seamap

environmental and biological atlas of the gulf of mexico 2001

gulf states marine fisheries commission

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SEAMAP ENVIRONMENTAL AND BIOLOGICAL ATLAS OF THE GULF OF MEXICO, 2001

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The 2001 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 Fish and Wildlife Conservation Commission, Alabama Department of Conservation and Natural Resources, University of Southern Mississippi College 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.

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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.). A SEAMAP Subcommittee was then formed within the existing framework of the GSMFC. The Subcommittee consists of one representative from each state fishery management agency [Florida Fish and Wildlife Conservation Commission (FFWCC); Alabama Department of Conservation and Natural Resources (ADCNR); Mississippi Department of Marine Resources (MDMR) represented by the University of Southern Mississippi, College of Marine Science, Gulf Coast Research Laboratory (USM/CMS/GCRL); Louisiana Department of Wildlife and Fisheries (LDWF) and Texas Parks and Wildlife Department (TPWD)], one from NMFS SEFSC and a non-voting member representing the Gulf of Mexico Fishery Management Council (GMFMC). The Subcommittee has organized and successfully coordinated numerous resource surveys from 1982 through 2001 (Table 1). The resultant 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); 1996 (Donaldson et al. 1998); 1997 (Rester et al. 1999); 1998 (Rester et al. 2000); 1999 (Rester et al. 2001); and 2000 (Rester et al. 2002). Environmental assessment activities occurred with each of the surveys found in Table 1.

In March 2001, 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 2000. Overall survey objectives in 1982 to 2001 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. Data from plankton surveys are used for detection and assessment of fishery resources; in the determination of spawning seasons and areas; in investigations of early survival and recruitment mechanisms; and in estimation of the abundance of a stock based on its spawning production (Sherman et al. 1983). Assessment of the Texas Closure (Nichols 1982, 1984; Nichols and Poffenberger 1987) was the rationale for the establishment of the trawl surveys and 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 Reef Fish Survey is designed 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 twentieth in a series of SEAMAP environmental and biological atlases presents such data, in a summarized form, collected during the 2001 SEAMAP surveys. The area covered in the Gulf of Mexico for all SEAMAP survey activities during 2001 is shown in Figure 1.

MATERIALS AND METHODS

Methodology for the 2001 SEAMAP surveys is similar to that of the 1982 through 2000 surveys. Sampling was conducted within the U.S. Exclusive Economic Zone (EEZ) and state territorial waters. The NOAA Ship GORDON GUNTER collected plankton and environmental data during the Spring Plankton Survey from April 18 to May 29.

Vessels that participated in the Summer Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the USM/CMS/GCRL vessel TOMMY MUNRO (June 8-10, June15-16, and July 3-12), the Louisiana vessel PELICAN (July 16-19), and the NOAA Ship OREGON II (June 11-July 22). The TPWD vessels SAN JACINTO, LAGUNA MADRE, GALVESTON BAY, SABINE, and NEUCES (June 1-18) and the Alabama vessel A.E. VERRILL (June 18 and June 25) did not sample plankton in conjunction with the summer survey.

The Alabama vessel A.E. VERRILL participated in the Reef Fish Survey (May 18, October 2, October 4, and October 22), while the NOAA Ships MCARTHUR and OREGON II participated in the Reef Fish Survey June 14-22 and May 31-June 5.

Vessels that participated in collecting plankton and environmental data during the Fall Plankton Survey included the NOAA Ship GORDON GUNTER (August 31-September 26); the Louisiana vessel PELICAN (October 8-21); the Alabama vessel A.E. VERRILL (September 27); and the Florida vessel SUNCOASTER (October 11-14).

Vessels that participated in the Fall Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the NOAA Ships OREGON II (October 15-November 15) and GORDON GUNTER (October 15-November 13); the USM/CMS/GCRL vessel TOMMY MUNRO (October 18-21) and the Louisiana vessel PELICAN (December 10-13). The Alabama vessel A.E. VERRILL (October 23 and November 12); and the TPWD vessels GALVESTON BAY, SAN JACINTO, R.J. KEMP, NEUCES, and SABINE (November 7-26) did not sample plankton in conjunction with the fall survey.

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 (½ degree) and during the Fall Plankton Survey, Mississippi sampled stations set at intervals 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 ½ 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 and surface neuston tow or a surface neuston tow only were made. At bongo stations 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.

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 shipped 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 FFWCC, for long-term storage under museum conditions. Sorted ichthyoplankton samples from 1982 through 2001 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/CMS/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/CMS/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 MgCO3 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 data were also collected using a CTD. This method only obtains measures of chlorophyll a and is a measure of fluorescence (FL) and appears in the Tables as such.

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 11 through 22 (Figure 2). Trawl stations sampled by NMFS, Alabama, Mississippi and Louisiana are made with a standard SEAMAP 40-ft net, and Texas sampled with a 20-ft net. 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/CMS/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 55 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 55 minutes. The Texas vessels towed 10 minutes parallel to the depth stratum. The Louisiana samples did not cover a complete depth stratum on several stations because of the distance between depth contours.

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 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 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

The SEAMAP Archiving Center received 34,155 identified ichthyoplankton lots in 2001. 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.

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 Fort Morgan, 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-15a 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 through 22, by depth stratum. Tables 4b-15b 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:

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

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 Fort Morgan, 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 16. The species lists for Table 16 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 16 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.

Tables 17a-27a 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 17b-27b 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 225 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.

Beginning in 1998, the SEAMAP Subcommittee decided to produce near-real-time data for the Fall Shrimp/Groundfish Survey. The third annual fall real-time data distribution was produced in January, 2001. Plots of station locations and catch rates of red snapper were prepared and edited at the NMFS Mississippi Laboratories, and processed by GSMFC for a summary distribution at the end of the Survey to management agencies, fishermen, processors, and researchers. These plots were also available through the SEAMAP home page.

REEF FISH SURVEY

Primary data collection and sampling for reef fish assessment were conducted during May and June 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 28. The species list for Table 28 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 continue to 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 are being 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 goals.

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, 1985-2001. 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.

Since SEAMAP's inception in 1982, the goal of plankton activities in the Gulf of Mexico has been to collect data on the early life stages of fishes and invertebrates that will complement and enhance the fishery-independent data gathered on the adult life-stage (Lyczkowski-Shultz and Brasher 1996). An annual larval index for the Atlantic bluefin tuna is generated each year from the Spring Plankton Survey and is used by the International Commission for the Conservation of Atlantic Bluefin Tunas to estimate stock size (Scott et al. 1993). Larval indices generated from the Summer Shrimp/Groundfish and Fall Plankton Surveys have now become an integral part of the king mackerel assessment in the Gulf (Gledhill and Lyczkowski-Shultz 2000). Larvae from SEAMAP collections have formed the basis for formal descriptions of larval development for fishes such as the snappers, cobia, tripletail, and dolphin (Drass et al. 2000; Ditty and Shaw 1992; Ditty and Shaw 1993; Ditty et al. 1994). Data on distribution and relative abundance of larvae of all Gulf fishes captured during SEAMAP surveys have been summarized by Richards et al. 1984, Kelley et al. 1985, Kelley et al. 1990, and Kelley et al. 1993.

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 allow small brown shrimp to be protected from harvest but would still allow the taking of larger brown shrimp by fishermen in deeper waters.

The National Marine Fisheries Service was charged with evaluating the effects of the Texas Closure and submitted a report (Nance 2000) to the GMFMC in December 2000. This report contained the results and an overview of the effect of the 2000 Texas Closure. After review of these data and other information, the GMFMC voted to continue the Texas Closure for 2001.

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: 2001-2005 (ASMFC 2001).

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 2001.

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	JANUARY-FEBRUARY	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
1997	APRIL-JUNE	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	JUNE, JULY, AUGUST, NOVEMBER
1998	APRIL-JUNE	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-NOVEMBER	--	MAY, JULY, AUGUST
1999	APRIL-MAY	JUNE-JULY	--	SEPTEMBER-OCTOBER	OCTOBER-NOVEMBER	--	JANUARY, AUGUST, OCTOBER, DECEMBER
2000	APRIL-MAY	JUNE-JULY	–	SEPTEMBER-OCTOBER	OCTOBER-DECEMBER	--	OCTOBER, NOVEMBER
2001	APRIL-MAY	JUNE-JULY	–	AUGUST-OCTOBER	OCTOBER-DECEMBER	--	MAY, JUNE, OCTOBER

Table 2. Selected environmental parameters measured during 2001 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).

GORDON GUNTER, 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
1	4/18/2001	1320	2900.1	8559.9	8	242	100	200	22.1	18.3	14.7	36.0	36.4	35.9						PN
2	4/18/2001	2207	2830.0	8500.0	6	94	48	91	21.8	20.6	19.3	36.5	36.5	36.5			6.9	7.1	6.7	PN
3	4/19/2001	147	2759.9	8459.6	5	247	102	196	22.5	19.2	16.1	36.5	36.6	36.2			6.8	6.5	4.6	PN
4	4/19/2001	602	2730.1	8500.1	99	398	102	199	22.5	18.9	16.1	36.5	36.6	36.2			6.7	5.7	4.5	PN
5	4/19/2001	1013	2700.3	8500.1	99	838	101	198	23.0	19.5	14.4	36.5	36.6	35.9			6.7	5.9	4.4	PN
6	4/19/2001	1458	2630.1	8500.0	99	1618	102	197	23.7	19.4	14.9	36.5	36.6	36.0			6.6	5.9	4.4	PN
7	4/19/2001	1908	2600.1	8459.9	99	3458	99	199	23.7	18.1	12.0	36.5	36.4	35.5			6.5	4.6	4.3	PN
8	4/19/2001	2329	2600.0	8430.1	99	216	101	198	24.2	18.1	14.6	36.4	36.5	35.9			6.3	4.9	4.4	PN
9	4/20/2001	324	2559.8	8400.2	99	136	69	133	24.1	21.3	18.7	36.4	36.6	36.5			6.4	6.3	5.1	PN
10	4/20/2001	1726	2430.0	8330.2	99	277	99	194	24.8	18.3	14.2	36.4	36.5	35.9			6.3	4.7	4.4	PN
11	4/20/2001	2158	2400.0	8330.2	99	153	77	151	24.6	20.0	14.6	36.5	36.5	35.9			6.4	5.8	4.7	PN
12	4/21/2001	126	2400.6	8359.5	99	2011	100	199	24.1	19.7	14.6	36.5	36.6	35.9			6.4	5.7	4.5	PN
13	4/21/2001	725	2430.1	8430.0	99	3528	100	200	25.4	21.0	17.0	36.3	36.5	36.3			6.2	6.8	4.8	PN
14	4/21/2001	1227	2500.1	8429.9	99	2050	102	202	23.3	19.4	15.2	36.5	36.5	36.0			6.7	5.7	4.4	PN
15	4/21/2001	1645	2500.0	8459.8	99	3349	102	190	25.8	20.9	18.1	36.2	36.6	36.4			6.2	6.0	5.2	PN
16	4/21/2001	2200	2440.1	8530.0	99	3376	97	203	26.5	26.2	21.4	36.1	36.2	36.8			6.1	6.0	4.9	PN
17	4/22/2001	404	2500.0	8559.8	99	3294	102	200	26.5	26.1	21.3	36.1	36.2	36.8			6.2	5.9	4.8	PN
18	4/22/2001	1213	2559.7	8600.0	99	3218	99	200	23.6	19.6	15.3	36.5	36.5	36.0			6.5	6.4	4.5	PN
19	4/22/2001	1703	2629.9	8600.0	99	3202	101	200	24.2	20.1	16.0	36.4	36.6	36.1			6.4	6.4	4.7	PN
20	4/22/2001	2110	2659.8	8559.8	99	3203	100	200	22.7	20.0	16.5	36.3	36.5	36.2			6.9	6.5	4.7	PN
21	4/23/2001	202	2729.9	8559.9	99	3239	104	200	23.1	20.3	16.2	36.5	36.6	36.2			6.7	5.7	4.7	PN
22	4/23/2001	632	2800.1	8600.0	99	980	100	201	25.0	20.5	16.5	36.4	36.6	36.2			6.2	6.3	4.9	PN
23	4/23/2001	1116	2830.1	8600.0	99	329	101	200	22.6	18.6	14.9	35.2	36.5	36.0			6.8	5.0	4.3	PN
24	4/23/2001	1636	2900.0	8629.8	99	373	100	200	22.9	16.4	13.6	34.6	36.2	35.8			6.8	4.6	4.3	PN
25	4/23/2001	2034	2859.7	8700.1	99	681	100	199	23.4	18.8	16.0	33.3	36.5	36.2			6.7	5.9	4.6	PN
26	4/24/2001	49	2829.8	8700.0	99	841	100	201	24.5	19.1	17.7	36.4	36.4	36.4			6.5	6.7	5.6	PN
27	4/24/2001	449	2759.9	8700.0	99	2862	101	201	25.1	20.2	15.7	36.5	36.7	36.1			6.3	4.8	4.6	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
28	4/24/2001	924	2730.1	8659.8	99	2975	101	200	25.9	23.1	18.3	36.3	36.7	36.5			6.2	5.9	5.3	PN
29	4/24/2001	1343	2659.8	8700.1	99	2934	100	200	25.6	24.8	19.9	36.2	36.3	36.7			6.3	6.2	5.1	PN
30	4/24/2001	1754	2629.9	8700.0	99	2992	101	200	25.8	24.4	18.4	36.2	36.7	36.5			6.2	5.2	5.1	PN
31	4/24/2001	2041	2615.4	8700.5	99	3211	102	201	25.9	21.3	18.3	36.3	36.6	36.5			6.2	6.2	5.1	PN
32	4/25/2001	54	2600.3	8730.4	99	3135	99	200	25.0	18.9	14.8	36.5	36.5	36.0			6.2	4.7	4.5	PN
33	4/25/2001	417	2600.0	8800.0	99	3019	101	200	25.0	18.2	13.4	36.5	36.4	35.7			6.3	4.7	4.6	PN
34	4/25/2001	828	2629.9	8759.9	99	2812	101	200	25.1	19.4	15.2	36.5	36.6	36.0			6.4	4.7	4.8	PN
35	4/25/2001	1227	2700.3	8759.9	99	2743	101	200	25.4	21.9	16.9	36.4	36.8	36.3			6.3	4.8	5.1	PN
36	4/25/2001	1641	2730.0	8800.0	99	2617	100	200	24.2	19.8	15.6	36.5	36.6	36.1			6.5	4.7	4.9	PN
37	4/25/2001	2101	2759.7	8800.0	99	2565	102	201	24.3	18.7	15.0	36.5	36.5	36.0			6.3	5.0	4.8	PN
38	4/26/2001	152	2830.1	8800.1	99	2224	100	201	24.8	19.8	16.2	36.5	36.5	36.2			6.3	5.6	4.8	PN
39	4/26/2001	556	2859.8	8759.9	99	1410	101	200	24.6	20.5	15.5	36.4	36.6	36.1			6.2	5.9	4.5	PN
40	4/26/2001	1024	2929.8	8759.9	99	41	21	39	22.0	19.3	18.4	33.8	35.5	35.7			7.0	6.4	4.7	PN
41	4/26/2001	1455	2859.9	8829.8	99	617	100	198	23.0	19.4	15.6	35.7	36.6	36.1			6.6	5.1	4.4	PN
42	4/26/2001	2005	2829.8	8859.7	99	825	100	200	24.6	18.5	16.0	36.5	36.5	36.1			6.2	4.8	4.6	PN
43	4/27/2001	1	2800.0	8859.9	99	1335	101	199	24.3	18.6	13.4	36.5	36.5	35.7			6.4	4.8	4.7	PN
44	4/27/2001	434	2729.9	8900.0	99	1784	100	201	24.9	21.0	16.3	36.5	36.6	36.2			6.2	4.9	4.9	PN
45	4/27/2001	815	2700.0	8859.9	99	2356	100	201	25.2	24.8	20.2	36.2	36.2	36.8			6.2	6.2	5.0	PN
46	4/27/2001	1202	2629.8	8900.1	99	3099	100	200	25.5	24.8	20.3	36.3	36.3	36.8			6.3	6.2	5.0	PN
47	4/27/2001	1532	2559.8	8900.3	99	3100	100	200	25.5	23.0	16.3	36.4	36.6	36.2			6.3	6.2	4.6	PN
48	4/27/2001	1914	2600.3	8929.2	99	2909	101	200	25.5	24.6	20.5	36.3	36.3	36.8			6.4	6.1	5.1	PN
49	4/27/2001	2225	2600.0	8959.3	99	2900	100	201	25.3	24.8	21.5	36.2	36.3	36.8			6.4	6.3	4.9	PN
50	4/28/2001	328	2630.5	8959.0	99	2716	100	200	25.3	24.9	22.6	36.2	36.2	36.9			6.5	6.2	5.0	PN
51	4/28/2001	734	2700.0	8959.8	99	2452	100	200	24.9	25.0	22.5	36.2	36.2	36.9			6.5	6.4	4.8	PN
52	4/28/2001	1230	2730.3	9000.2	99	1156	101	200	25.2	24.8	19.1	36.3	36.5	36.5			6.3	6.2	5.0	PN
53	4/28/2001	1708	2800.0	8959.9	99	532	99	201	24.4	20.5	16.2	36.5	36.7	36.2			4.8	4.9	5.0	PN
54	4/28/2001	2110	2758.8	9029.8	99	415	101	200	24.5	20.8	16.8	36.5	36.5	36.3			6.3	6.6	4.4	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
55	4/29/2001	109	2800.1	9059.9	14	142	72	141	24.3	21.8	18.8	36.5	36.4	36.5			6.4	7.0	5.0	PN
56	4/29/2001	1000	2700.2	9059.8	99	1730	101	201	25.0	25.0	22.9	36.2	36.2	36.9			6.4	6.3	4.9	PN
57	4/29/2001	1457	2630.2	9059.8	99	2096	100	200	25.1	24.7	23.0	36.2	36.3	36.8			6.3	6.2	5.0	PN
58	4/29/2001	1919	2600.0	9059.9	99	2611	103	198	25.3	24.9	21.8	36.2	36.3	36.8			4.0	4.9	3.8	PN
59	4/29/2001	2258	2600.0	9130.0	99	2280	101	197	25.5	24.7	20.0	36.3	36.3	36.6			6.3	6.2	5.0	PN
60	4/30/2001	226	2559.8	9159.7	99	2187	100	201	24.4	20.0	15.9	36.4	36.6	36.1			6.5	4.7	4.3	PN
61	4/30/2001	613	2629.5	9159.7	99	1879	100	201	24.3	20.0	15.5	36.5	36.4	36.1			6.5	4.8	4.9	PN
62	4/30/2001	951	2700.2	9200.1	99	1653	101	200	24.3	21.6	14.0	36.5	36.6	35.8			6.4	5.1	4.7	PN
63	4/30/2001	1440	2729.9	9159.9	99	748	100	200	24.7	21.0	17.1	36.4	36.6	36.3			6.3	5.4	5.4	PN
64	4/30/2001	1835	2759.9	9159.7	99	114	55	110	24.0	21.9	19.6	36.3	36.4	36.5			6.7	6.9	5.3	PN
65	4/30/2001	2227	2801.7	9230.0	16	92	45	90	24.3	22.4	19.3	36.4	36.4	36.5			6.5	7.0	5.4	PN
66	5/1/2001	158	2800.9	9301.1	17	97	49	96	23.5	21.1	19.6	35.9	36.4	36.5			6.7	6.6	5.7	PN
67	5/1/2001	620	2730.0	9300.0	99	809	101	201	23.6	19.3	16.0	35.8	36.4	36.1			6.7	4.9	4.3	PN
68	5/1/2001	1046	2700.1	9300.0	99	1245	101	200	24.8	20.8	15.1	36.5	36.6	36.0			6.2	5.5	4.0	PN
69	5/1/2001	1722	2629.3	9259.9	99	1647	100	200	25.1	19.4	13.7	36.5	36.6	36.8			6.5	4.7	4.2	PN
70	5/1/2001	2015	2610.5	9310.0	99	1894	102	200	24.7	20.7	13.6	36.5	36.6	35.8			6.3	5.3	4.7	PN
71	5/1/2001	2343	2600.8	9330.3	99	2278	99	201	24.7	21.9	14.1	36.5	36.6	35.4			6.4	5.9	4.6	PN
72	5/2/2001	312	2603.1	9359.2	99	2369	101	199	25.3	24.3	17.8	36.3	36.7	36.4			6.4	5.3	5.1	PN
73	5/2/2001	725	2630.0	9400.0	99	1557	100	200	25.3	22.6	18.5	36.3	36.8	36.6			6.3	4.9	5.2	PN
74	5/2/2001	1121	2700.0	9359.8	99	1025	100	200	25.1	21.1	15.9	36.4	36.6	36.1			6.3	5.9	4.3	PN
75	5/2/2001	1631	2730.1	9359.9	99	812	100	199	24.8	18.2	14.4	35.7	36.4	35.9			6.3	4.4	4.0	PN
76	5/2/2001	2133	2758.4	9354.7	99	84	42	83	23.9	23.4	19.5	35.1	36.6	36.6			6.7	6.4	6.4	PN
77	5/3/2001	131	2801.1	9430.8	18	63	32	60	24.0	22.5	19.8	34.8	36.6	36.5			6.5	6.2	6.8	PN
78	5/3/2001	434	2759.9	9500.1	99	80	41	73	24.0	21.1	19.8	34.7	36.3	36.5			6.6	7.0	7.0	PN
79	5/3/2001	834	2729.9	9500.0	99	840	100	200	23.8	18.1	14.3	34.0	36.4	35.9			6.7	4.3	4.1	PN
80	5/3/2001	1230	2700.2	9459.9	99	1481	100	199	25.2	21.5	16.5	35.9	36.6	36.2			6.5	6.2	4.1	PN
81	5/3/2001	1646	2629.9	9459.8	99	1665	101	201	24.4	21.9	18.7	36.6	36.6	36.5			6.4	6.8	4.2	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
82	5/3/2001	2039	2602.7	9500.1	99	2432	100	200	25.1	22.2	19.7	36.4	36.6	36.7			6.4	6.8	5.0	PN
83	5/4/2001	24	2602.4	9529.8	99	1454	99	201	25.1	21.8	18.6	36.4	36.6	36.4			6.2	6.8	5.5	PN
84	5/4/2001	404	2602.0	9559.9	99	977	100	202	25.2	21.3	16.7	36.5	36.5	36.2			6.2	5.5	4.0	PN
85	5/4/2001	756	2630.0	9600.1	99	1030	100	200	24.4	19.3	16.3	33.0	36.4	36.2			6.4	4.3	4.3	PN
86	5/4/2001	1144	2659.9	9600.2	99	781	100	200	24.7	18.5	14.9	32.5	36.5	36.0			6.6	5.4	4.1	PN
87	5/4/2001	1701	2729.9	9559.9	99	208	100	200	24.5	19.3	16.6	34.4	36.5	36.2			6.5	5.9	4.4	PN
88	5/4/2001	2109	2800.0	9600.0	20	45	23	41	24.0	22.3	22.3	35.3	36.2	36.2			6.6	7.0	7.0	PN
89	5/5/2001	1252	2719.2	9445.0	99	1133	100	200	25.0	18.0	13.9	35.0	36.4	35.8			6.3	4.3	3.9	PN
90	5/5/2001	1622	2720.4	9420.0	99	1433	101	200	24.4	19.8	14.9	34.5	36.3	35.9			6.4	5.6	3.8	PN
91	5/5/2001	1921	2721.4	9400.1	99	848	102	199	24.1	18.2	13.7	35.0	36.4	35.8			6.4	4.2	3.9	PN
92	5/5/2001	2217	2722.4	9340.0	99	874	99	201	24.9	18.5	14.9	35.7	36.4	36.0			6.3	4.7	4.4	PN
93	5/6/2001	549	2725.7	9230.0	99	997	98	201	24.6	19.6	15.5	36.5	36.6	36.1			6.3	4.6	4.8	PN
94	5/6/2001	823	2726.5	9215.1	99	927	101	200	24.6	19.4	14.8	36.5	36.5	35.9			6.3	4.5	4.6	PN
95	5/6/2001	1040	2727.1	9200.0	99	814	100	200	25.0	20.7	13.4	36.5	36.6	35.7			6.3	4.7	4.7	PN
96	5/6/2001	1247	2727.9	9142.2	99	1042	100	200	25.0	21.4	13.7	36.5	36.6	35.8			6.4	5.0	4.6	PN
97	5/6/2001	1452	2728.5	9129.6	99	934	100	200	25.3	22.5	17.2	36.4	36.6	36.3			6.2	6.1	4.6	PN
98	5/6/2001	1805	2730.0	9060.0	99	1051	100	200	25.3	25.0	19.5	36.3	36.3	36.6			6.3	6.3	4.8	PN
99	5/11/2001	224	2959.8	8700.0	10	71	35	69	23.0	22.1	19.7	35.8	36.1	36.3		0.112	6.8	7.0	6.9	PN
100	5/11/2001	646	2929.9	8630.2	99	206	102	200	23.4	19.4	14.8	36.2	36.5	36.0		0.097	6.6	6.1	4.3	PN
101	5/11/2001	1153	2900.1	8600.0	99	239	101	200	23.9	19.0	15.7	36.1	36.5	36.1		0.075	6.5	6.0	4.4	PN
102	5/11/2001	1748	2830.0	8600.1	99	329	100	200	24.4	18.0	14.8	36.2	36.4	36.0		0.072	6.5	4.6	4.3	PN
103	5/12/2001	0	2830.2	8500.3	8	101	50	99	23.5	21.0	19.8	36.4	36.5	36.6		0.083	6.7	7.3	6.6	PN
104	5/12/2001	333	2800.2	8459.8	6	246	100	201	23.1	20.0	15.1	36.5	36.5	36.0		0.075	6.7	6.3	4.5	PN
105	5/12/2001	816	2729.8	8500.2	99	394	100	200	23.4	19.3	15.5	36.6	36.6	36.1		0.075	6.7	5.8	4.6	PN
106	5/12/2001	1207	2700.2	8500.0	99	834	101	200	23.9	18.8	14.6	36.4	36.5	35.9		0.074	6.5	5.1	4.4	PN
107	5/12/2001	1714	2630.1	8459.9	99	2286	100	198	24.9	19.0	14.9	36.4	36.5	36.0		0.044	6.3	5.9	4.7	PN
108	5/12/2001	2058	2600.1	8459.8	99	3428	100	200	25.1	20.4	16.2	36.4	36.7	36.2		0.047	6.4	4.8	4.9	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
109	5/13/2001	38	2600.0	8430.0	99	215	100	200	24.6	19.3	14.3	36.4	36.6	35.9		0.063	6.4	5.0	4.2	PN
110	5/13/2001	408	2559.9	8400.0	3	136	67	132	24.0	21.5	18.3	36.5	36.6	36.5		0.056	6.5	7.0	4.7	PN
111	5/13/2001	820	2529.9	8359.7	3	130	65	128	24.1	21.3	17.9	36.5	36.6	36.4		0.058	6.5	7.0	4.4	PN
112	5/13/2001	1156	2500.3	8400.1	99	125	63	122	24.4	20.1	17.3	36.5	36.6	36.3		0.039	6.6	6.0	4.8	PN
113	5/13/2001	1625	2430.1	8359.9	2	2196	101	201	24.6	19.1	14.0	36.5	36.5	35.8		0.052	6.4	4.9	4.4	PN
114	5/13/2001	1959	2430.1	8330.0	2	273	103	200	25.4	19.8	13.9	36.4	36.6	35.8		0.052	6.3	5.5	4.5	PN
115	5/14/2001	14	2400.0	8330.1	99	1038	100	200	26.5	24.8	17.8	36.1	36.7	36.4		0.062	6.1	5.3	5.2	PN
116	5/14/2001	534	2401.8	8400.8	99	1830	101	200	26.3	21.7	17.1	36.2	36.5	36.3		0.084	5.9	6.7	4.8	PN
117	5/14/2001	1146	2430.0	8429.8	99	3419	101	200	24.2	18.6	13.1	36.5	36.5	35.7		0.050	6.5	4.7	4.6	PN
118	5/14/2001	1626	2500.1	8430.0	99	2196	101	200	24.9	19.5	14.0	36.5	36.5	35.8		0.040	6.4	5.4	4.4	PN
119	5/14/2001	2022	2459.9	8459.6	99	3477	102	198	27.0	22.3	18.3	36.2	36.6	36.5		0.033	6.2	6.7	5.5	PN
120	5/14/2001	2329	2431.4	8459.7	99	3518	100	200	26.8	23.1	17.0	36.2	36.6	36.3		0.057	5.9	6.0	5.2	PN
121	5/15/2001	403	2442.5	8530.0	99	3376	100	202	26.2	25.6	21.4	36.1	36.4	36.8		0.042	6.2	5.7	4.8	PN
122	5/15/2001	731	2459.8	8529.9	99	3303	101	200	26.2	25.6	20.8	36.1	36.4	36.8		0.051	6.2	5.9	4.9	PN
123	5/15/2001	1113	2500.2	8559.8	99	3420	100	201	26.4	25.8	22.3	36.1	36.2	36.9		0.029	6.1	6.1	5.0	PN
124	5/15/2001	1534	2530.0	8559.9	99	3203	100	201	26.8	25.8	21.6	36.1	36.3	36.9		0.031	6.0	5.8	4.9	PN
125	5/15/2001	1935	2530.2	8627.9	99	3372	100	201	26.5	25.4	20.9	36.2	36.2	36.8		0.044	6.2	6.1	5.0	PN
126	5/15/2001	2341	2600.0	8559.8	99	3227	100	200	26.5	25.0	19.6	36.2	36.5	36.7		0.036	6.2	5.7	5.0	PN
127	5/16/2001	354	2629.9	8559.9	99	3203	103	202	26.4	21.5	17.8	36.3	36.5	36.4		0.060	6.1	6.5	4.9	PN
128	5/16/2001	833	2700.1	8600.0	99	3120	100	201	24.5	19.0	15.6	36.5	36.5	36.1		0.068	6.4	4.9	4.5	PN
129	5/16/2001	1317	2730.1	8559.9	99	3237	100	200	25.0	19.5	15.9	36.2	36.5	36.1		0.041	6.4	5.4	4.8	PN
130	5/16/2001	1714	2800.4	8600.3	99	915	100	201	24.8	18.5	15.1	35.8	36.5	36.0		0.071	6.6	5.6	4.6	PN
131	5/17/2001	115	2900.0	8630.0	99	378	102	200	24.2	18.3	15.0	36.0	36.5	36.0		0.092	6.6	5.0	4.4	PN
132	5/17/2001	455	2900.1	8659.9	99	683	102	200	24.8	19.3	15.4	36.6	36.5	36.0		0.067	6.4	5.2	4.6	PN
133	5/17/2001	1003	2830.1	8700.2	99	870	100	201	25.7	20.4	16.7	36.4	36.6	36.3		0.052	6.2	6.2	5.1	PN
134	5/17/2001	1418	2759.9	8659.9	99	2853	101	200	26.2	23.6	18.4	36.4	36.7	36.5		0.029	6.1	5.4	5.5	PN
135	5/17/2001	1825	2729.9	8660.0	99	3075	100	201	26.2	24.7	19.1	36.4	36.5	36.5		0.031	6.2	6.1	5.9	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
136	5/17/2001	2223	2700.0	8700.2	99	3059	100	200	26.1	21.7	17.8	36.4	36.5	36.4		0.052	6.3	6.5	5.0	PN
137	5/18/2001	247	2630.1	8700.0	99	2990	100	201	25.6	18.9	15.9	36.6	36.6	36.1		0.047	6.2	5.1	5.2	PN
138	5/18/2001	519	2615.6	8700.3	99	3093	101	200	25.5	18.2	14.6	36.2	36.4	35.9		0.131	6.4	4.3	4.8	PN
139	5/18/2001	940	2559.9	8730.1	99	3268	100	200	25.5	14.7	11.9	36.3	35.9	35.5		0.120	6.2	4.6	4.4	PN
140	5/18/2001	1345	2559.9	8800.0	99	3008	101	201	25.7	17.2	13.2	36.4	36.3	35.7		0.810	6.2	4.8	4.4	PN
141	5/18/2001	1814	2630.0	8800.0	99	2708	100	201	25.5	17.5	13.1	36.6	36.3	35.7		0.044	6.2	4.7	4.5	PN
142	5/18/2001	2145	2659.9	8759.9	99	2860	102	202	25.9	18.3	14.5	36.6	36.4	35.9		0.086	6.1	4.9	4.8	PN
143	5/19/2001	137	2729.9	8800.1	99	2560	102	199	26.9	20.7	16.6	36.3	36.8	36.2		0.057	6.1	4.9	5.1	PN
144	5/19/2001	446	2759.6	8800.0	99	2507	103	202	26.0	20.8	16.1	36.4	36.8	36.1		0.068	6.2	4.8	4.8	PN
145	5/19/2001	852	2829.8	8800.1	99	2400	100	201	25.8	18.5	14.9	36.4	36.5	36.0		0.069	6.2	4.5	4.7	PN
146	5/19/2001	1338	2859.9	8760.0	99	1382	101	201	25.6	20.0	15.6	35.7	36.7	36.1		0.062	6.2	4.7	4.6	PN
147	5/19/2001	1759	2930.0	8800.2	11	44	20	41	26.5	23.3	20.5	28.3	35.4	36.0		0.284	6.7	7.0	7.1	PN
148	5/19/2001	2232	2900.2	8830.0	11	1107	100	200	26.1	18.5	14.6	31.5	36.4	35.9		1.580	6.9	5.1	4.3	PN
149	5/20/2001	337	2830.0	8900.0	99	788	104	213	25.3	18.7	15.9	35.8	36.4	36.1		0.092	6.2	5.5	4.4	PN
150	5/20/2001	826	2800.1	8900.3	99	2442	100	200	25.5	19.2	15.3	35.4	36.6	36.0		0.122	6.1	5.0	4.8	PN
151	5/20/2001	1242	2730.1	8900.0	99	1775	101	200	26.0	18.3	14.6	36.5	36.4	35.9		0.060	6.2	4.7	4.6	PN
152	5/20/2001	1636	2700.0	8900.2	99	2270	101	201	26.1	19.1	14.6	36.6	36.5	35.9		0.051	6.2	4.6	4.6	PN
153	5/20/2001	2038	2630.2	8900.0	99	2870	99	200	26.0	21.3	16.3	36.4	36.6	36.2		0.053	6.2	5.7	5.1	PN
154	5/21/2001	2355	2601.0	8900.1	99	3291	100	202	25.8	24.2	17.9	36.3	36.6	36.4		0.035	6.2	5.6	4.8	PN
155	5/21/2001	404	2600.8	8930.0	99	3294	98	200	25.7	24.8	20.7	36.3	36.3	36.8		0.038	6.1	6.1	4.8	PN
156	5/21/2001	744	2601.0	9000.0	99	2900	100	200	25.8	24.8	22.6	36.3	36.2	36.9		0.036	6.3	6.3	4.9	PN
157	5/21/2001	1210	2629.9	9000.1	99	2743	100	199	26.0	24.9	22.3	36.3	36.2	36.9		0.290	6.3	6.3	4.9	PN
158	5/21/2001	1633	2700.1	8959.8	99	2333	100	200	26.1	25.3	18.3	36.3	36.3	36.5		0.020	6.2	6.3	4.9	PN
159	5/21/2001	2211	2729.8	8959.7	99	1089	103	200	26.1	21.6	17.4	36.4	36.5	36.4		0.041	6.1	6.4	5.2	PN
160	5/22/2001	222	2759.9	9000.0	99	532	100	201	25.9	19.7	15.7	36.0	36.5	36.1		0.058	6.1	4.5	4.7	PN
161	5/22/2001	624	2758.8	9029.9	99	407	100	200	25.8	20.7	14.2	36.1	36.5	35.8		0.057	6.2	6.3	4.6	PN
162	5/22/2001	1136	2800.1	9059.9	14	147	73	144	25.9	25.1	20.2	36.4	36.5	36.5		0.045	6.2	6.4	6.2	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
163	5/22/2001	1556	2730.0	9100.2	99	1098	101	201	26.1	24.7	19.5	36.4	36.5	36.6		0.052	6.2	5.6	5.0	PN
164	5/22/2001	2006	2700.1	9059.8	99	2791	102	200	26.0	24.8	20.1	36.3	36.3	36.7		0.037	6.4	6.0	5.0	PN
165	5/23/2001	55	2630.2	9059.8	99	2103	100	197	25.9	25.1	21.2	36.3	36.3	36.7		0.037	6.3	6.4	5.1	PN
166	5/23/2001	518	2600.0	9059.9	99	2745	103	200	25.8	25.0	21.8	36.3	36.2	36.9		0.033	6.2	6.2	4.9	PN
167	5/23/2001	941	2559.8	9130.4	99	2200	100	200	25.9	22.4	16.8	36.5	36.6	36.3		0.043	6.1	6.5	4.8	PN
168	5/23/2001	1350	2600.4	9159.9	99	2149	100	200	26.4	19.6	14.7	36.4	36.6	35.9		0.063	6.0	4.7	4.5	PN
169	5/23/2001	1821	2630.1	9200.0	99	1880	100	200	26.0	18.3	13.8	36.5	36.4	35.8		0.052	6.2	4.6	4.5	PN
170	5/23/2001	2159	2659.1	9159.9	99	1830	101	199	25.8	18.5	14.2	36.5	36.5	35.8		0.037	6.3	4.6	4.6	PN
171	5/24/2001	226	2730.1	9159.9	99	755	100	200	25.6	20.6	16.0	36.6	36.5	36.1		0.060	6.1	5.6	4.7	PN
172	5/24/2001	938	2730.1	9300.2	99	770	101	200	25.6	20.3	16.1	36.6	36.7	36.2		0.043	6.2	4.7	5.0	PN
173	5/24/2001	1331	2659.9	9260.0	99	1298	100	200	26.1	20.2	15.1	36.7	36.6	36.0		0.038	6.2	4.8	4.5	PN
174	5/24/2001	1818	2629.9	9300.1	99	1647	100	201	26.3	19.3	14.9	36.6	36.6	36.0		0.046	6.2	4.9	4.4	PN
175	5/24/2001	2121	2611.0	9310.2	99	1900	100	201	26.1	18.8	14.4	36.5	36.5	35.9		0.056	6.2	5.0	4.5	PN
176	5/25/2001	21	2601.4	9330.1	99	2291	100	201	26.1	18.8	14.2	36.5	36.5	35.8		0.054	6.2	4.6	4.5	PN
177	5/25/2001	343	2600.9	9360.0	99	2745	100	201	26.3	18.3	14.8	30.9	36.4	36.0		0.269	6.3	4.4	4.1	PN
178	5/25/2001	821	2630.1	9359.9	99	1564	100	200	26.3	19.0	14.5	32.8	36.4	35.9		0.141	6.2	4.7	4.1	PN
179	5/25/2001	1210	2700.0	9400.1	99	1097	101	201	26.4	19.5	14.6	35.7	36.6	35.9		0.084	6.2	5.0	4.0	PN
180	5/25/2001	1624	2730.0	9400.3	99	805	100	200	26.5	19.9	15.6	35.4	36.6	36.1		0.128	6.2	5.0	4.8	PN
181	5/25/2001	2140	2758.6	9356.2	99	80	39	78	26.4	23.0	20.7	35.6	36.3	36.5		0.086	6.3	6.9	5.8	PN
182	5/26/2001	138	2801.4	9430.6	18	61	30	59	26.1	23.5	20.4	34.4	36.1	36.5		0.101	6.3	7.0	6.6	PN
183	5/26/2001	452	2800.0	9500.0	19	80	38	77	26.3	22.1	19.9	34.8	36.2	36.5		0.081	6.2	7.2	6.3	PN
184	5/26/2001	857	2730.1	9500.1	99	850	100	200	26.8	18.9	14.8	30.8	36.5	36.0		0.232	6.3	4.1	4.0	PN
185	5/26/2001	1250	2700.0	9500.1	99	1410	100	200	27.1	18.9	15.3	31.0	36.5	36.0		0.275	6.4	4.3	4.2	PN
186	5/26/2001	1658	2629.9	9500.1	99	1684	101	200	27.1	22.3	17.7	32.7	36.6	36.4		0.102	6.3	6.1	4.4	PN
187	5/26/2001	2033	2602.3	9500.0	99	2400	100	201	26.5	22.3	19.6	36.4	36.6	36.7		0.032	6.1	6.8	5.1	PN
188	5/27/2001	23	2601.7	9530.1	99	1454	102	200	26.7	22.3	19.0	36.4	36.6	36.6		0.042	6.1	6.7	4.7	PN
189	5/27/2001	356	2601.2	9559.9	99	982	98	202	26.9	22.4	17.1	36.6	36.6	36.3		0.042	6.1	6.7	4.0	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
190	5/27/2001	748	2629.8	9559.7	99	1040	100	200	27.1	21.3	16.1	35.5	36.5	36.1		0.088	5.9	5.7	4.1	PN
191	5/27/2001	1617	2659.7	9600.1	99	784	100	200	27.0	19.3	15.1	30.9	36.5	36.0		0.273	6.3	4.2	4.2	PN
192	5/27/2001	2039	2729.8	9559.9	99	216	102	199	27.0	19.6	16.0	32.3	35.5	36.1		0.192	6.2	5.5	4.1	PN
193	5/28/2001	35	2759.9	9600.1	20	45	23	42	26.2	23.0	20.1	32.8	35.9	36.4		0.298	6.5	6.8	5.9	PN
194	5/28/2001	2007	2801.1	9300.1	17	101	48	98	26.1	24.0	20.0	35.9	36.5	36.5		0.067	6.1	6.7	5.2	PN
195	5/28/2001	2350	2801.4	9230.0	16	99	50	98	26.4	24.4	20.9	36.4	36.6	36.6		0.073	6.2	6.2	5.4	PN
196	5/29/2001	317	2759.9	9200.1	99	119	58	117	26.0	24.0	20.6	36.5	36.6	36.6		0.041	6.2	6.1	5.1	PN

Table 2. Selected environmental parameters (continued)

ALABAMA VESSEL, 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
66001	5/18/2001	1208	2959.2	8753.0	10	27	14	27	25.0	24.5	24.0	28.0	30.0	32.0			8.0	10.2	6.0	TV
66002	10/2/2001	1235	2959.4	8807.0	11	25	13	25	27.5	27.0	27.5	33.0	33.0	33.0				6.4	6.6	TV
66003	10/2/2001	1055	3002.7	8804.7	11	20	10	20	27.0	27.0	26.0	32.0	32.0	32.0			6.8	7.2	6.6	TV
66004	10/4/2001	1256	2955.8	8800.1	11	32	16	32	27.5	27.5	27.0	32.0	33.0	33.0			6.8	6.6	6.6	TV
66005	10/4/2001	1100	2956.6	8801.8	11	30	15	30	27.0	27.0	26.0	33.0	33.0	33.0			6.8	6.6	6.6	TV
66006	10/22/2001	1100	2957.4	8745.6	10	31	16	31	23.0	22.5	22.0	32.0	33.0	33.0			5.8	5.8	6.8	TV

Table 2. Selected environmental parameters (continued)

OREGON II, 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
1	5/31/2001	1321	2836.7	8458.8	99	72	35	70	27.4	23.4	21.1	36.4	36.5	36.5			7.0	9.1	8.9	VC
2	5/31/2001	1517	2835.9	8458.0	99	64	32	62	27.1	24.3	21.3	36.3	36.5	36.5			6.1	8.8	9.3	TR
3	5/31/2001	1709	2832.0	8453.8	99	58	29	58	27.4	23.4	21.1	36.4	36.5	36.5			8.0	8.8	8.7	VC
4	6/1/2001	718	2837.1	8459.3	99	66	31	65	25.9	23.3	21.3	36.3	36.5	36.5			8.3	9.0	9.3	VC
5	6/1/2001	851	2837.0	8459.4	99	71	35	70	25.6	22.9	21.1	36.3	36.5	36.5			8.4	9.0	8.9	VC
6	6/1/2001	1050	2835.9	8458.9	99	66	33	64	25.6	23.6	21.2	36.3	36.5	36.5			8.2	8.9	9.1	VC
7	6/1/2001	1245	2835.9	8459.3	99	78	37	74	25.8	23.3	21.1	36.3	37.8	36.5			8.2	8.9	9.0	VC
9	6/1/2001	1536	2834.9	8458.4	99	72	37	70	25.6	23.1	21.2	36.4	36.5	36.5			8.2	8.9	9.0	VC
10	6/1/2001	1715	2832.9	8457.8	99	64	33	64	25.6	23.4	21.2	36.4	36.4	36.5			7.9	8.8	8.9	TR
11	6/2/2001	745	2837.2	8421.7	99	28	15	28	25.0	25.0	23.2	36.6	36.6	36.6			8.5	8.6	9.3	VC
12	6/2/2001	905	2836.7	8422.0	99	27	13	27	25.0	24.9	23.1	36.6	36.6	36.6			5.9	8.6	9.3	VC
13	6/2/2001	1025	2835.7	8420.3	99	25	12	24	25.0	24.9	23.5	36.6	36.6	36.6			8.6	8.8	9.4	VC
14	6/2/2001	1205	2833.7	8420.5	99	28	14	26	25.5	25.0	23.4	36.6	36.6	36.6			8.4	8.5	9.2	VC
15	6/2/2001	1257	2833.7	8420.5	99	27	13	24	25.7	25.1	23.4	36.6	36.6	36.6			8.1	8.3	8.8	TR
16	6/2/2001	1440	2833.2	8421.0	99	32	15	30	25.5	24.4	23.3	36.6	36.6	36.6			8.0	8.5	8.9	VC
17	6/2/2001	1535	2833.2	8420.4	99	26	12	25	25.7	25.3	22.9	36.6	36.6	36.6			8.3	8.6	9.7	TR
18	6/2/2001	1720	2832.3	8421.5	99	37	17	36	25.4	24.8	23.3	36.6	36.6	36.6			8.4	8.7	9.2	VC
19	6/3/2001	748	2837.4	8416.1	99	26	13	25	25.9	25.6	22.5	36.5	36.5	36.5			6.3	6.4	7.0	VC
20	6/3/2001	913	2835.8	8415.9	99	30	15	30	26.0	24.7	22.5	36.6	36.5	36.5			6.1	6.7	6.9	VC
21	6/3/2001	1029	2835.9	8415.7	99	28	13	27	26.2	25.5	22.6	36.6	36.5	36.5			6.3	6.4	7.0	VC
22	6/3/2001	1147	2834.4	8416.1	99	29	12	28	26.1	25.6	22.8	36.6	36.6	36.6			6.3	6.4	7.0	VC
23	6/3/2001	1316	2833.9	8415.6	99	23	11	23	26.6	25.8	22.8	36.6	36.6	36.5			6.3	6.3	7.1	VC
24	6/3/2001	1433	2833.4	8415.6	99	26	13	26	26.8	25.5	22.6	36.6	36.6	36.5			6.3	6.5	7.2	TR
25	6/3/2001	1630	2832.9	8414.9	99	26	14	25	26.8	24.1	22.3	36.6	36.5	36.5			6.3	6.9	7.2	VC
26	6/3/2001	1732	2831.9	8416.6	99	23	11	21	26.9	25.6	23.0	36.6	36.6	36.6			6.3	6.5	7.1	VC
27	6/4/2001	918	2825.3	8418.4	99	28	14	28	26.0	25.5	23.1	36.6	36.6	36.6			6.3	6.4	6.8	VC
28	6/4/2001	1030	2825.8	8418.7	99	30	13	27	26.2	24.9	23.0	36.6	36.6	36.6			6.3	6.6	6.8	VC

Table 2. Selected environmental parameters (continued)

OREGON II, 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
29	6/4/2001	1149	2825.8	8418.3	99	33	16	31	26.1	24.3	23.1	36.6	36.6	36.6			6.3	6.7	6.8	VC
30	6/4/2001	1316	2827.3	8417.0	99	28	13	25	26.5	25.4	23.4	36.3	36.6	36.6			6.3	6.5	7.0	VC
31	6/4/2001	1441	2827.7	8416.5	99	25	13	25	26.6	25.8	23.3	36.6	36.6	36.6			6.3	6.4	6.9	VC
32	6/4/2001	1615	2827.3	8414.0	99	31	15	31	27.0	25.6	22.7	36.6	36.6	36.6		0.303	6.3	6.5	7.1	TR
33	6/4/2001	1748	2828.3	8414.2	99	30	15	30	26.8	25.1	22.9	36.6	36.6	36.6		0.407	4.6	6.6	7.2	VC
34	6/5/2001	727	2805.1	8440.0	99	85	43	85	26.8	22.5	20.4	36.5	36.6	36.5		0.324	6.2	6.9	6.2	VC
35	6/5/2001	854	2805.0	8437.9	99	82	41	81	26.8	22.6	20.7	36.5	36.6	36.6		0.283	6.2	6.9	6.5	VC
36	6/5/2001	1031	2807.6	8437.0	99	68	25	65	26.9	22.8	21.2	36.5	36.4	36.6		0.262	6.1	6.9	6.5	VC
37	6/5/2001	1212	2808.2	8441.3	99	79	36	76	26.7	23.3	21.1	36.5	36.6	36.6			6.2	6.9	6.5	VC
38	6/5/2001	1335	2811.7	8437.8	99	67	33	65	26.8	23.5	21.2	36.5	36.4	36.5		0.262	6.2	6.8	6.7	TR
39	6/5/2001	1543	2811.3	8441.2	99	72	36	70	27.0	26.3	21.1	36.5	36.5	36.6		0.262	6.1	6.8	6.6	VC
40	6/5/2001	1711	2811.9	8443.3	99	75	37	73	27.0	23.4	21.1	36.5	36.5	36.6		0.303	6.2	6.9	6.6	VC

Table 2. Selected environmental parameters (continued)

NUECES, 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
67001	6/1/2001	847	2747.7	9703.4	20	7	3	7	25.9	26.4	26.3	34.0	35.3	35.5			5.9	5.7	6.4	ST
67002	6/1/2001	928	2744.1	9703.7	20	13	6	13	26.1	25.4	24.3	34.8	35.2	35.8			5.6	5.9	4.3	ST
67003	6/1/2001	1053	2740.8	9709.3	20	5	3	5	28.6	27.2	25.1	36.0	35.9	35.8			5.6	5.5	5.4	ST
67004	6/1/2001	1125	2739.2	9709.6	20	9	4	9	27.9	26.3	24.9	35.9	35.5	35.8			6.1	6.0	6.1	ST
67005	6/1/2001	1222	2738.6	9708.4	20	12	6	12	27.1	26.9	24.5	35.7	35.9	35.8			5.8	5.9	6.4	ST
67006	6/1/2001	1327	2736.3	9701.5	20	21	10	21	26.5	25.6	22.9	35.3	35.6	36.0			5.7	5.8	6.3	ST
67007	6/1/2001	1408	2739.0	9704.3	20	16	8	16	26.9	26.0	24.7	35.0	35.3	35.8			5.9	6.1	6.4	ST
67008	6/1/2001	1450	2741.3	9703.7	20	15	7	15	27.0	26.1	24.5	34.9	35.8	36.0			5.8	6.0	6.0	ST
67009	6/18/2001	826	2750.2	9659.4	20	13	6	13	28.8	28.8	28.8	33.2	33.4	33.4			5.4	5.5	5.3	ST
67010	6/18/2001	912	2755.7	9657.5	20	10	5	10	29.8	29.8	29.7	33.0	33.0	33.0			5.9	6.0	5.9	ST
67011	6/18/2001	951	2758.2	9656.5	20	3	1	3	29.9	29.9	29.5	32.9	33.3	33.3			6.8	6.6	6.3	ST
67012	6/18/2001	1037	2755.5	9650.5	20	16	8	16	28.8	28.6	28.5	32.5	32.9	33.7			6.8	6.9	6.7	ST
67013	6/18/2001	1441	2752.2	9654.6	20	16	8	16	29.3	28.8	28.7	32.5	33.2	33.8			7.6	7.3	7.4	ST
67014	6/18/2001	1522	2748.7	9652.8	20	20	10	20	29.3	29.0	28.6	34.3	34.3	34.7			7.3	7.5	6.9	ST
67015	6/18/2001	1602	2747.2	9656.8	20	18	9	18	29.7	29.1	28.8	33.3	33.6	34.3			7.4	6.3	7.3	ST
67016	6/18/2001	1723	2744.8	9700.8	20	16	8	16	29.4	29.2	28.8	33.2	33.6	33.9			7.6	7.4	6.6	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	6/8/2001	841	2826.4	9616.3	19	9	4	9	27.2	27.2	26.8	33.5	34.5	34.7			6.3	6.2	4.3	ST
34002	6/8/2001	916	2826.5	9614.3	19	10	5	10	27.4	27.3	27.2	34.7	34.3	34.0			6.7	6.5	6.3	ST
34003	6/8/2001	1026	2827.5	9606.4	19	14	7	14	27.3	27.1	26.8	34.6	34.5	34.7			7.1	7.0	5.6	ST
34004	6/8/2001	1127	2823.5	9604.4	19	18	9	18	27.3	27.1	26.6	33.3	34.0	34.5			6.8	6.6	6.1	ST
34005	6/8/2001	1239	2822.6	9606.4	19	18	9	18	27.9	27.1	26.4	34.3	34.3	34.4			7.0	6.7	4.9	ST
34006	6/8/2001	1322	2823.6	9608.6	19	17	8	17	28.1	27.3	26.4	34.7	34.7	34.7			7.4	6.6	4.4	ST
34007	6/8/2001	1408	2823.5	9611.2	19	16	8	16	28.5	27.5	26.6	34.4	34.4	34.3			7.3	6.7	4.4	ST
34008	6/8/2001	1445	2823.4	9612.4	19	16	8	16	28.8	27.3	27.0	33.5	34.2	34.4			7.4	6.5	4.6	ST
34009	6/18/2001	1010	2820.5	9622.5	19	9	4	9	29.1	29.1	28.9	29.0	29.0	29.8			7.2	6.8	7.1	ST
34010	6/18/2001	1124	2813.5	9626.6	19	16	8	16	28.7	28.2	28.4	29.9	33.1	33.3			7.5	5.9	6.2	ST
34011	6/18/2001	1212	2812.5	9624.8	19	17	9	17	28.8	28.6	28.1	32.4	33.7	34.2			7.1	6.7	6.0	ST
34012	6/18/2001	1322	2816.5	9619.6	19	19	9	19	29.0	28.3	28.7	30.3	33.7	33.9			7.4	7.0	7.2	ST
34013	6/18/2001	1404	2815.5	9617.6	19	22	11	22	29.1	29.1	28.1	33.8	34.1	34.3			6.9	6.7	6.0	ST
34014	6/18/2001	1514	2820.4	9613.6	19	19	9	19	29.2	28.2	28.4	29.6	31.7	31.8			7.5	5.6	6.5	ST
34015	6/18/2001	1554	2821.5	9612.5	19	17	8	17	29.2	28.7	28.2	28.9	31.4	31.4			7.3	6.8	6.9	ST
34016	6/18/2001	1642	2823.5	9616.6	19	12	6	12	28.8	28.7	28.6	29.0	29.1	29.2			7.6	7.4	7.0	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	6/1/2001	852	2604.6	9708.5	21	10	5	10	22.4	21.7	21.7	36.3	36.4	36.4			5.1	5.3	5.3	ST
33002	6/1/2001	924	2605.6	9707.5	21	15	8	15	24.5	21.7	21.6	36.3	36.3	36.5			5.3	6.0	5.7	ST
33003	6/1/2001	1008	2603.5	9703.5	21	22	11	22	25.1	24.8	21.6	35.1	36.2	36.5			5.8	6.1	6.2	ST
33004	6/1/2001	1102	2557.5	9705.5	22	19	9	19	25.9	24.9	21.7	36.4	36.3	36.5			5.7	5.8	6.2	ST
33005	6/1/2001	1149	2559.5	9700.5	22	26	13	26	26.9	26.0	23.7	36.5	36.5	36.6			6.2	5.8	6.3	ST
33006	6/1/2001	1233	2603.6	9700.5	21	26	13	26	26.7	25.4	21.3	36.6	36.6	36.5			7.1	6.0	6.0	ST
33007	6/1/2001	1324	2604.5	9654.6	21	27	14	27	26.9	25.6	21.4	36.6	36.6	36.5			5.9	6.1	6.4	ST
33008	6/1/2001	1409	2608.6	9701.5	21	23	12	23	26.3	25.6	24.0	36.2	36.3	36.2			6.1	5.8	6.1	ST
33009	6/18/2001	851	2608.5	9702.5	21	22	11	22	27.6	27.5	26.0	35.2	36.2	36.3			5.7	6.0	5.7	ST
33010	6/18/2001	930	2610.5	9702.5	21	22	11	22	27.8	27.7	25.8	36.2	36.3	36.3			5.8	5.7	4.9	ST
33011	6/18/2001	1027	2616.6	9703.5	21	19	10	19	28.3	27.8	26.9	36.0	36.0	36.2			5.8	5.6	5.5	ST
33012	6/18/2001	1109	2619.5	9702.5	21	22	11	22	28.2	27.9	27.3	35.9	35.9	36.0			5.7	5.9	5.5	ST
33013	6/18/2001	1211	2620.5	9711.6	21	9	5	9	28.8	28.1	27.9	36.2	36.2	36.3			5.8	5.7	5.5	ST
33014	6/18/2001	1258	2617.6	9708.6	21	16	8	16	28.6	27.6	27.2	36.3	36.2	36.3			5.8	5.9	5.3	ST
33015	6/18/2001	1328	2616.5	9708.6	21	15	8	15	28.4	27.6	27.4	36.3	36.3	36.2			5.9	6.0	5.4	ST
33016	6/18/2001	1425	2609.4	9708.5	21	14	7	14	29.0	27.9	27.2	36.3	36.2	36.3			5.9	5.9	5.3	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	6/11/2001	1046	2936.3	9350.5	17	8	4	8	28.0	26.9	27.1	11.0	19.3	22.4			6.4	6.4	6.0	ST
40002	6/11/2001	1140	2939.6	9352.8	17	4	2	4	27.6	27.3	27.0	14.6	15.8	17.0			7.2	6.6	5.3	ST
40003	6/11/2001	1229	2939.5	9357.2	17	4	2	4	28.3	27.2	27.3	16.0	16.3	18.6			6.9	6.6	5.5	ST
40004	6/11/2001	1308	2939.4	9358.8	17	4	2	4	28.7	27.3	27.2	15.9	16.2	19.5			7.7	6.7	4.7	ST
40005	6/11/2001	1348	2940.5	9358.3	17	2	1	2	29.5	27.6	27.2	15.6	15.6	16.7			7.6	7.1	5.8	ST
40006	6/11/2001	1431	2939.5	9401.8	18	4	2	4	29.2	27.0	27.2	16.0	17.3	19.1			7.6	5.2	4.7	ST
40007	6/11/2001	1518	2937.6	9359.1	17	6	3	6	29.2	27.4	27.3	15.8	16.9	21.7			8.1	7.0	5.1	ST
40008	6/11/2001	1558	2937.5	9358.7	17	6	3	6	29.2	27.1	27.2	15.8	16.8	20.6			8.1	5.3	5.0	ST
40009	6/18/2001	909	2937.3	9348.7	17	8	4	8	29.1	29.0	28.7	9.2	17.9	18.0			5.3	6.0	6.3	ST
40010	6/18/2001	946	2936.5	9347.2	17	9	4	9	28.5	28.3	28.3	17.5	18.2	19.1			5.8	5.8	5.6	ST
40011	6/18/2001	1035	2936.5	9344.9	17	10	5	10	29.0	28.7	28.3	17.5	18.2	24.2			6.5	6.4	5.8	ST
40012	6/18/2001	1115	2937.5	9342.4	17	10	5	10	29.5	29.2	28.7	17.2	17.5	23.9			7.7	7.0	4.4	ST
40013	6/18/2001	1212	2935.6	9343.9	17	11	6	11	29.5	28.6	28.5	17.6	22.4	27.6			6.9	6.0	6.3	ST
40014	6/18/2001	1249	2934.6	9345.4	17	11	6	11	29.6	28.8	28.6	17.7	22.9	28.6			6.9	6.1	6.7	ST
40015	6/18/2001	1345	2935.5	9353.8	17	7	4	7	30.3	28.6	28.4	13.2	18.7	21.7			9.1	6.3	6.0	ST
40016	6/18/2001	1443	2934.5	9353.2	17	9	4	9	31.4	28.5	28.7	12.6	20.3	23.7			7.9	6.1	6.6	ST

Table 2. Selected environmental parameters (continued)

SAN JACINTO, 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
69001	6/11/2001	1032	2917.6	9439.5	18	9	4	9	27.4	27.1	27.0	19.5	21.3	22.5			6.3	6.2	5.7	ST
69002	6/11/2001	1058	2919.7	9437.4	18	11	5	11	27.6	26.9	26.9	18.6	19.7	22.2			6.6	6.2	6.1	ST
69003	6/11/2001	1129	2918.1	9435.7	18	13	6	13	27.7	27.1	27.3	28.4	20.8	19.2			6.4	5.4	5.3	ST
69004	6/11/2001	1156	2919.8	9434.3	18	12	6	12	28.6	27.0	27.3	18.2	22.0	25.9			6.5	5.4	5.5	ST
69005	6/11/2001	1221	2919.1	9433.7	18	13	7	13	28.9	27.0	27.3	18.3	22.0	26.0			7.1	5.3	5.4	ST
69006	6/11/2001	1304	2923.5	9432.6	18	10	5	10	28.9	27.0	27.2	17.7	19.7	23.1			7.1	6.4	5.4	ST
69007	6/11/2001	1336	2925.8	9432.3	18	9	5	9	29.3	27.9	27.1	17.9	17.6	23.7			7.7	6.9	5.3	ST
69008	6/11/2001	1418	2925.6	9438.8	18	3	2	3	31.9	27.8	27.7	17.9	18.6	18.9			7.0	8.5	8.6	ST
69009	6/18/2001	1018	2919.5	9443.4	18	2	1	2	29.6	29.4	29.4	14.9	16.6	18.0			8.7	5.2	5.1	ST
69010	6/18/2001	1057	2918.5	9445.4	18	2	1	2	30.3	30.3	29.9	16.9	17.1	17.7			9.5	8.5	6.6	ST
69011	6/18/2001	1136	2913.8	9451.4	18	6	3	6	30.0	29.6	29.6	18.1	18.7	19.9			9.1	8.5	8.8	ST
69012	6/18/2001	1203	2911.5	9453.6	18	9	5	9	29.8	29.5	28.5	18.7	21.0	23.8			9.6	8.8	7.2	ST
69013	6/18/2001	1227	2911.6	9451.3	18	11	6	11	30.0	29.3	28.6	18.9	20.2	21.9			8.4	7.4	6.3	ST
69014	6/18/2001	1304	2907.5	9448.5	18	15	8	15	30.0	29.5	28.7	17.4	19.0	19.5			8.2	8.6	6.0	ST
69015	6/18/2001	1346	2912.7	9439.5	18	16	8	16	30.3	29.3	27.5	16.0	18.4	23.2			10.5	7.2	6.1	ST
69016	6/18/2001	1411	2914.3	9439.3	18	15	8	15	30.2	29.3	28.5	16.8	17.4	20.7			10.9	7.1	5.8	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	6/8/2001	1919	3003.3	8844.9	11	7	3	6	27.1	26.6	26.8	31.1	30.5	30.7			5.4	6.3	6.3	ST
17002	6/8/2001	2115	2953.0	8844.7	11	18	9	17	27.1	25.1	24.3	32.1	34.5	35.2			6.3	3.6	3.3	ST
17003	6/9/2001	126	2954.5	8844.1	11	13	6	12	26.9	26.9	24.8	31.7	31.9	34.9			4.9	5.1	3.1	ST
17004	6/9/2001	453	2951.9	8839.0	11	20	10	19	27.0	25.8	22.1	31.5	35.0	36.9			5.7	4.9	4.3	ST
17005	6/9/2001	801	2942.4	8826.8	11	37	18	36	26.6	25.4	21.9	33.5	36.4	37.0			7.7	5.0	4.4	ST
17006	6/9/2001	1021	2936.0	8833.7	11	32	16	31	27.1	24.6	22.4	33.0	36.1	37.0			8.0	5.5	4.6	ST
17007	6/9/2001	1224	2938.4	8845.0	11	14	7	13	26.8	26.3	23.1	34.1	34.7	36.5			6.1	5.9	4.1	ST
17008	6/9/2001	1450	2928.0	8847.5	11	16	8	15	25.7	25.5	24.1	27.4	36.7	36.1			6.4	5.7	5.4	ST
17009	6/9/2001	1628	2929.0	8856.5	11	11	6	10	25.2	23.2	22.5	26.5	30.3	35.4			6.0	6.5	6.8	ST
17010	6/9/2001	1914	2926.1	8846.2	11	22	11	21	25.6	25.8	24.0	28.6	36.3	36.4			8.0	5.8	5.7	ST
17011	6/9/2001	2020	2922.4	8849.3	11	33	16	32	25.5	24.7	22.3	30.2	37.0	36.8			6.4	6.3	5.2	ST
17012	6/9/2001	2146	2923.5	8850.0	11	24	11	23	25.7	25.5	24.4	29.8	36.7	36.4			6.5	5.9	5.7	ST
17013	6/9/2001	2328	2926.6	8851.7	11	19	9	17	25.3	25.1	23.8	27.4	36.3	37.0			6.3	5.7	5.4	ST
17014	6/10/2001	240	2924.0	8844.5	11	40	20	39	25.8	24.8	21.8	28.5	37.1	37.0			6.1	6.0	3.9	ST
17015	6/10/2001	536	2916.3	8857.0	11	28	13	27	25.1	24.4	25.7	24.9	36.8	31.5			6.2	5.8	5.6	ST
17016	6/10/2001	757	2919.2	8856.8	11	24	12	23	24.7	24.6	23.1	24.5	31.1	37.1			6.4	5.9	6.0	ST
17017	6/10/2001	922	2920.2	8852.1	11	34	17	33	26.0	24.9	23.2	32.1	37.2	37.1			6.2	6.2	5.7	ST
17018	6/10/2001	1110	2918.2	8846.6	11	56	28	55	26.0	22.2	21.5	31.3	37.0	37.4			6.2	6.2	5.0	ST
17019	6/10/2001	1405	2930.1	8829.9	11	49	25	48	27.1	24.8	21.9	33.8	36.9	36.9			5.7	6.1	4.1	PN
17020	6/15/2001	2012	2929.2	8838.8	11	35	17	34	27.5	25.1	22.9	32.4	36.2	36.1			7.9	6.0	4.1	ST
17021	6/15/2001	2239	2932.4	8835.8	11	36	18	35	27.5	25.0	22.3	33.3	36.3	36.3			7.3	5.9	3.4	ST
17022	6/16/2001	100	2931.3	8836.5	11	32	16	31	27.3	25.4	22.8	33.0	36.1	36.3			7.6	5.9	4.1	ST
17023	6/16/2001	301	2936.6	8835.3	11	23	11	22	27.3	26.5	22.8	31.4	34.6	36.1			8.2	6.1	3.2	ST
17024	6/16/2001	534	2941.1	8850.7	11	11	6	10	26.9	24.9	24.3	26.3	34.3	35.5			9.5	5.3	3.7	ST
17025	6/16/2001	1700	3000.2	8830.0	11	25	12	24	29.9	25.5	22.5	24.0	34.3	36.4			7.7	5.0	3.1	PN
17026	6/16/2001	2024	3013.3	8847.7	11	7	4	6	28.8	27.9	25.8	14.0	21.9	30.8			6.9	5.9	3.2	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
5	6/13/2001	706	2930.0	8759.3	11	46	23	46												ST
6	7/11/2001	1208	2629.5	9626.9	21	93	46	92												ST/PN
7	7/11/2001	1708	2609.8	9654.6	21	37	17	35	28.5	25.6	21.8	36.4	36.5	36.5		0.280	5.7	6.2	5.3	ST
8	7/11/2001	1802	2611.5	9656.9	21	28	14	27	28.2	27.4	22.4	36.3	36.4	36.5		0.870	5.8	5.9	5.8	ST
10	7/11/2001	2310	2613.4	9703.2	21	22	10	21	26.7	26.7	22.9	36.6	36.6	36.5		0.600	5.9	5.9	5.7	ST
11	7/12/2001	407	2616.1	9630.3	21	64	32	63	28.1	23.9	21.5	36.4	36.5	36.6		0.260	5.8	5.3	5.5	ST/PN
12	7/12/2001	900	2607.3	9704.3	21	20	10	20	24.9	23.0	22.8	36.5	36.5	36.5		0.640	5.7	5.9	5.8	ST
13	7/12/2001	1040	2610.8	9709.4	21	13	6	13	24.1	24.1	22.9	36.5	36.5	36.5		1.100	5.5	5.5	5.4	ST
14	7/12/2001	1344	2623.8	9702.5	21	26	13	25	27.2	26.7	22.8	36.6	36.6	36.5		0.370	5.9	5.9	5.7	ST/PN
15	7/12/2001	2018	2630.1	9628.6	21	92	44	89	28.3	22.9	17.4	36.4	36.6	36.3		0.300	5.8	6.6	3.9	ST
16	7/12/2001	2159	2631.8	9635.4	21	75	37	74	28.3	23.1	18.7	36.4	36.6	36.4		0.240	5.8	6.7	3.9	ST
17	7/13/2001	0	2631.9	9641.9	21	58	29	57	28.3	24.2	20.0	36.4	36.6	36.5		0.320	5.8	6.6	4.3	ST
18	7/13/2001	318	2642.3	9658.3	21	40	20	39	28.2	28.1	21.2	36.5	36.5	36.5		0.350	5.7	5.8	5.0	ST
20	7/13/2001	805	2658.6	9653.7	21	55	27	54	28.2	26.6	21.4	36.3	36.5	36.5		0.300	5.8	6.0	5.5	ST/PN
22	7/13/2001	1222	2652.4	9715.4	21	23	11	22	26.5	26.3	22.5	36.4	36.4	36.4		0.451	5.7	5.8	5.5	ST
23	7/13/2001	1416	2646.0	9714.2	21	20	11	19	25.8	24.9	22.7	36.4	36.4	36.4		0.451	5.7	5.8	5.6	ST
24	7/13/2001	2017	2638.3	9715.9	21	14	6	13	24.2	24.1	23.0	36.4	36.4	36.5		0.914	5.5	5.5	5.4	ST
25	7/13/2001	2246	2651.5	9714.4	21	23	11	21	28.3	25.6	22.5	36.4	36.4	36.4		0.598	5.8	5.8	5.8	ST
26	7/13/2001	2358	2653.6	9711.6	21	28	14	28	27.1	23.0	22.1	36.5	36.5	36.5		0.493	5.8	5.7	5.5	ST
27	7/14/2001	235	2658.0	9718.5	21	17	8	16	24.8	24.8	22.8	36.4	36.4	36.4		1.020	6.0	6.0	5.7	ST
28	7/14/2001	734	2710.7	9647.2	20	64	32	63	28.8	26.8	20.6	36.1	36.5	36.5		0.325	5.7	6.1	5.1	ST/PN
30	7/14/2001	1137	2707.8	9708.4	20	29	14	28	27.6	26.8	22.4	36.5	36.5	36.5		0.325	5.8	5.9	6.0	ST
31	7/14/2001	1316	2711.6	9710.9	20	26	13	25	27.2	25.1	22.8	36.5	36.5	36.5		0.409	5.8	5.9	6.1	ST
32	7/14/2001	1524	2721.9	9714.9	20	17	8	17	25.9	24.7	23.3	36.4	36.5	36.5		0.725	6.5	6.6	6.3	ST
33	7/14/2001	1713	2728.5	9711.9	20	16	8	16	26.5	26.3	24.2	36.4	36.4	36.5		0.619	6.3	6.3	6.3	ST
34	7/14/2001	2208	2659.5	9711.4	21	28	15	28	26.8	25.2	21.8	36.6	36.6	36.5		0.493	5.9	6.1	5.7	ST
35	7/15/2001	35	2706.6	9721.7	20	13	6	12	24.2	24.2	23.1	36.4	36.4	36.5		1.399	6.0	6.0	6.1	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
36	7/15/2001	149	2710.0	9717.5	20	18	9	17	25.0	24.8	22.5	36.4	36.4	36.5		0.704	5.9	5.9	5.7	ST
37	7/15/2001	353	2721.3	9716.3	20	15	7	14	25.0	25.0	23.3	36.5	36.5	36.5		0.725	6.2	6.2	6.1	ST
38	7/15/2001	652	2733.1	9711.9	20	13	6	12	25.6	25.5	24.4	36.4	36.5	36.5		0.978	6.1	6.1	6.1	ST
39	7/15/2001	845	2741.9	9708.2	20	12	5	12	25.9	25.9	25.1	36.4	36.4	36.5		1.251	6.0	6.0	6.0	ST
40	7/15/2001	1032	2730.1	9700.3	20	28	14	28	26.9	26.5	23.1	36.5	36.5	36.5		0.367	5.8	5.9	6.3	PN
41	7/15/2001	1232	2732.2	9650.5	20	37	18	36	28.3	27.9	22.2	36.5	36.5	36.6		0.282	5.8	5.8	6.2	ST
42	7/15/2001	1545	2722.0	9633.7	20	84	42	83	29.3	22.9	18.5	36.1	36.5	36.4		0.304	5.6	6.5	3.9	ST
44	7/15/2001	1936	2721.9	9633.5	20	82	40	80	29.0	23.5	18.5	36.1	36.5	36.4		0.325	5.7	6.7	3.7	PN
45	7/15/2001	2336	2730.0	9655.7	20	33	16	32	27.8	27.4	27.7	36.5	36.5	36.5		0.304	6.0	6.1	6.4	ST
46	7/18/2001	2212	2903.3	9429.3	18	17	8	17	30.3	30.0	28.2	32.5	33.0	34.1		1.315	6.2	6.5	3.8	ST/PN
47	7/19/2001	111	2852.1	9426.9	18	22	11	21	30.1	30.1	25.5	33.2	33.3	35.6		0.830	5.9	6.0	1.6	ST
48	7/19/2001	539	2839.4	9512.4	19	25	13	24	29.9	28.8	26.6	32.9	35.2	35.9		0.914	5.8	5.9	3.5	ST
49	7/19/2001	807	2848.2	9507.1	19	20	10	19	29.5	28.8	26.0	34.5	35.2	35.6		1.504	6.0	6.5	2.6	ST
50	7/19/2001	1215	2846.0	9531.9	19	9	4	8	31.0	30.3	29.0	33.8	33.8	34.8		0.662	5.8	5.8	5.7	ST
51	7/19/2001	1523	2822.9	9524.4	19	31	15	30	30.7	28.8	23.7	33.4	35.8	36.2		0.535	5.7	5.9	5.4	ST
52	7/19/2001	1828	2809.2	9538.5	19	40	21	40	29.6	29.0	22.7	36.1	36.3	36.5		0.430	5.8	5.8	5.6	ST/PN
53	7/19/2001	2242	2801.6	9606.2	19	40	20	40	28.9	28.6	22.8	36.4	36.5	36.5		0.325	5.8	5.9	6.2	ST/PN
54	7/20/2001	236	2821.2	9619.4	19	13	6	12	30.1	30.1	29.8	34.4	34.4	35.0		2.726	5.8	5.8	5.9	ST
55	7/20/2001	530	2759.4	9620.5	20	35	17	34	28.0	27.8	23.0	36.5	36.5	36.5		0.346	5.9	6.0	6.3	ST
56	7/20/2001	856	2749.1	9639.9	20	32	16	31	27.4	27.4	23.4	36.5	36.5	36.5		0.430	6.0	6.0	6.0	ST/PN
57	7/20/2001	1111	2738.5	9627.5	20	64	33	64	29.1	27.0	20.7	36.3	36.4	36.5		0.240	5.7	6.3	4.9	ST
58	7/20/2001	1441	2755.8	9614.8	20	46	23	45	29.3	28.4	21.7	36.4	36.5	36.6		0.346	5.8	5.9	6.1	ST
59	7/20/2001	1721	2804.1	9608.5	19	34	17	33	28.6	27.9	23.7	36.5	36.5	36.5		0.493	5.9	6.0	6.2	ST
60	7/21/2001	14	2802.7	9500.1	19	72	37	72	29.9	23.4	19.4	34.8	36.4	36.4		0.472	5.7	6.2	4.0	ST/PN
61	7/21/2001	533	2812.1	9423.0	18	55	27	54	30.4	27.1	21.5	32.3	36.4	36.5		0.577	5.6	6.3	5.7	ST/PN
62	7/21/2001	742	2803.7	9422.2	18	64	32	63	30.3	26.1	20.4	33.4	36.5	36.4		0.409	5.6	6.6	5.6	ST
63	7/21/2001	1050	2800.8	9439.6	18	71	35	70	30.4	23.1	19.5	33.9	36.5	36.5		0.451	5.7	6.6	4.7	ST
64	7/21/2001	1619	2838.7	9446.8	18	29	14	28	30.2	30.2	25.5	33.2	34.0	35.7		0.598	5.8	5.7	5.5	ST/PN

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
65	7/21/2001	1854	2855.4	9441.8	18	18	9	18	30.1	29.9	27.8	33.8	33.8	35.3		0.914	6.0	6.0	3.9	ST
66	7/21/2001	2331	2835.4	9409.5	18	34	17	33	30.7	29.7	23.6	32.0	34.2	36.2		0.683	5.8	6.3	3.9	ST/PN
67	7/22/2001	146	2841.2	9407.1	18	29	14	28	30.6	30.4	24.3	31.7	32.6	36.1		0.598	5.7	5.8	3.7	ST
68	7/22/2001	603	2908.9	9410.1	18	12	6	11	30.1	30.0	30.0	33.1	33.1	33.1		1.736	5.8	5.8	5.8	ST/PN
69	7/22/2001	1050	2902.9	9323.3	17	22	11	22	30.2	28.6	27.6	26.9	33.0	34.9		0.978	5.8	2.3	1.4	ST/PN
70	7/22/2001	1414	2920.5	9311.5	17	17	8	15	30.5	30.2	28.3	29.1	29.4	33.4		1.167	5.5	5.6	0.1	ST

Table 2. Selected environmental parameters (continued)

MCARTHUR, 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
1	6/14/2001	815	2820.8	9227.4	16	52	26	48	27.4	26.3	21.2	34.0	35.3	36.5						VC
2	6/14/2001	1059	2820.9	9227.3	16	54	27	50	27.4	26.2	21.2	34.0	35.5	36.5						VC
3	6/14/2001	1341	2820.7	9227.0	16	54	27	47	27.5	25.7	21.2	34.1	35.7	36.5						VC
4	6/14/2001	1531	2820.6	9227.0	16	55	24	50	27.5	26.6	21.2	34.1	34.6	36.5						TR
5	6/15/2001	818	2752.7	9348.4	99	47	20	42	27.8	27.8	23.2	36.1	36.1	36.4						VC
6	6/15/2001	956	2752.8	9348.0	99	81	36	77	27.8	23.4	20.0	36.0	36.1	36.5						VC
7	6/15/2001	1116	2752.1	9348.8	99	55	25	47	27.7	27.3	22.3	36.1	36.2	36.4						VC
8	6/15/2001	1314	2752.6	9349.3	99	46	20	41	27.8	27.8	23.2	36.2	36.5	36.3						VC
9	6/15/2001	1426	2751.8	9348.8	99	77	37	75	27.9	23.9	20.4	36.2	36.2	36.4						TR
10	6/15/2001	1703	2751.5	9347.6	99	93	44	88	27.8	22.6	20.1	36.3	36.2	36.5						VC
11	6/15/2001	1824	2752.5	9348.7	99	57	26	54	27.9	26.2	22.1	36.3	36.4	36.4						VC
12	6/16/2001	759	2754.4	9336.9	99	44	21	40	27.8	27.8	22.8	34.3	35.2	36.3						VC
13	6/16/2001	922	2753.9	9336.4	99	49	22	44	27.5	26.1	23.2	34.4	35.2	36.3						VC
14	6/16/2001	1045	2753.5	9336.9	99	80	37	75	28.0	23.8	20.3	35.7	36.1	36.5						VC
15	6/16/2001	1227	2753.1	9336.9	99	114	55	109	28.1	21.3	18.3	35.1	36.4	36.3						TR
16	6/16/2001	1442	2754.6	9336.4	99	39	17	34	27.9	27.8	23.5	35.3	35.9	36.2						VC
17	6/16/2001	1611	2755.3	9336.4	99	50	23	45	28.5	23.4	22.2	35.5	27.3	36.3						VC
18	6/16/2001	1803	2755.7	9336.9	99	56	28	50	28.3	24.1	22.3	34.5	35.6	36.3						VC
19	6/17/2001	846	2800.0	9326.3	17	96	45	91	28.2	22.3	19.4	33.3	36.3	36.5						VC
20	6/17/2001	919	2800.0	9328.1	17	90	43	85	28.2	22.5	20.0	33.2	36.3	36.8						VC
21	6/17/2001	1013	2800.3	9327.9	17	89	42	85	28.3	22.3	19.8	33.2	36.2	36.5						TR
22	6/17/2001	1211	2800.3	9329.8	17	85	40	80	28.3	22.5	20.1	33.2	36.3	36.5						VC
23	6/17/2001	1411	2800.7	9329.9	17	76	36	71	28.3	22.9	20.4	33.2	36.3	36.5						VC
24	6/17/2001	1535	2800.7	9329.5	17	80	40	75	28.3	22.3	20.1	33.2	36.3	36.5						VC
25	6/17/2001	1739	2801.6	9329.2	17	81	40	75	28.3	21.5	20.3	33.2	36.4	36.5						VC
34	6/19/2001	741	2749.2	9253.7	99	63	28	59	28.3	25.6	22.2	33.8	36.6	36.5						VC
35	6/19/2001	940	2749.1	9253.8	99	77	37	73	28.3	25.4	21.8	33.8	36.6	36.5						VC

Table 2. Selected environmental parameters (continued)

MCARTHUR, REEF FISH SURVEY																				
							SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			CL, MG/M3	FL	DISSOLVED OXYGEN, PPM			
STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	SUR	MID	MAX	GEAR
36	6/19/2001	1044	2749.1	9253.5	99	87	40	84	28.3	25.0	21.0	33.7	36.6	36.6						TR
37	6/19/2001	1250	2749.2	9253.2	99	89	42	85	30.2		20.9			36.6						VC
41	6/20/2001	751	2758.2	9222.7	99	62	27	58	28.7	25.8	22.0	34.5	36.6	36.6						VC
42	6/20/2001	911	2758.7	9222.8	99	68	34	63	28.3	25.5	21.9	34.4	36.6	36.6						VC
43	6/20/2001	1120	2758.7	9222.1	99	87	42	83	28.5	24.6	20.9	34.4	36.5	36.6						VC
44	6/20/2001	1451	2757.7	9222.2	99	88	42	84	28.5	24.8	20.9	34.2	36.5	36.6						VC
45	6/20/2001	1600	2756.7	9223.8	99	116	58	111	28.7	22.7	18.8	34.1	36.5	36.5						TR
46	6/20/2001	1740	2756.2	9223.7	99	101	47	97	28.8	23.8	20.0	36.1	36.5	36.6						VC
47	6/21/2001	1015	2758.1	9203.8	99	108	54	105	28.6	23.9	19.6	34.1	36.5	36.5						VC
48	6/21/2001	1407	2756.7	9203.2	99	89	42	85	29.0	24.6	21.0	34.2	36.5	36.5						VC
49	6/21/2001	1544	2757.5	9201.4	99	105	53	101	28.9	22.9	20.2	34.1	36.5	36.2						TR
50	6/21/2001	1757	2756.1	9200.5	99	75	35	73	29.0	25.4	21.9	34.2	36.5	36.5						VC
51	6/22/2001	758	2805.9	9101.8	15	52	26	48	28.5	26.6	24.7	35.5	36.4	36.5						VC
52	6/22/2001	923	2804.9	9103.1	15	88	42	83	28.3	25.5	21.2	35.3	36.5	36.5						VC
53	6/22/2001	1046	2804.5	9103.1	15	88	42	84	28.8	25.6	21.3	35.2	36.5	36.6						VC

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	6/18/2001	852	3009.2	8803.0	11	9	5	9	27.8	23.9	22.6	25.7	34.6	35.7			6.8	7.1	2.8	ST
2302	6/18/2001	1142	3002.7	8824.2	11	21	11	21	28.4	25.9	21.9	28.8	35.0	36.4			6.1	6.3	3.4	ST
2303	6/18/2001	1232	3000.2	8823.9	11	28	14		28.1	25.1		31.0	35.0				6.1	6.3		ST
2304	6/18/2001	1412	3000.3	8819.5	11	29	15	29	28.3	23.6	21.8	30.3	35.3	36.2			5.9	6.1	2.9	ST
2305	6/18/2001	1510	2958.8	8818.1	11	15	15		28.3	24.3		31.0	35.2				5.9	5.5		ST
2306	6/18/2001	1740	2950.4	8816.5	11	35	18	35	27.9	25.5	21.6	33.7	35.9	36.4			5.9	5.3	2.2	ST
2307	6/18/2001	2010	2958.0	8811.5	11	31	16	31	28.0	25.0	22.1	32.4	34.7	36.5			6.0	5.1	3.0	ST
2308	6/18/2001	2056	2959.4	8812.3	11	28	14	28	27.9	24.9	22.0	32.1	34.4	36.5			5.9	5.5	2.8	ST
2309	6/25/2001	1644	3012.5	8818.8	11	6	3	6	29.6	28.5	28.3	24.7	26.1	28.3			5.6	5.7	5.7	ST
2310	6/25/2001	1750	3007.4	8818.0	11	21	11	21	29.5	27.9	22.5	30.0	33.8	36.1			6.3	6.5	2.7	ST
2311	6/25/2001	2021	3012.3	8813.2	11	13	7	13	29.3	28.4	23.1	26.5	30.3	35.6			6.7	6.3	1.4	ST
2312	6/25/2001	2204	3009.6	8802.8	11	7	4	7	28.1	27.5	26.7	18.8	27.3	32.1			6.8	6.6	6.0	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
1	7/3/2001	800	2900.1	8930.0	13	15	7	13	29.7	27.7	27.0	32.6	34.3	33.4			7.5	10.0	9.9	PN
2	7/3/2001	1025	2859.2	8933.3	13	27	13	27	30.1	27.7	26.4	16.1	34.9	35.6			3.3	5.5	3.8	ST
3	7/3/2001	1208	2900.1	8941.2	13	41	20	41	30.4	27.3	23.4	32.7	33.3	36.4			3.4	10.0	5.7	ST
4	7/3/2001	1357	2902.8	8940.7	13	30	15	30	30.6	27.4	25.2	14.9	35.2	36.0			10.1	5.8	2.0	ST
5	7/3/2001	1610	2905.8	8956.9	13	18	9	18	31.8	28.1	26.2	15.0	17.3	35.6			9.9	10.3	0.9	ST
6	7/3/2001	1729	2909.6	8954.7	13	15	7	15	31.2	28.2	26.3	14.9	16.6	35.3			10.1	10.5	0.2	ST
7	7/3/2001	2024	2912.2	8940.6	13	12	6	12	31.3	29.6	26.8	15.4	16.0	34.8			10.3	8.5	0.1	ST
8	7/3/2001	2220	2904.3	8934.4	13	15	7	15	30.9	27.4	26.7	13.2	21.7	35.1			10.3	5.4	0.4	ST
9	7/4/2001	126	2957.1	8953.4	12	36	18	33	30.8	28.3	24.0	25.1	35.5	36.5			10.2	6.4	3.8	ST
10	7/4/2001	415	2841.2	8948.3	13	92	46	88	25.4	22.6	18.2	37.8	37.0	36.4			6.0	7.3	4.1	ST
11	7/4/2001	840	2830.2	9000.0	13	90	45	90	29.2	22.1	19.2	34.7	37.7	36.5			6.1	9.3	4.2	PN
12	7/4/2001	1221	2827.1	9020.8	14	48	24	47	29.3	26.8	21.9	34.3	36.2	36.6			3.7	6.7	3.8	ST
14	7/4/2001	1730	2830.0	9030.0	14	38	19	38	29.3	27.4	23.6	34.4	36.3	36.5			6.2	8.4	2.3	PN
15	7/4/2001	1916	2830.2	9038.0	14	35	17	34	29.4	27.8	24.8	34.5	36.0	36.2			6.1	6.7	1.9	ST
16	7/4/2001	2111	2832.6	9044.8	14	26	12	26	29.4	28.3	26.0	34.7	34.9	35.9			6.2	6.1	4.5	ST
17	7/4/2001	2228	2832.2	9050.2	14	27	13	27	29.4	28.2	26.1	34.6	35.4	35.9			6.3	6.7	4.6	ST
18	7/5/2001	34	2823.7	9049.8	14	42	21	42	29.6	27.0	22.9	34.5	35.9	36.9			6.3	6.1	3.1	ST
19	7/5/2001	314	2829.1	9057.7	14	34	14	34	29.2	28.9	24.5	34.4	35.0	36.2			6.2	6.4	2.4	ST
20	7/5/2001	429	2831.2	9056.8	14	30	15	29	29.5	27.3	25.5	34.5	36.3	36.1			6.2	6.7	3.0	ST
21	7/5/2001	605	2830.0	9059.9	14	33	16	32	29.1	28.9	24.6	34.4	35.3	36.3			5.8	6.4	3.2	PN
22	7/5/2001	800	2826.9	9058.9	14	38	19	38	29.0	28.1	24.1	34.3	35.8	36.3			4.4	6.2	1.7	ST
23	7/5/2001	1045	2812.1	9051.5	14	85	43	85	29.3	23.3	19.5	33.8	36.7	36.6			6.2	7.1	4.6	ST
24	7/5/2001	1333	2815.0	9037.7	14	65	32	65	29.3	24.8	21.0	34.1	36.0	36.6			6.0	8.3	5.7	ST
25	7/5/2001	1517	2813.0	9034.9	14	74	37	74	29.4	25.1	20.5	34.5	37.1	36.6			6.2	7.0	5.2	ST
27	7/5/2001	1907	2819.7	9007.4	14	84	41	84	29.2	25.7	21.2	34.3	36.9	36.5			6.1	6.9	5.8	PN
28	7/5/2001	2055	2817.5	9011.4	14	86	42	86	29.2	25.1	19.3	34.3	37.1	36.5			5.3	7.6	4.2	ST
29	7/5/2001	2352	2814.1	9024.6	14	76	37	76	29.3	24.1	20.5	34.4	36.8	36.7			6.3	7.4	5.4	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
30	7/6/2001	637	2810.1	9119.0	15	94	46	92	29.6	23.0	19.0	35.5	38.2	36.5			6.2	7.3	4.6	ST
32	7/6/2001	1255	2825.3	9149.9	15	56	28	56	29.4	26.4	21.1	34.1	36.0	36.5			6.1	6.8	5.9	ST
34	7/6/2001	1907	2847.7	9159.6	15	28	14	28	29.8	28.5	25.3	32.3	34.1	36.3			6.9	6.6	2.6	ST
35	7/6/2001	2106	2844.9	9208.8	16	34	17	34	29.6	28.7	23.5	32.4	34.1	36.8			6.3	6.4	4.9	ST
36	7/6/2001	2324	2848.3	9201.8	16	28	14	28	29.7	28.9	25.7	32.4	33.8	36.1			6.6	6.5	2.4	ST
37	7/7/2001	134	2845.3	9149.3	15	23	11	22	29.2	29.9	26.0	33.3	33.7	35.9			3.9	6.2	5.9	ST
38	7/7/2001	450	2830.4	9136.3	15	47	23	46	29.1	27.3	21.6	33.7	35.1	36.5			5.9	6.7	5.6	ST
40	7/7/2001	748	2829.9	9130.1	15	47	23	47	28.9	26.9	21.6	33.4	35.6	36.5			6.2	6.7	5.8	PN
41	7/7/2001	951	2832.4	9121.6	15	38	19	38	29.5	27.4	22.8	32.9	35.7	36.4			4.5	9.4	7.2	ST
42	7/7/2001	1123	2836.3	9120.0	15	30	15	30	29.1	28.5	24.5	33.8	34.5	36.4			6.6	6.5	3.6	ST
44	7/7/2001	1547	2835.4	9107.7	15	24	12	24	31.0	29.0	25.5	32.5	34.3	37.0			3.1	6.6	5.2	ST
45	7/7/2001	1655	2833.9	9105.0	15	27	13	27	31.0	28.7	25.3	24.5	34.5	36.2			7.8	6.6	4.6	ST
46	7/7/2001	2019	2833.0	9114.7	15	32	16	32	31.0	28.8	23.8	32.2	34.7	36.5			5.7	6.6	4.3	ST
47	7/7/2001	2202	2832.1	9123.8	15	39	19	39	29.8	27.8	22.6	33.2	35.1	36.5			6.4	6.6	5.3	ST
48	7/8/2001	15	2841.4	9121.5	15	22	10	20	30.5	29.4	26.8	24.2	33.9	35.8			7.2	7.0	3.4	ST
49	7/8/2001	150	2841.3	9117.9	15	19	9	18	30.2	29.7	27.2	30.2	31.6	35.8			6.9	7.0	3.4	ST
50	7/8/2001	327	2842.1	9113.8	15	17	8	16	29.8	29.8	27.7	24.3	31.2	35.6			6.9	8.1	3.8	ST
51	7/8/2001	1719	2900.0	9030.0	14	11		9	34.8	28.9	28.2	23.4	34.1	35.5			9.0	9.6	9.6	PN
52	7/8/2001	1952	2852.0	9019.8	14	21	10	19	29.8	28.2	27.4	28.1	35.2	35.6			3.7	4.4	4.2	ST
54	7/8/2001	2243	2852.8	9024.7	14	19	9	18	30.4	28.1	26.7	32.5	34.2	34.9			7.0	10.4	10.7	ST
55	7/9/2001	211	2853.3	9040.3	14	13	6	12	30.6	29.4	26.7	23.8	27.1	36.3			6.8	8.8	5.9	ST
56	7/9/2001	629	2842.1	9036.7	14	17	8	16	30.0	29.7	28.0	25.4	33.3	35.8			7.1	6.9	5.9	ST
57	7/9/2001	940	2852.1	9052.8	14	9	4	8	30.3	29.7	28.6	23.0	34.1	35.2			7.9	5.9	4.8	ST
58	7/9/2001	1629	2903.8	9153.3	15	12	6	12	31.0	29.8	27.9	22.4	33.3	34.8			7.3	6.3	9.5	ST
61	7/10/2001	100	2900.1	9230.1	16	24	12	23	30.7	29.2	26.8	22.9	30.7	33.8			8.2	6.3	2.3	PN
62	7/10/2001	229	2901.3	9233.9	16	24	12	23	30.1	29.0	27.0	21.2	31.9	33.8			7.5	6.1	2.9	ST
63	7/10/2001	524	2853.8	9239.3	16	26	13	25	30.1	28.9	25.9	29.9	31.9	33.6			6.4	6.1	3.7	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
64	7/10/2001	858	2910.4	9257.1	16	19	9	18	29.9	29.6	28.8	22.5	30.4	14.1			6.4	5.3	4.6	ST
65	7/10/2001	1046	2859.9	9259.8	16	24	12	24	30.5	29.8	28.7						6.6	6.1	4.5	PN
66	7/10/2001	1259	2844.6	9255.2	16	30	15	29	31.5	29.6	26.1	31.9	32.6	34.2			5.9	6.2	4.7	ST
67	7/10/2001	1532	2838.1	9303.1	17	34	17	33	31.3	29.4	24.5	32.0	32.2	34.9			5.8	6.4	6.7	ST
68	7/10/2001	1718	2830.0	9300.1	17	44	24	44	30.4	29.3	28.6						6.1	5.9	6.0	PN
69	7/10/2001	2038	2832.6	9300.4	17	41	21	41	29.8	28.2	22.5	32.0	32.8	34.6			6.0	6.1	5.9	ST
71	7/11/2001	216	2835.0	9242.1	16	37	18	36	29.8	28.5	23.8	31.7	33.5	33.0			5.8	7.1	6.3	ST
72	7/11/2001	443	2836.0	9234.6	16	36	18	35	29.8	28.9	23.3	31.6	32.7	34.5			5.9	5.9	5.8	ST
73	7/11/2001	714	2824.5	9224.4	16	57	28	56	29.7	24.7	22.1	31.9	34.1	34.3			5.7	6.5	5.5	ST
76	7/11/2001	1247	2831.6	9210.7	16	47	23	46	30.8	28.1	22.9	31.0	34.2	34.0			5.8	7.4	5.8	ST
78	7/11/2001	1605	2815.7	9209.3	16	66	33	65	30.5	24.4	22.3	32.8	34.4	34.6			5.6	6.5	4.7	ST
80	7/11/2001	1901	2810.5	9201.8	16	75	37	74	30.1	24.1	20.8	32.7	34.3	34.4			5.8	6.4	4.9	ST
81	7/11/2001	2234	2818.4	9138.2	15	66	33	66	29.0	24.9	21.3	32.4	34.1	34.9			5.8	6.4	5.0	ST
83	7/12/2001	351	2822.4	9115.9	15	57	28	56	30.3	26.7	21.9	30.5	33.4	34.2			6.7	6.3	4.8	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
37825	7/16/2001	948	2900.1	9030.0	14	9	5	9	29.4	29.0	28.0	31.4	33.2	35.2		8.845	8.3	6.6	1.4	PN
37826	7/16/2001	1333	2900.0	9059.9	14	5	3	5	30.4	30.4	29.1	28.2	28.1	30.0		8.696	8.1	8.2	8.4	
37827	7/16/2001	1655	2900.0	9129.9	15	9	5	9	30.2	30.2	27.3	30.4	30.4	35.2		2.320	7.9	7.8	0.9	PN
37828	7/16/2001	1959	2848.3	9122.5	15	15	8	15	30.0	29.6	27.1	29.6	33.3	35.4		1.160	7.0	6.4	1.9	ST
37829	7/16/2001	2346	2840.1	9120.5	15	23	12	23	29.8	29.1	26.0	29.3	33.7	36.1		1.397	7.1	5.9	2.0	ST
37830	7/17/2001	257	2843.7	9103.3	15	12	7	12	29.3	27.8	27.9	27.9	33.9	35.3		3.108	6.8	4.0	2.0	ST
37831	7/17/2001	453	2840.3	9106.5	15	15	8	15	29.9	27.8	27.7	29.2	35.3	35.4		1.887	6.7	1.6	2.1	ST
37832	7/17/2001	618	2835.8	9106.5	15	24	12	24	29.5	27.9	25.0	29.2	35.0	36.1		1.182	6.5	1.9	1.5	ST
37833	7/17/2001	831	2830.1	9100.0	14	31	17	31	29.3	28.3	22.9	29.1	34.3	33.4		1.408	6.5	5.9	3.7	PN
37834	7/17/2001	1113	2843.3	9103.3	15	12	7	12	29.6	28.5	27.9	28.8	34.2	35.3		2.807	7.1	4.0	1.9	ST
37835	7/17/2001	1402	2848.3	9122.5	15	16	8	16	30.1	29.6	27.7	29.1	33.5	35.0		0.918	6.8	6.2	2.2	ST
37836	7/17/2001	1544	2840.1	9120.5	15	23	11	23	30.1	29.2	26.4	28.7	33.7	35.7		0.796	6.9	6.0	1.6	ST
37837	7/17/2001	1752	2840.3	9106.5	15	15	8	15	30.4	28.9	27.7	29.4	34.2	35.3		1.227	6.7	3.8	2.2	ST
37838	7/17/2001	1845	2834.9	9106.5	15	26	14	26	30.2	27.7	24.2	28.7	34.9	36.3		0.225	6.6	4.6	2.0	ST
37839	7/17/2001	2207	2832.8	9048.8	14	24	14	24	30.0	27.4	25.1	29.1	35.5	36.2		1.077	6.8	5.2	3.8	ST
37840	7/18/2001	104	2840.2	9031.8	14	18	10	18	29.9	29.4	26.8	24.3	33.9	35.6		3.381	7.3	5.9	3.5	ST
37841	7/18/2001	413	2842.4	9015.0	14	30	16	30	30.2	29.1	24.7	21.4	34.6	36.2		7.353	8.4	5.8	4.2	ST
37842	7/18/2001	655	2830.0	9029.9	14	38	18	38	29.2	28.3	22.7	28.4	35.0	36.4		1.372	6.7	6.4	2.3	PN
37843	7/18/2001	1006	2832.7	9048.6	14	26	13	26	30.0	29.1	24.1	31.6	34.6	36.2		0.812	6.2	5.9	2.4	ST
37844	7/18/2001	1240	2840.0	9031.9	14	18	9	18	29.8	29.5	27.1	26.3	33.8	35.5		1.465	7.0	5.7	4.0	ST
37845	7/18/2001	1514	2842.4	9015.0	14	28	14	28	29.5	28.9	25.0	22.6	34.3	36.2		4.989	7.5	5.9	4.1	ST
37846	7/18/2001	1815	2859.9	9000.1	14	24	12	24	30.4	28.8	26.5	28.5	34.9	35.7		4.908	8.2	6.2	0.5	PN
37847	7/18/2001	2057	2902.1	8949.7	13	30	15	30	30.0	29.0	24.5	31.0	34.9	36.2		0.757	6.5	6.4	0.8	ST
37848	7/18/2001	2256	2904.4	8942.1	13	24	14	24	30.0	29.0	28.0	31.3	34.5	35.3		0.572	6.4	5.7	5.7	ST
37849	7/19/2001	11	2904.1	8938.8	13	18	10	18	30.1	29.3	27.8	31.5	33.5	35.1		0.838	6.6	6.3	1.2	ST
37850	7/19/2001	148	2901.3	8938.3	13	34	18	34	30.0	28.4	21.3	31.0	35.1	36.5		1.879	7.0	6.3	2.5	ST
37851	7/19/2001	615	2900.0	8929.9	13	15	8	15	29.0	29.2	27.6	21.5	31.5	35.1		16.254	7.7	6.3	0.9	PN

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
37852	7/19/2001	816	2901.1	8938.2	13	33	17	33	29.6	28.7	23.2	30.7	34.8	36.4		0.345	6.3	6.0	3.7	ST
37853	7/19/2001	924	2904.1	8938.8	13	19	10	19	29.5	29.5	27.7	32.1	32.2	35.1		0.512	6.3	6.2	0.3	ST
37854	7/19/2001	1027	2904.5	8942.2	13	26	13	26	30.0	29.1	24.1	31.6	34.6	36.2		0.210	6.2	5.9	2.4	ST
37855	7/19/2001	1153	2902.1	8949.7	13	31	16	31	29.6	28.7	24.8	29.7	35.0	36.1		0.710	6.7	5.9	0.0	ST

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, FALL PLANTON 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
63001	8/31/2001	46	2602.6	9600.1	99	1042	102	207	29.6	22.4	16.5	36.5	36.6	36.2						PN
63002	8/31/2001	440	2602.4	9630.0	21	62	28	60	27.7	23.6	21.8	36.2	36.5	36.5						PN
63003	8/31/2001	806	2600.0	9700.1	21	27	17	25	26.5	23.6	23.5	36.4	36.5	36.5						PN
63004	8/31/2001	1318	2629.9	9629.9	99	83	42	81	27.7	21.5	20.1	36.2	36.5	36.5			6.0	5.1	3.9	PN
63005	8/31/2001	1705	2629.9	9659.9	21	35	17	32	26.9	25.9	24.1	36.3	36.6	36.5			6.2	7.0	6.5	PN
63006	8/31/2001	2126	2659.9	9712.2	21	26	13	25	28.0	28.0	25.6	36.5	36.5	26.4			5.9	5.9	4.2	PN
63007	9/1/2001	112	2659.9	9640.3	21	86	43	85	28.2	25.5	21.1	36.2	36.6	36.5			5.9	6.7	4.5	PN
63008	9/1/2001	559	2700.0	9600.0	99	760	99	202	27.2	19.5	14.6	36.2	36.5	35.9			6.0	3.9	3.5	PN
63009	9/1/2001	1048	2735.2	9600.2	20	138	74	131	29.2	21.7	17.8	36.4	36.5	36.3			5.7	5.6	3.5	PN
63010	9/1/2001	1448	2729.9	9630.1	20	72	35	70	29.0	28.9	22.0	36.3	36.6	36.5		0.170	5.8	5.9	5.3	PN
63011	9/1/2001	1851	2731.2	9659.1	20	28	13	26	28.6	28.1	27.7	36.4	36.4	36.4		0.159	5.9	6.0	5.7	PN
63012	9/1/2001	2340	2759.9	9629.9	20	27	12	25	28.8	28.8	28.8	36.6	36.6	36.6		1.099	5.5	5.5	5.4	PN
63013	9/2/2001	313	2800.2	9600.2	19	45	22	45	28.6	28.4	23.8	36.4	36.4	36.5		0.296	5.8	5.8	5.0	PN
63014	9/2/2001	649	2820.0	9620.0	19	15	7	12	28.6	28.6	28.7	36.5	36.5	36.7		1.270	5.4	5.7	5.4	PN
63015	9/2/2001	939	2830.8	9602.2	19	13	6	10	28.5	28.5	28.8	35.8	35.8	36.1		2.696	5.6	5.6	5.4	PN
63016	9/2/2001	1351	2830.1	9528.7	19	26	12	24	28.9	28.9	28.9	35.5	35.5	35.7		1.334	5.8	5.7	5.3	PN
63017	9/2/2001	1754	2759.9	9530.7	20	53	26	51	29.2	29.1	23.8	36.4	36.4	36.5		0.230	5.8	5.8	5.4	PN
63018	9/2/2001	2026	2744.9	9530.1	20	107	53	104	29.0	24.4	17.3	36.4	36.5	36.3		0.130	5.8	6.5	3.5	PN
63019	9/2/2001	2251	2730.0	9530.0	20	732	102	201	29.3	19.6	14.7	36.1	36.5	35.9		0.096	5.8	4.2	3.8	PN
63020	9/3/2001	411	2759.9	9459.9	99	80	39	78	29.1	28.5	20.9	35.8	36.5	36.5		0.125	5.8	6.2	4.6	PN
63021	9/3/2001	752	2828.2	9459.1	18	36	17	34	28.8	28.8	24.5	35.7	35.8	36.3		0.889	5.7	5.7	3.9	PN
63022	9/3/2001	1141	2900.1	9500.1	19	16	8	14	28.4	28.0	28.7	33.2	33.3	34.9		1.913	5.8	5.6	5.3	PN
63023	9/3/2001	1520	2900.0	9429.9	18	19	9	16	29.5	29.4	28.9	34.6	34.6	34.6		1.262	6.0	5.9	5.8	PN
63024	9/3/2001	1910	2830.9	9430.3	18	36	17	35	30.0	28.8	25.6	36.1	36.2	36.4		0.251	5.8	5.8	4.6	PN
63025	9/3/2001	2253	2801.0	9430.0	18	68	33	68	29.2	29.2	20.8	36.1	36.2	36.5		0.140	5.8	5.8	4.5	PN
63026	9/4/2001	245	2730.2	9430.2	99	695	101	202	29.4	19.5	13.7	36.4	36.5	35.8		0.081	5.7	3.9	3.4	PN
63027	9/4/2001	753	2759.6	9401.2	99	82	41	80	29.2	24.9	21.0	34.8	36.6	36.4		0.155	5.8	6.8	4.8	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, FALL PLANTON SURVEY																				
			POSITION		STAT	DEPTH	SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			CL, MG/M3	FL	DISSOLVED OXYGEN, PPM			
STA#	DATE MM/DD/YY	TIME	LAT	LONG	ZONE	(M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	SUR	MID	MAX	GEAR
63028	9/4/2001	1215	2830.0	9359.8	17	40	21	38	29.4	28.9	24.1	35.2	35.2	36.3		0.156	5.8	5.7	4.0	PN
63029	9/4/2001	1609	2900.1	9359.8	17	20	9	18	29.5	29.2	29.1	33.9	34.2	34.3		0.309	5.9	5.9	5.8	PN
63030	9/4/2001	2056	2926.9	9428.6	18	10	5	9	28.2	28.5	28.8	29.6	31.6	32.5		6.667	6.1	4.7	3.2	PN
63031	9/5/2001	17	2928.9	9400.3	18	12	6	12	29.5	29.1	28.6	30.3	30.7	32.8		2.290	7.5	7.3	4.1	PN
63032	9/5/2001	349	2929.9	9332.4	17	11	5	10	28.5	28.4	28.7	30.6	31.7	32.2		5.589	5.3	5.0	4.3	PN
63033	9/5/2001	733	2901.1	9330.1	17	23	11	21	29.3	29.3	29.1	33.6	33.6	33.6			5.8	5.8	5.3	PN
63034	9/5/2001	1218	2830.0	9330.0	17	42	20	40	29.4	28.9	22.9	34.9	35.6	36.4		0.209	5.8	5.9	4.0	PN
63035	9/5/2001	1620	2800.7	9329.3	17	83	40	82	30.0	26.1	20.9	36.4	36.5	36.5		0.135	5.8	6.8	5.0	PN
63036	9/5/2001	2014	2729.8	9329.7	99	531	98	201	29.7	21.6	16.3	36.5	36.6	36.2		0.060	5.8	5.5	4.0	PN
63037	9/6/2001	117	2800.5	9258.5	16	103	51	102	30.0	26.3	18.9	36.3	36.5	36.4		0.083	5.8	6.7	4.0	PN
63038	9/6/2001	525	2830.0	9259.9	16	45	22	44	29.5	29.1	23.6	33.3	34.0	36.5		0.129	5.8	5.5	4.6	PN
63039	9/6/2001	939	2859.9	9300.3	17	24	11	22	29.4	29.3	29.1	33.4	33.4	33.7		0.190	5.8	5.8	5.2	PN
63040	9/6/2001	1325	2929.9	9260.0	16	14	6	11	29.8	29.4	28.6	29.8	30.5	30.9		1.836	7.1	6.5	4.4	PN
63041	9/6/2001	1712	2927.1	9227.3	16	10	5	8	30.0	29.7	29.0	24.3	26.5	27.6		12.956	8.2	7.3	2.3	PN
63043	9/7/2001	153	2829.8	9231.4	16	50	24	48	29.7	29.5	22.6	33.6	35.7	36.5		0.153	5.8	5.7	4.4	PN
63044	9/7/2001	728	2800.1	9230.6	16	105	52	103	29.5	23.2	18.7	33.6	36.5	36.4		0.177	5.8	6.2	4.0	PN
63045	9/7/2001	1135	2730.0	9230.4	99	862	99	201	29.8	19.5	14.6	34.5	36.5	35.9		0.121	5.8	4.4	3.8	PN
63046	9/7/2001	1645	2800.1	9200.1	16	117	58	115	29.8	21.0	18.2	33.4	36.5	36.4		0.209	5.9	5.5	4.0	PN
63047	9/7/2001	2056	2829.9	9200.1	16	50	25	49	29.7	27.5	22.6	33.3	36.0	36.4		0.221	5.9	4.3	4.5	PN
63048	9/8/2001	119	2901.3	9200.1	16	19	9	18	29.7	29.7	27.6	31.1	31.1	35.3		0.364	6.1	6.1	0.0	PN
63049	9/8/2001	443	2856.4	9131.9	15	15	7	14	29.8	29.8	28.8	31.1	31.1	34.2		0.412	5.8	5.8	0.6	PN
63050	9/8/2001	820	2830.0	9130.1	15	45	22	42	29.5	29.8	23.3	32.2	34.7	36.4		0.372	5.8	5.6	5.5	PN
63051	9/8/2001	1238	2800.1	9130.3	15	158	75	155	29.8	21.4	17.2	34.9	36.6	36.3		0.167	5.8	5.0	4.3	PN
63052	9/8/2001	1705	2730.1	9130.1	99	837	100	200	29.9	18.2	14.0	34.1	36.4	35.8		0.177	5.9	4.4	4.1	PN
63054	9/9/2001	109	2828.7	9059.8	14	36	17	35	29.5	27.9	24.5	32.1	35.4	36.3		0.496	5.9	2.5	3.2	PN
63055	9/9/2001	414	2841.1	9058.0	14	15	7	14	29.4	29.4	29.7	32.6	32.6	34.1		0.433	5.8	5.8	5.0	PN
63056	9/9/2001	828	2858.7	9029.7	14	13	6	11	29.6	29.6	29.6	30.4	30.4	30.5		1.980	5.7	5.7	5.7	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, FALL PLANTON 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
63057	9/9/2001	1218	2830.0	9030.0	14	38	19	35	29.4	29.6	24.0	32.1	35.4	36.4		0.608	6.0	5.7	2.2	PN
63058	9/9/2001	1548	2805.0	9029.7	14	151	77	148	30.3	21.5	16.8	35.4	36.5	36.3		0.179	5.8	5.4	4.3	
63059	9/9/2001	2032	2730.0	9030.1	99	564	101	203	30.1	20.7	15.7	36.0	36.6	36.1		0.093	5.8	4.9	4.4	PN
63060	9/10/2001	138	2759.9	9000.0	99	533	100	202	29.7	18.3	14.3	35.1	36.5	35.9		0.135	5.8	4.4	4.0	PN
63061	9/10/2001	913	2901.5	9002.0	14	22	9	19	29.4	29.7	27.1	29.4	31.5	35.7		1.812	5.9	5.6	0.2	PN
63062	9/10/2001	1315	2901.6	8930.3	13	13	7	11	30.2	29.5	28.3	16.6	26.6	34.1		7.211	6.9	5.4	0.1	PN
63063	9/10/2001	1721	2829.6	8929.9	99	458	99	202	30.3	19.2	13.9	32.4	36.5	35.8		0.236	5.9	4.2	4.0	PN
63064	9/10/2001	2049	2829.9	8859.7	99	453	101	201	30.3	19.7	14.4	33.4	36.6	35.9		0.160	5.8	4.8	4.1	PN
63065	9/11/2001	107	2859.9	8859.9	99	72	35	71	29.7	27.3	21.9	29.7	36.2	36.5		3.216	5.3	2.7	4.7	PN
63066	9/11/2001	430	2900.0	8830.0	11	621	100	202	29.8	18.0	14.4	31.3	36.4	35.9		1.639	7.0	4.5	4.0	PN
63067	9/11/2001	653	2913.1	8830.0	11	112	56	110	29.7	21.8	18.3	31.3	36.5	36.4		1.389	6.4	4.6	3.8	PN
63068	9/11/2001	923	2930.0	8829.8	11	50	24	48	29.6	26.6	21.7	30.5	36.3	36.5		0.073	6.2	4.7	4.2	PN
63069	9/11/2001	1333	2959.9	8829.9	11	26	12	24	29.7	30.1	28.3	29.9	34.4	36.1		0.127	6.1	5.8	3.9	PN
63070	9/11/2001	1732	3000.1	8800.1	11	22	10	21	29.8	29.4	28.2	31.3	32.3	35.3		0.756	6.1	5.6	1.9	PN
63071	9/11/2001	2113	2929.9	8760.0	99	45	22	45	30.1	29.4	24.5	30.8	36.3	36.3		1.032	6.0	6.0	3.0	PN
63079	9/16/2001	854	2914.9	8759.9	99	247	100	201	29.0	18.6	13.1	34.5	36.5	35.7			5.9	4.3	3.9	PN
63080	9/16/2001	1322	2929.9	8730.0	99	70	34	68	29.1	28.4	21.9	34.7	36.2	36.5			5.9	6.2	4.6	PN
63081	9/16/2001	1819	2959.9	8729.9	10	25	12	23	29.0	28.8	28.6	33.0	33.1	34.3			6.0	6.0	5.5	PN
63082	9/16/2001	2035	3013.9	8730.1	10	13	7	12	28.4	28.5	28.8	31.5	31.6	32.3			6.2	6.2	5.8	PN
63083	9/17/2001	5	3019.3	8700.0	10	19	9	18	28.5	28.5	28.8	33.1	33.1	33.4			6.0	6.0	6.0	PN
63084	9/17/2001	250	2959.4	8659.5	9	75	37	74	28.7	26.4	20.2	34.6	36.4	36.5			6.0	6.2	4.2	PN
63085	9/17/2001	459	2947.9	8659.9	9	189	95	187	28.8	19.2	11.0	34.7	36.5	35.3			5.9	4.1	3.8	PN
63086	9/17/2001	956	2930.1	8630.0	9	205	100	203	28.5	19.0	11.3	34.7	36.5	35.4			6.0	4.3	3.8	PN
63087	9/17/2001	1349	3000.1	8629.8	9	55	26	53	28.8	28.5	21.2	34.4	34.6	36.5			6.0	6.0	4.2	PN
63088	9/17/2001	1710	3020.1	8630.1	9	21	11	19	28.6	28.6	28.7	33.1	33.2	33.5			6.1	6.0	5.8	PN
63089	9/17/2001	2104	2959.9	8600.3	9	32	16	31	28.5	28.5	26.5	34.2	34.3	36.1			6.0	6.0	5.2	PN
63090	9/18/2001	38	2930.0	8600.0	8	58	30	57	28.3	28.5	21.7	34.5	35.3	36.5			6.0	5.9	4.9	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, FALL PLANTON 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
63091	9/18/2001	337	2911.8	8600.0	8	184	92	182	28.4	19.0	12.2	34.5	36.4	35.5			5.9	4.2	3.6	PN
63092	9/18/2001	938	2947.9	8529.9	8	20	9	18	28.2	28.2	28.2	34.7	34.7	34.7			5.8	5.7	5.7	PN
63093	9/18/2001	1220	2929.9	8530.0	8	14	7	12	28.3	28.2	28.1	34.6	34.6	34.7			5.8	5.8	5.7	PN
63094	9/18/2001	1606	2924.4	8459.9	7	17	8	17	28.4	28.3	28.2	35.0	35.1	35.1			6.1	6.1	5.8	PN
63095	9/18/2001	1959	2929.8	8430.0	7	24	12	23	28.5	28.3	28.3	35.2	35.2	35.2			6.0	6.0	5.8	PN
63096	9/18/2001	2313	2930.0	8359.7	7	20	10	19	28.1	27.9	27.9	35.4	35.4	35.5			6.2	6.1	5.9	PN
63097	9/19/2001	135	2945.0	8359.8	7	13	6	12	27.1	27.1	27.1	34.4	34.4	34.4			5.8	6.2	5.7	PN
63098	9/19/2001	439	2929.8	8337.7	7	12	6	11	27.1	27.1	27.1	34.7	34.7	34.7			5.9	6.1	5.9	PN
63099	9/19/2001	940	2859.9	8316.4	6	11	5	10	26.9	26.8	26.8	35.0	35.0	35.0			6.0	6.0	6.0	PN
63100	9/19/2001	1140	2900.0	8330.0	6	18	9	17	27.8	27.6	27.6	35.5	35.6	35.6			5.8	5.7	5.7	PN
63101	9/19/2001	1557	2859.8	8360.0	6	29	13	27	28.3	28.1	28.1	36.0	36.0	36.0			6.0	5.9	5.6	PN
63102	9/19/2001	1919	2859.8	8430.1	6	34	18	33	28.3	28.1	27.6	35.5	35.6	35.9			5.9	5.9	6.0	PN
63103	9/19/2001	2240	2900.0	8500.1	8	39	19	38	28.5	28.2	22.9	35.0	35.5	36.5			6.0	6.0	5.2	PN
63104	9/20/2001	158	2900.3	8529.4	8	67	33	66	28.5	27.3	21.3	34.9	36.0	36.5			5.9	5.8	5.4	PN
63110	9/20/2001	837	2830.1	8530.2	99	198	99	197	28.3	18.1	14.2	35.1	36.4	35.9			6.0	4.2	3.8	PN
63111	9/20/2001	1227	2829.9	8500.1	99	102	49	99	28.2	23.3	20.2	35.2	36.5	36.5			6.0	6.3	4.6	PN
63112	9/20/2001	1720	2829.8	8429.7	6	49	23	46	28.4	27.9	22.9	35.6	35.9	36.5			6.0	5.9	5.6	PN
63113	9/20/2001	2051	2829.7	8400.6	6	35	18	33	28.3	28.2	26.8	35.9	35.9	36.2			5.9	5.9	4.4	PN
63114	9/21/2001	7	2830.1	8330.0	6	23	12	22	28.8	28.8	28.6	36.4	36.4	36.4			5.9	5.9	5.8	PN
63115	9/21/2001	309	2830.1	8303.0	6	13	6	12	27.7	27.7	27.7	36.3	36.3	36.3			5.9	6.0	5.9	PN
63116	9/21/2001	712	2800.0	8300.3	5	13	6	11	27.4	27.4	27.4	36.0	36.0	36.0			6.0	6.0	5.9	PN
63117	9/21/2001	1042	2800.1	8330.1	6	28	13	26	28.8	28.8	28.6	36.5	36.5	36.4			5.8	5.7	5.1	PN
63118	9/21/2001	1552	2800.1	8400.0	6	46	23	45	28.5	28.2	23.9	35.8	35.8	36.5			6.0	6.1	6.2	PN
63119	9/21/2001	1932	2759.9	8430.2	5	76	36	75	28.4	28.1	21.2	35.5	35.8	36.5			6.0	6.1	5.3	PN
63120	9/21/2001	2252	2800.2	8500.1	99	249	101	202	28.1	18.5	14.0	35.1	36.5	35.8			6.0	4.4	4.0	PN
63121	9/22/2001	337	2730.2	8500.1	99	399	100	200	28.2	18.8	14.5	35.6	36.5	35.9			6.0	4.5	4.3	PN
63122	9/22/2001	1044	2730.1	8430.0	5	131	65	130	28.3	22.0	15.9	35.9	36.6	36.1			6.0	5.4	4.0	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, FALL PLANTON 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
63123	9/22/2001	1535	2730.2	8400.0	5	60	30	58	28.5	28.2	22.2	35.8	35.9	36.5			6.0	6.1	5.5	PN
63124	9/22/2001	1953	2729.9	8329.9	5	42	21	40	28.6	28.5	26.2	35.8	36.1	36.4			6.0	6.0	3.7	PN
63125	9/22/2001	2310	2729.9	8300.1	5	16	8	16	29.1	29.0	28.3	36.2	36.2	36.0			6.7	6.6	5.5	PN
63126	9/23/2001	343	2659.9	8229.6	4	12	6	11	29.1	28.2	27.8	33.0	33.8	34.6			8.7	6.5	3.0	PN
63127	9/23/2001	655	2659.9	8300.1	4	33	16	32	28.3	28.5	28.1	35.5	36.0	36.0			6.2	6.1	4.5	PN
63128	9/23/2001	1043	2659.9	8330.0	4	52	25	50	28.5	28.4	23.0	35.3	35.8	36.5			6.1	6.1	4.8	PN
63129	9/23/2001	1437	2700.0	8359.8	4	82	40	80	29.2	27.9	21.0	35.8	35.9	36.6			6.0	6.3	4.8	PN
63130	9/23/2001	1815	2700.0	8430.2	99	174	87	173	28.8	19.7	14.4	35.6	36.6	35.9			6.0	4.6	3.8	PN
63131	9/23/2001	2149	2659.9	8500.0	99	878	100	200	29.3	20.0	14.7	36.0	36.6	35.9			5.9	4.7	4.3	PN
63132	9/24/2001	130	2630.1	8459.9	99	2000	100	200	29.3	20.8	15.6	36.0	36.6	36.1			5.9	4.9	4.4	PN
63133	9/24/2001	509	2629.8	8429.9	99	197	99	194	28.4	19.1	14.0	35.6	36.5	35.8			6.0	4.5	3.9	PN
63134	9/24/2001	933	2629.9	8400.1	99	123	61	122	28.4	22.5	17.1	35.7	36.5	36.3			6.0	6.0	4.2	PN
63135	9/24/2001	1345	2630.1	8330.0	4	58	28	56	28.9	28.2	22.3	35.7	35.7	36.5			6.0	6.2	5.4	PN
63136	9/24/2001	1714	2629.9	8300.0	4	39	19	37	28.6	28.3	24.6	35.4	35.5	36.4			6.1	6.2	5.4	PN
63137	9/24/2001	2043	2629.9	8230.0	4	21	10	19	29.1	29.0	28.5	35.2	35.2	35.4			6.2	6.1	5.6	PN
63138	9/25/2001	124	2600.0	8200.1	4	14	7	13	28.7	28.7	28.5	35.6	35.6	35.6			5.9	5.9	5.3	PN
63139	9/25/2001	451	2559.9	8230.2	3	30	15	29	28.5	28.5	27.5	35.4	35.4	35.7			6.0	6.0	4.9	PN
63140	9/25/2001	850	2600.1	8300.0	4	44	21	43	28.4	28.4	23.2	35.7	35.7	36.5			6.0	6.1	6.0	PN
63141	9/25/2001	1254	2559.9	8330.1	3	63	31	61	28.5	26.1	22.6	35.8	36.5	36.6			6.1	6.0	5.1	PN
63142	9/25/2001	1658	2600.0	8400.0	99	136	68	134	28.9	22.0	16.6	35.4	36.6	36.2			6.0	5.7	4.2	PN
63143	9/25/2001	2039	2559.8	8430.1	99	216	100	201	28.6	19.5	14.8	35.6	36.5	36.0			6.0	4.7	4.0	PN
63144	9/26/2001	39	2600.0	8459.5	99	3310	100	200	28.9	24.9	17.3	36.2	36.2	36.3			5.9	5.3	4.3	PN
63145	9/26/2001	520	2529.7	8430.0	99	436	100	200	28.5	19.3	15.1	35.6	36.5	36.0			6.0	4.5	4.3	PN
63146	9/26/2001	917	2530.0	8360.0	3	136	67	135	28.6	21.3	17.1	35.7	36.6	36.3			6.0	5.0	4.3	PN
63147	9/26/2001	1259	2500.1	8360.0	3	124	62	122	28.5	20.6	19.3	36.0	36.6	36.5			6.0	4.8	4.6	PN
63148	9/26/2001	1640	2500.0	8430.0	99	2000	100	201	28.4	19.7	14.1	35.6	36.6	35.8			6.0	4.6	4.1	PN

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, FALL PLANTON 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
23001	9/27/2001	845	3013.0	8802.3	11	15	8	15	26.1	26.1	26.1	32.1	32.3	32.4			3.9	3.7	4.1	PN
23002	9/27/2001	947	3014.1	8807.7	11	6	3	6	26.3	26.3	27.0	31.7	31.7	32.3			4.2	4.6	3.7	PN
23003	9/27/2001	1040	3008.6	8807.9	11	15	8	15	26.6	26.6	26.5	31.9	32.1	32.1			4.8	5.6	6.0	PN
23004	9/27/2001	1118	3007.4	8804.0	11	18	9	18	27.3	27.3	27.9	32.8	32.9	33.2			6.4	6.4	6.3	PN
23005	9/27/2001	1159	3008.2	8759.9	10	16	8	16	26.9	26.9	26.9	32.9	32.9	33.0			6.4	6.3	6.3	PN
23006	9/27/2001	1239	3011.9	8759.9	10	9	5	9	26.5	26.5	26.5	32.4	32.4	32.4			4.6	4.4	4.5	PN
23007	9/27/2001	1415	3016.6	8800.0	11	4	2	4	23.6	23.5	26.2	20.7	21.6	31.7			4.9	5.6	3.7	PN
23008	9/27/2001	1439	3016.6	8802.2	11	15	8	15	23.4	25.7	26.3	18.4	30.7	32.2			6.0	4.4	4.2	PN
23009	9/27/2001	1504	3016.6	8804.5	11	4	2	4	23.7	23.6	24.6	18.1	20.0	25.1			6.5	6.4	5.5	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
37856	10/8/2001	1019	2900.0	9029.0	14	9	5	9	24.8	24.8	24.9	29.4	29.4	29.9		2.277	6.9	6.8	6.0	PN
37857	10/8/2001	1347	2857.5	9018.1	14	13	7	13	25.7	25.7	25.9	31.4	32.1	32.6		1.676	7.2	7.1	6.7	ST
37858	10/8/2001	1624	2855.3	9007.5	14	22	11	22	26.0	26.4	27.7	30.4	31.8	35.6		1.958	7.7	6.7	5.5	ST
37859	10/8/2001	2045	2855.5	9007.6	14	21	11	21	28.9	26.3	27.7	30.6	31.7	35.8		2.224	7.5	6.9	5.5	ST
37860	10/8/2001	2250	2858.9	9018.8	14	12	6	12	25.8	25.8	25.8	31.8	31.8	31.8		1.526	7.2	7.2	7.2	ST
37861	10/9/2001	316	2901.2	8954.5	13	29	20	29	25.9	26.2	27.3	31.2	31.8	34.3		2.809	7.1	7.0	5.3	ST
37862	10/9/2001	536	2902.6	8947.5	13	33	16	33	27.0	25.8	25.8	30.6	30.7	35.1		1.421	7.2	7.2	2.5	ST
37863	10/9/2001	815	2900.0	8930.0	13	13	6	13	25.5	25.5	25.9	29.7	29.8	30.9		1.912	6.9	6.9	6.5	PN
37864	10/9/2001	1051	2902.4	8947.1	13	31	14	31	25.8	25.8	27.5	30.7	30.7	35.9		2.161	7.3	7.1	3.8	ST
37865	10/9/2001	1304	2901.5	8955.0	13	23	14	23	26.0	26.0	26.1	31.3	31.4	31.8		2.058	7.1	7.1	7.0	ST
37866	10/9/2001	1801	2849.5	9029.8	14	16	8	16	26.1	26.1	26.8	32.0	32.0	34.3			7.3	7.3	6.3	ST
37867	10/9/2001	2057	2849.1	9028.5	14	16	8	16	26.1	26.1	26.8	32.0	32.0	34.3			7.3	7.3	6.3	ST
37868	10/20/2001	445	2900.2	9041.0	14	8	4	8	23.1	23.2	23.2	30.6	30.6	30.6		3.888	7.9	7.9	8.1	ST
37869	10/20/2001	748	2900.4	9040.6	14	7	3	7	23.1	23.1	23.1	30.5	30.5	30.5		4.634	7.8	7.7	7.8	ST
37870	10/20/2001	1125	2849.2	9058.0	14	10	5	10	23.6	23.6	23.5	32.0	32.0	32.0		3.037	7.6	7.6	7.6	ST
37871	10/20/2001	1327	2846.8	9107.3	15	10	5	10	23.8	23.8	23.7	32.3	32.3	32.3		4.462	7.9	7.9	7.8	ST
37872	10/20/2001	1517	2840.4	9101.5	15	14	7	14	24.2	24.2	24.1	32.7	32.7	32.8		2.335	7.6	7.5	7.5	ST
37873	10/20/2001	1704	2830.6	9100.1	15	32	16	32	25.3	25.3	25.2	34.5	34.5	34.5		0.735	7.4	7.4	7.1	PN
37874	10/20/2001	2027	2849.2	9058.0	14	11	5	11	23.9	23.9	23.9	32.2	32.2	32.2		4.111	8.1	8.2	8.4	ST
37875	10/20/2001	2324	2846.8	9107.1	15	10	5	10	23.9	23.9	23.9	32.4	32.4	32.4		3.101	8.0	8.1	8.2	ST
37876	10/21/2001	115	2840.4	9101.3	15	14	7	14	24.0	23.9	24.2	32.6	32.6	32.9		1.590	7.5	7.6	8.2	ST
37877	10/21/2001	418	2833.1	9044.4	14	24	12	24	25.0	25.0	25.2	34.3	34.3	34.6		2.005	7.7	7.7	7.2	ST
37878	10/21/2001	613	2834.4	9033.9	14	28	14	28	25.0	25.8	26.0	34.5	35.5	35.9		0.853	7.4	6.7	6.6	ST
37879	10/21/2001	806	2834.0	9033.9	14	27	13	27	25.0	25.8	26.0	34.5	35.5	35.9		0.702	7.4	6.6	6.8	ST
37880	10/21/2001	918	2830.0	9030.0	14	36	18	36	25.6	25.8	26.0	35.5	35.8	36.0		0.421	7.2	7.2	6.7	PN
37881	10/21/2001	1151	2832.9	9044.5	14	23	11	23	25.1	25.0	25.0	34.2	34.2	34.4		1.727	7.8	7.7	7.2	ST
37882	10/21/2001	1417	2838.3	9034.3	14	17	9	17	24.9	24.9	25.5	33.5	33.9	34.8		1.658	8.0	7.8	7.3	ST

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
26001	10/11/2001	1348	2730.0	8300.0	5	15	6	14	26.7	26.5	26.4	36.0	36.0	36.0		4.467	5.6	5.6	5.5	PN
26002	10/12/2001	718	2530.0	8200.0	3	18	8	16	27.4	27.4	27.4	35.8	35.8	35.8		0.456	5.1	5.3	1.9	PN
26003	10/12/2001	1107	2530.0	8230.0	3	32	15	32	27.4	27.4	26.5	35.8	35.8	36.3		0.278	5.4	5.5	5.1	PN
26004	10/12/2001	1437	2530.0	8259.0	3	52	25	51	27.3	24.9	24.3	35.9	30.8	36.5		0.138	3.0	1.6	3.2	PN
26005	10/12/2001	1834	2530.0	8330.0	3	68	32	66	27.5	27.1	23.6	36.0	36.1	36.6		0.168	2.0	2.2	2.2	PN
26006	10/12/2001	2320	2500.0	8330.0	3	70	34	69	27.4	27.2	23.0	36.0	36.1	36.6		0.091	1.6	1.7	1.8	PN
26007	10/13/2001	430	2429.9	8330.1	99	203	100	203	27.5	19.9	13.5	35.9	36.6	35.7		0.100	1.5	1.7	1.9	PN
26008	10/13/2001	1016	2430.0	8300.0	2	31	15	30	27.8	27.8	27.8	36.2	36.2	36.2		0.112	1.4	1.4	1.5	PN
26009	10/13/2001	1419	2500.0	8300.1	3	50	25	49	27.7	27.6	25.4	34.7	36.0	36.5		0.166	1.5	1.5	1.6	PN
26010	10/13/2001	1853	2500.0	8230.0	3	31	16	29	27.8	27.8	27.6	35.7	35.7	35.7		0.489	1.6	1.6	1.7	PN
26011	10/14/2001	251	2429.0	8230.0	2	17	7	15	27.7	27.8	27.8	36.0	36.1	36.1		0.217	1.5	1.5	1.5	PN
26012	10/14/2001	646	2430.0	8200.0	2	11	5	9	27.7	27.7	27.8	36.1	36.1	36.1		0.773	1.3	1.3	1.4	PN

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
1	10/15/2001	342	2629.8	9629.9	21	81	40	81	26.9	26.9	21.0	36.3	36.4	36.5		0.367	5.7	5.7	4.3	PN
2	10/15/2001	808	2625.3	9621.2	21	125	61	125	26.5	21.5	16.4	36.5	36.5	36.2		0.198	5.8	5.4	3.7	ST
3	10/15/2001	1000	2627.9	9626.9	21	84	42	84	26.8	25.0	20.2	36.4	36.5	36.5		0.177	5.7	6.0	4.1	ST
4	10/15/2001	1222	2631.3	9637.6	21	64	33	64	26.7	27.0	23.9	35.4	36.3	36.5		0.619	5.7	5.3	5.0	ST
5	10/15/2001	1420	2629.3	9642.8	21	46	23	46	26.5	26.9	27.1	34.3	35.5	36.4		0.725	5.8	5.6	5.1	ST
8	10/15/2001	1958	2627.3	9642.4	21	46	23	46	26.5	27.1	27.0	34.3	36.0	36.4		0.641	5.9	5.4	5.1	ST
12	10/16/2001	249	2610.4	9658.0	21	29	15	29	26.0	26.0	26.2	33.0	33.0	33.1		1.230	5.8	5.8	5.7	ST
13	10/16/2001	516	2602.5	9707.0	21	17	9	17	26.2	26.2	26.2	33.2	33.2	33.2		2.220	5.7	5.7	5.7	ST
14	10/16/2001	1809	2617.1	9709.7	21	15	7	15	25.5			32.4				1.925	6.0			ST
15	10/16/2001	1915	2615.4	9708.7	21	16	8	16	25.5	25.5	25.5	32.4	32.4	32.4		1.799	6.0	6.0	6.0	ST
16	10/16/2001	2228	2632.0	9714.4	21	14	7	14		25.1	25.1		31.4	31.4				6.1	6.1	ST
17	10/17/2001	46	2629.5	9701.5	21	33	16	32	25.2	25.3	26.0	30.8	30.8	33.6		1.251	5.9	5.9	5.6	ST
18	10/17/2001	154	2627.2	9700.5	21	34	17	34	25.2	25.3	26.2	30.8	31.2	34.2		1.630	5.9	5.8	5.6	ST
19	10/17/2001	727	2622.3	9656.8	21	37	19	36	24.9	26.0	26.7	30.8	33.8	35.1		1.083	5.9	5.8	5.1	ST
20	10/17/2001	911	2624.2	9702.5	21	26	13	26	25.0	25.0	25.1	30.9	30.9	31.2		1.125	5.9	5.9	5.9	ST
21	10/17/2001	1233	2639.4	9705.4	21	32	17	32	24.7	25.7	25.8	29.6	33.5	33.6		1.989	6.1	5.6	5.3	ST
22	10/17/2001	1546	2651.7	9719.9	21	15	8	15	25.1	24.9	24.7	29.8	29.9	30.3		2.010	6.5	6.5	6.2	ST
23	10/17/2001	1657	2653.4	9718.2	21	19	9	19	24.9	25.0	25.4	29.6	30.2	32.2		2.010	6.3	5.9	5.4	ST
24	10/17/2001	1853	2643.5	9718.4	21	15	7	15	25.0	25.0	24.9	30.2	30.3	30.4		1.799	6.4	6.4	6.4	ST
25	10/17/2001	2054	2649.9	9714.0	21	24	12	24	24.5	25.2	25.2	29.3	32.6	32.9		1.904	6.6	6.0	5.8	ST
26	10/18/2001	131	2645.2	9643.3	21	70	35	70	26.3	26.7	26.8	35.4	36.1	36.5		0.851	5.8	5.7	5.7	ST
27	10/18/2001	444	2654.7	9652.9	21	55	29	55	25.9	26.8	26.8	35.8	36.4	36.4		0.598	5.9	5.7	5.7	ST
29	10/18/2001	811	2651.6	9700.4	21	41	20	41	26.0	26.7	26.8	35.5	36.2	36.3		0.872	5.8	5.7	5.7	ST
30	10/18/2001	1021	2658.1	9704.7	21	35	17	35	24.7	26.3	26.3	33.5	35.4	35.5		0.914	6.1	5.8	5.7	ST
31	10/18/2001	1232	2702.0	9707.7	20	31	16	31	24.4	26.0	26.3	30.3	34.5	35.3		1.336	6.2	5.6	5.5	ST
32	10/18/2001	1428	2706.2	9712.4	20	25	13	25	24.3	24.9	25.5	29.6	31.9	33.7		2.347	6.5	5.9	5.7	ST
33	10/18/2001	1641	2712.9	9711.3	20	25	12	25	24.3	24.8	25.3	29.8	32.4	33.2		2.052	6.6	6.1	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
34	10/18/2001	1852	2705.5	9702.6	20	37	18	37	26.1	26.2	26.3	34.8	35.0	35.3		1.715	5.9	5.8	5.7	ST
36	10/18/2001	2353	2704.4	9632.3	20	116	59	116	26.2	24.2	20.1	36.4	36.6	36.5		0.240	5.9	6.3	3.9	ST
37	10/19/2001	403	2715.5	9642.0	20	73	37	73	26.5	26.8	26.7	36.2	36.4	36.5		0.346	5.8	5.8	5.7	ST
39	10/19/2001	738	2704.4	9648.8	20	63	32	63	26.3	26.6	26.7	35.9	36.2	36.4		0.746	5.7	5.7	5.7	ST
41	10/19/2001	1205	2723.6	9645.1	20	56	28	56	25.8	26.5	26.7	35.1	36.1	36.4		0.978	5.9	5.7	5.7	ST
43	10/19/2001	1721	2718.9	9718.5	20	14	6	13	24.5	24.5	24.7	29.4	31.2	31.3		2.178	6.5	5.9	5.6	ST
44	10/19/2001	1945	2731.9	9709.3	20	18	9	18	24.3	24.5	25.0	29.1	32.1	33.0		2.094	6.9	5.9	5.6	ST
45	10/19/2001	2104	2733.9	9706.4	20	20	10	20	24.0	23.8	25.0	28.9	29.2	33.2		1.820	6.7	6.5	5.7	ST
46	10/19/2001	2333	2739.6	9649.9	20	32	17	32	24.5	25.7	25.8	32.9	34.4	25.0		0.935	6.3	5.8	1.6	ST
47	10/20/2001	259	2728.7	9653.3	20	35	18	35	24.6	26.0	26.3	33.2	34.9	35.6		0.809	6.3	5.8	5.6	ST
48	10/20/2001	724	2725.4	9713.5	20	16	8	15	24.0	24.1	24.9	29.3	30.0	32.6		1.967	6.4	6.3	5.4	ST
49	10/20/2001	926	2738.0	9709.3	20	13	7	13	23.8	24.2	24.5	29.0	29.9	31.6		1.588	6.6	6.2	5.2	ST
50	10/20/2001	1148	2744.2	9656.3	20	22	11	22	24.1	24.1	25.0	31.0	31.3	33.2		2.178	6.4	6.3	5.7	ST
51	10/20/2001	1327	2747.3	9655.3	20	20	10	20	24.1	24.1	24.4	28.8	31.3	31.8		1.588	6.8	6.2	5.6	ST
52	10/20/2001	1715	2801.6	9636.0	19	22	11	22	23.7	24.5	25.3	28.1	31.8	33.9		3.631	7.1	5.8	5.2	ST
53	10/20/2001	1854	2757.8	9644.0	20	20	10	20	24.0	23.8	25.3	29.0	29.9	33.8		3.294	7.2	6.6	5.4	ST
54	10/20/2001	2016	2754.5	9645.5	20	22	11	21	23.8	24.2	25.8	28.7	31.1	34.7		3.842	7.1	6.0	5.2	ST
55	10/20/2001	2138	2750.7	9644.2	20	26	13	25	24.4	25.6	25.9	31.8	34.1	35.1		0.978	6.5	5.7	5.5	ST
56	10/21/2001	21	2747.6	9629.1	20	46	24	46	26.0	26.0	26.4	35.5	35.5	36.0		1.104	5.8	5.8	5.7	ST
61	10/21/2001	1500	2806.6	9612.8	19	29	15	29	25.6	25.5	25.7	34.7	34.7	35.0		0.430	6.0	6.0	5.9	ST
62	10/21/2001	1722	2759.0	9623.5	20	33	16	32	25.1	25.6	26.0	33.5	34.5	35.5		0.683	6.2	5.9	5.5	ST
63	10/21/2001	1915	2806.7	9632.6	19	20	10	19	24.0	23.9	24.6	28.4	30.9	32.5		3.737	7.3	6.2	5.7	ST
64	10/21/2001	2303	2823.2	9613.9	19	16	8	15	23.8	23.8	23.8	29.7	29.8	30.0		1.715	6.6	6.6	6.3	ST
65	10/22/2001	131	2811.5	9610.7	19	26	14	25	24.8	25.3	25.4	33.2	33.9	34.5		0.641	6.2	6.1	5.7	ST
66	10/22/2001	359	2807.8	9602.5	19	34	17	34	25.5	25.6	25.8	34.6	34.7	35.0		0.662	6.0	6.0	5.7	ST
67	10/22/2001	542	2802.8	9608.2	19	37	18	37	25.6	25.7	26.1	34.8	34.8	33.6		0.619	5.9	5.9	5.8	ST
68	10/22/2001	802	2810.6	9558.3	19	31	16	31	25.3	25.3	25.4	34.3	34.3	34.6		0.556	6.0	6.0	5.9	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
69	10/22/2001	926	2812.9	9559.2	19	28	14	27	25.3	25.3	25.4	34.4	34.4	34.6		0.409	6.0	6.0	5.9	ST
70	10/22/2001	1242	2827.7	9601.2	19	16	8	16	23.6	23.5	24.2	27.8	27.9	31.9		3.042	6.9	6.8	5.0	ST
71	10/22/2001	1553	2834.0	9543.7	19	17	9	17	23.8	23.9	24.1	29.6	30.6	31.4		2.684	6.9	6.4	5.5	ST
72	10/22/2001	1858	2842.2	9536.9	19	12	6	11	24.0	23.3	23.4	27.0	27.7	28.7		2.852	7.1	6.6	2.6	ST
73	10/22/2001	2122	2828.6	9530.6	19	27	13	26	25.1	25.4	25.4	33.8	34.2	34.4		1.188	6.1	6.0	5.5	ST
74	10/23/2001	45	2812.5	9544.3	19	35	18	34	25.4	25.8	26.0	34.0	35.0	35.5		0.577	6.1	6.0	5.8	ST
75	10/23/2001	452	2756.6	9526.7	19	63	32	63	26.0	26.1	26.0	35.5	36.1	36.2		0.451	5.9	5.8	5.4	ST
76	10/23/2001	826	2745.0	9540.5	20	79	37	79	26.2	26.2	23.8	35.8	35.9	36.5		0.472	5.7	5.7	4.7	ST
77	10/23/2001	1151	2803.2	9546.2	19	46	25	46	25.9	26.2	26.2	35.1	35.7	36.0		0.367	5.9	5.6	5.4	ST
80	10/23/2001	1727	2803.6	9528.7	19	49	25	49	26.2	26.1	26.0	35.4	36.1	36.2		0.641	5.9	5.8	5.4	ST
81	10/23/2001	2202	2819.2	9506.3	19	39	19	38	25.9	25.8	26.1	34.9	34.9	36.3		0.619	6.0	6.0	5.4	ST
83	10/24/2001	112	2807.6	9501.3	19	55	27	55	26.3	26.3	26.3	36.4	36.5	36.5		0.367	5.8	5.9	5.9	ST
85	10/24/2001	532	2752.1	9515.1	19	113	58	113	26.3	25.5	18.7	36.5	36.5	36.4		0.198	5.9	5.8	3.7	ST
86	10/24/2001	902	2757.2	9502.5	19	89	44	89	26.3	26.3	21.0	36.5	36.5	36.5		0.198	5.8	5.9	4.4	ST
88	10/24/2001	1338	2758.9	9439.8	18	82	42	82	26.3	26.2	23.0	36.5	36.5	36.5		0.135	5.9	5.9	4.5	ST
89	10/24/2001	1804	2819.5	9502.2	19	41	22	40	26.2	26.1	26.1	34.9	35.9	36.3		0.451	6.0	5.9	5.4	ST
90	10/24/2001	2048	2830.2	9509.9	19	33	18	33	25.8	25.8	25.8	34.1	34.9	35.0		0.430	6.1	5.9	5.7	ST
91	10/24/2001	2239	2838.2	9515.8	19	25	12	24	24.1	25.0	25.8	29.8	33.8	35.0		2.810	7.2	5.9	5.6	ST
92	10/25/2001	49	2847.6	9523.8	19	13	6	13	24.1	23.5	23.7	27.6	29.3	31.0		2.536	7.3	6.8	5.3	ST
97	10/25/2001	741	2851.4	9520.4	19	13	7	13	23.7	23.7	24.0	27.8	28.0	32.4		4.663	7.0	7.0	5.0	ST
98	10/25/2001	1004	2900.3	9509.6	19	11	5	11	23.4	23.4	23.3	27.7	27.7	27.8		4.432	6.9	6.9	6.4	ST
99	10/25/2001	1313	2855.9	9502.7	19	18	9	17	23.9	23.9	24.1	29.3	29.3	32.7		2.515	6.9	6.9	5.3	ST
100	10/25/2001	1743	2831.0	9501.2	19	32	16	32	25.7	25.7	25.8	34.7	34.7	35.2		0.577	6.0	6.0	5.8	ST
101	10/26/2001	2147	2856.8	9511.0	19	14	7	14	23.4	23.4	23.4	27.4	27.4	27.4		4.516	6.9	6.9	6.9	ST
102	10/26/2001	2352	2902.1	9507.0	19	14	7	14	23.4	23.4	23.4	27.4	27.4	27.3		4.095	7.1	7.1	7.1	ST
103	10/27/2001	1632	2917.9	9432.6	18	14	7	13	22.5	22.6	22.8	29.5	30.2	31.2		4.116	6.9	6.7	6.3	ST
104	10/27/2001	2109	2853.0	9426.5	18	21	11	20	24.1	24.1	24.2	34.2	34.2	34.2		1.083	6.2	6.2	6.2	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
105	10/28/2001	56	2846.5	9440.7	18	22	11	22	24.2	24.2	24.2	34.2	34.2	34.2		1.020	6.1	6.1	6.1	ST
106	10/28/2001	400	2840.1	9423.5	18	30	16	29	25.1	25.1	25.1	35.7	35.7	35.7		0.935	6.0	6.0	6.0	ST
107	10/28/2001	635	2848.8	9413.1	18	24	12	24	24.3	24.3	24.3	35.0	35.0	35.0		0.893	6.1	6.1	6.1	ST
109	10/28/2001	846	2853.1	9410.6	18	22	11	22	24.2	24.2	24.3	35.0	35.1	35.2		0.906	6.1	6.1	6.1	ST
110	10/28/2001	1228	2837.3	9357.1	17	32	16	32	25.0	25.0	25.0	35.4	35.4	35.4		0.956	6.0	5.9	6.0	ST
111	10/28/2001	1522	2821.6	9352.6	17	56	23	56	25.5	25.5	25.5	35.8	35.8	35.8		0.577	6.0	6.0	5.8	ST
113	10/28/2001	2045	2837.6	9400.3	18	32	16	32	24.9	24.9	25.0	35.4	35.4	35.5		1.062	5.9	6.0	5.8	ST
114	10/28/2001	2323	2826.0	9404.2	18	45	22	44	25.5	25.5	25.5	35.9	35.9	35.9		0.935	5.8	5.8	5.9	ST
117	10/29/2001	739	2759.8	9438.3	18	72	36	72	25.7	25.9	24.1	36.2	36.4	36.5		0.767	5.8	5.8	4.9	ST
118	10/29/2001	1150	2811.6	9416.6	18	55	27	55	25.6	25.5	25.7	35.9	35.9	36.3		0.304	5.9	5.9	5.2	ST
121	10/29/2001	1609	2802.1	9410.3	18	79	39	78	25.5	25.6	21.9	35.8	35.9	36.5		0.851	5.9	5.8	4.5	ST
122	10/29/2001	1834	2759.6	9412.1	18	80	40	80	25.6	25.6	20.6	35.9	35.9	36.5		0.893	5.9	5.8	4.0	ST
124	10/29/2001	2204	2802.1	9418.5	18	72	36	72	25.5	25.5	25.3	35.9	35.9	36.4		0.809	5.8	5.8	4.8	ST
125	10/30/2001	250	2757.8	9352.0	17	91	45	90	25.1	25.3	21.5	36.1	36.2	36.5		0.914	6.0	6.0	4.3	ST
126	10/30/2001	545	2804.0	9340.2	17	72	36	72	25.1	24.8	21.6	36.3	36.4	36.5		0.430	5.9	4.4	4.5	ST
127	10/30/2001	1050	2810.2	9307.0	17	73	36	73	25.3	25.3	22.2	35.9	35.9	36.5		0.725	5.8	5.8	4.3	ST
128	10/30/2001	1459	2821.1	9250.7	16	55	27	55	25.3	25.2	25.3	35.8	35.8	35.8		1.125	5.9	5.8	5.8	ST
130	10/30/2001	1936	2814.5	9259.9	16	66	33	66	25.2	25.2	22.7	35.8	35.8	36.5		1.293	5.8	5.9	4.3	ST
132	10/31/2001	5	2805.8	9318.0	17	83	41	83	25.0	25.1	21.5	36.1	36.2	36.5		0.556	5.9	5.9	4.3	ST
133	10/31/2001	326	2800.1	9257.1	16	107	53	107	25.7	25.7	19.9	36.5	36.5	36.5		0.219	5.9	5.9	4.0	PN
134	10/31/2001	742	2800.8	9230.1	16	103	51	103	25.0	24.9	20.1	36.2	36.3	36.5		0.472	6.0	6.0	4.1	PN
135	10/31/2001	1021	2808.1	9220.3	16	81	40	81	24.9	24.9	21.6	36.2	36.2	36.6		0.261	5.9	5.9	4.2	ST
136	10/31/2001	1429	2804.1	9246.8	16	90	45	90	25.3	25.3	21.2	36.3	36.4	36.5		0.219	6.0	6.0	4.2	ST
138	10/31/2001	2104	2837.3	9250.6	16	36	18	36	24.7	24.7	24.5	35.5	35.5	35.5		1.230	6.0	6.0	5.9	ST
139	11/1/2001	0	2851.6	9240.2	16	29	14	28	23.9	24.0	24.1	36.6	34.7	34.9		1.167	6.3	6.3	6.0	ST
141	11/1/2001	348	2853.6	9253.0	16	26	13	26	24.1	24.1	24.1	35.0	35.0	35.0		0.956	6.1	6.1	6.1	ST
143	11/1/2001	706	2846.5	9259.9	16	30	15	30	24.2	24.2	24.2	35.2	35.2	35.2		0.788	6.1	6.1	6.1	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
144	11/1/2001	914	2848.7	9307.9	17	27	13	27	24.0	24.0	24.0	35.3	35.3	35.3		0.935	6.0	6.0	6.0	ST
145	11/1/2001	1227	2839.6	9319.1	17	35	17	35	24.3	24.3	24.2	35.2	35.2	35.2		2.115	6.0	6.0	6.0	ST
146	11/1/2001	1402	2837.1	9322.9	17	36	18	36	24.9	24.9	24.8	35.5	35.6	35.7		1.188	6.1	6.0	5.9	ST
147	11/1/2001	1620	2829.6	9330.4	17	46	23	46	25.2	25.1	25.1	35.8	35.8	35.8		1.315	5.9	5.8	5.8	ST
148	11/1/2001	1901	2828.6	9337.3	17	45	22	45	25.1	25.1	25.0	35.8	35.8	35.9		0.914	6.0	6.0	5.8	ST
151	11/2/2001	253	2846.8	9309.7	17	27	13	27	24.0	24.0	23.9	35.2	35.2	35.2		0.914	6.2	6.1	6.0	ST
154	11/2/2001	811	2904.3	9258.8	16	24	12	24	23.9	23.9	23.9	35.2	35.2	35.2		1.083	6.1	6.1	6.1	ST
155	11/2/2001	1113	2920.0	9312.2	17	16	8	16	22.7	22.6	22.8	33.0	33.0	33.6		2.262	6.5	6.5	5.9	ST
157	11/2/2001	1604	2906.7	9322.4	17	21	10	21	23.3	23.3	23.4	33.6	33.7	33.9		2.431	6.6	6.5	6.1	ST
158	11/2/2001	2008	2911.0	9347.9	17	18	9	18	22.7	22.8	23.1	32.7	33.2	33.8		1.862	6.5	6.3	5.8	ST
159	11/2/2001	2151	2914.6	9356.8	17	14	7	14	22.9	22.6	22.6	32.2	33.1	33.2		1.588	6.4	6.4	6.1	ST
160	11/2/2001	2352	2900.0	9400.2	18	20	10	20	23.5	23.5	23.4	34.3	34.3	34.6		0.956	6.3	6.3	5.9	PN
161	11/3/2001	632	2908.1	9343.1	17	20	10	20	23.4	23.5	23.4	34.3	34.3	34.3		1.083	6.2	6.2	6.2	ST
162	11/3/2001	1438	2922.0	9237.7	16	16	8	16	22.6	22.1	21.9	32.9	32.9	32.9		2.452	6.6	6.3	6.2	ST
163	11/3/2001	1713	2931.2	9238.2	16	10	5	10	21.3	20.9	21.0	19.5	25.0	31.5		10.729	9.0	7.4	6.2	ST
164	11/3/2001	1806	2928.7	9236.5	16	12	6	12	21.0	21.7	20.8	26.1	30.1	31.9		5.864	7.0	5.1	6.3	ST
165	11/3/2001	2329	2839.8	9305.3	17	9	5	9	20.6	20.5	22.0	22.2	24.1	31.4		6.054	8.0	7.6	5.2	ST
166	11/4/2001	450	2907.5	9244.5	16	22	11	22	23.0	23.0	23.2	33.5	33.5	33.7		1.462	6.1	6.1	6.0	ST
168	11/4/2001	919	2910.2	9222.1	16	13	7	13	21.9	21.9	22.0	31.9	32.0	32.1		3.063	6.4	6.4	6.2	ST
169	11/4/2001	1126	2902.0	9232.0	16	24	12	24	23.1	23.2	24.0	33.5	33.8	34.7		1.757	6.3	6.3	5.7	ST
170	11/4/2001	1441	2854.4	9214.3	16	28	14	28	23.3	23.6	23.6	33.7	34.1	34.1		1.694	6.2	5.9	6.1	ST
171	11/4/2001	1704	2906.7	9204.3	16	13	7	13	23.0	23.0	22.9	32.0	32.1	32.4		2.410	6.6	6.6	6.2	ST
172	11/4/2001	1939	2908.6	9221.0	16	21	10	20	22.9	22.6	22.9	33.0	33.0	33.2		1.504	6.1	6.1	6.1	ST
173	11/4/2001	2056	2904.7	9220.8	16	21	11	20	22.6	22.6	22.7	33.0	33.0	33.2		1.504	6.1	6.1	6.1	ST
174	11/4/2001	2250	2904.6	9214.9	16	20	10	20	22.7	22.7	22.7	33.0	33.0	33.3		1.883	6.4	6.4	6.2	ST
175	11/5/2001	105	2854.1	9213.5	16	23	11	23	23.3	23.3	23.3	34.0	34.0	34.0		1.378	6.2	6.2	6.2	ST
176	11/5/2001	255	2847.5	9209.5	16	33	16	33	23.8	23.9	24.8	34.5	34.5	35.6		1.230	6.1	6.1	5.8	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
177	11/5/2001	549	2836.1	9221.3	16	40	20	40	23.9	24.0	24.4	34.8	34.9	35.3		1.020	6.2	6.1	5.8	ST
178	11/5/2001	837	2843.8	9233.0	16	33	16	33	23.9	23.9	24.5	34.9	34.9	35.4		1.104	6.0	6.0	5.6	ST
182	11/5/2001	1641	2823.4	9212.5	16	60	30	60	24.7	25.0	25.0	35.9	36.3	36.3		0.619	6.0	5.9	5.8	ST
183	11/5/2001	2024	2834.5	9229.1	16	40	20	40	24.7	24.7	24.7	35.9	35.9	35.9		0.893	5.9	6.0	6.0	ST
184	11/6/2001	47	2827.4	9204.9	16	55	27	55	24.4	24.4	24.9	35.4	35.4	35.9		0.809	5.9	5.9	5.5	ST
188	11/6/2001	903	2810.6	9143.2	15	83	41	83	24.8	24.8	23.0	36.3	36.3	36.5		0.556	5.8	5.8	4.2	ST
190	11/6/2001	1247	2815.4	9137.8	15	74	37	74	25.1	25.0	25.0	36.4	36.4	36.4		0.451	5.9	5.9	5.8	ST
191	11/6/2001	1639	2800.1	9200.2	16	121	60	121	25.5	25.4	20.2	36.5	36.5	36.6		0.325	5.9	5.9	4.1	ST/PN
192	11/6/2001	1913	2809.5	9159.4	15	82	41	82	25.0	25.0	24.3	36.3	36.3	36.4		0.872	5.8	5.8	5.2	ST
194	11/7/2001	16	2833.0	9143.8	15	45	22	45	24.4	24.4	24.5	35.8	35.8	36.0		0.788	5.7	5.8	5.7	ST
196	11/7/2001	255	2841.4	9140.8	15	31	15	31	23.7	24.0	23.9	34.8	35.7	35.8		0.935	5.7	6.0	5.8	ST
197	11/7/2001	513	2852.0	9147.7	15	22	11	22	22.8	22.8	23.0	32.6	32.6	33.1		1.251	6.7	6.7	5.6	ST
198	11/7/2001	750	2845.0	9147.9	15	29	15	29	23.2	23.7	24.1	33.7	34.3	35.2		1.504	6.2	5.9	5.5	ST
199	11/7/2001	1001	2835.5	9143.0	15	37	18	37	24.0	24.0	24.3	35.6	35.6	35.9		0.935	5.8	5.8	5.5	ST
201	11/7/2001	1350	2843.6	9131.1	15	26	13	26	23.4	23.7	23.9	33.1	35.4	34.3		1.925	6.6	5.7	5.6	ST
202	11/7/2001	1634	2856.6	9123.5	15	11	5	11	22.2	22.2	22.2	31.0	31.0	31.0		2.368	6.2	6.2	6.2	ST
203	11/7/2001	1739	2852.9	9124.7	15	15	7	15	22.2	22.2	22.9	31.2	31.2	32.2		2.747	6.3	6.3	5.0	ST
204	11/7/2001	1932	2859.2	9124.9	15	10	5	10	21.8	21.8	21.8	30.8	30.8	30.8		2.157	6.1	6.2	6.2	ST
205	11/8/2001	15	2908.1	9157.7	15	11	5	11	22.1	22.1	22.1	31.5	31.5	31.5		2.410	6.4	6.4	6.4	ST
206	11/8/2001	150	2902.6	9156.5	15	17	8	17	22.6	22.6	22.6	32.4	32.4	32.4		1.230	6.5	6.5	6.0	ST
207	11/8/2001	347	2855.0	9150.6	15	22	11	22	23.0	23.0	23.0	32.8	32.8	33.1		1.883	6.4	6.4	5.7	ST
208	11/8/2001	909	2835.7	9119.0	15	31	15	31	24.2	24.1	24.1	36.3	36.3	36.3		0.978	5.8	5.8	5.8	ST
209	11/8/2001	1229	2828.1	9057.3	14	37	18	37	24.8	24.7	24.7	36.3	36.3	36.3		0.556	5.9	5.9	5.9	ST
210	11/8/2001	1404	2834.9	9055.8	14	24	12	24	24.6	24.2	24.2	36.4	36.4	36.4		0.767	6.0	6.0	5.9	ST
211	11/8/2001	1554	2839.3	9107.1	15	18	9	18	24.2	23.8	23.8	35.8	35.9	35.9		2.241	6.1	5.8	5.7	ST
212	11/8/2001	1810	2846.2	9116.1	15	14	7	14	22.8	23.3	23.7	31.1	32.7	34.5		3.695	7.4	6.8	5.4	ST
213	11/8/2001	1919	2842.5	9117.8	15	21	10	21	23.6	23.9	24.0	34.8	35.5	35.9		1.315	6.3	5.8	5.2	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
214	11/8/2001	2315	2833.2	9056.4	14	27	13	27	24.4	24.2	24.2	36.4	36.3	36.3		0.872	5.9	5.8	5.8	ST
215	11/9/2001	56	2828.4	9050.5	14	37	18	37	24.6	24.6	24.5	36.3	36.4	36.3		0.662	5.9	5.9	5.8	ST
216	11/9/2001	219	2833.5	9049.7	14	25	12	25	24.4	24.4	24.4	36.3	36.3	36.3		0.935	5.9	5.9	5.8	ST
217	11/9/2001	424	2829.3	9039.2	14	37	18	37	24.5	24.6	24.6	36.3	36.3	36.3		0.704	5.8	5.9	5.9	ST
218	11/9/2001	818	2849.3	9044.5	14	19	9	19	23.3	24.0	24.2	33.6	35.1	35.7		2.726	6.3	6.0	4.7	ST
219	11/9/2001	925	2852.2	9044.0	14	16	8	16	23.0	23.8	24.1	34.5	33.9	34.9		5.232	6.7	5.9	4.4	ST
220	11/9/2001	1245	2838.5	9023.5	14	26	23	26	24.6	24.5	24.5	36.1	36.1	36.1		0.577	5.9	5.9	5.8	ST
221	11/9/2001	1400	2837.1	9027.6	14	27	13	27	24.6	24.6	24.6	36.1	36.1	36.1		0.598	5.9	5.9	5.9	ST
222	11/9/2001	1539	2822.8	9028.1	14	52	26	52	24.7	24.8	24.8	36.3	36.3	36.3		0.725	5.9	5.8	5.8	ST
223	11/9/2001	1655	2821.9	9027.9	14	52	26	52	24.7	24.8	24.8	36.3	36.3	36.3		0.725	5.9	5.8	5.8	ST
224	11/9/2001	1859	2812.4	9031.1	14	79	39	79	24.7	24.8	24.0	36.3	36.3	36.5		0.872	5.8	5.8	5.0	ST
225	11/9/2001	2048	2811.6	9026.3	14	91	45	91	24.7	24.7	22.7	36.3	36.4	36.5		0.872	5.8	5.6	4.8	ST
226	11/10/2001	39	2826.5	9015.9	14	55	27	55	24.6	24.6	24.7	36.1	36.1	36.2		0.683	5.8	5.8	5.6	ST
229	11/10/2001	548	2846.1	9015.1	14	30	15	30	23.6	24.0	24.3	35.2	35.6	35.9		1.041	6.1	6.0	5.8	ST
230	11/10/2001	845	2840.5	8955.5	13	80	40	80	22.9	24.7	24.1	33.9	36.0	36.3		4.401	6.3	5.8	4.9	ST
231	11/10/2001	954	2840.9	8956.5	13	62	33	61	22.6	24.5	24.4	32.1	35.8	36.1		4.600	7.0	5.6	3.2	ST
232	11/10/2001	1341	2901.1	8943.4	13	41	20	40	21.8	24.2	25.3	26.1	35.0	36.3		4.916	8.9	5.5	3.6	ST
233	11/10/2001	1454	2902.6	8946.3	13	35	17	35	22.1	24.0	25.3	28.2	35.0	36.0		5.253	8.6	5.4	4.3	ST
234	11/10/2001	1629	2907.4	9000.3	13	14	7	14	22.4	22.5	23.8	28.3	31.1	33.9		4.579	8.4	7.2	4.1	ST
235	11/10/2001	1945	2852.3	9005.3	14	31	15	31	22.9	24.0	24.4	33.1	35.5	36.0		1.925	6.9	6.0	5.7	ST
236	11/10/2001	2210	2842.5	8959.4	13	55	27	55	24.3	23.9	24.4	35.1	35.4	35.8		4.116	6.0	5.5	5.4	ST
237	11/11/2001	104	2851.5	8942.7	13	63	31	63	22.1	24.2	24.5	28.0	35.6	35.8		6.496	10.2	5.9	3.2	ST
239	11/11/2001	444	2859.8	8935.5	13	25	12	25	22.2	23.1	25.2	28.5	31.5	36.0		4.411	8.2	5.6	4.6	ST
240	11/11/2001	831	2906.4	9004.8	14	13	6	13	22.5	22.6	24.1	28.9	31.0	34.5		9.676	9.1	8.2	4.2	ST
241	11/11/2001	1304	2900.1	8933.6	13	21	10	21	21.8	22.5	25.2	28.2	30.4	35.9		2.094	8.0	6.1	4.0	ST
242	11/11/2001	1526	2845.0	8934.6	13	91	45	91	20.0	24.8	23.0	30.7	36.1	36.5		6.032	5.2	5.7	4.5	ST
244	11/11/2001	2221	2901.1	8860.0	11	64	32	64	22.4	23.6	23.2	32.2	35.7	35.8		2.873	7.0	5.7	5.0	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
245	11/12/2001	39	2906.1	8853.5	11	73	36	73	24.0	24.6	23.6	35.0	36.1	36.2		0.914	5.9	5.7	4.6	ST
246	11/12/2001	213	2905.2	8851.7	11	86	43	86	24.3	24.5	23.2	35.7	36.2	36.4		0.683	5.9	5.8	4.5	ST
247	11/12/2001	627	2900.9	8857.5	11	78	39	78	22.0	23.5	23.3	31.4	35.7	36.2		2.052	6.6	5.6	4.8	ST
249	11/12/2001	1049	2913.4	8837.0	11	73	36	73	24.0	24.0	23.3	35.9	35.9	36.2		0.619	5.8	5.8	3.8	ST
251	11/12/2001	1505	2915.4	8816.5	11	90	45	90	24.4	24.3	22.3	36.0	36.0	36.6		0.514	5.8	5.8	4.3	ST
252	11/12/2001	1910	2922.7	8800.2	11	77	38	77	23.8	23.8	23.9	36.0	36.0	36.1		0.662	5.9	5.8	5.6	ST
253	11/12/2001	2152	2925.6	8801.0	11	60	30	60	24.0	24.0	23.8	36.1	36.1	36.0		0.619	5.8	5.8	5.8	ST
254	11/13/2001	36	2943.9	8800.8	11	36	18	36	23.5	23.5	23.5	35.9	35.9	35.9		0.409	6.0	6.0	6.0	ST
259	11/15/2001	839	2933.7	8805.3	11	42	21	42	23.6	23.6	23.6	36.0	36.0	36.0		0.409	5.9	5.9	5.9	ST
260	11/15/2001	1045	2930.0	8809.2	11	45	24	45	23.7	23.7	23.7	36.0	36.0	36.0		0.430	5.8	5.9	5.9	ST
263	11/15/2001	1505	2920.2	8818.0	11	63	31	62	24.2	24.2	24.2	36.2	36.2	36.2		0.641	5.8	5.8	5.8	ST

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
1	10/15/2001	515	2621.2	9536.0	99	59	28	56	26.7	27.2	27.1	35.3	36.2	36.4			4.5	4.5	4.5	PN
5	10/15/2001	1754	2629.4	9700.1	21	35	17	34	26.2	25.8	27.1	32.5	32.4	35.7			4.7	4.7	4.5	PN
27	10/18/2001	846	2659.8	9659.9	21	42	21	41	26.2	26.2	26.2	35.3	35.3	35.3			4.6	4.6	4.6	PN
34	10/19/2001	108	2701.0	9627.8	20	158	79	157	26.4	22.1	17.3	36.4	36.5	36.3			4.6	4.9	5.4	PN
45	10/20/2001	133	2730.2	9700.7	20	28	14	27	24.6	24.8	25.4	32.5	33.1	34.0			4.8	4.8	4.7	PN
57	10/21/2001	554	2733.7	9617.7	20	92	46	91	26.4	26.7	22.1	36.4	36.6	36.5			4.6	4.6	4.9	PN
62	10/21/2001	1836	2800.0	9630.2	19	28	14	26	24.4	24.9	25.0	31.7	33.5	33.8			4.9	4.8	4.8	PN
69	10/22/2001	1200	2828.1	9600.5	19	17	8	15	23.7	23.5	24.2	27.7	28.0	31.9			5.0	5.0	4.9	PN
72	10/22/2001	1846	2829.9	9530.1	19	27	13	25	25.2	25.0	25.5	33.8	33.8	34.5			4.7	4.8	4.7	PN
75	10/23/2001	343	2758.2	9527.1	20	62	31	61	26.0	26.1	26.0	35.6	36.0	36.2			4.6	4.6	4.6	PN
78	10/23/2001	1208	2759.9	9559.9	20	47	23	46	25.5	25.9	26.2	34.4	35.1	36.0			4.7	4.7	4.6	PN
86	10/24/2001	915	2800.1	9500.3	19	83	41	82	26.3	26.2	21.7	36.5	36.5	36.5			4.6	4.6	5.0	PN
88	10/24/2001	1340	2800.2	9435.7	18	68	34	67	26.5	26.3	24.0	36.5	36.5	36.5			4.6	4.6	4.6	PN
99	10/25/2001	1149	2857.9	9500.4	19	19	8	18	24.0	24.0	24.2	29.9	29.9	32.8			5.0	5.0	4.9	PN
101	10/24/2001	1717	2829.8	9500.1	19	35	19	34	25.7	25.8	25.9	34.7	34.7	35.2			4.7	4.7	4.7	PN
106	10/28/2001	135	2900.3	9430.2	18	19	9	18	23.6	23.6	23.6	33.6	33.6	33.6			6.6	6.7	6.7	PN
107	10/28/2001	432	2830.1	9429.6	18	37	18	36	25.3	25.3	25.3	35.7	35.7	35.7			6.5	6.3	6.3	PN
110	10/28/2001	1518	2828.8	9401.2	18	42	21	39	25.3	25.4	25.4	35.3	35.8	35.8						PN
115	10/29/2001	621	2800.5	9429.8	18	72	36	71	25.8	25.8	24.7	36.5	36.5	36.4			6.3	6.3	4.9	PN
123	10/30/2001	134	2800.1	9400.3	18	84	42	81	25.2	25.3	21.7	36.1	36.1	36.5			6.4	6.5	4.7	PN
124	10/30/2001	534	2800.3	9329.6	17	103	51	99	25.2	25.2	20.4	36.3	36.4	36.5						PN
125	10/31/2001	1700	2830.0	9330.1	17	44	23	44	25.3	25.2	25.2	35.8	35.9	35.8			6.5	6.4	6.3	PN
126	10/31/2001	2036	2830.0	9300.0	17	47	24	45	25.1	25.1	25.0	35.7	35.7	35.7			6.5	6.5	6.4	PN
140	11/2/2001	718	2859.9	9300.0	17	24	12	23	24.0	24.0	23.9	35.2	35.2	35.2			6.7	6.7	6.5	PN
146	11/3/2001	119	2858.4	9330.7	17	22	11	22	23.6	23.6	23.4	34.2	34.2	34.3			6.8	6.9	6.5	PN
151	11/3/2001	2109	2929.9	9259.9	16	14	7	14	22.4	22.4	22.9	31.1	32.7	33.8			7.2	6.1	6.1	PN
156	11/4/2001	1057	2859.9	9229.1	16	26	13	24	23.3	23.3	23.8	33.9	33.9	34.5			6.9	6.8	6.7	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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
167	11/5/2001	1922	2830.3	9159.7	15	49	25	47	24.5	24.6	24.7	35.5	35.6	35.7			4.8	4.7	4.7	PN
172	11/6/2001	955	2800.0	9130.0	15	168	84	166	25.5	21.3	17.3	36.5	36.6	36.3			6.4	4.8	4.7	PN
174	11/6/2001	1527	2830.0	9130.2	15	47	24	46	24.5	24.5	24.6	36.1	36.2	36.2			6.6	6.5	6.4	PN
185	11/7/2001	1921	2858.7	9131.0	15	13	6	12	22.1	22.1	22.2	31.1	31.1	31.2			7.0	7.0	6.6	PN
187	11/8/2001	149	2859.9	9159.3	15	20	10	19	22.7	22.8	22.8	32.8	32.9	33.2			7.1	7.1	6.7	PN
195	11/8/2001	2204	2830.0	9100.0	14	34	17	33	24.6	24.5	24.5	36.3	36.3	36.3			6.6	6.5	6.5	PN
203	11/9/2001	1512	2830.0	9030.0	14	39	19	38	24.8	24.7	24.7	36.3	36.3	36.3			6.5	6.5	6.5	PN
205	11/9/2001	2037	2804.9	9030.1	14	147	74	146	25.5	23.7	17.9	36.4	36.6	36.4			6.4	4.8	4.4	PN
214	11/10/2001	1635	2900.8	9000.2	14	24	12	22	22.5	24.3	24.6	26.9	35.5	36.0			10.7	6.5	6.4	PN
215	11/10/2001	2028	2900.1	9028.9	14	11	5	10	22.7	22.6	22.3	28.5	28.8	30.1			10.0	9.8	8.3	PN
219	11/11/2001	1407	2858.6	8928.6	13	22	11	21	22.3	24.8	25.0	26.8	35.5	36.1			10.3	3.1	4.9	PN
226	11/12/2001	1053	2912.9	8829.9	11	123	61	122	24.3	24.3	20.1	36.0	36.1	36.6			6.5	6.1	4.4	PN
229	11/12/2001	2106	2929.9	8759.9	11	47		42	23.8		23.8	35.9		35.9						PN
230	11/13/2001	49	3000.1	8759.6	10	23	9	19	21.7	21.8	21.8	35.2	35.3	35.3						PN

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	10/18/2001	1559	2926.0	8843.0	11	33	16	32	23.8	24.0	24.8	33.5	33.7	34.6			6.4	5.9	5.8	ST
17002	10/18/2001	1749	2922.5	8838.7	11	56	28	55	24.0	24.4	25.2	34.3	34.5	35.9			6.0	6.6	6.1	ST
17003	10/18/2001	2022	2922.1	8850.6	11	31	15	30	23.8	24.0	24.9	33.5	33.8	35.3			6.4	6.0	4.1	ST
17004	10/18/2001	2211	2926.4	8841.9	11	37	18	36	23.7			33.6	34.0	35.8			4.2	5.6	3.8	ST
17005	10/19/2001	15	2932.1	8839.4	11	24	12	23	23.1	23.1	23.5	34.3	34.3	34.4			6.5	6.3	6.1	ST
17006	10/19/2001	151	2932.0	8833.6	11	41	20	40	24.4	24.5	25.4	35.0	34.9	36.0			5.9	5.7	4.9	ST
17007	10/19/2001	422	2941.2	8841.0	11	18	9	17	23.0	23.1	24.0	33.4	33.8	35.0			6.4	6.1	5.8	ST
17008	10/19/2001	630	2930.1	8830.0	11	49	25	48	24.6	24.9	25.4	35.0	35.1	35.4			5.6	5.6	4.8	PN
17009	10/19/2001	831	2928.8	8840.0	11	33	16	32	22.9	23.2	24.5	33.5	33.8	35.0			6.2	4.8	4.8	ST
17010	10/19/2001	1006	2930.1	8839.9	11	28	14	27	22.9	23.5	24.5	33.6	34.2	35.0			5.3	5.8	4.4	ST
17011	10/19/2001	1140	2929.4	8844.9	11	18	9	17	23.0	23.0	23.3	33.1	33.2	33.4			5.6	6.1	5.8	ST
17012	10/19/2001	1640	2942.0	8835.2	11	26	13	25	24.6	24.7	24.4	35.2	35.3	35.1			6.2	6.1	6.1	ST
17013	10/19/2001	1809	2949.4	8835.7	11	24	12	23	24.1	24.1	24.0	34.8	34.7	34.7			5.8	5.7	5.8	ST
17014	10/19/2001	1934	2946.7	8834.4	11	26	13	25	24.5	24.5	24.5	35.5	35.5	35.5			5.8	5.8	5.7	ST
17015	10/19/2001	2137	2954.5	8836.9	11	22	11	21	23.9	23.9	23.8	34.7	34.7	34.7			5.7	5.8	5.7	ST
17016	10/19/2001	2323	2957.3	8838.7	11	20	10	19	23.8	23.8	23.7	34.7	34.7	34.7			5.9	5.7	5.5	ST
17017	10/20/2001	124	2955.4	8848.1	11	8	4	7	21.4	21.4	22.6	32.4	32.3	32.8			7.0	6.9	6.2	ST
17018	10/20/2001	309	2951.1	8848.9	11	6	3	5	21.7	21.7	21.7	32.3	32.3	32.3			7.1	7.0	7.0	ST
17019	10/20/2001	432	2946.6	8848.8	11	9	4	8	22.1	22.3	22.5	32.6	32.6	32.9			7.0	6.8	6.8	ST
17020	10/20/2001	657	2952.7	8848.8	11	7	3	6	21.6	21.6	21.7	32.3	32.5	32.5			4.6	6.2	5.2	ST
17021	10/20/2001	835	2955.0	8846.6	11	12	6	11	22.5	22.4	22.4	33.8	33.7	33.9			5.9	6.1	5.9	ST
17022	10/20/2001	1027	2955.9	8845.9	11	11	6	10	23.0	23.0	23.0	34.4	34.3	34.3			5.9	5.9	6.0	ST
17023	10/20/2001	1135	2953.4	8843.8	11	16	8	15	23.1	23.0	22.9	34.1	34.1	34.2			6.0	5.7	5.6	ST
17024	10/20/2001	1433	2947.8	8822.1	11	35	18	34	24.9	24.8	24.9	35.8	35.8	35.8			6.1	6.1	6.1	ST
17025	10/20/2001	1852	2952.6	8819.6	11	33	16	32	24.1	24.1	24.1	35.2	35.2	35.3			5.6	5.5	5.5	ST
17026	10/20/2001	2100	2952.6	8819.6	11	26	13	25	23.8	23.9	23.6	34.8	34.8	34.8			5.8	5.7	5.6	PN
17027	10/20/2001	2253	3007.0	8835.6	11	15	7	14	23.3	23.3	23.3	34.1	34.1	34.2			5.5	5.7	5.1	ST
17028	10/21/2001	207	3005.1	8853.6	11	11	5	10	22.5	22.4	22.5	32.5	32.6	32.6			6.8	6.7	6.6	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
23001	10/23/2001	845	3011.1	8800.4	11	9	5	9	22.5	22.6	22.6	31.8	33.3	33.4			4.8	5.6	5.4	ST
23002	10/23/2001	1028	3009.6	8813.4	11	16	8	16	23.1	23.2	23.3	29.2	33.9	34.7			4.9	5.2	4.3	ST
23003	10/23/2001	1147	3013.1	8818.8	11	6	3	6	23.3	22.7	22.7	28.2	30.9	32.5			5.2	5.6	5.0	ST
23004	10/23/2001	1232	3012.3	8820.2	11	7	4	7	23.3	22.6	22.7	28.2	29.4	32.5			3.9	4.7	5.0	ST
23005	10/23/2001	1403	3003.4	8819.3	11	20	10	20	24.2	23.2	23.4	24.9	33.8	34.5			4.6	4.9	4.7	ST
23006	10/23/2001	1518	2959.6	8819.0	11	29	15	29	24.4	23.5	23.3	29.4	34.7	34.7			4.5	5.0	4.7	ST
23007	10/23/2001	1818	2959.2	8824.1	11	30	15	30	24.0	24.0	24.1	34.7	34.9	35.0			4.5	5.0	4.6	ST
23008	10/23/2001	2012	3008.9	8818.0	11	18	9	18	23.3	23.1	23.6	28.5	33.4	34.5			4.3	5.1	4.4	ST
23009	10/23/2001	2111	3011.1	8815.3	11	15	8	15	23.6	23.0	23.2	25.6	33.4	34.6			3.8	5.1	3.8	ST
23010	11/12/2001	1521	3005.4	8807.6	11	22	11	22	21.6	22.4	22.6	33.3	35.2	35.5			7.2	6.2	6.1	ST
23011	11/12/2001	1718	2954.8	8807.8	11	34	17	34	23.0	22.9	22.8	35.6	35.6	35.6			6.7	6.6	6.5	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	11/7/2001	930	2826.4	9617.3	19	6	3	6	21.8	21.8	21.8	26.6	27.4	27.5			7.2	7.2	7.1	ST
34002	11/7/2001	1029	2828.6	9613.4	19	7	4	7	21.9	21.9	21.8	27.1	27.1	27.2			7.4	7.3	7.2	ST
34003	11/7/2001	1152	2830.5	9605.8	19	11	5	11	21.9	21.7	22.1	27.0	27.1	29.7			7.1	7.0	6.5	ST
34004	11/7/2001	1231	2828.4	9606.4	19	12	6	12	22.2	22.0	22.3	27.7	27.9	30.6			6.6	6.5	6.4	ST
34005	11/7/2001	1312	2827.6	9605.5	19	14	7	14	22.3	22.2	22.6	28.8	30.0	30.8			6.7	6.7	6.3	ST
34006	11/7/2001	1356	2824.4	9604.6	19	17	9	17	22.6	22.5	22.8	31.4	31.9	33.1			6.4	6.3	6.7	ST
34007	11/7/2001	1454	2823.5	9610.2	19	16	8	16	22.6	22.4	22.6	30.1	30.0	30.1			6.7	6.7	6.5	ST
34008	11/7/2001	1541	2823.5	9615.6	19	14	7	14	21.9	21.8	22.0	27.9	27.7	30.2			6.9	6.9	6.8	ST
34009	11/19/2001	933	2820.5	9610.4	19	20	10	20	22.1	22.6	22.8	31.8	33.7	33.9			6.6	6.6	6.9	ST
34010	11/19/2001	1003	2819.5	9611.6	19	20	10	20	22.2	22.5	22.8	32.5	34.2	34.5			6.9	6.8	6.9	ST
34011	11/19/2001	1200	2815.4	9617.6	19	20	10	20	22.6	22.5	23.0	30.5	33.0	33.9			6.6	6.2	6.9	ST
34012	11/19/2001	1237	2813.4	9617.5	19	23	12	23	22.3	22.6	22.9	30.9	33.5	34.0			6.5	6.1	6.9	ST
34013	11/19/2001	1311	2813.5	9618.6	19	23	11	23	22.6	22.4	23.1	30.1	33.1	33.7			6.7	6.4	6.7	ST
34014	11/19/2001	1348	2813.5	9621.5	19	22	11	22	22.3	22.2	23.0	28.4	31.5	32.8			6.6	6.1	6.5	ST
34015	11/19/2001	1440	2816.5	9626.5	19	12	6	12	22.7	22.1	22.1	26.9	28.5	29.8			7.3	6.8	6.2	ST
34016	11/19/2001	1544	2822.5	9621.5	19	8	4	8	22.8	22.4	22.1	26.1	27.6	28.6			7.1	6.8	6.4	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	11/7/2001	726	2940.1	9350.4	17	2	1	2	20.6	21.4	21.6	22.6	22.1	23.3			7.2	5.9	4.0	ST
40002	11/7/2001	815	2939.5	9356.7	17	4	2	4	20.8	20.8	20.9	23.7	23.7	23.8			7.8	7.5	6.4	ST
40003	11/7/2001	910	2939.4	9403.1	18	4	2	4	20.9	20.9	21.0	23.5	23.6	23.6			7.6	7.1	6.0	ST
40004	11/7/2001	947	2937.4	9403.8	18	6	3	6	21.2	21.1	21.4	24.0	24.0	25.1			7.4	7.2	5.3	ST
40005	11/7/2001	1046	2934.4	9357.5	17	8	4	8	21.2	21.0	21.5	24.0	24.3	30.3			7.2	6.8	4.7	ST
40006	11/7/2001	1121	2933.4	9357.8	17	10	5	10	21.3	21.3	22.0	24.2	25.0	30.2			7.0	7.0	5.9	ST
40007	11/7/2001	1234	2932.5	9347.4	17	12	6	12	21.9	21.9	22.0	30.0	30.3	31.2			6.0	6.3	4.0	ST
40008	11/7/2001	1331	2935.5	9342.8	17	10	5	10	22.1	22.2	22.3	30.2	30.3	31.0			6.0	5.8	6.1	ST
40009	11/18/2001	828	2937.5	9344.7	17	9	4	9	21.4	21.4	21.5	24.8	25.3	29.0			6.8	6.8	6.9	ST
40010	11/18/2001	902	2938.5	9343.3	17	9	4	9	21.2	21.2	21.5	25.1	26.6	29.9			6.9	6.7	6.3	ST
40011	11/18/2001	937	2940.4	9344.9	17	7	4	7	21.3	21.3	21.3	25.2	25.0	25.3			6.7	6.6	6.3	ST
40012	11/18/2001	1017	2941.5	9341.2	17	7	4	7	21.3	21.3	21.3	24.4	24.5	24.6			6.8	6.7	6.2	ST
40013	11/18/2001	1048	2941.5	9340.8	17	7	4	7	21.3	21.2	21.3	24.3	24.4	25.7			6.7	6.6	5.5	ST
40014	11/18/2001	1132	2941.5	9336.2	17	7	4	7	21.3	21.2	21.6	24.0	24.3	29.2			6.7	6.6	6.7	ST
40015	11/18/2001	1218	2938.6	9339.9	17	9	4	9	21.6	21.4	21.8	28.1	28.4	30.6			6.7	6.7	5.7	ST
40016	11/18/2001	1255	2936.6	9339.3	17	10	5	10	22.0	21.9	22.1	30.1	30.4	30.9			7.0	6.9	6.5	ST

Table 2. Selected environmental parameters (continued)

SAN JACINTO, 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
69001	11/7/2001	1049	2907.5	9450.9	18	14	7	14	21.8	21.8	21.8	29.9	29.5	30.8			7.0	6.9	6.9	ST
69002	11/7/2001	1120	2909.4	9449.7	18	13	6	13	21.5	21.5	22.0	29.1	30.0	29.6			7.4	7.6	7.3	ST
69003	11/7/2001	1151	2911.2	9452.5	18	11	5	11	21.3	21.3	21.3	27.6	27.8	28.2			7.5	7.4	7.2	ST
69004	11/7/2001	1232	2914.3	9447.9	18	9	4	9	21.1	21.0	21.2	27.4	27.4	27.8			7.6	7.4	7.3	ST
69005	11/7/2001	1302	2916.7	9444.3	18	7	3	7	21.5	21.5	21.4	27.5	27.5	27.5			7.6	7.6	7.6	ST
69006	11/7/2001	1329	2918.4	9442.9	18	6	3	6	21.7	21.7	21.5	27.8	27.9	27.9			7.5	7.4	7.3	ST
69007	11/7/2001	1355	2918.4	9440.2	18	9	4	9	21.4	21.4	21.4	23.4	27.0	27.5			7.9	7.3	7.2	ST
69008	11/7/2001	1423	2918.3	9439.9	18	9	4	9	21.2	21.3	21.3	22.5	26.4	27.0			7.7	7.4	7.2	ST
69009	11/26/2001	1039	2919.4	9435.5	18	13	6	13	20.5	20.4	20.4	26.4	27.0	27.0			7.1	7.2	7.0	ST
69010	11/26/2001	1123	2920.6	9430.6	18	12	6	12	21.0	20.9	21.2	28.0	28.1	28.0			7.3	7.2	6.6	ST
69011	11/26/2001	1141	2921.5	9429.3	18	13	6	13	21.1	21.0	21.1	28.1	28.1	28.2			7.1	7.0	6.8	ST
69012	11/26/2001	1209	2925.5	9429.6	18	11	6	11	20.9	20.7	20.9	27.1	27.0	27.0			7.3	7.3	7.1	ST
69013	11/26/2001	1239	2923.7	9436.6	18	9	5	9	20.7	20.7	20.5	27.1	27.0	27.0			7.3	7.2	7.0	ST
69014	11/26/2001	1258	2922.2	9438.4	18	9	5	9	20.8	20.6	20.5	27.0	26.9	26.9			7.2	7.3	7.1	ST
69015	11/26/2001	1333	2926.4	9438.3	18	4	2	4	20.6	20.6	20.5	26.5	26.5	26.6			7.1	7.3	7.1	ST
69016	11/26/2001	1348	2925.6	9439.5	18	4	2	4	20.5	20.4	20.4	26.5	26.6	26.6			7.1	7.3	7.1	ST

Table 2. Selected environmental parameters (continued)

R.J. KEMP, 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	11/8/2001	910	2602.4	9708.4	21	8	4	7	22.2	22.2	22.2	29.5	30.1	30.2			7.1	6.8	6.8	ST
31002	11/8/2001	1002	2557.4	9705.7	22	18	9	18	22.5	22.8	23.1	30.9	32.4	33.2			6.3	6.6	6.5	ST
31003	11/8/2001	1047	2559.6	9702.6	22	24	12	23	22.4	23.2	23.1	30.5	31.3	33.3			5.4	6.4	5.9	ST
31004	11/8/2001	1133	2603.5	9701.5	21	24	12	24	22.6	22.3	22.9	30.1	30.5	32.5			6.1	6.3	5.9	ST
31005	11/8/2001	1204	2604.6	9702.5	21	23	12	23	22.7	22.3	22.8	30.0	30.0	32.3			5.8	6.4	5.6	ST
31006	11/8/2001	1245	2608.6	9702.5	21	23	12	22	23.2	22.2	23.0	29.2	29.8	32.0			5.8	6.6	4.8	ST
31007	11/8/2001	1321	2609.6	9704.5	21	19	10	19	22.9	22.1	22.7	30.0	29.9	32.3			6.5	6.5	4.8	ST
31008	11/8/2001	1356	2608.5	9706.5	21	18	9	17	22.9	22.2	22.5	29.9	30.0	30.3			6.1	6.7	5.9	ST
31009	11/19/2001	841	2610.5	9701.4	21	24	12	23	22.6	22.6	22.7	31.9	32.7	32.7			5.7	6.0	6.0	ST
31010	11/19/2001	944	2617.6	9704.6	21	19	10	19	22.5	22.5	22.7	32.5	32.9	32.9			6.3	6.0	6.3	ST
31011	11/19/2001	1029	2620.5	9708.5	21	15	8	15	22.3	21.9	22.1	31.3	31.6	31.4			6.5	6.2	6.2	ST
31012	11/19/2001	1059	2619.5	9710.5	21	13	7	13	22.1	22.2	22.1	30.7	31.4	31.4			6.4	6.1	6.0	ST
31013	11/19/2001	1154	2613.5	9706.5	21	17	9	17	22.8	22.5	22.8	32.1	32.3	32.4			5.8	5.6	6.1	ST
31014	11/19/2001	1225	2613.5	9708.6	21	15	8	15	22.9	22.4	22.4	32.1	32.3	32.3			5.8	6.3	6.1	ST
31015	11/19/2001	1307	2609.5	9708.5	21	15	8	14	22.5	22.4	22.6	32.0	32.5	32.5			5.9	6.1	6.0	ST
31016	11/19/2001	1335	2608.5	9709.5	21	7	4	7	22.8	22.4	22.5	32.3	32.3	32.0			6.3	6.1	5.9	ST

Table 2. Selected environmental parameters (continued)

NUECES, 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
67001	11/12/2001	820	2755.4	9656.5	20	12	6	12	22.6	22.6	22.5	30.0	30.0	31.0			6.8	6.8	6.0	ST
67002	11/12/2001	910	2757.7	9650.9	20	14	7	14	22.7	22.6	22.6	30.5	30.5	32.3			6.4	6.4	6.3	ST
67003	11/12/2001	957	2754.3	9649.4	20	19	9	19	22.7	22.7	22.9	31.3	32.5	34.1			6.2	6.5	6.3	ST
67004	11/12/2001	1029	2753.6	9649.8	20	19	9	19	22.7	22.7	23.0	31.4	32.2	34.0			6.3	6.4	6.4	ST
67005	11/12/2001	1146	2743.3	9656.5	20	22	11	22	22.9	22.9	23.2	31.5	32.9	33.1			6.1	6.0	6.1	ST
67006	11/12/2001	1227	2742.6	9701.6	20	17	9	17	22.9	22.9	22.7	28.5	32.0	33.0			6.7	6.7	6.4	ST
67007	11/12/2001	1301	2744.4	9702.6	20	14	7	14	22.7	22.7	22.9	28.4	30.7	31.7			6.8	6.7	6.0	ST
67008	11/12/2001	1342	2748.8	9700.5	20	14	7	14	23.1	22.9	22.8	27.6	30.0	30.8			6.7	7.0	6.0	ST
67009	11/19/2001	911	2742.6	9703.5	20	14	7	14	22.2	22.2	22.2	27.1	29.3	32.5			6.5	6.3	6.0	ST
67010	11/19/2001	945	2739.2	9704.8	20	16	8	16	22.2	22.2	22.4	28.6	29.3	33.4			6.5	6.5	5.7	ST
67011	11/19/2001	1019	2737.6	9705.5	20	16	8	16	22.6	22.2	22.7	29.0	32.2	33.6			6.4	6.6	6.1	ST
67012	11/19/2001	1049	2736.3	9704.4	20	19	9	19	22.4	22.4	23.4	29.2	34.0	34.2			6.5	6.2	5.9	ST
67013	11/19/2001	1123	2737.5	9702.5	20	20	10	20	22.3	22.6	23.5	28.5	31.8	34.2			6.3	6.1	6.0	ST
67014	11/19/2001	1155	2739.3	9702.4	20	18	9	18	22.7	22.6	23.5	28.1	31.7	33.9			6.5	6.3	6.0	ST
67015	11/19/2001	1226	2740.5	9702.4	20	17	9	17	23.4	22.6	23.2	28.0	32.8	34.1			6.2	6.2	6.0	ST
67016	11/19/2001	1256	2740.3	9700.3	20	20	10	20	23.0	22.9	23.5	29.0	32.6	34.3			7.0	6.0	6.0	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
37883	12/10/2001	910	2900.0	9030.0	14	9	4	9	20.9	20.8	21.5	28.8	28.8	30.0		9.095	8.2	8.2	7.3	PN
37884	12/10/2001	1247	2900.0	9100.0	14	6	3	6	20.8	20.8	20.8	30.6	30.6	30.6		3.151	8.1	8.1	8.1	PN
37885	12/10/2001	1625	2900.0	9130.0	15	9	4	9	21.1	21.1	21.1	32.4	32.4	32.5		2.001	7.7	7.8	7.8	PN
37886	12/10/2001	2015	2900.0	9130.0	15	9	4	9	22.8	22.9	23.1	36.1	36.2	36.3		0.112	7.1	7.1	7.1	ST
37887	12/10/2001	2325	2836.9	9111.2	15	23	11	23	22.2	22.3	22.9	35.0	35.1	35.5		0.518	7.0	7.1	6.8	ST
37888	12/11/2001	116	2832.9	9110.6	15	30	15	30	22.4	23.0	23.2	35.7	36.1	36.2		0.509	7.1	7.1	7.0	ST
37889	12/11/2001	337	2833.0	9100.9	15	26	13	26	22.5	22.6	23.0	35.6	35.8	36.0		0.285	7.1	7.1	7.0	ST
37890	12/11/2001	536	2836.1	9055.7	14	19	9	19	22.5	22.5	22.8	35.4	35.4	35.6		0.481	7.0	7.0	6.2	ST
37891	12/11/2001	1021	2837.3	9130.8	15	30	15	30	22.8	22.8	22.8	36.1	36.1	36.1		0.457	7.1	7.1	7.1	ST
37892	12/11/2001	1321	2836.7	9111.5	15	23	12	23	22.3	22.3	23.0	35.2	35.2	35.7		1.189	7.2	7.2	6.8	ST
37893	12/11/2001	1458	2832.9	9110.6	15	30	16	30	23.1	23.1	23.2	36.2	36.2	36.3		1.121	7.1	7.2	7.1	ST
37894	12/11/2001	1644	2833.4	9101.1	15	24	12	24	22.7	22.7	22.7	35.8	35.8	35.9		0.610	7.2	7.1	7.1	ST
37895	12/11/2001	2029	2851.4	9056.3	14	9	5	9	21.0	21.0	21.0	31.2	31.2	31.2		3.649	8.4	8.4	8.6	ST
37896	12/12/2001	7	2853.4	9038.5	14	12	6	12	21.2	21.2	21.3	29.9	30.0	30.8		4.515	8.5	8.5	8.5	ST
37897	12/12/2001	408	2900.6	9016.7	14	10	6	10	20.1	20.2	20.2	24.6	24.8	25.3		6.487	8.6	8.5	8.4	ST
37898	12/12/2001	615	2901.8	9006.7	14	14	7	14	20.0	20.3	23.5	24.2	25.4	34.7		3.494	8.3	8.5	3.8	ST
37899	12/12/2001	724	2901.9	9006.7	14	14	7	14	20.0	20.2	23.5	24.2	25.4	34.7			8.3	8.5	3.8	ST
37900	12/12/2001	840	2900.1	9000.0	13	22	11	22	20.2	22.9	24.1	24.4	33.1	35.8		6.383	8.3	6.0	3.9	PN
37901	12/12/2001	1115	2900.3	9016.7	14	11	6	11	20.5	20.4	21.9	25.4	25.5	30.7		6.260	8.5	8.2	4.6	ST
37902	12/12/2001	1416	2853.4	9038.3	14	12	6	12	21.8	21.7	21.4	28.7	29.3	30.6		2.772	8.3	7.9	7.4	ST
37903	12/12/2001	1645	2851.4	9056.2	14	8	5	8	21.5	21.5	21.5	30.4	30.4	30.5		12.244	9.0	9.0	8.7	ST
37904	12/13/2001	39	2903.8	8952.7	13	23	10	23	20.5	22.0	24.0	24.0	29.9	35.8		9.386	9.2	6.8	2.8	ST
37905	12/13/2001	225	2907.2	8948.8	13	20	9	20	20.4	20.7	24.1	24.4	26.9	35.5		7.319	8.9	8.0	1.6	ST
37906	12/13/2001	429	2907.4	8938.1	13	11	6	11	19.6	20.3	21.3	19.2	29.9	29.0		5.222	9.3	8.9	6.2	ST
37907	12/13/2001	541	2901.5	8939.2	13	31	15	31	19.4	23.7	24.2	20.6	34.8	36.3		1.158	8.4	3.7	3.9	ST
37908	12/13/2001	715	2900.0	8930.0	13	13	7	13	19.5	20.3	24.1	20.2	25.9	35.4		4.923	8.7	8.1	1.8	PN
37909	12/13/2001	933	2907.3	8938.0	13	11	5	11	20.2	20.2	23.1	22.6	25.8	33.4		6.051	9.3	8.7	1.2	ST
37910	12/13/2001	1050	2901.8	8939.1	13	29	15	29	19.8	24.0	24.2	21.0	35.3	36.2		4.502	8.4	4.1	3.9	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
37911	12/13/2001	1239	2907.1	8948.8	13	20	10	20	20.8	21.5	24.0	24.3	29.2	35.2		10.382	9.3	6.5	1.2	ST
37912	12/13/2001	1357	2904.0	8952.8	13	24	12	24	21.1	22.9	24.0	24.6	33.4	35.6		11.479	9.8	6.5	2.4	ST

Table 3. 2001 Summer Shrimp/Groundfish Survey species composition list, 273 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					
Micropogonias undulatus	Atlantic croaker	29512	876.5	132	48.4
Stenotomus caprinus	longspine porgy	27213	524.3	159	58.2
Chloroscombrus chrysurus	Atlantic bumper	14535	339.2	92	33.7
Peprilus burti	gulf butterfish	12885	550.3	105	38.5
Upeneus parvus	dwarf goatfish	7555	137.3	97	35.5
Saurida brasiliensis	largescale lizardfish	6385	39.4	104	38.1
Leiostomus xanthurus	spot	5606	229.1	73	26.7
Prionotus tribulus	bighead searobin	5604	51.2	35	12.8
Trachurus lathami	rough scad	4735	115.3	73	26.7
Serranus atrobranchus	blackear bass	4616	39.5	80	29.3
Syacium gunteri	shoal flounder	4173	82.6	139	50.9
Anchoa hepsetus	striped anchovy	3628	40.2	62	22.7
Prionotus longispinosus	bigeye searobin	3336	27.9	104	38.1
Centropristis philadelphica	rock sea bass	2856	49.9	120	44.0
Trichiurus lepturus	Atlantic cutlassfish	2407	88.4	60	22.0
Cynoscion nothus	silver seatrout	2255	92.5	70	25.6
Etropus crossotus	fringed flounder	2219	22.0	58	21.2
Pristipomoides aquilonaris	wenchman	1984	97.4	58	21.2
Prionotus stearnsi	shortwing searobin	1947	15.0	74	27.1
Synodus foetens	inshore lizardfish	1536	141.3	123	45.1
Cynoscion arenarius	sand seatrout	1335	57.9	108	39.6
Lagodon rhomboides	pinfish	1332	77.9	91	33.3
Diplectrum bivittatum	dwarf sand perch	1223	27.3	79	28.9
Prionotus paralatus	Mexican searobin	1161	21.2	45	16.5
Polydactylus octonemus	Atlantic threadfin	1104	41.7	60	22.0
Cynoscion spp.	seatrouts	841	12.9	20	7.3
Anchoa mitchilli	bay anchovy	760	1.4	22	8.1

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Mullus auratus	red goatfish	742	25.9	6	2.2
Stellifer lanceolatus	star drum	732	11.1	29	10.6
Etrumeus teres	round herring	621	6.7	19	7.0
Sphoeroides parvus	least puffer	593	3.8	51	18.7
Halieutichthys aculeatus	pancake batfish	560	3.5	53	19.4
Larimus fasciatus	banded drum	525	19.0	40	14.7
Bollmannia communis	ragged goby	518	1.9	34	12.5
Lepophidium brevibarbe	blackedge cusk-eel	510	13.7	45	16.5
Selene setapinnis	Atlantic moonfish	509	29.7	59	21.6
Harengula jaguana	scaled sardine	505	14.8	35	12.8
Symphurus plagiusa	blackcheek tonguefish	481	6.9	43	15.8
Porichthys plectrodon	Atlantic midshipman	468	7.0	55	20.1
Synodus poeyi	offshore lizardfish	439	3.4	43	15.8
Anchoviella perfasciata	flat anchovy	429	1.9	4	1.5
Lutjanus campechanus	red snapper	400	19.9	45	16.5
Prionotus rubio	blackwing searobin	394	9.9	23	8.4
Peprilus alepidotus	harvestfish	386	17.0	31	11.4
Prionotus alatus	spiny searobin	369	2.9	14	5.1
Citharichthys spilopterus	bay whiff	367	3.8	36	13.2
Trichopsetta ventralis	sash flounder	327	7.8	24	8.8
Lagocephalus laevigatus	smooth puffer	316	13.7	44	16.1
Syacium papillosum	dusky flounder	312	13.5	13	4.8
Lutjanus synagris	lane snapper	303	35.6	33	12.1
Engraulis eurystole	silver anchovy	283	0.8	6	2.2
Urophycis floridana	southern hake	282	22.8	19	7.0
Balistes capriscus	gray triggerfish	275	19.4	29	10.6
Sardinella aurita	Spanish sardine	263	6.5	19	7.0
Scorpaena calcarata	smoothhead scorpionfish	258	4.5	10	3.7
Brevoortia patronus	gulf menhaden	248	5.8	14	5.1
Menticirrhus americanus	southern kingfish	232	24.4	34	12.5

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Monacanthus hispidus	planehead filefish	230	2.8	41	15.0
Opisthonema oglinum	Atlantic thread herring	226	19.5	15	5.5
Cyclopsetta chittendeni	Mexican flounder	223	20.2	52	19.0
Arius felis	hardhead catfish	178	24.3	22	8.1
Decapterus punctatus	round scad	177	12.5	10	3.7
Hildebrandia flava	yellow conger	154	6.3	19	7.0
Bregmaceros atlanticus	antenna codlet	138	0.2	12	4.4
Ogcocephalus radiatus	polka-dot batfish	136	8.0	15	5.5
Astroscopus y-graecum	southern stargazer	123	2.9	5	1.8
Eucinostomus gula	silver jenny	117	4.0	13	4.8
Lepophidium jeannae	mottled cusk-eel	109	2.5	9	3.3
Engyophrys senta	spiny flounder	107	0.5	16	5.9
Bellator militaris	horned searobin	102	0.9	8	2.9
Etropus cyclosquamus	shelf flounder	97	0.4	15	5.5
Hoplunnis macrurus	freckled pike-conger	85	0.9	16	5.9
Selene vomer	lookdown	69	1.9	10	3.7
Ancylopsetta quadrocellata	ocellated flounder	65	8.8	18	6.6
Ancylopsetta dilecta	three-eye flounder	64	1.6	18	6.6
Urophycis cirrata	gulf hake	63	1.6	11	4.0
Kathetostoma albigutta	lancer stargazer	55	2.0	12	4.4
Scomberomorus maculatus	Spanish mackerel	51	1.7	6	2.2
Anchoa lyolepis	dusky anchovy	50	0.0	5	1.8
Prionotus ophryas	bandtail searobin	42	0.5	7	2.6
Sphoeroides spengleri	bandtail puffer	42	0.3	4	1.5
Caranx crysos	blue runner	41	3.5	12	4.4
Gymnachirus texae	fringed sole	41	0.4	15	5.5
Caulolatilus intermedius	anchor tilefish	39	2.0	10	3.7
Orthopristis chrysoptera	pigfish	38	3.3	5	1.8
Scomberomorus cavalla	king mackerel	38	1.0	7	2.6
Antennarius radiosus	singlespot frogfish	38	0.5	13	4.8

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Eucinostomus argenteus	spotfin mojarra	37	1.3	11	4.0
Equetus umbrosus	cubbyu	35	1.2	6	2.2
Ophidion welshi	crested cusk-eel	35	0.6	9	3.3
Gymnothorax nigromarginatus	blackedge moray	34	2.9	6	2.2
Brotula barbata	bearded brotula	34	4.0	9	3.3
Diplectrum formosum	sand perch	33	2.6	6	2.2
Priacanthus arenatus	bigeye	31	1.8	17	6.2
Raja texana	roundel skate	26	5.7	8	2.9
Synodus intermedius	sand diver	26	0.5	4	1.5
Selar crumenophthalmus	bigeye scad	25	1.6	6	2.2
Ogcocephalus parvus	roughback batfish	25	0.2	4	1.5
Symphurus civitatus	offshore tonguefish	23	0.3	4	1.5
Symphurus diomedianus	spottedfin tonguefish	22	0.5	5	1.8
Sphyraena guachancho	guaguanche	20	2.2	11	4.0
Bairdiella chrysoura	silver perch	20	1.4	8	2.9
Ophidion holbrooki	bank cusk-eel	19	1.1	2	0.7
Paralichthys lethostigma	southern flounder	19	3.7	6	2.2
Chilomycterus schoepfi	striped burrfish	18	1.4	6	2.2
Conodon nobilis	barred grunt	17	1.4	3	1.1
Pontinus longispinis	longspine scorpionfish	16	0.0	2	0.7
Sphoeroides dorsalis	marbled puffer	16	0.8	5	1.8
Rhomboplites aurorubens	vermilion snapper	15	7.0	4	1.5
Ogcocephalus spp.	batfishes	15	0.2	5	1.8
Haemulon aurolineatum	tomtate	12	0.6	5	1.8
Chaetodipterus faber	Atlantic spadefish	12	0.5	6	2.2
Ogcocephalus declivirostris	slantbrow batfish	12	0.1	9	3.3
Serraniculus pumilio	pygmy sea bass	11	0.0	4	1.5
Lactophrys quadricornis	scrawled cowfish	11	0.7	2	0.7
Gymnachirus melas	naked sole	10	0.0	3	1.1
Rhizoprionodon terraenovae	Atlantic sharpnose shark	9	8.3	5	1.8

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Mustelus canis	smooth dogfish	9	15.9	7	2.6
Fistularia petimba	red cornetfish	9	0.3	3	1.1
Hippocampus erectus	lined seahorse	9	0.0	6	2.2
Hemanthias leptus	longtail bass	9	0.1	1	0.4
Apogon aurolineatus	bridle cardinalfish	9	0.0	3	1.1
Citharichthys macrops	spotted whiff	9	0.2	5	1.8
Aluterus heudeloti	dotterel filefish	9	0.4	3	1.1
Aluterus schoepfi	orange filefish	9	0.2	4	1.5
Dorosoma petenense	threadfin shad	8	0.2	3	1.1
Pisces	fishes	7	0.2	2	0.7
Trachinocephalus myops	snakefish	7	0.5	2	0.7
Peristedion gracile	slender searobin	7	0.0	2	0.7
Caranx hippos	crevalle jack	7	0.5	1	0.4
Syacium micrurum	channel flounder	7	0.1	1	0.4
Prionotus scitulus	leopard searobin	6	0.1	1	0.4
Bathyanthias mexicanus	yellowtail bass	6	0.1	3	1.1
Hemicaranx amblyrhynchus	bluntnose jack	6	0.1	3	1.1
Lonchopisthus micrognathus	swordtail jawfish	6	0.0	2	0.7
Raja eglanteria	clearnose skate	5	3.2	2	0.7
Rhinoptera bonasus	cownose ray	5	2.9	2	0.7
Hemiramphus balao	balao	5	0.1	1	0.4
Prionotus roseus	bluespotted searobin	5	0.2	3	1.1
Opistognathus lonchurus	moustache jawfish	5	0.0	1	0.4
Neobythites gillii	cusk-eel	5	0.1	1	0.4
Ogcocephalus nasutus	shortnose batfish	5	0.0	1	0.4
Squatina dumeril	Atlantic angel shark	4	2.4	2	0.7
Carcharhinus acronotus	blacknose shark	4	3.0	3	1.1
Scorpaena plumieri	spotted scorpionfish	4	0.0	1	0.4
Neomerinthe hemingwayi	spinycheek scorpionfish	4	0.7	3	1.1
Seriola fasciata	lesser amberjack	4	0.8	1	0.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Bothus robinsi	twospot flounder	4	0.1	1	0.4
Dorosoma cepedianum	gizzard shad	3	0.0	3	1.1
Synodus spp.	lizardfishes	3	0.0	1	0.4
Pomatomus saltatrix	bluefish	3	1.4	2	0.7
Oligoplites saurus	leatherjack	3	0.0	1	0.4
Sciaenops ocellatus	red drum	3	6.5	1	0.4
Umbrina coroides	sand drum	3	0.3	1	0.4
Calamus leucosteus	whitebone porgy	3	0.5	1	0.4
Gobioides broussoneti	violet goby	3	0.0	1	0.4
Ogcocephalus corniger	longnose batfish	3	0.3	1	0.4
Mustelus norrisi	Florida smoothhound	2	1.5	2	0.7
Narcine brasiliensis	lesser electric ray	2	2.5	1	0.4
Alosa chrysochloris	skipjack herring	2	0.1	1	0.4
Gymnothorax saxicola	honeycomb moray	2	0.1	2	0.7
Myrophis punctatus	speckled worm eel	2	0.1	1	0.4
Syngnathus louisianae	chain pipefish	2	0.0	1	0.4
Scorpaenidae	scorpionfishes	2	0.0	2	0.7
Rypticus maculatus	whitespotted soapfish	2	0.4	2	0.7
Caulolatilus microps	blueline tilefish	2	0.0	2	0.7
Trachinotus carolinus	Florida pompano	2	0.0	1	0.4
Equetus lanceolatus	jackknife fish	2	0.0	1	0.4
Opistognathus spp.	jawfishes	2	0.0	1	0.4
Gobiidae	gobies	2	0.0	1	0.4
Ophidion grayi	blotched cusk-eel	2	0.1	2	0.7
Cyclopsetta fimbriata	spotfin flounder	2	0.0	1	0.4
Trinectes maculatus	hogchoker	2	0.0	2	0.7
Balistidae	leatherjackets	2	0.0	2	0.7
Carcharhinus limbatus	blacktip shark	1	1.1	1	0.4
Sphyrna tiburo	bonnethead	1	1.4	1	0.4
Rhinobatos lentiginosus	Atlantic guitarfish	1	0.9	1	0.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Dasyatis americana	southern stingray	1	16.3	1	0.4
Dasyatis say	bluntnose stingray	1	2.5	1	0.4
Anchoa nasuta	longnose anchovy	1	0.0	1	0.4
Gymnothorax moringa	spotted moray	1	0.1	1	0.4
Ophichthus gomesi	shrimp eel	1	0.1	1	0.4
Prionotus martis	barred searobin	1	0.0	1	0.4
Epinephelus flavolimbatus	yellowedge grouper	1	0.1	1	0.4
Echeneis naucrates	sharksucker	1	1.1	1	0.4
Eucinostomus melanopterus	flagfin mojarra	1	0.0	1	0.4
Menticirrhus saxatilis	northern kingfish	1	0.0	1	0.4
Holacanthus bermudensis	blue angelfish	1	0.7	1	0.4
Callionymidae	dragonets	1	1.7	1	0.4
Scomber japonicus	chub mackerel	1	0.0	1	0.4
Peprilus triacanthus	butterfish	1	0.0	1	0.4
Ariomma bondi	silver-rag	1	0.0	1	0.4
Gobionellus oceanicus	highfin goby	1	0.0	1	0.4
Microgobius gulosus	clown goby	1	0.0	1	0.4
Otophidium omostigmum	polka-dot cusk-eel	1	0.0	1	0.4
Dactylopterus volitans	flying gurnard	1	0.1	1	0.4
Etropus spp.	lefteye flounders	1	0.0	1	0.4
Aluterus monoceros	unicorn filefish	1	0.5	1	0.4
Crustaceans					
Trachypenaeus similis	roughback shrimp	19977	76.0	126	46.2
Callinectes similis	lesser blue crab	15606	190.1	172	63.0
Penaeus aztecus	brown shrimp	15129	254.1	214	78.4
Squilla empusa	mantis shrimp	7288	57.9	129	47.3
Sicyonia dorsalis	lesser rock shrimp	5491	12.4	86	31.5
Portunus gibbesii	irridescent swimming crab	3982	15.7	121	44.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Portunus spinicarpus	longspine swimming crab	2685	18.9	52	19.0
Sicyonia brevirostris	brown rock shrimp	1350	16.0	28	10.3
Solenocera vioscai	humpback shrimp	1301	3.5	26	9.5
Squilla chydaea	mantis shrimp	1217	5.9	49	17.9
Callinectes sapidus	blue crab	1159	46.0	54	19.8
Penaeus duorarum	pink shrimp	836	18.5	46	16.8
Trachypenaeus constrictus	roughneck shrimp	813	3.9	10	3.7
Anasimus latus	stilt spider crab	479	3.5	25	9.2
Portunus spinimanus	blotched swimming crab	420	18.6	44	16.1
Squilla spp.	mantis shrimps	392	2.2	3	1.1
Ovalipes floridanus	Florida lady crab	219	2.3	24	8.8
Penaeus setiferus	white shrimp	193	8.7	59	21.6
Calappa sulcata	yellow box crab	181	36.1	51	18.7
Hepatus epheliticus	calico crab	150	5.4	22	8.1
Libinia spp.	spider crabs	61	2.0	4	1.5
Porcellana sayana	spotted porcelain crab	60	0.0	7	2.6
Arenaeus cribrarius	speckled swimming crab	59	1.6	18	6.6
Xiphopenaeus kroyeri	seabob	53	0.2	21	7.7
Leiolambrus nitidus	white elbow crab	48	0.0	15	5.5
Stenorhynchus seticornis	yellowline arrow crab	40	0.2	13	4.8
Persephona crinita	pink purse crab	38	0.0	21	7.7
Squilla deceptrix	mantis shrimp	34	0.1	1	0.4
Libinia emarginata	portly spider crab	33	5.0	16	5.9
Stenocionops furcata	furcate crab	32	2.1	4	1.5
Sicyonia burkenroadi	spiny rock shrimp	31	0.0	5	1.8
Squilla neglecta	mantis shrimp	30	0.2	2	0.7
Paguristes triangulatus	hermit crab	26	0.3	3	1.1
Solenocera necopina	deepwater humpback shrimp	23	0.1	1	0.4
Libinia dubia	longnose spider crab	20	0.0	10	3.7
Parapenaeus politus	deepwater rose shrimp	19	0.0	1	0.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Petrochirus diogenes	giant hermit crab	15	0.6	7	2.6
Parthenope granulata	bladetooth elbow crab	14	0.0	6	2.2
Dardanus insignis	red brocade hermit	14	0.0	4	1.5
Pseudorhombila quadridentata	flecked squareback crab	13	0.0	4	1.5
Raninoides louisianensis	gulf frog crab	12	0.1	7	2.6
Menippe adina	Gulf stone crab	11	0.0	3	1.1
Collodes robustus	spider crab	11	0.0	3	1.1
Alpheus spp.	snapping shrimps	10	0.0	2	0.7
Myropsis quinquespinosa	fivespine purse crab	10	0.0	4	1.5
Portunus sayi	sargassum swimming crab	10	0.0	5	1.8
Podochela sidneyi	shortfinger neck crab	10	0.0	5	1.8
Acanthocarpus alexandri	gladiator box crab	10	0.0	1	0.4
Diogenidae	left-handed hermit crabs	9	0.0	1	0.4
Pagurus pollicaris	flatclaw hermit crab	7	0.1	7	2.6
Persephona mediterranea	mottled purse crab	6	0.0	3	1.1
Speocarcinus lobatus	gulf squareback crab	6	0.0	4	1.5
Sicyonia parri	rock shrimp	5	0.0	2	0.7
Munida forceps	squat lobster	5	0.0	1	0.4
Parapenaeus spp.	penaeid shrimps	4	0.0	2	0.7
Raninidae	frog crabs	4	0.0	1	0.4
Majidae	spider crabs	3	0.0	1	0.4
Parthenope spp.	elbow crabs	3	0.0	1	0.4
Lironeca ovalis	isopod	2	0.0	1	0.4
Decapoda	decapods	2	0.0	1	0.4
Plesionika longicauda	pandalid shrimp	2	0.0	1	0.4
Rhithropanopeus harrisii	Harris mud crab	2	0.0	1	0.4
Podochela riisei	longfinger neck crab	2	0.0	2	0.7
Stenocionops coelata	spider crab	2	0.0	1	0.4
Metoporhaphis calcarata	false arrow crab	2	0.0	2	0.7
Porcellana sigsbeiana	striped porcelain crab	2	0.0	1	0.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Dromidia antillensis	hairy sponge crab	2	0.0	2	0.7
Calappa flammea	flame box crab	2	0.4	2	0.7
Lysiosquilla scabricauda	mantis shrimp	1	0.1	1	0.4
Xanthidae	mud crabs	1	0.0	1	0.4
Munida spp.	squat lobsters	1	0.0	1	0.4
Nibilia antilocapra	shorthorn spiny crab	1	0.0	1	0.4
Porcellana spp.	porcelain crabs	1	0.0	1	0.4
Euphrosynoplax clausa	craggy bathyal crab	1	0.0	1	0.4
Parthenope serrata	sawtooth elbow crab	1	0.0	1	0.4
Others					
Loligo pleii	arrow squid	9470	105.1	104	38.1
Renilla mulleri	short-stemmed sea pansy	4648	26.8	72	26.4
Loligo pealeii	longfin squid	2972	71.0	66	24.2
Astropecten duplicatus	spiny beaded sea star	2748	2.8	46	16.8
Amusium papyraceum	paper scallop	2714	24.1	48	17.6
Loligo spp.	squids	1739	23.3	12	4.4
Lolliguncula brevis	Atlantic brief squid	1124	13.8	93	34.1
Luidia clathrata	sea star	781	12.0	58	21.2
Chrysaora quinquecirrha	sea nettle	491	8.6	53	19.4
Mnemiopsis mccradyi	comb jelly	268	2.1	8	2.9
Clypeaster ravenelii	cake urchin	186	16.4	3	1.1
Mellita quinquiesperforata	five-slotted sand dollar	183	0.1	4	1.5
Actinidae	sea anemones	149	0.5	23	8.4
Astropecten cingulatus	starfish	133	1.0	27	9.9
Ophiolepis elegans	brittle star	128	0.1	13	4.8
Pitar cordatus	Schwengel's pitar	65	1.5	11	4.0
Chione clenchi	Clench venus	50	0.6	7	2.6
Tethyaster grandis	starfish	45	1.7	9	3.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Stomolophus meleagris	many-mouthed sea jelly	38	7.8	8	2.9
Porifera	sponges	32	2.5	3	1.1
Aplysia brasiliana	mottled seahare	29	0.2	6	2.2
Styela plicata	tunicate	23	0.9	3	1.1
Polystira albida	white giant turris	21	0.3	2	0.7
Paranthus rapiformis	onion anemone	20	0.0	7	2.6
Aurelia aurita	moon jellyfish	19	0.2	2	0.7
Anthenoides piercei	starfish	18	0.7	2	0.7
Beroe ovata	comb jelly	16	0.0	6	2.2
Anadara baughmani	Baughman's ark	15	0.1	4	1.5
Encope michelini	sand dollar	13	0.1	1	0.4
Neverita duplicata	shark eye	12	0.2	7	2.6
Semirossia equalis	greater shining bobtail	10	0.0	3	1.1
Chiropsalmus quadrumanus	jellyfish	10	0.1	1	0.4
Luidia alternata	banded luidia	9	0.2	6	2.2
Distorsio clathrata	Atlantic distorsio	7	0.0	3	1.1
Conus austini	cone shell	7	0.1	1	0.4
Arcinella cornuta	Florida spiny jewelbox	6	0.0	2	0.7
Laevicardium sybariticum	delicate eggcockle	6	0.2	2	0.7
Cantharus cancellarius	cancellate cantharus	5	0.0	4	1.5
Anadara brasiliana	incongruous ark	5	0.3	1	0.4
Ascidiacea	sea squirts	5	0.0	2	0.7
Anthozoa	anthozoans	5	0.0	3	1.1
Ctenophora	comb jellies	5	0.1	1	0.4
Moira atropos	mud heart-urchin	5	0.5	2	0.7
Strombus alatus	Florida fighting conch	4	0.3	3	1.1
Asterophilidae	mollusc	4	0.0	1	0.4
Pecten raveneli	Ravenel's scallop	4	0.0	2	0.7
Astropecten articulatus	plated-margined sea star	4	0.0	1	0.4
Gastropoda	snails	3	0.3	1	0.4
Busycon sinistrum	lightning whelk	3	2.3	3	1.1

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Nudibranchia	sea slugs	3	0.0	1	0.4
Atrina spp.	penshells	3	0.0	1	0.4
Pectinidae	scallops	3	0.0	1	0.4
Octopus vulgaris	common Atlantic octopus	3	0.3	1	0.4
Calliactris tricolor	common sea anemone	3	0.0	2	0.7
Asteroidea	starfishes	3	0.0	1	0.4
Clypeaster prostratus	sea biscuit	3	0.3	2	0.7
Molpadia cubana	sea cucumber	3	0.0	2	0.7
Argopecten gibbus	calico scallop	2	0.0	1	0.4
Geodia gibberosa	sponge	2	0.0	1	0.4
Tamoya haplonema	sea wasp	2	0.0	2	0.7
Gorgonidae	gorgonians	2	0.0	2	0.7
Centrostephanus longispinosus	sea urchin	2	0.0	1	0.4
Phalium granulatum	scotch bonnet	1	0.0	1	0.4
Thais haemastoma	rocksnail	1	0.0	1	0.4
Busycotypus spiratus	pearwhelk	1	0.0	1	0.4
Busycon lyonsi	whelk	1	0.2	1	0.4
Aplysia spp.	sea hares	1	0.0	1	0.4
Macoma brevifrons	short macoma	1	0.1	1	0.4
Tunicata	tunicates	1	0.0	1	0.4
Ascidia spp.	tunicates	1	0.1	1	0.4
Spongiidae	sponges	1	0.0	1	0.4
Aequorea aequorea	thecate hydroid	1	0.0	1	0.4
Phyllorhiza punctata	jellyfish	1	5.0	1	0.4
Chloeia viridis	red-tipped fire worm	1	0.0	1	0.4
Astropecten americanus	starfish	1	0.0	1	0.4
Echinaster serpentarius	starfish	1	0.0	1	0.4
Goniaster tesselatus	starfish	1	0.0	1	0.4
Hemipholis elongata	brittle star	1	0.0	1	0.4
Astrophyton muricatum	basket star	1	0.0	1	0.4
Protankyra grayi	sea cucumber	1	0.0	1	0.4

Table 4a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2001 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	5	462.3	246.99	1.4	0.61	8	1048.4	438.07	3.4	1.35	21
Callinectes similis	8.6	6.22	0.0	0.04	5	583.3	304.47	2.5	1.32	8	316.3	133.81	1.8	0.78	21
Portunus gibbesii	35.6	30.19	0.1	0.09	5	328.9	176.22	0.6	0.28	8	123.6	60.41	0.3	0.16	21
Squilla spp.	10.5	6.54	0.1	0.07	5	161.5	84.28	1.2	0.62	8	165.9	61.42	1.2	0.43	21
Penaeus aztecus	37.4	34.72	0.5	0.41	5	124.9	58.34	1.6	0.68	8	196.5	80.37	2.7	1.03	21
Sicyonia dorsalis	0.0	0.00	0.0	0.00	5	21.2	10.18	0.0	0.02	8	202.0	85.51	0.3	0.12	21
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	7.0	3.99	0.0	0.02	8	309.6	108.84	1.8	0.66	21
Peprilus burti	2.4	2.40	0.1	0.09	5	4.4	3.68	0.0	0.04	8	185.5	132.60	4.2	2.87	21
Prionotus longispinosus	9.2	9.20	0.0	0.04	5	288.1	172.45	0.7	0.50	8	165.2	96.45	0.7	0.35	21
Serranus atrobranchus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	8	260.8	94.89	0.9	0.35	21
Saurida brasiliensis	0.0	0.00	0.0	0.00	5	6.0	5.03	0.0	0.02	8	204.3	79.93	0.7	0.25	21
Micropogonias undulatus	10.7	5.19	0.2	0.12	5	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	21
Centropristis philadelphica	1.2	1.20	0.0	0.00	5	85.7	44.66	0.3	0.17	8	83.5	34.38	0.5	0.23	21
Anchoa hepsetus	17.9	16.09	0.2	0.24	5	1.8	1.49	0.0	0.02	8	183.5	135.78	3.2	2.44	21
Squid	63.7	35.74	0.9	0.43	5	13.7	8.34	0.1	0.06	8	142.0	69.96	1.2	0.45	21

Table 4a (continued)

Statistical Zone

Summary of dominant organisms taken in statistical zone 11 during the 2001 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	110.4	101.33	1.1	1.05	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Callinectes similis	27.7	20.52	0.3	0.24	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Portunus gibbesii	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Squilla spp.	33.0	29.14	0.2	0.14	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Penaeus aztecus	54.1	47.70	0.9	0.74	4	2.5	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	0
Sicyonia dorsalis	10.3	10.34	0.0	0.02	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	163.0	161.95	9.7	9.72	4	1237.5	0.00	78.2	0.00	1	0.0	0.00	0.0	0.00	0
Peprilus burti	739.3	734.90	18.3	18.09	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Prionotus longispinosus	13.1	5.50	0.6	0.22	4	37.5	0.00	2.3	0.00	1	0.0	0.00	0.0	0.00	0
Serranus atrobranchus	76.9	44.75	0.9	0.62	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Saurida brasiliensis	93.0	91.66	0.6	0.61	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	43.9	43.89	4.0	3.96	4	1962.5	0.00	121.5	0.00	1	0.0	0.00	0.0	0.00	0
Centropristis philadelphica	16.0	5.87	1.5	0.87	4	75.0	0.00	5.2	0.00	1	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Squid	165.5	165.50	1.4	1.36	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0

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 2001 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	20.0	5.34	5	12.4	4.44	8	33.5	7.38	21	81.5	41.78	4	303.4	0	1	0.0	0	0
Total finfish kg	16.3	4.44	5	3.3	0.98	8	19.0	4.92	21	75.5	42.3	4	286.4	0	1	0.0	0	0
Total crustacean kg	0.7	0.73	5	8.7	3.52	8	12.6	3.33	21	4.1	2.25	4	15.9	0	1	0.0	0	0
Total others kg	3.3	1.71	5	0.3	0.2	8	1.6	0.51	21	2.0	1.3	4	0.0	0	1	0.0	0	0
Surface temperature	28.3	0.42	5	26.8	0.45	9	27.2	0.3	21	26.5	0.65	2	26.0	0	1	0.0	0	0
Midwater temperature	26.9	0.82	5	25.5	0.51	9	25.3	0.19	21	24.8	0	2	22.2	0	1	0.0	0	0
Bottom temperature	26.1	0.95	5	23.8	0.27	8	22.7	0.22	20	21.8	0.05	2	21.5	0	1	0.0	0	0
Surface salinity	22.9	2.95	5	29.2	1	9	30.5	0.64	21	31.1	2.65	2	31.3	0	1	0.0	0	0
Midwater salinity	28.1	2.14	5	33.8	0.8	9	35.4	0.3	21	37.0	0.1	2	37.0	0	1	0.0	0	0
Bottom salinity	31.5	1.21	5	35.8	0.25	8	36.3	0.26	20	37.0	0.05	2	37.4	0	1	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	6.3	0.33	5	6.5	0.42	9	6.8	0.19	21	5.9	0.2	2	6.2	0	1	0.0	0	0
Midwater oxygen	6.3	0.25	5	5.5	0.28	9	5.8	0.11	21	6.1	0.05	2	6.2	0	1	0.0	0	0
Bottom oxygen	4.8	0.74	5	4.1	0.59	8	4.1	0.27	20	4.0	0.1	2	5.0	0	1	0.0	0	0

Table 5a
Statistical Zone 12

Summary of dominant organisms taken in statistical zone 12 during the 2001 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 11 fm or 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
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	3844.0	0.00	12.2	0.00	1
Squilla spp.	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	2140.0	0.00	12.2	0.00	1
Callinectes similis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	692.0	0.00	8.2	0.00	1
Penaeus aztecus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	584.0	0.00	8.5	0.00	1
Portunus gibbesii	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	20.0	0.00	0.2	0.00	1
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	12.0	0.00	0.0	0.00	1
Bollmannia communis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	500.0	0.00	1.5	0.00	1
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	420.0	0.00	3.8	0.00	1
Cynoscion spp.	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	340.0	0.00	0.4	0.00	1
Centropristis philadelphica	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	252.0	0.00	1.6	0.00	1
Citharichthys spilopterus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	132.0	0.00	1.3	0.00	1
Etropus crossotus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	132.0	0.00	1.8	0.00	1
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	120.0	0.00	13.1	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	100.0	0.00	1.8	0.00	1
Squid	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	192.0	0.00	0.9	0.00	1

Table 5b

Statistical Zone 12

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 2001 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 11 fm or 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	0	0.0	0	0	70.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish kg	0.0	0	0	0.0	0	0	29.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean kg	0.0	0	0	0.0	0	0	41.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total others kg	0.0	0	0	0.0	0	0	1.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	0.0	0	0	30.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	0.0	0	0	28.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	0.0	0	0	24.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	0.0	0	0	25.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	0.0	0	0	35.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	0.0	0	0	36.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	0.0	0	0	10.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	0.0	0	0	6.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	0.0	0	0	3.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0

Table 6a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2001 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 or 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	0.0	0.00	0.0	0.00	0	0.8	0.80	0.0	0.00	3	1051.1	474.44	3.5	1.44	10
Squilla spp.	0.0	0.00	0.0	0.00	0	189.6	189.63	0.3	0.30	3	767.4	314.66	4.5	1.86	10
Callinectes similis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	117.3	77.34	0.8	0.41	10
Penaeus aztecus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	57.7	18.36	0.7	0.20	10
Portunus gibbesii	0.0	0.00	0.0	0.00	0	0.7	0.74	0.0	0.00	3	30.1	13.84	0.0	0.04	10
Callinectes sapidus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	30.8	17.38	1.1	0.40	10
Prionotus tribulus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	1897.2	1651.03	13.6	11.55	10
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	369.3	246.94	4.4	2.62	10
Anchoa mitchilli	0.0	0.00	0.0	0.00	0	393.7	230.06	0.6	0.50	3	1.8	1.28	0.0	0.00	10
Centropristis philadelphica	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	181.4	149.27	1.8	1.51	10
Anchoa hepsetus	0.0	0.00	0.0	0.00	0	165.6	165.60	0.5	0.47	3	68.6	33.02	0.8	0.47	10
Peprilus burti	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	15.0	10.09	0.7	0.46	10
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	113.6	30.46	3.5	2.26	10
Peprilus alepidotus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	105.0	85.89	5.1	4.13	10
Squid	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	3	201.7	83.15	1.6	0.65	10

Table 6a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2001 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 or 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	113.8	0.00	0.4	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squilla spp.	82.8	0.00	0.5	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	113.8	0.00	1.7	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	78.6	0.00	1.2	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus gibbesii	4.1	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes sapidus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Prionotus tribulus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	802.8	0.00	17.5	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	31.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Centropristis philadelphica	20.7	0.00	0.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	4.1	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus burti	585.5	0.00	29.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus alepidotus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	209.0	0.00	1.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 6b

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 2001 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 or 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	0.0	0	0	1.8	1.32	3	55.1	19.74	10	61.1	0	1	0.0	0	0	0.0	0	0
Total finfish kg	0.0	0	0	1.5	1.45	3	42.7	17.37	10	55.5	0	1	0.0	0	0	0.0	0	0
Total crustacean kg	0.0	0	0	0.3	0.34	3	11.0	3.4	10	3.8	0	1	0.0	0	0	0.0	0	0
Total others kg	0.0	0	0	0.0	0	3	1.3	0.72	10	1.9	0	1	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	30.4	0.35	8	30.0	0.12	8	30.4	0	1	0.0	0	0	27.3	1.89	2
Midwater temperature	0.0	0	0	28.6	0.31	8	28.5	0.23	8	27.3	0	1	0.0	0	0	22.4	0.25	2
Bottom temperature	0.0	0	0	27.0	0.22	8	24.7	0.7	8	23.4	0	1	0.0	0	0	18.7	0.54	2
Surface salinity	0.0	0	0	22.0	3.06	8	27.0	2.53	8	32.7	0	1	0.0	0	0	36.2	1.56	2
Midwater salinity	0.0	0	0	25.4	2.9	8	34.9	0.08	8	33.3	0	1	0.0	0	0	37.4	0.37	2
Bottom salinity	0.0	0	0	34.9	0.24	8	36.0	0.14	8	36.4	0	1	0.0	0	0	36.5	0.04	2
Surface chlorophyll	0.0	0	0	5.9	5.19	3	0.7	0.24	6	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	8.6	0.61	8	6.6	0.65	8	3.4	0	1	0.0	0	0	6.1	0.05	2
Midwater oxygen	0.0	0	0	7.9	0.75	8	5.9	0.11	8	10.0	0	1	0.0	0	0	8.3	1	2
Bottom oxygen	0.0	0	0	1.7	1.17	8	2.6	0.64	8	5.7	0	1	0.0	0	0	4.1	0.05	2

Table 7a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2001 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	35.2	35.20	0.1	0.13	5	445.9	290.88	2.0	1.27	12
Squilla spp.	0.0	0.00	0.0	0.00	0	58.6	55.89	0.6	0.60	5	175.2	141.77	1.3	0.99	12
Penaeus aztecus	0.0	0.00	0.0	0.00	0	2.8	2.80	0.1	0.05	5	120.4	43.39	2.2	0.83	12
Callinectes similis	0.0	0.00	0.0	0.00	0	24.8	24.80	0.4	0.40	5	108.9	89.88	2.2	1.99	12
Portunus gibbesii	0.0	0.00	0.0	0.00	0	22.4	16.81	0.1	0.07	5	39.6	21.18	0.2	0.11	12
Penaeus duorarum	0.0	0.00	0.0	0.00	0	13.2	13.20	0.4	0.42	5	8.9	8.04	0.2	0.20	12
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	563.2	420.32	31.2	24.15	5	320.6	139.64	15.8	6.97	12
Peprilus burti	0.0	0.00	0.0	0.00	0	14.8	14.80	0.8	0.76	5	24.3	13.80	1.0	0.59	12
Anchoa hepsetus	0.0	0.00	0.0	0.00	0	113.6	75.05	0.6	0.34	5	249.3	148.81	1.1	0.59	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	39.2	23.23	0.8	0.45	5	240.5	73.31	2.5	0.80	12
Prionotus tribulus	0.0	0.00	0.0	0.00	0	91.6	91.60	2.1	2.13	5	133.3	96.96	2.2	1.57	12
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	303.2	145.95	11.1	4.86	5	22.5	13.91	0.9	0.60	12
Trachurus lathami	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	5	14.6	8.01	0.3	0.20	12
Syacium gunteri	0.0	0.00	0.0	0.00	0	21.2	21.20	0.6	0.62	5	57.8	37.76	1.9	1.32	12
Squid	0.0	0.00	0.0	0.00	0	21.2	9.24	0.3	0.09	5	217.3	103.56	1.1	0.46	12

Table 7a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2001Summer 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	20.4	20.43	0.1	0.10	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Squilla spp.	4.7	3.06	0.0	0.04	3	0.0	0.00	0.0	0.00	3	0.8	0.75	0.0	0.00	2
Penaeus aztecus	73.7	37.70	1.5	0.83	3	27.0	19.58	1.4	1.02	3	16.6	13.38	1.0	0.85	2
Callinectes similis	6.7	4.66	0.1	0.05	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Portunus gibbesii	3.5	3.48	0.0	0.02	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Penaeus duorarum	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	132.5	123.61	7.0	6.53	3	116.8	111.65	6.7	6.26	3	65.1	30.59	5.1	2.50	2
Peprilus burti	732.7	566.57	30.0	23.15	3	91.0	57.21	5.1	2.65	3	549.7	548.17	28.7	28.57	2
Anchoa hepsetus	405.2	357.67	9.0	7.97	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	16.1	8.47	0.4	0.34	3	66.1	26.32	4.3	1.71	3	88.3	34.74	6.7	2.89	2
Prionotus tribulus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Trachurus lathami	100.5	48.51	2.5	1.42	3	8.9	7.86	0.2	0.21	3	29.2	29.19	0.6	0.63	2
Syacium gunteri	1.3	1.30	0.0	0.04	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Squid	30.8	19.28	0.1	0.09	3	73.4	38.53	0.3	0.14	3	7.1	2.61	0.1	0.01	2

Table 7b

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 2001 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	0	79.5	47.13	5	48.6	12.69	12	60.9	31.38	3	28.1	11.32	3	58.1	18.56	2
Total finfish kg	0.0	0	0	76.4	45.2	5	37.4	9.9	12	58.8	32.38	3	24.5	9.28	3	57.1	19.58	2
Total crustacean kg	0.0	0	0	2.7	2.11	5	9.6	3.73	12	2.1	1.08	3	1.6	1.17	3	1.0	1.02	2
Total others kg	0.0	0	0	0.0	0	5	1.0	0.44	12	0.0	0	3	2.3	0.8	3	0.3	0.34	2
Surface temperature	30.0	0.3	3	30.9	0.79	6	29.6	0.11	13	29.3	0.1	5	29.3	0.03	2	29.3	0.03	4
Midwater temperature	29.7	0.4	3	29.2	0.23	6	28.4	0.17	13	27.5	0.3	5	24.9	0.15	2	24.5	0.53	4
Bottom temperature	28.6	0.35	3	27.3	0.27	6	25.2	0.32	13	23.0	0.38	5	20.8	0.28	2	20.1	0.45	4
Surface salinity	27.5	2.43	3	25.9	1.38	6	30.6	1.29	13	33.2	1.18	5	34.3	0.17	2	34.2	0.15	4
Midwater salinity	31.8	1.86	3	32.7	1.14	6	35.1	0.17	13	35.9	0.22	5	36.6	0.54	2	36.9	0.09	4
Bottom salinity	33.5	1.75	3	35.6	0.18	6	35.9	0.22	13	36.5	0.1	5	36.6	0.03	2	36.6	0.03	4
Surface chlorophyll	8.8	0.07	2	2.4	0.96	2	3.4	1.1	6	1.4	0	1	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	8.1	0.12	3	7.4	0.33	6	6.5	0.32	13	5.5	0.59	5	6.1	0.1	2	6.0	0.23	4
Midwater oxygen	6.9	0.68	3	7.9	0.81	6	6.0	0.18	13	6.8	0.42	5	7.7	0.65	2	7.3	0.16	4
Bottom oxygen	4.9	2.02	3	6.6	1.2	6	3.3	0.33	13	2.6	0.37	5	5.4	0.25	2	5.0	0.37	4

Table 8a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2001 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	188.7	132.28	0.5	0.35	8	116.0	47.18	0.5	0.17	15
Squilla spp.	0.0	0.00	0.0	0.00	0	382.5	305.51	2.4	1.84	8	27.7	14.70	0.2	0.12	15
Portunus gibbesii	0.0	0.00	0.0	0.00	0	235.8	192.09	1.1	0.89	8	25.2	19.36	0.1	0.11	15
Callinectes sapidus	0.0	0.00	0.0	0.00	0	178.3	171.70	4.7	4.50	8	38.3	36.63	0.9	0.80	15
Penaeus aztecus	0.0	0.00	0.0	0.00	0	9.8	2.80	0.2	0.05	8	57.7	25.07	1.2	0.51	15
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	21.5	21.22	0.2	0.18	8	8.2	5.48	0.0	0.01	15
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	1608.6	1542.57	44.4	42.65	8	123.3	115.25	4.2	3.90	15
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	17.2	9.76	0.1	0.09	8	595.2	162.77	5.8	1.90	15
Peprilus burti	0.0	0.00	0.0	0.00	0	2.2	1.94	0.1	0.10	8	587.4	534.14	28.6	25.99	15
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	387.1	217.68	12.7	7.08	8	111.9	56.32	3.5	1.68	15
Etropus crossotus	0.0	0.00	0.0	0.00	0	320.0	291.27	2.3	2.04	8	57.9	47.81	0.6	0.44	15
Trachurus lathami	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	8	87.2	49.92	2.3	1.37	15
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	8	29.8	27.91	0.2	0.19	15
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	153.8	130.95	1.6	1.33	8	11.4	5.26	0.1	0.06	15
Squid	0.0	0.00	0.0	0.00	0	268.9	152.66	3.8	2.70	8	286.7	104.72	2.5	1.09	15

Table 8a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2001 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	71.1	47.57	0.3	0.22	4	2.9	2.91	0.0	0.02	3	0.0	0.00	0.0	0.00	2
Squilla spp.	22.6	11.57	0.2	0.09	4	0.7	0.74	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Portunus gibbesii	0.7	0.40	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Callinectes sapidus	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	2
Penaeus aztecus	111.2	38.98	2.3	0.66	4	26.4	9.46	1.3	0.52	3	0.0	0.00	0.0	0.00	2
Sicyonia dorsalis	72.1	30.95	0.2	0.11	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	4.2	4.17	0.3	0.27	4	0.7	0.74	0.1	0.07	3	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	31.4	4.21	0.6	0.18	4	249.2	96.96	14.4	6.11	3	132.3	22.63	7.7	1.60	2
Peprilus burti	117.3	92.26	5.7	4.51	4	8.0	6.93	0.7	0.56	3	138.5	95.00	8.0	5.50	2
Chloroscombrus chrysurus	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	2
Etropus crossotus	0.3	0.30	0.0	0.00	4	0.4	0.36	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Trachurus lathami	34.5	24.10	0.8	0.58	4	20.7	20.73	0.6	0.60	3	281.2	51.54	10.5	2.67	2
Serranus atrobranchus	100.9	48.65	0.8	0.31	4	107.0	76.64	1.6	1.19	3	27.0	1.94	0.4	0.04	2
Prionotus longispinosus	6.5	3.03	0.1	0.08	4	5.5	3.21	0.4	0.23	3	2.1	2.07	0.1	0.14	2
Squid	365.6	308.60	1.4	1.10	4	101.5	99.27	0.8	0.68	3	146.4	64.61	1.6	0.51	2

Table 8b

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 2001 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	0	82.7	45.74	8	63.4	28.2	15	19.3	2.46	4	33.8	8.57	3	40.2	12.89	2
Total finfish kg	0.0	0	0	68.8	44.31	8	56.6	28.46	15	14.2	3.36	4	28.7	7.39	3	35.8	12.29	2
Total crustacean kg	0.0	0	0	9.9	8.48	8	3.3	1.3	15	3.5	1.08	4	1.7	0.6	3	0.0	0	2
Total others kg	0.0	0	0	4.0	2.72	8	3.2	1.17	15	1.7	1.08	4	3.3	0.86	3	3.9	1.07	2
Surface temperature	30.2	0	1	30.0	0.16	9	30.1	0.21	11	29.3	0.2	4	29.6	0.39	3	29.6	0	1
Midwater temperature	30.2	0	1	29.1	0.28	9	28.8	0.2	11	27.4	0.18	4	26.0	0.55	3	23.0	0	1
Bottom temperature	27.3	0	1	27.6	0.09	9	25.3	0.28	11	22.2	0.34	4	21.4	0.23	3	19.0	0	1
Surface salinity	30.4	0	1	27.9	0.9	9	29.9	1.01	11	33.3	0.16	4	32.3	1.04	3	35.5	0	1
Midwater salinity	30.4	0	1	33.4	0.43	9	34.3	0.14	11	35.4	0.16	4	34.5	0.77	3	38.2	0	1
Bottom salinity	35.2	0	1	35.3	0.1	9	36.2	0.11	11	36.5	0.02	4	35.2	0.68	3	36.5	0	1
Surface chlorophyll	2.3	0	1	1.9	0.38	6	0.9	0.26	4	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	7.9	0	1	6.9	0.07	9	6.2	0.44	11	5.8	0.43	4	6.2	0.26	3	6.2	0	1
Midwater oxygen	7.8	0	1	5.3	0.68	9	5.9	0.44	11	7.3	0.68	4	6.5	0.15	3	7.3	0	1
Bottom oxygen	0.9	0	1	3.2	0.82	9	3.3	0.46	11	6.0	0.42	4	5.2	0.34	3	4.6	0	1

Table 9a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2001 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 or 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	0	1.0	1.03	0.0	0.00	2	109.4	52.29	0.5	0.22	7
Penaeus aztecus	0.0	0.00	0.0	0.00	0	2.1	2.07	0.0	0.00	2	105.8	42.32	2.5	0.99	7
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	14.3	14.01	0.1	0.08	7
Callinectes similis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	26.5	11.61	0.3	0.16	7
Squilla spp.	0.0	0.00	0.0	0.00	0	3.1	3.13	0.0	0.03	2	23.3	11.79	0.2	0.09	7
Solenocera vioscai	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	4.1	4.14	0.0	0.05	2	737.6	335.52	16.1	4.40	7
Peprilus burti	0.0	0.00	0.0	0.00	0	7.5	7.50	0.3	0.26	2	11.3	5.34	0.5	0.30	7
Trachurus lathami	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	0.6	0.48	0.0	0.02	7
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	23.3	23.33	0.1	0.11	7
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	0.6	0.63	0.0	0.00	2	45.9	25.70	1.7	0.90	7
Synodus foetens	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	19.1	7.75	1.3	0.46	7
Prionotus alatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7
Saurida brasiliensis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	1.7	1.09	0.0	0.02	7
Squid	0.0	0.00	0.0	0.00	0	3.1	3.10	0.0	0.00	2	9.9	4.50	0.1	0.06	7

Table 9a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2001 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 or 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	17.8	17.78	0.1	0.10	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
Penaeus aztecus	12.8	9.96	0.4	0.34	4	2.2	1.40	0.1	0.08	5	0.0	0.00	0.0	0.00	0
Portunus spinicarpus	27.5	14.79	0.1	0.06	4	5.7	3.87	0.0	0.02	5	0.0	0.00	0.0	0.00	0
Callinectes similis	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	0
Squilla spp.	7.2	7.22	0.1	0.05	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
Solenocera vioscai	18.3	18.33	0.1	0.08	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	214.7	82.80	6.0	1.91	4	108.0	17.92	6.0	1.01	5	0.0	0.00	0.0	0.00	0
Peprilus burti	6.0	5.30	0.4	0.38	4	96.2	35.57	6.0	2.16	5	0.0	0.00	0.0	0.00	0
Trachurus lathami	92.5	53.62	2.0	1.15	4	3.2	1.39	0.1	0.04	5	0.0	0.00	0.0	0.00	0
Serranus atrobranchus	50.5	49.10	0.3	0.22	4	5.0	1.75	0.1	0.02	5	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	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	0
Synodus foetens	10.7	5.42	1.4	0.74	4	18.7	4.82	3.0	0.72	5	0.0	0.00	0.0	0.00	0
Prionotus alatus	59.4	59.44	0.4	0.38	4	1.0	0.96	0.0	0.02	5	0.0	0.00	0.0	0.00	0
Saurida brasiliensis	24.9	10.40	0.2	0.13	4	8.7	2.71	0.1	0.02	5	0.0	0.00	0.0	0.00	0
Squid	474.2	273.10	2.9	1.34	4	351.4	193.72	1.7	0.84	5	0.0	0.00	0.0	0.00	0

Table 9b

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 2001 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 or 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	0.0	0	0	0.6	0.57	2	30.6	5.17	7	19.9	4.02	4	20.6	3.18	5	0.0	0	0
Total finfish kg	0.0	0	0	0.3	0.28	2	26.4	4.85	7	15.8	5.1	4	18.5	3.35	5	0.0	0	0
Total crustacean kg	0.0	0	0	0.0	0	2	4.2	1.38	7	0.8	0.76	4	0.1	0.1	5	0.0	0	0
Total others kg	0.0	0	0	0.0	0	2	0.1	0.08	7	3.1	1.27	4	2.3	0.76	5	0.0	0	0
Surface temperature	0.0	0	0	29.9	0	1	30.2	0.2	9	30.8	0	1	30.1	0.4	2	30.1	0	1
Midwater temperature	0.0	0	0	29.6	0	1	29.1	0.14	9	28.1	0	1	24.5	0.15	2	24.1	0	1
Bottom temperature	0.0	0	0	28.8	0	1	25.6	0.6	9	22.9	0	1	22.2	0.1	2	20.8	0	1
Surface salinity	0.0	0	0	22.5	0	1	29.3	1.6	8	31.0	0	1	32.3	0.45	2	32.7	0	1
Midwater salinity	0.0	0	0	30.4	0	1	32.7	0.41	8	34.2	0	1	34.3	0.15	2	34.3	0	1
Bottom salinity	0.0	0	0	14.1	0	1	34.5	0.46	8	34.0	0	1	34.4	0.15	2	34.4	0	1
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	6.4	0	1	6.6	0.27	9	5.8	0	1	5.6	0.05	2	5.8	0	1
Midwater oxygen	0.0	0	0	5.3	0	1	6.3	0.12	9	7.4	0	1	6.5	0	2	6.4	0	1
Bottom oxygen	0.0	0	0	4.6	0	1	4.2	0.48	9	5.8	0	1	5.1	0.4	2	4.9	0	1

Table 10a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2001 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
Penaeus aztecus	80.5	24.37	0.7	0.22	12	0.0	0.00	0.0	0.00	3	2.7	2.73	0.0	0.04	2
Sicyonia brevirostris	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Callinectes similis	6.0	4.43	0.0	0.02	12	0.0	0.00	0.0	0.00	3	1.3	1.30	0.0	0.00	2
Portunus spinicarpus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	1.3	1.30	0.0	0.00	2
Trachypenaeus similis	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Portunus gibbesii	0.0	0.00	0.0	0.00	12	2.0	2.00	0.0	0.00	3	29.0	23.75	0.2	0.17	2
Micropogonias undulatus	1362.0	650.99	25.3	12.81	12	0.0	0.00	0.0	0.00	3	1029.1	1029.09	30.8	30.79	2
Stenotomus caprinus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	1795.1	1497.67	32.3	19.22	2
Chloroscombrus chrysurus	2.5	1.37	0.1	0.05	12	4.0	2.00	0.1	0.09	3	627.9	617.51	14.5	14.02	2
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	2.6	2.61	0.1	0.12	2
Peprilus burti	2.0	2.00	0.1	0.07	12	0.0	0.00	0.0	0.00	3	148.2	148.18	7.9	7.93	2
Prionotus alatus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	6.8	4.15	0.2	0.17	2
Leiostomus xanthurus	35.5	13.32	0.8	0.29	12	0.0	0.00	0.0	0.00	3	41.8	41.82	3.3	3.26	2
Trachurus lathami	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Squid	1.5	1.08	0.0	0.02	12	0.0	0.00	0.0	0.00	3	231.6	221.15	3.7	3.54	2

Table 10a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2001 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
Penaeus aztecus	208.4	0.00	6.7	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sicyonia brevirostris	164.7	0.00	1.9	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	137.5	0.00	3.4	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus spinicarpus	68.7	0.00	0.5	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	54.5	0.00	0.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus gibbesii	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	1494.5	0.00	41.4	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Pristipomoides aquilonaris	219.3	0.00	7.3	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus burti	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Prionotus alatus	137.5	0.00	1.2	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachurus lathami	123.3	0.00	2.5	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	27.3	0.00	1.6	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 10b

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 2001 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	32.5	12.4	12	1.8	1.82	3	121.6	101.49	2	83.8	0	1	0.0	0	0	0.0	0	0
Total finfish kg	28.6	12.82	12	1.8	1.82	3	115.9	95.71	2	66.4	0	1	0.0	0	0	0.0	0	0
Total crustacean kg	0.5	0.31	12	0.0	0	3	2.1	2.07	2	14.4	0	1	0.0	0	0	0.0	0	0
Total others kg	2.7	1.21	12	0.0	0	3	3.7	3.72	2	3.5	0	1	0.0	0	0	0.0	0	0
Surface temperature	29.1	0.27	13	29.9	0.31	3	30.7	0.56	2	30.1	0.3	2	0.0	0	0	0.0	0	0
Midwater temperature	27.9	0.22	13	29.2	0.52	3	29.0	0.4	2	28.8	0.55	2	0.0	0	0	0.0	0	0
Bottom temperature	27.8	0.2	13	28.5	0.08	3	26.0	1.53	2	25.5	3.05	2	0.0	0	0	0.0	0	0
Surface salinity	14.8	0.71	13	21.5	3.82	3	29.4	2.56	2	32.0	0	1	0.0	0	0	0.0	0	0
Midwater salinity	17.5	0.4	13	24.9	2.25	3	32.6	0.4	2	32.8	0	1	0.0	0	0	0.0	0	0
Bottom salinity	20.5	0.72	13	29.9	1.78	3	34.9	0.01	2	34.6	0	1	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	1.2	0	1	1.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	7.3	0.29	13	6.4	0.47	3	5.8	0	2	6.1	0.05	2	0.0	0	0	0.0	0	0
Midwater oxygen	6.4	0.14	13	5.9	0.15	3	4.3	2.05	2	6.0	0.1	2	0.0	0	0	0.0	0	0
Bottom oxygen	5.5	0.18	13	4.4	2.14	3	4.0	2.65	2	5.9	0.05	2	0.0	0	0	0.0	0	0

Table 11a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2001 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
Penaeus aztecus	63.0	38.38	0.5	0.32	4	417.5	259.26	5.0	2.71	13	108.5	66.32	1.6	0.89	5
Callinectes similis	7.5	5.68	0.1	0.14	4	74.1	18.39	0.6	0.21	13	98.4	54.26	1.3	0.82	5
Trachypenaeus similis	3.0	3.00	0.0	0.00	4	61.1	15.91	0.1	0.04	13	64.4	53.19	0.2	0.22	5
Sicyonia dorsalis	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	13	99.2	89.74	0.2	0.18	5
Squilla spp.	1.5	1.50	0.0	0.00	4	54.0	10.76	0.3	0.05	13	66.6	61.53	0.6	0.57	5
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	5
Micropogonias undulatus	1085.1	352.40	25.5	8.87	4	1400.7	501.20	28.7	10.01	13	90.4	76.53	3.3	2.86	5
Chloroscombrus chrysurus	324.3	322.28	9.0	8.96	4	41.2	24.06	0.6	0.32	13	660.4	520.02	9.4	6.47	5
Cynoscion nothus	73.0	49.18	3.5	2.85	4	149.2	36.84	5.5	1.60	13	217.0	102.25	8.9	4.22	5
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	13	315.0	144.13	3.0	1.86	5
Trichiurus lepturus	446.5	444.50	27.3	27.20	4	0.0	0.00	0.0	0.00	13	18.0	13.06	1.0	0.67	5
Saurida brasiliensis	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	13	73.1	44.78	0.5	0.30	5
Syacium gunteri	0.0	0.00	0.0	0.00	4	17.4	3.91	0.1	0.05	13	137.1	37.87	2.2	0.70	5
Trachurus lathami	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	13	11.2	11.17	0.2	0.23	5
Squid	18.1	4.30	0.4	0.07	4	72.5	34.36	1.4	0.58	13	329.7	174.77	5.7	2.53	5

Table 11a (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2001 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
Penaeus aztecus	110.2	55.64	2.2	1.12	2	124.4	0.00	5.1	0.00	1	0.0	0.00	0.0	0.00	0
Callinectes similis	396.0	305.45	6.3	5.11	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	220.9	218.73	0.9	0.94	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Sicyonia dorsalis	168.5	18.00	0.4	0.10	2	5.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Squilla spp.	74.7	72.55	1.0	0.99	2	27.3	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	0
Portunus spinicarpus	0.0	0.00	0.0	0.00	2	495.3	0.00	4.0	0.00	1	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Cynoscion nothus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	66.0	30.00	0.7	0.42	2	229.1	0.00	14.0	0.00	1	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Saurida brasiliensis	298.4	294.00	2.5	2.45	2	5.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Syacium gunteri	80.7	18.55	1.9	1.07	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0
Trachurus lathami	252.0	252.00	4.5	4.54	2	5.5	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	0
Squid	134.7	118.36	1.8	1.21	2	10.9	0.00	0.6	0.00	1	0.0	0.00	0.0	0.00	0

Table 11b

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 2001 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	40.2	12.75	8	57.4	11.02	12	63.2	9.98	4	51.6	0	1	76.8	7.96	2	0.0	0	0
Total finfish kg	35.1	12.46	8	44.8	10.45	12	47.6	7.27	4	21.3	0	1	65.7	0.25	2	0.0	0	0
Total crustacean kg	1.0	0.5	8	2.9	1.93	12	12.9	4.5	4	22.3	0	1	3.5	3.47	2	0.0	0	0
Total others kg	3.7	1.78	8	9.6	2.82	12	2.9	0.86	4	8.4	0	1	7.3	4.59	2	0.0	0	0
Surface temperature	29.6	0.4	9	29.4	0.32	11	30.4	0.14	4	30.4	0	1	30.4	0.06	2	0.0	0	0
Midwater temperature	28.4	0.43	9	28.7	0.41	11	30.1	0.15	4	27.1	0	1	24.6	1.5	2	0.0	0	0
Bottom temperature	28.2	0.4	9	28.0	0.27	11	24.7	0.47	4	21.5	0	1	19.9	0.41	2	0.0	0	0
Surface salinity	17.5	0.47	9	22.9	2.21	11	32.5	0.41	4	32.3	0	1	33.6	0.27	2	0.0	0	0
Midwater salinity	18.6	0.56	9	23.6	1.93	11	33.5	0.35	4	36.4	0	1	36.5	0	2	0.0	0	0
Bottom salinity	20.8	0.84	9	25.5	1.8	11	35.9	0.14	4	36.5	0	1	36.5	0.01	2	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	1.3	0.24	3	0.7	0.05	4	0.6	0	1	0.4	0.02	2	0.0	0	0
Surface oxygen	8.1	0.4	9	7.5	0.54	11	5.8	0.04	4	5.6	0	1	5.6	0.05	2	0.0	0	0
Midwater oxygen	7.1	0.49	9	6.4	0.31	11	5.9	0.13	4	6.3	0	1	6.6	0	2	0.0	0	0
Bottom oxygen	6.4	0.51	9	5.5	0.26	11	3.7	0.8	4	5.7	0	1	5.1	0.45	2	0.0	0	0

Table 12a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2001 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
Penaeus aztecus	48.8	23.06	0.3	0.13	8	77.9	37.93	0.8	0.40	12	196.2	104.16	3.6	1.34	4
Sicyonia brevirostris	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	48.1	26.56	0.5	0.31	4
Trachypenaeus similis	2.3	2.25	0.0	0.00	8	49.4	10.17	0.1	0.04	12	225.9	138.44	1.5	1.03	4
Squilla spp.	0.0	0.00	0.0	0.00	8	46.1	35.32	0.4	0.35	12	168.1	88.12	1.9	1.10	4
Portunus spinicarpus	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	12	8.9	6.94	0.0	0.03	4
Callinectes similis	10.5	6.18	0.1	0.04	8	55.7	21.83	0.8	0.60	12	80.7	24.24	1.5	0.33	4
Stenotomus caprinus	0.0	0.00	0.0	0.00	8	127.6	86.67	1.5	0.99	12	1166.1	586.44	13.8	6.85	4
Micropogonias undulatus	777.8	414.85	12.9	7.50	8	950.0	439.21	12.9	4.75	12	37.3	35.29	1.1	1.02	4
Chloroscombrus chrysurus	32.3	30.55	0.4	0.41	8	568.8	397.41	12.5	8.23	12	196.7	135.41	6.3	4.12	4
Upeneus parvus	0.0	0.00	0.0	0.00	8	20.3	13.79	0.3	0.18	12	100.4	49.63	1.2	0.43	4
Leiostomus xanthurus	330.0	202.58	8.8	5.46	8	291.0	108.55	6.1	2.26	12	0.0	0.00	0.0	0.00	4
Syacium gunteri	0.0	0.00	0.0	0.00	8	28.3	18.62	0.4	0.29	12	234.6	73.62	3.6	0.73	4
Anchoviella perfasciata	0.0	0.00	0.0	0.00	8	101.1	101.07	0.4	0.44	12	39.2	37.18	0.2	0.17	4
Diplectrum bivittatum	0.0	0.00	0.0	0.00	8	1.4	1.43	0.0	0.03	12	160.1	31.64	3.4	0.36	4
Squid	1.5	0.98	0.0	0.00	8	115.7	76.63	3.7	2.40	12	176.3	97.77	1.8	0.94	4

Table 12a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2001 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
Penaeus aztecus	284.7	0.00	7.3	0.00	1	6.8	0.82	0.3	0.12	2	0.0	0.00	0.0	0.00	0
Sicyonia brevirostris	718.9	0.00	8.9	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	5.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Squilla spp.	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Portunus spinicarpus	521.5	0.00	3.0	0.00	1	73.6	73.64	0.4	0.40	2	0.0	0.00	0.0	0.00	0
Callinectes similis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	14.2	0.00	0.6	0.00	1	437.0	0.47	27.3	1.64	2	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	3.3	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Upeneus parvus	151.6	0.00	3.2	0.00	1	362.3	86.25	12.2	4.06	2	0.0	0.00	0.0	0.00	0
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	1.6	1.64	0.2	0.17	2	0.0	0.00	0.0	0.00	0
Syacium gunteri	3.3	0.00	0.0	0.00	1	10.9	10.91	0.5	0.55	2	0.0	0.00	0.0	0.00	0
Anchoviella perfasciata	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Diplectrum bivittatum	0.0	0.00	0.0	0.00	1	1.6	1.64	0.0	0.02	2	0.0	0.00	0.0	0.00	0
Squid	43.6	0.00	0.4	0.00	1	62.2	14.18	1.4	0.83	2	0.0	0.00	0.0	0.00	0

Table 12b

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 2001 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	85.1	51.94	4	54.8	13.47	13	54.2	14.54	5	41.4	3.22	2	83.3	0	1	0.0	0	0
Total finfish kg	80.5	52.94	4	44.6	11.44	13	42.4	13.3	5	25.8	5.45	2	67.9	0	1	0.0	0	0
Total crustacean kg	1.2	0.7	4	7.2	3.36	13	5.6	2.64	5	12.6	8.68	2	11.4	0	1	0.0	0	0
Total others kg	3.0	1.82	4	2.4	1.09	13	5.9	2.36	5	3.0	0	2	3.5	0	1	0.0	0	0
Surface temperature	28.7	0.88	4	28.6	0.22	13	29.6	0.35	5	29.3	0.37	2	29.9	0	1	0.0	0	0
Midwater temperature	28.5	0.74	4	28.0	0.25	13	28.7	0.2	5	28.8	0.21	2	23.4	0	1	0.0	0	0
Bottom temperature	28.0	0.56	4	27.7	0.31	13	25.6	0.86	5	22.8	0.05	2	19.4	0	1	0.0	0	0
Surface salinity	32.8	1.28	4	32.2	0.65	13	34.2	0.62	5	36.3	0.18	2	34.8	0	1	0.0	0	0
Midwater salinity	32.9	1.3	4	33.3	0.46	13	35.4	0.4	5	36.4	0.11	2	36.4	0	1	0.0	0	0
Bottom salinity	33.3	1.19	4	33.5	0.48	13	35.7	0.38	5	36.5	0.03	2	36.4	0	1	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.7	0	1	2.7	0	1	0.9	0.23	4	0.4	0.05	2	0.5	0	1	0.0	0	0
Surface oxygen	6.5	0.3	4	7.2	0.13	13	6.1	0.22	5	5.8	0	2	5.7	0	1	0.0	0	0
Midwater oxygen	6.3	0.21	4	6.6	0.14	13	6.2	0.17	5	5.9	0.05	2	6.2	0	1	0.0	0	0
Bottom oxygen	5.9	0.59	4	5.8	0.27	13	4.7	0.72	5	5.9	0.3	2	4.0	0	1	0.0	0	0

Table 13a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2001 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
Callinectes similis	142.3	127.81	2.5	2.30	8	285.5	135.24	3.1	1.53	14	381.1	110.61	4.3	1.59	8
Trachypenaeus similis	0.8	0.75	0.0	0.00	8	14.4	9.96	0.0	0.04	14	512.7	317.32	1.9	1.25	8
Penaeus aztecus	26.1	23.74	0.7	0.71	8	134.3	36.54	1.8	0.63	14	242.9	74.94	3.3	1.20	8
Sicyonia dorsalis	0.0	0.00	0.0	0.00	8	1.3	0.93	0.0	0.00	14	243.6	178.68	0.5	0.37	8
Squilla spp.	15.3	12.05	0.2	0.12	8	27.7	12.09	0.3	0.15	14	45.9	28.78	0.3	0.20	8
Portunus spinicarpus	117.0	117.00	1.0	0.99	8	0.0	0.00	0.0	0.00	14	15.9	15.87	0.1	0.10	8
Micropogonias undulatus	15.0	9.07	0.3	0.21	8	1460.0	1318.53	42.9	38.74	14	7.6	4.26	0.3	0.13	8
Chloroscombrus chrysurus	540.0	448.65	16.7	15.17	8	644.8	387.61	12.4	6.79	14	27.3	26.11	0.3	0.30	8
Upeneus parvus	82.5	59.98	1.4	1.05	8	258.2	135.59	4.4	2.42	14	134.9	55.29	2.2	1.00	8
Leiostomus xanthurus	20.6	10.44	0.5	0.22	8	440.5	321.60	18.7	13.84	14	1.3	1.25	0.0	0.02	8
Peprilus burti	4.5	4.50	0.2	0.20	8	1.3	0.93	0.1	0.04	14	119.9	77.95	4.6	2.95	8
Saurida brasiliensis	60.0	58.30	0.3	0.34	8	6.3	3.62	0.0	0.02	14	235.8	94.45	1.9	0.77	8
Stenotomus caprinus	24.8	24.75	1.0	0.95	8	48.2	28.64	0.6	0.33	14	202.1	65.91	0.9	0.30	8
Trachurus lathami	63.9	57.20	1.6	1.42	8	0.7	0.74	0.0	0.01	14	78.8	43.28	1.3	0.68	8
Squid	143.0	87.68	2.7	1.54	8	72.0	33.78	1.6	0.65	14	215.0	53.92	3.5	1.02	8

Table 13a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2001 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
Callinectes similis	244.4	0.00	4.3	0.00	1	48.0	13.60	0.5	0.19	3	4.4	0.00	0.0	0.00	1
Trachypenaeus similis	13.1	0.00	0.0	0.00	1	5.8	5.83	0.0	0.04	3	0.0	0.00	0.0	0.00	1
Penaeus aztecus	27.3	0.00	0.6	0.00	1	67.8	6.73	1.5	0.12	3	68.7	0.00	1.0	0.00	1
Sicyonia dorsalis	387.3	0.00	0.8	0.00	1	87.1	60.13	0.3	0.16	3	0.0	0.00	0.0	0.00	1
Squilla spp.	13.1	0.00	0.0	0.00	1	2.9	2.86	0.0	0.03	3	0.0	0.00	0.0	0.00	1
Portunus spinicarpus	4.4	0.00	0.0	0.00	1	0.8	0.83	0.0	0.00	3	56.7	0.00	0.5	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Upeneus parvus	25.1	0.00	1.3	0.00	1	75.2	27.48	1.6	0.57	3	130.9	0.00	3.0	0.00	1
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Peprilus burti	27.3	0.00	1.3	0.00	1	551.4	341.95	24.9	14.18	3	24.0	0.00	1.2	0.00	1
Saurida brasiliensis	581.5	0.00	2.9	0.00	1	207.6	150.85	1.2	0.87	3	32.7	0.00	0.2	0.00	1
Stenotomus caprinus	104.7	0.00	1.1	0.00	1	6.5	3.45	0.2	0.13	3	494.2	0.00	26.4	0.00	1
Trachurus lathami	281.5	0.00	6.3	0.00	1	164.5	72.26	3.9	1.70	3	130.9	0.00	3.3	0.00	1
Squid	67.6	0.00	0.7	0.00	1	132.5	36.62	3.7	1.88	3	306.5	0.00	7.5	0.00	1

Table 13b

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 2001 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	45.9	28.46	8	102.8	60.45	14	37.4	5.5	8	29.8	0	1	56.6	15.25	3	66.4	0	1
Total finfish kg	34.5	23.19	8	92.4	57	14	21.3	4.8	8	20.8	0	1	50.1	15.92	3	56.5	0	1
Total crustacean kg	5.1	3.46	8	7.4	3.14	14	11.1	4.07	8	6.4	0	1	2.8	0.42	3	2.0	0	1
Total others kg	5.5	2.7	8	2.9	1.03	14	5.5	1.48	8	3.0	0	1	3.9	1.73	3	7.9	0	1
Surface temperature	28.4	0.73	5	26.9	0.44	16	27.7	0.27	9	29.3	0	1	29.0	0.2	2	29.2	0.16	2
Midwater temperature	27.9	0.8	5	26.6	0.44	16	27.1	0.41	9	28.4	0	1	26.9	0.14	2	23.2	0.32	2
Bottom temperature	27.1	1.05	5	25.5	0.59	16	24.0	0.8	9	21.7	0	1	20.7	0.07	2	18.5	0.02	2
Surface salinity	34.4	0.67	5	35.0	0.39	16	36.1	0.26	9	36.4	0	1	36.2	0.09	2	36.1	0	2
Midwater salinity	34.6	0.61	5	35.2	0.35	16	36.2	0.25	9	36.5	0	1	36.5	0.01	2	36.5	0	2
Bottom salinity	34.6	0.63	5	35.5	0.3	16	36.3	0.2	9	36.6	0	1	36.5	0.01	2	36.4	0	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.9	0.12	7	0.4	0.02	7	0.3	0	1	0.3	0.04	2	0.3	0.01	2
Surface oxygen	6.1	0.2	5	6.3	0.17	16	6.0	0.16	9	5.8	0	1	5.7	0	2	5.6	0.05	2
Midwater oxygen	6.0	0.19	5	6.3	0.13	16	6.1	0.18	9	5.9	0	1	6.2	0.1	2	6.6	0.1	2
Bottom oxygen	6.0	0.18	5	6.2	0.18	16	6.3	0.09	9	6.1	0	1	5.0	0.1	2	3.8	0.1	2

Table 14a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2001 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
Penaeus aztecus	0.0	0.00	0.0	0.00	1	29.3	16.36	0.2	0.14	9	742.8	345.29	10.5	4.98	18
Callinectes similis	324.0	0.00	4.4	0.00	1	172.9	97.78	2.3	1.42	9	565.2	171.95	7.6	2.50	18
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	0.7	0.67	0.0	0.00	9	96.8	54.89	0.4	0.24	18
Sicyonia dorsalis	0.0	0.00	0.0	0.00	1	0.7	0.67	0.0	0.00	9	100.9	43.40	0.2	0.12	18
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	1	3.6	3.59	0.0	0.02	9	114.3	101.30	0.6	0.52	18
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	18
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	38.0	26.41	0.3	0.18	9	1025.7	220.40	7.9	1.98	18
Upeneus parvus	0.0	0.00	0.0	0.00	1	309.9	251.04	4.4	3.61	9	373.8	161.01	5.2	2.27	18
Saurida brasiliensis	0.0	0.00	0.0	0.00	1	13.3	11.21	0.1	0.09	9	78.1	28.15	0.5	0.16	18
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	66.6	48.98	1.5	0.98	9	108.5	98.14	5.3	4.72	18
Serranus atrobranchus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	59.2	53.74	0.3	0.23	18
Prionotus stearnsi	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	8.8	5.47	0.0	0.03	18
Syacium gunteri	0.0	0.00	0.0	0.00	1	31.9	24.16	0.5	0.41	9	131.5	27.50	2.3	0.47	18
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	31.7	24.27	0.5	0.32	9	191.6	164.02	6.4	5.43	18
Squid	0.0	0.00	0.0	0.00	1	39.3	28.20	0.7	0.52	9	142.9	59.63	3.7	1.92	18

Table 14a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2001 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
Penaeus aztecus	418.3	157.14	8.6	3.78	5	93.2	13.52	2.9	0.15	2	13.5	8.30	0.7	0.39	2
Callinectes similis	470.0	176.69	6.7	2.25	5	9.8	9.82	0.1	0.15	2	0.0	0.00	0.0	0.00	2
Trachypenaeus similis	539.3	294.00	2.5	1.29	5	53.0	46.30	0.3	0.30	2	0.0	0.00	0.0	0.00	2
Sicyonia dorsalis	587.8	308.80	1.3	0.69	5	2.7	2.73	0.0	0.05	2	2.7	2.73	0.0	0.00	2
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	9.1	9.13	0.0	0.03	2
Portunus spinicarpus	23.3	23.27	0.2	0.17	5	336.1	87.19	3.2	0.95	2	12.9	8.95	0.1	0.08	2
Stenotomus caprinus	9.4	5.85	0.1	0.04	5	135.9	68.11	6.6	3.67	2	115.7	2.98	6.4	0.32	2
Upeneus parvus	36.1	9.72	0.4	0.08	5	63.1	21.99	2.3	0.43	2	217.1	60.73	6.9	1.77	2
Saurida brasiliensis	307.8	141.71	1.8	0.81	5	0.0	0.00	0.0	0.00	2	21.9	5.51	0.1	0.02	2
Leiostomus xanthurus	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	2
Serranus atrobranchus	156.0	51.84	1.1	0.32	5	105.7	6.47	2.1	0.24	2	99.3	40.65	1.9	0.90	2
Prionotus stearnsi	230.9	127.02	1.2	0.61	5	53.0	18.10	0.6	0.23	2	257.2	24.51	2.3	0.21	2
Syacium gunteri	56.8	25.53	1.0	0.40	5	14.7	14.73	0.2	0.25	2	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	0.0	0.00	0.0	0.00	5	2.7	2.73	0.3	0.32	2	0.0	0.00	0.0	0.00	2
Squid	90.2	27.73	2.1	0.82	5	60.2	25.32	7.4	5.95	2	218.1	45.38	3.3	1.29	2

Table 14b

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 2001 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	5.5	0	1	20.1	9.14	9	67.8	14.69	18	38.3	7.93	5	62.9	14.44	2	80.3	1.48	2
Total finfish kg	0.0	0	1	12.6	6.16	9	38.9	12.19	18	14.2	1.25	5	42.1	15.88	2	73.5	0.02	2
Total crustacean kg	5.5	0	1	5.4	4.1	9	23.5	8.32	18	21.4	7.38	5	11.0	4.9	2	1.7	0.06	2
Total others kg	0.0	0	1	1.7	0.63	9	5.4	2	18	2.4	0.94	5	9.8	6.35	2	4.7	1.11	2
Surface temperature	25.6	3.2	2	26.5	0.79	8	27.0	0.26	17	28.2	0	2	28.2	0.1	2	28.3	0	2
Midwater temperature	24.9	3.2	2	25.7	0.83	8	25.8	0.35	17	27.4	0.75	2	24.0	0.15	2	23.0	0.1	2
Bottom temperature	24.8	3.1	2	24.9	0.88	8	23.0	0.42	17	21.3	0.1	2	20.8	0.75	2	18.0	0.65	2
Surface salinity	36.3	0.06	2	36.3	0.05	8	36.3	0.11	17	36.4	0.1	2	36.4	0	2	36.4	0	2
Midwater salinity	36.3	0.11	2	36.3	0.06	8	36.4	0.05	17	36.5	0	2	36.5	0.05	2	36.6	0.01	2
Bottom salinity	36.4	0.07	2	36.3	0.05	8	36.4	0.03	17	36.5	0	2	36.5	0.05	2	36.3	0.05	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	1.0	0.05	3	0.5	0.05	10	0.3	0.03	2	0.3	0.03	2	0.3	0.03	2
Surface oxygen	5.4	0.35	2	5.7	0.09	8	5.9	0.08	17	5.8	0.05	2	5.8	0	2	5.8	0	2
Midwater oxygen	5.5	0.2	2	5.8	0.08	8	5.9	0.04	17	5.9	0.1	2	5.9	0.65	2	6.6	0.05	2
Bottom oxygen	5.4	0.1	2	5.5	0.06	8	5.7	0.08	17	5.3	0.25	2	4.9	0.6	2	3.9	0	2

Table 15a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 2001 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 11 fm or 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	0	0.0	0.00	0.0	0.00	1	180.0	0.00	0.3	0.00	1
Callinectes similis	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	72.0	0.00	0.5	0.00	1
Penaeus aztecus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	42.0	0.00	0.3	0.00	1
Portunus spinimanus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Parthenope serrata	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Podochela rissei	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	288.0	0.00	1.1	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	60.0	0.00	0.8	0.00	1
Lutjanus synagris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.5	0.00	1
Centropristis philadelphica	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Upeneus parvus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Synodus foetens	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Priacanthus arenatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Squid	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	30.0	0.00	0.3	0.00	1

Table 15b

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 2001 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 11 fm or 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	0	0.0	0	1	5.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish kg	0.0	0	0	0.0	0	1	2.7	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean kg	0.0	0	0	0.0	0	1	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total others kg	0.0	0	0	0.0	0	1	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	25.9	0	1	26.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	24.9	0	1	26.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	21.7	0	1	23.7	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	36.4	0	1	36.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	36.3	0	1	36.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	36.5	0	1	36.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	5.7	0	1	6.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	5.8	0	1	5.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	6.2	0	1	6.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0

Table 16. 2001 Fall Shrimp/Groundfish Survey species composition list, 393 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					
Micropogonias undulatus	Atlantic croaker	79035	3511.1	275	70.0
Chloroscombrus chrysurus	Atlantic bumper	31305	421.3	179	45.5
Stenotomus caprinus	longspine porgy	26754	821.0	195	49.6
Leiostomus xanthurus	spot	11730	896.0	170	43.3
Prionotus longispinosus	bigeye searobin	11708	284.8	185	47.1
Syacium gunteri	shoal flounder	9356	171.2	229	58.3
Peprilus burti	gulf butterfish	8234	461.5	158	40.2
Trachurus lathami	rough scad	6569	196.8	109	27.7
Serranus atrobranchus	blackear bass	5611	75.8	105	26.7
Cynoscion nothus	silver seatrout	5241	271.8	170	43.3
Cynoscion arenarius	sand seatrout	4486	200.0	188	47.8
Upeneus parvus	dwarf goatfish	4279	136.5	86	21.9
Trichiurus lepturus	Atlantic cutlassfish	3743	155.6	122	31.0
Synodus foetens	inshore lizardfish	3142	410.5	201	51.1
Cynoscion spp.	seatrouts	2558	8.4	53	13.5
Lagodon rhomboides	pinfish	2504	157.4	144	36.6
Lutjanus campechanus	red snapper	2110	119.1	173	44.0
Harengula jaguana	scaled sardine	2070	51.1	75	19.1
Halieutichthys aculeatus	pancake batfish	2061	12.9	123	31.3
Pristipomoides aquilonaris	wenchman	2014	141.9	48	12.2
Prionotus paralatus	Mexican searobin	1966	47.1	54	13.7
Stellifer lanceolatus	star drum	1800	21.5	70	17.8
Balistes capriscus	gray triggerfish	1757	84.4	106	27.0
Opisthonema oglinum	Atlantic thread herring	1748	45.5	50	12.7
Diplectrum bivittatum	dwarf sand perch	1711	31.1	110	28.0

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Trichopsetta ventralis	sash flounder	1621	36.1	46	11.7
Anchoa hepsetus	striped anchovy	1597	26.5	67	17.0
Centropristis philadelphica	rock sea bass	1480	81.6	157	39.9
Citharichthys spilopterus	bay whiff	1296	18.2	93	23.7
Sphoeroides parvus	least puffer	917	5.5	113	28.8
Prionotus stearnsi	shortwing searobin	896	10.4	43	10.9
Cyclopsetta chittendeni	Mexican flounder	868	69.4	126	32.1
Eucinostomus gula	silver jenny	867	18.4	93	23.7
Etropus crossotus	fringed flounder	827	13.7	117	29.8
Larimus fasciatus	banded drum	794	39.2	63	16.0
Peprilus alepidotus	harvestfish	789	14.5	54	13.7
Lutjanus synagris	lane snapper	773	55.3	93	23.7
Porichthys plectrodon	Atlantic midshipman	703	11.4	107	27.2
Arius felis	hardhead catfish	694	138.1	69	17.6
Mullus auratus	red goatfish	664	38.9	26	6.6
Menticirrhus americanus	southern kingfish	646	62.9	78	19.8
Caranx crysos	blue runner	608	41.4	73	18.6
Sardinella aurita	Spanish sardine	565	11.3	23	5.9
Scorpaena calcarata	smoothhead scorpionfish	510	6.9	48	12.2
Lepophidium brevibarbe	blackedge cusk-eel	416	17.4	64	16.3
Saurida brasiliensis	largescale lizardfish	411	1.4	66	16.8
Chaetodipterus faber	Atlantic spadefish	402	16.5	89	22.6
Prionotus rubio	blackwing searobin	352	33.7	37	9.4
Syacium papillosum	dusky flounder	342	31.1	22	5.6
Symphurus plagiusa	blackcheek tonguefish	315	4.9	77	19.6
Polydactylus octonemus	Atlantic threadfin	270	19.4	25	6.4
Lagocephalus laevigatus	smooth puffer	249	39.3	55	14.0
Selene setapinnis	Atlantic moonfish	247	13.5	60	15.3
Prionotus tribulus	bighead searobin	242	8.4	26	6.6
Gymnachirus texae	fringed sole	236	3.6	45	11.5

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Synodus poeyi	offshore lizardfish	219	3.1	48	12.2
Monacanthus hispidus	planehead filefish	209	4.0	47	12.0
Ogcocephalus declivirostris	slantbrow batfish	195	2.8	52	13.2
Orthopristis chrysoptera	pigfish	185	12.3	39	9.9
Paralichthys lethostigma	southern flounder	183	36.0	28	7.1
Anchoa mitchilli	bay anchovy	182	0.3	28	7.1
Equetus umbrosus	cubbyu	147	7.6	19	4.8
Brevoortia patronus	gulf menhaden	140	8.8	27	6.9
Hemicaranx amblyrhynchus	bluntnose jack	139	2.0	28	7.1
Rhomboplites aurorubens	vermilion snapper	129	16.7	10	2.5
Urophycis floridana	southern hake	124	15.7	17	4.3
Prionotus ophryas	bandtail searobin	124	1.9	33	8.4
Bagre marinus	gafftopsail catfish	123	22.6	36	9.2
Hildebrandia flava	yellow conger	116	10.9	25	6.4
Bollmannia communis	ragged goby	110	0.3	22	5.6
Ancylopsetta quadrocellata	ocellated flounder	105	14.6	33	8.4
Engyophrys senta	spiny flounder	102	0.4	23	5.9
Anchoa lyolepis	dusky anchovy	101	0.1	10	2.5
Lepophidium jeannae	mottled cusk-eel	101	3.2	12	3.1
Bellator militaris	horned searobin	99	1.2	13	3.3
Hoplunnis macrurus	freckled pike-conger	92	0.5	32	8.1
Prionotus roseus	bluespotted searobin	90	3.7	15	3.8
Kathetostoma albigutta	lancer stargazer	90	3.0	22	5.6
Diplectrum formosum	sand perch	89	7.5	14	3.6
Symphurus diomedianus	spottedfin tonguefish	88	2.4	22	5.6
Haemulon aurolineatum	tomtate	80	2.7	9	2.3
Raja texana	roundel skate	73	12.7	25	6.4
Ancylopsetta dilecta	three-eye flounder	73	3.7	19	4.8
Ogcocephalus parvus	roughback batfish	69	2.0	16	4.1
Scomberomorus maculatus	Spanish mackerel	68	11.2	17	4.3

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Antennarius radiosus	singlespot frogfish	64	1.3	16	4.1
Sphoeroides dorsalis	marbled puffer	63	1.7	21	5.3
Priacanthus arenatus	bigeye	62	9.2	17	4.3
Sphyraena guachancho	guaguanche	59	7.0	23	5.9
Neomerinthe hemingwayi	spinycheek scorpionfish	59	7.1	14	3.6
Etrumeus teres	round herring	58	1.6	15	3.8
Caulolatilus intermedius	anchor tilefish	55	4.8	17	4.3
Prionotus scitulus	leopard searobin	50	1.1	3	0.8
Selene vomer	lookdown	49	1.3	17	4.3
Ophidion welshi	crested cusk-eel	39	1.5	16	4.1
Scomberomorus cavalla	king mackerel	37	8.0	17	4.3
Rhizoprionodon terraenovae	Atlantic sharpnose shark	33	27.5	20	5.1
Brotula barbata	bearded brotula	32	4.6	14	3.6
Mugil curema	white mullet	31	1.2	1	0.3
Etropus microstomus	smallmouth flounder	31	0.3	5	1.3
Seriola dumerili	greater amberjack	30	14.9	4	1.0
Symphurus civitatus	offshore tonguefish	29	0.5	9	2.3
Ogcocephalus spp.	batfishes	27	0.5	5	1.3
Selar crumenophthalmus	bigeye scad	26	3.0	9	2.3
Decodon puellaris	red hogfish	24	1.5	8	2.0
Alectis ciliaris	African pompano	21	0.1	9	2.3
Decapterus punctatus	round scad	21	0.6	8	2.0
Sphoeroides spengleri	bandtail puffer	21	0.5	3	0.8
Rachycentron canadum	cobia	19	7.5	17	4.3
Equetus wamotoi	blackbar drum	19	0.9	8	2.0
Centropristis ocyura	bank sea bass	18	1.2	3	0.8
Paralichthys squamilentus	broad flounder	18	5.2	7	1.8
Sphyrna tiburo	bonnethead	17	38.5	11	2.8
Rypticus maculatus	whitespotted soapfish	17	0.5	8	2.0
Squatina dumeril	Atlantic angel shark	15	24.7	7	1.8

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Bellator egretta	streamer searobin	15	0.1	8	2.0
Equetus lanceolatus	jackknife fish	15	1.4	3	0.8
Menticirrhus littoralis	gulf kingfish	15	3.7	2	0.5
Narcine brasiliensis	lesser electric ray	14	6.9	5	1.3
Synodus intermedius	sand diver	12	1.0	2	0.5
Ophidion holbrooki	bank cusk-eel	12	0.8	1	0.3
Mustelus canis	smooth dogfish	11	16.6	9	2.3
Serranus phoebe	tattler	11	0.5	2	0.5
Trachinocephalus myops	snakefish	10	0.7	6	1.5
Steindachneria argentea	luminous hake	10	0.0	1	0.3
Caranx hippos	crevalle jack	10	0.7	3	0.8
Sciaenops ocellatus	red drum	10	53.3	8	2.0
Ogcocephalus pantostictus	spotted batfish	10	1.2	4	1.0
Hippocampus erectus	lined seahorse	9	0.0	5	1.3
Trachinotus carolinus	Florida pompano	9	2.9	4	1.0
Eucinostomus argenteus	spotfin mojarra	9	0.1	4	1.0
Brevoortia gunteri	finescale menhaden	8	1.0	4	1.0
Gymnothorax saxicola	honeycomb moray	8	0.9	6	1.5
Apogon aurolineatus	bridle cardinalfish	8	0.0	3	0.8
Cyclopsetta fimbriata	spotfin flounder	8	1.0	4	1.0
Monacanthus ciliatus	fringed filefish	8	0.1	1	0.3
Aluterus monoceros	unicorn filefish	8	4.5	3	0.8
Urophycis cirrata	gulf hake	7	0.3	2	0.5
Bathyanthias mexicanus	yellowtail bass	7	0.0	3	0.8
Opistognathidae	jawfishes	7	0.1	1	0.3
Neobythites gillii	cusk-eel	7	0.0	3	0.8
Dasyatis americana	southern stingray	6	12.8	4	1.0
Peristedion gracile	slender searobin	6	0.2	1	0.3
Epinephelus flavolimbatus	yellowedge grouper	6	0.8	4	1.0
Gobionellus hastatus	sharptail goby	6	0.0	3	0.8

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Chilomycterus schoepfi	striped burrfish	6	2.3	5	1.3
Ogcocephalus nasutus	shortnose batfish	6	0.6	2	0.5
Ogcocephalus radiatus	polka-dot batfish	6	4.0	2	0.5
Hemanthias vivanus	red barbier	5	0.1	1	0.3
Apogon pseudomaculatus	twospot cardinalfish	5	0.0	2	0.5
Bairdiella chrysoura	silver perch	5	0.2	3	0.8
Monacanthus setifer	pygmy filefish	5	0.0	4	1.0
Dorosoma petenense	threadfin shad	4	0.2	2	0.5
Gymnothorax nigromarginatus	blackedge moray	4	0.8	3	0.8
Hippocampus spp.	seahorses	4	0.0	3	0.8
Hemanthias aureorubens	streamer bass	4	0.0	2	0.5
Pristigenys alta	short bigeye	4	0.1	2	0.5
Umbrina coroides	sand drum	4	0.3	2	0.5
Citharichthys macrops	spotted whiff	4	0.1	3	0.8
Bothus robinsi	twospot flounder	4	0.1	2	0.5
Trinectes maculatus	hogchoker	4	0.1	3	0.8
Dasyatis say	bluntnose stingray	3	12.7	3	0.8
Elops saurus	ladyfish	3	0.4	1	0.3
Paraconger caudilimbatus	margintail conger	3	0.0	2	0.5
Pontinus longispinis	longspine scorpionfish	3	0.0	1	0.3
Pomatomus saltatrix	bluefish	3	1.0	3	0.8
Echeneis naucrates	sharksucker	3	1.4	3	0.8
Chromis enchrysurus	yellowtail reeffish	3	0.0	1	0.3
Aluterus scriptus	scrawled filefish	3	0.2	2	0.5
Lactophrys polygonia	honeycomb cowfish	3	0.0	2	0.5
Lactophrys quadricornis	scrawled cowfish	3	0.2	3	0.8
Carcharhinus acronotus	blacknose shark	2	4.9	2	0.5
Rhinobatos lentiginosus	Atlantic guitarfish	2	0.8	1	0.3
Rhinoptera bonasus	cownose ray	2	24.0	2	0.5
Gymnothorax kolpos	blacktail moray	2	1.1	2	0.5

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Conger oceanicus	conger eel	2	0.0	1	0.3
Ophichthus gomesi	shrimp eel	2	0.4	2	0.5
Syngnathus louisianae	chain pipefish	2	0.0	1	0.3
Scorpaena brasiliensis	barbfish	2	0.5	1	0.3
Scorpaena plumieri	spotted scorpionfish	2	0.3	1	0.3
Seriola rivoliana	almaco jack	2	0.8	1	0.3
Calamus arctifrons	grass porgy	2	1.0	1	0.3
Calamus leucosteus	whitebone porgy	2	1.3	1	0.3
Pagrus pagrus	red porgy	2	0.8	2	0.5
Lonchopisthus micrognathus	swordtail jawfish	2	0.0	2	0.5
Scomber japonicus	chub mackerel	2	0.1	1	0.3
Ophidion grayi	blotched cusk-eel	2	0.1	2	0.5
Ophidion marginatum	striped cusk-eel	2	0.1	1	0.3
Poecilopsetta beani	offshore flounder	2	0.0	1	0.3
Gymnachirus melas	naked sole	2	0.0	2	0.5
Symphurus urospilus	spottail tonguefish	2	0.0	2	0.5
Opsanus beta	gulf toadfish	2	0.0	1	0.3
Raja eglanteria	clearnose skate	1	0.6	1	0.3
Raja olseni	spreadfin skate	1	0.5	1	0.3
Dasyatis sabina	Atlantic stingray	1	1.4	1	0.3
Gymnura altavela	spiny butterfly ray	1	3.2	1	0.3
Echiophis intertinctus	spotted spoon-nose eel	1	0.1	1	0.3
Bregmaceros atlanticus	antenna codlet	1	0.0	1	0.3
Epinephelus spp.	groupers	1	0.3	1	0.3
Serranus notospilus	saddle bass	1	0.0	1	0.3
Hemanthias leptus	longtail bass	1	0.1	1	0.3
Remora remora	remora	1	0.2	1	0.3
Haemulon striatum	striped grunt	1	0.0	1	0.3
Menticirrhus saxatilis	northern kingfish	1	0.1	1	0.3
Pogonias cromis	black drum	1	3.0	1	0.3

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Calamus penna	sheepshead porgy	1	0.1	1	0.3
Callionymidae	dragonets	1	0.0	1	0.3
Gobiidae	gobies	1	0.0	1	0.3
Dactylopterus volitans	flying gurnard	1	0.1	1	0.3
Citharichthys cornutus	horned whiff	1	0.0	1	0.3
Symphurus piger	deepwater tonguefish	1	0.0	1	0.3
Aluterus schoepfi	orange filefish	1	0.0	1	0.3
Lactophrys trigonus	trunkfish	1	0.0	1	0.3
Lophius americanus	goosefish	1	0.0	1	0.3
Crustaceans					
Callinectes similis	lesser blue crab	16567	342.2	246	62.6
Penaeus aztecus	brown shrimp	13026	265.5	257	65.4
Portunus spinicarpus	longspine swimming crab	9579	65.8	87	22.1
Trachypenaeus similis	roughback shrimp	5753	18.4	173	44.0
Penaeus setiferus	white shrimp	3225	71.0	159	40.5
Squilla empusa	mantis shrimp	3047	34.8	164	41.7
Portunus gibbesii	irridescent swimming crab	2452	14.0	166	42.2
Sicyonia dorsalis	lesser rock shrimp	2108	6.4	68	17.3
Sicyonia brevirostris	brown rock shrimp	1899	27.4	58	14.8
Solenocera vioscai	humpback shrimp	1641	7.3	56	14.2
Trachypenaeus constrictus	roughneck shrimp	1193	3.8	21	5.3
Xiphopenaeus kroyeri	seabob	1095	4.0	27	6.9
Squilla chydaea	mantis shrimp	868	5.2	74	18.8
Penaeus duorarum	pink shrimp	542	10.7	44	11.2
Anasimus latus	stilt spider crab	526	4.7	44	11.2
Portunus spinimanus	blotched swimming crab	452	11.2	87	22.1
Raninoides louisianensis	gulf frog crab	317	2.5	36	9.2
Calappa sulcata	yellow box crab	303	70.4	88	22.4

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Squilla spp.	mantis shrimps	69	0.7	6	1.5
Callinectes sapidus	blue crab	49	8.2	26	6.6
Pseudorhombila quadridentata	flecked squareback crab	43	0.5	13	3.3
Hepatus epheliticus	calico crab	40	2.8	18	4.6
Dardanus insignis	red brocade hermit	38	1.1	9	2.3
Libinia emarginata	portly spider crab	32	5.2	16	4.1
Podochela sidneyi	shortfinger neck crab	32	0.1	14	3.6
Stenorhynchus seticornis	yellowline arrow crab	32	0.1	12	3.1
Persephona crinita	pink purse crab	29	0.2	11	2.8
Myropsis quinquespinosa	fivespine purse crab	28	0.1	13	3.3
Persephona mediterranea	mottled purse crab	24	0.0	15	3.8
Leiolambrus nitidus	white elbow crab	23	0.0	11	2.8
Arenaeus cribrarius	speckled swimming crab	20	0.7	4	1.0
Sicyonia burkenroadi	spiny rock shrimp	19	0.0	10	2.5
Stenocionops spinimanus	prickly spider crab	18	5.5	4	1.0
Pagurus bullisi	hermit crab	17	0.1	5	1.3
Pagurus pollicaris	flatclaw hermit crab	15	0.1	12	3.1
Plesionika longicauda	pandalid shrimp	13	0.0	5	1.3
Collodes robustus	spider crab	9	0.0	4	1.0
Libinia dubia	longnose spider crab	8	0.1	6	1.5
Scyllarus depressus	scaled slipper lobster	7	0.0	2	0.5
Porcellana sayana	spotted porcelain crab	7	0.0	3	0.8
Parthenope granulata	bladetooth elbow crab	7	0.0	5	1.3
Xanthidae	mud crabs	6	0.0	3	0.8
Parapenaeus politus	deepwater rose shrimp	5	0.0	2	0.5
Libinia spp.	spider crabs	5	0.7	4	1.0
Nibilia antilocapra	shorthorn spiny crab	5	0.0	1	0.3
Calappa flammea	flame box crab	5	1.1	4	1.0
Acanthocarpus alexandri	gladiator box crab	5	0.0	3	0.8
Pseudorhombilia quadridentata	goneplacid crab	5	0.1	2	0.5

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Petrochirus diogenes	giant hermit crab	4	0.2	3	0.8
Phimochirus holthuisi	red-striped hermit	4	0.0	2	0.5
Scyllarides nodifer	ridged slipper lobster	4	0.0	2	0.5
Scyllarus spp.	slipper lobsters	4	0.0	1	0.3
Galatheidae	squat lobsters	4	0.0	1	0.3
Munida forceps	squat lobster	4	0.0	2	0.5
Paguristes triangulatus	hermit crab	4	0.0	1	0.3
Menippe adina	Gulf stone crab	3	0.0	3	0.8
Pinnotheres maculatus	squatter pea crab	3	0.0	2	0.5
Scyllarus chacei	chace slipper lobster	3	0.0	1	0.3
Stenocionops furcata	furcate crab	3	0.3	3	0.8
Dromidia antillensis	hairy sponge crab	3	0.0	2	0.5
Speocarcinus lobatus	gulf squareback crab	3	0.0	3	0.8
Dardanus fucosus	bareye hermit	3	0.0	2	0.5
Cirripedia	barnacles	2	0.0	1	0.3
Clibanarius vittatus	thinstripe hermit crab	2	0.0	2	0.5
Menippe mercenaria	Florida stone crab	2	0.0	1	0.3
Ovalipes floridanus	Florida lady crab	2	0.0	2	0.5
Porcellana sigsbeiana	striped porcelain crab	2	0.0	1	0.3
Lironeca ovalis	isopod	1	0.0	1	0.3
Alpheidae	snapping shrimps	1	0.0	1	0.3
Neopanope texana	mud crab	1	0.0	1	0.3
Pagurus spp.	right-handed hermit crabs	1	0.0	1	0.3
Pagurus longicarpus	longwrist hermit crab	1	0.0	1	0.3
Danielum ixbauchac	crab	1	0.0	1	0.3
Portunus sayi	sargassum swimming crab	1	0.0	1	0.3
Others					
Amusium papyraceum	paper scallop	10305	84.9	71	18.1

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Renilla mulleri	short-stemmed sea pansy	6939	39.2	66	16.8
Astropecten duplicatus	spiny beaded sea star	2668	2.5	60	15.3
Aurelia aurita	moon jellyfish	2482	395.7	67	17.0
Lolliguncula brevis	Atlantic brief squid	1894	23.0	165	42.0
Loligo pealeii	longfin squid	1247	71.6	106	27.0
Astropecten cingulatus	starfish	954	8.0	50	12.7
Luidia clathrata	sea star	749	15.6	59	15.0
Loligo pleii	arrow squid	574	8.8	67	17.0
Anadara baughmani	Baughman's ark	456	7.5	19	4.8
Pitar cordatus	Schwengel's pitar	436	10.8	24	6.1
Stomolophus meleagris	many-mouthed sea jelly	409	283.6	21	5.3
Polystira albida	white giant turris	343	3.0	18	4.6
Clypeaster ravenelii	cake urchin	238	24.0	9	2.3
Anthozoa	anthozoans	164	2.2	18	4.6
Polychaeta	bristleworms	157	0.8	6	1.5
Chione clenchi	Clench venus	142	1.7	12	3.1
Styela plicata	tunicate	99	4.7	15	3.8
Chrysaora quinquecirrha	sea nettle	98	3.0	13	3.3
Tethyaster grandis	starfish	97	7.6	17	4.3
Sconsia striata	royal bonnet	73	1.6	7	1.8
Actinidae	sea anemones	66	0.2	22	5.6
Gorgonidae	gorgonians	37	1.2	3	0.8
Argopecten gibbus	calico scallop	35	0.0	5	1.3
Conus austini	cone shell	32	0.2	8	2.0
Macoma brevifrons	short macoma	31	0.3	8	2.0
Anadara ovalis	blood ark	30	0.4	6	1.5
Polystira tellea	delicate giant turret	21	0.2	5	1.3
Molpadia cubana	sea cucumber	20	0.6	7	1.8
Ophiolepis elegans	brittle star	19	0.0	9	2.3
Distorsio clathrata	Atlantic distorsio	18	0.3	6	1.5

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Beroe ovata	comb jelly	18	0.3	6	1.5
Mellita quinquiesperforata	five-slotted sand dollar	15	0.0	2	0.5
Laevicardium sybariticum	delicate eggcockle	14	0.5	4	1.0
Agriopuma texasianum	Texas venus	14	0.2	7	1.8
Porifera	sponges	13	14.4	10	2.5
Luidia alternata	banded luidia	13	0.5	6	1.5
Cantharus cancellarius	cancellate cantharus	12	0.0	8	2.0
Clypeaster prostratus	sea biscuit	12	2.4	2	0.5
Bryozoa	moss animals	9	0.1	9	2.3
Echinaster serpentarius	starfish	8	0.0	5	1.3
Moira atropos	mud heart-urchin	8	0.2	1	0.3
Laevicardium laevigatum	egg cockle	7	0.4	2	0.5
Neverita duplicata	shark eye	6	0.1	6	1.5
Arcinella cornuta	Florida spiny jewelbox	6	0.1	2	0.5
Goniaster tesselatus	starfish	6	0.0	2	0.5
Cancellaria reticulata	common nutmeg	5	0.1	2	0.5
Loligo spp.	squids	5	0.3	5	1.3
Asteroporpa annulata	starfish	5	0.0	3	0.8
Encope aberrans	sand dollar	5	0.4	1	0.3
Architectonica nobilis	common sundial	4	0.1	2	0.5
Schizaster orbignyanus	heart urchin	4	0.2	1	0.3
Astrocyclus caecilia	basket star	4	0.0	2	0.5
Atrina spp.	penshells	3	0.0	1	0.3
Pteria colymbus	Atlantic wing-oyster	3	0.0	2	0.5
Eucrassatella speciosa	beautiful crassatella	3	0.0	1	0.3
Ascidiacea	sea squirts	3	0.4	1	0.3
Tamoya haplonema	sea wasp	3	0.8	1	0.3
Anthenoides piercei	starfish	3	0.4	1	0.3
Mollusca	molluscs	2	0.3	2	0.5
Gastropoda	snails	2	0.0	2	0.5

Table 16. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Muricanthus fulvescens	giant eastern murex	2	0.0	2	0.5
Busycon sinistrum	lightning whelk	2	0.1	2	0.5
Busycon pulleyi	prickly whelk	2	0.1	1	0.3
Anomia simplex	common jingle	2	0.0	1	0.3
Pitar fulminatus	lightning pitar	2	0.0	2	0.5
Paranthus rapiformis	onion anemone	2	0.0	1	0.3
Amphinomidae	polychaet worm	2	0.0	1	0.3
Tonna galea	giant tun	1	0.5	1	0.3
Thais haemastoma	rocksnail	1	0.0	1	0.3
Busycotypus spiratus	pearwhelk	1	0.0	1	0.3
Fasciolaria spp.	tulip shells	1	0.1	1	0.3
Oliva sayana	lettered olive	1	0.0	1	0.3
Semirossia equalis	greater shining bobtail	1	0.0	1	0.3
Octopus spp.	octopuses	1	0.0	1	0.3
Octopus vulgaris	common Atlantic octopus	1	0.1	1	0.3
Lepidochelys kempi	Atlantic ridley	1	5.5	1	0.3
Aurelia spp.	jellyfishes	1	0.1	1	0.3
Hydroidae	hydras	1	0.3	1	0.3
Mnemiopsis mccradyi	comb jelly	1	0.0	1	0.3
Asteroidea	starfishes	1	0.0	1	0.3
Astropecten articulatus	plated-margined sea star	1	0.0	1	0.3
Allothyone mexicana	sea cucumber	1	0.0	1	0.3
Molpadia barbouri	sea cucumber	1	0.0	1	0.3
Paracaudina chilensis	sea cucumber	1	0.0	1	0.3
Crustacea	crustaceans	1	0.0	1	0.3
Cnidaria	jellyfish	1	0.0	1	0.3

Table 17a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2001 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 spinicarpus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	10	7.3	6.41	0.1	0.05	20
Callinectes similis	4.5	2.15	0.0	0.00	7	6.2	5.34	0.0	0.02	10	10.0	3.14	0.2	0.06	20
Penaeus aztecus	6.4	5.08	0.0	0.04	7	83.7	65.99	1.0	0.83	10	22.5	8.23	0.3	0.11	20
Solenocera vioscai	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	10	3.5	3.46	0.0	0.00	20
Trachypenaeus similis	0.0	0.00	0.0	0.00	7	4.5	3.10	0.0	0.00	10	8.8	6.41	0.0	0.02	20
Sicyonia brevirostris	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	10	1.6	1.50	0.0	0.03	20
Micropogonias undulatus	329.1	103.46	18.0	6.35	7	177.6	69.55	8.8	3.44	10	797.9	504.89	39.9	24.54	20
Chloroscombrus chrysurus	389.5	149.83	4.3	1.25	7	650.9	274.96	8.6	3.17	10	195.7	86.70	5.8	2.03	20
Stenotomus caprinus	0.0	0.00	0.0	0.00	7	60.7	57.28	1.2	1.18	10	211.3	63.25	4.6	1.28	20
Serranus atrobranchus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	10	7.3	5.68	0.1	0.05	20
Leiostomus xanthurus	9.4	3.18	0.9	0.32	7	7.3	3.94	0.7	0.37	10	60.2	32.91	5.6	2.94	20
Trachurus lathami	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	10	75.3	50.47	2.6	1.75	20
Peprilus burti	6.9	5.14	0.4	0.27	7	22.5	19.36	1.5	1.34	10	17.2	9.20	1.1	0.58	20
Lagodon rhomboides	13.0	5.68	0.6	0.27	7	17.0	12.63	0.5	0.42	10	33.7	16.13	1.7	0.81	20
Squid	24.2	7.35	0.1	0.08	7	4.0	2.23	0.1	0.05	10	12.7	5.70	0.1	0.03	20

Table 17a (continued)

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2001 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 spinicarpus	17.2	9.10	0.1	0.06	10	52.4	21.06	0.4	0.16	5	3687.7	3378.88	23.1	21.10	3
Callinectes similis	19.3	16.64	0.6	0.50	10	484.0	386.00	7.6	5.56	5	20.2	12.44	0.5	0.25	3
Penaeus aztecus	1.3	1.25	0.0	0.05	10	36.2	27.27	0.7	0.55	5	267.8	215.01	5.8	4.55	3
Solenocera vioscai	2.7	1.49	0.0	0.00	10	130.4	94.20	0.7	0.53	5	42.5	36.28	0.4	0.35	3
Trachypenaeus similis	20.2	19.98	0.1	0.08	10	81.2	63.92	0.6	0.59	5	4.3	4.29	0.0	0.00	3
Sicyonia brevirostris	9.0	5.98	0.1	0.10	10	62.9	62.90	0.9	0.92	5	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	66.1	42.77	4.3	2.62	10	19.5	10.35	1.5	0.91	5	8.6	8.57	0.5	0.45	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	297.2	254.77	7.4	5.93	10	9.8	5.45	0.4	0.15	5	74.9	70.61	2.8	2.70	3
Serranus atrobranchus	5.8	4.37	0.0	0.03	10	102.7	68.43	1.0	0.63	5	403.1	212.55	8.4	5.20	3
Leiostomus xanthurus	11.6	7.33	1.6	1.15	10	16.0	6.21	1.7	0.71	5	178.3	171.90	19.5	18.87	3
Trachurus lathami	25.4	25.40	0.8	0.80	10	6.0	6.00	0.2	0.19	5	54.0	35.16	1.8	1.14	3
Peprilus burti	40.8	40.80	2.7	2.71	10	2.7	1.79	0.1	0.09	5	56.3	50.00	4.0	3.60	3
Lagodon rhomboides	17.9	7.74	1.2	0.45	10	3.1	1.63	0.3	0.13	5	1.4	1.43	0.1	0.06	3
Squid	5.0	3.72	0.0	0.03	10	0.7	0.44	0.0	0.00	5	6.0	6.00	0.0	0.00	3

Table 17b

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 2001 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	97.2	26.3	7	48.3	15.99	10	75.2	28.79	20	37.8	17.67	10	31.8	11.35	5	113.6	18.63	3
Total finfish kg	93.1	25.92	7	46.8	15.91	10	73.5	28.93	20	35.7	17.51	10	19.4	4.67	5	78.5	6.87	3
Total crustacean kg	2.4	0.96	7	1.4	1.07	10	1.0	0.27	20	1.8	1.02	10	12.6	7.05	5	34.8	19.68	3
Total others kg	1.0	0.72	7	0.0	0	10	0.3	0.31	20	0.2	0.11	10	0.0	0	5	0.0	0	3
Surface temperature	22.3	0.29	7	23.0	0.11	10	23.9	0.22	21	24.1	0.24	4	23.8	0.29	6	23.6	0.57	4
Midwater temperature	22.1	0.21	7	23.0	0.1	10	23.9	0.21	20	24.2	0.3	4	24.1	0.14	6	24.0	0.22	4
Bottom temperature	22.4	0.18	7	23.1	0.15	10	23.8	0.21	20	24.5	0.49	4	23.9	0.3	6	23.2	0.34	4
Surface salinity	31.1	0.76	7	31.9	0.95	10	33.9	0.55	21	35.5	0.3	4	34.9	0.63	6	34.8	1.13	4
Midwater salinity	31.9	0.5	7	33.6	0.16	10	34.8	0.17	21	35.5	0.3	4	35.7	0.26	6	36.0	0.1	4
Bottom salinity	32.7	0.15	7	34.1	0.22	10	35.2	0.12	21	35.9	0.16	4	36.0	0.07	6	36.3	0.12	4
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.4	0	1	0.4	0.01	2	1.1	0.44	5	1.0	0.36	4
Surface oxygen	5.7	0.51	7	5.5	0.29	10	5.8	0.17	21	5.8	0.07	4	6.0	0.19	6	6.0	0.18	4
Midwater oxygen	6.1	0.32	7	5.8	0.16	10	5.7	0.1	21	5.8	0.08	4	5.9	0.14	6	5.8	0.05	4
Bottom oxygen	5.8	0.32	7	5.3	0.28	10	5.3	0.17	21	5.4	0.3	4	5.2	0.36	6	4.8	0.29	4

Table 18a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2001 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	29.3	14.67	0.0	0.04	3	564.9	242.83	1.2	0.56	9
Callinectes similis	0.0	0.00	0.0	0.00	0	9.2	6.14	0.1	0.03	3	139.1	36.01	2.1	0.67	9
Penaeus aztecus	0.0	0.00	0.0	0.00	0	21.2	3.42	0.2	0.03	3	24.0	13.70	0.1	0.09	9
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	4.3	4.35	0.0	0.04	3	3.5	2.97	0.0	0.01	9
Penaeus setiferus	0.0	0.00	0.0	0.00	0	37.0	20.95	0.6	0.38	3	67.3	13.76	1.0	0.24	9
Squilla spp.	0.0	0.00	0.0	0.00	0	12.0	8.44	0.0	0.00	3	67.3	22.04	0.7	0.27	9
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	16.7	14.04	0.2	0.16	3	677.1	274.57	19.0	13.38	9
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	7.5	6.69	0.4	0.38	3	27.9	8.89	2.2	0.70	9
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	18.2	10.09	1.1	0.54	3	92.6	37.54	4.9	1.90	9
Serranus atrobranchus	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	9
Citharichthys spilopterus	0.0	0.00	0.0	0.00	0	7.3	7.27	0.0	0.00	3	55.9	29.61	0.8	0.42	9
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	2.6	2.61	0.1	0.08	3	10.2	4.57	0.8	0.46	9
Etropus crossotus	0.0	0.00	0.0	0.00	0	4.9	2.46	0.1	0.05	3	41.4	13.19	0.8	0.27	9
Anchoa hepsetus	0.0	0.00	0.0	0.00	0	60.6	60.57	1.0	1.01	3	11.3	11.33	0.1	0.06	9
Squid	0.0	0.00	0.0	0.00	0	14.9	12.37	0.1	0.10	3	65.1	31.55	0.4	0.25	9

Table 18a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2001 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	21.8	11.80	0.1	0.05	2	4.8	2.84	0.0	0.02	3	2.5	2.50	0.0	0.00	3
Callinectes similis	41.2	21.20	0.8	0.37	2	247.1	133.44	5.7	2.90	3	0.0	0.00	0.0	0.00	3
Penaeus aztecus	56.8	23.20	0.8	0.57	2	127.9	50.67	2.0	0.69	3	186.3	66.57	3.9	1.54	3
Portunus spinicarpus	2.4	2.40	0.0	0.00	2	24.3	24.31	0.2	0.20	3	286.5	81.72	2.5	0.71	3
Penaeus setiferus	40.8	40.80	0.9	0.93	2	0.4	0.36	0.0	0.02	3	0.7	0.73	0.0	0.02	3
Squilla spp.	3.7	1.30	0.0	0.00	2	40.5	12.77	0.9	0.34	3	7.0	4.36	0.1	0.11	3
Trichiurus lepturus	675.6	675.60	26.3	26.29	2	20.0	20.00	0.6	0.55	3	39.6	24.00	1.3	1.04	3
Leiostomus xanthurus	37.4	32.60	3.5	3.08	2	654.4	100.12	44.5	14.26	3	44.2	40.95	4.7	4.34	3
Micropogonias undulatus	36.9	8.10	2.4	0.55	2	376.7	142.07	25.2	9.78	3	319.5	311.31	19.2	18.49	3
Serranus atrobranchus	8.6	1.40	0.1	0.05	2	60.9	24.60	0.6	0.25	3	119.0	40.76	2.4	0.96	3
Citharichthys spilopterus	3.6	3.60	0.0	0.00	2	19.8	10.87	0.3	0.15	3	0.0	0.00	0.0	0.00	3
Cynoscion arenarius	6.0	6.00	0.7	0.65	2	49.9	33.28	5.8	3.45	3	78.9	74.59	9.6	9.10	3
Etropus crossotus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3	0.4	0.36	0.0	0.00	3
Anchoa hepsetus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Squid	4.8	4.80	0.0	0.00	2	0.0	0.00	0.0	0.00	3	3.8	1.92	0.2	0.17	3

Table 18b

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 2001 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	0	8.1	4.56	3	39.7	14.28	9	40.8	20.32	2	92.7	28.42	3	61.4	36.26	3
Total finfish kg	0.0	0	0	6.4	4.72	3	32.8	14.72	9	36.9	20.95	2	83.7	26.36	3	52.5	37.86	3
Total crustacean kg	0.0	0	0	0.9	0.47	3	5.5	1.71	9	2.8	0.5	2	9.0	2.4	3	8.2	2.73	3
Total others kg	0.0	0	0	0.0	0	3	0.9	0.63	9	0.0	0	2	0.0	0	3	0.9	0.49	3
Surface temperature	0.0	0	0	20.4	0.68	4	21.4	0.61	11	23.0	1.22	2	22.4	0.24	2	21.5	1.45	2
Midwater temperature	0.0	0	0	20.8	0.56	4	23.1	0.49	11	24.1	0.14	2	24.4	0.14	2	24.7	0.04	2
Bottom temperature	0.0	0	0	23.1	0.62	4	24.1	0.35	11	24.8	0.45	2	24.5	0.04	2	23.6	0.59	2
Surface salinity	0.0	0	0	22.6	2.04	4	25.9	1.31	11	30.6	4.5	2	30.1	2.02	2	32.3	1.6	2
Midwater salinity	0.0	0	0	28.2	1.38	4	32.4	0.9	11	35.2	0.2	2	35.7	0.1	2	36.1	0.05	2
Bottom salinity	0.0	0	0	32.9	1.37	4	35.9	0.12	11	36.0	0.24	2	35.9	0.14	2	36.4	0.1	2
Surface chlorophyll	0.0	0	0	5.4	0.34	3	6.4	1.46	8	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	4.6	0	1	3.9	0.94	3	4.5	0.4	2	5.5	0.95	2	5.2	0.82	2
Surface oxygen	0.0	0	0	8.9	0.23	4	8.4	0.32	11	7.4	1.45	2	8.6	1.6	2	5.8	0.55	2
Midwater oxygen	0.0	0	0	8.2	0.38	4	5.9	0.36	11	5.5	0	2	5.8	0.15	2	5.8	0.05	2
Bottom oxygen	0.0	0	0	3.3	1.14	4	3.4	0.35	11	4.5	0.9	2	3.2	0	2	4.7	0.2	2

Table 19a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2001 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	0.0	0.00	0.0	0.00	1	4.4	1.19	0.0	0.00	10	212.2	56.00	2.5	0.68	11
Callinectes similis	0.0	0.00	0.0	0.00	1	16.6	6.79	0.4	0.32	10	56.7	20.98	1.2	0.47	11
Penaeus setiferus	16.0	0.00	0.2	0.00	1	84.9	62.69	0.9	0.45	10	3.7	2.02	0.1	0.08	11
Trachypenaeus similis	4.0	0.00	0.0	0.00	1	22.4	9.79	0.0	0.02	10	13.4	10.01	0.0	0.02	11
Portunus gibbesii	0.0	0.00	0.0	0.00	1	4.6	1.67	0.0	0.00	10	13.4	5.39	0.1	0.04	11
Sicyonia dorsalis	0.0	0.00	0.0	0.00	1	37.7	37.71	0.1	0.06	10	0.2	0.21	0.0	0.00	11
Micropogonias undulatus	20.0	0.00	1.3	0.00	1	305.6	96.95	14.3	4.41	10	1742.6	488.15	75.5	20.78	11
Leiostomus xanthurus	36.0	0.00	2.7	0.00	1	1.8	1.41	0.1	0.10	10	118.8	49.45	9.1	3.71	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.4	0.43	0.0	0.02	10	41.1	10.55	0.9	0.24	11
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	3.6	3.60	0.1	0.12	10	60.8	15.62	1.5	0.37	11
Anchoa hepsetus	12.0	0.00	0.2	0.00	1	176.6	93.52	3.7	2.08	10	0.0	0.00	0.0	0.00	11
Trichiurus lepturus	44.0	0.00	0.0	0.00	1	108.1	67.11	1.3	0.67	10	6.4	3.94	0.3	0.23	11
Trichopsetta ventralis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	11
Lagodon rhomboides	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	10	31.7	28.13	1.7	1.48	11
Squid	132.0	0.00	2.0	0.00	1	62.1	19.80	1.1	0.31	10	19.7	7.10	0.4	0.13	11

Table 19a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2001 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	190.8	68.57	4.0	1.29	5	0.0	0.00	0.0	0.00	0	62.6	59.15	1.2	1.00	2
Callinectes similis	44.5	16.46	0.9	0.29	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Penaeus setiferus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Trachypenaeus similis	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	1.7	1.73	0.0	0.00	2
Portunus gibbesii	11.8	9.09	0.2	0.14	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Sicyonia dorsalis	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	790.7	383.38	41.4	18.48	5	0.0	0.00	0.0	0.00	0	2.6	2.65	0.3	0.28	2
Leiostomus xanthurus	877.4	386.45	72.7	31.63	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	89.1	44.17	5.1	2.38	5	0.0	0.00	0.0	0.00	0	79.8	1.36	5.9	0.17	2
Prionotus longispinosus	67.1	23.48	2.5	0.72	5	0.0	0.00	0.0	0.00	0	49.2	1.56	3.5	0.34	2
Anchoa hepsetus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Trichiurus lepturus	1.4	1.41	0.1	0.13	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Trichopsetta ventralis	0.4	0.44	0.0	0.01	5	0.0	0.00	0.0	0.00	0	169.3	47.58	3.6	0.76	2
Lagodon rhomboides	45.1	6.01	2.7	0.35	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2
Squid	6.5	2.34	0.5	0.18	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2

Table 19b

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 2001 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	20.0	0	1	34.4	5.04	10	106.2	25.06	11	154.4	35.02	5	0.0	0	0	51.0	7.71	2
Total finfish kg	18.2	0	1	31.5	5.28	10	100.5	24.48	11	148.0	33.75	5	0.0	0	0	38.0	9.16	2
Total crustacean kg	0.0	0	1	1.5	0.52	10	5.0	1.11	11	5.5	1.78	5	0.0	0	0	5.0	1.8	2
Total others kg	1.8	0	1	1.2	0.55	10	0.5	0.27	11	0.6	0.24	5	0.0	0	0	8.2	2.99	2
Surface temperature	20.9	0.22	5	21.7	0.42	9	24.5	0.29	11	24.7	0.04	3	0.0	0	0	24.7	0	2
Midwater temperature	20.9	0.21	5	21.8	0.49	9	24.6	0.24	11	24.7	0.04	3	0.0	0	0	24.8	0.02	2
Bottom temperature	21.0	0.24	5	23.0	0.4	9	24.1	0.32	11	24.7	0.01	3	0.0	0	0	23.3	0.65	2
Surface salinity	29.1	1.2	5	29.4	1.44	9	35.9	0.3	11	36.2	0.08	3	0.0	0	0	36.3	0.02	2
Midwater salinity	29.1	1.16	5	30.1	1.37	9	36.2	0.09	11	36.2	0.08	3	0.0	0	0	36.4	0.02	2
Bottom salinity	29.5	1.07	5	33.6	0.73	9	36.2	0.06	11	36.3	0.04	3	0.0	0	0	36.5	0.01	2
Surface chlorophyll	6.9	1.71	5	3.5	0.96	5	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	5.9	2.03	3	0.9	0.13	10	0.7	0.01	3	0.0	0	0	0.9	0	2
Surface oxygen	8.5	0.16	5	7.9	0.32	9	6.0	0.1	11	5.9	0.03	3	0.0	0	0	5.8	0	2
Midwater oxygen	8.4	0.16	5	7.6	0.35	9	5.9	0.03	11	5.8	0	3	0.0	0	0	5.7	0.1	2
Bottom oxygen	8.2	0.25	5	5.3	0.56	9	5.7	0.14	11	5.7	0.07	3	0.0	0	0	4.9	0.1	2

Table 20a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2001 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	5.7	3.54	0.1	0.05	2	11.2	4.19	0.1	0.04	6	36.8	8.19	0.5	0.12	14
Callinectes similis	8.9	0.33	0.0	0.05	2	17.2	8.65	0.2	0.12	6	105.8	21.90	2.0	0.50	14
Portunus gibbesii	30.7	17.80	0.2	0.06	2	98.0	51.62	0.3	0.14	6	23.7	6.26	0.1	0.04	14
Penaeus setiferus	152.6	8.98	2.8	0.25	2	26.2	15.01	0.7	0.33	6	10.6	3.32	0.3	0.10	14
Trachypenaeus similis	12.7	12.69	0.1	0.05	2	25.2	11.97	0.0	0.02	6	19.0	6.52	0.0	0.02	14
Squilla spp.	10.3	8.16	0.1	0.10	2	18.0	7.45	0.2	0.06	6	9.6	2.32	0.1	0.03	14
Micropogonias undulatus	521.6	373.76	22.1	15.97	2	1510.0	477.97	62.2	19.96	6	942.0	325.40	38.0	13.06	14
Prionotus longispinosus	2.1	2.14	0.0	0.05	2	156.6	106.88	4.0	2.76	6	83.3	29.05	1.9	0.69	14
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	1.1	1.05	0.0	0.02	6	56.1	42.79	1.1	0.81	14
Syacium gunteri	0.0	0.00	0.0	0.00	2	14.9	7.36	0.4	0.19	6	101.0	23.79	2.4	0.59	14
Cynoscion nothus	0.0	0.00	0.0	0.00	2	1.1	0.71	0.1	0.05	6	44.3	19.69	3.4	1.58	14
Leiostomus xanthurus	12.7	12.69	0.9	0.89	2	109.3	49.61	7.6	3.54	6	12.0	3.42	0.8	0.25	14
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	0.3	0.25	0.0	0.00	14
Cynoscion spp.	151.9	68.82	0.5	0.18	2	44.8	18.41	0.1	0.04	6	4.2	3.40	0.0	0.01	14
Squid	36.0	17.55	0.5	0.08	2	27.0	10.47	0.5	0.19	6	3.1	0.96	0.1	0.05	14

Table 20a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2001 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	287.1	126.29	4.2	1.81	4	0.0	0.00	0.0	0.00	1	21.4	0.99	1.0	0.09	4
Callinectes similis	132.2	89.64	3.1	2.21	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Portunus gibbesii	3.1	1.93	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Penaeus setiferus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Trachypenaeus similis	48.8	45.24	0.2	0.14	4	0.0	0.00	0.0	0.00	1	0.8	0.52	0.0	0.00	4
Squilla spp.	52.7	42.69	0.6	0.40	4	0.0	0.00	0.0	0.00	1	3.3	1.96	0.0	0.02	4
Micropogonias undulatus	1027.9	226.17	44.6	10.04	4	0.0	0.00	0.0	0.00	1	1.4	0.82	0.1	0.08	4
Prionotus longispinosus	107.3	30.66	3.4	1.15	4	0.0	0.00	0.0	0.00	1	12.9	3.78	0.9	0.33	4
Stenotomus caprinus	148.7	60.78	3.4	1.45	4	0.0	0.00	0.0	0.00	1	63.5	10.17	4.1	0.90	4
Syacium gunteri	37.1	6.91	1.0	0.24	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Cynoscion nothus	83.0	28.77	6.7	2.39	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Leiostomus xanthurus	84.8	24.00	5.5	1.48	4	0.0	0.00	0.0	0.00	1	2.5	1.20	0.3	0.15	4
Serranus atrobranchus	29.2	21.94	0.3	0.18	4	0.0	0.00	0.0	0.00	1	124.5	72.66	1.2	0.75	4
Cynoscion spp.	1.1	1.07	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Squid	9.6	7.51	0.3	0.23	4	0.0	0.00	0.0	0.00	1	5.2	3.13	0.1	0.12	4

Table 20b

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 2001 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	49.4	25.06	2	93.4	27.62	6	63.9	16.15	14	89.1	17.71	4	0.0	0	1	30.8	3.23	4
Total finfish kg	35.4	14.95	2	87.2	26.85	6	59.6	16.34	14	80.5	16.82	4	0.0	0	1	22.2	3.43	4
Total crustacean kg	3.6	0.64	2	2.8	0.96	6	4.2	0.69	14	8.5	4.54	4	0.0	0	1	2.0	0.47	4
Total others kg	11.5	9.52	2	3.4	2.36	6	0.0	0.04	14	0.0	0	4	0.0	0	1	6.5	0.46	4
Surface temperature	21.5	0.37	2	22.7	0.32	6	23.3	0.27	17	24.4	0	1	25.1	0	1	24.9	0.08	2
Midwater temperature	21.5	0.36	2	22.7	0.28	6	23.4	0.26	17	24.4	0	1	25.0	0	1	24.9	0.09	2
Bottom temperature	21.5	0.33	2	22.9	0.3	6	23.3	0.2	17	24.5	0	1	25.0	0	1	23.6	0.64	2
Surface salinity	31.6	0.8	2	32.2	0.75	6	35.0	0.3	17	35.8	0	1	36.4	0	1	36.3	0	2
Midwater salinity	31.6	0.8	2	32.4	0.74	6	35.4	0.27	17	35.8	0	1	36.4	0	1	36.3	0	2
Bottom salinity	31.6	0.82	2	32.9	0.77	6	35.5	0.26	17	36.0	0	1	36.4	0	1	36.5	0.06	2
Surface chlorophyll	2.0	0	1	0.0	0	0	0.6	0.12	9	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	2.2	0	1	2.4	0.33	6	1.3	0.14	8	0.8	0	1	0.5	0	1	0.7	0.16	2
Surface oxygen	6.9	0.8	2	6.5	0.19	6	6.6	0.14	17	5.7	0	1	5.9	0	1	5.8	0	2
Midwater oxygen	7.0	0.8	2	6.3	0.14	6	6.5	0.16	17	5.8	0	1	5.9	0	1	5.8	0	2
Bottom oxygen	7.0	0.8	2	5.8	0.21	6	6.2	0.21	17	5.7	0	1	5.8	0	1	4.7	0.5	2

Table 21a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2001 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
Callinectes similis	0.0	0.00	0.0	0.00	0	145.6	40.89	0.5	0.14	7	194.4	42.66	2.5	0.60	17
Penaeus aztecus	0.0	0.00	0.0	0.00	0	4.0	2.14	0.0	0.01	7	87.2	28.26	1.3	0.42	17
Penaeus setiferus	0.0	0.00	0.0	0.00	0	111.5	18.36	2.2	0.31	7	30.9	8.73	1.1	0.29	17
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	72.3	25.05	0.2	0.06	7	35.0	11.96	0.1	0.04	17
Portunus gibbesii	0.0	0.00	0.0	0.00	0	69.0	12.34	0.2	0.06	7	29.0	12.03	0.2	0.07	17
Squilla spp.	0.0	0.00	0.0	0.00	0	66.5	30.58	0.3	0.17	7	9.9	3.26	0.1	0.03	17
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	606.7	224.61	24.4	9.02	7	2197.4	236.46	84.1	9.02	17
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	7	686.4	147.41	15.4	3.19	17
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	26.0	13.56	0.4	0.23	7	645.5	158.29	11.9	3.00	17
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	1.2	0.61	0.1	0.04	7	218.0	78.95	15.4	4.94	17
Peprilus burti	0.0	0.00	0.0	0.00	0	11.3	4.91	0.7	0.30	7	46.4	16.75	2.6	0.92	17
Cynoscion nothus	0.0	0.00	0.0	0.00	0	1.9	1.27	0.1	0.06	7	88.8	31.21	5.5	2.02	17
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	12.3	8.84	0.2	0.13	7	97.4	46.78	1.1	0.50	17
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	3.4	1.65	0.1	0.04	7	24.2	16.12	1.1	0.73	17
Squid	0.0	0.00	0.0	0.00	0	10.9	4.26	0.1	0.04	7	11.4	4.93	0.2	0.08	17

Table 21a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2001 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
Callinectes similis	41.8	17.23	0.9	0.34	6	19.7	8.27	0.5	0.25	5	0.0	0.00	0.0	0.00	3
Penaeus aztecus	191.4	119.38	3.7	1.61	6	143.3	32.38	4.5	0.98	5	17.5	1.87	1.2	0.10	3
Penaeus setiferus	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
Trachypenaeus similis	11.0	8.89	0.0	0.04	6	0.2	0.22	0.0	0.00	5	0.4	0.39	0.0	0.00	3
Portunus gibbesii	1.9	1.94	0.0	0.01	6	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Squilla spp.	16.0	14.94	0.2	0.15	6	10.7	4.96	0.1	0.06	5	7.5	1.39	0.1	0.02	3
Micropogonias undulatus	358.7	267.66	17.2	11.64	6	44.6	12.98	3.2	0.95	5	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	355.4	189.11	10.6	4.72	6	87.0	20.73	3.0	0.56	5	142.1	55.80	8.2	3.16	3
Prionotus longispinosus	44.7	20.32	1.2	0.52	6	34.1	8.98	1.3	0.39	5	0.8	0.78	0.1	0.07	3
Leiostomus xanthurus	81.2	60.90	6.2	4.30	6	25.8	11.22	2.5	1.09	5	0.0	0.00	0.0	0.00	3
Peprilus burti	241.6	77.56	13.6	4.34	6	18.2	17.95	1.4	1.36	5	12.7	6.74	0.8	0.45	3
Cynoscion nothus	99.8	89.41	7.2	6.34	6	0.9	0.87	0.1	0.08	5	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	17.1	14.44	0.3	0.23	6	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Trichiurus lepturus	20.0	14.02	1.4	0.96	6	1.8	0.73	0.4	0.21	5	104.3	36.18	4.2	1.64	3
Squid	5.0	1.78	0.5	0.28	6	2.9	1.08	0.2	0.10	5	36.6	9.47	1.8	0.92	3

Table 21b

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 2001 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	0	35.8	9.76	7	163.3	16.27	17	79.8	31.38	6	30.7	2.85	5	54.6	20.51	3
Total finfish kg	0.0	0	0	30.6	9.7	7	156.9	16.02	17	72.4	29.98	6	22.1	3.03	5	49.2	20.68	3
Total crustacean kg	0.0	0	0	4.1	0.59	7	6.0	1.02	17	6.1	2.01	6	6.5	1.37	5	1.7	0.18	3
Total others kg	0.0	0	0	1.1	0.57	7	0.4	0.14	17	1.3	0.31	6	2.1	0.5	5	3.9	1.25	3
Surface temperature	21.3	0	1	22.1	0.44	4	23.7	0.27	15	24.6	0.28	4	25.0	0.27	2	25.3	0.15	5
Midwater temperature	20.9	0	1	22.2	0.29	4	23.8	0.28	15	24.6	0.27	4	25.1	0.13	2	25.2	0.16	5
Bottom temperature	21.0	0	1	21.9	0.44	4	23.6	0.25	15	24.8	0.17	4	23.9	1.17	2	20.6	0.33	5
Surface salinity	19.5	0	1	30.7	1.56	4	34.5	0.3	15	35.5	0.23	4	35.9	0.05	2	36.3	0.06	5
Midwater salinity	25.0	0	1	31.8	0.59	4	34.4	0.26	15	35.5	0.23	4	36.0	0.21	2	36.4	0.05	5
Bottom salinity	31.5	0	1	32.3	0.21	4	34.6	0.26	15	35.7	0.15	4	36.4	0.11	2	36.5	0.01	5
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	10.7	0	1	3.4	0.82	4	1.3	0.08	14	1.0	0.07	4	1.0	0.34	2	0.3	0.05	5
Surface oxygen	9.0	0	1	6.7	0.13	4	6.1	0.04	15	6.0	0.07	4	5.9	0.1	2	5.9	0.02	5
Midwater oxygen	7.4	0	1	6.1	0.34	4	6.1	0.04	15	5.9	0.06	4	5.9	0	2	5.9	0.02	5
Bottom oxygen	6.2	0	1	6.2	0.02	4	5.9	0.12	15	5.8	0.1	4	5.1	0.75	2	4.1	0.04	5

Table 22a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2001 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	0.6	0.56	0.0	0.00	12	17.3	7.88	0.3	0.12	7	71.1	17.37	1.4	0.36	9
Xiphopenaeus kroyeri	329.2	328.98	1.1	1.09	12	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	9
Callinectes similis	16.7	7.21	0.0	0.02	12	15.3	4.76	0.1	0.04	7	55.0	22.92	1.1	0.42	9
Trachypenaeus constrictus	55.6	55.65	0.1	0.08	12	2.9	2.86	0.0	0.00	7	0.0	0.00	0.0	0.00	9
Sicyonia brevirostris	0.0	0.00	0.0	0.00	12	0.7	0.66	0.0	0.00	7	4.7	3.46	0.1	0.05	9
Portunus spinicarpus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	1.1	0.77	0.0	0.00	9
Micropogonias undulatus	1.0	0.67	0.0	0.00	12	437.8	195.06	21.0	9.41	7	1288.4	313.45	63.6	14.05	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	12	5.6	5.57	0.1	0.10	7	725.4	314.15	20.3	8.47	9
Chloroscombrus chrysurus	0.1	0.09	0.0	0.00	12	5.1	3.57	0.1	0.04	7	197.2	140.46	2.9	2.12	9
Leiostomus xanthurus	1.2	1.20	0.1	0.05	12	18.0	10.68	1.0	0.60	7	192.5	62.82	15.2	5.31	9
Trachurus lathami	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	7	99.1	89.55	3.9	3.48	9
Peprilus burti	1.0	0.67	0.0	0.00	12	101.0	91.31	5.9	5.31	7	57.5	18.22	3.5	1.09	9
Prionotus longispinosus	0.0	0.00	0.0	0.00	12	49.0	31.36	0.9	0.54	7	93.0	31.18	2.3	0.76	9
Cynoscion nothus	0.0	0.00	0.0	0.00	12	0.6	0.62	0.0	0.04	7	135.0	97.21	6.6	3.91	9
Squid	64.7	16.38	0.8	0.21	12	42.3	14.77	0.5	0.15	7	6.2	4.51	0.2	0.08	9

Table 22a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2001 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	83.8	24.87	3.0	0.88	4	61.7	25.62	2.3	0.88	5	41.5	26.50	2.1	1.27	2
Xiphopenaeus kroyeri	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	2
Callinectes similis	16.6	9.21	0.6	0.32	4	8.3	7.75	0.3	0.28	5	0.0	0.00	0.0	0.00	2
Trachypenaeus constrictus	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	2
Sicyonia brevirostris	122.4	78.90	1.6	1.04	4	24.2	12.80	0.4	0.19	5	1.2	1.15	0.0	0.03	2
Portunus spinicarpus	85.5	41.33	0.4	0.20	4	53.4	21.41	0.5	0.15	5	49.9	36.60	0.6	0.41	2
Micropogonias undulatus	132.7	65.50	11.5	6.10	4	2.1	2.12	0.2	0.18	5	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	350.4	195.35	13.9	6.13	4	317.8	95.53	12.8	3.67	5	179.5	15.50	10.9	0.11	2
Chloroscombrus chrysurus	3.3	3.27	0.1	0.10	4	7.1	7.06	0.4	0.45	5	0.0	0.00	0.0	0.00	2
Leiostomus xanthurus	27.1	7.12	2.9	0.73	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Trachurus lathami	74.2	68.01	2.6	2.32	4	209.1	103.57	5.6	2.94	5	7.8	5.51	0.5	0.35	2
Peprilus burti	40.1	40.09	2.7	2.69	4	18.7	12.90	1.3	0.92	5	0.0	0.00	0.0	0.00	2
Prionotus longispinosus	28.4	16.01	1.3	0.60	4	13.6	8.28	0.9	0.48	5	1.3	1.33	0.2	0.21	2
Cynoscion nothus	15.8	13.66	1.2	1.04	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Squid	4.4	1.20	0.4	0.19	4	35.0	21.26	2.0	1.71	5	31.3	28.67	2.5	2.30	2

Table 22b

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 2001 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	7.1	1.8	12	40.5	14.78	7	143.6	13.83	9	58.9	18.16	4	63.4	11.01	5	56.2	11.65	2
Total finfish kg	1.4	0.44	12	39.7	14.77	7	139.8	13.65	9	52.2	19.43	4	48.4	11.66	5	46.3	10.65	2
Total crustacean kg	1.4	1.15	12	0.4	0.22	7	3.4	1.05	9	5.8	2.21	4	5.5	1.83	5	2.9	0.77	2
Total others kg	3.5	1.45	12	0.1	0.07	7	0.4	0.14	9	1.0	0.18	4	9.9	2.74	5	7.0	0.23	2
Surface temperature	21.3	0.12	14	22.5	0.22	4	24.5	0.41	8	25.2	0.07	2	25.3	0.1	3	25.0	0.09	2
Midwater temperature	21.3	0.11	14	22.5	0.2	4	24.5	0.41	8	25.1	0.03	2	25.2	0.22	3	25.2	0.09	2
Bottom temperature	21.6	0.1	14	22.6	0.23	4	23.7	0.44	8	25.1	0.05	2	23.1	1.21	3	21.5	0.02	2
Surface salinity	25.2	0.67	14	32.0	0.69	4	35.1	0.29	8	35.8	0.01	2	36.0	0.15	3	36.1	0.04	2
Midwater salinity	25.6	0.66	14	32.4	0.71	4	35.1	0.29	8	35.8	0.01	2	36.0	0.2	3	36.2	0.03	2
Bottom salinity	28.2	0.8	14	32.9	0.6	4	35.2	0.28	8	35.8	0.02	2	36.3	0.23	3	36.5	0	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	6.1	0	1	1.9	0.2	3	1.4	0.24	7	1.1	0.2	2	0.6	0.09	3	0.7	0.18	2
Surface oxygen	7.0	0.13	14	6.3	0.12	4	6.1	0.09	8	5.9	0.05	2	5.9	0.06	3	5.9	0.05	2
Midwater oxygen	6.7	0.13	14	6.4	0.05	4	6.1	0.08	8	5.9	0.1	2	5.4	0.5	3	5.9	0.05	2
Bottom oxygen	5.9	0.22	14	5.4	0.49	4	5.8	0.22	8	5.8	0	2	4.9	0.47	3	4.3	0	2

Table 23a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2001 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	0.0	0.00	0.0	0.00	5	8.5	6.67	0.1	0.10	15	85.7	29.37	1.4	0.47	21
Squilla spp.	5.0	3.68	0.0	0.03	5	93.4	34.24	1.0	0.34	15	40.4	34.16	0.3	0.28	21
Portunus spinicarpus	0.0	0.00	0.0	0.00	5	0.2	0.24	0.0	0.01	15	0.1	0.06	0.0	0.00	21
Trachypenaeus similis	0.0	0.00	0.0	0.00	5	10.6	4.49	0.0	0.01	15	54.2	22.90	0.2	0.09	21
Penaeus setiferus	162.4	98.89	1.9	1.27	5	57.1	12.62	1.1	0.29	15	7.1	4.84	0.2	0.16	21
Callinectes similis	0.0	0.00	0.0	0.00	5	11.7	4.17	0.1	0.04	15	29.9	11.67	0.5	0.23	21
Chloroscombrus chrysurus	11.5	9.31	0.1	0.05	5	143.0	125.78	1.4	1.34	15	180.6	65.42	4.0	1.67	21
Micropogonias undulatus	48.1	28.68	2.0	1.21	5	35.1	10.26	1.3	0.42	15	95.2	39.46	4.8	2.14	21
Syacium gunteri	0.0	0.00	0.0	0.00	5	13.7	4.41	0.2	0.05	15	138.0	45.05	2.3	0.77	21
Upeneus parvus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	15	5.0	2.54	0.1	0.07	21
Peprilus burti	3.6	2.40	0.0	0.00	5	8.5	5.83	0.5	0.33	15	33.3	24.87	1.6	1.19	21
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	15	27.3	15.71	1.0	0.76	21
Cynoscion spp.	21.7	13.81	0.1	0.06	5	99.1	44.32	0.4	0.20	15	30.4	30.24	0.1	0.13	21
Stellifer lanceolatus	170.5	101.33	1.5	0.88	5	117.7	46.22	1.4	0.52	15	0.0	0.00	0.0	0.00	21
Squid	32.9	11.03	0.4	0.16	5	37.7	7.62	0.4	0.10	15	38.5	16.80	0.7	0.21	21

Table 23a (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2001 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	37.6	20.08	1.5	0.81	7	59.2	12.55	2.4	0.30	2	16.2	5.12	0.7	0.22	3
Squilla spp.	5.9	3.72	0.1	0.08	7	5.8	2.45	0.1	0.08	2	3.2	1.74	0.0	0.00	3
Portunus spinicarpus	3.0	2.96	0.0	0.01	7	38.4	34.90	0.2	0.23	2	413.6	398.69	3.2	3.05	3
Trachypenaeus similis	0.9	0.60	0.0	0.00	7	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Penaeus setiferus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Callinectes similis	36.4	12.60	0.8	0.28	7	18.3	1.67	0.5	0.07	2	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	58.5	35.65	2.8	1.74	7	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	138.0	85.90	9.1	5.60	7	3.3	3.33	0.5	0.45	2	0.0	0.00	0.0	0.00	3
Syacium gunteri	42.9	15.94	0.9	0.33	7	15.4	1.27	0.2	0.00	2	1.9	1.85	0.0	0.03	3
Upeneus parvus	132.8	55.10	3.3	1.38	7	6.8	3.24	0.3	0.17	2	304.9	152.04	9.6	4.93	3
Peprilus burti	130.1	74.59	8.3	4.88	7	0.0	0.00	0.0	0.00	2	1.1	1.11	0.1	0.07	3
Stenotomus caprinus	107.2	40.44	3.2	1.06	7	49.7	39.71	2.4	1.63	2	110.0	11.50	6.4	0.84	3
Cynoscion spp.	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Stellifer lanceolatus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Squid	1.2	0.63	0.1	0.08	7	14.8	1.86	1.7	0.32	2	180.3	65.38	13.9	4.72	3

Table 23b

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 2001 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	43.6	25.98	11	4.6	1.97	8	56.2	5.99	7	40.8	5.65	4	77.7	11.41	5	75.0	21.34	3
Total finfish kg	1.5	0.43	11	3.6	1.4	8	50.6	5.95	7	25.8	4.1	4	73.1	13.13	5	68.0	23.4	3
Total crustacean kg	0.2	0.25	11	0.9	0.61	8	5.3	2.24	7	9.8	3.4	4	2.8	1.85	5	2.7	0.98	3
Total others kg	40.9	25.97	11	0.1	0.06	8	0.0	0	7	5.4	3.72	4	1.8	0.62	5	4.2	2.18	3
Surface temperature	21.1	0.12	11	21.3	0.22	8	24.6	0.36	8	25.5	0.05	2	25.6	0.08	2	25.8	0.25	3
Midwater temperature	21.0	0.13	11	21.3	0.25	8	24.7	0.37	8	25.5	0.03	2	25.7	0.2	2	25.8	0.21	3
Bottom temperature	21.0	0.13	11	21.4	0.26	8	23.9	0.46	8	25.6	0.09	2	24.7	0.59	2	21.8	0.68	3
Surface salinity	25.8	0.6	11	28.2	0.42	8	35.0	0.27	8	35.9	0.01	2	36.1	0.16	2	36.1	0.2	3
Midwater salinity	26.4	0.42	11	28.5	0.45	8	35.0	0.27	8	35.9	0.01	2	36.2	0.24	2	36.1	0.19	3
Bottom salinity	26.7	0.38	11	28.7	0.58	8	35.1	0.28	8	36.1	0.19	2	36.4	0.05	2	36.5	0.01	3
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	4.1	0	1	1.0	0.03	7	0.6	0.32	2	0.8	0.02	2	0.6	0.25	3
Surface oxygen	7.5	0.08	11	7.2	0.07	8	6.1	0.07	8	5.9	0.05	2	5.8	0	2	5.9	0	3
Midwater oxygen	7.3	0.04	11	7.2	0.1	8	6.1	0.06	8	5.9	0.05	2	5.8	0	2	5.8	0.03	3
Bottom oxygen	6.9	0.2	11	6.9	0.12	8	5.8	0.22	8	5.6	0.35	2	4.9	0.05	2	4.3	0.17	3

Table 24a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2001 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	0.5	0.55	0.0	0.00	11	0.4	0.41	0.0	0.01	8	137.4	71.23	3.0	1.44	7
Portunus spinicarpus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	3.0	2.54	0.0	0.00	7
Callinectes similis	8.2	3.36	0.0	0.02	11	10.6	5.17	0.0	0.01	8	15.1	9.31	0.4	0.27	7
Penaeus setiferus	31.6	10.58	0.3	0.08	11	48.0	22.13	0.6	0.32	8	4.5	4.54	0.1	0.07	7
Xiphopenaeus kroyeri	124.9	37.63	0.5	0.15	11	6.0	3.76	0.0	0.03	8	0.3	0.27	0.0	0.00	7
Sicyonia brevirostris	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	42.3	23.16	0.3	0.16	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	31.0	10.05	0.9	0.34	7
Chloroscombrus chrysurus	1.1	0.73	0.0	0.00	11	7.0	5.13	0.0	0.03	8	327.7	169.00	8.8	4.85	7
Upeneus parvus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	0.5	0.45	0.0	0.01	7
Micropogonias undulatus	0.5	0.55	0.0	0.02	11	5.3	4.46	0.2	0.15	8	225.2	111.60	12.9	6.83	7
Trachurus lathami	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	104.3	73.00	3.4	2.38	7
Synodus foetens	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	31.8	8.89	3.3	0.83	7
Mullus auratus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	7
Syacium gunteri	0.0	0.00	0.0	0.00	11	0.3	0.27	0.0	0.01	8	194.3	97.29	3.3	1.33	7
Squid	16.9	2.54	0.2	0.05	11	35.9	9.65	0.2	0.06	8	10.1	4.83	0.2	0.12	7

Table 24a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2001 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	104.5	37.16	4.1	1.51	4	26.4	20.86	1.0	0.80	5	39.7	22.79	1.7	0.87	3
Portunus spinicarpus	8.2	3.33	0.0	0.02	4	105.1	97.38	0.9	0.87	5	60.4	32.74	0.6	0.31	3
Callinectes similis	134.7	81.72	4.4	2.64	4	1.6	1.60	0.0	0.04	5	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	5	0.0	0.00	0.0	0.00	3
Xiphopenaeus kroyeri	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
Sicyonia brevirostris	30.7	15.53	0.5	0.23	4	10.5	9.42	0.2	0.15	5	1.5	1.45	0.0	0.02	3
Stenotomus caprinus	120.2	56.39	5.5	2.10	4	363.4	63.17	19.0	3.36	5	256.7	37.64	14.3	2.54	3
Chloroscombrus chrysurus	8.7	6.72	0.5	0.43	4	6.7	4.96	0.4	0.33	5	0.0	0.00	0.0	0.00	3
Upeneus parvus	9.5	6.03	0.4	0.28	4	151.0	35.40	6.0	2.37	5	281.7	222.73	10.2	7.78	3
Micropogonias undulatus	71.3	34.34	5.5	2.51	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3
Trachurus lathami	4.4	2.04	0.1	0.06	4	85.0	45.70	2.3	1.17	5	95.6	77.06	2.7	1.72	3
Synodus foetens	15.9	7.44	2.3	0.98	4	91.2	43.53	15.5	7.26	5	72.8	63.39	12.2	10.40	3
Mullus auratus	1.1	1.09	0.1	0.06	4	37.6	15.92	2.5	0.97	5	258.5	70.11	13.1	2.57	3
Syacium gunteri	27.6	13.56	0.4	0.19	4	1.6	0.97	0.0	0.03	5	2.5	2.50	0.1	0.06	3
Squid	1.4	1.03	0.0	0.00	4	5.9	3.37	0.5	0.31	5	44.9	26.90	3.6	1.98	3

Table 24b

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 2001 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	251.2	142.74	5	14.2	3.49	15	33.5	8.96	21	54.0	12.33	7	25.0	5.26	2	112.6	14.75	3
Total finfish kg	9.2	4.57	5	8.5	2.98	15	28.8	8.88	21	46.6	12.25	7	13.0	0.89	2	89.6	10.62	3
Total crustacean kg	2.0	1.4	5	2.3	0.6	15	3.5	0.93	21	4.4	1.68	7	9.0	4.68	2	6.7	2.54	3
Total others kg	240.0	146.1	5	2.4	0.9	15	1.2	0.37	21	3.1	1.71	7	2.3	0.71	2	16.6	5.26	3
Surface temperature	22.2	0.32	3	23.1	0.19	17	24.3	0.34	20	26.1	0.07	5	26.0	0	1	26.3	0.01	2
Midwater temperature	22.0	0.19	3	23.0	0.19	17	24.5	0.33	20	26.1	0.08	5	26.1	0	1	25.9	0.37	2
Bottom temperature	21.9	0.1	3	23.2	0.19	17	24.6	0.34	20	26.1	0.04	5	26.0	0	1	19.9	1.17	2
Surface salinity	26.6	0.28	3	28.3	0.31	17	32.5	0.56	20	35.3	0.27	5	35.5	0	1	36.5	0.01	2
Midwater salinity	27.4	0.15	3	28.7	0.33	17	33.9	0.29	20	35.8	0.26	5	36.1	0	1	36.5	0	2
Bottom salinity	27.7	0.44	3	30.3	0.43	17	34.4	0.2	20	36.2	0.09	5	36.2	0	1	36.5	0.05	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	3.3	0.33	10	1.3	0.35	13	0.5	0.06	5	0.5	0	1	0.2	0	2
Surface oxygen	7.2	0.09	3	6.9	0.06	17	6.4	0.11	20	5.9	0.04	5	5.9	0	1	5.9	0.05	2
Midwater oxygen	7.1	0.15	3	6.8	0.05	17	6.1	0.06	20	5.8	0.07	5	5.8	0	1	5.9	0.05	2
Bottom oxygen	6.9	0.25	3	5.9	0.26	17	6.0	0.15	20	5.5	0.1	5	5.4	0	1	4.1	0.35	2

Table 25a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2001 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
Callinectes similis	6.0	0.00	0.0	0.00	1	1.7	1.36	0.0	0.02	16	70.7	33.06	1.9	0.97	16
Penaeus aztecus	6.0	0.00	0.0	0.00	1	6.2	3.83	0.1	0.03	16	152.3	38.78	1.9	0.47	16
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	56.8	35.71	0.1	0.07	16	129.3	42.57	0.4	0.12	16
Squilla spp.	0.0	0.00	0.0	0.00	1	36.1	24.19	0.5	0.35	16	36.4	10.17	0.4	0.12	16
Solenocera vioscai	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	16	0.0	0.00	0.0	0.00	16
Portunus gibbesii	0.0	0.00	0.0	0.00	1	53.7	31.81	0.3	0.17	16	19.0	5.48	0.1	0.04	16
Chloroscombrus chrysurus	8328.0	0.00	54.5	0.00	1	1845.6	1574.54	13.0	11.21	16	161.0	88.28	2.3	1.53	16
Syacium gunteri	0.0	0.00	0.0	0.00	1	25.2	12.81	0.3	0.16	16	320.7	87.87	5.4	1.74	16
Cynoscion arenarius	354.0	0.00	4.4	0.00	1	334.5	169.04	2.1	0.97	16	42.5	18.00	1.1	0.38	16
Peprilus burti	78.0	0.00	3.3	0.00	1	7.4	4.32	0.2	0.09	16	118.1	67.66	5.4	3.02	16
Trachurus lathami	24.0	0.00	0.5	0.00	1	0.0	0.00	0.0	0.00	16	5.8	5.78	0.2	0.16	16
Serranus atrobranchus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	16	0.0	0.00	0.0	0.00	16
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	14.7	7.74	0.5	0.24	16	116.6	35.32	5.2	1.69	16
Harengula jaguana	0.0	0.00	0.0	0.00	1	40.7	25.92	0.5	0.29	16	81.4	46.79	1.7	1.04	16
Squid	420.0	0.00	3.3	0.00	1	33.5	12.01	0.5	0.18	16	50.8	13.56	0.7	0.16	16

Table 25a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2001 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
Callinectes similis	369.3	127.93	8.0	2.81	4	58.4	27.89	1.3	0.68	4	1.6	1.62	0.0	0.04	5
Penaeus aztecus	50.6	19.69	1.4	0.63	4	43.6	20.82	1.5	0.69	4	14.9	5.89	0.6	0.22	5
Trachypenaeus similis	32.2	17.69	0.1	0.08	4	22.7	15.20	0.1	0.07	4	0.0	0.00	0.0	0.00	5
Squilla spp.	24.3	16.49	0.2	0.14	4	20.9	15.60	0.2	0.13	4	4.7	1.50	0.0	0.02	5
Solenocera vioscai	62.1	55.09	0.2	0.23	4	115.9	74.50	0.4	0.26	4	61.2	25.49	0.3	0.14	5
Portunus gibbesii	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4	3.5	3.49	0.0	0.03	5
Chloroscombrus chrysurus	21.9	15.79	0.9	0.61	4	3.2	1.86	0.2	0.11	4	0.0	0.00	0.0	0.00	5
Syacium gunteri	102.3	48.00	1.8	0.88	4	17.1	6.16	0.3	0.11	4	0.0	0.00	0.0	0.00	5
Cynoscion arenarius	0.0	0.00	0.0	0.00	4	2.6	1.53	0.3	0.15	4	1.3	0.89	0.3	0.22	5
Peprilus burti	269.1	205.39	13.6	10.49	4	13.6	12.58	0.9	0.77	4	1.1	1.09	0.1	0.07	5
Trachurus lathami	38.5	34.28	0.8	0.70	4	563.1	343.84	12.5	7.67	4	81.2	81.16	1.9	1.91	5
Serranus atrobranchus	68.3	34.56	0.7	0.32	4	352.7	196.39	3.6	1.99	4	249.9	106.68	3.9	1.13	5
Micropogonias undulatus	28.6	10.63	1.8	0.55	4	49.5	21.88	3.8	1.66	4	0.0	0.00	0.0	0.00	5
Harengula jaguana	0.3	0.35	0.0	0.02	4	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	5
Squid	42.8	23.61	1.2	0.93	4	32.5	23.97	0.8	0.35	4	6.9	2.94	0.6	0.17	5

Table 25b

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 2001 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	98.2	0	1	35.6	18.33	16	41.6	8.17	16	41.7	9.68	4	42.7	6.93	4	41.1	11.35	5
Total finfish kg	79.1	0	1	23.6	16.61	16	28.7	6.82	16	29.3	11.34	4	36.4	7.23	4	33.7	9.68	5
Total crustacean kg	0.0	0	1	1.9	1.2	16	6.1	1.58	16	10.8	3.74	4	4.3	2.42	4	2.8	0.75	5
Total others kg	19.1	0	1	9.2	5.92	16	6.8	2.79	16	2.0	0.75	4	0.7	0.42	4	4.7	1.25	5
Surface temperature	0.0	0	0	23.0	0.17	17	24.3	0.26	17	26.0	0	1	26.2	0.2	3	26.2	0.04	2
Midwater temperature	0.0	0	0	23.0	0.19	17	24.7	0.31	17	26.0	0	1	26.6	0.06	3	25.2	1.01	2
Bottom temperature	0.0	0	0	23.3	0.23	17	24.9	0.35	17	26.4	0	1	26.7	0.01	3	21.9	1.85	2
Surface salinity	0.0	0	0	29.1	0.29	17	31.0	0.58	17	35.5	0	1	35.7	0.34	3	36.1	0.31	2
Midwater salinity	0.0	0	0	31.2	0.33	17	32.8	0.48	17	35.5	0	1	36.2	0.09	3	36.2	0.33	2
Bottom salinity	0.0	0	0	32.8	0.28	17	33.7	0.62	17	36.0	0	1	36.5	0.01	3	36.5	0	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	2.0	0.13	4	1.8	0.26	13	1.1	0	1	0.7	0.18	3	0.4	0.12	2
Surface oxygen	0.0	0	0	6.5	0.05	17	6.5	0.1	17	5.8	0	1	5.8	0.06	3	5.8	0.1	2
Midwater oxygen	0.0	0	0	6.4	0.07	17	6.0	0.07	17	5.8	0	1	5.7	0.03	3	6.0	0.3	2
Bottom oxygen	0.0	0	0	5.9	0.08	17	5.3	0.25	17	5.7	0	1	5.7	0	3	4.3	0.4	2

Table 26a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2001 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
Callinectes similis	0.0	0.00	0.0	0.00	2	10.3	6.42	0.2	0.16	12	451.2	205.70	10.8	4.94	14
Penaeus aztecus	0.0	0.00	0.0	0.00	2	5.5	3.55	0.1	0.04	12	171.4	52.34	2.7	0.81	14
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	12	5.9	3.34	0.0	0.00	14
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	10.7	10.49	0.0	0.02	12	48.3	19.60	0.2	0.06	14
Squilla spp.	0.0	0.00	0.0	0.00	2	3.3	2.49	0.1	0.05	12	37.5	20.33	0.5	0.29	14
Solenocera vioscai	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	14
Chloroscombrus chrysurus	669.0	249.00	8.3	5.86	2	2079.3	1813.67	22.9	20.20	12	185.9	122.69	2.7	2.07	14
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	5.7	5.69	0.2	0.17	12	244.5	78.68	11.8	3.72	14
Syacium gunteri	3.0	3.00	0.1	0.14	2	7.3	3.92	0.2	0.08	12	181.4	61.33	2.9	0.93	14
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.3	0.34	0.0	0.01	12	1.2	1.22	0.0	0.03	14
Cynoscion nothus	0.0	0.00	0.0	0.00	2	46.6	32.98	0.8	0.44	12	124.9	56.67	2.4	1.08	14
Opisthonema oglinum	3.0	3.00	0.0	0.00	2	271.0	266.57	4.6	4.50	12	2.4	1.38	0.1	0.05	14
Peprilus burti	12.0	12.00	0.5	0.55	2	4.2	2.72	0.2	0.12	12	36.3	17.48	1.6	0.75	14
Upeneus parvus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	14
Squid	96.0	96.00	1.9	1.91	2	34.0	16.40	0.5	0.27	12	13.5	6.71	0.2	0.10	14

Table 26a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2001 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
Callinectes similis	592.2	146.81	14.6	4.03	9	159.2	73.78	3.4	1.66	3	0.0	0.00	0.0	0.00	2
Penaeus aztecus	66.9	16.29	1.8	0.39	9	59.5	29.88	2.3	1.21	3	7.0	4.77	0.4	0.17	2
Sicyonia dorsalis	125.8	47.93	0.4	0.15	9	153.4	83.19	0.5	0.24	3	0.0	0.00	0.0	0.00	2
Trachypenaeus similis	85.8	29.11	0.4	0.13	9	48.8	47.60	0.3	0.27	3	0.0	0.00	0.0	0.00	2
Squilla spp.	51.6	17.09	0.5	0.18	9	34.9	27.89	0.6	0.51	3	3.3	3.33	0.1	0.05	2
Solenocera vioscai	36.0	23.47	0.1	0.08	9	63.0	43.58	0.3	0.20	3	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	26.1	18.89	0.8	0.61	9	9.0	8.98	0.4	0.41	3	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	36.8	12.27	2.1	0.75	9	48.0	39.02	3.8	2.89	3	0.0	0.00	0.0	0.00	2
Syacium gunteri	84.0	24.58	1.5	0.51	9	23.0	22.18	0.4	0.36	3	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	91.5	28.05	1.0	0.27	9	340.0	161.04	4.1	2.06	3	168.7	155.75	3.8	3.55	2
Cynoscion nothus	4.6	2.55	0.3	0.18	9	0.5	0.54	0.1	0.07	3	0.0	0.00	0.0	0.00	2
Opisthonema oglinum	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Peprilus burti	31.0	16.57	1.3	0.71	9	1.6	1.63	0.1	0.13	3	0.0	0.00	0.0	0.00	2
Upeneus parvus	16.8	10.94	0.4	0.27	9	51.8	51.84	1.3	1.34	3	129.4	10.59	4.8	0.36	2
Squid	7.1	2.96	0.1	0.07	9	8.4	7.19	0.4	0.38	3	2.9	2.94	0.1	0.05	2

Table 26b

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 2001 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	34.1	31.36	2	97.8	39.92	12	82.2	25.25	14	39.7	5.26	9	32.4	4.58	3	43.1	18.51	2
Total finfish kg	21.8	19.09	2	49.3	29.26	12	35.3	9.21	14	18.5	3.86	9	19.3	2.85	3	37.4	18.15	2
Total crustacean kg	0.0	0	2	2.0	1.12	12	15.0	5.37	14	18.9	4.17	9	8.2	3.4	3	2.1	0.06	2
Total others kg	12.3	12.27	2	46.2	25.43	12	32.2	16.56	14	2.3	0.67	9	4.9	2.77	3	3.1	0.09	2
Surface temperature	22.5	0.3	2	23.8	0.39	14	24.5	0.37	13	26.2	0.17	4	26.5	0.18	2	26.7	0.14	2
Midwater temperature	22.3	0.1	2	23.6	0.42	14	24.7	0.47	13	26.8	0.08	4	26.9	0.16	2	23.2	1.78	2
Bottom temperature	22.4	0.15	2	23.7	0.4	14	24.6	0.52	13	26.9	0.09	4	25.3	1.46	2	18.3	1.9	2
Surface salinity	30.9	1.37	2	31.3	0.33	14	31.2	0.55	13	35.0	0.37	4	35.4	0.03	2	36.4	0.05	2
Midwater salinity	31.2	1.06	2	31.4	0.32	14	32.4	0.57	13	36.0	0.2	4	36.2	0.11	2	36.5	0	2
Bottom salinity	31.1	0.9	2	31.8	0.26	14	33.5	0.41	13	36.4	0.03	4	36.5	0.03	2	36.3	0.16	2
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	2.0	0.06	6	1.4	0.14	8	0.7	0.06	4	0.7	0.12	2	0.2	0.01	2
Surface oxygen	6.7	0.4	2	6.2	0.08	14	5.9	0.07	13	5.9	0.03	4	5.8	0.05	2	5.8	0.05	2
Midwater oxygen	6.4	0.35	2	6.2	0.08	14	6.0	0.08	13	5.6	0.07	4	5.5	0.2	2	5.7	0.3	2
Bottom oxygen	6.4	0.45	2	5.9	0.11	14	5.5	0.14	13	5.4	0.17	4	5.3	0.35	2	3.9	0.2	2

Table 27a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 2001 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 or 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
Portunus gibbesii	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	24.0	0.00	0.0	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	12.0	0.00	0.3	0.00	1	36.0	0.00	0.3	0.00	1
Harengula jaguana	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	30.0	0.00	0.5	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	24.0	0.00	1.6	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	30.0	0.00	0.5	0.00	1
Lutjanus campechanus	0.0	0.00	0.0	0.00	0	6.0	0.00	0.3	0.00	1	6.0	0.00	0.0	0.00	1
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	12.0	0.00	0.0	0.00	1
Sphoeroides parvus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	6.0	0.00	0.0	0.00	1
Hippocampus erectus	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1

Table 27b

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 2001 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 or 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	0	0.0	0	1	2.7	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish kg	0.0	0	0	0.0	0	1	2.7	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean kg	0.0	0	0	0.0	0	1	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total others kg	0.0	0	0	0.0	0	1	0.0	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	22.5	0	1	24.6	2.24	2	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	22.8	0	1	25.1	1.86	2	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	23.1	0	1	22.0	1.07	2	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	30.9	0	1	33.4	2.89	2	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	32.4	0	1	33.8	2.55	2	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	33.2	0	1	34.9	1.63	2	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	6.3	0	1	5.6	0.15	2	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	6.6	0	1	6.1	0.35	2	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	6.5	0	1	5.1	0.8	2	0.0	0	0	0.0	0	0	0.0	0	0

Table 28. 2001 Reef Fish Survey species composition list, 22 trap 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 TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Rhomboplites aurorubens	vermilion snapper	27	11.8	2	9.1
Haemulon aurolineatum	tomtate	20	2.7	2	9.1
Lutjanus campechanus	red snapper	7	4.3	5	22.7
Pagrus pagrus	red porgy	6	4.3	2	9.1
Paranthias furcifer	creole-fish	3	0.7	1	4.5
Calamus nodosus	knobbed porgy	3	1.3	2	9.1
Mycteroperca phenax	scamp	2	5.5	1	4.5
Epinephelus flavolimbatus	yellowedge grouper	1	1.8	1	4.5
Epinephelus morio	red grouper	1	2.0	1	4.5
Centropristis ocyura	bank sea bass	1	0.1	1	4.5
Lutjanus synagris	lane snapper	1	0.4	1	4.5
Equetus umbrosus	cubbyu	1	0.1	1	4.5
Calamus calamus	saucereye porgy	1	0.0	1	4.5

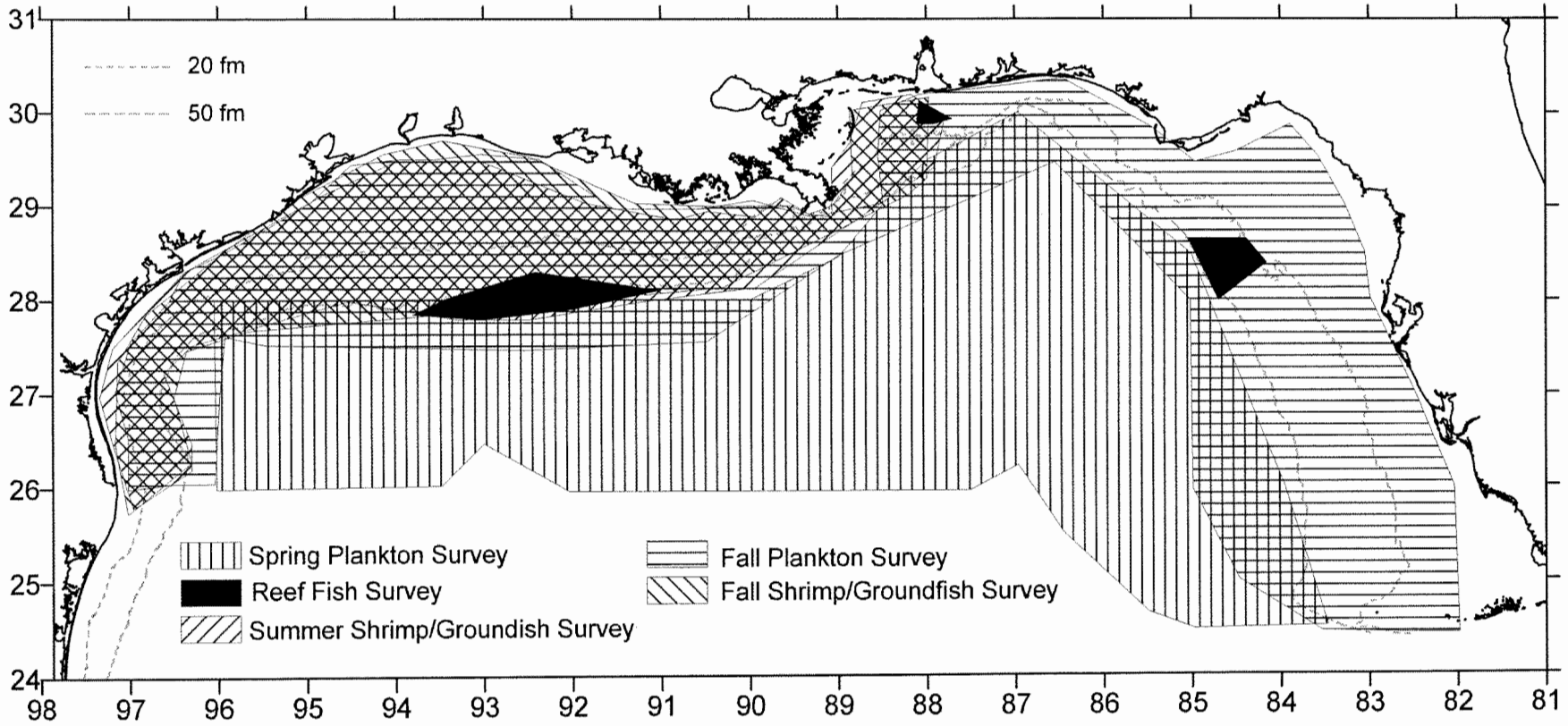

Figure 1. 2001 SEAMAP Surveys, Gulf of Mexico.

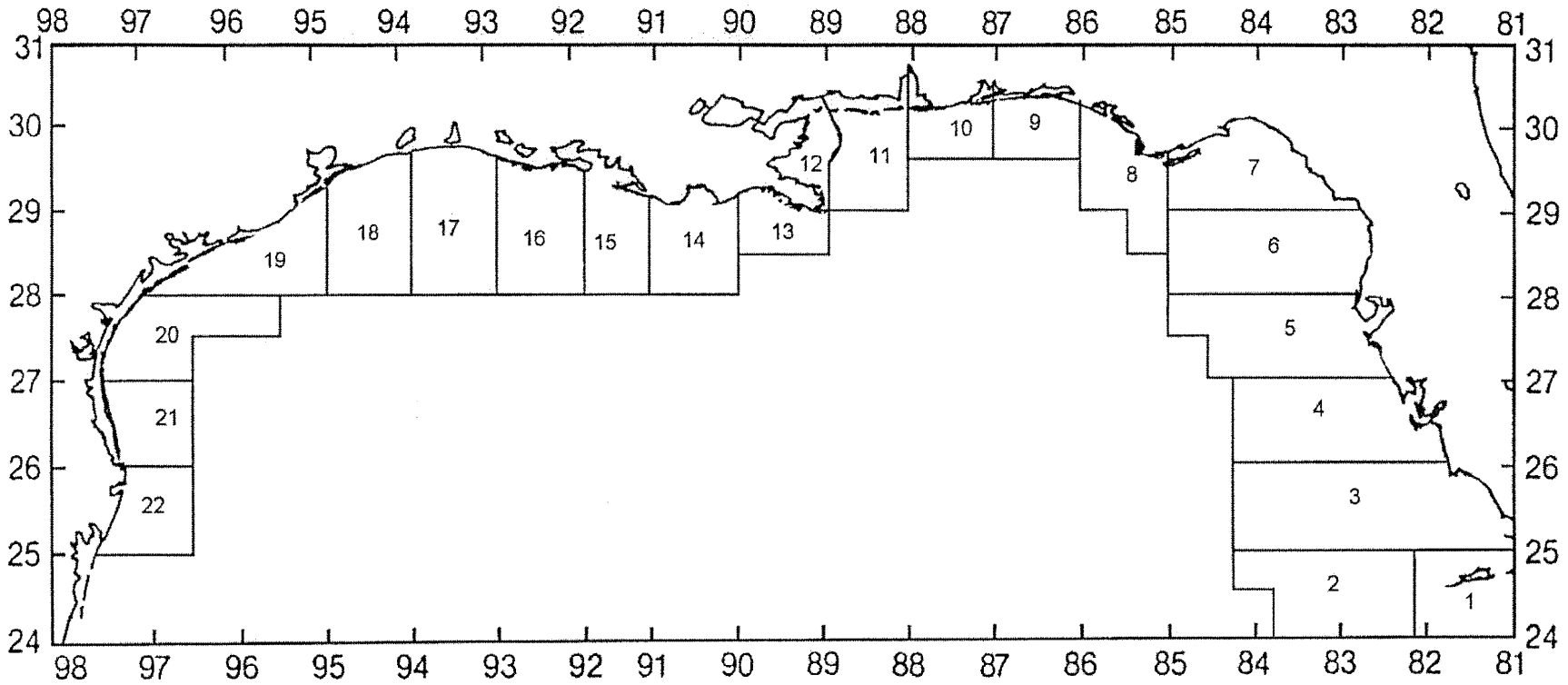

Figure 2. Statistical zones for shrimp in the Gulf of Mexico.

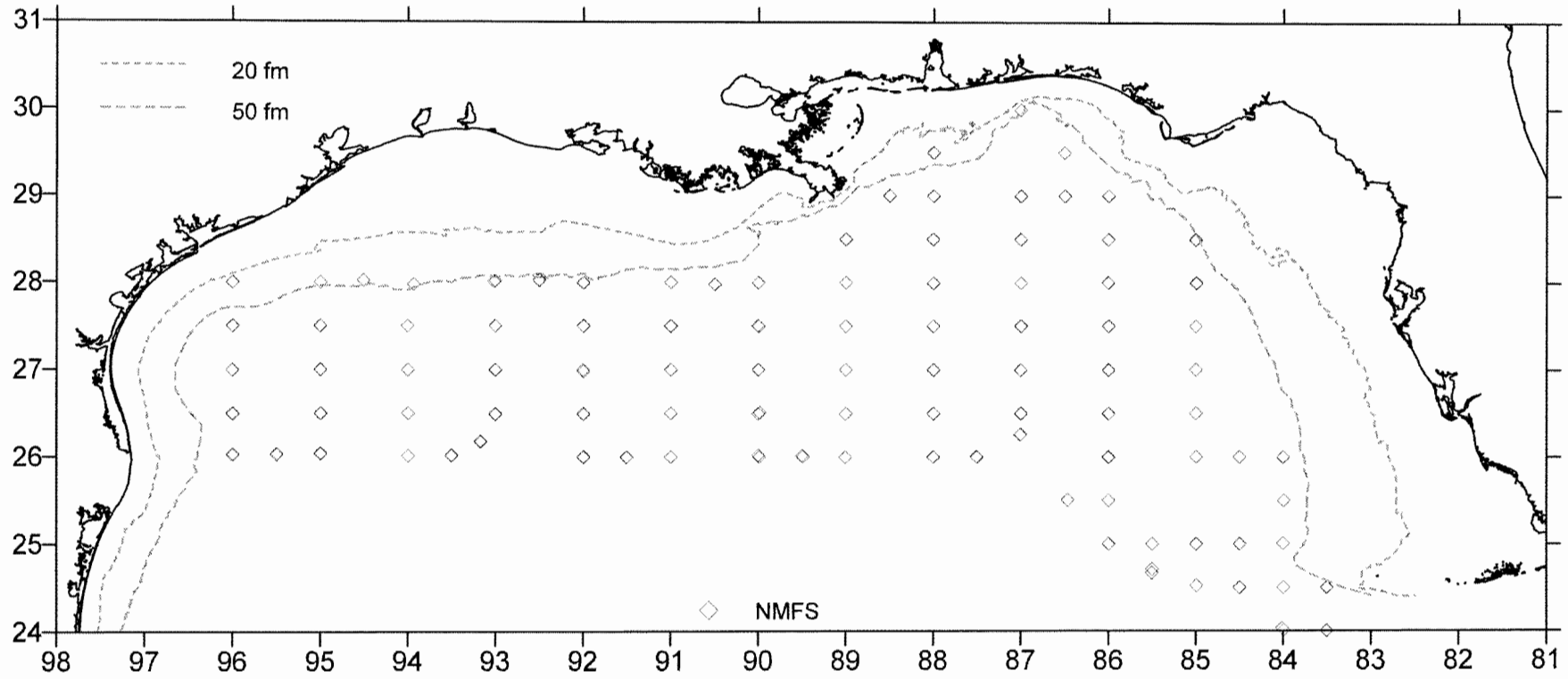

Figure 3. Locations of plankton and environmental stations during the 2001 Spring Plankton Survey.

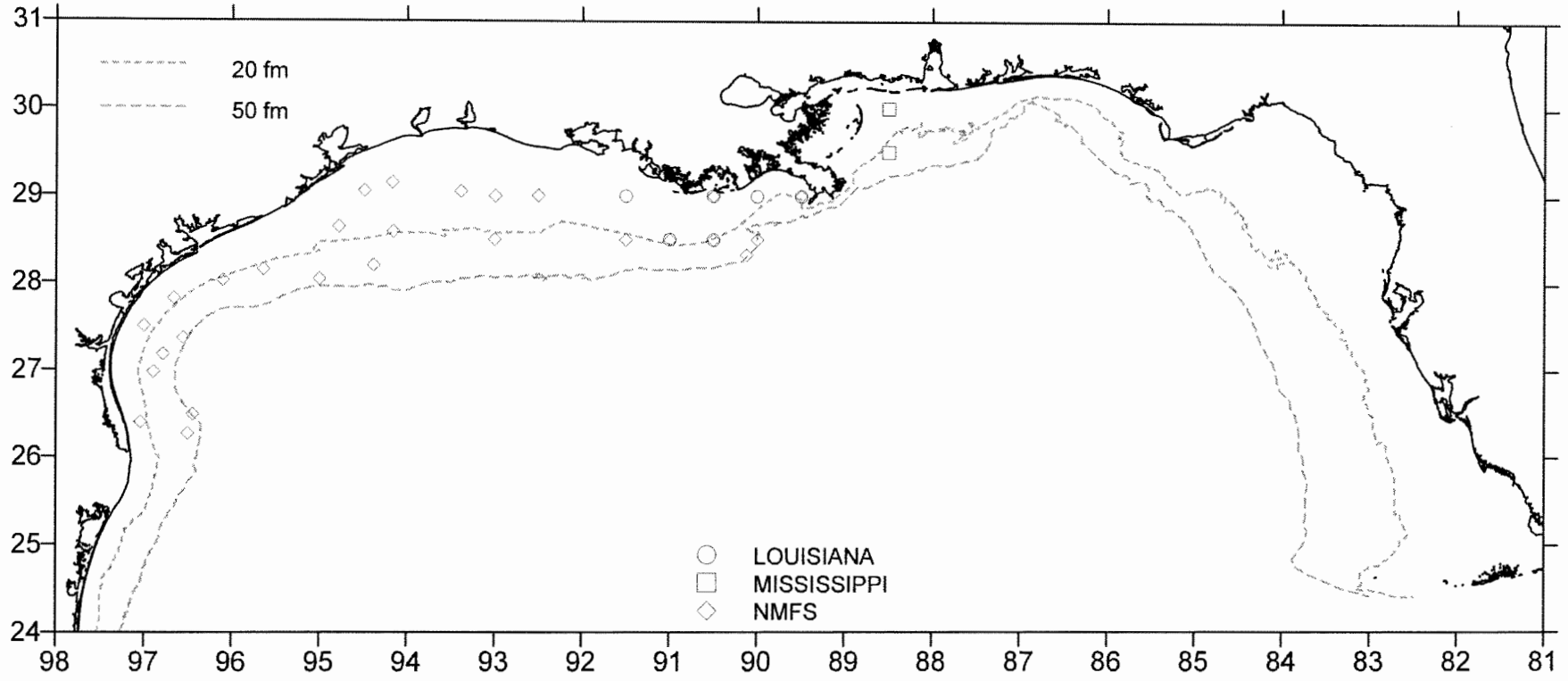

Figure 4. Locations of plankton stations during the 2001 Summer Shrimp/Groundfish Survey.

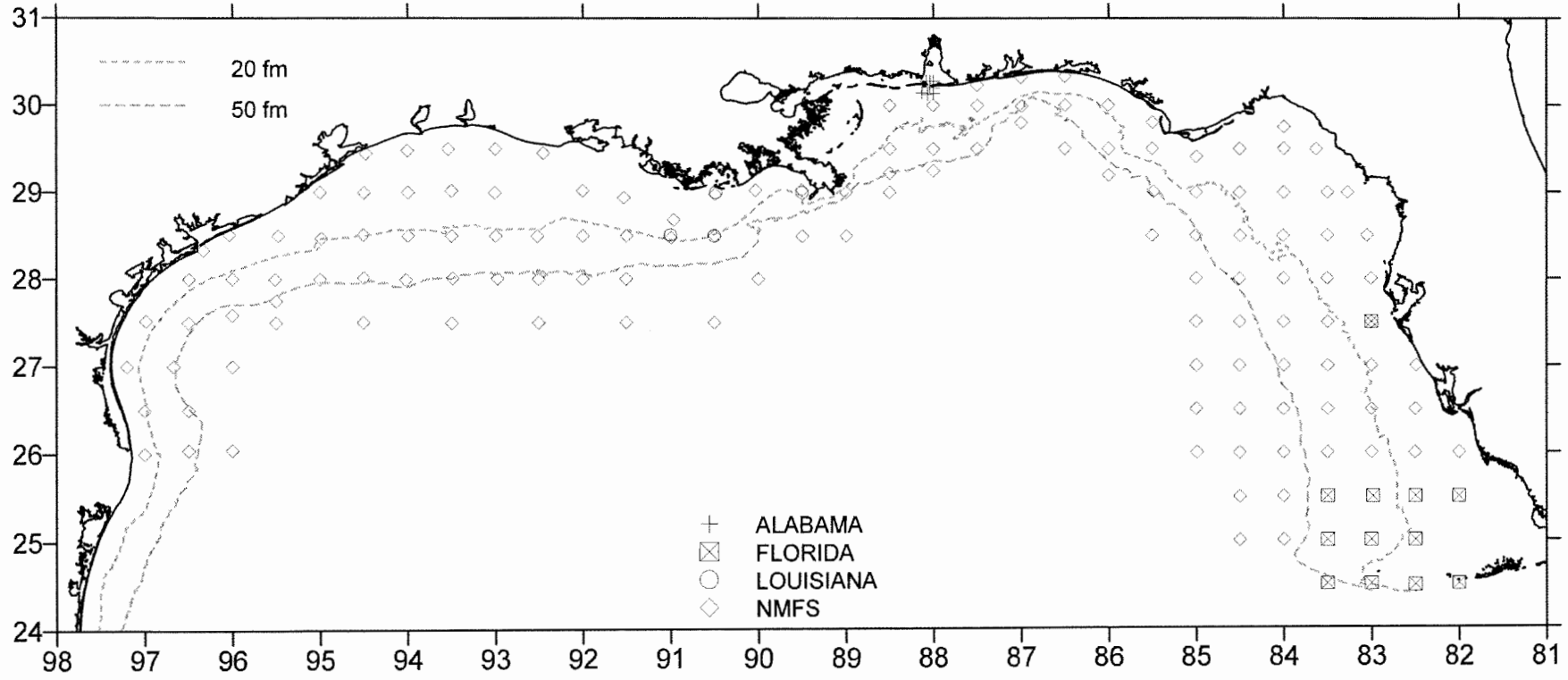

Figure 5. Locations of plankton and environmental stations during the 2001 Fall Plankton Survey.

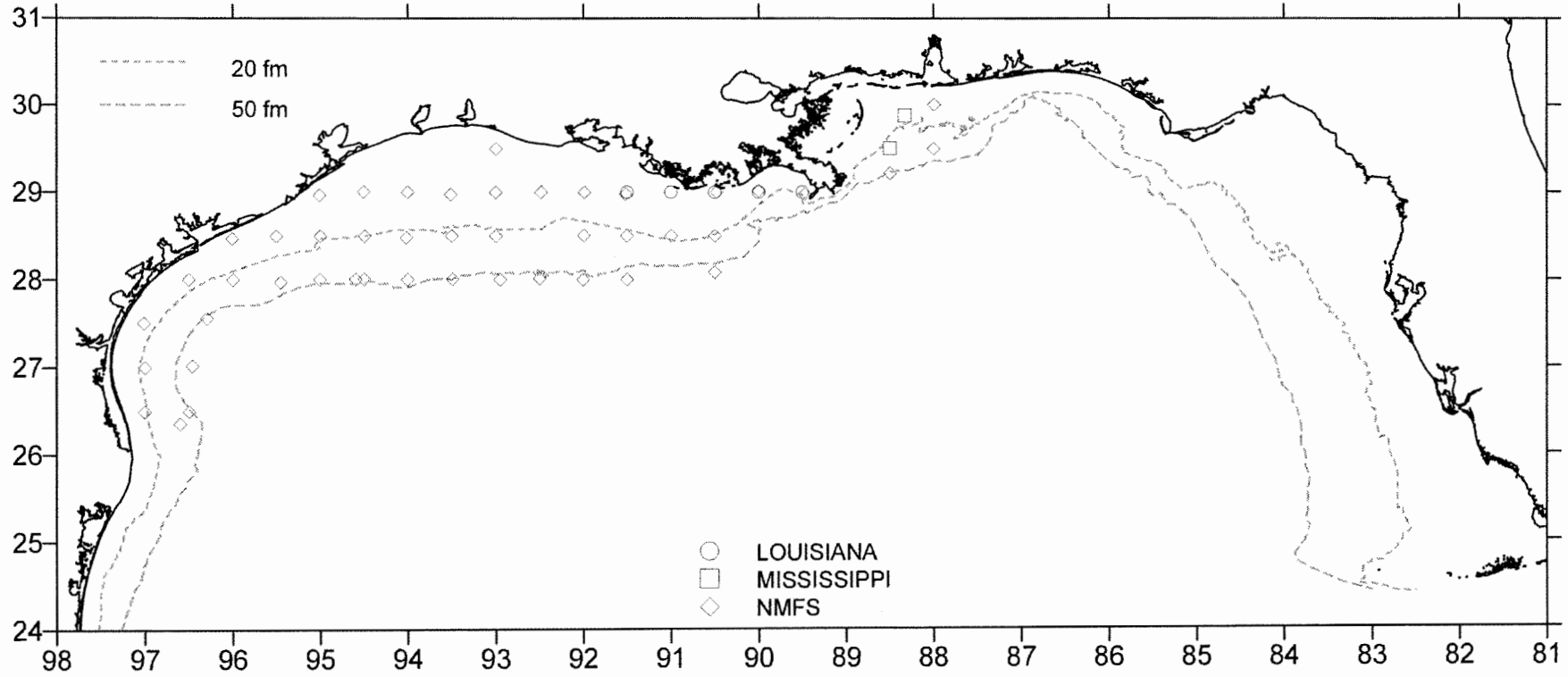

Figure 6. Locations of plankton stations during the 2001 Fall Shrimp/Groundfish Survey.

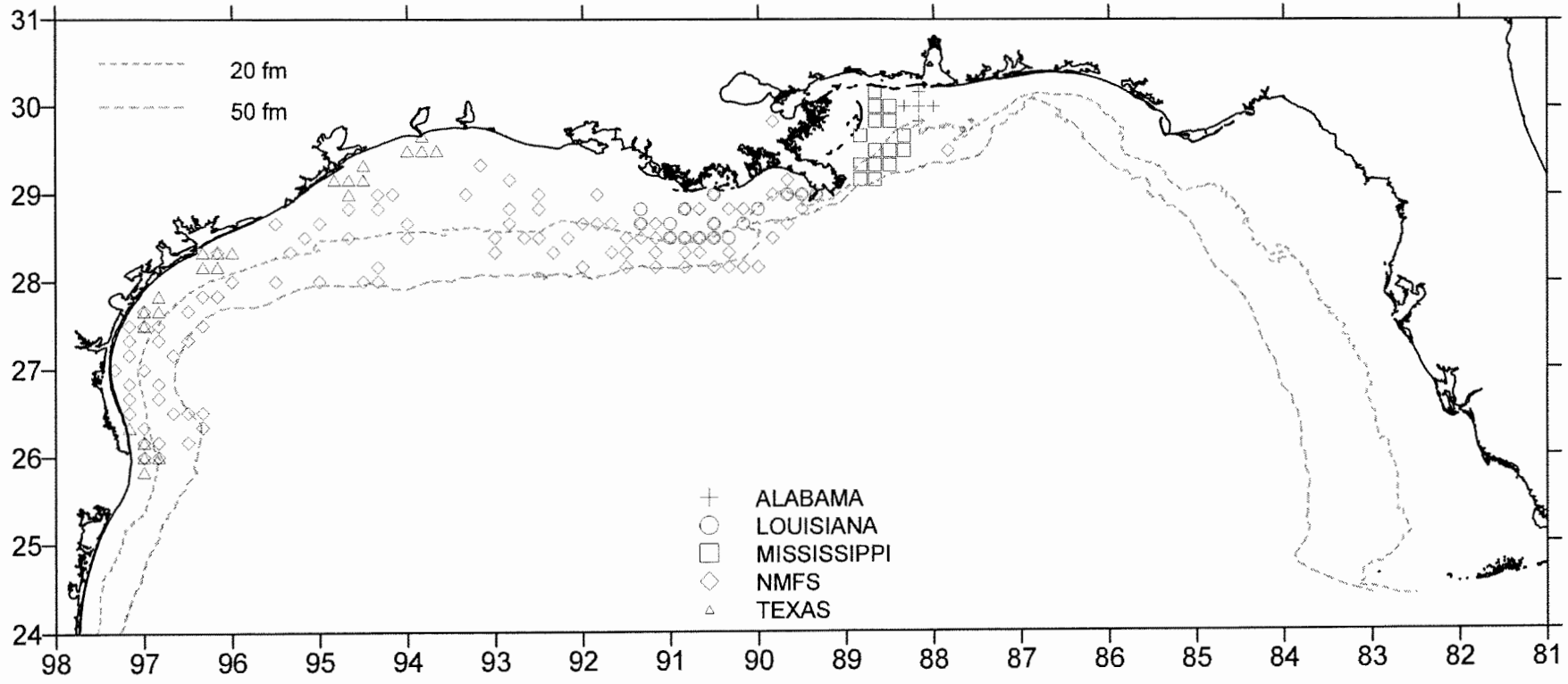

Figure 7. Locations of environmental stations during the 2001 Summer Shrimp/Groundfish Survey summarized by 10-minute squares.

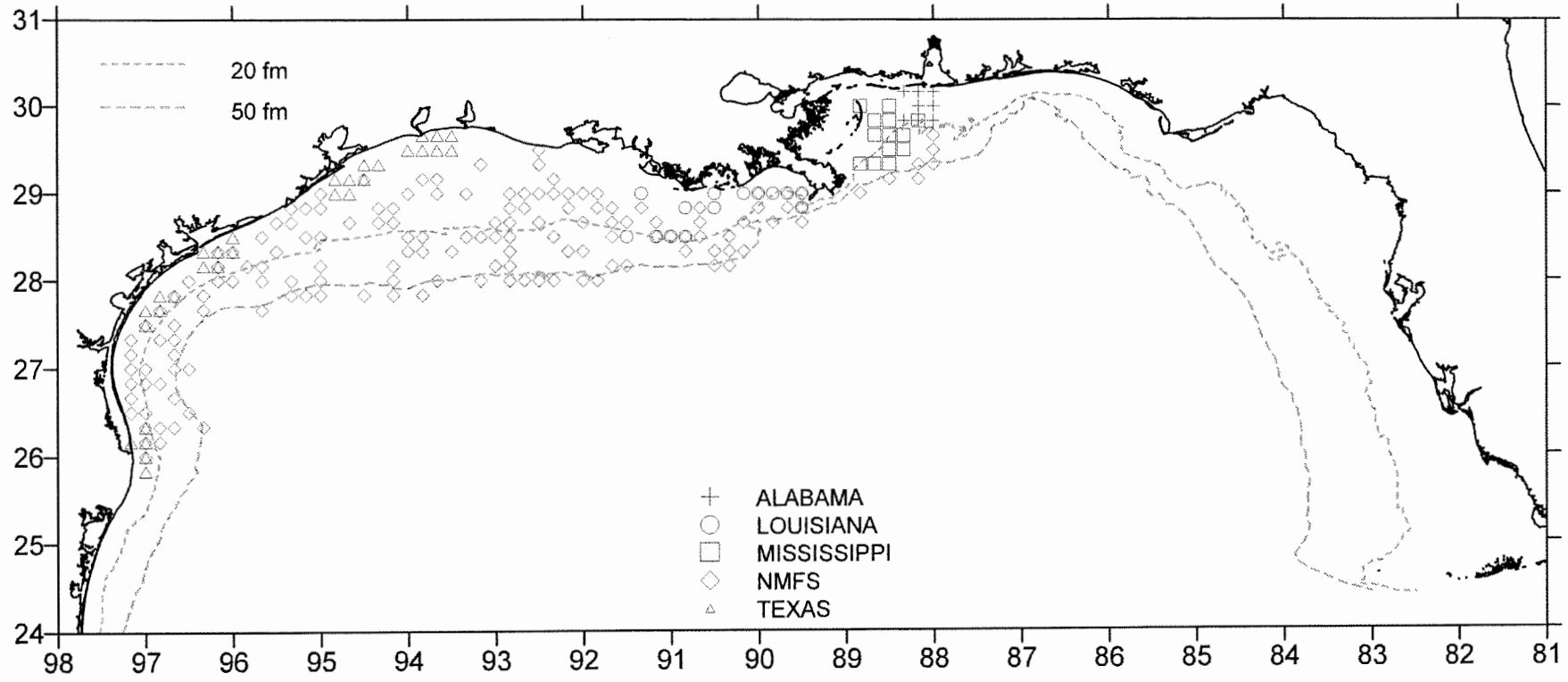

Figure 8. Locations of environmental stations during the 2001 Fall Shrimp/Groundfish Survey summarized by 10-minute squares.

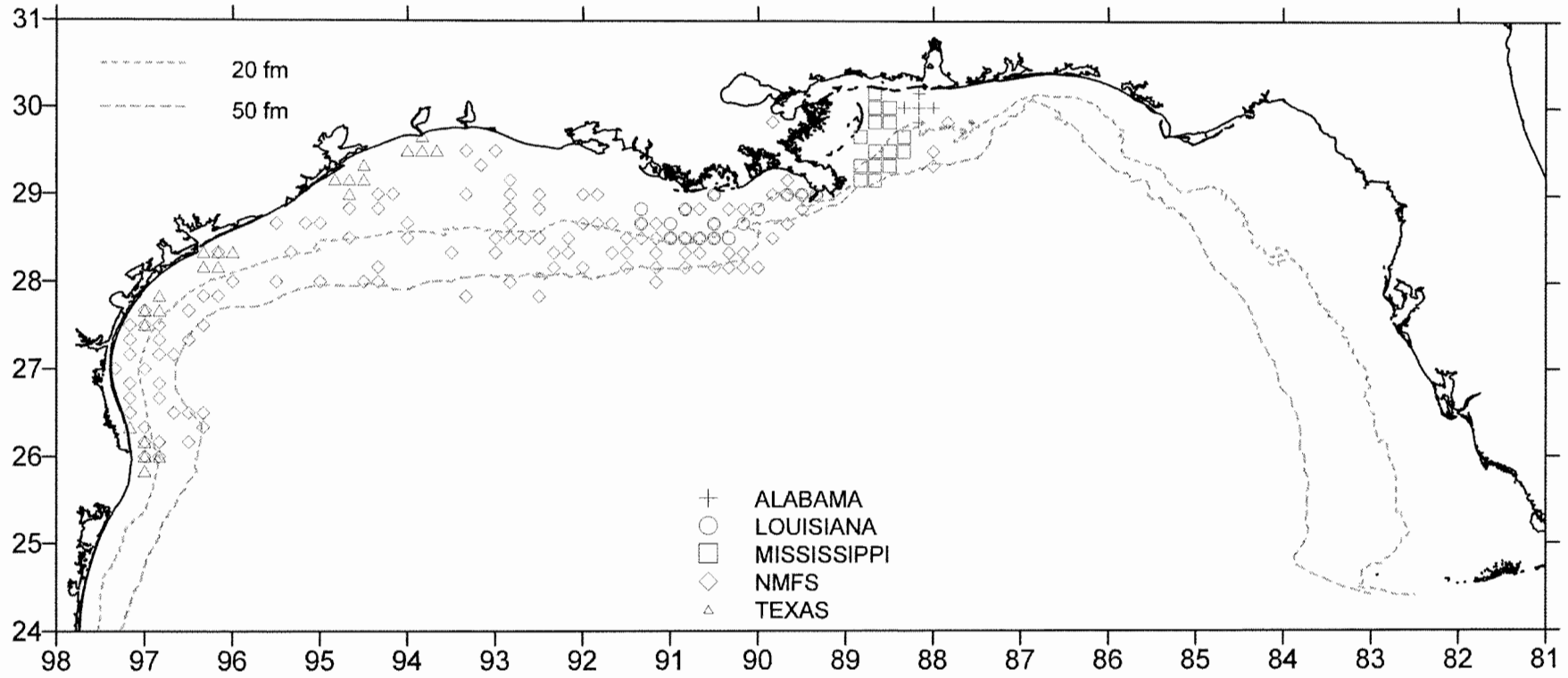

Figure 9. Locations of trawl stations during the 2001 Summer Shrimp/Groundfish Survey summarized by 10-minute squares.

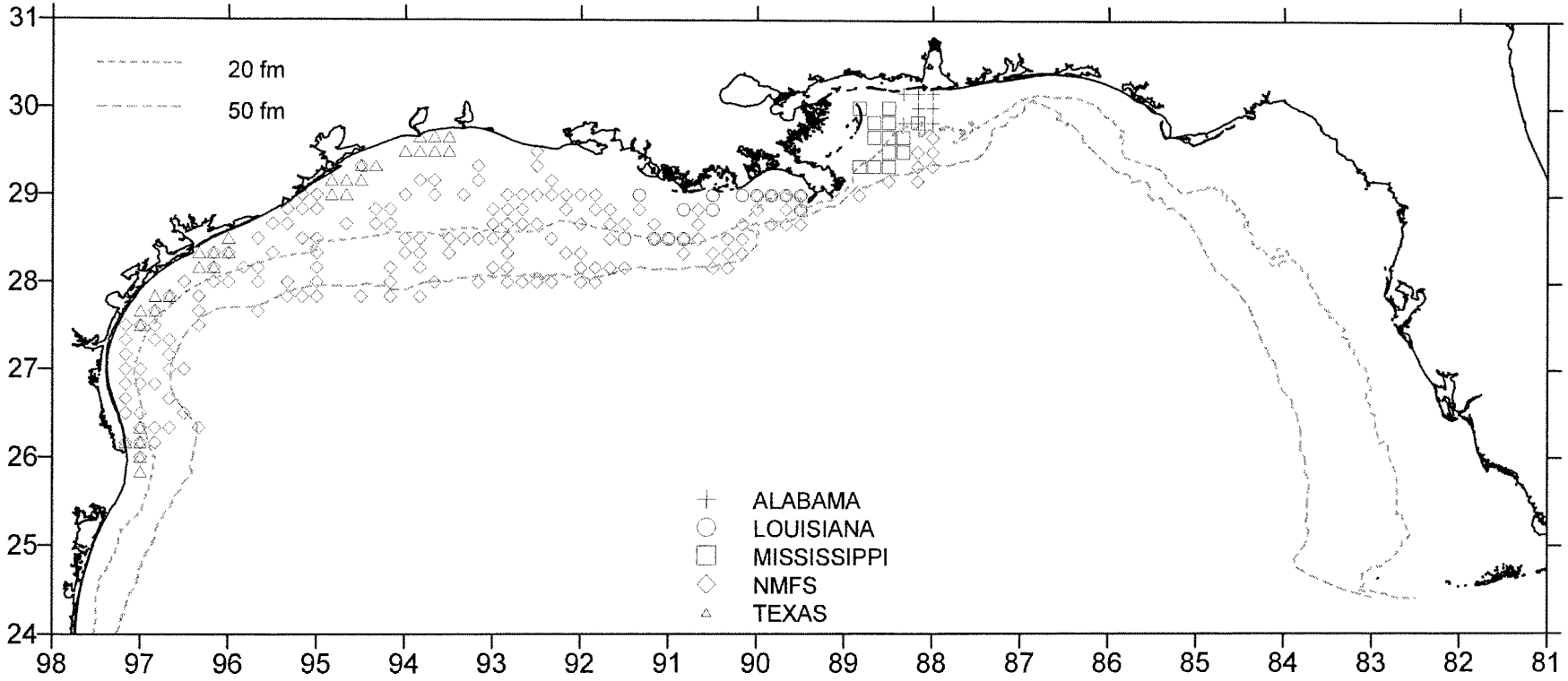

Figure 10. Locations of trawl stations during the 2001 Fall Shrimp/Groundfish Survey summarized by 10-minute squares.

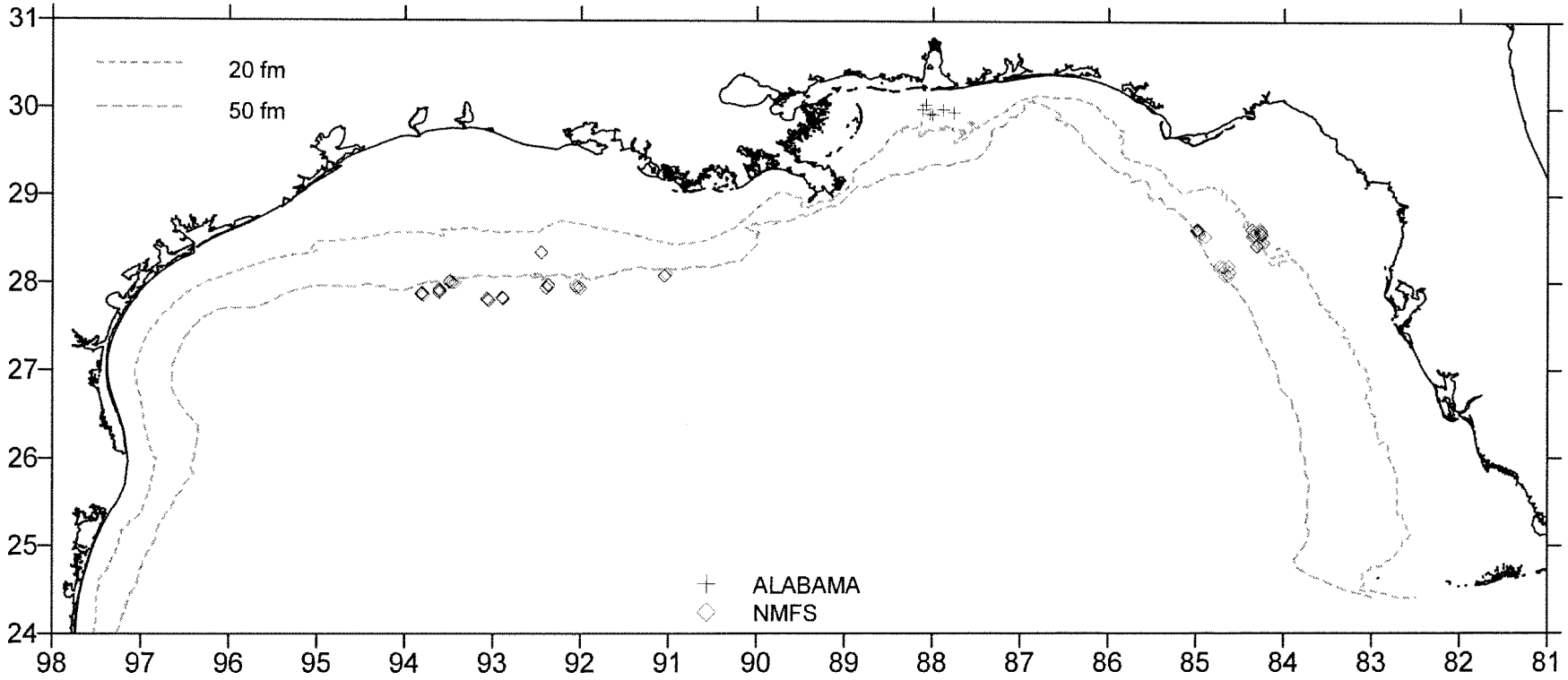

Figure 11. Locations of trap stations during the 2001 Reef Fish Survey.

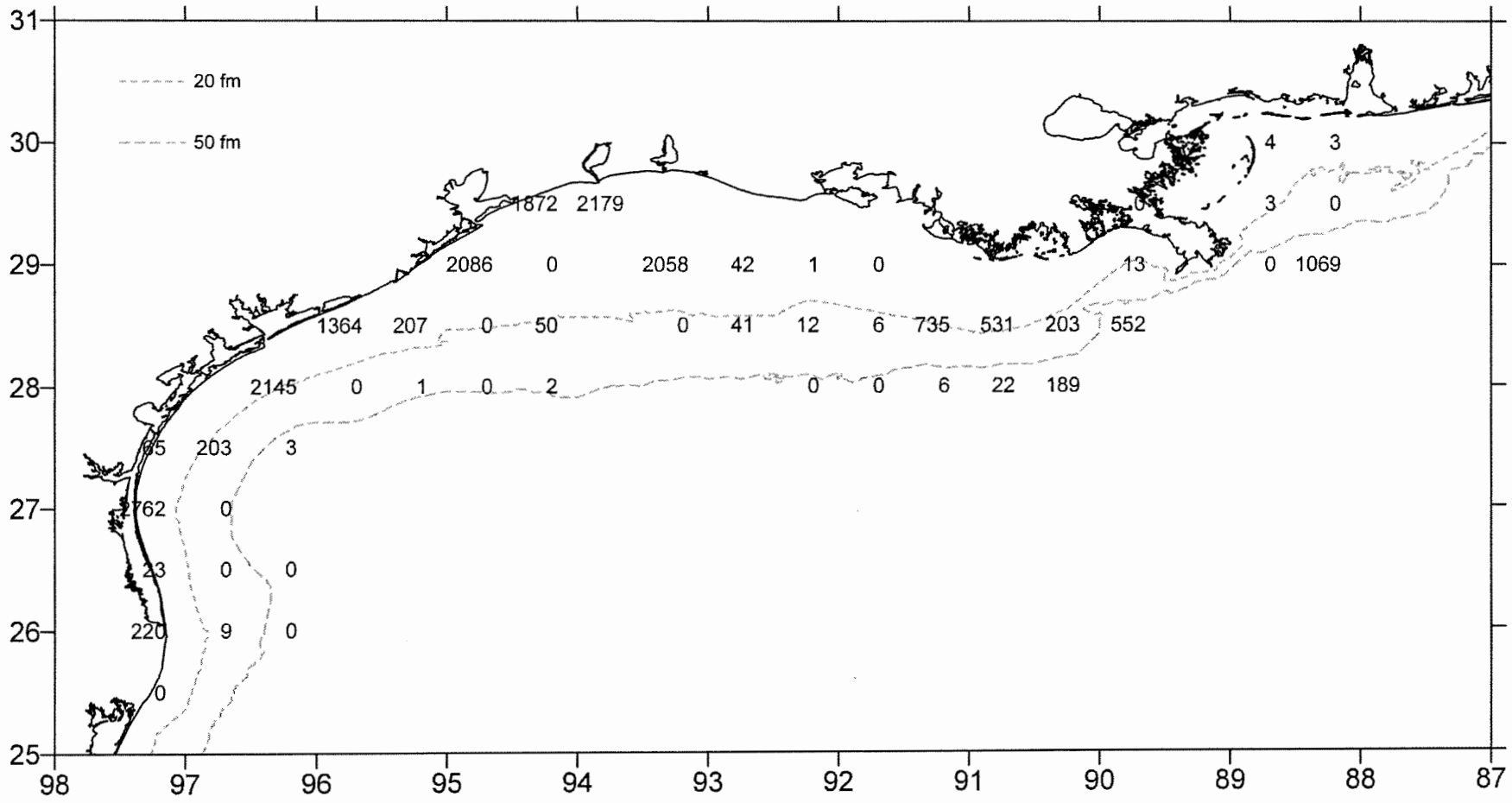

Figure 12. Atlantic croaker, Micropogonias undulatus, number/hour for June-July 2001.

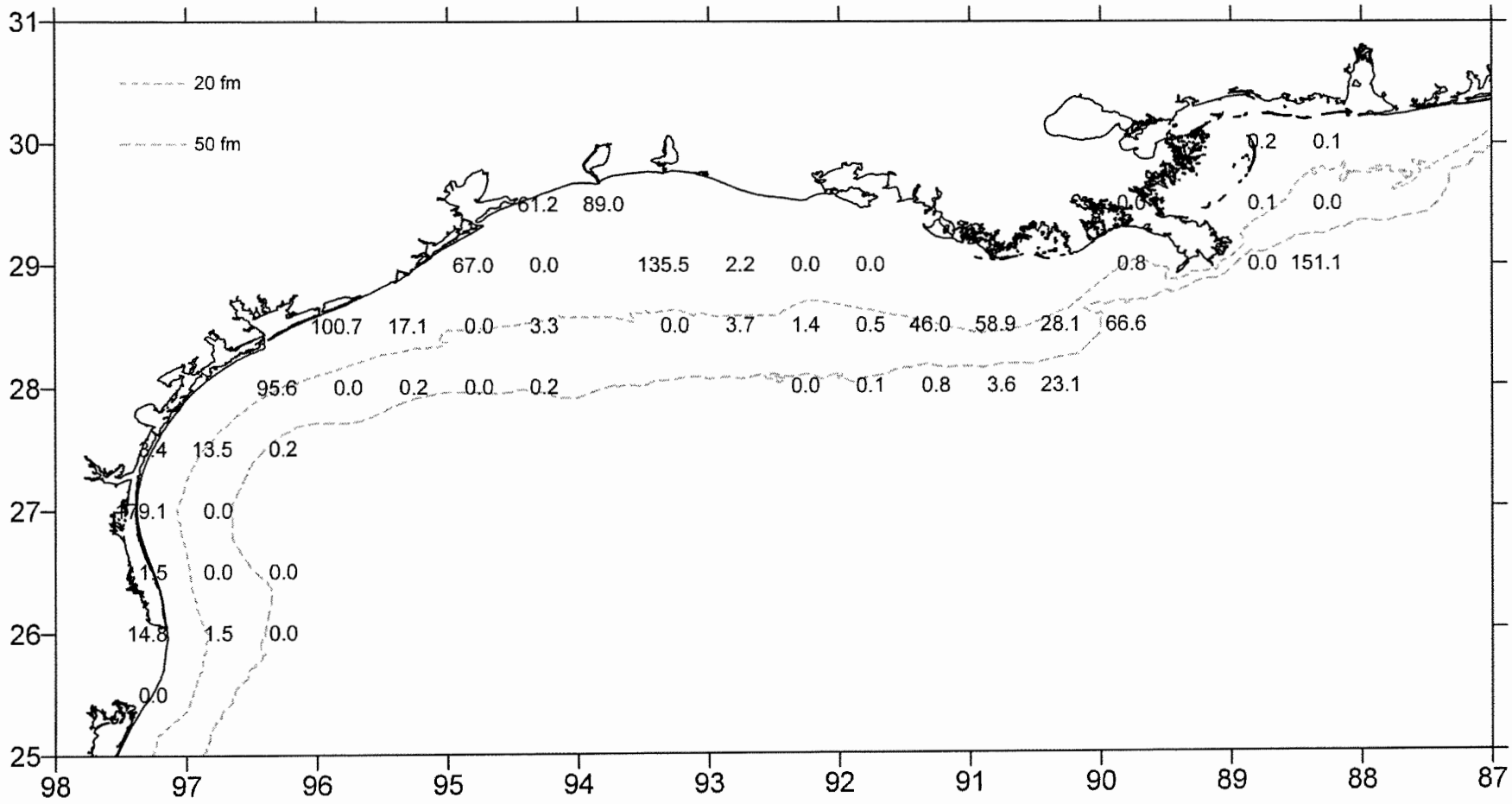

Figure 13. Atlantic croaker, Micropogonias undulatus, lb/hour for June-July 2001

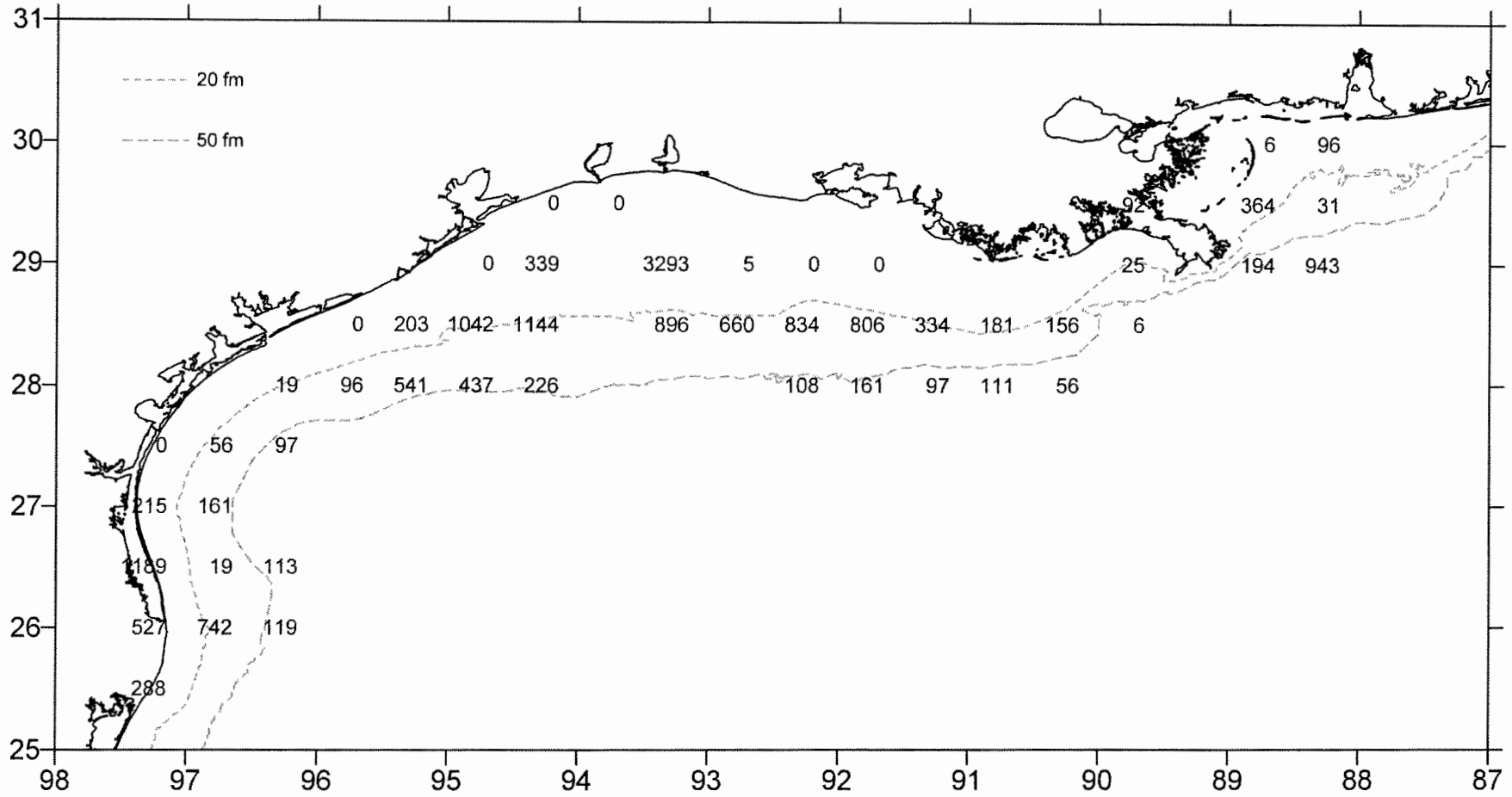

Figure 14. Longspine porgy, Stenotomus caprinus, number/hour for June-July 2001.

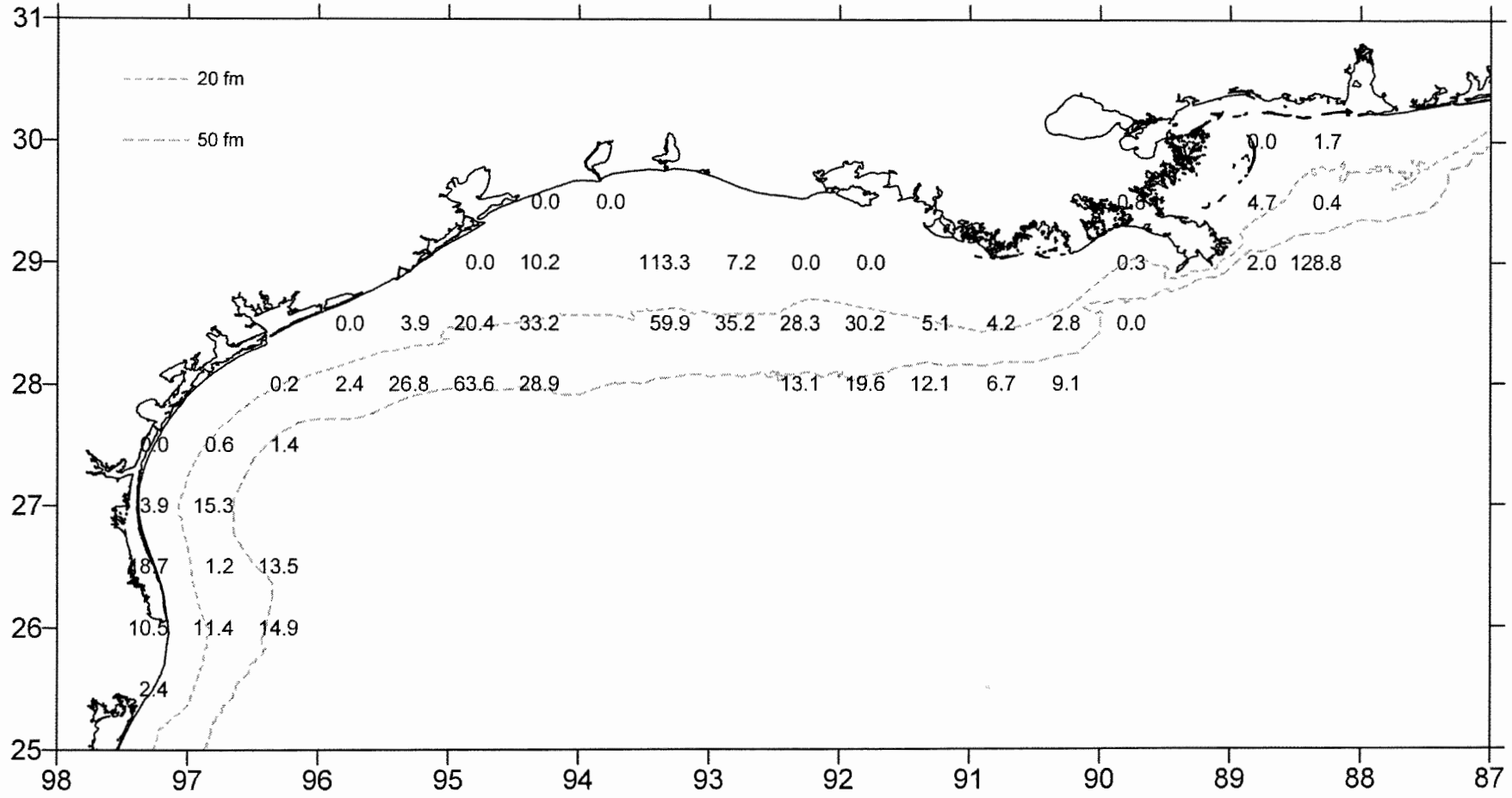

Figure 15. Longspine porgy, Stenotomus caprinus, lb/hour for June-July 2001.

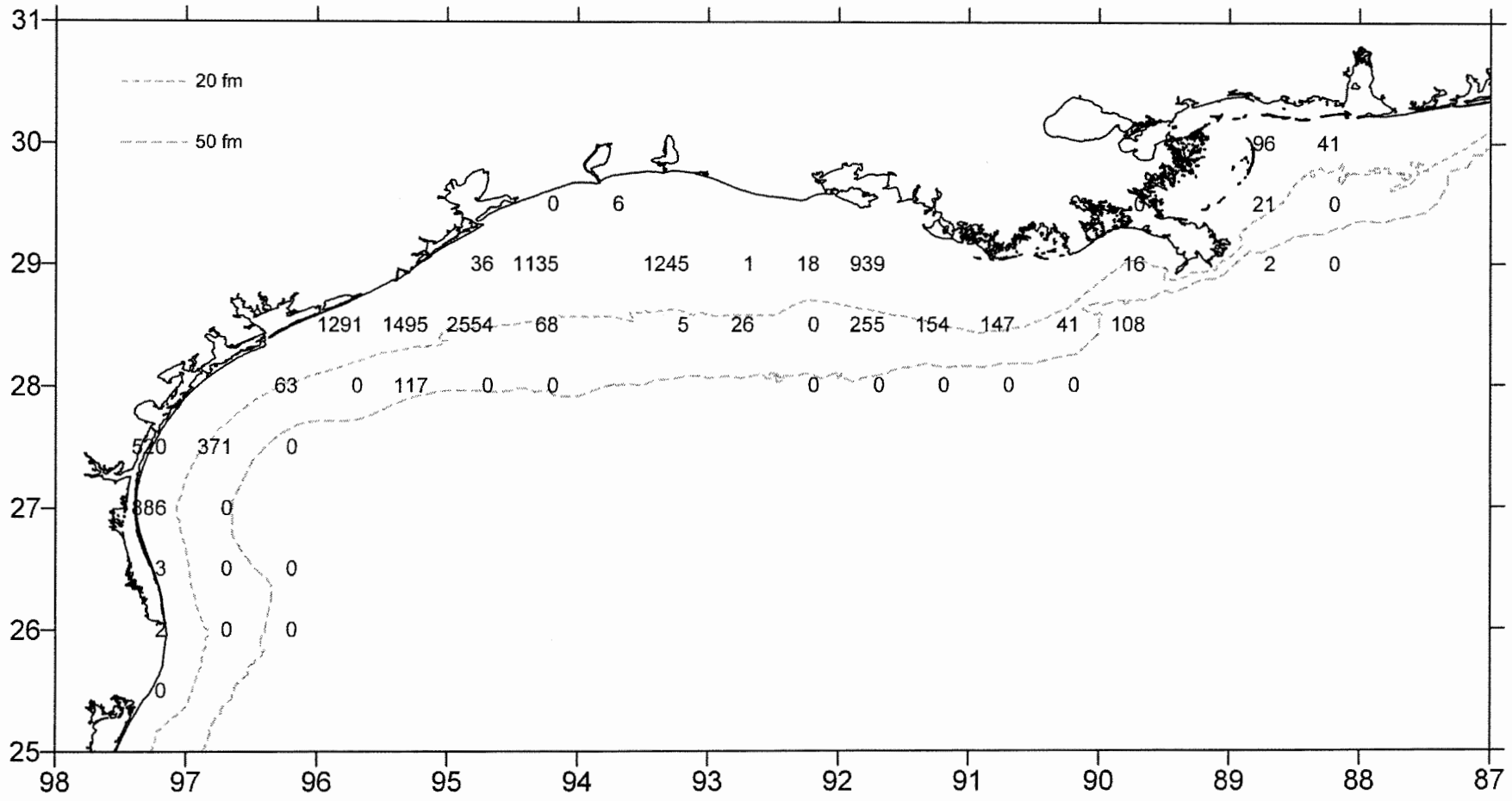

Figure 16. Atlantic bumper, Chloroscombrus chrysurus, number/hour for June-July 2001.

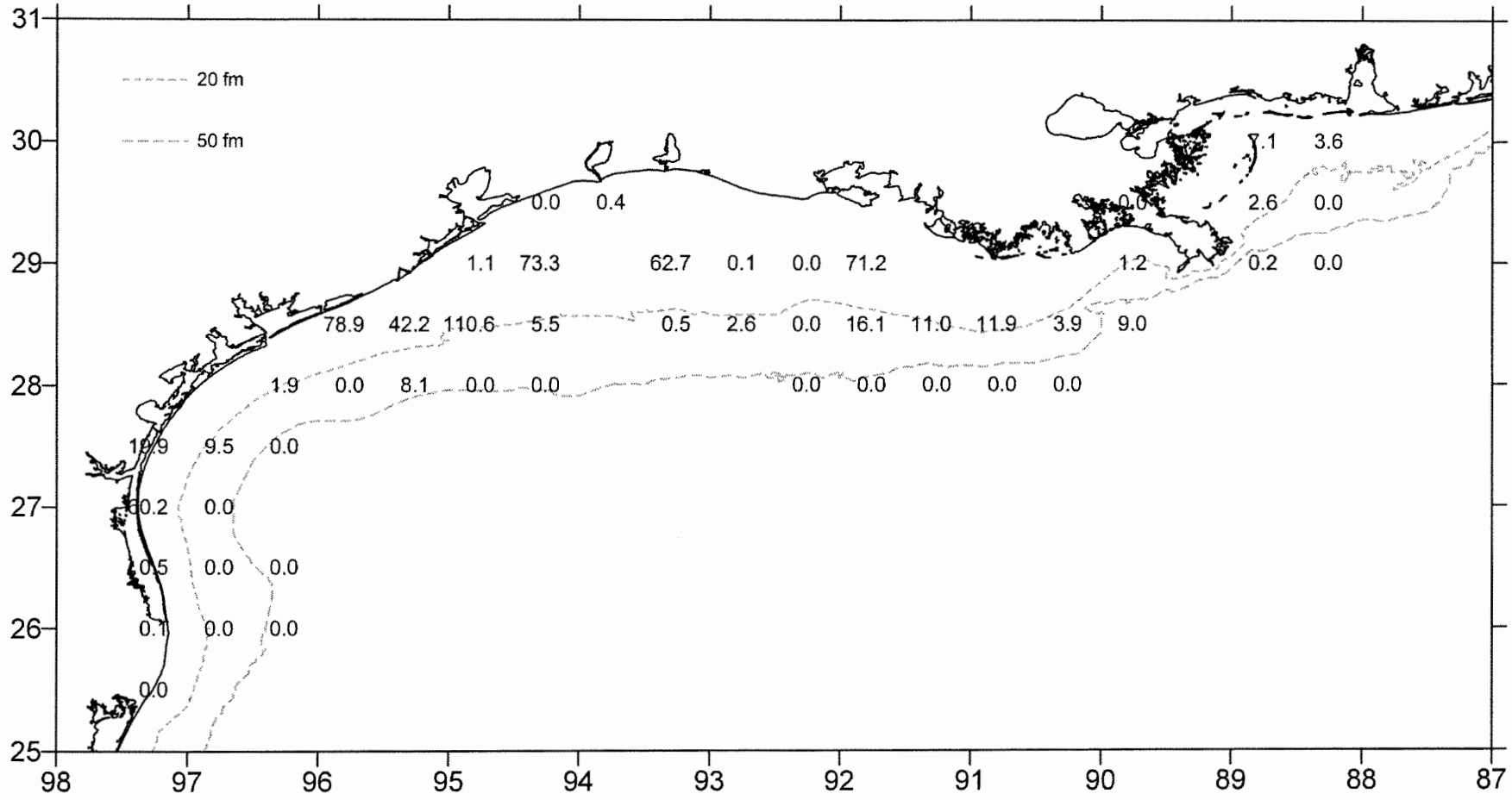

Figure 17. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for June-July 2001.

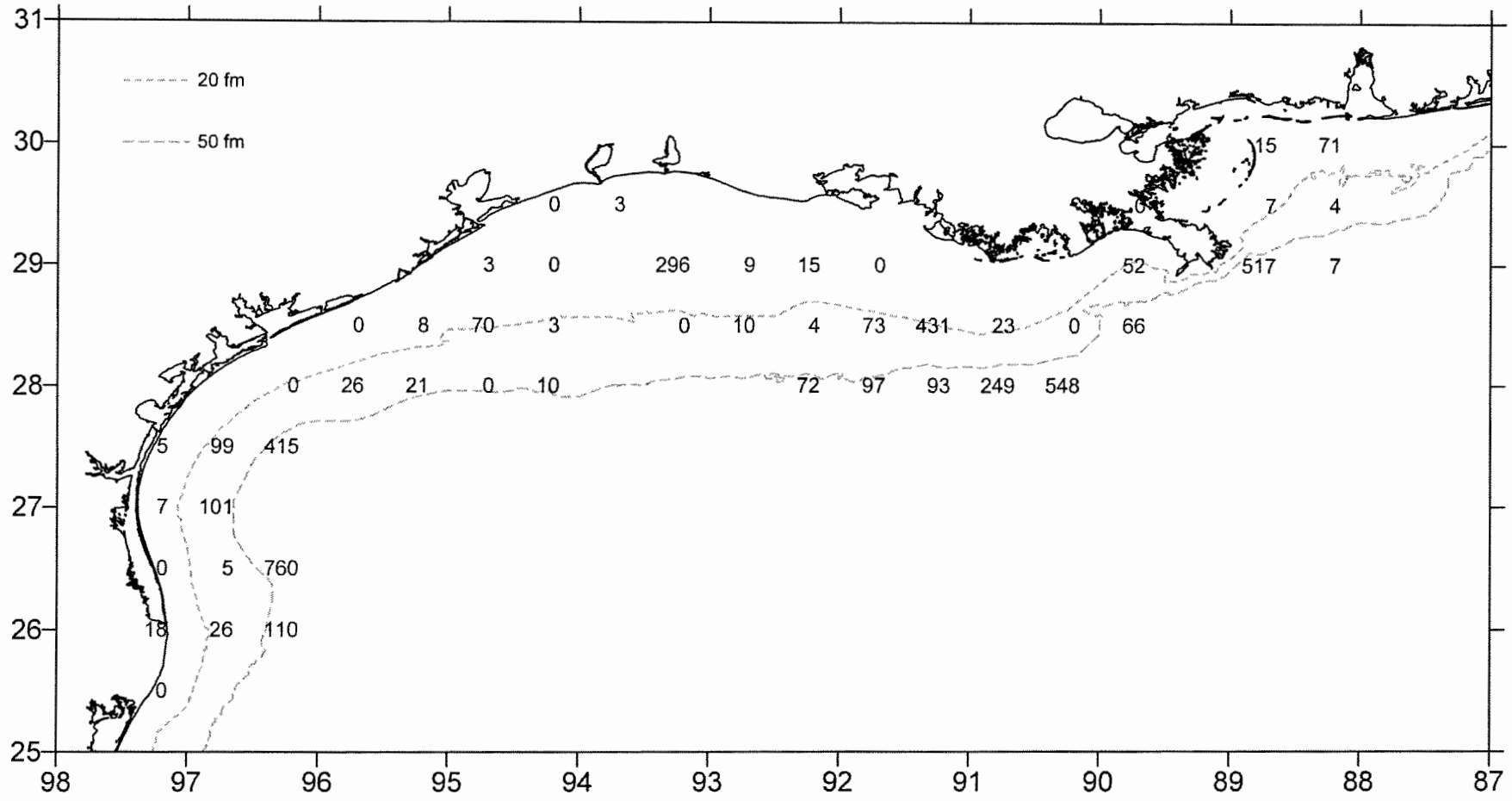

Figure 18. Gulf butterfish, Peprilus burti, number/hour for June-July 2001.

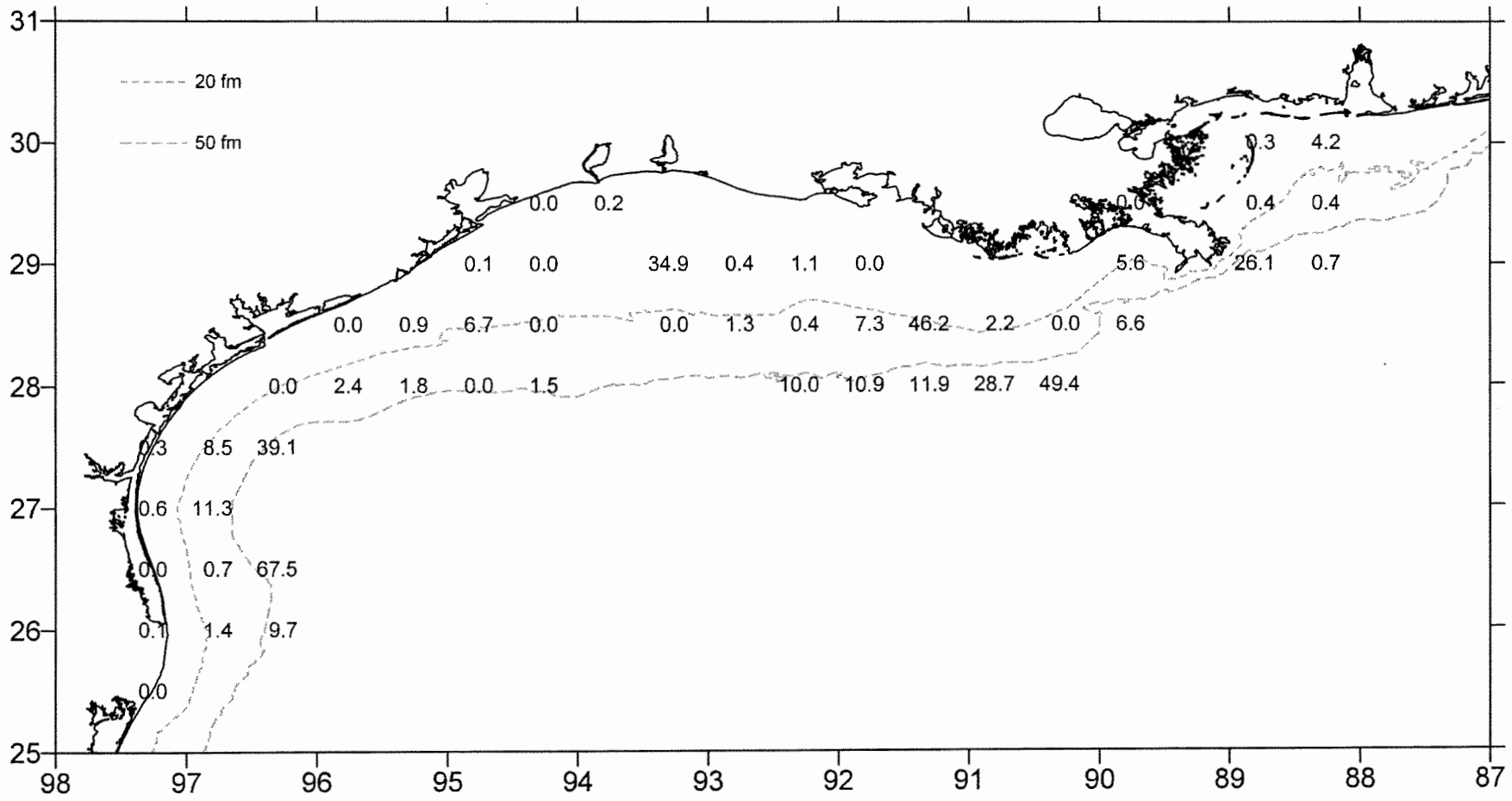

Figure 19. Gulf butterfish, Peprilus burti, lb/hour for June-July 2001.

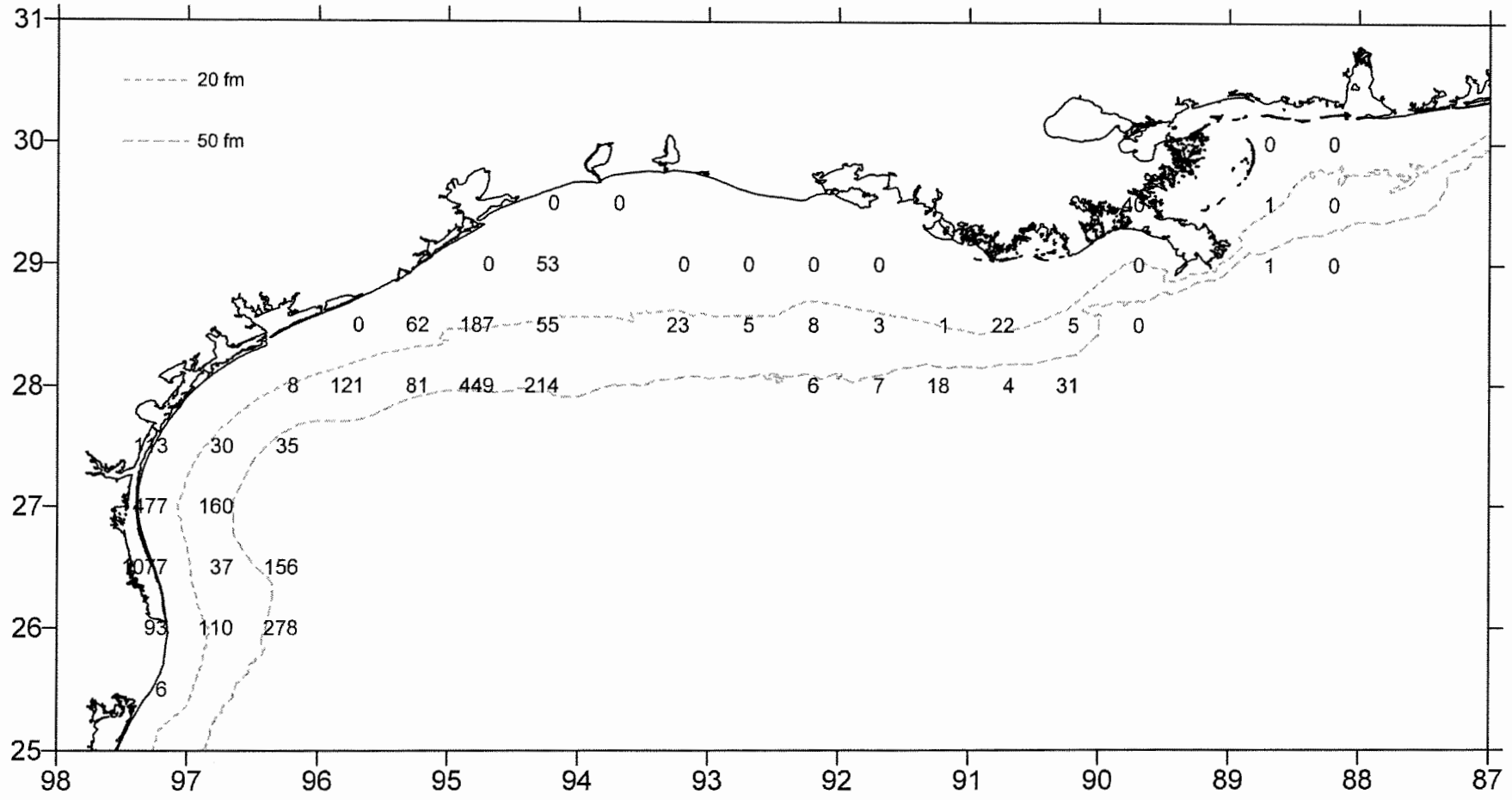

Figure 20. Dwarf goatfish, Upeneus parvus, number/hour for June-July 2001.

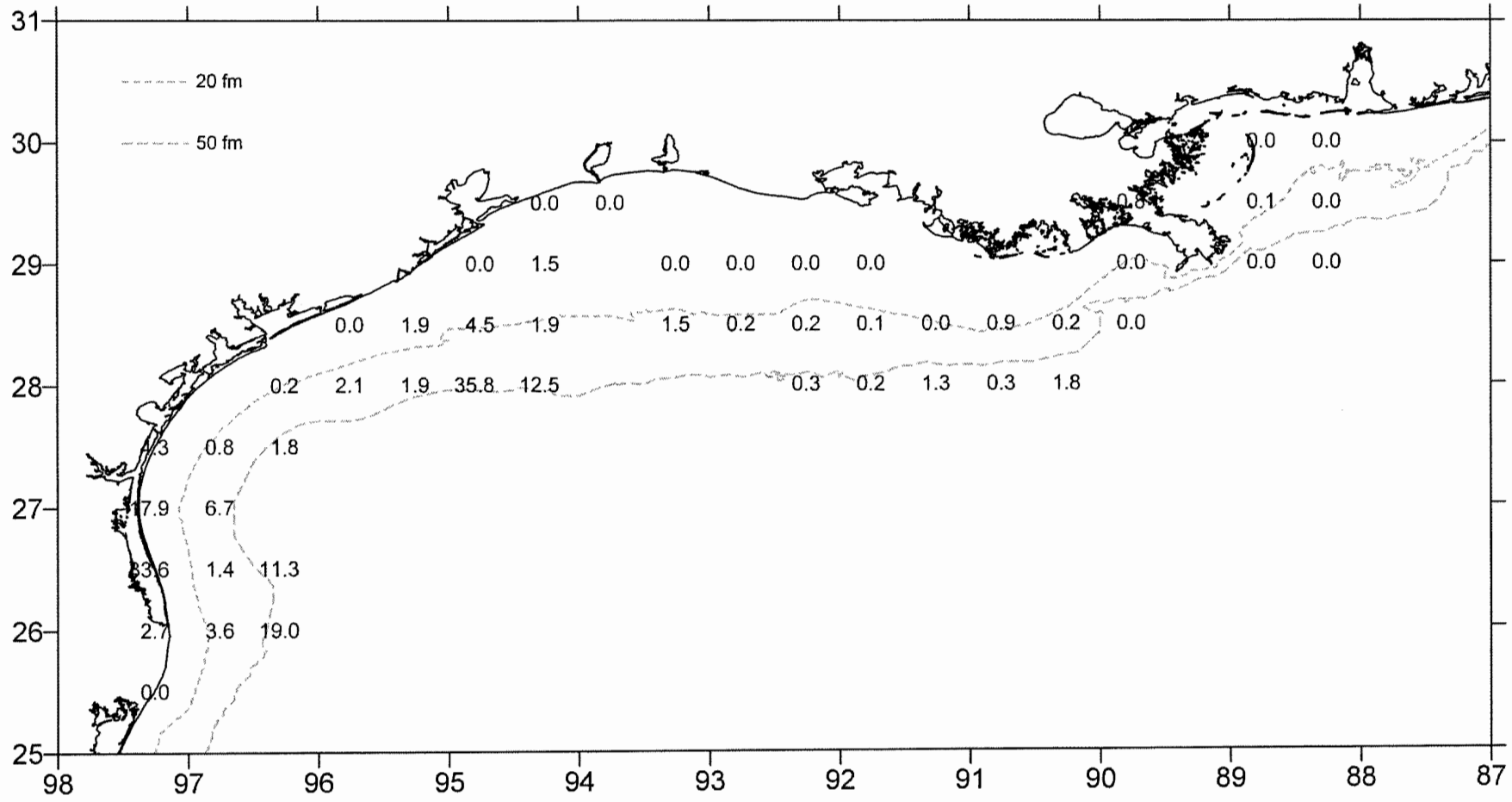

Figure 21. Dwarf goatfish, Upeneus parvus, lb/hour for June-July 2001.

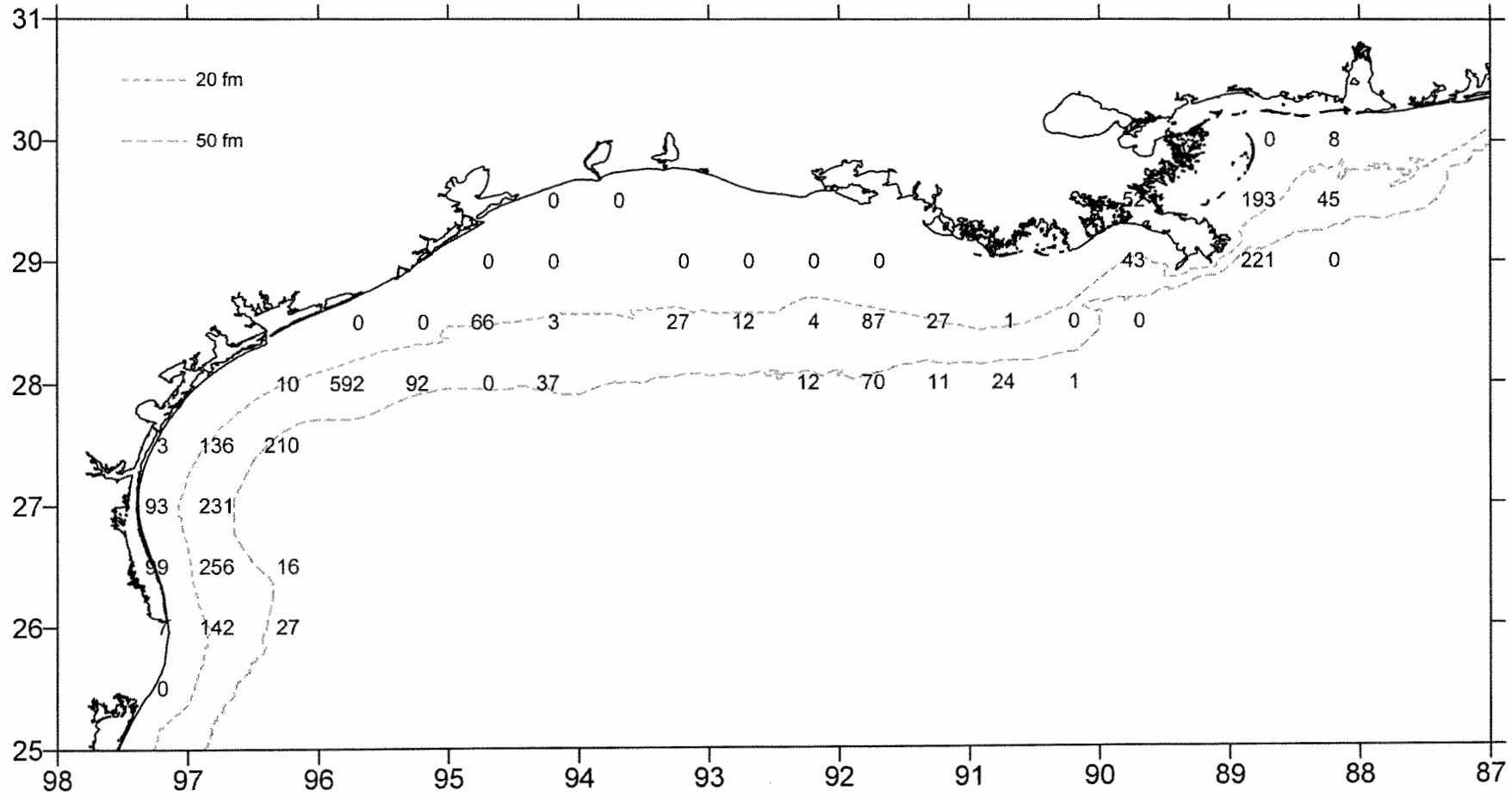

Figure 22. Largescale lizardfish, Saurida brasiliensis, number/hour for June-July 2001.

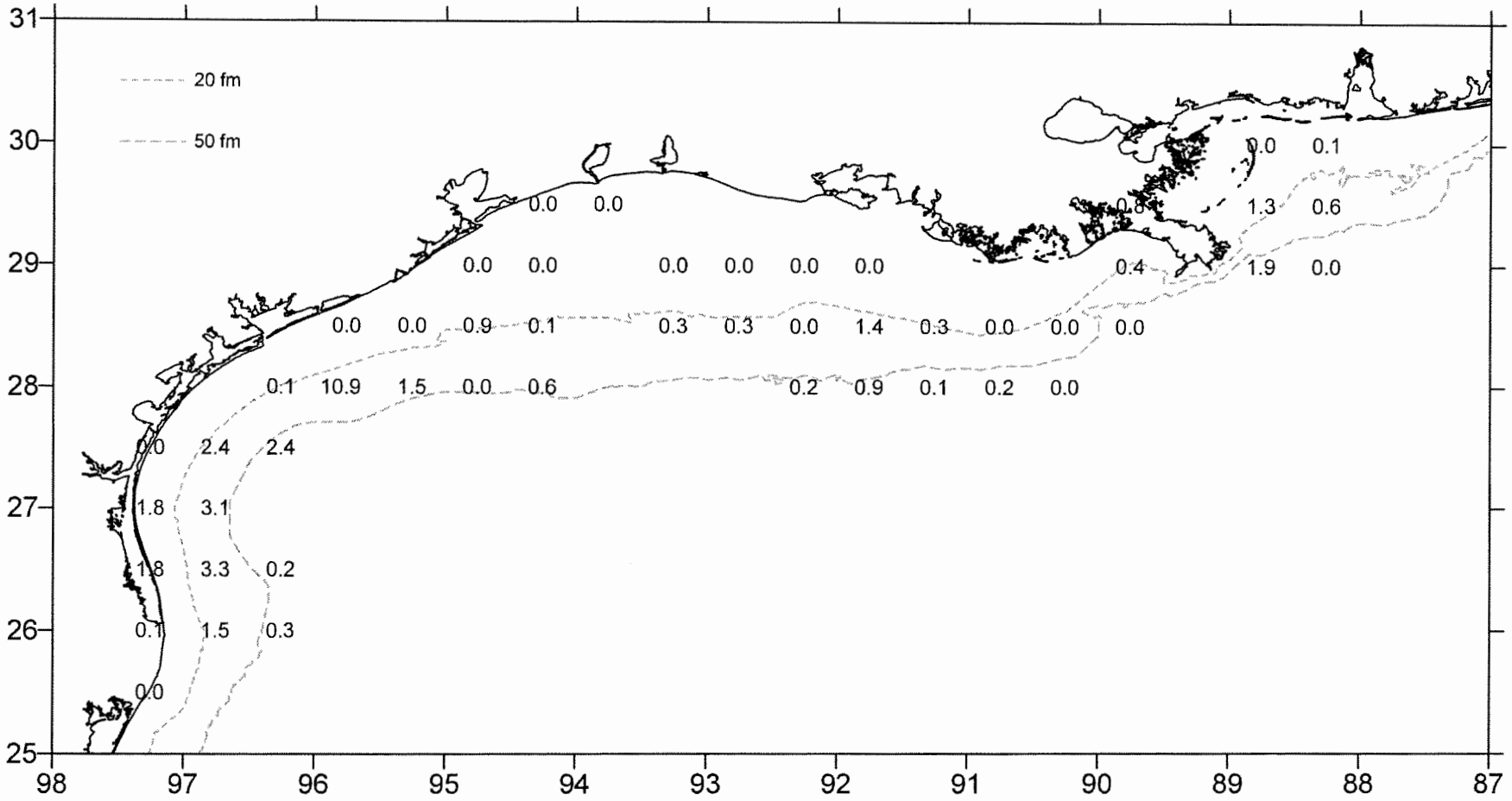

Figure 23. Largescale lizardfish, Saurida brasiliensis, lb/hour June-July 2001.

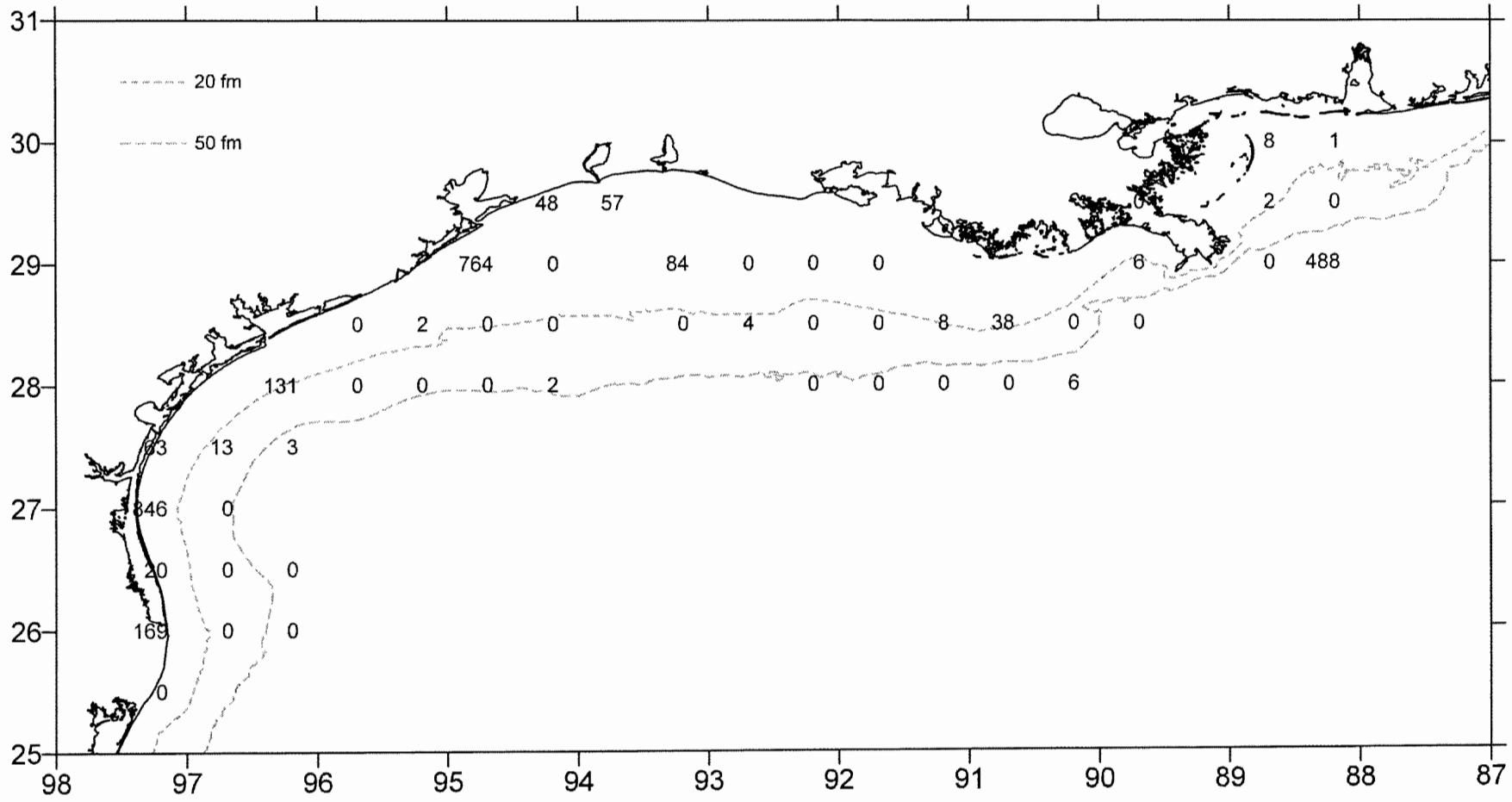

Figure 24. Spot, Leiostomus xanthurus, number/hour June-July 2001.

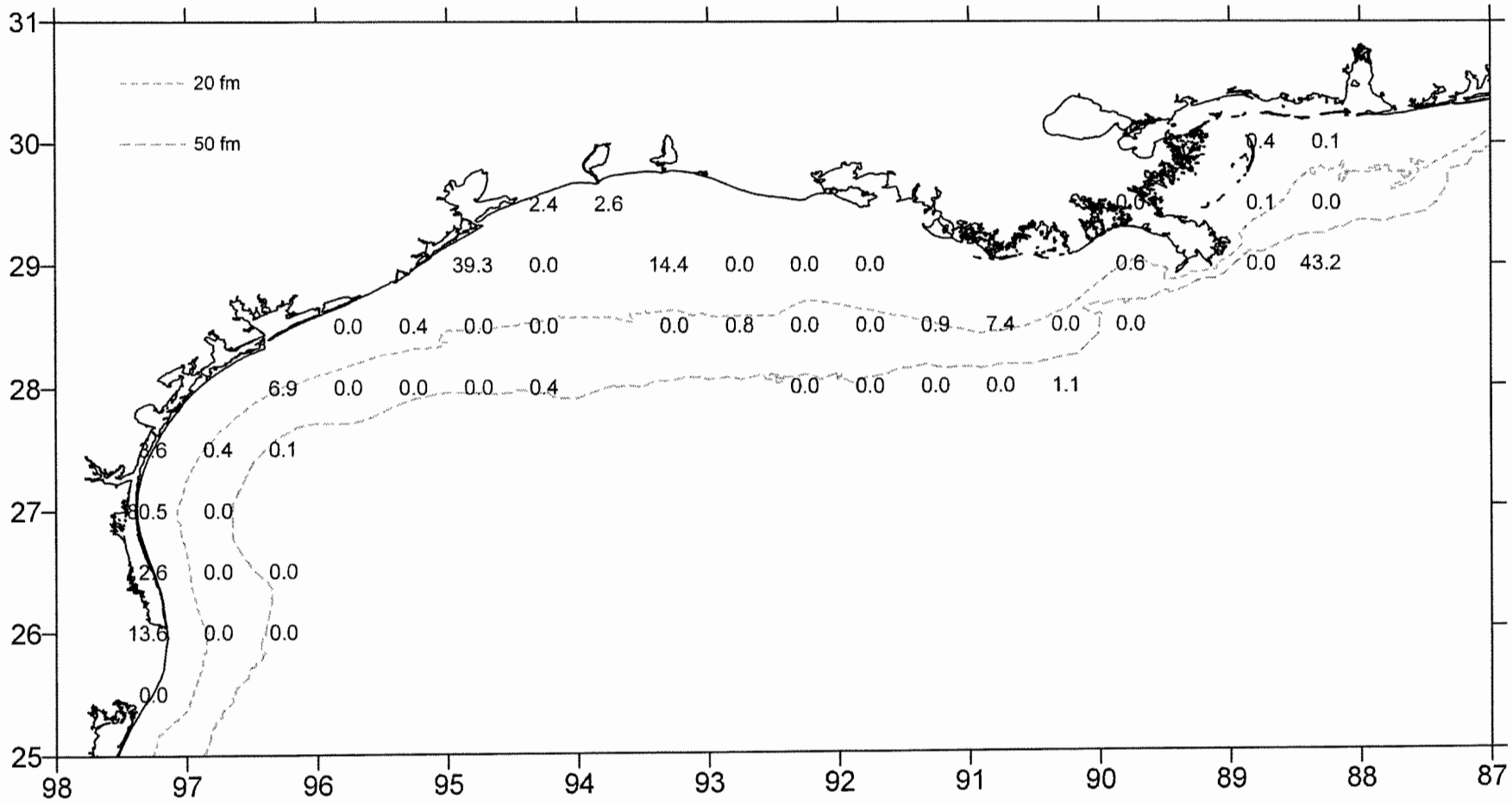

Figure 25. Spot, Leiostomus xanthurus, lb/hour June-July 2001.

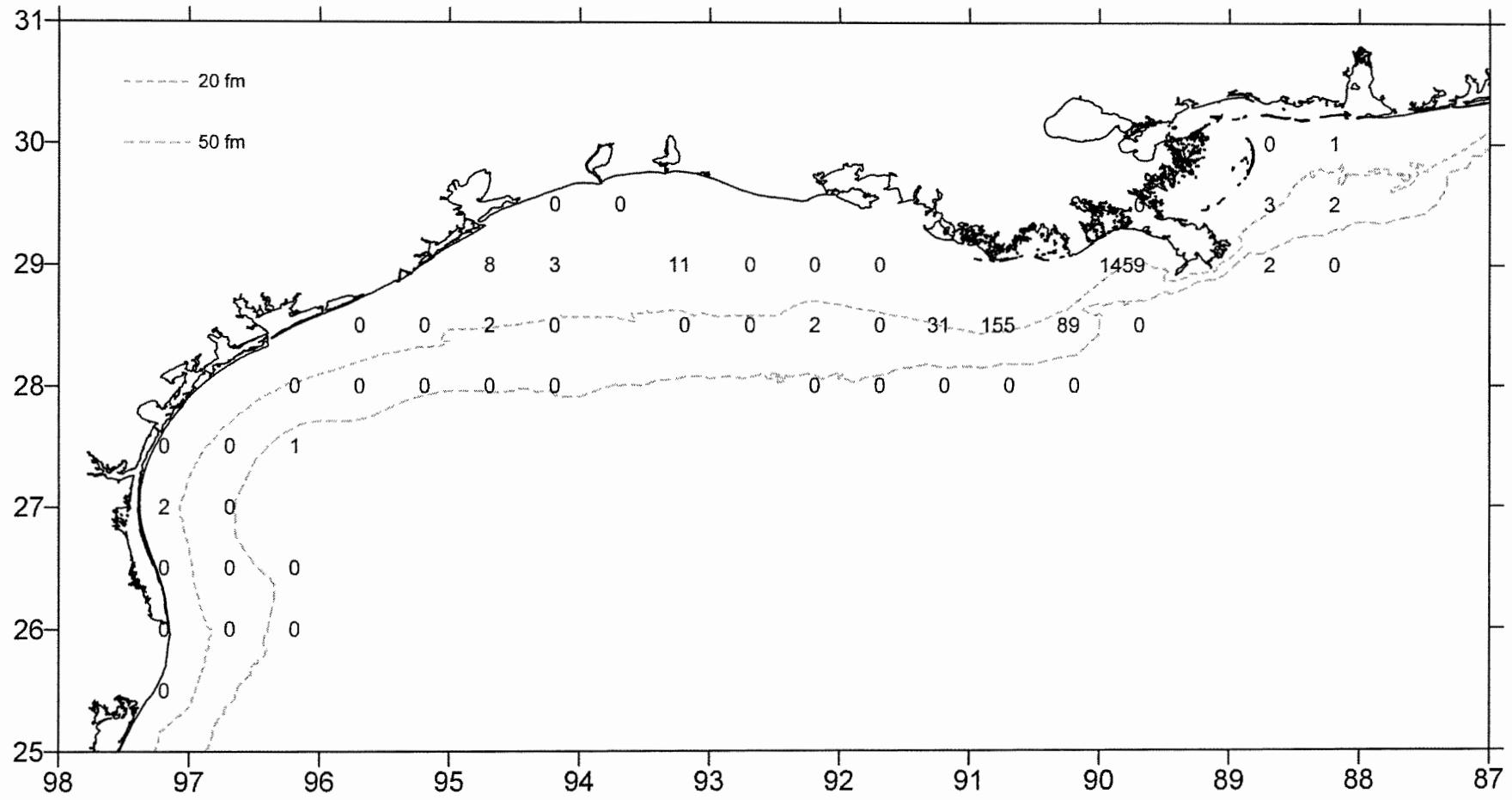

Figure 26. Bighead searobin, Prionotus tribulus, number/hour for June-July 2001.

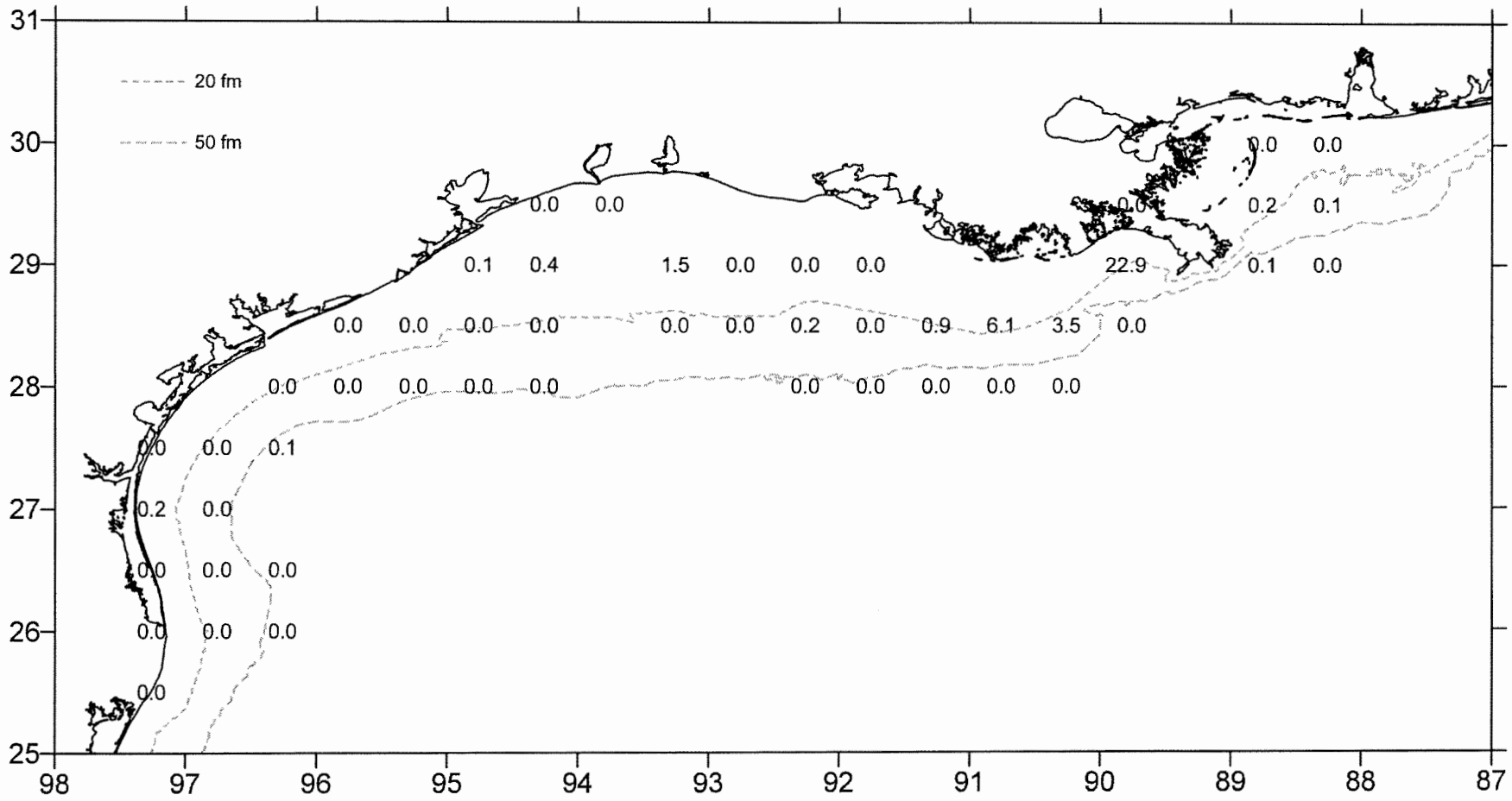

Figure 27. Bighead searobin, Prionotus tribulus, lb/hour for June-July 2001.

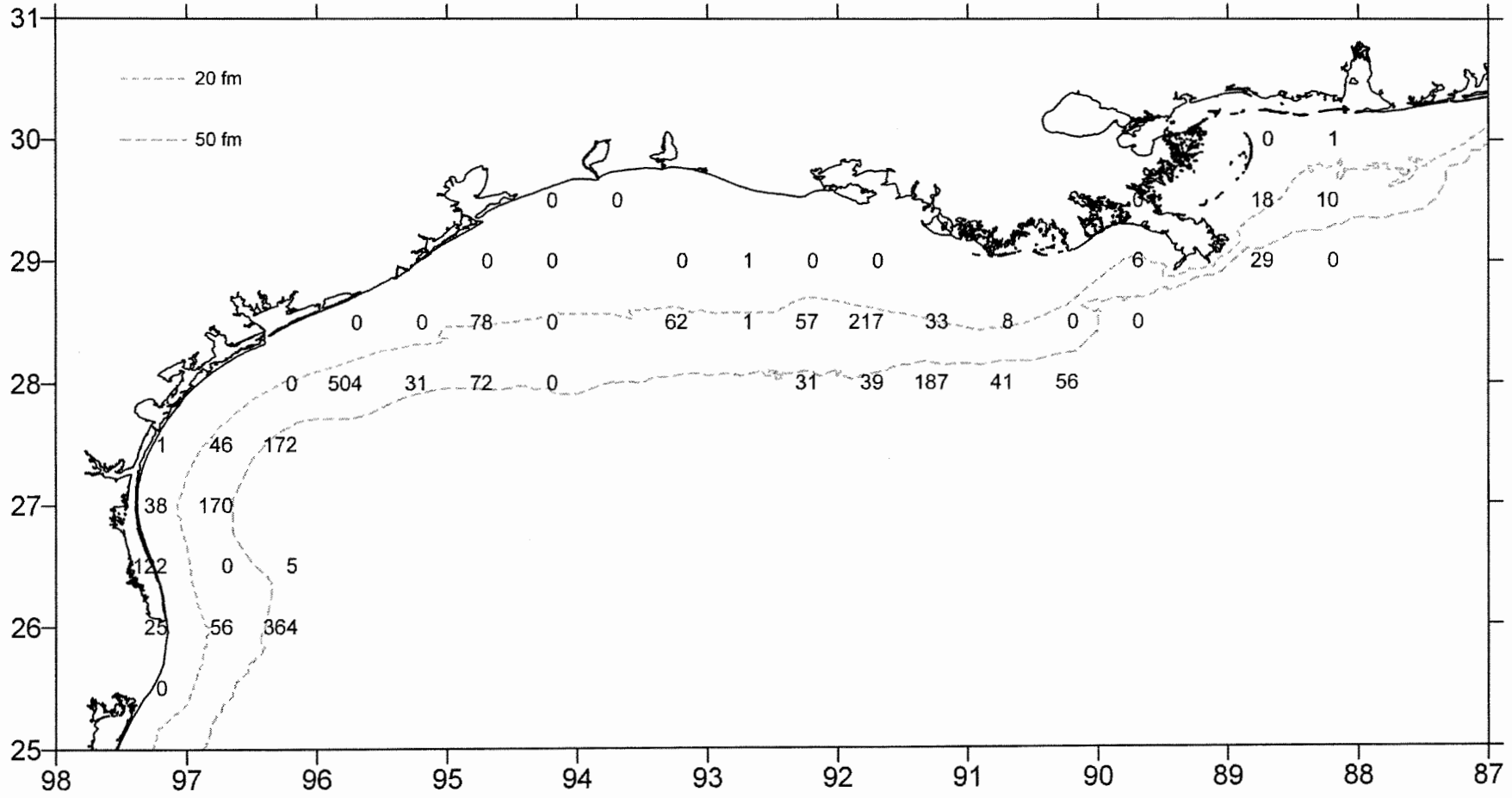

Figure 28. Rough scad, Trachurus lathami, number/hour for June-July 2001.

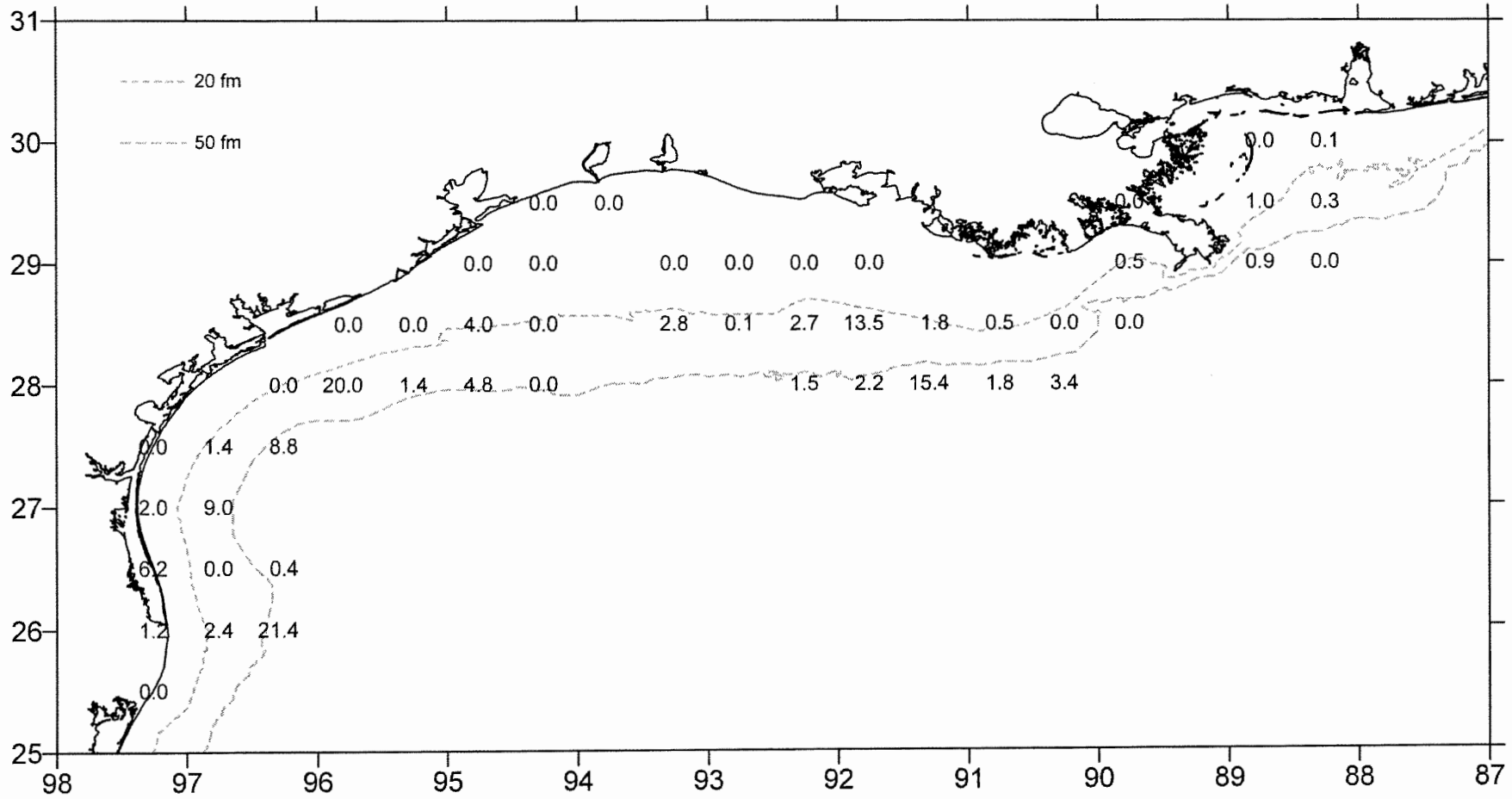

Figure 29. Rough scad, Trachurus lathami, lb/hour for June-July 2001.

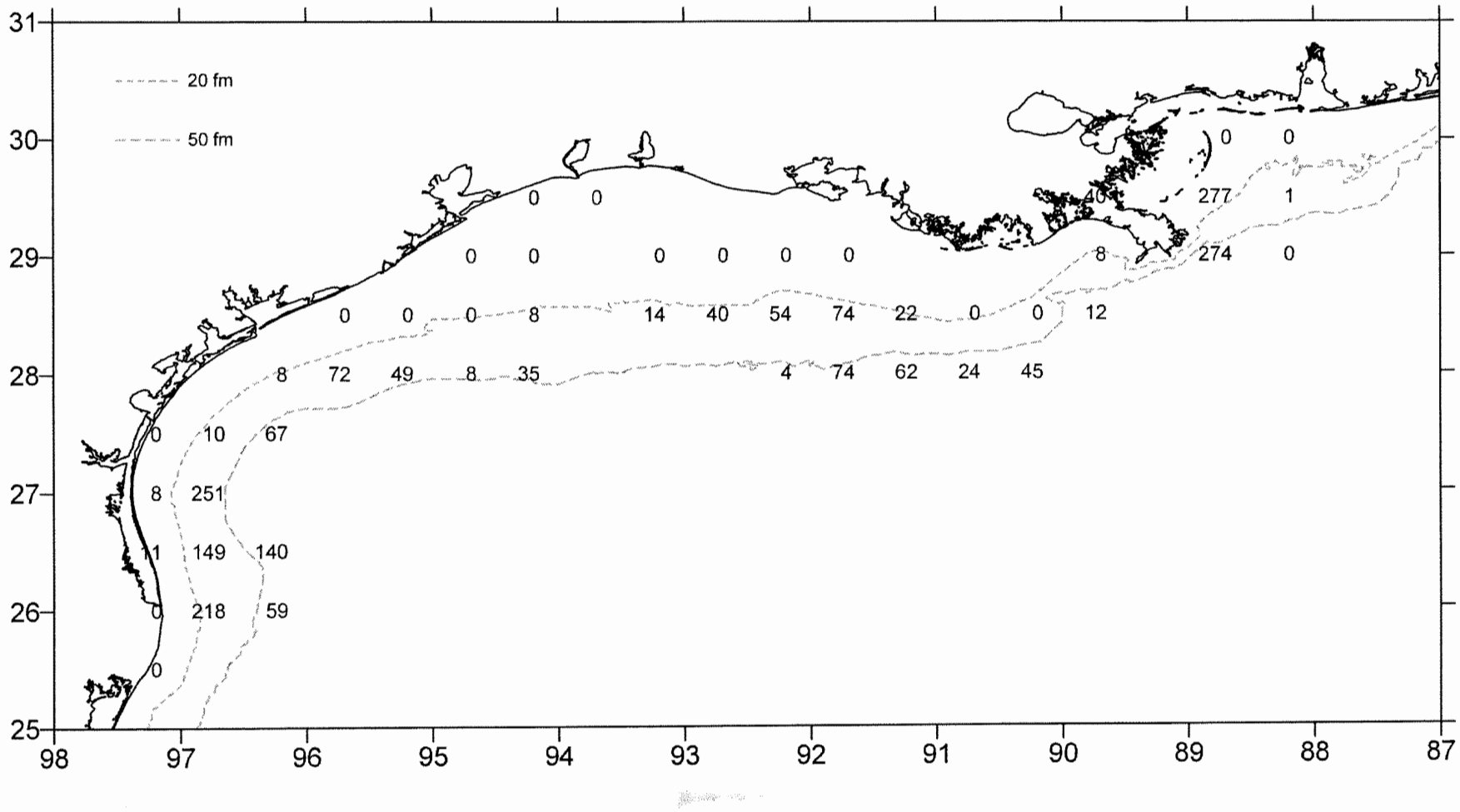

Figure 30. Blackear bass, Serranus altrobranchus, number/hour for June-July 2001.

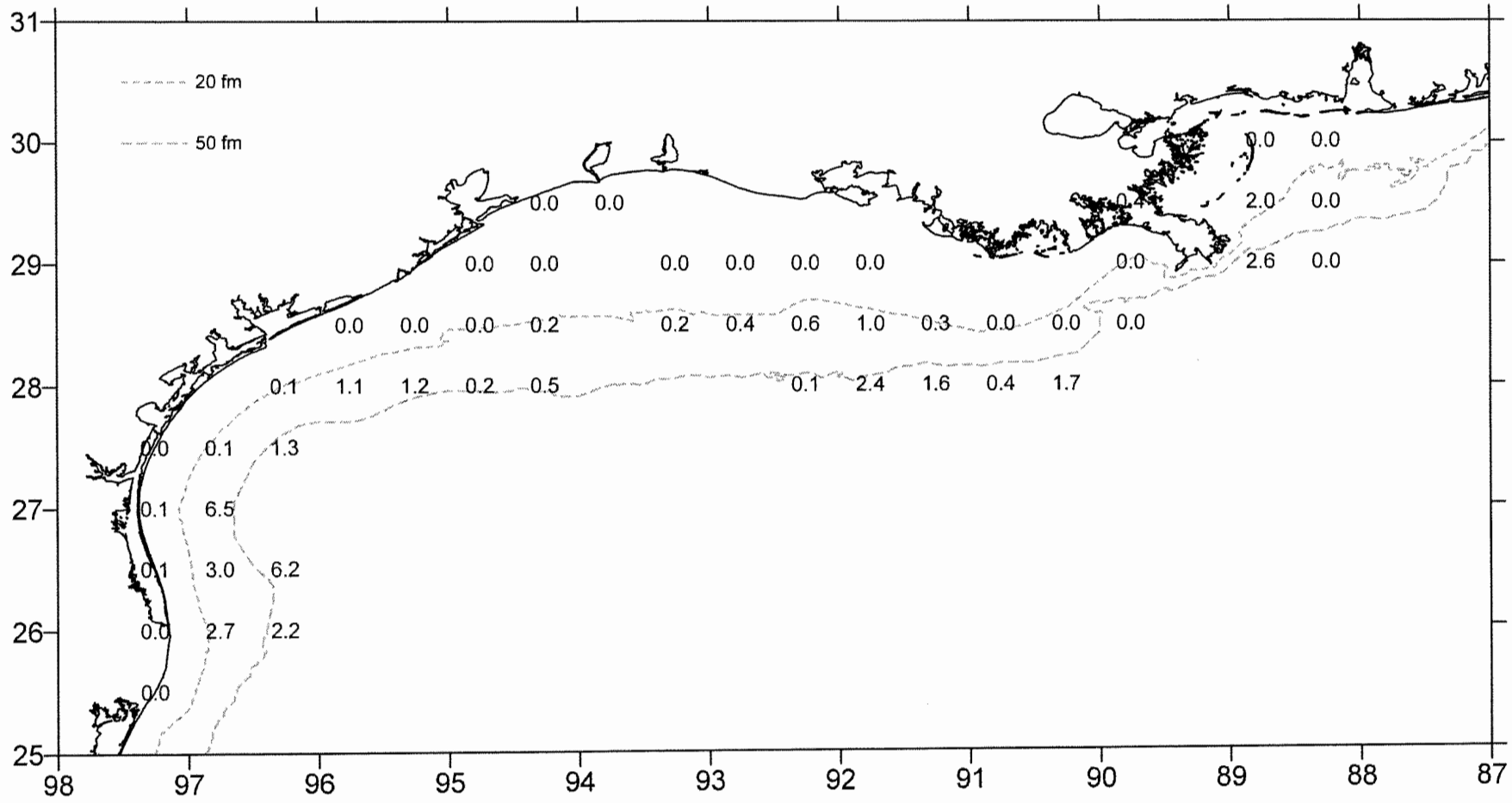

Figure 31. Blackear bass, Serranus altrobranchus, lb/hour for June-July 2001.

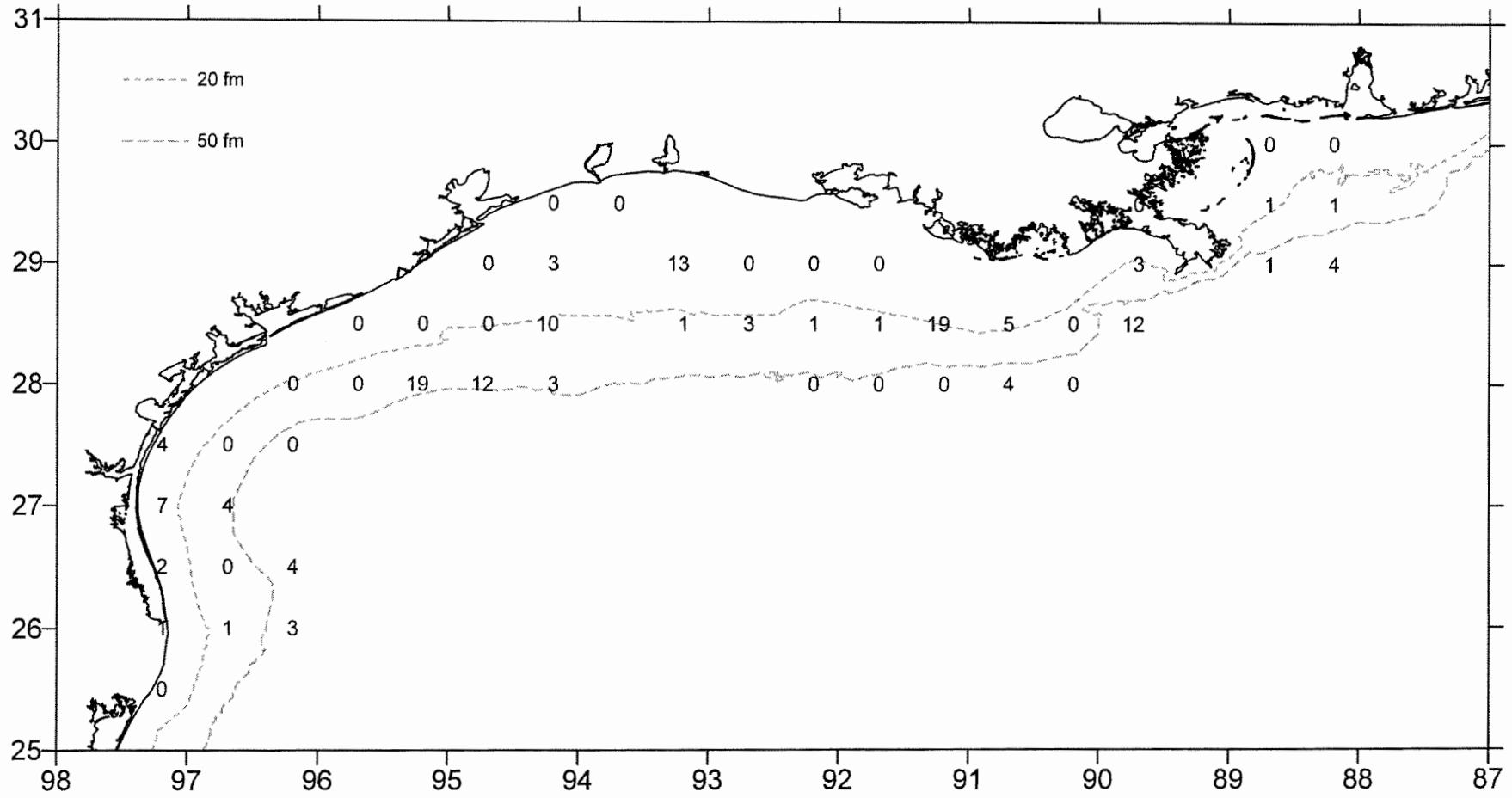

Figure 32. Red snapper, Lutjanus campechanus, number/hour for June-July 2001.

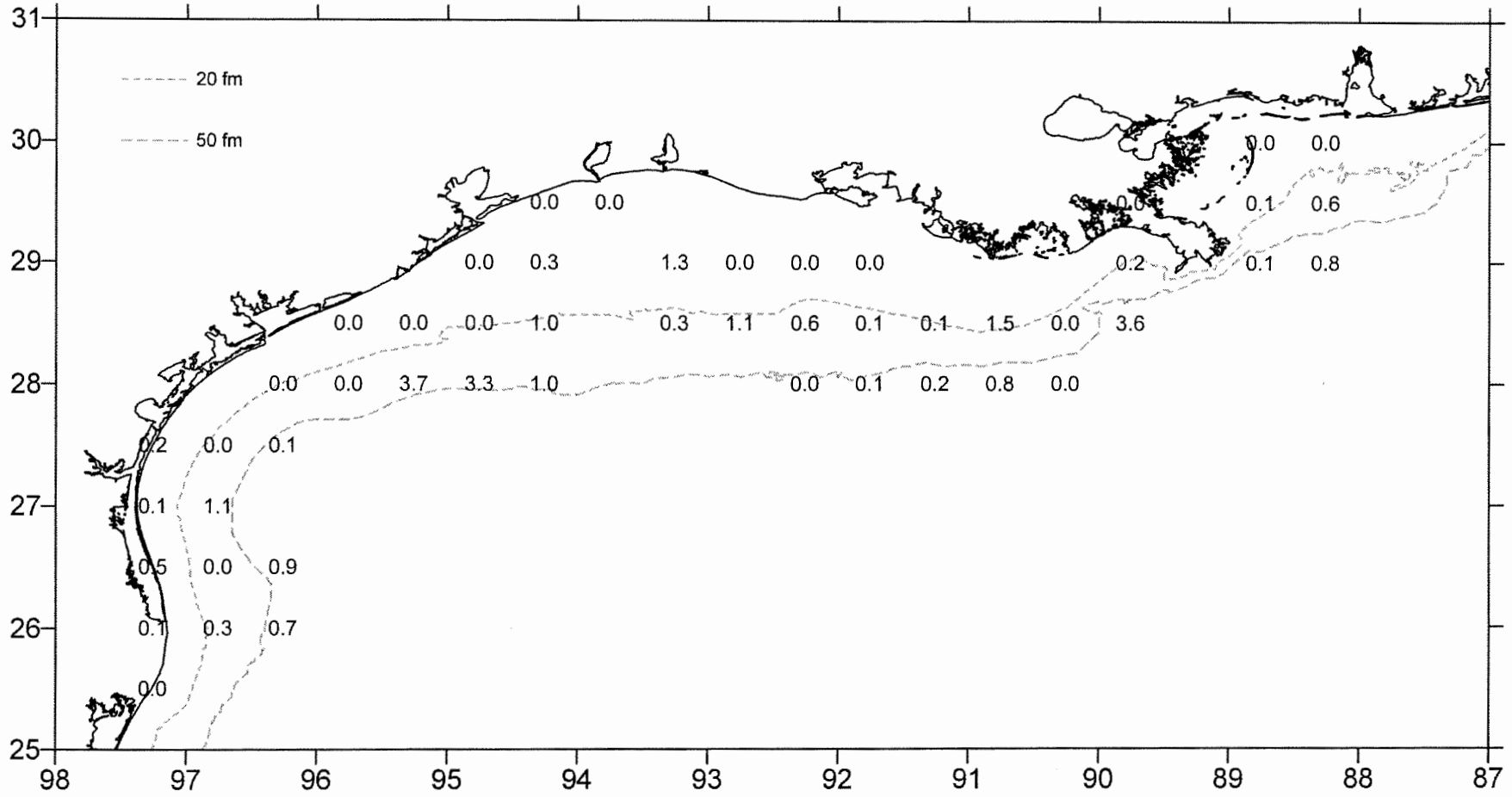

Figure 33. Red snapper, Lutjanus campechanus, lb/hour for June-July 2001.

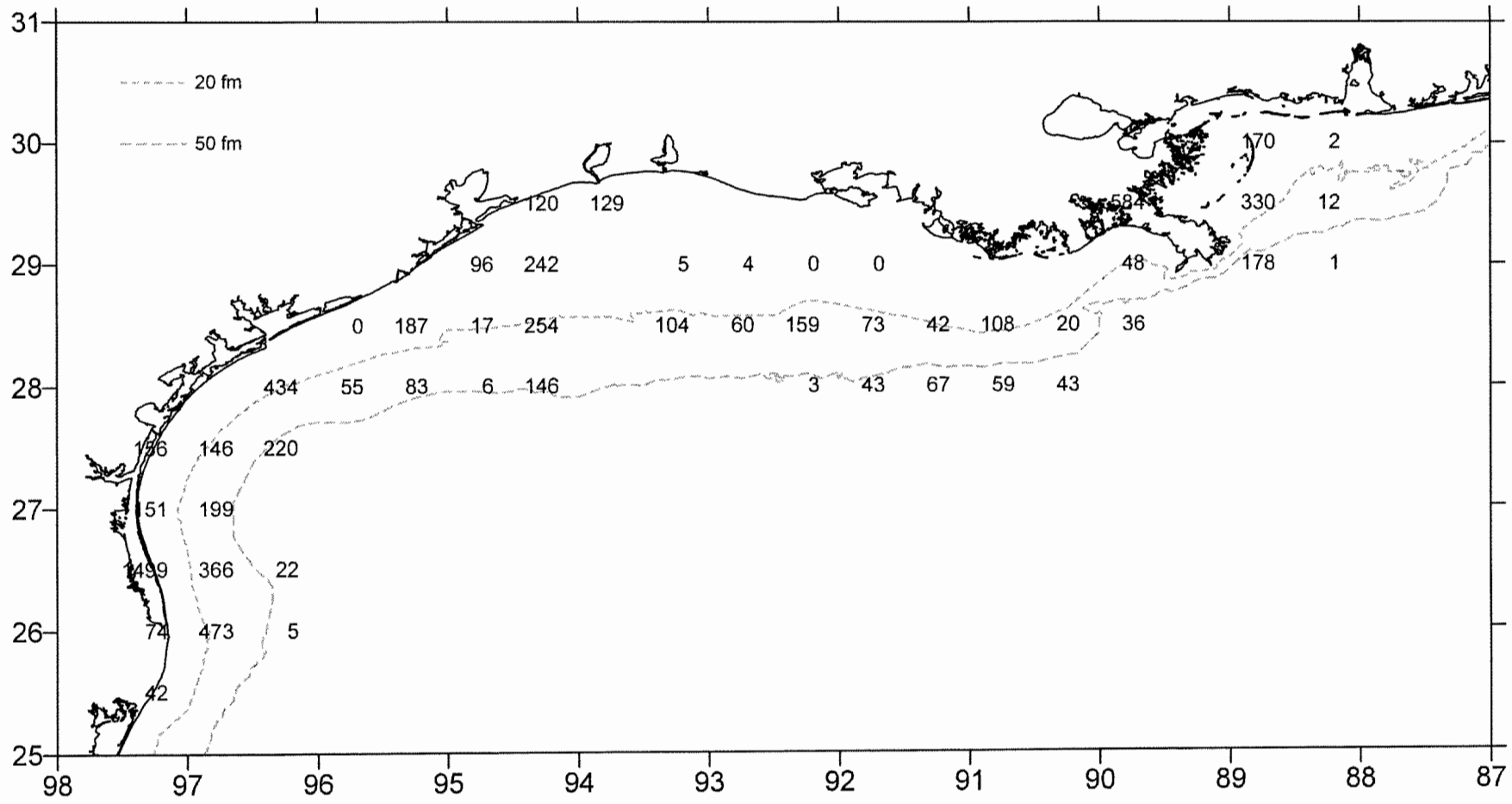

Figure 34. Brown shrimp, Penaeus aztecus, number/hour for June-July 2001.

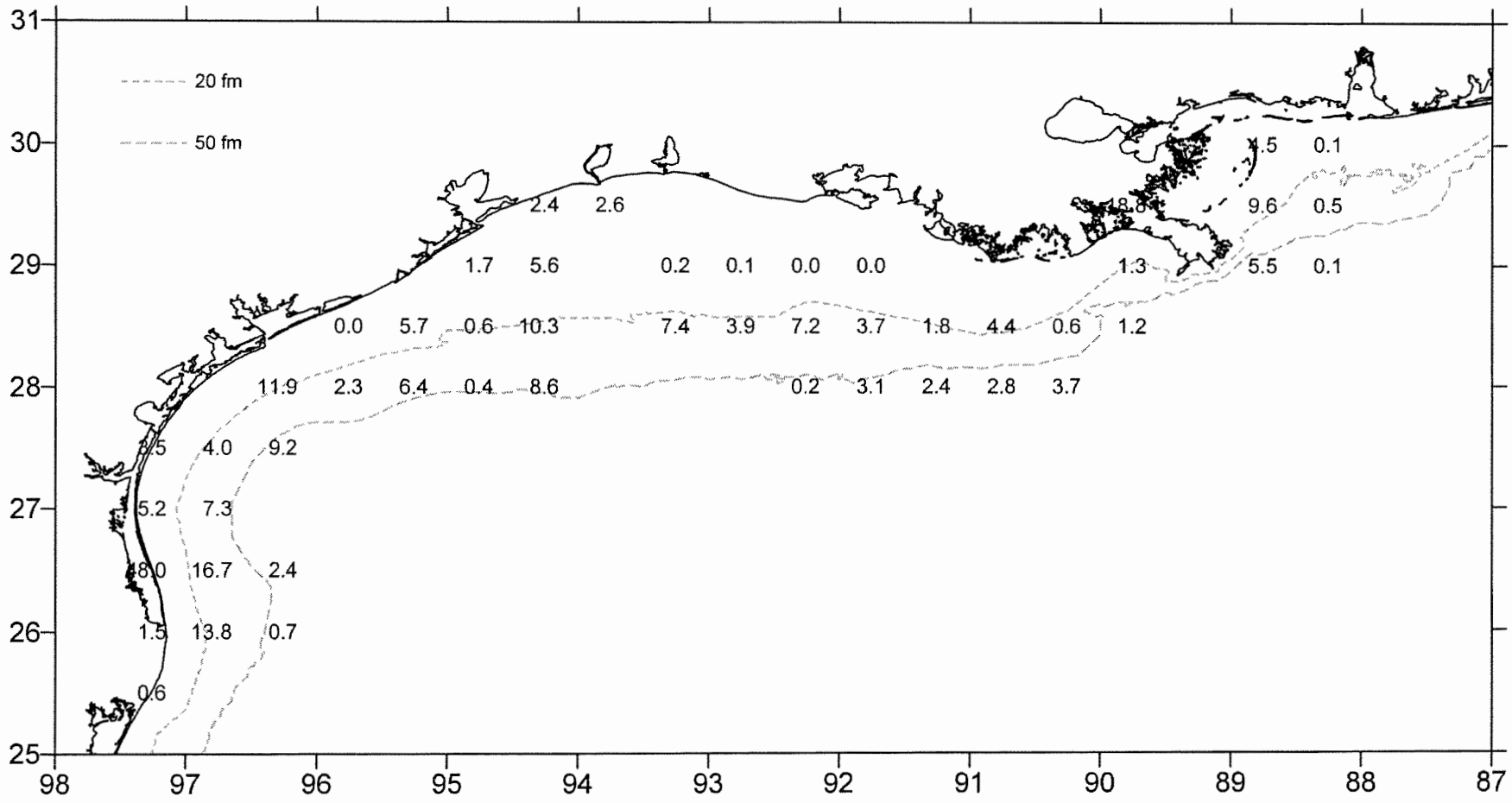

Figure 35. Brown shrimp, Penaeus aztecus, lb/hour for June-July 2001.

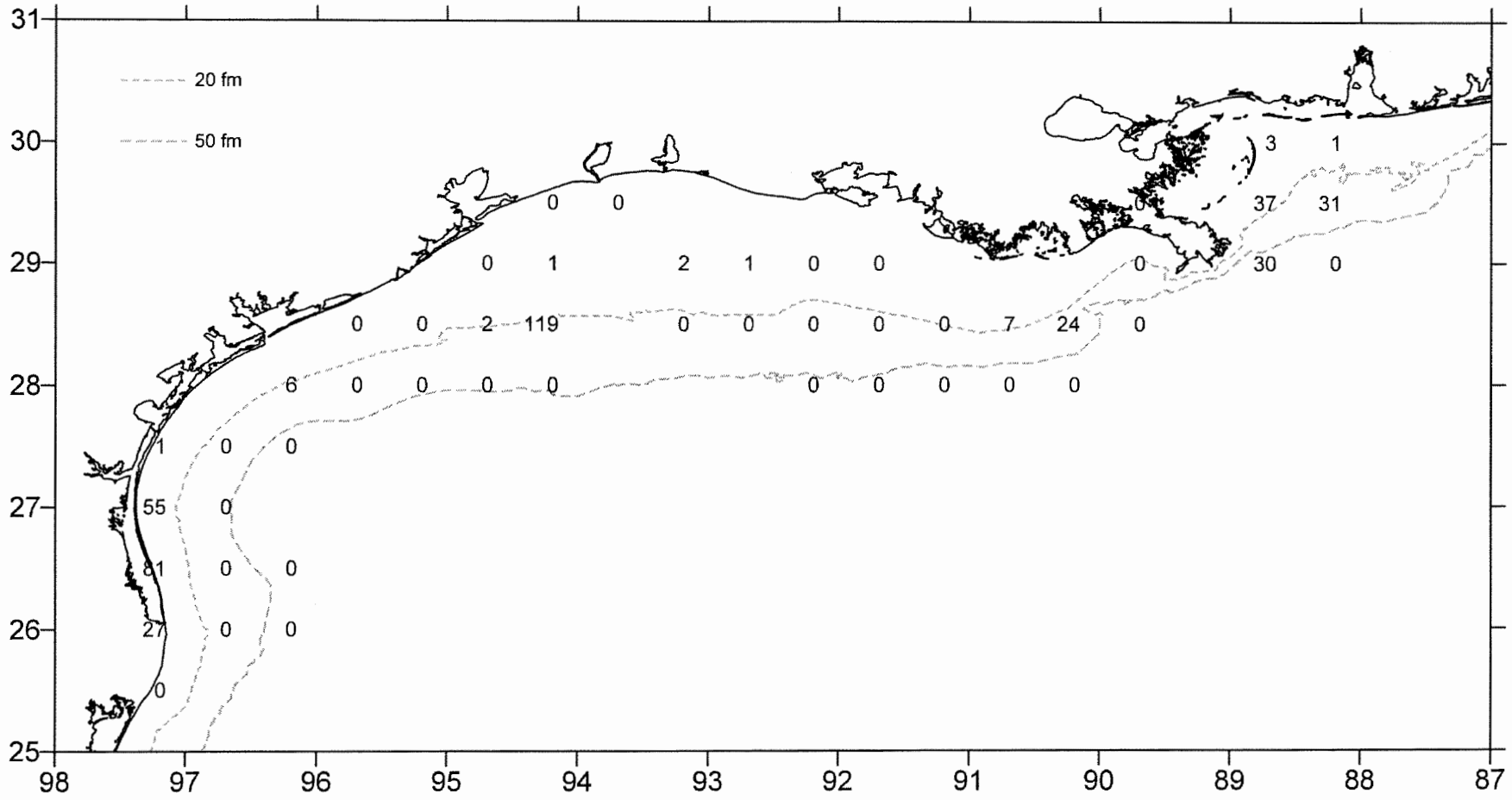

Figure 36. Pink shrimp, Penaeus duorarum, number/hour for June-July 2001.

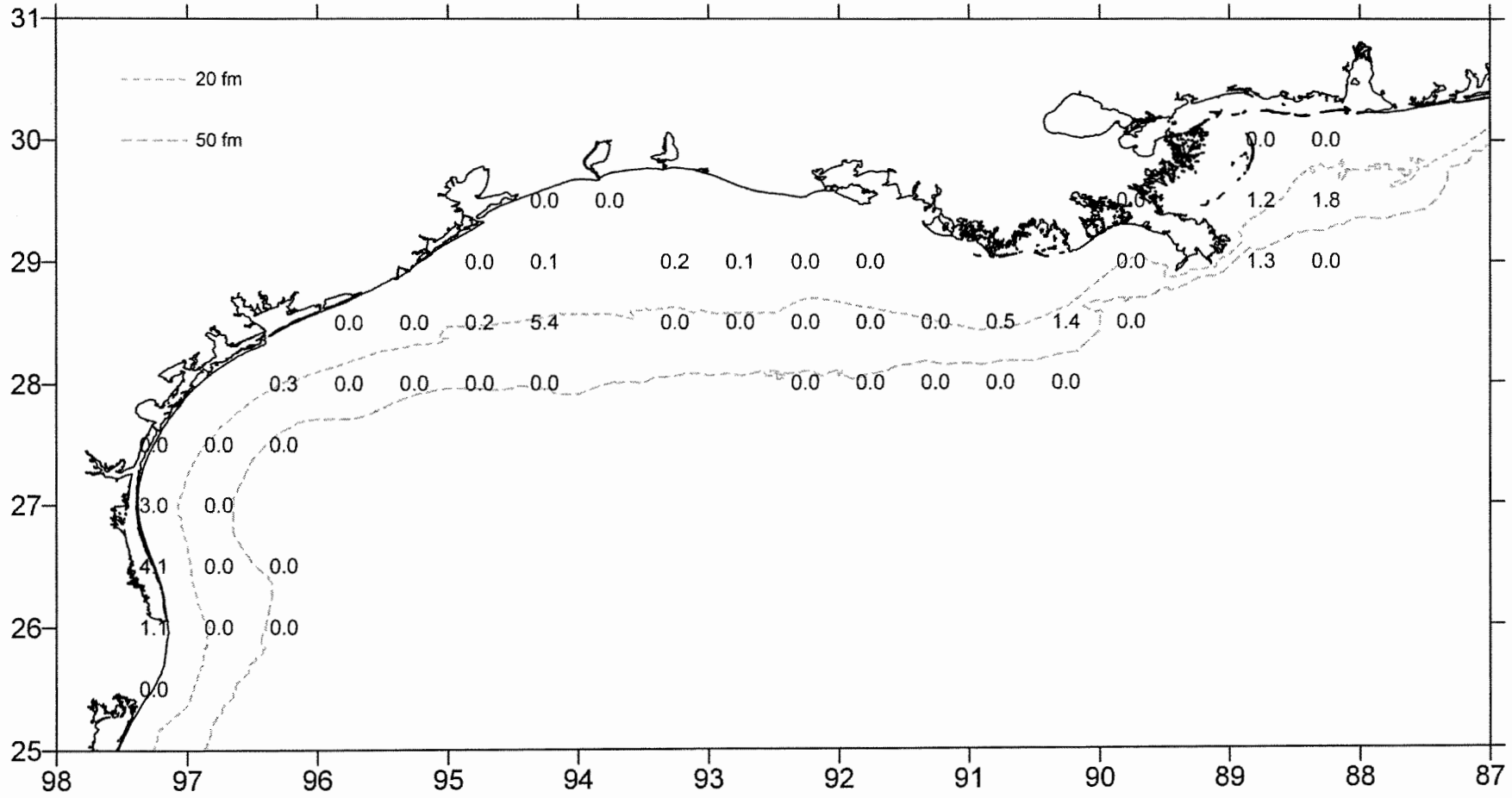

Figure 37. Pink shrimp, Penaeus duorarum, lb/hour for June-July 2001.

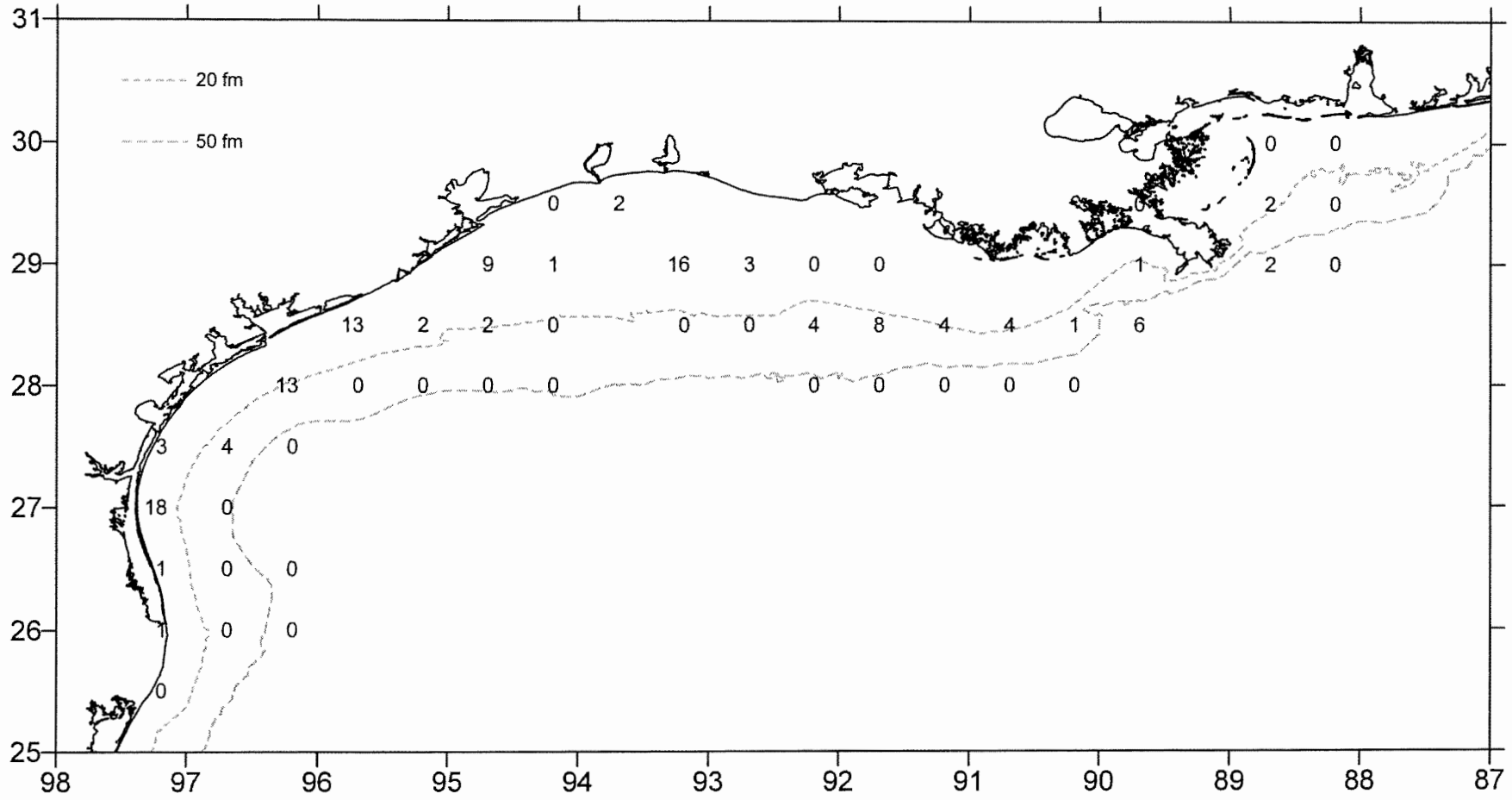

Figure 38. White shrimp, Penaeus setiferus, number/hour for June-July 2001.

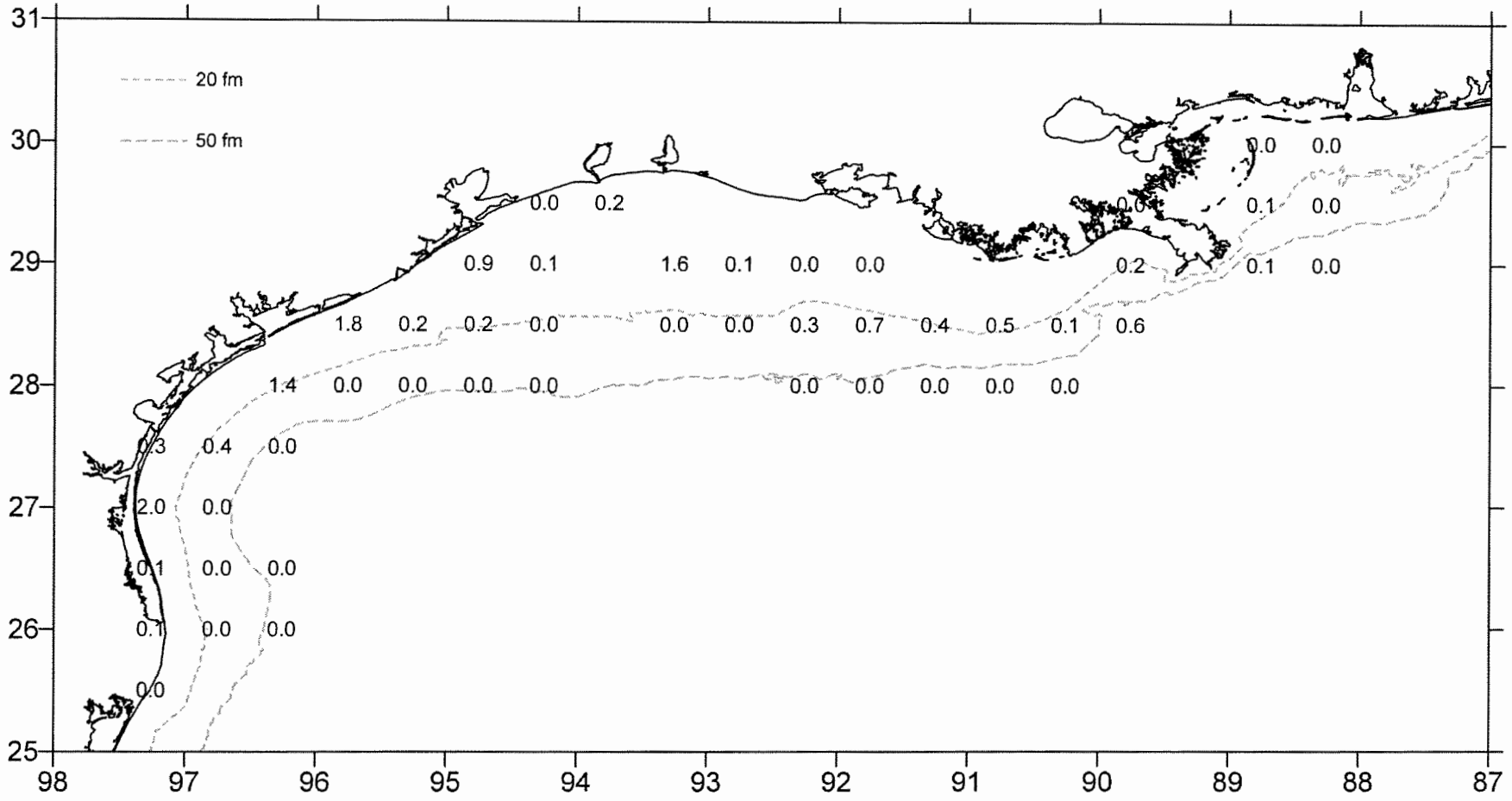

Figure 39. White shrimp, Penaeus setiferus, lb/hour for June-July 2001.

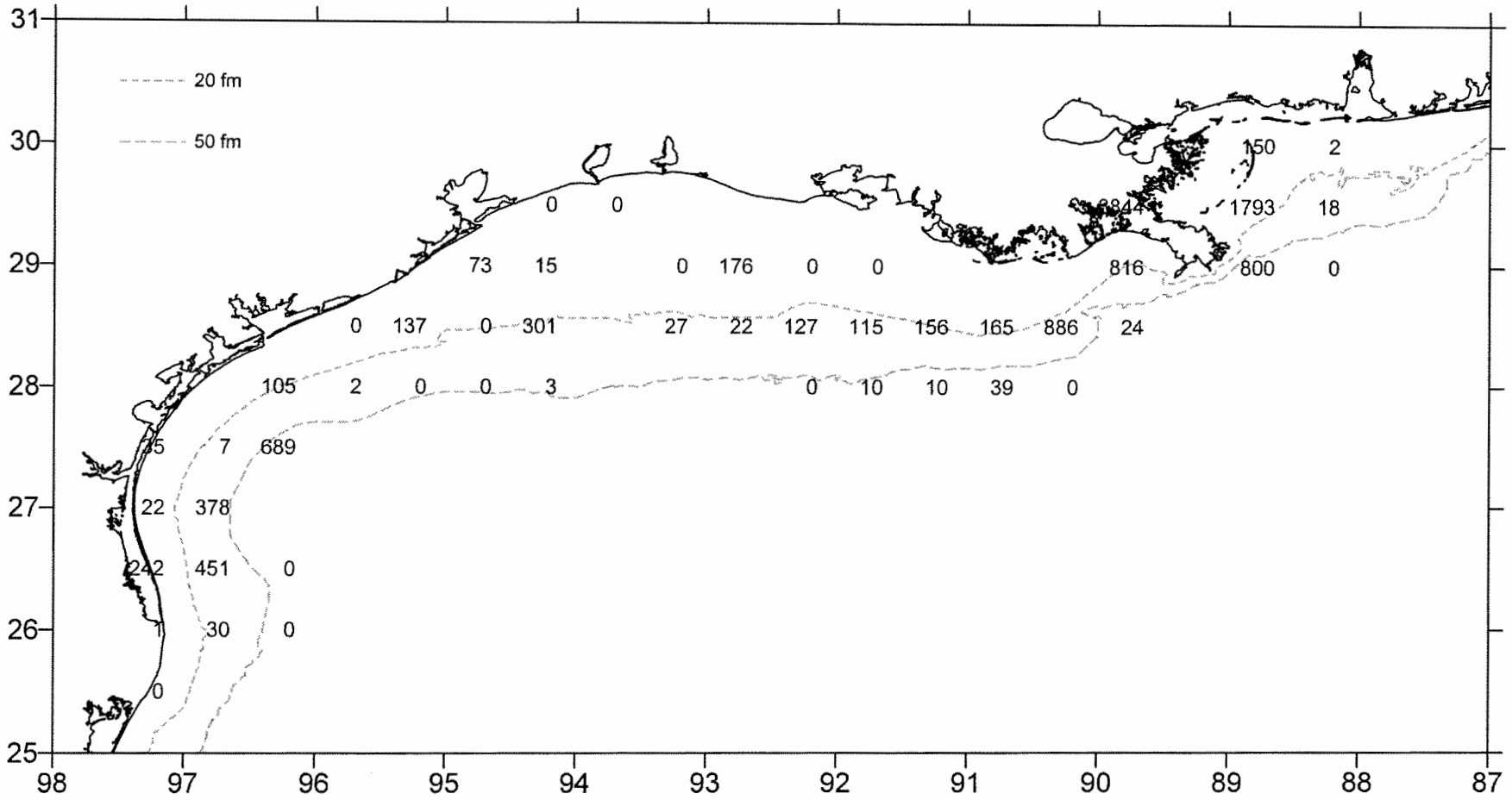

Figure 40. Roughback shrimp, Trachypenaeus similis, number/hour for June-July 2001.

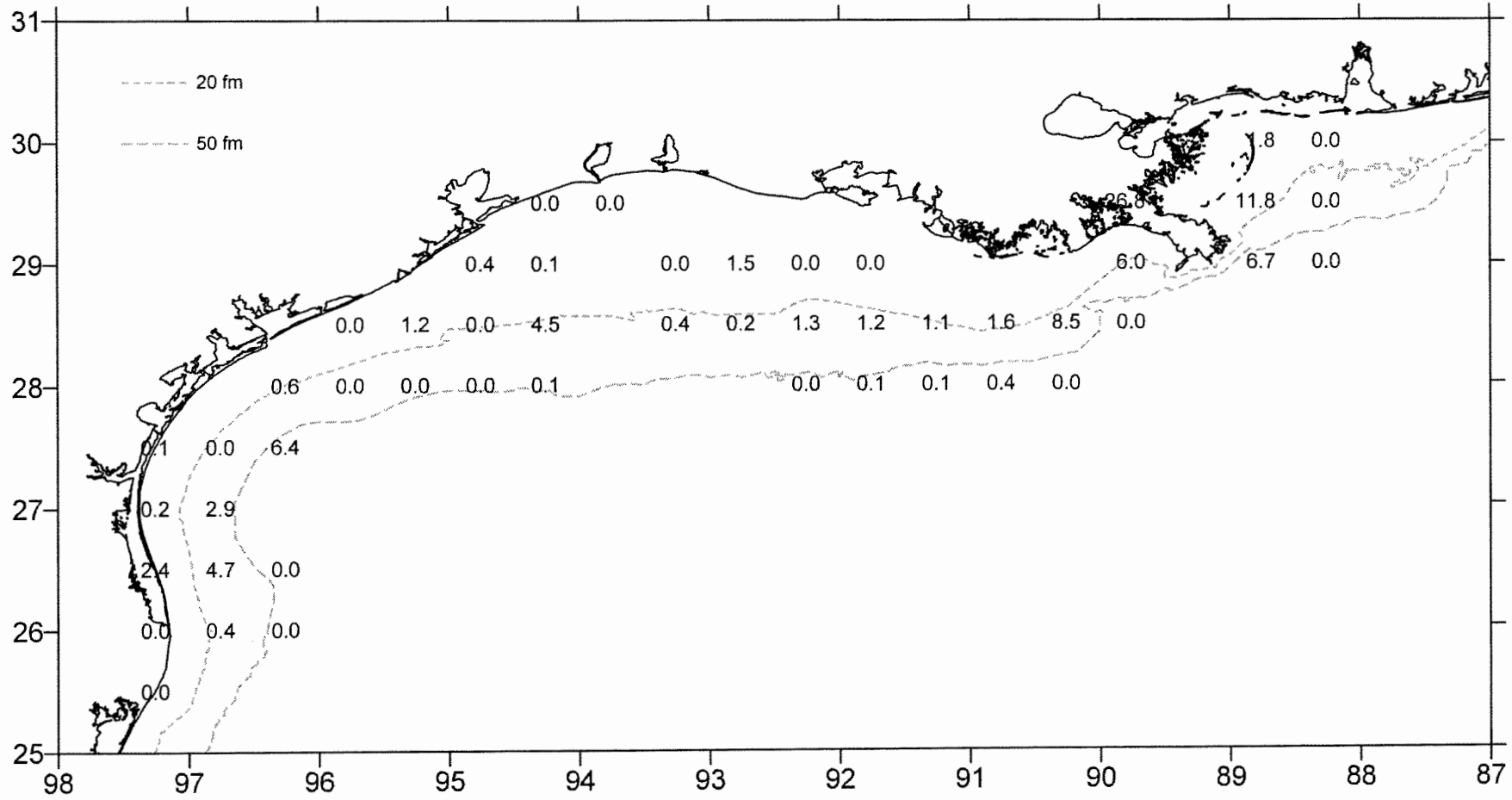

Figure 41. Roughback shrimp, Trachypenaeus similis, lb/hour for June-July 2001.

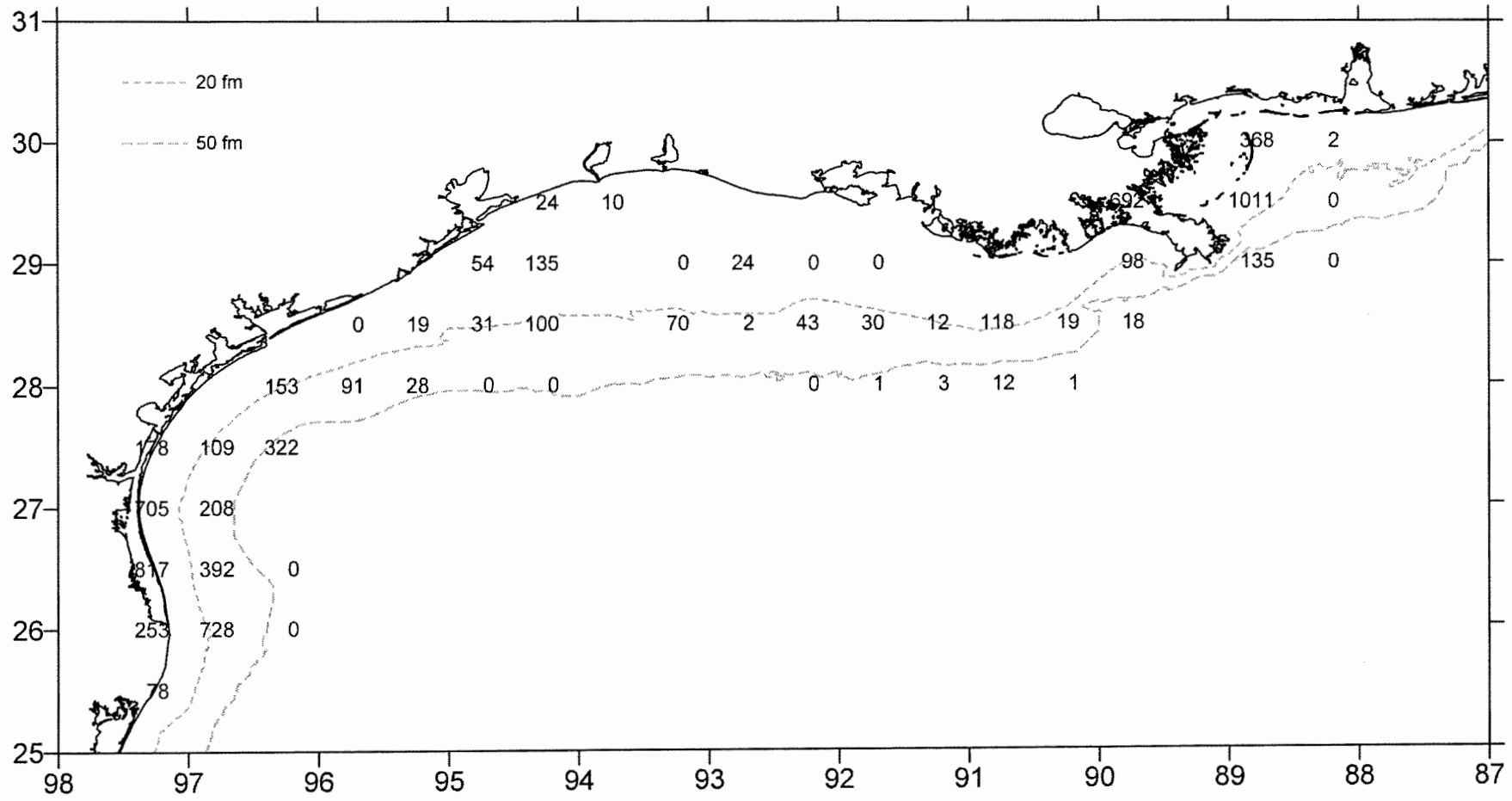

Figure 42. Lesser blue crab, Callinectes similis, number/hour for June-July 2001.

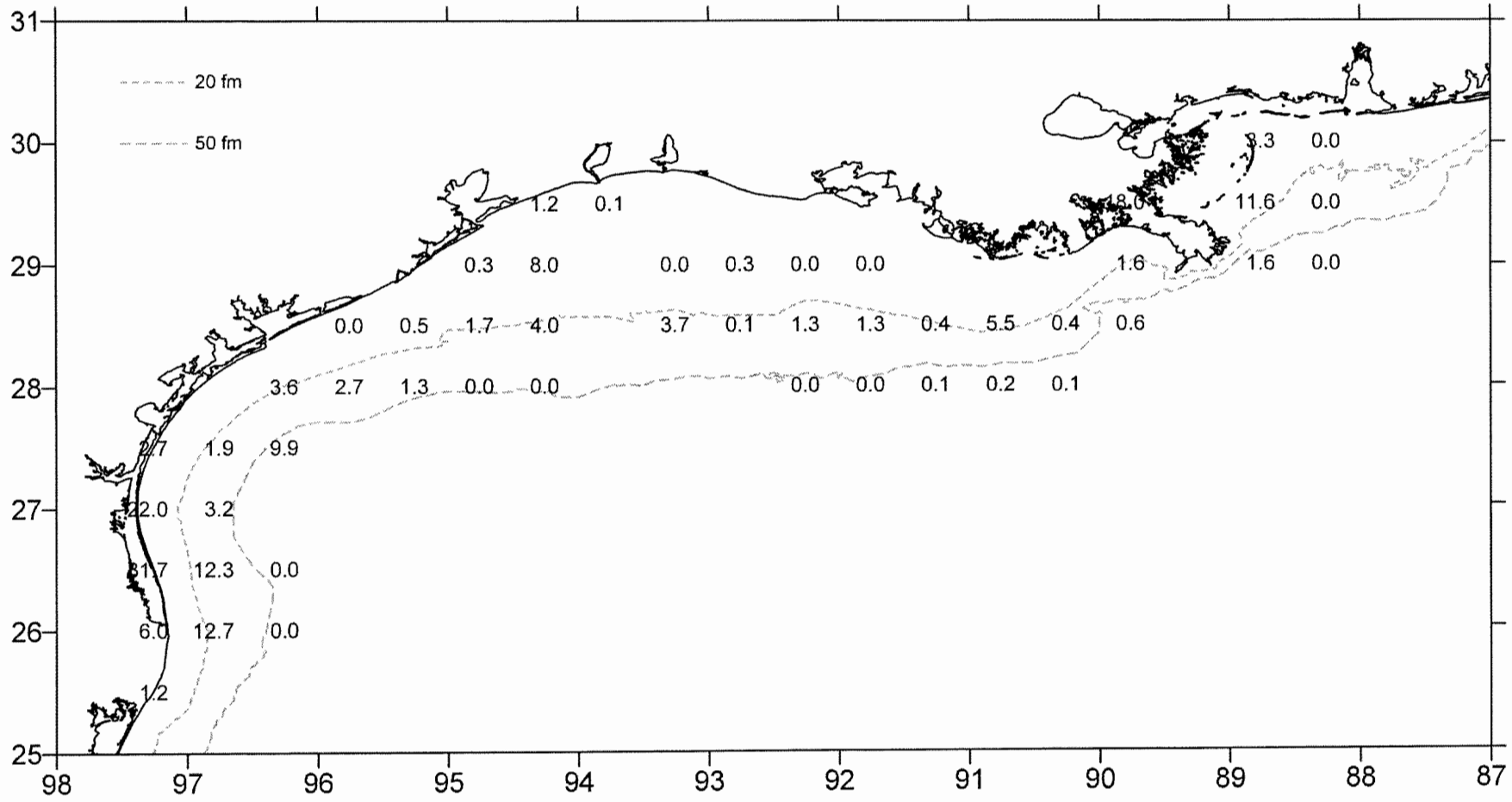

Figure 43. Lesser blue crab, Callinectes similis, lb/hour for June-July 2001.

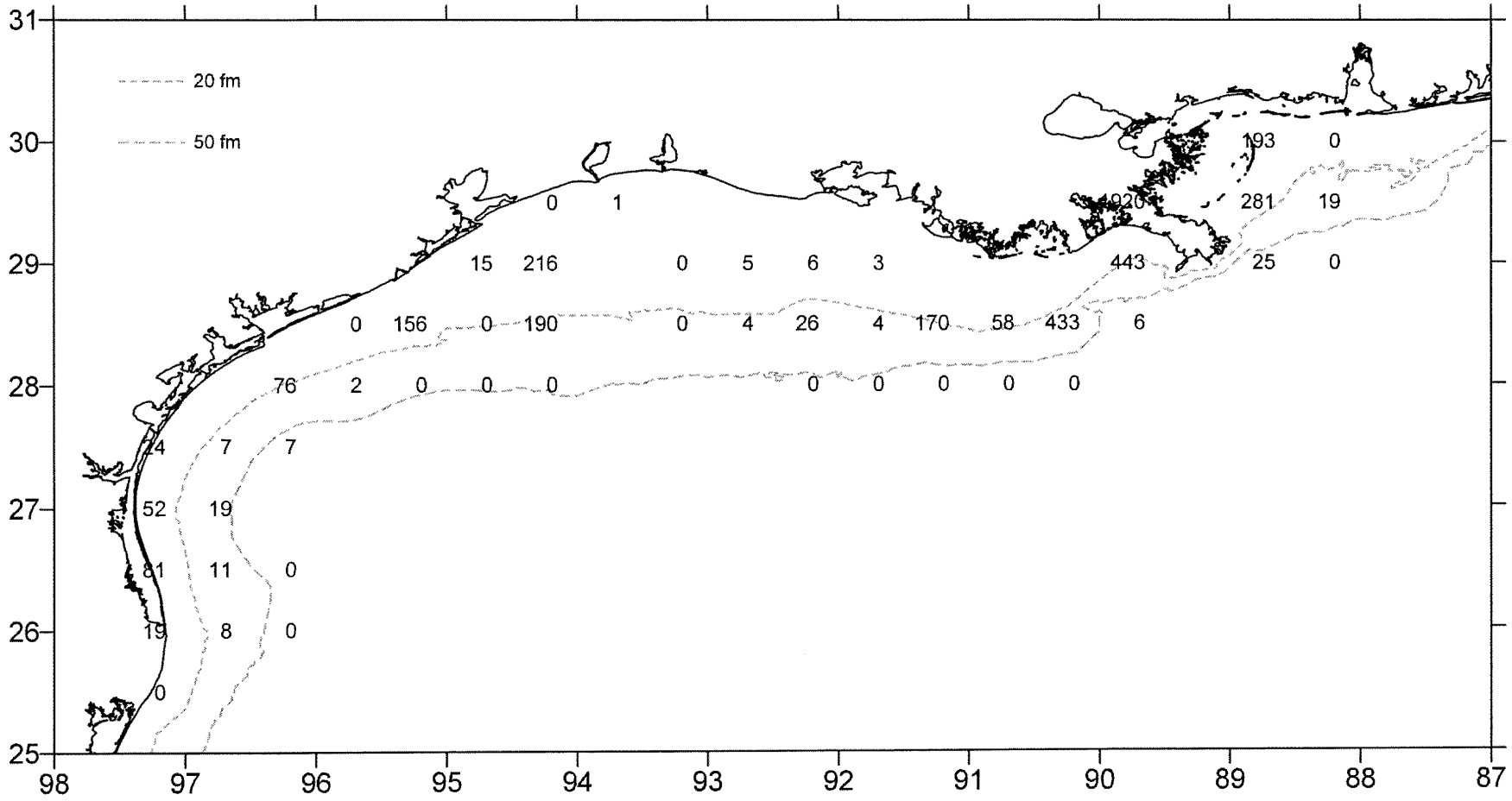

Figure 44. Mantis shrimp, Squilla empusa, number/hour for June-July 2001.

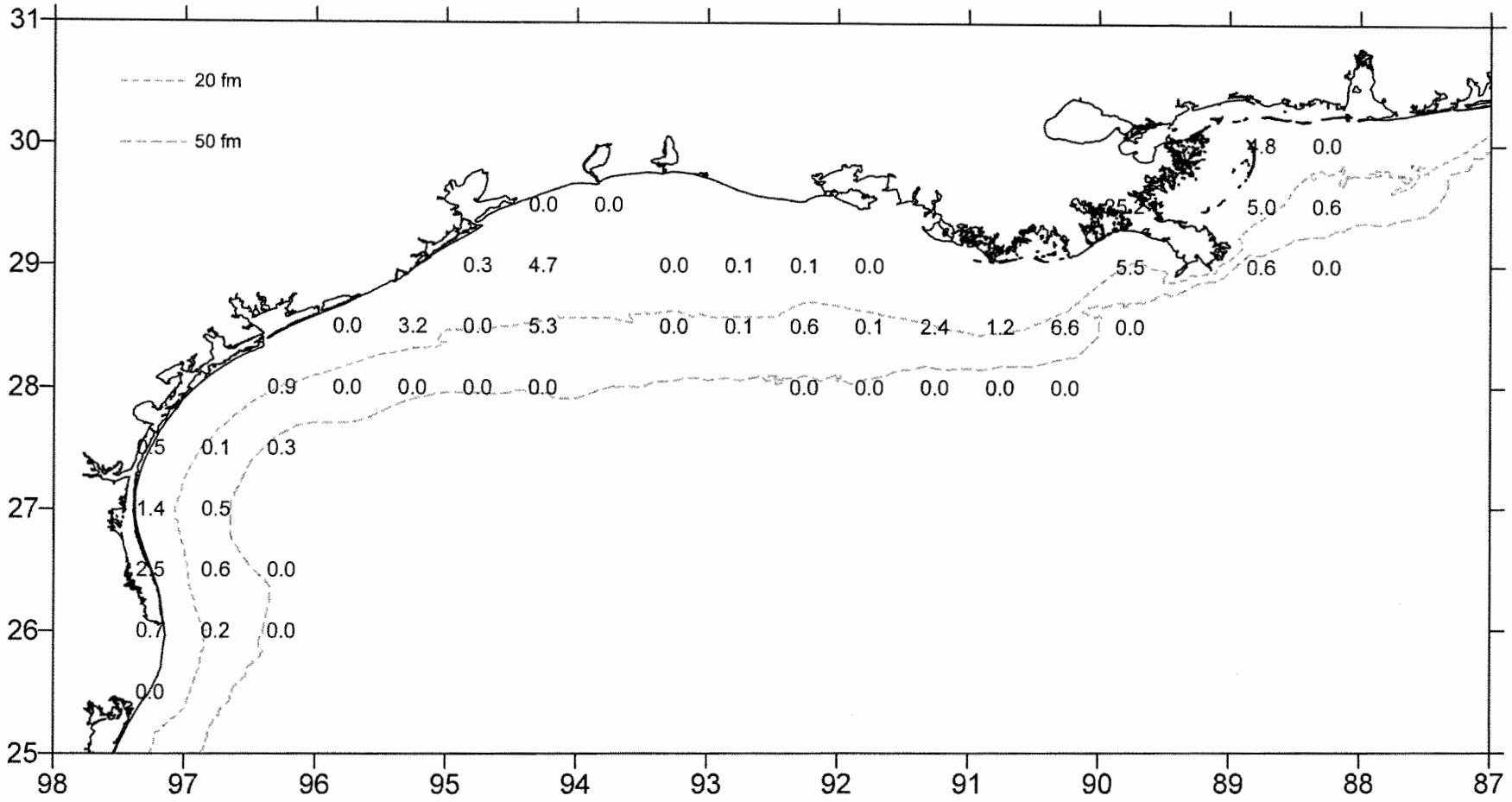

Figure 45. Mantis shrimp, Squilla empusa, lb/hour for June-July 2001.

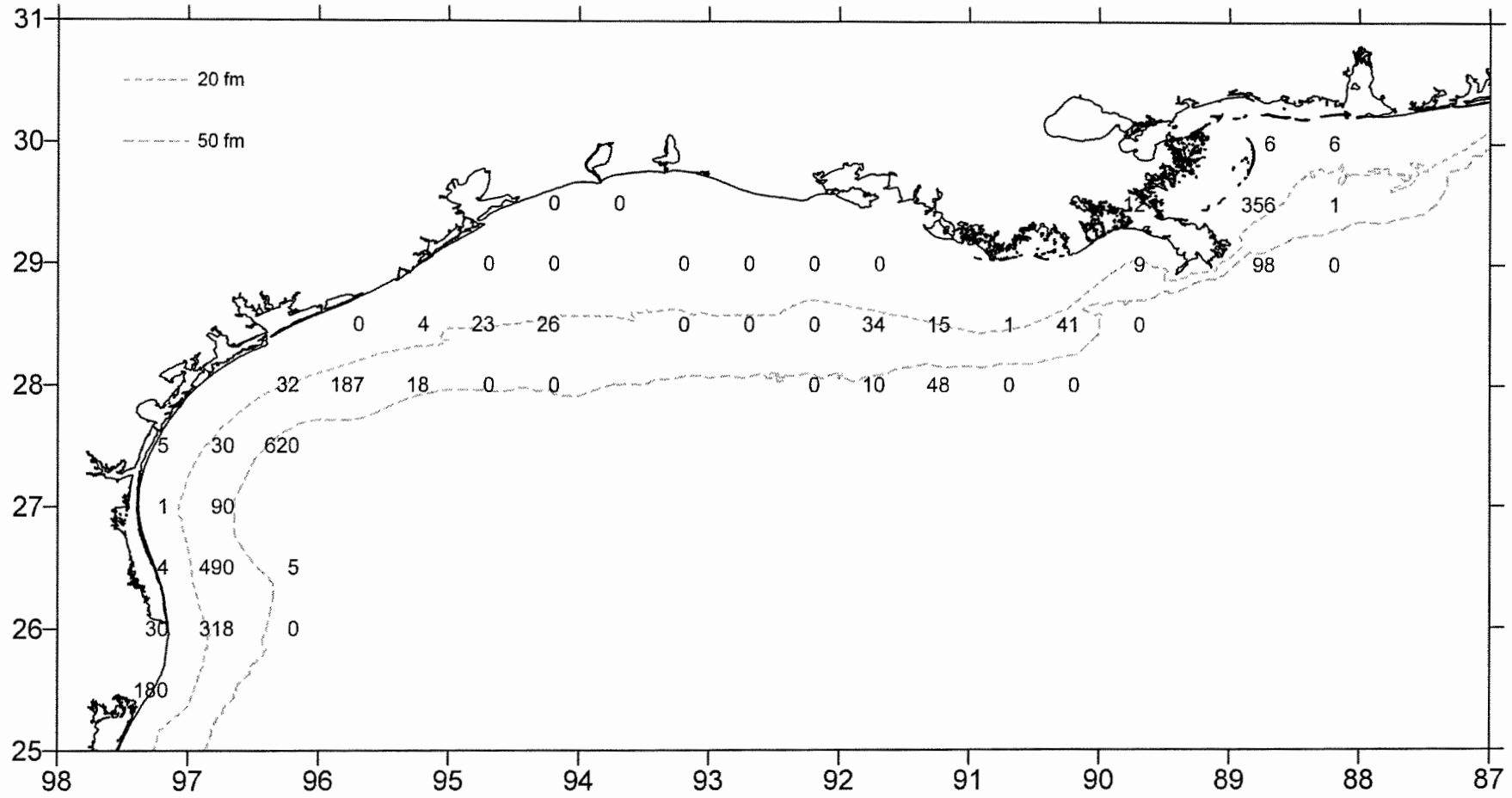

Figure 46. Lesser rock shrimp, Sicyonia dorsalis, number/hour for June-July 2001.

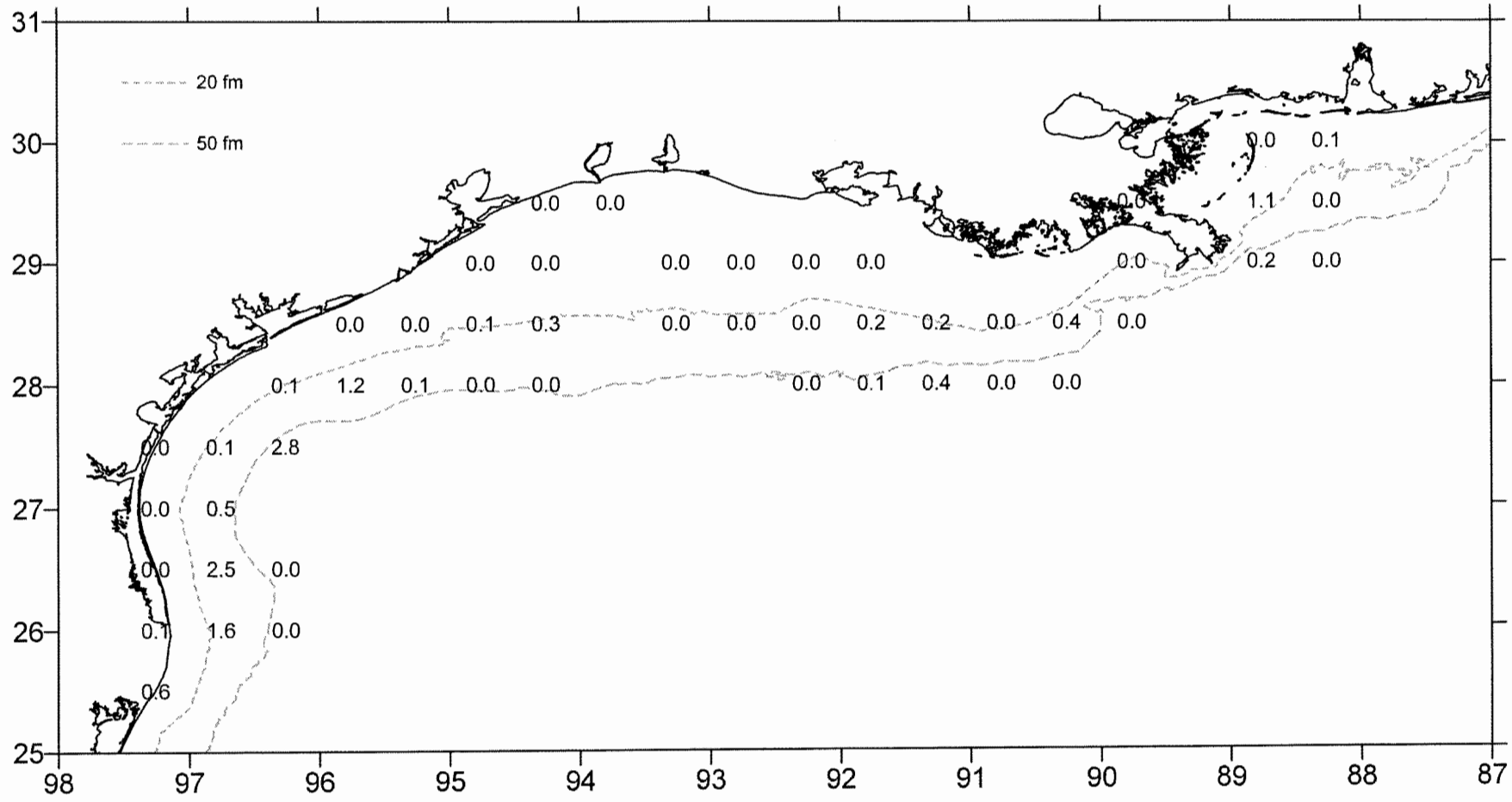

Figure 47. Lesser rock shrimp, Sicyonia dorsalis, lb/hour for June-July 2001.

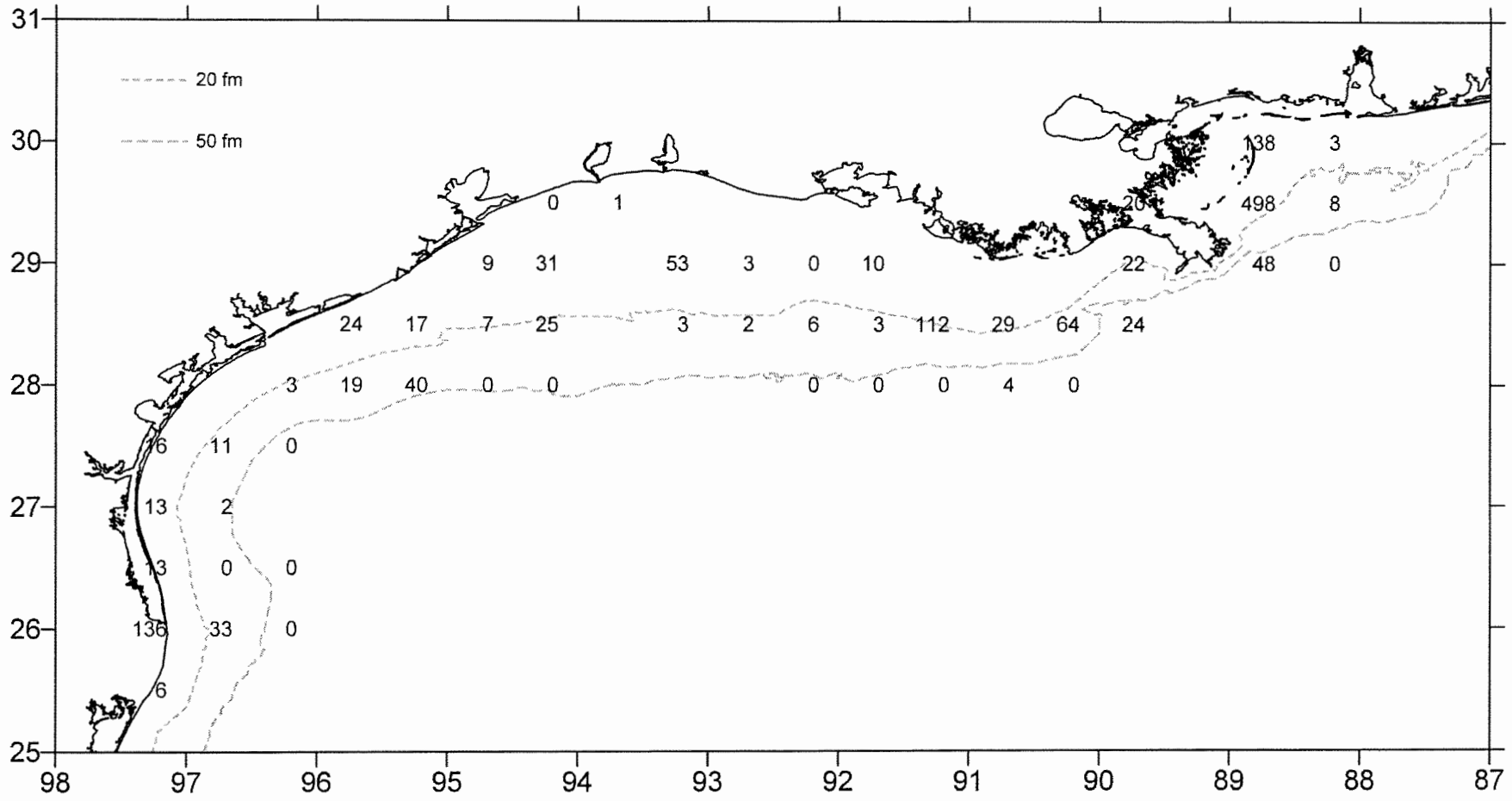

Figure 48. Irridescent swimming crab, Portunus gibbesii, number/hour for June-July 2001.

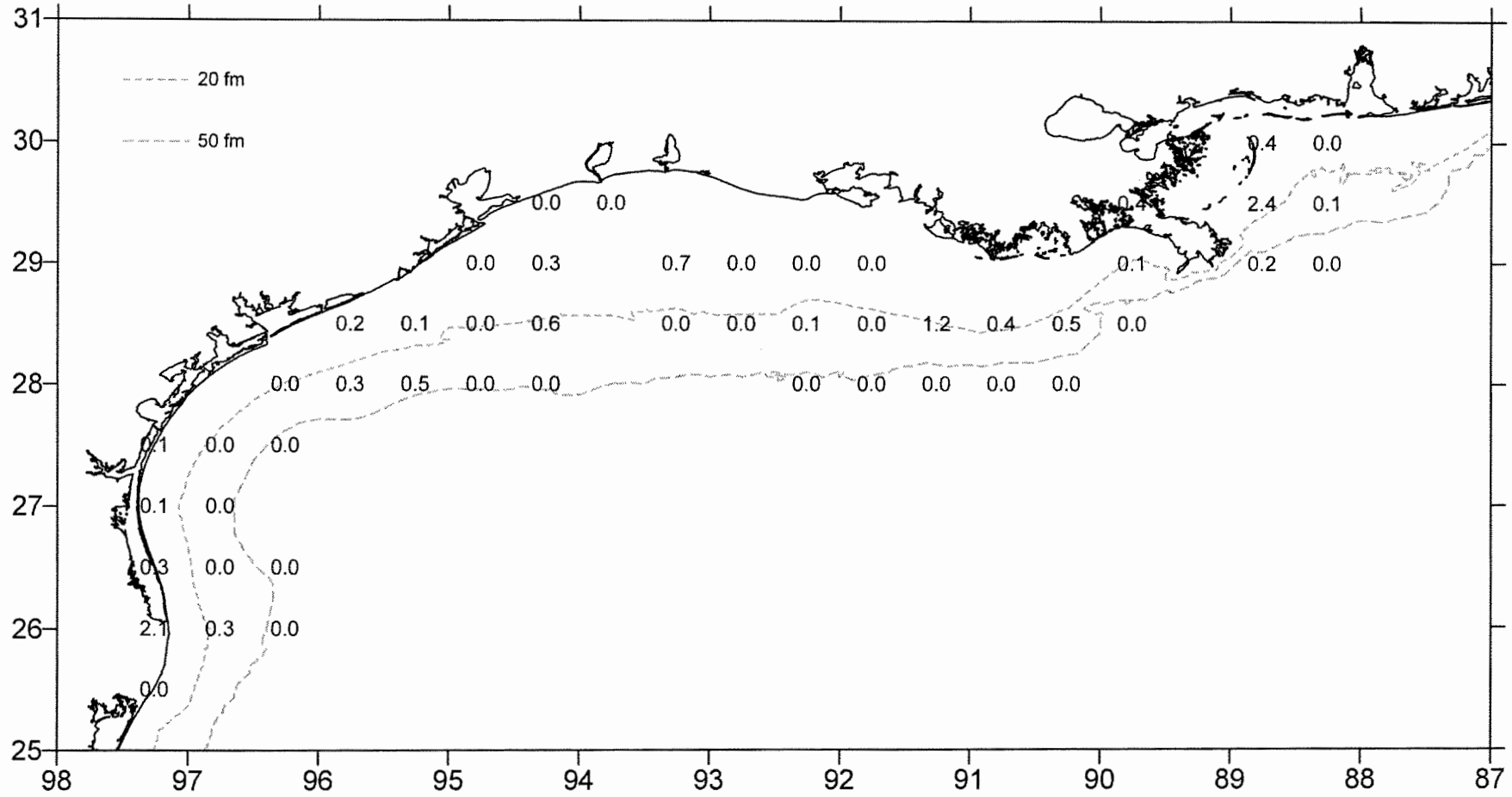

Figure 49. Irridescent swimming crab, Portunus gibbesii, lb/hour for June-July 2001.

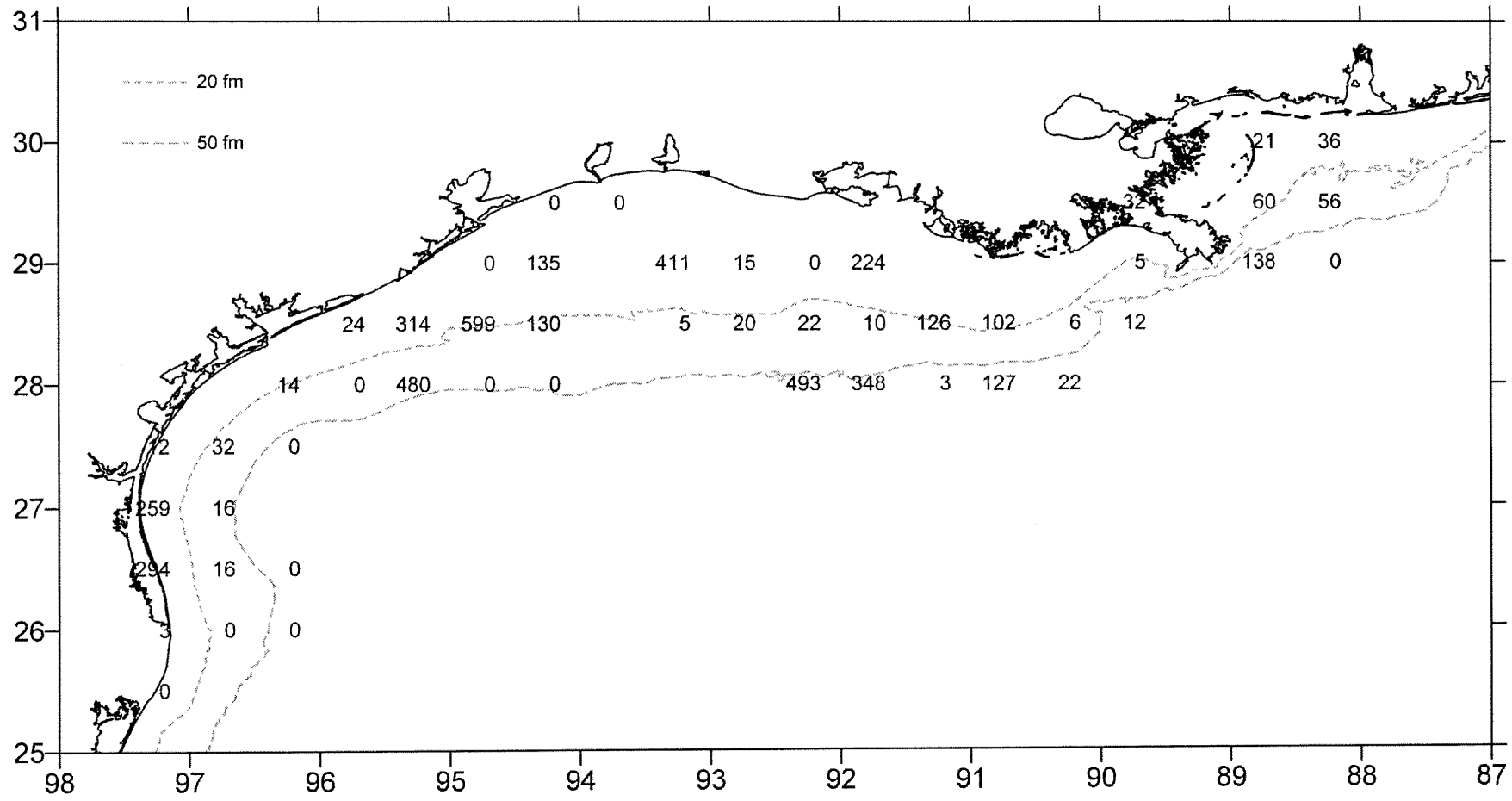

Figure 50. Arrow squid, Loligo pleii, number/hour for June-July 2001.

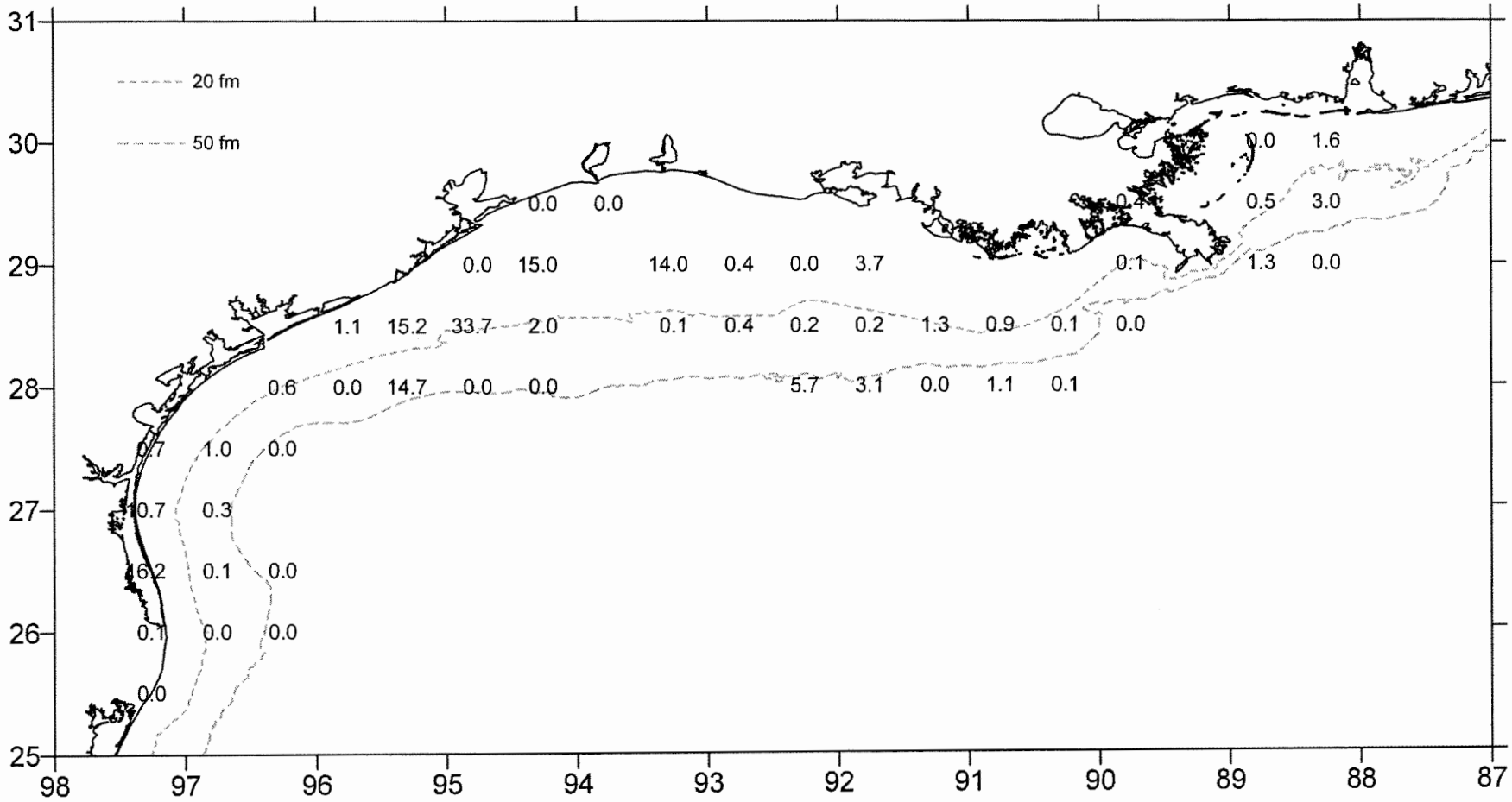

Figure 51. Arrow squid, Loligo pleii, lb/hour for June-July 2001.

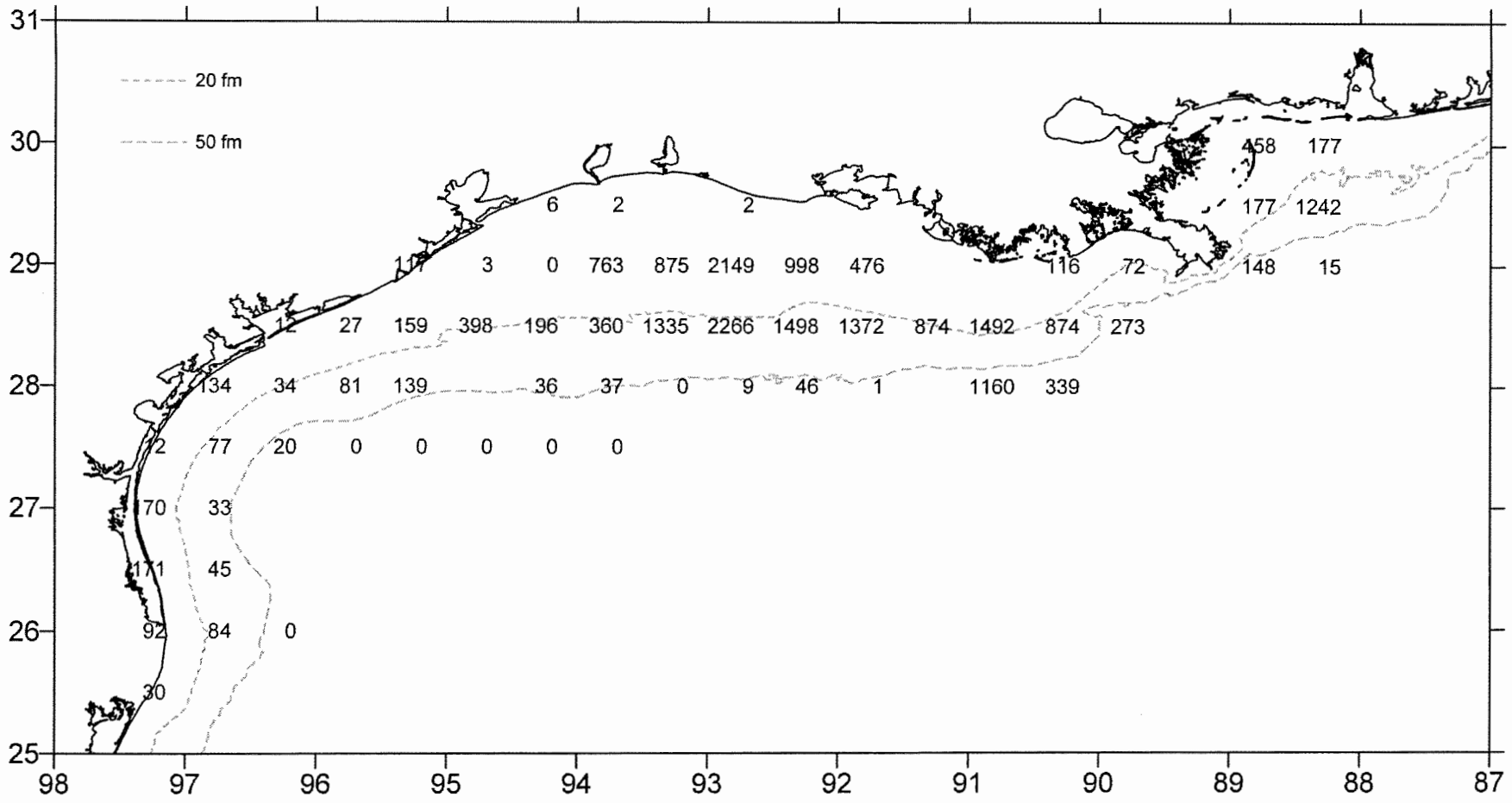

Figure 52. Atlantic croaker, Micropogonias undulatus, number/hour for October-December 2001.

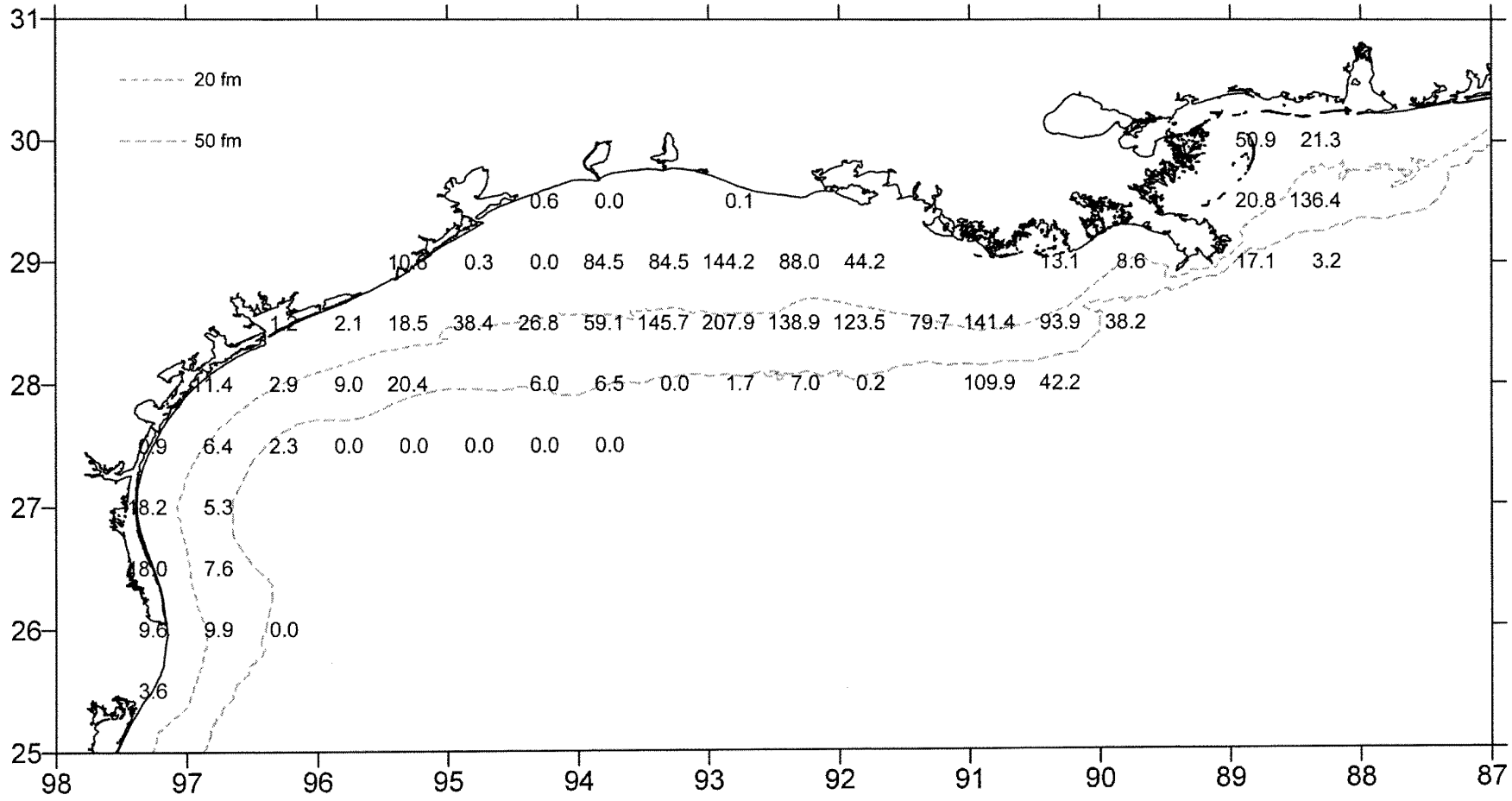

Figure 53. Atlantic croaker, Micropogonias undulatus, lb/hour for October-December 2001.

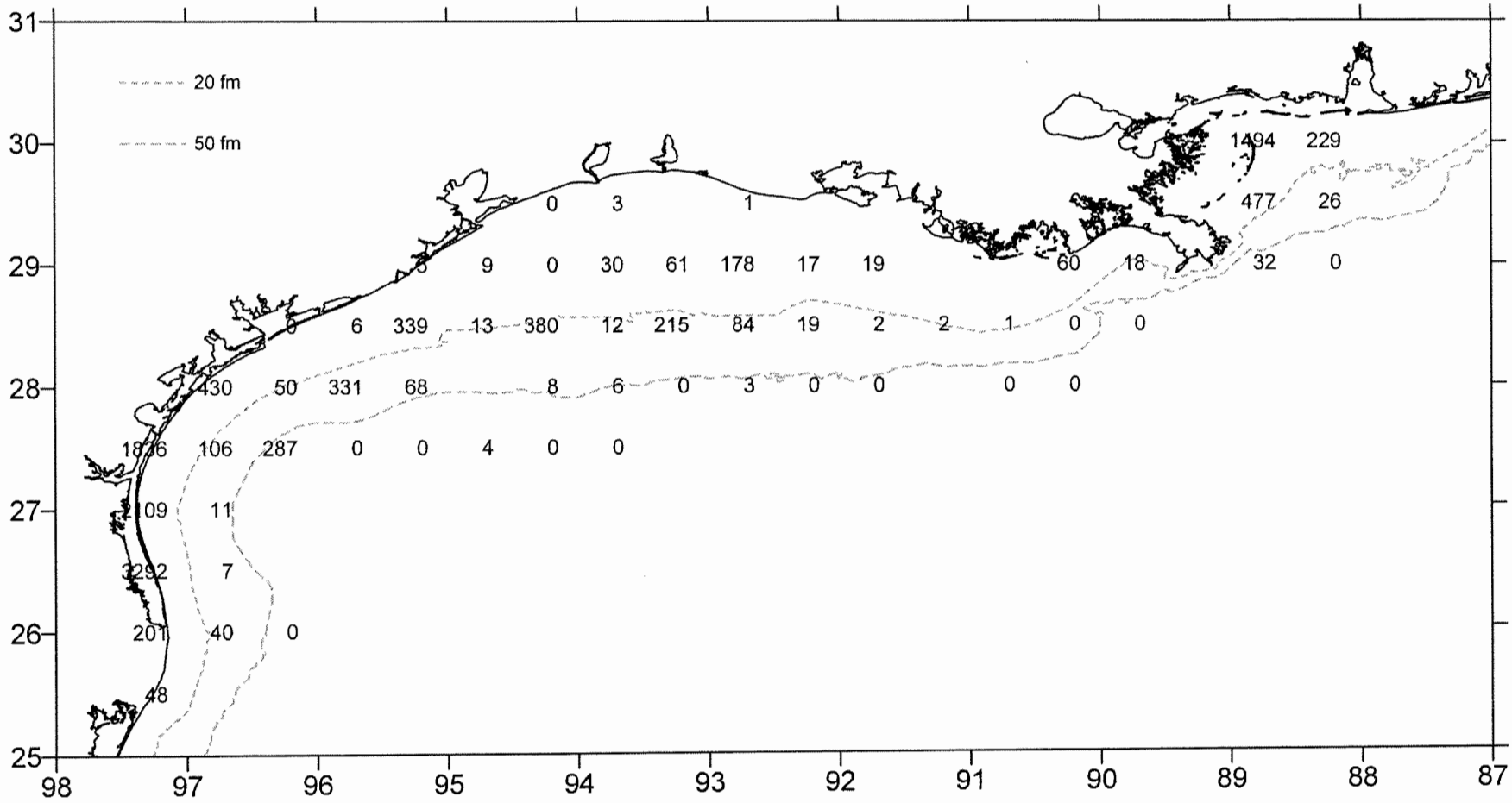

Figure 54. Atlantic bumper, Chloroscombrus chrysurus, number/hour for October-December 2001.

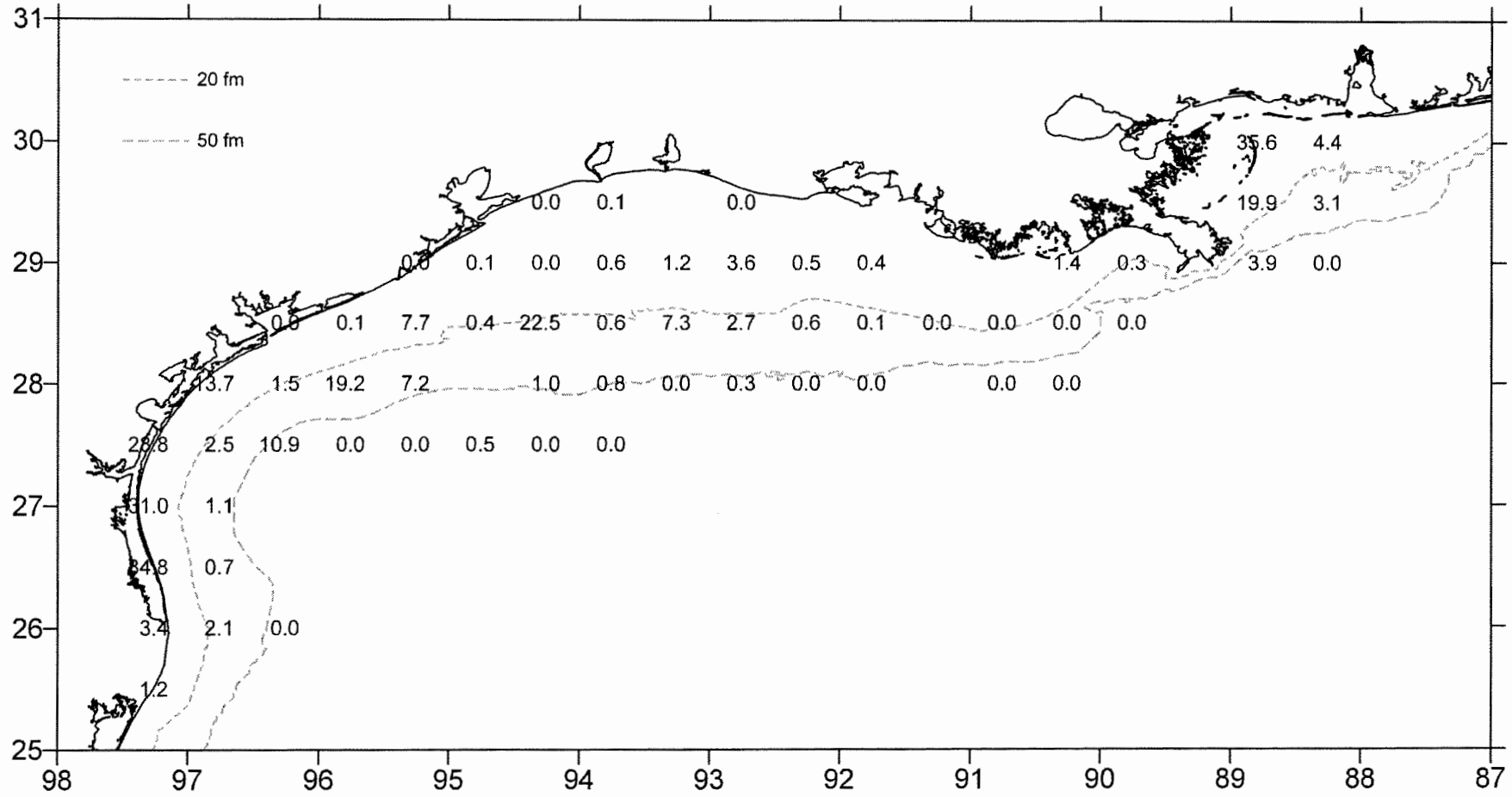

Figure 55. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for October-December 2001.

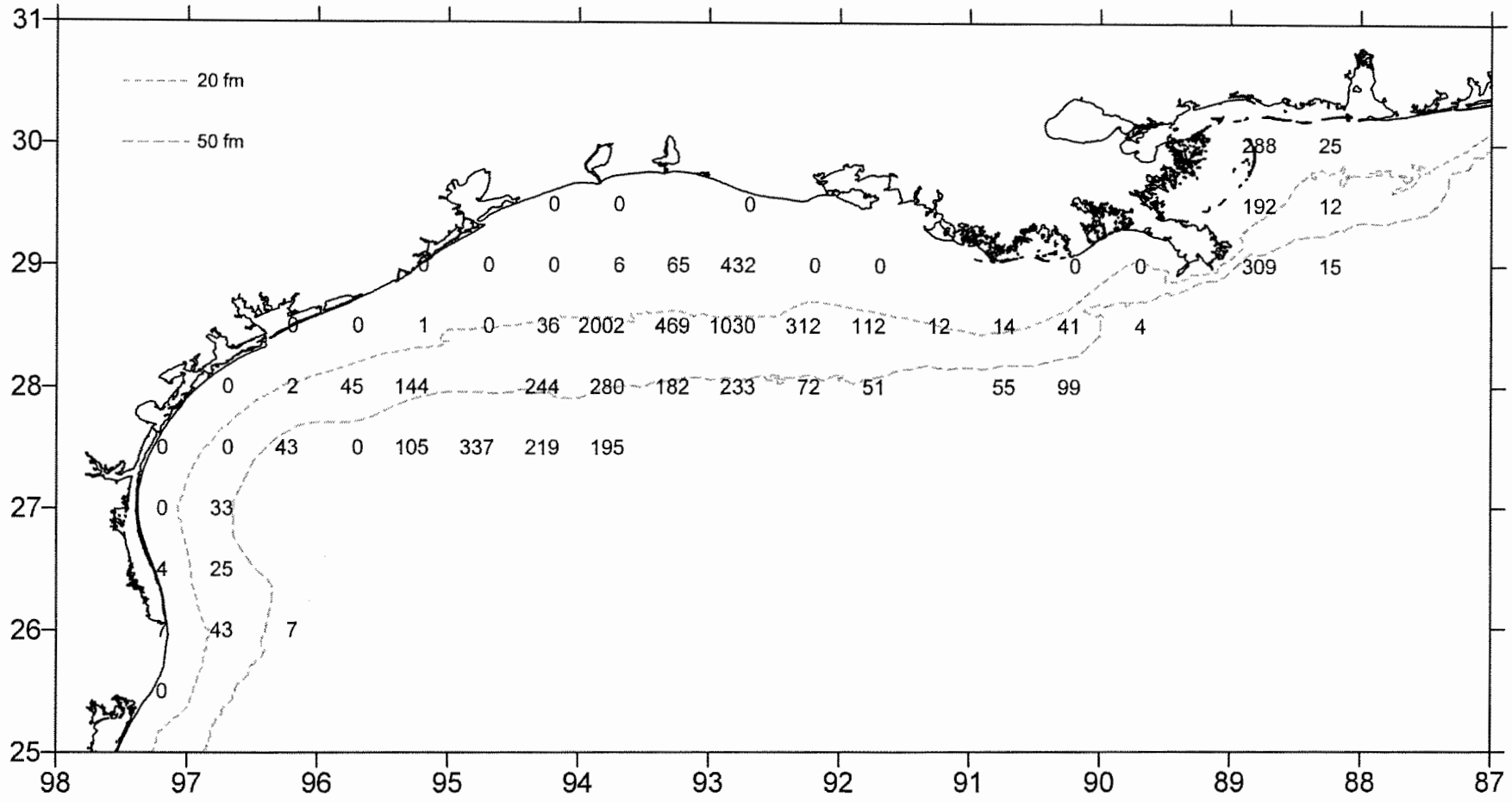

Figure 56. Longspine porgy, Stenotomus caprinus, number/hour for October-December 2001.

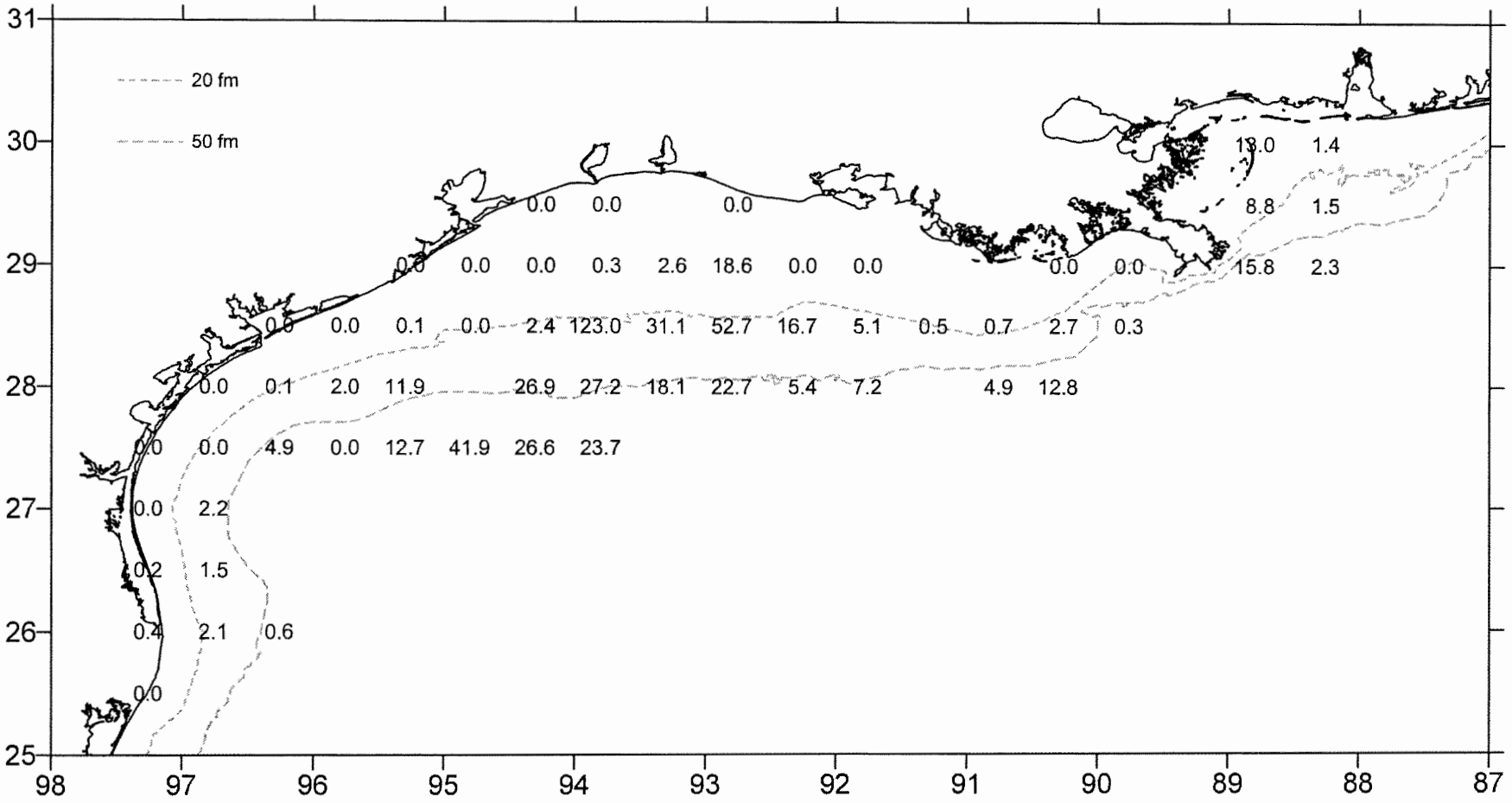

Figure 57. Longspine porgy, Stenotomus caprinus, lb/hour for October-December 2001.

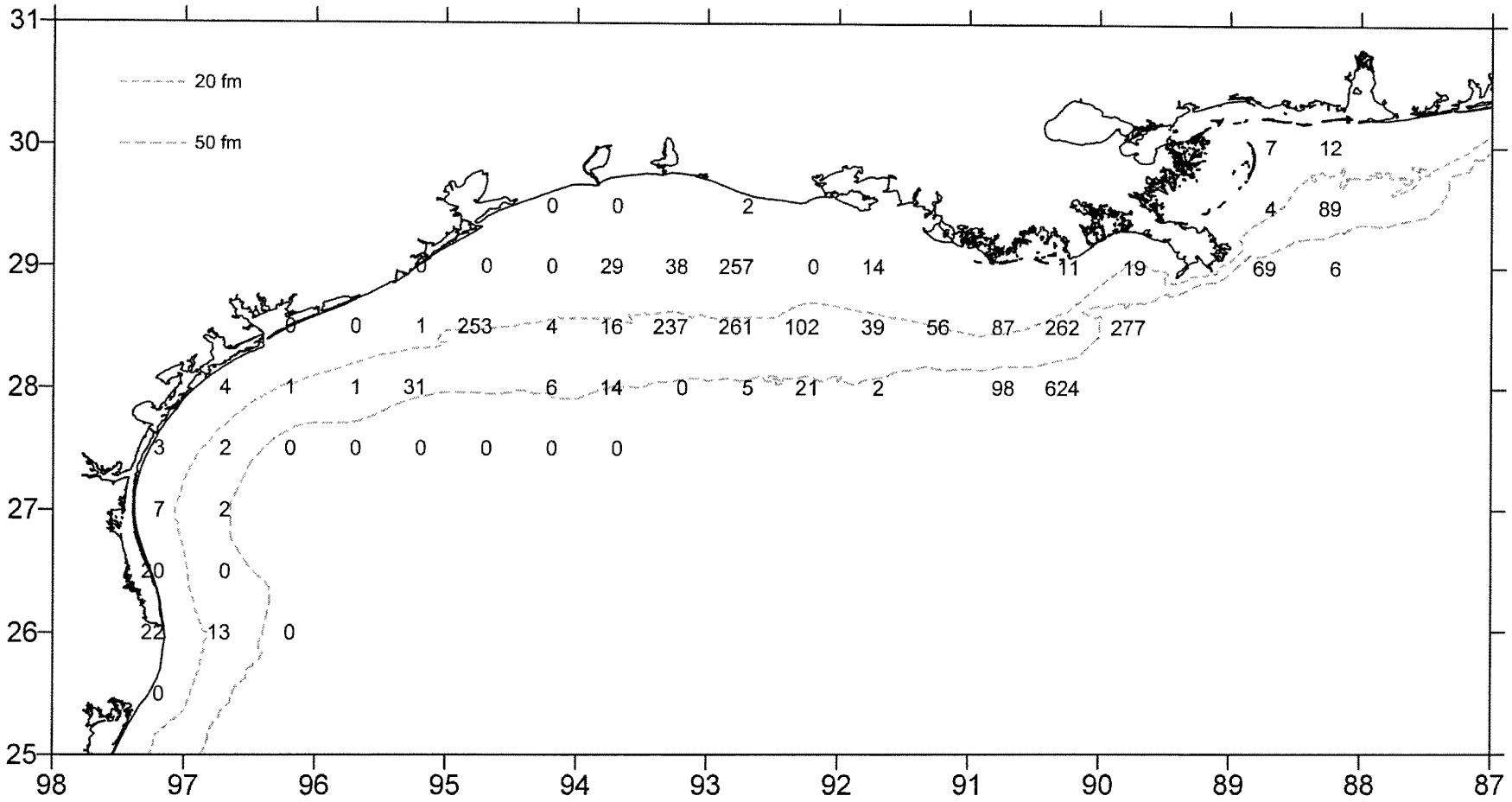

Figure 58. Spot, Leiostomus xanthurus, number/hour for October-December 2001.

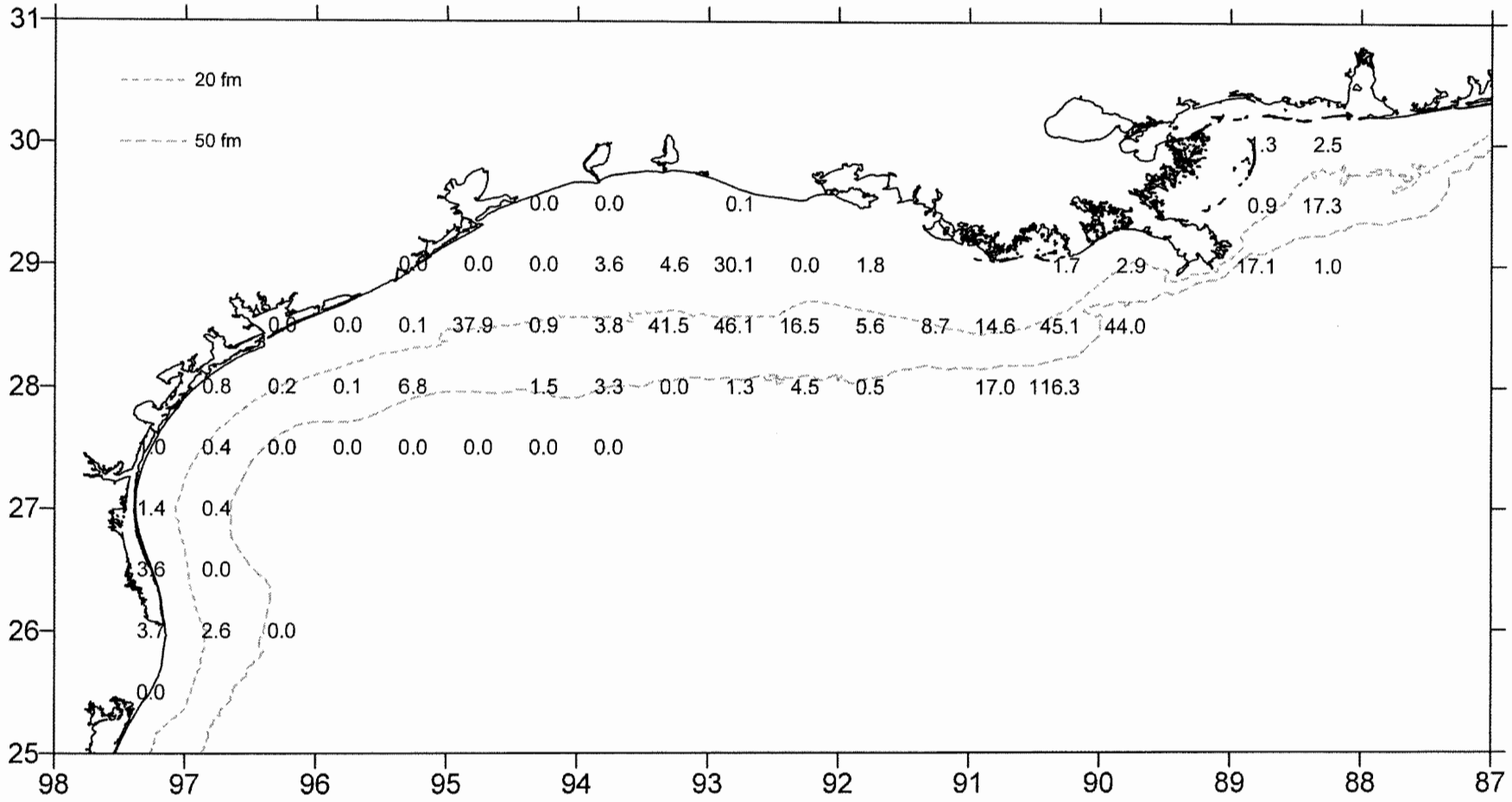

Figure 59. Spot, Leiostomus xanthurus, lb/hour for October-December 2001.

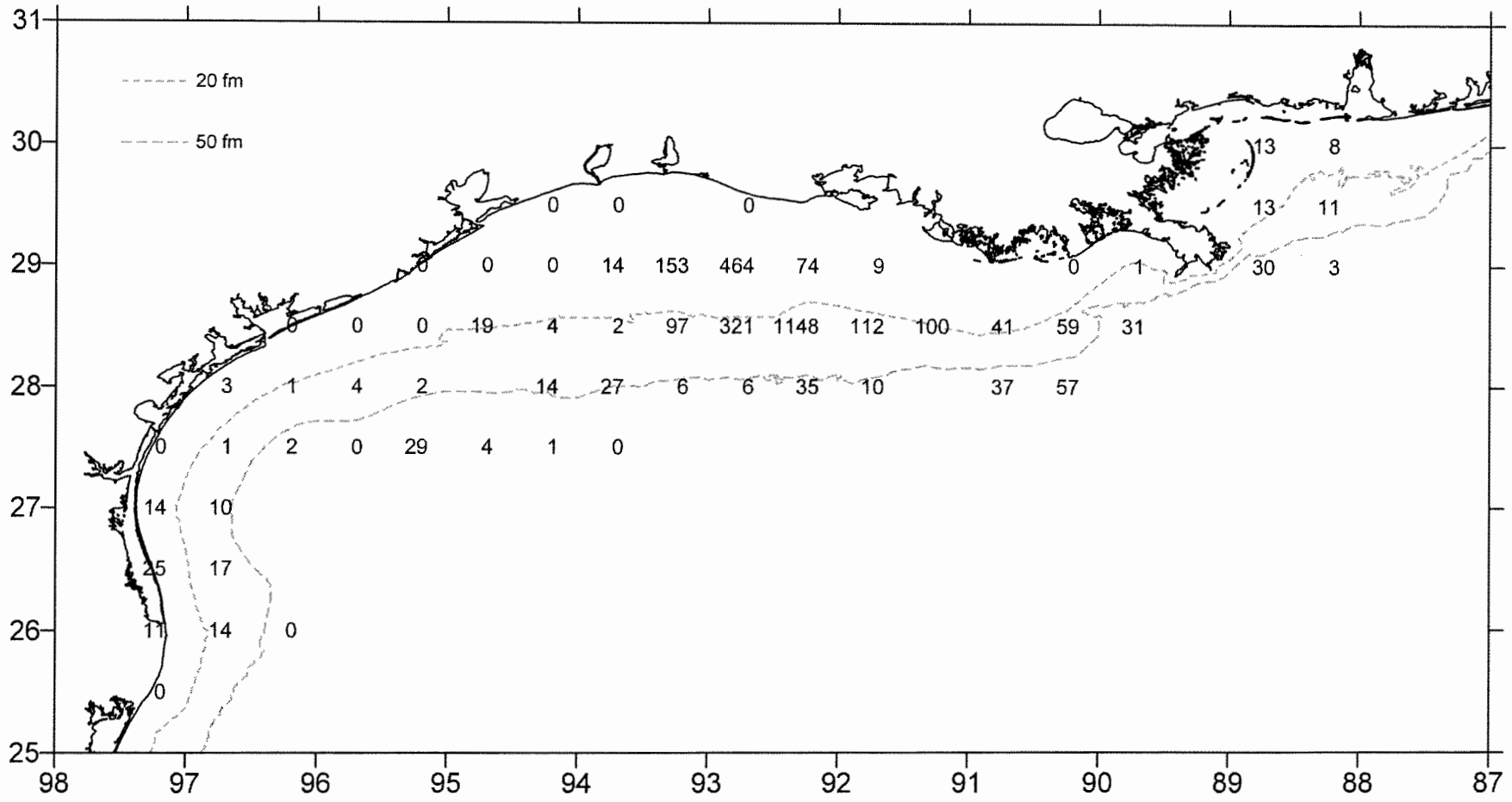

Figure 60. Bigeye searobin, Prionotus longispinosus, number/hour for October-December 2001.

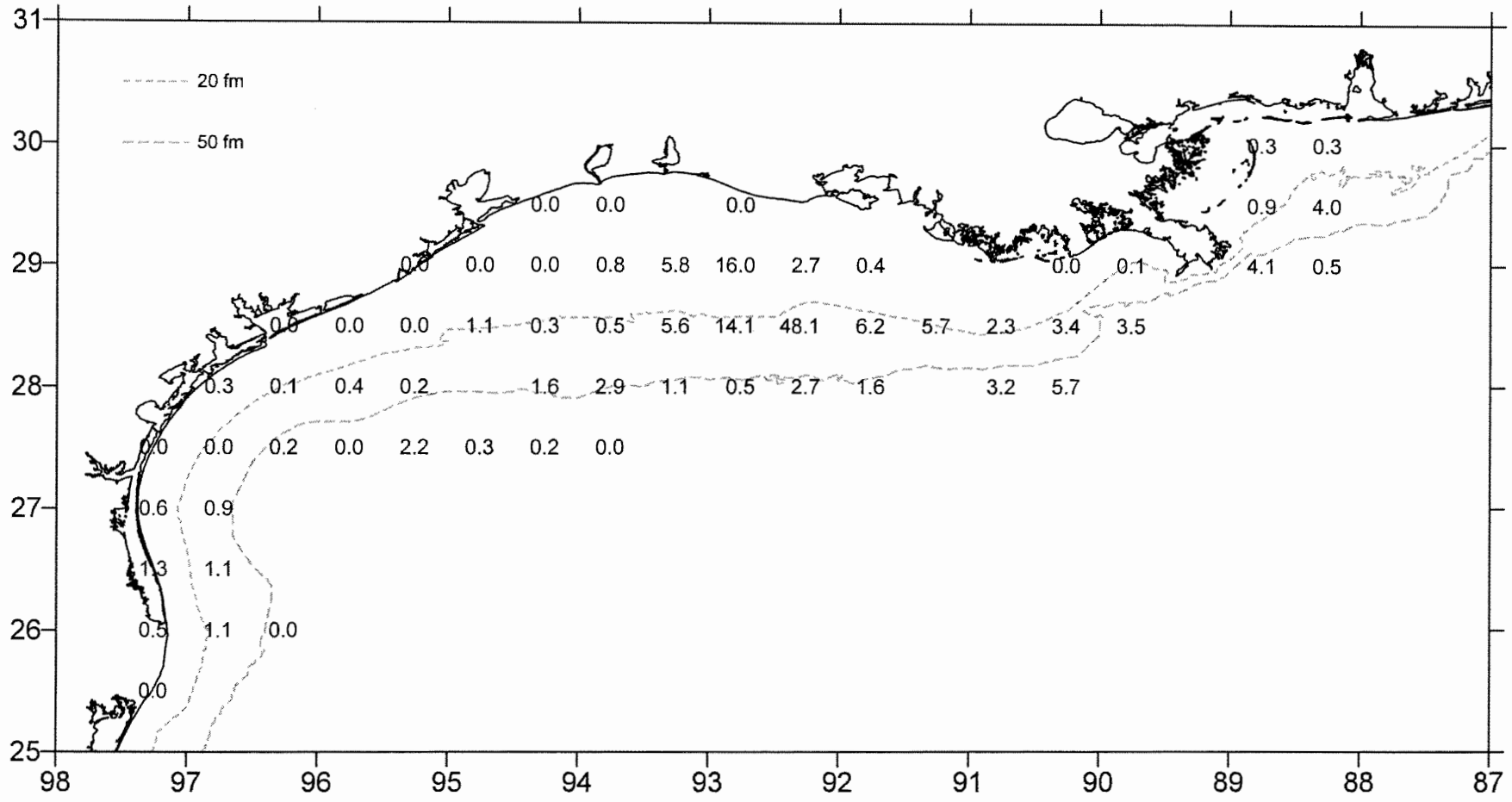

Figure 61. Bigeye searobin, Prionotus longispinosus, lb/hour for October-December 2001.

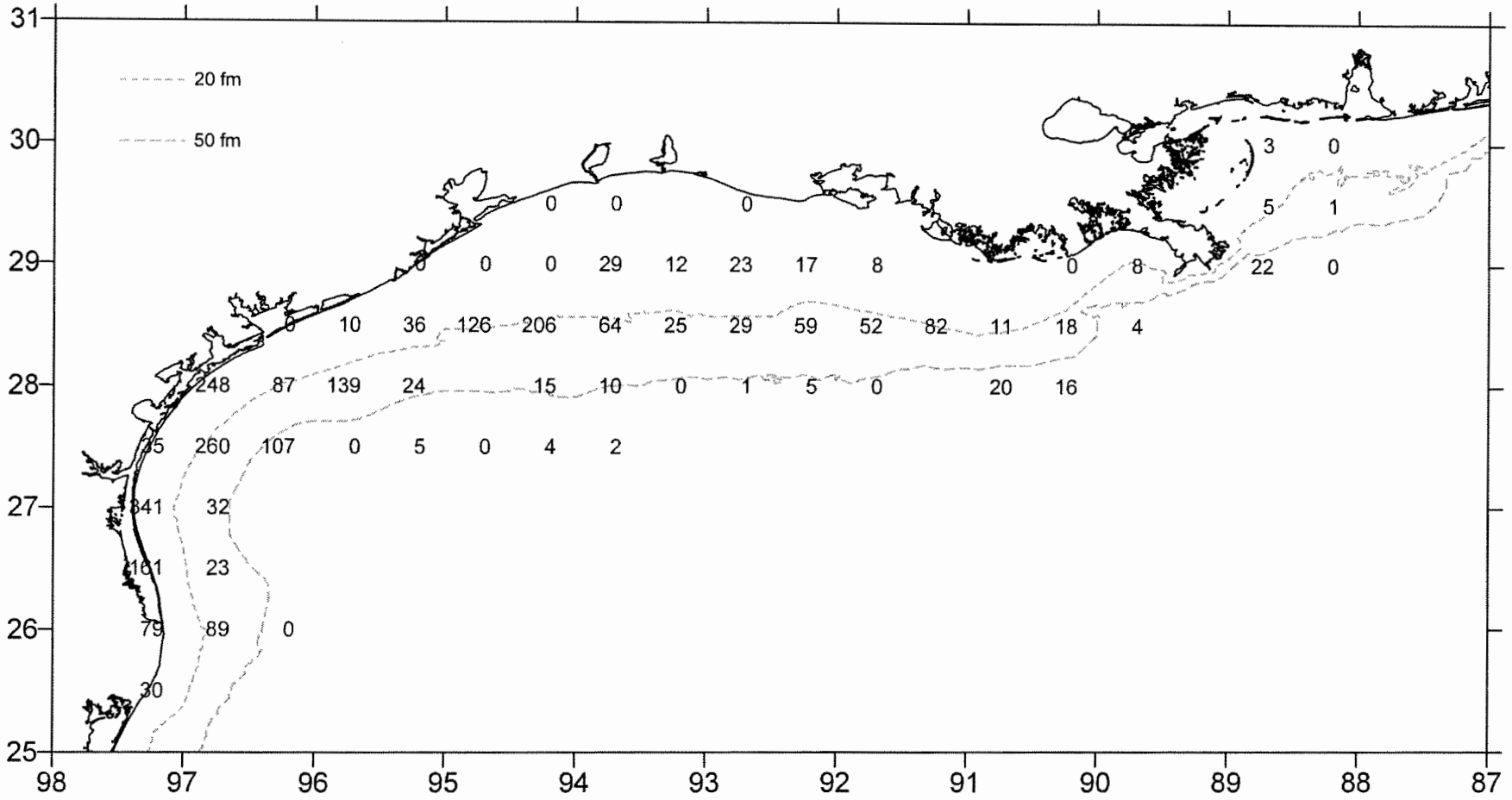

Figure 62. Shoal flounder, Syacium gunteri, number/hour for October-December 2001.

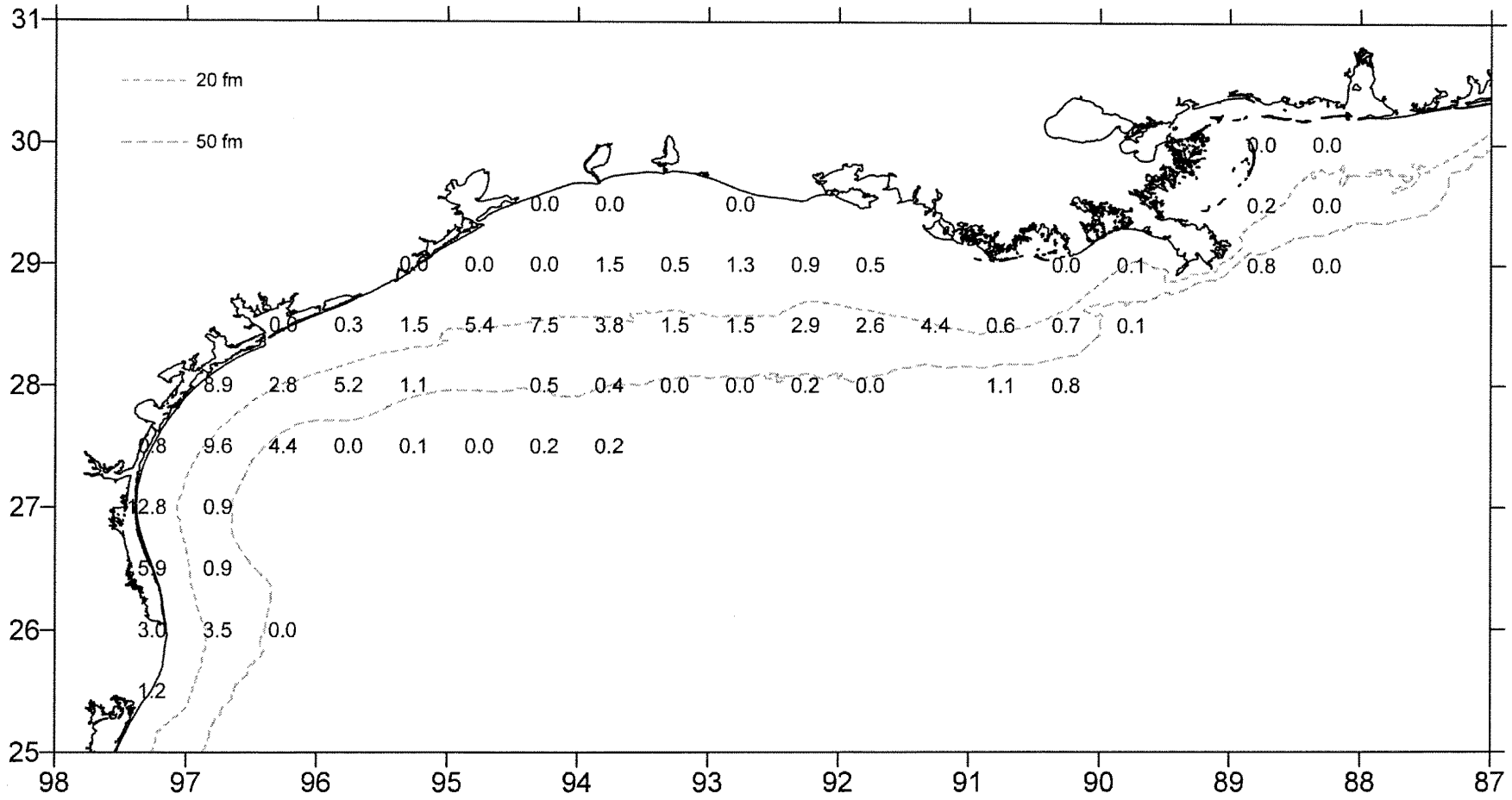

Figure 63. Shoal flounder, Syacium gunteri, lb/hour for October-December 2001.

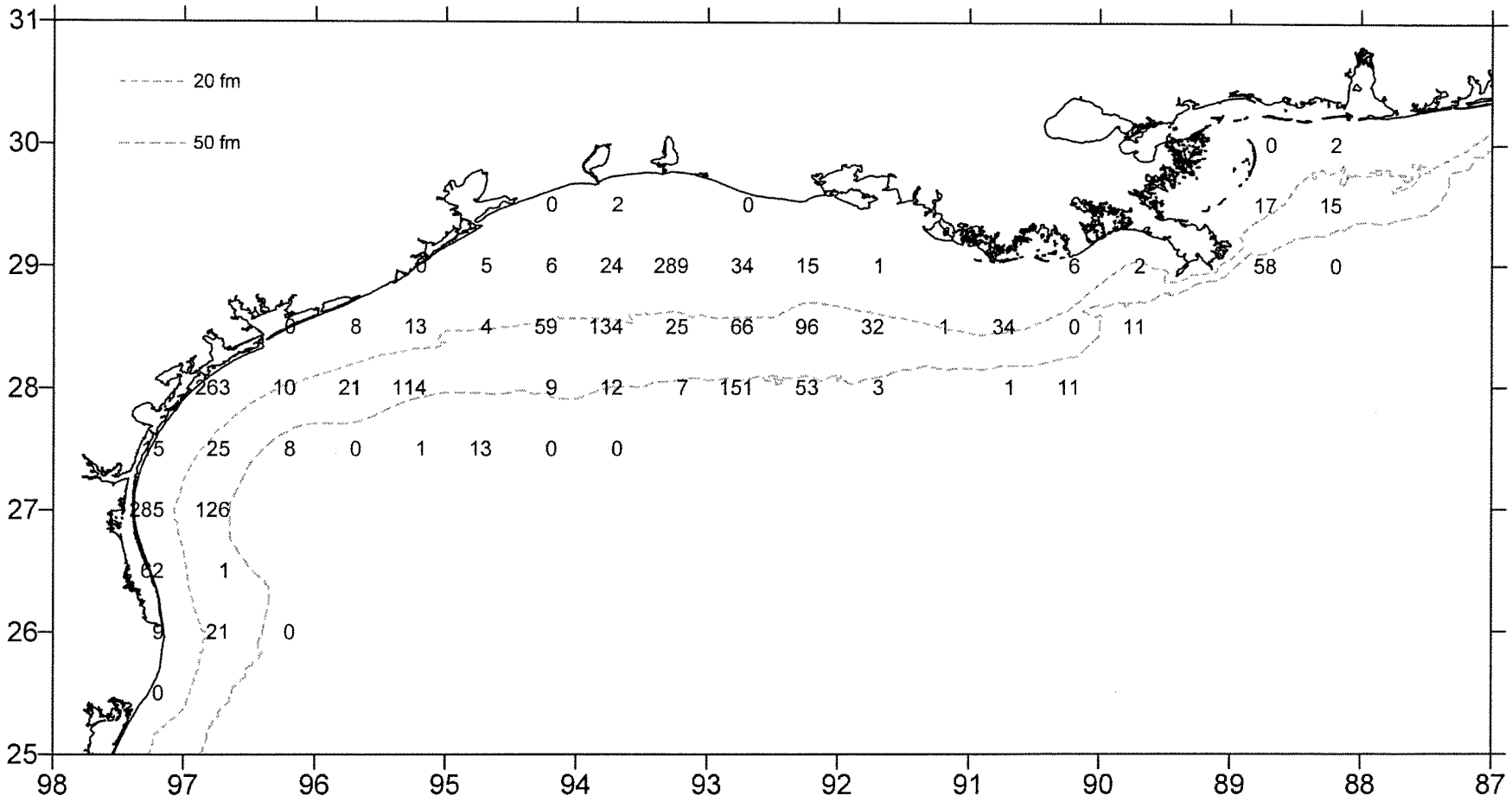

Figure 64. Gulf butterfish, Peprilus burti, number/hour for October-December 2001.

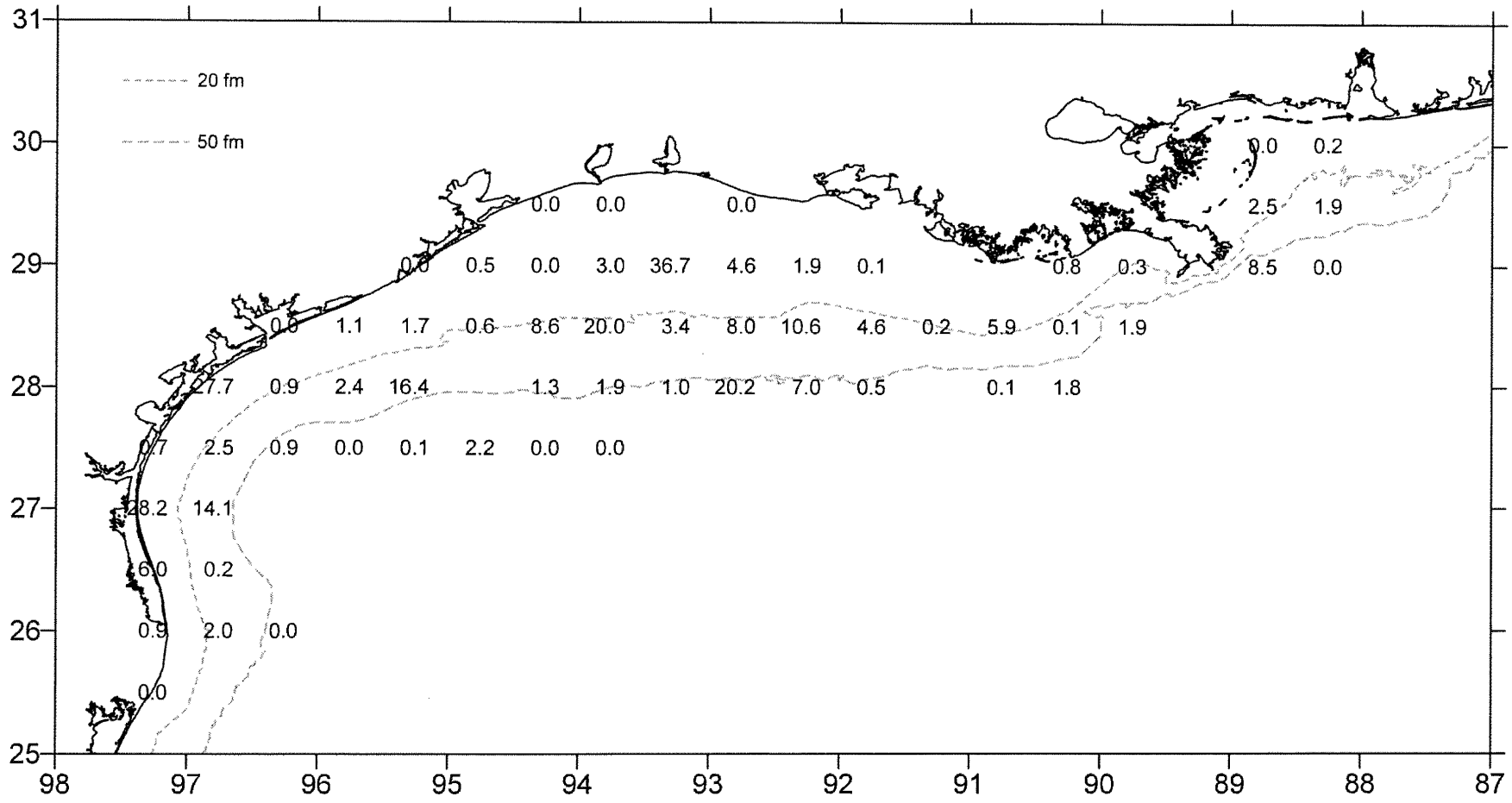

Figure 65. Gulf butterfish, Peprilus burti, lb/hour for October-December 2001.

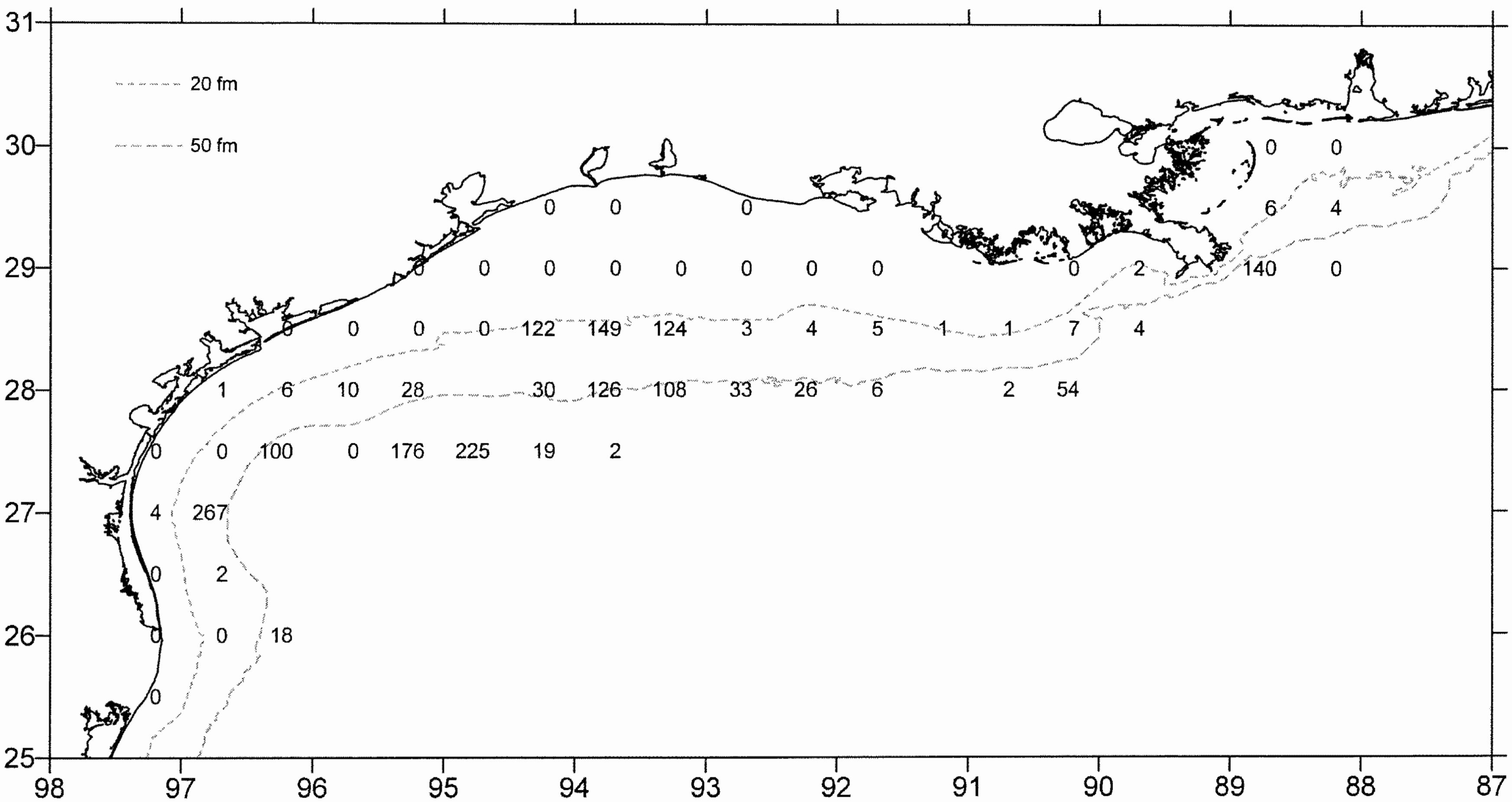

Figure 66. Rough scad, Trachurus lathami, number/hour for October-December 2001.

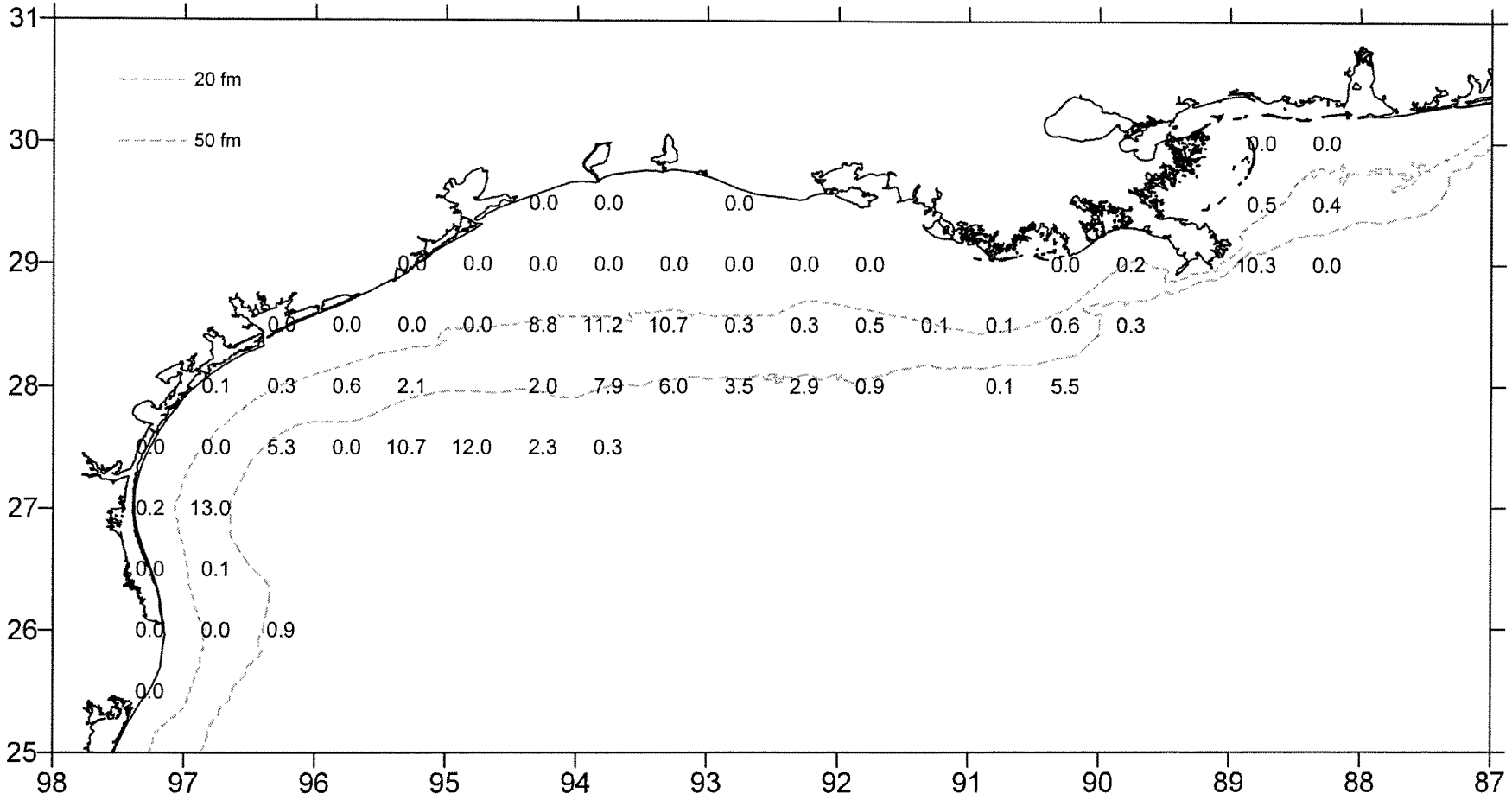

Figure 67. Rough scad, Trachurus lathami, lb/hour for October-December 2001.

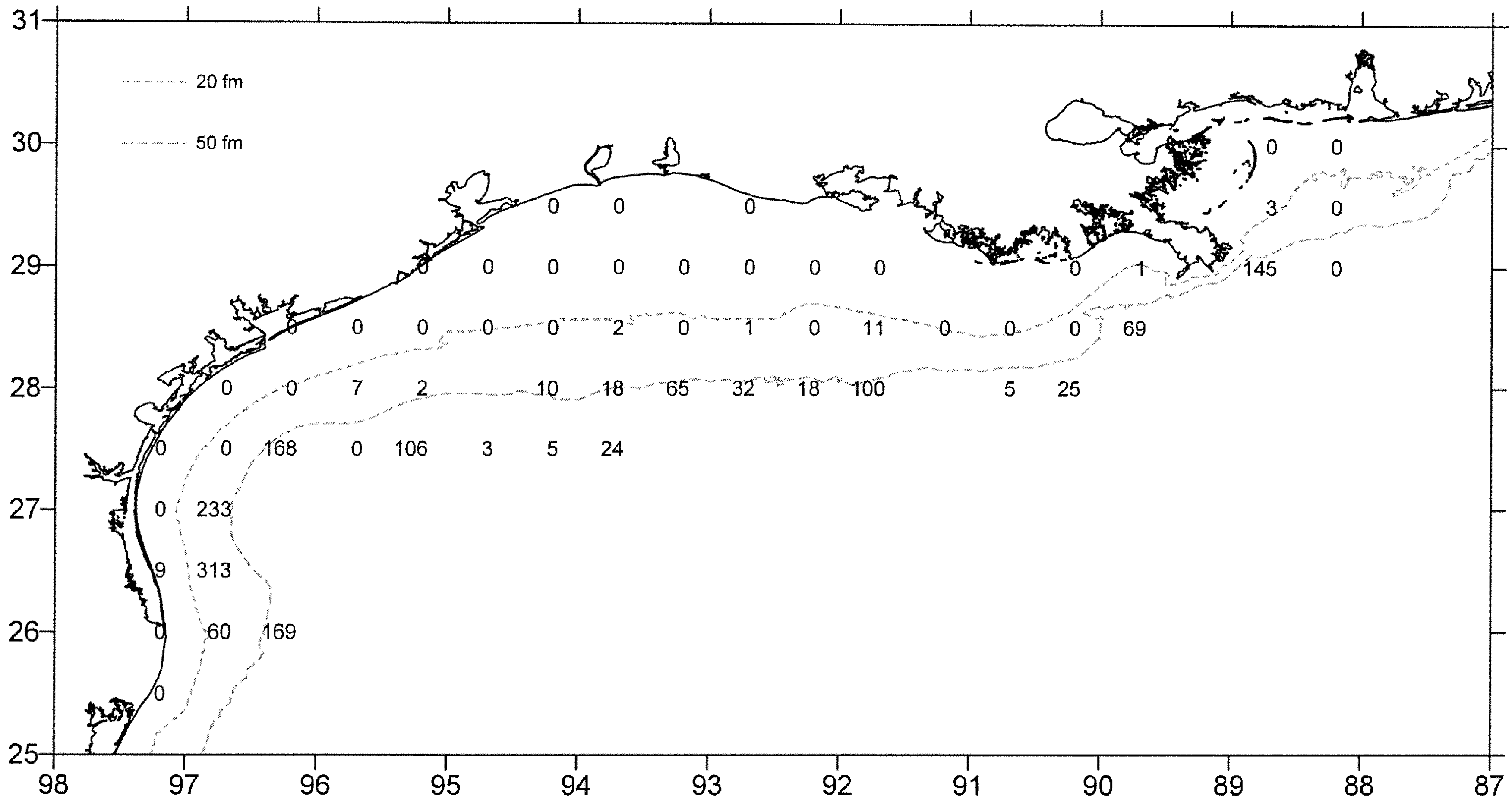

Figure 68. Blackear bass, Serranus altrobranchus, number/hour for October-December 2001.

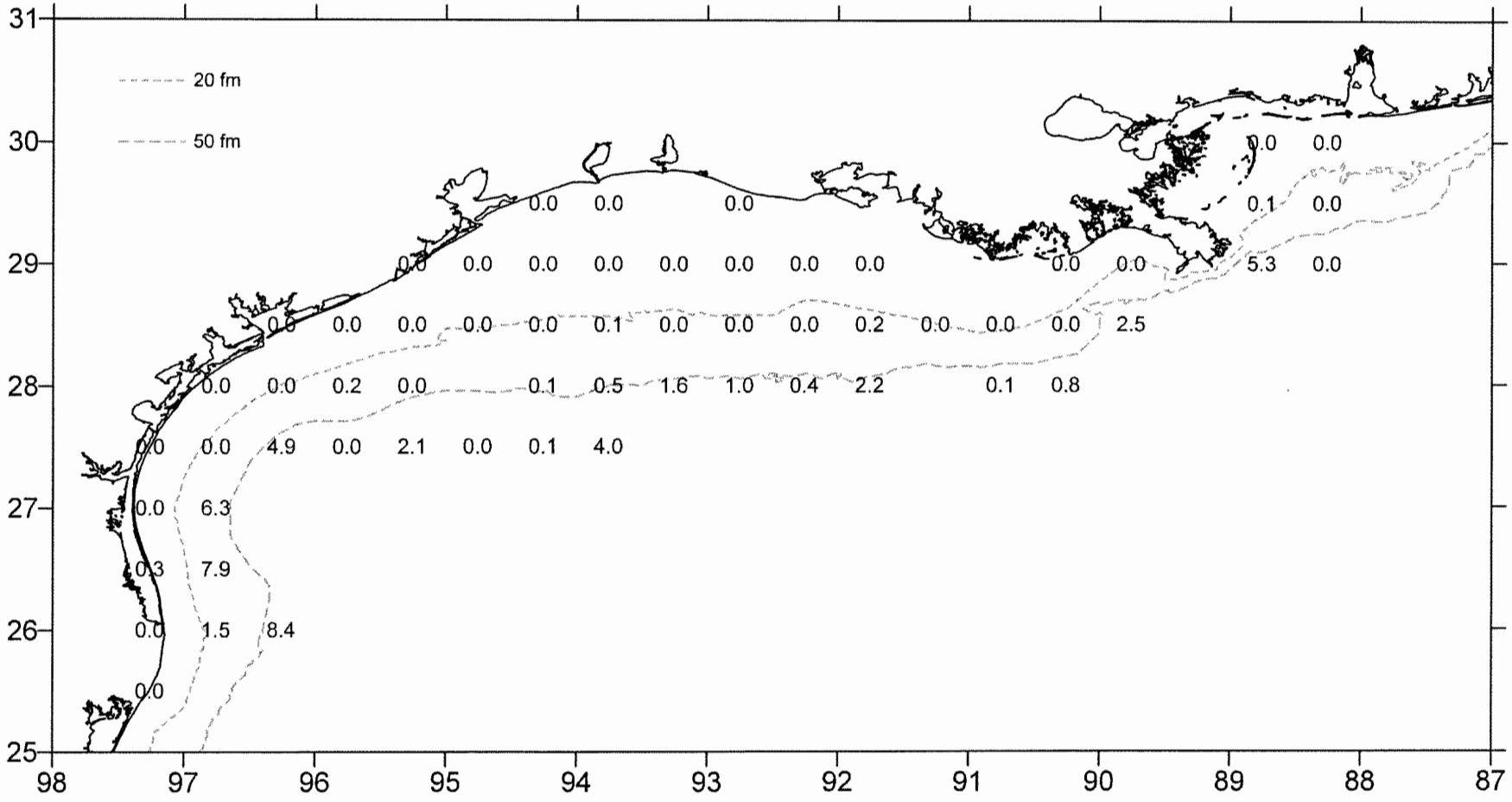

Figure 69. Blackear bass, Serranus altrobranchus, lb/hour for October-December 2001.

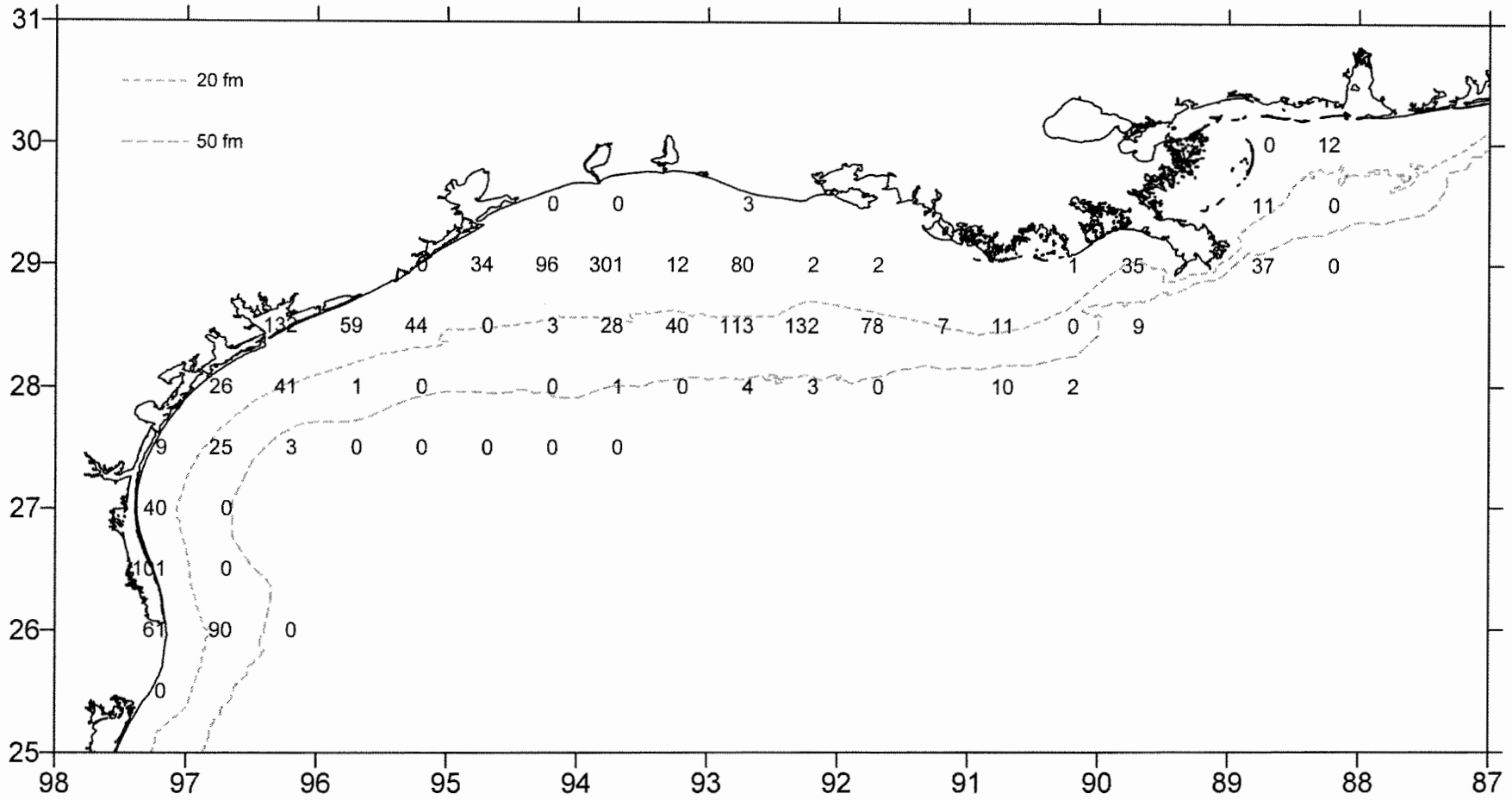

Figure 70. Silver seatrout, Cynoscion nothus, number/hour for October-December 2001.

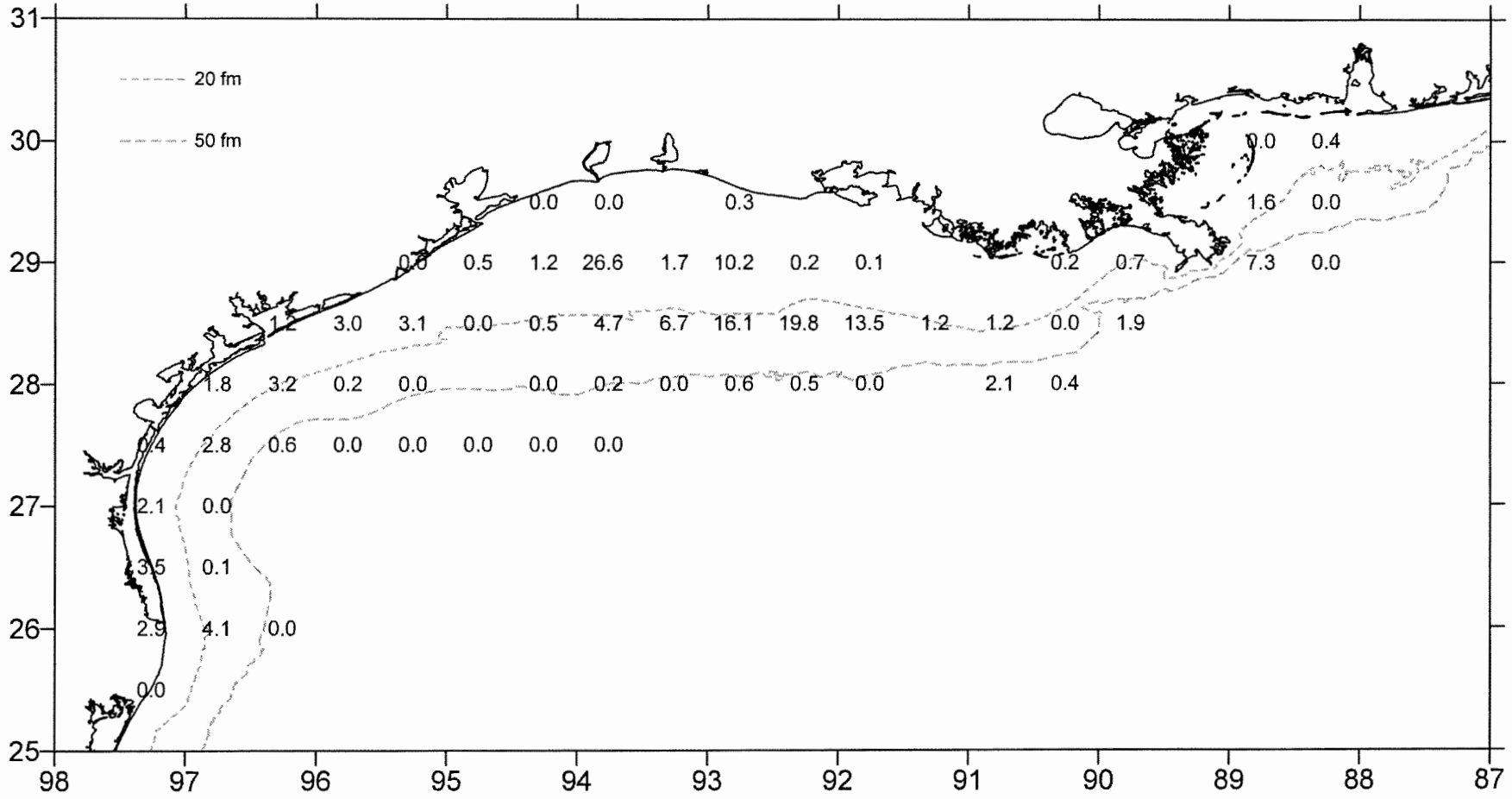

Figure 71. Silver seatrout, Cynoscion nothus, lb/hour for October-December 2001.

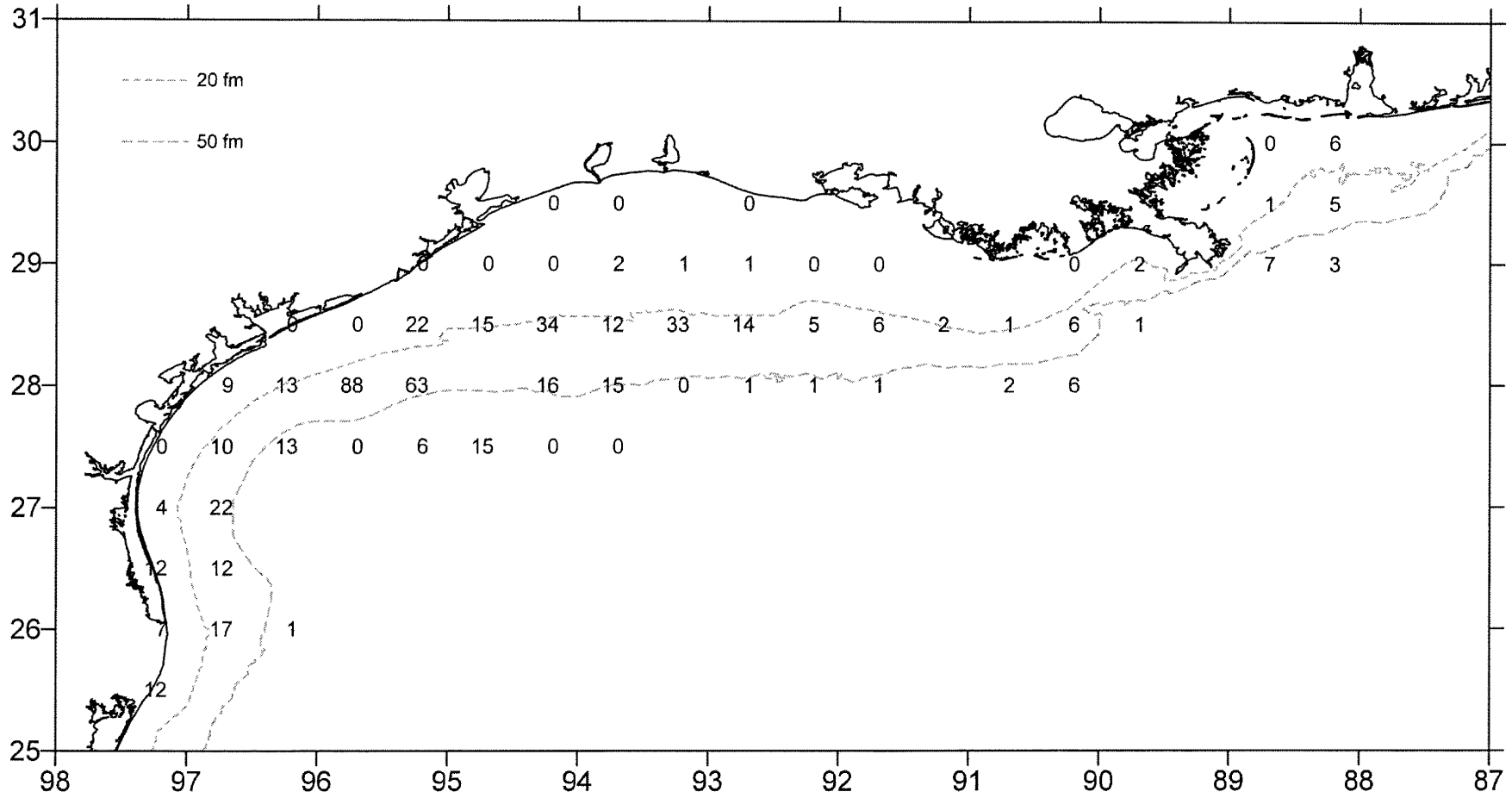

Figure 72. Red snapper, Lutjanus campechanus, number/hour for October-December 2001.

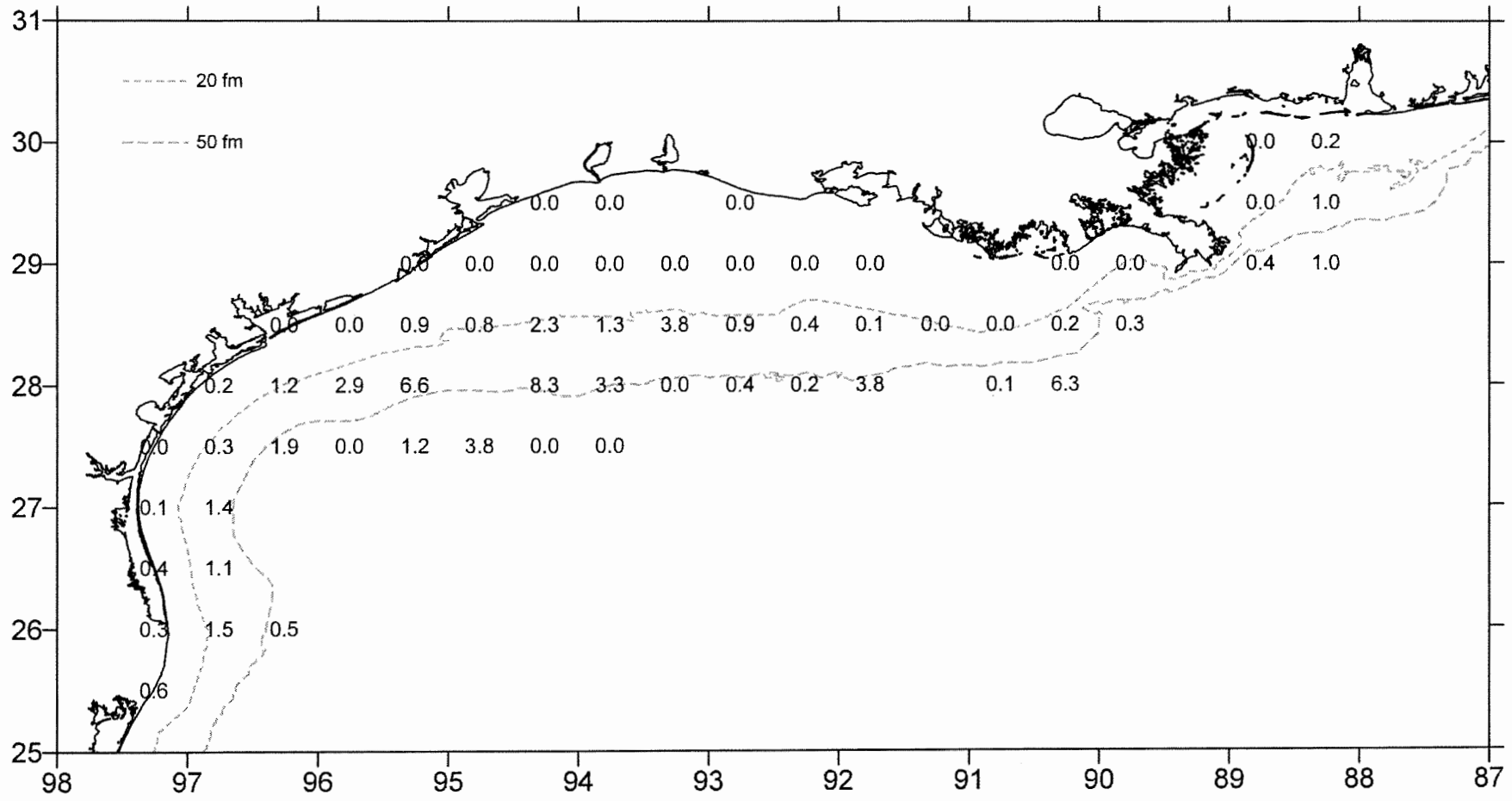

Figure 73. Red snapper, Lutjanus campechanus, lb/hour for October-December 2001.

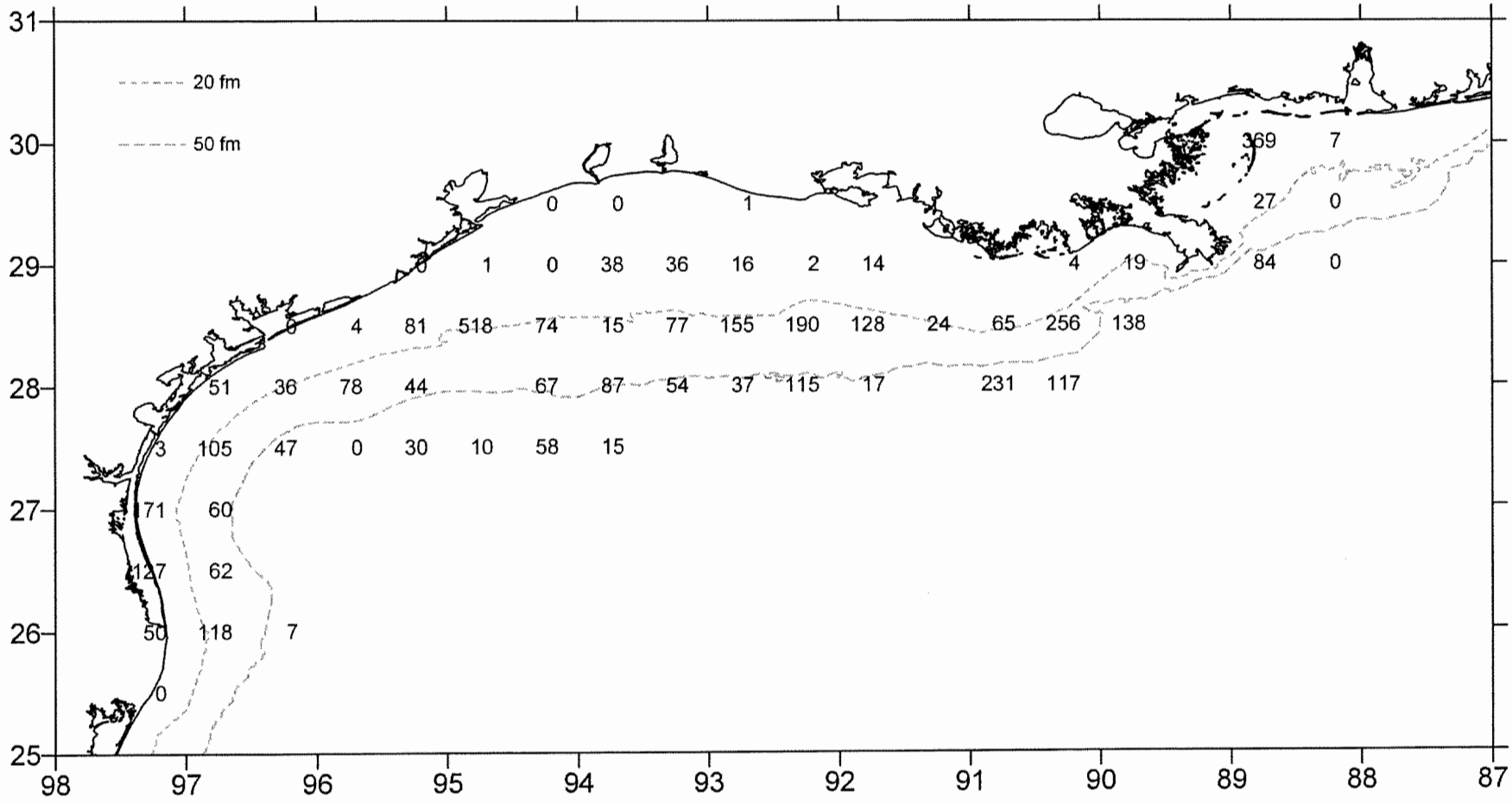

Figure 74. Brown shrimp, Penaeus aztecus, number/hour for October-December 2001.

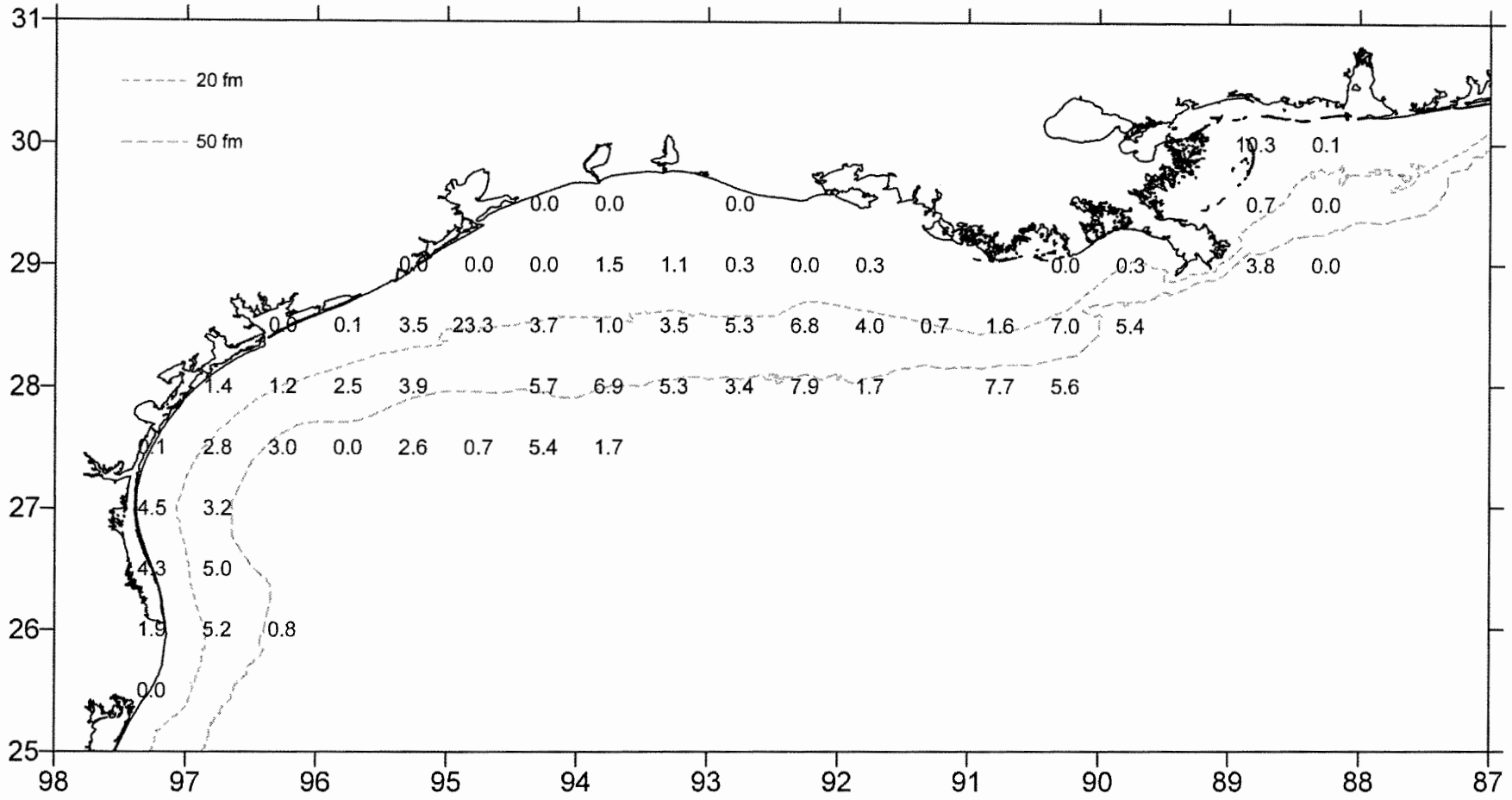

Figure 75. Brown shrimp, Penaeus aztecus, lb/hour for October-December 2001.

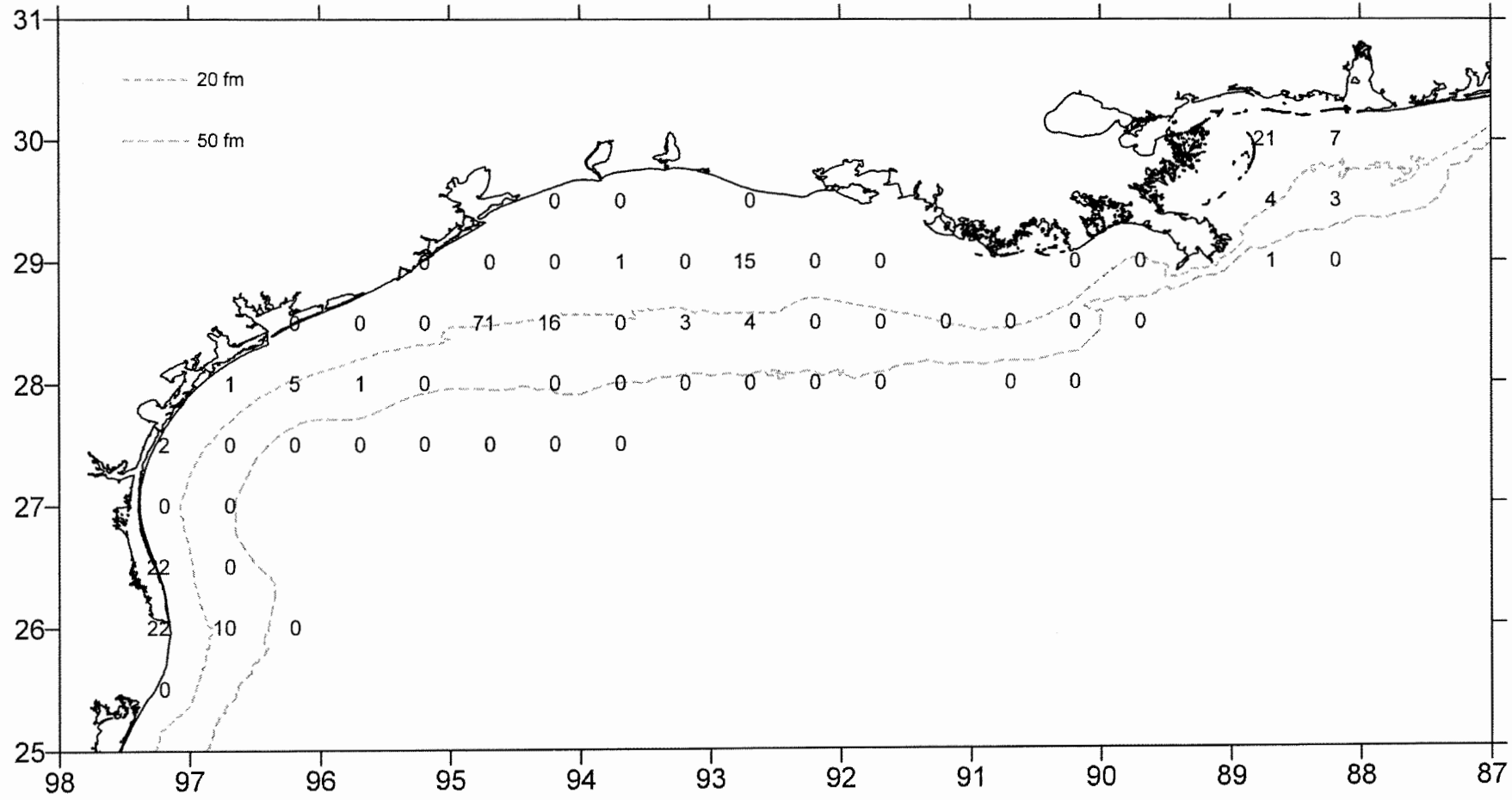

Figure 76. Pink shrimp, Penaeus duorarum, number/hour for October-December 2001.

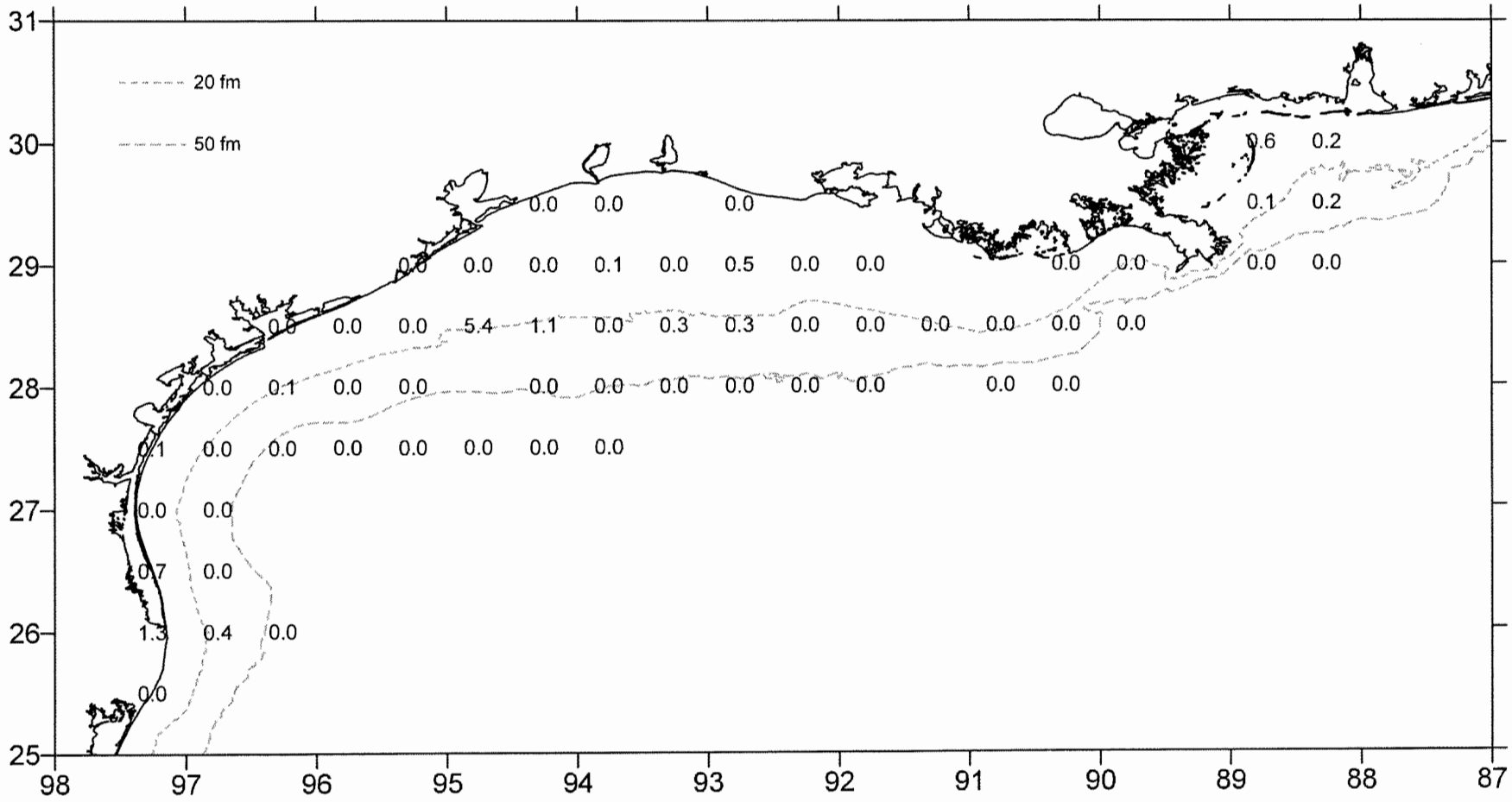

Figure 77. Pink shrimp, Penaeus duorarum, lb/hour for October-December 2001.

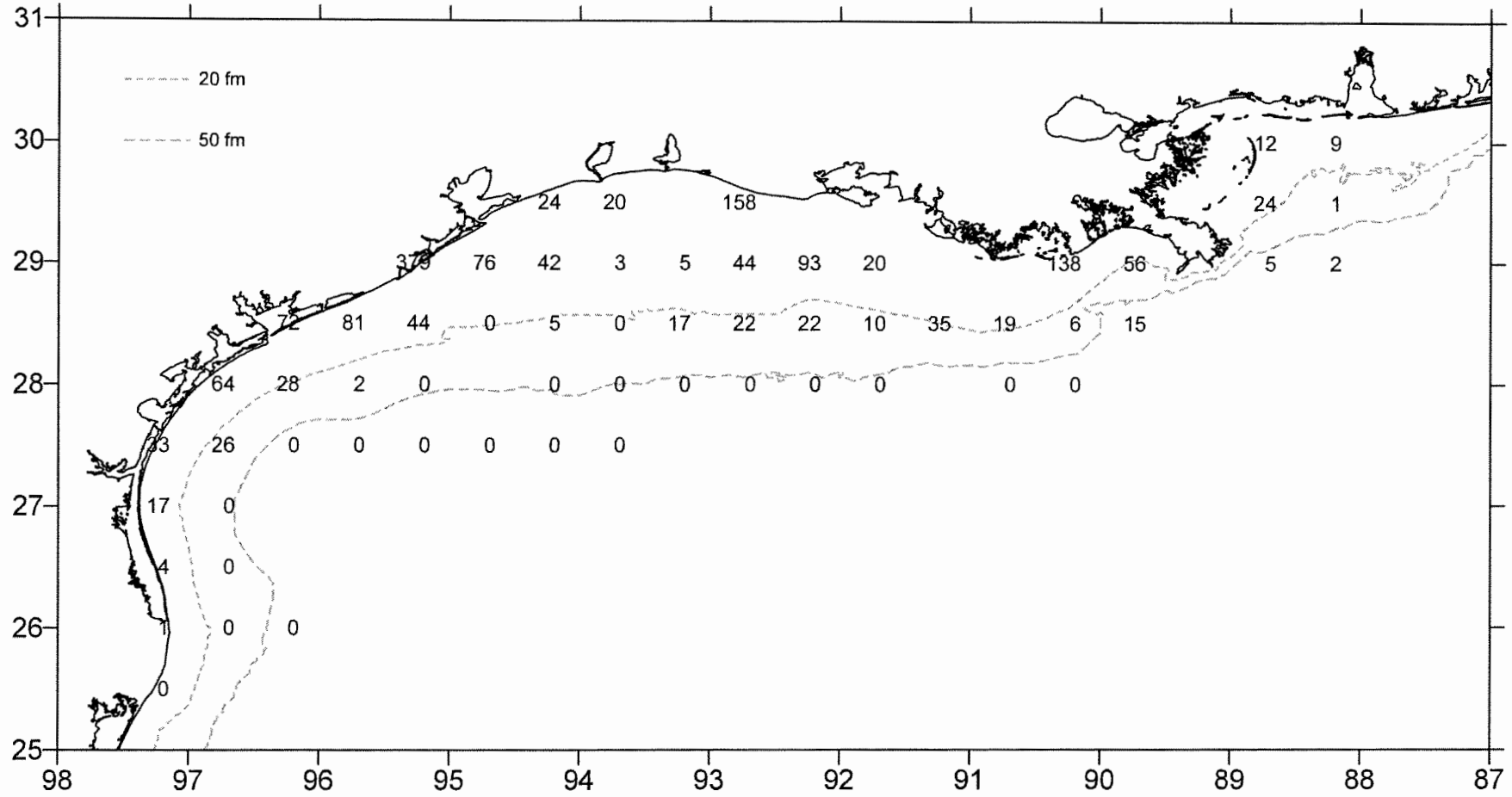

Figure 78. White shrimp, Penaeus setiferus, number/hour for October-December 2001.

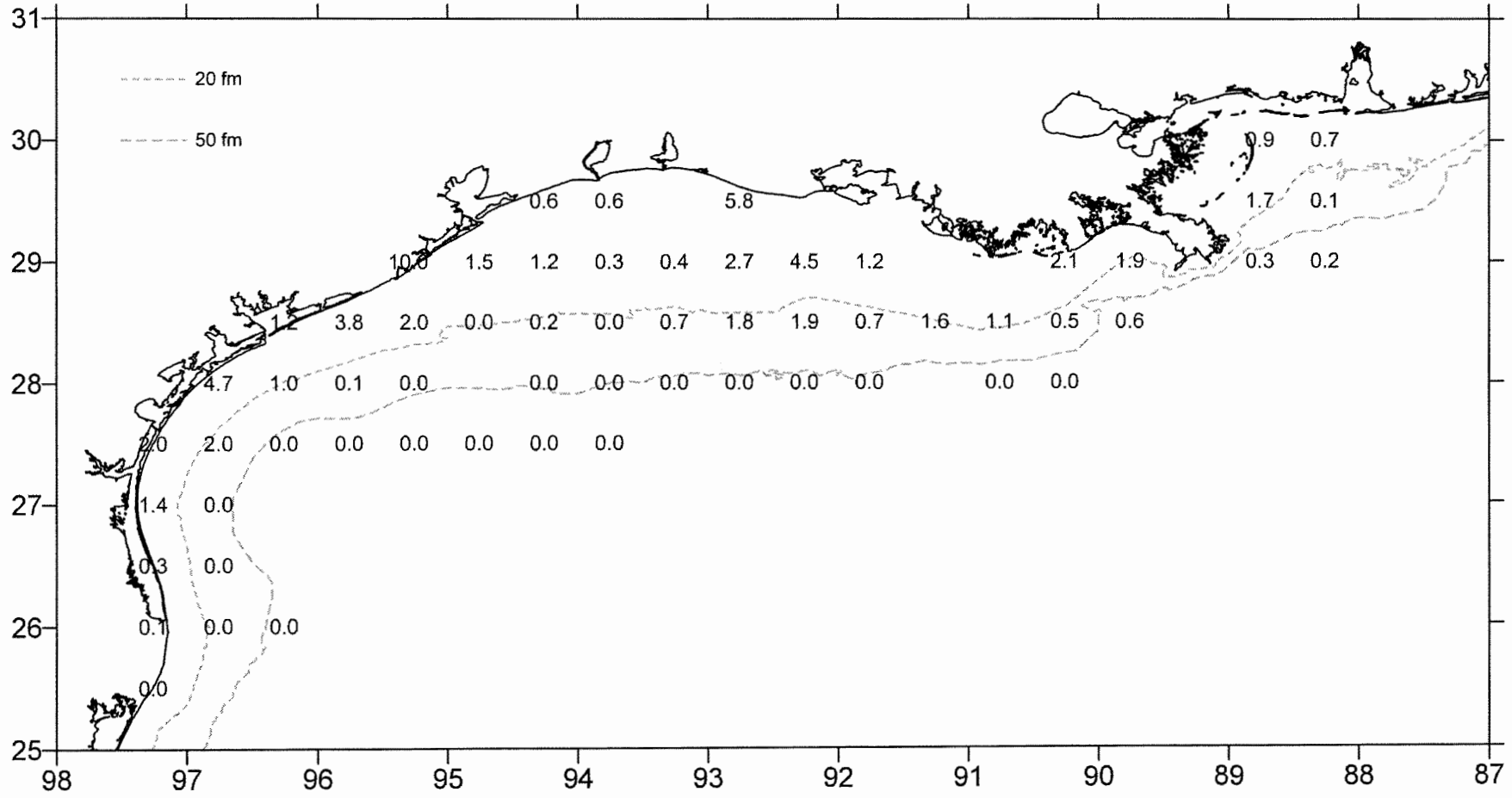

Figure 79. White shrimp, Penaeus setiferus, lb/hour for October-December 2001.

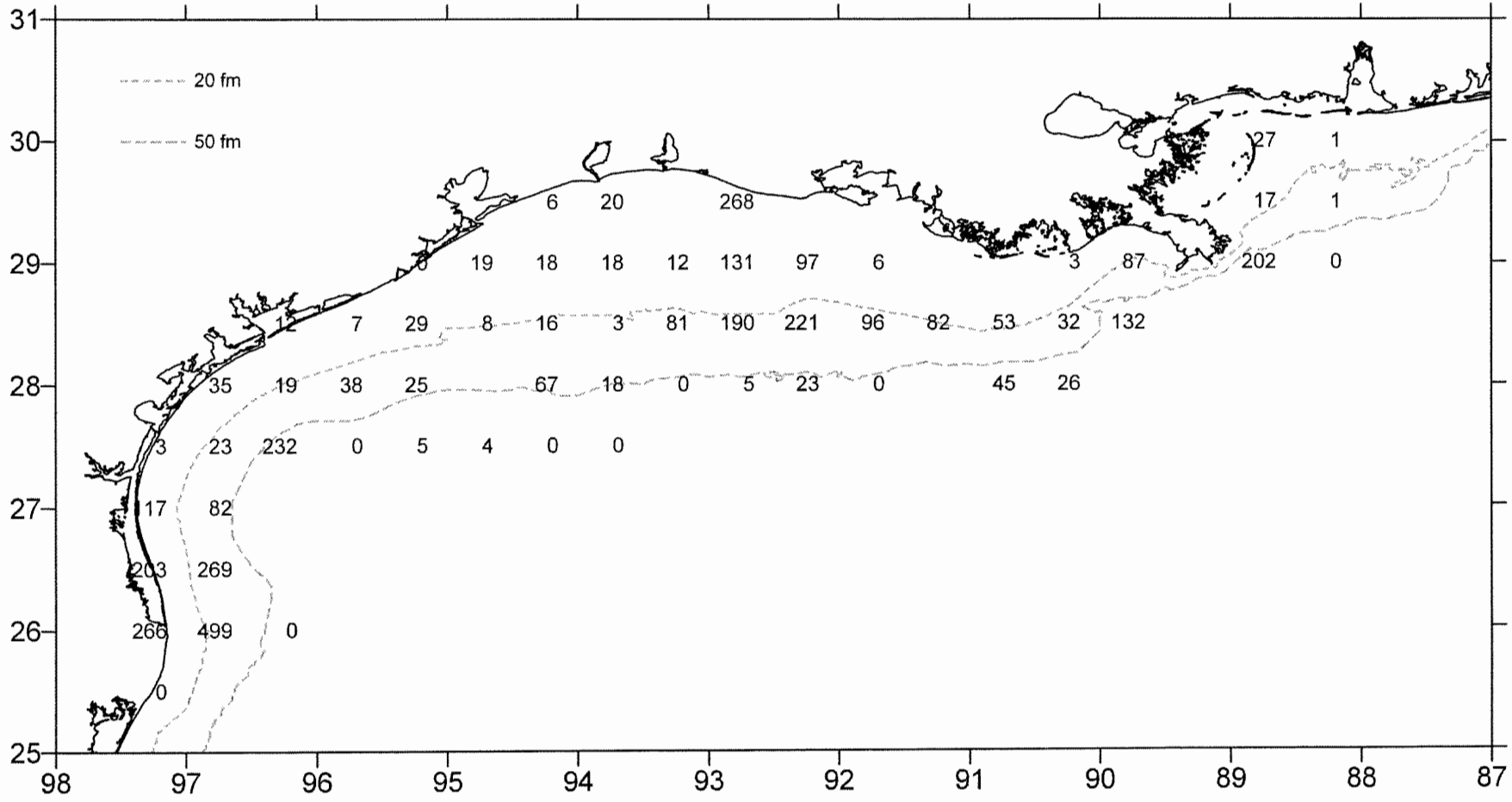

Figure 80. Lesser blue crab, Callinectes similis, number/hour for October-December 2001.

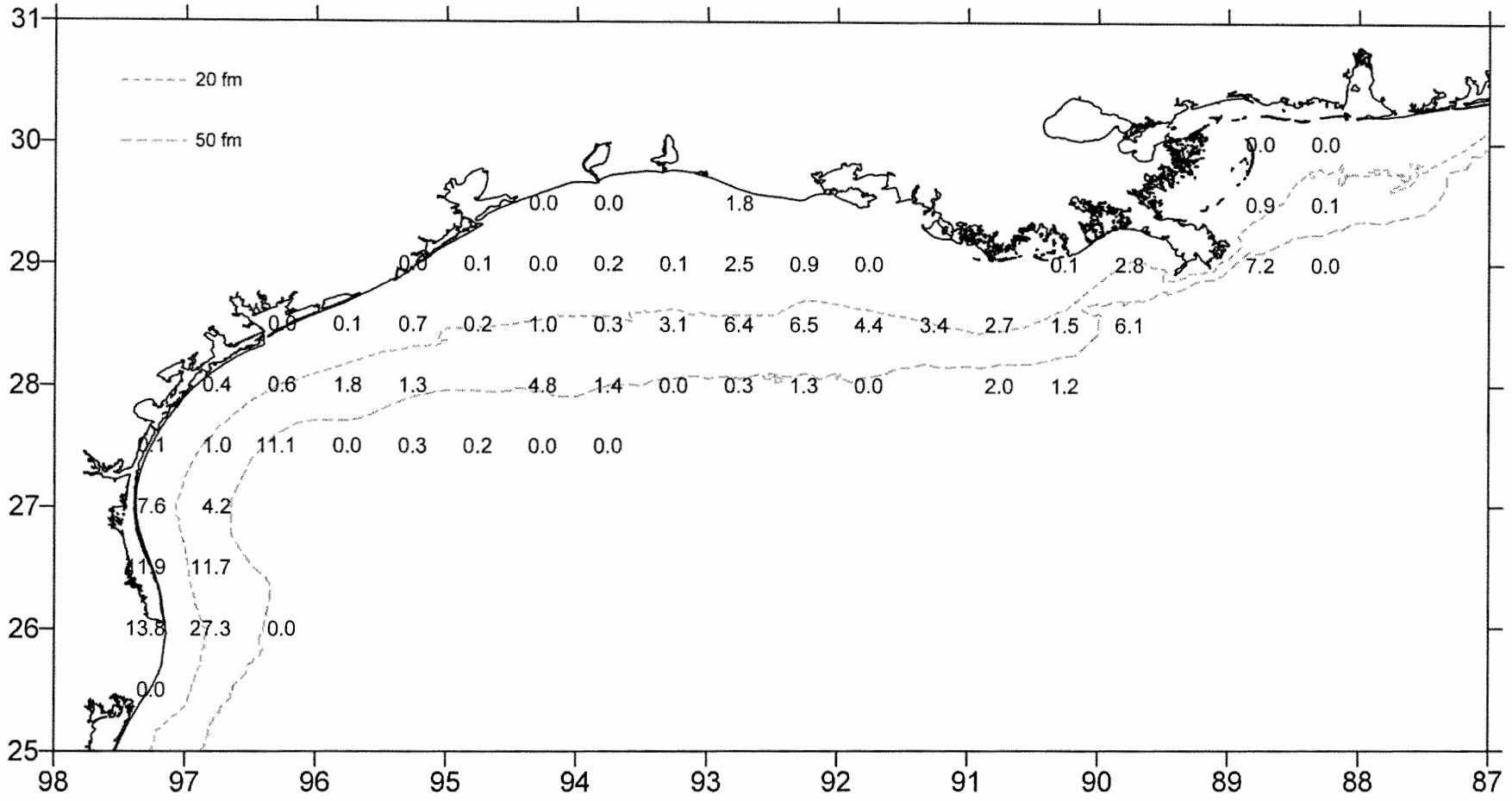

Figure 81. Lesser blue crab, Callinectes similis, lb/hour for October-December 2001.

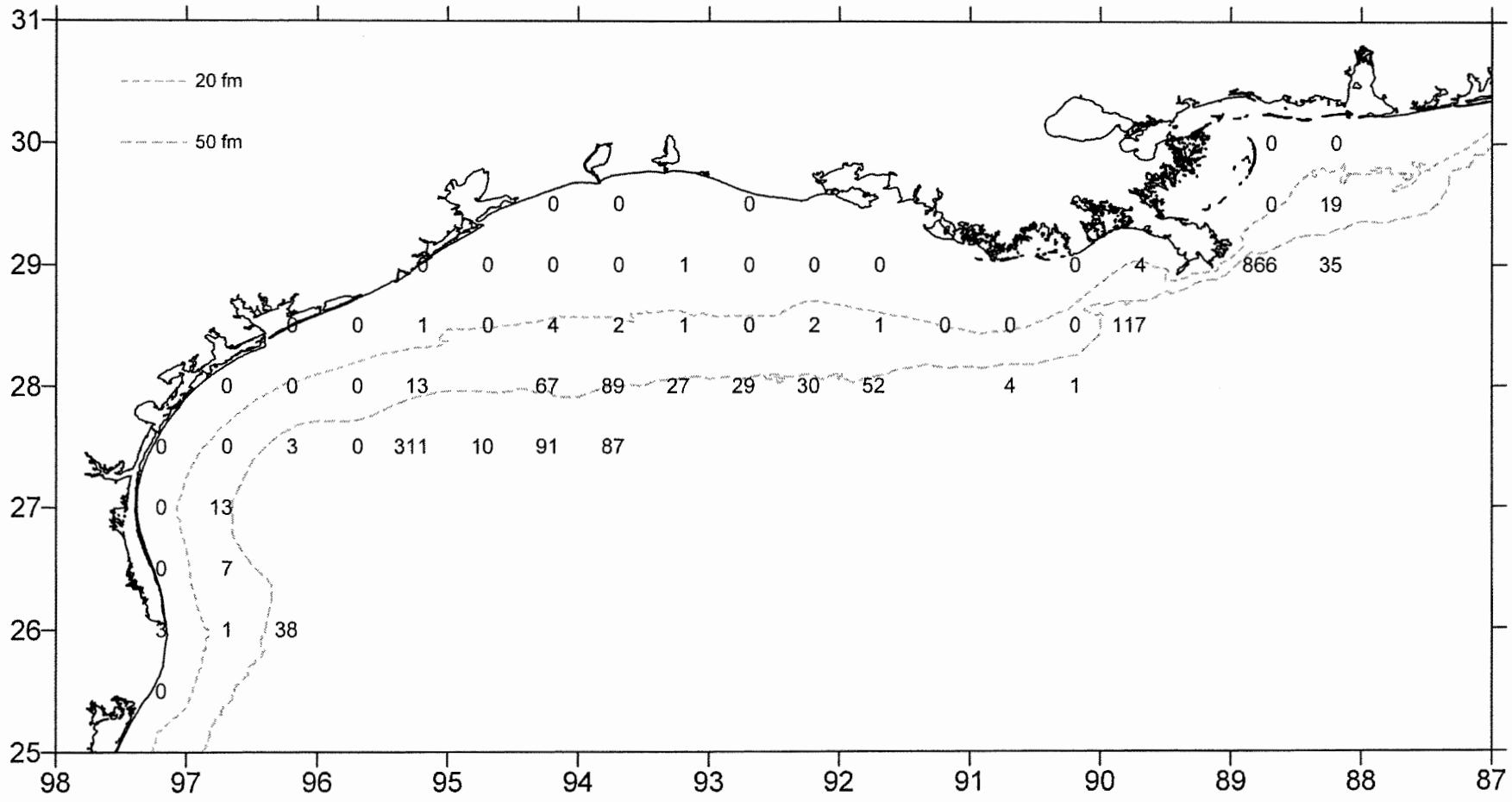

Figure 82. Longspine swimming crab, Portunis spinicarpus, number/hour for October-December 2001.

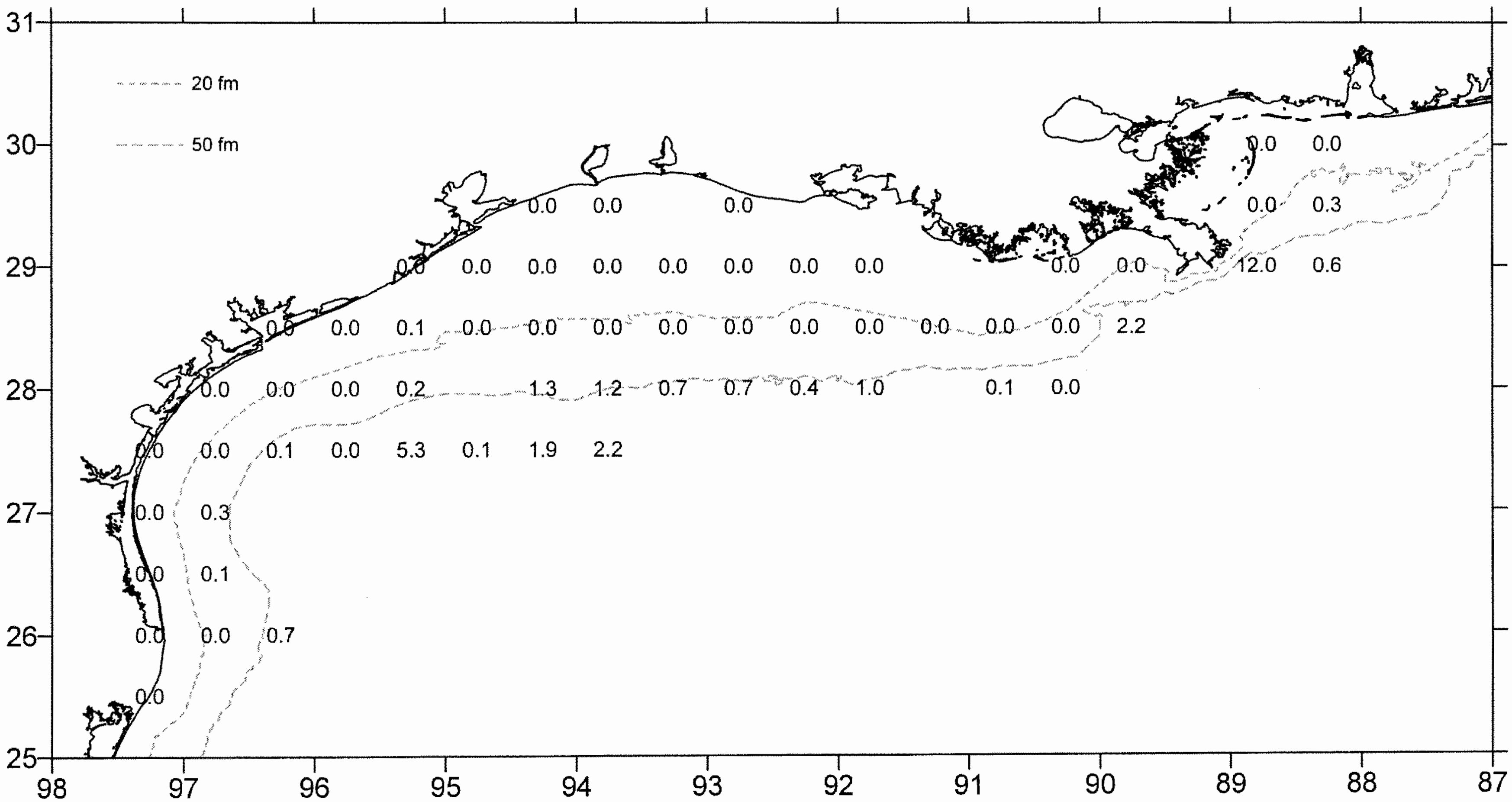

Figure 83. Longspine swimming crab, Portunis spinicarpus, lb/hour for October-December 2001.

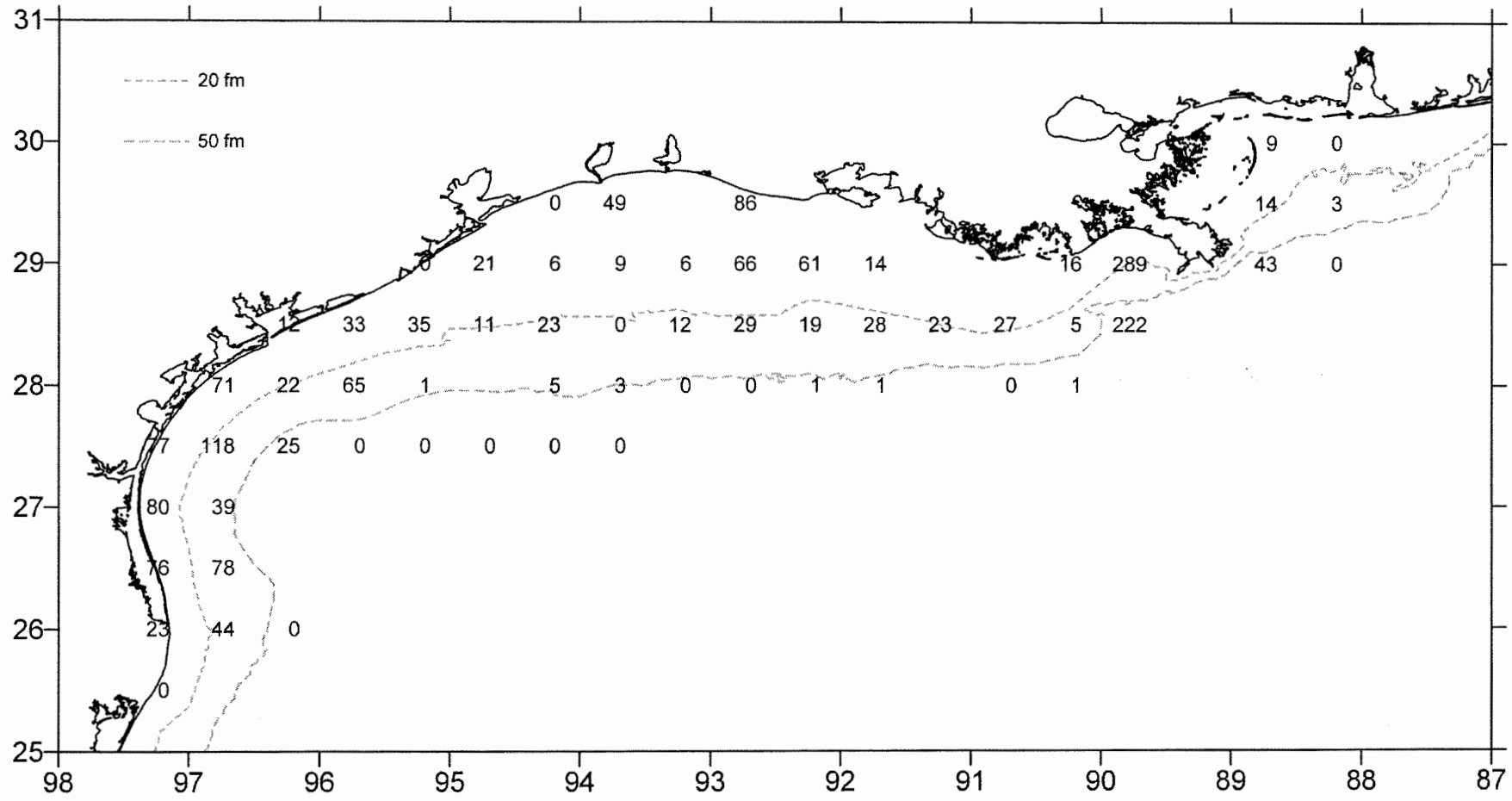

Figure 84. Roughback shrimp, Trachypenaeus similis, number/hour for October-December 2001.

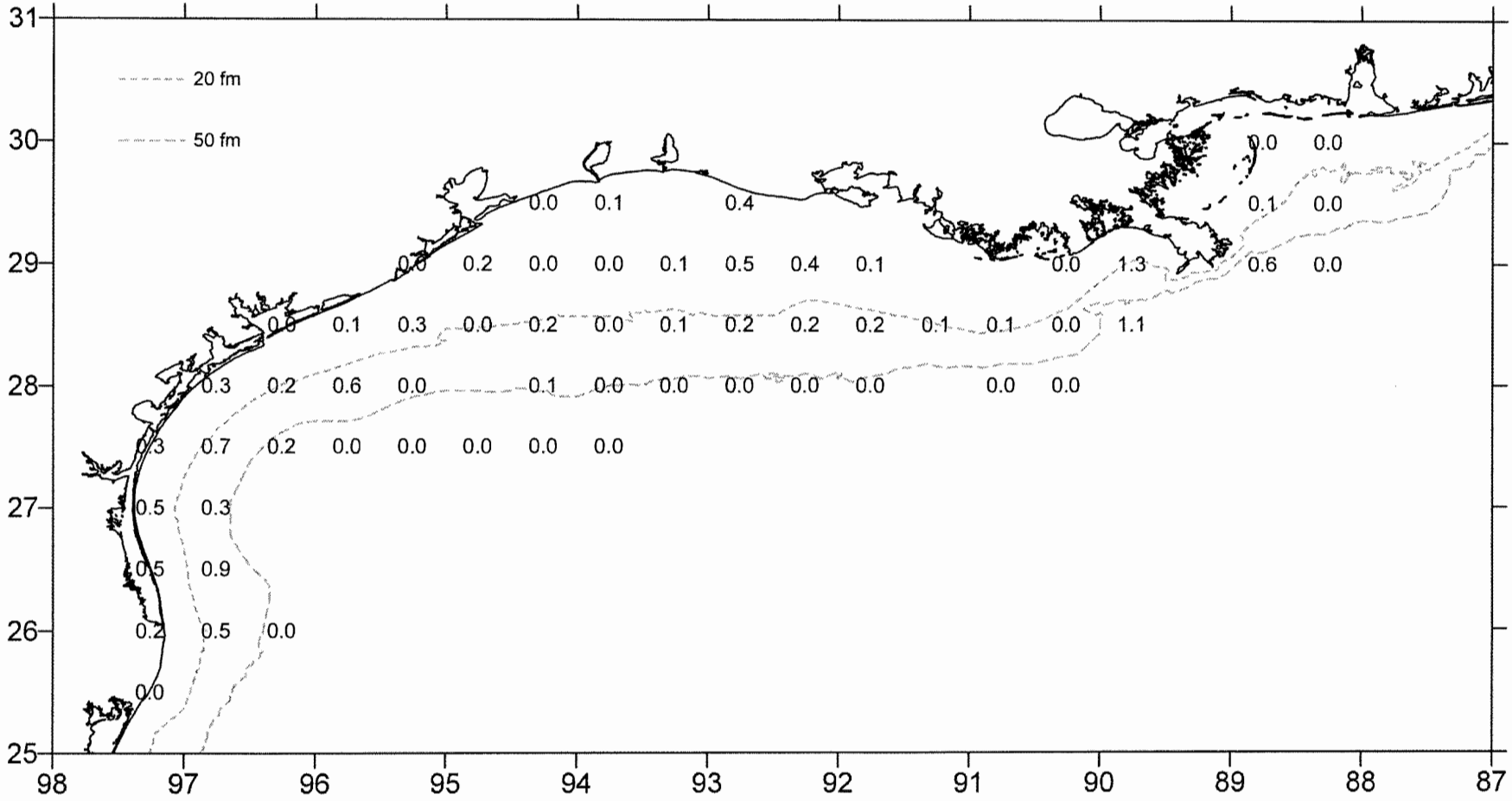

Figure 85. Roughback shrimp, Trachypenaeus similis, lb/hour for October-December 2001.

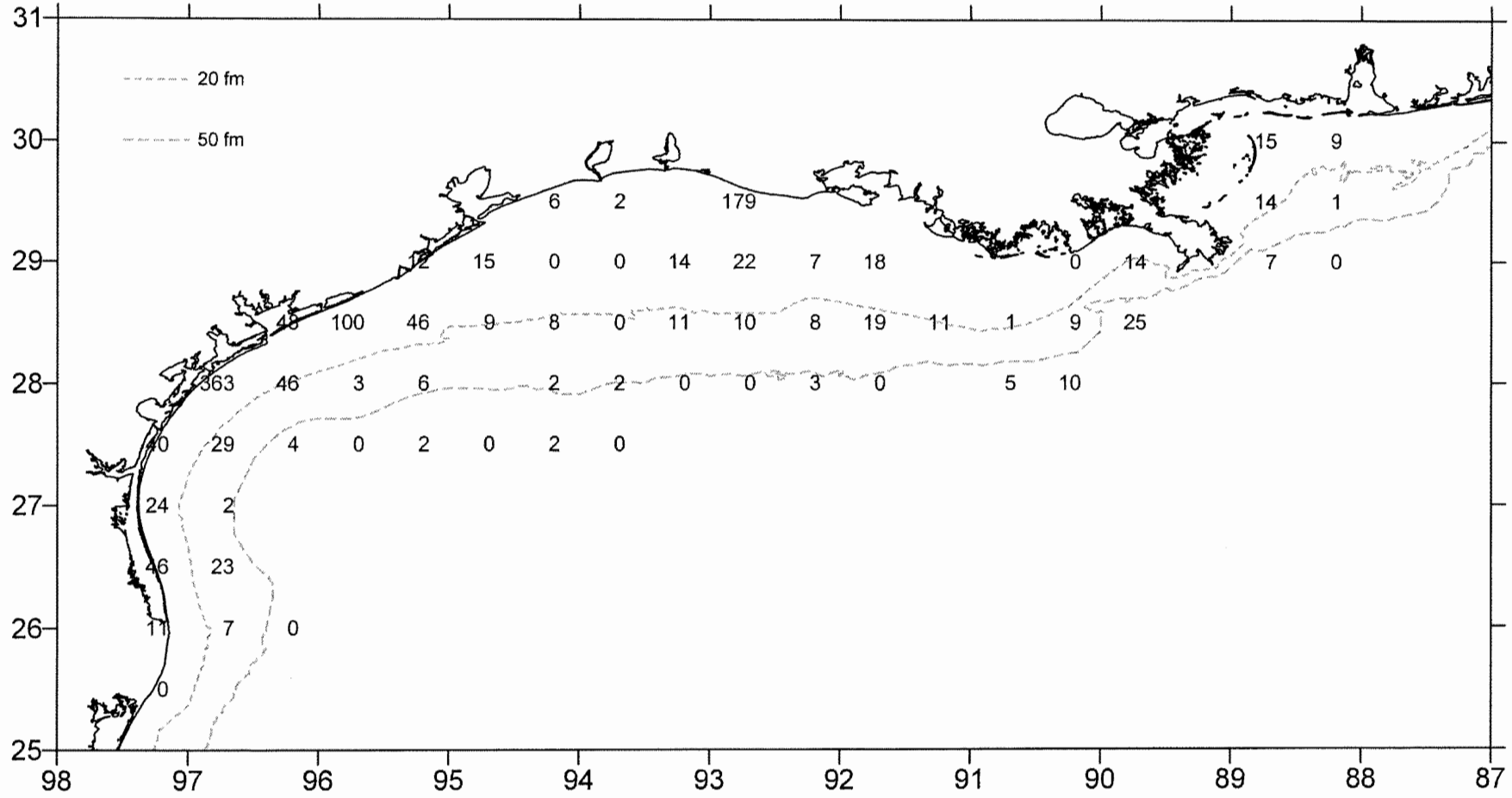

Figure 86. Mantis shrimp, Squilla empusa, number/hour for October-December 2001.

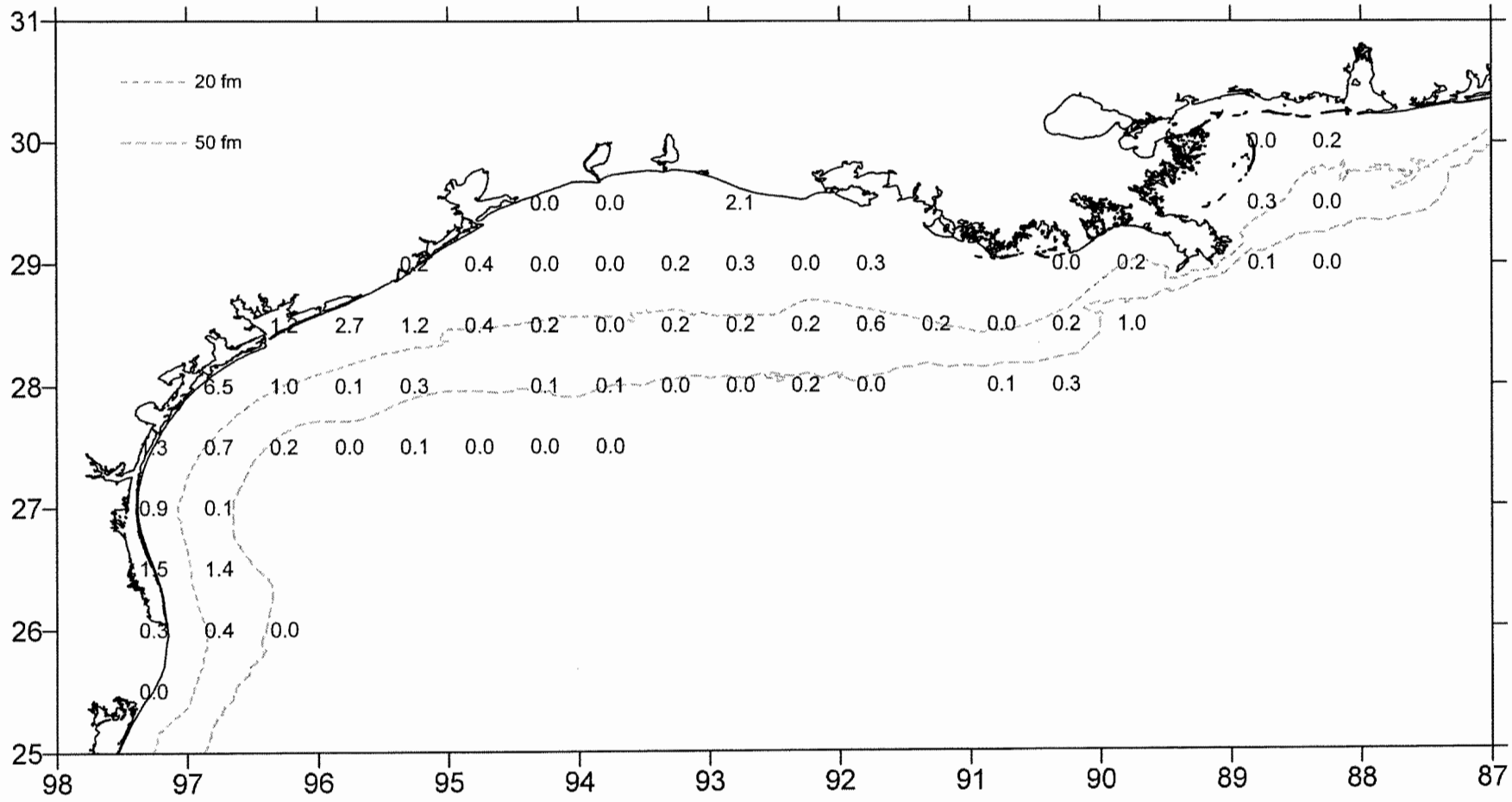

Figure 87. Mantis shrimp, Squilla empusa, lb/hour for October-December 2001.

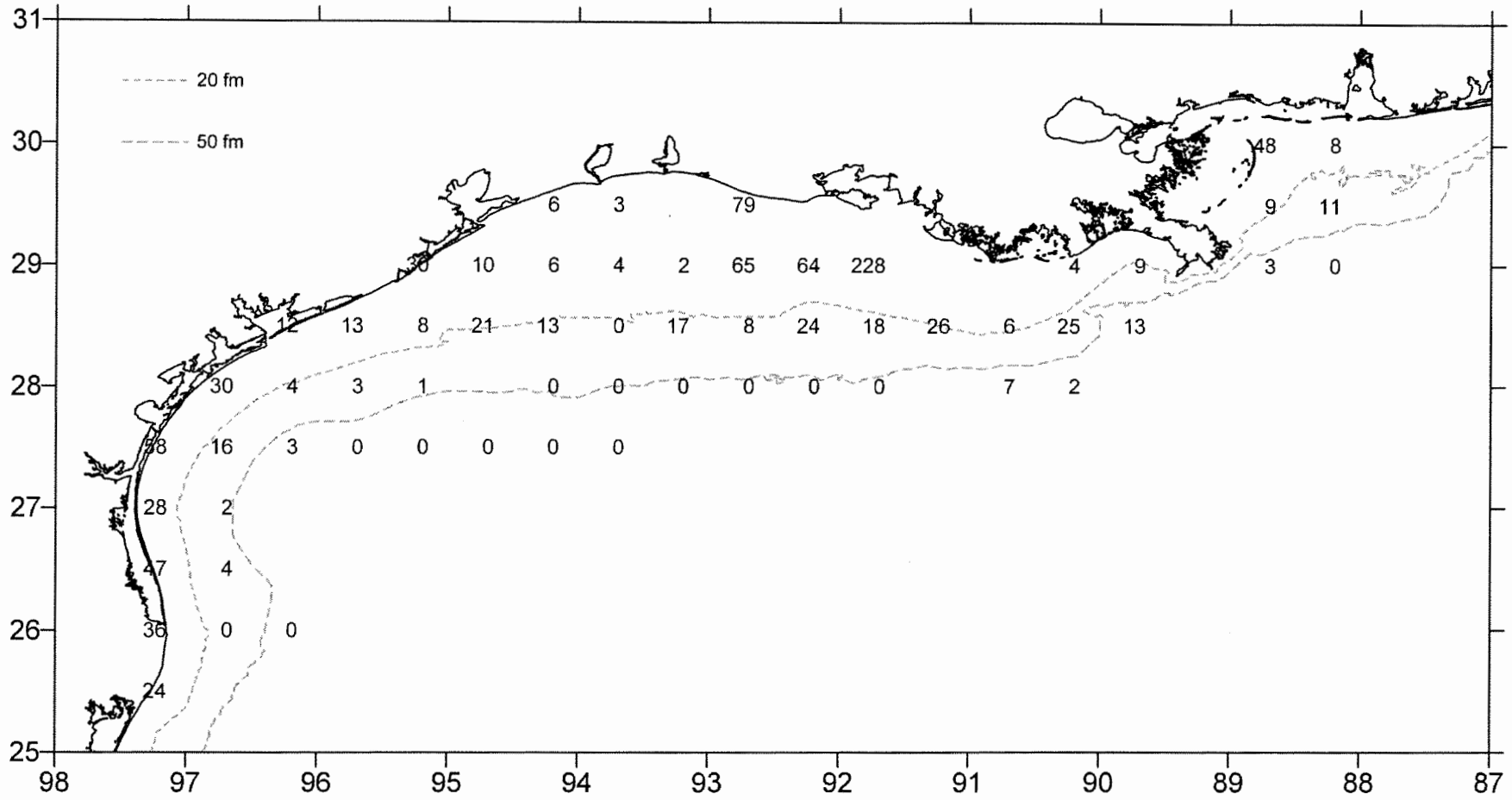

Figure 88. Irridescent swimming crab, Portunus gibbesii, number/hour for October-December 2001.

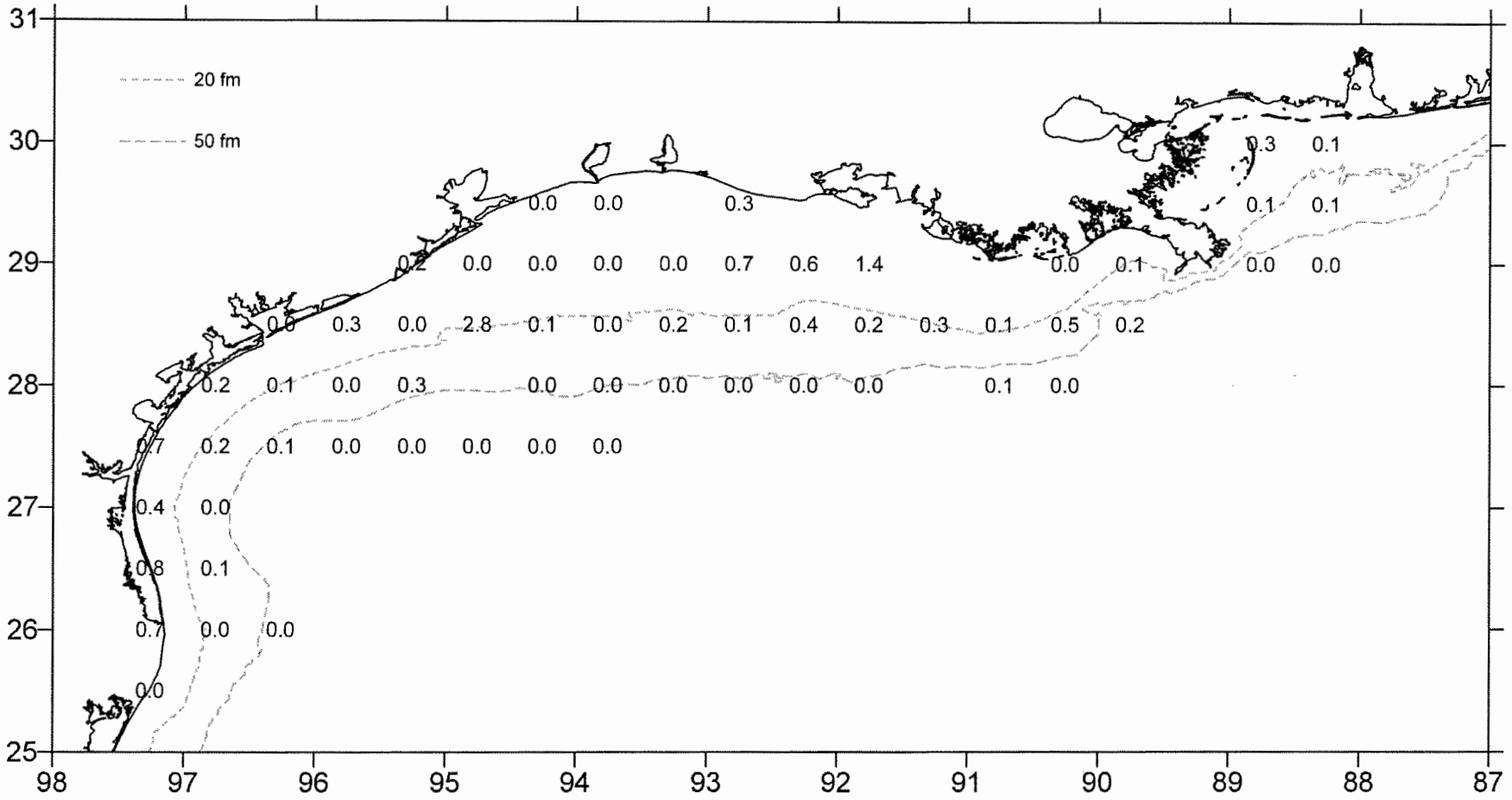

Figure 89. Irridescent swimming crab, Portunus gibbesii, lb/hour for October-December 2001.

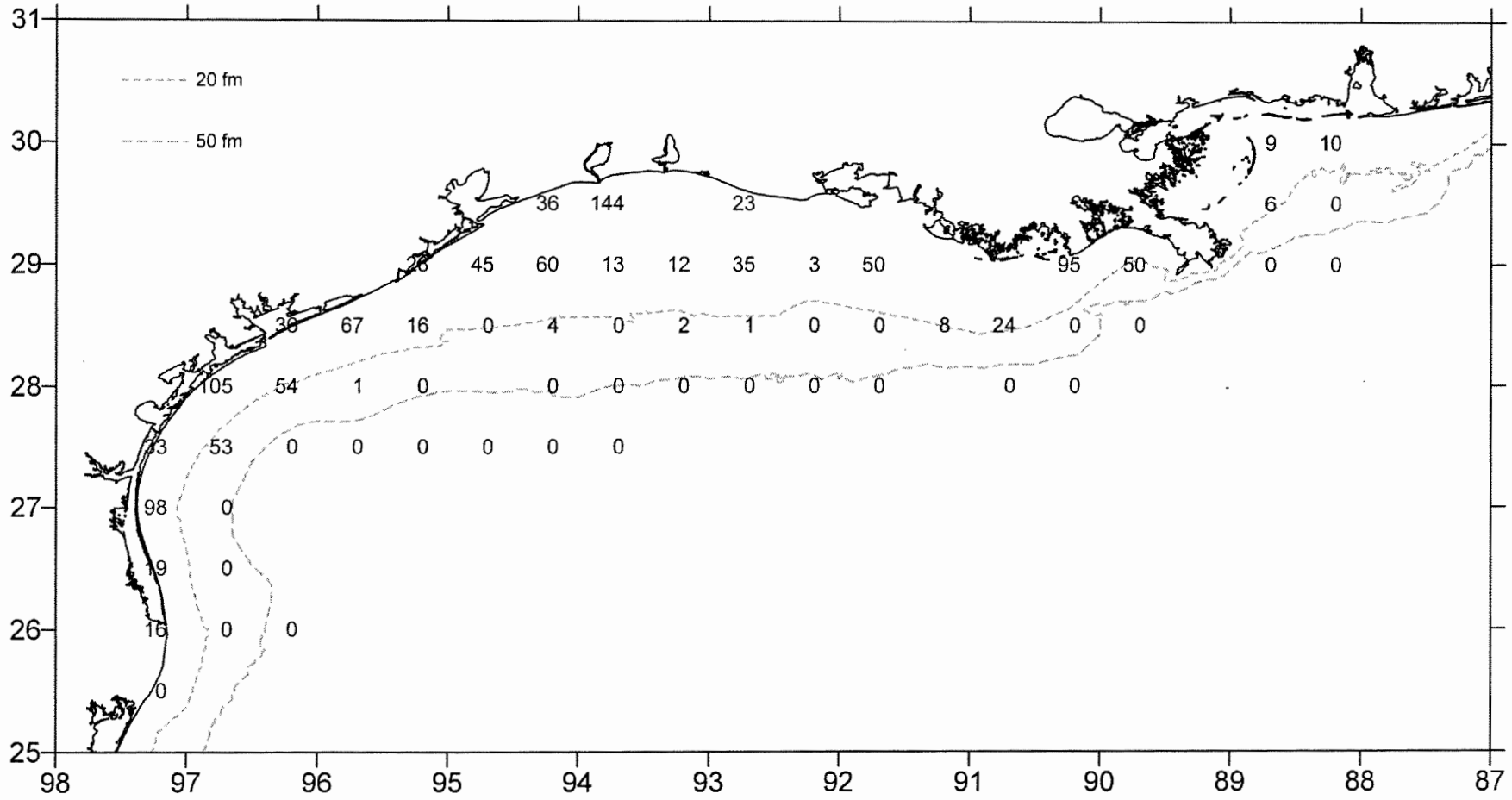

Figure 90. Atlantic brief squid, Lolliguncula brevis, number/hour for October-December 2001.

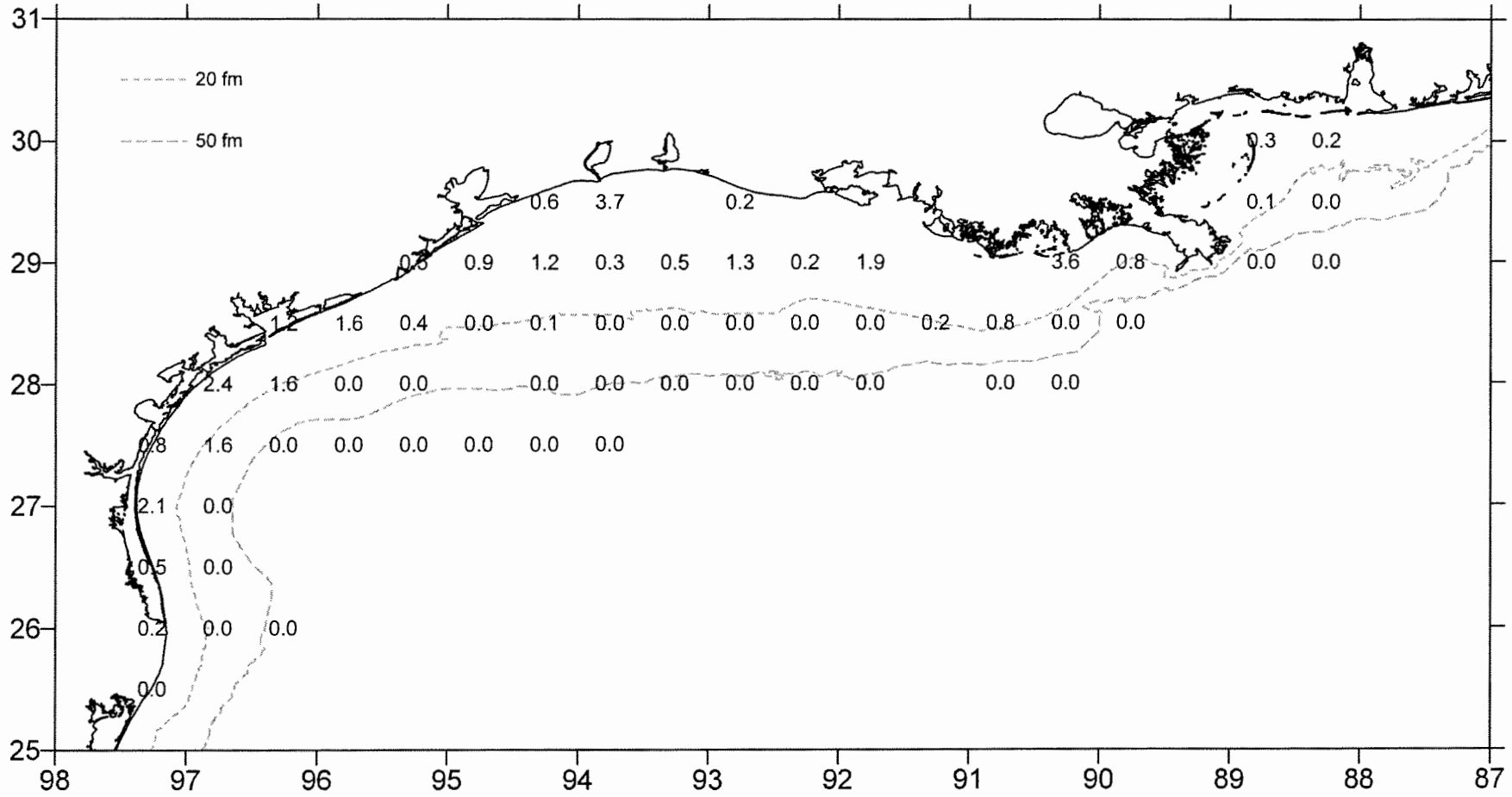

Figure 91. Atlantic brief squid, Lolliguncula brevis, lb/hour for October-December 2001.

LITERATURE CITED

Atlantic States Marine Fisheries Commission. 2001. SEAMAP Management Plan: 2001-2005. Washington, DC: ASMFC.

Center for Wetland Resources. 1980. Management plan and final environmental impact statement for the shrimp fishery of the Gulf of Mexico, United States waters. Louisiana State Univ., Baton Rouge, Louisiana. 185 p.

Ditty, J.G. and R.F. Shaw. 1992. Larval development, distribution, and ecology of cobia *Rachycentron canadum* (Family: Rachycentridae), in the northern Gulf of Mexico. Fishery Bulletin. Vol. 90:668-677.

Ditty, J.G. and R.F. Shaw. 1993. Larval development of tripletail, *Lobotes surinamensis* (Pisces: Lobotidae), and their spatial and temporal distribution in the northern Gulf of Mexico. Fishery Bulletin. Vol. 92:33-45.

Ditty, J.G., R.F. Shaw, C.B. Grimes, and J.S. Cope. 1994. Larval development, distribution, and abundance of common dolphin, *Coryphaena hippurus*, and pompano dolphin, *C. equiselis* (Family: Coryphaenidae), in the northern Gulf of Mexico. Fishery Bulletin. Vol. 94:275-291.

Donaldson, D.M., N.J. Sanders, and P.A. Thompson. 1993. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1991. Gulf States Marine Fisheries Commission. No. 29. 321 p.

Donaldson, D.M., N.J. Sanders, and P.A. Thompson. 1994. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1992. Gulf States Marine Fisheries Commission. No. 30. 293 p.

Donaldson, D.M., N.J. Sanders, P.A. Thompson and R. Minkler. 1996. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1993. Gulf States Marine Fisheries Commission. No. 34. 284 p.

Donaldson, D.M., N.J. Sanders, P.A. Thompson and R. Minkler. 1997a. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1994. Gulf States Marine Fisheries Commission. No. 40. 277 p.

Donaldson, D.M., N.J. Sanders, P.A. Thompson and R. Minkler. 1997b. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1995. Gulf States Marine Fisheries Commission. No. 41. 280 p.

Donaldson, D.M., N.J. Sanders, P.A. Thompson and D. Hanisko. 1998. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1996. Gulf States Marine Fisheries Commission. No. 52. 263 p.

Drass, D.M., K.L. Bootes, J. Lyczkowski-Shultz, B.H. Comyns, G.J. Holt, C.M. Riley, and R.P. Phelps. 2000. Larval development of red snapper, *Lutjanus campechanus*, with comparisons to co-occurring snapper species. Fishery Bulletin. Vol. 98(3):507-527.

Eldridge, P.J. 1988. The Southeast Area Monitoring and Assessment Program (SEAMAP): A state-federal-university program for collection, management and dissemination of fishery-independent data and information in the southeast United States. Mar. Fish. Rev. 50(2): 29-39.

Gledhill, C.T. and J. Lyczkowski-Shultz. 2000. Indices of larval king mackerel, *Scomberomorus cavalla*, for use in population assessment in the Gulf of Mexico. Fishery Bulletin. Vol. 98(4):684-691.

Goodyear, C.P. 1997. An evaluation of the minimum reduction in the 1997 red snapper shrimp bycatch mortality rate consistent with the 2019 recovery target. GMFMC. 14 p. + appendix.

Grace, M., K.R. Rademacher and M. Russell. 1994. Pictorial guide to the groupers (Teleostei: Serrenidae) of the western North Atlantic. NOAA Tech. Report. NMFS 118. 46 p.

LITERATURE CITED

Hanifen, J.G., W.S. Perret, R.P. Allemand and T.L. Romaire. 1995. Potential impacts of hypoxia on fisheries: Louisiana's fishery-independent data. *In* Proceedings of Gulf of Mexico Program's Hypoxia Conference. November 1995, New Orleans, LA.

Jeffrey, S.W. and G.F. Humphrey. 1975. New spectrophotometric equations for determining chlorophylls a, b, c_1 and c_2 in higher plants, algae and natural phytoplankton. Biochem. Physiol. Pflanzer Bpp. 167: 191-194.

Kelley, S., T. Potthoff, W.J. Richards, L. Ejsymont and J.V. Gartner. 1985. SEAMAP 1983 - Ichthyoplankton. Larval distribution and abundance of Engraulididae, Carangidae, Clupeidae, Lutjanidae, Serranidae, Sciaenidae, Coryphaenidae, Istiophoridae, Xiphiidae and Scombridae in the Gulf of Mexico. NOAA Tech. Mem., NMFS-SEFC -167.

Kelley, S., J.V. Gartner, Jr., W.J. Richards and L. Ejsymont. 1990. SEAMAP 1984 & 1985 - Ichthyoplankton. Larval distribution and abundance of Carangidae, Clupeidae, Coryphaenidae, Engraulididae, Gobiidae, Istiophoridae, Lutjanidae, Scombridae, Serranidae, and Xiphiidae in the Gulf of Mexico. NOAA Tech. Mem., NMFS-SESC-317.

Kelley, S., J.V. Gartner, Jr., W.J. Richards and L. Ejsymont. 1993. SEAMAP 1986 - Ichthyoplankton. Larval distribution and abundance of Engraulididae, Carangidae, Clupeidae, Gobiidae, Lutjanidae, Serranidae, Coryphaenidae, Istiophoridae and Scombridae in the Gulf of Mexico. NOAA Tech. Mem., NMFS-SESC-245.

Kramer, D., M.J. Kalin, E.G. Stevens, J.R. Thrailkill and J.R. Zweifel. 1972. Collecting and processing data on fish eggs and larvae in the California Current region. NOAA Technical Report. NMFS Circular 370. 38 p.

Leming, T.D. and W.E. Stuntz. 1984. Zones of coastal hypoxia revealed by satellite scanning have implications for strategic fishing. Nature. 310 (5973): 131-138.

Lyczkowski-Shultz, J. and R. Brasher. 1996. Ichthyoplankton data summaries from SEAMAP Summer Shrimp/Groundfish Surveys. Pages 27-42 *in* Uses of Fishery-Independent Data. General Session Proceedings, Gulf States Marine Fisheries Commission. No. 35.

Nance, J.M. 2000. Biological review of the 2000 Texas Closure. Unpublished report to Gulf of Mexico Fishery Management Council.

Nichols, S. 1982. Impacts of the 1981 and 1982 Texas closure on brown shrimp yields. NOAA, NMFS-SEFC. 44 p.

Nichols, S. 1984. Impacts of the 1982 and 1983 closure of the Texas FCZ on brown shrimp yields. Report to the Gulf of Mexico Fishery Management Council.

Nichols, S. and J.R. Poffenberger. 1987. Analysis of alternative closures for improving brown shrimp yield in the Gulf of Mexico. Report to the Gulf of Mexico Fishery Management Council.

Posgay, J.A. and R.R. Marak. 1980. The MARMAP bongo zooplankton samplers. J. Northw. Atl. Fish. Sci. 1: 9-99.

Rester, J.K., N.J. Sanders, P.A. Thompson and D. Hanisko. 1999. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1997. Gulf States Marine Fisheries Commission. No. 63. 254 p.

Rester, J.K., N.J. Sanders, G. Pellegrin, Jr. and D. Hanisko. 2000. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1998. Gulf States Marine Fisheries Commission. No. 75. 243 p.

LITERATURE CITED

Rester, J.K., N.J. Sanders, G. Pellegrin, Jr. and D. Hanisko. 2001. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1999. Gulf States Marine Fisheries Commission. No. 82. 247 p.

Rester, J.K., N.J. Sanders, G. Pellegrin, Jr. and D. Hanisko. 2002. SEAMAP environmental and biological atlas of the Gulf of Mexico, 2000. Gulf States Marine Fisheries Commission. No. 101. Available on CD-ROM only.

Richards, W.J., T. Potthoff, S. Kelley, M.F. McGowan, L. Ejsymont, J.H. Power and R.M. Olvera L. 1984. SEAMAP 1982 - Ichthyoplankton. Larval distribution and abundance of Engraulididae, Carangidae, Clupeidae, Lutjanidae, Serranidae, Sciaenidae, Coryphaenidae, Istiophoridae, Xiphiidae and Scombridae in the Gulf of Mexico. NOAA Tech. Mem., NMFS-SEFC-167.

Russell, G.M. Unpublished report. Reef fish assessment methodology for SEAMAP surveys of hardbottom areas. National Marine Fisheries Service. 25 p.

Sanders, N.J., P.A. Thompson and T. Van Devender. 1990a. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1986. Gulf States Marine Fisheries Commission. No. 20. 328 p.

Sanders, N.J., P.A. Thompson and D.M. Donaldson. 1990b. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1987. Gulf States Marine Fisheries Commission. No. 22. 337 p.

Sanders, N.J., D.M. Donaldson and P.A. Thompson. 1991a. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1988. Gulf States Marine Fisheries Commission. No. 23. 320 p.

Sanders, N.J., D.M. Donaldson and P.A. Thompson. 1991b. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1989. Gulf States Marine Fisheries Commission. No. 25. 318 p.

Sanders, N.J., D.M. Donaldson and P.A. Thompson. 1992. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1990. Gulf States Marine Fisheries Commission. No. 27. 311 p.

Scott, G.P., S.C. Turner, C.B. Grimes, W.J. Richards, and E.B. Brothers. 1993. Indices of larval bluefin tuna, *Thunnus thynnus*, abundance in the Gulf of Mexico: modeling variability in growth, mortality, and gear selectivity. Bulletin of Marine Science. Vol. 53(2):912-929.

Sherman, K., R. Lasker, W. Richards and A.W. Kendall, Jr. 1983. Ichthyoplankton and fish recruitment studies in large marine ecosystems. Mar. Fish. Rev. 45 (10, 11, 12): 1-25.

Smith, P.E. and S.L. Richardson, eds. 1977. Standard techniques for pelagic fish egg and larva surveys. FAO Fish. Tech. Paper 175. 100 p.

Southeast Area Monitoring and Assessment Program (SEAMAP) Strategic Plan. 1981. Report to the Gulf States Marine Fisheries Commission. 50 p.

Strickland, J.D.H. and T.R. Parsons. 1972. A practical handbook of seawater analysis. Ottawa: Fish. Res. Bd. Can. 310 p.

Stuntz, W.E., C.E. Bryan, K. Savastano, R.S. Waller and P.A. Thompson. 1985. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1982. Gulf States Marine Fisheries Commission. 145 p.

Thompson, P.A. and N. Bane. 1986a. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1983. Gulf States Marine Fisheries Commission. No. 13. 179 p.

LITERATURE CITED

Thompson, P.A. and N. Bane. 1986b. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1984. Gulf States Marine Fisheries Commission. No. 15. 171 p.

Thompson, P.A., T. Van Devender and N.J. Sanders, Jr. 1988. SEAMAP environmental and biological atlas of the Gulf of Mexico, 1985. Gulf States Marine Fisheries Commission. No. 17. 338 p.