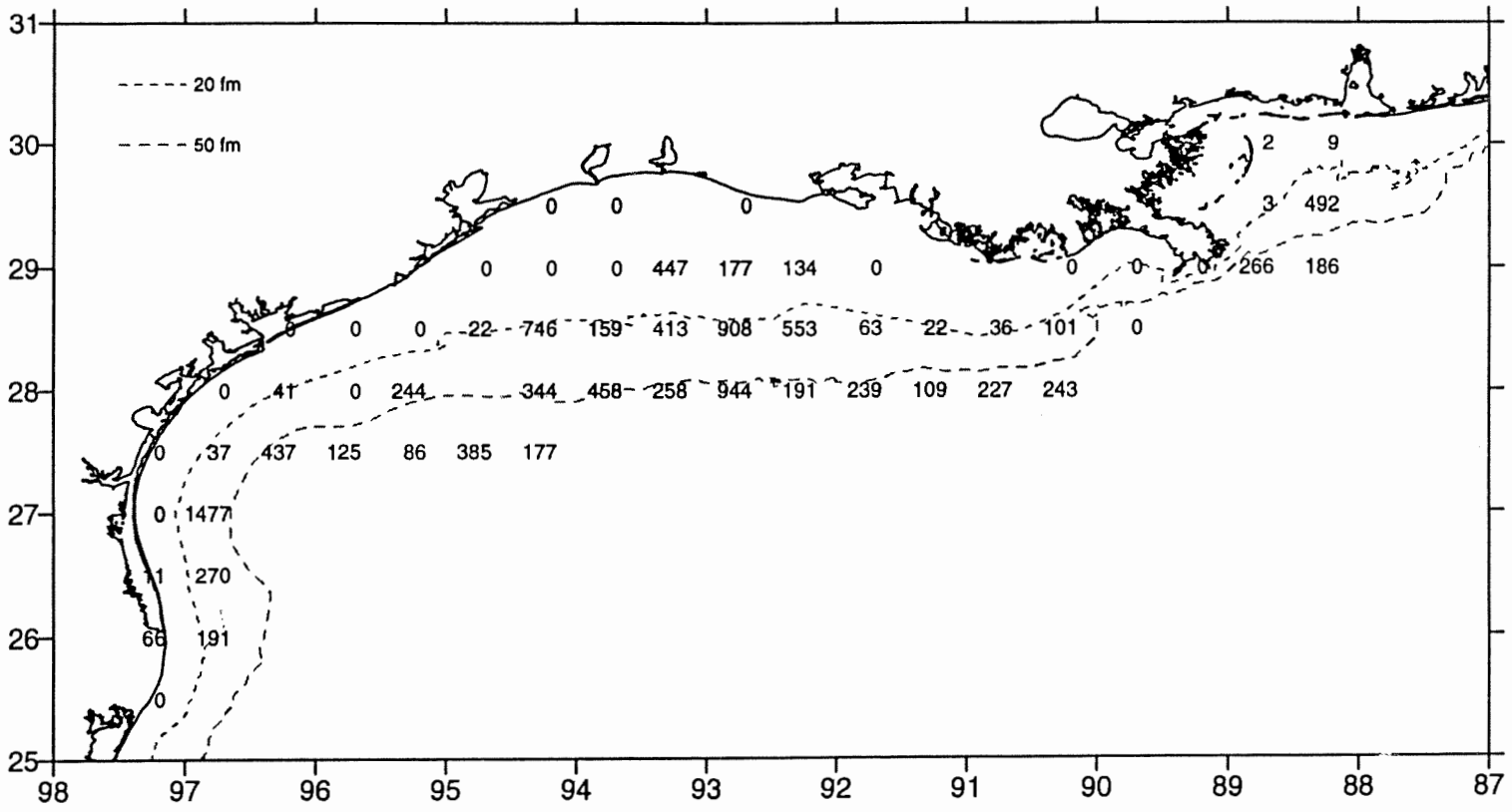

Figure 54. Longspine porgy, Stenotomus caprinus, number/hour for October-December 1997.

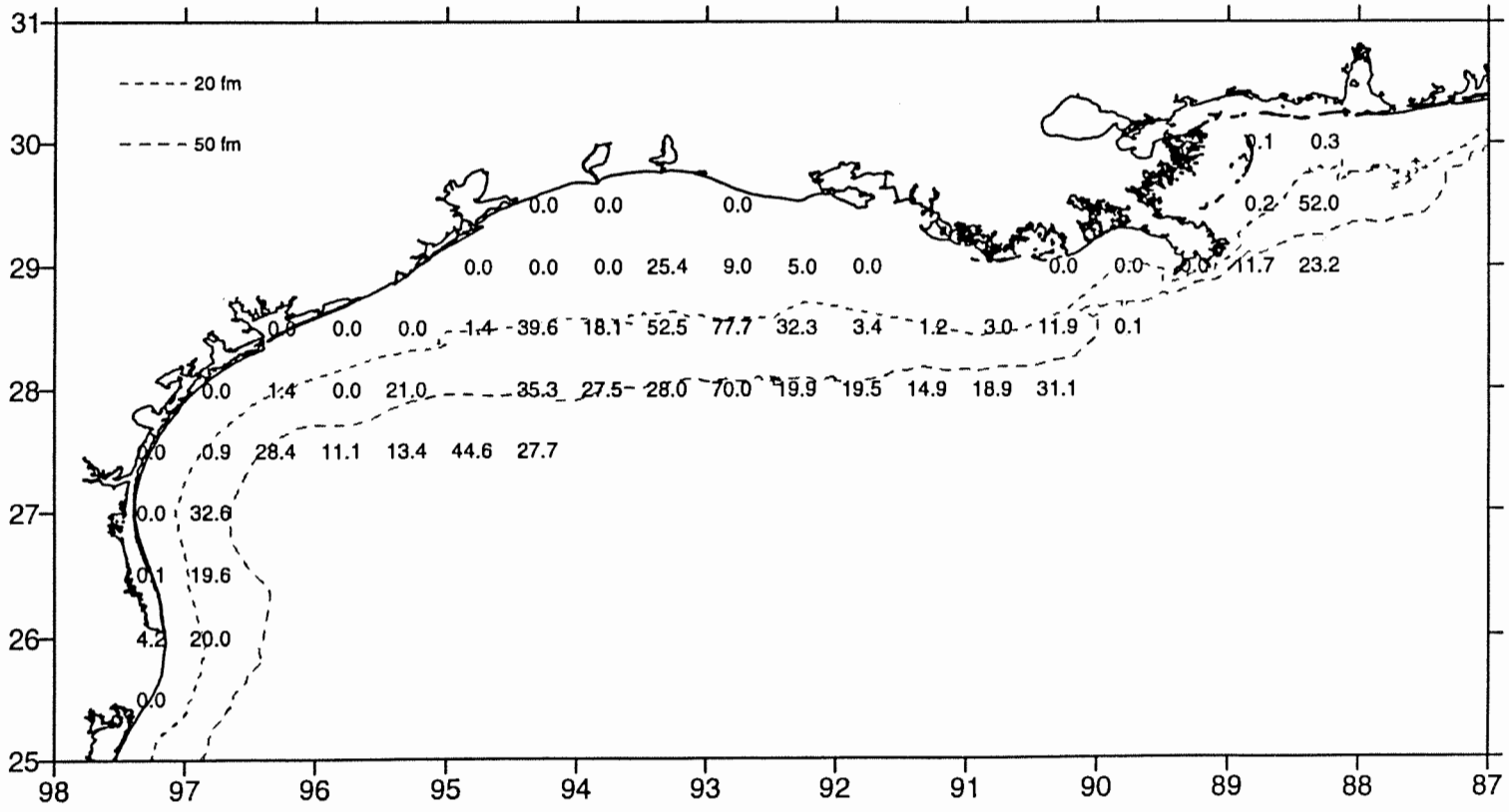

Figure 55. Longspine porgy, Stenotomus caprinus, lb/hour for October-December 1997.

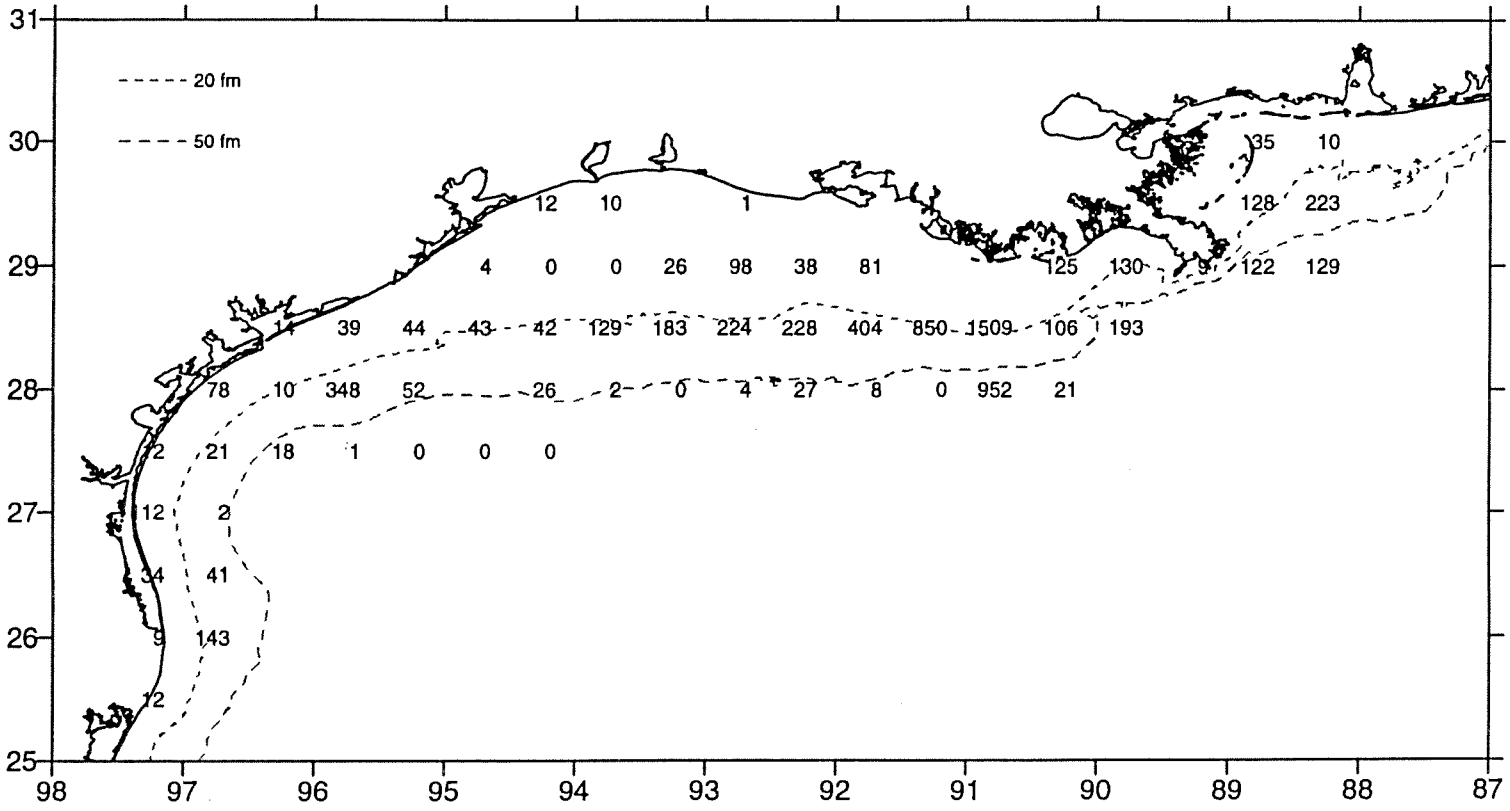

Figure 56. Atlantic croaker, Micropogonias undulatus, number/hour for October-December 1997.

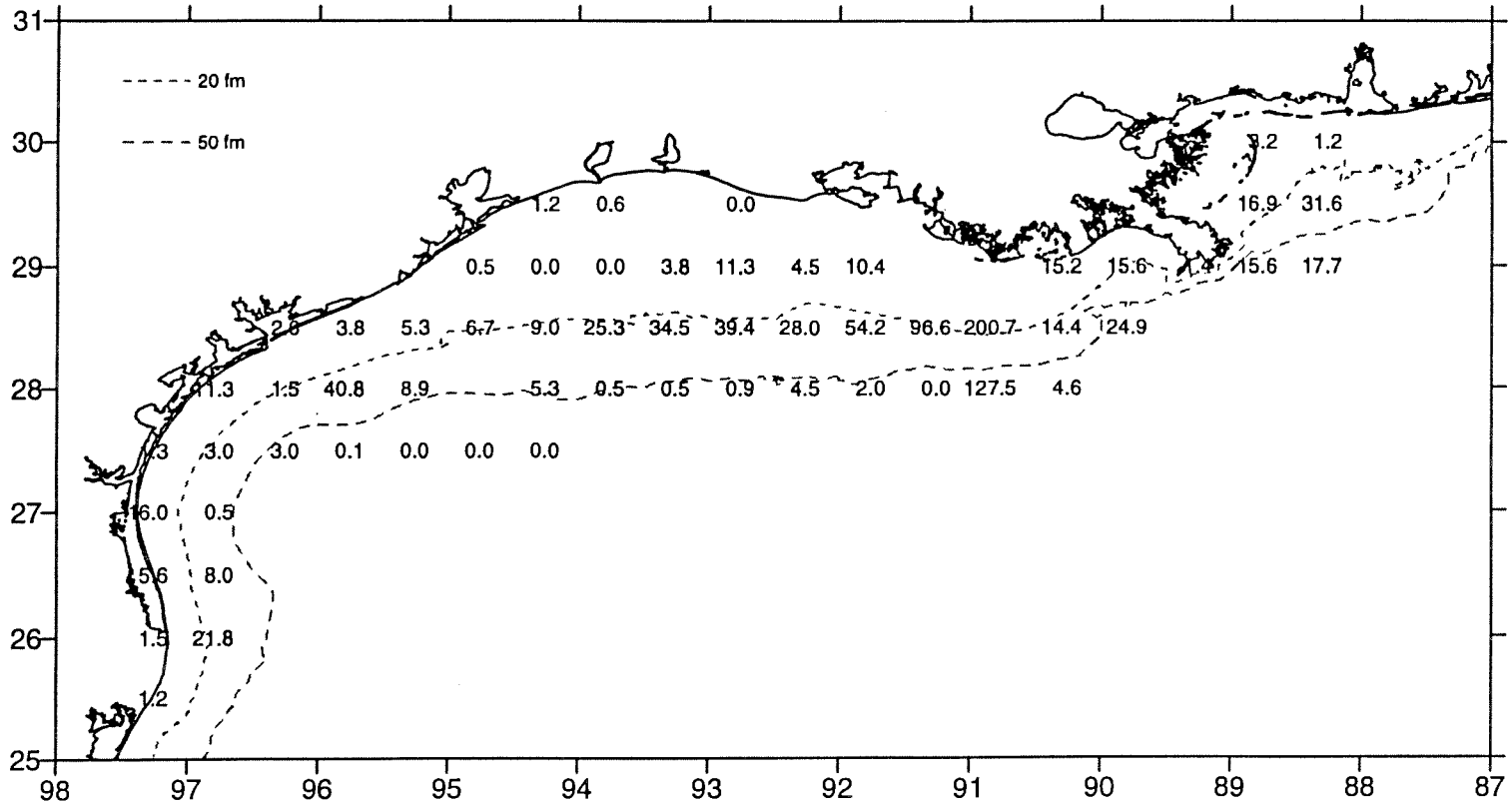

Figure 57. Atlantic croaker, Micropogonias undulatus, lb/hour for October-December 1997.

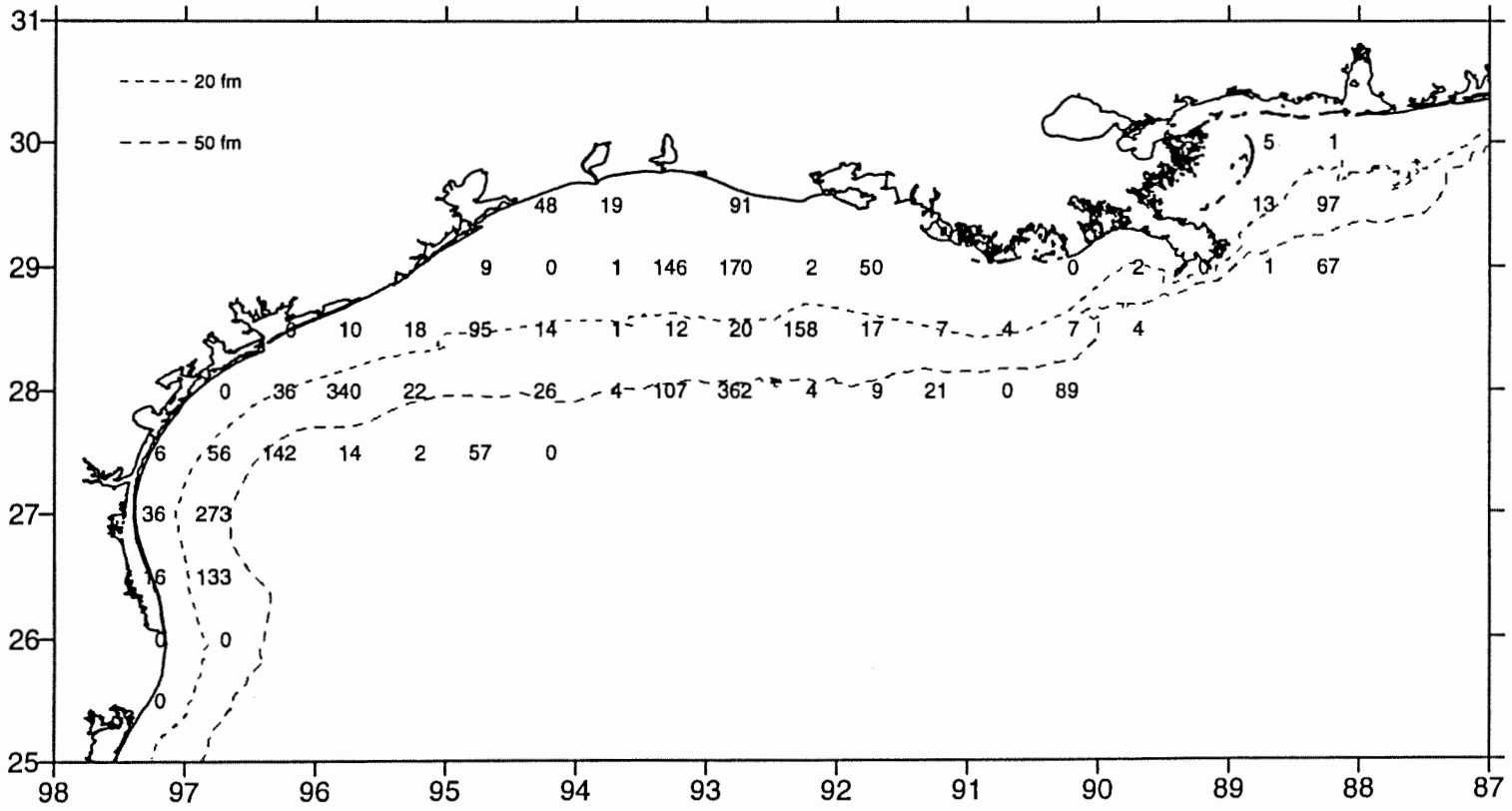

Figure 58. Gulf butterfish, Peprilus burti, number/hour for October-December 1997.

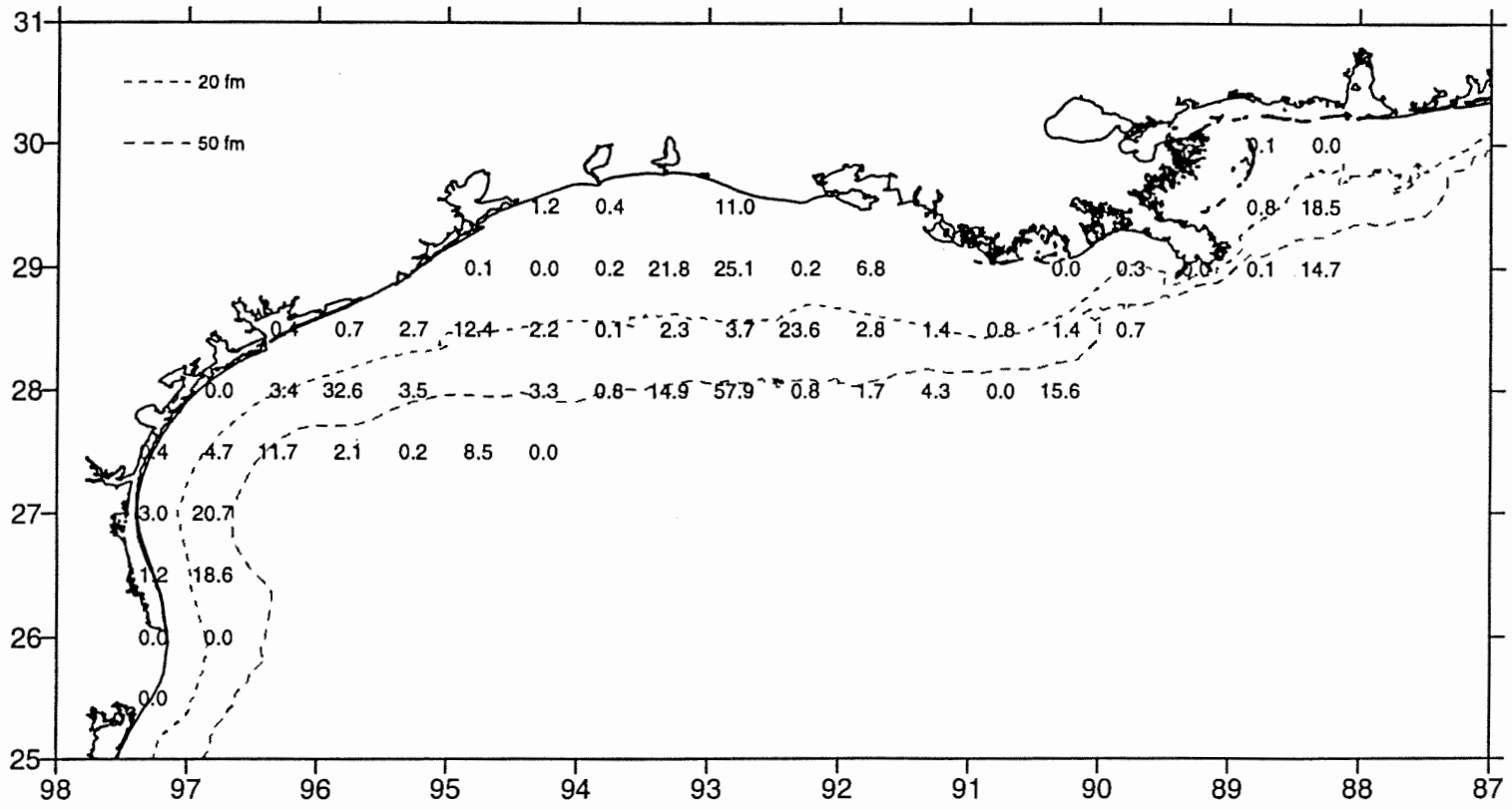

Figure 59. Gulf butterfish, Peprilus burti, lb/hour for October-December 1997.

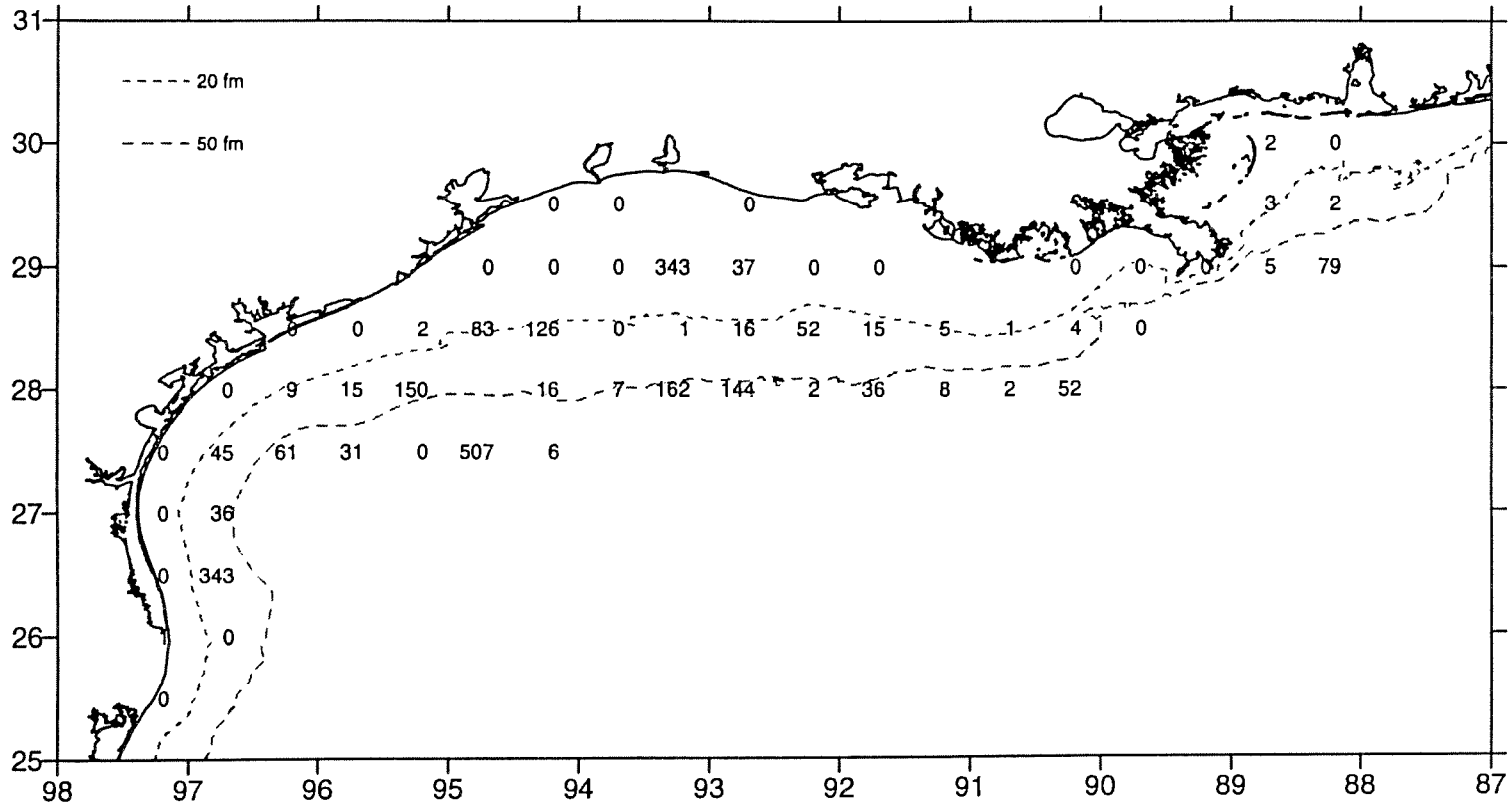

Figure 60. Rough scad, Trachurus lathami, number/hour for October-December 1997.

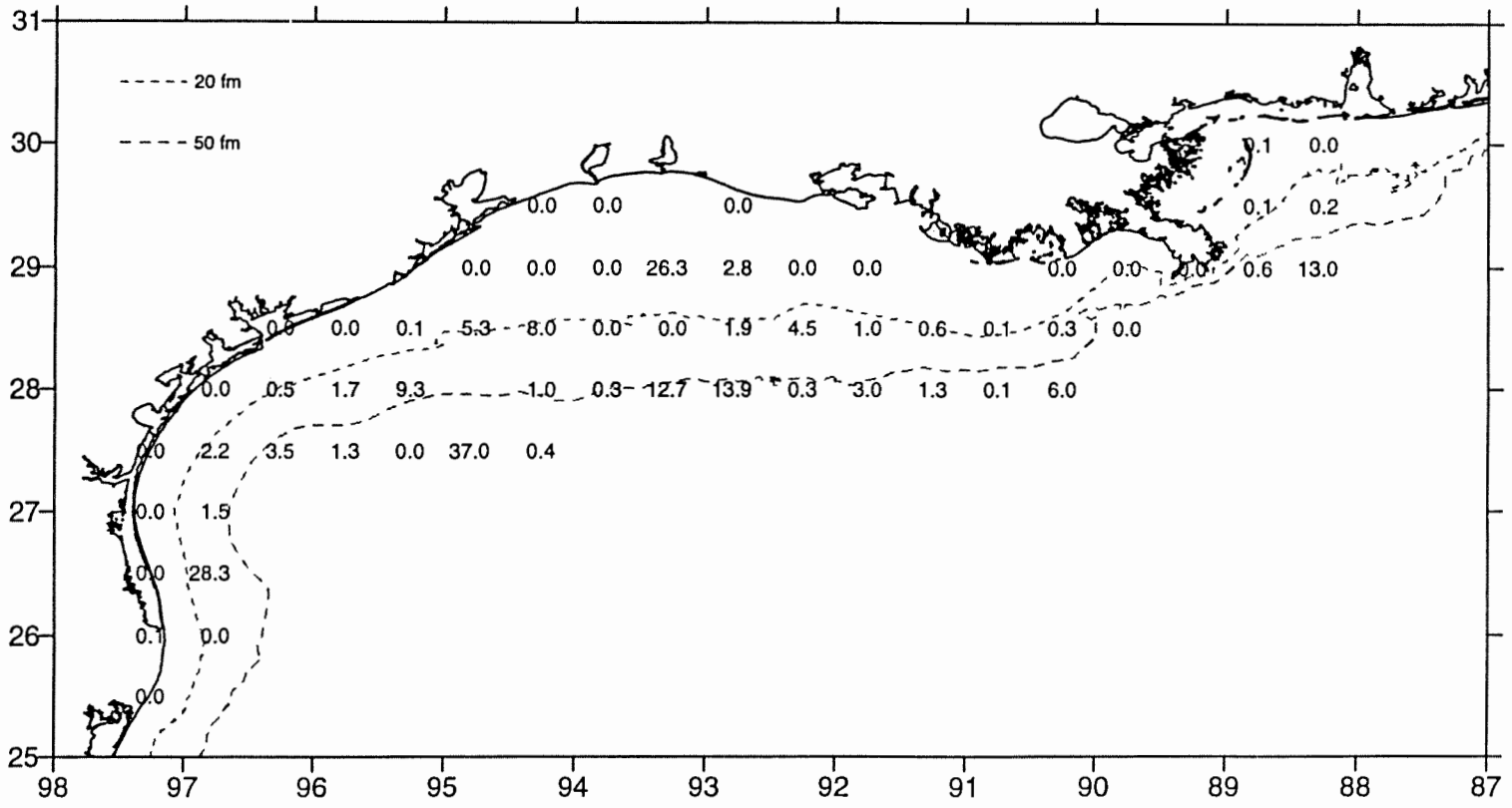

Figure 61. Rough scad, Trachurus lathami, lb/hour for October-December 1997.

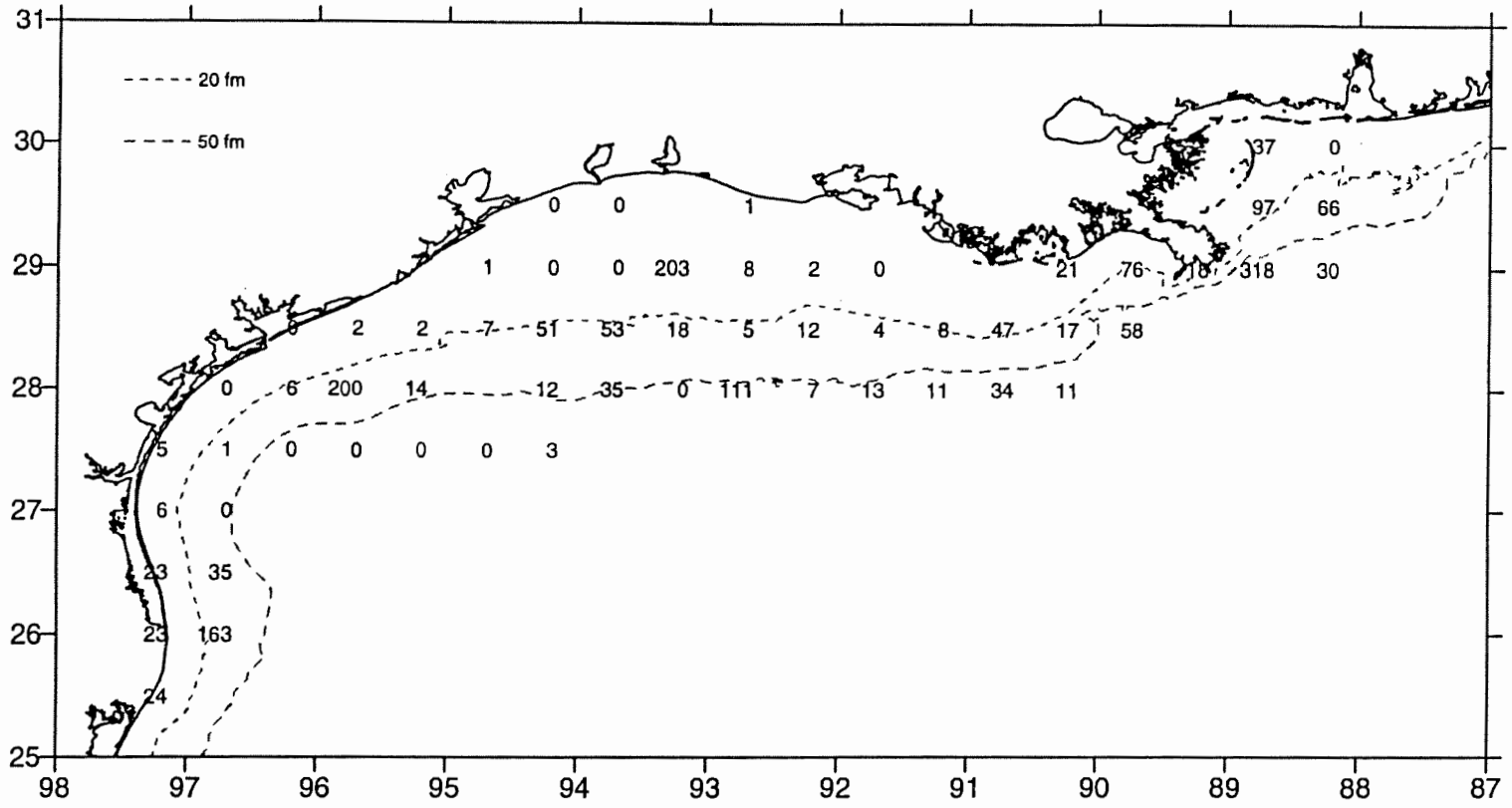

Figure 62. Spot, Leiostomus xanthurus, number/hour for October-December 1997.

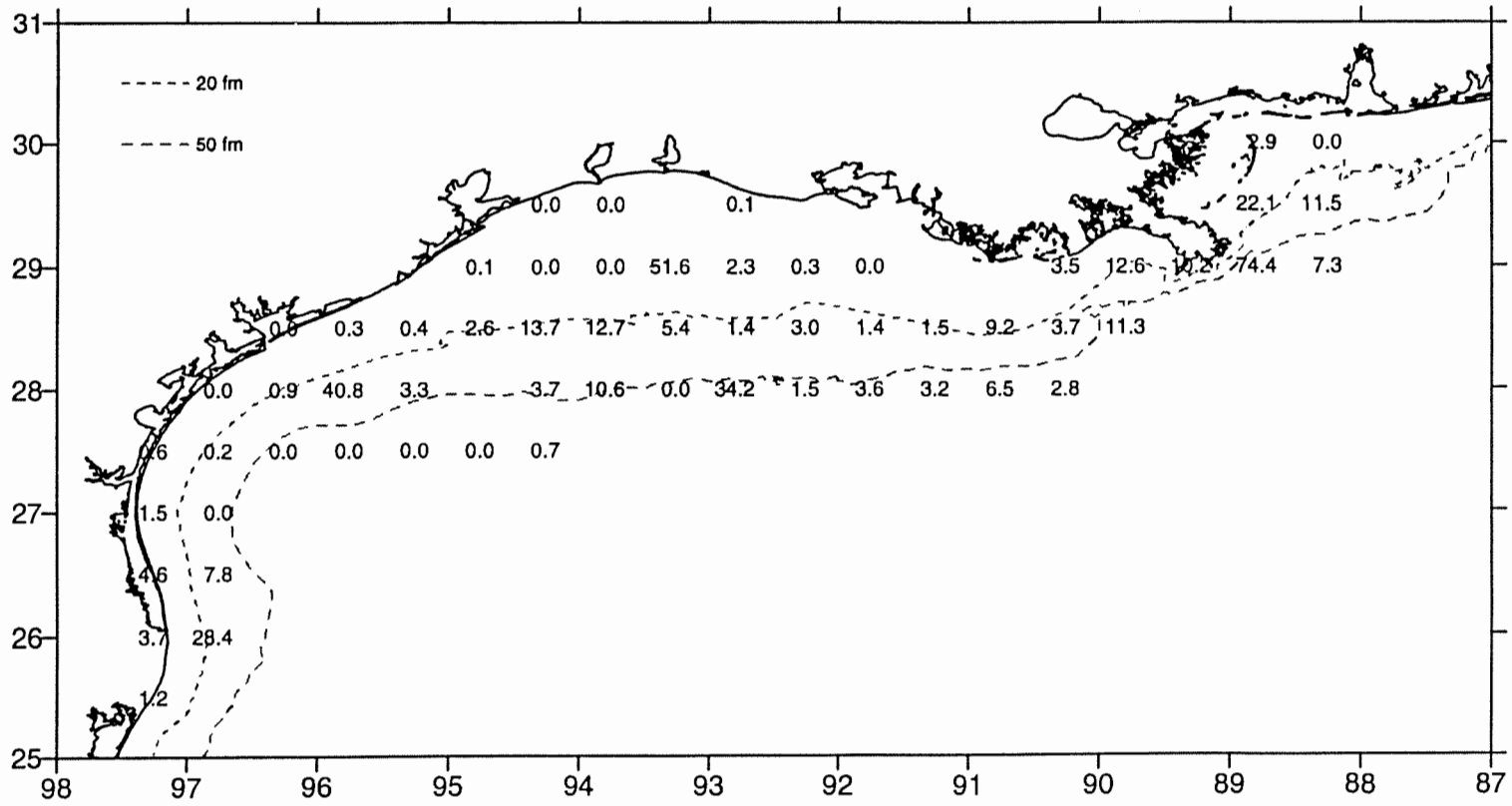

Figure 63. Spot, Leiostomus xanthurus, lb/hour for October-December 1997.

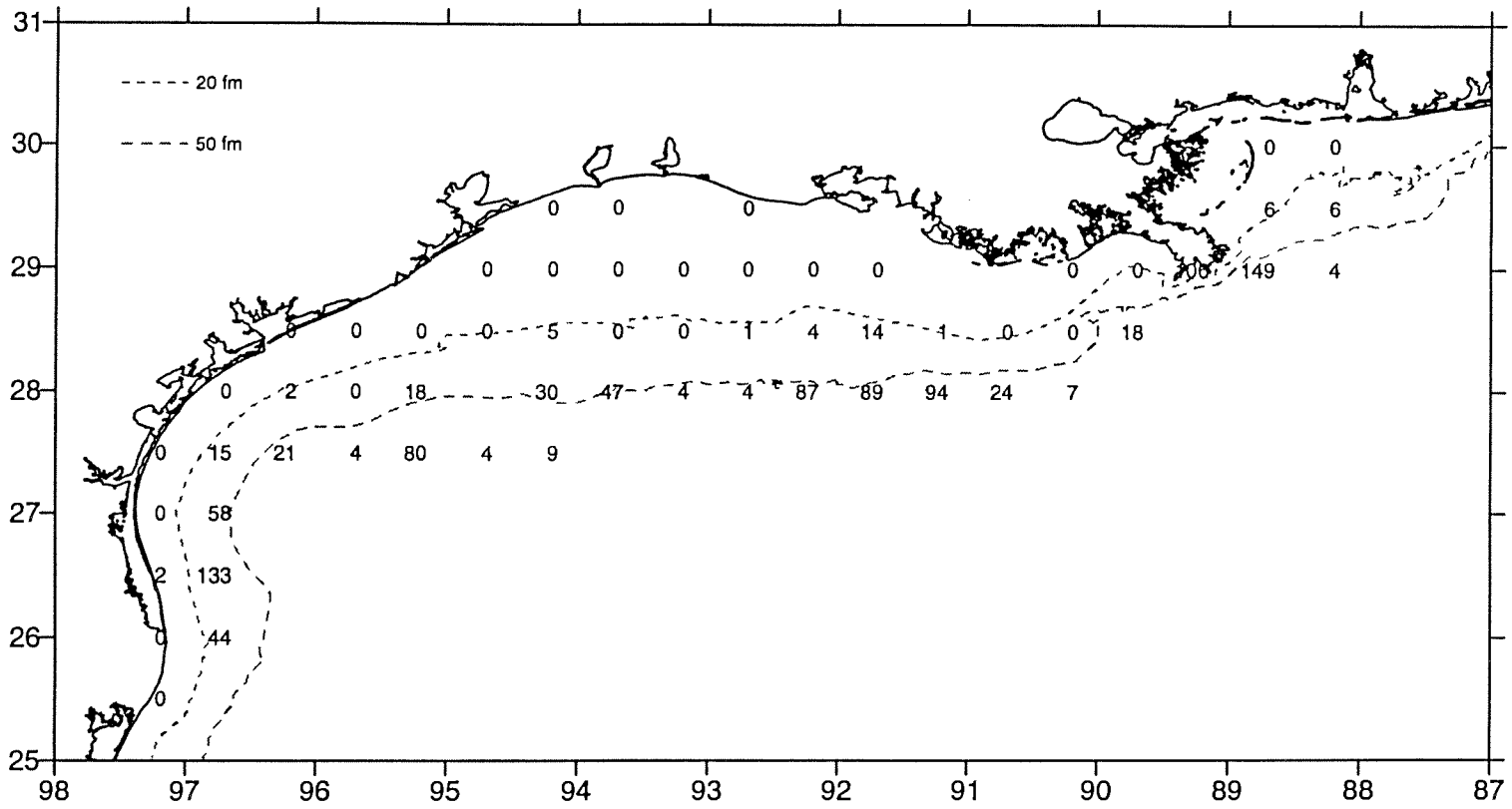

Figure 64. Blackear bass, Serranus atrobranchus, number/hour for October-December 1997.

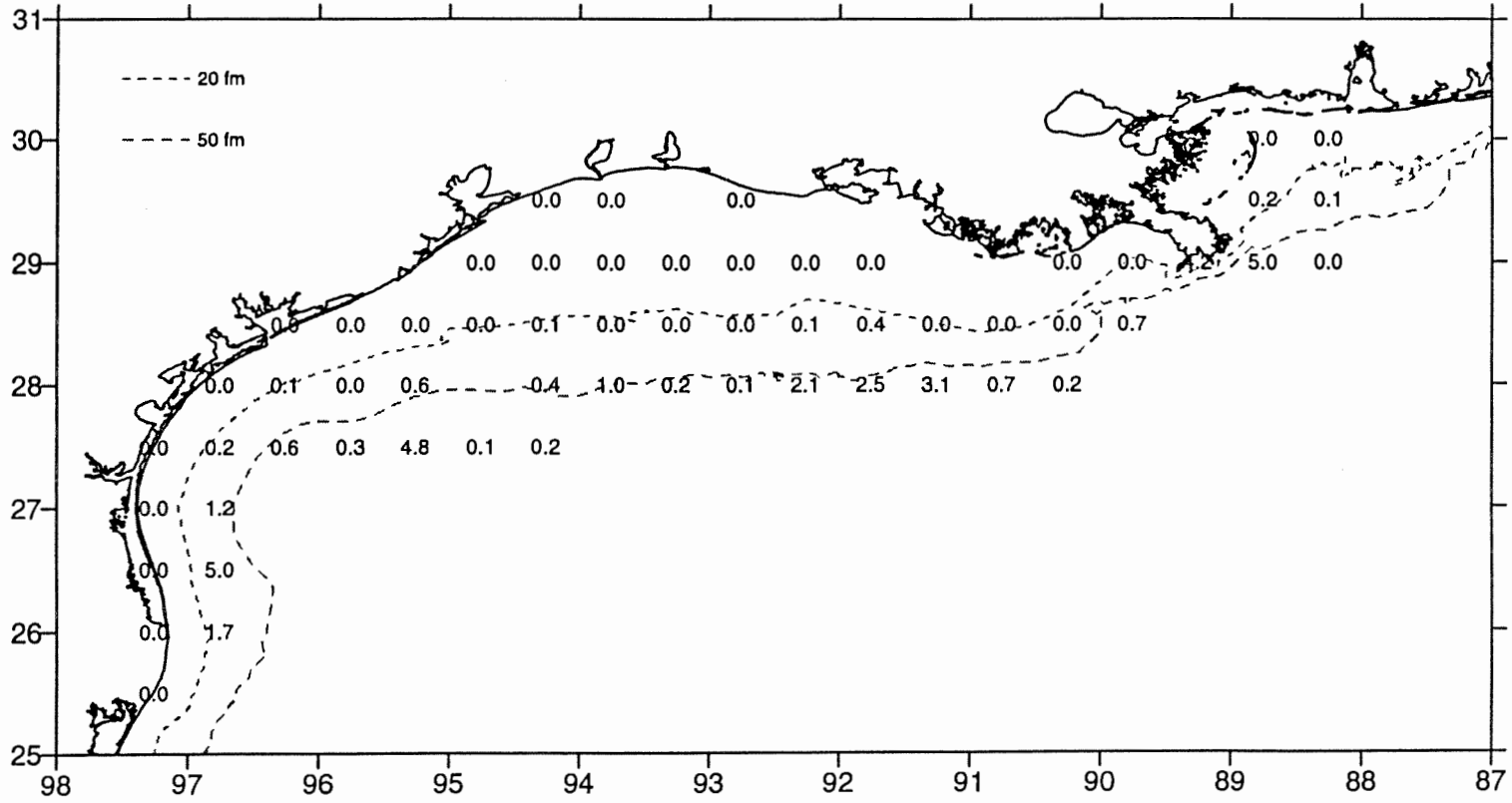

Figure 65. Blackear bass, Serranus atrobranchus, lb/hour for October-December 1997.

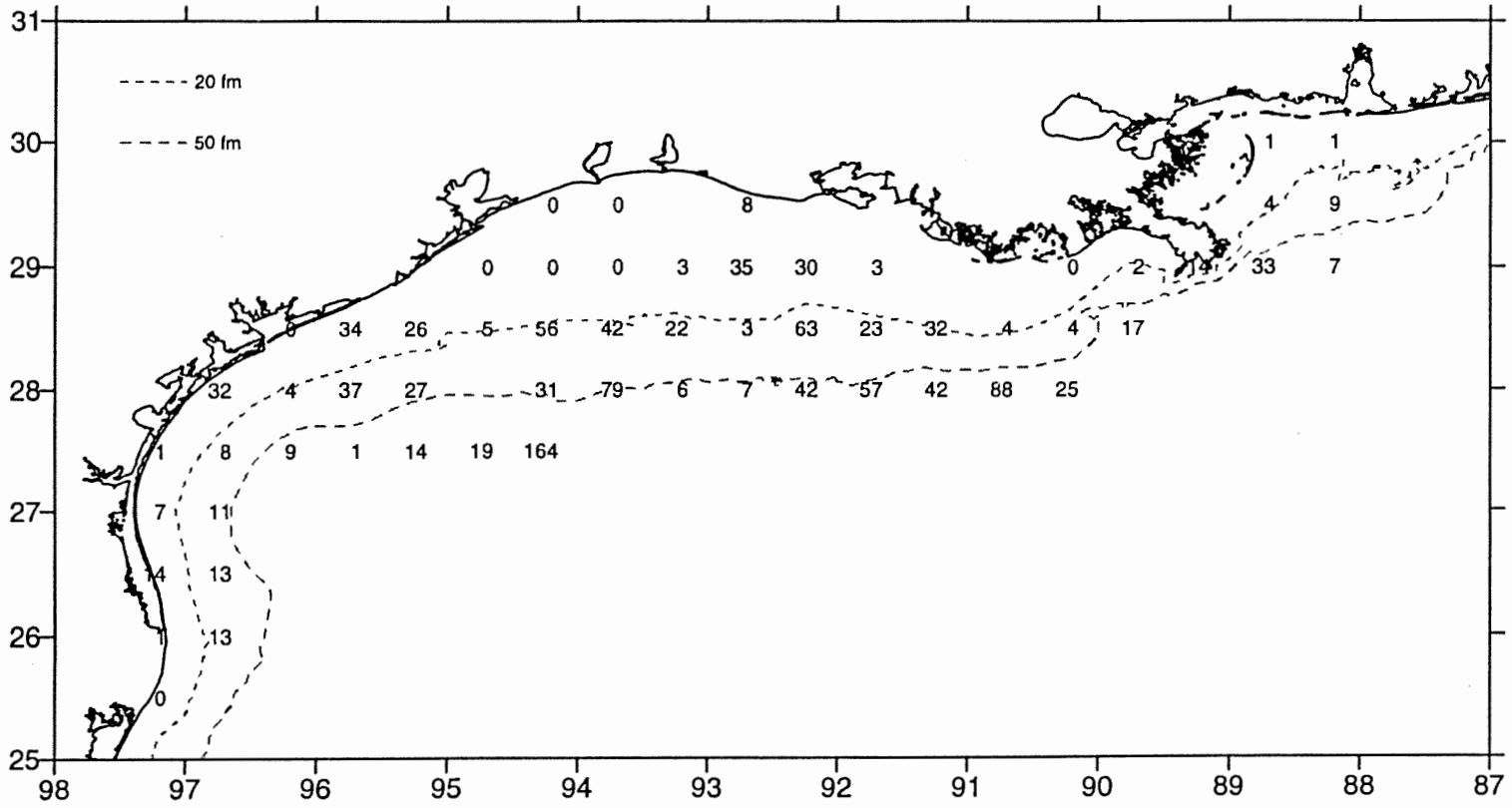

Figure 66. Rock sea bass, Centropristis philadelphica, number/hour for October-December 1997.

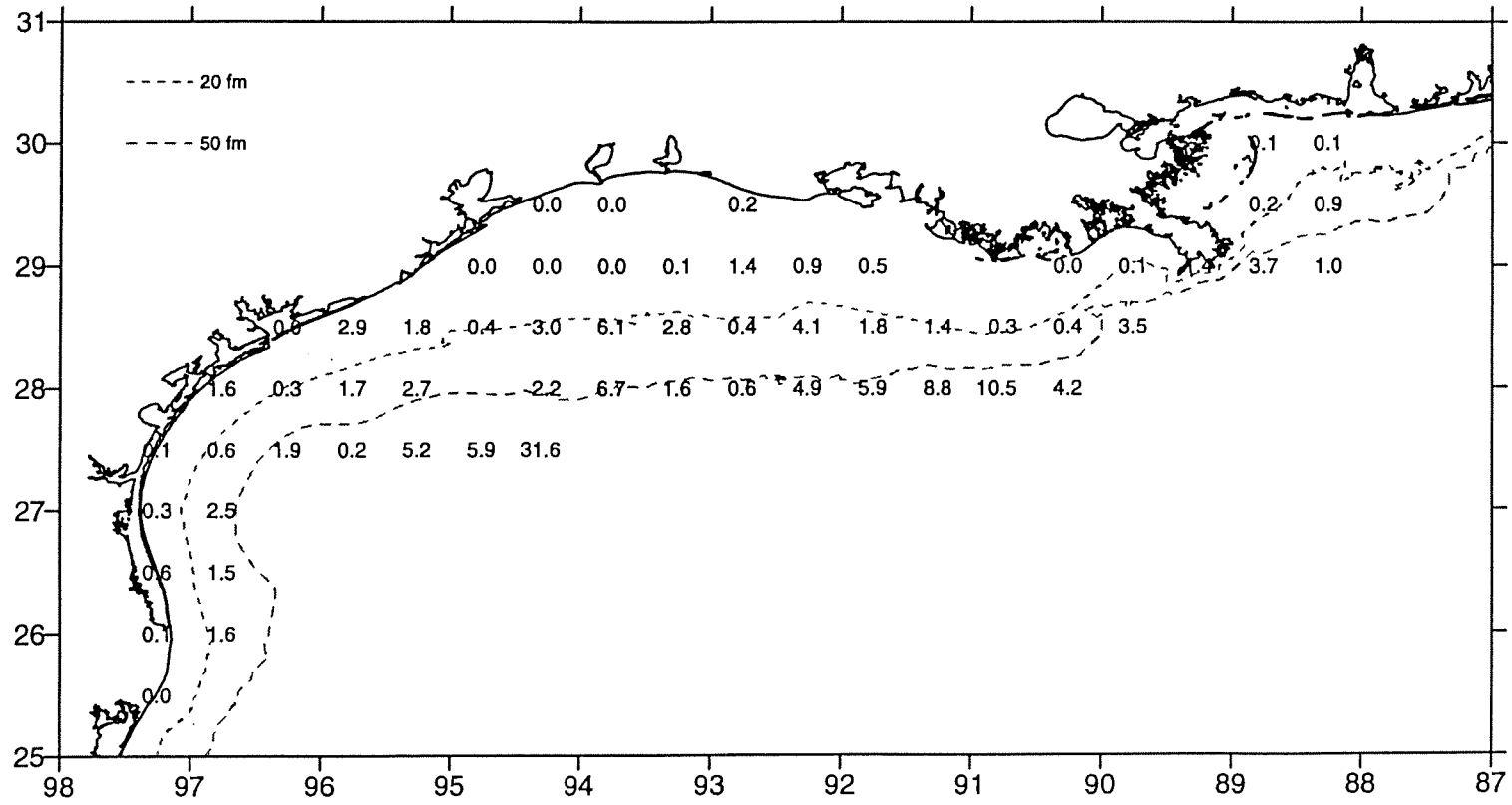

Figure 67. Rock sea bass, Centropristis philadelphica, lb/hour for October-December 1997.

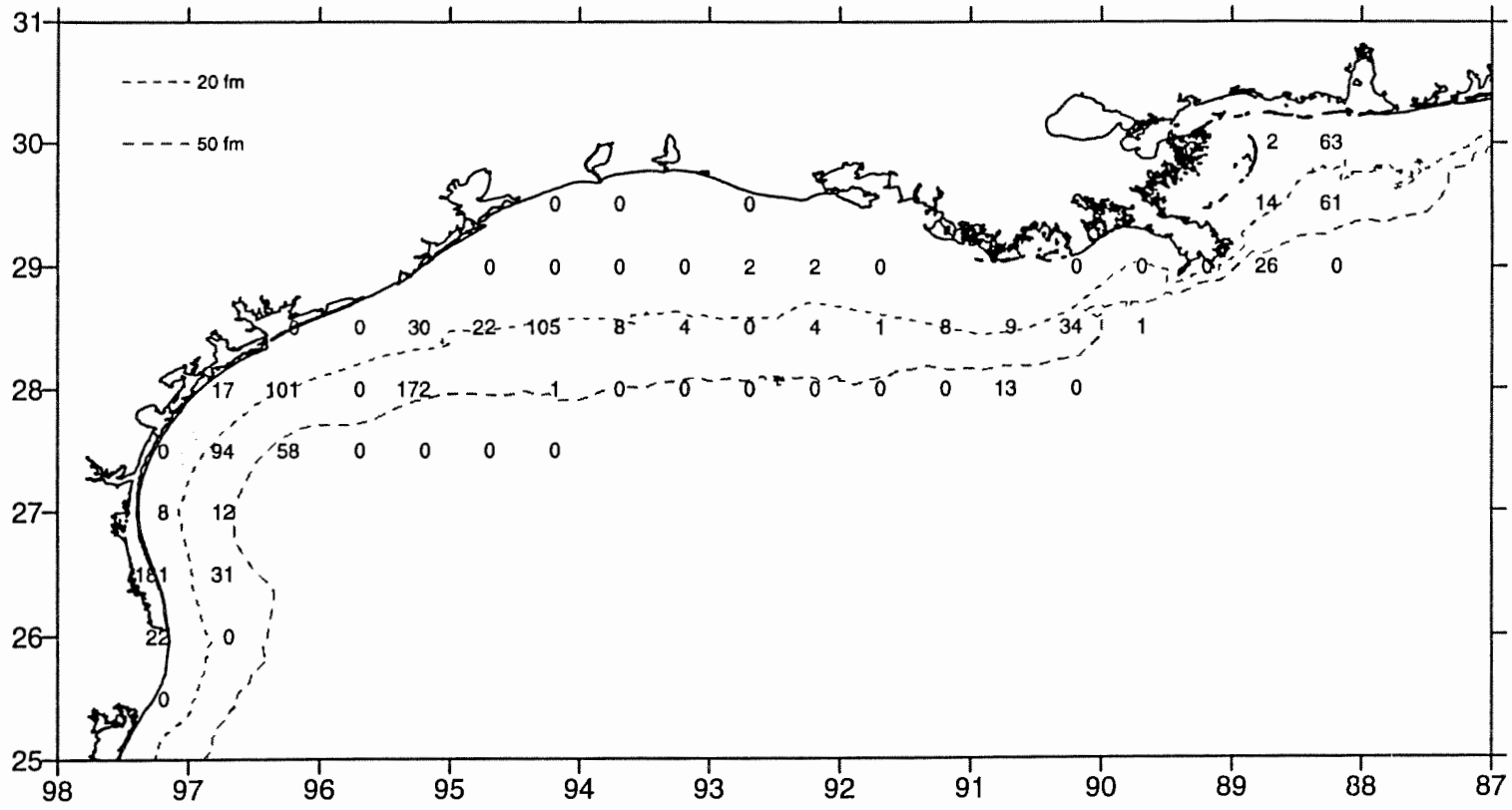

Figure 68. Dwarf sand perch, Diplectrum bivittatum, number/hour for October-December 1997.

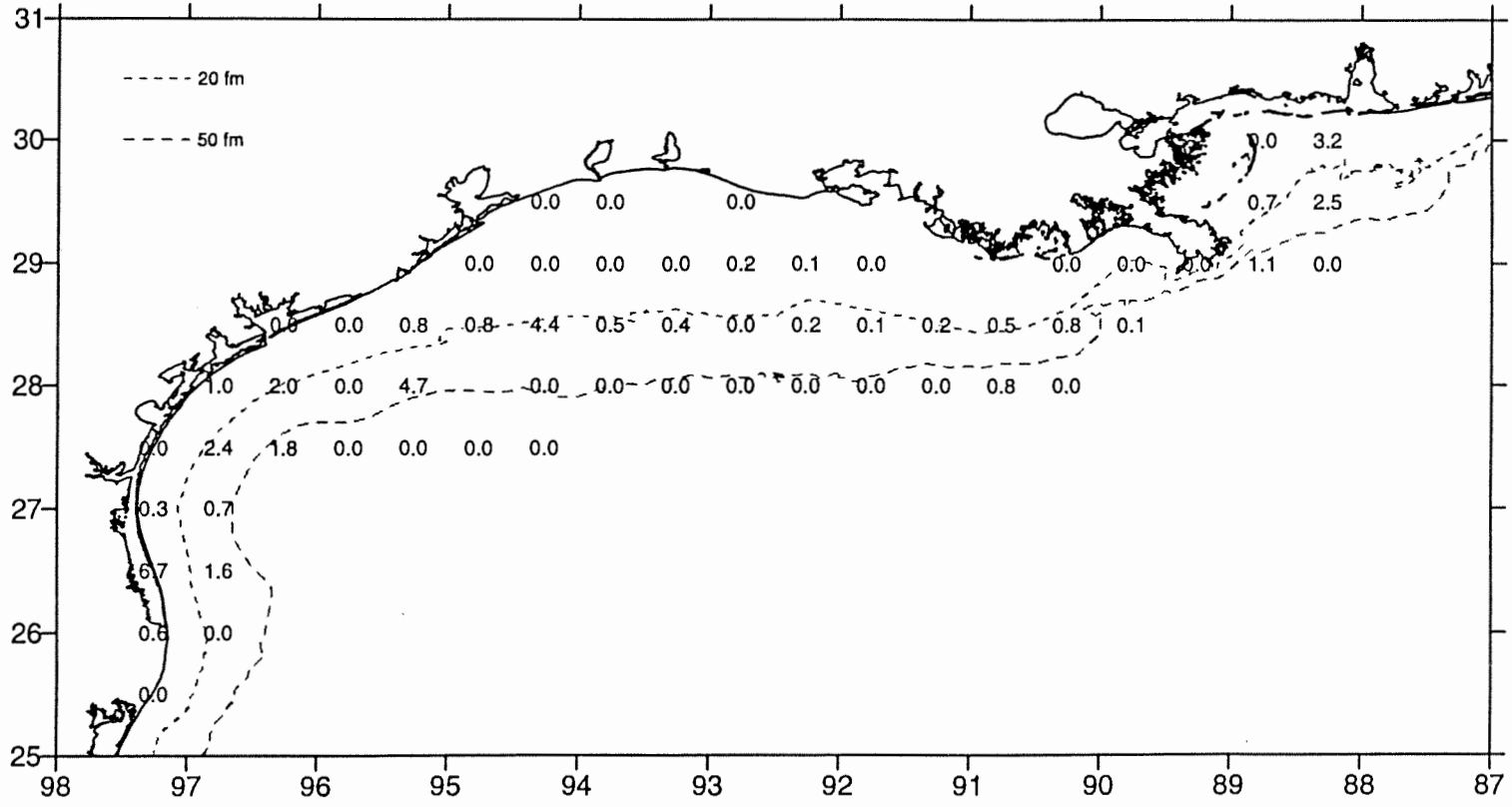

Figure 69. Dwarf sand perch, Diplectrum bivittatum, lb/hour for October-December 1997.

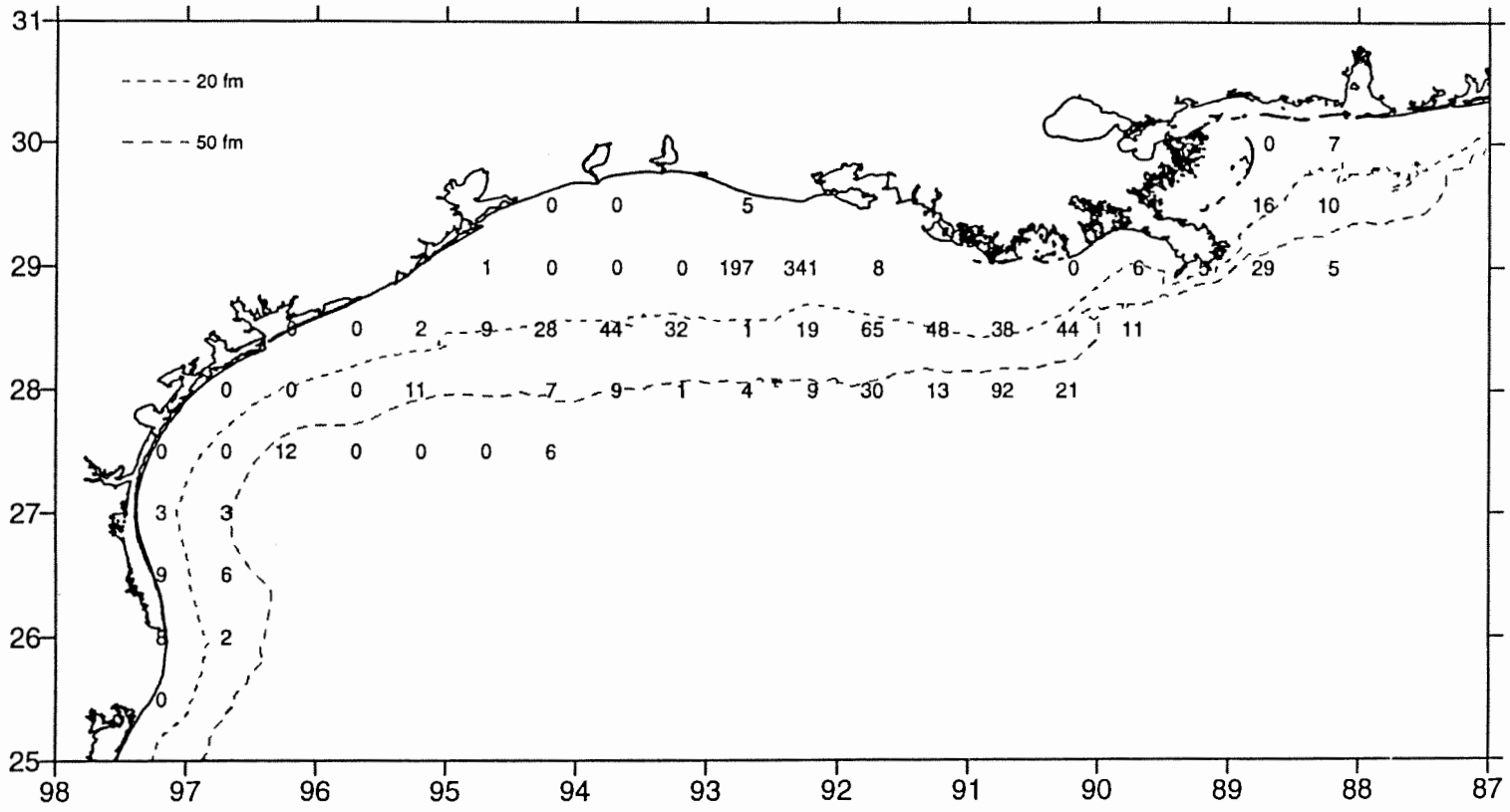

Figure 70. Bigeye searobin, Prionotus longispinosus, number/hour for October-December 1997.

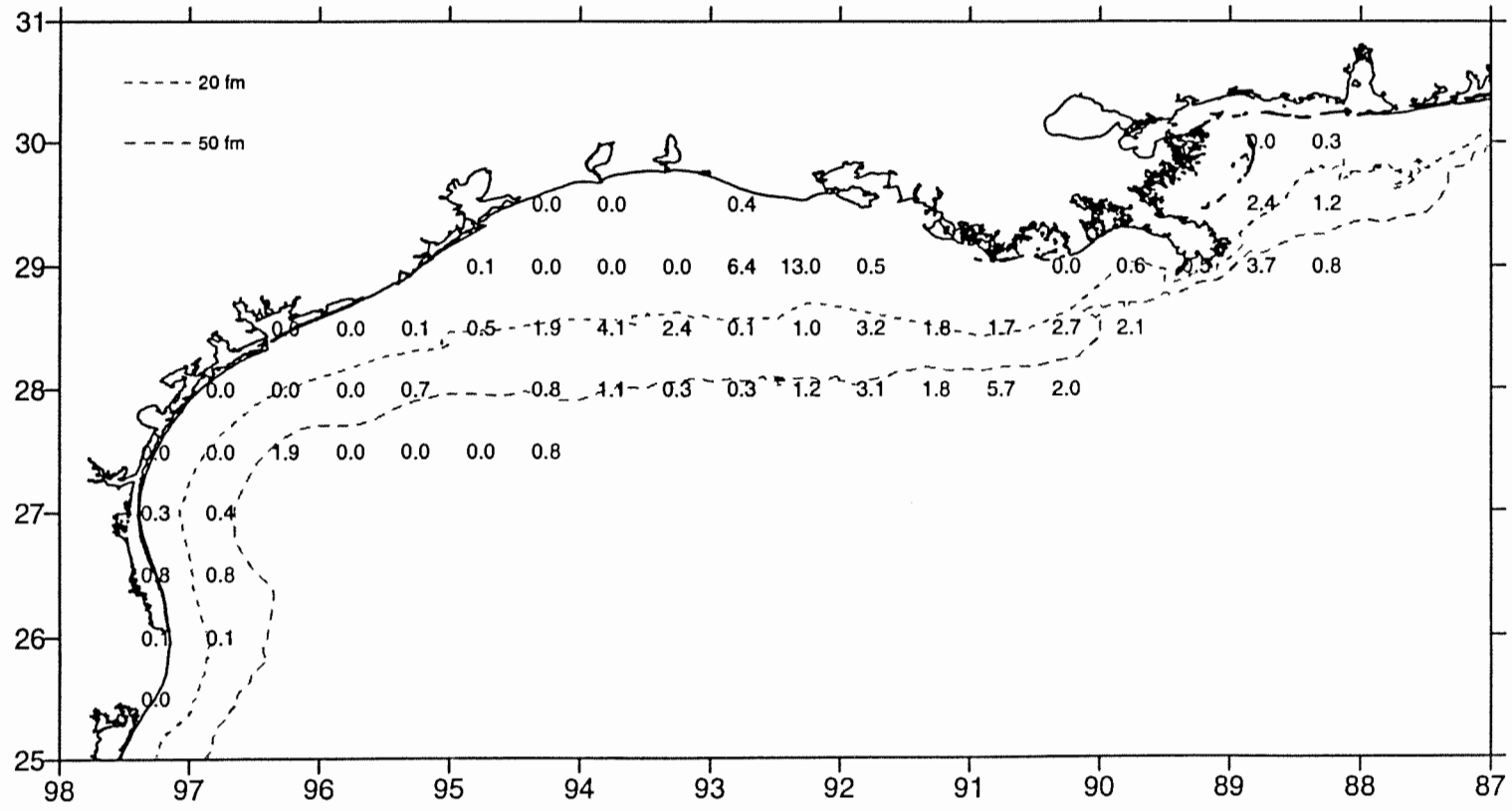

Figure 71. Bigeye searobin, Prionotus longispinosus, lb/hour for October-December 1997.

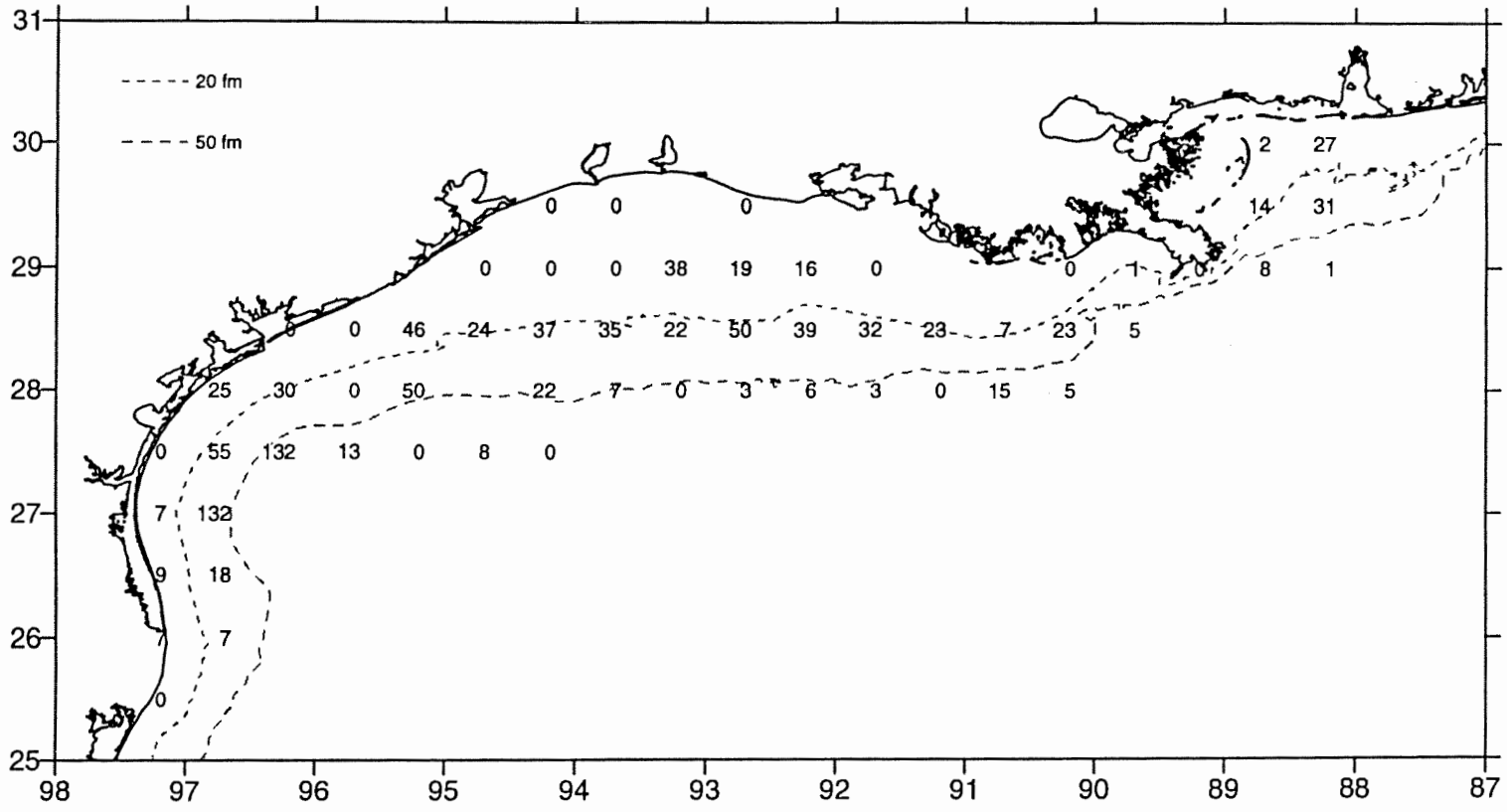

Figure 72. Red snapper, Lutjanus campechanus, number/hour for October-December 1997.

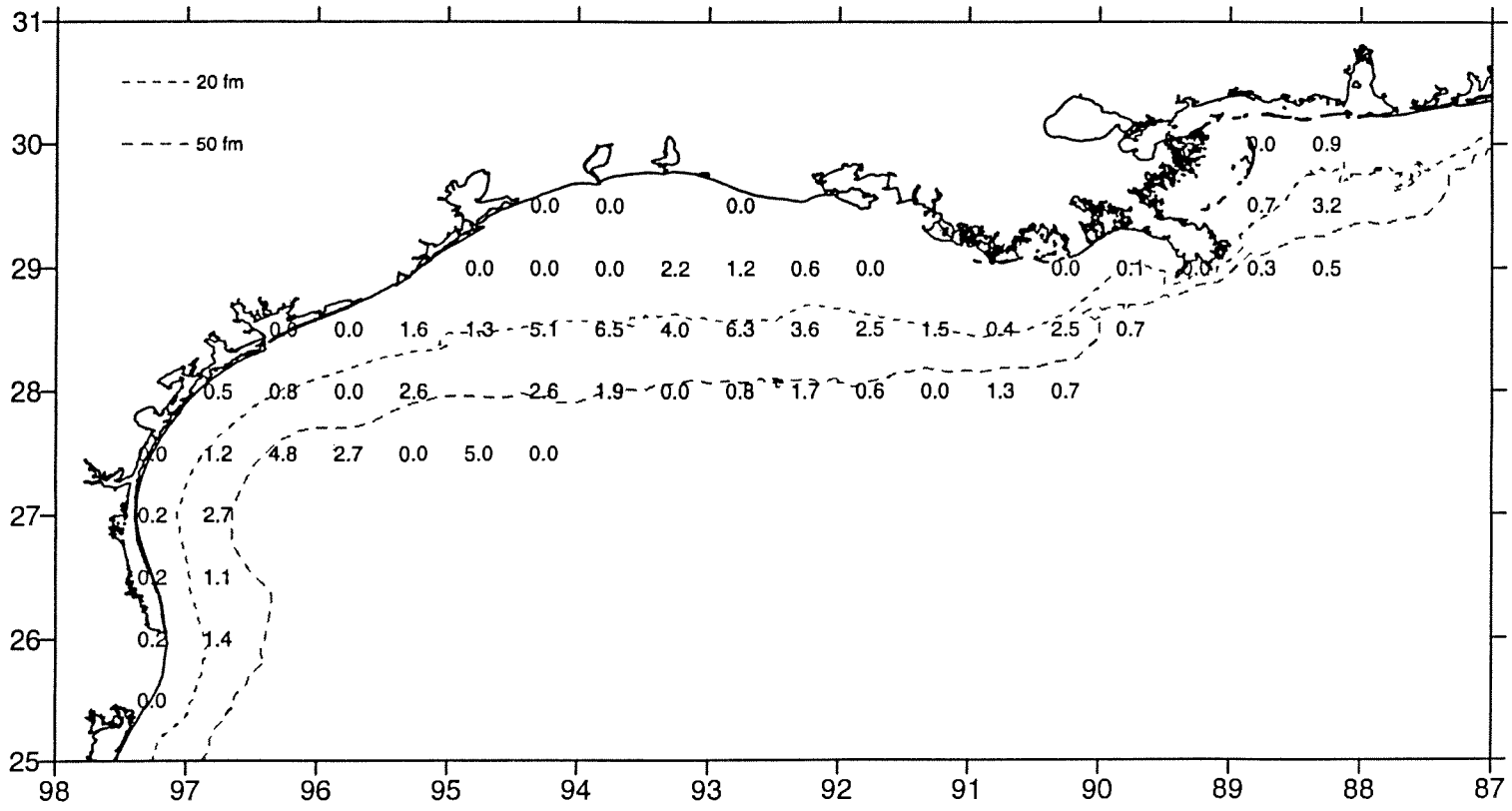

Figure 73. Red snapper, Lutjanus campechanus, lb/hour for October-December 1997.

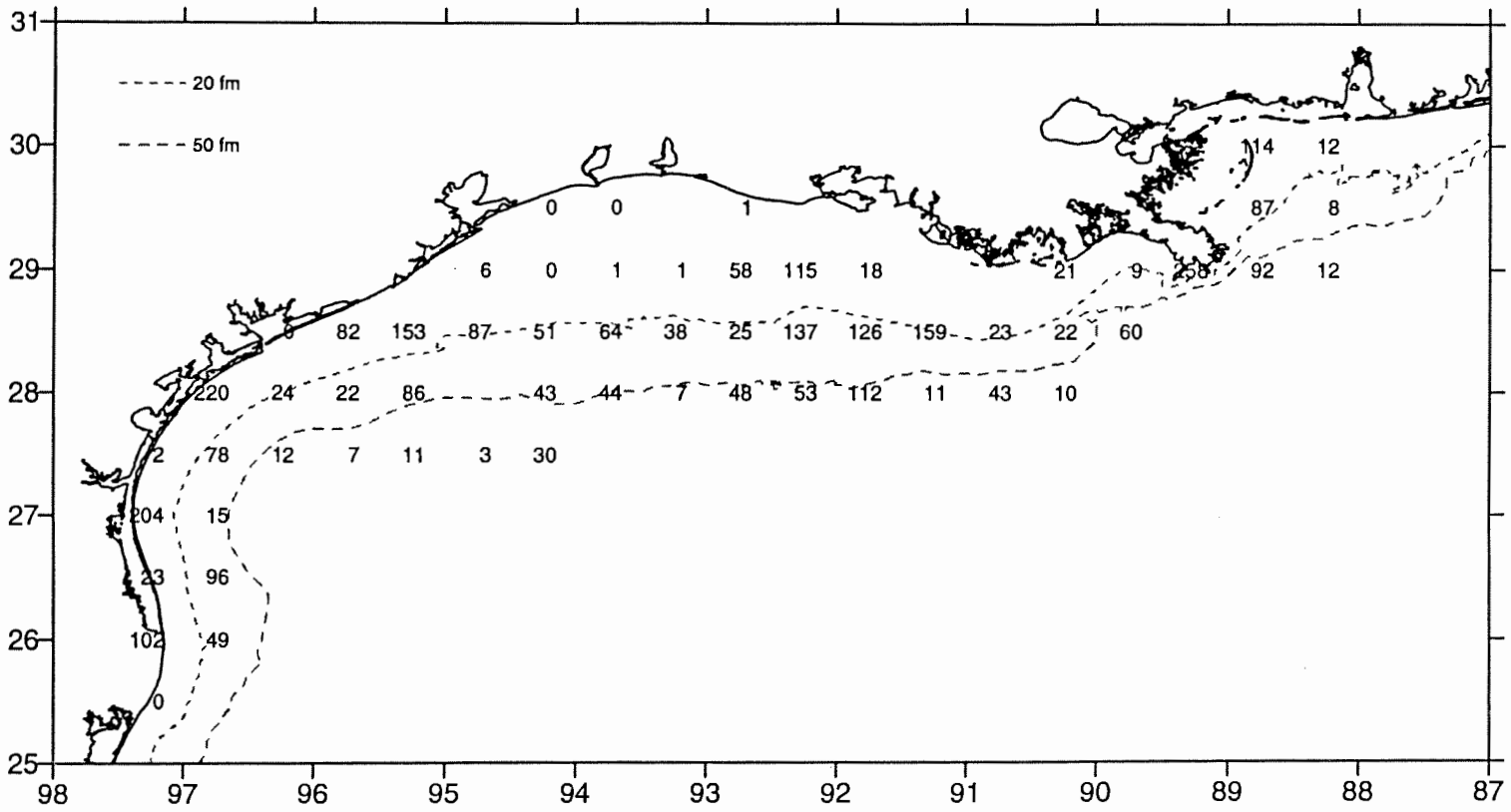

Figure 74. Brown shrimp, Penaeus aztecus, number/hour for October-December 1997.

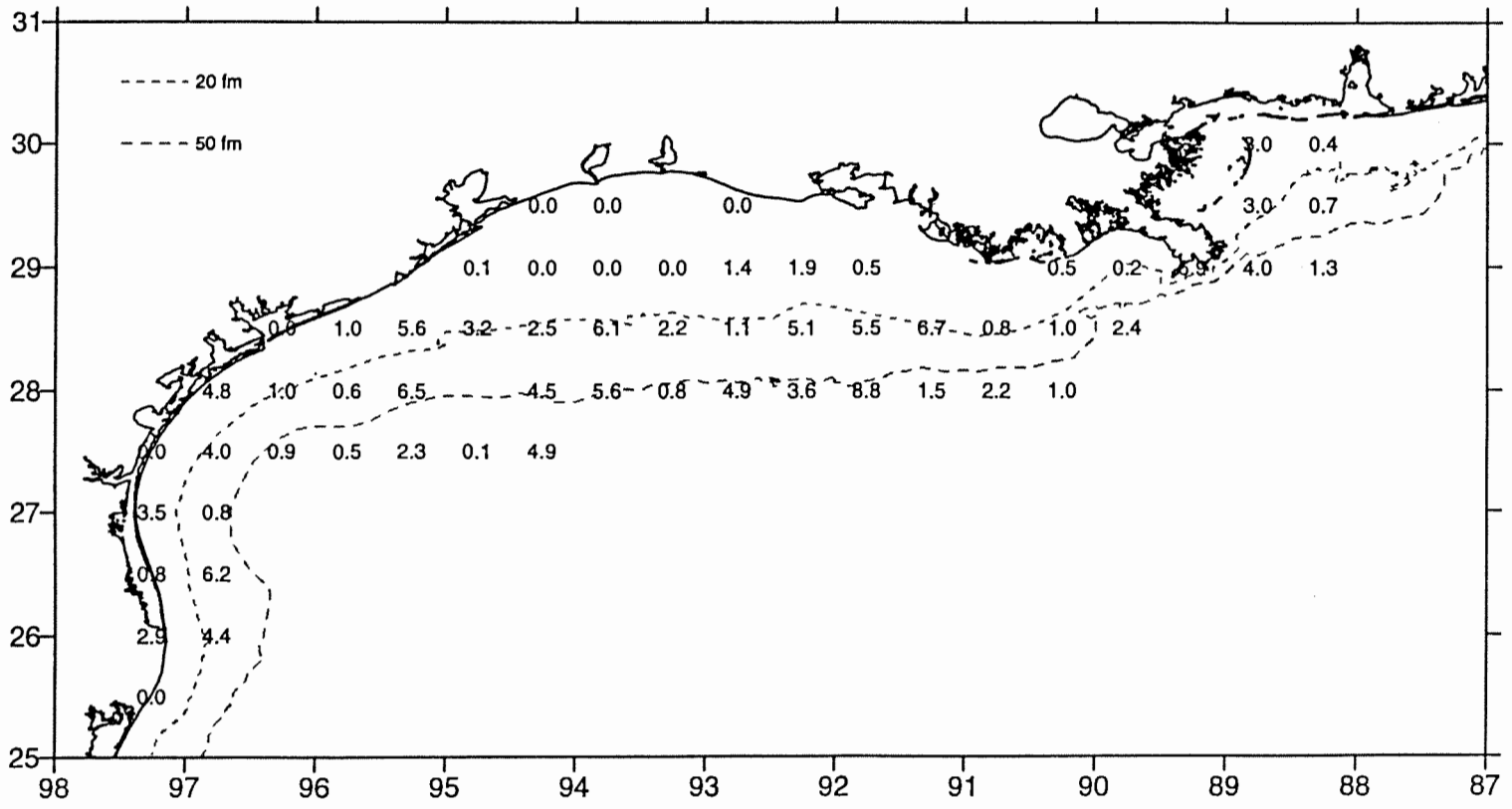

Figure 75. Brown shrimp, Penaeus aztecus, lb/hour for October-December 1997.

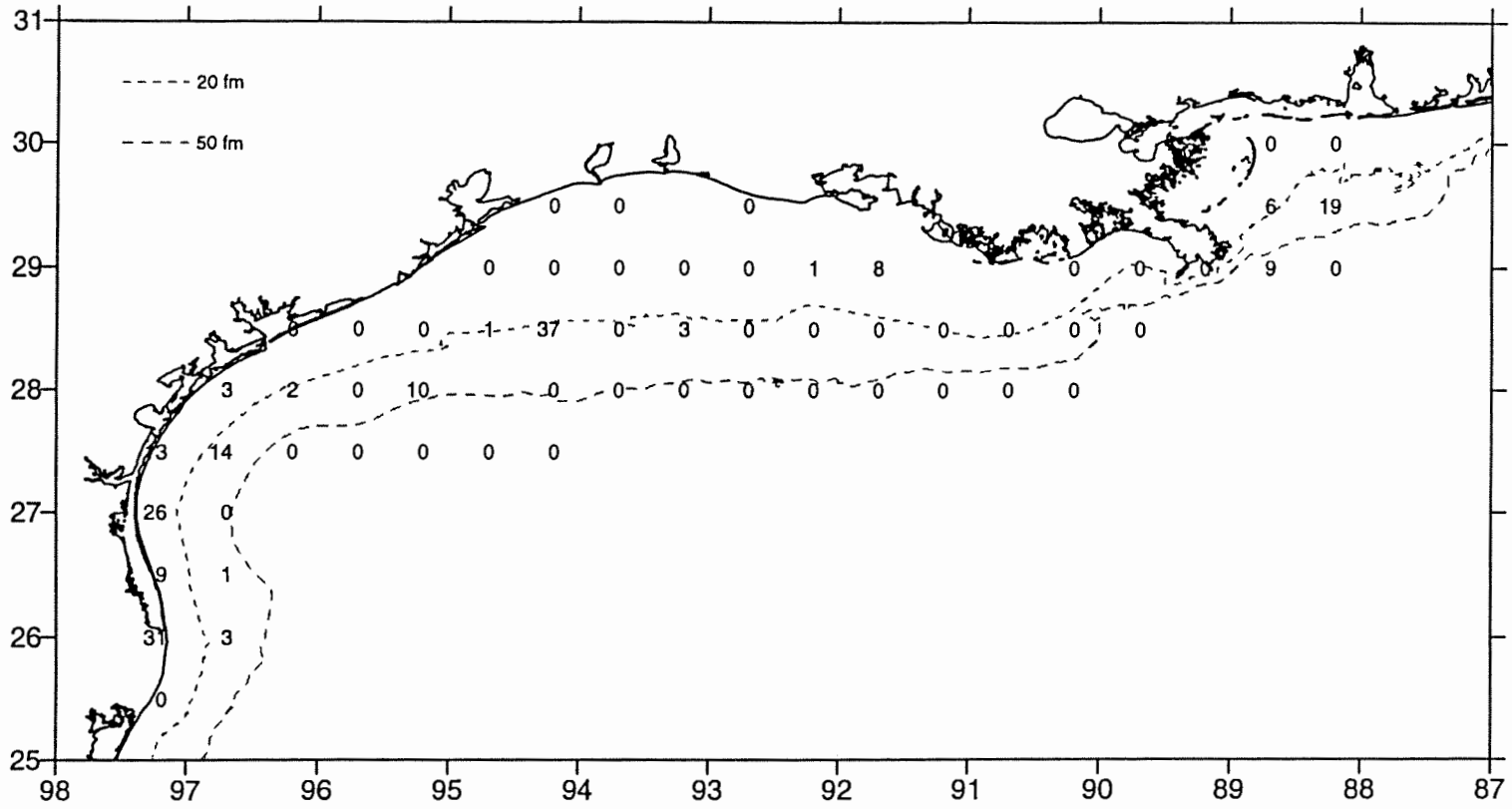

Figure 76. Pink shrimp, Penaeus duorarum, number/hour for October-December 1997.

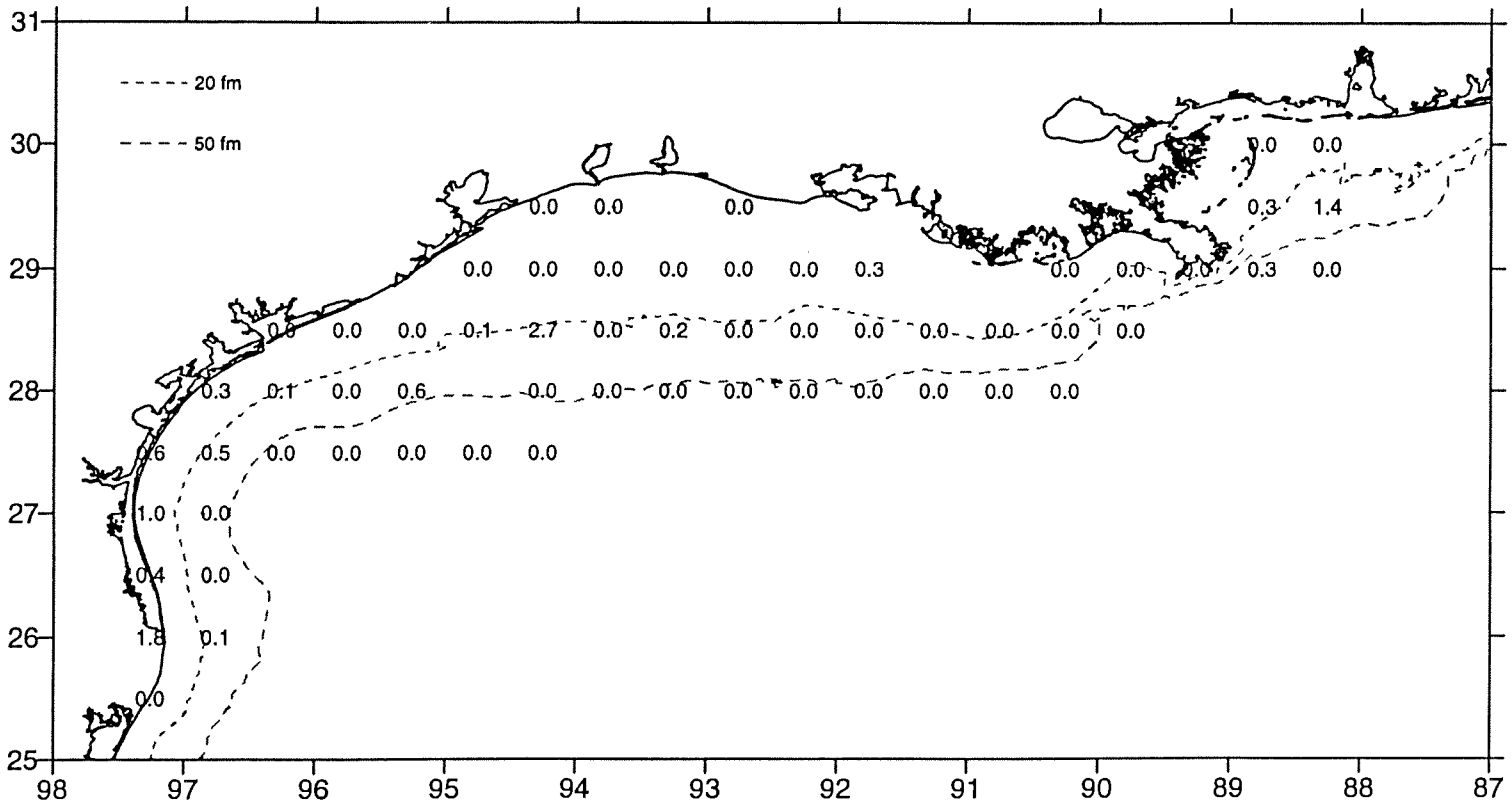

Figure 77. Pink shrimp, Penaeus duorarum, lb/hour for October-December 1997.

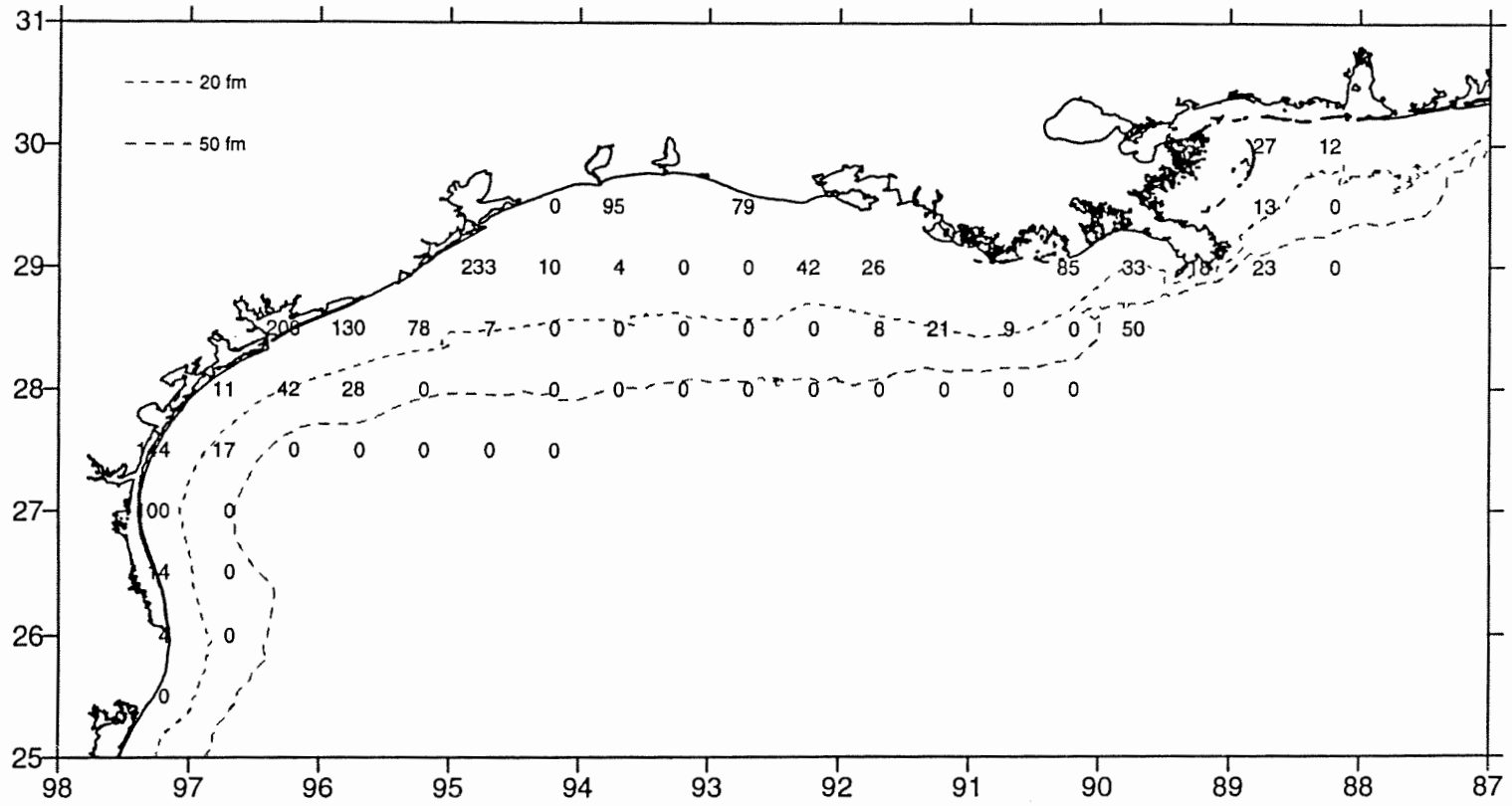

Figure 78. White shrimp, Penaeus setiferus, number/hour for October-December 1997.

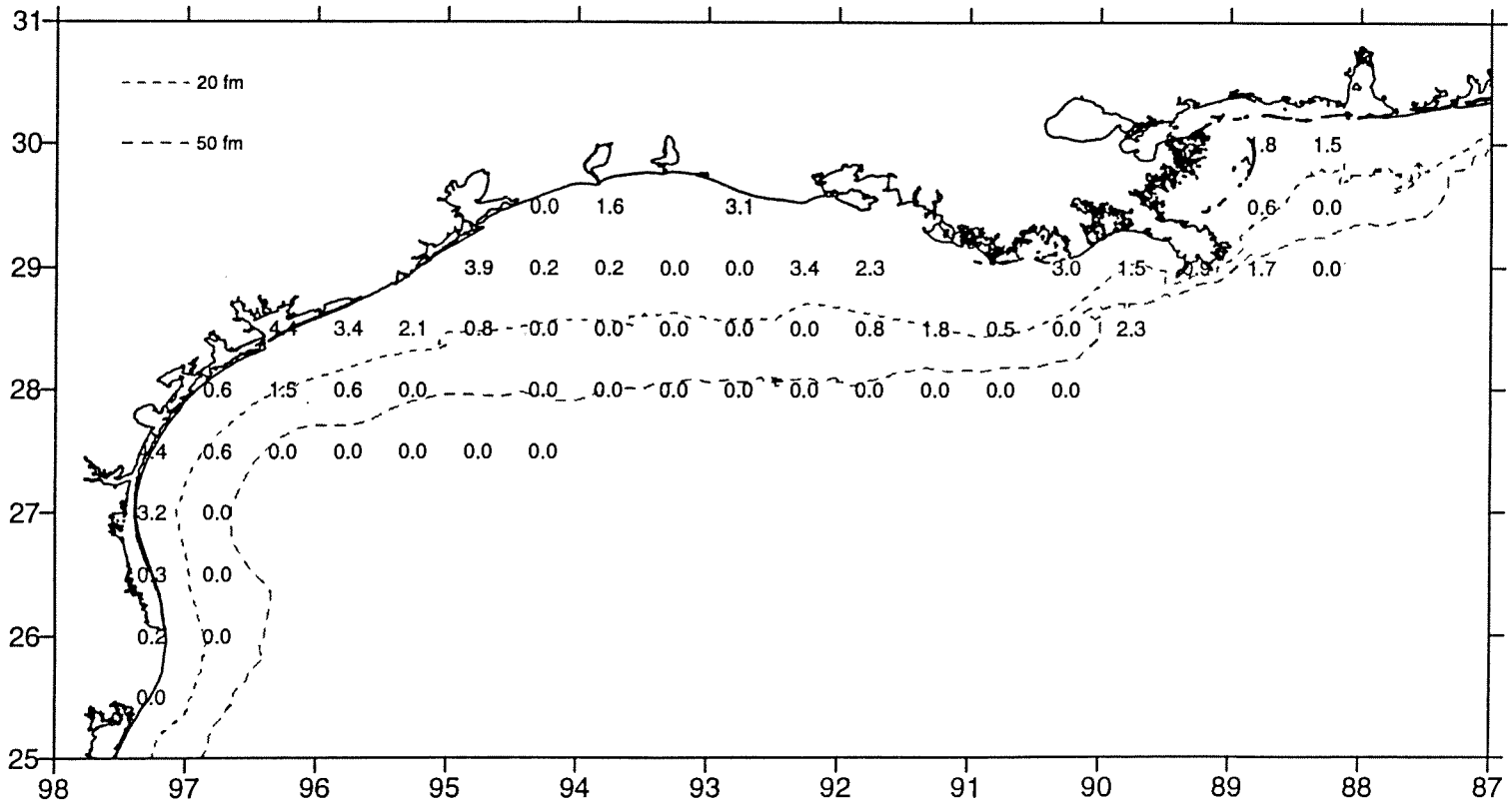

Figure 79. White shrimp, Penaeus setiferus, lb/hour for October-December 1997.

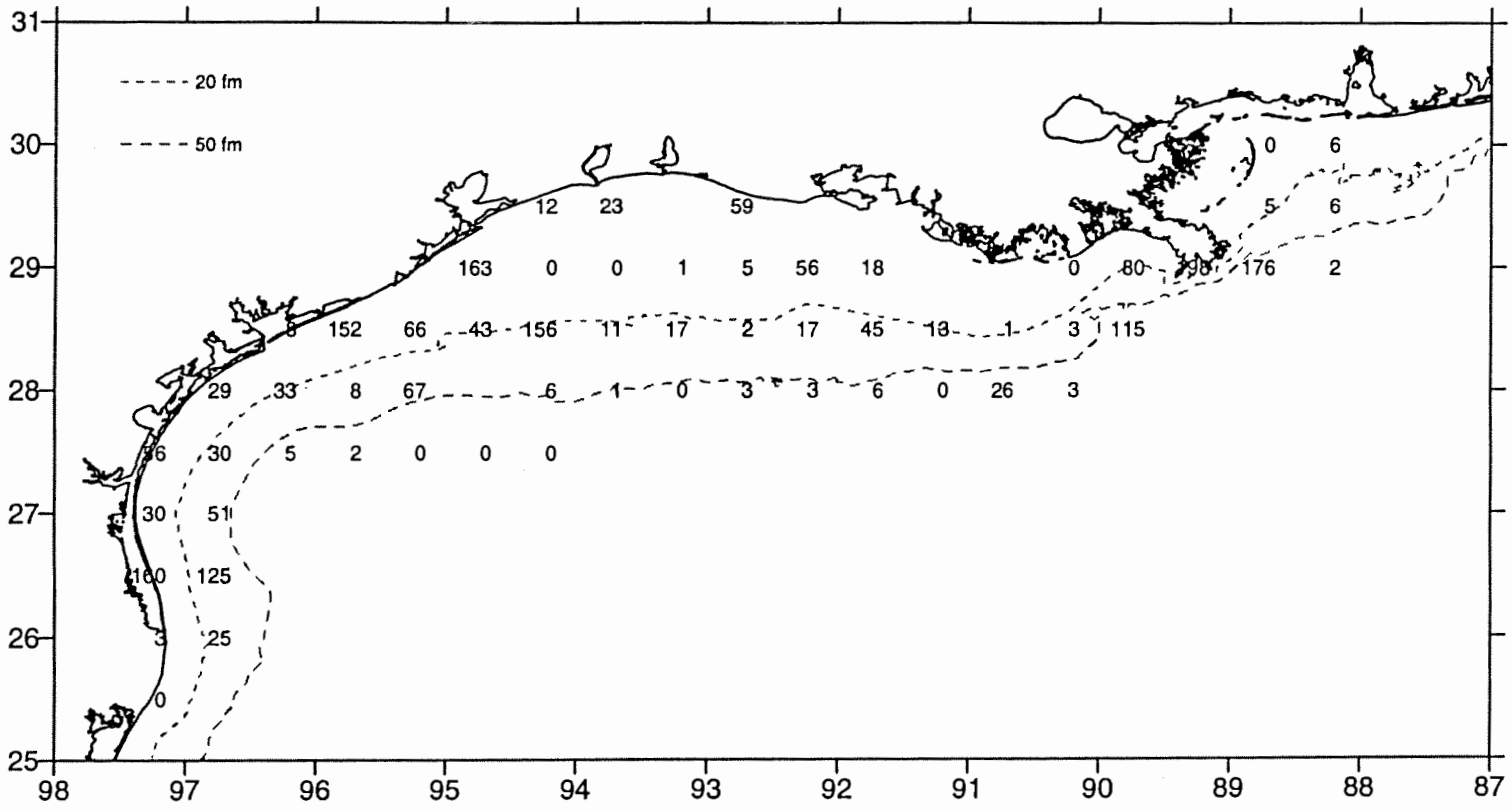

Figure 80. Lesser blue crab, Callinectes similis, number/hour for October-December 1997.

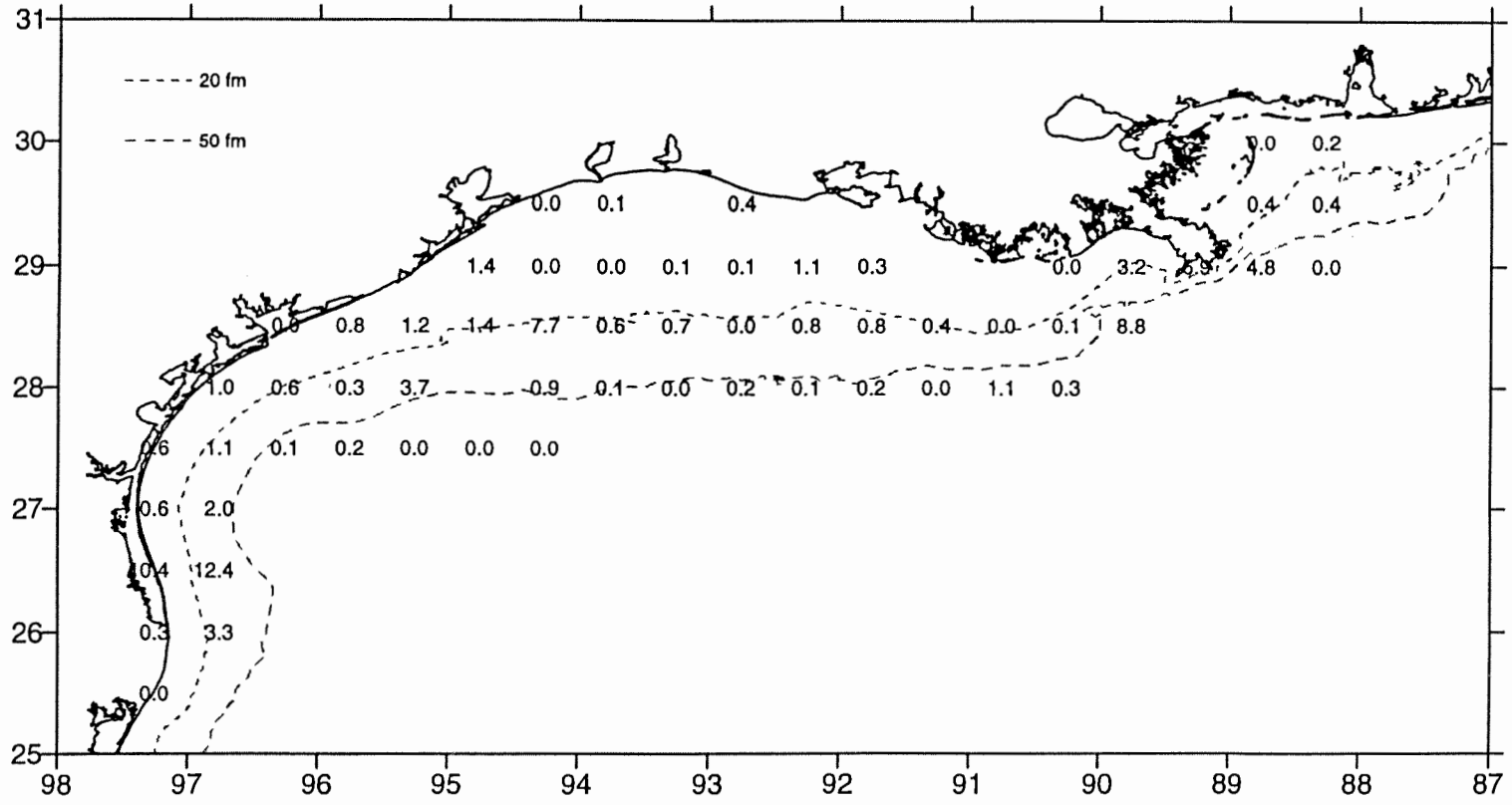

Figure 81. Lesser blue crab, Callinectes similis, lb/hour for October-December 1997.

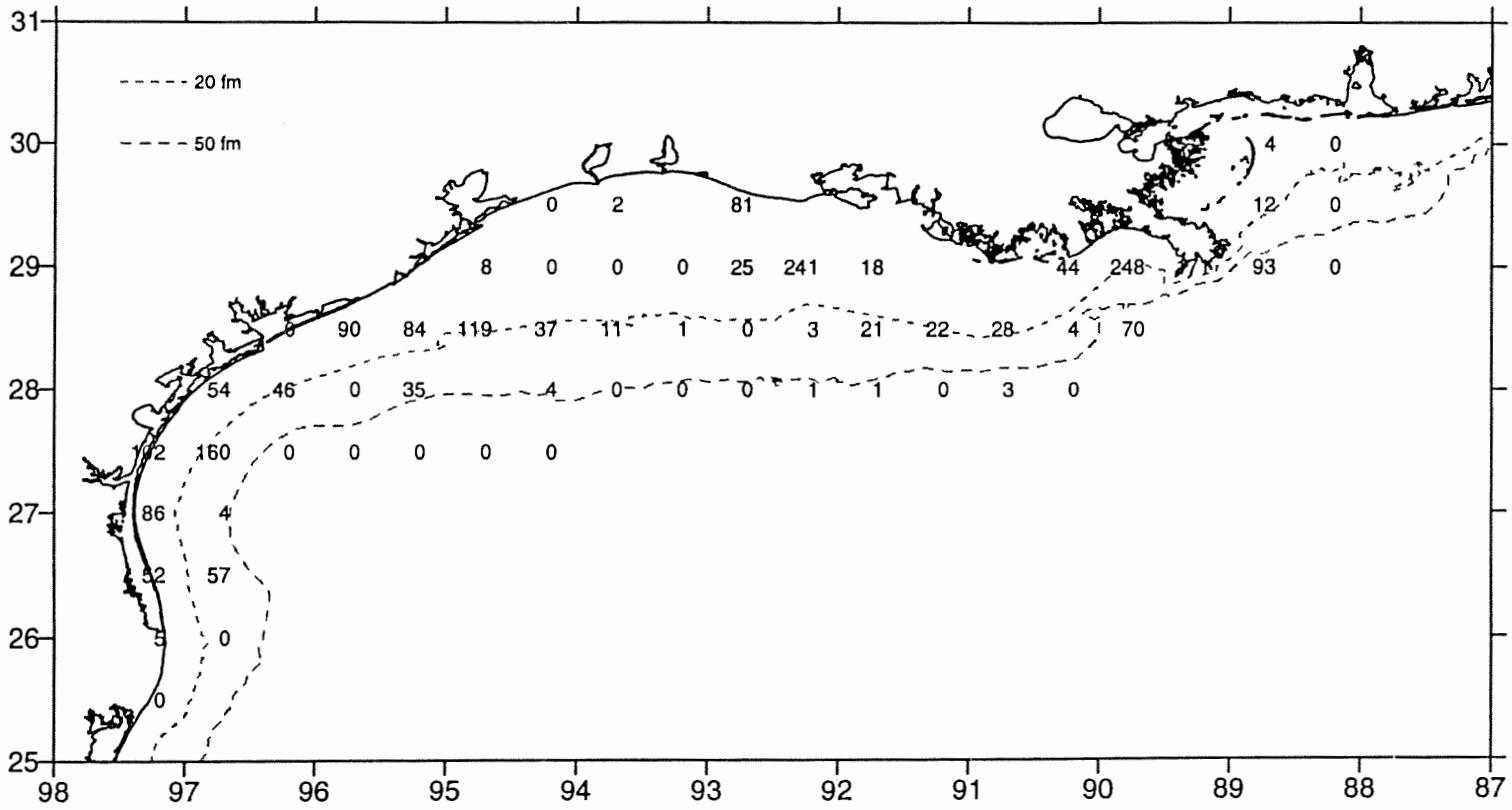

Figure 82. Roughback shrimp, Trachypenaeus similis, number/hour for October-December 1997.

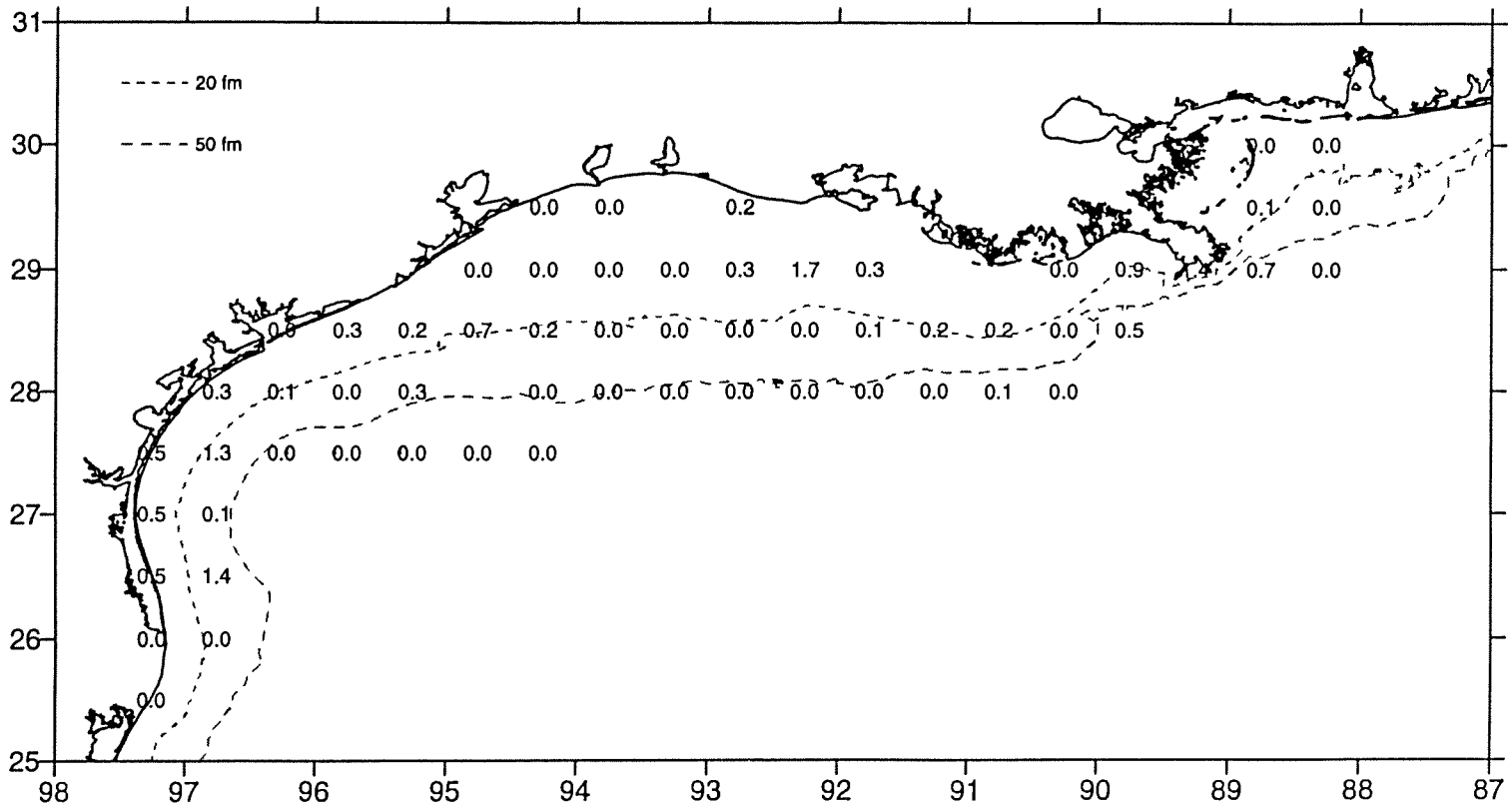

Figure 83. Roughback shrimp, Trachypenaeus similis, lb/hour for October-December 1997.

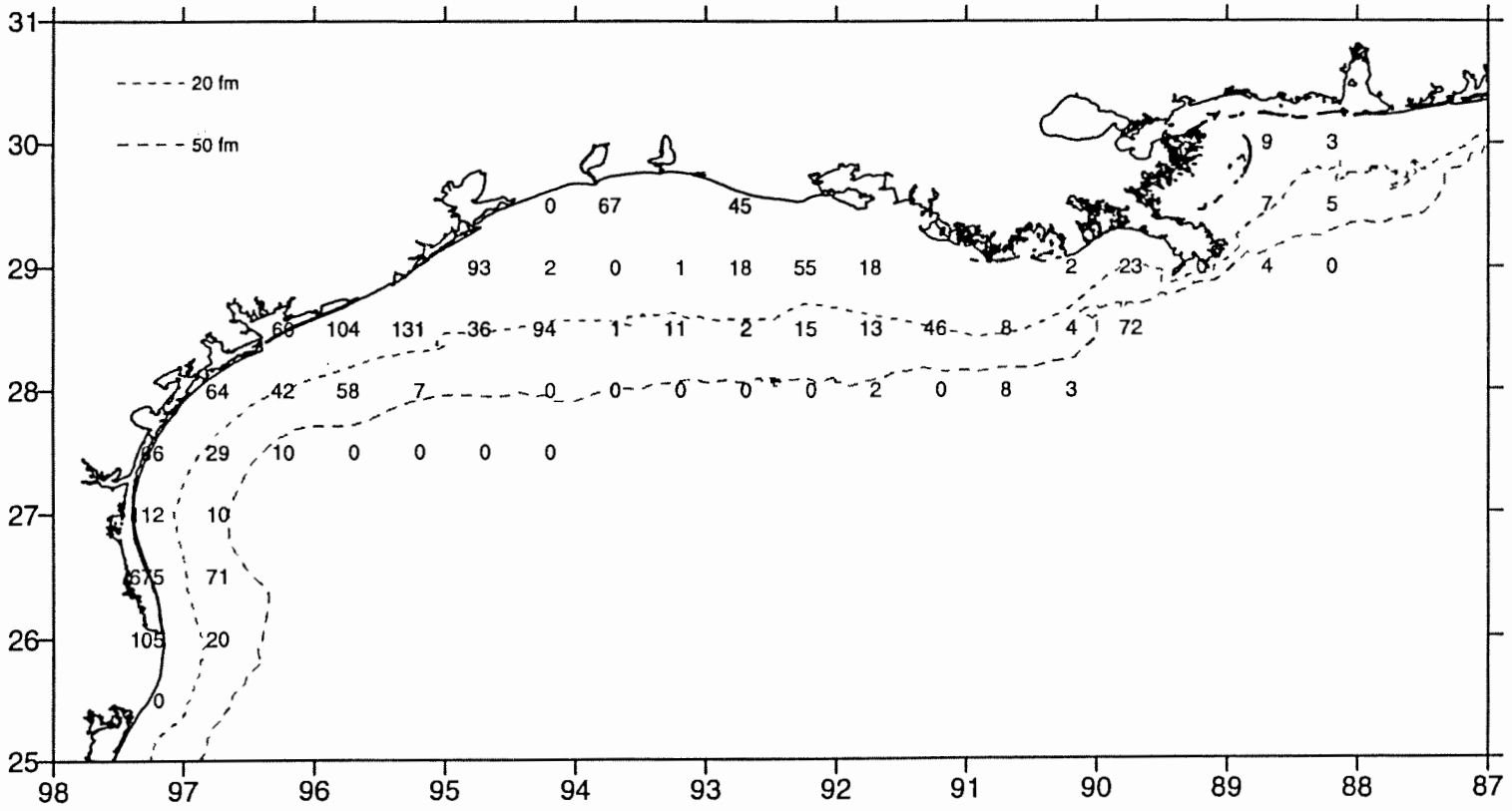

Figure 84. Irridescent swimming crab, Portunus gibbesii, number/hour for October-December 1997.

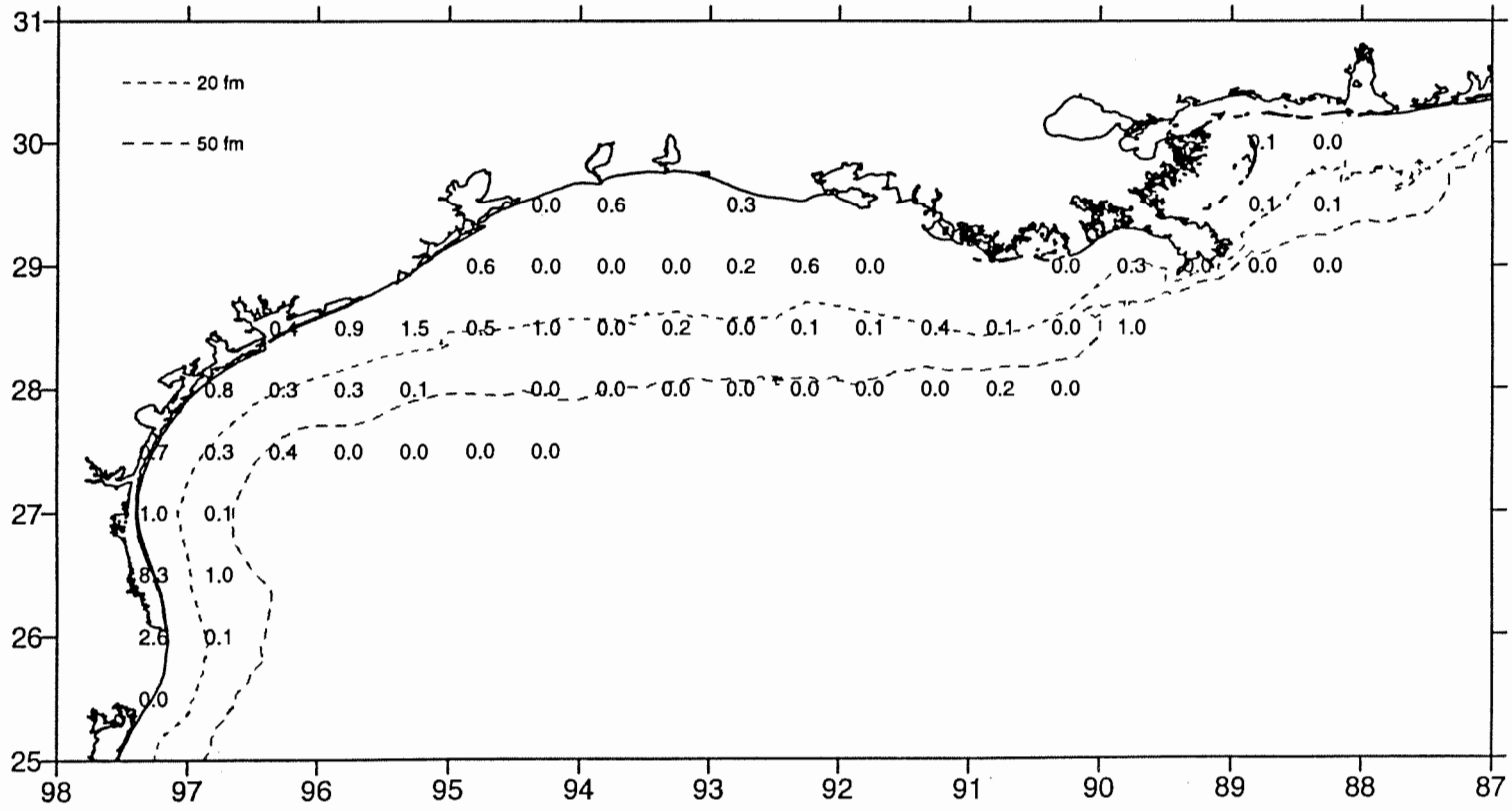

Figure 85. Irridescent swimming crab, Portunus gibbesii, lb/hour for October-December 1997.

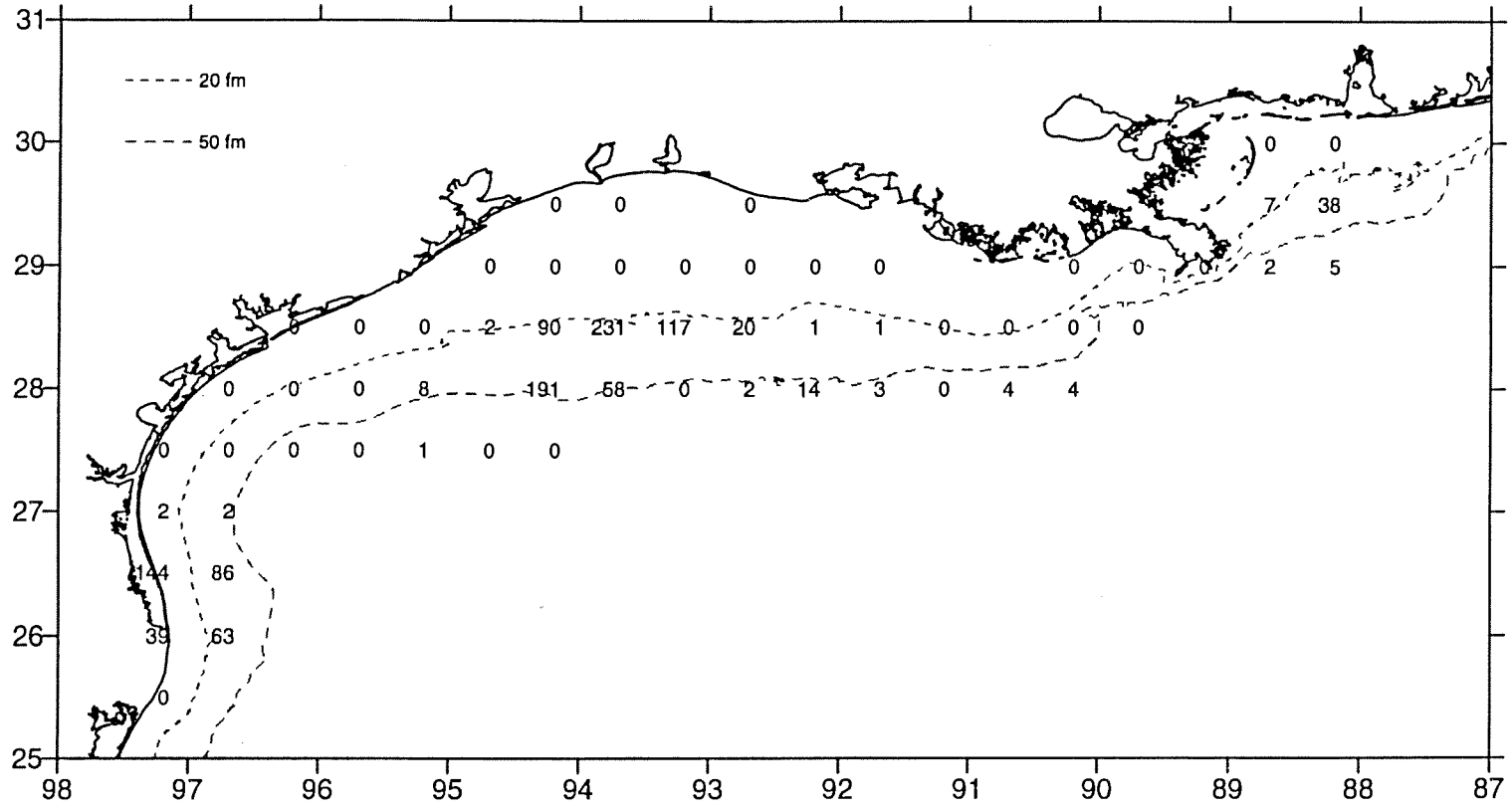

Figure 86. Brown rock shrimp, Sicyonia brevirostris, number/hour for October-December 1997.

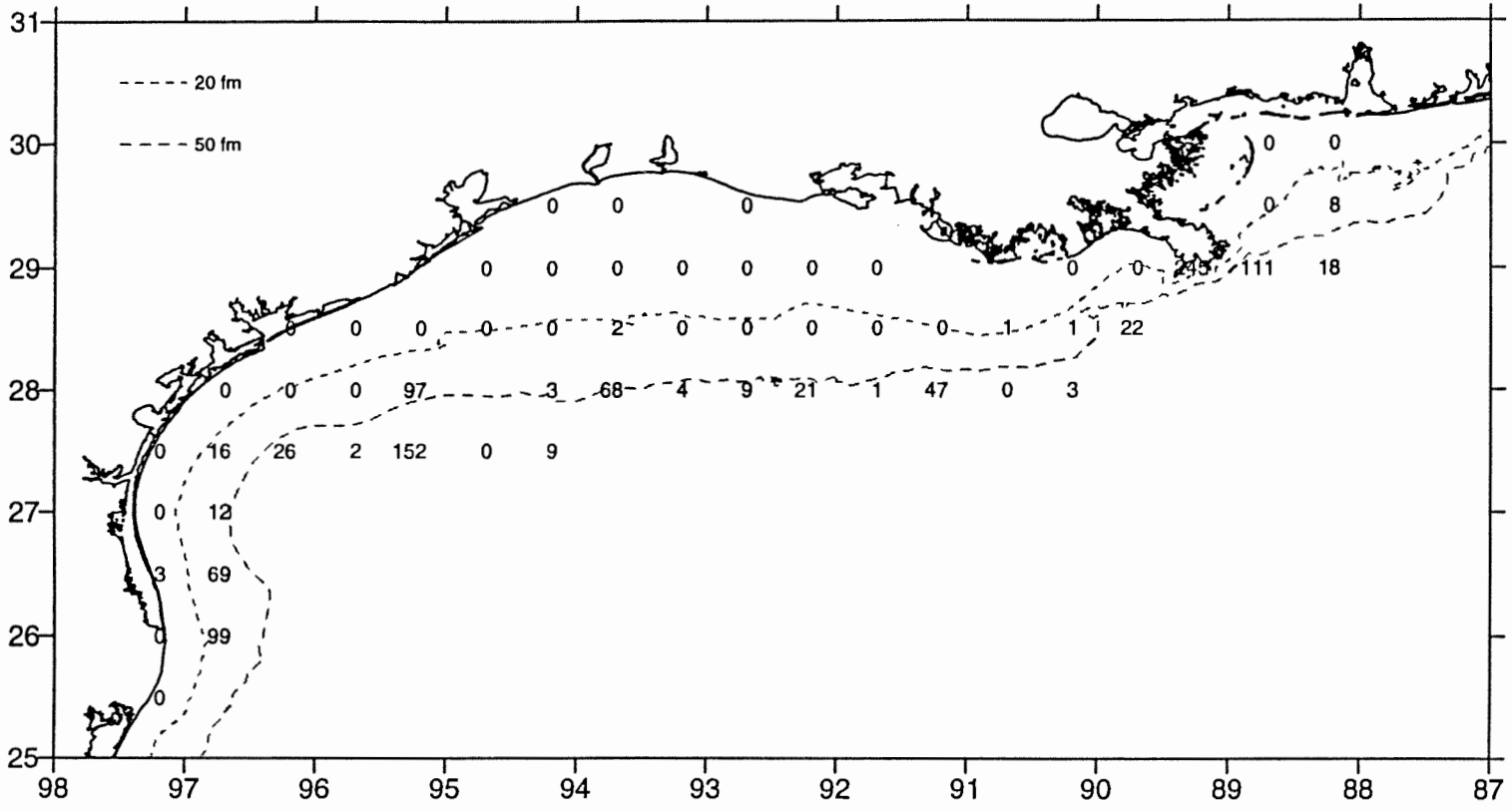

Figure 88. Longspine swimming crab, Portunis spinicarpus, number/hour for October-December 1997.

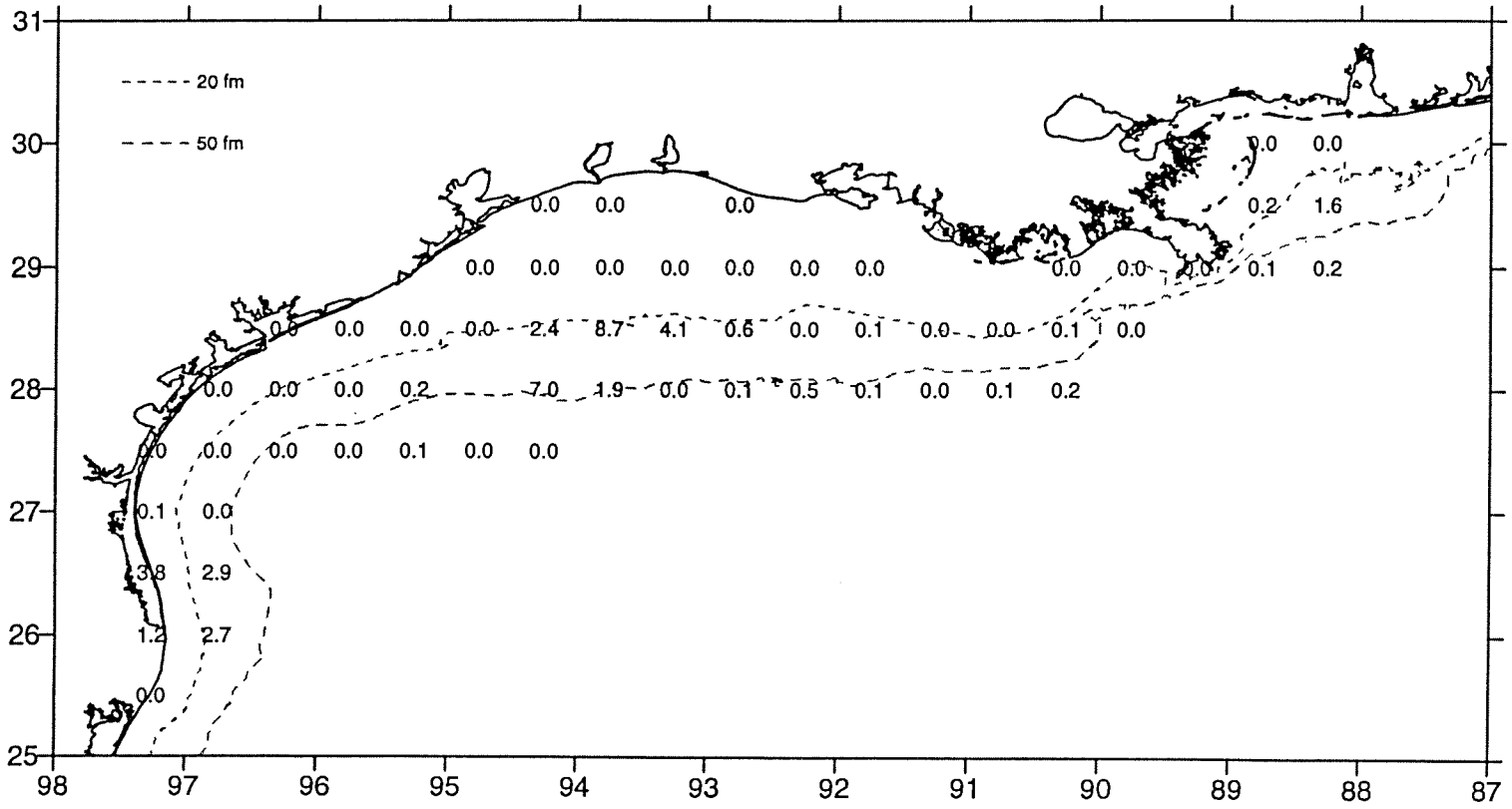

Figure 87. Brown rock shrimp, Sicyonia brevirostris, lb/hour for October-December 1997.

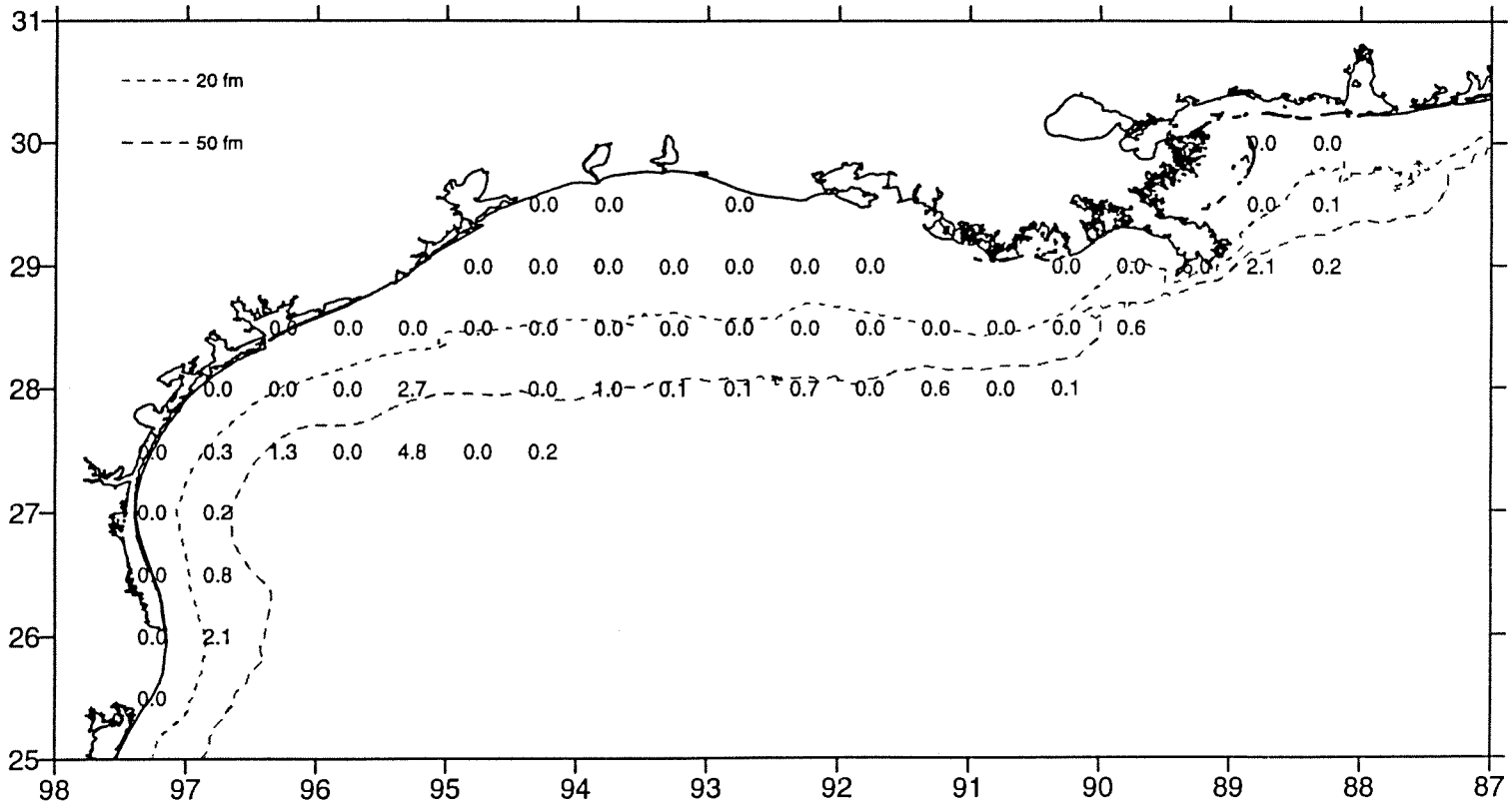

Figure 89. Longspine swimming crab, Portunis spinicarpus, lb/hour for October-December 1997.

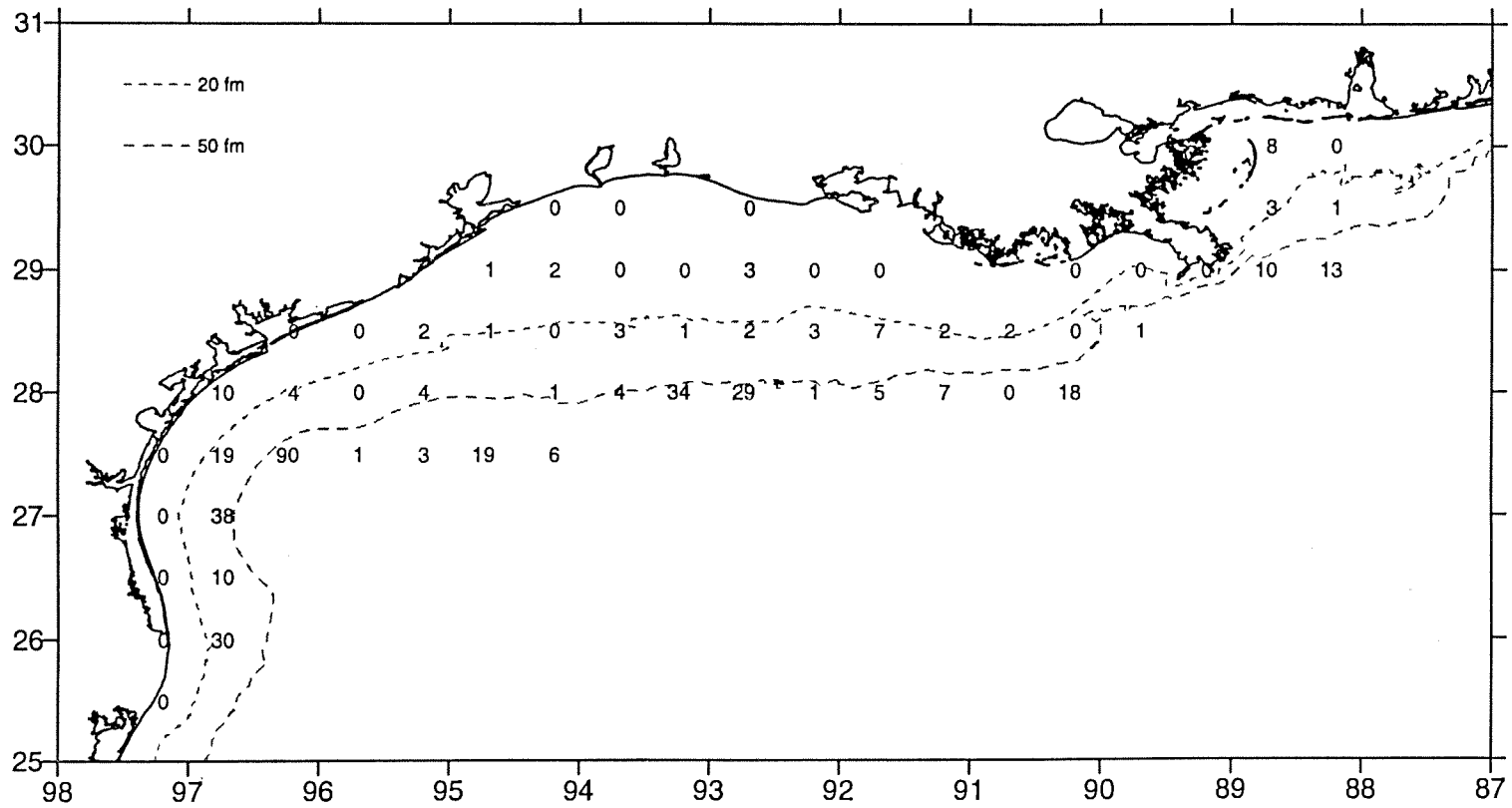

Figure 90. Longfin squid, Loligo pealeii, number/hour for October-December 1997.

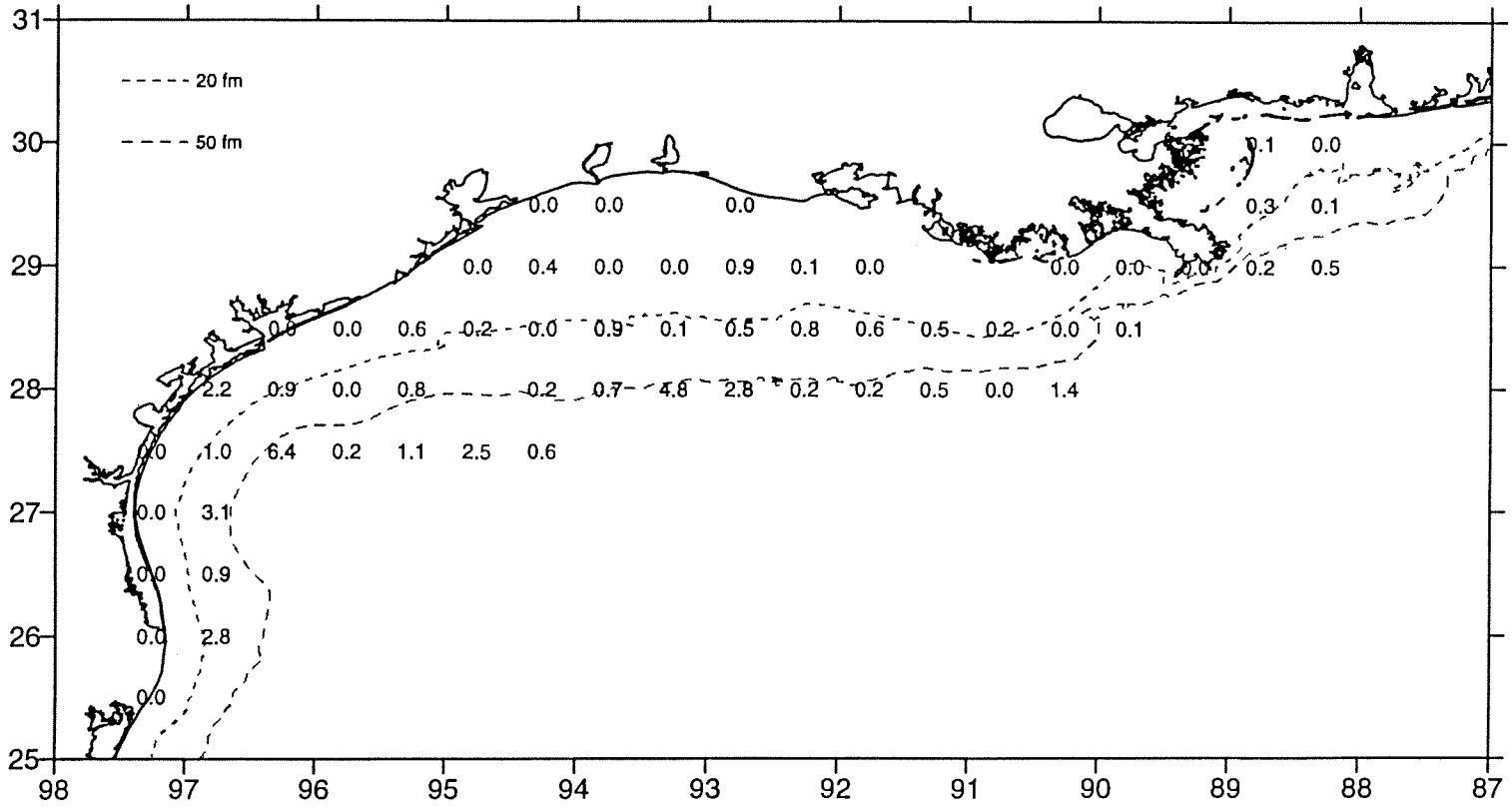

Figure 91. Longfin squid, Loligo pealeii, lb/hour for October-December 1997.

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