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environmental and biological atlas of the gulf of mexico 2002

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SEAMAP ENVIRONMENTAL AND BIOLOGICAL ATLAS OF THE GULF OF MEXICO, 2002

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TABLE OF CONTENTS

PAGE

LIST OF TABLES

PAGE

LIST OF TABLES

PAGE

LIST OF TABLES

PAGE

LIST OF TABLES

PAGE

LIST OF TABLES

PAGE

LIST OF FIGURES

PAGE

LIST OF FIGURES

PAGE

LIST OF FIGURES

PAGE

LIST OF FIGURES

PAGE

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The 2002 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 Science and Technology, 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 (FWC); Alabama Department of Conservation and Natural Resources (ADCNR); Mississippi Department of Marine Resources (MDMR) represented by the University of Southern Mississippi, College of Science and Technology, Gulf Coast Research Laboratory (USM/COST/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 2002 (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); 2000 (Rester et al. 2002); 2001 (Rester et al. 2004). Environmental assessment activities occurred with each of the surveys found in Table 1.

In March 2002, 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 2001. Overall survey objectives in 1982 to 2002 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).

A major purpose of SEAMAP is to provide resource survey data to State and Federal management agencies and universities participating in SEAMAP activities. This twenty-first in a series of SEAMAP environmental and biological atlases presents such data, in a summarized form, collected during the 2002 SEAMAP surveys. The area covered in the Gulf of Mexico for all SEAMAP survey activities during 2002 is shown in Figure 1.

MATERIALS AND METHODS

Methodology for the 2002 SEAMAP surveys is similar to that of the 1982 through 2001 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 28 with the USM/COST/GCRL vessel TOMMY MUNRO collecting data on May 16 and May 17.

Vessels that participated in the Summer Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the USM/COST/GCRL vessel TOMMY MUNRO (June 7-9 and July 3-5), the Louisiana vessel PELICAN (July 9-12), and the NOAA Ship OREGON II (June 12-July 17). The TPWD vessels SAN JACINTO, LAGUNA MADRE, R.J. KEMP, MATAGORDA BAY, and NEUCES (June 3-26) and the Alabama vessel A.E. VERRILL (June 3 and June 26) did not sample plankton in conjunction with the summer survey.

The Alabama vessel A.E. VERRILL participated in the Reef Fish Survey (October 11, November 18, and December 16-17), while the NOAA Ships CARETTA and OREGON II participated in the Reef Fish Survey February 15-March 8 and April 5-May 30.

Vessels that participated in collecting plankton and environmental data during the Fall Plankton Survey included the NOAA Ship GORDON GUNTER (August 30-September 20); the Louisiana vessel PELICAN (September 16-19); the Alabama vessel A.E. VERRILL (September 17); and the USM/COST/GCRL vessel TOMMY MUNRO (October 10-11).

Vessels that participated in the Fall Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the NOAA Ships OREGON II (October 12-November 17); the USM/COST/GCRL vessel TOMMY MUNRO (October 18-20 and December 2-4). The Alabama vessel A.E. VERRILL (October 22) and the TPWD vessels MATAGORDA BAY, SAN JACINTO, TRINITY BAY, NEUCES, and LAGUNA MADRE (November 5-21) did not sample plankton in conjunction with the fall survey.

PLANKTON SURVEYS

Since 1982 SEAMAP resource surveys have been conducted by the National Marine Fisheries Service in cooperation with the states of Florida, Alabama, Mississippi, Louisiana, and Texas. Plankton sampling is carried out during these surveys at predetermined SEAMAP stations arranged in a fixed, systematic grid pattern across the entire Gulf of Mexico. Most but not all SEAMAP stations (designated by a unique SEAMAP number) are located at ~56 km or ½ degree intervals along this grid. Some SEAMAP stations are located at < 56 km intervals especially along the continental shelf edge, while others have been moved to avoid obstructions, navigational hazards or shallow water. Most SEAMAP plankton samples are taken during either dedicated plankton and shrimp/bottomfish (trawl) surveys but over the years additional samples were taken using SEAMAP gear and collection methods at locations other than designated SEAMAP stations and/or outside established SEAMAP surveys, e.g. during Louisiana seasonal trawl surveys, SEAMAP Squid/Butterfish survey; and other serendipitous or special projects.

The sampling gear and methodology used to collect SEAMAP plankton samples are similar to those recommended by Kramer et al. (1972), Smith and Richardson (1977) and Posgay and Marak (1980). A 61 cm bongo net fitted with 0.333 (0.335)[1] mm mesh netting is fished in an oblique tow path from a maximum depth of 200 m or to 2-5 m off the bottom at depths less than 200 m. A mechanical flowmeter is mounted off-center in the mouth of each bongo net to record the volume of water filtered. Volume filtered ranges from ~20 to 600 m^3 but is typically 30 to 40 m^3 at the shallowest stations and 300 to 400 m^3 at the deepest stations. A single or double 2x1 m pipe frame neuston net fitted with 0.947 (0.950)[1] mm mesh netting is

[1] Mesh size change in database does not represent an actual change in gear but only a change in the accuracy at which plankton mesh aperture size can be measured by the manufacturer.

towed at the surface with the frame half-submerged for 10 minutes. Samples are taken upon arrival on station regardless of time of day. At each station either a bongo and/or neuston tow are made depending on the specific survey. Samples are routinely preserved in 5 to 10 % formalin and later transferred after 48 hours to 95 % ethanol for long term storage. During some surveys selected samples are preserved initially in 95 % ethanol and later transferred to fresh ethanol.

Initial processing of one bongo sample and one neuston sample (except those collected by Louisiana vessels) from each SEAMAP station was accomplished at the Sea Fisheries Institute, Plankton Sorting and Identification Center (ZSIOP), in Szczecin, Poland, under a Joint Studies Agreement with NMFS. Plankton samples collected by Louisiana vessels were retained by LDWF for sorting and identification at their facilities using the same protocols used at ZSIOP. Wet plankton volumes of bongo net samples were measured by displacement to estimate net-caught zooplankton biomass (Smith and Richardson 1977). Fish eggs and larvae were removed from bongo net samples, and fish larvae only from neuston net samples. Fish eggs were not identified further, but larvae were identified to the lowest possible taxon (to family in most cases). Body length (either notochord or standard length) was measured.

Sorted ichthyoplankton specimens from ZSIOP and LDWF were sent to the SEAMAP Archiving Center, managed in conjunction with the FWC, for long-term storage under museum conditions. Sorted ichthyoplankton samples from 1982 through 2002 are available for loan to researchers throughout the country. The alternate bongo and neuston samples from each station are retained at USM/COST/GCRL as a backup for those samples transshipped to ZSIOP in case of loss or damage during transit. These backup unsorted plankton samples are curated and housed at the SEAMAP Invertebrate Plankton Archiving Center, managed in conjunction with USM/COST/GCRL, and are available for use by researchers.

See the SEAMAP Operations Manual for a more detailed description of sampling methods and protocols. Refer to the NOAA vessel cruise reports for more specific information on the individual SEAMAP Plankton Surveys conducted during 2002.

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, and then raised until visible. If different depths were recorded, an average was used.
Water Color: Forel-Ule data was recorded.

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

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

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

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

Laboratory analyses for chlorophyll a and phaeophytin a (chlorophyll degradation product) were conducted by fluorometry and spectrophotometry. The general extraction procedures prior to measurement were similar. Samples analyzed by spectrophotometer included other chlorophyllous products but these have not been included as data in this report. The methodology used is described in Strickland and Parsons (1972) and Jeffrey and Humphrey (1975). Some of the values have been deleted from the data base because of analytical errors. In addition, chlorophyll samples 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) have 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/COST/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 *Litopenaeus setiferus*, *Farfantepenaeus aztecus*, and *Farfantepenaeus duorarum* 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" and 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 30,492 identified ichthyoplankton lots in 2002. Most of these samples have been accessioned into the SEAMAP Archiving Center computer systems and the remaining samples are being prepared for accession.

Plankton stations for the Spring Plankton Survey in conjunction with environmental are shown in Figure 3. The plankton stations for the Summer Shrimp/Groundfish Survey are shown in Figure 4. Plankton stations for the Fall Plankton Survey in conjunction with environmental stations are shown in Figure 5, while the plankton stations for the Fall Shrimp/Groundfish Survey 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 shown in Figures 7 and 8. 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. Figure 9 shows station locations. 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-13a 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-13b list the total catch and environmental data from the 40-ft and 20-ft nets within NMFS statistical zones listed above, by depth stratum.

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

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

where α = population standard deviation
n = number of samples

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

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

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant invertebrates and squid species, taken from Table 3 are displayed in plots of number/hour and

lb/hour in Figures 12-51 computed within a 30 x 30 minute grid. The number in each grid square is the average number/hour or lb/hour from all stations (may be one or more stations) that were sampled within a particular grid. The number for the 30 x 30 minute grid is located in the lower right hand corner of the grid. 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.

Fall Shrimp/Groundfish Survey

Shrimp and groundfish sampling was conducted during October through December from off Fort Morgan, Alabama to Brownsville, Texas. Figure 10 shows the station locations. 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 14. The species lists for Table 14 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 invertebrates and squid species, taken from Table 14 are displayed in plots of number/hour and lb/hour in Figures 52 to 91 computed within a 30 x 30 minute grid. The number in each grid square is the average number/hour or lb/hour from all stations (may be one or more stations) that were sampled within a particular grid. The number for the 30 x 30 minute grid is located in the lower right hand corner of the grid. 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 15a-25a 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 15b-25b 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 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 fifth annual fall real-time data distribution was produced in January 2002. 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 website.

REEF FISH SURVEY

Primary data collection and sampling for reef fish assessment were conducted during February through May 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 26. The species list for Table 26 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, 1985-2002. 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 in 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 to the GMFMC in December 2001. This report contained the results and an overview of the effect of the 2001 Texas Closure. After review of these data and other information, the GMFMC voted to continue the Texas Closure for 2002.

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: 2006-2010 (ASMFC 2006).

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 2002.

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
2002	APRIL-MAY	JUNE-JULY	--	AUGUST-OCTOBER	OCTOBER-DECEMBER	--	FEBRUARY-MAY, OCTOBER

Table 2. Selected environmental parameters measured during 2002 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	4/18/2002	2241	2930.1	8800.0	11	43	21	42	25.4	21.7	20.4	28.3	36.2	36.4		7.2	6.3	6.5	PN
2	4/19/2002	254	2859.6	8800.4		1373	100	200	22.9	18.6	14.6	33.4	36.5	35.9		7.2	4.3	3.9	PN
3	4/19/2002	719	2829.9	8759.9		2233	98	202	22.8	19.5	16.1	32.0	36.4	36.1		7.3	5.6	4.3	PN
4	4/19/2002	1058	2800.2	8800.1		2434	100	202	23.6	22.0	17.3	34.5	36.4	36.3		6.5	5.9	4.1	PN
5	4/19/2002	1514	2759.7	8829.9		2196	100	198	25.4	22.6	18.1	36.3	36.5	36.5					PN
6	4/19/2002	1853	2759.8	8859.9		1336	99	200	26.0	23.2	18.5	36.3	36.5	36.5		6.4	6.2	4.5	PN
7	4/19/2002	2323	2760.0	8930.0		944	100	200	25.9	22.3	17.4	36.4	36.5	36.3		6.4	5.7	4.1	PN
8	4/20/2002	408	2759.7	9000.2		535	100	200	25.0	20.6	15.8	36.4	36.5	36.1		6.5	5.5	4.0	PN
9	4/20/2002	716	2800.9	9030.1	14	854	100	201	25.1	19.8	15.0	36.4	36.5	36.0		6.5	4.9	4.4	PN
10	4/20/2002	1030	2800.1	9060.0	14	489	73	144	25.0	22.0	18.6	36.3	36.4	36.5		6.5	6.3	4.4	PN
11	4/20/2002	1408	2800.1	9130.1	15	158	79	156	24.9	21.7	17.5	36.3	36.5	36.3		6.5	5.7	4.5	PN
12	4/20/2002	1734	2759.8	9159.9		118	59	116	25.0	21.9	20.1	36.5	36.5	36.5		6.5	6.9	5.7	PN
13	4/20/2002	2121	2801.4	9230.0	16	98	49	96	24.8	22.9	20.2	36.5	36.5	36.5		6.5	6.6	6.2	PN
14	4/21/2002	43	2800.1	9300.3	17	105	48	94	24.6	22.7	20.1	36.5	36.4	36.5		6.6	6.6	6.2	PN
15	4/21/2002	502	2730.1	9300.0		787	100	200	24.8	20.9	16.3	36.4	36.6	36.2		6.5	5.1	4.9	PN
16	4/21/2002	914	2659.9	9259.9		1281	100	201	24.9	21.1	16.2	36.4	36.7	36.2		6.4	4.9	4.3	PN
17	4/21/2002	1337	2630.0	9300.2		1629	100	201	25.1	19.8	14.7	36.4	36.5	35.9		6.5	4.7	4.2	PN
18	4/21/2002	1552	2615.7	9260.0		1885	100	201	25.4	20.2	14.9	36.3	36.5	35.9		6.4	5.2	4.2	PN
19	4/21/2002	2011	2602.8	9230.0		2160	99	200	25.3	19.5	14.9	36.3	36.5	35.9		6.4	4.3	4.1	PN
20	4/21/2002	2330	2559.9	9160.0		2160	100	201	25.4	19.9	15.4	36.3	36.5	36.0		6.4	4.6	4.3	PN
21	4/22/2002	358	2629.4	9159.6		1879	100	200	25.0	19.2	14.4	36.4	36.5	35.9		6.4	4.4	4.1	PN
22	4/22/2002	756	2700.1	9200.0		1885	100	201	25.2	19.8	14.4	36.4	36.5	35.9		6.4	4.8	4.4	PN
23	4/22/2002	1156	2659.8	9130.1		2269	100	201	25.5	19.5	14.0	36.5	36.5	35.8		6.4	4.6	4.3	PN
24	4/22/2002	1525	2659.9	9100.0		1647	100	201	26.1	19.5	13.6	36.4	36.5	35.7		6.4	4.6	4.1	PN
25	4/22/2002	1916	2659.9	9029.9		1684	100	200	26.4	20.7	14.9	36.4	36.5	36.0		6.3	5.2	4.4	PN
26	4/22/2002	2234	2659.9	8960.0		2400	100	200	26.1	22.7	17.7	36.5	36.5	36.4		6.3	6.2	4.6	PN
27	4/23/2002	304	2630.0	8959.9		2745	100	200	25.9	24.0	19.1	36.2	36.5	36.5		6.3	6.6	4.7	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	4/23/2002	708	2600.2	9000.2		2910	100	200	25.8	24.7	21.5	36.1	36.1	36.5		6.3	6.2	6.5	PN
29	4/23/2002	1256	2560.0	8929.9		3294	100	201	26.0	24.7	21.9	36.1	36.1	36.8		6.4	6.3	4.8	PN
30	4/23/2002	1613	2559.9	8859.9		3111	100	201	26.3	23.2	19.3	36.1	36.4	36.6		6.4	6.6	4.6	PN
31	4/23/2002	2123	2630.1	8859.9		2800	100	201	25.5	22.6	19.8	36.1	36.5	36.4		6.5	5.9	6.4	PN
32	4/24/2002	120	2659.9	8860.0		2196	100	200	26.3	22.9	20.4	36.3	36.4	36.6		6.4	6.6	5.2	PN
33	4/24/2002	553	2659.7	8830.2		2562	100	200	25.0	21.0	17.6	35.7	36.5	36.3		6.6	6.7	4.4	PN
34	4/24/2002	949	2700.4	8800.0		2754	99	202	25.9	19.9	15.8	36.3	36.5	36.1		6.4	6.3	4.4	PN
35	4/24/2002	1339	2629.8	8800.1		2218	100	201	26.0	19.1	14.7	36.3	36.5	35.9		6.4	4.5	4.2	PN
36	4/24/2002	1710	2600.0	8800.0		2983	100	201	26.2	18.6	14.0	36.1	36.4	35.8		6.4	4.3	4.1	PN
37	4/24/2002	2116	2600.0	8729.8		3100	99	202	26.0	19.8	12.6	36.3	36.5	35.6		6.4	4.8	4.1	PN
38	4/25/2002	128	2625.1	8659.8		3020	100	200	26.1	19.7	14.0	36.3	36.5	35.8		6.4	4.9	4.1	PN
39	4/25/2002	326	2630.0	8659.8		3020	100	200	26.1	19.7	14.1	36.3	36.5	35.8		6.4	4.9	4.2	PN
40	4/25/2002	659	2659.9	8660.0		2946	100	201	26.2	19.9	14.4	36.3	36.5	35.9		6.4	5.2	4.1	PN
41	4/25/2002	1124	2730.1	8660.0		3051	100	201	26.3	19.6	14.8	36.2	36.5	35.9		6.4	4.9	4.2	PN
42	4/25/2002	1456	2800.1	8659.9		2864	100	200	26.7	18.9	14.8	36.3	36.5	35.9		6.5	4.6	4.6	PN
43	4/25/2002	1851	2829.7	8659.6		849	100	200	25.8	19.3	15.7	36.4	36.4	36.1		6.6	5.4	4.3	PN
44	4/25/2002	2236	2859.6	8700.0		685	100	202	25.6	20.8	16.5	33.0	36.5	36.2		6.7	5.7	4.3	PN
45	4/26/2002	306	2900.2	8629.8		375	100	201	25.3	20.5	16.1	33.5	36.4	36.1		6.8	6.4	4.3	PN
46	4/26/2002	733	2830.0	8600.1		333	99	202	25.9	20.3	16.5	36.4	36.5	36.2		6.7	6.6	4.5	PN
47	4/26/2002	1057	2800.0	8600.2		3165	100	201	26.6	20.0	15.4	36.3	36.6	36.0		6.7	4.9	4.4	PN
48	4/26/2002	1508	2729.9	8600.1		3230	101	202	27.3	20.9	16.0	36.2	36.6	36.1		6.6	5.9	4.9	PN
49	4/26/2002	1855	2700.1	8600.0		3203	100	200	27.3	21.1	16.9	36.2	36.5	36.3		6.6	6.4	4.9	PN
50	4/26/2002	2322	2629.9	8559.9		3168	99	200	26.8	20.1	15.6	36.2	36.5	36.1		6.6	6.3	4.9	PN
51	4/27/2002	310	2559.9	8600.1		3230	100	200	26.5	19.9	15.2	36.2	36.5	36.0		6.6	5.6	4.7	PN
52	4/27/2002	831	2529.9	8628.0		3186	99	201	26.2	18.5	16.1	36.2	36.5	36.2		6.6	5.0	4.9	PN
53	4/27/2002	1155	2530.0	8600.1		3203	100	201	26.7	19.5	15.6	36.2	36.6	36.1		6.6	4.7	4.3	PN
54	4/27/2002	1559	2500.1	8559.7		3294	101	201	26.3	17.7	13.6	36.0	36.3	35.7		6.7	4.4	4.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
55	4/27/2002	2039	2441.0	8531.2		3267	99	201	26.7	19.8	15.1	36.3	36.5	36.0		6.6	5.0	4.3	PN
56	4/27/2002	2340	2500.0	8530.0		3303	100	200	26.4	19.2	14.5	36.3	36.4	35.9		6.6	5.4	4.4	PN
57	4/28/2002	403	2459.9	8500.1		3349	101	200	26.4	19.9	15.1	36.2	36.5	36.0		6.6	5.8	4.4	PN
58	4/28/2002	922	2430.1	8459.9		3389	100	202	27.6	25.1	17.9	36.0	36.5	36.4		6.4	5.8	5.2	PN
59	4/28/2002	1244	2429.9	8430.0		3422	97	202	27.7	26.0	18.7	36.0	36.4	36.5		6.4	6.0	5.0	PN
60	4/28/2002	1731	2500.2	8430.9		2013	100	201	26.8	20.2	15.5	36.2	36.5	36.0		6.6	6.3	4.5	PN
61	4/28/2002	2148	2500.4	8400.5		124	62	123	26.8	20.8	18.7	36.2	36.8	36.5		6.6	4.9	5.0	PN
62	4/29/2002	144	2429.9	8400.2		2013	100	200	27.5	25.3	18.1	36.0	36.5	36.4		6.4	5.9	5.0	PN
63	4/29/2002	606	2401.7	8400.2		1830	100	200	27.5	26.8	22.6	36.0	36.1	36.9		6.4	6.4	5.1	PN
64	4/29/2002	946	2400.1	8330.1		999	99	203	27.6	26.9	20.4	36.0	36.0	36.7		6.4	6.4	4.9	PN
65	4/29/2002	1436	2430.4	8330.5	2	296	101	200	27.7	22.5	16.9	36.1	36.7	36.3		6.4	5.3	4.9	PN
121	5/11/2002	503	2459.8	8400.0		124	64	124	27.3	21.9	18.8	36.2	36.5	36.5		6.5	7.0	5.0	PN
122	5/11/2002	857	2529.9	8359.8	3	135	68	134	26.9	19.7	17.8	36.4	36.7	36.4		6.5	5.0	4.6	PN
123	5/11/2002	1219	2600.1	8400.0		134	69	133	27.6	21.8	19.8	36.2	36.5	36.6		6.5	6.7	5.0	PN
124	5/11/2002	1542	2559.9	8429.6		213	100	201	27.3	19.7	14.8	36.2	36.6	35.9		6.5	5.0	4.7	PN
125	5/11/2002	1900	2559.7	8460.0		3070	100	200	27.2	18.4	14.3	36.3	36.4	35.8		6.5	4.8	4.5	PN
126	5/11/2002	2313	2630.1	8459.9		2250	100	200	27.6	20.5	16.0	36.3	36.5	36.1		6.5	6.4	4.7	PN
127	5/12/2002	303	2659.8	8459.9		960	100	201	27.3	20.6	16.4	36.3	36.5	36.2		6.5	6.1	4.8	PN
128	5/12/2002	723	2729.9	8459.8		403	100	200	27.2	20.0	15.8	36.4	36.4	36.1		6.5	6.7	4.4	PN
129	5/12/2002	1052	2759.9	8459.9	5	248	102	200	27.3	19.8	15.9	34.9	36.4	36.1		6.6	6.6	4.5	PN
130	5/12/2002	1600	2830.0	8529.9	8	196	98	196	27.7	19.6	16.2	35.0	36.6	36.2		6.6	4.7	4.3	PN
131	5/12/2002	2039	2859.8	8560.0		243	100	200	27.4	20.1	16.1	34.4	36.5	36.1		6.6	6.8	4.3	PN
132	5/13/2002	149	2930.0	8630.1	9	206	100	200	28.1	19.7	16.2	30.7	36.4	36.1		6.6	6.5	4.1	PN
133	5/13/2002	631	2959.9	8700.1	10	71	34	70	27.5	22.0	20.9	31.2	36.4	36.4		6.5	7.4	7.3	PN
134	5/13/2002	1333	2929.9	8800.2	11	44	23	43	27.3	21.7	20.1	33.2	36.1	36.1		7.1	6.6	6.4	PN
135	5/13/2002	1650	2900.1	8760.0		1384	99	201	28.2	18.9	14.7	32.9	36.5	35.9		6.7	4.9	4.4	PN
136	5/13/2002	2044	2830.1	8800.1		2300	100	200	27.9	19.4	14.9	33.5	36.5	36.0		6.6	5.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
137	5/14/2002	7	2800.0	8800.2		2400	100	200	27.1	22.6	19.1	36.5	36.5	36.5		6.5	6.8	5.0	PN
138	5/14/2002	435	2800.1	8829.8		2196	100	200	26.9	22.6	17.9	36.5	36.5	36.4		6.5	6.5	4.5	PN
139	5/14/2002	813	2800.1	8859.9		1357	100	201	26.7	22.6	18.3	36.4	36.5	36.5		6.5	6.8	4.7	PN
140	5/14/2002	1221	2800.0	8930.0		945	100	201	26.8	22.3	17.3	36.5	36.5	36.3		6.5	6.8	4.4	PN
141	5/14/2002	1550	2800.1	8959.8		525	100	206	26.8	21.7	16.9	36.5	36.5	36.3		6.5	6.2	4.5	PN
142	5/14/2002	1948	2801.3	9030.0	14	249	100	200	26.6	21.4	16.0	36.4	36.5	36.1		6.6	5.4	4.7	PN
143	5/14/2002	2305	2759.8	9100.1		152	75	151	26.6	21.7	18.1	36.4	36.5	36.4		6.6	6.2	4.5	PN
144	5/15/2002	315	2760.0	9129.9		159	81	161	26.3	21.8	18.2	36.4	36.5	36.4		6.6	5.8	4.5	PN
145	5/15/2002	625	2759.9	9160.0		119	59	117	26.2	23.0	19.9	36.4	36.4	36.5		6.6	7.0	5.0	PN
146	5/15/2002	950	2800.9	9229.7	16	96	49	95	26.1	23.0	20.7	36.2	36.4	36.5		6.6	7.1	6.0	PN
147	5/15/2002	1254	2801.1	9259.7	16	102	50	100	26.5	22.6	20.5	35.3	36.5	36.5		6.6	6.9	5.8	PN
148	5/15/2002	1623	2800.1	9329.2	17	93	48	92	26.4	22.4	20.7	35.2	36.4	36.5		6.6	7.1	6.1	PN
149	5/15/2002	1945	2800.1	9400.1	18	81	42	78	26.4	22.6	20.8	35.3	36.4	36.5		6.7	7.4	6.0	PN
150	5/15/2002	2311	2800.3	9430.0	18	68	33	65	26.4	24.3	21.5	35.5	36.4	36.5		6.6	7.0	7.0	PN
151	5/16/2002	219	2800.0	9500.1	19	80	39	77	25.8	21.5	21.2	34.9	36.3	36.4		6.7	7.1	6.5	PN
152	5/16/2002	551	2760.0	9529.9		54	26	52	25.9	25.3	21.8	35.9	35.8	36.4		6.6	6.9	6.9	PN
153	5/16/2002	902	2759.8	9559.9	20	46	23	44	26.0	25.8	22.5	34.4	34.9	36.2		6.6	6.6	5.9	PN
154	5/16/2002	1254	2730.0	9559.9		210	100	201	26.2	21.0	16.1	36.1	36.5	36.1		6.6	6.1	4.4	PN
155	5/16/2002	1741	2660.0	9560.0		830	100	202	26.6	21.7	17.5	35.8	36.5	36.4		6.5	6.6	4.8	PN
156	5/16/2002	2205	2630.0	9600.1		1116	100	200	26.6	20.8	15.9	35.8	36.6	36.1		6.5	5.5	4.2	PN
157	5/17/2002	135	2602.1	9559.5		1000	100	200	26.5	20.1	15.4	36.1	36.5	36.0		6.5	4.8	4.3	PN
158	5/17/2002	528	2601.0	9530.1		1500	100	201	27.3	21.1	16.4	35.7	36.5	36.2		6.4	5.7	4.2	PN
159	5/17/2002	850	2601.1	9459.9		2342	101	202	27.7	22.1	16.5	36.1	36.5	36.2		6.3	6.2	4.2	PN
160	5/17/2002	1231	2629.6	9500.4		1665	100	201	26.9	20.4	14.9	35.4	36.5	36.0		6.5	5.4	4.3	PN
161	5/17/2002	1616	2700.1	9459.9		1480	99	201	26.7	19.7	14.9	36.0	36.5	36.0		6.5	4.7	4.4	PN
162	5/17/2002	2334	2660.0	9360.0		994	100	200	26.9	19.8	15.0	35.9	36.5	36.0		6.5	4.7	4.4	PN
163	5/18/2002	356	2629.8	9359.8		1600	100	200	27.4	21.1	15.8	35.7	36.6	36.1		6.4	4.8	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
164	5/18/2002	750	2600.6	9359.8		2700	101	201	27.4	22.6	18.6	36.4	36.5	36.5		6.4	6.7	4.7	PN
165	5/18/2002	1136	2600.7	9330.1		2250	101	201	27.2	22.7	18.9	36.5	36.5	36.5		6.3	6.7	4.8	PN
166	5/18/2002	1531	2617.0	9300.0		1863	100	202	26.9	21.3	16.4	36.1	36.6	36.2		6.4	5.3	4.6	PN
167	5/18/2002	1812	2630.1	9260.0		1650	100	202	26.5	20.8	16.3	35.7	36.5	36.2		6.5	6.5	4.5	PN
168	5/18/2002	2240	2700.0	9259.9		1225	100	200	26.2	21.9	16.6	36.2	36.5	36.2		6.5	6.0	4.6	PN
169	5/19/2002	544	2700.1	9160.0		1470	100	200	26.3	21.6	14.1	36.5	36.5	35.8		6.5	5.9	5.8	PN
170	5/19/2002	942	2630.1	9200.1		1900	100	202	26.2	19.1	14.4	36.5	36.5	35.9		5.8	4.4	4.3	PN
171	5/19/2002	1311	2600.2	9160.0		2160	100	201	26.5	20.6	15.2	36.2	36.5	36.0		6.5	5.5	4.3	PN
172	5/20/2002	415	2659.7	9059.7		1683	100	200	26.4	20.2	14.9	36.4	36.5	36.0		6.5	5.6	4.1	PN
173	5/20/2002	809	2700.0	9029.9		1700	100	201	26.6	21.2	16.6	36.5	36.5	36.2		6.4	5.9	4.4	PN
174	5/20/2002	1128	2700.0	9000.1		2500	100	201	26.6	22.6	18.5	36.4	36.5	36.5		6.4	6.8	4.5	PN
175	5/20/2002	1550	2630.2	8959.9		2740	100	203	26.6	22.9	18.6	36.5	36.5	36.5		6.4	6.6	4.8	PN
176	5/20/2002	1933	2600.1	8960.0		2890	99	200	26.7	22.9	18.7	36.4	36.5	36.4		6.4	6.5	5.7	PN
177	5/20/2002	2336	2559.9	8930.2		3400	100	200	26.3	23.6	18.4	36.4	36.5	36.5		6.5	5.7	4.9	PN
178	5/21/2002	340	2600.0	8900.1		3060	100	199	26.8	21.0	16.2	36.4	36.6	36.2		6.4	5.9	4.5	PN
179	5/21/2002	833	2629.9	8900.1		3000	101	201	26.3	22.7	17.6	36.5	36.5	36.4		6.5	6.5	4.5	PN
180	5/21/2002	1248	2700.5	8859.9		2232	102	201	25.9	24.4	19.3	36.2	36.4	36.6		6.6	6.1	4.9	PN
181	5/21/2002	2031	2700.2	8800.2		2800	100	200	26.2	20.8	16.5	36.5	36.5	36.2		6.5	6.8	4.4	PN
182	5/22/2002	31	2630.0	8800.0		2664	101	200	26.4	20.3	15.3	36.4	36.5	36.0		6.5	5.5	4.4	PN
183	5/22/2002	418	2600.5	8759.9		2990	100	200	26.5	19.6	14.4	36.3	36.5	35.9		6.4	4.7	4.3	PN
184	5/22/2002	1318	2617.0	8700.0		3093	100	202	26.3	20.4	15.8	36.4	36.5	36.1		6.5	5.9	4.3	PN
185	5/22/2002	1550	2630.1	8700.0		3010	100	203	26.2	20.3	15.6	36.4	36.5	36.1		6.5	5.6	4.5	PN
186	5/22/2002	1938	2660.0	8659.9		2946	99	201	25.9	20.8	16.9	36.4	36.5	36.3		6.5	6.5	4.7	PN
187	5/23/2002	323	2800.1	8700.1		2790	100	200	25.6	21.5	16.8	36.5	36.4	36.2		6.6	6.1	4.5	PN
188	5/23/2002	744	2830.0	8659.9		855	100	201	25.3	19.7	15.3	36.1	36.4	36.0		6.6	6.1	4.3	PN
189	5/23/2002	1105	2859.9	8660.0		686	100	201	24.9	20.1	15.8	35.5	36.5	36.1		6.6	5.8	4.4	PN
190	5/23/2002	1459	2900.1	8630.0		378	100	201	24.5	20.0	16.1	34.2	36.5	36.1		6.7	5.8	4.3	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
191	5/23/2002	1930	2830.1	8559.9		332	101	200	25.0	19.5	15.7	35.5	36.4	36.1		6.7	5.9	4.4	PN
192	5/23/2002	2251	2759.9	8600.0		1000	99	200	25.1	19.8	15.6	35.9	36.4	36.1		6.6	6.4	4.6	PN
193	5/24/2002	244	2729.9	8559.9		3170	100	200	25.7	21.0	16.5	36.4	36.5	36.2		6.5	6.4	4.4	PN
194	5/24/2002	620	2700.2	8559.8		3200	100	200	25.9	20.9	16.7	36.4	36.5	36.2		6.5	6.6	4.9	PN
195	5/24/2002	1017	2630.0	8600.2		3200	101	203	26.0	20.2	16.1	36.4	36.6	36.1		6.5	5.1	4.7	PN
196	5/24/2002	1357	2600.5	8559.6		3245	100	201	26.8	17.8	13.6	36.2	36.4	35.7		6.4	4.6	4.2	PN
197	5/24/2002	1901	2530.4	8626.3		3260	100	201	26.4	19.1	13.3	36.4	36.5	35.7		6.5	4.5	4.2	PN
198	5/24/2002	2212	2530.2	8559.8		3200	100	201	27.5	18.1	13.0	36.1	36.4	35.7		6.3	4.7	4.2	PN
199	5/25/2002	301	2459.7	8600.2		3240	100	200	27.8	18.7	14.4	36.1	36.5	35.9		6.2	4.9	4.6	PN
200	5/25/2002	648	2459.9	8530.4		3292	99	202	27.6	25.3	18.7	36.1	36.6	36.6		6.3	5.6	5.1	PN
201	5/25/2002	952	2440.1	8529.9		3365	100	202	27.5	24.8	19.1	36.1	36.7	36.6		6.3	5.4	5.1	PN
202	5/25/2002	1421	2430.1	8500.1		3389	100	201	27.6	26.0	20.6	36.0	36.5	36.8		6.3	5.7	4.9	PN
203	5/25/2002	1756	2459.9	8459.9		3349	99	202	27.6	26.0	20.2	36.1	36.5	36.7		6.3	5.7	5.0	PN
204	5/25/2002	2127	2459.9	8429.9		2275	100	200	27.7	26.1	19.4	36.1	36.4	36.6		6.3	5.9	5.0	PN
205	5/26/2002	117	2430.2	8430.2		3360	100	201	27.4	26.3	21.1	36.1	36.4	36.8		6.3	5.8	4.9	PN
206	5/26/2002	455	2429.9	8400.6		2280	100	200	27.6	25.8	17.2	36.1	36.5	36.3		6.3	5.7	4.5	PN
207	5/26/2002	750	2401.7	8359.7		2013	100	201	27.3	26.3	20.6	36.1	36.3	36.8		6.3	5.8	4.9	PN
208	5/26/2002	1115	2400.3	8330.2		999	102	200	27.6	23.4	17.0	36.1	36.7	36.3		6.3	5.3	4.4	PN
209	5/26/2002	1650	2430.0	8329.8	2	280	99	201	27.1	18.8	12.2	36.3	36.5	35.5		6.4	4.8	4.3	PN
210	5/26/2002	2202	2500.2	8359.9	3	124	61	122	26.6	22.8	17.3	36.3	36.5	36.3		6.5	7.3	4.4	PN
211	5/27/2002	222	2530.3	8360.0	3	136	72	134	26.2	21.0	16.8	36.3	36.5	36.2		6.5	6.8	4.3	PN
212	5/27/2002	612	2600.1	8400.0		135	72	134	26.0	21.2	16.8	36.4	36.5	36.2		6.5	6.8	4.3	PN
213	5/27/2002	947	2600.4	8429.5		214	99	202	27.2	20.3	15.9	36.2	36.6	36.1		6.3	5.2	4.6	PN
214	5/27/2002	1313	2600.4	8500.4		3070	100	201	27.7	22.4	16.0	36.2	36.9	36.1		6.3	5.1	4.7	PN
215	5/27/2002	1806	2630.1	8459.9		1850	99	202	26.5	20.4	15.8	36.3	36.5	36.1		6.5	5.8	4.3	PN
216	5/27/2002	2134	2659.9	8500.1		850	100	200	25.7	19.8	15.4	36.4	36.5	36.0		6.6	5.0	4.4	PN
217	5/28/2002	135	2730.1	8460.0	5	396	99	200	25.7	19.7	15.1	36.4	36.6	36.0		6.6	5.0	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
218	5/28/2002	511	2800.1	8459.7	6	246	100	200	25.3	19.8	15.4	36.4	36.5	36.0		6.6	5.7	4.3	PN
219	5/28/2002	1007	2830.0	8530.0	8	198	99	196	25.2	19.4	14.8	36.0	36.5	35.9		6.7	5.1	4.1	PN
220	5/28/2002	1421	2900.0	8600.1		245	100	201	25.2	19.5	15.1	34.6	36.4	36.0		6.3	6.0	4.1	PN
221	5/28/2002	1919	2930.2	8629.8	9	204	99	201	25.4	19.8	14.5	35.4	36.5	35.9		6.7	5.5	4.1	PN
222	5/28/2002	2347	2959.9	8660.0	9	71	35	69	25.6	22.8	20.2	35.4	36.2	36.4		6.6	7.1	6.6	PN

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	5/16/2002	1132	2831.1	8851.6		1098	25	50	26.5	26.4	24.4	36.0	35.8	36.0		5.4	5.9	7.2	PN
17002	5/16/2002	1410	2832.1	8851.7		1098	25	50	26.7	26.5	24.2	36.0	35.9	35.9		5.8	5.7	6.9	PN
17003	5/16/2002	1605	2837.1	8859.0		478	25	50	27.0	26.4	24.2	36.1	36.0	35.8		5.9	5.6	6.2	PN
17004	5/16/2002	1815	2837.8	8858.1		478	25	50	27.0	26.4	24.0	35.9	36.0	36.0		5.9	6.2	6.2	PN
17005	5/17/2002	1320	2919.3	8836.0	11	60	25	50	26.0	21.7	21.3	33.2	33.5	33.5		6.1	5.8	5.4	PN
17006	5/17/2002	1425	2920.2	8835.7	11	60	25	50	26.7	24.4	21.2	32.8	34.6	35.8		5.9	5.8	5.0	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMERSHRIMPGOUNDFISH 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	6/12/2002	247	3001.0	8827.9	11	26	12	24	28.3	27.4	24.3	29.9	33.2	34.9	0.603	6.5	6.4	5.9	ST
2	6/12/2002	503	3000.0	8816.6	11	28	13	26	28.0	27.0	24.7	31.1	33.8	35.2	0.666	6.5	6.5	6.5	ST
3	6/12/2002	806	2942.2	8806.1	11	37	18	36	27.1	25.5	20.7	32.0	34.9	36.1	0.757	6.3	6.7	5.4	ST
4	6/12/2002	1256	2912.1	8830.7	11	238	62	123	27.1	21.2	18.1	34.0	36.5	36.4	0.456	6.6	6.2	4.5	PN
5	6/12/2002	1608	2907.8	8840.7	11	93	45	90	27.2	21.9	19.6	36.1	36.5	36.5	0.330	6.3	6.7	5.3	ST
6	6/12/2002	1824	2908.0	8845.1	11	82	39	78	27.5	22.2	20.2	36.1	36.5	36.5	0.253	6.3	6.7	5.5	ST
7	6/12/2002	2034	2859.0	8859.9	11	153	35	70	28.2	21.8	20.5	18.5	36.4	36.5	6.755	8.5	6.3	5.6	PN
8	6/13/2002	59	2902.7	8859.4	11	54	25	49	27.6	23.1	21.0	21.5	36.3	34.6	7.199	6.6	5.0	5.4	ST
9	6/13/2002	252	2904.8	8853.6	11	83	38	75	27.8	21.7	19.9	31.7	36.5	36.4	2.059	6.9	6.7	5.5	ST
10	6/13/2002	416	2907.5	8853.5	11	64	29	57	28.2	24.2	20.7	27.1	36.3	36.5	2.912	7.7	6.5	5.2	ST
11	6/13/2002	552	2908.9	8851.6	11	74	34	68	29.0	23.1	20.5	24.6	36.4	36.4	2.356	7.9	6.7	5.3	ST
12	6/13/2002	819	2908.3	8839.3	11	94	41	82	27.1	22.5	20.4	34.7	36.5	36.4	0.848	4.8	6.8	5.8	ST
13	6/13/2002	1202	2929.7	8759.7	10	86	23	45	27.2	23.6	21.3	32.5	35.6	36.4	0.562	6.6	6.4	5.4	PN
14	6/13/2002	1541	2959.8	8759.9	10	48	13	25	28.2	26.6	23.4	33.4	34.5	35.5	0.435	6.4	6.6	6.7	PN
15	6/13/2002	1847	2959.9	8829.9	11	50	13	26	28.9	25.8	24.0	30.8	34.8	35.5	0.636	6.7	6.9	6.3	PN
16	6/14/2002	104	2925.0	8809.5	11	54	29	57	27.6	25.4	21.3	33.6	36.5	36.3	0.372	6.5	6.5	5.3	ST
17	6/14/2002	223	2927.4	8810.8	11	51													ST
18	6/17/2002	2208	2621.0	9631.2	21	64	32	64	29.2	25.3	21.2	33.1	36.2	36.2	0.242	5.9	6.3	5.2	ST
19	6/17/2002	2321	2619.1	9633.5	21	56													ST
20	6/18/2002	44	2610.9	9625.1	21	73	42	84	29.1	24.3	20.1	31.8	36.2	36.5	0.310	5.9	6.2	4.0	ST
22	6/18/2002	709	2604.9	9634.6	21	53	28	55	29.1	25.8	21.9	32.8	35.6	36.0	0.278	5.8	6.0	4.5	ST
23	6/18/2002	709	2604.9	9634.6	21	54													ST
24	6/18/2002	833	2606.1	9637.6	21	48													ST
25	6/18/2002	1412	2606.7	9703.2	21	22	11	22	28.4	28.4	25.6	34.2	34.2	35.5	0.324	5.8	5.8	5.7	ST
26	6/18/2002	1615	2604.8	9706.3	21	18	9	17	28.4	28.0	25.5	34.4	34.6	35.3	0.288	5.8	5.8	5.7	ST
27	6/18/2002	1829	2603.1	9703.9	21	22	10	20	28.6	25.8	25.4	34.4	35.4	35.4	0.257	5.8	5.9	5.9	ST
28	6/18/2002	2000	2600.1	9659.8	21	51	13	26	28.7	26.3	24.8	34.5	35.1	35.6	0.261	5.8	5.9	6.0	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
29	6/19/2002	122	2603.4	9708.2	21	12	7	13	28.5	27.9	25.5	35.0	34.9	35.3	0.477	5.9	5.8	5.6	ST
30	6/19/2002	315	2610.3	9701.2	21	25	12	23	28.7	28.6	25.5	34.0	35.2	35.3	0.287	5.8	5.8	6.0	ST
31	6/19/2002	506	2619.6	9702.8	21	22	10	19	28.4	28.4	26.0	33.9	34.6	34.7	0.280	5.8	5.8	5.8	ST
32	6/19/2002	653	2624.5	9702.5	21	28	13	25	28.6	28.4	24.7	33.7	34.6	35.2	0.267	5.8	5.8	4.8	ST
33	6/19/2002	838	2630.8	9702.2	21	59	16	31	28.4	26.6	23.9	33.6	34.8	35.5	0.251	5.8	5.5	3.4	PN
34	6/19/2002	1141	2630.5	9702.0	21	33	17	33	28.3	27.2	23.8	33.6	34.6	33.8	0.235	5.8	5.8	3.4	ST
35	6/19/2002	1329	2638.1	9709.0	21	24	12	23	28.0	27.3	24.7	34.1	34.3	35.5	0.339	5.8	5.6	4.3	ST
36	6/19/2002	1505	2644.8	9703.9	21	35	17	34	28.1	27.5	24.4	34.2	34.3	36.0	0.774	5.7	5.6	4.9	ST
37	6/19/2002	1658	2650.7	9705.0	21	34	17	33	28.5	26.6	24.5	34.1	34.3	35.9	0.224	5.8	5.8	5.1	ST
38	6/19/2002	1912	2656.4	9711.7	21	28	14	28	28.7	28.3	24.7	33.5	33.6	35.6	0.242	5.8	5.8	4.8	ST
39	6/19/2002	2056	2651.8	9720.7	21	11	7	13	28.8	28.8	27.9	34.2	34.2	34.1	0.561	6.0	6.0	5.8	ST
40	6/20/2002	121	2639.3	9717.7	21	10	7	14	28.6	28.6	28.6	34.4	34.4	34.4	0.521	5.9	5.9	5.9	ST
41	6/20/2002	304	2645.3	9716.2	21	18	9	17	28.3	28.3	26.1	34.0	34.1	34.5	0.485	5.9	5.9	5.6	ST
42	6/20/2002	636	2650.0	9652.7	21	55	28	55	28.4	25.8	21.4	34.0	36.0	32.7	0.264	5.8	6.1	4.2	ST
43	6/20/2002	759	2650.5	9650.0	21	60													ST
44	6/20/2002	1007	2647.9	9642.1	21	84	40	79	28.6	23.9	20.3	33.6	36.4	36.5	0.299	5.7	6.4	4.5	ST
45	6/20/2002	1304	2654.5	9639.4	21	92	46	92	28.7	23.5	20.5	32.8	36.5	36.5	0.302	5.7	6.5	4.7	ST
46	6/20/2002	1423	2654.4	9642.1	21	85													ST
47	6/20/2002	1660	2701.4	9630.0	20	244	70	140	29.0	22.4	18.1	31.5	36.5	36.4	0.252	5.7	6.1	4.0	PN
48	6/20/2002	2042	2659.6	9700.1	21	77	21	41	29.0	25.6	23.2	31.5	35.3	34.8	0.317	5.9	6.1	3.8	PN
49	6/20/2002	2316	2707.8	9656.8	20	46	23	46	29.1	25.9	22.4	31.7	35.6	35.6	0.343	5.9	6.0	4.6	ST
50	6/21/2002	124	2702.3	9703.1	20	37	18	36	28.9	27.0	24.0	31.8	33.7	35.8	0.347	5.9	5.8	3.8	ST
51	6/21/2002	212	2702.3	9704.6	20	35	16	31	28.6	28.3	24.5	32.5	33.9	35.4	0.366	5.9	5.9	4.1	ST
52	6/21/2002	410	2657.3	9706.4	21	33	16	32	28.8	27.1	24.4	31.9	34.0	35.7	0.345	5.9	5.8	4.2	ST
53	6/21/2002	651	2704.1	9721.7	20	11	7	14	28.6	28.6	28.6	34.1	34.1	34.1	1.265	5.7	5.8	5.6	ST
54	6/21/2002	843	2711.4	9716.5	20	20	10	19	28.8	28.7	27.8	33.1	33.1	34.1	0.582	4.4	4.8	4.7	ST
55	6/21/2002	1011	2715.0	9718.4	20	15	7	13	29.2	29.2	28.9	32.7	32.7	32.9	1.382	4.6	4.5	4.9	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
56	6/21/2002	1208	2706.9	9720.2	20	14	7	13	28.9	29.3	28.4	33.9	34.3	34.1	0.772	4.9	4.4	4.4	ST
57	6/21/2002	1427	2714.5	9707.2	20	29	14	28	28.6	28.6	25.3	31.5	33.2	33.0	0.314	4.8	4.7	4.8	ST
58	6/21/2002	1718	2726.6	9716.4	20	10	6	11	29.5	29.5	29.4	31.3	31.3	32.1	0.876	5.9	5.9	5.7	ST
59	6/21/2002	2017	2740.3	9707.4	20	13	6	12	29.7	29.4	29.2	30.0	30.0	30.2	1.449	6.1	6.0	5.8	ST
60	6/21/2002	2248	2730.2	9660.0	20	52	14	28	29.2	28.5	25.4	31.8	32.5	34.4	0.614	4.8	5.9	3.3	PN
61	6/22/2002	128	2726.7	9713.0	20	17	8	15	29.7	29.5	28.4	31.0	31.0	31.8	1.464	6.0	5.9	4.8	ST
62	6/22/2002	240	2726.8	9706.5	20	24	12	23	28.9	28.4	26.8	31.7	32.2	32.5	0.688	5.9	5.7	3.3	ST
63	6/22/2002	505	2718.2	9659.0	20	37	17	34	29.0	28.7	24.6	31.2	31.8	35.1	0.353	5.9	5.9	2.5	ST
64	6/22/2002	804	2719.5	9643.4	20	64	31	62	29.0	27.0	22.0	31.2	35.8	36.1	0.364	5.8	6.0	4.1	ST
65	6/22/2002	926	2718.6	9640.5	20	71													ST
66	6/22/2002	1142	2730.0	9630.3	20	137	38	76	29.0	24.9	21.4	30.0	36.0	36.4	0.717	5.8	5.9	5.3	PN
67	6/22/2002	1426	2736.8	9644.3	20	40	20	40	28.8	27.1	24.3	31.5	33.8	35.9	0.405	5.8	5.2	3.7	ST
68	6/22/2002	1656	2740.1	9637.4	20	46	22	44	28.9	25.9	23.7	31.1	34.2	35.4	0.813	4.8	4.9	4.4	ST
69	6/22/2002	1814	2738.7	9634.9	20	53													ST
70	6/22/2002	2011	2740.5	9625.2	20	64	31	61	29.4	25.3	21.9	30.7	35.8	36.5	0.390	5.8	5.4	5.2	ST
71	6/22/2002	2135	2738.6	9622.9	20	72													ST
72	6/23/2002	132	2734.4	9611.7	20	110	57	113	29.4	22.5	20.1	29.3	36.4	35.7	0.987	5.9	6.1	4.1	ST
73	6/23/2002	252	2736.5	9613.7	20	98													ST
74	6/23/2002	407	2738.1	9618.7	20	82	35	70	29.2	24.9	21.8	30.1	35.9	36.5	0.551	5.8	5.3	5.1	ST
75	6/23/2002	757	2737.7	9640.1	20	46	23	46	28.9	25.4	23.5	31.2	34.8	36.2	0.533	5.8	4.5	4.3	ST
76	6/23/2002	1025	2748.4	9640.9	20	31	14	28	29.2	28.8	25.4	28.9	30.0	34.8	1.249	5.9	5.6	3.0	ST
77	6/23/2002	1216	2751.7	9641.5	20	27	13	26	29.4	29.2	25.6	29.0	29.3	34.5	1.180	5.8	5.7	2.9	ST
78	6/23/2002	1503	2759.9	9624.4	19	32	15	30	29.3	28.3	25.8	28.5	30.8	33.1	0.658	5.8	5.4	2.8	ST
79	6/23/2002	1741	2801.1	9631.0	19	26	12	24	29.5	29.1	25.8	29.7	30.4	33.6	0.399	5.8	5.7	1.5	ST/PN
80	6/23/2002	2010	2757.4	9644.0	20	20	10	19	29.5	29.2	26.8	28.0	28.4	32.4	0.861	6.1	5.9	2.5	ST
81	6/24/2002	129	2756.8	9656.3	19	10	5	10	30.1	30.2	30.2	27.3	27.4	27.7	2.605	6.0	6.0	5.7	ST
82	6/24/2002	502	2811.9	9638.4	19	10	5	10	30.0	30.0	30.1	26.0	26.0	26.1	1.263	5.8	5.8	5.8	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
83	6/24/2002	808	2804.4	9618.8	19	29	13	26	29.4	29.1	25.9	27.7	28.0	34.3	1.471	5.9	5.7	2.9	ST
84	6/24/2002	944	2806.9	9616.7	19	28	12	23	29.5	29.4	26.1	26.6	28.2	33.4	1.693	5.8	5.4	1.9	ST
85	6/24/2002	1259	2821.1	9620.1	19	13	6	11	29.8	29.7	29.4	25.4	26.6	27.3	2.113	5.5	4.9	4.7	ST
86	6/24/2002	1521	2808.0	9610.6	19	29	14	28	29.5	28.7	25.4	26.8	29.4	33.4	1.075	6.0	4.9	2.6	ST
87	6/24/2002	1739	2759.9	9559.5	20	87	23	46	29.3	26.4	23.7	26.2	35.6	36.2	1.490	6.0	5.9	4.5	PN
88	6/24/2002	1935	2806.2	9549.3	19	40	19	38	29.2	26.3	25.1	26.3	35.5	35.9	2.567	5.8	5.9	4.6	ST
89	6/24/2002	2052	2804.1	9547.3	19	44													ST
90	6/24/2002	2133	2803.2	9546.6	19	46													ST
91	6/24/2002	2249	2800.5	9545.8	19	50													ST
92	6/25/2002	3	2757.9	9544.8	19	53	28	55	29.1	25.9	22.8	32.0	35.6	36.3	0.357	5.8	6.1	5.5	ST
93	6/25/2002	506	2743.3	9543.2	19	93	40	80	29.7	24.1	21.2	30.0	36.4	36.5	0.490	5.8	6.3	5.0	ST
93	6/25/2002	506	2743.3	9543.2	19	93	40	80	29.7	24.1	21.2	30.0	36.4	36.5	0.490	5.8	6.3	5.0	ST
94	6/25/2002	729	2747.7	9534.0	19	82	38	75	28.5	24.0	21.2	32.5	36.2	36.5	0.318	5.8	5.6	5.1	ST
95	6/25/2002	1024	2800.4	9517.2	19	64	27	54	28.4	26.6	23.6	34.4	35.8	36.4	0.234	5.7	6.0	6.1	ST
96	6/25/2002	1331	2808.0	9505.4	19	55	27	54	28.5	26.2	23.2	34.5	35.9	36.4	0.222	5.6	6.0	5.9	ST
97	6/25/2002	1447	2805.2	9504.6	19	58													ST
98	6/25/2002	1657	2759.9	9500.4	20	152	41	82	28.9	23.6	21.1	32.2	36.5	36.5	0.235	5.7	6.5	5.0	PN
99	6/25/2002	1923	2756.2	9508.4	20	93	44	88	28.8	23.2	20.7	32.5	36.5	36.5	0.263	5.7	6.5	4.7	ST
100	6/25/2002	2351	2753.8	9523.0	19	82	37	73	28.8	25.3	21.6	31.9	36.3	36.3	0.334	5.8	6.2	5.0	ST
100	6/25/2002	2351	2753.8	9523.0	19	82	37	73	28.8	25.3	21.6	31.9	36.3	36.3	0.334	5.8	6.2	5.0	ST/PN
101	6/26/2002	242	2802.2	9524.7	19	54	27	54	28.6	25.7	23.0	31.1	35.9	36.4	0.561	5.7	6.0	5.6	ST
102	6/26/2002	354	2804.7	9525.9	19	51													ST
103	6/26/2002	522	2807.1	9527.3	19	48													ST
104	6/26/2002	724	2808.5	9531.5	19	46	23	45	28.7	25.9	23.4	29.3	35.4	36.2	1.118	5.7	6.0	4.1	ST
105	6/26/2002	1044	2814.0	9553.2	19	30	13	26	29.3	26.7	25.9	25.0	34.3	35.0	1.665	5.7	4.7	3.2	ST
106	6/26/2002	1442	2830.1	9529.5	19	11	13	25	28.4	28.6	25.5	29.7	32.5	34.8	1.127	5.7	5.6	2.0	PN
107	6/26/2002	1704	2844.2	9534.7	19	11	5	9	28.9	29.0	28.9	24.4	24.9	27.3	3.209	5.9	5.8	4.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
108	6/26/2002	1905	2837.5	9542.9	19	14	7	13	28.9	28.8	27.6	23.5	29.0	31.0	4.101	5.9	5.9	1.5	ST
109	6/26/2002	2128	2833.0	9547.6	19	17	8	15	29.0	29.1	26.9	23.3	31.1	31.7	3.056	6.3	5.8	1.0	ST
110	6/26/2002	2348	2830.5	9600.1	19	26	7	13	29.5	29.4	27.3	24.2	25.5	30.0	2.528	5.7	4.9	1.1	PN
111	6/27/2002	125	2832.4	9557.7	19	13	6	11	29.1	29.1	28.0	25.0	25.0	29.8	1.927	5.9	5.7	0.3	ST
112	6/27/2002	421	2837.6	9537.3	19	15	7	13	28.8	28.9	28.5	29.1	29.2	31.4	2.685	5.8	5.8	4.1	ST
113	6/27/2002	518	2835.9	9537.4	19	17	9	18	28.4	28.4	27.3	29.7	29.7	33.2	2.029	5.9	5.9	3.1	ST
114	6/27/2002	950	2850.0	9515.6	19	19	8	16	28.6	28.7	25.8	25.9	27.1	33.0	3.426	6.7	6.6	6.7	ST
115	6/27/2002	1250	2855.1	9506.2	19	19	9	17	28.5	28.8	26.0	27.8	28.5	32.6	3.511	5.8	5.4	0.1	ST/PN
116	6/27/2002	1437	2849.1	9506.0	19	21	10	19	28.4	28.8	26.4	27.3	29.9	33.6	6.123	5.7	5.5	1.4	ST
117	6/27/2002	1603	2846.5	9504.2	19	20													ST
118	6/27/2002	1853	2842.1	9516.0	19	23	11	21	28.6	27.5	26.4	27.5	33.9	34.6	5.877	5.8	4.8	3.0	ST
119	6/27/2002	2016	2840.2	9514.0	19	24	13	25	28.3	28.0	25.9	30.0	33.8	34.7	2.472	6.0	5.5	3.4	ST
120	6/27/2002	2207	2836.1	9515.3	19	28	13	26	28.2	27.2	25.8	30.6	34.7	35.1	1.810	6.0	5.2	3.3	ST
121	6/28/2002	138	2831.4	9457.2	18	33	16	32	28.1	27.1	25.5	32.2	35.0	36.0	0.831	5.8	5.1	5.1	ST/PN
122	6/28/2002	426	2836.4	9443.3	18	31	15	30	28.2	27.9	25.7	29.8	35.5	35.7	2.847	5.8	5.5	3.8	ST
123	6/28/2002	721	2846.2	9440.3	18	22	10	19	28.1	28.2	25.6	29.0	31.9	35.3	2.538	5.7	5.1	1.9	ST
124	6/28/2002	1103	2829.5	9429.9	18	70	18	35	27.5	27.4	25.7	32.8	35.5	35.8	2.454	5.4	5.7	5.4	PN
125	6/28/2002	1232	2836.7	9424.5	18	33	16	31	27.8	26.7	25.5	31.5	35.4	35.9	2.590	5.7	5.6	4.8	ST
126	6/28/2002	1439	2834.2	9432.1	18	34	17	33	27.8	25.9	25.5	31.0	35.4	35.8	2.280	5.6	4.7	4.8	ST
127	6/28/2002	1943	2822.9	9500.1	19	38	19	37	27.5	28.1	25.8	30.7	34.6	36.0	0.544	5.8	5.6	5.4	ST
128	6/28/2002	2102	2820.6	9501.9	19	39													ST
129	6/29/2002	140	2802.4	9447.9	18	74	36	71	27.9	24.0	21.6	33.9	36.5	36.5	0.809	5.7	6.4	5.2	ST
130	6/29/2002	629	2802.1	9428.7	18	64	29	58	27.9	25.9	22.3	34.3	36.1	36.5	0.287	5.7	6.0	5.6	ST
131	6/29/2002	757	2759.9	9427.1	18	71													ST/PN
132	6/29/2002	1201	2758.1	9432.8	18	81	35	69	28.2	24.3	21.7	32.7	36.3	36.5	0.361	5.6	6.1	5.3	ST
133	6/29/2002	1547	2756.1	9411.5	18	92	44	87	27.9	22.8	20.8	32.9	36.4	36.5	0.338	5.7	6.2	4.9	ST
134	6/29/2002	1719	2754.5	9413.7	18	107													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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
135	6/29/2002	1927	2801.6	9410.3	18	73	38	75	28.1	23.5	21.1	32.8	36.5	36.5	0.302	5.7	6.3	5.2	ST
136	6/30/2002	150	2828.9	9411.1	18	40	20	40	27.7	27.7	25.4	33.5	35.8	35.7	1.534	5.8	5.6	5.4	ST/PN
137	6/30/2002	305	2831.4	9412.3	18	38													ST
138	6/30/2002	408	2832.8	9411.9	18	36	16	32	27.5	27.6	26.2	32.6	35.4	36.0	2.303	5.8	5.5	5.3	ST
139	6/30/2002	807	2849.5	9403.4	18	24	11	22	27.6	27.7	26.7	33.3	33.5	35.7	2.505	6.0	5.9	3.9	ST
140	6/30/2002	1032	2843.2	9353.9	17	27	14	27	27.8	27.8	27.0	34.9	35.6	35.9	0.656	5.6	5.5	5.3	ST
141	6/30/2002	1405	2843.7	9337.1	17	24	12	23	27.9	27.9	27.2	35.6	35.7	35.9	0.271	5.5	5.5	4.8	ST
142	6/30/2002	1658	2847.3	9315.6	17	27	14	27	27.8	27.6	26.7	35.6	35.6	35.9	0.159	5.5	5.5	4.6	ST
143	6/30/2002	2044	2836.1	9257.1	16	35	17	33	27.8	27.6	26.0	35.7	35.9	36.2	0.248	5.5	5.5	5.1	ST/PN
144	7/1/2002	125	2841.3	9321.2	17	31	15	30	28.0	28.0	26.4	35.5	35.5	36.0	0.395	5.6	5.6	4.6	ST
145	7/1/2002	253	2839.0	9327.4	17	33	17	33	27.8	27.7	26.4	35.7	35.7	36.0	0.175	5.6	5.6	5.1	ST
146	7/1/2002	422	2832.0	9327.9	17	41													ST/PN
147	7/1/2002	541	2829.6	9326.7	17	43	22	44	27.8	27.5	25.1	35.7	36.0	36.4	0.101	5.6	5.6	5.9	ST
148	7/1/2002	831	2835.8	9326.9	17	37	16	31	27.7	27.7	26.5	35.9	35.9	36.0	0.167	5.6	5.6	5.6	ST
149	7/1/2002	1032	2842.8	9331.5	17	29	14	27	27.9	27.9	27.1	35.7	35.7	35.9	0.193	5.5	5.5	5.1	ST
150	7/1/2002	1335	2859.4	9334.0	17	21	11	21	28.1	28.1	26.3	33.4	33.4	35.5	1.058	5.7	5.7	0.7	ST/PN
151	7/1/2002	1623	2909.8	9324.3	17	19	9	18	28.4	28.3	26.8	29.0	33.8	35.2	4.483	6.1	5.0	0.5	ST
152	7/1/2002	1836	2913.1	9332.8	17	17	7	14	28.6	28.4	27.7	27.5	28.6	32.8	1.346	6.0	4.9	1.7	ST
153	7/1/2002	2213	2924.0	9357.5	17	10	5	9	28.6	28.5	28.4	27.9	27.9	28.3	7.221	6.6	6.5	5.9	ST
154	7/2/2002	254	2855.2	9405.1	18	22	11	21	28.3	27.7	27.0	33.2	33.7	35.0	1.444	5.9	5.7	1.9	ST/PN
155	7/2/2002	748	2859.5	9430.6	18	35	9	17	28.4	28.1	27.4	28.0	31.2	34.0	2.244	5.7	5.6	2.3	PN
156	7/3/2002	2338	2912.5	9452.6	18	10	6	11	29.0	28.6	28.1	23.3	23.9	26.0	4.252	6.9	5.8	0.2	ST
157	7/4/2002	524	2929.1	9400.7	18	24	6	12	28.8	28.8	28.6	27.3	27.4	27.8	3.317	5.7	5.8	4.6	PN
158	7/4/2002	830	2930.3	9330.1	17	20	5	10	28.9	29.0	28.5	21.9	22.2	25.4	1.293	6.6	6.7	4.4	PN
159	7/4/2002	1245	2931.0	9257.2	16	13	6	12	29.1	29.1	28.7	27.0	27.0	28.5	0.935	5.9	5.9	4.6	ST/PN
160	7/4/2002	1354	2928.6	9255.9	16	14													ST
161	7/4/2002	1713	2922.6	9317.7	17	13	6	12	29.1	28.7	28.2	22.3	24.6	28.9	1.342	6.4	3.9	1.0	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
162	7/4/2002	1928	2911.4	9315.4	17	19	9	17	29.4	28.9	27.1	25.5	29.0	35.1	3.351	6.8	5.4	0.7	ST
163	7/4/2002	2041	2908.8	9314.8	17	19													ST
164	7/4/2002	2224	2905.1	9313.4	17	21	10	21	29.6	28.4	26.1	33.3	35.0	35.9	0.803	5.5	5.4	1.9	ST
165	7/5/2002	155	2912.8	9335.9	17	16	8	16	29.3	28.6	27.6	27.8	30.8	32.9	3.801	6.4	4.9	0.3	ST
166	7/5/2002	315	2912.9	9331.4	17	16	8	16	29.2	28.9	27.4	29.7	31.2	34.0	1.986	5.6	5.7	0.2	ST
167	7/5/2002	752	2900.5	9300.7	17	45	12	23	29.6	28.3	26.0	31.9	33.9	36.0	1.134	5.6	5.5	2.2	PN
168	7/5/2002	952	2903.7	9241.8	16	24													ST
169	7/5/2002	1104	2901.2	9243.0	16	25	13	25	28.8	28.3	26.4	30.6	33.9	36.2	1.072	5.5	5.2	1.6	ST
170	7/5/2002	1241	2856.9	9234.2	16	28													ST
171	7/5/2002	1350	2859.3	9232.8	16	26	13	25	29.3	28.3	27.0	32.5	35.8	36.5	0.419	5.3	5.4	4.5	ST/PN
172	7/5/2002	1838	2842.5	9254.2	16	33	16	32	29.0	27.7	26.5	34.6	35.7	36.4	0.261	5.3	5.4	3.6	ST
173	7/5/2002	2117	2837.4	9242.1	16	37	18	36	29.5	27.4	25.9	34.8	35.9	36.3	0.368	5.4	5.5	4.3	ST
174	7/5/2002	2232	2834.5	9242.4	16	38													ST
175	7/6/2002	245	2810.5	9307.2	17	72	35	70	28.9	26.8	21.2	35.9	36.2	36.5	0.126	5.3	5.6	4.2	ST
176	7/6/2002	401	2807.9	9307.5	17	80													ST
177	7/6/2002	540	2804.7	9308.8	17	92	44	87	28.6	24.9	20.4	36.1	36.4	36.3	0.113	5.3	6.0	3.6	ST
178	7/6/2002	705	2802.0	9308.7	17	99													ST
179	7/6/2002	1110	2801.0	9329.4	17	158	47	93	28.8	23.9	19.5	33.5	36.5	36.5	0.305	5.3	6.1	4.0	PN
180	7/6/2002	1510	2801.2	9259.1	16	189	54	108	28.4	23.1	19.5	36.2	36.4	35.5	0.129	5.3	6.0	3.9	PN
181	7/6/2002	1814	2800.1	9229.6	16	191	45	90	28.8	25.0	19.7	36.2	36.3	36.5	0.111	5.2	5.8	4.1	PN
182	7/6/2002	2049	2805.4	9221.0	16	92	48	96	28.7	23.7	19.7	36.1	36.4	36.5	0.121	5.3	6.1	3.7	ST
183	7/6/2002	2203	2807.8	9220.7	16	82	36	71	28.8	25.0	21.2	36.0	36.3	36.5	0.144	5.3	5.9	4.2	ST
184	7/7/2002	118	2805.6	9211.9	16	92	47	94	28.6	23.5	20.0	36.1	36.4	36.5	0.155	5.3	6.0	3.8	ST
185	7/7/2002	258	2810.8	9214.9	16	73	37	74	28.8	25.3	20.8	36.1	36.3	36.5	0.149	5.3	5.8	3.7	ST
186	7/7/2002	410	2813.6	9214.9	16	67													ST
187	7/7/2002	532	2816.4	9215.0	16	65													ST
188	7/7/2002	901	2836.0	9232.0	16	37	17	34	28.8	28.2	26.2	35.4	35.9	36.4	0.294	5.2	5.3	4.9	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
189	7/7/2002	1109	2830.8	9229.5	16	89	23	46	28.5	26.8	23.0	35.7	36.1	36.4	0.193	5.3	5.3	4.0	PN
190	7/7/2002	1252	2825.1	9236.0	16	55	28	56	28.4	26.5	22.9	35.7	36.2	36.1	0.156	5.2	5.3	4.8	ST
191	7/7/2002	1405	2827.7	9236.1	16	51													ST
192	7/7/2002	1518	2830.2	9236.0	16	49													ST
193	7/7/2002	1740	2832.0	9229.3	16	46	24	47	28.6	26.5	22.8	35.8	36.2	36.4	0.160	5.3	5.3	4.1	ST
194	7/8/2002	116	2915.3	9226.3	16	11	5	10	31.4	29.7	27.7	19.3	26.0	34.0	4.171	7.4	5.6	0.2	ST
195	7/8/2002	320	2909.1	9220.0	16	13	6	12	30.4	28.7	27.7	22.0	32.2	35.5	2.952	5.4	2.6	0.1	ST
196	7/8/2002	552	2910.1	9210.0	16	10	5	10	30.3	30.3	28.7	26.6	26.8	33.2	3.248	5.6	5.4	1.4	ST
197	7/8/2002	756	2902.3	9211.8	16	20	10	19	29.2	28.1	27.3	33.1	35.4	36.1	0.487	4.4	4.4	0.7	ST
198	7/8/2002	1016	2851.2	9217.2	16	30	15	29	28.9	28.9	27.4	35.0	35.4	36.3	0.393	4.8	4.9	3.9	ST
199	7/8/2002	1218	2848.5	9210.6	16	32	16	31	28.8	28.3	27.0	34.9	35.8	36.3	0.468	5.1	5.3	2.6	ST
200	7/8/2002	1358	2847.3	9206.1	16	31	15	30	28.8	28.1	26.7	35.3	35.9	36.4	0.362	5.1	5.0	3.8	ST
201	7/8/2002	1707	2843.3	9151.1	15	31	15	30	29.0	28.5	27.0	34.7	35.3	36.5	0.239	5.1	4.8	3.8	ST
202	7/8/2002	1912	2849.4	9151.9	15		13	26	29.4	28.7	27.1	33.6	35.0	34.1	0.276	5.1	5.0	2.9	ST
203	7/8/2002	2159	2900.5	9159.5	15	34	8	17	29.7	29.3	28.2	30.0	31.9	35.4	0.822	5.2	4.1	2.2	PN
204	7/9/2002	111	2857.3	9211.5	16	24	12	24	29.5	29.2	27.2	33.9	33.9	36.2	0.349	5.1	5.0	0.7	ST
205	7/9/2002	219	2900.6	9208.9	16	21	8	16	29.7	29.7	28.2	30.8	31.5	35.2	0.538	5.1	5.0	3.6	ST
206	7/9/2002	545	2903.7	9156.9	15	15	7	14	29.6	29.6	28.0	29.9	29.9	34.9	0.695	5.0	5.0	0.0	ST
207	7/9/2002	904	2901.2	9139.3	15	10	5	10	29.7	29.7	29.7	27.1	27.1	27.1	1.177	5.2	5.2	5.2	ST
208	7/9/2002	1127	2901.1	9144.1	15	13	7	13	29.6	29.8	28.9	26.2	27.5	32.9	1.144	5.3	4.1	1.0	ST
209	7/9/2002	1339	2859.4	9134.3	15	13	6	12	29.2	29.2	28.9	28.3	28.5	32.5	1.119	5.2	5.1	2.0	ST/PN
210	7/9/2002	1523	2853.8	9129.6	15	16	8	16	29.3	29.3	27.9	30.1	30.9	30.5	0.720	5.2	5.0	0.5	ST
211	7/9/2002	1732	2850.5	9139.1	15	22	11	22	29.4	28.8	27.3	32.3	35.2	17.5	0.482	5.0	4.6	1.3	ST
212	7/9/2002	1938	2851.0	9148.9	15	24	12	23	29.2	28.9	27.7	34.8	35.1	36.2	0.339	4.9	5.0	3.9	ST
213	7/9/2002	2313	2829.3	9200.2	16	92	25	49	28.9	27.6	23.5	36.0	36.2	36.4	0.143	5.1	5.2	5.4	PN
214	7/12/2002	838	2829.8	8929.0	13	732	100	201	28.9	18.6	14.2	36.3	36.5	35.9	0.158	5.0	3.9	3.6	PN
215	7/12/2002	1127	2845.3	8933.3	13	91	47	93	29.0	23.8	20.5	32.9	36.5	35.5	1.270	5.2	3.3	3.9	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
216	7/12/2002	1412	2858.3	8944.4	13	46	24	47	29.4	27.8	24.8	22.4	36.2	36.5	2.340	4.7	4.5	0.2	ST
217	7/12/2002	1641	2900.4	8935.4	13	25	10	20	30.0	29.0	27.6	16.9	34.0	36.1	4.329	6.5	4.6	3.7	ST/PN
218	7/12/2002	1821	2905.7	8936.8	13	16	9	17	31.3	27.9	27.5	17.1	34.7	35.7	2.805	7.6	3.2	2.4	ST
219	7/12/2002	2021	2913.5	8939.4	13	9	5	9	30.2	28.2	27.4	17.1	31.1	33.9	3.815	7.8	1.3	0.7	ST
220	7/12/2002	2233	2904.9	8947.6	13	27	13	26	30.2	28.9	26.9	17.1	35.3	36.2	4.985	6.8	4.6	0.7	ST
221	7/12/2002	2359	2905.2	8954.1	13	22	10	19	29.7	29.3	26.5	22.0	33.8	35.6	3.773	5.6	4.7	0.2	ST
222	7/13/2002	137	2905.0	8950.2	13	26	13	25	29.5	29.0	26.8	24.9	33.4	36.1	2.434	4.3	4.5	0.8	ST
223	7/13/2002	403	2851.9	8946.7	13	55	28	55	29.7	28.1	23.7	26.9	36.3	36.5	2.536	4.5	4.9	0.7	ST
224	7/13/2002	521	2849.6	8944.8	13	64	38	75	28.8	25.3	21.0	36.3	36.5	36.5	0.274	5.0	3.3	3.6	ST
225	7/13/2002	853	2840.4	8955.7	13	92	41	81	29.3	25.6	20.7	30.0	36.5	36.5	4.759	5.5	5.5	3.8	ST
226	7/13/2002	1100	2830.6	8959.8	13	214	89	178	29.3	20.3	15.0	35.2	36.5	35.1	0.293	4.9	4.0	0.5	PN
227	7/13/2002	1358	2816.2	9013.2	14	92	44	87	29.0	27.6	20.8	35.9	36.3	36.5	0.339	4.9	5.2	3.9	ST
228	7/13/2002	1560	2813.9	9011.7	14	102													ST
229	7/13/2002	2029	2844.4	9000.7	14	46	22	44	30.1	28.3	25.5	27.4	36.3	36.5	5.466	6.6	5.0	4.0	ST
230	7/14/2002	12	2900.6	9000.9	14	42	12	24	29.6	29.2	26.6	28.6	35.3	36.3	3.397	4.8	4.8	0.6	PN
231	7/14/2002	148	2858.9	9012.8	14	16	8	16	29.9	27.8	26.7	29.6	36.2	36.1	1.403	5.4	3.3	0.4	ST
232	7/14/2002	430	2859.1	9028.7	14	22	5	10	29.8	29.3	27.2	31.8	33.9	35.3	0.974	4.5	3.8	0.1	PN
233	7/14/2002	617	2853.7	9023.6	14	18	9	17	29.7	29.5	27.1	29.7	35.1	36.3	1.161	5.1	4.8	1.0	ST
234	7/14/2002	826	2844.4	9023.2	14	20	9	18	29.6	29.4	27.6	34.7	35.4	36.3	0.694	4.8	4.7	4.1	ST
235	7/14/2002	951	2845.6	9019.8	14	24	11	22	29.6	29.3	27.3	29.8	35.6	36.4	1.256	5.2	4.9	3.3	ST
236	7/14/2002	1348	2830.0	9030.5	14	70	19	38	29.3	28.7	25.6	34.0	36.2	35.9	0.592	4.8	4.9	3.4	PN
237	7/14/2002	1438	2831.2	9033.5	14	35	17	34	29.3	28.8	26.1	32.9	36.2	36.5	0.621	4.9	5.0	3.3	ST
238	7/14/2002	1645	2836.7	9043.2	14	31	9	18	29.9	29.5	27.9	26.1	35.8	36.0	2.426	5.7	4.8	3.3	ST
239	7/14/2002	1837	2829.1	9037.9	14	37	18	36	29.9	28.6	25.6	29.1	36.0	36.3	3.795	5.6	4.8	3.4	ST
240	7/14/2002	2215	2816.0	9041.3	14	64	32	63	30.1	28.5	22.3	31.7	36.4	36.5	1.027	5.3	5.0	4.8	ST/PN
241	7/15/2002	103	2812.2	9051.3	14	82	42	84	29.9	26.4	20.5	30.6	36.5	36.5	2.606	5.7	5.4	3.7	ST
242	7/15/2002	303	2822.4	9052.3	14	45	23	45	30.0	28.5	23.7	28.8	36.2	36.5	4.802	6.3	4.9	4.7	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
243	7/15/2002	615	2831.1	9100.7	15	31	15	30	30.1	28.1	25.7	26.8	36.1	36.2	1.749	5.1	4.6	3.3	ST
243	7/15/2002	615	2831.1	9100.7	15	31	15	30	30.1	28.1	25.7	26.8	36.1	36.2	1.749	5.1	4.6	3.3	ST
244	7/15/2002	903	2846.0	9102.0	15	13	6	12	29.7	28.3	28.1	24.8	31.9	30.0	5.894	2.9	0.2	0.1	ST
245	7/15/2002	1044	2851.4	9051.6	14	13	5	9	29.8	29.9	27.4	24.8	25.3	35.6	2.448	4.9	4.8	0.7	ST
246	7/15/2002	1405	2831.0	9050.0	14	31	15	30	29.9	28.7	26.1	25.8	36.0	36.4	4.241	5.9	4.8	2.7	ST
247	7/15/2002	1723	2830.7	9109.4	15	35	17	34	29.9	27.7	25.0	29.2	36.2	36.4	0.777	4.9	3.4	3.3	ST
248	7/15/2002	1934	2824.0	9118.5	15	55	27	54	29.7	27.6	22.3	35.2	36.2	36.5	0.181	4.8	5.0	4.1	ST
249	7/15/2002	2053	2821.3	9119.0	15	61													ST
250	7/15/2002	2230	2816.3	9117.3	15	74	36	71	29.6	26.1	21.5	35.8	36.4	36.5	0.175	4.8	5.1	4.6	ST
251	7/16/2002	106	2810.4	9113.8	15	92	46	91	29.2	25.4	20.4	36.2	36.5	36.6	0.085	4.8	5.5	3.9	ST
252	7/16/2002	426	2829.2	9107.8	15	37	18	36	30.4	27.9	24.5	27.3	36.0	36.5	1.084	5.0	3.4	4.0	ST
253	7/16/2002	615	2834.1	9111.1	15	30	15	30	30.0	28.0	25.4	29.0	36.1	36.2	1.425	4.8	3.4	2.2	ST
254	7/16/2002	750	2836.6	9108.4	15	24	12	24	29.8	28.8	26.6	28.7	33.1	35.0	1.151	2.2	3.4	2.2	ST
255	7/16/2002	1018	2832.8	9123.9	15	37	21	41	29.5	28.2	23.9	33.6	36.1	35.4	0.369	4.7	4.7	3.5	ST/PN
256	7/16/2002	1804	2801.8	9204.1	16	108	20	40	29.2	28.9	26.7	36.0	36.0	36.2	0.072	4.5	4.6	4.9	ST/PN
256	7/16/2002	1804	2801.8	9204.1	16	108	20	40	29.2	28.9	26.7	36.0	36.0	36.2	0.072	4.5	4.6	4.9	ST
257	7/16/2002	2128	2813.0	9201.9	16	72													ST
258	7/16/2002	2314	2820.7	9204.0	16	61													ST
259	7/17/2002	106	2821.9	9211.8	16	59	29	57	29.2	27.7	22.8	34.7	36.0	36.5	0.247	4.5	4.6	4.4	ST
260	7/17/2002	343	2827.7	9203.5	16	55	28	55	29.3	27.1	23.4	34.2	36.1	32.4	0.288	4.6	4.9	4.7	ST
261	7/17/2002	736	2845.1	9158.6	15	31	16	31	29.6	28.6	27.4	32.6	36.0	35.8	0.378	4.5	4.6	4.1	ST
262	7/17/2002	822	2844.2	9158.9	15	33	17	34	29.3	29.1	26.7	34.6	34.8	36.5	0.768	4.7	4.7	4.9	ST
263	7/17/2002	1037	2832.1	9159.5	15	46	25	49	29.0	28.6	23.8	34.3	36.0	36.4	0.265	4.7	4.8	5.0	ST

Table 2. Selected environmental parameters (continued)

ALABAMA INSHORE VESSELS, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
23001	6/3/2002	927	3011.6	8809.1	11	13	7	13	26.7	24.5	23.4	30.1	33.9	34.3		6.3	6.8	5.5	ST
23002	6/3/2002	1024	3013.9	8810.7	11	9	5	10	27.2	24.8	23.8	31.0	33.8	34.6		6.8	7.0	5.7	ST
23003	6/3/2002	1102	3012.6	8812.3	11	11	6	11	26.8			30.6				6.7			ST
23004	6/3/2002	1211	3009.1	8810.5	11	16	10	17	27.7	24.8	23.9	29.7	33.4	34.6		6.6	7.0	6.3	ST
23005	6/3/2002	1434	3003.2	8825.8	11	20	10	20	28.0	25.1		28.8	34.5			6.9	6.7		ST
23006	6/3/2002	1626	3011.6	8818.2	11	11	7	13	27.7	23.8	23.3	30.2	34.4	34.6		6.8	7.1	6.1	ST
23007	6/3/2002	2005	3011.7	8817.1	11	13	7	13	28.8	24.6	23.6	28.3	34.2	34.8		6.4	6.9	6.4	ST
23008	6/3/2002	2127	3013.9	8813.1	11	9													ST
23009	6/3/2002	2304	3009.9	8802.8	11	4	3	6	27.7	26.1	25.7	28.6	31.9	33.0		6.9	7.1	6.4	ST
23010	6/26/2002	1039	3000.2	8809.3	11	26	13	26	27.6	27.5	27.1	34.7	35.0	35.2		6.5	6.5	6.5	ST
23011	6/26/2002	1312	2946.8	8816.4	11	37	19	37	27.9	24.9	23.3	34.8	35.8	35.9		6.6	7.1	7.2	ST
23012	6/26/2002	1539	2958.7	8811.9	11	29	15	30	27.9	27.4	26.0	35.0	35.1	35.3		6.6	6.7	7.1	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	6/7/2002	727	2928.3	8845.3	11	20	10	19	27.9	25.6	23.7	21.7	32.4	33.1		7.0	5.0	4.0	ST
17002	6/7/2002	912	2925.8	8843.4	11	31	16	32	27.7	25.1	21.4	25.2	33.6	33.9		6.6	4.6	4.5	ST
17003	6/7/2002	1105	2921.2	8851.5	11	29	15	30	27.8	23.9	21.4	28.0	34.6	35.2		6.8	4.6	4.3	ST
17004	6/7/2002	1237	2918.3	8850.4	11	46	23	46	29.4	22.5	21.2	20.1	33.6	33.7		7.7	5.3	4.6	ST
17005	6/7/2002	1444	2915.3	8854.4	11	40	21	41	30.5	21.8	21.5	8.7	34.2	34.0		9.2	5.3	4.3	ST
17006	6/7/2002	1555	2913.3	8855.2	11	33	17	33	30.4	21.4	21.4	4.0	33.6	33.7		12.9	4.7	4.5	ST
17007	6/7/2002	1756	2910.9	8841.3	11	73	37	73	30.1	21.7	21.0	23.1	34.4	34.2		6.9	5.5	5.3	ST
17008	6/7/2002	2035	2919.0	8852.7	11	33	17	34	29.8	23.4	21.6	15.6	34.1	34.3		7.2	4.4	5.3	ST
17009	6/7/2002	2250	2921.4	8848.0	11	40	20	40	28.8	23.4	21.3	25.2	34.2	34.8		7.8	4.9	4.8	ST
17010	6/8/2002	14	2923.8	8851.6	11	20	10	19	29.0	25.7	23.8	19.3	33.5	34.6		7.1	5.1	4.6	ST
17011	6/8/2002	144	2923.0	8848.3	11	31	15	30	28.3	24.7	21.9	25.2	34.4	34.5		7.1	5.1	4.5	ST
17012	6/8/2002	315	2923.6	8845.5	11	37	18	36	28.4	24.0	21.5	26.2	34.4	34.6		7.2	4.9	4.8	ST
17013	6/8/2002	422	2924.9	8845.1	11	31	16	31	28.1	24.4	21.7	20.7	34.0	34.4		6.7	5.0	4.7	ST
17014	6/8/2002	537	2931.3	8844.7	11	17	8	15	28.8	25.3	25.0	18.6	31.4	32.7		7.2	5.3	4.9	ST
17015	6/8/2002	753	2918.4	8846.1	11	55	28	56	28.2	21.8	21.1	21.1	35.1	34.4		6.4	5.4	4.5	ST
17016	6/8/2002	1003	2917.1	8834.9	11	64	33	65	29.7	22.6	21.8	23.5	35.1	34.9		5.7	5.1	4.8	ST
17017	6/8/2002	1348	2940.7	8844.9	11	15	7	14	30.8	27.1	25.2	15.8	29.2	31.5		7.2	5.4	5.3	ST
17018	6/8/2002	1526	2942.2	8836.2	11	24	12	24	30.2	25.5	21.7	19.3	32.3	34.4		6.6	5.4	4.1	ST
17019	6/8/2002	1809	2945.2	8818.7	11	37	18	36	29.7	24.9	21.6	26.5	34.4	34.7		5.8	4.9	4.5	ST
17020	6/8/2002	2050	2948.9	8835.8	11	22	12	23	30.0	25.8	21.5	19.8	33.2	34.8		6.4	5.3	4.9	ST
17021	6/8/2002	2232	2948.5	8844.4	11	15	6	13	29.6	27.3	24.7	20.5	30.2	33.0		5.5	5.3	4.8	ST
17022	6/9/2002	129	2929.7	8843.5	11	18	9	17	28.7	25.3	24.5	24.4	32.5	33.5		7.4	5.2	4.5	ST
17023	6/9/2002	312	2935.4	8836.6	11	24	12	23	29.6	24.9	21.5	20.9	32.3	34.5		6.3	5.3	3.8	ST
17024	6/9/2002	555	2930.3	8830.0	11	48	25	49	27.2	23.8	21.8	31.7	34.7	35.2		5.5	5.1	5.2	PN
17025	6/9/2002	915	2953.0	8837.8	11	22	11	21	28.2	25.5	23.4	24.0	33.3	34.6		5.2	5.1	5.1	ST
17026	7/3/2002	1432	2912.3	8935.9	13	7	4	7	32.6	30.1	27.9	4.7	14.4	32.3		15.5	6.8	1.8	ST
17027	7/3/2002	1634	2917.8	8949.8	13	4	2	3	31.9	31.4	31.5	8.3	8.4	8.5		11.6	7.4	7.9	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17028	7/3/2002	2004	2918.2	8947.5	13	4	2	3	31.1	31.2	31.4	6.0	6.1	6.0		13.9	12.9	12.6	ST
17029	7/4/2002	44	2901.4	9024.2	14	5	3	5	30.0	30.0	29.1	20.5	20.7	22.2		7.0	7.0	5.1	ST
17030	7/4/2002	851	2908.7	9122.6	15	5	3	5	29.4	30.0	29.9	20.1	20.0	20.0		7.0	6.9	6.7	ST
17031	7/4/2002	2018	2928.1	9225.6	16	7	4	7	30.4	29.5	29.1	9.8	22.3	25.0		7.9	6.2	5.5	ST
17032	7/4/2002	2225	2930.4	9225.1	16	4	2	3	30.0	29.8	29.4	3.3	11.7	18.6		7.7	6.5	5.4	ST
17033	7/5/2002	6	2930.9	9228.4	16	5	3	5	30.1	29.3	28.8	3.7	16.2	21.2		8.4	5.4	4.2	ST
17034	7/5/2002	803	2942.2	9336.2	17	7	4	7	29.7	29.5	28.8	11.1	14.9	23.5		7.6	6.1	3.1	ST
17035	7/5/2002	1121	2945.3	9310.6	17	4	2	3	30.2	30.2	30.4	8.6	9.9	7.7		8.2	7.2	8.0	ST
17036	7/5/2002	1424	2934.1	9243.9	16	7	4	7	31.5	29.3	29.2	9.1	24.8	27.7		9.4	4.8	4.1	ST
17037	7/5/2002	2353	2857.8	9121.5	15	7	4	7	30.3	29.4	28.9	18.2	26.9	14.0		9.0	5.7	4.0	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37913	7/9/2002	951	2900.0	9030.0	14	20	4	9	30.0	29.9	29.4	19.0	27.6	32.7	12.294	7.4	6.5	6.0	PN
37914	7/9/2002	1330	2900.0	9059.9	14	7	4	5	30.7	30.7	30.1	22.9	23.3	23.6	8.592	8.0	7.7	7.2	PN
37915	7/9/2002	1748	2860.0	9030.0	14	11	5	9	30.6	30.0	29.7	25.0	25.1	26.4	4.597	7.4	7.1	6.1	PN
37916	7/9/2002	2320	2834.2	9058.9	14	24	12	23	29.3	28.2	26.4	35.3	35.9	36.4	0.365	6.3	5.7	4.3	ST
37917	7/10/2002	109	2825.8	9059.0	14	35	18	39	28.7	28.4	24.4	36.1	36.1	36.4	10.917	6.4	6.5	6.8	ST
37918	7/10/2002	351	2830.8	9043.3	14	33	15	31	29.0	27.4	26.0	35.7	36.2	36.4	0.233	6.4	6.1	5.0	ST
37919	7/10/2002	506	2831.2	9039.5	14	29	15	31	29.1	28.5	25.9	35.2	36.0	36.4	0.233	6.4	6.1	5.3	ST
37920	7/10/2002	825	2834.0	9059.0	14	24	12	24	28.8	28.6	26.4	35.2	35.6	36.4	0.504	6.3	6.2	4.5	ST
37921	7/10/2002	919	2830.1	9100.0	15	29	16	33	28.6	28.4	25.6	35.9	36.1	36.4	0.165	6.4	6.4	5.3	PN
37922	7/10/2002	1059	2825.5	9058.9	14	35	19	40	28.5	28.4	25.1	36.1	36.2	36.4	0.227	6.5	6.5	6.6	ST
37923	7/10/2002	1338	2829.7	9043.3	14	33	14	33	29.2	28.6	25.8	35.3	36.0	36.4	0.258	6.6	6.5	5.3	ST
37924	7/10/2002	1503	2832.1	9039.7	14	29	14	30	29.3	27.8	25.8	35.8	36.1	36.4	0.114	6.5	6.4	5.3	ST
37925	7/10/2002	1634	2830.0	9030.1	14	38	18	38	29.5	28.7	25.5	35.8	36.1	36.5	0.183	6.6	6.5	5.6	PN
37926	7/10/2002	1829	2835.2	9039.8	14	20	9	20	29.6	29.0	27.4	35.4	35.8	36.3	0.313	6.3	6.4	6.3	ST
37927	7/10/2002	1909	2832.5	9040.2	14	26	13	27	29.3	28.9	26.1	35.6	35.8	36.5	0.234	6.4	6.0	5.3	ST
37928	7/10/2002	2134	2832.7	9040.2	14	26	12	25	29.3	28.9	26.2	35.7	35.8	36.4	0.240	6.5	6.4	5.2	ST
37929	7/10/2002	2258	2835.0	9039.9	14	20	9	19	29.3	28.7	27.4	35.6	35.9	36.3	0.255	6.4	6.4	6.0	ST
37930	7/11/2002	244	2854.3	9021.9	14	18	8	16	29.4	29.3	27.3	32.8	33.3	36.2	0.575	6.3	6.2	3.5	ST
37931	7/11/2002	452	2859.7	9011.0	14	15	8	16	29.2	29.1	26.7	24.8	33.7	36.0	7.518	7.8	5.3	0.2	ST
37932	7/11/2002	747	2907.5	9002.8	14	13	6	11	29.3	29.5	29.0	18.8	24.8	33.3	15.380	7.5	7.6	5.7	ST
37933	7/11/2002	905	2908.0	8955.4	13	16	8	16	29.3	29.0	26.4	18.4	32.4	36.0	12.112	7.2	5.4	0.5	ST
37934	7/11/2002	1023	2900.0	8960.0	13	26	13	23	29.1	28.8	26.5	29.8	35.7	36.4	7.255	7.4	5.4	1.5	PN
37935	7/11/2002	1148	2858.9	9005.0	14	22	11	21	29.2	27.5	26.4	32.5	36.2	36.5	1.190	5.8	3.8	0.6	ST
37936	7/11/2002	1319	2900.4	9012.5	14	15	8	14	30.5	29.7	27.1	22.5	30.1	35.1	14.397	8.6	5.3	0.3	ST
37937	7/11/2002	1513	2854.2	9022.0	14	18	9	17	29.9	29.3	27.6	30.4	34.5	36.2	2.527	7.0	6.3	5.2	ST
37938	7/11/2002	2114	2859.0	9004.9	14	22	10	21	30.1	28.6	26.6	29.2	34.9	36.4	5.539	8.3	4.5	1.3	ST
37939	7/11/2002	2307	2907.4	9002.4	14	13	6	11	30.6	30.2	29.6	21.1	23.0	24.4	0.148	9.5	9.1	8.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37940	7/12/2002	37	2907.9	8955.5	13	16	8	15	29.9	30.1	27.3	18.6	26.8	35.6	16.586	8.7	7.5	3.1	ST
37941	7/12/2002	251	2904.2	8941.7	13	27	12	25	29.9	28.0	27.4	16.2	34.5	35.9	8.510	9.6	4.9	2.6	ST
37942	7/12/2002	729	2859.9	8929.9	13	15	7	14	30.5	28.2	28.0	14.8	31.7	35.6	18.124	9.4	3.4	5.3	PN
37943	7/12/2002	933	2904.1	8941.4	13	27	13	25	29.8	28.6	27.2	17.1	33.9	36.1	8.654	6.4	4.9	3.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
69001	6/5/2002	758	2919.9	9441.7	18	9	5	9	27.6	27.6	27.2					7.7	7.6	6.1	ST
69002	6/5/2002	819	2920.9	9438.6	18	9	5	10	27.4	27.5	26.0	21.7	22.6			7.4	6.9	7.1	ST
69003	6/5/2002	838	2921.3	9438.7	18	9	6	9	27.5	27.3	24.8	21.6	24.1	31.0		7.4	7.2	6.4	ST
69004	6/5/2002	903	2921.7	9434.0	18	11	6	12	27.6	27.5	26.8	22.2	23.9	31.0		7.8	7.6	6.8	ST
69005	6/5/2002	924	2920.0	9435.2	18	13	7	13	27.6	27.3	26.2	22.0	24.8	30.0		7.8	7.1	6.8	ST
69006	6/5/2002	958	2915.7	9440.3	18	13	6	12	27.6	27.6	26.7	21.8	29.6	30.0		7.9	7.7	7.3	ST
69007	6/5/2002	1028	2915.6	9441.1	18	11	5	11	27.7	27.7	26.7	22.0	22.5	25.0		7.7	7.8	7.2	ST
69008	6/5/2002	1054	2915.8	9446.5	18	9	4	9	27.8	27.6	26.5	21.8	22.8	26.0		7.8	7.8	5.2	ST
69009	6/26/2002	1002	2911.4	9451.8	18	11	5	11	28.5	28.9	28.9	20.6	21.5	21.0		6.4	5.5	5.1	ST
69010	6/26/2002	1018	2909.1	9451.4	18	15	7	14	28.7	28.9	29.1	20.6	21.1	23.0		5.8	4.8	3.3	ST
69011	6/26/2002	1033	2908.3	9451.6	18	15	8	15	29.0	28.9	28.9	20.4	20.1	21.0		5.9	5.4	5.2	ST
69012	6/26/2002	1243	2924.1	9438.4	18	7	4	8	29.0	28.8	28.7	20.3	20.3	21.0		5.8	5.5	5.1	ST
69013	6/26/2002	1311	2925.6	9434.4	18	9	4	9	29.0	28.5	28.4	20.3	21.2	21.0		6.9	5.5	5.3	ST
69014	6/26/2002	1340	2926.9	9429.2	18	11	5	10	29.0	28.8	29.1	20.3	21.2	21.0		6.2	5.9	4.7	ST
69015	6/26/2002	1358	2928.9	9431.1	18	7	4	7	28.8	28.8	28.3	20.2	20.7	23.0		6.0	5.8	5.3	ST
69016	6/26/2002	1439	2925.6	9440.4	18	4	2	4	28.7	28.7	28.4	20.2	20.6	23.0		6.3	6.1	5.9	ST

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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
67001	6/12/2002	946	2746.7	9705.3	20	2	3	6	29.3	27.8	28.9	27.8	27.8	27.8		4.5	4.5	4.6	ST
67002	6/12/2002	1019	2745.3	9704.5	20	11	6	12	29.0	29.0	29.1	27.5	28.1	28.9		4.6	4.5	4.7	ST
67003	6/12/2002	1104	2741.8	9704.4	20	11	6	11	29.1	29.0	28.7	28.2	28.7	31.1		4.7	4.8	4.7	ST
67004	6/12/2002	1149	2738.2	9707.8	20	11	6	12	29.3	29.2	28.9	27.8	29.1	30.6		4.8	4.7	5.0	ST
67005	6/12/2002	1247	2740.9	9702.5	20	18	9	18	28.8	28.7	28.7	28.2	28.7	31.3		4.6	4.7	4.7	ST
67006	6/12/2002	1314	2741.3	9702.3	20	18	9	19	29.0	28.9	28.8	28.2	28.6	31.4		4.6	4.7	4.9	ST
67007	6/12/2002	1340	2742.7	9702.4	20	16	8	17	29.2	29.2	29.0	28.7	30.2	29.1		4.9	5.0	4.9	ST
67008	6/12/2002	1442	2745.3	9659.5	20	9	5	11	29.4	29.5	29.2	28.0	31.0	31.2				5.0	ST
67009	6/17/2002	828	2754.1	9658.6	20	5	5	10	28.9	28.9	29.0	32.1	31.3	29.5		5.7	5.7	5.7	ST
67010	6/17/2002	906	2756.8	9656.1	20	5	5	10	28.9	28.9	28.9	29.5	29.7	32.2		5.5	5.5	5.6	ST
67011	6/17/2002	932	2756.1	9655.5	20	7	6	12	29.0	29.0	28.9	30.3	30.8	32.2		5.8	6.0	5.7	ST
67012	6/17/2002	1016	2757.8	9654.5	20	5	6	12	29.0	29.0	28.0	29.7	30.5	31.2		6.0	6.0	5.8	ST
67013	6/17/2002	1107	2754.1	9647.4	20	11	10	20	29.0	28.9	28.8	29.0	29.2	34.4		5.9	5.9	5.8	ST
67014	6/17/2002	1145	2753.8	9651.2	20	9	9	17	28.9	28.9	28.9	29.7	29.9	34.1		5.6	6.0	6.0	ST
67015	6/17/2002	1211	2752.3	9651.6	20	11	9	19	29.0	28.9	25.6	29.4	29.8	34.1		6.0	5.9	2.2	ST
67016	6/17/2002	1257	2758.2	9654.5	20	5	6	11	29.4	29.3	28.9	30.1	30.2	31.4		6.2	6.4	6.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
33001	6/5/2002	746	2940.4	9355.5	17	2	1	2	28.2	28.2	28.2	18.1	17.7	17.9		7.1	7.0	7.0	ST
33002	6/5/2002	943	2938.5	9402.9	18	5	3	6	28.4	28.4	28.2	20.0	20.0	20.1		6.5	6.6	6.5	ST
33003	6/5/2002	1022	2936.6	9402.2	18	7	4	7	28.4	28.4	28.4	17.6	19.3	19.9		7.1	7.0	6.5	ST
33004	6/5/2002	1125	2935.4	9356.9	17	9	4	9	28.8	28.6	28.5	15.8	16.8	19.2		7.1	6.8	6.4	ST
33005	6/5/2002	1223	2933.4	9353.5	17	11	6	12	29.1	28.7	28.5	13.8	21.7	32.0		8.0	7.0	6.0	ST
33006	6/5/2002	1346	2933.4	9351.9	17	13	6	12	29.7	28.5	28.0	14.5	25.5	32.3		9.2	6.0	5.5	ST
33007	6/5/2002	1448	2932.5	9350.3	17	13	6	13	29.7	28.1	27.6	15.3	27.6	33.6		8.8	6.1	6.0	ST
33008	6/5/2002	1530	2933.5	9348.9	17	13	6	13	29.1	28.1	27.4	18.9	25.1	33.5		8.9	5.9	5.0	ST
33009	6/18/2002	818	2935.5	9347.5	17	11	6	11	28.7	28.8	28.8	32.0	31.2	24.5		6.2	6.1	5.4	ST
33010	6/18/2002	908	2936.5	9344.4	17	11	6	11	28.5	28.6	28.8	31.6	25.2	24.5		6.0	5.9	5.2	ST
33011	6/18/2002	942	2937.6	9344.8	17	9	5	10	28.7	28.7	28.8	31.2	24.6	24.0		6.1	6.0	5.6	ST
33012	6/18/2002	1032	2939.6	9343.2	17	9	5	9	28.7	28.7	28.8	24.2	30.6	30.2		5.8	5.7	3.5	ST
33013	6/18/2002	1131	2942.5	9337.9	17	7	4	8	28.8	28.8	28.6	23.4	23.4	24.2		6.5	6.5	5.6	ST
33014	6/18/2002	1250	2940.5	9337.2	17	9	5	9	28.9	28.7	28.6	23.3	23.3	30.7		6.6	6.3	3.1	ST
33015	6/18/2002	1409	2939.6	9336.8	17	9	5	9	29.2	28.7	28.7	23.4	23.1	31.0		7.2	6.4	2.6	ST
33016	6/18/2002	1442	2937.8	9337.1	17	11	5	10	29.2	28.9	28.9	23.7	23.6	31.3		7.3	6.8	3.0	ST

Table 2. Selected environmental parameters (continued)

MATAGORDA BAY, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
32001	6/3/2002	902	2824.5	9617.5	19	11	5	10	27.2	27.2	27.2	24.9	24.7	25.0		6.3	6.5	6.4	ST
32002	6/3/2002	942	2823.5	9617.5	19	11	5	12	27.2	27.2	27.3	24.8	24.8	25.3		6.6	6.5	6.3	ST
32003	6/3/2002	1023	2822.5	9614.5	19	16	8	16	27.1	26.5	25.0	24.9	27.2	31.9		6.3	6.4	1.5	ST
32004	6/3/2002	1058	2824.5	9612.4	19	16	8	16	27.1	26.9	25.2	25.2	25.1	31.1		6.3	6.7	0.7	ST
32005	6/3/2002	1213	2825.5	9607.5	19	16	8	16	27.4	26.4	25.0	25.0	28.5	32.3		6.4	5.8	2.1	ST
32006	6/3/2002	1247	2825.5	9606.5	19	16	8	17	27.5	26.4	25.0	24.8	28.9	32.2		6.3	5.8	2.2	ST
32007	6/3/2002	1333	2823.5	9603.5	19	20	10	20	27.2	25.5	25.4	27.4	33.0	33.2		6.4	5.2	5.2	ST
32008	6/3/2002	1424	2828.5	9606.5	19	13	7	13	27.9	26.7	26.3	24.6	25.3	29.4		6.4	6.4	5.3	ST
32009	6/17/2002	938	2821.5	9617.5	19	16	8	16	29.2	29.1	25.9	27.3	27.4	33.3		5.6	5.5	1.5	ST
32010	6/17/2002	1015	2820.5	9619.4	19	15	7	15	29.4	29.1	26.6	27.4	27.7	32.9		5.7	5.8	1.6	ST
32011	6/17/2002	1139	2818.5	9625.5	19	7	3	6	29.5	29.4	28.7	26.9	26.9	28.4		5.8	5.7	3.2	ST
32012	6/17/2002	1226	2815.5	9629.5	19	9	5	9	29.6	29.5	29.3	28.6	28.6	28.7		6.0	6.0	5.9	ST
32013	6/17/2002	1302	2815.5	9626.5	19	15	7	14	29.3	29.2	27.3	28.0	28.0	28.6		6.0	6.0	1.9	ST
32014	6/17/2002	1408	2817.5	9616.5	19	20	10	20	29.6	28.9	25.0	27.9	28.0	34.2		5.8	5.7	7.0	ST
32015	6/17/2002	1501	2820.5	9610.5	19	20	10	20	29.7	28.9	25.1	28.2	28.2	33.9		5.8	5.6	1.3	ST
32016	6/17/2002	1539	2822.5	9613.5	19	16	8	16	30.1	27.1	25.6	27.5	27.4	33.3		6.2	3.6	2.0	ST

Table 2. Selected environmental parameters (continued)

R.J. KEMP, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
31001	6/3/2002	806	2603.5	9708.6	21	5	3	6	25.6	25.6	28.8	32.9				5.8	5.7	5.3	ST
31002	6/3/2002	859	2600.6	9708.5	21	7	4	9	25.9	25.9	25.9	34.3	34.4	34.3		5.7	5.7	5.3	ST
31003	6/3/2002	941	2600.4	9707.6	21	13	6	12	25.8	25.8	25.8	33.9	33.9	34.4		5.7	5.7	5.6	ST
31004	6/3/2002	1031	2600.5	9705.6	21	18	9	19	25.8	25.8	25.5	34.1	34.3	34.2		5.8	5.8	5.6	ST
31005	6/3/2002	1114	2601.5	9704.5	21	20	10	21	25.6	25.6	25.3	34.0	34.2	34.2		5.9	5.9	5.7	ST
31006	6/3/2002	1201	2601.6	9702.5	21	24	12	24	25.4	25.3	24.9	34.2	34.3	34.3		5.9	5.8	5.9	ST
31007	6/3/2002	1254	2601.5	9700.6	21	27	13	27	25.5	24.4	24.6	33.9	34.0	34.5		6.0	6.0	5.7	ST
31008	6/3/2002	1349	2604.6	9703.6	21	22	11	23	25.9	25.4	25.0	33.8	33.9	34.1		6.0	5.9	5.7	ST
31009	6/18/2002	820	2605.5	9703.5	21	22	11	22	28.3	28.3	25.8	34.3	34.4	35.5		5.6	5.9	6.1	ST
31010	6/18/2002	920	2610.6	9700.5	21	29	14	29	28.5	28.6	26.6	35.4	35.1	34.1		5.7	6.0	6.1	ST
31011	6/18/2002	1020	2616.6	9701.5	21	26	13	25	28.6	28.5	25.6	34.1	34.7	35.0		5.7	5.7	6.1	ST
31012	6/18/2002	1059	2618.6	9702.5	21	24	12	24	28.7	28.7	25.4	33.9	34.1	35.1		5.4	5.7	6.1	ST
31013	6/18/2002	1145	2616.5	9704.5	21	22	11	22	28.7	28.3	25.7	34.2	34.4	35.1		5.4	5.7	5.7	ST
31014	6/18/2002	1230	2616.5	9707.5	21	20	10	19	28.5	27.7	26.0	34.7	34.8	35.2		5.4	5.6	5.8	ST
31015	6/18/2002	1316	2612.5	9706.6	21	18	10	19	28.5	28.2	25.8	34.7	34.6	35.3		5.4	5.5	5.9	ST
31016	6/18/2002	1407	2608.5	9709.5	21	9	5	10	28.1	27.8	25.9	35.2	35.1	35.4		5.5	5.5	5.4	ST

Table 2. Selected environmental parameters (continued)

CARETTA, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	2/15/2002	842	2908.3	8547.4	8	100													
2	2/15/2002	1704	2908.3	8546.6	8	98													VC
3	2/16/2002	803	2908.3	8546.5	8	101													VC
4	2/16/2002	832	2908.4	8547.5	8	97													TR
5	2/16/2002	1056	2909.8	8544.0	8	80													VC
6	2/16/2002	1345	2909.8	8543.2	8	75	43	79	20.7	19.3	17.4	36.4	36.2	36.3					VC
7	2/16/2002	1457	2911.1	8540.9	8	74	42	83	21.3	19.7	17.6	36.5	36.3	36.3					VC
8	2/24/2002	723	2916.7	8538.3	8	52	29	58	19.5	19.3	19.3	36.4	36.4	36.4		6.8	6.8	6.8	VC
9	2/24/2002	838	2916.2	8538.9	8	55	30	59	19.8	19.6	19.1	36.4	36.3	36.3		6.6	6.5	6.5	VC
10	2/24/2002	942	2914.1	8538.0	8	59	34	68	20.1	20.0	18.9	36.5	36.4	36.3		6.8	6.5	6.4	VC
11	2/24/2002	1024	2914.1	8538.0	8	59													TR
12	2/24/2002	1258	2916.8	8543.3	8	74	38	76	20.4	19.5	19.1	36.5	36.4	36.3		6.7	6.6	6.6	VC
13	2/24/2002	1453	2916.7	8543.1	8	73	39	78	20.4	19.5	19.0	36.5	36.3	36.3		6.7	6.5	6.6	VC
14	2/24/2002	1538	2916.7	8543.1	8	72													TR
15	2/25/2002	748	2916.5	8542.8	8	74													VC
16	2/25/2002	844	2916.4	8542.6	8	68													VC
17	2/25/2002	923	2916.4	8542.6	8	77													TR
18	2/25/2002	1131	2916.2	8542.3	8	73													VC
19	2/25/2002	1245	2916.1	8542.2	8	70													VC
20	2/25/2002	1338	2915.8	8541.9	8	72													VC
21	2/25/2002	1432	2915.5	8541.6	8	75													VC
22	2/25/2002	1515	2915.5	8541.6	8	77													TR
23	3/6/2002	832	2912.7	8539.7	8	72													VC
24	3/6/2002	954	2911.1	8540.8	8	67													VC
25	3/6/2002	1051	2910.9	8541.0	8	73													VC
26	3/6/2002	1135	2910.9	8541.0	8	71													TR
27	3/6/2002	1256	2911.1	8541.3	8	79													VC

Table 2. Selected environmental parameters (continued)

CARETTA, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	3/6/2002	1402	2910.2	8542.0	8	71													VC
29	3/6/2002	1440	2910.2	8542.0	8	71													TR
30	3/7/2002	738	2910.0	8542.6	8	70													VC
31	3/7/2002	845	2909.9	8543.0	8	77													VC
32	3/7/2002	944	2909.9	8543.1	8	74													VC
33	3/7/2002	1022	2909.9	8543.1	8	76													TR
34	3/7/2002	1203	2909.8	8545.0	8	81													VC
35	3/7/2002	1307	2909.7	8545.6	8	89													VC
36	3/7/2002	1406	2909.7	8545.8	8	92													VC
37	3/7/2002	1453	2909.7	8546.0	8	91													VC
38	3/7/2002	1458	2909.7	8545.8	8	92													TR
39	3/8/2002	738	2908.4	8546.6	8	92													VC
40	3/8/2002	842	2908.1	8546.9	8	94													VC
41	3/8/2002	846	2908.3	8546.6	8	92													TR
42	3/8/2002	1006	2908.4	8547.3	8	93													VC
43	3/8/2002	1041	2908.4	8547.3	8	94													TR
44	3/8/2002	1255	2915.3	8541.5	8	76													VC
45	3/8/2002	1346	2914.9	8541.1	8	63													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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	4/5/2002	744	2652.7	9646.7	21	69													VC
2	4/5/2002	846	2652.7	9646.7	21	70													TR
3	4/5/2002	1039	2652.8	9646.7	21	76		71			18.5							4.1	VC
4	4/5/2002	1226	2652.6	9646.6	21	76		62			18.4							4.2	VC
5	4/5/2002	1503	2652.8	9646.8	21	72		73	20.5		18.5							4.2	VC
6	4/5/2002	1553	2652.7	9646.8	21	76													TR
7	4/6/2002	820	2701.9	9642.1	20	72	39	68	21.5	20.3	18.6					4.5	4.6	4.2	VC
8	4/6/2002	937	2702.8	9642.4	20	76	34	68	21.4	20.8	18.6					4.5	4.6	4.2	VC
9	4/9/2002	736	2752.3	9351.1		55	34	67	22.7	22.7	21.0	36.4	36.5	36.5		10.8	10.8	10.9	VC
10	4/13/2002	810	2752.7	9350.8		74	25	51	22.7	22.7	21.7					3.0	3.0	3.0	VC
11	4/13/2002	937	2753.0	9350.5		84	46	85	23.2	22.5	20.1						4.3	3.7	VC
12	4/13/2002	1026	2753.0	9350.5		84	44	90	23.0	22.6	20.4	36.4	36.4	36.5		7.0	7.0	6.5	TR
13	4/13/2002	1204	2752.4	9351.3		57	30	60	23.3	22.7	22.2	36.5	36.4	36.4		6.9	7.0	7.1	VC
14	4/13/2002	1328	2752.1	9351.2		61	27	53	23.4	22.7	22.5	36.5	36.4	36.4		7.0	7.1	7.1	VC
15	4/13/2002	1431	2752.1	9351.2		66													TR
16	4/13/2002	1504	2751.2	9351.0		93	43	90	23.8	22.8	20.4	36.5	36.4	36.5		7.0	7.0	7.0	VC
17	4/13/2002	1701	2750.8	9352.1		96	47	93	23.8	22.8	20.4	36.5	36.5	36.5		7.0	7.0	6.5	VC
18	4/14/2002	805	2752.3	9349.3		43	20	40	23.0	23.0	22.6	36.4	36.4	36.4		7.0	7.0	7.0	VC
19	4/14/2002	916	2753.4	9348.7		82	48	95	23.1	22.3	20.2	36.4	36.4	36.5		7.0	7.1	6.5	VC
20	4/14/2002	1032	2752.4	9348.7		53	39	78	23.1	22.7	20.5	36.4	36.4	36.5		7.0	7.0	6.5	VC
21	4/14/2002	1117	2752.4	9348.7		55													TR
22	4/14/2002	1302	2754.0	9347.7		91	49	96	23.1	22.4	20.0	36.4	36.4	36.5		7.0	7.1	6.4	VC
23	4/14/2002	1433	2754.0	9349.1		68	35	73	24.3	22.8	20.5	36.4	36.4	36.5		6.9	7.1	6.8	VC
24	4/14/2002	1557	2753.2	9349.5		90	50	98	23.3	22.6	20.3	36.4	36.4	36.5		7.0	7.0	6.4	VC
25	4/14/2002	1655	2753.2	9349.5		96													TR
26	4/14/2002	1731	2751.2	9349.1		80	45	89	23.8	22.7	20.1	36.4	36.4	36.5		7.0	7.0	6.5	VC
27	4/15/2002	805	2754.0	9335.7		53	36	75	23.1	22.3	20.3	36.4	36.5	36.5		7.0	6.9	6.3	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	4/15/2002	927	2756.5	9336.7		70	33	63	23.0	22.0	20.9	36.4	36.5	36.5		7.0	7.1	6.6	VC
29	4/15/2002	1012	2756.6	9336.7		67													TR
30	4/15/2002	1041	2755.6	9337.6		81	40	78	23.3	21.9	20.0	36.4	36.5	36.5		7.0	7.1	6.2	VC
31	4/15/2002	1221	2755.5	9337.6		80													TR
32	4/15/2002	1252	2756.5	9337.6		87	44	87	23.5	21.4	20.0	36.4	36.5	36.5		6.9	7.3	6.2	VC
33	4/15/2002	1507	2754.6	9334.8		83	49	99	23.7	21.3	20.0	36.4	36.5	36.5		6.9	7.0	6.2	VC
34	4/15/2002	1523	2755.0	9335.8		43	25	48	23.6	22.3	21.1	36.4	36.5	36.5		6.9	7.1	6.9	VC
35	4/15/2002	1735	2757.1	9335.9		70	29	59	23.7	21.8	20.4	36.4	36.5	36.5		7.0	7.2	6.5	VC
36	4/18/2002	801	2753.7	9318.3		34	30	60	23.6	22.5	21.2	36.4	36.5	36.5	0.261	6.8	6.9	6.8	VC
37	4/18/2002	910	2752.3	9318.6		90	45	89	23.6	21.5	20.6	36.4	36.5	36.5	0.261	6.8	6.7	6.7	VC
38	4/18/2002	1016	2752.3	9318.3		79	30	57	23.7	22.5	21.2	36.4	36.5	36.5	0.240	6.8	6.9	7.0	VC
39	4/18/2002	1123	2752.4	9316.7		69	43	86	23.9	22.4	20.4	36.4	36.5	36.5	0.261	6.8	6.7	6.2	VC
40	4/18/2002	1216	2752.3	9316.7		70													TR
41	4/18/2002	1249	2753.9	9316.7		63	41	86	24.0	22.5	20.5	36.4	36.5	36.5	0.240	6.8	6.8	6.4	VC
42	4/18/2002	1445	2754.8	9318.5		107	60	120	24.1	21.2	19.4	36.4	36.5	36.6	0.240	6.8	6.9	5.1	VC
43	4/18/2002	1538	2754.8	9318.5		105													TR
44	4/18/2002	1601	2755.0	9317.6		109	60	119	24.1	21.2	19.6	36.4	36.5	36.6	0.304	6.8	6.8	5.3	VC
45	4/19/2002	808	2749.2	9304.3		80	39	80	24.3	23.1	21.1	36.5	36.5	36.5	0.240	6.6	6.8	6.1	VC
46	4/19/2002	940	2749.5	9303.8		65	27	64	24.3	23.4	21.8	36.5	36.5	36.5	0.219	6.7	6.8	6.1	VC
47	4/19/2002	1047	2749.5	9302.5		116	63	125	24.4	21.8	19.7	36.5	36.5	36.6	0.261	6.7	5.9	5.6	VC
48	4/19/2002	1128	2749.5	9302.5		116													TR
49	4/19/2002	1205	2750.4	9304.2		77	34	76	24.5	23.1	20.9	36.5	36.5	36.6	0.219	6.7	6.9	6.0	VC
50	4/19/2002	1402	2751.0	9303.9		55	34	70	24.6	23.2	21.2	36.5	36.5	36.5	0.219	6.7	6.8	6.1	VC
51	4/19/2002	1518	2751.0	9304.7		85	44	88	24.6	22.8	20.9	36.5	36.5	36.6	0.261	6.7	6.7	6.1	VC
52	4/19/2002	1607	2751.0	9304.7		84													TR
53	4/19/2002	1756	2748.0	9304.5		62	33	63	24.5	23.5	21.9	36.5	36.5	36.6	0.261	6.7	6.8	5.9	VC
54	4/20/2002	755	2751.2	9255.3		73	64	129	24.4	21.9	18.9	36.5	36.5	36.5	0.261	6.6	6.5	5.0	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
55	4/20/2002	913	2751.1	9255.2		74	73	148	24.4	21.7	17.8	36.5	36.5	36.4	0.240	6.6	6.3	6.7	VC
56	4/20/2002	959	2751.1	9255.3		83													TR
57	4/20/2002	1033	2750.8	9253.6		134	73	151	24.6	21.7	17.6	36.5	36.5	36.4	0.240	6.6	6.4	4.6	VC
58	4/20/2002	1259	2751.0	9255.1		113	72	171	24.6	21.7	17.1	36.5	36.5	36.3	0.282	6.6	6.1	4.5	VC
59	4/20/2002	1612	2750.4	9252.7		127	65	128	24.8	22.6	18.9	36.5	36.5	36.5	0.282	6.6	6.8	5.0	VC
60	4/20/2002	1704	2750.4	9252.7		129													TR
61	4/20/2002	1733	2750.6	9251.8		118	60	120	24.8	22.9	19.8	36.1	35.3	36.0	0.514	3.5	2.9	4.0	VC
62	4/21/2002	756	2749.2	9253.7		66	50	100	24.4	23.1	20.0	36.5	36.5	36.6	0.261	6.5	6.5	5.1	VC
63	4/21/2002	903	2749.7	9253.1		126	68	147	24.4	21.9	17.6	36.5	36.5	36.4	0.261	6.6	6.4	4.6	VC
64	4/21/2002	943	2749.7	9253.1		117													TR
65	4/21/2002	1013	2749.2	9253.2		95	50	101	24.4	22.6	20.5	36.5	36.5	36.6	0.240	6.5	6.5	5.1	VC
66	4/21/2002	1159	2749.9	9253.2		125	60	134	24.3	22.4	18.8	36.5	36.5	36.5	0.240	6.6	6.6	4.8	VC
67	4/21/2002	1331	2749.8	9252.9		147	56	115	24.3	22.6	19.9	36.4	36.5	36.6	0.240	6.6	6.6	4.9	VC
68	4/21/2002	1430	2749.8	9252.9		141													TR
69	4/21/2002	1500	2749.6	9253.4		113	47	111	24.4	22.7	19.7	36.4	36.5	36.6	0.325	6.6	6.6	4.8	VC
70	4/21/2002	1646	2749.0	9253.6		96	35	70	24.4	23.2	22.5	36.4	36.4	36.5	0.261	6.6	6.8	6.7	VC
71	4/21/2002	1755	2749.4	9253.5		71	56	108	24.5	22.6	19.9	36.4	36.5	36.6	0.304	6.6	6.6	5.2	VC
72	4/22/2002	754	2758.8	9222.1		60	30	61	24.9	24.0	22.5	36.5	36.5	36.5	0.240	6.4	6.6	6.5	VC
73	4/22/2002	900	2757.3	9222.1		91	41	83	24.9	23.9	21.8	36.5	36.5	36.5	0.219	6.5	6.3	6.1	VC
74	4/22/2002	1004	2755.6	9222.1		145	24	67	25.0	24.2	22.5	36.5	36.5	36.5	0.219	6.5	6.6	6.5	VC
75	4/22/2002	1046	2755.6	9222.1		141													TR
76	4/22/2002	1114	2754.8	9223.1		99	35	70	25.3	24.0	22.4	36.5	36.5	36.5	0.282	6.5	6.6	6.5	VC
77	4/22/2002	1313	2753.8	9222.8		83	43	87	25.4	23.7	21.6	36.5	36.5	36.5	0.240	6.4	6.7	5.9	VC
78	4/22/2002	1401	2753.8	9222.8		88													TR
79	4/22/2002	1452	2753.8	9222.3		110	83	166	25.5	21.8	17.6	36.5	36.5	36.4	0.282	6.4	5.9	4.5	VC
80	4/22/2002	1644	2754.1	9222.8		95	83	162	25.8	22.0	17.5	36.5	36.5	36.4	0.240	6.4	5.9	4.6	VC
81	4/23/2002	750	2805.8	9159.6	15	89	43	93	24.9	22.6	20.5	36.5	36.5	36.5	0.282	6.4	6.7	5.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
82	4/23/2002	839	2805.8	9159.6	15	91													TR
83	4/23/2002	909	2804.6	9159.6	15	63	35	69	24.9	23.0	20.8	36.5	36.5	36.5	0.346	6.4	6.7	6.0	VC
84	4/23/2002	1105	2804.7	9159.5	15	68													VC
85	4/23/2002	1206	2804.8	9159.4	15	76													VC
86	4/23/2002	1349	2803.9	9153.6	15	91	43	85	25.2	22.6	20.6	36.5	36.5	36.5	0.282	6.4	6.7	5.8	VC
87	4/23/2002	1444	2803.9	9153.6	15	91													TR
88	4/23/2002	1525	2804.4	9152.5	15	81	41	86	25.2	22.9	20.6	36.5	36.5	36.5	0.304	6.3	6.7	5.8	VC
89	4/23/2002	1717	2802.6	9153.0	15	89	46	93	25.2	22.7	20.5	36.5	36.5	36.5	0.346	6.3	6.7	5.3	VC
90	4/24/2002	754	2756.6	9200.2		69	50	100	24.9	22.7	20.4	36.5	36.5	36.5	0.282	6.3	6.7	5.9	VC
91	4/24/2002	901	2757.9	9159.2		89	44	90	25.0	22.8	20.4	36.5	36.5	36.5	0.261	6.3	6.7	5.8	VC
92	4/24/2002	943	2757.9	9159.2		89													TR
93	4/24/2002	1013	2758.4	9159.2		98	44	98	25.3	22.8	20.4	36.5	36.5	36.5	0.304	6.3	6.7	5.7	VC
94	4/24/2002	1227	2758.4	9200.2		104	58	122	25.4	21.9	20.1	36.5	36.5	36.5	0.282	6.3	6.7	5.5	VC
95	4/24/2002	1315	2758.4	9200.2		104													TR
96	4/24/2002	1517	2756.1	9159.2		119	59	119	25.7	22.1	20.0	36.5	36.5	36.5	0.282	6.3	6.8	5.6	VC
97	4/24/2002	1640	2755.7	9159.2		141	67	133	25.4	21.7	18.9	36.5	36.5	36.5	0.325	6.3	6.7	4.5	VC
98	4/25/2002	750	2750.5	9150.4		81	32	80	25.3	24.0	21.7	36.5	36.4	36.5	0.282	6.3	6.5	6.6	VC
99	4/25/2002	858	2750.1	9150.7		122	64	127	25.3	22.4	19.0	36.5	36.5	36.5	0.261	6.2	6.5	4.7	VC
100	4/25/2002	943	2750.1	9150.7		128													TR
101	4/25/2002	1011	2750.3	9150.5		87	40	83	25.5	23.7	21.0	36.5	36.5	36.5	0.282	6.2	6.5	6.4	VC
102	4/25/2002	1156	2750.6	9150.1		98	47	97	25.4	23.3	20.4	36.5	36.5	36.5	0.261	6.3	6.5	5.8	VC
103	4/25/2002	1319	2751.4	9150.5		135	76	183	25.7	21.5	15.9	36.5	36.5	36.1	0.261	6.2	6.3	4.3	VC
104	4/25/2002	1417	2751.4	9150.5		124													TR
105	4/25/2002	1442	2751.5	9150.1		125	59	117	25.7	22.3	19.9	36.5	36.5	36.5	0.304	6.2	6.5	5.3	VC
106	4/25/2002	1632	2751.3	9149.3		107	52	108	25.8	22.6	20.0	36.5	36.5	36.5	0.325	6.3	6.6	5.7	VC
107	4/25/2002	1753	2750.9	9148.7		101	31	102	25.7	24.0	20.1	36.5	36.4	36.5	0.261	6.2	6.5	5.7	VC
108	4/26/2002	748	2803.0	9129.2	15	96	66	136	25.3	22.3	19.0	36.4	36.5	36.5	0.261	6.2	6.3	4.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
109	4/26/2002	858	2802.3	9128.8	15	98	48	96	25.3	22.9	20.7	36.4	36.5	36.6	0.261	6.3	6.6	5.4	VC
110	4/26/2002	939	2802.3	9128.8	15	98													TR
111	4/26/2002	1006	2802.1	9129.6	15	129	65	129	25.5	22.6	19.3	36.4	36.5	36.6	0.028	6.2	6.3	4.5	VC
112	4/26/2002	1156	2802.9	9129.0	15	91	46	92	25.5	23.3	21.2	36.4	36.5	36.6	0.240	6.2	6.5	5.3	VC
113	4/26/2002	1308	2802.9	9128.6	15	85	66	131	25.5	22.3	19.0	36.4	36.5	36.5	0.261	6.3	6.3	4.6	VC
114	4/26/2002	1408	2802.9	9128.6	15	84													TR
115	4/26/2002	1436	2803.0	9128.0	15	117	51	103	25.7	23.2	20.1	36.4	36.5	36.5	0.282	6.2	6.5	5.2	VC
116	4/26/2002	1624	2801.8	9128.6	15	120	70	142	25.8	22.0	17.6	36.4	36.5	36.4	0.304	6.2	5.8	4.6	VC
117	4/26/2002	1739	2800.9	9128.0	15	120	65	131	25.8	22.3	18.9	36.4	36.1	36.5	0.346	6.2	6.2	4.4	VC
118	4/27/2002	749	2838.0	8933.4	13	61	31	61	25.6	24.3	22.5	36.5	36.4	36.5	0.261	6.1	6.4	6.4	VC
119	4/27/2002	852	2838.1	8933.0	13	74	41	83	25.5	23.8	21.7	36.5	36.5	36.5	0.240	6.1	6.4	5.8	VC
120	4/27/2002	956	2838.6	8932.5	13	98	50	100	25.5	23.2	20.2	36.5	36.5	36.5	0.282	6.2	6.5	5.2	VC
121	4/27/2002	1041	2838.6	8932.5	13	98													TR
122	4/27/2002	1105	2838.3	8933.0	13	81	42	81	25.6	23.5	21.4	36.4	36.5	36.5	0.219	6.1	6.4	5.6	VC
123	4/27/2002	1324	2837.8	8934.5	13	102	49	96	25.6	23.1	20.6	36.5	36.5	36.4	0.240	6.2	6.5	5.3	VC
124	4/27/2002	1418	2837.8	8934.5	13	102													TR
125	4/27/2002	1617	2837.7	8933.5	13	69	30	60	25.6	24.4	22.6	36.4	36.4	36.5	0.282	6.1	6.3	6.4	VC
126	4/27/2002	1727	2838.0	8933.1	13	64	42	83	25.6	23.7	21.4	36.4	36.5	36.5	0.325	6.2	6.4	5.8	VC
127	4/28/2002	735	2913.9	8826.5	11	64	31	62	25.1	23.1	20.7	35.9	36.5	36.5	6.706	6.5	6.2	6.1	VC
128	4/28/2002	854	2913.9	8826.4	11	60	31	60	25.2	23.1	20.7	24.8	36.5	36.5	3.631	6.6	6.1	6.1	VC
129	4/28/2002	935	2913.9	8826.4	11	60													TR
130	4/28/2002	1004	2913.8	8826.1	11	81	70	138	25.4	20.3	17.9	29.6	36.4	36.4	2.894	6.5	6.3	4.2	VC
131	4/28/2002	1154	2913.7	8826.5	11	68	70	141	25.2	20.3	18.0	36.4	36.4	36.4	1.715	6.3	6.3	4.2	VC
132	4/28/2002	1317	2914.0	8826.2	11	66	67	136	25.4	20.9	18.0	27.9	36.5	36.4	3.463	6.7	6.1	4.2	VC
133	4/28/2002	1500	2915.3	8820.4	11	70	44	88	25.6	21.7	19.9	24.9	36.4	36.4	5.000	7.2	5.8	5.8	VC
134	4/28/2002	1612	2915.4	8820.4	11	71	44	87	25.9	21.2	19.9	22.2	36.4	36.4	6.391	7.9	6.4	5.9	VC
135	4/29/2002	730	2929.0	8736.7		64	32	65	25.5	21.9	20.2	32.2	36.3	36.4	0.472	6.2	6.5	6.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
136	4/29/2002	836	2927.8	8737.2		70	37	73	25.6	20.9	20.3	31.9	36.2	36.4	0.514	6.2	6.7	6.3	VC
137	4/29/2002	946	2927.8	8738.7		68	36	72	25.6	21.6	20.3	31.7	36.4	36.4	0.598	6.1	6.5	6.2	VC
138	4/29/2002	1022	2927.8	8738.9		67													TR
139	4/29/2002	1057	2926.3	8737.1		76	39	79	25.8	20.8	20.0	32.0	36.1	36.3	0.472	6.1	6.5	6.4	VC
140	4/29/2002	1324	2926.7	8733.0		63	39	78	25.9	20.6	19.9	32.6	36.0	36.2	0.451	6.1	6.7	6.5	VC
141	4/29/2002	1414	2926.7	8733.0		67													TR
142	4/29/2002	1456	2927.0	8730.5		67	32	62	26.3	22.1	20.2	32.0	36.3	36.4	0.472	6.1	6.5	6.5	VC
143	4/29/2002	1610	2929.6	8730.0		66	33	66	26.0	20.9	20.2	32.7	36.0	36.4	0.514	6.1	6.8	6.1	VC
144	5/3/2002	814	2960.0	8633.8	9	55	31	61	24.5	21.5	20.2	36.1	36.4	36.4	0.346	6.1	6.6	6.2	VC
145	5/3/2002	829	3000.0	8631.2	9	50	30	56	24.5	21.4	20.3	36.2	36.4	36.4	0.221	6.1	6.6	6.2	VC
146	5/3/2002	1007	3000.0	8631.2	9	50													TR
147	5/3/2002	1038	2959.7	8630.1	9	55	31	59	24.6	21.7	20.3	36.2	36.4	36.4	0.200	6.1	6.6	6.3	VC
148	5/3/2002	1320	2956.3	8636.5	9	90	43	97	24.8	20.9	19.5	35.9	36.4	36.4	0.221	6.1	6.7	5.4	VC
149	5/3/2002	1445	2957.5	8635.9	9	83	44	85	25.4	20.5	20.1	35.9	36.4	36.4	0.200	6.1	6.5	6.5	VC
150	5/3/2002	1611	2958.1	8638.6	9	91	51	99	24.9	20.5	19.3	35.9	36.5	36.4	0.262	6.1	6.5	5.5	VC
151	5/3/2002	1659	2958.1	8638.6	9	92													TR
152	5/3/2002	1734	2958.0	8637.2	9	85	48	95	25.2	20.7	19.6	35.9	36.5	36.4	0.283	6.1	6.6	5.6	VC
153	5/4/2002	1419	2910.9	8541.1	8	72	43	82	26.6	21.6	20.2	34.8	36.5	36.5	0.221	5.9	6.6	6.0	VC
154	5/4/2002	1448	2911.1	8541.3	8	78	40	79	26.8	21.7	20.3	34.7	36.5	36.5	0.324	5.9	6.6	6.0	VC
155	5/4/2002	1603	2910.4	8541.9	8	72	42	82	26.3	21.5	20.3	34.8	36.5	36.5	0.448	5.6	6.6	6.1	VC
156	5/4/2002	1728	2909.7	8545.6	8	91	47	92	27.1	21.3	20.2	34.2	36.5	36.5	0.283	5.9	6.6	5.9	VC
157	5/4/2002	1840	2909.7	8545.7	8	91	47	92	27.0	21.5	20.2	34.3	36.5	36.5	0.345	5.9	6.6	5.9	VC
158	5/5/2002	1301	2910.0	8542.5	8	78	54	107	26.7	20.8	19.9	34.8	36.5	36.5	0.221	5.9	6.5	5.7	VC
159	5/5/2002	1431	2912.7	8539.7	8	74	40	81	26.4	21.1	20.2	35.2	36.5	36.5	0.200	5.9	6.6	5.9	VC
160	5/5/2002	1546	2913.2	8540.3	8	74	41	76	26.7	21.1	20.2	35.4	36.5	36.5	0.241	5.9	6.6	5.9	VC
161	5/5/2002	1711	2911.2	8540.8	8	74	50	99	26.7	21.0	19.3	35.2	36.5	36.4	0.241	5.9	6.5	5.3	VC
162	5/5/2002	1827	2911.6	8540.4	8	71	47	95	26.9	20.9	19.4	35.3	36.5	36.4	0.283	5.9	6.5	6.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
163	5/6/2002	1325	2916.7	8543.1	8	75	35	69	26.3	21.5	20.1	35.1	36.4	36.5	0.221	5.9	6.5	5.9	VC
164	5/6/2002	1448	2916.2	8542.4	8	66	35	70	26.3	21.2	20.1	35.1	36.5	36.5	0.241	5.9	6.5	5.8	VC
165	5/6/2002	1605	2915.4	8541.5	8	75	34	65	26.4	21.4	20.2	35.3	36.5	36.5	0.262	5.9	6.6	6.0	VC
166	5/6/2002	1733	2915.3	8541.4	8	66	33	66	26.4	21.3	20.3	35.2	36.5	36.5	0.283	5.9	6.6	6.0	VC
167	5/6/2002	1843	2915.9	8542.0	8	77	35	70	26.4	21.2	20.1	34.9	36.5	36.5	0.324	5.9	6.6	5.9	VC
168	5/7/2002	1146	2914.2	8542.2	8	76	38	76	26.7	21.1	20.2	34.2	36.5	36.5	0.241	5.8	6.5	5.8	VC
169	5/7/2002	1308	2913.9	8545.4	8	89	46	93	26.8	20.6	20.0	34.1	36.5	36.5	0.303	5.8	6.3	5.7	VC
170	5/7/2002	1432	2913.7	8545.8	8	94	49	97	27.1	20.6	19.6	34.2	36.5	36.5	0.262	5.7	6.3	5.5	VC
171	5/8/2002	813	2859.2	8522.3	8	79	36	71	26.7	21.7	20.4	36.1	36.5	36.5	0.262	5.7	6.2	5.8	VC
172	5/8/2002	858	2859.2	8522.3	8	78													TR
173	5/8/2002	924	2859.0	8522.0	8	77	35	72	26.7	21.7	20.4	36.2	36.5	36.5	0.283	5.7	6.2	5.8	VC
174	5/8/2002	1058	2859.4	8522.5	8	73	37	72	26.9	21.7	20.4	36.1	36.5	36.5	0.221	5.7	6.3	5.8	VC
175	5/8/2002	1225	2858.7	8521.7	8	76	36	71	27.0	22.1	20.4	36.2	36.5	36.5	0.200	5.7	6.2	5.8	VC
176	5/8/2002	1346	2859.4	8522.1	8	68	33	66	27.1	22.2	20.6	36.2	36.5	36.5	0.221	5.7	6.3	6.1	VC
177	5/8/2002	1458	2858.5	8521.5	8	76	35	70	27.4	22.5	20.5	35.9	36.5	36.5	0.221	5.7	6.3	6.0	VC
178	5/8/2002	1557	2858.5	8521.5	8	69													TR
179	5/8/2002	1804	2855.4	8526.9	8	110	59	117	27.0	21.3	19.5	24.9	36.5	36.5	0.283	5.7	6.4	4.9	VC
180	5/9/2002	1319	2812.8	8443.5	6	71	35	71	27.5	23.2	20.4	36.3	36.5	36.5	0.200	5.7	6.1	5.6	VC
181	5/9/2002	1426	2812.7	8443.5	6	71	36	72	27.6	22.8	20.4	36.3	36.5	36.5	0.179	5.6	6.1	5.6	VC
182	5/9/2002	1530	2812.5	8443.2	6	71	35	71	27.5	22.9	20.5	36.4	36.5	36.5	0.179	5.6	6.2	5.6	VC
183	5/9/2002	1637	2812.4	8443.1	6	71	36	71	27.4	22.9	20.5	36.4	36.5	36.5	0.179	5.6	6.1	5.7	VC
184	5/9/2002	1743	2812.4	8443.0	6	71	34	71	27.1	23.4	20.6	36.4	36.5	36.5	0.200	5.6	6.1	5.7	VC
185	5/9/2002	1846	2813.9	8444.5	6	75	40	78	27.4	22.4	20.3	36.4	36.5	36.5	0.200	5.6	6.2	5.5	VC
186	5/10/2002	1312	2813.7	8444.4	6	72	39	78	27.5	22.6	20.4	36.4	36.5	36.5	0.200	5.6	6.1	5.5	VC
187	5/10/2002	1428	2813.6	8444.4	6	75	39	78	27.5	22.9	20.4	36.4	36.5	36.5	0.179	5.6	6.1	5.6	VC
188	5/10/2002	1532	2813.4	8444.3	6	75	29	79	27.9	21.6	20.4	36.4	36.5	36.5	0.179	5.6	6.1	5.6	VC
189	5/10/2002	1643	2813.3	8444.3	6	76	38	77	27.7	22.9	20.5	36.4	36.5	36.5	0.200	5.6	6.1	5.6	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
190	5/10/2002	1813	2813.4	8437.5	6	71	35	71	27.8	23.2	20.9	36.4	36.5	36.5	0.200	5.6	6.2	5.8	VC
191	5/11/2002	1341	2811.7	8441.0	6	70	35	68	27.4	24.0	21.0	36.4	36.5	36.5	0.179	5.6	6.0	5.8	VC
192	5/11/2002	1459	2812.0	8437.9	6	70	35	70	27.5	23.2	21.0	36.4	36.5	36.5	0.179	5.6	6.2	5.9	VC
193	5/11/2002	1605	2811.2	8437.3	6	70	35	70	27.5	23.4	21.0	36.4	36.5	36.5	0.200	5.6	6.2	6.0	VC
194	5/11/2002	1729	2810.0	8441.0	6	81	43	80	27.5	22.9	20.3	36.4	36.5	36.5	0.138	5.6	6.1	5.5	VC
195	5/11/2002	1846	2813.3	8445.4	6	83	43	82	27.3	23.0	20.6	34.9	35.9	36.5		5.5	5.5	6.2	VC
196	5/12/2002	1038	2805.0	8438.5	6	82	42	82	27.2	22.6	20.4	36.3	36.0	36.5					VC
197	5/12/2002	1158	2807.0	8439.0	6	83	41	82	27.2	22.6	20.4	36.1	36.0	36.5					VC
198	5/12/2002	1333	2807.2	8443.8	6	82	41	82	27.2	22.6	20.4	36.3	36.0	36.5					VC
199	5/12/2002	1500	2811.4	8443.4	6	83													VC
200	5/13/2002	808	2836.0	8458.9	6	75	36	72	27.0	23.6	21.3	35.8	36.5	36.5	0.200	5.5	6.1	6.1	VC
201	5/13/2002	856	2836.0	8458.9	6	72													TR
202	5/13/2002	920	2835.5	8458.9	6	77	41	80	27.1	23.4	21.0	36.0	36.5	36.5	0.200	5.5	6.1	6.0	VC
203	5/13/2002	1050	2836.0	8459.1	6	75	39	75	26.8	23.1	21.3	36.7	36.5	36.5	0.200	5.5	6.1	6.1	VC
204	5/13/2002	1204	2835.0	8458.4	6	77	39	78	27.2	23.2	21.3	35.9	36.5	36.5	0.200	5.5	6.0	6.1	VC
205	5/13/2002	1333	2836.0	8453.0	6	56	25	50	27.3	24.6	21.5	36.0	36.4	36.5	0.200	5.5	6.0	6.3	VC
206	5/13/2002	1420	2836.0	8453.0	6	55													TR
207	5/13/2002	1450	2835.5	8452.4	6	54	27	54	27.4	24.5	21.5	36.0	36.4	36.5	0.200	5.5	6.0	6.4	VC
208	5/13/2002	1653	2834.5	8458.0	6	74	39	73	27.6	22.7	21.4	36.0	36.5	36.5	0.241	5.5	6.1	6.2	VC
209	5/14/2002	823	2748.5	8409.6	5	54	25	51	26.4	22.5	20.7	36.5	36.5	36.5	0.241	5.5	6.3	5.9	VC
210	5/14/2002	929	2748.2	8409.7	5	52	25	48	26.4	22.4	20.7	36.5	36.5	36.5	0.200	5.6	6.3	5.9	VC
211	5/14/2002	1030	2747.9	8409.7	5	51	25	50	26.4	22.1	20.7	36.5	36.5	36.5	0.200	5.5	6.3	5.8	VC
212	5/14/2002	1130	2747.7	8409.7	5	49	26	50	26.4	22.0	20.7	36.5	36.5	36.5	0.200	5.6	6.3	5.9	VC
213	5/14/2002	1248	2747.2	8409.7	5	49	25	50	26.4	22.4	20.6	36.5	36.5	36.5	0.221	5.6	6.3	5.8	VC
214	5/14/2002	1334	2747.2	8409.7	5	49													TR
215	5/14/2002	1357	2746.7	8409.8	5	50	25	49	26.4	22.5	20.6	36.5	36.5	36.5	0.179	5.6	6.3	5.7	VC
216	5/14/2002	1517	2746.7	8409.8	5	50													TR

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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
217	5/14/2002	1543	2746.2	8409.9	5	51	25	50	26.5	22.3	20.5	36.5	36.5	36.5	0.179	5.6	6.3	5.8	VC
218	5/14/2002	1732	2746.0	8410.0	5	52	25	49	26.5	22.4	20.5	36.5	36.5	36.5	0.200	5.5	6.3	5.7	VC
219	5/19/2002	808	2431.0	8256.4	2	22	11	24	27.2	27.0	26.0	36.3	36.4	36.5	0.241	5.3	5.4	5.4	VC
220	5/19/2002	919	2430.2	8257.2	2	22	12	25	27.3	27.1	25.8	36.3	36.4	36.5	0.241	5.3	5.3	5.3	VC
221	5/19/2002	1032	2431.7	8257.3	2	22	11	22	27.2	27.0	26.7	36.3	36.4	36.4	0.179	5.3	5.3	5.3	VC
222	5/19/2002	1115	2431.7	8257.3	2	23													TR
223	5/19/2002	1151	2430.5	8255.8	2	28	14	28	27.3	27.1	26.3	36.3	36.4	36.4	0.241	5.3	5.4	5.5	VC
224	5/19/2002	1341	2430.3	8252.4	2	22	9	20	27.2	27.2	25.8	36.3	36.4	36.5	0.241	5.3	5.3	5.5	VC
225	5/19/2002	1516	2430.5	8257.5	2	26	13	26	27.0	26.9	26.3	36.0	36.4	36.5	0.386	5.3	5.3	5.3	VC
226	5/19/2002	1658	2430.5	8257.5	2	27													TR
227	5/19/2002	1730	2430.7	8258.1	2	41	13	25	27.1	27.0	26.0	36.1	36.3	36.4	0.365	5.3	5.3	5.2	VC
228	5/19/2002	1758	2431.3	8257.8	2	24	12	23	27.0	27.0	26.1	36.0	36.4	36.4	0.510	5.3	5.3	5.3	VC
229	5/20/2002	807	2431.9	8301.1	2	26	14	30	26.8	26.4	25.3	36.2	36.4	36.4	0.262	5.3	5.3	5.2	VC
230	5/20/2002	922	2430.9	8305.6	2	29	17	35	26.9	27.0	24.0	36.2	36.4	36.4	0.262	5.3	5.3	5.5	VC
231	5/20/2002	1040	2430.4	8305.7	2	28	15	31	27.0	27.0	24.7	36.3	36.3	36.5	0.221	5.3	5.3	5.6	VC
232	5/20/2002	1157	2430.6	8305.8	2	28	15	31	27.0	27.0	24.8	36.2	36.3	36.5	0.200	5.3	5.3	5.2	VC
233	5/20/2002	1314	2430.4	8306.4	2	30	15	26	27.1	27.0	24.9	36.2	36.3	36.4	0.179	5.3	5.3	5.5	VC
234	5/20/2002	1457	2436.1	8304.0	2	23	11	22	27.6	27.4	27.4	36.2	36.2	36.3	0.448	5.3	5.3	5.3	VC
235	5/20/2002	1605	2438.1	8304.8	2	16	7	14	27.6	27.5	27.5	36.2	36.2	36.2	0.510	5.1	5.2	5.2	VC
236	5/20/2002	1646	2438.1	8304.8	2	15													TR
237	5/20/2002	1834	2438.9	8301.5	2	19	11	19	27.6	27.6	27.5	36.2	36.2	36.2	0.283	5.2	5.2	5.2	VC
238	5/21/2002	801	2442.8	8258.2	2	34	17	33	27.4	27.4	25.8	36.2	36.2	36.3	0.241	5.2	5.2	5.2	VC
239	5/21/2002	920	2441.9	8258.6	2	28	14	28	27.3	27.3	26.1	36.2	36.2	36.4	0.283	5.2	5.2	5.0	VC
240	5/21/2002	1029	2442.8	8258.8	2	28	14	29	27.4	27.4	26.9	36.2	36.2	36.4	0.241	5.1	5.1	5.1	VC
241	5/21/2002	1139	2443.4	8259.0	2	21	9	17	27.4	27.4	27.4	36.2	36.2	36.3	0.159	5.2	5.2	5.2	VC
242	5/21/2002	1251	2442.6	8259.0	2	29	13	26	27.4	27.4	26.8	36.3	36.3	36.4	0.179	5.2	5.2	5.3	VC
243	5/21/2002	1359	2441.4	8259.4	2	28	13	24	27.4	27.3	27.3	36.3	36.3	36.3	0.200	5.2	5.1	5.1	VC

Table 2. Selected environmental parameters (continued)

OREGON II, REEF FISH SURVEY																				
							SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			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	MID	MAX	GEAR
244	5/21/2002	1508	2442.3	8259.4	2	23	13	23	27.5	27.4	27.3	36.3	36.3	36.3	0.138	5.3	5.3	5.4	VC
245	5/21/2002	1618	2442.3	8259.6	2	17	12	24	27.5	27.5	27.4	36.3	36.3	36.3	0.159	5.2	5.2	5.3	VC
246	5/21/2002	1730	2441.1	8259.6	2	24	11	21	27.5	27.5	27.5	36.2	36.2	36.3	0.159	5.2	5.2	5.2	VC
247	5/21/2002	1832	2442.3	8259.8	2	17	10	20	27.4	27.4	27.1	36.3	36.3	36.4	0.221	5.2	5.2	5.2	VC
248	5/22/2002	807	2440.4	8300.1	2	20	11	25	27.2	27.2	27.2	36.2	36.2	36.2	0.427	5.1	5.1	5.1	VC
249	5/22/2002	914	2441.2	8300.5	2	18	9	21	27.2	27.2	27.2	36.2	36.2	36.2	0.489	5.1	5.1	5.1	VC
250	5/22/2002	1022	2440.1	8300.6	2	18	9	19	27.2	27.2	27.2	36.2	36.2	36.2	0.427	5.1	5.1	5.1	VC
251	5/22/2002	1128	2440.7	8302.2	2	15	9	19	27.3	27.3	27.2	36.2	36.2	36.2	0.469	5.1	5.1	5.1	VC
252	5/22/2002	1310	2440.3	8305.5	2	44	12	24	27.3	27.3	27.3	36.2	36.2	36.3	0.489	5.1	5.1	5.0	VC
253	5/22/2002	1429	2440.6	8305.2	2	40	10	21	27.4	27.3	27.3	36.2	36.2	36.2	0.427	5.1	5.1	5.1	VC
254	5/22/2002	1537	2441.2	8304.5	2	36	21	39	27.3	27.2	25.8	36.3	36.3	36.3	0.407	5.2	5.2	5.3	VC
255	5/22/2002	1657	2441.5	8303.9	2	29	18	36	27.3	27.2	25.9	36.3	36.3	36.4	0.489	5.2	5.2	5.3	VC
256	5/23/2002	847	2550.0	8336.1	3	74	35	70	26.5	23.9	20.6	36.3	36.5	36.6	0.159	5.3	5.8	4.5	VC
257	5/23/2002	1016	2550.5	8339.4	3	77	39	80	26.5	23.5	19.6	36.4	36.5	36.6	0.159	5.3	5.9	3.9	VC
258	5/23/2002	1103	2550.5	8339.4	3	79													TR
259	5/23/2002	1318	2551.0	8337.2	3	70	33	66	26.3	23.4	20.3	36.3	36.5	36.6	0.179	5.3	6.0	4.5	VC
260	5/23/2002	1430	2551.5	8337.2	3	67	33	69	26.3	23.4	20.1	36.3	36.5	36.6	0.159	5.4	6.0	4.3	VC
261	5/23/2002	1553	2553.7	8338.3	3	69	36	71	26.5	23.3	20.3	36.3	36.5	36.6	0.159	5.3	5.9	4.3	VC
262	5/23/2002	1709	2554.8	8337.5	3	69	33	67	26.5	23.5	20.6	36.3	36.5	36.6	0.179	5.3	5.9	4.5	VC
263	5/24/2002	835	2824.4	8419.1	6	38	15	30	23.9	23.9	22.7	36.5	36.5	36.5	0.179	5.6	5.6	5.7	VC
264	5/24/2002	941	2825.8	8417.7	6	41	20	39	23.9	23.7	22.2	36.5	36.5	36.5	0.407	5.3	5.3	5.8	VC
265	5/24/2002	1019	2825.8	8417.7	6	39													VC
266	5/24/2002	1049	2826.2	8418.4	6	30	15	30	24.0	23.9	22.1	36.5	36.5	36.5	0.303	5.5	5.6	5.8	VC
267	5/24/2002	1236	2826.8	8414.5	6	35	14	28	23.9	23.7	22.7	36.5	36.5	36.5	0.200	5.6	5.6	5.7	VC
268	5/24/2002	1348	2828.6	8415.4	6	29	22	43	24.0	23.7	22.7	36.5	36.5	36.5	0.221	5.6	5.6	5.8	VC
269	5/24/2002	1507	2828.3	8419.6	6	33	22	43	24.6	23.1	22.5	36.5	36.5	36.5	0.200	5.2	5.8	5.9	VC
270	5/24/2002	1546	2828.3	8419.6	6	33													TR

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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
271	5/24/2002	1624	2829.1	8417.4	6	35	17	35	24.2	23.4	22.6	36.5	36.5	36.5	0.241	5.5	5.7	5.8	VC
272	5/24/2002	1801	2827.7	8417.0	6	29	14	29	24.4	23.8	22.9	36.5	36.5	36.5	0.241	5.6	5.6	5.8	VC
273	5/25/2002	759	2830.2	8413.3	6	34	17	34	23.7	23.6	23.2	36.5	36.5	36.5	0.241	5.6	5.6	5.5	VC
274	5/25/2002	900	2831.1	8411.9	6	34	20	37	23.7	23.7	23.4	36.5	36.5	36.5	0.241	5.6	5.6	5.6	VC
275	5/25/2002	1004	2832.6	8412.4	6	33	16	33	23.8	23.7	23.4	36.5	36.5	36.5	0.179	5.6	5.6	5.5	VC
276	5/25/2002	1040	2832.6	8412.4	6	33													TR
277	5/25/2002	1109	2833.4	8413.9	6	56	20	38	23.8	23.7	23.4	36.5	36.5	36.5	0.159	5.6	5.6	5.6	VC
278	5/25/2002	1257	2835.8	8415.0	6	31	16	29	24.1	23.7	23.3	36.5	36.5	36.5	0.179	5.6	5.6	5.7	VC
279	5/25/2002	1338	2835.8	8415.0	6	29													TR
280	5/25/2002	1406	2835.0	8415.2	6	30	14	29	24.4	23.6	23.4	36.5	36.5	36.5	0.159	5.5	5.6	5.7	VC
281	5/25/2002	1607	2833.4	8415.0	6	32	15	31	24.3	23.8	23.5	36.5	36.5	36.5	0.200	5.6	5.6	5.7	VC
282	5/25/2002	1734	2830.2	8419.3	6	28	20	40	24.7	23.8	23.3	36.5	36.5	36.5	0.221	5.5	5.6	5.7	VC
283	5/26/2002	804	2830.4	8422.9	6	44	23	45	24.3	23.7	22.5	36.4	36.5	36.5	0.159	5.4	5.6	5.7	VC
284	5/26/2002	905	2830.7	8421.9	6	33	19	39	24.3	23.7	23.1	36.4	36.5	36.5	0.159	5.5	5.5	5.5	VC
285	5/26/2002	942	2830.7	8421.9	6	36													TR
286	5/26/2002	1006	2831.3	8422.1	6	39	21	44	24.3	23.6	22.8	36.4	36.5	36.5	0.138	5.5	5.6	5.6	VC
287	5/26/2002	1134	2831.3	8421.4	6	32	16	32	24.4	23.6	23.2	36.5	36.5	36.5	0.179	5.5	5.6	5.6	VC
288	5/26/2002	1248	2834.6	8422.2	6	38	17	37	24.4	23.2	23.0	36.4	36.5	36.5	0.159	5.5	5.6	5.7	VC
289	5/26/2002	1354	2836.4	8423.2	6	37	17	35	24.5	23.5	23.1	36.4	36.5	36.5	0.138	5.5	5.6	5.7	VC
290	5/26/2002	1426	2836.4	8423.2	6	35													TR
291	5/26/2002	1455	2837.0	8422.3	6	32	17	33	24.5	23.6	23.3	36.5	36.5	36.5	0.179	5.5	5.6	5.8	VC
292	5/26/2002	1634	2838.9	8422.5	6	27	15	30	24.1	23.3	23.2	36.5	36.5	36.5	0.200	5.5	5.6	5.7	VC
293	5/27/2002	758	2841.0	8423.1	6	30	15	29	23.9	23.9	23.2	36.5	36.5	36.5	0.200	5.5	5.5	5.5	VC
294	5/27/2002	900	2841.0	8423.4	6	27	14	28	23.9	23.5	23.3	36.5	36.5	36.5	0.159	5.5	5.6	5.4	VC
295	5/27/2002	938	2841.0	8423.4	6	27													TR
296	5/27/2002	1005	2840.2	8423.5	6	28	15	29	24.1	23.6	23.3	36.5	36.5	36.5	0.138	5.5	5.6	5.6	VC
297	5/27/2002	1142	2840.6	8427.9	6	40	20	39	24.3	23.7	22.9	36.5	36.5	36.5	0.138	5.4	5.6	5.7	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
298	5/27/2002	1352	2843.0	8426.8	6	37	17	35	24.2	23.2	23.1	36.5	36.5	36.5	0.138	5.5	5.7	5.7	VC
299	5/27/2002	1352	2843.8	8426.3	6	37	19	39	24.3	23.4	23.0	36.5	36.5	36.5	0.117	5.5	5.6	5.7	VC
300	5/27/2002	1427	2843.8	8426.3	6	36													TR
301	5/27/2002	1454	2844.2	8427.1	6	38	20	40	24.5	23.5	22.8	36.5	36.5	36.5	0.138	5.5	5.6	5.8	VC
302	5/27/2002	1637	2845.4	8426.9	6	36	20	40	24.4	23.4	22.9	36.5	36.5	36.5	0.179	5.5	5.6	5.8	VC
303	5/27/2002	1747	2844.6	8424.3	6	37	20	39	24.6	23.4	23.1	36.5	36.5	36.5	0.179	5.5	5.7	5.8	VC
304	5/28/2002	1202	2955.7	8710.1	10	111													
305	5/29/2002	807	2955.7	8710.3	10	59	32	64	25.4	23.3	20.7	35.4	36.4	36.4	0.221	5.2	5.5	5.6	VC
306	5/29/2002	909	2955.6	8710.5	10	57	33	66	25.5	23.0	20.8	35.4	36.4	36.4	0.241	5.2	5.4	5.6	VC
307	5/29/2002	946	2955.6	8710.5	10	56													TR
308	5/29/2002	1012	2955.4	8711.0	10	61	36	71	25.5	22.5	20.7	35.4	36.4	36.4	0.200	5.3	5.4	5.6	VC
309	5/29/2002	1158	2955.0	8712.0	10	62	31	61	25.8	23.0	20.7	35.4	36.3	36.4	0.200	5.3	5.4	5.6	VC
310	5/29/2002	1246	2955.0	8711.9	10	62													TR
311	5/29/2002	1318	2954.6	8712.7	10	55	27	56	26.0	23.8	20.9	35.3	36.2	36.4	0.200	5.3	5.5	5.6	VC
312	5/29/2002	1512	2952.4	8715.0	10	63	31	63	25.8	23.3	20.9	35.3	36.2	36.4	0.200	5.2	5.5	5.6	VC
313	5/29/2002	1624	2951.5	8715.0	10	72	37	74	26.1	22.6	20.4	35.3	36.4	36.4	0.221	5.2	5.5	5.1	VC
314	5/29/2002	1742	2951.8	8715.0	10	68	33	67	26.1	23.4	20.6	35.3	36.3	36.4	0.221	5.2	5.5	5.5	VC
315	5/30/2002	924	2954.4	8802.8	11	32	16	32	24.7	24.5	21.9	33.8	35.2	35.9	0.221	5.4	5.5	5.8	VC
316	5/30/2002	1032	2954.5	8803.0	11	31	17	32	24.5	24.2	21.7	35.5	35.4	35.9	0.221	5.3	5.5	5.7	VC
317	5/30/2002	1107	2954.4	8803.0	11	32													TR
318	5/30/2002	1136	2954.3	8803.4	11	29	15	31	24.6	24.4	21.7	34.0	35.3	35.9	0.200	5.3	5.5	5.9	VC
319	5/30/2002	1313	2955.1	8803.4	11	31	16	31	24.7	24.3	22.4	34.8	35.3	35.8	0.159	5.3	5.5	5.9	VC
320	5/30/2002	1413	2955.4	8803.6	11	31	16	31	24.8	24.4	22.5	35.0	35.5	35.7	0.159	5.4	5.5	6.0	VC
321	5/30/2002	1517	2955.7	8803.6	11	30	17	32	24.9	24.2	22.5	34.9	35.4	35.7	0.159	5.4	5.6	5.9	VC
322	5/30/2002	1632	2956.7	8803.6	11	32	15	32	24.9	24.2	22.7	34.8	35.1	35.7	0.179	5.4	5.6	5.9	VC
323	5/30/2002	1737	2957.8	8803.2	11	31	15	30	24.8	24.1	23.5	34.5	35.1	35.3	0.345	5.4	5.6	5.6	VC
324	5/30/2002	1922	2957.9	8802.8	11	30	15	30	24.8	23.9	23.6	34.6	35.2	35.3	0.386	5.5	5.6	5.6	VC

Table 2. Selected environmental parameters (continued)

ALABAMA INSHORE VESSELS, REEF FISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
66001	10/11/2002	1200	3001.3	8807.2	11	23	12	23	29.0	30.0	30.0	28.0	30.0	30.0		6.8	5.6	5.2	TV
66002	11/18/2002	1250	2957.8	8746.6	10	31	16	31	21.5	21.5	21.5	31.0	32.0	32.0		7.4	6.8	7.2	TV
66003	12/16/2002	1140	2960.0	8807.5	11	24	12	24	15.0	17.5	18.0	24.0	29.0	32.0		9.0	6.0	8.2	TV
66004	12/17/2002	1048	2959.7	8743.8	10	28	14	28	17.0	18.0	18.0	27.0	27.0	29.0		4.2	3.2	5.2	TV

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	8/30/2002	2139	2602.3	9559.9		1050	101	202	30.1	22.7	15.4	36.6	36.5	36.0		5.7	5.8	3.9	PN
2	8/31/2002	326	2602.1	9630.1	21	61	30	59	29.0	24.3	21.6	36.5	36.4	36.6		6.2	6.8	5.4	PN
3	8/31/2002	731	2559.9	9660.0	22	27	13	25	28.5	27.4	25.2	36.5	36.5	36.4		6.2	6.6	6.7	PN
4	8/31/2002	1338	2629.7	9630.0	21	81	41	79	28.7	23.8	20.7	36.4	36.5	36.5		6.2	6.5	4.9	PN
5	8/31/2002	1825	2630.1	9700.1	21	34	16	33	28.8	28.0	24.9	36.5	36.4	36.4		6.2	6.6	6.9	PN
6	8/31/2002	2344	2659.6	9712.5	21	26	12	25	28.8	28.7	27.4	36.5	36.5	36.4		6.3	6.3	6.4	PN
7	9/1/2002	417	2660.0	9640.2	21	87	42	81	29.1	25.4	20.6	36.4	36.4	36.5		6.2	7.3	4.9	PN
8	9/1/2002	1015	2660.0	9560.0		785	100	199	29.8	22.0	17.3	36.4	36.4	36.3		6.1	6.3	4.7	PN
9	9/1/2002	1608	2732.8	9559.5	20	171	85	169	29.6	21.5	16.7	36.3	36.6	36.2		6.1	5.4	4.4	PN
10	9/1/2002	2021	2730.1	9630.0	20	73	33	70	29.6	28.9	22.1	36.4	36.4	36.5		6.1	6.3	5.7	PN
11	9/1/2002	2353	2729.7	9660.0	20	28	14	27	29.7	29.7	29.6	36.4	36.4	36.5		6.2	6.1	5.9	PN
12	9/2/2002	512	2759.9	9630.2	20	27	13	25	30.0	29.9	29.7	34.5	35.0	35.7		6.1	6.1	6.1	PN
13	9/2/2002	828	2759.8	9601.6	20	45	22	44	29.6	29.6	23.6	35.9	36.2	36.5		6.1	6.2	5.5	PN
14	9/2/2002	1206	2819.9	9619.7	19	16	6	13	30.0	30.0	30.0	33.1	33.1	33.2		6.0	6.0	5.9	PN
15	9/2/2002	1510	2829.7	9559.9	19	15	7	14	30.0	30.0	30.1	31.4	31.8	32.1		6.4	6.4	6.3	PN
16	9/2/2002	1845	2829.8	9530.0	19	26	12	23	30.0	30.0	29.5	32.4	32.5	34.1		6.2	6.0	4.2	PN
17	9/2/2002	2235	2800.1	9530.0	19	54	25	50	29.7	29.4	23.6	35.5	36.4	36.4		6.0	6.3	6.3	PN
18	9/3/2002	58	2744.7	9530.1	20	111	52	107	29.7	23.6	19.6	35.8	36.4	36.5		6.1	6.8	4.4	PN
19	9/3/2002	334	2730.2	9530.3	20	23	101	200	29.6	20.6	15.8	36.4	36.6	36.1		6.2	4.8	4.3	PN
20	9/3/2002	930	2759.9	9459.9		81	40	77	29.8	24.9	21.1	35.3	36.4	36.5		6.1	7.2	5.4	PN
21	9/3/2002	1316	2830.0	9459.9	18	33	16	32	29.9	30.0	29.0	32.4	32.6	35.8		6.1	6.1	4.8	PN
22	9/3/2002	1731	2859.9	9460.0	18	17	7	15	30.0	30.1	30.2	25.8	25.8	26.8		6.2	6.2	5.9	PN
23	9/3/2002	2143	2859.9	9430.0	18	19	7	16	29.8	29.8	29.8	31.2	31.2	31.2		5.7	5.7	5.7	PN
24	9/4/2002	147	2830.2	9431.0	18	35	18	34	29.6	29.3	25.1	33.1	35.0	36.3		6.2	4.9	4.2	PN
25	9/4/2002	612	2800.6	9428.9	18	67	34	65	29.9	29.2	23.8	35.8	36.3	36.4		6.1	6.3	7.0	PN
26	9/4/2002	1028	2729.9	9430.0		636	101	200	30.0	20.5	16.0	35.6	36.5	36.1		6.1	5.1	4.3	PN
27	9/4/2002	1641	2800.0	9402.1	18	81	40	80	29.7	28.4	20.4	35.9	36.3	36.5		6.1	6.6	5.1	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	9/4/2002	2047	2829.7	9400.2	18	40	19	36	29.4	29.5	23.1	33.0	34.7	36.4		6.1	6.1	2.9	PN
29	9/5/2002	54	2830.1	9331.3	17	41	21	39	29.2	29.1	23.7	33.0	36.2	36.4		6.2	6.2	4.4	PN
30	9/5/2002	644	2802.1	9329.7	17	84	42	84	29.5	29.5	20.5	34.5	36.1	36.5		6.1	6.5	5.1	PN
31	9/5/2002	1058	2729.8	9330.0		531	100	202	29.3	21.1	15.8	35.2	36.5	36.1		6.1	5.4	4.2	PN
32	9/5/2002	1604	2801.0	9260.0	16	102	51	98	29.3	25.2	19.2	34.1	36.4	36.5		6.2	7.1	4.4	PN
33	9/5/2002	1942	2800.9	9231.2	16	105	48	102	29.2	26.8	19.8	33.3	36.3	36.5		6.2	6.2	4.7	PN
35	9/6/2002	1322	2729.5	9030.9		1008	100	200	29.0	22.9	17.6	36.1	36.5	36.3		6.2	6.5	4.3	PN
36	9/7/2002	2322	2559.9	8429.9		216	99	201	29.8	18.2	13.3	36.1	36.4	35.7		6.1	4.8	4.4	PN
37	9/8/2002	308	2559.8	8400.2		136	68	135	29.5	25.0	16.6	36.2	36.7	36.2		6.1	6.0	4.2	PN
38	9/8/2002	706	2559.8	8330.2	3	64	32	62	29.7	26.7	18.8	36.0	36.3	36.3		6.1	7.0	5.0	PN
39	9/8/2002	1106	2559.9	8300.1	3	44	21	42	29.7	29.7	24.9	36.1	36.1	36.5		6.1	6.1	5.4	PN
40	9/8/2002	1428	2559.6	8230.2	3	29	15	27	30.0	30.0	30.0	36.1	36.1	36.1		5.8	5.8	5.9	PN
41	9/8/2002	1817	2629.9	8230.1	4	21	11	19	30.4	30.3	30.3	36.1	36.1	36.1		6.0	6.0	6.1	PN
42	9/8/2002	2133	2629.8	8300.1	4	39	20	38	29.9	29.7	27.9	36.0	36.0	36.4		6.1	6.1	7.3	PN
43	9/9/2002	56	2630.0	8329.9	4	57	27	56	29.5	29.4	17.5	35.8	35.8	36.2		6.1	6.2	4.9	PN
44	9/9/2002	440	2629.7	8359.8	4	122	60	121	29.1	23.1	18.1	36.2	36.7	36.4		6.1	5.8	4.5	PN
45	9/9/2002	832	2629.8	8430.3		197	98	196	29.2	17.7	12.4	36.3	36.4	35.6		6.1	4.4	4.3	PN
46	9/9/2002	1227	2660.0	8430.3		173	87	174	29.5	21.3	15.4	36.2	36.7	36.0		6.1	5.2	4.2	PN
47	9/9/2002	1616	2659.7	8400.2		83	40	81	29.4	23.7	19.9	36.1	36.7	36.6		6.1	6.2	4.9	PN
48	9/9/2002	1937	2659.9	8330.1	4	52	31	51	29.8	26.2	19.6	35.9	36.3	36.4		6.1	6.7	4.6	PN
49	9/9/2002	2259	2700.2	8300.2	5	33	15	31	30.2	29.8	29.8	36.2	36.1	36.2		6.0	6.1	6.2	PN
50	9/10/2002	218	2700.1	8232.4	5	12	4	10	30.3	30.3	30.0	35.1	35.1	35.5		6.0	6.0	6.0	PN
51	9/10/2002	645	2730.2	8300.4	5	19	9	18	30.0	30.0	30.0	36.1	36.1	36.2		6.0	6.0	6.1	PN
52	9/10/2002	959	2729.9	8330.1	5	40	19	39	29.6	29.6	25.0	36.1	36.1	36.4		5.9	6.1	5.3	PN
53	9/10/2002	1312	2730.1	8400.1	5	60	30	58	29.2	25.4	17.1	35.8	36.3	36.2		6.0	6.4	3.9	PN
54	9/10/2002	1630	2730.0	8430.1		132	65	131	29.4	21.3	17.1	36.2	36.5	36.2		6.1	6.1	4.2	PN
55	9/10/2002	2013	2800.2	8429.7	6	76	38	74	29.3	21.0	18.8	35.8	36.4	36.4		6.1	4.9	4.5	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
56	9/10/2002	2329	2800.1	8360.0	6	45	22	44	29.9	29.4	22.2	36.0	36.0	36.4		6.0	6.1	5.4	PN
57	9/11/2002	318	2800.2	8330.0	6	29	14	28	29.8	29.7	29.7	36.3	36.3	36.3		6.0	6.0	6.0	PN
58	9/11/2002	649	2760.0	8259.9	5	14	7	13	29.8	29.8	29.6	35.3	35.3	35.3		5.6	5.7	5.5	PN
59	9/11/2002	1033	2829.0	8303.9	6	12	5	10	29.4	29.3	29.4	35.9	35.9	35.9		5.8	5.8	5.9	PN
60	9/11/2002	1309	2829.8	8330.1	6	23	11	20	29.6	29.6	29.6	36.5	36.5	36.5		5.7	5.8	5.8	PN
61	9/11/2002	1619	2830.1	8358.7	6	34	16	33	29.4	29.4	29.4	36.1	36.1	36.1		5.7	5.8	5.9	PN
62	9/11/2002	2008	2828.0	8430.1	6	52	25	51	28.8	28.6	19.0	35.7	35.8	36.4		6.1	6.1	4.1	PN
63	9/12/2002	14	2860.0	8430.2	6	33	14	31	29.2	29.2	29.2	36.1	36.1	36.2		6.0	6.0	5.9	PN
64	9/12/2002	332	2859.9	8500.1	8	39	19	37	28.9	29.0	26.8	35.9	35.9	36.1		6.0	6.0	5.7	PN
65	9/12/2002	817	2859.9	8530.3		71	35	69	28.9	26.2	18.6	35.5	36.3	36.4		6.0	6.1	4.2	PN
66	9/12/2002	1220	2911.7	8559.9	8	190	94	187	29.2	18.6	15.8	35.9	36.4	36.1		6.0	4.4	4.0	PN
67	9/12/2002	1649	2929.8	8630.0		208	100	200	29.0	18.4	16.0	35.2	36.4	36.1		6.0	4.3	4.0	PN
68	9/12/2002	2104	2947.9	8700.1	10	188	92	186	29.0	20.4	15.6	35.7	36.5	36.1		6.1	4.8	3.9	PN
70	9/17/2002	921	2829.8	8900.2		447	100	201	28.8	19.2	15.2	33.6	36.5	36.0		5.9	4.4	4.2	PN
71	9/17/2002	1313	2830.7	8930.1	13	405	100	201	29.1	20.0	14.8	35.5	36.6	35.9		5.9	4.6	4.1	PN
72	9/17/2002	1838	2800.0	9000.0	14	535	100	201	29.7	21.4	16.2	36.1	36.5	36.2		5.9	5.7	4.3	PN
73	9/17/2002	2243	2829.9	9000.1	14	89	43	86	29.5	26.0	19.9	36.0	36.2	36.5		6.0	5.1	4.7	PN
74	9/18/2002	301	2804.8	9031.4	14	143	71	140	29.2	23.4	17.2	35.7	36.5	36.3		6.0	6.6	4.4	PN
75	9/18/2002	633	2759.9	9100.0		150	74	148	29.1	23.1	17.0	35.5	36.4	36.3		5.9	6.5	4.2	PN
76	9/18/2002	1148	2830.1	9130.2	15	46	21	44	28.8	28.8	25.1	34.4	35.3	36.3		5.9	6.0	2.2	PN
77	9/18/2002	1536	2759.9	9130.1		162	80	161	29.2	22.6	16.8	35.5	36.4	36.2		6.0	6.3	4.2	PN
78	9/18/2002	1917	2759.8	9200.2		118	59	116	29.1	22.7	20.3	34.8	36.4	36.5		6.0	6.4	4.9	PN
79	9/18/2002	2309	2830.0	9159.9	15	49	23	47	28.9	28.8	24.4	34.2	35.2	36.4		6.1	5.8	3.3	PN
80	9/19/2002	221	2830.0	9231.3	16	49	23	46	28.5	28.7	25.0	33.6	35.0	36.3		6.1	5.9	1.9	PN
81	9/19/2002	613	2830.1	9300.1	17	45	22	42	28.8	28.8	28.0	35.0	35.3	35.9		6.0	6.0	5.7	PN
82	9/19/2002	954	2900.3	9259.9	16	25	11	22	28.4	28.4	28.4	31.8	31.8	32.5		6.1	6.2	5.1	PN
83	9/19/2002	1315	2901.0	9330.0	17	23	11	21	28.2	28.2	28.5	32.2	32.2	33.5		6.1	6.0	5.4	PN

Table 2. Selected environmental parameters (continued)

GORDON GUNTER, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
84	9/19/2002	1647	2859.9	9400.1	18	21	7	14	28.5	28.5	28.5	33.1	33.1	33.3		6.0	6.0	6.0	PN
85	9/19/2002	2048	2929.5	9359.1	17	13	3	7	28.0	28.0	28.0	27.6	27.6	27.7		5.4	5.5	5.7	PN
86	9/20/2002	22	2927.5	9331.6	17	12	5	10	28.1	28.1	28.2	28.0	28.0	28.1		6.4	6.4	6.3	PN
87	9/20/2002	505	2930.2	9300.8	17	13	6	11	28.2	28.1	28.1	29.1	29.2	30.1		6.1	5.6	5.5	PN
88	9/20/2002	918	2923.9	9229.9	16	12	4	9	28.6	28.6	28.6	28.9	28.9	28.9		5.7	5.7	5.8	PN
89	9/20/2002	1259	2900.1	9232.6	16	25	12	24	28.4	28.5	28.4	31.8	32.0	33.8		5.4	5.7	3.9	PN
90	9/20/2002	1624	2902.0	9201.2	16	18	8	16	28.7	28.6	28.6	30.7	30.8	32.0		5.9	6.0	4.6	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37944	9/16/2002	851	2860.0	9029.3	14	11	4	10	29.0	28.8	28.9	27.9	29.1	34.1	0.883	7.4	6.4	2.4	PN
37945	9/16/2002	1235	2860.0	9059.9	14	7	4	7	29.2	28.9	28.8	26.3	27.9	28.7	3.034	5.8	6.5	4.3	PN
37946	9/16/2002	1617	2860.0	9130.0	15	11	5	9	29.0	28.9	28.6	29.4	29.4	30.7	0.877				PN
37947	9/16/2002	1751	2852.7	9128.8	15	16	7	16	28.7	28.7	28.7	30.5	30.6	32.4	0.751	7.2	7.2	6.3	ST
37948	9/16/2002	2009	2852.7	9128.7	15	16	7	16	28.7	28.7	28.7	30.5	30.6	32.4	0.751	7.2	7.2	6.3	ST
37949	9/17/2002	18	2835.1	9106.7	15	26	13	23	28.9	28.9	28.6	31.6	34.0	35.5	0.563	7.1	7.1	6.6	ST
37950	9/17/2002	243	2829.9	9053.3	14	33	17	32	29.1	28.8	28.4	30.3	33.1	35.7	0.509	7.7	6.7	5.1	ST
37951	9/17/2002	518	2841.7	9057.3	14	15	8	13	29.0	28.9	28.7	30.0	31.3	32.5	0.416	7.6	7.7	6.6	ST
37952	9/17/2002	804	2841.5	9056.3	14	15	8	12	28.9	28.8	28.7	30.1	32.2	32.8	0.498	7.1	7.4	6.6	ST
37953	9/17/2002	1032	2835.3	9106.6	15	26	13	24	29.1	28.9	28.6	32.0	33.4	35.4	0.627	6.3	6.1	5.3	ST
37954	9/17/2002	1200	2830.1	9100.0	15	33	15	31	29.3	28.8	28.7	30.3	34.1	35.6	0.399	6.5	6.1	5.7	PN
37955	9/17/2002	1338	2830.0	9053.3	14	33	15	33	29.5	28.8	28.2	28.6	33.6	35.9	0.317	8.1	6.9	4.1	ST
37956	9/17/2002	1640	2830.0	9030.1	14	38	18	39	29.6	28.8	27.2	28.0	35.3	36.2	0.462	8.2	6.9	4.8	PN
37957	9/17/2002	1757	2834.6	9033.3	14	31	14	30	29.4	28.6	28.8	29.9	32.2	35.9	0.322	7.6	5.9	5.5	ST
37958	9/17/2002	2010	2834.8	9033.1	14	31	14	30	29.4	28.6	28.8	29.9	32.2	35.9	0.323	7.6	5.9	5.5	ST
37959	9/17/2002	2224	2838.0	9021.1	14	27	14	30	29.4	29.0	28.8	29.8	35.4	35.8	0.455	7.3	6.6	5.4	ST
37960	9/18/2002	15	2845.6	9018.9	14	24	11	24	29.4	28.9	28.8	33.1	35.5	35.7	0.258	7.4	7.1	5.4	ST
37961	9/18/2002	231	2855.5	9014.1	14	20	11	19	29.4	29.2	28.9	29.9	34.1	35.4	0.368	6.9	6.0	3.9	ST
37962	9/18/2002	449	2903.0	9001.2	14	18	11	19	29.8	29.0	29.0	27.3	34.3	35.1	0.515	6.5	4.6	3.8	ST
37963	9/18/2002	843	2837.9	9020.8	14	27	14	28	29.1	29.0	29.0	29.3	35.6	35.7	0.546	7.3	7.2	6.0	ST
37964	9/18/2002	1024	2846.3	9018.8	14	24	13	23	29.4	28.8	28.8	33.0	35.6	35.7	0.449	6.9	5.4	5.2	ST
37965	9/18/2002	1220	2855.0	9014.3	14	20	9	19	29.4	29.2	29.0	28.8	34.3	35.3	0.828	7.2	6.9	5.2	ST
37966	9/18/2002	1452	2903.0	9001.8	14	18	9	18	29.7	29.0	29.0	30.9	33.8	34.7	0.725	6.8	5.3	3.6	ST
37967	9/18/2002	1547	2900.2	9000.2	14	26	11	22	29.9	29.1	29.1	31.7	35.2	35.6	0.475	7.9	5.5	5.1	PN
37968	9/18/2002	1721	2856.0	8955.6	13	35	15	34	30.0	29.2	28.6	30.5	35.5	36.2	0.482	6.9	6.6	5.8	ST
37969	9/18/2002	2057	2856.1	8955.5	13	35	17	35	29.8	29.1	28.3	30.8	35.5	36.2	0.418	6.6	6.1	5.7	ST
37970	9/19/2002	2	2860.0	8935.6	13	31	14	29	29.2	29.4	28.7	31.5	34.3	36.0	0.720	6.6	6.2	5.6	ST

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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37971	9/19/2002	106	2859.1	8932.4	13	26	13	24	29.2	29.0	28.2	30.3	33.2	35.5	0.835	6.6	5.8	4.4	ST
37972	9/19/2002	750	2900.3	8930.2	13	15	8	14	29.2	29.2	28.6	29.9	31.3	34.9	0.844				PN
37973	9/19/2002	848	2859.0	8932.5	13	26	11	23	28.9	29.3	28.2	31.4	34.3	35.7	0.684	6.7	6.2	5.0	ST
37974	9/19/2002	944	2900.0	8935.7	13	29	15	29	28.9	29.1	28.8	33.1	35.8	36.0	0.224	7.1	7.1	6.2	ST

Table 2. Selected environmental parameters (continued)

ALABAMA INSHORE VESSELS, 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
23001	9/17/2002	821	3012.6	8802.5	11	1	7	13	28.8	28.8	28.7	33.3	33.5	33.8		6.6	6.5	5.7	PN
23002	9/17/2002	922	3013.7	8807.9	11	1	4	8	28.9	28.8	28.5	33.6	33.9	33.9		5.7	5.7	4.7	PN
23003	9/17/2002	1013	3008.2	8807.4	11	1	8	16	29.0	28.7	28.6	32.9	34.3	34.3		7.1	6.4	5.6	PN
23004	9/17/2002	1046	3007.6	8804.2	11	1	9	18	29.1	28.6	28.7	32.1	33.6	34.5		7.0	6.3	5.3	PN
23005	9/17/2002	1121	3007.6	8806.7	11	1	9	19	29.2	28.6	28.7	32.2	33.8	34.9		7.0	6.2	5.8	PN
23006	9/17/2002	1206	3012.4	8800.2	11	1	4	8	28.9	28.8	28.7	31.2	33.6	34.6		7.0	6.6	5.3	PN
23007	9/17/2002	1346	3016.6	8800.5	11	1	2	4	28.9	28.7	28.8	25.3	28.8	29.6		7.8	8.0	6.4	PN
23008	9/17/2002	1409	3017.1	8802.1	11	1	7	14	29.1	28.8	28.9	24.1	30.7	32.9		7.8	6.0	5.6	PN
23009	9/17/2002	1435	3016.8	8804.6	11	1	2	4	29.8	29.5	28.5	24.7	25.8	29.6		7.5	7.9	7.2	PN

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	10/10/2002	1211	2930.3	8730.0	10	68	35	68	29.4	28.5	21.7	34.4	34.6	34.9		4.2	5.4	4.7	PN
17002	10/10/2002	1625	3000.1	8730.0	10	24	12	23	28.5	28.7	28.4	34.2	34.3	34.4		3.0	5.0	4.5	PN
17003	10/10/2002	2000	3000.1	8800.0	11	22	12	24	27.9	28.3	28.2	33.4	33.7	34.3		5.3	5.3	4.9	PN
17004	10/11/2002	1	2930.0	8800.0	11	44	22	44	28.2	28.5	27.9	35.1	35.2	35.7		3.5	3.1	3.1	PN
17005	10/11/2002	328	2930.0	8830.1	11	48	25	49	27.6	28.3	27.4	32.9	34.8	35.5		3.7	3.2	3.4	PN
17006	10/11/2002	935	3000.0	8830.1	11	26	13	25	27.7	28.3	28.7	28.4	31.5	34.3		2.6	4.8	4.4	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	10/12/2002	1731	2622.8	9622.6	21	83	39	78	27.7	28.1	21.7	30.2	35.9	36.5	0.295	5.2	4.8	4.2	ST
2	10/12/2002	1960	2621.0	9626.9	21	73	36	71	27.9	28.2	23.9	30.9	35.8	36.4	0.328	5.1	4.9	4.3	ST
3	10/12/2002	2259	2608.1	9622.7	21	92	48	96	28.1	28.7	20.0	31.0	36.1	36.5	0.325	5.1	4.5	3.6	ST
4	10/13/2002	47	2606.2	9623.0	21	92	45	89	28.2	28.8	20.8	31.3	36.1	36.5	0.282	5.1	4.7	3.7	ST
5	10/13/2002	624	2628.4	9631.4	21	73	37	74	27.7	28.2	21.2	31.5	35.9	36.5	0.378	5.0	4.8	3.6	ST/PN
6	10/13/2002	747	2627.4	9633.9	21	65													ST
7	10/13/2002	1025	2601.6	9631.2	21	60	30	60	28.0	29.5	27.4	32.0	36.3	36.3	0.263	5.0	4.7	4.1	PN
8	10/13/2002	1230	2601.5	9629.2	21	64	32	64	27.9	29.2	27.6	31.8	36.0	36.3	0.333	4.9	4.8	3.6	ST
9	10/13/2002	1409	2601.4	9632.2	21	59													ST
10	10/13/2002	1844	2614.0	9703.3	21	20	10	19	28.1	28.1	28.2	32.5	32.5	33.8	0.882	4.9	4.8	3.1	ST
11	10/13/2002	2043	2622.2	9701.6	21	27	14	27	27.9	28.0	28.2	31.7	32.5	34.3	0.603	5.1	5.0	3.5	ST
12	10/13/2002	2250	2624.0	9710.7	21	28	8	15	27.8	27.8	27.8	32.5	32.5	32.5	0.776	5.0	5.0	5.0	ST
13	10/14/2002	5	2625.3	9712.3	21	13	7	13	27.8	27.8	27.8	32.4	32.4	32.4	1.493	5.0	5.0	5.0	ST
14	10/14/2002	243	2601.0	9703.1	21	23	11	21	27.7	27.8	28.1	30.6	30.8	33.2	0.443	5.0	5.0	3.8	PN
15	10/14/2002	529	2600.8	9703.8	21	22													ST
16	10/14/2002	933	2630.0	9659.8	21	35	17	33	27.4	27.9	28.1	31.4	32.4	34.3	0.445	5.0	4.7	3.5	PN
17	10/14/2002	1239	2637.6	9702.1	21	34	16	32	27.5	27.5	28.1	31.7	31.7	33.0	0.780	4.9	4.9	3.9	ST
18	10/14/2002	1519	2641.8	9710.0	21	25	12	23	27.4	27.4	27.5	31.8	31.8	31.8	1.128	4.9	4.9	4.9	ST
19	10/14/2002	1712	2639.2	9713.2	21	18	10	19	27.4	27.4	27.4	32.0	32.0	32.0	0.972	4.9	4.8	4.9	ST
20	10/14/2002	1813	2638.1	9716.1	21	16	7	14	27.3	27.3	27.3	32.0	32.0	32.1	1.259	4.9	4.9	4.9	ST
21	10/14/2002	2227	2702.9	9707.2	20	31	16	31	27.4	27.5	27.8	31.3	31.6	33.8	1.123	4.5	4.3	3.0	ST
22	10/15/2002	31	2655.8	9704.3	21	35	16	32	27.1	27.2	27.8	31.6	31.9	34.1	1.033	4.9	4.8	3.1	ST
23	10/15/2002	245	2655.2	9714.8	21	24	12	23	27.4	27.4	27.4	31.2	31.2	31.3	0.830	4.8	4.8	4.8	ST
24	10/15/2002	454	2646.3	9709.6	21	29	14	28	27.2	27.2	27.3	31.3	31.4	31.5	1.079	4.9	4.9	4.9	ST
25	10/15/2002	851	2649.0	9644.7	21	73	37	74	26.9	28.2	23.2	33.8	35.9	36.4	0.302	4.9	4.8	3.2	ST
26	10/15/2002	1103	2700.1	9629.7			64	128	26.6	22.9	19.0	32.3	36.4	36.5	0.332	5.0	4.7	3.3	PN
27	10/15/2002	1418	2657.6	9641.9	21	82	40	80	26.8	28.0	22.1	33.0	35.9	36.4	0.340	4.9	4.5	3.7	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	10/15/2002	1837	2659.5	9700.1	21	41	20	39	27.2	27.2	27.8	33.9	33.9	34.7	0.812	4.7	4.7	3.7	ST/PN
29	10/15/2002	2146	2706.1	9657.0	20	45	21	42	26.9	27.5	27.9	32.9	34.0	35.4	0.745	4.8	4.3	3.5	ST
30	10/15/2002	2260	2705.6	9654.3	20	51	16	31	27.0	27.3	27.3	33.4	33.7	34.0	0.731	4.8	4.6	4.5	ST
31	10/16/2002	139	2659.2	9707.3	21	31	15	31	27.1	27.3	27.3	33.5	33.7	34.0	0.717	4.8	4.6	4.5	ST
32	10/16/2002	401	2707.9	9705.0	20	33	15	30	26.6	27.3	27.3	31.9	33.7	34.6	0.859	4.7	4.4	4.6	ST
33	10/16/2002	535	2707.8	9702.3	20	37	20	39	26.8	27.4	27.9	33.9	34.8	35.5	0.799	4.8	4.6	3.5	ST
34	10/16/2002	703	2706.9	9659.8	20	40	24	47	27.1	27.3	27.9	33.9	34.5	35.7	0.873	4.6	4.6	3.6	ST
35	10/16/2002	821	2706.9	9657.4	20	44	22	43	26.7	27.4	27.9	34.2	35.0	35.6	0.622	4.8	4.6	3.6	ST
36	10/16/2002	944	2705.6	9656.9	20	46													ST
37	10/16/2002	1105	2704.4	9654.3	20	52													ST
38	10/16/2002	1331	2712.3	9700.7	20	37	18	35	27.0	27.0	27.1	34.3	34.3	34.4	0.552	4.7	4.7	4.7	ST
39	10/16/2002	1545	2714.6	9706.0	20	30	14	28	27.1	27.1	27.3	33.7	33.9	34.2	0.699	4.5	4.5	4.5	ST
40	10/16/2002	1843	2704.7	9721.5	20	12	7	13	26.4	26.5	26.3	30.3	30.4	30.5	1.162	4.3	5.3	5.2	ST
41	10/17/2002	7	2706.3	9721.4	20	11	7	13	26.2	26.0	26.1	30.0	30.1	30.3	6.986	5.6	5.4	5.2	ST
42	10/17/2002	116	2707.1	9721.5	20	11	7	13	26.1	26.0	26.1	30.1	30.1	30.3	3.722	5.6	5.4	5.2	ST
43	10/17/2002	240	2712.3	9718.8	20	14	7	13	26.3	26.3	26.4	30.2	30.2	30.4	6.365	5.4	5.5	5.2	ST
44	10/17/2002	901	2721.0	9633.7	20	82	40	80	27.1	28.2	21.6	34.9	36.1	36.5	1.078	5.1	5.1	4.2	ST/PN
45	10/17/2002	1333	2746.1	9640.6	20	33	15	30	26.8	26.8	27.9	34.6	34.6	35.7	1.351	5.1	5.1	4.6	ST
46	10/17/2002	1604	2729.3	9659.7	20	29	14	28	26.6	26.5	27.8	33.1	33.1	35.7	1.425	5.2	5.2	3.8	PN
47	10/17/2002	1959	2747.1	9702.6	20	11	7	13	25.6	26.0	26.0	30.7	31.8	31.8	3.037	5.9	5.5	5.4	ST
48	10/18/2002	4	2749.5	9657.4	20	16	7	14	25.8	25.7	25.8	31.5	31.5	31.7	3.755	5.5	5.5	5.3	ST
49	10/18/2002	217	2737.4	9703.4	20	20	11	22	26.0	26.0	26.4	32.3	32.3	32.3	3.855	5.3	5.3	4.8	ST
50	10/18/2002	426	2733.0	9707.8	20	18	9	18	25.8	25.9	26.4	31.3	31.5	32.3	4.642	5.6	5.5	4.9	ST
51	10/18/2002	700	2737.3	9652.2	20	30	15	29	26.2	26.2	27.1	32.8	32.8	34.8	3.201	5.3	5.3	4.8	ST
52	10/18/2002	943	2751.8	9642.8	20	25	13	26	25.9	25.9	27.0	31.7	31.7	34.6	3.326	5.4	5.4	4.8	ST
53	10/18/2002	1236	2753.6	9640.4	20	25	12	23	25.9	25.9	27.0	31.8	31.8	34.3	3.048	5.4	5.4	4.7	ST
54	10/18/2002	1444	2755.2	9643.7	20	22	11	22	25.8	25.8	25.9	31.9	31.8	31.7	2.851	5.4	5.3	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
55	10/18/2002	1633	2759.2	9642.0	20	20	10	20	25.8	25.8	25.8	31.5	31.5	30.9	3.323	5.5	5.5	5.3	ST
56	10/18/2002	2021	2806.1	9628.4	19	23	12	23	25.7	25.7	27.0	31.2	31.3	34.4	4.503	5.6	5.6	4.1	ST
57	10/19/2002	27	2803.5	9647.9	19	12	6	11	25.1	25.1	25.1	30.4	30.4	30.4	5.572	5.6	5.6	5.6	ST
58	10/19/2002	522	2813.3	9627.9	19	15	8	15	25.4	25.4	25.4	30.9	30.9	30.5	2.225	5.5	5.5	5.2	ST
59	10/19/2002	807	2814.8	9617.1	19	22	11	22	25.3	25.3	26.9	30.8	30.9	34.0	1.527	5.5	5.5	4.4	ST
60	10/19/2002	939	2813.4	9615.6	19	24													ST
61	10/19/2002	1055	2811.5	9613.2	19	24	12	24	25.3	25.9	27.9	30.9	32.4	35.3	1.445	4.7	4.4	3.7	ST
62	10/19/2002	1133	2810.7	9612.2	19	26	14	27	25.8	26.4	27.0	33.2	34.0	35.5	0.712	5.5	5.5	5.1	ST
63	10/19/2002	1615	2808.8	9605.6	19	29	16	32	26.0	27.1	27.1	33.4	35.5	35.7	0.484	4.9	4.6	4.3	ST
64	10/19/2002	1919	2826.6	9614.0	19	11	7	13	25.3	24.9	24.9	29.8	29.8	29.6	5.938	5.8	5.7	5.4	ST
65	10/19/2002	2226	2826.3	9559.8	19	19	9	18	25.2	26.3	26.7	30.1	33.9	34.7	5.608	6.0	5.6	5.3	ST/PN
66	10/20/2002	137	2811.9	9601.5	19	27	13	26	26.2	26.7	26.8	33.8	35.2	35.3	0.877	5.6	5.4	5.3	ST
67	10/20/2002	322	2808.1	9607.5	19	30	14	28	25.3	27.0	27.1	31.1	35.5	35.6	0.726	5.8	5.5	5.2	ST
68	10/20/2002	553	2759.4	9630.0	20	28	13	26	25.5	26.0	27.5	31.5	32.8	35.2	1.363	5.8	5.6	4.4	PN
69	10/20/2002	936	2747.3	9621.7	20	55	27	54	26.8	27.2	27.3	35.1	35.5	36.2	0.436	5.4	5.4	4.8	ST
70	10/20/2002	1058	2745.7	9619.5	20	60													ST
71	10/20/2002	1419	2744.7	9555.1	19	75	36	71	26.7	27.4	21.9	34.9	35.6	36.5	0.850	5.5	5.3	4.7	ST
72	10/20/2002	1615	2759.4	9559.0	20	47	23	45	25.9	27.0	27.3	33.2	35.3	35.7	0.966	5.6	5.4	5.2	PN
73	10/20/2002	1904	2808.2	9558.9	19	33	17	33	26.0	27.0	27.0	33.1	35.4	35.6	1.190	5.6	5.3	5.2	ST
74	10/20/2002	2117	2808.1	9550.5	19	37	18	36	26.7	26.9	27.2	35.0	35.2	35.6	0.906	5.5	5.4	5.1	ST
75	10/21/2002	0	2812.9	9545.2	19	33	16	32	26.5	26.6	27.0	34.9	35.0	35.5	1.104	5.5	5.5	5.2	ST
76	10/21/2002	219	2806.2	9534.3	19	46	23	46	27.1	27.2	27.2	35.6	35.6	35.7	0.940	5.3	5.3	5.3	ST
77	10/21/2002	342	2803.9	9533.0	19	49													ST
78	10/21/2002	459	2801.6	9531.6	19	52													ST
79	10/21/2002	750	2748.0	9536.5	19	73	37	73	27.3	27.3	21.8	35.6	35.6	36.5	0.378	5.3	5.3	4.6	ST
80	10/21/2002	921	2747.3	9534.2	19	84	39	77	27.3	27.3	21.3	35.6	35.6	36.5	0.426	5.4	5.4	4.5	ST
81	10/21/2002	1101	2759.4	9529.7	20	56	28	55	27.2	27.2	25.5	35.7	35.7	36.2	1.465	5.3	5.3	4.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
82	10/21/2002	1323	2800.6	9525.5	19	56													ST
83	10/21/2002	1441	2757.9	9524.1	19	62													ST
84	10/21/2002	1754	2818.7	9523.8	19	35	17	34	26.8	26.8	26.8	35.4	35.5	35.5	1.829	5.3	5.4	5.3	ST
85	10/21/2002	2020	2812.4	9516.6	19	46													ST
86	10/21/2002	2141	2810.0	9515.8	19	47													ST
87	10/21/2002	2257	2807.6	9514.8	19	51													ST
88	10/22/2002	203	2757.5	9522.3	19	65	34	67	27.3	27.2	22.0	35.6	35.7	36.4	0.919	5.4	5.2	4.3	ST
89	10/22/2002	429	2800.9	9526.4	19	55	27	54	27.2	27.2	25.1	35.7	35.7	36.4	0.457	5.3	5.3	4.1	ST
90	10/22/2002	548	2759.0	9524.5	19	59													ST
92	10/22/2002	1011	2812.9	9526.5	19	40	20	40	27.0	27.0	27.0	35.6	35.6	35.6	1.328	5.3	5.3	5.3	ST
93	10/22/2002	1130	2815.3	9527.3	19	37													ST
94	10/22/2002	1508	2821.2	9506.0	19	35	18	35	26.8	26.8	26.8	35.4	35.4	35.5	1.201	5.4	5.4	5.3	ST
95	10/22/2002	1756	2830.6	9518.3	19	29	15	29	26.2	26.3	26.3	34.5	34.6	34.7	0.949	5.4	5.4	5.4	ST
96	10/22/2002	1949	2836.4	9519.2	19	25	12	24	25.0	25.6	25.8	30.1	32.6	32.1	4.182	5.4	5.5	4.5	ST
97	10/22/2002	2116	2829.6	9528.9	19	26	14	27	25.9	26.1	26.2	33.7	34.1	34.2	1.797	5.5	5.5	5.4	PN
98	10/23/2002	0	2832.0	9533.9	19	23	12	23	25.0	25.2	25.7	30.6	31.0	32.8	4.067	5.7	5.7	5.0	ST
99	10/23/2002	204	2834.9	9529.8	19	20	10	20	24.9	24.9	25.6	30.0	30.2	32.7	1.975	5.5	5.5	5.5	ST
100	10/23/2002	311	2837.2	9532.9	19	19													ST
101	10/23/2002	544	2846.0	9531.7	19	9	6	11	23.9	23.9	23.9	27.8	27.9	27.9	2.689	5.8	5.8	5.8	ST
102	10/23/2002	1035	2832.2	9502.7	19	31	16	32	26.3	26.3	26.3	34.8	34.8	34.8	3.509	5.4	5.4	5.6	ST/PN
103	10/23/2002	1531	2824.5	9437.6	18	40	20	40	26.5	26.6	26.8	34.8	34.9	35.2	2.197	5.4	5.4	5.0	ST
104	10/23/2002	1653	2822.0	9437.0	18	42													ST
105	10/23/2002	1809	2819.7	9436.3	18	43													ST/PN
106	10/23/2002	2232	2803.2	9422.5	18	66	30	59	26.8	26.9	23.8	35.6	35.9	36.4	1.008	5.4	5.1	5.0	ST
107	10/23/2002	2322	2759.7	9422.2	18	84	47	94	26.9	26.7	19.5	35.7	36.0	36.4	1.364	5.4	5.5	3.7	ST
108	10/24/2002	310	2758.7	9428.2	18	92	56	111	26.8	24.3	18.0	35.9	36.4	35.0	9.425	5.4	5.1	3.3	ST/PN
109	10/24/2002	715	2759.5	9459.1	19	85	43	85	26.8	26.9	19.8	35.9	36.0	36.4	1.352	5.4	5.4	3.8	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
110	10/24/2002	1614	2755.1	9401.5	18	92	45	90	26.7	27.1	21.0	35.4	35.9	36.4	0.552	5.4	5.3	3.8	ST/PN
111	10/24/2002	2227	2830.3	9358.1	17	41	20	39	26.3	26.5	27.2	34.8	35.0	35.8	1.199	5.4	5.3	4.4	ST
112	10/25/2002	205	2826.7	9419.3	18	41	20	40	26.5	26.7	26.8	35.2	35.3	35.5	1.172	5.5	5.4	5.2	ST
113	10/25/2002	321	2824.2	9418.3	18	44													ST
114	10/27/2002	2203	2900.3	9508.1	19	13													ST
115	10/27/2002	2314	2857.5	9509.5	19	15	9	17	23.6	23.6	24.3	24.8	29.0	16.5	3.872	6.5	6.1	4.6	ST
116	10/28/2002	46	2900.6	9459.2	18	18	9	17	23.5	24.0	24.0	25.5	30.5	30.5	1.480	6.2	5.8	5.7	PN
117	10/28/2002	602	2914.3	9442.1	18	13	7	13	23.1	23.4	23.5	26.0	28.1	27.2	2.538	5.9	5.9	5.1	ST
118	10/28/2002	840	2901.2	9434.9	18	17	9	17	25.0	24.9	24.9	31.8	31.8	32.0	2.123	5.9	5.9	5.8	ST
119	10/28/2002	910	2900.5	9429.9	18	18	10	19	25.0	25.0	25.0	31.8	31.9	31.8	1.652	5.9	5.9	5.5	PN
120	10/28/2002	1241	2853.2	9429.6	18	17	9	17	25.2	25.2	25.6	32.5	32.6	33.6	2.101	5.8	5.7	5.2	ST
121	10/28/2002	1346	2851.5	9430.7	18	20	10	20	25.1	25.2	25.6	32.6	32.6	33.5	2.808	5.8	5.8	5.2	ST
122	10/28/2002	1712	2845.1	9406.0	18	27	13	26	25.7	25.8	26.0	33.9	34.0	34.4	3.053	5.6	5.6	5.5	ST
123	10/28/2002	2005	2839.4	9349.2	17	29	15	29	25.9	25.9	26.5	34.0	34.1	35.4	1.123	5.7	5.7	5.4	ST
124	10/28/2002	2220	2836.8	9338.5	17	34	17	33	26.2	26.7	26.8	34.5	35.5	35.6	0.714	5.6	5.5	5.3	ST
125	10/29/2002	107	2841.5	9342.2	17	26	12	24	25.9	25.9	26.8	34.0	34.1	35.6	1.944	5.7	5.6	4.9	ST
126	10/29/2002	224	2838.8	9343.7	17	31	15	30	25.9	26.0	26.7	34.1	34.3	35.6	0.901	5.7	5.6	5.3	ST
127	10/29/2002	526	2835.5	9403.0	18	35	16	32	26.1	26.1	27.0	34.6	34.6	35.8	0.845	5.6	5.6	4.4	ST
128	10/29/2002	832	2854.4	9355.0	17	24	12	24	25.5	25.6	25.9	33.5	33.6	34.1	1.997	4.9	4.3	3.9	ST
129	10/29/2002	1024	2859.9	9400.1	17	20	10	20	25.4	25.3	25.5	33.2	33.2	33.4	2.448	5.6	5.6	5.4	PN
130	10/29/2002	1238	2858.7	9356.7	17	21	10	20	25.5	25.5	25.5	33.3	33.3	33.4	1.196	4.9	4.6	4.0	ST
131	10/29/2002	1837	2933.3	9413.6	18	10	6	11	23.3	23.3	23.2	23.0	26.7	27.0	4.624	6.2	6.0	5.2	ST
132	10/30/2002	328	2929.4	9359.2	17	13	6	11	23.7	23.7	23.8	25.0	28.1	28.4	6.477	6.3	6.1	5.9	PN
133	10/30/2002	630	2930.2	9331.3	17	11	5	10	23.9	23.9	24.1	28.1	28.1	28.3	4.830	5.8	5.8	5.5	PN
134	10/30/2002	1001	2923.2	9319.7	17	10	7	13	24.0	24.3	24.7	28.4	29.2	30.1	2.953	5.8	5.7	4.6	ST
135	10/30/2002	1142	2922.7	9309.4	17	15	8	16	23.6	23.8	25.9	27.1	28.6	32.8	5.243	5.7	4.8	2.9	ST
136	10/30/2002	1542	2920.6	9333.5	17	12	6	12	24.6	24.6	24.9	30.0	30.0	30.6	1.881	5.6	5.6	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
137	10/30/2002	1831	2923.0	9354.8	17	9	6	11	24.3	24.3	24.2	29.0	29.0	29.0	6.107	5.8	5.8	5.7	ST
138	10/30/2002	2214	2900.5	9329.1	17	24	11	21	25.6	25.6	25.6	32.6	32.7	33.0	2.460	5.6	5.6	5.2	PN
139	10/31/2002	147	2845.6	9324.5	17	28	14	27	25.8	26.4	27.3	33.6	34.5	35.7	2.796	5.6	5.4	4.3	ST
140	10/31/2002	401	2840.3	9319.5	17	33	16	32	26.1	26.4	26.8	34.3	34.8	35.6	1.909	5.5	5.5	5.1	ST
141	10/31/2002	716	2837.0	9334.5	17	35	18	35	26.2	26.4	26.8	35.1	35.3	35.6	0.729	5.5	5.5	5.1	ST
142	10/31/2002	909	2828.3	9331.2	17	45	23	46	26.3	26.4	25.8	35.2	35.2	35.9	0.819	5.4	5.5	3.8	ST
143	10/31/2002	1030	2825.9	9331.7	17	50													ST
144	10/31/2002	1146	2823.2	9331.9	17	53													ST
145	10/31/2002	1445	2821.0	9319.2	17	56	27	53	26.3	26.4	23.3	35.0	35.2	36.4	0.960	5.4	5.5	3.5	ST
146	10/31/2002	1627	2816.4	9316.2	17	56													ST
147	10/31/2002	1751	2813.5	9316.0	17	61													ST
148	10/31/2002	2001	2807.0	9309.2	17	83	41	82	26.5	27.1	19.3	35.4	36.1	36.4	0.511	5.5	5.4	3.5	ST
149	11/1/2002	43	2807.2	9330.1	17	72	36	71	26.7	26.7	21.1	35.6	35.6	36.4	1.212	5.4	5.4	3.8	ST/PN
150	11/1/2002	438	2820.2	9319.1	17	57	28	55	26.3	26.3	22.5	35.0	35.0	36.4	0.477	5.5	5.5	3.4	ST
151	11/1/2002	605	2816.5	9316.2	17	57													ST
152	11/1/2002	732	2814.0	9316.1	17	60													ST
153	11/1/2002	1059	2832.9	9306.4	17	42													ST
154	11/1/2002	1211	2830.7	9305.1	17	44	23	45	26.2	26.3	25.9	35.2	35.2	36.1	0.936	5.4	5.5	4.4	ST/PN
155	11/1/2002	1546	2836.5	9256.4	16	33	18	35	26.1	26.1	27.1	34.8	34.8	35.7	0.939	5.4	5.5	4.1	ST
156	11/1/2002	1758	2847.6	9254.9	16	28	13	25	25.5	25.5	25.5	34.0	34.1	34.1	1.908	5.5	5.6	5.6	ST
157	11/1/2002	2006	2848.6	9305.7	17	27	14	27	25.9	25.9	25.9	34.6	34.6	34.6	1.208	5.3	5.3	5.3	ST
158	11/1/2002	2119	2850.5	9305.8	17	26	12	23	25.7	25.7	25.7	34.4	34.4	34.4	5.540	5.4	5.4	5.4	ST
159	11/1/2002	2230	2853.4	9304.8	17	22	12	23	25.6	25.6	25.6	34.3	34.3	34.3	3.896	5.5	5.6	5.5	ST/PN
160	11/2/2002	212	2908.2	9257.2	16	21	10	19	24.9	24.9	24.9	33.3	33.3	33.3	2.604	5.6	5.6	5.6	ST
161	11/2/2002	712	2932.2	9259.0	16	13	6	11	23.1	23.1	23.5	29.6	29.7	30.6	5.406	6.1	6.0	6.0	ST/PN
162	11/2/2002	825	2934.8	9259.3	16	12													ST
163	11/2/2002	1142	2932.1	9241.6	16	10	5	10	21.9	22.4	24.4	21.4	23.4	30.1	9.271	6.4	6.4	3.8	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
164	11/2/2002	1250	2932.3	9242.1	16	10	5	10	21.9	22.0	24.3	21.9	22.3	29.9	9.113	6.3	6.3	4.3	ST
165	11/2/2002	1625	2915.0	9233.4	16	16	8	15	23.9	23.9	24.0	31.9	31.9	31.9	4.721	5.7	5.7	5.7	ST
166	11/2/2002	1907	2908.2	9225.9	16	18	10	19	24.7	24.7	24.7	33.3	33.4	33.3	4.168	5.6	5.6	5.6	ST
167	11/2/2002	2128	2908.3	9219.9	16	14	8	15	24.4	24.4	24.4	32.4	32.4	32.4	1.059	5.5	5.5	5.6	ST
168	11/2/2002	2343	2908.8	9228.0	16	19	10	19	24.8	24.8	24.8	33.7	33.7	33.8	4.985	5.5	5.5	5.6	ST/PN
169	11/3/2002	431	2902.4	9206.7	16	19	10	19	24.7	24.7	24.7	32.6	32.6	32.6	2.260	5.8	5.8	5.8	ST
170	11/3/2002	625	2858.5	9215.2	16	23	12	24	24.8	24.9	25.0	33.4	33.4	33.7	3.710	5.9	5.9	5.8	ST
171	11/3/2002	942	2851.1	9230.9	16	28	15	30	25.3	25.3	25.3	35.0	35.0	33.9	1.133	5.7	5.7	5.5	ST
172	11/3/2002	1246	2850.2	9222.1	16	32	16	32	25.4	25.4	25.4	34.9	34.9	30.7	2.046	5.7	5.7	5.0	ST
173	11/3/2002	1537	2831.2	9230.5	16	48	23	46	26.1	26.1	26.2	35.5	35.5	35.7	0.934	5.6	5.6	4.7	PN
174	11/3/2002	1907	2835.8	9250.3	16	37	19	38	25.7	25.8	25.8	35.1	35.1	35.2	2.032	5.6	5.6	5.6	ST
175	11/3/2002	2328	2814.2	9300.5	17	64	32	63	26.4	26.6	23.2	35.5	35.9	36.4	2.433	5.6	5.3	3.5	ST/PN
176	11/4/2002	44	2811.6	9300.8	17	70													ST
177	11/4/2002	329	2803.5	9251.5	16	92	44	87	26.3	26.3	20.2	35.9	36.0	36.5	1.128	5.6	5.7	3.9	ST
178	11/4/2002	459	2800.9	9250.3	16	105													ST
179	11/4/2002	701	2807.0	9252.5	16	82	41	82	26.3	26.3	20.3	35.9	36.0	36.5	0.969	5.6	5.7	3.8	ST
180	11/4/2002	824	2804.5	9252.1	16	89													ST
181	11/4/2002	1242	2804.9	9238.9	16	92	46	92	26.5	26.3	19.4	35.8	35.9	36.4	1.377	5.5	5.6	3.6	ST/PN
182	11/4/2002	1612	2810.3	9220.4	16	74	42	83	26.4	26.3	20.8	36.1	36.1	36.4	0.934	5.6	5.6	3.8	ST
183	11/4/2002	1830	2811.6	9212.6	16	72													ST
184	11/4/2002	1949	2814.2	9211.8	16	68	33	65	26.6	26.6	23.0	35.9	35.9	36.4	1.012	5.5	5.6	3.8	ST
185	11/4/2002	2221	2826.9	9204.3	16	56	25	50	26.0	26.0	25.9	35.4	35.7	36.1	1.874	5.6	5.5	4.2	ST
186	11/5/2002	159	2818.8	9156.3	15	64	32	63	26.1	26.3	24.4	35.7	35.8	36.3	1.023	5.6	5.6	3.6	ST
187	11/5/2002	321	2816.1	9156.0	15	68													ST
188	11/5/2002	439	2813.5	9156.0	15	72													ST
189	11/5/2002	622	2829.6	9200.3	16	50	25	50	26.2	26.2	26.0	35.7	35.8	35.9	1.604	5.6	5.6	5.1	PN
190	11/5/2002	859	2837.6	9202.6	16	41	20	40	25.7	26.0	26.1	35.4	35.7	36.0	1.988	5.6	5.3	4.7	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
191	11/5/2002	1521	2904.2	9150.6	15	13	7	13	23.8	23.8	24.0	30.3	30.4	30.0	2.251	5.9	5.8	5.2	ST/PN
192	11/5/2002	1915	2859.7	9136.0	15	13	7	13	23.7	23.7	24.2	30.2	30.2	30.7	5.330	5.9	5.9	5.3	ST/PN
193	11/5/2002	2014	2855.8	9135.1	15	16	9	17	24.5	24.5	25.0	31.9	31.9	32.8	1.525	5.8	5.8	5.6	ST
194	11/5/2002	2230	2851.4	9135.6	15	18	10	20	24.8	24.8	24.9	32.4	32.5	32.8	1.918	5.7	5.8	5.6	ST
195	11/5/2002	2308	2850.0	9137.1	15	23	12	23	24.8	25.3	26.0	32.7	33.8	35.3	3.837	5.7	5.6	5.6	ST
196	11/6/2002	150	2854.1	9141.6	15	21	10	19	24.6	24.6	25.3	32.6	32.6	33.7	3.019	5.7	5.7	5.7	ST
197	11/6/2002	337	2856.2	9141.7	15	19	10	19	23.7	24.2	25.2	31.1	31.9	30.9	4.196	5.8	5.8	5.1	ST
198	11/6/2002	655	2849.2	9121.3	15	15	7	14	24.2	24.2	24.9	31.8	31.9	33.0	1.495	5.7	5.7	5.5	ST
199	11/6/2002	847	2842.9	9125.5	15	24	12	23	24.7	24.8	26.0	33.2	33.3	35.4	2.297	5.6	5.6	5.5	ST
201	11/6/2002	1542	2850.0	9121.7	15	14	6	12	23.5	23.5	25.9	30.8	30.8	34.6	1.960	5.6	5.6	5.4	ST
202	11/6/2002	1827	2839.8	9125.2	15	27	14	28	24.7	25.0	26.0	33.6	34.1	35.7	2.043	5.6	5.6	5.6	ST
203	11/6/2002	2125	2820.2	9125.6	15	65													ST
204	11/6/2002	2251	2817.7	9126.1	15	70	37	74	25.8	25.9	20.7	35.9	35.9	36.5	1.813	5.5	5.6	3.6	ST
205	11/7/2002	208	2816.3	9113.5	15	73	36	72	25.5	25.9	21.1	35.5	35.9	36.5	1.751	5.6	5.5	3.7	ST
206	11/7/2002	334	2813.7	9112.5	15	81													ST
207	11/7/2002	724	2825.4	9130.3	15	55	28	56	25.5	25.6	24.6	35.7	35.8	36.2	0.970	5.6	5.5	4.6	ST
207	11/7/2002	724	2825.4	9130.3	15	55	28	56	25.5	25.6	24.6	35.7	35.8	36.2	0.970	5.6	5.5	4.6	ST
208	11/7/2002	852	2828.2	9130.5	15	50													ST
209	11/7/2002	1248	2827.9	9109.4	15	40	21	41	24.8	25.0	26.1	34.4	34.7	34.8	2.934	5.7	5.7	5.4	ST
210	11/7/2002	1523	2834.0	9106.5	15	28	14	28	24.3	24.3	26.1	33.4	33.4	35.6	1.646	5.6	5.6	5.2	ST
211	11/7/2002	1709	2832.5	9103.6	15	29	15	29	24.5	24.5	26.1	33.5	33.5	35.6	2.769	5.7	5.7	5.4	ST/PN
212	11/7/2002	2019	2836.2	9043.3	14	19	9	17	24.6	24.8	25.3	32.4	32.9	33.9	2.599	5.8	5.8	5.7	ST
213	11/7/2002	2203	2829.0	9046.7	14	35	17	34	25.0	24.9	25.8	33.5	33.8	35.7	2.909	5.8	5.7	5.3	ST
214	11/8/2002	11	2828.0	9100.3	15	37	18	35	24.7	24.9	25.9	34.0	34.4	35.9	3.353	5.8	5.8	5.2	ST
215	11/8/2002	146	2829.4	9101.5	15	35	18	36	24.7	24.9	25.8	34.0	34.4	35.9	3.655	5.8	5.8	4.9	ST
216	11/8/2002	256	2832.1	9104.7	15	31	16	32	24.3	24.5	26.1	33.4	33.6	35.7	3.825	5.7	5.8	5.3	ST
217	11/8/2002	422	2837.1	9109.4	15	24	12	24	24.0	24.0	25.9	33.0	33.0	35.2	1.355	5.6	5.7	5.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
218	11/8/2002	755	2851.2	9048.4	14	15	8	15	23.7	23.7	23.7	31.7	31.7	31.7	2.800	5.9	5.9	5.9	ST
219	11/8/2002	1157	2854.1	9016.1	14	20	9	18	23.6	23.6	24.2	31.0	31.0	30.8	4.128	5.8	5.8	5.1	ST
220	11/8/2002	1411	2855.3	9024.2	14	16	9	17	23.4	23.4	24.1	30.7	30.7	30.3	3.846	5.6	5.6	5.0	ST
221	11/8/2002	1918	2833.8	9031.6	14	31	16	31	24.9	24.9	26.1	34.0	34.1	36.1	1.602	5.8	5.7	5.2	ST/PN
222	11/8/2002	2038	2833.8	9028.8	14	33	16	32	24.8	24.8	26.1	34.0	34.2	36.1	2.258	5.8	5.8	5.3	ST
223	11/8/2002	2244	2827.2	9013.6	14	55	29	58	25.5	26.0	21.6	35.4	35.9	36.4	1.436	5.6	5.5	4.2	ST
224	11/9/2002	121	2817.1	9009.5	14	92	44	88	24.9	26.1	19.8	34.5	36.1	36.5	2.799	5.8	5.6	3.7	ST
225	11/9/2002	504	2830.6	9020.7	14	45	23	46	25.1	25.2	24.2	35.2	35.3	36.3	0.771	5.6	5.6	4.1	ST
226	11/9/2002	712	2834.1	9028.8	14	33	16	32	24.7	25.3	26.1	34.0	34.8	36.1	1.790	5.7	5.5	5.2	ST
227	11/9/2002	824	2836.4	9026.6	14	29	15	30	24.6	24.8	26.1	33.9	34.0	36.0	1.609	5.7	5.7	5.0	ST
228	11/9/2002	1149	2853.4	8958.9	13	35	19	38	23.8	24.9	22.9	30.8	33.3	36.4	2.066	5.8	5.8	3.9	ST/PN
229	11/9/2002	1448	2842.3	9005.8	14	46	23	45	24.7	24.8	21.3	34.1	34.2	36.5	2.494	5.7	5.8	4.0	ST
230	11/9/2002	1656	2842.1	8952.1	13	96	61	122	24.6	23.7	16.0	33.4	36.5	36.1	2.462	5.8	5.5	3.5	ST
231	11/9/2002	1857	2844.4	8946.4	13	81	40	80	24.6	26.1	16.7	32.7	35.8	36.2	0.946	5.7	5.4	3.5	ST
232	11/9/2002	2047	2844.1	8943.4	13	83	46	91	24.3	26.0	17.3	30.5	35.9	36.3	4.517	5.7	5.7	3.5	ST
233	11/9/2002	2321	2846.1	8939.1	13	81	40	80	24.2	26.3	19.4	30.5	35.8	36.5	3.073	5.8	5.4	3.2	ST
234	11/10/2002	221	2854.6	8942.6	13	56	27	54	24.2	26.0	21.5	32.7	35.3	36.5	1.191	5.8	5.6	3.0	ST
235	11/10/2002	517	2905.6	8942.8	13	26	12	24	23.5	23.6	24.8	30.0	30.1	32.3	1.041	5.9	5.9	4.6	ST
236	11/10/2002	722	2906.9	8931.9	13	11	6	11	23.2	23.2	24.5	29.8	29.8	32.3	2.295	5.9	5.9	3.7	ST
237	11/10/2002	1218	2901.0	8936.1	13	24	12	23	23.9	23.8	25.1	30.5	30.5	32.7	1.658	5.7	5.7	4.5	ST
238	11/10/2002	1411	2858.0	8932.2	13	40	17	33	23.8	24.4	26.1	30.4	31.6	32.2	2.770	5.8	5.2	3.0	ST
239	11/10/2002	1907	2900.5	8858.4	11	82	49	98	23.5	21.4	18.5	25.0	36.5	36.4	5.269	6.0	4.3	3.4	ST/PN
240	11/10/2002	2240	2906.7	8857.2	11	33	14	27	23.5	25.3	24.0	26.8	34.2	35.8	8.501	5.8	5.3	3.7	ST
242	11/11/2002	232	2911.1	8855.4	11	32	16	31	22.2	25.4	24.5	24.7	34.5	35.4	1.700	6.2	5.4	3.0	ST
243	11/14/2002	640	2906.4	8858.0	11	25	10	20	20.3	23.6	23.9	23.8	32.2	33.0	2.828	6.0	5.4	5.2	ST
244	11/14/2002	805	2902.5	8854.7	11	94	56	111	22.2	21.3	17.5	30.2	36.5	36.3	2.326	5.8	3.7	3.3	ST
245	11/14/2002	1139	2859.4	8859.5	11	83	36	72	21.4	25.8	20.5	28.8	35.7	36.5	2.597	5.9	4.5	3.8	ST

Table 2. Selected environmental parameters (continued)

OREGON II, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
246	11/14/2002	1516	2909.7	8836.2	11	92	43	85	23.9	23.3	19.6	32.4	36.4	36.5	1.521	5.5	3.8	3.6	ST
247	11/14/2002	1720	2912.0	8830.1	11	135	61	121	24.0	22.4	17.8	32.3	36.5	36.4	1.645	5.5	4.7	3.4	PN
248	11/14/2002	2142	2913.7	8759.7		316	101	201	25.2	19.2	14.8	35.4	36.5	36.0	0.598	5.3	3.5	3.5	PN
249	11/15/2002	26	2917.9	8818.2	11	72	33	66	24.7	26.4	22.7	34.4	36.0	36.4	1.829	5.4	4.9	4.4	ST
250	11/15/2002	247	2923.6	8825.4	11	54	27	53	23.4	25.7	22.2	31.8	35.2	36.4	1.755	5.8	5.1	4.0	ST
251	11/15/2002	406	2921.2	8824.0	11	59													ST
252	11/15/2002	636	2918.3	8831.6	11	65	39	78	23.7	23.7	20.3	32.2	36.3	36.5	1.144	5.6	3.7	3.8	ST
253	11/15/2002	1237	2924.0	8805.1	11	66	30	59	24.1	25.6	22.5	34.3	35.6	36.4	1.422	5.4	5.1	3.4	ST
255	11/15/2002	1641	2926.4	8802.1	11	55	25	50	24.5	24.7	24.9	35.2	35.3	35.6	0.725	5.3	5.2	4.9	ST/PN
256	11/15/2002	2115	2959.8	8759.9	10	26	13	26	22.0	22.0	23.0	33.0	33.1	34.1	2.511	5.7	5.7	5.2	PN
257	11/16/2002	28	2946.5	8812.7	11	37	19	38	24.2	24.2	25.3	34.8	34.8	35.7	2.324	5.3	5.3	4.2	ST
258	11/16/2002	254	2942.1	8815.8	11	40	20	39	24.8	25.2	25.4	34.9	35.3	35.5	1.223	5.3	5.2	4.9	ST
259	11/16/2002	410	2944.7	8815.7	11	38													ST
260	11/16/2002	632	2958.9	8812.7	11	29	15	29	22.1	23.1	23.7	33.4	34.5	34.9	1.265	5.7	5.5	5.2	ST
261	11/16/2002	817	3002.0	8811.3	11	24	12	24	21.1	22.8	23.5	30.6	33.8	34.7	3.027	6.0	5.6	5.2	ST
262	11/16/2002	1227	2957.9	8814.5	11	31	15	30	21.8	23.0	25.3	32.7	34.3	35.8	1.892	5.8	5.5	4.0	ST
263	11/16/2002	1518	3011.1	8808.8	11	13	7	13	21.3	21.3	23.9	31.3	31.4	34.2	2.201	5.4	5.3	4.1	ST
264	11/16/2002	1715	3008.6	8816.1	11	18	10	19	20.5	20.7	24.0	29.7	29.9	34.4	3.323	6.1	6.1	4.6	ST
265	11/16/2002	2312	3007.0	8759.7	10	18	10	19	22.1	22.1	22.1	33.5	33.5	33.5	4.664	5.2	5.2	5.2	ST
266	11/17/2002	201	3009.7	8815.6	11	17	8	16	20.7	20.7	24.0	31.5	31.5	34.4	2.357	6.0	6.0	4.5	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
11	10/15/2002	1252	2733.6	9603.8	20	135	67	134	27.5	23.7	18.5	35.0	36.4	36.4	3.198	5.8	6.2	3.8	PN
14	10/15/2002	2353	2744.2	9531.4	20	112	57	113	27.5	24.7	19.5	35.6	36.4	36.5	3.783	5.8	6.3	4.2	PN
30	10/18/2002	1809	2802.0	9235.9	16	109	53	106	26.2	23.4	18.5	35.9	36.4	36.4	2.554	5.8	4.2	4.0	PN
39	10/21/2002	2148	2800.7	9106.8	15	129	65	129	27.1	23.0	17.9	35.9	36.4	36.4	1.989	5.5	6.0	4.1	PN
41	10/22/2002	720	2803.3	9027.4	14	236	120	241	27.3	18.0	13.9	35.8	36.4	35.8	1.911	5.6	3.9	3.8	PN
56	10/27/2002	826	2957.2	8655.5	9	145													PN
89	10/31/2002	240	2744.7	8443.4	5	198	103	203	27.4	18.5	14.3	35.9	36.4	35.9		5.5	3.9	3.8	PN
102	11/2/2002	1641	2657.9	8428.8	5	165	85	171	27.0	20.4	16.3	36.3	36.5	36.2		5.2	4.2	3.8	PN
110	11/3/2002	1830	2632.2	8424.6	4	188	97	193	27.3	19.6	14.6	36.3	36.5	35.9		5.2	4.0	3.8	PN
136	11/10/2002	833	2501.6	8402.9	3	127	63	126	26.7	24.7	17.2	36.2	36.5	36.4		5.3	5.4	4.3	PN

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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
23001	10/22/2002	943	3008.6	8807.4	11	15	8	15	24.1	25.3	25.5	22.6	33.1	33.3		7.9	6.5	6.3	ST
23002	10/22/2002	1104	3014.6	8809.2	11	6	4	7	25.5	25.7	26.3	28.1	31.2	33.6		5.8	5.6	3.0	ST
23003	10/22/2002	1223	3009.8	8816.2	11	16	8	16	24.8	25.4	26.8	29.7	31.6	34.1		7.8	7.7	5.6	ST
23004	10/22/2002	1421	2958.9	8814.2	11	29	15	30	26.0	27.5	27.3	32.8	34.7	35.8		7.6	6.3	3.6	ST
23005	10/22/2002	1815	2958.5	8816.3	11	29	15	30	26.1	27.2	27.4	32.9	34.5	35.7		7.6	6.4	3.6	ST
23006	10/22/2002	1933	3001.8	8814.5	11	24	13	25	25.9	26.6	27.2	32.6	34.2	35.1		7.6	6.6	5.4	ST
23007	10/22/2002	2052	3009.8	8813.0	11	16	8	17	25.3	26.4	25.9	30.1	33.0	33.6		7.8	7.1	6.3	ST
23008	10/22/2002	2235	3010.8	8804.3	11	6	3	6	25.9	26.1	26.4	32.1	32.3	33.7		6.6	6.9	4.6	ST
23009	10/22/2002	2332	3007.6	8800.5	11	18	10	19	25.6	25.9	25.7	33.4	33.9	33.9		7.4	7.3	7.0	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
17001	10/18/2002	756	2921.7	8846.9	11	44	24	47	26.6	26.8	20.5	33.7	34.4	35.8		5.3	5.5	4.3	ST
17002	10/18/2002	1012	2922.0	8848.0	11	38	21	41	26.9	26.7	21.1	33.4	34.0	35.4		5.3	5.5	4.7	ST
17003	10/18/2002	1142	2922.9	8849.2	11	27	15	29	26.8	27.3	26.8	32.4	33.3	35.0		5.6	5.4	4.2	ST
17004	10/18/2002	1302	2925.6	8849.6	11	20	10	19	26.1	26.5	27.2	31.5	31.5	33.2		4.8	4.7	4.0	ST
17005	10/18/2002	1524	2930.4	8837.2	11	37	19	37	26.4	26.4	23.8	31.9	32.1	35.4		4.4	4.0	3.5	ST
17006	10/18/2002	1707	2933.8	8838.1	11	24	14	27	25.8	26.3	27.4	30.9	31.2	35.0		3.9	5.4	2.9	ST
17007	10/18/2002	1856	2929.8	8834.5	11	46	24	48	26.3	27.1	22.3	32.8	34.0	36.0		5.5	5.2	4.9	ST
17008	10/18/2002	2057	2929.4	8837.6	11	40	20	40	26.4	26.6	23.2	33.0	33.5	36.0		5.5	5.3	5.0	ST
17009	10/18/2002	2254	2928.1	8842.0	11	29	15	29	26.5	27.0	27.1	33.2	33.2	34.5		5.5	5.3	5.2	ST
17010	10/19/2002	42	2923.4	8850.3	11	26	12	23	25.2	26.7	27.2	28.2	32.1	34.3		6.1	5.6	5.3	ST
17011	10/19/2002	210	2920.3	8857.0	11	20	10	19	24.4	26.7	27.2	23.7	32.3	33.2		6.6	5.6	5.1	ST
17012	10/19/2002	348	2919.9	8852.7	11	31	16	31	24.6	27.7	24.4	23.1	33.8	35.6		6.6	4.4	4.8	ST
17013	10/19/2002	638	2938.6	8836.4	11	18	11	21	26.0	26.2	27.1	31.4	31.5	34.4		5.5	7.1	5.6	ST
17014	10/19/2002	759	2939.1	8834.9	11	22	12	22	26.0	26.2	27.2	31.2	31.4	34.7		5.5	5.5	5.1	ST
17015	10/19/2002	932	2930.0	8830.0	11	48	25	49	27.1	27.5	23.2	33.9	34.6	35.1		5.4	5.5	5.0	PN
17016	10/19/2002	1250	2950.0	8824.1	11	35	17	33	26.2	27.9	27.7	31.0	34.6	34.9		5.2	4.7	4.4	ST
17017	10/19/2002	1441	2947.9	8829.3	11	31	15	30	26.5	27.8	27.0	31.9	35.0	35.0		5.4	4.8	4.0	ST
17018	10/19/2002	1644	2956.1	8832.2	11	26	13	25	26.4	27.4	27.9	32.3	33.8	34.5		5.6	5.6	5.4	ST
17019	10/19/2002	1819	2954.4	8840.4	11	18	10	19	25.8	26.9	27.7	29.9	33.2	34.7		6.3	5.4	3.7	ST
17020	10/19/2002	2022	2960.0	8830.0	11	26	13	25	25.3	26.8	27.5	29.2	33.4	34.8		6.2	5.5	4.4	PN
17021	10/19/2002	2254	3012.3	8836.0	11	9	5	10	24.7	25.0	26.3	28.2	28.9	30.8		6.7	6.1	4.6	ST
17022	10/20/2002	30	3011.0	8841.6	11	13	6	12	25.5	25.7	25.9	29.9	30.5	31.0		5.6	5.5	4.7	ST
17023	10/20/2002	259	3003.2	8847.5	11	11	5	10	25.4	25.3	25.4	29.4	29.4	29.4		5.5	5.8	5.8	ST
17024	10/20/2002	653	2952.8	8847.5	11	9	5	9	25.4	25.8	26.2	29.6	30.3	31.6		6.0	5.8	5.6	ST
17025	10/20/2002	839	3000.6	8849.4	11	5	3	5	25.5	25.7	25.7	29.4	29.4	29.4		5.8	5.8	5.8	ST
17026	10/20/2002	1036	3006.9	8835.9	11	15	7	14	26.0	26.4	26.7	29.9	29.9	31.1		6.1	5.8	5.2	ST
17027	10/20/2002	1226	3012.4	8842.2	11	11	6	11	26.5	26.3	26.2	29.7	29.7	30.0		5.5	5.5	5.3	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
37975	12/2/2002	2028	2902.4	9009.6	14	13	7	13	19.4	19.9	20.6	30.5	30.9	31.5	2.218	8.7	8.6	7.9	ST
37976	12/2/2002	2246	2859.5	8958.4	13	26	14	26	19.7	21.1	23.6	29.3	31.8	35.2	1.133	8.8	7.9	6.2	ST
37977	12/3/2002	158	2911.6	8939.5	13	11	6	11	18.5	19.4	22.2	27.9	28.5	33.2	2.257	9.2	8.1	6.2	ST
37978	12/3/2002	426	2901.1	8938.1	13	33	17	33	18.8	23.6	23.6	27.7	35.0	36.0	2.332	9.4	6.7	7.0	ST
37979	12/3/2002	736	2859.1	8930.2	13	15	8	15	18.2	19.4	22.9	28.6	30.7	34.6	2.229	8.8	8.4	6.5	PN
37980	12/3/2002	922	2901.3	8938.6	13	33	17	33	18.6	23.6	23.6	27.7	35.0	36.0	2.373	9.2	6.7	7.0	ST
37981	12/3/2002	1109	2911.4	8939.3	13	11	5	11	18.4	19.1	22.2	27.8	28.4	33.2	3.222	9.4	8.4	6.2	ST
37982	12/3/2002	1406	2859.9	8958.6	13	26	11	23	19.3	20.6	23.3	27.9	30.6	34.9	1.846	9.6	8.9	6.7	ST
37983	12/3/2002	1536	2900.1	9000.2	14	26	11	22	19.4	20.5	23.0	28.1	30.5	34.5	3.522	9.9	8.9	7.0	PN
37984	12/3/2002	1712	2902.2	9010.5	14	13	7	14	20.2	20.2	20.4	30.4	30.5	31.3	3.504	8.7	8.1	8.4	ST
37985	12/3/2002	2025	2854.7	9030.2	14	16	6	14	19.2	19.2	19.9	29.4	29.6	30.6	6.384	8.6	8.6	8.1	ST
37986	12/4/2002	247	2855.2	9012.0	14	20	9	17	22.1	22.2	22.3	35.1	35.4	35.6	1.665	8.2	8.3	8.3	ST
37987	12/4/2002	745	2900.0	9030.0	14	9	5	10	18.6	18.6	18.7	28.4	28.4	28.4	1.339	8.2	8.2	8.3	PN
37988	12/4/2002	910	2854.4	9030.1	14	16	8	15	19.0	19.7	20.5	28.8	29.1	31.8	3.770	9.3	8.3	8.0	ST
37989	12/4/2002	1149	2856.0	9012.1	14	20	9	19	22.0	22.0	22.0	34.4	34.5	34.8	2.805	8.4	8.3	8.2	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
69001	11/6/2002	1236	2911.8	9444.2	18	13	6	13	21.5	21.5	21.5	29.2	29.2	29.7		6.7	6.5	6.5	ST
69002	11/6/2002	1258	2912.0	9445.1	18	13	6	12	21.4	21.4	22.7	28.6	28.6	28.6		6.6	6.5	5.9	ST
69003	11/6/2002	1332	2916.0	9448.1	18	9	4	9	21.8	21.9	22.3	29.5	31.0	31.1		6.3	6.4	6.4	ST
69004	11/6/2002	1536	2906.4	9447.2	18	16	8	17	21.8	22.4	21.9	29.8	30.2	31.2		6.5	6.1	6.6	ST
69005	11/6/2002	1601	2910.6	9440.7	18	16	9	17	21.8	21.8	21.8	29.5	30.2	31.3		6.8	6.5	6.5	ST
69006	11/6/2002	1633	2916.5	9438.0	18	13	7	13	21.8	21.7	21.8	29.6	30.2	31.3		6.8	6.6	6.5	ST
69007	11/6/2002	1649	2918.1	9435.5	18	13	6	13	21.9	22.1	22.2	30.4	30.7	31.0		6.5	6.3	6.2	ST
69008	11/6/2002	1726	2921.6	9433.0	18	11	6	12	21.9	22.1	22.2	30.7	30.6	31.0		6.4	6.3	6.3	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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
67001	11/5/2002	912	2607.8	9708.4	21	13	7	14	22.8	22.8	22.3	27.9	27.9	27.9		6.3	6.5	6.4	ST
67002	11/5/2002	1016	2611.2	9703.5	21	20	10	20	23.1	23.1	23.1	30.5	30.6	30.5		6.2	6.2	6.1	ST
67003	11/5/2002	1105	2612.7	9701.4	21	24	12	24	23.2	23.1	23.1	30.7	30.7	31.6		5.3	50.4	5.3	ST
67004	11/5/2002	1146	2608.2	9701.5	21	24	12	23	23.2	23.1	23.1	30.8	30.7	31.0		5.3	5.4	5.3	ST
67005	11/5/2002	1230	2602.7	9701.4	21	24	12	24	23.1	23.1	23.5	30.0	31.3	31.8		5.5	5.3	5.4	ST
67006	11/5/2002	1308	2558.2	9702.5	22	24	1	24	22.9	22.9	23.1	28.6	29.9	31.3		5.5	5.6	5.4	ST
67007	11/5/2002	1348	2557.8	9705.5	22	18	9	18	23.1	23.1	23.2	27.9	28.2	28.5		5.8	5.5	5.4	ST
67008	11/5/2002	1423	2558.3	9707.5	22	11	6	11	23.0	23.0	23.1	27.7	27.7	27.9		5.7	5.8	6.0	ST
67017	11/21/2002	800	2745.6	9704.3	20	9	5	11	20.6	20.7	20.7	29.6	34.0	34.1		7.0	6.9	7.0	ST
67018	11/21/2002	828	2744.1	9704.4	20	13	6	12	20.6	20.6	20.6	30.7	33.6	33.4		6.8	6.9	6.7	ST
67019	11/21/2002	902	2741.6	9707.2	20	11	5	11	20.6	20.7	20.6	30.9	33.9	34.2		6.9	6.9	6.8	ST
67020	11/21/2002	948	2742.1	9701.3	20	18	9	19	21.2	21.2	21.2	32.2	32.7	35.4		6.9	6.7	6.8	ST
67021	11/21/2002	1024	2743.9	9658.7	20	18	10	20	20.8	20.8	20.8	31.3	32.9	36.2		7.0	7.1	7.8	ST
67022	11/21/2002	1100	2744.1	9656.4	20	20	11	22	21.0	21.0	21.0	31.9	32.5	36.7		7.0	7.0	6.8	ST
67023	11/21/2002	1134	2744.9	9659.3	20	18	9	18	20.6	20.6	20.6	29.0	27.9	27.2		7.2	7.2	7.3	ST
67024	11/21/2002	1207	2745.2	9702.5	20	13	7	13	20.7	20.6	20.7	28.3	33.2	35.4		7.3	7.1	7.3	ST
67025	11/17/2002	928	2613.2	9706.4	21	16	9	17	22.1	22.1	22.1	32.8	32.8	33.0		6.9	6.8	6.7	ST
67026	11/17/2002	1002	2614.8	9706.5	21	16	8	17	22.2	22.1	22.1	33.0	32.9	33.0		6.2	6.4	6.2	ST
67027	11/17/2002	1044	2617.3	9701.4	21	26	13	25	22.0	22.0	20.0	32.7	32.8	32.9		6.8	6.6	6.7	ST
67028	11/17/2002	1122	2619.9	9702.3	21	22	11	23	22.2	22.9	21.9	32.6	32.7	32.8		6.6	6.6	6.7	ST
67029	11/17/2002	1159	2618.3	9705.6	21	18	9	18	22.2	22.0	22.0	32.7	32.8	32.8		6.5	6.4	6.4	ST
67030	11/17/2002	1246	2621.9	9711.6	21	11	6	11	21.8	21.5	20.5	32.9	32.9	32.9		7.9	7.4	7.5	ST
67031	11/17/2002	1328	2617.1	9709.5	21	15	7	15	22.2	21.9	21.8	32.8	33.0	33.0		7.6	7.2	7.1	ST
67032	11/17/2002	1354	2616.9	9709.5	21	15	7	14	22.1	21.8	21.8	33.0	33.0	33.0		7.7	7.3	7.1	ST

Table 2. Selected environmental parameters (continued)

TRINITY 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	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
65001	11/19/2002	1053	2921.5	9439.5	18	9	4	9	19.7	20.3	20.9	25.3	31.6	29.9		7.0	6.4	5.3	ST
65002	11/19/2002	1135	2921.5	9438.5	18	9	4	9	19.2	20.2	20.2	23.6	29.7	32.0		6.5	6.2	6.2	ST
65003	11/19/2002	1215	2922.5	9433.5	18	11	6	11	20.2	20.5	20.8	30.4	30.4	32.4		6.8	6.6	5.6	ST
65004	11/19/2002	1125	2927.5	9432.6	18	7	4	7	20.4	20.3	20.9	30.3	30.2	31.6		6.6	6.5	5.4	ST
65005	11/19/2002	1335	2923.5	9437.5	18	9	4	9	20.4	20.2	20.9	28.7	29.7	32.2		7.3	6.7	5.7	ST
65006	11/19/2002	1401	2924.5	9438.5	18	7	4	7	20.7	20.3	20.3	29.8	29.8	31.6		6.8	6.7	6.4	ST
65007	11/19/2002	1428	2925.4	9440.5	18	4	1	3	20.9	20.6	20.6	30.5	29.7	30.6		6.4	6.2	5.8	ST
65008	11/19/2002	1458	2923.5	9440.7	18	7	3	6	20.6	20.3	20.2	29.9	30.5	29.8		6.9	6.6	6.5	ST

Table 2. Selected environmental parameters (continued)

LAGUNA MADRE, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
33001	11/8/2002	717	2940.6	9356.1	17	2	1	2	19.4	19.4	19.4	19.7	19.5	19.5		6.6	6.7	6.6	ST
33002	11/8/2002	752	2940.4	9359.9	17	2	1	2	18.8	19.1	19.6	18.1	18.2	18.2		7.0	7.0	6.7	ST
33003	11/8/2002	832	2939.5	9402.2	18	4	2	4	19.9	19.8	19.8	20.0	20.0	20.1		6.6	6.7	5.7	ST
33004	11/8/2002	941	2935.5	9357.7	17	7	4	7	20.6	21.3	21.6	27.5	29.6	29.8		6.5	6.0	5.0	ST
33005	11/8/2002	1030	2933.6	9355.4	17	11	5	10	20.5	20.6	21.7	27.0	27.0	30.9		6.5	6.5	6.1	ST
33006	11/8/2002	1103	2933.5	9354.8	17	11	5	10	20.6	20.8	21.6	27.0	27.0	31.1		6.6	6.5	6.3	ST
33007	11/8/2002	1139	2935.5	9353.3	17	7	4	7	20.6	20.8	20.8	29.4	26.0	21.6		6.7	6.6	6.2	ST
33008	11/8/2002	1216	2936.5	9352.9	17	5	3	6	20.4	20.5	21.6	20.2	20.9	28.2		6.5	6.6	6.5	ST
33009	11/19/2002	829	2933.4	9351.9	17	11	6	11	19.1	19.6	19.7	23.1	27.3	28.6		6.5	6.6	6.7	ST
33010	11/19/2002	911	2932.5	9349.3	17	11	6	12	19.3	19.6	19.7	25.1	28.4	28.9		6.7	6.7	6.8	ST
33011	11/19/2002	1217	2936.5	9347.7	17	9	5	9	19.3	19.8	19.9	17.4	27.7	28.9		7.0	6.4	6.3	ST
33012	11/19/2002	1307	2936.5	9342.4	17	11	5	11	19.7	19.7	20.0	26.3	27.4	29.4		7.0	6.7	6.2	ST
33013	11/19/2002	1401	2938.5	9337.9	17	11	5	10	19.9	19.7	20.2	26.7	27.2	30.4		7.0	6.7	6.5	ST
33014	11/19/2002	1504	2943.5	9336.3	17	7	3	6	20.7	20.4	20.5	27.2	27.1	28.0		6.5	6.4	6.1	ST
33015	11/19/2002	1546	2944.5	9340.9	17	4	2	3	21.0	21.0	20.8	27.4	27.4	27.4		6.3	6.2	6.0	ST
33016	11/19/2002	1629	2942.5	9343.3	17	5	3	6	20.5	20.0	20.0	27.1	27.4	28.2		6.7	6.4	6.3	ST

Table 2. Selected environmental parameters (continued)

MATAGORDA BAY, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
32001	11/7/2002	848	2825.5	9617.5	19	9	5	9	19.6	20.5	21.8	24.6	26.8	28.0		7.2	6.7	6.4	ST
32002	11/7/2002	932	2822.5	9614.5	19	16	8	16	19.5	21.2	23.2	21.5	28.0	30.9		6.5	5.9	5.0	ST
32003	11/7/2002	1013	2824.5	9611.5	19	16	8	16	21.1	21.1	23.1	28.0	27.7	31.9		6.8	6.8	5.9	ST
32004	11/7/2002	1048	2827.5	9610.5	19	13	7	13	21.0	20.9	22.6	27.4	27.3	30.2		6.8	6.7	5.7	ST
32005	11/7/2002	1131	2827.5	9605.5	19	15	8	15	21.2	20.8	23.1	27.6	27.4	31.5		7.2	6.8	5.8	ST
32006	11/7/2002	1224	2823.5	9603.5	19	20	10	19	21.5	22.1	23.9	29.5	30.3	33.8		6.8	6.6	6.5	ST
32007	11/7/2002	1312	2821.5	9610.5	19	18	9	19	21.4	21.5	23.7	28.9	29.3	33.8		6.8	6.7	5.9	ST
32008	11/7/2002	1359	2819.5	9615.5	19	20	10	19	20.6	21.3	21.9	20.6	29.1	33.1		7.1	6.9	6.6	ST
32009	11/8/2002	1039	2800.4	9653.3	19	7	4	9	20.5	20.8	21.4	22.7	27.0	27.4		8.5	7.9	7.7	ST
32010	11/8/2002	1137	2754.0	9650.6	20	18	9	19	22.0	21.6	22.4	27.5	30.4	31.0		7.2	7.4	7.0	ST
32011	11/8/2002	1217	2753.6	9654.4	20	15	7	15	21.8	21.3	21.9	28.3	29.1	30.5		6.9	6.9	10.0	ST
32012	11/8/2002	1302	2752.2	9700.5	20	9	5	9	21.6	21.7	21.0	26.0	26.7	27.3		8.2	8.8	7.7	ST
32013	11/8/2002	1347	2747.5	9700.2	20	13	7	14	20.7	21.0	21.1	22.2	28.4	28.4		8.0	7.4	7.3	ST
32014	11/8/2002	1416	2747.1	9701.9	20	11	6	13	20.9	20.9	21.0	32.1	28.4	28.5		8.0	7.6	7.3	ST
32015	11/8/2002	1445	2748.7	9701.3	20	9	5	10	20.5	20.9	21.1	20.1	23.7	28.1		8.2	7.7	7.7	ST
32016	11/8/2002	1512	2749.1	9702.8	20	5	3	6	21.2	21.1	21.3	24.0	27.9	27.2		8.1	8.0	8.1	ST
32017	11/20/2002	1052	2811.5	9624.5	19	22	11	21	20.5	20.6	23.8	29.5	30.5	34.1		7.3	7.3	4.9	ST
32018	11/21/2002	848	2819.5	9622.5	19	11	6	11	19.5	21.7	23.6	26.5	33.3	36.0		7.5	5.2	4.9	ST
32019	11/21/2002	926	2818.5	9625.5	19	5	3	6	20.3	20.4	22.2	30.0	30.2	31.5		7.5	7.4	4.4	ST
32020	11/21/2002	1003	2817.5	9627.5	19	5	3	6	20.5	20.3	20.1	30.5	31.4	33.7		7.1	6.9	3.8	ST
32021	11/21/2002	1046	2816.5	9624.5	19	15	7	15	19.7	20.4	20.2	28.3	33.2	36.2		7.4	7.2	5.1	ST
32022	11/21/2002	1143	2812.5	9620.5	19	22	11	23	20.3	22.0	24.5	29.9	30.4	34.9		8.5	7.1	4.4	ST
32023	11/21/2002	1224	2814.5	9619.5	19	22	11	21	20.4	22.5	24.6	29.4	29.6	35.2		8.6	4.6	4.6	ST
32024	11/21/2002	1300	2815.5	9617.5	19	22	11	21	20.7	22.1	24.6	28.2	28.0	28.1		6.4	5.6	5.2	ST

Table 3. 2002 Summer Shrimp/Groundfish Survey species composition list, 381 trawl stations, for those vessels that used either a 40-ft or 20-ft trawl. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Chloroscombrus chrysurus	Atlantic bumper	64466	1320.0	185	48.6
Micropogonias undulatus	Atlantic croaker	55420	1667.0	215	56.4
Stenotomus caprinus	longspine porgy	25341	745.8	203	53.3
Peprilus burti	gulf butterfish	15922	742.5	177	46.5
Leiostomus xanthurus	spot	6506	373.0	121	31.8
Serranus atrobranchus	blackear bass	6389	61.3	114	29.9
Saurida brasiliensis	largescale lizardfish	6253	33.9	118	31.0
Cynoscion arenarius	sand seatrout	6029	195.3	164	43.0
Prionotus longispinosus	bigeye searobin	5692	89.1	155	40.7
Cynoscion nothus	silver seatrout	4614	211.5	120	31.5
Trachurus lathami	rough scad	3586	96.3	87	22.8
Upeneus parvus	dwarf goatfish	3366	87.1	115	30.2
Pristipomoides aquilonaris	wenchman	3166	205.5	95	24.9
Trichiurus lepturus	Atlantic cutlassfish	3115	122.7	139	36.5
Diplectrum bivittatum	dwarf sand perch	2746	50.5	106	27.8
Anchoa hepsetus	striped anchovy	2716	47.0	79	20.7
Lagodon rhomboides	pinfish	2441	110.2	148	38.8
Centropristis philadelphica	rock sea bass	2409	76.3	148	38.8
Syacium gunteri	shoal flounder	2326	48.2	146	38.3
Synodus foetens	inshore lizardfish	2321	215.1	184	48.3
Larimus fasciatus	banded drum	2096	65.9	38	10.0
Prionotus paralatus	Mexican searobin	1874	34.6	77	20.2
Brevoortia patronus	gulf menhaden	1607	50.1	54	14.2
Prionotus stearnsi	shortwing searobin	1554	16.5	71	18.6
Cynoscion spp.	seatrouts	1421	4.2	30	7.9
Stellifer lanceolatus	star drum	1323	18.0	51	13.4
Halieutichthys aculeatus	pancake batfish	1193	8.2	91	23.9

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Porichthys plectrodon	Atlantic midshipman	1096	18.0	98	25.7
Peprilus alepidotus	harvestfish	1058	10.8	68	17.8
Lepophidium brevibarbe	blackedge cusk-eel	1041	30.2	82	21.5
Harengula jaguana	scaled sardine	1036	40.8	63	16.5
Trichopsetta ventralis	sash flounder	987	21.7	65	17.1
Selene setapinnis	Atlantic moonfish	986	46.3	93	24.4
Anchoa mitchilli	bay anchovy	851	1.4	30	7.9
Lutjanus campechanus	red snapper	657	82.8	98	25.7
Prionotus rubio	blackwing searobin	621	38.3	43	11.3
Bollmannia communis	ragged goby	534	1.7	43	11.3
Synodus poeyi	offshore lizardfish	465	3.3	65	17.1
Steindachneria argentea	luminous hake	457	4.3	8	2.1
Etropus crossotus	fringed flounder	448	7.2	63	16.5
Syacium papillosum	dusky flounder	440	24.1	25	6.6
Opisthonema oglinum	Atlantic thread herring	428	34.1	41	10.8
Eucinostomus gula	silver jenny	369	13.2	40	10.5
Rhynchoconger flavus	yellow conger	369	24.6	43	11.3
Sphoeroides parvus	least puffer	347	2.8	58	15.2
Decapterus punctatus	round scad	339	11.0	18	4.7
Urophycis floridana	southern hake	326	22.0	54	14.2
Ariopsis felis	hardhead catfish	323	61.7	35	9.2
Bagre marinus	gafftopsail catfish	317	5.1	12	3.1
Anchoa lyolepis	dusky anchovy	316	1.0	11	2.9
Lagocephalus laevigatus	smooth puffer	297	12.1	61	16.0
Mullus auratus	red goatfish	296	17.4	23	6.0
Polydactylus octonemus	Atlantic threadfin	293	12.7	22	5.8
Scorpaena calcarata	smoothhead scorpionfish	284	3.7	26	6.8
Selar crumenophthalmus	bigeye scad	260	6.8	28	7.3
Cyclopsetta chittendeni	Mexican flounder	242	22.5	69	18.1
Lutjanus synagris	lane snapper	196	24.2	48	12.6

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Caulolatilus intermedius	anchor tilefish	182	12.9	32	8.4
Rhomboplites aurorubens	vermilion snapper	179	23.6	19	5.0
Stephanolepis hispidus	planehead filefish	174	2.6	43	11.3
Hemicaranx amblyrhynchus	bluntnose jack	169	11.2	16	4.2
Hoplunnis macrura	freckled pike-conger	164	1.8	47	12.3
Ancylopsetta dilecta	three-eye flounder	146	7.7	33	8.7
Citharichthys spilopterus	bay whiff	144	1.9	32	8.4
Ogcocephalus spp.	batfishes	144	7.2	24	6.3
Symphurus plagiusa	blackcheek tonguefish	139	2.2	39	10.2
Engyophrys senta	spiny flounder	122	0.5	27	7.1
Ancylopsetta quadrocellata	ocellated flounder	117	9.4	44	11.5
Engraulis eurystole	silver anchovy	112	1.2	5	1.3
Balistes capriscus	gray triggerfish	108	15.8	47	12.3
Menticirrhus americanus	southern kingfish	108	13.6	26	6.8
Kathetostoma albigutta	lancer stargazer	107	4.5	32	8.4
Urophycis cirrata	gulf hake	103	2.1	23	6.0
Haemulon aurolineatum	tomtate	102	5.4	11	2.9
Prionotus ophryas	bandtail searobin	99	0.6	13	3.4
Symphurus civitatium	offshore tonguefish	91	1.8	14	3.7
Prionotus tribulus	bighead searobin	87	2.7	24	6.3
Bregmaceros atlanticus	antenna codlet	83	0.1	17	4.5
Symphurus diomedianus	spottedfin tonguefish	79	2.1	20	5.2
Lepophidium jeannae	mottled cusk-eel	78	4.0	16	4.2
Prionotus roseus	bluespotted searobin	77	1.8	10	2.6
Syacium micrurum	channel flounder	76	6.0	3	0.8
Etrumeus teres	round herring	74	0.6	6	1.6
Priacanthus arenatus	bigeye	66	6.0	17	4.5
Menticirrhus littoralis	gulf kingfish	65	8.9	4	1.0
Sphoeroides dorsalis	marbled puffer	65	0.9	16	4.2
Ogcocephalus declivirostris	slantbrow batfish	63	5.3	12	3.1

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Pareques umbrosus	cubbyu	62	3.2	15	3.9
Sardinella aurita	spanish sardine	62	3.0	15	3.9
Ophidion josephi	crested cusk-eel	61	2.4	11	2.9
Sphyraena guachancho	guaguanche	61	8.8	23	6.0
Dorosoma petenense	threadfin shad	56	0.9	9	2.4
Paralichthys squamilentus	broad flounder	56	1.2	7	1.8
Caranx crysos	blue runner	51	7.9	17	4.5
Brotula barbata	bearded brotula	49	4.8	22	5.8
Sphoeroides nephelus	southern puffer	49	0.3	7	1.8
Scomberomorus maculatus	spanish mackerel	47	4.0	6	1.6
Rhizoprionodon terraenovae	Atlantic sharpnose shark	45	32.6	24	6.3
Seriola dumerili	greater amberjack	45	7.3	8	2.1
Gymnachirus texae	fringed sole	44	0.5	13	3.4
Bellator militaris	horned searobin	43	0.4	6	1.6
Neomerinthe hemingwayi	spinycheek scorpionfish	43	4.0	8	2.1
Pontinus longispinis	longspine scorpionfish	41	0.9	11	2.9
Ophidion holbrooki	bank cusk-eel	38	3.1	3	0.8
Raja texana	roundel skate	36	12.5	24	6.3
Scomberomorus cavalla	king mackerel	36	2.9	10	2.6
Pisces	fishes	35	0.4	16	4.2
Ogcocephalus parvus	roughback batfish	32	0.5	13	3.4
Antennarius radiosus	singlespot frogfish	31	0.3	15	3.9
Paralichthys lethostigma	southern flounder	29	7.6	19	5.0
Orthopristis chrysoptera	pigfish	26	2.0	6	1.6
Selene vomer	lookdown	26	0.8	11	2.9
Trachinocephalus myops	snakefish	26	1.6	6	1.6
Diplacanthopoma spp.	diplacanthopoma spp.	24	0.5	1	0.3
Diplectrum formosum	sand perch	24	2.6	8	2.1
Chaetodipterus faber	Atlantic spadefish	22	1.9	9	2.4
Apogon spp.	cardinalfishes	21	0.0	6	1.6

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Neobythites gillii	cusk-eel	21	0.1	5	1.3
Gymnothorax nigromarginatus	blackedge moray	20	2.5	9	2.4
Gymnothorax saxicola	honeycomb moray	18	1.4	11	2.9
Porogadus spp.	porogadus spp.	18	0.3	1	0.3
Decodon puellaris	red hogfish	17	2.1	6	1.6
Cyclopsetta fimbriata	spotfin flounder	16	1.7	2	0.5
Serranus phoebe	tattler	16	0.5	3	0.8
Synagrops bellus	blackmouth bass	16	0.1	3	0.8
Conger oceanicus	conger eel	15	0.9	1	0.3
Pareques iwamotoi	blackbar drum	15	4.3	5	1.3
Aluterus heudeloti	dotterel filefish	13	0.2	7	1.8
Hippocampus erectus	lined seahorse	13	0.0	7	1.8
Mustelus canis	smooth dogfish	13	10.8	10	2.6
Rhinoptera bonasus	cownose ray	13	103.0	10	2.6
Sphoeroides spengleri	bandtail puffer	13	0.2	5	1.3
Synodus intermedius	sand diver	13	0.9	3	0.8
Apogon aurolineatus	bridle cardinalfish	12	0.1	3	0.8
Gymnachirus melas	naked sole	12	0.2	7	1.8
Ogcocephalus nasutus	shortnose batfish	12	0.2	5	1.3
Seriola fasciata	lesser amberjack	12	0.7	3	0.8
Serranus spp.	sea basses	12	0.1	4	1.0
Citharichthys macrops	spotted whiff	11	0.4	6	1.6
Conodon nobilis	barred grunt	11	1.5	3	0.8
Dactylopterus volitans	flying gurnard	11	0.1	1	0.3
Narcine brasiliensis	lesser electric ray	11	5.4	5	1.3
Ogcocephalus cubifrons	polka-dot batfish	11	0.2	3	0.8
Achirus lineatus	lined sole	10	0.2	5	1.3
Pagrus pagrus	pagrus spp.	10	0.2	2	0.5
Umbrina coroides	sand drum	10	1.1	1	0.3
Bairdiella chrysoura	silver perch	9	0.5	5	1.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Etropus cyclosquamus	shelf flounder	9	0.1	4	1.0
Fistularia petimba	red cornetfish	9	0.7	5	1.3
Pronotogrammus martinicensis	roughtongue bass	8	0.0	1	0.3
Lonchopisthus micrognathus	swordtail jawfish	8	0.0	4	1.0
Ophidion grayi	blotched cusk-eel	8	1.2	2	0.5
Chilomycterus schoepfi	striped burrfish	7	2.4	7	1.8
Hemanthias aureorubens	streamer bass	7	0.0	2	0.5
Peprilus triacanthus	butterfish	7	0.3	2	0.5
Trachinotus carolinus	Florida pompano	7	1.0	5	1.3
Rypticus maculatus	whitespotted soapfish	6	0.2	4	1.0
Urophycis spp.	hakes	6	0.1	2	0.5
Bathyanthias mexicanus	yellowtail bass	5	0.0	2	0.5
Dasyatis say	bluntnose stingray	5	4.5	3	0.8
Gadidae	codfishes	5	0.0	1	0.3
Pagrus pagrus	red porgy	5	1.3	1	0.3
Scorpaena spp.	scorpionfishes	5	0.1	2	0.5
Serraniculus pumilio	pygmy sea bass	5	0.1	1	0.3
Squatina dumeril	Atlantic angel shark	5	2.6	4	1.0
Calamus leucosteus	whitebone porgy	4	1.5	2	0.5
Caranx hippos	crevalle jack	4	0.0	3	0.8
Centropristis ocyurus	bank sea bass	4	0.1	2	0.5
Lophius americanus	goosefish	4	0.5	2	0.5
Ophichthus gomesi	shrimp eel	4	0.5	3	0.8
Scomber colias	chub mackerel	4	0.3	3	0.8
Syngnathus louisianae	chain pipefish	4	0.0	2	0.5
Trinectes maculatus	hogchoker	4	0.1	4	1.0
Astroscopus y-graecum	southern stargazer	3	0.1	2	0.5
Bellator egretta	streamer searobin	3	0.0	1	0.3
Bollmannia spp.	gobies	3	0.0	1	0.3
Carcharhinus brevipinna	spinner shark	3	1.3	2	0.5

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Epinephelus flavolimbatus	yellowedge grouper	3	0.1	2	0.5
Acanthostracion quadricornis	scrawled cowfish	3	0.7	3	0.8
Paraconger caudilimbatus	margintail conger	3	0.1	2	0.5
Prionotus scitulus	leopard searobin	3	0.0	2	0.5
Aluterus schoepfi	orange filefish	2	0.0	2	0.5
Bellator brachychir	shortfin searobin	2	0.0	2	0.5
Citharichthys cornutus	horned whiff	2	0.0	2	0.5
Dasyatis americana	southern stingray	2	1.8	2	0.5
Dasyatis sabina	Atlantic stingray	2	0.4	1	0.3
Equetus lanceolatus	jackknife fish	2	0.0	1	0.3
Eucinostomus argenteus	spotfin mojarra	2	0.1	1	0.3
Gobioides broussoneti	violet goby	2	0.0	2	0.5
Rhynchoconger gracilior	whiptail conger	2	0.1	1	0.3
Hippocampus reidi	longsnout seahorse	2	0.0	2	0.5
Labridae	wrasses	2	0.0	1	0.3
Mustelus norrisi	Florida smoothhound	2	2.3	2	0.5
Myctophidae	lanternfishes	2	0.0	1	0.3
Myliobatis goodei	southern eagle ray	2	5.5	2	0.5
Opsanus pardus	leopard toadfish	2	0.4	2	0.5
Remora remora	remora	2	0.5	1	0.3
Scorpaena plumieri	spotted scorpionfish	2	0.0	1	0.3
Syacium spp.	lefteye flounders	2	0.0	1	0.3
Aluterus monoceros	unicorn filefish	1	0.5	1	0.3
Aluterus scriptus	scrawled filefish	1	0.0	1	0.3
Bothus robinsi	twospot flounder	1	0.0	1	0.3
Callionymidae	dragonets	1	0.0	1	0.3
Carangidae	jacks	1	0.0	1	0.3
Carcharhinus acronotus	blacknose shark	1	0.6	1	0.3
Chaetodon aya	bank butterflyfish	1	0.0	1	0.3
Chilomycterus atringa	spotted burrfish	1	0.0	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Cheilopogon exsiliens	bandwing flyingfish	1	0.0	1	0.3
Dorosoma cepedianum	gizzard shad	1	0.1	1	0.3
Echeneis naucrates	sharksucker	1	0.1	1	0.3
Echiophis intertinctus	spotted spoon-nose eel	1	0.2	1	0.3
Echiophis punctifer	snapper eel	1	0.5	1	0.3
Gymnothorax kolpos	blacktail moray	1	1.1	1	0.3
Gymnura micrura	smooth butterfly ray	1	2.6	1	0.3
Hirundichthys rondeleti	blackwing flyingfish	1	0.0	1	0.3
Jenkinsia lamprotaenia	dwarf herring	1	0.0	1	0.3
Lepophidium spp.	cusk-eels	1	0.0	1	0.3
Lophius gastrophysus	blackfin goosefish	1	0.0	1	0.3
Ophichthus rex	king snake eel	1	0.6	1	0.3
Opistognathus spp.	jawfishes	1	0.0	1	0.3
Opsanus beta	gulf toadfish	1	0.0	1	0.3
Paralichthys albigutta	gulf flounder	1	0.4	1	0.3
Rachycentron canadum	cobia	1	1.3	1	0.3
Dipturus olseni	spreadfin skate	1	1.4	1	0.3
Scorpaena inermis	mushroom scorpionfish	1	0.0	1	0.3
Syngnathus spp.	northern pipefish	1	0.0	1	0.3
Tetraodontidae	puffers	1	0.0	1	0.3
Crustaceans					
Farfantepenaeus aztecus	brown shrimp	33490	539.0	292	76.6
Rimapenaeus similis	roughback shrimp	32226	126.2	154	40.4
Callinectes similis	lesser blue crab	15415	192.6	213	55.9
Portunus spinicarpus	longspine swimming crab	12022	73.6	107	28.1
Squilla empusa	mantis shrimp	8954	95.9	159	41.7
Solenocera vioscai	humpback shrimp	5892	26.6	67	17.6
Squilla chydaea	mantis shrimp	3453	19.3	100	26.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Sicyonia dorsalis	lesser rock shrimp	2089	5.2	82	21.5
Sicyonia brevirostris	brown rock shrimp	1704	16.1	70	18.4
Parapenaeus politus	deepwater rose shrimp	1339	1.8	15	3.9
Litopenaeus setiferus	white shrimp	1234	54.4	80	21.0
Portunus gibbesii	irridescent swimming crab	1227	7.3	116	30.4
Farfantepenaeus duorarum	pink shrimp	1184	23.5	50	13.1
Xiphopenaeus kroyeri	seabob	680	3.4	25	6.6
Callinectes sapidus	blue crab	355	40.1	86	22.6
Sicyonia burkenroadi	spiny rock shrimp	289	0.4	29	7.6
Portunus spinimanus	blotched swimming crab	274	6.2	59	15.5
Calappa sulcata	yellow box crab	248	48.2	74	19.4
Anasimus latus	stilt spider crab	233	1.2	49	12.9
Ovalipes floridanus	Florida lady crab	181	2.7	16	4.2
Raninoides louisianensis	gulf frog crab	174	1.1	30	7.9
Rimapenaeus constrictus	roughneck shrimp	158	0.4	13	3.4
Gibbesia neglecta	mantis shrimp	108	1.0	12	3.1
Solenocera spp.	humpback shrimps	69	0.1	3	0.8
Porcellana sayana	spotted porcelain crab	67	0.0	1	0.3
Plesionika longicauda	pandalid shrimp	60	0.2	8	2.1
Persephona mediterranea	mottled purse crab	58	0.2	16	4.2
Sicyonia spp.	rock shrimps	56	0.2	3	0.8
Stenorhynchus seticornis	yellowline arrow crab	47	0.1	14	3.7
Arenaeus cribrarius	speckled swimming crab	46	0.9	13	3.4
Hepatus epheliticus	calico crab	43	1.1	23	6.0
Myropsis quinquespinosa	fivespine purse crab	38	0.2	10	2.6
Platylambrus granulata	bladetooth elbow crab	36	0.1	19	5.0
Leiolambrus nitidus	white elbow crab	27	0.0	12	3.1
Persephona crinita	pink purse crab	24	0.1	15	3.9
Euphrosynoplax clausa	craggy bathyal crab	17	0.1	8	2.1
Pagurus pollicaris	flatclaw hermit crab	15	0.1	7	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
Petrochirus diogenes	giant hermit crab	15	0.3	8	2.1
Pseudorhombila quadridentata	flecked squareback crab	13	0.1	10	2.6
Pagurus bullisi	hermit crab	12	0.0	2	0.5
Calappa flammea	flame box crab	10	1.7	5	1.3
Libinia emarginata	portly spider crab	10	0.8	8	2.1
Scyllarides nodifer	ridged slipper lobster	10	0.3	2	0.5
Podochela sidneyi	shortfinger neck crab	9	0.0	7	1.8
Xanthidae	mud crabs	9	0.1	6	1.6
Collodes robustus	spider crab	8	0.1	5	1.3
Dardanus insignis	red brocade hermit	8	0.1	3	0.8
Libinia dubia	longnose spider crab	7	0.0	7	1.8
Portunus spp.	swimming crabs	7	0.0	3	0.8
Scyllarus chacei	chace slipper lobster	7	0.0	4	1.0
Stenocionops furcatus	furcate crab	6	0.1	3	0.8
Paguridae	right-handed hermit crabs	5	0.0	1	0.3
Paguristes triangulatus	hermit crab	5	0.0	3	0.8
Squillidae	mantis shrimps	5	0.0	2	0.5
Cryptodromiopsis antillensis	hairy sponge crab	4	0.0	4	1.0
Menippe adina	gulf stone crab	4	0.1	2	0.5
Menippe spp.	stone crabs	4	0.0	2	0.5
Micropanope spp.	mud crabs	4	0.0	3	0.8
Portunus sayi	sargassum swimming crab	4	0.0	4	1.0
Speocarcinus lobatus	gulf squareback crab	4	0.0	3	0.8
Stenocionops spinimanus	prickly spider crab	4	0.3	2	0.5
Alpheidae	snapping shrimps	3	0.0	1	0.3
Livoneca redmanii	isopod	3	0.0	2	0.5
Munida forceps	squat lobster	3	0.0	1	0.3
Solenocera atlantidis	dwarf humpback shrimp	3	0.0	1	0.3
Stenocionops furcatus	spider crab	3	0.2	1	0.3
Stenopus scutellatus	golden coral shrimp	3	0.0	2	0.5

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Callianassidae	ghost shrimps	2	0.0	1	0.3
Danielum ixbauchac	red sea crab	2	0.0	2	0.5
Dyspanopeus texanus	gulf grassflat crab	2	0.0	1	0.3
Latreutes fucorum	slender sargassum shrimp	2	0.0	1	0.3
Metoporhaphis calcarata	false arrow crab	2	0.0	1	0.3
Parasquilla coccinea	mantis shrimp	2	2.0	1	0.3
Porcellana sigsbeiana	striped porcelain crab	2	0.0	1	0.3
Porcellana spp.	porcelain crabs	2	0.0	1	0.3
Raninoides loevis	furrowed frog crab	2	0.0	2	0.5
Acanthilia intermedia	granulose purse crab	1	0.0	1	0.3
Acanthocarpus alexandri	gladiator box crab	1	0.0	1	0.3
Lysiosquilla scabricauda	mantis shrimp	1	0.1	1	0.3
Majidae	spider crabs	1	0.0	1	0.3
Ovalipes stephensoni	coarsehand lady crab	1	0.0	1	0.3
Paguristes hummi	left-handed hermit crabs	1	0.0	1	0.3
Paguristes spp.	hermit crabs	1	0.0	1	0.3
Raninoides spp.	frog crabs	1	0.0	1	0.3
Scyllarus spp.	slipper lobsters	1	0.0	1	0.3
Rimapenaeus spp.	roughneck shrimps	1	0.0	1	0.3
Others					
Loligo pleii	arrow squid	13221	171.1	130	34.1
Amusium papyraceum	paper scallop	7264	66.7	85	22.3
Renilla muelleri	short-stemmed sea pansy	4995	21.1	83	21.8
Lolliguncula brevis	Atlantic brief squid	3974	46.1	152	39.9
Loligo pealeii	longfin squid	3832	69.9	87	22.8
Chrysaora quinquecirrha	sea nettle	2833	74.6	98	25.7
Astropecten duplicatus	spiny beaded sea star	674	0.7	48	12.6
Mellita quinquiesperforata	five-slotted sand dollar	256	1.4	6	1.6
Luidia clathrata	sea star	232	4.6	70	18.4

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Polystira albida	white giant turris	217	2.1	13	3.4
Astropecten cingulatus	starfish	152	2.0	36	9.4
Pitar cordatus	schwengel's pitar	108	2.7	16	4.2
Actinidae	sea anemones	101	0.4	22	5.8
Ophiolepis elegans	brittle star	75	0.1	22	5.8
Lirophora clenchi	clench venus	70	0.9	10	2.6
Aurelia aurita	moon jellyfish	53	1.0	11	2.9
Clypeaster ravenelii	cake urchin	47	6.1	7	1.8
Loligo spp.	squids	46	0.3	10	2.6
Tethyaster grandis	starfish	32	1.2	11	2.9
Argopecten gibbus	calico scallop	27	0.1	8	2.1
Styela plicata	tunicate	25	0.5	5	1.3
Semirossia equalis	greater shining bobtail	22	0.0	9	2.4
Aplysia brasiliana	mottled seahare	21	1.7	9	2.4
Calliactis tricolor	common sea anemone	18	0.1	5	1.3
Laevicardium laevigatum	egg cockle	18	1.0	3	0.8
Bryozoa	moss animals	15	0.2	8	2.1
Anadara baughmani	baughman's ark	14	0.3	6	1.6
Paranthus rapiformis	onion anemone	14	0.3	7	1.8
Eucrassatella speciosa	beautiful crassatella	13	0.2	2	0.5
Anthozoa	anthozoans	12	0.1	6	1.6
Euvola raveneli	ravenel's scallop	10	0.0	2	0.5
Arcinella cornuta	Florida spiny jewelbox	9	0.1	1	0.3
Circomphalus strigillinus	empress venus	8	0.2	2	0.5
Conus austini	cone shell	7	0.1	3	0.8
Luidia alternata	banded luidia	7	0.2	4	1.0
Moira atropos	mud heart-urchin	7	0.3	1	0.3
Beroe ovata	comb jelly	6	0.0	3	0.8
Ophiothrix angulata	angular brittle star	6	0.0	1	0.3
Porifera	sponges	6	2.8	5	1.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Molpadia spp.	sea cucumber	5	0.1	2	0.5
Sconsia striata	royal bonnet	5	0.1	3	0.8
Calliactis spp.	anemone	4	0.0	1	0.3
Cantharus cancellarius	cancellate cantharus	4	0.0	4	1.0
Distorsio clathrata	Atlantic distorsio	4	0.0	2	0.5
Echinaster spp.	thorny sea stars	4	0.0	2	0.5
Fasciolaria spp.	tulip shells	4	0.2	2	0.5
Geodia gibberosa	sponge	4	0.0	2	0.5
Macoma brevifrons	short macoma	4	0.0	2	0.5
Hexaplex fulvescens	giant eastern murex	4	0.4	4	1.0
Neverita duplicata	shark eye	4	0.1	3	0.8
Salpidae	salps	4	0.2	1	0.3
Anadara floridana	cut-ribbed ark	3	0.0	1	0.3
Anthenoides piercei	starfish	3	0.2	2	0.5
Cancellaria reticulata	common nutmeg	3	0.0	2	0.5
Caretta caretta	loggerhead turtle	3	124.9	2	0.5
Molpadia cubana	sea cucumber	3	0.0	1	0.3
Ophioderma spp.	brittle stars	3	0.0	1	0.3
Polystira tellea	delicate giant turret	3	0.0	1	0.3
Stomolophus meleagris	many-mouthed sea jelly	3	0.5	3	0.8
Strombus alatus	Florida fighting conch	3	0.1	2	0.5
Tonna galea	giant tun	3	0.8	2	0.5
Agriopoma texasianum	texas venus	2	0.0	1	0.3
Anadara ovalis	blood ark	2	0.0	2	0.5
Armina tigrina	tiger armina	2	0.0	1	0.3
Atrina spp.	penshells	2	0.1	2	0.5
Clypeaster prostratus	sea biscuit	2	0.5	2	0.5
Echinaster serpentarius	starfish	2	0.0	2	0.5
Gorgonidae	gorgonians	2	0.0	1	0.3
Molpadia barbouri	sea cucumber	2	0.1	1	0.3

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Octopus vulgaris	common Atlantic octopus	2	0.4	2	0.5
Phyllorhiza punctata	jellyfish	2	3.8	2	0.5
Scyphozoa	jellyfishes	2	0.0	2	0.5
Stylocidaris affinis	sea urchin	2	0.0	1	0.3
Arbacia punctulata	purple sea-urchin	1	0.0	1	0.3
Architectonica nobilis	common sundial	1	0.0	1	0.3
Argopecten irradians	bay scallop	1	0.0	1	0.3
Ascidiidae	tunicates	1	0.0	1	0.3
Asteroporpa annulata	starfish	1	0.0	1	0.3
Busycon sinistrum	lightning whelk	1	0.0	1	0.3
Caecum spp.		1	0.0	1	0.3
Clibanarius vittatus	thinstripe hermit crab	1	0.0	1	0.3
Enidae		1	0.0	1	0.3
Hemipholis elongata	brittle star	1	0.0	1	0.3
Holothuroidea	sea cucumbers	1	0.0	1	0.3
Mnemiopsis mccradyi	comb jelly	1	0.0	1	0.3
Haustellum bellegladeense	belleglade murex	1	0.0	1	0.3
Ophionereis spp.	brittle stars	1	0.0	1	0.3
Pennatulidae	sea pens	1	0.0	1	0.3
Protankyra grayi	sea cucumber	1	0.0	1	0.3
Scaphella dubia	dubious volute	1	0.2	1	0.3
Schizaster orbignyanus	heart urchin	1	0.0	1	0.3
Chicoreus beauii	beau's murex	1	0.0	1	0.3
Tamoya haplonema	sea wasp	1	0.0	1	0.3
Stramonita haemastoma	rocksnail	1	0.0	1	0.3
Thyonella spp.	sea cucumber	1	0.0	1	0.3
Zoobotryon pelluc	sauerkraut grass	0	20.2	9	2.4

Table 4a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2002 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
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	3	73.3	54.67	0.8	0.49	9	462.5	312.88	1.6	0.80	21
Litopenaeus setiferus	108.0	105.01	0.7	0.56	3	116.8	108.37	0.4	0.36	9	482.4	186.33	1.6	0.59	21
Portunus spinicarpus	0.0	0.00	0.0	0.00	3	0.2	0.22	0.0	0.00	9	35.2	15.73	0.0	0.02	21
Squilla spp	8.0	8.00	0.1	0.09	3	16.2	7.64	0.2	0.08	9	263.6	106.87	1.7	0.62	21
Farfantepenaeus aztecus	82.0	55.68	1.0	0.65	3	223.6	179.15	2.5	1.96	9	133.6	59.55	1.4	0.53	21
Callinectes similis	10.0	10.00	0.1	0.11	3	30.7	26.31	0.1	0.10	9	200.9	89.14	1.1	0.54	21
Stenotomus caprinus	14.0	11.14	0.1	0.07	3	47.6	22.47	0.3	0.18	9	94.2	28.21	2.1	1.22	21
Hildebrandia flava	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	9	0.8	0.78	0.0	0.01	21
Micropogonias undulatus	50.0	30.27	1.0	0.58	3	4.1	2.40	0.2	0.08	9	3.3	1.31	0.2	0.07	21
Anchoa hepsetus	60.0	60.00	0.2	0.15	3	25.8	7.61	0.3	0.09	9	171.3	111.53	3.2	2.10	21
Serranus atrobranchus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	9	138.5	61.45	0.6	0.30	21
Peprilus burti	20.0	20.00	0.7	0.72	3	2.3	1.13	0.1	0.03	9	14.2	6.88	0.6	0.26	21
Trichiurus lepturus	2.0	2.00	0.4	0.36	3	0.0	0.00	0.0	0.00	9	91.5	65.87	1.2	1.03	21
Lagodon rhomboides	0.0	0.00	0.0	0.00	3	0.4	0.27	0.0	0.01	9	3.4	2.33	0.2	0.16	21
Squid spp	102.0	57.86	0.6	0.32	3	53.3	17.19	0.4	0.11	9	97.5	42.68	0.4	0.15	21

Table 4a (continued)

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2002 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
Farfantepenaeus duorarum	1.2	1.18	0.0	0.03	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Litopenaeus setiferus	11.8	10.80	0.2	0.15	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Portunus spinicarpus	23.4	15.88	0.0	0.02	7	999.6	570.90	5.7	3.37	4	332.1	186.24	2.3	1.28	4
Squilla spp	118.2	92.98	0.9	0.78	7	148.7	118.40	1.1	0.78	4	43.3	31.87	0.4	0.28	4
Farfantepenaeus aztecus	48.7	18.73	0.6	0.21	7	39.9	20.38	1.1	0.52	4	13.7	6.04	0.8	0.40	4
Callinectes similis	209.4	141.20	1.0	0.61	7	47.8	42.79	0.4	0.33	4	8.9	7.16	0.0	0.03	4
Stenotomus caprinus	175.9	106.46	9.2	6.05	7	159.7	91.77	7.7	4.64	4	102.3	54.28	6.8	3.73	4
Hildebrandia flava	224.9	156.37	2.4	1.54	7	1314.8	761.63	7.3	4.55	4	87.2	58.01	3.2	1.88	4
Micropogonias undulatus	18.6	15.32	1.0	0.83	7	721.1	583.47	40.7	30.83	4	44.3	44.32	3.8	3.77	4
Anchoa hepsetus	46.0	39.16	1.0	0.87	7	66.5	66.50	1.3	1.33	4	0.0	0.00	0.0	0.00	4
Serranus atrobranchus	167.8	62.60	1.8	0.59	7	198.9	103.69	2.7	1.32	4	142.3	68.39	2.3	0.97	4
Peprilus burti	217.0	187.61	12.6	11.24	7	64.1	39.68	4.6	2.79	4	67.3	67.30	4.7	4.72	4
Trichiurus lepturus	225.4	207.30	6.0	5.69	7	42.5	11.41	2.3	0.63	4	29.8	25.29	1.5	1.05	4
Lagodon rhomboides	16.4	9.54	1.3	0.79	7	183.1	180.98	11.7	11.43	4	13.3	8.03	1.4	0.87	4
Squid spp	65.9	38.10	0.5	0.27	7	48.1	42.66	0.4	0.32	4	19.7	17.30	0.2	0.15	4

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 2002 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	21.8	3.8	3	9.6	4.42	9	29.9	6.93	21	0.0	0	0	108.0	42.92	4	55.9	4.64	4
Total finfish kg	16.6	2.43	3	4.4	1.69	9	21.4	6.75	21	0.0	0	0	94.2	47.97	4	46.0	5.77	4
Total crustacean kg	2.2	1.6	3	8.2	4.49	5	11.7	2.24	14	0.0	0	0	12.9	6.61	4	8.0	3.71	4
Total others kg	4.5	3.3	2	0.7	0.22	7	1.0	0.19	16	0.0	0	0	0.5	0.32	4	1.9	1.21	4
Surface temperature	27.5	0.25	2	28.4	0.44	9	28.6	0.21	21	0.0	0	0	29.3	0.41	4	27.5	0.18	6
Midwater temperature	25.5	0.65	2	25.3	0.44	8	25.2	0.31	21	0.0	0	0	22.9	0.53	4	21.9	0.18	6
Bottom temperature	24.8	0.97	2	24.2	0.26	8	22.7	0.39	20	0.0	0	0	21.0	0.29	4	19.8	0.36	6
Surface salinity	29.8	1.22	2	25.3	1.91	9	24.9	1.62	21	0.0	0	0	24.6	0.9	4	31.9	2.76	6
Midwater salinity	32.8	0.97	2	32.4	0.69	8	33.9	0.21	21	0.0	0	0	35.6	0.49	4	36.5	0.02	6
Bottom salinity	33.8	0.82	2	33.6	0.41	8	34.7	0.15	20	0.0	0	0	35.5	0.57	4	36.5	0.02	6
Surface chlorophyll	0.0	0	0	0.0	0	0	0.7	0.04	3	0.0	0	0	2.6	0.28	2	1.8	1.03	6
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	6.9	0.05	2	6.7	0.19	9	6.9	0.32	21	0.0	0	0	7.1	0.5	4	6.6	0.49	6
Midwater oxygen	7.1	0.05	2	6.1	0.31	8	5.5	0.19	21	0.0	0	0	6.0	0.39	4	6.6	0.1	6
Bottom oxygen	6.1	0.35	2	5.5	0.26	8	5.1	0.23	20	0.0	0	0	5.2	0.12	4	5.4	0.19	6

Table 5a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2002 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
Squilla spp	0.0	0.00	0.0	0.00	4	7.4	5.96	0.0	0.02	3	89.6	38.79	0.5	0.32	6
Callinectes similis	2.8	1.68	0.0	0.01	4	0.0	0.00	0.0	0.00	3	38.5	31.42	0.3	0.24	6
Farfantepenaeus aztecus	104.3	60.51	1.0	0.61	4	1.2	1.21	0.0	0.01	3	92.3	60.84	0.5	0.22	6
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	5.0	5.00	0.1	0.05	6
Solenocera vioscai	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	6
Parapenaeus politus	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	6
Micropogonias undulatus	21.7	12.21	0.4	0.22	4	1631.1	1629.90	46.2	46.17	3	1087.8	695.25	37.8	26.05	6
Hildebrandia flava	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	6
Prionotus longispinosus	1.0	1.03	0.0	0.01	4	4.0	2.67	0.0	0.01	3	50.1	34.52	0.8	0.59	6
Serranus atrobranchus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	5.0	5.00	0.0	0.03	6
Cynoscion arenarius	68.2	53.79	0.5	0.38	4	28.5	28.48	2.3	2.27	3	75.6	62.89	1.4	0.79	6
Lepophidium brevibarbe	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	2.5	2.50	0.0	0.03	6
Leiostomus xanthurus	240.1	164.45	9.5	6.76	4	5.5	5.45	0.2	0.23	3	2.3	1.46	0.2	0.12	6
Trichiurus lepturus	54.6	49.57	0.2	0.11	4	73.9	73.94	3.0	2.99	3	51.2	46.52	1.4	1.19	6
Squid spp	0.5	0.52	0.0	0.00	4	42.4	42.42	0.6	0.56	3	192.8	116.62	1.6	0.84	6

Table 5a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2002 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
Squilla spp	721.5	590.58	7.2	6.73	2	234.3	0.00	3.1	0.00	1	91.8	10.18	0.9	0.09	2
Callinectes similis	221.2	215.76	3.4	3.28	2	301.1	0.00	4.4	0.00	1	36.9	23.11	0.4	0.29	2
Farfantepenaeus aztecus	36.2	36.23	0.9	0.86	2	122.3	0.00	3.1	0.00	1	58.6	46.62	1.5	1.01	2
Portunus spinicarpus	121.1	98.45	1.0	0.98	2	52.1	0.00	0.3	0.00	1	151.0	25.03	1.4	0.57	2
Solenocera vioscai	78.1	71.31	0.3	0.21	2	35.1	0.00	0.2	0.00	1	49.2	10.82	0.3	0.04	2
Parapenaeus politus	4.1	4.09	0.0	0.01	2	52.1	0.00	0.1	0.00	1	62.5	62.46	0.1	0.15	2
Micropogonias undulatus	17.1	15.73	0.9	0.86	2	183.4	0.00	10.3	0.00	1	2399.3	2136.70	147.2	127.20	2
Hildebrandia flava	387.7	387.74	7.6	7.57	2	54.3	0.00	3.5	0.00	1	70.8	10.82	3.6	0.77	2
Prionotus longispinosus	182.8	182.83	3.8	3.75	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	68.3	64.18	0.8	0.77	2	79.2	0.00	1.3	0.00	1	182.5	63.49	3.7	1.30	2
Cynoscion arenarius	8.5	8.49	0.9	0.93	2	10.2	0.00	1.6	0.00	1	83.5	18.54	13.7	0.76	2
Lepophidium brevibarbe	133.0	133.02	5.2	5.18	2	17.0	0.00	0.7	0.00	1	0.0	0.00	0.0	0.00	2
Leiostomus xanthurus	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	2
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	1.5	1.48	0.1	0.08	2
Squid spp	2.0	2.05	0.0	0.01	2	27.2	0.00	1.7	0.00	1	14.8	14.75	0.2	0.19	2

Table 5b

Statistical Zone 13

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	19.8	11.35	4	55.7	55.14	3	59.2	22.45	6	0.0	0	0	39.3	0	1	198.0	133.4	2
Total finfish kg	23.7	12.17	3	54.2	53.91	3	53.0	24.02	6	0.0	0	0	21.3	0	1	193.0	136.1	2
Total crustacean kg	2.5	1.09	3	1.5	0.88	2	4.6	2.64	6	0.0	0	0	16.2	0	1	5.7	2.09	2
Total others kg	0.0	0	1	1.6	0	1	1.9	0.99	5	0.0	0	0	1.7	0	1	0.3	0.3	2
Surface temperature	31.5	0.51	4	30.3	0.44	4	29.7	0.14	7	0.0	0	0	28.8	0	1	29.1	0.09	4
Midwater temperature	30.2	0.74	4	28.8	0.49	4	28.8	0.16	7	0.0	0	0	25.3	0	1	22.1	1.6	4
Bottom temperature	29.6	1.1	4	27.3	0.35	4	27.0	0.17	7	0.0	0	0	21.0	0	1	17.6	1.73	4
Surface salinity	9.0	2.79	4	17.2	0.88	4	20.6	1.97	7	0.0	0	0	36.3	0	1	33.6	1.39	4
Midwater salinity	15.0	5.66	4	31.4	1.66	4	34.4	0.32	7	0.0	0	0	36.5	0	1	36.5	0.01	4
Bottom salinity	20.2	7.49	4	35.7	0.11	4	36.1	0.1	7	0.0	0	0	36.5	0	1	35.7	0.3	4
Surface chlorophyll	3.8	0	1	12.4	3.45	4	5.7	0.92	7	0.0	0	0	0.3	0	1	1.6	1.08	4
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	12.2	1.67	4	8.2	0.5	4	6.7	0.62	7	0.0	0	0	5.0	0	1	5.2	0.13	4
Midwater oxygen	7.1	2.37	4	4.9	1.01	4	4.8	0.12	7	0.0	0	0	3.3	0	1	4.2	0.47	4
Bottom oxygen	5.8	2.78	4	2.8	0.99	4	1.8	0.51	7	0.0	0	0	3.6	0	1	3.0	0.82	4

Table 6a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2002 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	1	38.0	20.99	0.3	0.18	9	95.0	41.31	1.2	0.47	20
Callinectes similis	12.0	0.00	0.1	0.00	1	4.1	1.12	0.0	0.01	9	28.8	15.63	0.5	0.31	20
Squilla spp	0.0	0.00	0.0	0.00	1	33.2	14.32	0.2	0.09	9	12.1	3.56	0.2	0.08	20
Litopenaeus setiferus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	15.0	10.54	0.2	0.11	20
Portunus gibbesii	0.0	0.00	0.0	0.00	1	8.7	4.89	0.0	0.01	9	4.7	2.15	0.0	0.02	20
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	0.7	0.68	0.0	0.01	20
Micropogonias undulatus	0.0	0.00	0.0	0.00	1	136.8	101.83	5.6	4.00	9	321.8	100.22	16.0	5.41	20
Prionotus longispinosus	6.0	0.00	0.1	0.00	1	113.7	103.78	1.3	1.30	9	146.2	72.07	2.6	1.12	20
Chloroscombrus chrysurus	12.0	0.00	0.6	0.00	1	64.8	54.55	2.7	2.32	9	131.7	67.17	5.7	2.80	20
Peprilus burti	0.0	0.00	0.0	0.00	1	1.1	1.14	0.1	0.06	9	36.8	18.89	2.4	1.23	20
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9	22.3	8.23	0.2	0.08	20
Anchoa hepsetus	0.0	0.00	0.0	0.00	1	0.4	0.37	0.0	0.01	9	46.7	25.43	1.0	0.51	20
Trichiurus lepturus	0.0	0.00	0.0	0.00	1	0.2	0.22	0.0	0.00	9	36.9	26.41	1.4	1.01	20
Upeneus parvus	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	20
Squid spp	0.0	0.00	0.0	0.00	1	0.2	0.22	0.0	0.01	9	13.8	5.68	0.1	0.07	20

Table 6a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2002 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
Farfantepenaeus aztecus	172.6	154.70	3.4	3.01	2	18.0	0.00	0.5	0.00	1	40.6	32.72	1.1	0.79	3
Callinectes similis	26.2	26.18	0.6	0.62	2	1.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Squilla spp	2.2	2.18	0.0	0.03	2	0.0	0.00	0.0	0.00	1	2.9	1.48	0.0	0.02	3
Litopenaeus setiferus	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	3
Portunus gibbesii	12.0	12.00	0.1	0.11	2	1.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	5.7	1.90	0.0	0.01	2	0.0	0.00	0.0	0.00	1	4.5	2.53	0.0	0.02	3
Micropogonias undulatus	224.1	173.01	12.8	9.43	2	3.0	0.00	0.2	0.00	1	73.8	73.29	5.2	5.10	3
Prionotus longispinosus	51.1	30.70	1.5	0.81	2	4.5	0.00	0.2	0.00	1	8.2	8.16	0.4	0.40	3
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	3
Peprilus burti	5.1	5.11	0.3	0.29	2	3.0	0.00	0.2	0.00	1	125.5	74.06	8.6	5.06	3
Stenotomus caprinus	8.8	6.57	0.1	0.07	2	55.5	0.00	2.1	0.00	1	106.1	21.50	6.8	1.87	3
Anchoa hepsetus	3.2	3.19	0.0	0.02	2	1.5	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	1.5	0.00	0.1	0.00	1	4.5	3.30	0.6	0.31	3
Upeneus parvus	32.6	32.55	0.4	0.37	2	13.5	0.00	0.2	0.00	1	82.8	42.76	3.5	1.87	3
Squid spp	46.0	45.96	0.2	0.18	2	19.5	0.00	0.1	0.00	1	12.1	4.10	0.2	0.08	3

Table 6b

Statistical Zone 14

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	1.2	0	1	11.2	5.81	9	42.9	9.71	20	0.0	0	0	9.5	0	1	48.5	5.09	3
Total finfish kg	1.2	0	1	10.7	5.65	9	39.7	9.39	20	0.0	0	0	8.0	0	1	44.3	5.88	3
Total crustacean kg	0.0	0	0	0.5	0.23	8	3.6	1.06	17	0.0	0	0	0.5	0	1	1.6	0.85	3
Total others kg	0.0	0	0	0.0	0	4	0.2	0.15	10	0.0	0	0	1.1	0	1	2.5	0.45	3
Surface temperature	30.4	0.36	2	29.9	0.16	10	29.4	0.09	22	0.0	0	0	29.7	0.38	2	29.4	0.44	2
Midwater temperature	30.3	0.35	2	29.4	0.21	10	28.7	0.13	22	0.0	0	0	28.6	0.1	2	27.0	0.63	2
Bottom temperature	29.6	0.51	2	27.8	0.37	10	26.5	0.23	22	0.0	0	0	23.9	1.65	2	20.7	0.14	2
Surface salinity	21.7	1.22	2	25.9	1.43	10	32.6	0.95	22	0.0	0	0	32.8	1.14	2	33.3	2.65	2
Midwater salinity	22.0	1.29	2	30.1	1.6	10	35.4	0.39	22	0.0	0	0	36.3	0.09	2	36.4	0.1	2
Bottom salinity	22.9	0.71	2	33.6	1.4	10	36.2	0.17	22	0.0	0	0	36.2	0.31	2	36.5	0.01	2
Surface chlorophyll	8.6	0	1	5.0	1.78	10	2.1	0.73	22	0.0	0	0	0.8	0.22	2	1.5	1.13	2
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	7.5	0.5	2	7.0	0.48	10	6.1	0.18	22	0.0	0	0	5.1	0.25	2	5.3	0.4	2
Midwater oxygen	7.4	0.35	2	6.0	0.52	10	5.6	0.2	22	0.0	0	0	5.0	0.05	2	5.3	0.1	2
Bottom oxygen	6.2	1.05	2	3.1	0.94	10	4.3	0.4	22	0.0	0	0	4.1	0.7	2	3.8	0.1	2

Table 7a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2002 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
Farfantepenaeus aztecus	37.4	34.43	0.5	0.46	3	6.5	3.85	0.1	0.05	5	153.4	50.27	3.1	0.98	11
Squilla spp	58.3	56.27	0.2	0.17	3	104.1	97.03	0.4	0.43	5	92.5	36.47	1.0	0.37	11
Litopenaeus setiferus	0.0	0.00	0.0	0.00	3	2.8	1.75	0.1	0.06	5	121.8	78.72	0.8	0.42	11
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	104.8	104.01	0.5	0.50	11
Callinectes similis	10.4	6.36	0.1	0.04	3	10.3	8.60	0.1	0.07	5	41.8	11.43	0.7	0.20	11
Portunus gibbesii	10.8	10.77	0.0	0.04	3	31.4	25.88	0.1	0.11	5	18.1	6.66	0.1	0.05	11
Chloroscombrus chrysurus	88.7	75.72	3.0	2.53	3	480.6	339.03	17.3	12.58	5	308.0	181.23	10.6	6.01	11
Peprilus burti	0.0	0.00	0.0	0.00	3	1.8	1.41	0.1	0.07	5	197.6	157.15	13.8	11.10	11
Micropogonias undulatus	99.8	63.11	3.8	2.20	3	223.3	118.52	6.6	3.38	5	155.6	114.66	6.4	4.22	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	63.5	19.08	0.9	0.26	11
Diplectrum bivittatum	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	108.2	33.65	1.2	0.30	11
Serranus atrobranchus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	71.3	44.70	0.3	0.22	11
Cynoscion arenarius	17.3	16.34	0.2	0.08	3	28.6	19.99	2.6	2.18	5	35.7	11.89	4.3	1.37	11
Trichiurus lepturus	8.0	6.11	0.1	0.03	3	58.6	32.34	0.3	0.14	5	7.8	4.25	0.4	0.24	11
Squid spp	81.1	56.28	1.1	0.88	3	79.9	34.02	1.1	0.49	5	16.1	6.18	0.2	0.07	11

Table 7a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2002 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
Farfantepenaeus aztecus	148.5	123.45	3.8	3.21	2	38.2	0.69	1.0	0.18	2	132.0	0.00	5.1	0.00	1
Squilla spp	1.0	1.00	0.0	0.01	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Callinectes similis	3.7	1.73	0.1	0.01	2	5.0	5.00	0.2	0.18	2	0.0	0.00	0.0	0.00	1
Portunus gibbesii	1.5	0.45	0.0	0.01	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Chloroscombrus chrysurus	2.0	2.00	0.1	0.12	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Peprilus burti	92.6	78.64	6.0	4.93	2	640.3	375.28	36.5	18.00	2	140.7	0.00	9.2	0.00	1
Micropogonias undulatus	13.6	1.64	1.0	0.05	2	259.2	254.17	21.4	21.29	2	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	475.5	474.45	18.7	18.60	2	75.7	63.19	2.9	2.57	2	225.8	0.00	11.2	0.00	1
Diplectrum bivittatum	1.0	1.00	0.0	0.02	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
Serranus atrobranchus	8.7	8.73	0.2	0.23	2	12.5	12.50	0.2	0.17	2	58.9	0.00	0.6	0.00	1
Cynoscion arenarius	1.1	1.09	0.1	0.13	2	7.8	7.78	1.4	1.45	2	6.5	0.00	1.4	0.00	1
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	23.9	23.89	2.8	2.78	2	0.0	0.00	0.0	0.00	1
Squid spp	29.5	5.45	0.1	0.00	2	36.8	25.69	0.2	0.13	2	9.8	0.00	0.0	0.00	1

Table 7b

Statistical Zone 15

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	26.7	6.28	3	66.6	23.1	5	56.2	11.89	11	0.0	0	0	76.5	51.03	2	50.2	0	1
Total finfish kg	24.6	6.24	3	64.5	23.39	5	48.1	13.09	11	0.0	0	0	73.3	50.1	2	34.9	0	1
Total crustacean kg	2.3	0	1	0.8	0.57	5	7.8	1.87	11	0.0	0	0	1.2	0.01	2	5.3	0	1
Total others kg	2.3	1.88	2	1.3	0.57	5	0.3	0.08	11	0.0	0	0	1.9	0.94	2	10.0	0	1
Surface temperature	29.8	0.27	3	29.5	0.09	5	29.6	0.13	13	0.0	0	0	29.6	0	1	29.2	0	1
Midwater temperature	29.7	0.17	3	29.2	0.25	5	28.5	0.14	13	0.0	0	0	26.1	0	1	25.4	0	1
Bottom temperature	29.5	0.3	3	28.4	0.23	5	26.2	0.36	13	0.0	0	0	21.5	0	1	20.4	0	1
Surface salinity	21.8	2.71	3	27.9	1.03	5	31.5	0.87	13	0.0	0	0	35.8	0	1	36.2	0	1
Midwater salinity	24.7	2.34	3	29.7	0.8	5	35.2	0.36	13	0.0	0	0	36.4	0	1	36.5	0	1
Bottom salinity	20.4	3.79	3	32.2	0.89	5	34.6	1.43	13	0.0	0	0	36.5	0	1	36.6	0	1
Surface chlorophyll	1.2	0	1	1.9	1	5	0.7	0.14	13	0.0	0	0	0.2	0	1	0.1	0	1
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	7.1	1.1	3	4.7	0.46	5	4.8	0.25	13	0.0	0	0	4.8	0	1	4.8	0	1
Midwater oxygen	5.9	0.5	3	3.9	0.94	5	4.4	0.24	13	0.0	0	0	5.1	0	1	5.5	0	1
Bottom oxygen	5.3	0.78	3	0.7	0.37	5	3.4	0.32	13	0.0	0	0	4.6	0	1	3.9	0	1

Table 8a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2002 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
Farfantepenaeus aztecus	190.2	89.53	1.2	0.49	5	11.0	9.11	0.2	0.22	5	100.7	44.09	1.3	0.46	13
Squilla spp	1.9	1.92	0.0	0.01	5	51.5	45.74	0.4	0.32	5	45.5	20.38	0.4	0.19	13
Litopenaeus setiferus	34.0	16.06	0.6	0.33	5	3.5	2.38	0.2	0.18	5	42.8	31.55	0.2	0.18	13
Portunus spinicarpus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	3.4	3.07	0.0	0.01	13
Xiphopenaeus kroyeri	143.2	83.20	0.5	0.33	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	13
Callinectes similis	16.5	7.17	0.1	0.03	5	4.9	3.00	0.0	0.02	5	23.7	10.59	0.3	0.10	13
Micropogonias undulatus	1610.0	733.32	11.3	3.53	5	495.9	301.99	8.5	5.12	5	315.2	229.94	9.5	6.91	13
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	240.7	97.66	8.0	4.26	13
Chloroscombrus chrysurus	28.9	17.37	0.7	0.49	5	829.7	533.31	24.9	16.15	5	386.2	174.02	12.9	5.52	13
Peprilus burti	1.4	0.96	0.0	0.00	5	14.2	8.59	0.8	0.51	5	48.8	31.17	2.6	1.55	13
Prionotus longispinosus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	75.6	61.67	0.7	0.56	13
Saurida brasiliensis	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	13.5	9.89	0.0	0.02	13
Brevoortia patronus	223.5	203.70	1.9	1.55	5	1.1	1.09	0.1	0.14	5	0.0	0.00	0.0	0.00	13
Trachurus lathami	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	7.5	5.36	0.2	0.16	13
Squid spp	46.6	20.95	0.5	0.33	5	62.9	46.09	0.9	0.56	5	69.8	37.81	0.4	0.17	13

Table 8a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2002 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
Farfantepenaeus aztecus	61.7	44.83	2.3	1.88	6	65.7	30.46	2.1	0.68	6	16.7	10.62	0.8	0.57	4
Squilla spp	2.5	2.14	0.0	0.03	6	8.9	5.59	0.0	0.03	6	2.0	1.96	0.0	0.02	4
Litopenaeus setiferus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Portunus spinicarpus	27.9	7.11	0.2	0.05	6	78.3	42.11	0.5	0.27	6	0.9	0.61	0.0	0.01	4
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Callinectes similis	4.5	2.75	0.1	0.05	6	1.3	1.27	0.0	0.04	6	1.9	1.91	0.0	0.04	4
Micropogonias undulatus	8.7	5.57	0.7	0.41	6	7.5	5.09	0.5	0.32	6	1.9	1.12	0.2	0.14	4
Stenotomus caprinus	413.5	212.94	18.9	9.56	6	307.4	74.02	14.9	3.56	6	184.0	52.00	9.8	3.04	4
Chloroscombrus chrysurus	27.2	15.24	1.4	0.78	6	0.4	0.36	0.0	0.04	6	0.0	0.00	0.0	0.00	4
Peprilus burti	21.2	16.91	1.6	1.29	6	62.9	31.50	4.7	2.32	6	216.6	84.34	14.8	6.02	4
Prionotus longispinosus	16.0	10.04	0.6	0.42	6	13.0	6.67	0.7	0.35	6	7.1	6.35	0.7	0.68	4
Saurida brasiliensis	65.9	27.70	0.3	0.15	6	19.3	8.83	0.1	0.05	6	3.8	1.71	0.0	0.00	4
Brevoortia patronus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	4
Trachurus lathami	49.0	26.86	1.0	0.49	6	17.8	9.59	0.5	0.24	6	9.3	3.00	0.5	0.16	4
Squid spp	53.3	18.79	0.3	0.09	6	4.0	3.58	0.0	0.02	6	8.3	4.06	0.1	0.03	4

Table 8b

Statistical Zone 16

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	33.8	9.74	5	49.2	28.27	5	46.9	8.62	13	0.0	0	0	37.1	3.8	6	46.3	6.39	4
Total finfish kg	18.2	2.95	5	46.7	27.32	5	43.4	8.53	13	0.0	0	0	33.5	4.04	6	42.9	5.95	4
Total crustacean kg	3.3	0.92	5	1.4	0.76	5	2.5	0.77	13	0.0	0	0	2.5	0.74	6	1.3	0.79	4
Total others kg	15.5	13.65	4	1.2	0.58	5	1.1	0.42	13	0.0	0	0	1.1	0.3	6	2.0	0.57	4
Surface temperature	30.5	0.27	5	30.1	0.55	4	29.0	0.16	11	0.0	0	0	29.0	0.21	2	28.7	0.09	8
Midwater temperature	29.6	0.19	5	28.9	0.34	4	28.3	0.21	11	0.0	0	0	26.5	1.19	2	25.5	0.74	8
Bottom temperature	29.0	0.14	5	27.9	0.31	4	26.8	0.2	11	0.0	0	0	21.8	1	2	21.7	0.91	8
Surface salinity	10.5	4.24	5	25.3	3.05	4	33.9	0.55	11	0.0	0	0	35.4	0.69	2	36.0	0.06	8
Midwater salinity	20.4	2.81	5	30.1	2.22	4	35.0	0.43	11	0.0	0	0	36.2	0.11	2	36.3	0.05	8
Bottom salinity	25.1	2.54	5	33.5	1.73	4	36.2	0.11	11	0.0	0	0	36.5	0.03	2	36.3	0.12	8
Surface chlorophyll	3.2	0	1	2.1	0.86	4	0.4	0.07	11	0.0	0	0	0.2	0.05	2	0.1	0.01	8
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	7.8	0.62	5	5.8	0.63	4	5.2	0.06	11	0.0	0	0	4.9	0.4	2	5.2	0.1	8
Midwater oxygen	5.7	0.31	5	4.6	0.75	4	5.2	0.07	11	0.0	0	0	5.2	0.6	2	5.6	0.19	8
Bottom oxygen	4.1	0.74	5	1.4	1.07	4	3.5	0.41	11	0.0	0	0	4.1	0.35	2	4.3	0.21	8

Table 9a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2002 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
Farfantepenaeus aztecus	72.7	57.15	0.4	0.32	10	45.3	33.47	0.4	0.35	14	162.6	79.99	2.3	1.36	9
Portunus spinicarpus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	42.8	27.77	0.1	0.07	9
Squilla spp	2.6	2.57	0.0	0.01	10	49.0	37.85	0.2	0.12	14	32.7	24.66	0.4	0.34	9
Callinectes similis	2.8	1.31	0.0	0.01	10	5.8	3.28	0.0	0.02	14	73.0	68.39	1.0	0.94	9
Sicyonia brevirostris	0.0	0.00	0.0	0.00	10	0.1	0.13	0.0	0.00	14	57.9	37.93	0.6	0.41	9
Solenocera vioscai	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	3.5	3.32	0.0	0.01	9
Chloroscombrus chrysurus	75.5	72.61	2.1	2.09	10	248.0	116.64	7.3	3.23	14	296.6	115.54	9.6	3.54	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	10	11.8	6.78	0.1	0.05	14	208.4	167.58	3.5	2.84	9
Micropogonias undulatus	772.6	404.73	9.8	5.33	10	97.0	79.78	1.2	0.87	14	5.8	3.58	0.2	0.11	9
Serranus atrobranchus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	4.0	4.03	0.0	0.01	9
Peprilus burti	22.7	22.67	0.0	0.04	10	14.0	6.50	0.5	0.26	14	86.9	52.74	4.3	2.45	9
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	0.8	0.55	0.0	0.01	9
Prionotus paralatus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	4.0	1.75	0.0	0.01	9
Saurida brasiliensis	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	14	95.8	83.69	0.4	0.33	9
Squid spp	12.2	6.99	0.1	0.08	10	98.4	64.59	0.7	0.34	14	157.0	60.21	1.8	0.85	9

Table 9a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2002 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
Farfantepenaeus aztecus	608.4	61.38	6.2	1.26	2	14.2	0.00	0.9	0.00	1	27.0	0.73	1.7	0.09	3
Portunus spinicarpus	990.3	382.65	5.7	2.58	2	0.0	0.00	0.0	0.00	1	4.1	0.99	0.0	0.03	3
Squilla spp	25.1	11.98	0.1	0.02	2	0.0	0.00	0.0	0.00	1	60.4	33.24	0.4	0.16	3
Callinectes similis	2.7	2.73	0.1	0.08	2	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Sicyonia brevirostris	131.0	20.79	1.1	0.24	2	3.3	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	3
Solenocera vioscai	227.9	128.60	0.5	0.28	2	10.9	0.00	0.0	0.00	1	59.2	28.56	0.2	0.07	3
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	3
Stenotomus caprinus	118.8	43.54	4.3	1.74	2	243.3	0.00	15.1	0.00	1	236.1	34.77	14.7	1.69	3
Micropogonias undulatus	2.6	2.65	0.1	0.09	2	272.7	0.00	19.9	0.00	1	2.6	1.03	0.2	0.08	3
Serranus atrobranchus	331.5	62.04	1.6	0.72	2	46.9	0.00	0.6	0.00	1	217.8	27.25	2.7	0.07	3
Peprilus burti	0.0	0.00	0.0	0.00	2	10.9	0.00	1.0	0.00	1	6.7	4.63	0.5	0.32	3
Pristipomoides aquilonaris	3.7	1.56	0.1	0.03	2	142.9	0.00	7.6	0.00	1	193.4	64.18	11.9	1.66	3
Prionotus paralatus	87.9	63.88	0.2	0.13	2	75.3	0.00	3.1	0.00	1	59.6	59.63	2.4	2.44	3
Saurida brasiliensis	2.6	2.65	0.0	0.02	2	0.0	0.00	0.0	0.00	1	4.2	2.70	0.0	0.01	3
Squid spp	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	0.7	0.74	0.0	0.00	3

Table 9b

Statistical Zone 17

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	22.8	7.32	10	44.6	27.49	14	41.3	10.95	9	0.0	0	0	73.0	0	1	54.9	3.87	3
Total finfish kg	20.5	7.11	10	13.2	5.36	14	33.5	9.69	9	0.0	0	0	70.3	0	1	48.4	3.5	3
Total crustacean kg	2.2	1.06	9	1.1	0.61	10	5.5	2.21	9	0.0	0	0	1.1	0	1	2.6	0.42	3
Total others kg	0.5	0.2	6	30.6	27.08	14	2.4	0.88	9	0.0	0	0	1.6	0	1	3.9	0.49	3
Surface temperature	29.0	0.18	10	29.1	0.11	14	28.1	0.19	9	0.0	0	0	28.9	0	1	28.7	0.08	2
Midwater temperature	28.9	0.18	10	28.6	0.08	14	27.9	0.08	9	0.0	0	0	26.8	0	1	24.4	0.47	2
Bottom temperature	28.8	0.19	10	27.9	0.18	14	26.6	0.13	9	0.0	0	0	21.2	0	1	20.0	0.48	2
Surface salinity	20.7	2.28	10	23.8	1.68	14	35.1	0.34	9	0.0	0	0	35.9	0	1	34.8	1.28	2
Midwater salinity	21.2	1.99	10	27.1	0.99	14	35.3	0.26	9	0.0	0	0	36.2	0	1	36.4	0.06	2
Bottom salinity	23.7	2.3	10	31.1	1.01	14	35.9	0.05	9	0.0	0	0	36.5	0	1	36.4	0.11	2
Surface chlorophyll	7.2	0	1	2.5	0.51	7	0.4	0.11	9	0.0	0	0	0.1	0	1	0.2	0.1	2
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	6.9	0.22	10	7.0	0.32	14	5.6	0.02	9	0.0	0	0	5.3	0	1	5.3	0	2
Midwater oxygen	6.5	0.15	10	5.7	0.23	14	5.5	0.03	9	0.0	0	0	5.6	0	1	6.1	0.05	2
Bottom oxygen	5.1	0.59	10	3.2	0.63	14	4.2	0.57	9	0.0	0	0	4.2	0	1	3.8	0.2	2

Table 10a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2002 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
Farfantepenaeus aztecus	302.4	179.83	2.4	1.52	11	90.8	36.96	0.7	0.28	8	967.7	589.08	13.4	7.50	9
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	734.6	315.14	5.1	1.82	9
Callinectes similis	6.0	4.85	0.0	0.01	11	1.5	1.50	0.0	0.00	8	635.0	187.33	10.2	3.33	9
Squilla spp	1.6	1.17	0.0	0.01	11	1.5	0.98	0.0	0.02	8	477.2	220.95	4.7	2.08	9
Sicyonia dorsalis	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	119.3	58.73	0.4	0.20	9
Portunus spinicarpus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	22.2	16.39	0.1	0.06	9
Micropogonias undulatus	2310.3	1955.50	48.6	43.28	11	246.0	114.77	4.8	2.31	8	944.5	917.09	36.9	35.71	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	654.1	247.32	8.5	2.96	9
Leiostomus xanthurus	371.3	260.83	15.5	11.39	11	135.8	55.35	3.6	1.44	8	166.1	107.35	12.1	7.73	9
Chloroscombrus chrysurus	23.9	20.09	0.6	0.47	11	9.0	4.24	0.2	0.11	8	144.0	78.60	4.5	2.42	9
Upeneus parvus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	14.8	4.79	0.2	0.07	9
Trachurus lathami	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	72.3	37.53	1.9	1.03	9
Prionotus longispinosus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	140.0	59.48	1.5	0.52	9
Syacium gunteri	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	81.9	17.73	1.8	0.39	9
Squid spp	86.2	71.60	0.7	0.43	11	3.8	2.99	0.1	0.05	8	301.7	179.12	5.1	3.27	9

Table 10a (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2002 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
Farfantepenaeus aztecus	301.1	0.00	3.7	0.00	1	24.4	11.11	1.2	0.50	4	3.4	2.38	0.1	0.09	3
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Callinectes similis	285.8	0.00	8.0	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Squilla spp	55.6	0.00	0.8	0.00	1	12.1	10.34	0.1	0.10	4	1.6	1.60	0.0	0.00	3
Sicyonia dorsalis	3.3	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	349.1	0.00	1.1	0.00	1	103.0	46.66	0.5	0.22	4	11.0	3.40	0.1	0.02	3
Micropogonias undulatus	3.3	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	330.5	0.00	12.0	0.00	1	183.1	43.62	13.0	3.94	4	238.7	96.91	12.3	4.13	3
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	0.8	0.82	0.1	0.08	4	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Upeneus parvus	0.0	0.00	0.0	0.00	1	63.6	28.33	2.5	0.98	4	291.5	111.98	9.9	3.52	3
Trachurus lathami	0.0	0.00	0.0	0.00	1	28.9	15.34	0.7	0.32	4	131.9	75.97	4.1	2.67	3
Prionotus longispinosus	16.4	0.00	0.4	0.00	1	1.5	1.53	0.2	0.16	4	0.0	0.00	0.0	0.00	3
Syacium gunteri	28.4	0.00	0.6	0.00	1	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Squid spp	5.5	0.00	0.1	0.00	1	46.2	25.15	0.9	0.64	4	193.1	71.99	2.0	0.48	3

Table 10b

Statistical Zone 18

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	82.9	63.05	11	16.0	5.49	8	133.0	41.62	9	0.0	0	0	41.5	8.01	4	52.1	11.87	3
Total finfish kg	83.9	65.96	10	14.0	5.17	8	88.8	41.34	9	0.0	0	0	36.7	6.89	4	49.5	11.12	3
Total crustacean kg	5.4	3.19	10	1.9	0.55	6	37.1	9.27	9	0.0	0	0	2.4	0.78	4	0.2	0.12	3
Total others kg	3.0	1.19	6	0.9	0.29	7	6.6	3.14	9	0.0	0	0	2.5	0.86	4	2.6	0.73	3
Surface temperature	28.3	0.19	11	28.2	0.23	8	28.1	0.12	10	0.0	0	0	27.8	0.12	4	28.0	0.19	2
Midwater temperature	28.2	0.17	11	28.2	0.26	8	27.6	0.26	10	0.0	0	0	25.2	0.89	4	23.6	0.75	2
Bottom temperature	27.5	0.38	11	27.8	0.46	8	26.4	0.33	10	0.0	0	0	22.7	1.04	4	21.2	0.41	2
Surface salinity	20.7	0.48	10	21.2	0.29	8	30.8	0.68	10	0.0	0	0	33.5	0.38	4	32.8	0.07	2
Midwater salinity	21.5	0.53	10	23.1	1.08	8	33.4	0.83	10	0.0	0	0	36.1	0.22	4	36.4	0.06	2
Bottom salinity	23.4	1.22	9	25.3	1.57	8	34.7	0.79	10	0.0	0	0	36.3	0.17	4	36.5	0.02	2
Surface chlorophyll	4.3	0	1	0.0	0	0	2.3	0.22	10	0.0	0	0	1.0	0.51	4	0.3	0.01	2
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	6.9	0.2	11	6.9	0.33	8	5.8	0.04	10	0.0	0	0	5.6	0.07	4	5.7	0.05	2
Midwater oxygen	6.5	0.25	11	6.5	0.43	8	5.5	0.12	10	0.0	0	0	6.1	0.16	4	6.2	0.05	2
Bottom oxygen	5.4	0.56	11	5.8	0.51	8	3.8	0.42	10	0.0	0	0	5.4	0.1	4	5.1	0.2	2

Table 11a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2002 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
Farfantepenaeus aztecus	8.2	8.23	0.1	0.06	4	225.2	122.67	3.5	2.26	21	1169.2	399.94	17.0	5.84	14
Callinectes similis	70.5	65.62	1.1	1.00	4	121.5	80.23	1.4	0.90	21	233.8	101.23	3.0	1.35	14
Squilla spp	77.8	72.87	1.1	0.99	4	97.8	47.98	0.5	0.25	21	138.4	50.36	1.7	0.64	14
Litopenaeus setiferus	111.0	64.06	8.3	5.59	4	31.9	18.06	1.2	0.88	21	141.7	128.57	0.8	0.54	14
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	21	0.0	0.00	0.0	0.00	14
Farfantepenaeus duorarum	1.5	1.45	0.0	0.02	4	8.7	5.48	0.1	0.07	21	92.9	90.08	0.4	0.35	14
Chloroscombrus chrysurus	391.7	69.95	7.1	1.41	4	3482.4	1833.70	49.1	25.33	21	399.0	140.52	10.7	3.71	14
Micropogonias undulatus	1205.5	682.39	34.8	20.31	4	1682.4	635.18	41.1	15.93	21	230.3	200.04	8.7	7.44	14
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	0.6	0.61	0.0	0.01	21	318.6	109.20	3.5	1.33	14
Peprilus burti	0.0	0.00	0.0	0.00	4	89.0	59.49	3.2	2.39	21	318.9	122.72	13.5	5.22	14
Cynoscion nothus	68.8	48.17	3.4	2.50	4	188.8	65.99	7.6	3.02	21	144.0	57.13	6.9	2.45	14
Cynoscion arenarius	138.6	93.73	3.7	2.15	4	186.9	88.95	2.6	1.24	21	53.7	21.11	1.2	0.37	14
Saurida brasiliensis	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	21	36.7	24.99	0.2	0.12	14
Leiostomus xanthurus	195.3	111.57	12.2	7.16	4	163.6	109.75	5.2	3.22	21	1.2	0.70	0.1	0.04	14
Squid spp	83.4	33.61	1.3	0.44	4	102.8	22.97	1.7	0.38	21	576.1	211.56	10.6	3.86	14

Table 11a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2002 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
Farfantepenaeus aztecus	283.8	142.03	5.7	2.80	11	41.9	38.49	1.1	0.95	2	47.5	31.23	2.2	1.48	3
Callinectes similis	93.1	28.65	0.7	0.22	11	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Squilla spp	30.2	14.02	0.3	0.15	11	0.0	0.00	0.0	0.00	2	45.5	23.98	0.4	0.22	3
Litopenaeus setiferus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	90.5	35.20	0.6	0.26	11	139.3	130.71	0.8	0.73	2	95.6	50.97	0.8	0.52	3
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	7.1	4.14	0.3	0.16	11	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	5.9	4.50	0.3	0.16	11	0.0	0.00	0.0	0.00	2	10.0	10.00	1.0	1.00	3
Stenotomus caprinus	267.6	59.40	7.6	2.62	11	114.3	68.06	4.7	2.34	2	137.3	77.82	6.9	2.80	3
Peprilus burti	14.9	9.35	1.0	0.65	11	0.0	0.00	0.0	0.00	2	3.9	3.87	0.2	0.24	3
Cynoscion nothus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Cynoscion arenarius	0.1	0.10	0.0	0.02	11	0.0	0.00	0.0	0.00	2	3.1	1.56	0.7	0.33	3
Saurida brasiliensis	290.9	148.71	1.5	0.77	11	100.9	63.69	0.5	0.30	2	73.0	70.91	0.4	0.41	3
Leiostomus xanthurus	12.8	9.87	1.1	0.89	11	0.0	0.00	0.0	0.00	2	15.6	13.51	1.8	1.40	3
Squid spp	92.9	39.89	1.0	0.37	11	103.8	79.80	1.4	1.29	2	162.5	122.51	4.1	2.74	3

Table 11b

Statistical Zone 19

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	117.0	47.62	4	131.0	35.39	21	92.1	17.84	14	0.0	0	0	21.3	8.74	2	97.9	32.68	3
Total finfish kg	91.3	45.97	4	122.0	35.89	20	62.1	15.25	13	0.0	0	0	15.7	6.41	2	85.4	33.82	3
Total crustacean kg	24.7	3.42	2	9.7	4.79	15	25.5	7.64	13	0.0	0	0	2.7	2.14	2	5.1	2.31	3
Total others kg	13.6	11.48	4	7.9	1.87	21	10.8	3.84	14	0.0	0	0	2.9	0.19	2	7.3	2.57	3
Surface temperature	29.8	0.15	4	28.5	0.2	21	28.9	0.21	15	0.0	0	0	28.4	0	1	29.0	0.36	3
Midwater temperature	29.8	0.19	4	28.1	0.24	21	28.2	0.28	15	0.0	0	0	26.6	0	1	24.5	0.42	3
Bottom temperature	29.6	0.36	4	26.7	0.29	21	25.9	0.15	15	0.0	0	0	23.6	0	1	21.3	0.14	3
Surface salinity	27.2	0.54	4	26.1	0.42	21	27.9	0.48	15	0.0	0	0	34.4	0	1	31.4	0.75	3
Midwater salinity	27.2	0.55	4	27.6	0.47	21	30.9	0.77	15	0.0	0	0	35.8	0	1	36.3	0.08	3
Bottom salinity	27.7	0.59	4	30.8	0.59	21	33.9	0.35	15	0.0	0	0	36.4	0	1	36.4	0.05	3
Surface chlorophyll	1.9	0.67	2	2.7	0.29	10	2.2	0.55	12	0.0	0	0	0.2	0	1	0.4	0.05	3
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	5.9	0.06	4	6.1	0.07	21	5.9	0.05	15	0.0	0	0	5.7	0	1	5.8	0	3
Midwater oxygen	5.9	0.08	4	5.8	0.15	21	5.3	0.09	15	0.0	0	0	6.0	0	1	6.0	0.22	3
Bottom oxygen	5.2	0.65	4	2.8	0.45	21	3.1	0.43	15	0.0	0	0	6.1	0	1	5.0	0.03	3

Table 12a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2002 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
Farfantepenaeus aztecus	20.0	16.58	0.1	0.11	9	150.3	73.98	1.5	0.80	14	1655.4	732.27	9.9	3.97	8
Portunus spinicarpus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	14	0.0	0.00	0.0	0.00	8
Callinectes similis	8.0	3.32	0.1	0.02	9	173.4	85.37	1.8	0.88	14	298.2	152.58	2.9	1.27	8
Solenocera vioscai	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	14	1.9	1.92	0.0	0.01	8
Squilla spp	8.0	2.45	0.1	0.02	9	79.4	38.82	1.2	0.55	14	165.3	89.53	1.7	0.97	8
Sicyonia dorsalis	2.0	1.41	0.0	0.00	9	1.7	1.71	0.0	0.00	14	50.9	42.91	0.0	0.03	8
Chloroscombrus chrysurus	352.7	303.05	7.3	6.61	9	585.5	283.95	10.3	5.88	14	1442.4	1262.10	25.3	21.98	8
Peprilus burti	13.3	10.67	0.4	0.33	9	28.4	13.37	0.7	0.34	14	209.2	95.19	5.6	2.51	8
Micropogonias undulatus	38.7	17.03	0.9	0.42	9	819.7	298.13	18.8	7.02	14	25.9	24.37	0.6	0.55	8
Leiostomus xanthurus	8.7	3.33	0.3	0.12	9	320.3	226.93	20.7	15.87	14	0.8	0.80	0.0	0.04	8
Cynoscion arenarius	36.0	28.09	1.5	1.24	9	108.4	38.13	1.5	0.47	14	197.1	63.05	3.1	1.17	8
Saurida brasiliensis	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	14	78.5	47.92	0.3	0.15	8
Serranus atrobranchus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	14	23.2	13.25	0.1	0.05	8
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	14	7.4	4.60	0.2	0.11	8
Squid spp	32.7	21.12	0.5	0.36	9	106.3	52.47	1.6	0.79	14	467.4	243.43	6.7	4.07	8

Table 12a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2002 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
Farfantepenaeus aztecus	557.2	464.93	4.0	3.11	5	88.4	25.15	2.1	0.70	4	35.5	24.68	1.4	0.86	3
Portunus spinicarpus	16.2	13.65	0.1	0.07	5	1258.0	593.36	8.4	4.01	4	154.1	68.36	1.0	0.41	3
Callinectes similis	169.2	132.95	1.0	0.76	5	0.5	0.55	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Solenocera vioscai	44.0	43.42	0.2	0.16	5	274.4	172.48	1.5	0.99	4	181.7	84.16	1.1	0.43	3
Squilla spp	34.6	30.80	0.4	0.35	5	34.1	20.72	0.3	0.20	4	32.4	10.36	0.2	0.05	3
Sicyonia dorsalis	128.1	74.95	0.3	0.20	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Peprilus burti	949.4	540.29	30.9	17.36	5	93.8	92.73	5.6	5.55	4	0.8	0.78	0.1	0.08	3
Micropogonias undulatus	0.0	0.00	0.0	0.00	5	0.5	0.55	0.0	0.04	4	0.0	0.00	0.0	0.00	3
Leiostomus xanthurus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Cynoscion arenarius	4.0	3.17	0.1	0.04	5	0.8	0.82	0.1	0.12	4	0.0	0.00	0.0	0.00	3
Saurida brasiliensis	227.9	127.65	1.5	0.72	5	174.1	70.77	1.1	0.36	4	0.0	0.00	0.0	0.00	3
Serranus atrobranchus	35.6	24.95	0.3	0.15	5	114.3	43.47	1.2	0.34	4	176.3	36.56	2.4	0.36	3
Pristipomoides aquilonaris	19.1	7.90	0.5	0.19	5	50.6	5.46	1.9	0.20	4	280.9	102.34	30.3	13.25	3
Squid spp	683.6	241.40	7.4	2.96	5	100.9	43.87	2.1	0.52	4	49.3	30.82	1.2	0.41	3

Table 12b

Statistical Zone 20

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	16.1	9.04	9	81.8	23.87	14	89.0	41.39	8	0.0	0	0	37.9	3.56	4	67.0	16.79	3
Total finfish kg	13.7	8.89	9	70.4	22.49	14	54.4	30.15	8	0.0	0	0	21.3	7.87	4	56.6	18.43	3
Total crustacean kg	0.6	0.24	4	11.6	4.11	10	15.1	5.3	8	0.0	0	0	13.9	5.4	4	3.8	1.26	3
Total others kg	2.7	1.3	7	3.3	1.35	13	19.5	12.84	8	0.0	0	0	2.7	0.49	4	6.5	1.6	3
Surface temperature	29.1	0.08	9	29.1	0.08	14	29.0	0.12	8	0.0	0	0	29.2	0.2	2	29.1	0.09	7
Midwater temperature	29.0	0.17	9	29.0	0.07	14	28.5	0.25	8	0.0	0	0	26.2	0.87	2	24.0	0.55	7
Bottom temperature	28.9	0.13	9	28.5	0.24	14	25.4	0.36	8	0.0	0	0	22.0	0.03	2	21.0	0.64	7
Surface salinity	29.8	0.46	9	30.1	0.63	14	30.6	0.59	8	0.0	0	0	30.9	0.21	2	30.3	0.81	7
Midwater salinity	30.3	0.37	9	30.5	0.57	14	31.6	0.74	8	0.0	0	0	35.8	0.03	2	36.2	0.13	7
Bottom salinity	31.3	0.59	9	32.0	0.52	14	34.2	0.47	8	0.0	0	0	36.3	0.18	2	36.3	0.12	7
Surface chlorophyll	0.9	0	1	1.2	0.15	6	0.7	0.14	8	0.0	0	0	0.4	0.01	2	0.6	0.18	7
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	4.0	1.64	9	5.1	0.17	14	5.8	0.14	8	0.0	0	0	5.8	0	2	5.8	0.04	7
Midwater oxygen	5.8	0.2	8	5.1	0.17	14	5.7	0.14	8	0.0	0	0	5.7	0.3	2	6.0	0.16	7
Bottom oxygen	5.6	0.16	9	4.8	0.23	14	3.4	0.29	8	0.0	0	0	4.7	0.55	2	4.7	0.19	7

Table 13a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2002 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	4	44.1	44.13	0.3	0.32	7	747.2	390.13	6.5	3.54	21
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	3.0	2.85	0.0	0.02	21
Solenocera vioscai	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	2.7	2.23	0.0	0.01	21
Callinectes similis	0.0	0.00	0.0	0.00	4	8.0	5.45	0.1	0.08	7	53.8	34.80	0.7	0.36	21
Squilla spp	0.0	0.00	0.0	0.00	4	6.4	5.32	0.1	0.09	7	23.4	9.73	0.4	0.17	21
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	4	86.5	80.21	1.3	1.17	7	56.0	31.46	0.4	0.19	21
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	148.9	148.89	1.6	1.60	7	265.7	71.65	1.1	0.28	21
Micropogonias undulatus	0.0	0.00	0.0	0.00	4	1386.7	1386.70	37.7	37.75	7	3.8	2.90	0.1	0.10	21
Hildebrandia flava	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	21
Saurida brasiliensis	0.0	0.00	0.0	0.00	4	1.0	0.95	0.0	0.00	7	93.3	42.70	0.6	0.23	21
Synodus poeyi	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	2.4	2.28	0.0	0.00	21
Upeneus parvus	0.0	0.00	0.0	0.00	4	26.9	13.37	0.3	0.13	7	78.4	17.41	0.7	0.19	21
Chloroscombrus chrysurus	211.5	107.12	7.9	5.65	4	231.1	112.79	6.5	4.73	7	48.3	33.92	1.0	0.66	21
Leiostomus xanthurus	4.5	4.50	0.0	0.04	4	194.1	194.08	8.8	8.82	7	111.4	109.19	7.1	6.94	21
Squid spp	3.0	3.00	0.0	0.03	4	155.9	58.79	2.4	0.87	7	256.1	101.85	3.0	1.19	21

Table 13a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2002 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
Farfantepenaeus aztecus	313.9	113.29	4.5	1.37	5	53.9	26.65	1.3	0.56	3	86.8	26.15	3.7	1.21	3
Portunus spinicarpus	263.3	154.07	1.5	0.84	5	859.7	856.24	5.7	5.68	3	188.3	179.11	1.3	1.27	3
Solenocera vioscai	250.4	100.40	1.6	0.79	5	349.9	349.38	1.2	1.15	3	105.2	105.22	0.5	0.53	3
Callinectes similis	2.0	0.88	0.1	0.02	5	1.7	1.74	0.1	0.07	3	0.0	0.00	0.0	0.00	3
Squilla spp	67.9	24.21	0.4	0.22	5	53.4	52.86	0.4	0.36	3	8.8	6.79	0.0	0.05	3
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	20.7	8.50	0.8	0.34	5	148.3	104.45	7.4	5.15	3	32.6	10.07	1.9	0.69	3
Micropogonias undulatus	0.4	0.44	0.0	0.03	5	0.7	0.73	0.1	0.12	3	1.7	1.74	0.2	0.20	3
Hildebrandia flava	397.5	264.25	2.2	1.34	5	249.6	249.57	1.8	1.82	3	70.6	60.23	1.1	0.61	3
Saurida brasiliensis	82.9	67.85	0.4	0.29	5	43.2	10.01	0.3	0.10	3	85.0	75.35	0.4	0.31	3
Synodus poeyi	259.0	233.66	1.5	1.20	5	26.1	10.53	0.7	0.60	3	8.3	4.95	0.1	0.05	3
Upeneus parvus	36.4	28.86	0.4	0.34	5	231.5	183.74	8.6	6.60	3	62.6	20.45	1.8	0.66	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Leiostomus xanthurus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3
Squid spp	36.6	20.92	1.6	0.90	5	227.2	131.87	3.3	1.99	3	288.3	136.22	3.3	1.52	3

Table 13b

Statistical Zone 21

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2002 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	22.8	16.2	4	104.0	81.03	7	29.0	8.76	21	0.0	0	0	48.2	19.66	3	30.4	1.42	3
Total finfish kg	21.6	16.37	4	95.3	79.67	7	16.2	7.35	21	0.0	0	0	34.3	21.44	3	20.5	3.23	3
Total crustacean kg	0.6	0.6	2	6.2	3.27	5	9.8	4.44	19	0.0	0	0	10.4	9.4	3	5.8	3.08	3
Total others kg	1.2	0.42	4	4.7	1.24	6	4.1	1.13	21	0.0	0	0	3.5	2.09	3	4.1	1.24	3
Surface temperature	27.1	0.76	4	27.7	0.5	7	27.9	0.26	21	0.0	0	0	28.9	0.25	3	28.8	0.12	3
Midwater temperature	27.0	0.73	4	27.6	0.46	7	27.3	0.29	21	0.0	0	0	25.4	0.64	3	24.3	0.63	3
Bottom temperature	27.3	0.81	4	26.0	0.32	7	25.2	0.15	21	0.0	0	0	21.7	1.13	3	21.4	0.94	3
Surface salinity	34.2	0.48	4	34.3	0.14	7	34.0	0.14	21	0.0	0	0	32.8	0.53	3	32.6	0.59	3
Midwater salinity	34.6	0.22	3	34.4	0.13	7	34.4	0.1	21	0.0	0	0	35.7	0.47	3	36.1	0.39	3
Bottom salinity	34.7	0.33	3	34.7	0.21	7	35.0	0.14	21	0.0	0	0	36.1	0.28	3	35.9	0.57	3
Surface chlorophyll	0.5	0	1	0.5	0.06	4	0.3	0.05	11	0.0	0	0	0.3	0.02	3	0.3	0.01	3
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	5.7	0.09	4	5.8	0.07	7	5.8	0.04	21	0.0	0	0	5.9	0.03	3	5.8	0.07	3
Midwater oxygen	5.7	0.08	4	5.8	0.06	7	5.8	0.03	21	0.0	0	0	6.0	0.25	3	6.3	0.12	3
Bottom oxygen	5.5	0.14	4	5.7	0.05	7	5.4	0.16	21	0.0	0	0	4.2	0.53	3	4.3	0.27	3

Table 14. 2002 Fall Shrimp/Groundfish Survey species composition list, 378 trawl stations, for those vessels that used either a 40-ft or 20-ft trawl. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Chloroscombrus chrysurus	Atlantic bumper	33225	555.6	160	42.3
Micropogonias undulatus	Atlantic croaker	31311	2174.0	267	70.6
Stenotomus caprinus	longspine porgy	14323	660.2	187	49.5
Cynoscion spp.	seatrouts	7636	23.5	73	19.3
Serranus atrobranchus	blackear bass	6524	63.3	85	22.5
Peprilus burti	gulf butterfish	5981	392.1	146	38.6
Cynoscion nothus	silver seatrout	5801	146.9	187	49.5
Leiostomus xanthurus	spot	5309	507.1	170	45.0
Prionotus longispinosus	bigeye searobin	4227	99.0	139	36.8
Trachurus lathami	rough scad	3020	135.2	78	20.6
Anchoa hepsetus	striped anchovy	3006	43.4	81	21.4
Trichiurus lepturus	Atlantic cutlassfish	2803	96.5	154	40.7
Stellifer lanceolatus	star drum	2798	36.1	84	22.2
Diplectrum bivittatum	dwarf sand perch	2475	38.9	115	30.4
Syacium gunteri	shoal flounder	2305	40.3	166	43.9
Harengula jaguana	scaled sardine	2261	36.2	85	22.5
Synodus foetens	inshore lizardfish	2179	203.2	201	53.2
Pristipomoides aquilonaris	wenchman	2066	140.1	63	16.7
Lagodon rhomboides	pinfish	2044	120.0	154	40.7
Cynoscion arenarius	sand seatrout	1864	152.7	200	52.9
Centropristis philadelphica	rock sea bass	1721	69.8	171	45.2
Lutjanus campechanus	red snapper	1672	57.3	176	46.6
Upeneus parvus	dwarf goatfish	1625	59.4	72	19.0
Prionotus paralatus	Mexican searobin	1548	31.3	46	12.2
Halieutichthys aculeatus	pancake batfish	1467	9.2	104	27.5

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Prionotus stearnsi	shortwing searobin	1312	12.2	38	10.1
Porichthys plectrodon	Atlantic midshipman	1115	16.8	137	36.2
Ariopsis felis	hardhead catfish	1097	159.8	71	18.8
Saurida brasiliensis	largescale lizardfish	998	4.1	90	23.8
Trichopsetta ventralis	sash flounder	925	20.2	59	15.6
Lepophidium brevibarbe	blackedge cusk-eel	909	25.6	82	21.7
Sphoeroides parvus	least puffer	857	4.3	88	23.3
Prionotus roseus	bluespotted searobin	797	13.2	24	6.3
Eucinostomus gula	silver jenny	751	17.4	108	28.6
Bagre marinus	gafftopsail catfish	705	19.5	22	5.8
Etropus crossotus	fringed flounder	618	9.5	93	24.6
Scorpaena calcarata	smoothhead scorpionfish	601	4.4	53	14.0
Larimus fasciatus	banded drum	574	28.1	71	18.8
Chaetodipterus faber	Atlantic spadefish	547	25.0	104	27.5
Anchoa mitchilli	bay anchovy	473	0.7	50	13.2
Lutjanus synagris	lane snapper	463	29.0	104	27.5
Cyclopsetta chittendeni	Mexican flounder	449	28.5	101	26.7
Opisthonema oglinum	Atlantic thread herring	447	20.8	65	17.2
Peprilus alepidotus	harvestfish	422	22.1	69	18.3
Balistes capriscus	gray triggerfish	405	18.0	68	18.0
Selene setapinnis	Atlantic moonfish	399	16.8	69	18.3
Citharichthys spilopterus	bay whiff	383	5.3	70	18.5
Synodus poeyi	offshore lizardfish	332	1.2	47	12.4
Brevoortia patronus	gulf menhaden	316	22.7	46	12.2
Caranx crysos	blue runner	310	24.1	60	15.9
Rhynchoconger flavus	yellow conger	296	15.8	37	9.8
Bollmannia communis	ragged goby	285	0.7	30	7.9
Menticirrhus americanus	southern kingfish	232	24.6	67	17.7
Steindachneria argentea	luminous hake	231	3.2	9	2.4
Mullus auratus	red goatfish	229	16.1	23	6.1

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Sardinella aurita	spanish sardine	217	10.0	23	6.1
Syacium papillosum	dusky flounder	199	12.7	20	5.3
Symphurus plagiusa	blackcheek tonguefish	178	2.9	56	14.8
Lagocephalus laevigatus	smooth puffer	168	16.6	56	14.8
Decapterus punctatus	round scad	165	5.4	13	3.4
Prionotus rubio	blackwing searobin	165	14.2	34	9.0
Haemulon aurolineatum	tomtate	141	7.2	15	4.0
Symphurus civitatium	offshore tonguefish	136	2.1	28	7.4
Orthopristis chrysoptera	pigfish	135	10.4	32	8.5
Lepophidium jeannae	mottled cusk-eel	114	4.0	11	2.9
Ophidion josephi	crested cusk-eel	112	4.3	29	7.7
Bellator militaris	horned searobin	105	0.3	17	4.5
Hoplunnis macrura	freckled pike-conger	102	0.6	33	8.7
Pisces	fishes	97	6.5	15	4.0
Sphyraena guachancho	guaguanche	95	9.0	26	6.9
Diplectrum formosum	sand perch	89	7.6	13	3.4
Hemicaranx amblyrhynchus	bluntnose jack	88	1.0	19	5.0
Apogon aurolineatus	bridle cardinalfish	78	0.1	10	2.6
Selar crumenophthalmus	bigeye scad	76	6.5	25	6.6
Symphurus diomedianus	spottedfin tonguefish	71	1.5	20	5.3
Ancylopsetta quadrocellata	ocellated flounder	70	8.2	36	9.5
Rhomboplites aurorubens	vermilion snapper	68	2.6	16	4.2
Etrumeus teres	round herring	67	1.3	6	1.6
Ancylopsetta dilecta	three-eye flounder	64	2.6	7	1.9
Selene vomer	lookdown	64	1.8	35	9.3
Brotula barbata	bearded brotula	62	6.7	22	5.8
Pareques umbrosus	cubbyu	61	2.0	9	2.4
Urophycis floridana	southern hake	57	7.6	16	4.2
Gymnachirus texae	fringed sole	56	1.0	12	3.2
Caulolatilus intermedius	anchor tilefish	54	3.5	17	4.5

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Ogcocephalus pantostictus	spotted batfish	52	1.2	10	2.6
Ophidion holbrooki	bank cusk-eel	52	2.9	2	0.5
Prionotus tribulus	bighead searobin	52	1.9	24	6.3
Scomberomorus cavalla	king mackerel	46	5.4	15	4.0
Stephanolepis hispidus	planehead filefish	45	0.6	16	4.2
Prionotus ophryas	bandtail searobin	42	0.4	20	5.3
Ogcocephalus spp.	batfishes	41	1.8	15	4.0
Pontinus longispinis	longspine scorpionfish	37	0.7	8	2.1
Kathetostoma albigutta	lancer stargazer	34	1.4	11	2.9
Bothus robinsi	twospot flounder	31	0.9	4	1.1
Scomber colias	chub mackerel	31	2.7	2	0.5
Ogcocephalus declivirostris	slantbrow batfish	30	0.3	17	4.5
Paralichthys lethostigma	southern flounder	30	6.6	15	4.0
Rhizoprionodon terraenovae	Atlantic sharpnose shark	30	34.6	15	4.0
Peprilus triacanthus	butterfish	27	1.7	4	1.1
Raja texana	roundel skate	24	7.8	15	4.0
Anchoa lyolepis	dusky anchovy	23	0.1	8	2.1
Gymnothorax nigromarginatus	blackedge moray	23	2.0	16	4.2
Equetus acuminatus	high-hat	22	1.1	5	1.3
Engyophrys senta	spiny flounder	21	0.1	11	2.9
Bregmaceros atlanticus	antenna codlet	20	0.0	10	2.6
Cyclopsetta fimbriata	spotfin flounder	20	1.6	9	2.4
Sphyrna tiburo	bonnethead	20	41.3	10	2.6
Priacanthus arenatus	bigeye	19	2.8	8	2.1
Sciaenops ocellatus	red drum	19	85.2	4	1.1
Neobythites gillii	cusk-eel	17	0.1	3	0.8
Scomberomorus maculatus	spanish mackerel	17	4.2	7	1.9
Urophycis cirrata	gulf hake	17	0.4	6	1.6
Neomerinthe hemingwayi	spinycheek scorpionfish	16	2.9	6	1.6
Paraconger caudilimbatus	margintail conger	16	0.5	3	0.8

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Bellator brachychir	shortfin searobin	15	0.5	1	0.3
Sphoeroides dorsalis	marbled puffer	15	0.3	7	1.9
Decodon puellaris	red hogfish	14	0.5	3	0.8
Antennarius radiosus	singlespot frogfish	13	0.1	6	1.6
Ophichthus gomesi	shrimp eel	13	0.7	9	2.4
Menticirrhus littoralis	gulf kingfish	11	1.5	5	1.3
Paralichthys squamilentus	broad flounder	11	3.6	5	1.3
Lepophidium spp.	cusk-eels	10	0.2	1	0.3
Mustelus canis	smooth dogfish	10	10.5	9	2.4
Squatina dumeril	Atlantic angel shark	10	6.7	8	2.1
Dorosoma petenense	threadfin shad	9	0.1	5	1.3
Epinephelus flavolimbatus	yellowedge grouper	9	0.5	7	1.9
Hemanthias aureorubens	streamer bass	9	0.0	1	0.3
Bathyanthias mexicanus	yellowtail bass	8	0.1	2	0.5
Physiculus fulvus	metallic codling	8	0.0	3	0.8
Echeneis naucrates	sharksucker	7	3.9	7	1.9
Haemulon parrai	sailors choice	7	0.2	1	0.3
Peristedion gracile	slender searobin	7	0.0	2	0.5
Rachycentron canadum	cobia	7	9.4	6	1.6
Citharichthys gymnohinus	anglefin whiff	6	0.0	1	0.3
Dasyatis sabina	Atlantic stringray	6	2.1	4	1.1
Decapterus macarellus	mackeral scad	6	0.0	1	0.3
Etropus rimosus	gray flounder	6	0.1	1	0.3
Acanthostracion quadricornis	scrawled cowfish	6	0.7	5	1.3
Lonchopisthus micrognathus	swordtail jawfish	6	0.1	3	0.8
Ogcocephalidae	batfishes	6	0.4	2	0.5
Syacium micrurum	channel flounder	6	0.6	2	0.5
Trachinotus carolinus	Florida pompano	6	2.0	2	0.5
Dasyatis say	bluntnose stingray	5	1.3	3	0.8
Pareques iwamotoi	blackbar drum	5	0.3	3	0.8

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Scorpaena brasiliensis	barbfish	5	0.1	2	0.5
Calamus leucosteus	whitebone porgy	4	0.5	2	0.5
Carcharhinus brevipinna	spinner shark	4	3.5	1	0.3
Chilomycterus schoepfi	striped burrfish	4	1.3	3	0.8
Epinephelus drummondhayi	speckled hind	4	0.4	1	0.3
Rypticus maculatus	whitespotted soapfish	4	0.1	4	1.1
Sardinella brasiliensis	orangespot sardine	4	0.1	2	0.5
Synodus intermedius	sand diver	4	0.2	2	0.5
Caranx hippos	crevalle jack	3	0.1	2	0.5
Citharichthys macrops	spotted whiff	3	0.1	3	0.8
Etropus cyclosquamus	shelf flounder	3	0.0	2	0.5
Gobionellus oceanicus	highfin goby	3	0.0	2	0.5
Narcine brasiliensis	lesser electric ray	3	2.5	3	0.8
Ocyurus chrysurus	yellowtail snapper	3	0.1	1	0.3
Ophichthus spp.	snake eels	3	0.2	1	0.3
Pogonias cromis	black drum	3	22.2	3	0.8
Trachinocephalus myops	snakefish	3	0.1	3	0.8
Trinectes maculatus	hogchoker	3	0.0	3	0.8
Achirus lineatus	lined sole	2	0.0	2	0.5
Alectis ciliaris	african pompano	2	0.4	1	0.3
Carcharhinus acronotus	blacknose shark	2	3.2	1	0.3
Dasyatis americana	southern stingray	2	2.6	2	0.5
Gobioides broussoneti	violet goby	2	0.0	2	0.5
Gymnachirus melas	naked sole	2	0.0	1	0.3
Gymnothorax moringa	spotted moray	2	0.1	1	0.3
Gymnothorax saxicola	honeycomb moray	2	0.1	1	0.3
Lutjanus griseus	grey snapper	2	0.4	2	0.5
Ophidiidae	cusk-eels	2	0.1	1	0.3
Ophidion marginatum	striped cusk-eel	2	0.1	1	0.3
Opihichthus cruentifer	margined snake eel	2	0.2	1	0.3

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Opistognathus spp.	jawfishes	2	0.0	1	0.3
Pomatomus saltatrix	bluefish	2	0.7	1	0.3
Saurida caribbaea	smallscale lizardfish	2	0.0	2	0.5
Sphoeroides spengleri	bandtail puffer	2	0.1	1	0.3
Sphyraena borealis	northern sennet	2	0.4	1	0.3
Symphurus spp.	tonguefishes	2	0.0	1	0.3
Antennarius striatus	striated frogfish	1	0.1	1	0.3
Aplatophis chauliodus	tusky eel	1	0.6	1	0.3
Apogon spp.	cardinalfishes	1	0.0	1	0.3
Archosargus probatocephalus	sheepshead	1	0.9	1	0.3
Astroscopus y-graecum	southern stargazer	1	0.0	1	0.3
Bairdiella chrysoura	silver perch	1	0.0	1	0.3
Bascanichthys bascanium	sooty eel	1	0.0	1	0.3
Canthidermis sufflamen	ocean triggerfish	1	0.0	1	0.3
Centropristis ocyurus	bank sea bass	1	0.0	1	0.3
Chaetodon aya	bank butterflyfish	1	0.0	1	0.3
Dysomma anguillare	shortbelly eel	1	0.1	1	0.3
Echiophis intertinctus	spotted spoon-nose eel	1	0.1	1	0.3
Echiophis punctifer	snapper eel	1	0.0	1	0.3
Elops saurus	ladyfish	1	1.0	1	0.3
Eucinostomus argenteus	spotfin mojarra	1	0.0	1	0.3
Exocoetidae	flyingfishes	1	0.0	1	0.3
Gymnothorax spp.	morays	1	0.1	1	0.3
Gymnura altavela	spiny butterfly ray	1	0.9	1	0.3
Hoplunnis tenuis	spotted pike conger	1	0.0	1	0.3
Lactophrys trigonus	trunkfish	1	0.0	1	0.3
Lophius americanus	goosefish	1	0.1	1	0.3
Menticirrhus saxatilis	northern kingfish	1	0.2	1	0.3
Mycteroperca microlepis	gag	1	0.3	1	0.3
Mycteroperca phenax	scamp	1	7.4	1	0.3

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Ogcocephalus cubifrons	polka-dot batfish	1	0.0	1	0.3
Oligoplites saurus	leatherjack	1	0.0	1	0.3
Ophichthidae	snake eels	1	0.0	1	0.3
Ophidion grayi	blotched cusk-eel	1	0.0	1	0.3
Opistognathidae	jawfishes	1	0.0	1	0.3
Pagrus pagrus	red porgy	1	0.3	1	0.3
Polydactylus octonemus	Atlantic threadfin	1	0.1	1	0.3
Prionotus scitulus	leopard searobin	1	0.0	1	0.3
Raja eglanteria	clearnose skate	1	1.4	1	0.3
Dipturus olseni	spreadfin skate	1	0.0	1	0.3
Rhinobatos lentiginosus	Atlantic guitarfish	1	0.4	1	0.3
Rhinoptera bonasus	cownose ray	1	13.4	1	0.3
Seriola dumerili	greater amberjack	1	0.3	1	0.3
Serraniculus pumilio	pygmy sea bass	1	0.0	1	0.3
Syacium spp.	lefteye flounders	1	0.0	1	0.3
Symphurus urospilus	spottail tonguefish	1	0.0	1	0.3
Crustaceans					
Farfantepenaeus aztecus	brown shrimp	12661	242.0	270	71.4
Callinectes similis	lesser blue crab	10005	116.4	236	62.4
Rimapenaeus similis	roughback shrimp	8961	31.5	155	41.0
Xiphopenaeus kroyeri	seabob	4062	16.1	48	12.7
Litopenaeus setiferus	white shrimp	3874	70.7	170	45.0
Portunus spinicarpus	longspine swimming crab	3747	43.3	72	19.0
Gibbesia neglecta	mantis shrimp	2348	25.2	145	38.4
Portunus gibbesii	irridescent swimming crab	2115	10.2	175	46.3
Rimapenaeus constrictus	roughneck shrimp	1811	5.3	36	9.5
Solenocera vioscai	humpback shrimp	1604	7.3	46	12.2
Parapenaeus politus	deepwater rose shrimp	1291	2.3	18	4.8

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Gibbesia neglecta	mantis shrimp	1090	7.6	76	20.1
Anasimus latus	stilt spider crab	803	7.5	32	8.5
Sicyonia dorsalis	lesser rock shrimp	587	1.4	31	8.2
Sicyonia brevirostris	brown rock shrimp	573	8.5	49	13.0
Farfantepenaeus duorarum	pink shrimp	500	8.9	69	18.3
Raninoides louisianensis	gulf frog crab	359	2.6	20	5.3
Portunus spinimanus	blotched swimming crab	227	5.7	59	15.6
Callinectes sapidus	blue crab	190	22.0	58	15.3
Calappa sulcata	yellow box crab	109	23.8	57	15.1
Pseudorhombila quadridentata	flecked squareback crab	39	0.3	7	1.9
Stenorhynchus seticornis	yellowline arrow crab	32	0.1	10	2.6
Plesionika longicauda	pandalid shrimp	30	0.1	8	2.1
Persephona mediterranea	mottled purse crab	22	0.1	10	2.6
Porcellana sayana	spotted porcelain crab	21	0.0	4	1.1
Sicyonia burkenroadi	spiny rock shrimp	18	0.0	8	2.1
Myropsis quinquespinosa	fivespine purse crab	13	0.1	6	1.6
Libinia dubia	longnose spider crab	12	0.2	4	1.1
Alpheidae	snapping shrimps	11	0.0	2	0.5
Leiolambrus nitidus	white elbow crab	10	0.0	6	1.6
Hepatus epheliticus	calico crab	9	0.2	6	1.6
Pagurus pollicaris	flatclaw hermit crab	9	0.2	8	2.1
Petrochirus diogenes	giant hermit crab	9	0.4	5	1.3
Scyllarides nodifer	ridged slipper lobster	9	0.0	3	0.8
Exhippolysmata oplophoroides	redleg humpback shrimp	8	0.0	5	1.3
Libinia emarginata	portly spider crab	8	1.5	7	1.9
Platylambrus granulata	bladetooth elbow crab	8	0.0	3	0.8
Persephona crinita	pink purse crab	8	0.0	5	1.3
Euphrosynoplax clausa	craggy bathyal crab	7	0.0	2	0.5
Sicyonia laevigata	rock shrimp	7	0.0	2	0.5
Speocarcinus lobatus	gulf squareback crab	7	0.0	2	0.5

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Portunus sayi	sargassum swimming crab	6	0.0	5	1.3
Ovalipes floridanus	Florida lady crab	5	0.2	4	1.1
Parapenaeus spp.	penaeid shrimps	5	0.0	1	0.3
Podochela sidneyi	shortfinger neck crab	4	0.0	1	0.3
Arenaeus cribrarius	speckled swimming crab	3	0.0	3	0.8
Pagurus bullisi	hermit crab	3	0.0	1	0.3
Scyllarus depressus	scaled slipper lobster	3	0.0	2	0.5
Calappa flammea	flame box crab	2	0.4	1	0.3
Metoporhaphis calcarata	false arrow crab	2	0.0	2	0.5
Paguristes triangulatus	hermit crab	2	0.0	1	0.3
Pinnotheres maculatus	squatter pea crab	2	0.0	2	0.5
Stenocionops furcatus	spider crab	2	0.0	1	0.3
Collodes robustus	spider crab	1	0.0	1	0.3
Danielum ixbauchac	red sea crab	1	0.0	1	0.3
Dardanus insignis	red brocade hermit	1	0.0	1	0.3
Menippe mercenaria	Florida stone crab	1	0.0	1	0.3
Paguridae	right-handed hermit crabs	1	0.0	1	0.3
Scyllarus chacei	chace slipper lobster	1	0.0	1	0.3
Squilla neglecta	mantis shrimp	1	0.0	1	0.3
Squilla spp.	mantis shrimps	1	0.0	1	0.3
Stenocionops spinimanus	prickly spider crab	1	0.4	1	0.3
Stenopus scutellatus	golden coral shrimp	1	0.0	1	0.3
Others					
Amusium papyraceum	paper scallop	3944	40.8	66	17.5
Lolliguncula brevis	Atlantic brief squid	2443	24.6	171	45.2
Loligo pleii	arrow squid	1465	7.6	75	19.8
Aurelia aurita	moon jellyfish	973	190.5	67	17.7
Loligo pealeii	longfin squid	889	17.2	64	16.9

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Renilla muelleri	short-stemmed sea pansy	880	2.8	68	18.0
Chrysaora quinquecirrha	sea nettle	598	17.6	53	14.0
Gorgonidae	gorgonians	241	0.2	4	1.1
Encope aberrans	sand dollar	151	1.1	3	0.8
Astropecten duplicatus	spiny beaded sea star	149	0.2	32	8.5
Luidia clathrata	sea star	100	1.5	31	8.2
Astropecten cingulatus	starfish	97	1.6	24	6.3
Tamoya haplonema	sea wasp	88	12.6	16	4.2
Anadara baughmani	baughman's ark	86	1.2	10	2.6
Polystira albida	white giant turris	66	0.5	5	1.3
Mellita quinquiesperforata	five-slotted sand dollar	61	0.3	4	1.1
Actinidae	sea anemones	56	0.1	9	2.4
Tethyaster grandis	starfish	53	2.5	8	2.1
Ophiolepis elegans	brittle star	52	0.1	12	3.2
Macoma brevifrons	short macoma	51	0.3	5	1.3
Bryozoa	moss animals	47	0.6	9	2.4
Loligo spp.	squids	46	0.2	2	0.5
Clypeaster ravenelii	cake urchin	40	3.5	8	2.1
Pitar cordatus	schwengel's pitar	38	0.7	11	2.9
Calliactis tricolor	common sea anemone	32	0.1	13	3.4
Stomolophus meleagris	many-mouthed sea jelly	24	11.1	6	1.6
Anthozoa	anthozoans	17	0.2	1	0.3
Calliactis spp.	anemone	17	0.0	1	0.3
Cymatium parthenopeum	giant triton	13	0.0	3	0.8
Neverita duplicata	shark eye	13	0.2	9	2.4
Ctenophora	comb jellies	10	0.0	2	0.5
Polystira tellea	delicate giant turret	10	0.1	3	0.8
Styela plicata	tunicate	10	0.2	2	0.5
Cantharus cancellarius	cancellate cantharus	9	0.1	4	1.1
Lirophora clenchi	clench venus	9	0.1	1	0.3

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Pteria colymbus	Atlantic wing-oyster	8	0.1	2	0.5
Moira atropos	mud heart-urchin	7	0.4	1	0.3
Molpadia barbouri	sea cucumber	7	0.3	2	0.5
Gorgonocephalus arcticus	basket star	6	0.0	4	1.1
Sconsia striata	royal bonnet	6	0.1	3	0.8
Ventricolaria rigida	rigid venus	6	0.1	2	0.5
Asteroidea	starfishes	5	0.0	2	0.5
Arcinella cornuta	Florida spiny jewelbox	4	0.0	1	0.3
Atrina spp.	penshells	4	0.0	1	0.3
Busycon sinistrum	lightning whelk	4	0.9	4	1.1
Molpadia spp.	sea cucumber	4	0.1	1	0.3
Asteroporpa annulata	starfish	3	0.0	2	0.5
Conus austini	cone shell	3	0.1	2	0.5
Distorsio clathrata	Atlantic distorsio	3	0.1	1	0.3
Gastropoda	snails	3	0.0	2	0.5
Hexaplex fulvescens	giant eastern murex	3	0.0	2	0.5
Astropecten articulatus	plated-margined sea star	2	0.0	1	0.3
Echinaster serpentarius	starfish	2	0.0	1	0.3
Hermodice carunculata	green fire worm	2	0.0	2	0.5
Luidia alternata	banded luidia	2	0.1	2	0.5
Octopus vulgaris	common Atlantic octopus	2	0.2	2	0.5
Paranthus rapiformis	onion anemone	2	0.0	2	0.5
Pennatulidae	sea pens	2	0.0	1	0.3
Rhynchocephalia	tuataras	2	0.1	1	0.3
Semirossia equalis	greater shining bobtail	2	0.0	2	0.5
Stramonita haemastoma	rocksnail	2	0.1	2	0.5
Alcyonidiidae	bryozoans	1	0.0	1	0.3
Architectonica nobilis	common sundial	1	0.0	1	0.3
Argopecten gibbus	calico scallop	1	0.0	1	0.3
Astropecten americanus	starfish	1	0.0	1	0.3

Table 14. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Dinocardium robustum	Atlantic giant-cockle	1	0.2	1	0.3
Lepidochelys kempi	Atlantic ridley	1	3.0	1	0.3
Limulus polyphemus	horseshoe crab	1	1.7	1	0.3
Oliva sayana	lettered olive	1	0.0	1	0.3
Ophioderma spp.	brittle stars	1	0.0	1	0.3
Polychaeta	bristleworms	1	0.0	1	0.3
Semirossia tenera	lesser shining bobtail	1	0.0	1	0.3
Sinum perspectivum	white baby-ear	1	0.0	1	0.3
Stylocidaris affinis	sea urchin	1	0.0	1	0.3

Table 15a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2002 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
Farfantepenaeus aztecus	3.5	3.50	0.0	0.04	5	52.9	14.89	0.4	0.13	13	92.3	54.00	0.8	0.38	23
Portunus spinicarpus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	13	20.6	20.61	0.4	0.36	23
Callinectes similis	2.3	2.25	0.0	0.01	5	3.5	1.31	0.0	0.01	13	322.0	274.38	1.5	1.24	23
Parapenaeus politus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	23
Anasimus latus	0.0	0.00	0.0	0.00	5	0.2	0.19	0.0	0.00	13	0.5	0.52	0.0	0.00	23
Litopenaeus setiferus	19.4	11.85	4.4	3.89	5	43.7	18.46	0.7	0.29	13	61.4	38.70	0.7	0.43	23
Micropogonias undulatus	434.0	307.23	21.5	15.15	5	285.4	94.06	14.7	5.01	13	1320.7	554.50	74.4	34.19	23
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	1.5	0.71	0.0	0.02	13	121.9	43.74	5.3	1.96	23
Leiostomus xanthurus	14.4	6.18	1.3	0.55	5	15.3	5.49	1.5	0.50	13	43.4	23.93	2.8	1.03	23
Anchoa hepsetus	67.5	57.61	0.7	0.59	5	148.1	60.23	1.4	0.66	13	31.3	21.29	0.3	0.22	23
Peprilus burti	5.7	4.36	0.3	0.24	5	11.4	6.16	0.6	0.36	13	78.6	60.82	5.2	3.93	23
Chloroscombrus chrysurus	91.6	66.27	3.5	3.10	5	103.3	52.59	1.7	0.77	13	51.7	23.22	2.2	1.03	23
Cynoscion nothus	563.7	543.26	1.8	1.58	5	62.2	47.96	0.3	0.20	13	10.5	3.15	1.0	0.28	23
Serranus atrobranchus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	23
Squid spp	6.0	3.79	0.1	0.04	5	31.8	8.03	0.4	0.14	13	8.4	3.29	0.0	0.02	23

Table 15a (continued)

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2002 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
Farfantepenaeus aztecus	135.7	63.09	2.2	0.89	7	183.4	127.08	6.8	4.96	4	304.2	165.50	6.5	3.33	4
Portunus spinicarpus	2.8	2.81	0.0	0.02	7	43.2	14.13	0.3	0.12	4	1266.4	481.36	10.1	4.15	4
Callinectes similis	8.2	2.36	0.1	0.04	7	4.7	4.72	0.1	0.11	4	62.2	38.63	0.8	0.47	4
Parapenaeus politus	0.0	0.00	0.0	0.00	7	0.3	0.28	0.0	0.00	4	1171.5	925.83	2.2	1.68	4
Anasimus latus	0.3	0.31	0.0	0.00	7	0.6	0.56	0.0	0.00	4	617.4	413.61	5.8	4.04	4
Litopenaeus setiferus	1.0	0.65	0.0	0.01	7	0.0	0.00	0.0	0.00	4	60.5	56.38	1.9	1.77	4
Micropogonias undulatus	149.6	73.34	10.3	4.91	7	49.7	48.98	9.7	9.63	4	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	76.1	26.64	4.0	1.47	7	122.1	71.84	6.1	3.47	4	11.7	8.49	0.9	0.56	4
Leiostomus xanthurus	94.5	51.09	9.2	5.04	7	698.7	655.57	67.3	63.20	4	2.7	2.73	0.7	0.67	4
Anchoa hepsetus	39.4	35.59	0.6	0.54	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Peprilus burti	24.3	15.93	2.2	1.42	7	3.7	2.38	0.3	0.24	4	50.7	38.86	4.4	3.59	4
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Cynoscion nothus	12.1	6.45	0.4	0.40	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
Serranus atrobranchus	0.0	0.00	0.0	0.00	7	1.7	1.67	0.0	0.01	4	693.7	203.63	11.2	3.08	4
Squid spp	3.2	2.08	0.0	0.00	7	13.0	12.60	0.1	0.05	4	12.9	7.85	0.1	0.07	4

Table 15b

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 2002 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	47.5	16.15	5	34.4	6.88	13	118.0	38.42	23	0.0	0	0	111.0	86.44	4	82.6	18.38	4
Total finfish kg	43.3	14.81	5	32.0	6.58	13	113.0	38.71	23	0.0	0	0	102.0	81.7	4	49.0	9.23	4
Total crustacean kg	1.7	0.8	3	1.7	0.52	10	5.6	2.13	20	0.0	0	0	8.3	5.19	4	32.4	10.97	4
Total others kg	3.0	1.05	5	1.2	0.32	12	0.4	0.14	13	0.0	0	0	0.7	0.28	4	1.1	1	4
Surface temperature	25.4	0.2	5	24.4	0.59	13	24.8	0.41	23	0.0	0	0	24.2	0.3	3	23.0	0.52	5
Midwater temperature	25.7	0.18	5	24.8	0.63	13	26.1	0.34	23	0.0	0	0	25.2	0.8	3	22.8	0.82	5
Bottom temperature	26.2	0.13	5	25.7	0.34	13	26.1	0.33	23	0.0	0	0	21.8	0.76	3	18.8	0.57	5
Surface salinity	29.5	0.72	5	29.9	0.69	13	30.2	0.72	23	0.0	0	0	33.6	0.73	3	29.8	1.36	5
Midwater salinity	30.4	0.61	5	31.4	0.42	13	33.4	0.25	23	0.0	0	0	36.0	0.22	3	36.3	0.16	5
Bottom salinity	31.8	0.83	5	33.0	0.52	13	34.9	0.17	23	0.0	0	0	36.4	0.02	3	36.4	0.03	5
Surface chlorophyll	0.0	0	0	2.6	0.35	3	3.1	0.93	7	0.0	0	0	1.5	0.2	3	2.7	0.68	5
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	6.2	0.2	5	6.4	0.27	13	5.9	0.19	23	0.0	0	0	5.5	0.07	3	5.7	0.1	5
Midwater oxygen	6.0	0.23	5	6.2	0.23	13	5.4	0.12	23	0.0	0	0	4.6	0.44	3	4.2	0.19	5
Bottom oxygen	4.7	0.5	5	5.3	0.26	13	4.4	0.17	23	0.0	0	0	3.9	0.29	3	3.5	0.09	5

Table 16a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2002 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	194.3	0.00	1.2	0.00	1	147.3	41.93	1.8	0.45	9
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	25.7	0.00	0.1	0.00	1	158.9	72.50	0.9	0.36	9
Squilla spp	0.0	0.00	0.0	0.00	0	54.3	0.00	0.4	0.00	1	82.6	28.75	0.5	0.18	9
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	351.4	0.00	3.4	0.00	1	115.5	38.30	0.8	0.23	9
Parapenaeus politus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9
Raninoides louisianensis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	91.4	0.00	4.8	0.00	1	303.0	73.10	32.9	17.80	9
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	8.6	0.00	0.0	0.00	1	55.5	34.03	2.3	1.68	9
Cynoscion nothus	0.0	0.00	0.0	0.00	0	14.3	0.00	0.5	0.00	1	144.7	66.89	5.4	2.46	9
Cynoscion spp	0.0	0.00	0.0	0.00	0	388.6	0.00	0.8	0.00	1	43.1	41.78	0.1	0.10	9
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	25.9	15.95	0.8	0.46	9
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	22.9	0.00	1.7	0.00	1	22.8	14.20	2.5	1.71	9
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	9
Citharichthys spilopterus	0.0	0.00	0.0	0.00	0	11.4	0.00	0.2	0.00	1	44.2	12.38	0.5	0.15	9
Squid spp	0.0	0.00	0.0	0.00	0	2.9	0.00	0.1	0.00	1	11.0	6.53	0.1	0.04	9

Table 16a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2002 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	478.9	366.88	6.2	4.31	2	0.0	0.00	0.0	0.00	0	125.9	95.73	2.1	1.42	4
Farfantepenaeus aztecus	202.6	158.58	2.3	2.15	2	0.0	0.00	0.0	0.00	0	209.4	120.08	3.4	1.49	4
Squilla spp	134.8	102.85	1.1	0.85	2	0.0	0.00	0.0	0.00	0	33.1	19.23	0.2	0.13	4
Litopenaeus setiferus	56.0	56.00	0.6	0.59	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4
Parapenaeus politus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	86.2	53.69	0.1	0.06	4
Raninoides louisianensis	1.7	1.73	0.0	0.01	2	0.0	0.00	0.0	0.00	0	61.7	43.23	0.4	0.25	4
Micropogonias undulatus	106.1	98.12	5.9	5.57	2	0.0	0.00	0.0	0.00	0	1.4	1.42	0.1	0.11	4
Trichiurus lepturus	598.0	598.00	14.4	14.40	2	0.0	0.00	0.0	0.00	0	18.1	12.81	0.8	0.48	4
Cynoscion nothus	1.7	1.73	0.2	0.17	2	0.0	0.00	0.0	0.00	0	1.2	0.80	0.1	0.07	4
Cynoscion spp	67.0	28.96	0.3	0.23	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4
Prionotus longispinosus	4.0	4.04	0.4	0.45	2	0.0	0.00	0.0	0.00	0	55.1	28.95	3.1	1.52	4
Cynoscion arenarius	68.3	3.69	7.1	1.20	2	0.0	0.00	0.0	0.00	0	14.1	9.13	1.8	1.10	4
Serranus atrobranchus	55.6	35.58	0.4	0.27	2	0.0	0.00	0.0	0.00	0	42.2	14.94	0.6	0.17	4
Citharichthys spilopterus	11.5	3.50	0.1	0.03	2	0.0	0.00	0.0	0.00	0	2.8	1.63	0.0	0.02	4
Squid spp	140.0	140.00	0.5	0.49	2	0.0	0.00	0.0	0.00	0	6.8	4.49	0.1	0.08	4

Table 16b

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 2002 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	27.1	0	1	61.4	21.44	9	0.0	0	0	0.0	0	0	23.6	6.31	4
Total finfish kg	0.0	0	0	20.3	0	1	56.7	21.25	9	0.0	0	0	0.0	0	0	16.9	5.61	4
Total crustacean kg	0.0	0	0	6.6	0	1	4.6	0.62	9	0.0	0	0	0.0	0	0	6.3	3	4
Total others kg	0.0	0	0	0.0	0	1	0.5	0.34	4	0.0	0	0	0.0	0	0	0.4	0.32	4
Surface temperature	0.0	0	0	26.2	3.02	2	27.5	0.94	9	0.0	0	0	0.0	0	0	24.4	0.1	4
Midwater temperature	0.0	0	0	26.2	3.01	2	27.5	0.86	9	0.0	0	0	0.0	0	0	25.5	0.62	4
Bottom temperature	0.0	0	0	26.6	2.04	2	27.1	0.73	9	0.0	0	0	0.0	0	0	17.4	0.74	4
Surface salinity	0.0	0	0	29.9	0.06	2	31.0	0.31	9	0.0	0	0	0.0	0	0	31.8	0.76	4
Midwater salinity	0.0	0	0	30.6	0.75	2	33.6	0.69	9	0.0	0	0	0.0	0	0	36.0	0.16	4
Bottom salinity	0.0	0	0	33.6	1.31	2	35.2	0.53	9	0.0	0	0	0.0	0	0	36.3	0.07	4
Surface chlorophyll	0.0	0	0	1.6	0.73	2	0.9	0.2	9	0.0	0	0	0.0	0	0	2.7	0.74	4
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	-1.6	7.45	2	6.4	0.17	9	0.0	0	0	0.0	0	0	5.8	0.03	4
Midwater oxygen	0.0	0	0	5.9	0	1	6.2	0.15	9	0.0	0	0	0.0	0	0	5.5	0.07	4
Bottom oxygen	0.0	0	0	3.7	0	1	5.1	0.26	9	0.0	0	0	0.0	0	0	3.4	0.07	4

Table 17a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2002 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	27.4	9.45	0.2	0.07	7	93.8	31.59	1.1	0.33	16
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	74.8	54.38	0.9	0.59	7	21.3	17.97	0.3	0.16	16
Callinectes similis	0.0	0.00	0.0	0.00	0	4.6	2.13	0.0	0.02	7	32.9	7.14	0.8	0.19	16
Portunus gibbesii	0.0	0.00	0.0	0.00	0	14.5	6.79	0.1	0.03	7	13.6	5.18	0.1	0.03	16
Callinectes sapidus	0.0	0.00	0.0	0.00	0	10.3	6.29	1.3	0.75	7	4.0	1.31	0.6	0.20	16
Squilla spp	0.0	0.00	0.0	0.00	0	1.1	0.66	0.0	0.01	7	6.0	3.95	0.1	0.06	16
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	171.4	67.77	7.8	2.97	7	502.9	92.15	49.8	13.00	16
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	7.4	4.16	0.1	0.06	7	342.4	273.06	2.4	0.78	16
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	8.2	3.78	0.6	0.27	7	91.4	23.29	7.5	1.92	16
Cynoscion nothus	0.0	0.00	0.0	0.00	0	1.5	0.77	0.1	0.06	7	51.5	19.65	4.2	1.67	16
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	7	24.4	7.84	0.5	0.14	16
Lagodon rhomboides	0.0	0.00	0.0	0.00	0	0.8	0.37	0.0	0.02	7	27.2	10.84	1.6	0.62	16
Prionotus roseus	0.0	0.00	0.0	0.00	0	13.8	8.65	0.2	0.16	7	39.3	19.22	0.7	0.36	16
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	38.2	25.92	1.1	0.98	7	11.9	7.41	0.2	0.11	16
Squid spp	0.0	0.00	0.0	0.00	0	28.3	12.41	0.2	0.06	7	9.6	3.34	0.0	0.01	16

Table 17a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2002 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
Farfantepenaeus aztecus	170.5	93.83	2.9	1.48	3	0.0	0.00	0.0	0.00	0	9.8	0.00	0.8	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Callinectes similis	16.6	4.66	0.5	0.19	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Portunus gibbesii	0.7	0.67	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Callinectes sapidus	6.1	3.01	0.9	0.36	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Squilla spp	2.0	2.00	0.0	0.05	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	137.4	87.75	26.3	22.97	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Prionotus longispinosus	50.9	29.06	2.4	1.37	3	0.0	0.00	0.0	0.00	0	24.0	0.00	1.5	0.00	1
Leiostomus xanthurus	124.7	92.35	16.6	12.97	3	0.0	0.00	0.0	0.00	0	2.2	0.00	0.2	0.00	1
Cynoscion nothus	2.7	1.76	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	82.4	37.38	3.1	1.34	3	0.0	0.00	0.0	0.00	0	78.5	0.00	6.3	0.00	1
Lagodon rhomboides	88.1	33.31	6.7	2.55	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Prionotus roseus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1
Squid spp	14.1	14.07	0.0	0.03	3	0.0	0.00	0.0	0.00	0	4.4	0.00	0.5	0.00	1

Table 17b

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 2002 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	0.0	0	0	17.1	4.3	7	83.2	17.15	16	0.0	0	0	0.0	0	0	31.4	0	1
Total finfish kg	0.0	0	0	14.5	3.68	7	80.1	16.81	16	0.0	0	0	0.0	0	0	28.9	0	1
Total crustacean kg	0.0	0	0	2.4	0.71	7	3.0	0.64	16	0.0	0	0	0.0	0	0	0.9	0	1
Total others kg	0.0	0	0	0.3	0.09	5	0.1	0.04	8	0.0	0	0	0.0	0	0	1.6	0	1
Surface temperature	29.2	0	1	27.2	1	8	27.7	0.58	17	0.0	0	0	0.0	0	0	24.9	0	1
Midwater temperature	28.9	0	1	27.1	0.92	8	27.4	0.51	17	0.0	0	0	0.0	0	0	26.1	0	1
Bottom temperature	28.8	0	1	27.2	0.85	8	27.7	0.39	17	0.0	0	0	0.0	0	0	19.8	0	1
Surface salinity	26.3	0	1	30.1	0.62	8	31.5	0.49	17	0.0	0	0	0.0	0	0	34.5	0	1
Midwater salinity	27.9	0	1	32.0	0.6	8	34.0	0.32	17	0.0	0	0	0.0	0	0	36.1	0	1
Bottom salinity	28.7	0	1	33.1	0.57	8	35.5	0.3	17	0.0	0	0	0.0	0	0	36.5	0	1
Surface chlorophyll	3.0	0	1	1.5	0.47	8	1.1	0.27	17	0.0	0	0	0.0	0	0	2.8	0	1
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	5.8	0	1	6.6	0.27	8	6.9	0.21	17	0.0	0	0	0.0	0	0	5.8	0	1
Midwater oxygen	6.5	0	1	6.1	0.37	8	6.1	0.15	17	0.0	0	0	0.0	0	0	5.6	0	1
Bottom oxygen	4.3	0	1	5.0	0.54	8	5.1	0.12	17	0.0	0	0	0.0	0	0	3.7	0	1

Table 18a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2002 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	51.7	21.78	0.2	0.09	9	98.3	29.62	1.1	0.44	12
Callinectes similis	0.0	0.00	0.0	0.00	0	95.9	30.03	0.5	0.16	9	80.3	31.28	0.9	0.22	12
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	151.4	39.46	2.6	0.61	9	52.9	19.47	0.8	0.26	12
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	0	130.2	48.93	0.4	0.14	9	10.7	10.66	0.0	0.04	12
Portunus gibbesii	0.0	0.00	0.0	0.00	0	49.9	14.74	0.2	0.06	9	36.7	12.23	0.2	0.06	12
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	12
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	509.2	143.22	25.1	4.92	9	672.3	169.01	33.3	6.74	12
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	1.7	1.26	0.1	0.11	9	104.6	53.67	6.9	3.53	12
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	9	1.5	1.53	0.0	0.01	12
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	8.3	4.33	0.2	0.10	9	66.4	14.97	2.1	0.46	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.7	0.67	0.0	0.01	9	26.7	11.12	0.5	0.22	12
Prionotus roseus	0.0	0.00	0.0	0.00	0	64.9	48.38	0.8	0.58	9	35.5	25.78	0.6	0.41	12
Porichthys plectrodon	0.0	0.00	0.0	0.00	0	8.2	3.27	0.2	0.10	9	7.7	2.55	0.1	0.05	12
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	2.4	1.99	0.1	0.07	9	44.9	29.00	0.5	0.31	12
Squid spp	0.0	0.00	0.0	0.00	0	5.5	2.89	0.1	0.05	9	9.5	3.45	0.2	0.09	12

Table 18a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2002 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
Farfantepenaeus aztecus	258.1	132.08	4.2	2.23	3	115.8	21.52	3.1	0.49	6	60.0	0.00	2.4	0.00	1
Callinectes similis	33.8	13.79	0.8	0.37	3	9.1	2.49	0.3	0.07	6	5.5	0.00	0.2	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Portunus gibbesii	0.7	0.67	0.0	0.00	3	0.7	0.46	0.0	0.01	6	0.0	0.00	0.0	0.00	1
Portunus spinicarpus	1.7	1.67	0.0	0.02	3	90.7	47.39	0.6	0.34	6	87.3	0.00	0.7	0.00	1
Micropogonias undulatus	109.0	8.75	14.5	4.89	3	6.9	2.84	0.6	0.22	6	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	93.3	37.56	10.3	4.29	3	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Serranus atrobranchus	43.9	21.61	0.4	0.19	3	141.4	46.18	1.9	0.67	6	300.0	0.00	1.9	0.00	1
Prionotus longispinosus	28.7	6.71	1.3	0.40	3	33.2	8.73	1.5	0.43	6	174.5	0.00	8.5	0.00	1
Stenotomus caprinus	50.6	31.59	3.7	3.09	3	62.0	17.76	2.4	0.66	6	38.2	0.00	1.8	0.00	1
Prionotus roseus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Porichthys plectrodon	12.1	5.63	0.2	0.09	3	76.9	18.19	1.0	0.21	6	49.1	0.00	0.6	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	3	1.3	1.27	0.0	0.01	6	0.0	0.00	0.0	0.00	1
Squid spp	7.5	7.50	0.0	0.01	3	19.5	12.61	0.1	0.11	6	0.0	0.00	0.0	0.00	1

Table 18b

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 2002 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	37.0	5.07	9	58.3	8.68	12	0.0	0	0	24.6	3.46	6	37.6	0	1
Total finfish kg	0.0	0	0	32.9	4.92	9	54.3	8.89	12	0.0	0	0	18.4	3.44	6	26.7	0	1
Total crustacean kg	0.0	0	0	3.8	0.77	9	3.8	0.68	12	0.0	0	0	4.8	0.81	6	5.5	0	1
Total others kg	0.0	0	0	0.3	0.17	7	0.3	0.12	10	0.0	0	0	1.4	0.23	6	4.9	0	1
Surface temperature	0.0	0	0	25.5	0.74	10	25.6	0.56	13	0.0	0	0	25.8	0.17	3	0.0	0	0
Midwater temperature	0.0	0	0	25.5	0.72	10	25.6	0.51	13	0.0	0	0	26.0	0.14	3	0.0	0	0
Bottom temperature	0.0	0	0	26.0	0.6	10	26.5	0.33	13	0.0	0	0	22.1	1.18	3	0.0	0	0
Surface salinity	0.0	0	0	30.9	0.29	10	32.9	0.29	13	0.0	0	0	35.7	0.11	3	0.0	0	0
Midwater salinity	0.0	0	0	31.0	0.31	10	33.7	0.15	13	0.0	0	0	35.9	0.01	3	0.0	0	0
Bottom salinity	0.0	0	0	32.0	0.44	10	35.4	0.15	13	0.0	0	0	36.4	0.06	3	0.0	0	0
Surface chlorophyll	0.0	0	0	2.1	0.48	10	2.3	0.35	13	0.0	0	0	1.5	0.25	3	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	4.6	1.52	10	5.9	0.13	13	0.0	0	0	5.6	0.03	3	0.0	0	0
Midwater oxygen	0.0	0	0	6.1	0.21	9	5.9	0.11	13	0.0	0	0	5.6	0.03	3	0.0	0	0
Bottom oxygen	0.0	0	0	5.6	0.15	9	5.5	0.11	13	0.0	0	0	3.6	0.03	3	0.0	0	0

Table 19a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2002 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
Litopenaeus setiferus	192.8	40.51	2.6	0.84	2	276.3	62.24	2.7	0.31	7	78.4	34.40	1.2	0.44	7
Callinectes similis	114.8	39.81	0.5	0.13	2	180.2	90.74	0.7	0.35	7	39.8	20.15	0.3	0.13	7
Xiphopenaeus kroyeri	278.3	171.67	1.6	1.16	2	218.7	218.73	0.4	0.44	7	0.0	0.00	0.0	0.00	7
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	2	17.5	4.99	0.1	0.04	7	48.6	23.73	1.0	0.62	7
Squilla spp	109.7	63.59	0.8	0.39	2	45.3	16.56	0.4	0.17	7	3.3	2.36	0.0	0.02	7
Portunus gibbesii	10.4	1.22	0.0	0.01	2	38.3	7.78	0.1	0.03	7	23.4	12.40	0.1	0.06	7
Cynoscion spp	1061.1	242.76	2.7	0.27	2	444.1	120.54	1.5	0.32	7	2.7	1.83	0.0	0.00	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7	168.9	93.14	11.2	6.08	7
Micropogonias undulatus	7.0	4.68	0.2	0.11	2	159.6	69.99	6.4	2.32	7	257.1	108.18	27.5	9.92	7
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	7
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	7
Trichiurus lepturus	91.3	82.05	0.9	0.85	2	30.0	24.12	0.6	0.55	7	4.1	4.06	0.4	0.35	7
Prionotus longispinosus	0.0	0.00	0.0	0.00	2	3.8	2.04	0.1	0.04	7	77.7	60.72	2.5	1.96	7
Stellifer lanceolatus	139.4	5.58	1.5	0.06	2	78.0	33.00	1.1	0.44	7	0.0	0.00	0.0	0.00	7
Squid spp	84.5	22.18	0.7	0.27	2	47.6	8.98	0.5	0.12	7	9.0	4.68	0.1	0.03	7

Table 19a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2002 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
Litopenaeus setiferus	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	5
Callinectes similis	4.4	4.44	0.0	0.05	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Xiphopenaeus kroyeri	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	5
Farfantepenaeus aztecus	172.8	102.78	3.2	1.74	2	17.8	3.85	0.6	0.13	3	25.0	5.30	1.3	0.28	5
Squilla spp	4.4	4.44	0.0	0.03	2	0.4	0.38	0.0	0.00	3	47.5	19.26	0.5	0.20	5
Portunus gibbesii	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	5
Cynoscion spp	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	5
Stenotomus caprinus	409.4	356.11	14.5	13.17	2	119.0	66.03	7.0	2.81	3	208.1	69.14	10.6	3.48	5
Micropogonias undulatus	87.8	20.00	12.3	7.83	2	0.4	0.38	0.1	0.06	3	0.0	0.00	0.0	0.00	5
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	2	6.4	3.91	0.2	0.18	3	211.6	50.02	15.5	5.55	5
Serranus atrobranchus	7.8	7.78	0.1	0.08	2	3.8	2.26	0.0	0.02	3	195.2	50.00	2.9	0.80	5
Trichiurus lepturus	26.1	26.11	2.0	1.96	2	36.6	32.05	1.7	1.36	3	23.4	12.62	1.4	0.52	5
Prionotus longispinosus	19.4	1.67	1.0	0.05	2	4.7	4.18	0.3	0.28	3	4.4	1.88	0.5	0.26	5
Stellifer lanceolatus	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	5
Squid spp	0.0	0.00	0.0	0.00	2	3.0	2.44	0.0	0.02	3	8.1	7.08	0.3	0.20	5

Table 19b

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 2002 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	15.4	1.58	2	21.5	2.88	7	60.6	9.49	7	0.0	0	0	25.0	3.23	3	55.7	12.05	5
Total finfish kg	8.9	1.56	2	16.6	2.46	7	58.2	10.17	7	0.0	0	0	23.3	3.31	3	48.2	13.52	5
Total crustacean kg	5.6	0.06	2	4.2	0.62	7	2.3	0.9	7	0.0	0	0	0.7	0.14	3	2.4	0.46	5
Total others kg	0.8	0.15	2	0.7	0.16	7	0.1	0.06	7	0.0	0	0	1.0	0.25	3	5.2	1.44	5
Surface temperature	21.9	0.02	2	24.3	0.26	6	25.4	0.17	7	0.0	0	0	26.5	0.13	2	26.4	0.05	3
Midwater temperature	22.2	0.2	2	24.3	0.26	6	25.4	0.17	7	0.0	0	0	26.4	0.12	2	26.3	0	3
Bottom temperature	24.3	0.03	2	24.3	0.22	6	25.6	0.28	7	0.0	0	0	21.9	1.11	2	19.9	0.27	3
Surface salinity	21.7	0.25	2	32.3	0.59	6	34.4	0.3	7	0.0	0	0	36.0	0.11	2	35.9	0.02	3
Midwater salinity	22.8	0.53	2	32.3	0.59	6	34.4	0.3	7	0.0	0	0	36.0	0.1	2	35.9	0.04	3
Bottom salinity	30.0	0.09	2	32.4	0.46	6	33.8	0.61	7	0.0	0	0	36.4	0	2	36.4	0.02	3
Surface chlorophyll	9.2	0.08	2	3.8	0.7	6	2.1	0.35	7	0.0	0	0	1.0	0.04	2	1.2	0.12	3
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	6.4	0.05	2	5.7	0.09	6	5.6	0.06	7	0.0	0	0	5.6	0.05	2	5.6	0.03	3
Midwater oxygen	6.4	0.05	2	5.7	0.08	6	5.7	0.05	7	0.0	0	0	5.6	0	2	5.7	0.03	3
Bottom oxygen	4.1	0.25	2	5.7	0.07	6	5.3	0.22	7	0.0	0	0	3.8	0	2	3.8	0.09	3

Table 20a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2002 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
Farfantepenaeus aztecus	4.2	2.59	0.0	0.02	11	1.6	1.10	0.0	0.01	8	136.5	46.16	2.9	0.82	12
Xiphopenaeus kroyeri	778.9	334.80	2.7	1.17	11	201.3	102.36	4.2	3.33	8	0.0	0.00	0.0	0.00	12
Portunus spinicarpus	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	12
Litopenaeus setiferus	155.2	33.60	1.2	0.29	11	38.9	12.86	0.5	0.16	8	0.0	0.00	0.0	0.00	12
Sicyonia brevirostris	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	5.4	2.30	0.1	0.03	12
Callinectes similis	13.0	6.78	0.0	0.02	11	17.6	6.97	0.1	0.02	8	42.1	16.03	0.9	0.30	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	241.8	47.71	14.4	3.23	12
Micropogonias undulatus	35.5	11.91	1.7	1.08	11	32.3	16.16	1.0	0.55	8	445.8	98.82	39.7	9.21	12
Leiostomus xanthurus	4.5	1.84	0.1	0.05	11	3.3	1.01	0.1	0.05	8	229.4	120.86	24.6	13.62	12
Chloroscombrus chrysurus	4.0	2.76	0.0	0.02	11	13.1	6.54	0.2	0.13	8	120.8	103.49	2.6	1.72	12
Peprilus burti	1.4	1.11	0.1	0.07	11	7.5	7.50	0.4	0.45	8	50.6	18.95	3.5	1.37	12
Serranus atrobranchus	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	0.6	0.56	0.0	0.01	12
Synodus foetens	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	38.7	6.33	3.9	0.66	12
Trachurus lathami	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	8	5.6	4.43	0.4	0.28	12
Squid spp	28.6	14.98	0.3	0.16	11	46.6	22.08	0.4	0.21	8	9.3	6.75	0.0	0.03	12

Table 20a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2002 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
Farfantepenaeus aztecus	162.8	66.65	3.8	1.55	8	115.9	32.07	3.3	0.69	7	13.7	0.00	0.8	0.00	1
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1
Portunus spinicarpus	15.8	6.98	0.1	0.03	8	174.2	71.61	4.0	1.72	7	24.0	0.00	0.2	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1
Sicyonia brevirostris	22.5	12.17	0.3	0.15	8	40.3	18.43	0.7	0.30	7	0.0	0.00	0.0	0.00	1
Callinectes similis	8.5	3.58	0.2	0.09	8	3.3	1.49	0.1	0.03	7	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	230.6	61.71	14.3	3.89	8	146.0	30.15	10.0	2.74	7	126.9	0.00	6.9	0.00	1
Micropogonias undulatus	88.9	30.16	12.1	5.57	8	4.2	2.20	0.4	0.20	7	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	35.3	11.45	5.0	2.03	8	36.9	31.73	4.1	3.50	7	0.0	0.00	0.0	0.00	1
Chloroscombrus chrysurus	27.5	11.92	1.3	0.51	8	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	1
Peprilus burti	63.9	24.15	6.0	2.38	8	5.7	5.18	0.5	0.48	7	92.6	0.00	6.1	0.00	1
Serranus atrobranchus	8.3	5.43	0.1	0.04	8	152.4	92.54	1.0	0.58	7	3.4	0.00	0.0	0.00	1
Synodus foetens	17.7	5.63	2.3	0.75	8	19.7	8.61	2.5	1.12	7	20.6	0.00	1.9	0.00	1
Trachurus lathami	55.4	23.32	2.7	1.07	8	12.3	6.97	0.6	0.31	7	51.4	0.00	3.1	0.00	1
Squid spp	0.0	0.00	0.0	0.00	8	13.2	10.84	0.1	0.12	7	3.4	0.00	0.2	0.00	1

Table 20b

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 2002 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	13.1	3.96	11	41.2	15.2	8	117.0	19.18	12	0.0	0	0	40.9	7.76	7	49.7	0	1
Total finfish kg	8.3	3.92	11	38.9	15.24	8	112.0	19.31	12	0.0	0	0	30.5	6.73	7	44.1	0	1
Total crustacean kg	4.3	1.23	11	1.7	0.55	8	4.9	1.48	12	0.0	0	0	8.3	2.37	7	1.0	0	1
Total others kg	1.0	0.27	9	0.8	0.2	8	0.1	0.05	12	0.0	0	0	2.1	1.01	7	4.6	0	1
Surface temperature	20.9	0.53	11	21.8	0.72	11	25.8	0.07	13	0.0	0	0	26.5	0.13	3	26.5	0	1
Midwater temperature	21.0	0.53	11	21.9	0.7	11	25.9	0.11	13	0.0	0	0	26.5	0.12	3	27.1	0	1
Bottom temperature	21.2	0.53	11	22.5	0.73	11	26.3	0.17	13	0.0	0	0	22.3	0.63	3	19.3	0	1
Surface salinity	24.7	1.42	11	27.1	0.81	11	34.0	0.18	13	0.0	0	0	35.4	0.17	3	35.4	0	1
Midwater salinity	25.6	1.24	11	28.4	0.55	11	34.3	0.21	13	0.0	0	0	35.5	0.25	3	36.1	0	1
Bottom salinity	26.3	1.3	11	30.3	0.52	11	34.8	0.26	13	0.0	0	0	36.4	0.02	3	36.4	0	1
Surface chlorophyll	4.5	1.58	2	4.2	0.87	5	2.0	0.39	13	0.0	0	0	1.4	0.57	3	0.5	0	1
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	6.5	0.12	11	6.3	0.16	11	5.5	0.08	13	0.0	0	0	5.5	0.06	3	5.5	0	1
Midwater oxygen	6.3	0.12	11	6.1	0.19	11	5.4	0.12	13	0.0	0	0	5.4	0.06	3	5.4	0	1
Bottom oxygen	6.0	0.2	11	5.8	0.33	11	5.0	0.15	13	0.0	0	0	3.6	0.12	3	3.5	0	1

Table 21a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2002 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
Xiphopenaeus kroyeri	1122.6	954.13	3.7	3.07	10	84.4	39.11	0.4	0.19	11	0.0	0.00	0.0	0.00	3
Litopenaeus setiferus	252.4	26.39	1.9	0.24	10	63.5	16.08	0.6	0.24	11	0.0	0.00	0.0	0.00	3
Farfantepenaeus aztecus	4.8	3.32	0.0	0.01	10	20.8	20.81	0.2	0.19	11	89.7	86.22	2.8	2.72	3
Squilla spp	29.5	14.06	0.2	0.11	10	53.6	16.85	0.6	0.21	11	11.7	9.99	0.2	0.16	3
Callinectes similis	18.5	6.04	0.0	0.01	10	34.4	15.58	0.2	0.11	11	49.4	47.93	1.4	1.32	3
Portunus gibbesii	4.2	1.80	0.0	0.01	10	14.9	5.93	0.1	0.02	11	1.2	1.18	0.0	0.01	3
Stenotomus caprinus	0.0	0.00	0.0	0.00	10	0.4	0.36	0.0	0.01	11	85.4	67.56	1.8	1.36	3
Cynoscion nothus	385.2	122.60	1.2	0.36	10	30.0	21.51	0.2	0.09	11	2.4	2.35	0.2	0.17	3
Peprilus burti	0.4	0.36	0.0	0.03	10	0.7	0.72	0.0	0.05	11	15.9	8.71	1.1	0.65	3
Stellifer lanceolatus	221.4	81.25	1.0	0.30	10	41.0	20.73	1.5	1.26	11	0.0	0.00	0.0	0.00	3
Bagre marinus	106.2	106.18	1.2	1.19	10	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	3
Trachurus lathami	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	11	3.0	3.00	0.2	0.20	3
Micropogonias undulatus	1.0	0.67	0.0	0.01	10	18.3	12.51	0.6	0.46	11	81.8	41.71	25.4	22.97	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	10	9.4	7.66	0.2	0.17	11	56.2	53.09	1.5	1.41	3
Squid spp	12.9	5.01	0.1	0.05	10	18.2	5.53	0.1	0.02	11	11.8	11.76	0.0	0.04	3

Table 21a (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2002 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
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Litopenaeus setiferus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Farfantepenaeus aztecus	30.3	17.65	1.0	0.56	5	13.3	0.00	0.5	0.00	1	17.1	7.23	0.8	0.30	3
Squilla spp	4.3	2.73	0.1	0.04	5	0.0	0.00	0.0	0.00	1	3.3	3.27	0.0	0.03	3
Callinectes similis	12.7	7.83	0.3	0.21	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Portunus gibbesii	0.4	0.44	0.0	0.00	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	535.5	223.60	22.6	9.21	5	86.7	0.00	5.5	0.00	1	172.4	61.91	9.9	2.64	3
Cynoscion nothus	30.0	27.98	2.0	1.82	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Peprilus burti	138.0	120.11	9.0	7.68	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Stellifer lanceolatus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Bagre marinus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Trachurus lathami	72.9	68.78	4.0	3.70	5	15.6	0.00	1.1	0.00	1	98.7	14.76	5.1	1.07	3
Micropogonias undulatus	86.8	36.24	5.7	2.30	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	67.2	31.04	2.9	1.24	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3
Squid spp	2.4	2.40	0.0	0.00	5	37.8	0.00	0.1	0.00	1	25.8	8.76	1.6	0.99	3

Table 21b

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 2002 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	13.1	3.3	10	12.0	4.35	11	50.6	26.66	3	0.0	0	0	21.3	0	1	46.2	1.89	3
Total finfish kg	5.2	1.52	10	9.4	3.5	11	46.1	22.75	3	0.0	0	0	19.3	0	1	41.3	1.99	3
Total crustacean kg	6.0	3.09	10	1.9	0.55	11	4.2	3.92	3	0.0	0	0	0.4	0	1	1.3	0.54	3
Total others kg	2.3	1.21	10	1.1	0.39	9	0.2	0.11	3	0.0	0	0	1.6	0	1	3.6	0.48	3
Surface temperature	20.7	0.37	10	22.6	0.44	13	25.7	0.29	3	0.0	0	0	26.8	0	1	26.8	0.04	3
Midwater temperature	20.7	0.34	10	22.8	0.43	13	25.7	0.29	3	0.0	0	0	26.9	0	1	26.0	0.85	3
Bottom temperature	20.9	0.33	10	22.9	0.42	13	26.2	0.43	3	0.0	0	0	23.8	0	1	19.5	0.85	3
Surface salinity	27.1	1.2	10	29.7	0.57	13	33.7	0.61	3	0.0	0	0	35.6	0	1	35.7	0.14	3
Midwater salinity	28.9	1.07	10	30.4	0.35	13	33.7	0.61	3	0.0	0	0	35.9	0	1	36.1	0.15	3
Bottom salinity	29.6	1.16	10	30.9	0.46	13	34.5	0.68	3	0.0	0	0	36.4	0	1	35.9	0.47	3
Surface chlorophyll	4.6	0	1	2.0	0.19	5	2.2	0.7	3	0.0	0	0	1.0	0	1	3.8	2.83	3
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	6.7	0.11	10	6.4	0.11	13	5.7	0.07	3	0.0	0	0	5.4	0	1	5.4	0	3
Midwater oxygen	6.4	0.08	10	6.2	0.09	13	5.7	0.07	3	0.0	0	0	5.1	0	1	5.3	0.12	3
Bottom oxygen	5.9	0.15	10	6.0	0.14	13	5.0	0.33	3	0.0	0	0	5.0	0	1	3.6	0.15	3

Table 22a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2002 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	6.8	5.43	0.0	0.03	5	60.7	26.50	0.3	0.13	14	92.4	40.95	0.9	0.37	25
Litopenaeus setiferus	52.4	25.69	0.7	0.44	5	163.9	45.80	1.7	0.55	14	61.6	24.48	0.5	0.19	25
Farfantepenaeus aztecus	1.2	1.20	0.0	0.00	5	8.4	5.04	0.0	0.02	14	88.8	28.48	1.0	0.32	25
Squilla spp	8.4	8.40	0.1	0.07	5	52.6	16.38	0.4	0.14	14	37.0	11.74	0.3	0.11	25
Portunus gibbesii	10.8	10.80	0.0	0.04	5	27.5	14.31	0.1	0.07	14	38.6	17.27	0.2	0.07	25
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	5	0.6	0.34	0.0	0.00	14	35.8	31.42	0.1	0.09	25
Chloroscombrus chrysurus	208.4	207.40	0.9	0.92	5	21.8	9.50	0.2	0.12	14	1088.8	679.71	13.0	6.04	25
Micropogonias undulatus	1.2	1.20	0.1	0.05	5	10.2	3.66	0.5	0.19	14	126.4	50.33	6.1	2.50	25
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	0.1	0.09	0.0	0.00	14	53.7	16.22	0.9	0.25	25
Stellifer lanceolatus	29.6	19.90	0.8	0.78	5	157.5	82.71	1.5	0.83	14	0.0	0.00	0.0	0.00	25
Cynoscion spp	28.8	28.80	0.0	0.03	5	101.9	45.30	0.3	0.15	14	9.4	6.37	0.0	0.01	25
Diplectrum bivittatum	0.0	0.00	0.0	0.00	5	0.1	0.09	0.0	0.00	14	64.2	20.62	0.9	0.26	25
Peprilus burti	2.4	1.47	0.0	0.01	5	0.9	0.48	0.0	0.02	14	7.5	3.19	0.4	0.15	25
Serranus atrobranchus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	14	0.9	0.90	0.0	0.01	25
Squid spp	72.8	27.83	1.0	0.40	5	67.1	15.38	0.6	0.13	14	32.7	8.43	0.3	0.10	25

Table 22a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2002 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	12.2	4.78	0.3	0.12	9	6.5	4.52	0.2	0.13	4	0.0	0.00	0.0	0.00	2
Litopenaeus setiferus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Farfantepenaeus aztecus	56.4	16.98	1.7	0.51	9	85.9	29.07	2.9	0.91	4	64.3	64.29	2.6	2.59	2
Squilla spp	10.2	4.33	0.1	0.05	9	1.1	0.77	0.0	0.00	4	4.3	4.29	0.1	0.09	2
Portunus gibbesii	0.2	0.25	0.0	0.00	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Farfantepenaeus duorarum	2.3	2.21	0.1	0.08	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	44.3	23.17	2.1	1.06	9	10.0	10.00	0.6	0.60	4	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	79.9	44.65	5.7	2.40	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	110.9	42.00	3.1	1.03	9	13.4	3.13	0.6	0.14	4	37.1	37.14	2.4	2.37	2
Stellifer lanceolatus	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Cynoscion spp	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Diplectrum bivittatum	12.4	9.42	0.1	0.12	9	1.1	0.68	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Peprilus burti	90.0	39.94	5.8	2.54	9	17.7	16.78	1.1	1.05	4	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	26.4	10.87	0.1	0.06	9	152.4	75.29	0.7	0.34	4	86.2	82.41	0.8	0.79	2
Squid spp	8.4	6.15	0.0	0.02	9	14.1	6.70	0.3	0.24	4	22.5	22.50	0.5	0.55	2

Table 22b

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 2002 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	25.0	8.76	5	17.5	4.77	14	32.4	7.76	25	0.0	0	0	16.6	3.91	4	46.0	19.4	2
Total finfish kg	4.2	1.32	5	10.3	3.46	14	28.7	7.71	25	0.0	0	0	12.0	2.8	4	35.6	13.51	2
Total crustacean kg	1.6	0.82	5	2.9	0.78	14	3.4	0.78	24	0.0	0	0	3.7	1.31	4	3.9	3.53	2
Total others kg	19.6	9.29	5	4.5	1.35	14	0.5	0.13	25	0.0	0	0	0.8	0.76	4	6.7	2.18	2
Surface temperature	21.0	0.75	5	22.3	0.7	12	24.6	0.48	24	0.0	0	0	27.3	0.02	2	27.0	0.18	3
Midwater temperature	21.2	0.68	5	22.7	0.62	12	25.1	0.43	24	0.0	0	0	27.3	0.04	2	27.2	0.16	3
Bottom temperature	21.9	0.62	5	23.8	0.48	12	26.0	0.29	24	0.0	0	0	21.9	0.1	2	21.0	0.64	3
Surface salinity	27.1	1.52	5	27.9	0.77	12	31.6	0.66	24	0.0	0	0	35.6	0	2	35.5	0.3	3
Midwater salinity	28.6	0.92	5	30.0	0.68	12	32.8	0.51	24	0.0	0	0	35.7	0.04	2	35.8	0.13	3
Bottom salinity	29.7	1.24	5	31.0	1.48	12	34.3	0.35	24	0.0	0	0	36.4	0.05	2	36.5	0.01	3
Surface chlorophyll	2.7	0	1	4.6	0.7	5	1.8	0.31	18	0.0	0	0	0.6	0.27	2	0.9	0.27	3
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	7.2	0.43	5	6.5	0.2	12	5.9	0.21	24	0.0	0	0	5.4	0.05	2	5.4	0.03	3
Midwater oxygen	6.9	0.35	5	6.2	0.19	12	5.6	0.15	24	0.0	0	0	5.3	0.05	2	5.4	0.03	3
Bottom oxygen	5.6	0.7	5	5.4	0.12	12	5.1	0.14	24	0.0	0	0	4.5	0.15	2	4.3	0.27	3

Table 23a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2002 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
Farfantepenaeus aztecus	7.2	7.20	0.0	0.03	5	16.0	7.44	0.1	0.05	17	99.9	29.76	1.5	0.45	12
Litopenaeus setiferus	44.4	39.96	0.2	0.19	5	54.0	23.67	0.6	0.25	17	155.8	64.28	1.1	0.33	12
Callinectes similis	0.0	0.00	0.0	0.00	5	16.2	8.70	0.2	0.14	17	80.6	27.35	1.0	0.45	12
Squilla spp	0.0	0.00	0.0	0.00	5	27.5	14.15	0.4	0.27	17	14.8	7.08	0.1	0.04	12
Portunus spinicarpus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	17	19.3	19.29	0.1	0.13	12
Solenocera vioscai	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	17	0.0	0.00	0.0	0.00	12
Chloroscombrus chrysurus	84.0	44.17	1.4	0.93	5	1512.3	1004.50	16.2	9.66	17	560.0	332.08	8.5	4.30	12
Cynoscion spp	0.0	0.00	0.0	0.00	5	144.6	104.46	0.4	0.35	17	43.8	20.34	0.3	0.20	12
Serranus atrobranchus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	17	15.7	14.51	0.1	0.13	12
Cynoscion nothus	14.4	9.60	0.2	0.10	5	123.5	35.08	1.2	0.49	17	70.2	21.10	1.3	0.27	12
Anchoa hepsetus	6.0	6.00	0.1	0.10	5	18.6	12.32	0.2	0.16	17	58.6	35.40	0.8	0.52	12
Micropogonias undulatus	18.0	13.94	1.1	0.94	5	11.1	4.93	0.6	0.25	17	62.5	30.47	3.5	1.59	12
Diplectrum bivittatum	0.0	0.00	0.0	0.00	5	0.6	0.55	0.0	0.00	17	60.9	20.39	1.0	0.42	12
Syacium gunteri	0.0	0.00	0.0	0.00	5	13.5	7.47	0.1	0.06	17	46.1	15.68	0.6	0.19	12
Squid spp	69.6	41.77	0.9	0.51	5	142.0	29.97	1.4	0.26	17	100.0	18.28	0.8	0.10	12

Table 23a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2002 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
Farfantepenaeus aztecus	546.7	264.50	5.1	1.52	7	92.0	0.00	1.7	0.00	1	74.4	0.00	2.9	0.00	1
Litopenaeus setiferus	161.7	160.45	0.6	0.56	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Callinectes similis	217.7	55.70	3.9	0.89	7	32.0	0.00	0.7	0.00	1	0.0	0.00	0.0	0.00	1
Squilla spp	37.6	13.02	0.2	0.07	7	22.0	0.00	0.3	0.00	1	16.7	0.00	0.2	0.00	1
Portunus spinicarpus	0.5	0.54	0.0	0.00	7	2.0	0.00	0.0	0.00	1	298.9	0.00	1.9	0.00	1
Solenocera vioscai	9.8	9.84	0.0	0.04	7	34.0	0.00	0.2	0.00	1	122.2	0.00	0.6	0.00	1
Chloroscombrus chrysurus	25.7	19.10	0.8	0.59	7	0.0	0.00	0.0	0.00	1	8.9	0.00	0.1	0.00	1
Cynoscion spp	159.3	63.89	0.1	0.05	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Serranus atrobranchus	222.2	70.21	1.8	0.57	7	256.0	0.00	2.1	0.00	1	398.9	0.00	3.5	0.00	1
Cynoscion nothus	65.9	15.71	0.6	0.19	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Anchoa hepsetus	50.3	31.93	0.8	0.50	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	41.4	7.01	2.9	0.47	7	12.0	0.00	0.9	0.00	1	0.0	0.00	0.0	0.00	1
Diplectrum bivittatum	93.2	54.22	1.0	0.42	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Syacium gunteri	51.9	22.60	0.7	0.27	7	2.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Squid spp	55.8	36.91	0.4	0.16	7	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1

Table 23b

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 2002 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	90.0	72.03	5	37.9	14.56	17	32.1	7.13	12	0.0	0	0	14.8	0	1	26.0	0	1
Total finfish kg	13.7	7.38	5	24.6	11.26	17	27.0	7.08	12	0.0	0	0	10.4	0	1	15.9	0	1
Total crustacean kg	0.8	0.29	4	1.7	0.69	15	3.8	0.99	12	0.0	0	0	4.2	0	1	5.9	0	1
Total others kg	75.8	64.9	5	12.1	4.6	17	1.4	0.38	12	0.0	0	0	0.2	0	1	4.2	0	1
Surface temperature	22.0	1.05	5	23.0	0.62	17	26.0	0.41	14	0.0	0	0	0.0	0	0	27.1	0	1
Midwater temperature	22.1	1	5	23.0	0.63	17	26.2	0.43	14	0.0	0	0	0.0	0	0	28.2	0	1
Bottom temperature	22.0	1.02	5	23.2	0.63	17	26.8	0.47	14	0.0	0	0	0.0	0	0	21.6	0	1
Surface salinity	26.0	1.85	5	29.9	0.58	17	32.6	0.3	14	0.0	0	0	0.0	0	0	34.9	0	1
Midwater salinity	28.5	1.72	5	31.0	0.46	17	33.0	0.3	14	0.0	0	0	0.0	0	0	36.1	0	1
Bottom salinity	29.4	1.3	5	31.6	0.63	17	34.5	0.35	14	0.0	0	0	0.0	0	0	36.5	0	1
Surface chlorophyll	3.7	0	1	4.2	0.76	7	1.9	0.33	13	0.0	0	0	0.0	0	0	1.1	0	1
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	7.4	0.51	5	6.5	0.25	17	5.2	0.17	14	0.0	0	0	0.0	0	0	5.1	0	1
Midwater oxygen	7.4	0.58	5	6.4	0.21	17	5.2	0.18	14	0.0	0	0	0.0	0	0	5.1	0	1
Bottom oxygen	7.1	0.52	5	6.5	0.32	17	4.6	0.23	14	0.0	0	0	0.0	0	0	4.2	0	1

Table 24a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2002 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	75.4	25.29	1.3	0.46	16
Callinectes similis	0.0	0.00	0.0	0.00	0	2.8	1.50	0.1	0.03	10	64.3	26.63	1.1	0.51	16
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	16
Solenocera vioscai	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	16
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	7.1	3.47	0.1	0.06	10	41.0	20.29	0.5	0.22	16
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	16
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	384.2	212.21	9.1	5.80	10	433.8	169.79	13.3	4.94	16
Peprilus burti	0.0	0.00	0.0	0.00	0	0.6	0.60	0.0	0.00	10	2.5	1.31	0.1	0.09	16
Harengula jaguana	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	22.5	9.34	0.7	0.31	16
Cynoscion nothus	0.0	0.00	0.0	0.00	0	155.1	93.71	2.8	1.73	10	117.9	57.16	1.6	0.56	16
Trachurus lathami	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	16
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	3.0	1.87	0.0	0.02	16
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	11.0	8.23	0.7	0.53	10	93.5	48.42	5.7	2.89	16
Upeneus parvus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	10	0.2	0.16	0.0	0.00	16
Squid spp	0.0	0.00	0.0	0.00	0	31.6	10.82	0.4	0.11	10	69.1	16.41	0.5	0.10	16

Table 24a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2002 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
Farfantepenaeus aztecus	12.0	0.00	0.2	0.00	1	136.8	66.62	2.6	1.15	6	10.7	5.79	0.4	0.17	3
Callinectes similis	10.8	0.00	0.1	0.00	1	34.5	19.72	0.6	0.36	6	0.0	0.00	0.0	0.00	3
Sicyonia dorsalis	0.0	0.00	0.0	0.00	1	137.1	96.60	0.3	0.16	6	0.0	0.00	0.0	0.00	3
Solenocera vioscai	0.0	0.00	0.0	0.00	1	131.8	91.11	0.5	0.30	6	3.2	3.23	0.0	0.02	3
Litopenaeus setiferus	1.2	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	52.3	30.17	0.3	0.19	6	12.3	9.55	0.1	0.06	3
Chloroscombrus chrysurus	916.8	0.00	18.9	0.00	1	86.1	56.08	3.3	2.14	6	0.0	0.00	0.0	0.00	3
Peprilus burti	2.4	0.00	0.1	0.00	1	179.0	130.35	11.7	8.42	6	168.5	124.01	11.4	8.61	3
Harengula jaguana	1234.8	0.00	3.2	0.00	1	3.6	3.64	0.1	0.14	6	0.0	0.00	0.0	0.00	3
Cynoscion nothus	114.0	0.00	1.3	0.00	1	2.6	2.11	0.0	0.01	6	0.0	0.00	0.0	0.00	3
Trachurus lathami	6.0	0.00	0.2	0.00	1	101.8	95.01	2.7	2.52	6	283.9	180.14	10.3	7.07	3
Serranus atrobranchus	6.0	0.00	0.1	0.00	1	178.5	74.67	2.8	1.56	6	151.0	100.94	2.8	1.65	3
Micropogonias undulatus	16.8	0.00	1.4	0.00	1	22.8	8.84	1.7	0.67	6	0.7	0.74	0.1	0.13	3
Upeneus parvus	2.4	0.00	0.1	0.00	1	102.6	48.27	3.4	1.51	6	51.1	40.54	2.1	1.71	3
Squid spp	142.8	0.00	0.8	0.00	1	40.0	17.16	0.6	0.14	6	24.0	14.13	1.5	0.44	3

Table 24b

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 2002 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 6fm.

	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	34.4	17.48	10	35.2	6.56	16	0.0	0	0	48.0	12.75	6	80.4	25.25	3
Total finfish kg	0.0	0	0	21.0	10.66	10	28.3	5.61	16	0.0	0	0	41.0	14.43	6	72.5	27.22	3
Total crustacean kg	0.0	0	0	0.5	0.07	9	3.6	1.02	16	0.0	0	0	4.1	1.66	6	1.5	0.29	3
Total others kg	0.0	0	0	13.1	7.38	10	3.4	1.43	16	0.0	0	0	2.8	1.01	6	6.4	2.7	3
Surface temperature	0.0	0	0	23.8	0.81	10	25.8	0.57	17	0.0	0	0	27.7	0.19	5	27.7	0.33	4
Midwater temperature	0.0	0	0	23.7	0.84	10	25.9	0.57	17	0.0	0	0	28.7	0.29	5	28.4	0.2	4
Bottom temperature	0.0	0	0	23.5	0.89	10	25.9	0.67	17	0.0	0	0	24.7	1.24	5	21.2	0.46	4
Surface salinity	0.0	0	0	32.1	0.48	10	31.6	0.23	17	0.0	0	0	32.0	0.48	5	31.4	0.58	4
Midwater salinity	0.0	0	0	32.2	0.49	10	31.8	0.22	17	0.0	0	0	36.0	0.08	5	36.0	0.06	4
Bottom salinity	0.0	0	0	32.2	0.5	10	32.6	0.3	17	0.0	0	0	36.4	0.05	5	36.5	0.01	4
Surface chlorophyll	0.0	0	0	1.2	0.15	3	0.8	0.07	11	0.0	0	0	0.3	0.02	5	0.3	0.01	4
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	0.37	10	5.3	0.15	17	0.0	0	0	5.0	0.04	5	5.1	0.06	4
Midwater oxygen	0.0	0	0	6.3	0.32	10	7.9	2.66	17	0.0	0	0	4.8	0.03	5	4.6	0.08	4
Bottom oxygen	0.0	0	0	6.2	0.31	10	4.7	0.28	17	0.0	0	0	3.8	0.2	5	3.8	0.14	4

Table 25a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 2002 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
Porcellana sayana	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	84.0	0.00	0.1	0.00	1
Portunus gibbesii	0.0	0.00	0.0	0.00	0	9.0	3.00	0.0	0.03	2	12.0	0.00	0.1	0.00	1
Callinectes similis	0.0	0.00	0.0	0.00	0	6.0	6.00	0.1	0.06	2	6.0	0.00	0.1	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	9.0	9.00	0.4	0.40	2	0.0	0.00	0.0	0.00	1
Calappa sulcata	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	12.0	0.00	2.5	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	3186.0	3186.00	22.1	22.15	2	0.0	0.00	0.0	0.00	1
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	75.0	69.00	0.9	0.13	2	240.0	0.00	2.5	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	45.0	45.00	3.4	3.44	2	84.0	0.00	5.5	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	21.0	21.00	0.5	0.47	2	78.0	0.00	1.5	0.00	1
Selene setapinnis	0.0	0.00	0.0	0.00	0	30.0	24.00	0.1	0.11	2	0.0	0.00	0.0	0.00	1
Lutjanus campechanus	0.0	0.00	0.0	0.00	0	3.0	3.00	0.1	0.09	2	42.0	0.00	0.6	0.00	1
Halieutichthys aculeatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	2	24.0	0.00	0.1	0.00	1
Lagodon rhomboides	0.0	0.00	0.0	0.00	0	12.0	12.00	0.7	0.70	2	0.0	0.00	0.0	0.00	1
Squid spp	0.0	0.00	0.0	0.00	0	87.0	39.00	0.9	0.29	2	78.0	0.00	0.5	0.00	1

Table 25b

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 2002 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	29.7	18.3	2	16.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish kg	0.0	0	0	28.2	19.2	2	10.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean kg	0.0	0	0	0.9	0.3	2	4.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total others kg	0.0	0	0	0.9	0.3	2	1.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	23.1	0.05	2	22.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	23.1	0.05	2	22.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	23.2	0.05	2	23.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	27.8	0.13	2	28.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	28.0	0.25	2	29.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	28.2	0.3	2	31.3	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	5.8	0.05	2	5.5	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	5.7	0.15	2	5.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	5.7	0.3	2	5.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0

Table 26. 2002 Reef Fish Survey species composition list, 64 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					
Lutjanus campechanus	red snapper	103	147.0	15	23.8
Rhomboplites aurorubens	vermilion snapper	46	17.2	4	6.3
Pagrus pagrus	red porgy	26	18.7	12	19.0
Balistes capriscus	gray triggerfish	19	21.7	8	12.7
Epinephelus morio	red grouper	14	19.0	6	9.5
Calamus nodosus	knobbed porgy	11	5.9	5	7.9
Mycteroperca phenax	scamp	8	8.8	3	4.8
Calamus proridens	littlehead porgy	6	2.8	3	4.8
Seriola dumerili	greater amberjack	5	42.0	2	3.2
Haemulon plumieri	white grunt	4	1.3	1	1.6
Chaetodon ocellatus	spotfin butterflyfish	2	0.2	1	1.6
Holacanthus bermudensis	blue angelfish	2	1.3	1	1.6
Ophichthus rex	king snake eel	2	2.4	1	1.6
Caulolatilus chrysops	goldface tilefish	1	1.5	1	1.6
Chaetodon sedentarius	reef butterflyfish	1	0.1	1	1.6
Epinephelus drummondhayi	speckled hind	1	2.7	1	1.6
Epinephelus flavolimbatus	yellowedge grouper	1	6.4	1	1.6
Muraena Retifera	reticulate moray	1	0.7	1	1.6
Ocyurus chrysurus	yellowtail snapper	1	0.4	1	1.6
Seriola rivoliana	almaco jack	1	1.6	1	1.6
Crustaceans					
Anasimus latus	stilt spider crab	1	0.0	1	1.6

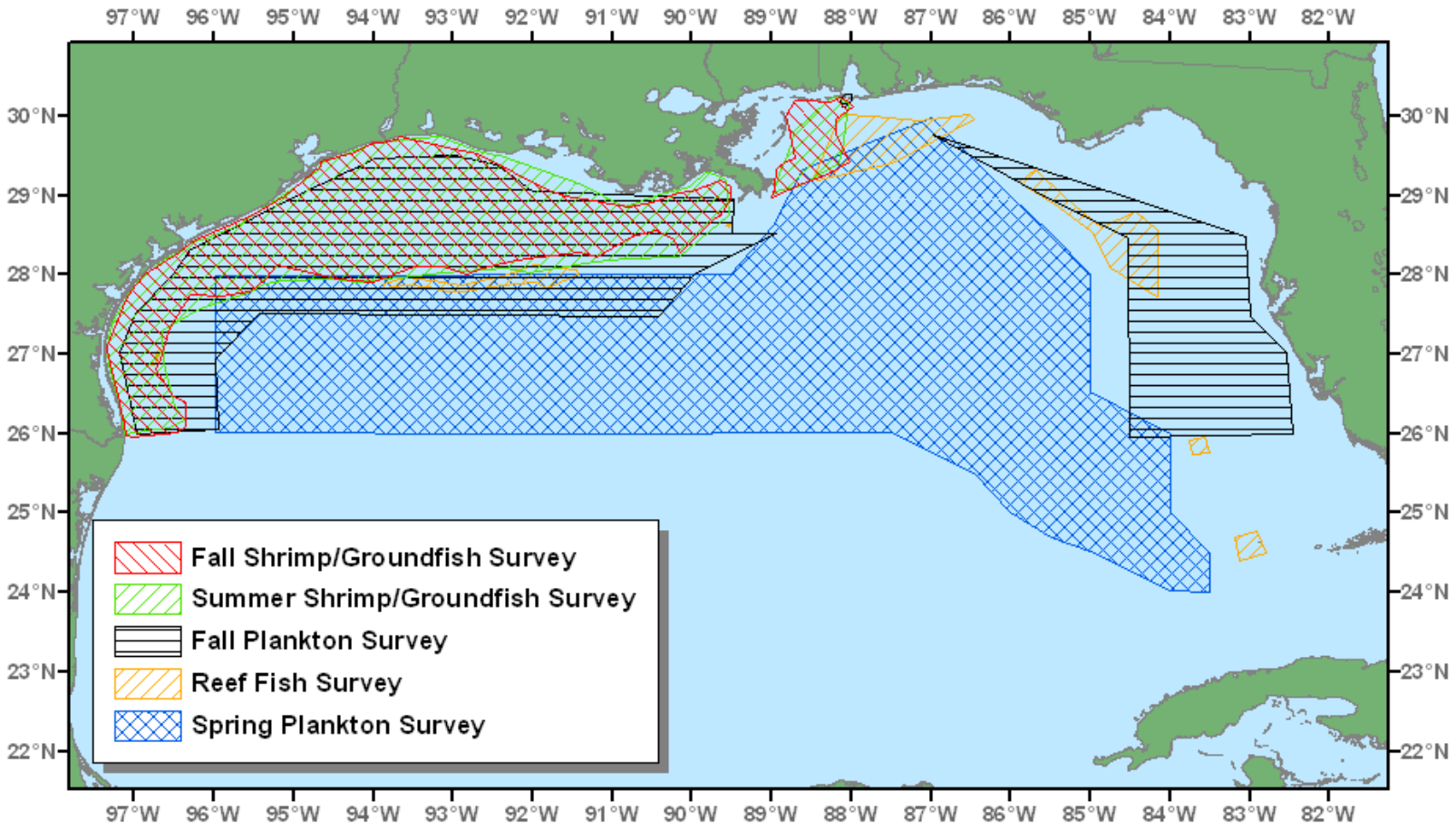

Figure 1. 2002 SEAMAP Surveys, Gulf of Mexico.

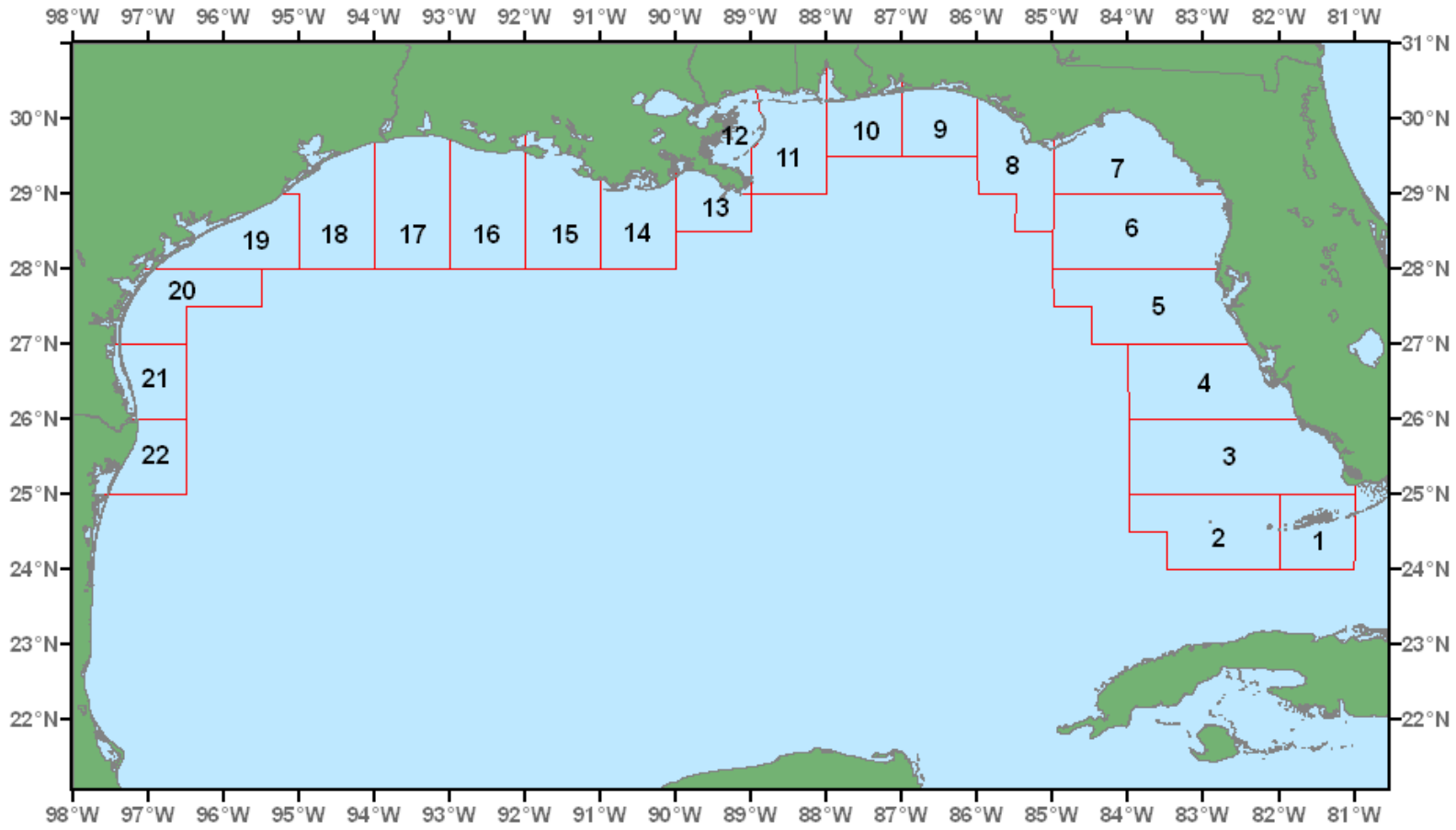

Figure 2. Statistical zones for shrimp in the Gulf of Mexico.

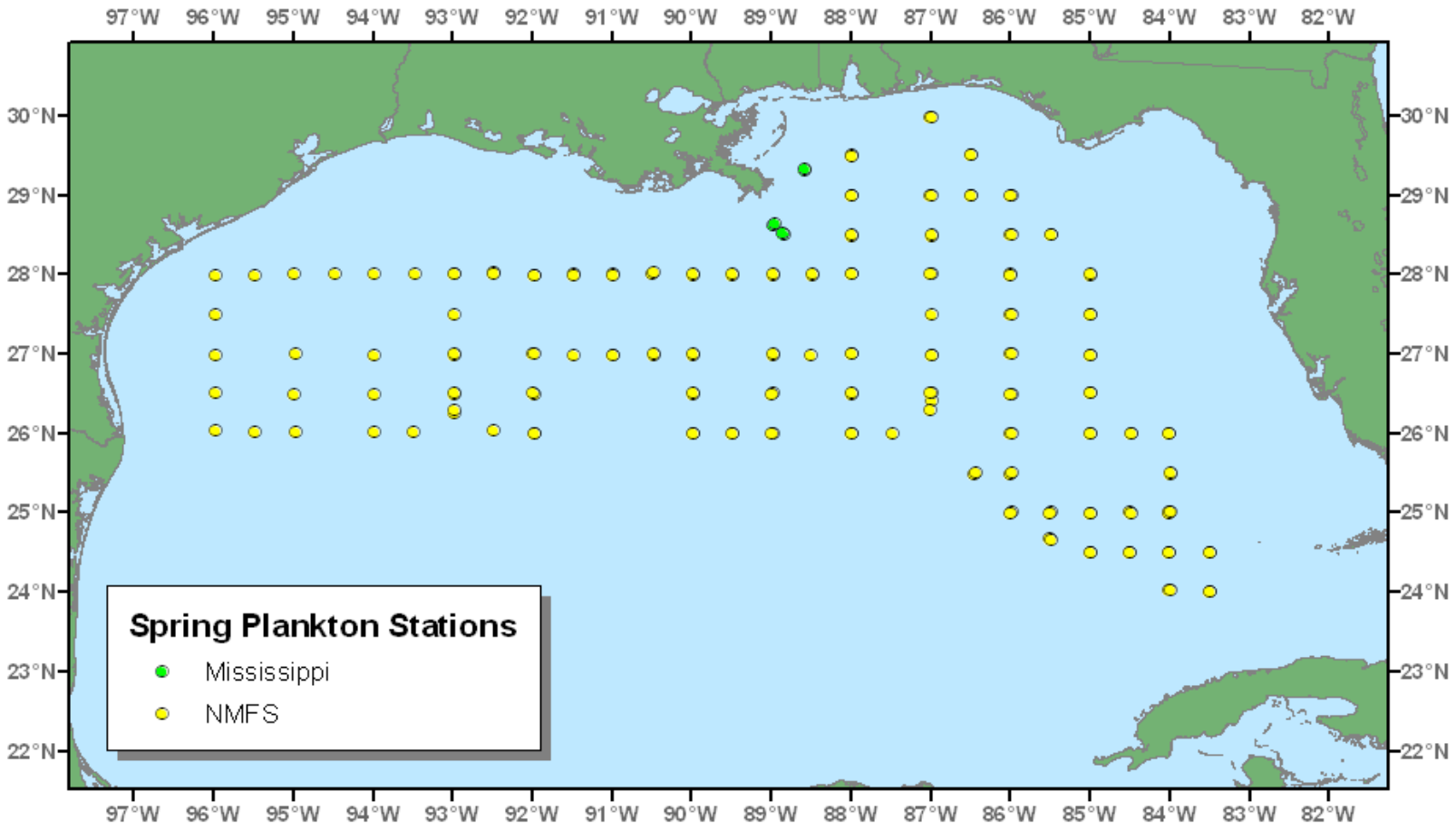

Figure 3. Locations of plankton and environmental stations during the 2002 Spring Plankton Survey.

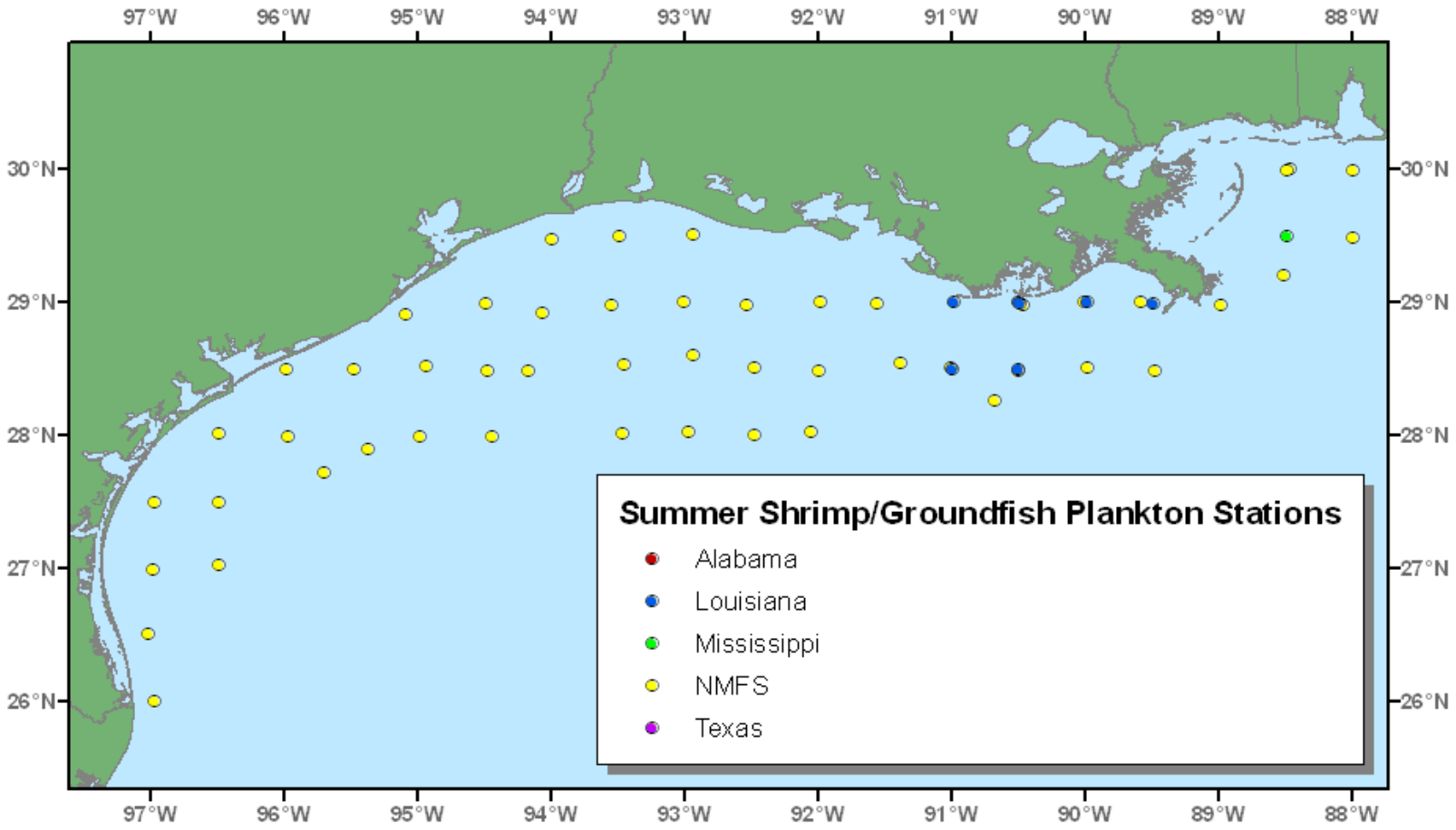

Figure 4. Locations of plankton stations during the 2002 Summer Shrimp/Groundfish Survey.

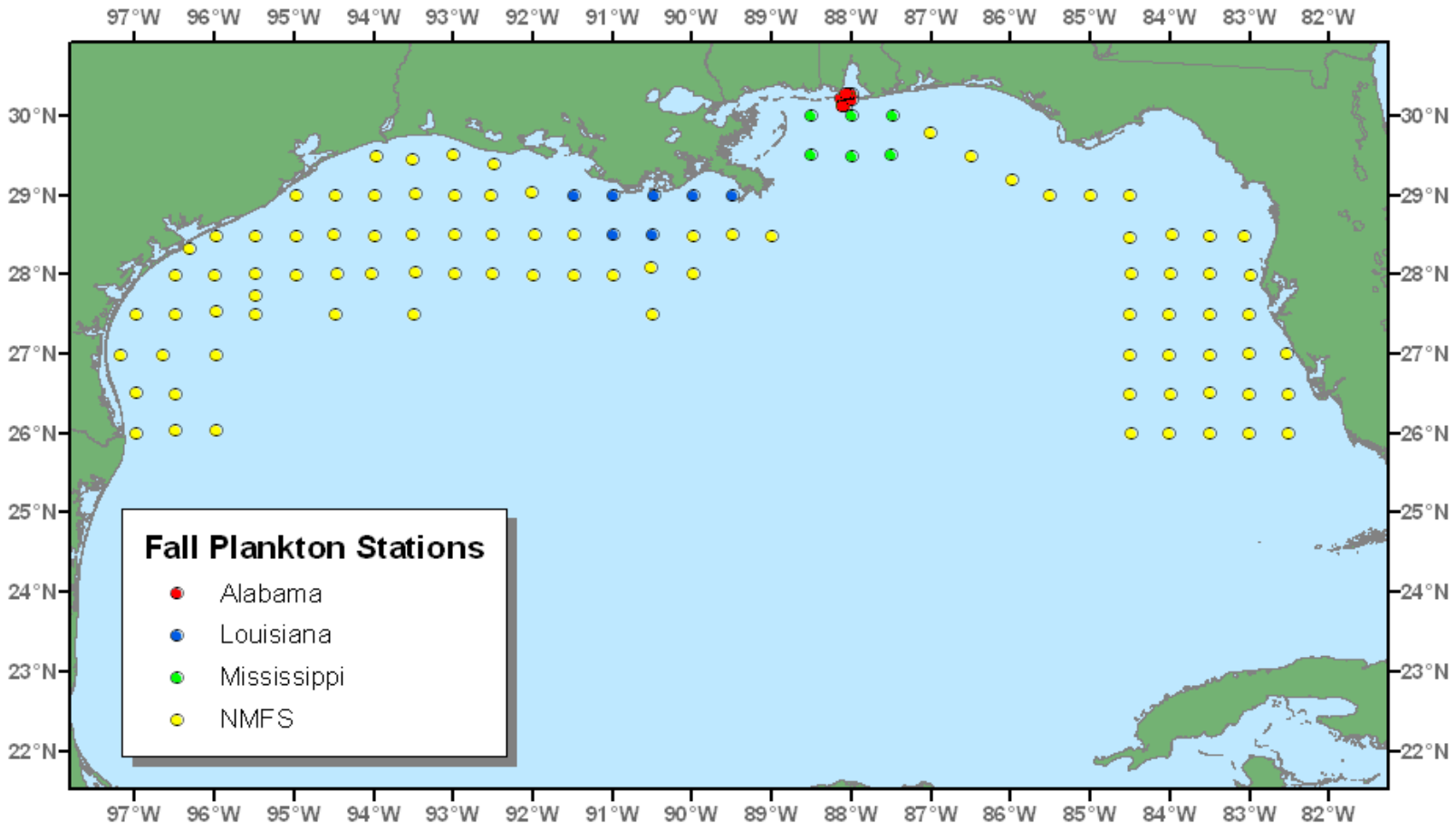

Figure 5. Locations of plankton and environmental stations during the 2002 Fall Plankton Survey.

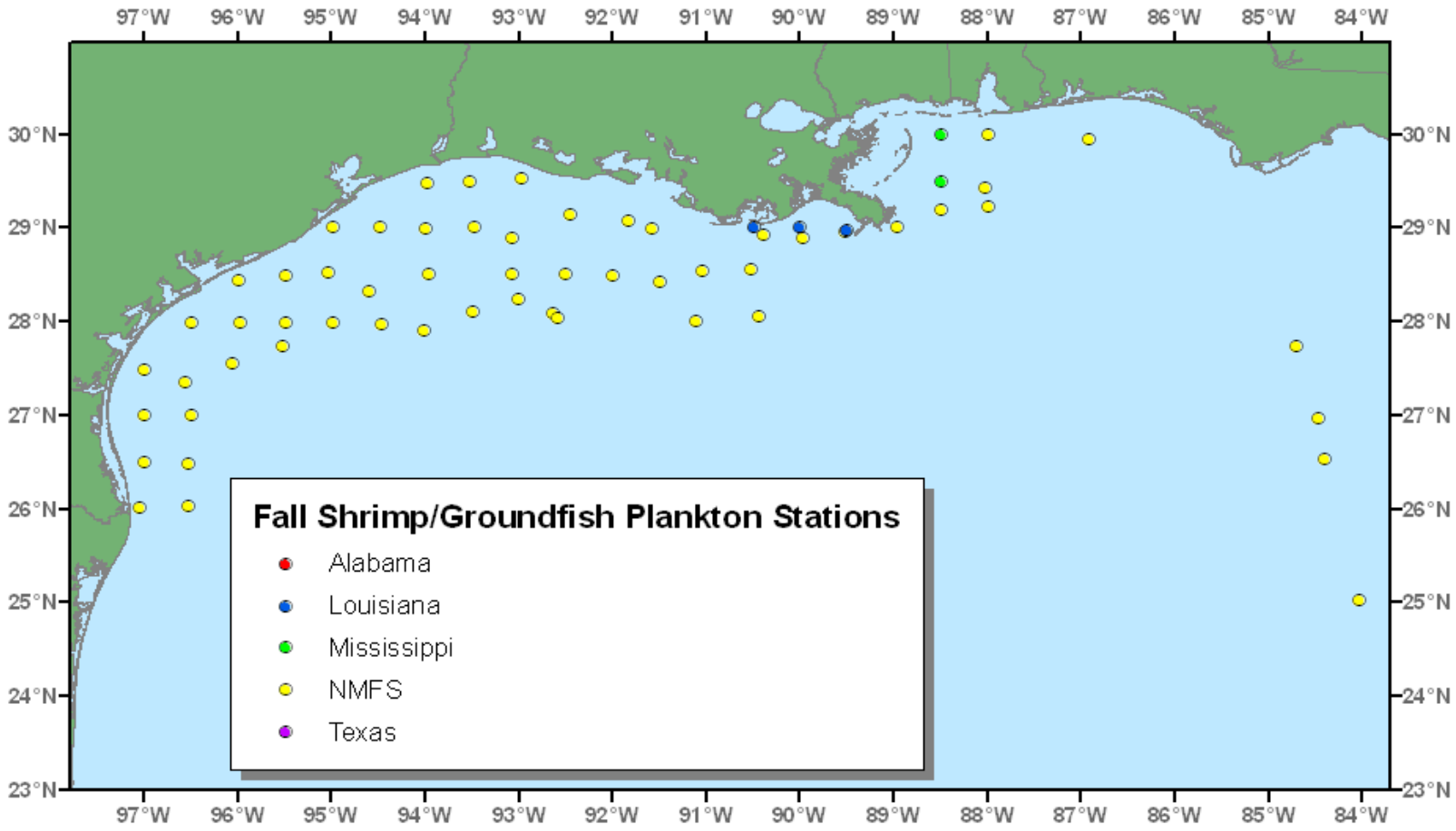

Figure 6. Locations of plankton stations during the 2002 Fall Shrimp/Groundfish Survey.

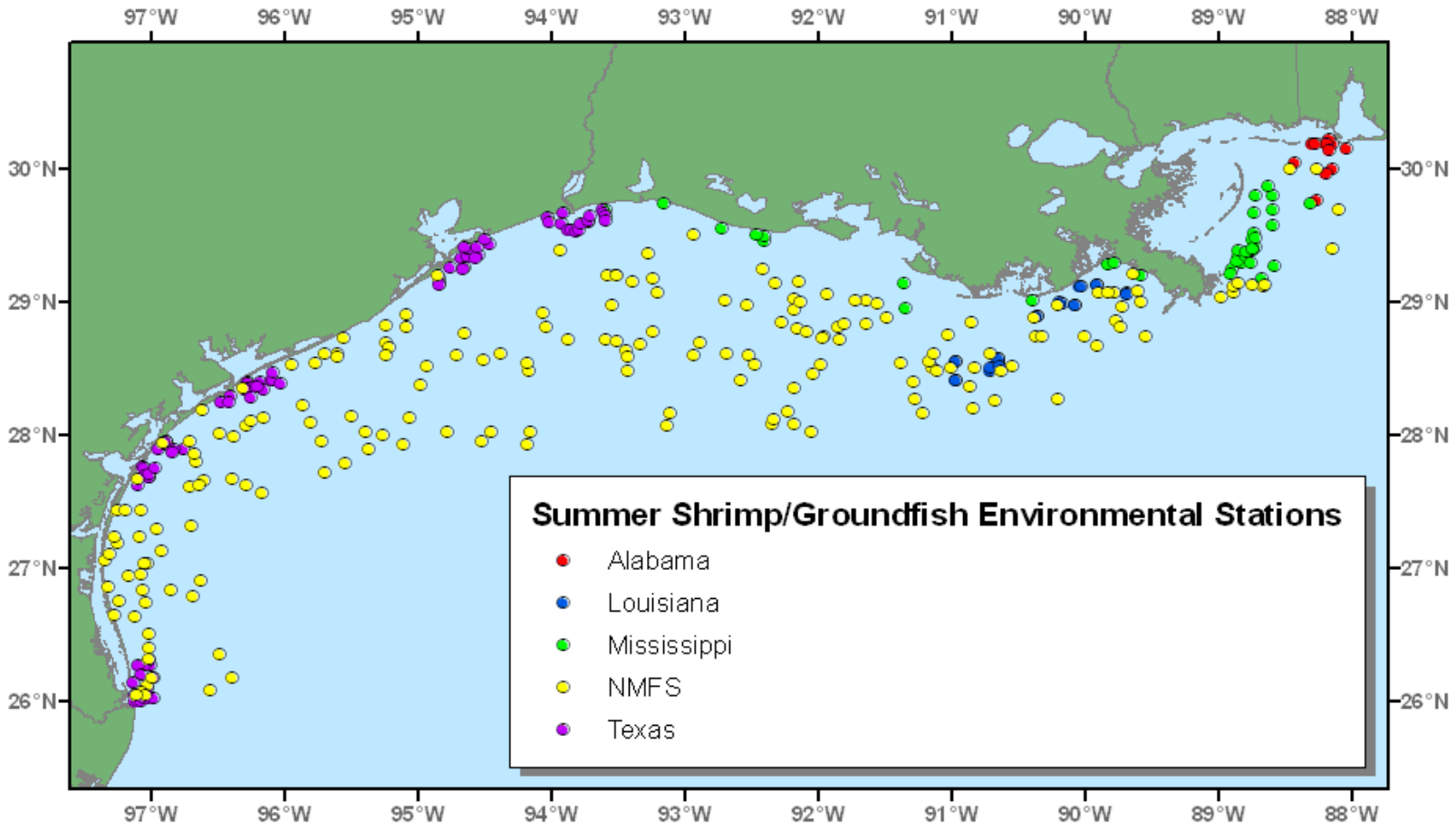

Figure 7. Locations of environmental stations during the 2002 Summer Shrimp/Groundfish Survey.

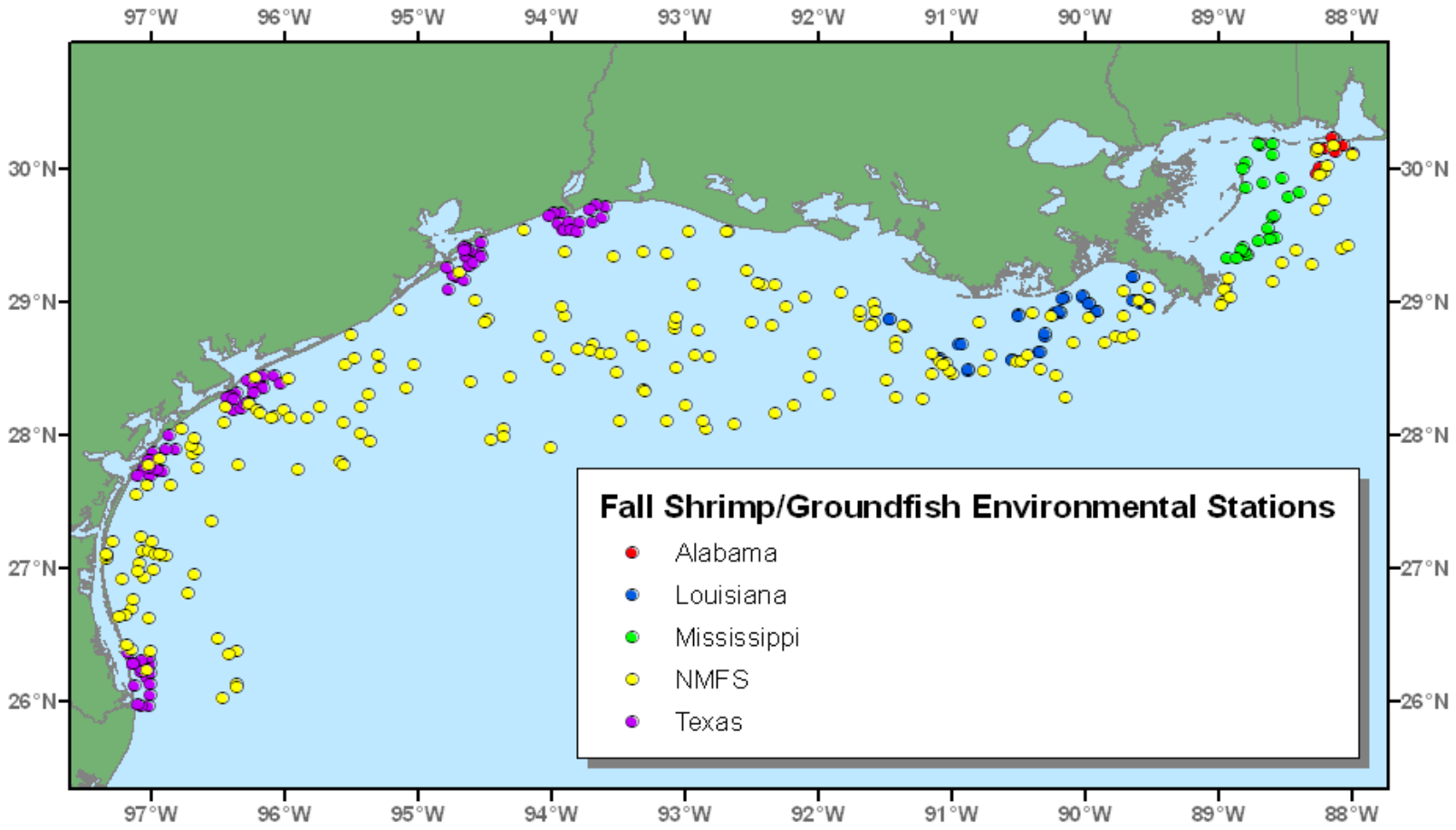

Figure 8. Locations of environmental stations during the 2002 Fall Shrimp/Groundfish Survey.

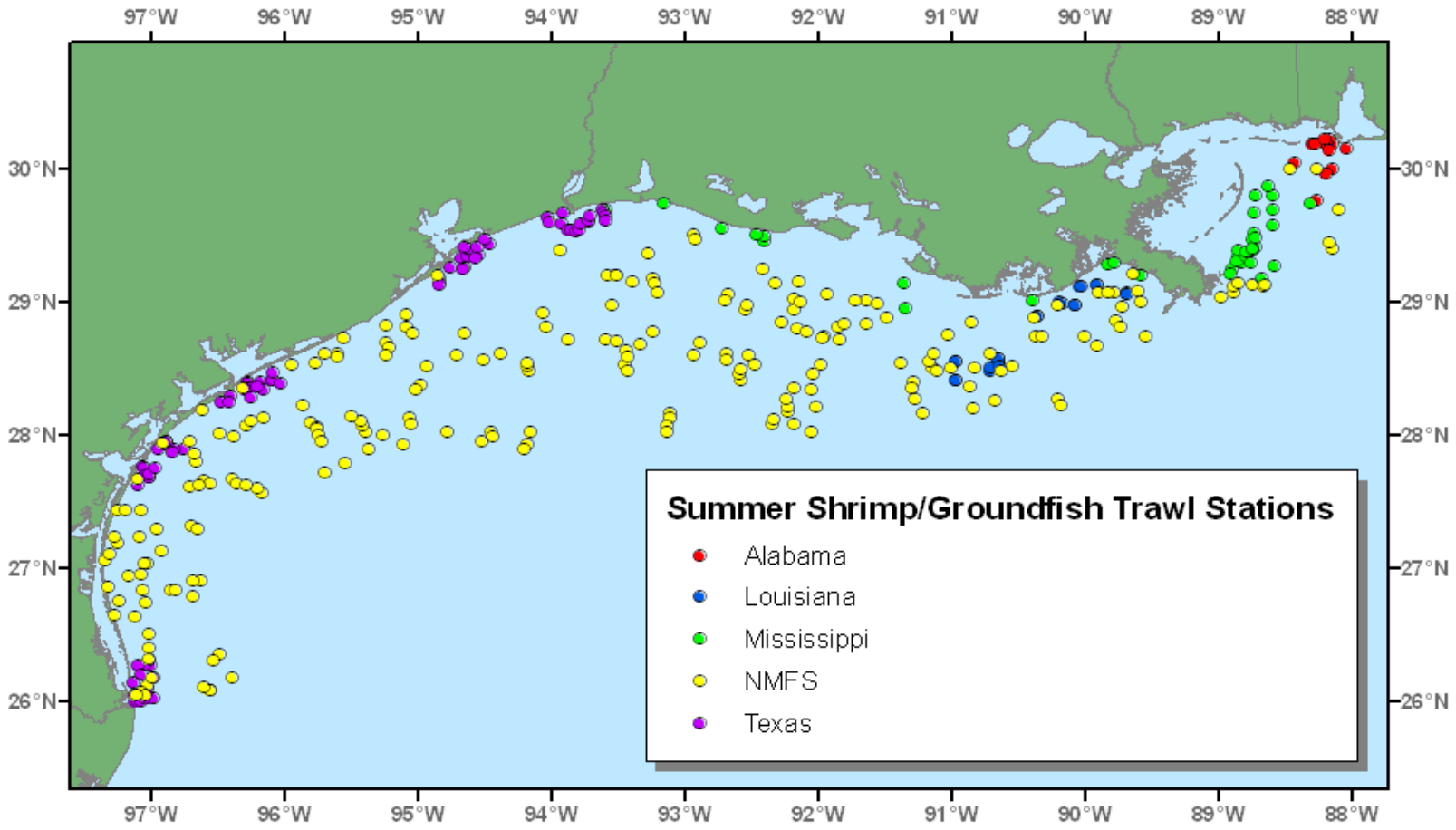

Figure 9. Locations of trawl stations during the 2002 Summer Shrimp/Groundfish Survey.

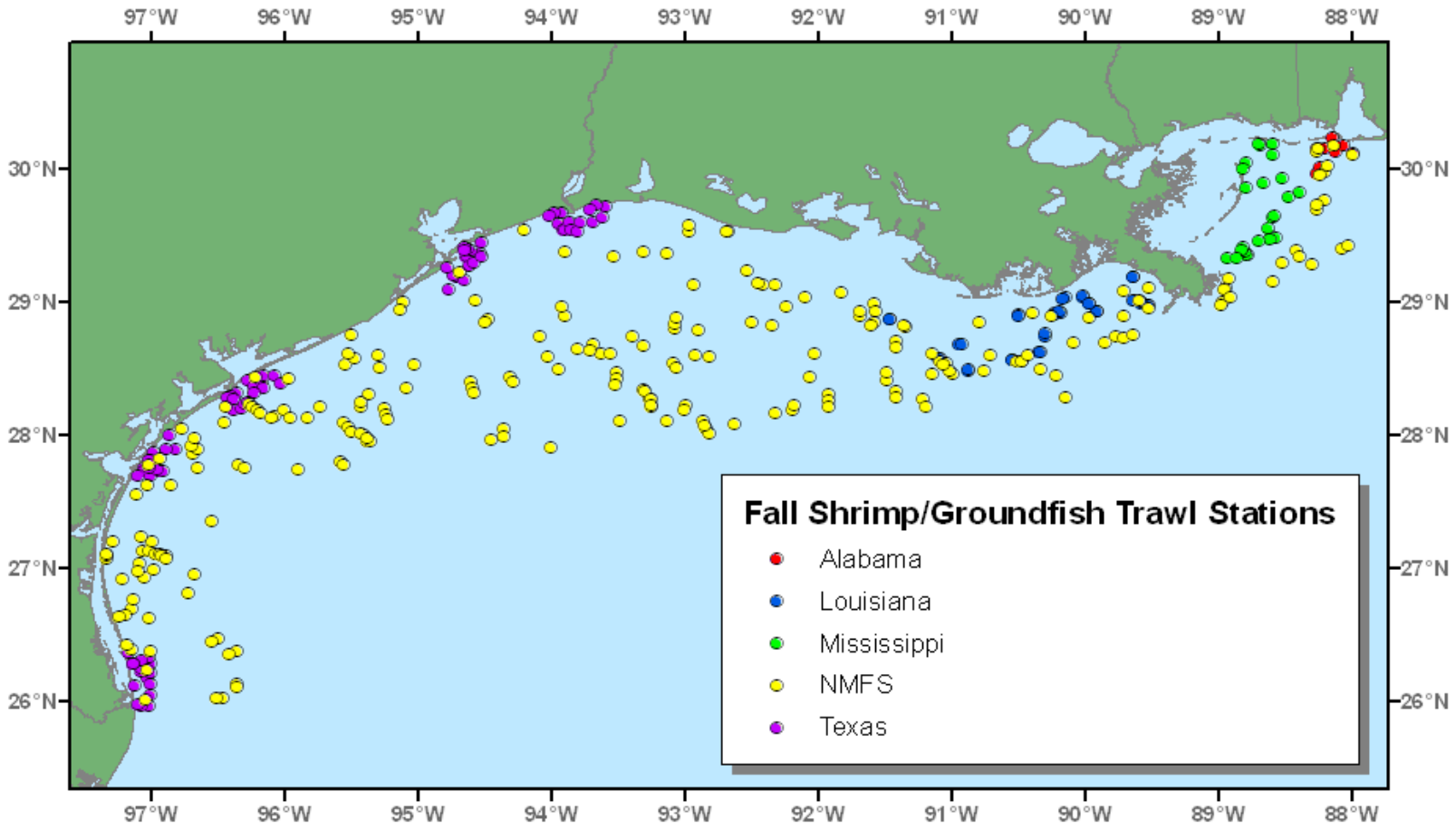

Figure 10. Locations of trawl stations during the 2002 Fall Shrimp/Groundfish Survey.

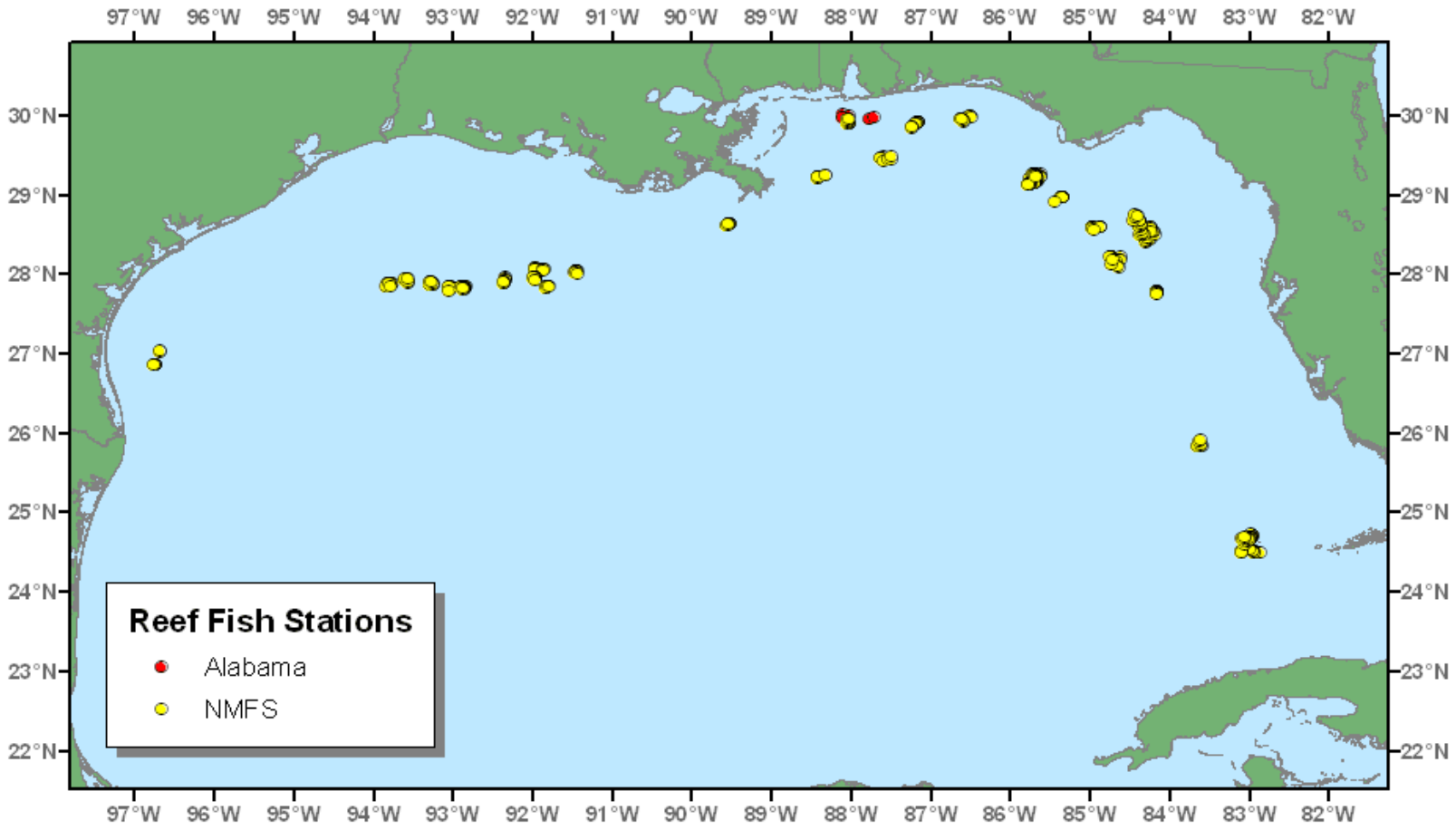

Figure 11. Locations of trap stations during the 2002 Reef Fish Survey.

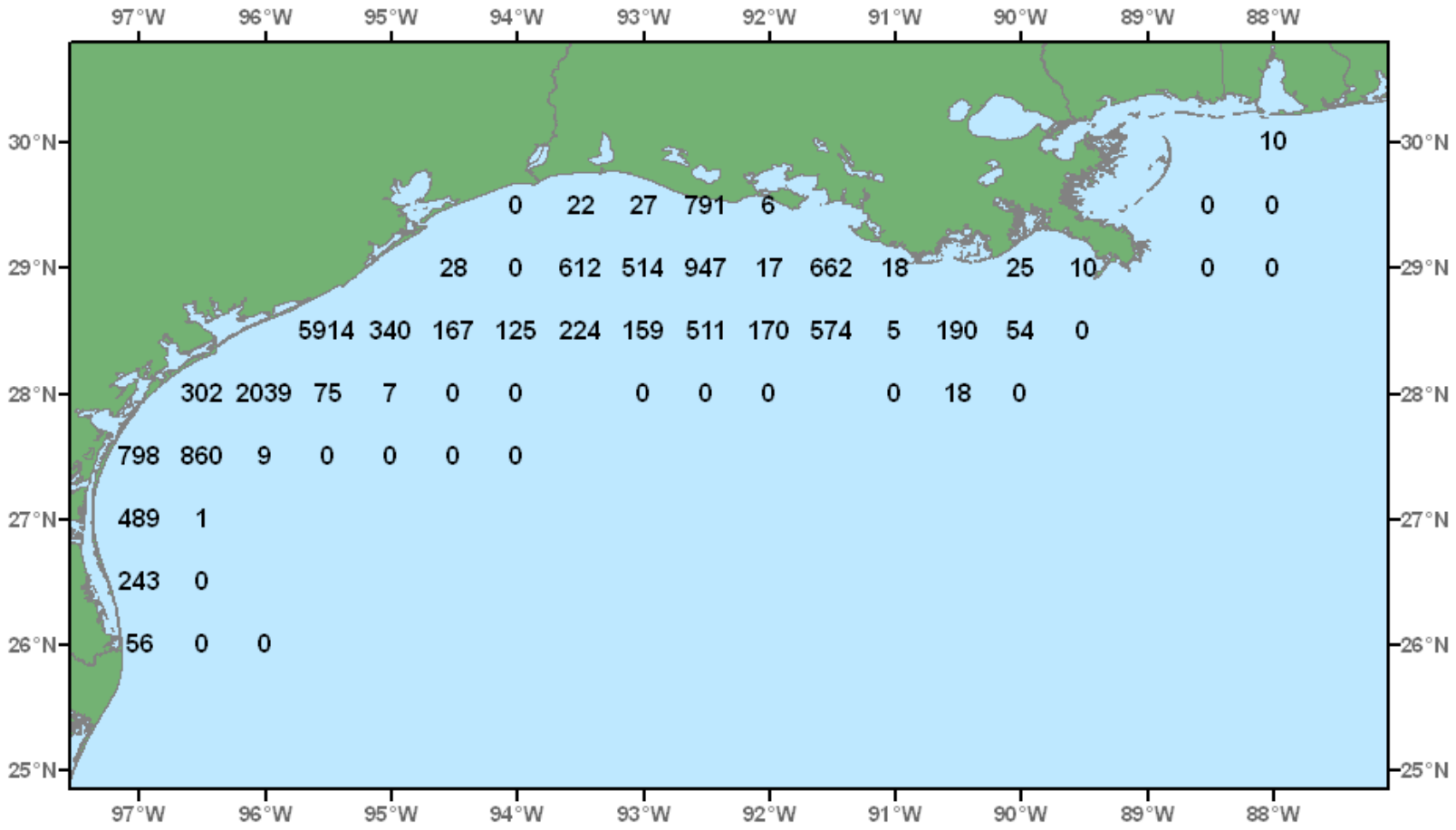

Figure 12. Atlantic bumper, Chloroscombrus chrysurus, number/hour for June-July 2002.

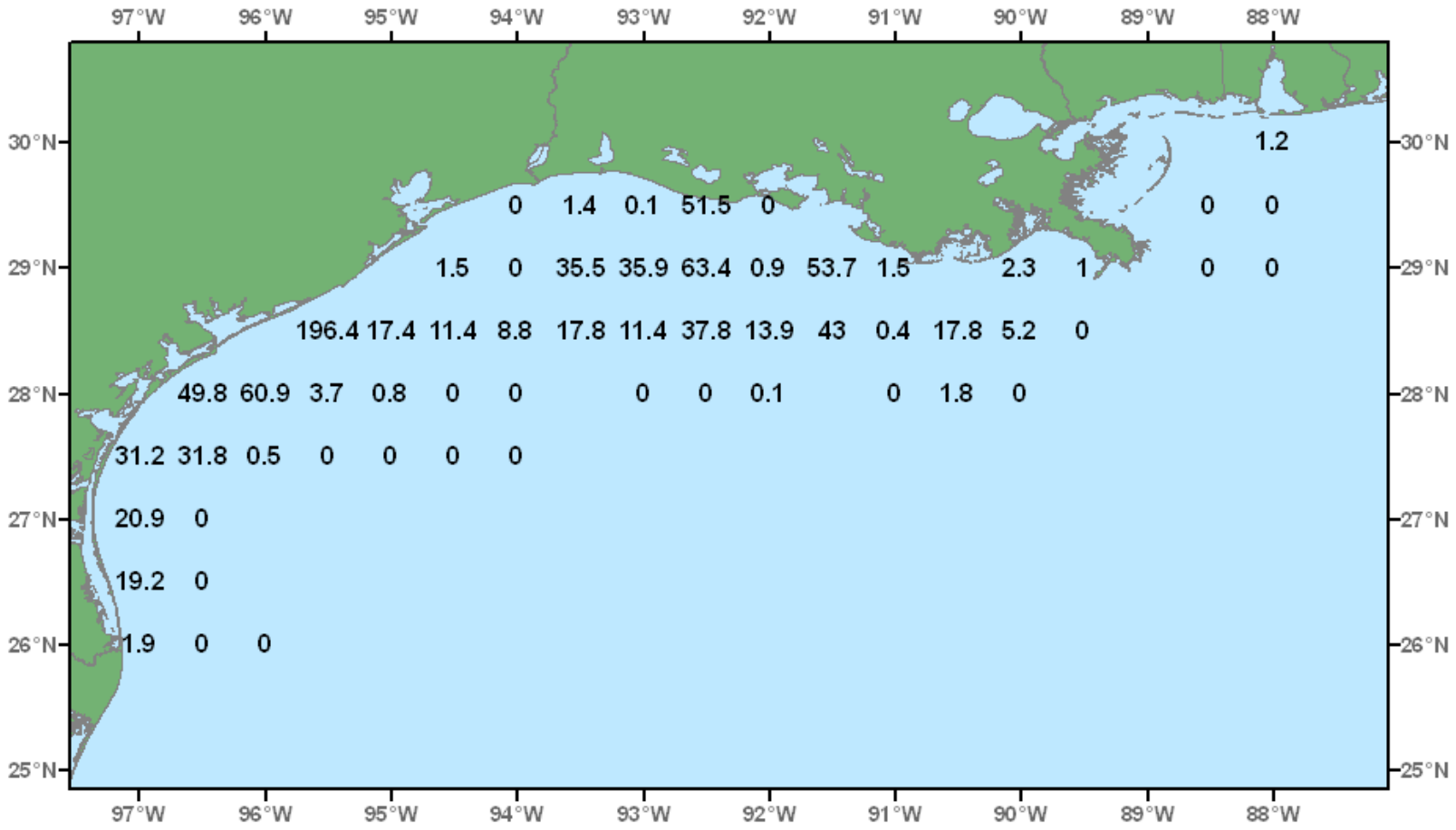

Figure 13. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for June-July 2002.

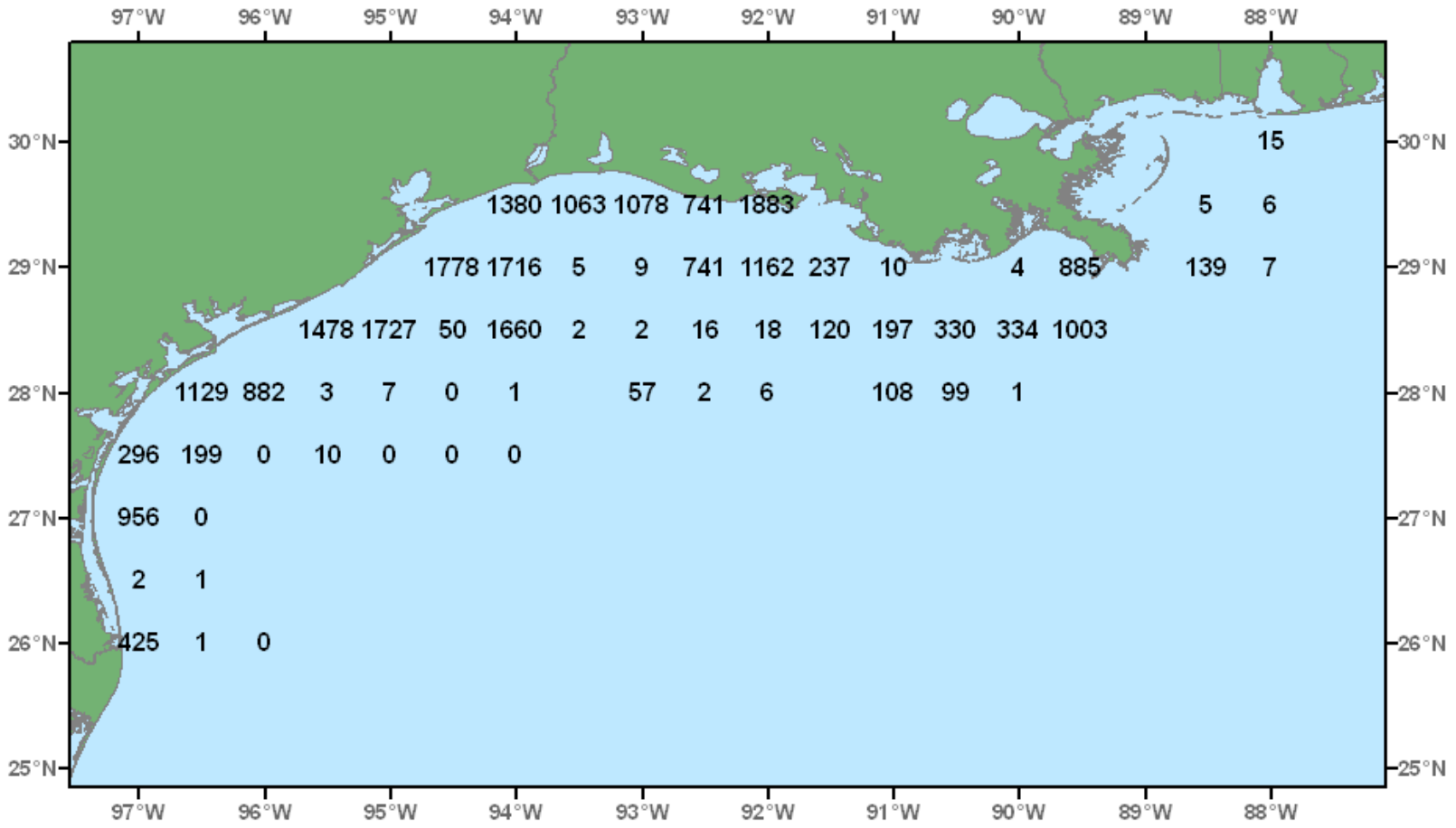

Figure 14. Atlantic croaker, Micropogonias undulatus, number/hour for June-July 2002.

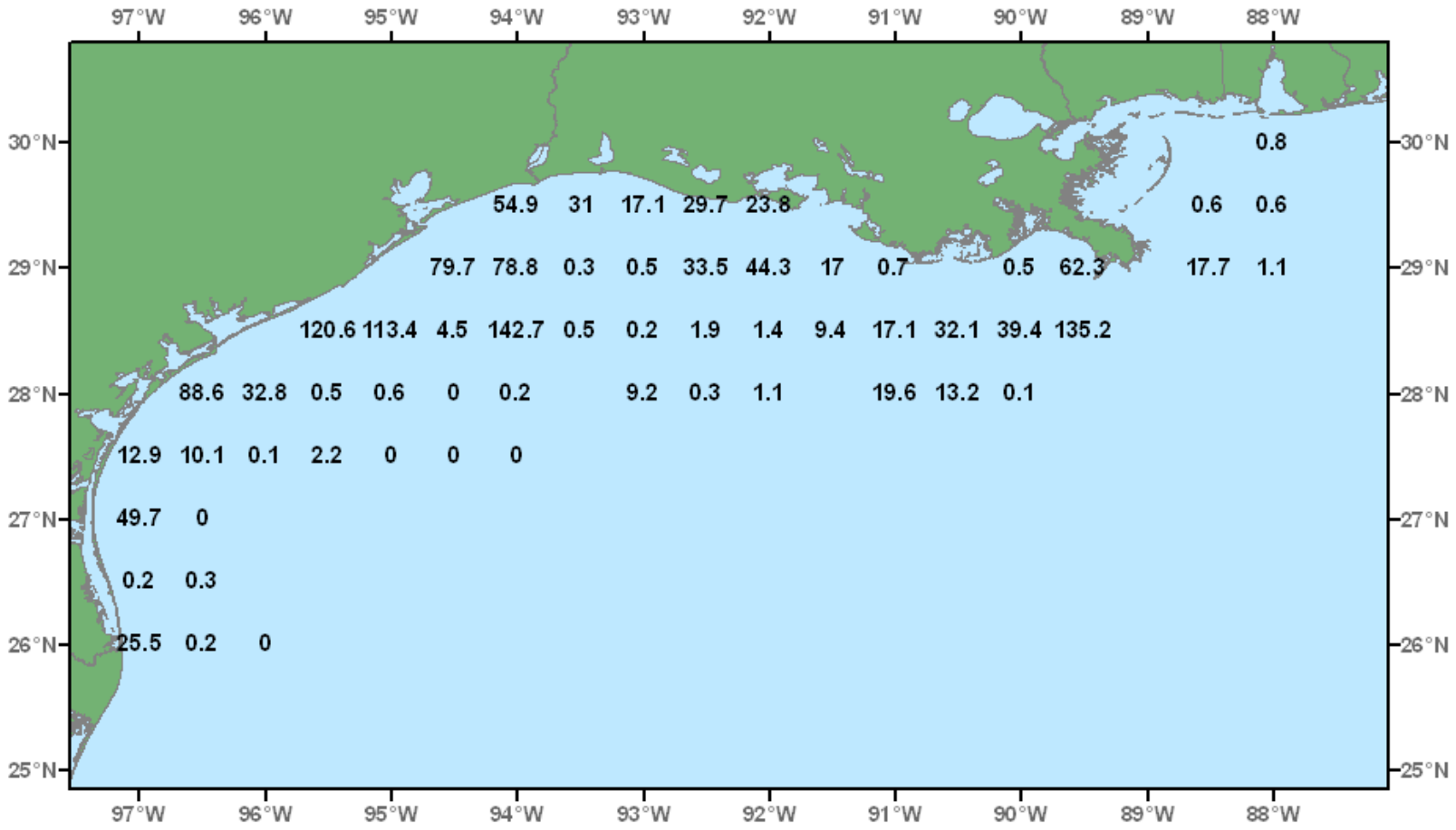

Figure 15. Atlantic croaker, Micropogonias undulatus, lb/hour for June-July 2002.

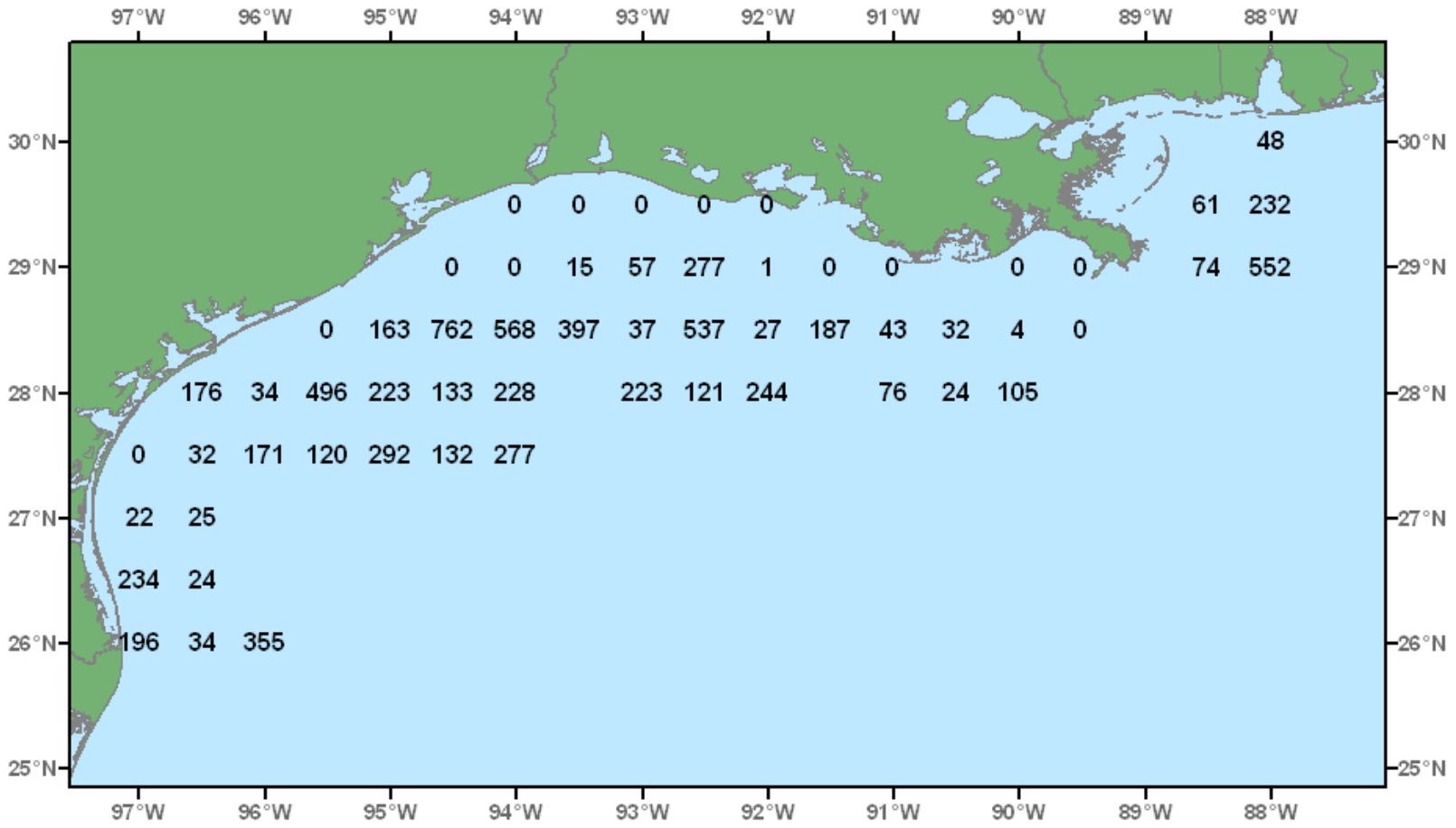

Figure 16. Longspine porgy, Stenotomus caprinus, number/hour for June-July 2002.

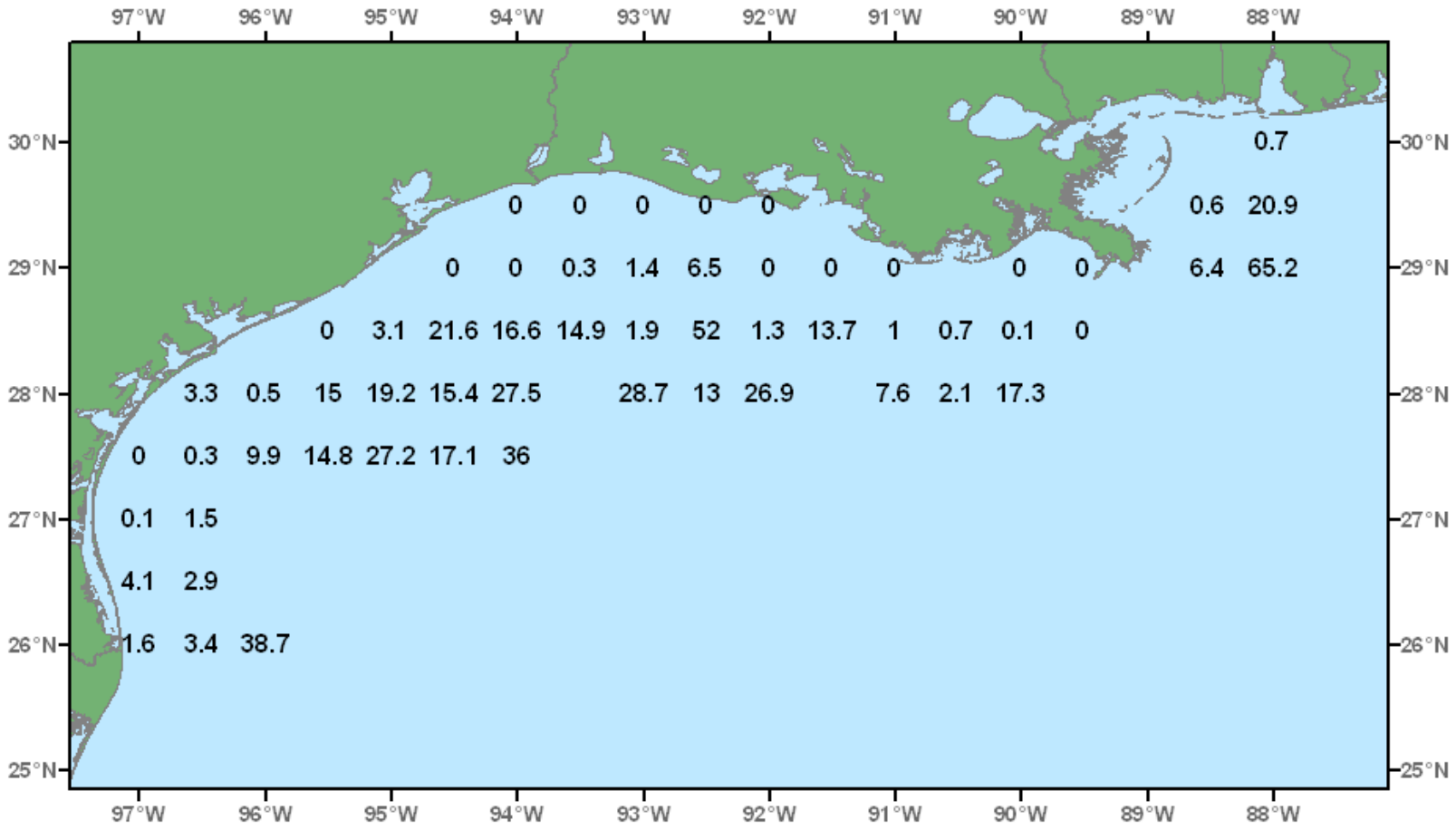

Figure 17. Longspine porgy, Stenotomus caprinus, lb/hour for June-July 2002.

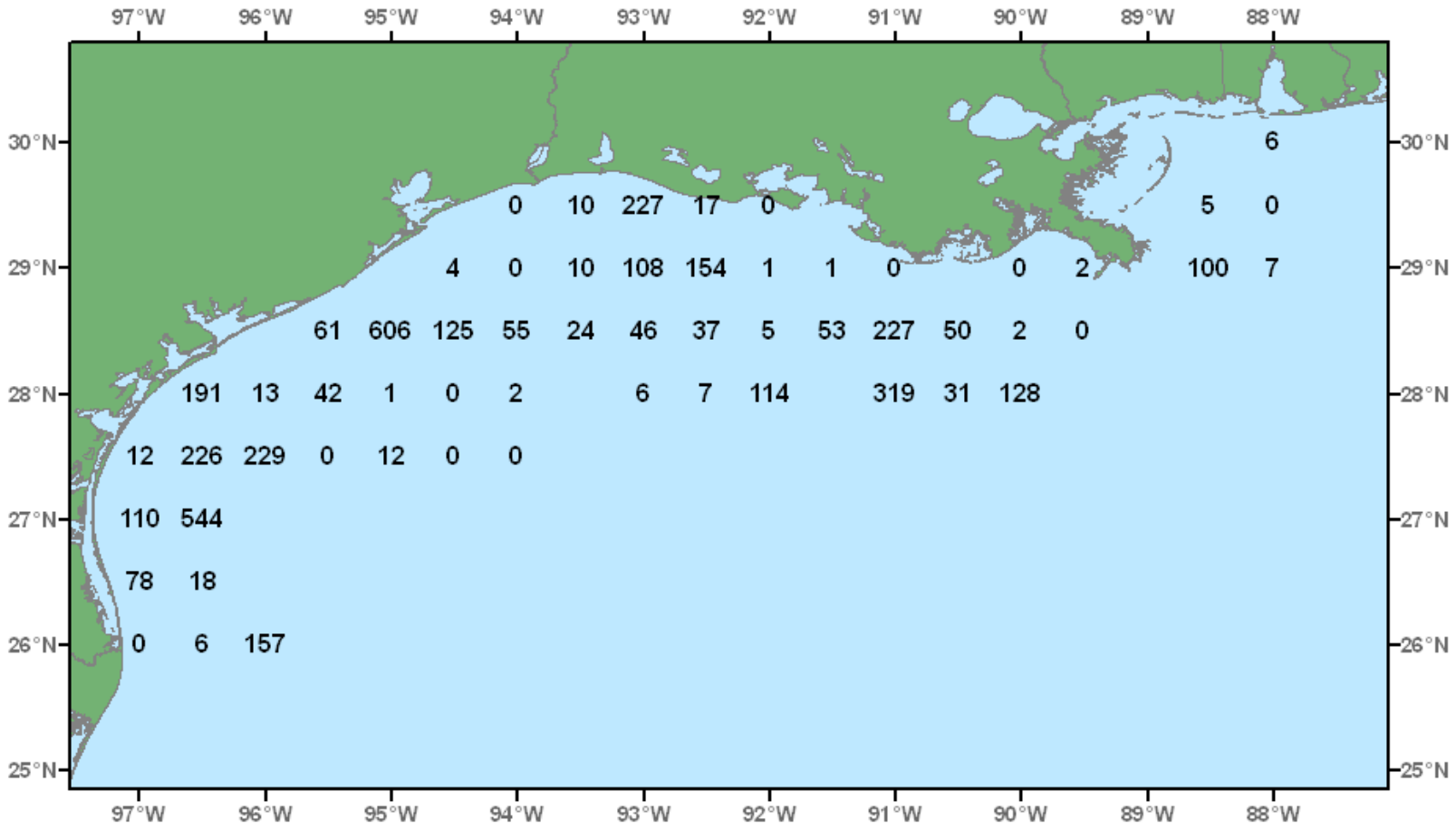

Figure 18. Gulf butterfish, Peprilus burti, number/hour for June-July 2002.

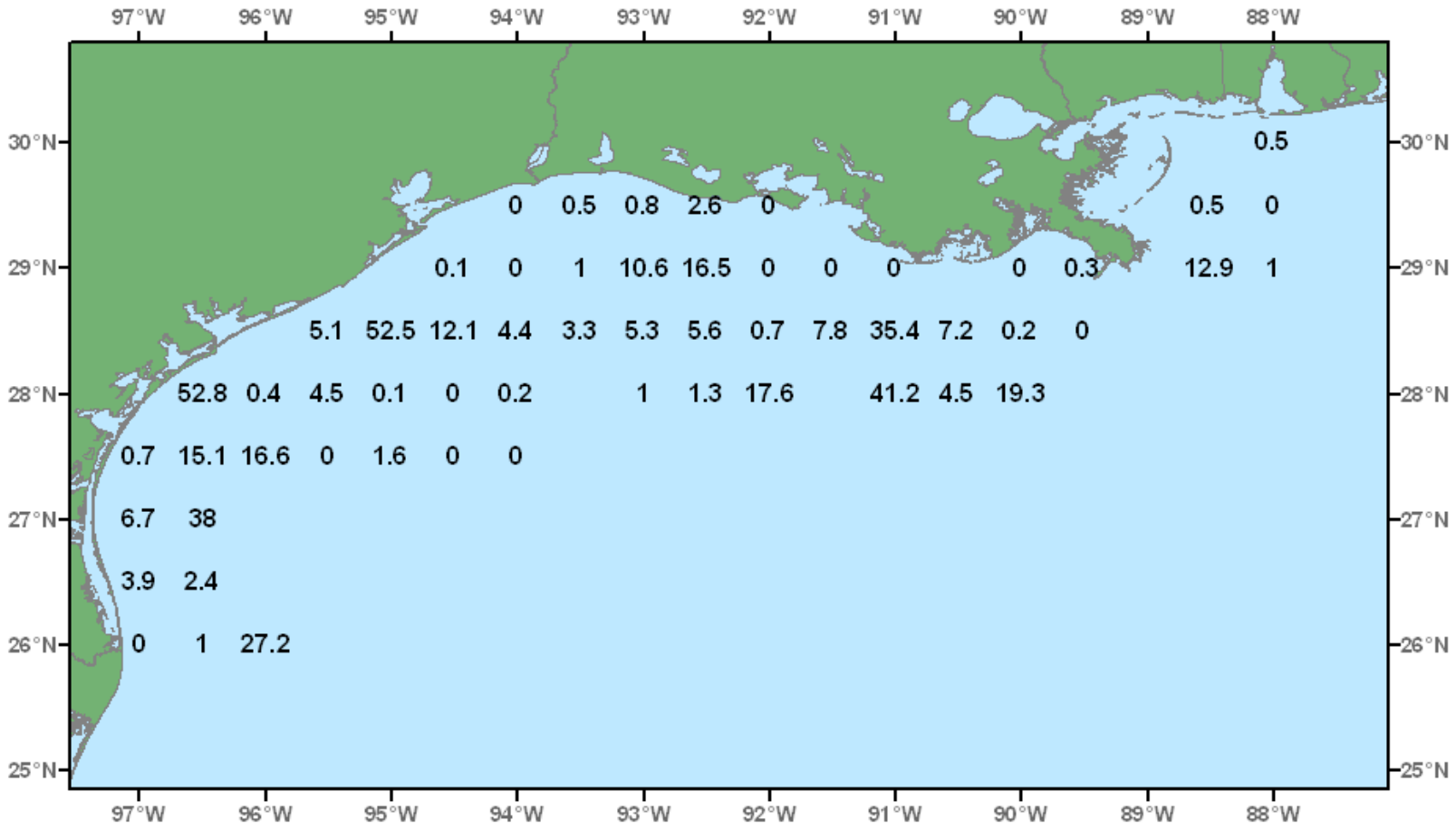

Figure 19. Gulf butterfish, Peprilus burti, lb/hour for June-July 2002.

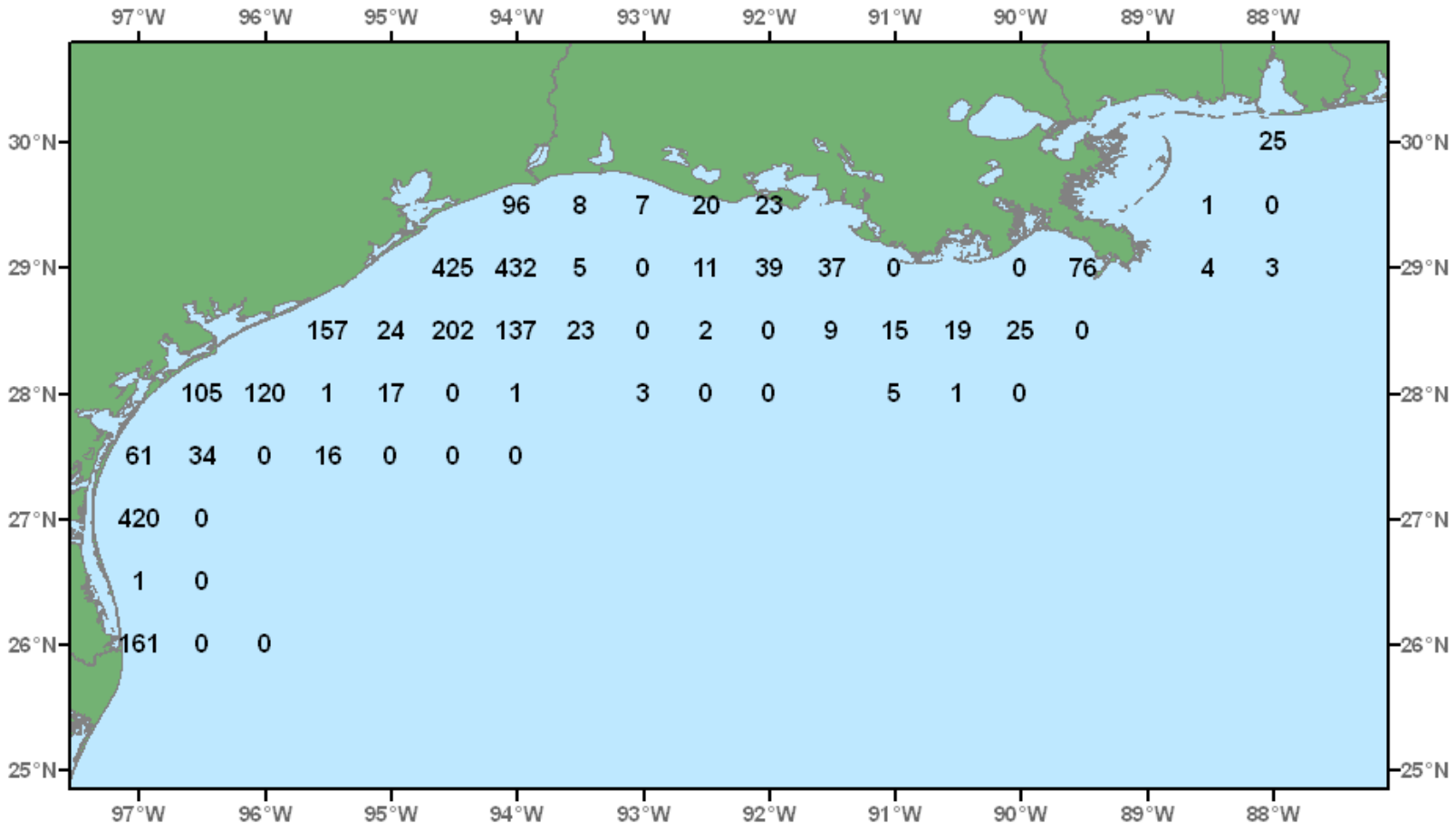

Figure 20. Spot, Leiostomus xanthurus, number/hour for June-July 2002.

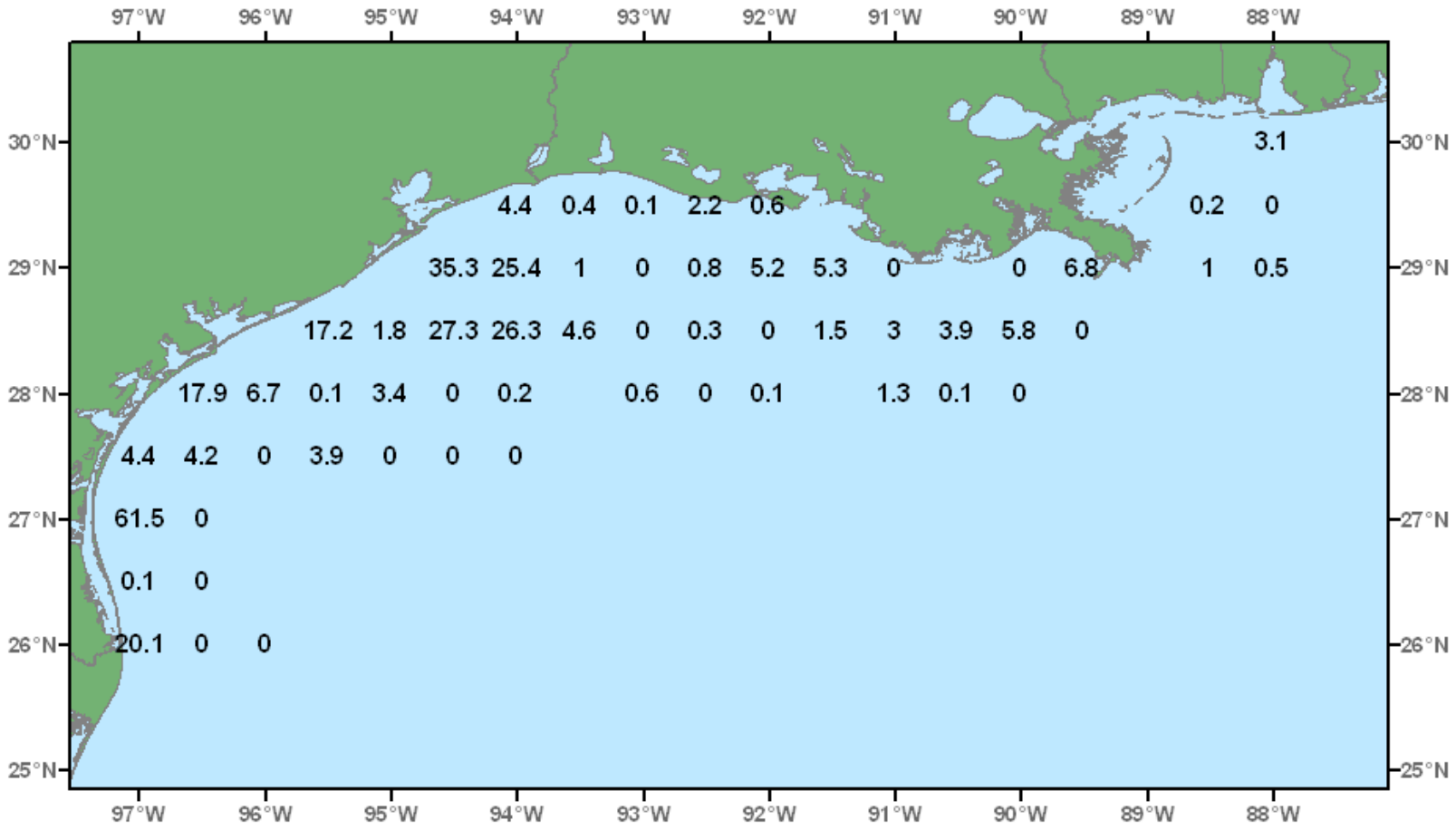

Figure 21. Spot, Leiostomus xanthurus, lb/hour for June-July 2002.

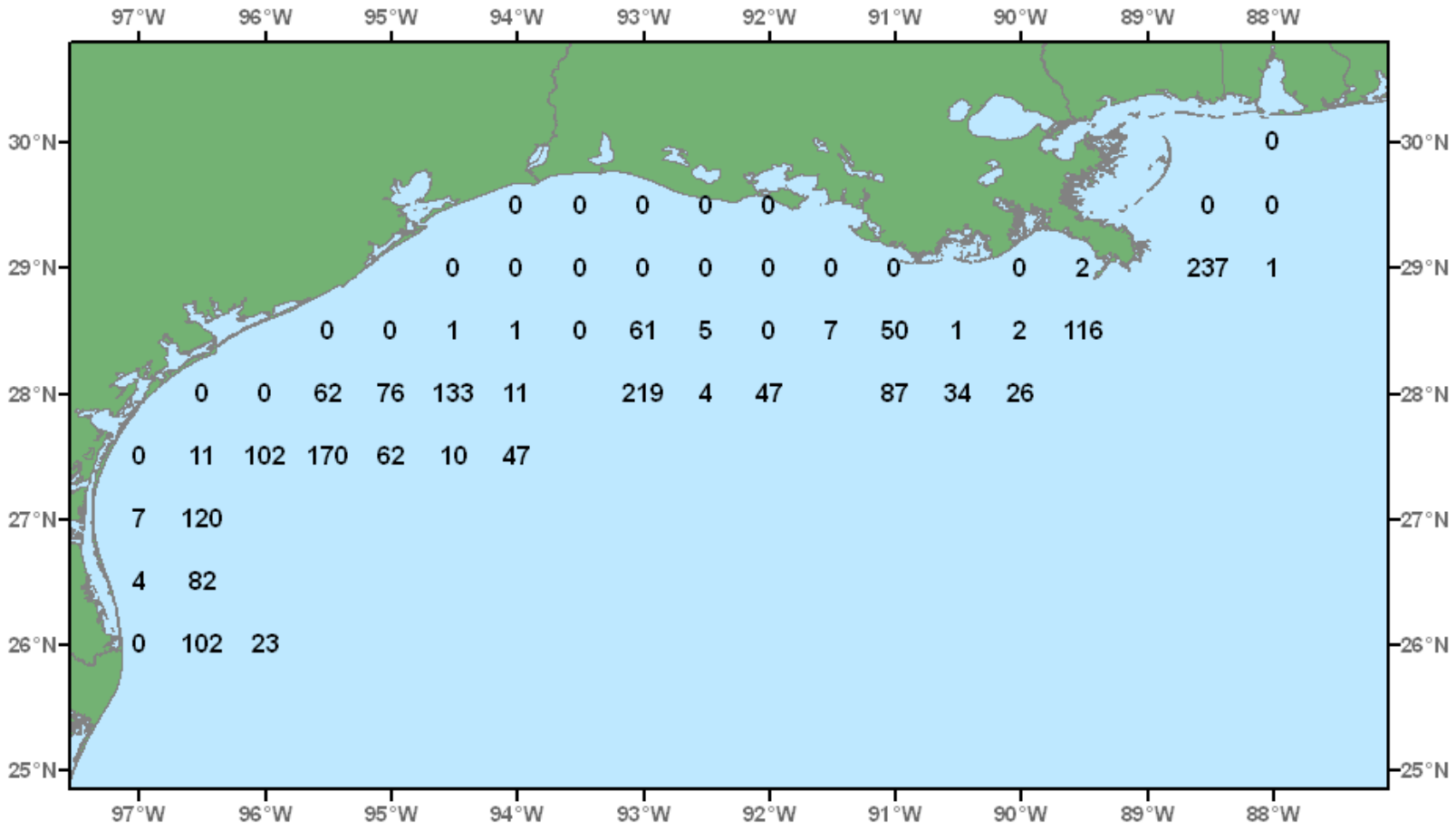

Figure 22. Blackear bass, Serranus atrobranchus, number/hour for June-July 2002.

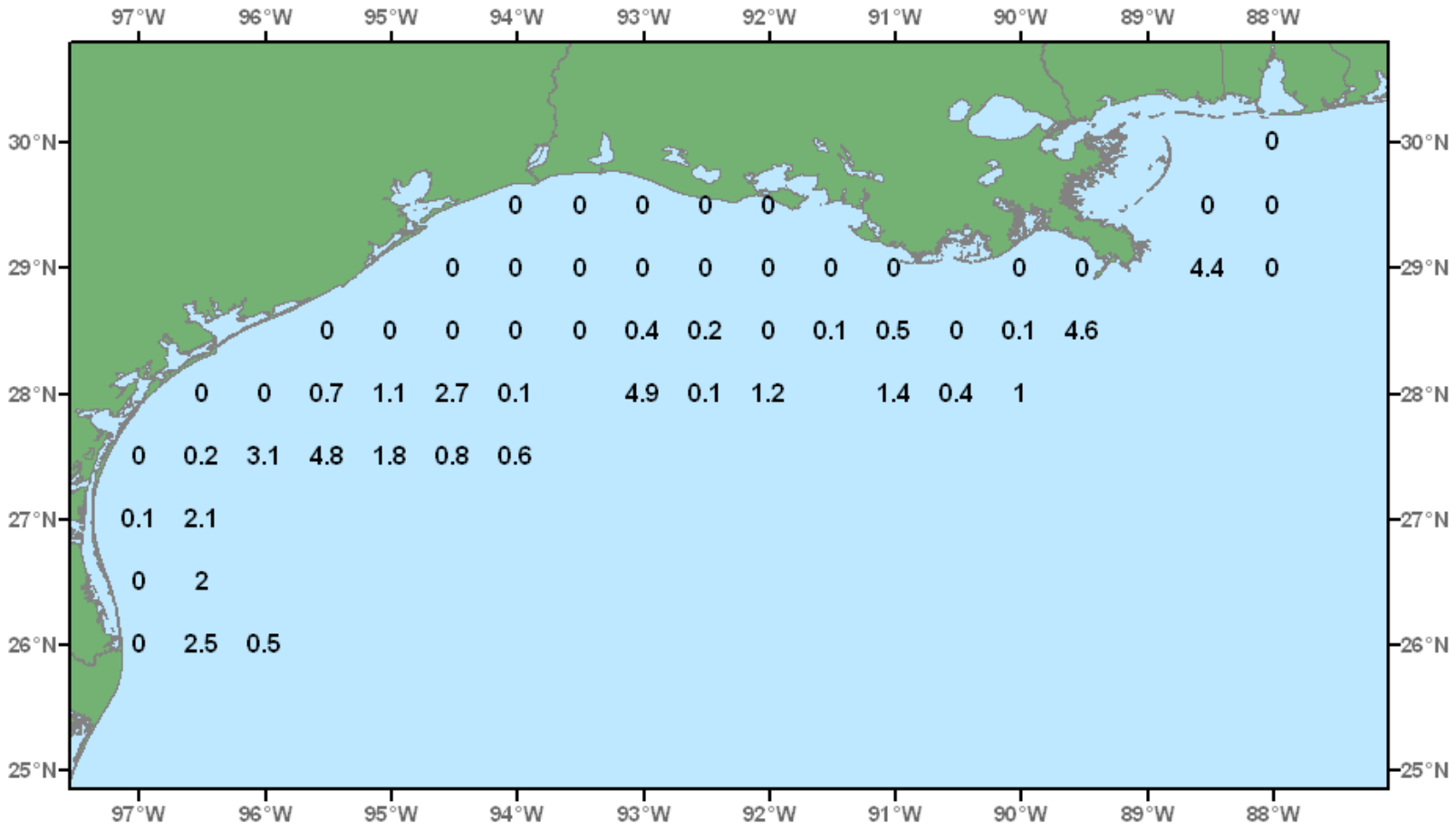

Figure 23. Blackear bass, Serranus atrobranchus, lb/hour for June-July 2002.

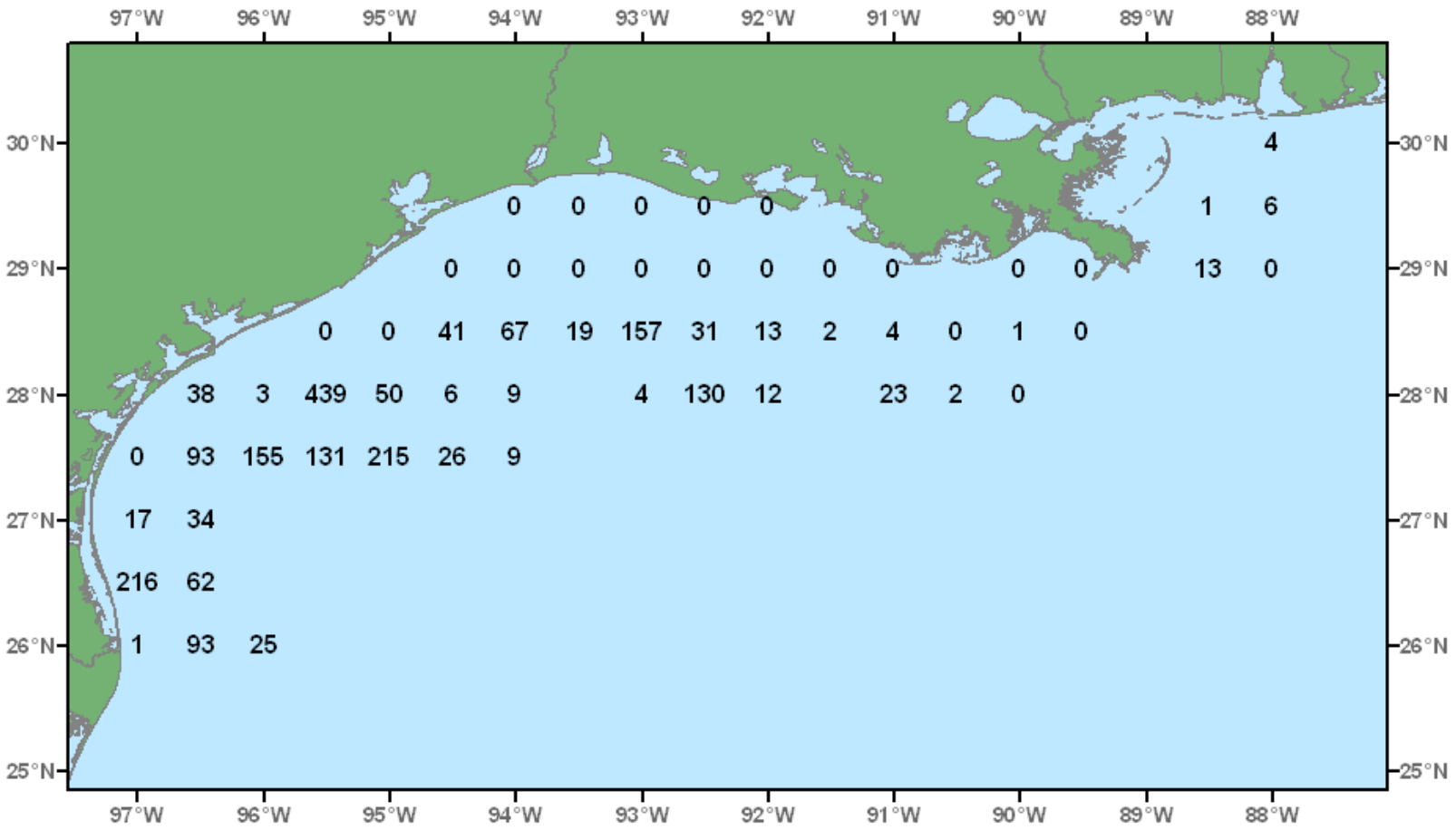

Figure 24. Largescale lizardfish, Saurida brasiliensis, number/hour for June-July 2002.

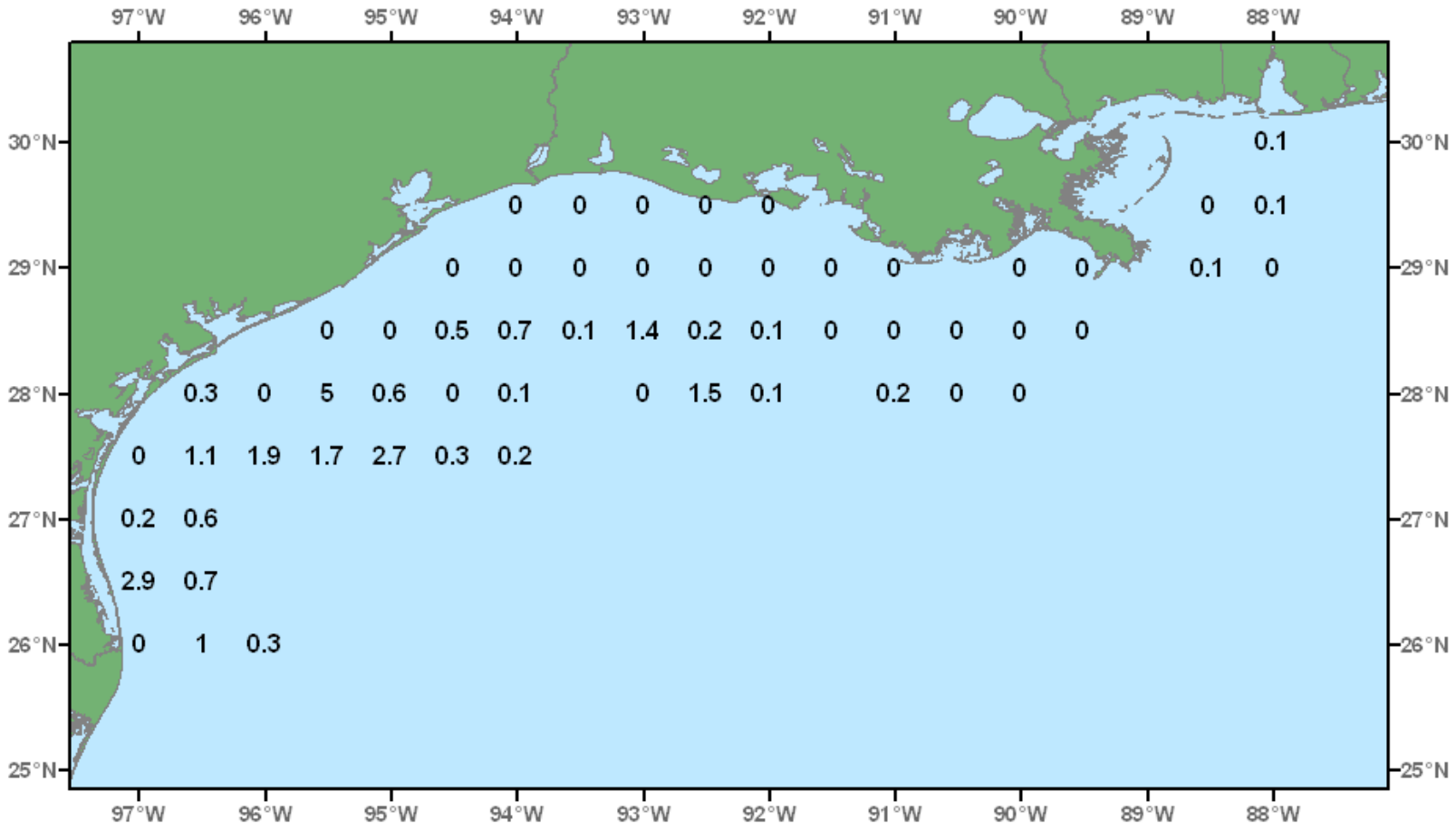

Figure 25. Largescale lizardfish, Saurida brasiliensis, lb/hour for June-July 2002.

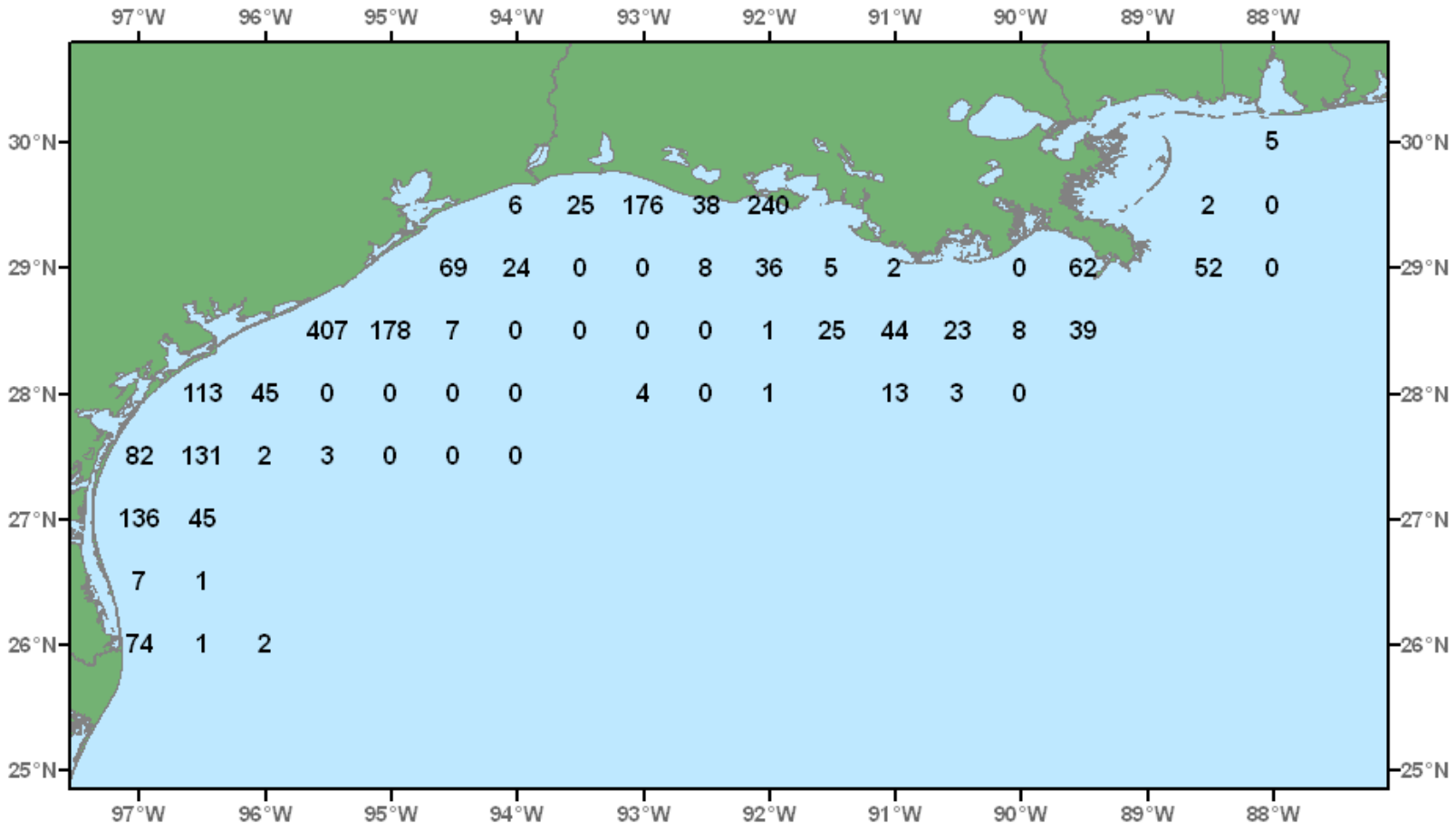

Figure 26. Sand seatrout, Cynoscion arenarius, number/hour for June-July 2002.

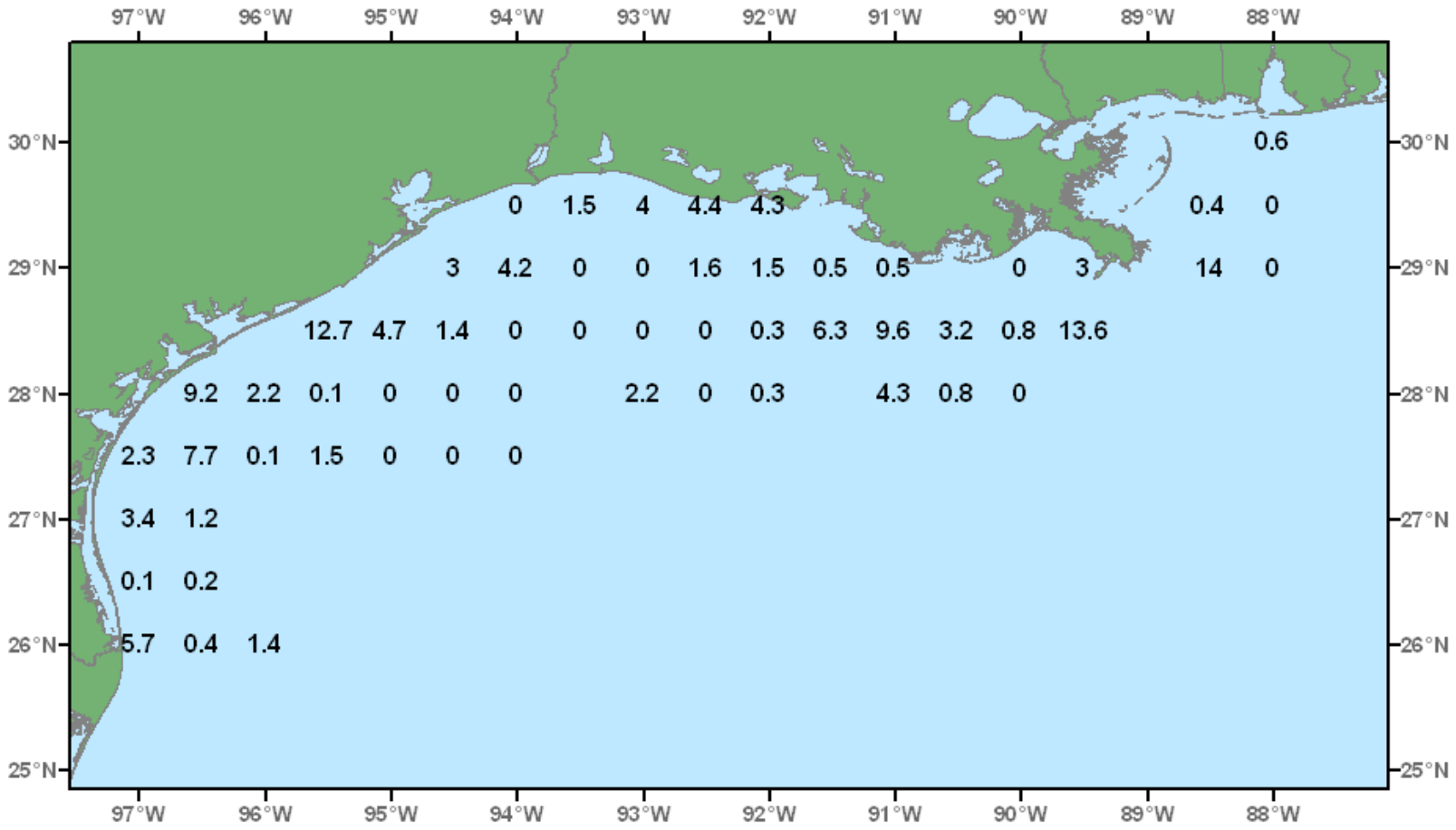

Figure 27. Sand seatrout, Cynoscion arenarius, lb/hour for June-July 2002.

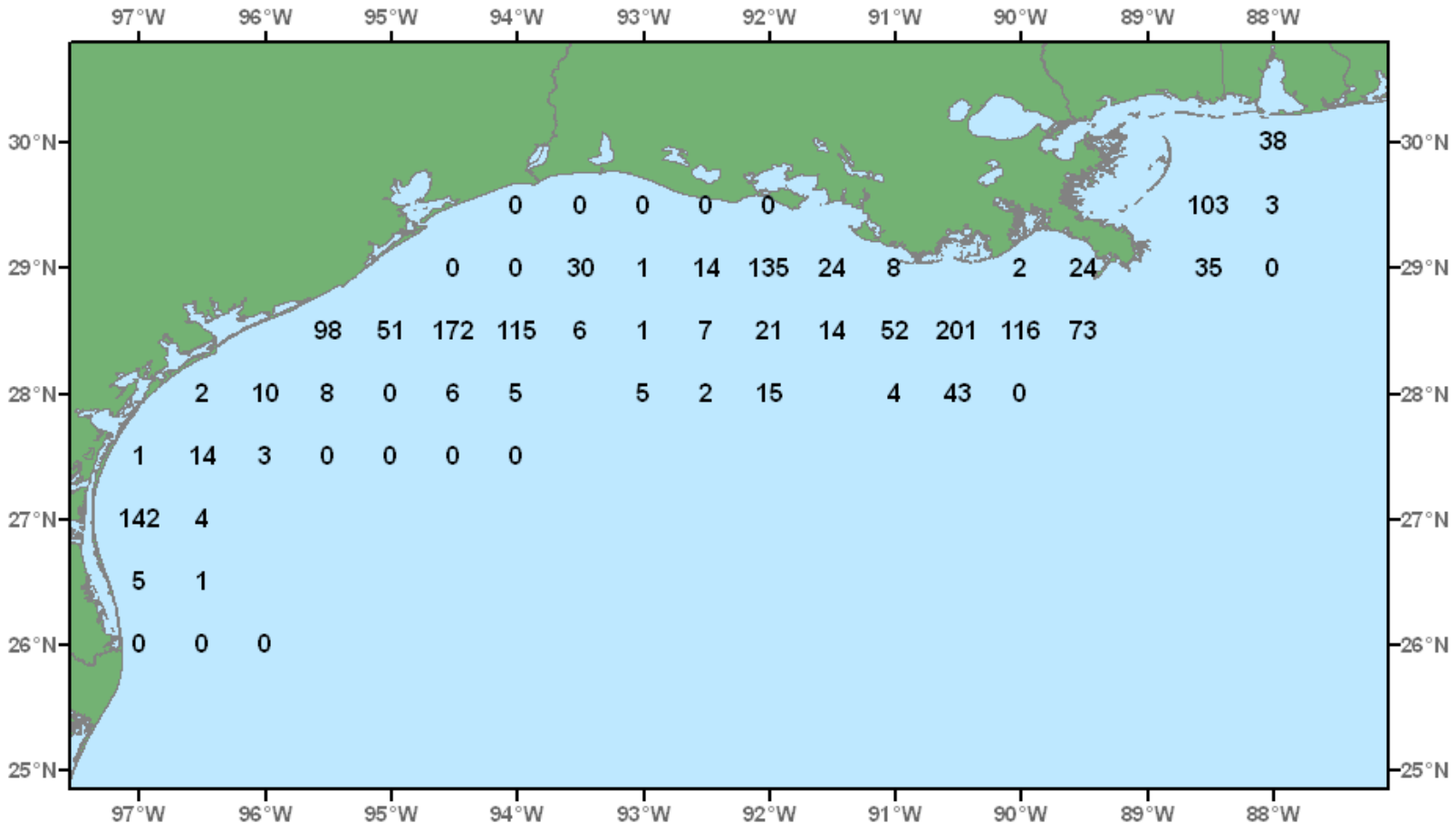

Figure 28. Bigeye searobin, Prionotus longispinosus, number/hour for June-July 2002.

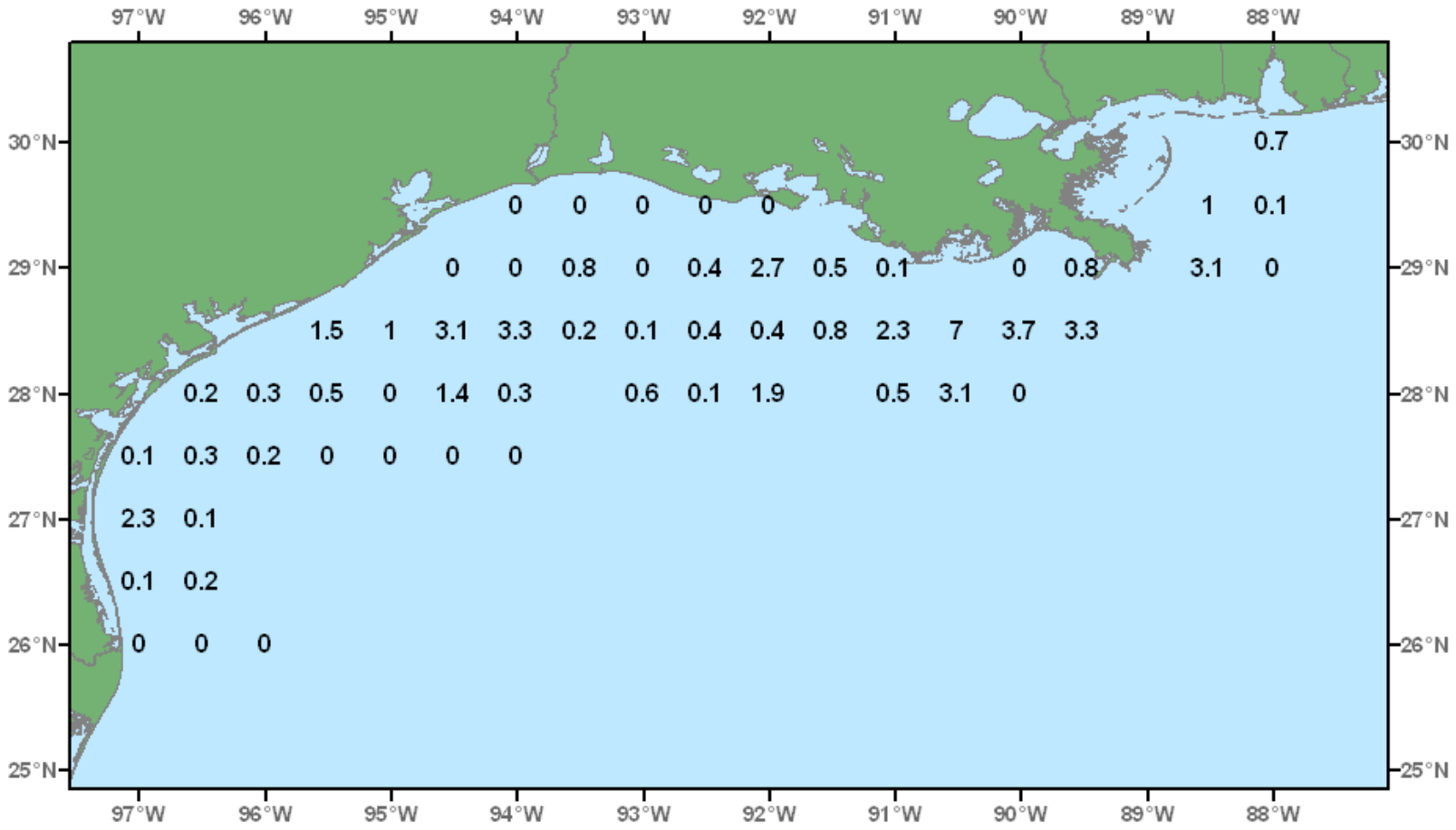

Figure 29. Bigeye searobin, Prionotus longispinosus, lb/hour for June-July 2002.

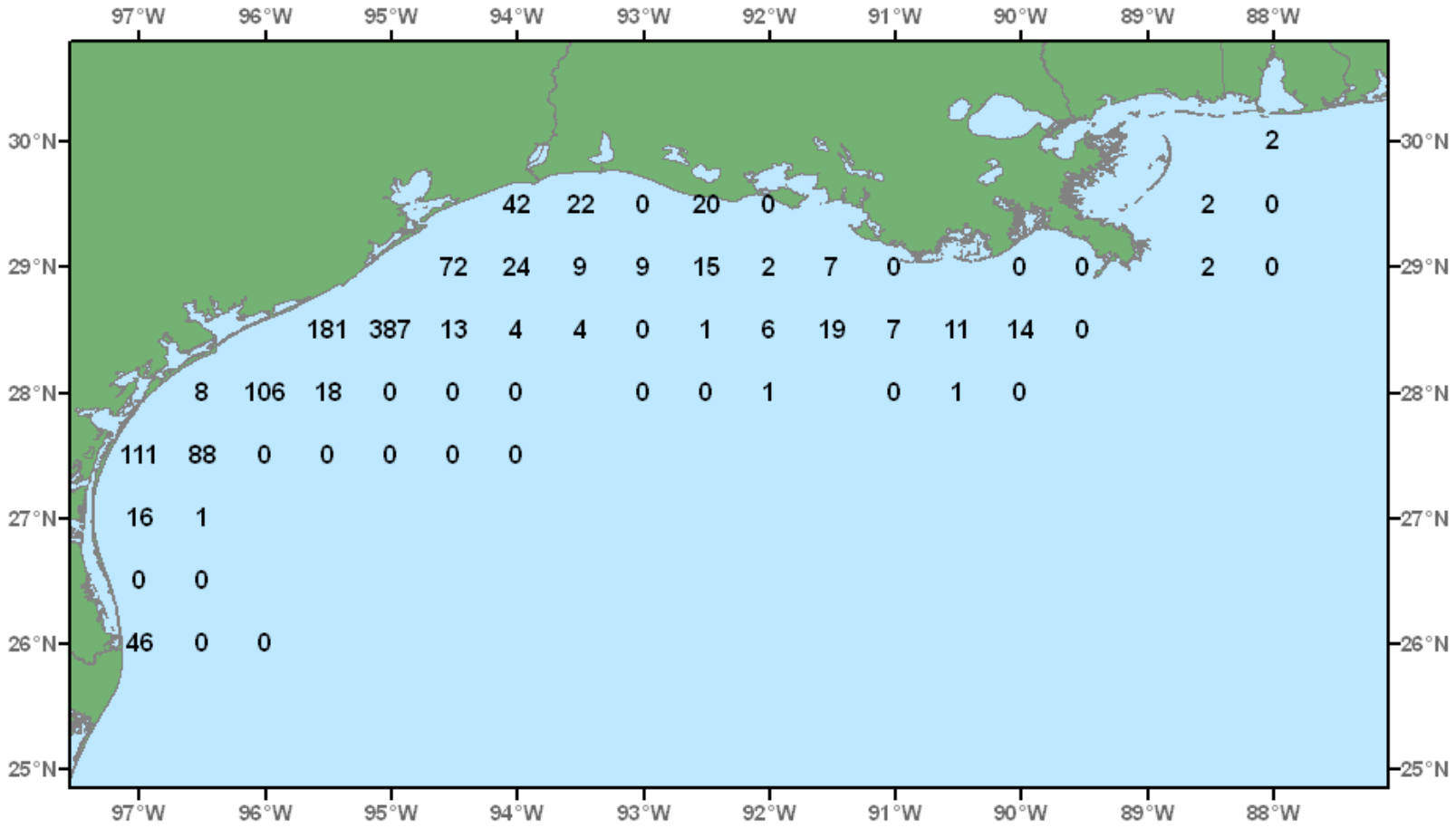

Figure 30. Silver seatrout, Cynoscion nothus, number/hour for June-July 2002.

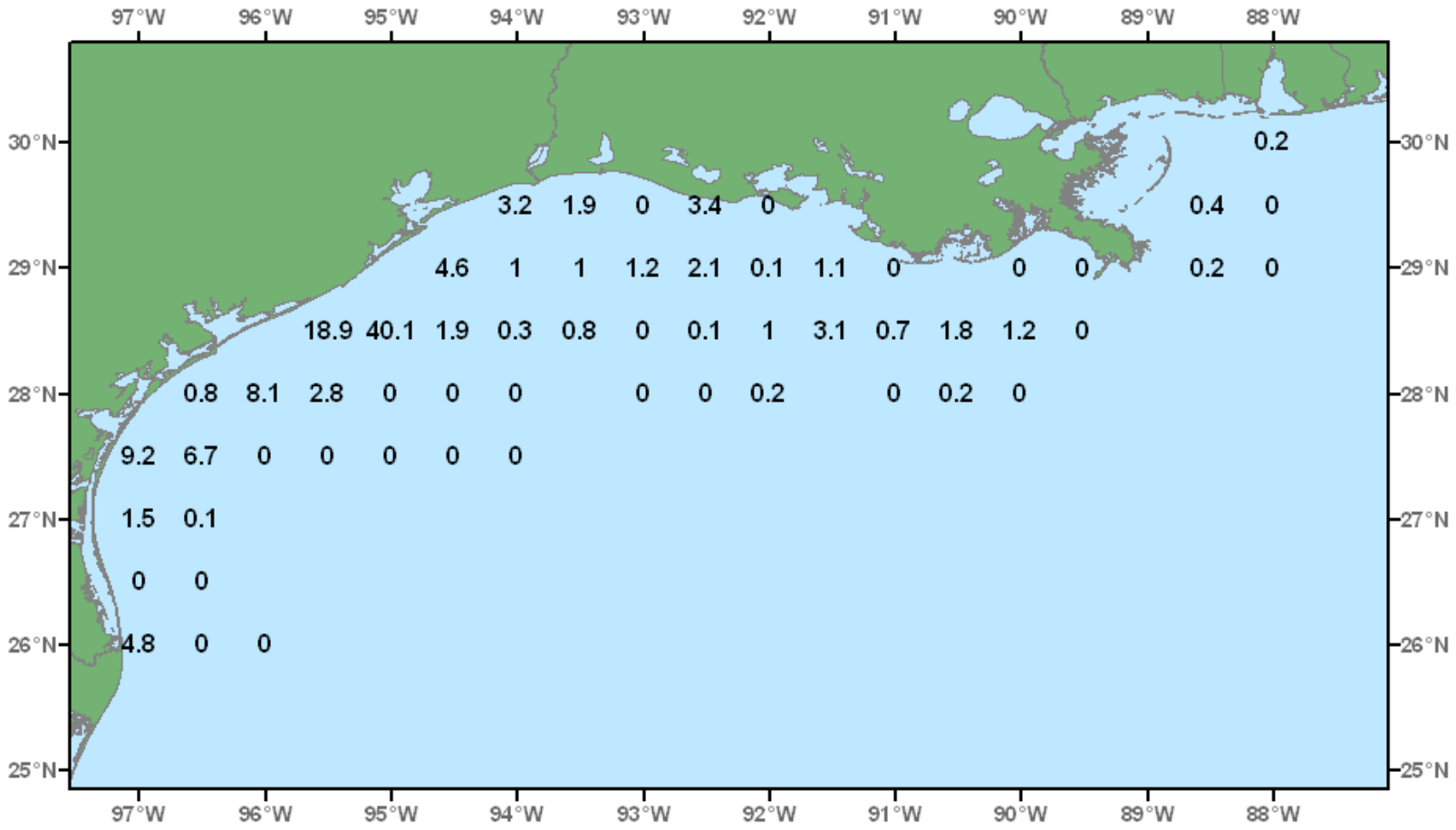

Figure 31. Silver seatrout, Cynoscion nothus, lb/hour for June-July 2002.

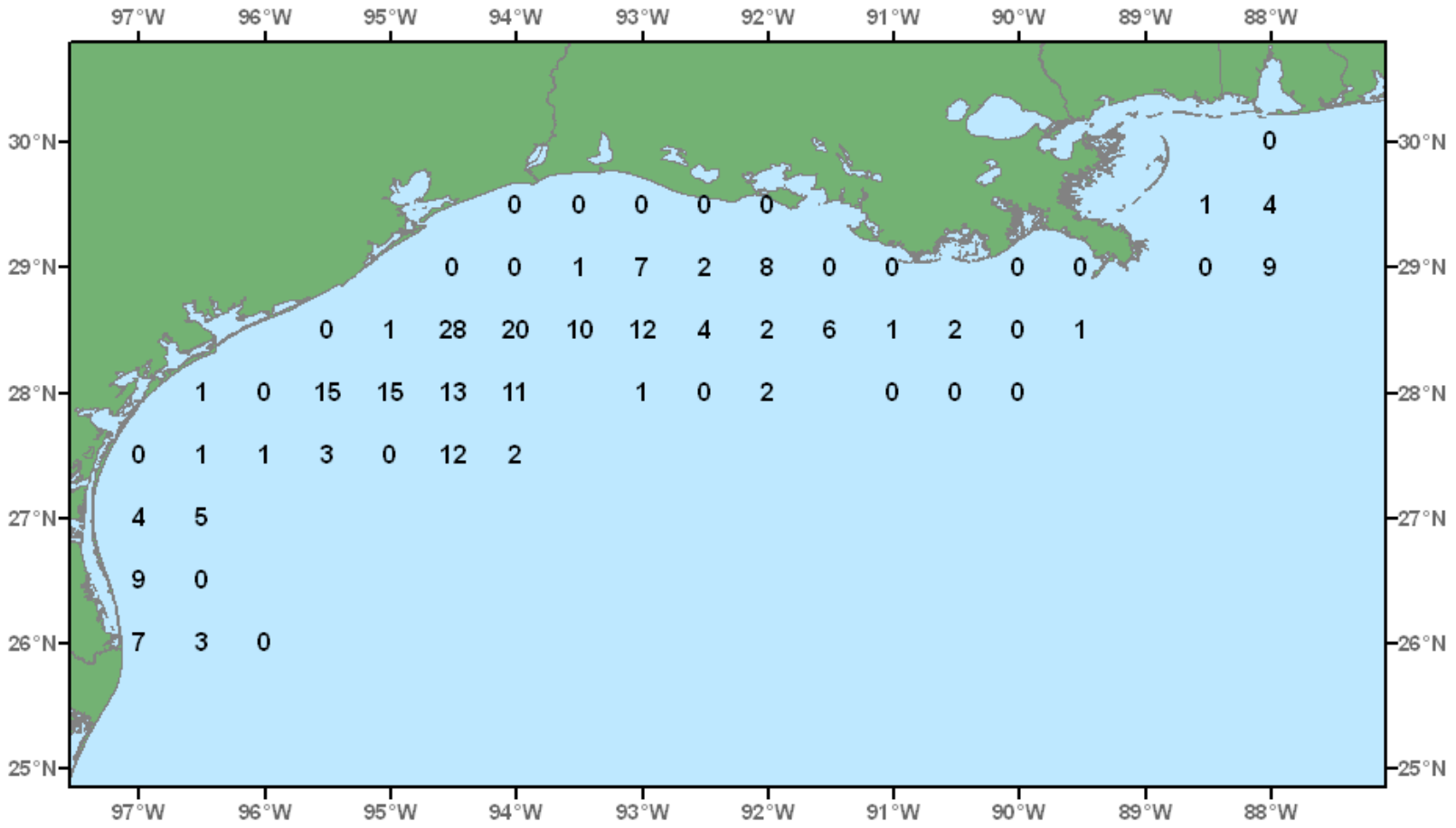

Figure 32. Red snapper, Lutjanus campechanus, number/hour for June-July 2002.

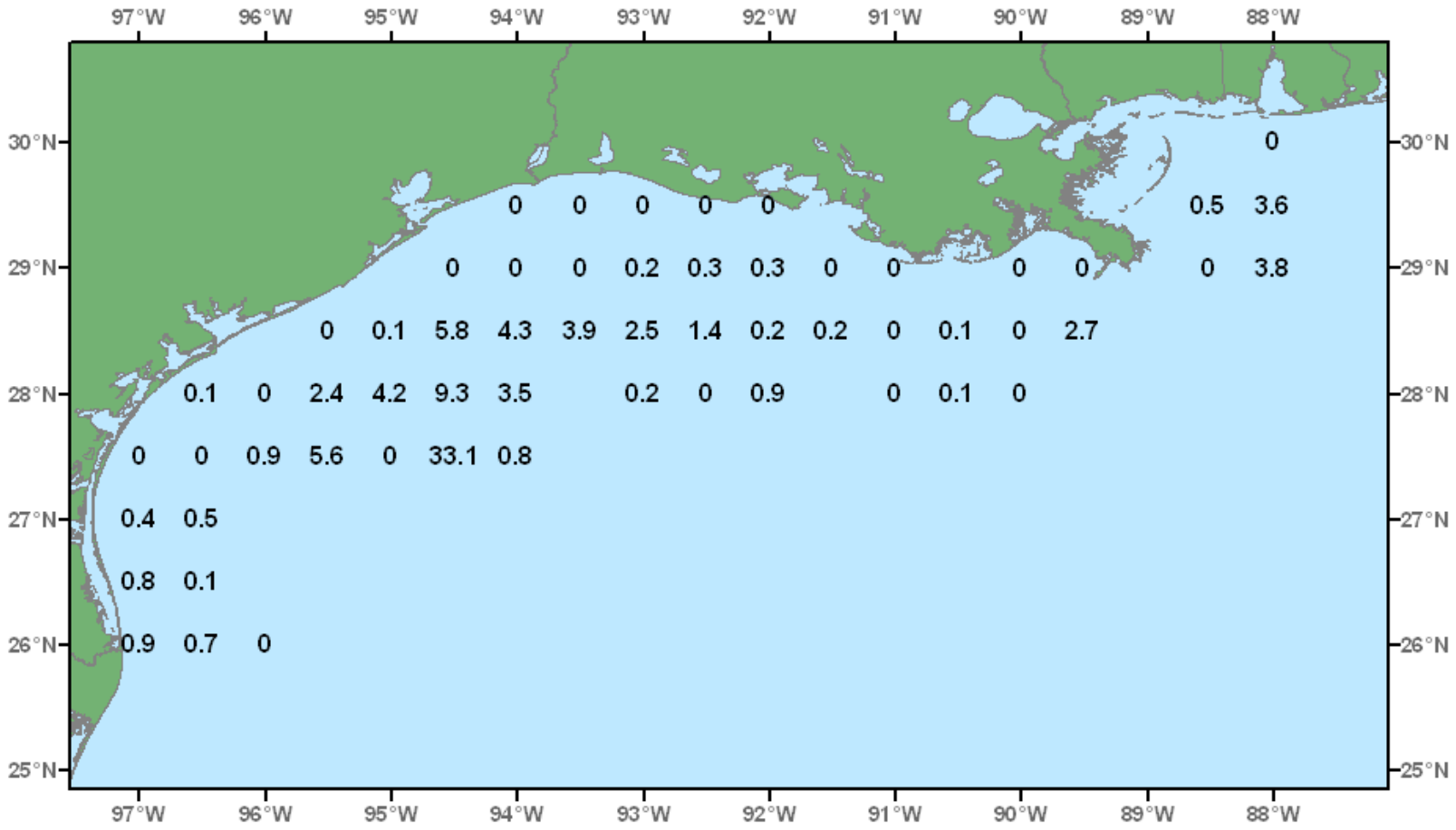

Figure 33. Red snapper, Lutjanus campechanus, lb/hour for June-July 2002.

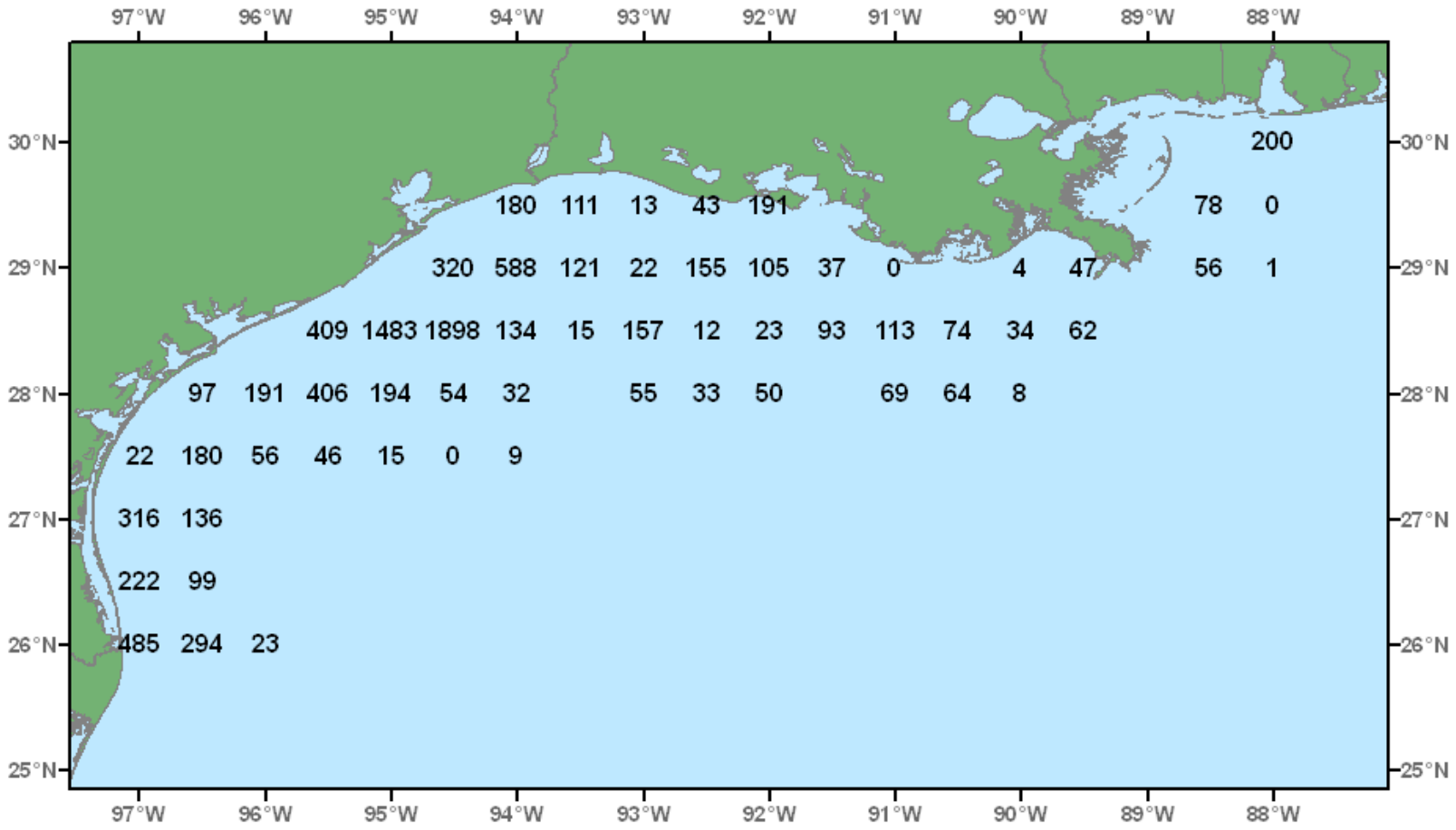

Figure 34. Brown shrimp, Farfantepenaeus aztecus, number/hour for June-July 2002.

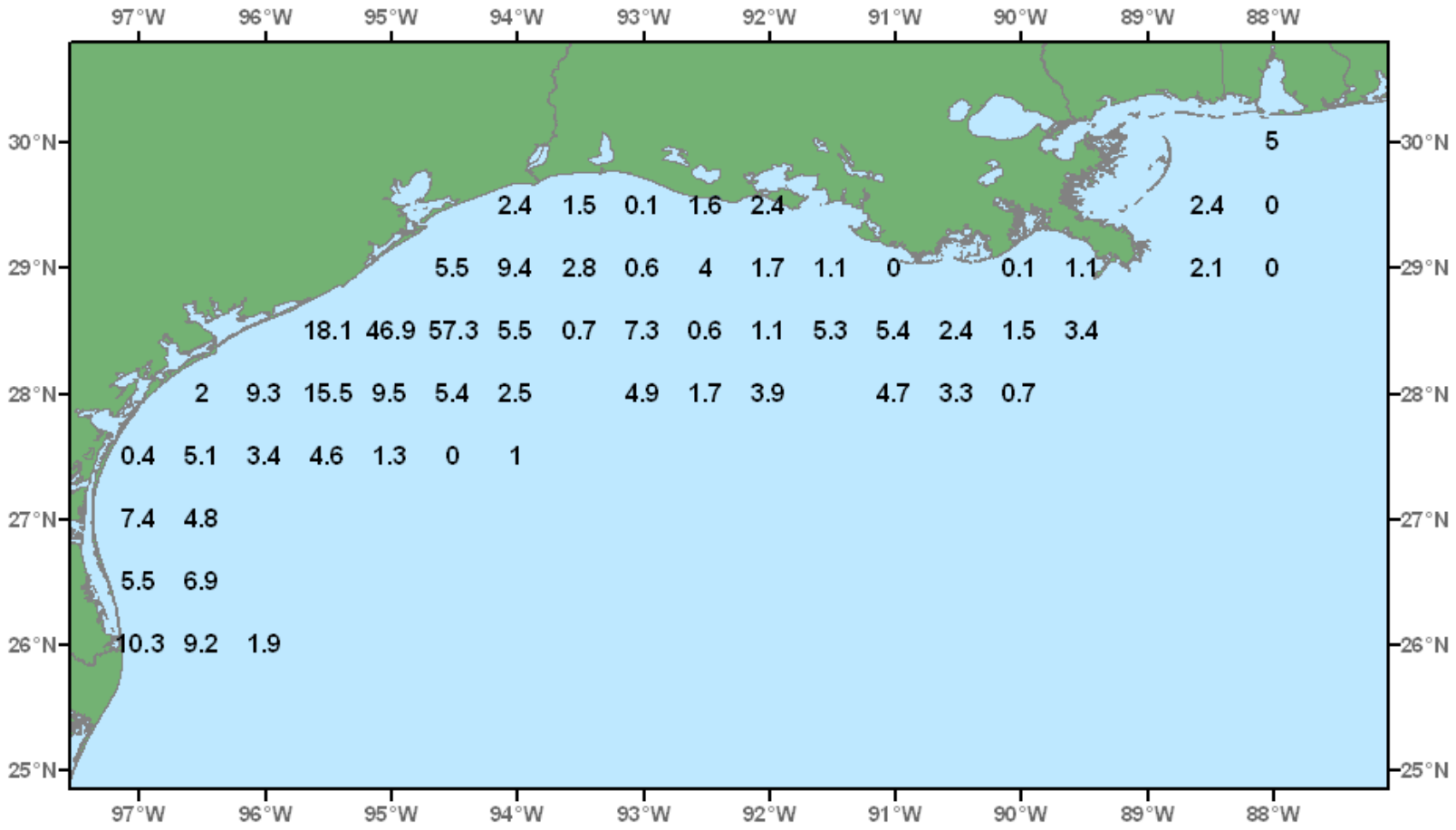

Figure 35. Brown shrimp, Farfantepenaeus aztecus, lb/hour for June-July 2002.

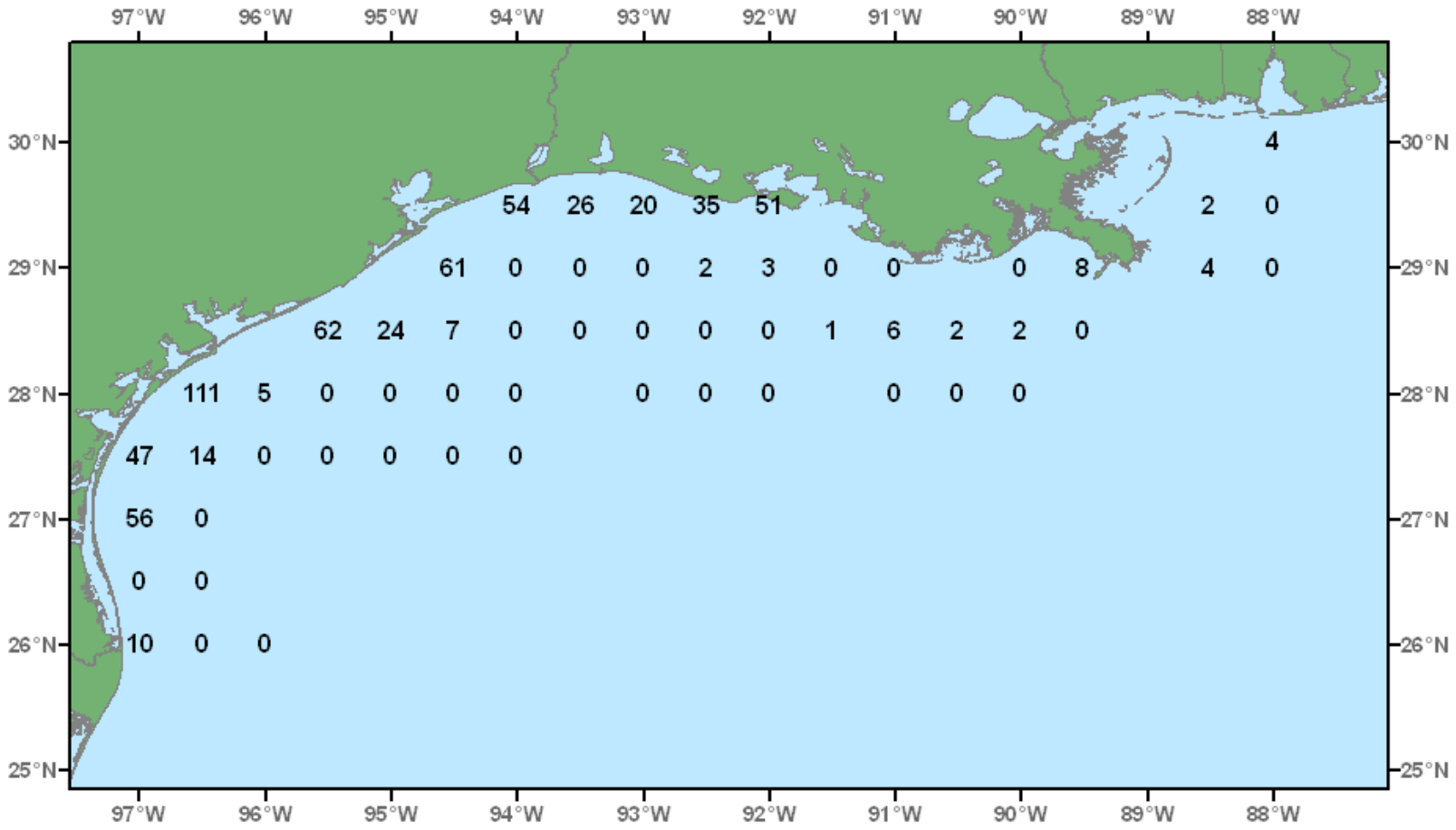

Figure 36. White shrimp, Litopenaeus setiferus, number/hour for June-July 2002.

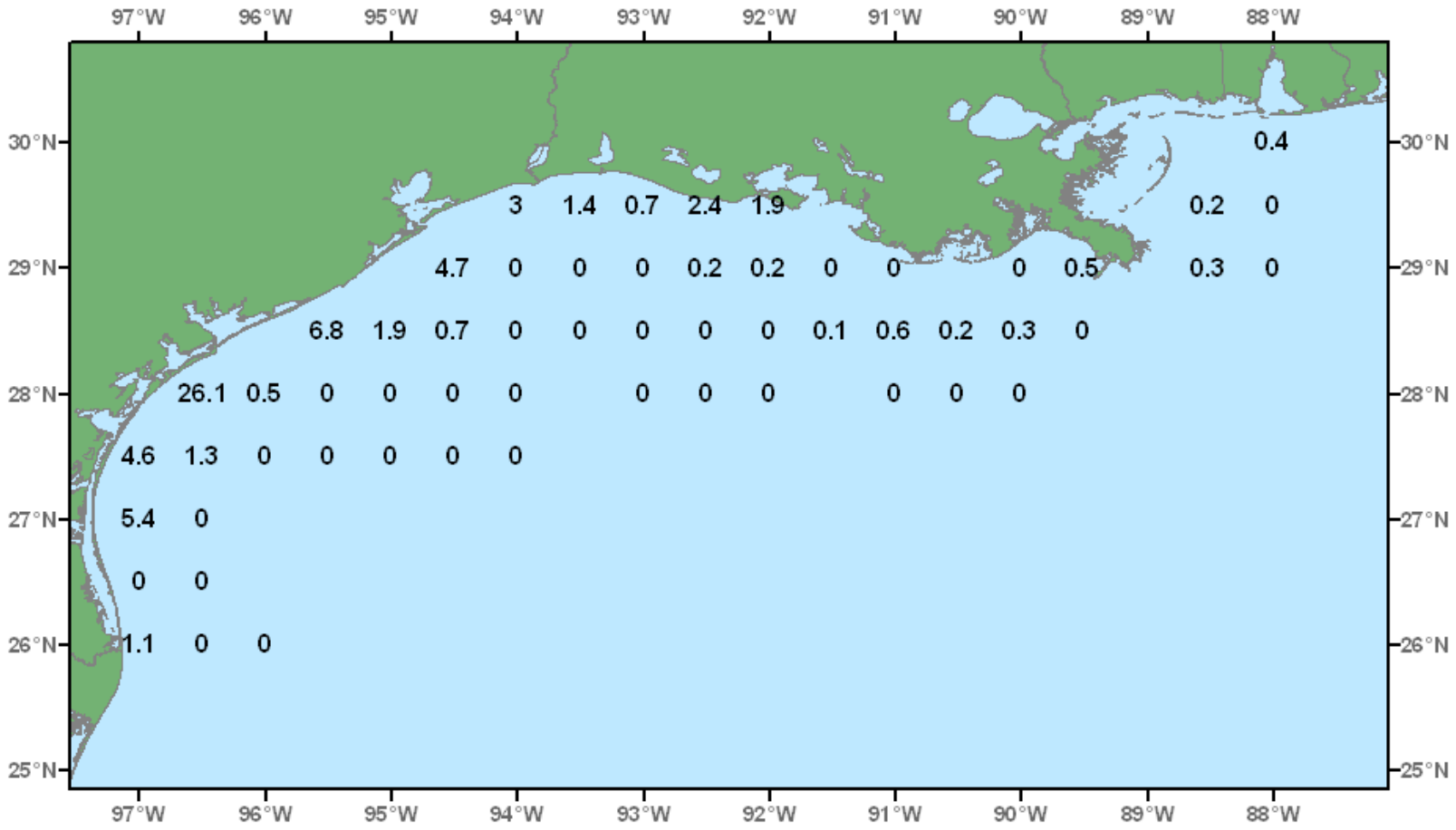

Figure 37. White shrimp, Litopenaeus setiferus, lb/hour for June-July 2002.

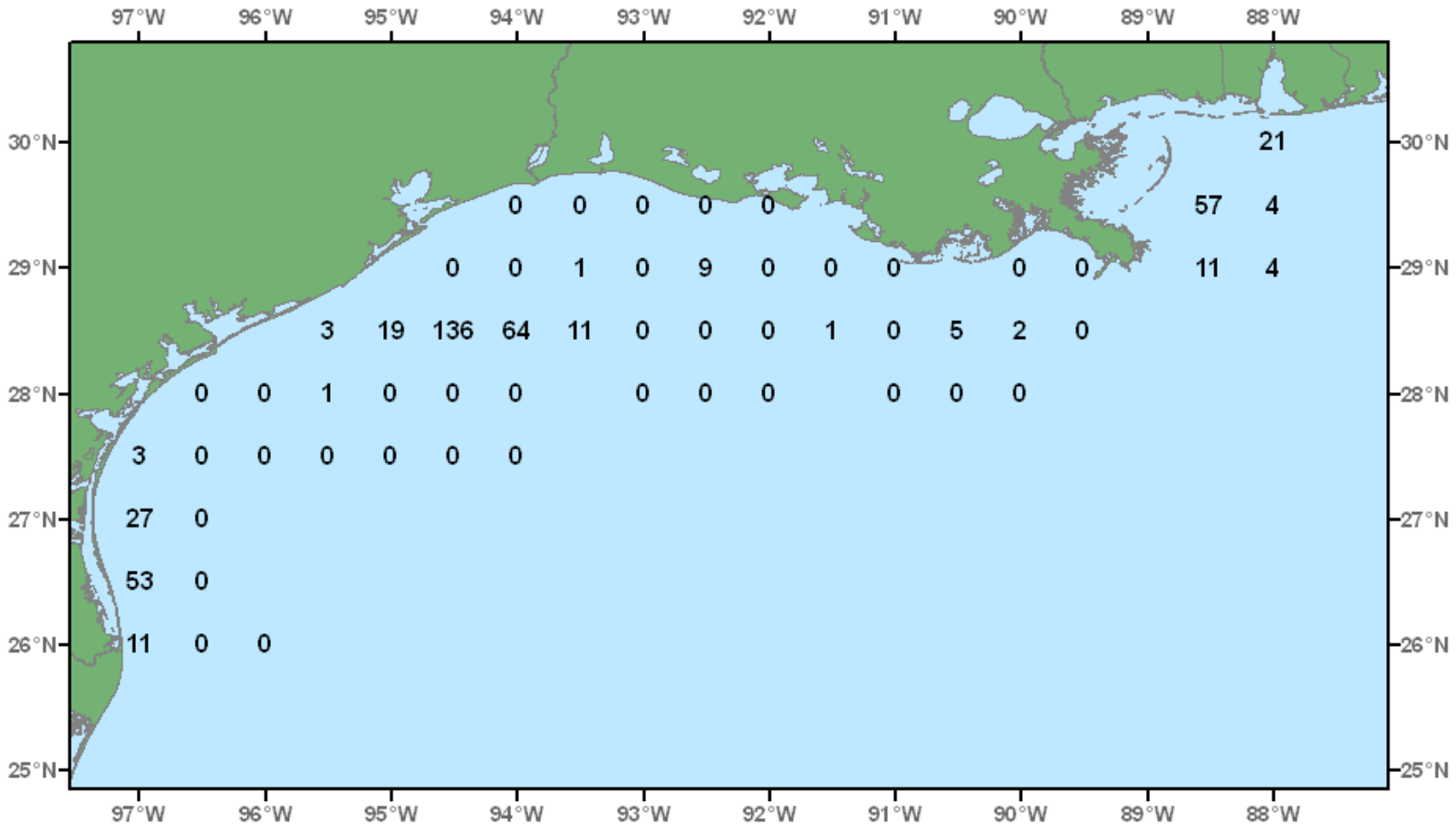

Figure 38. Pink shrimp, Farfantepenaeus duorarum, number/hour for June-July 2002.

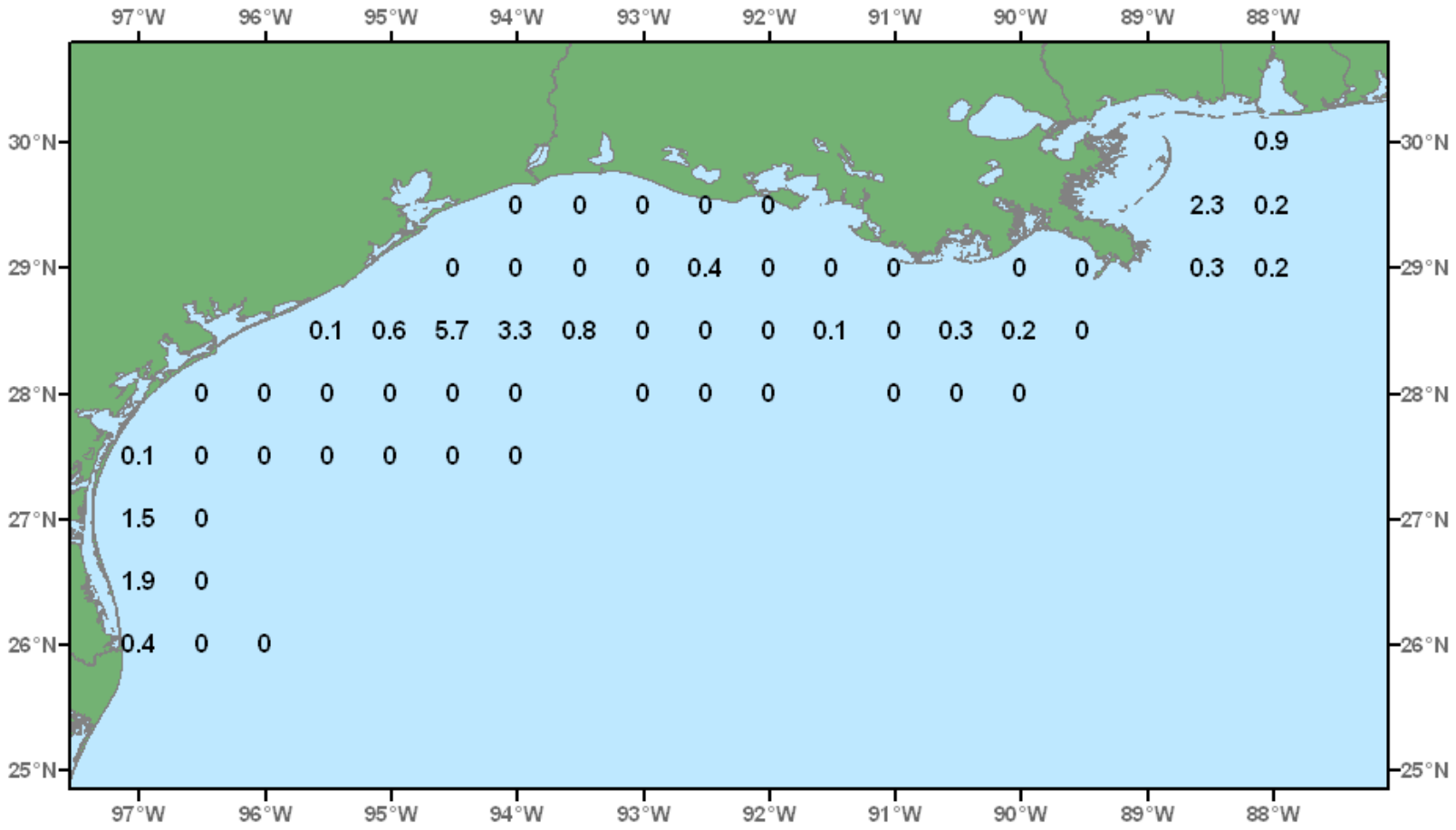

Figure 39. Pink shrimp, Farfantepenaeus duorarum, lb/hour for June-July 2002.

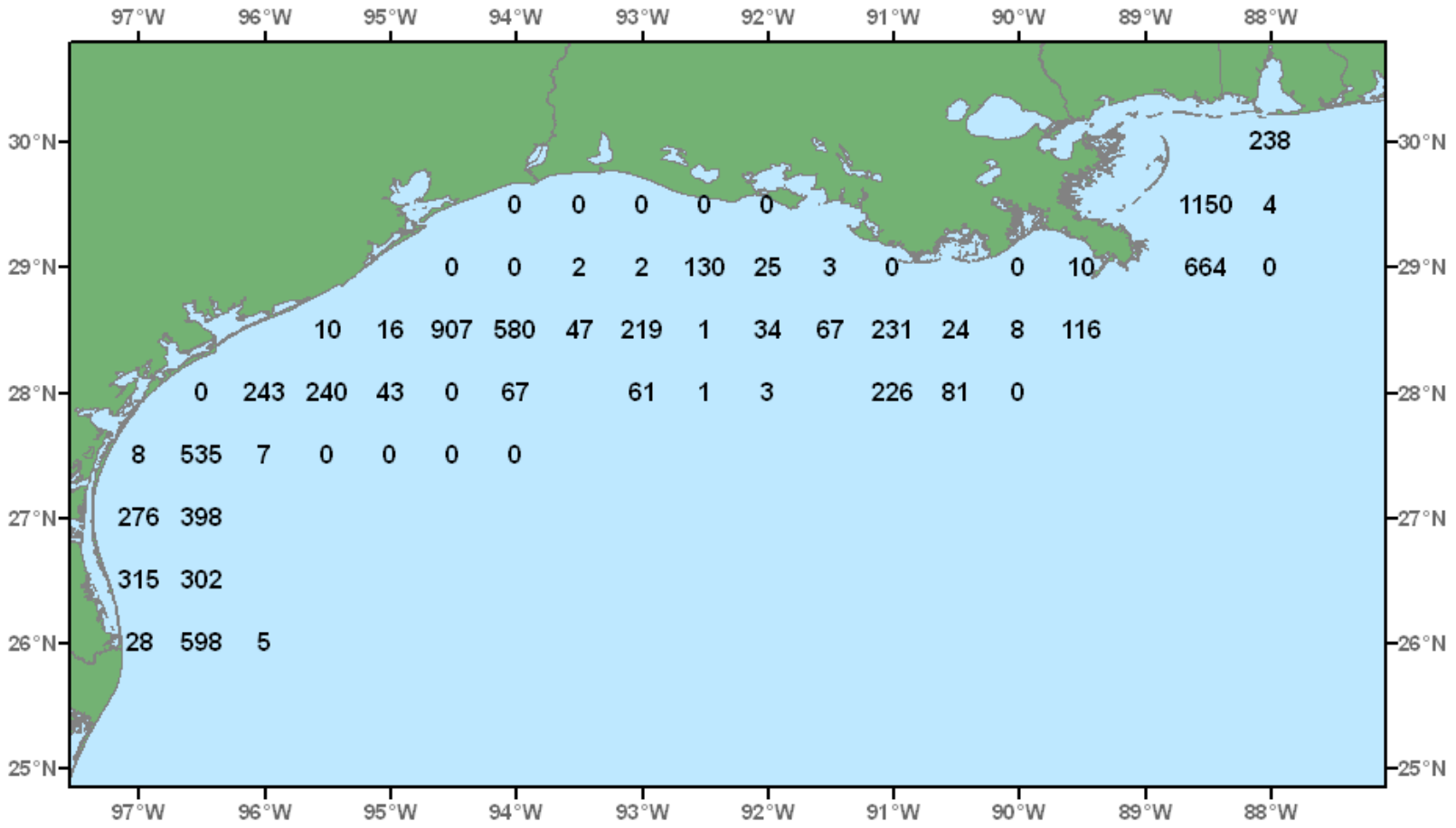

Figure 40. Roughback shrimp, Trachypenaeus similis, number/hour for June-July 2002.

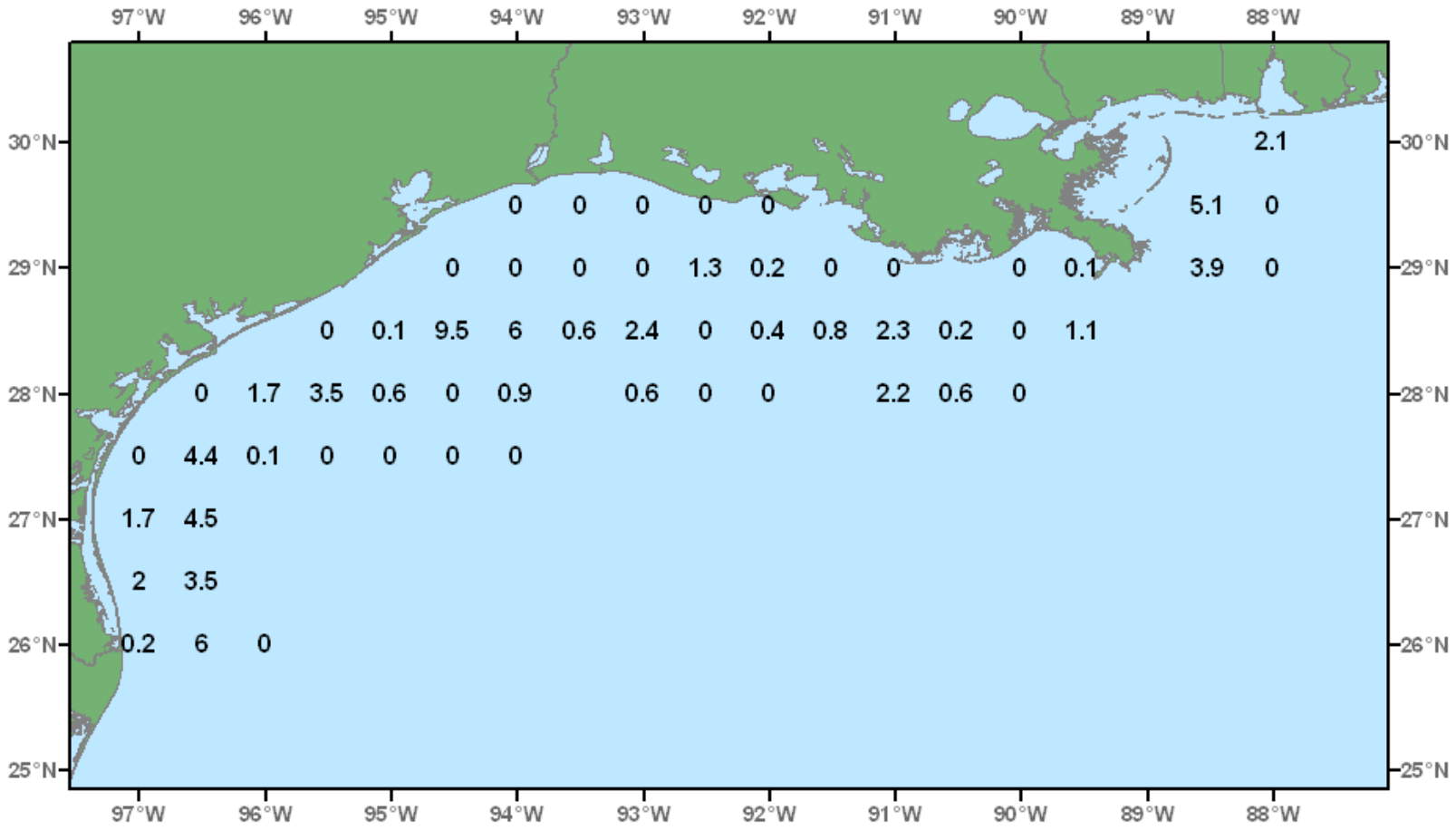

Figure 41. Roughback shrimp, Trachypenaeus similis, lb/hour for June-July 2002.

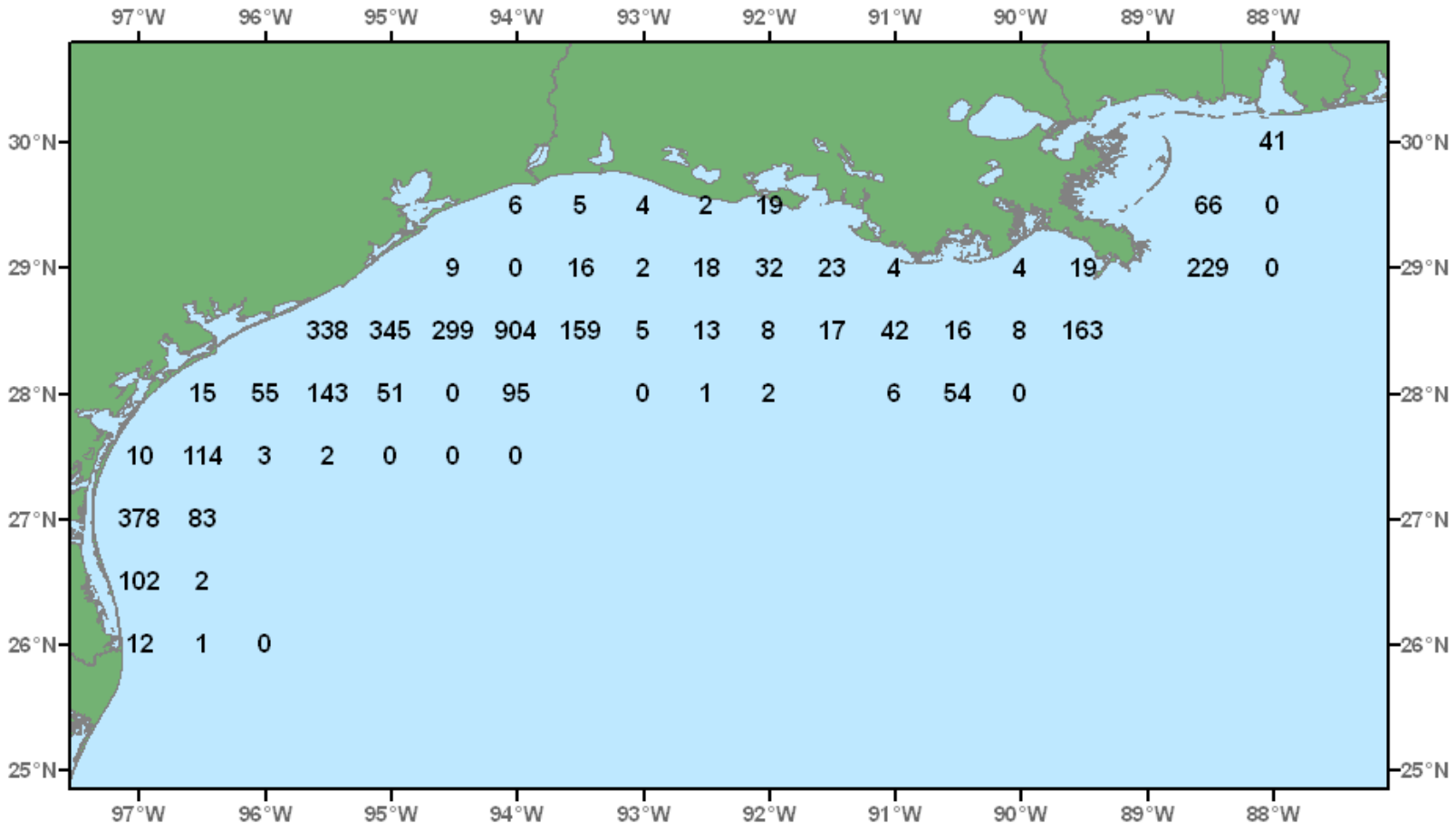

Figure 42. Lesser blue crab, Callinectes similis, number/hour for June-July 2002.

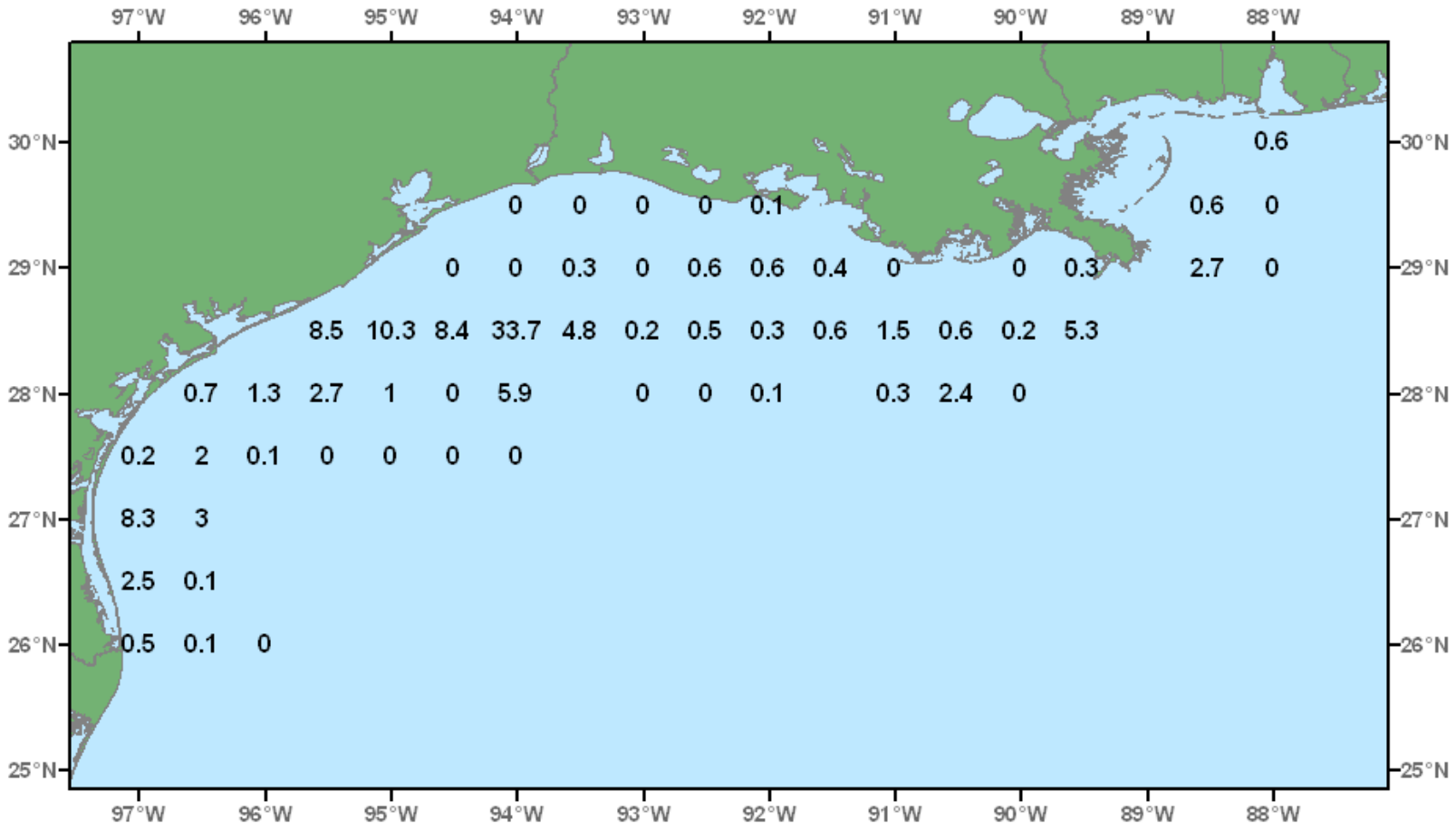

Figure 43. Lesser blue crab, Callinectes similis, lb/hour for June-July 2002.

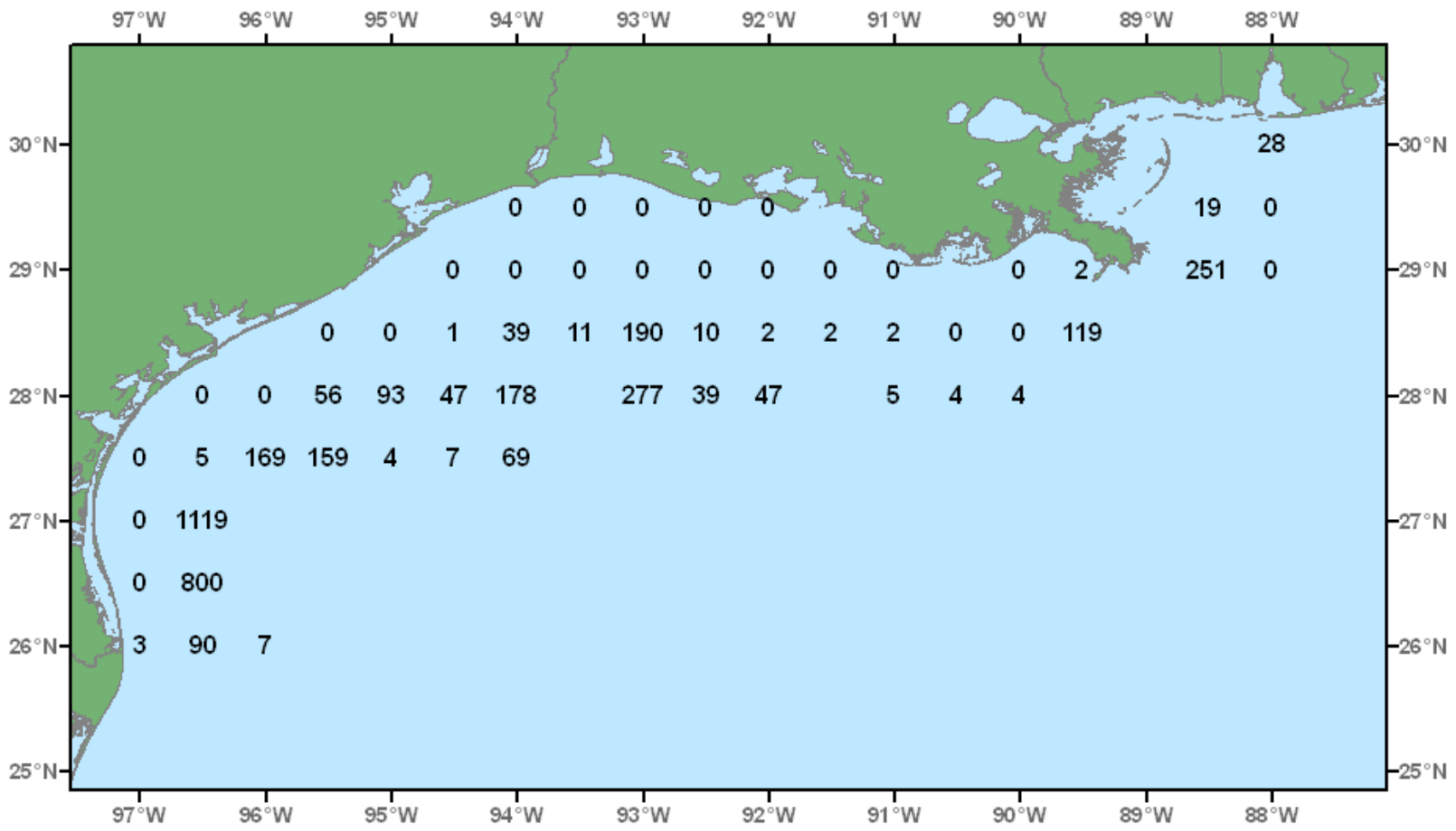

Figure 44. Longspine swimming crab, Portunis spinicarpus, number/hour for June-July 2002.

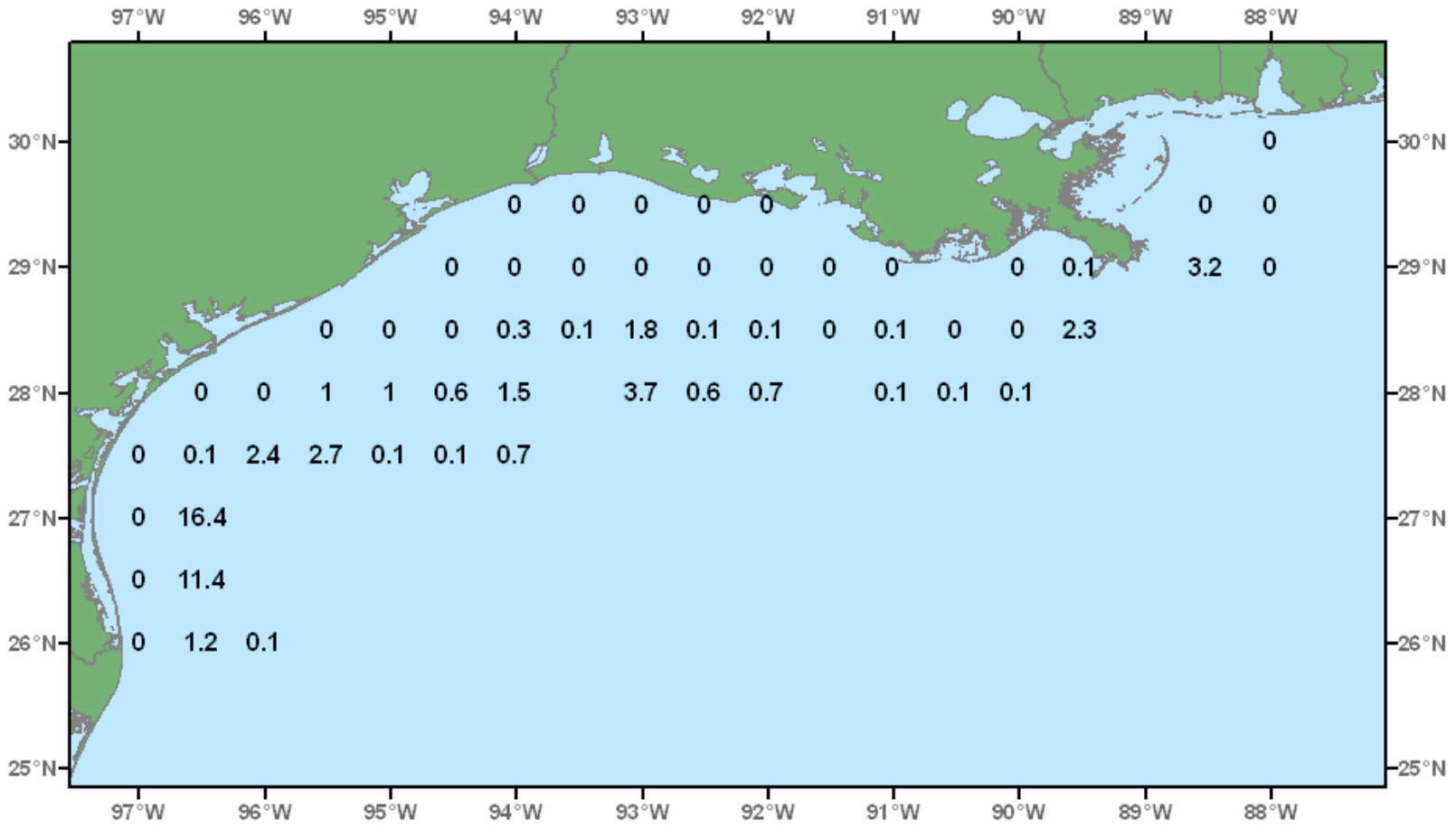

Figure 45. Longspine swimming crab, Portunis spinicarpus, lb/hour for June-July 2002.

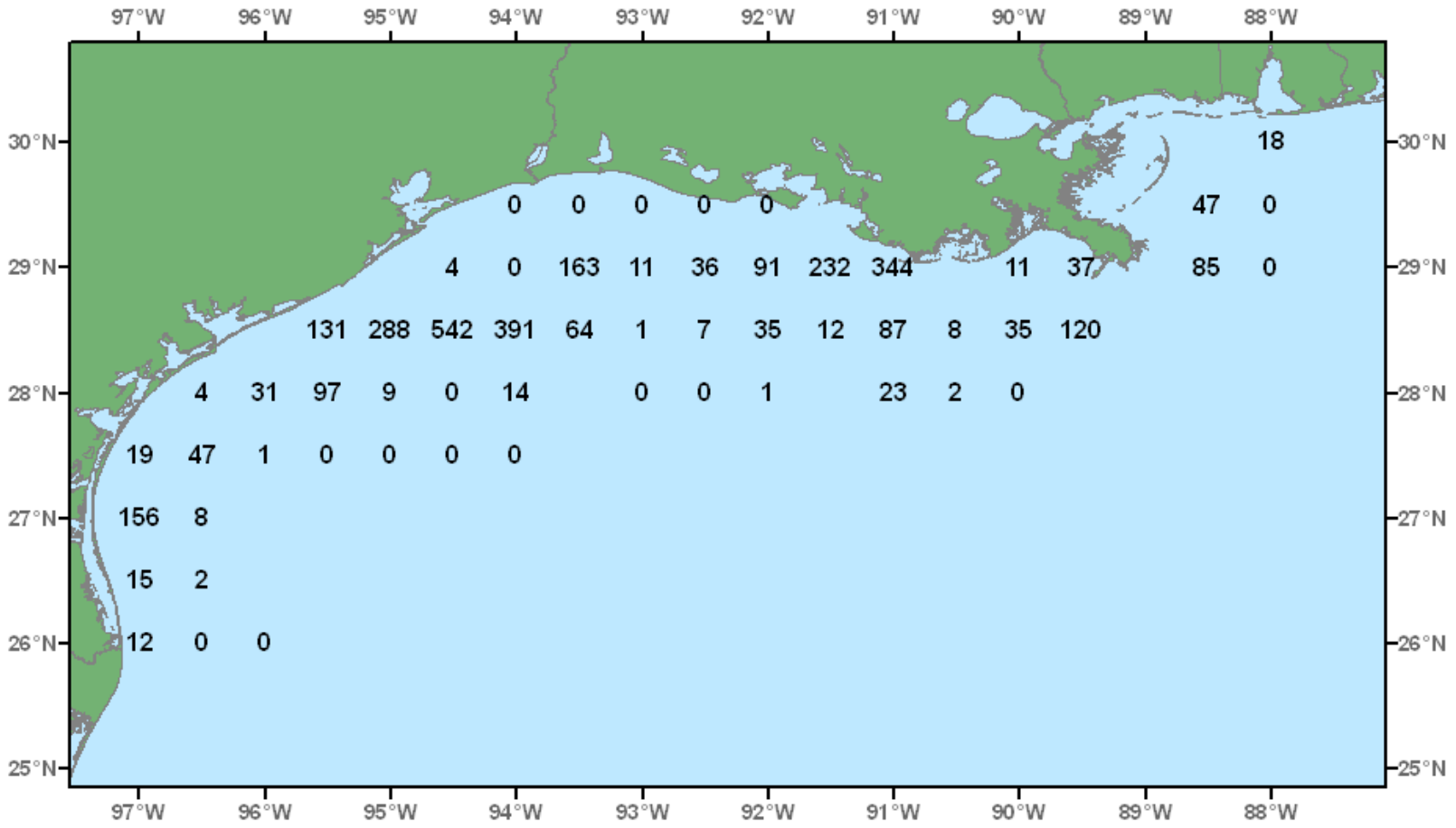

Figure 46. Mantis shrimp, Squilla empusa, number/hour for June-July 2002.

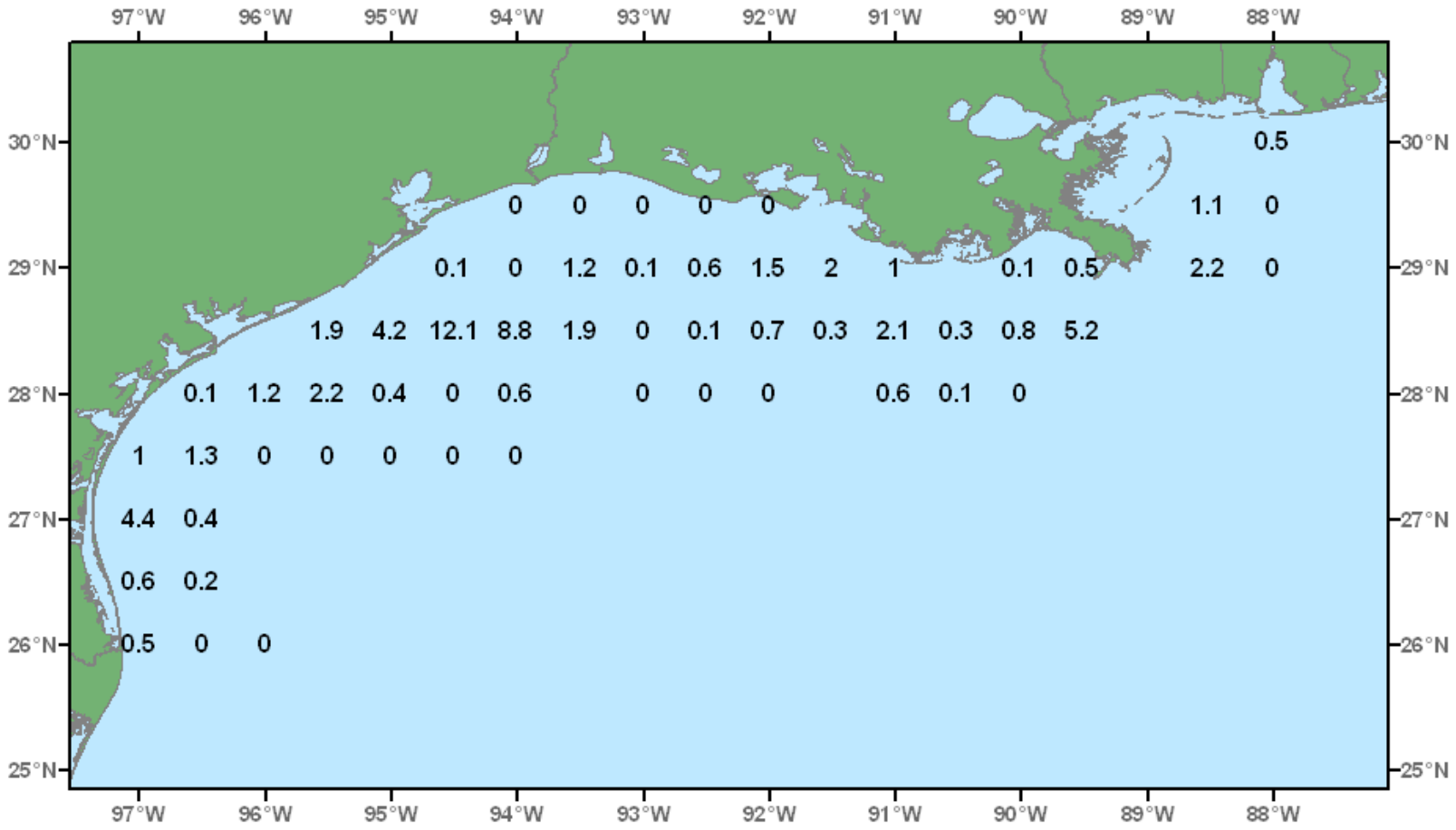

Figure 47. Mantis shrimp, Squilla empusa, lb/hour for June-July 2002.

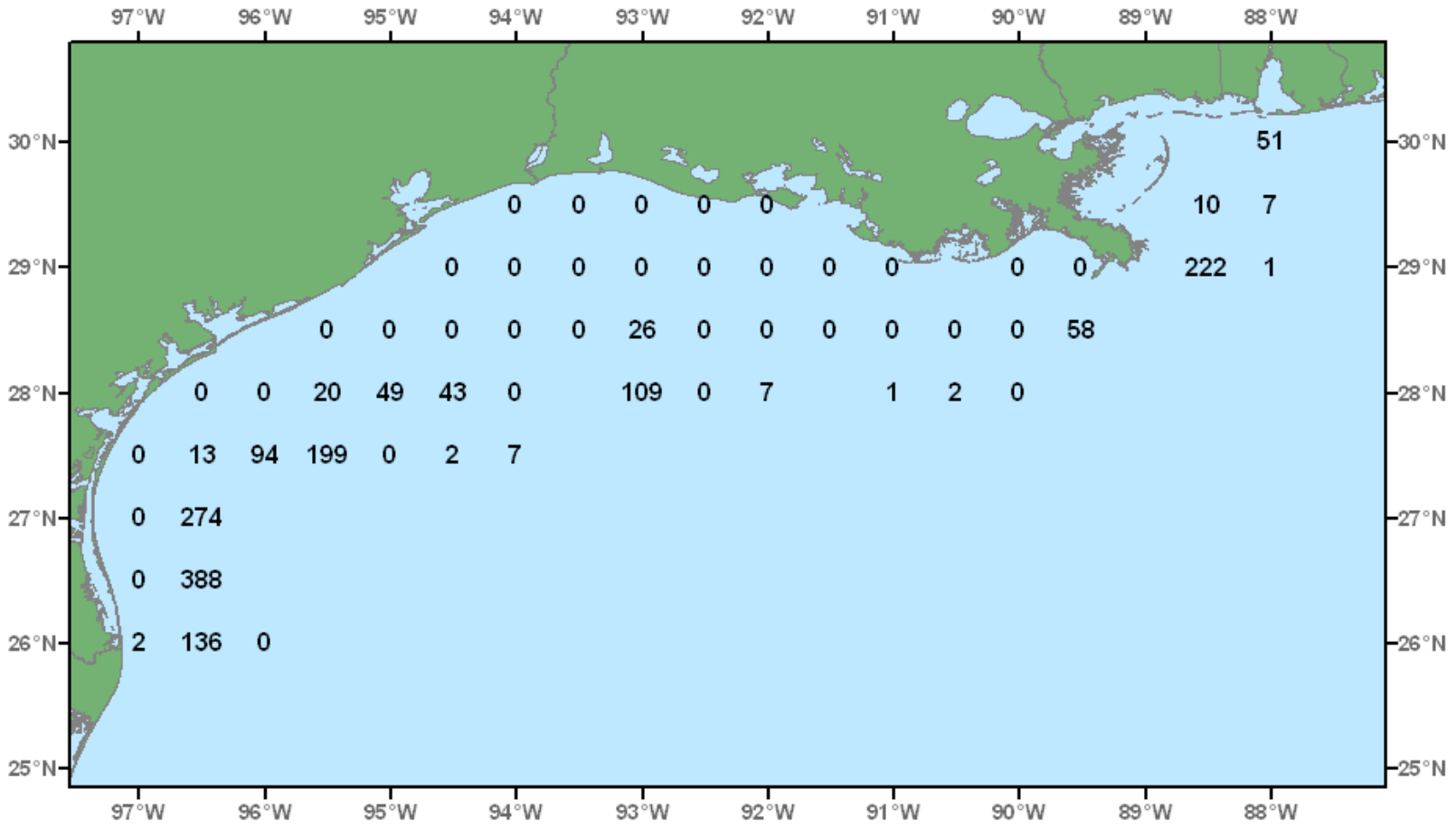

Figure 48. Humpback shrimp, Solenocera vioscai, number/hour for June-July 2002.

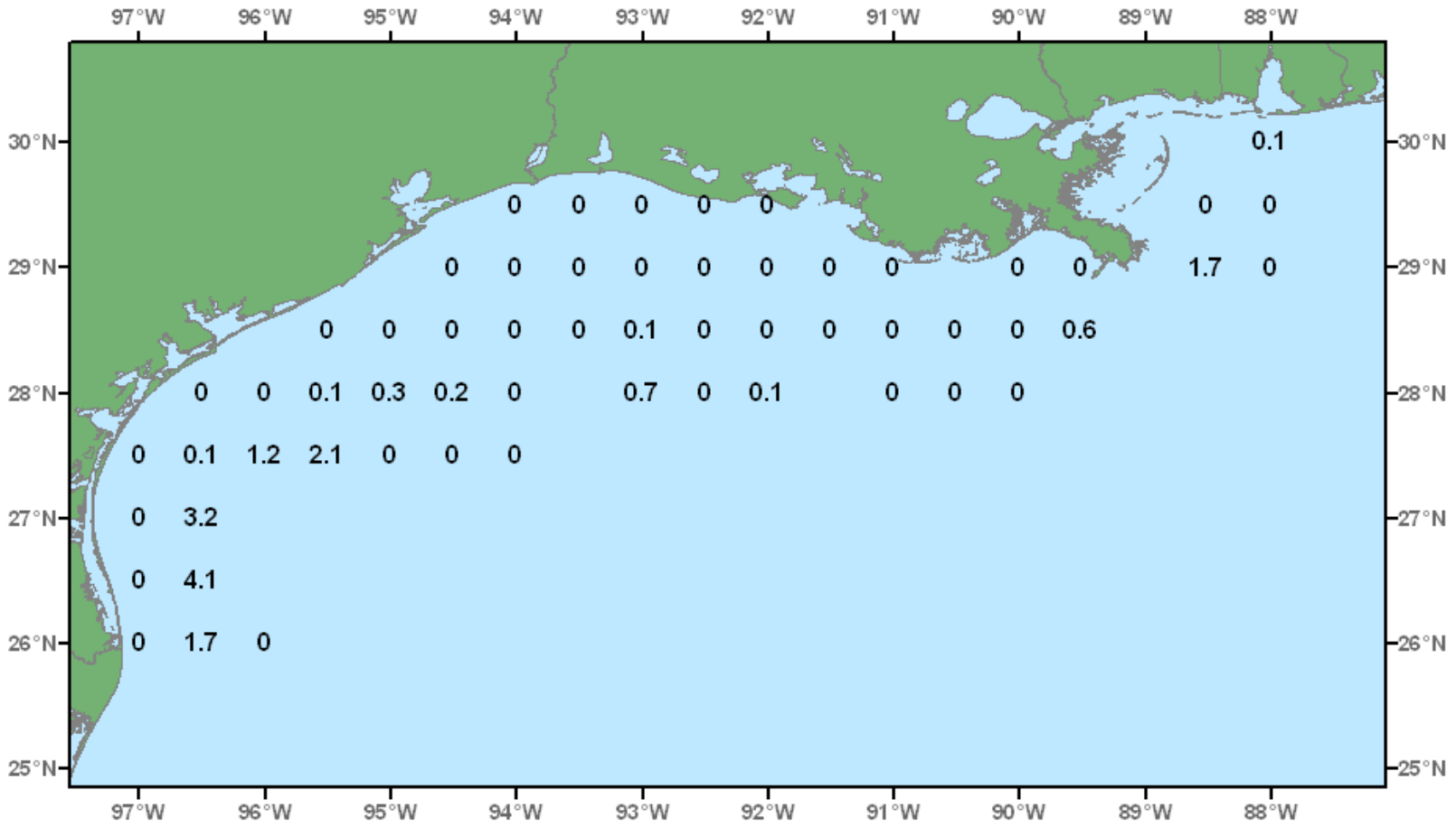

Figure 49. Humpback shrimp, Solenocera vioscai, lb/hour for June-July 2002.

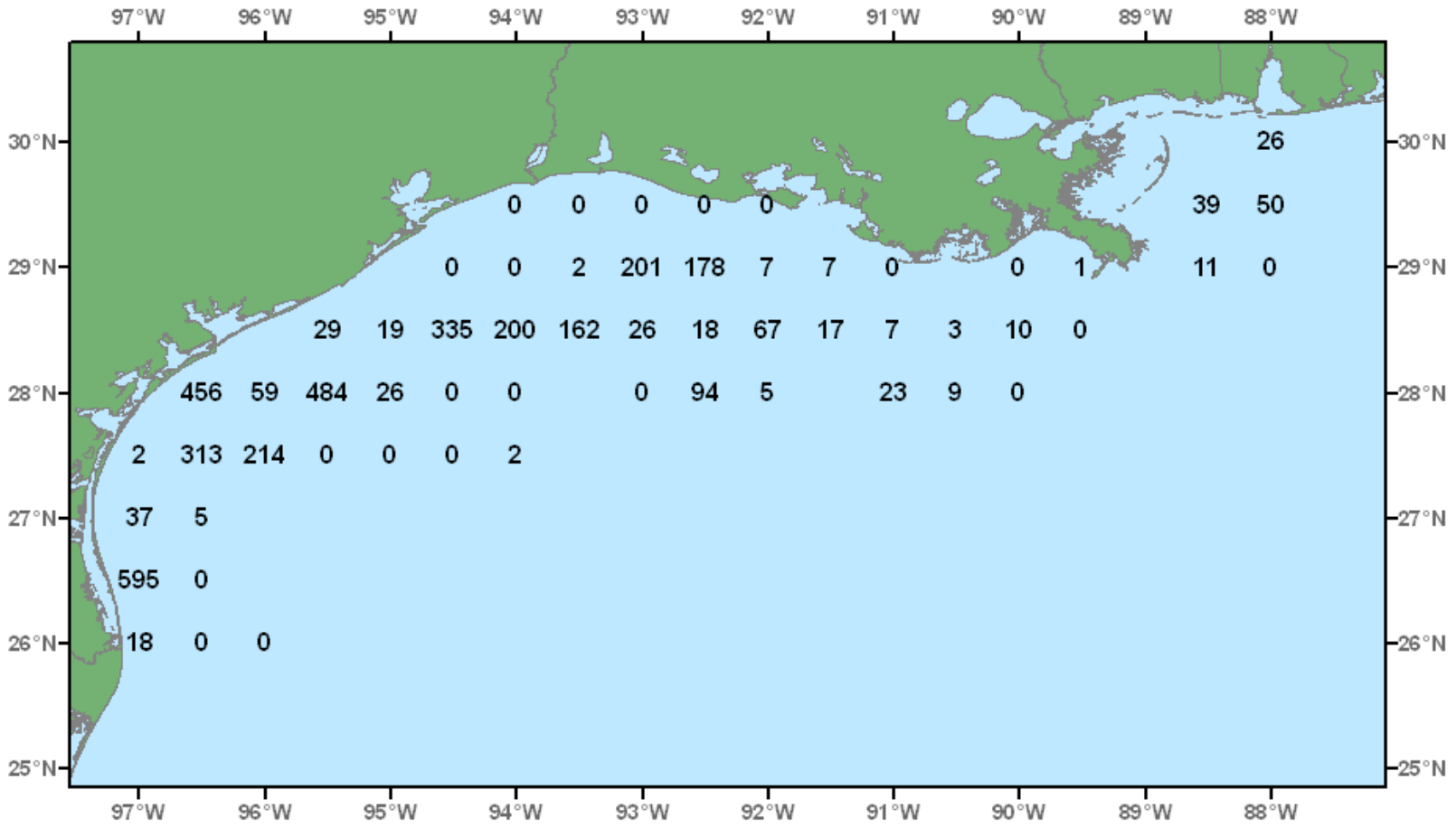

Figure 50. Arrow squid, Loligo pleii, number/hour for June-July 2002.

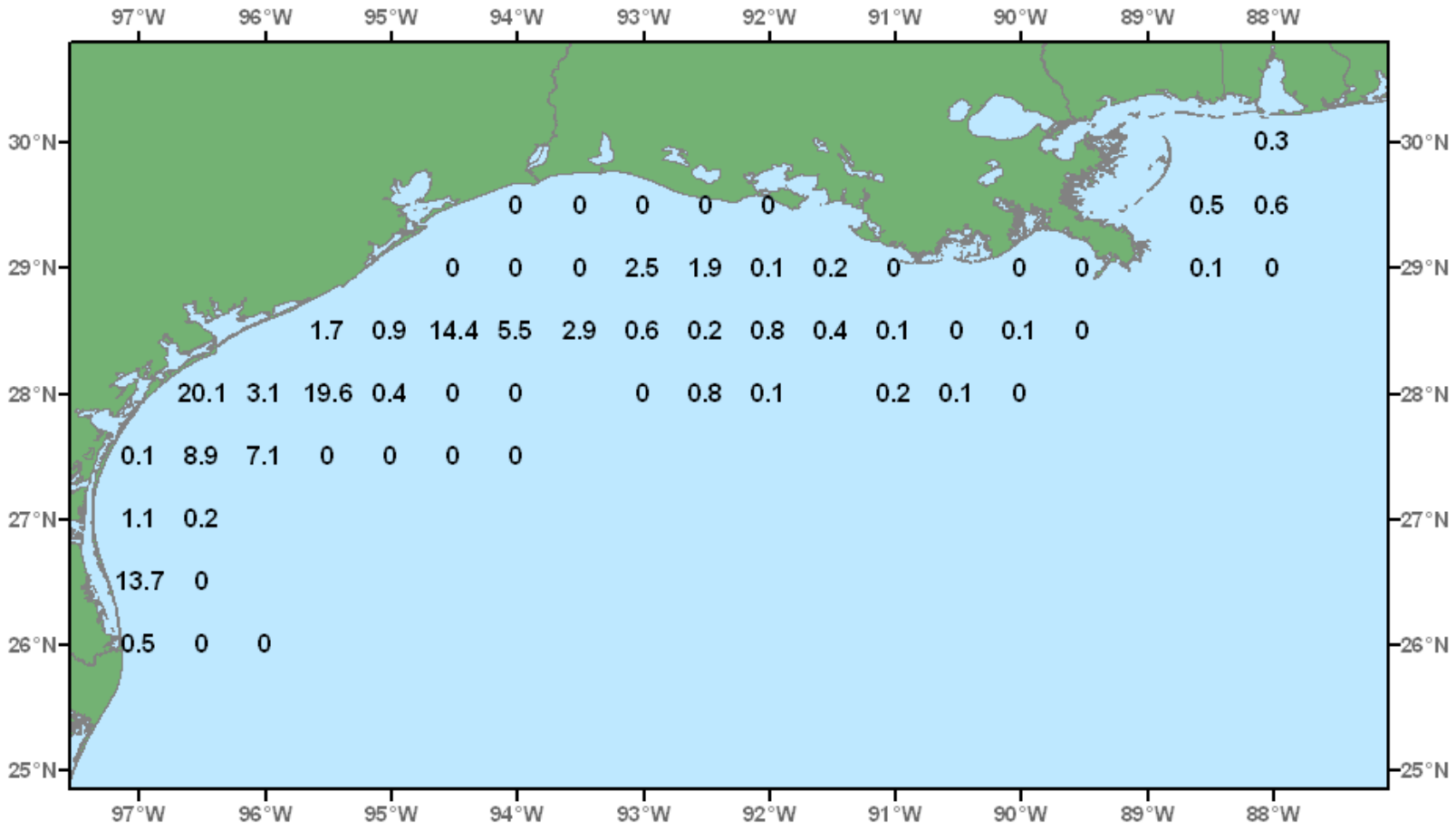

Figure 51. Arrow squid, Loligo pleii, lb/hour for June-July 2002.

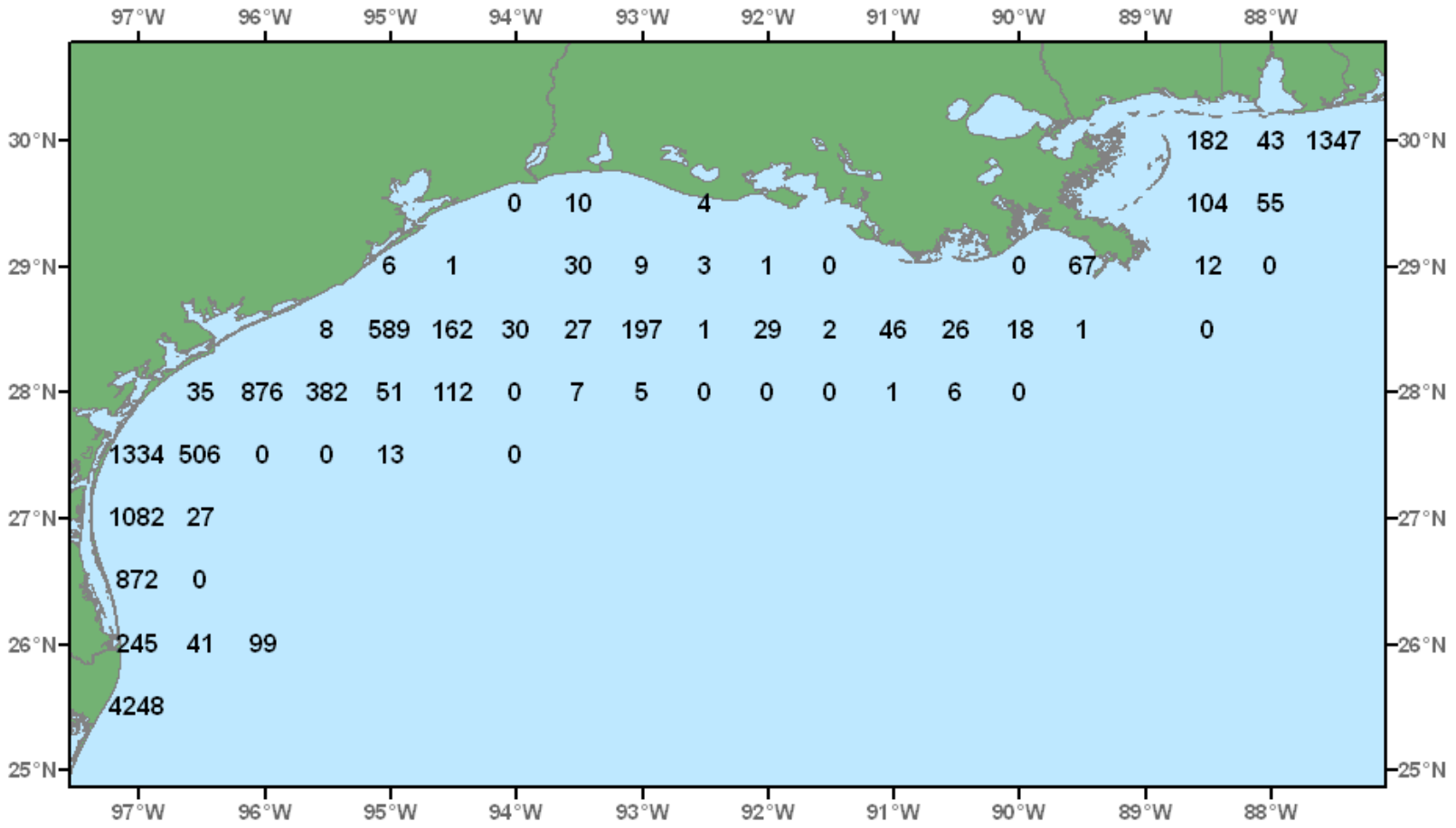

Figure 52. Atlantic bumper, Chloroscombrus chrysurus, number/hour for October-December 2002.

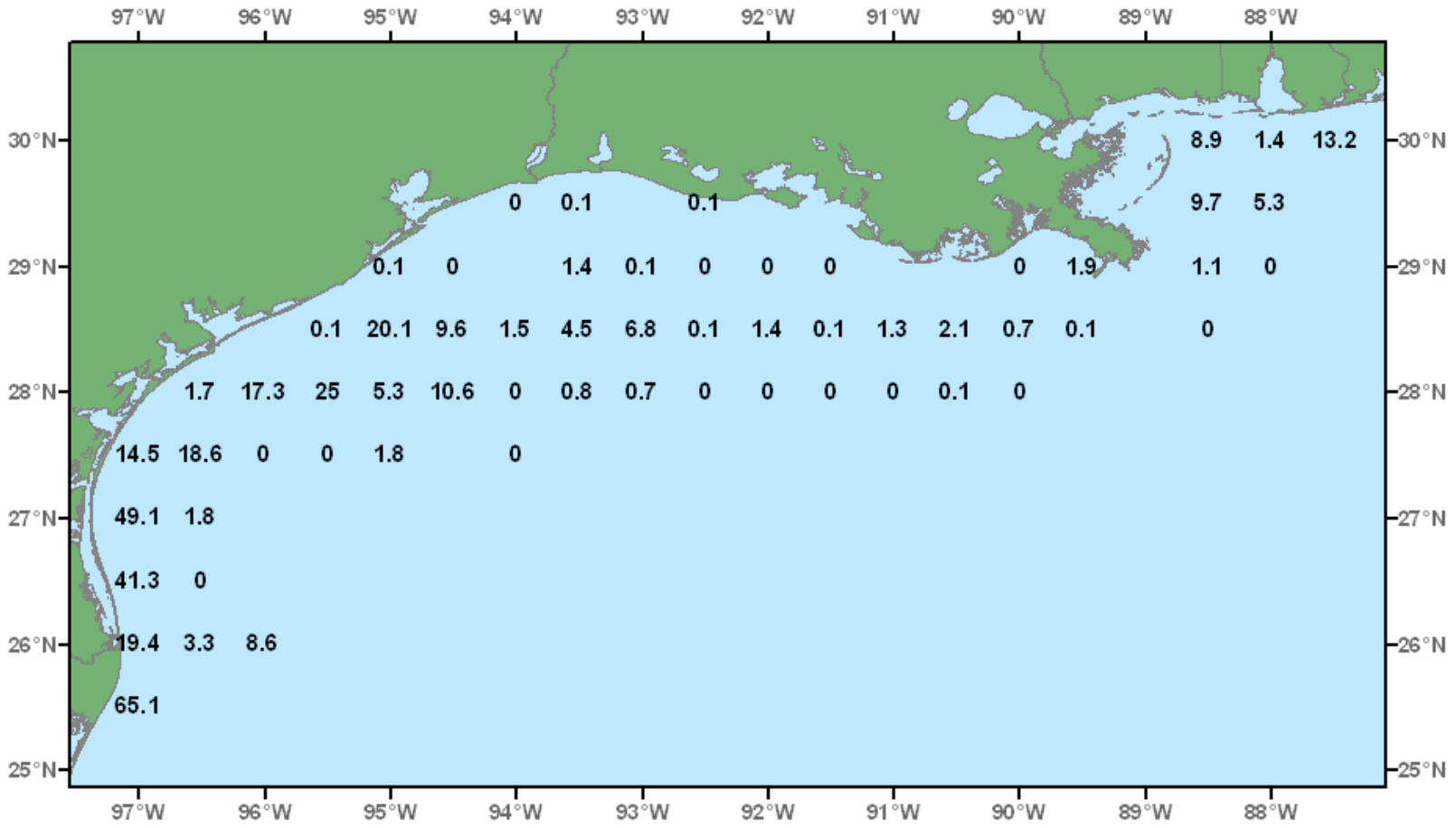

Figure 53. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for October-December 2002.

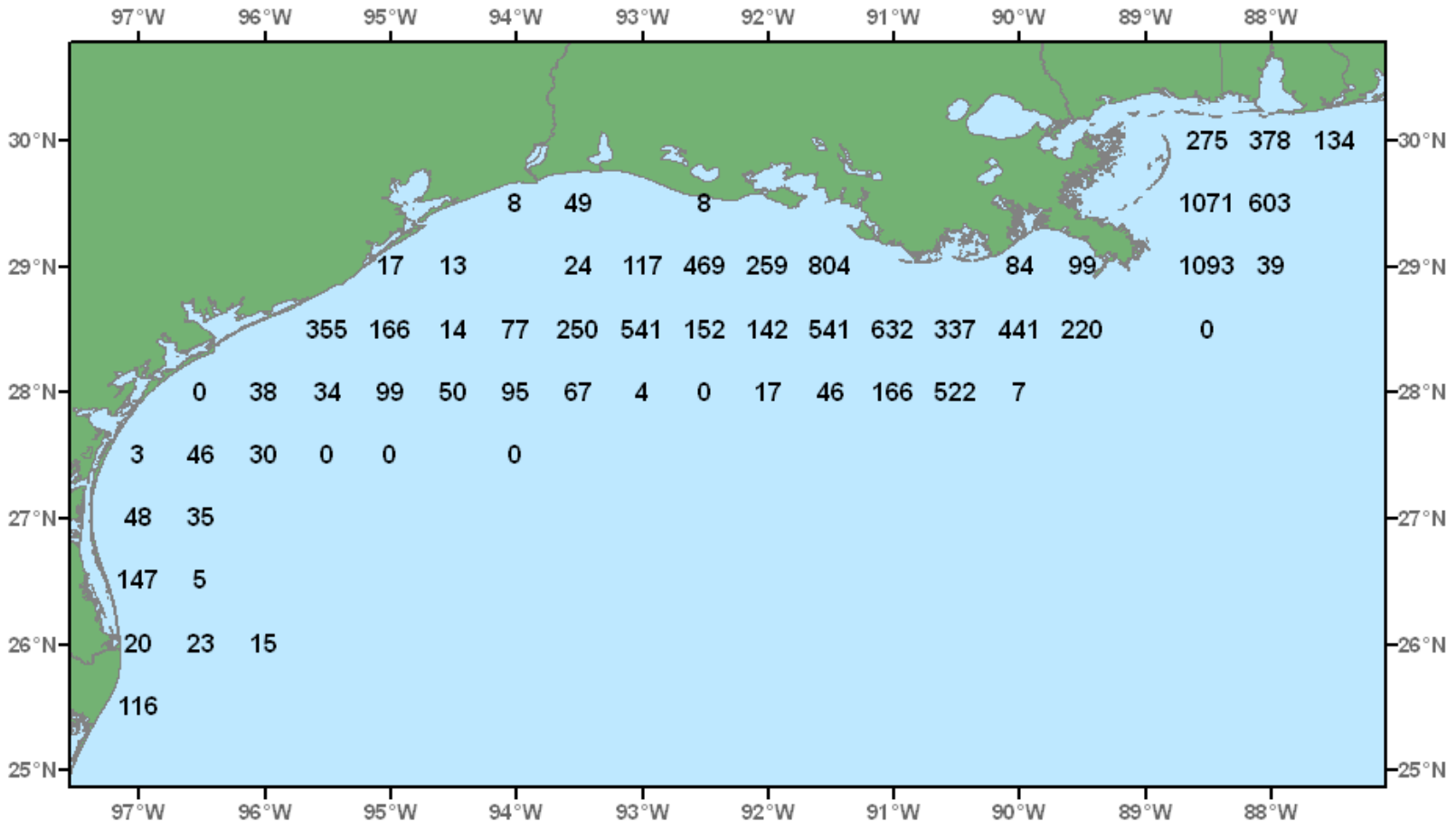

Figure 54. Atlantic croaker, Micropogonias undulatus, number/hour for October-December 2002.

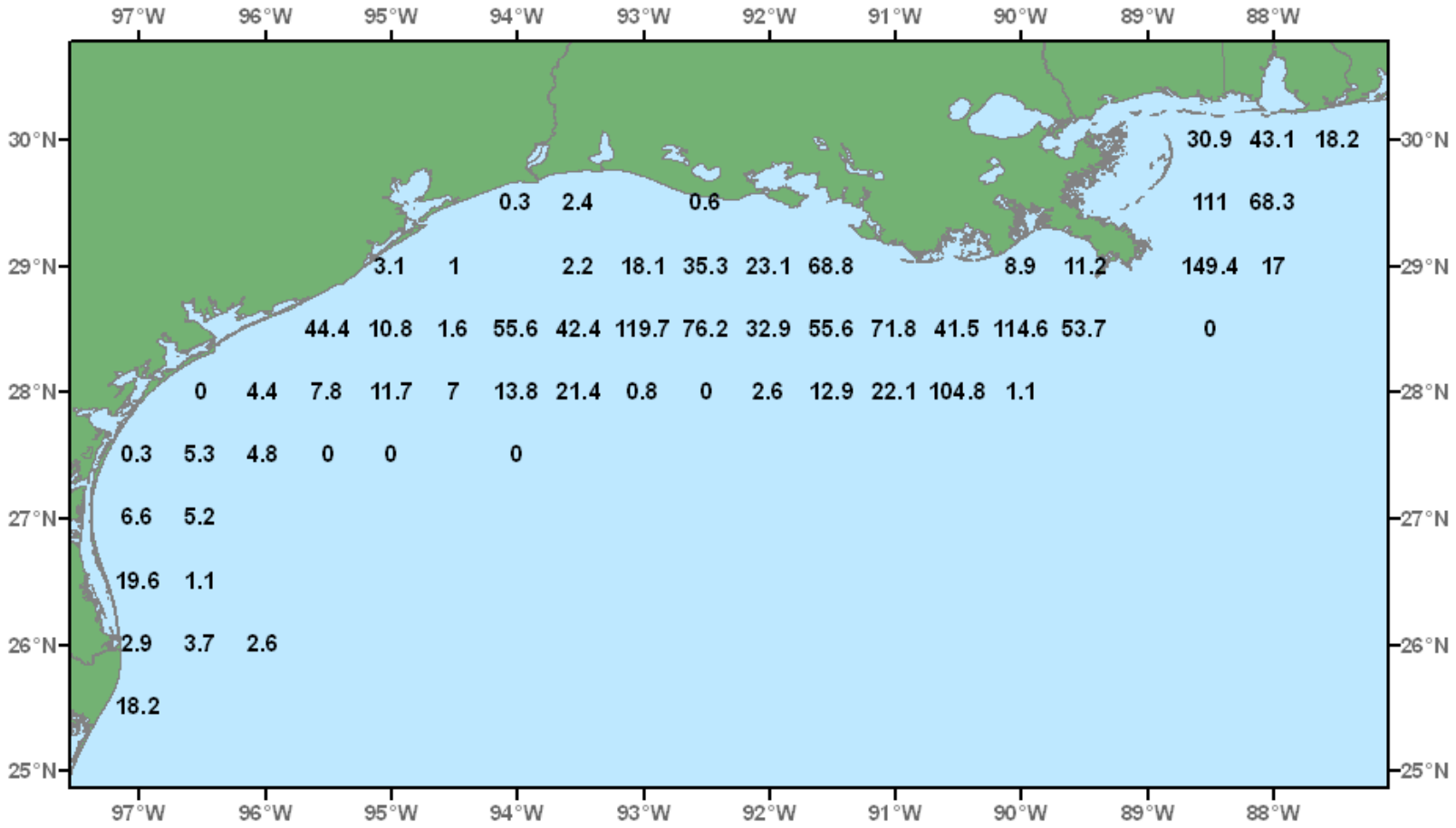

Figure 55. Atlantic croaker, Micropogonias undulatus, lb/hour for October-December 2002.

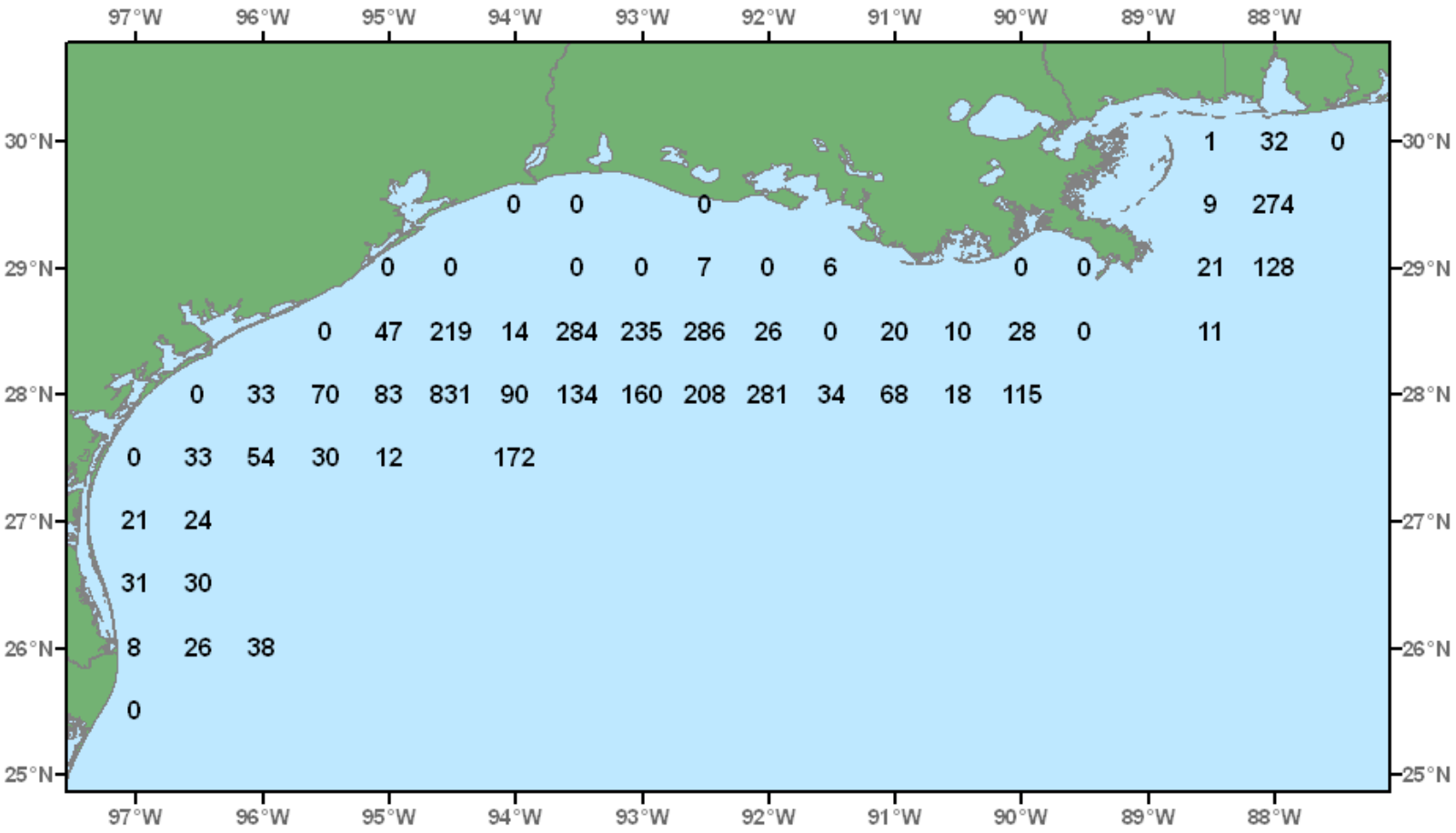

Figure 56. Longspine porgy, Stenotomus caprinus, number/hour for October-December 2002.

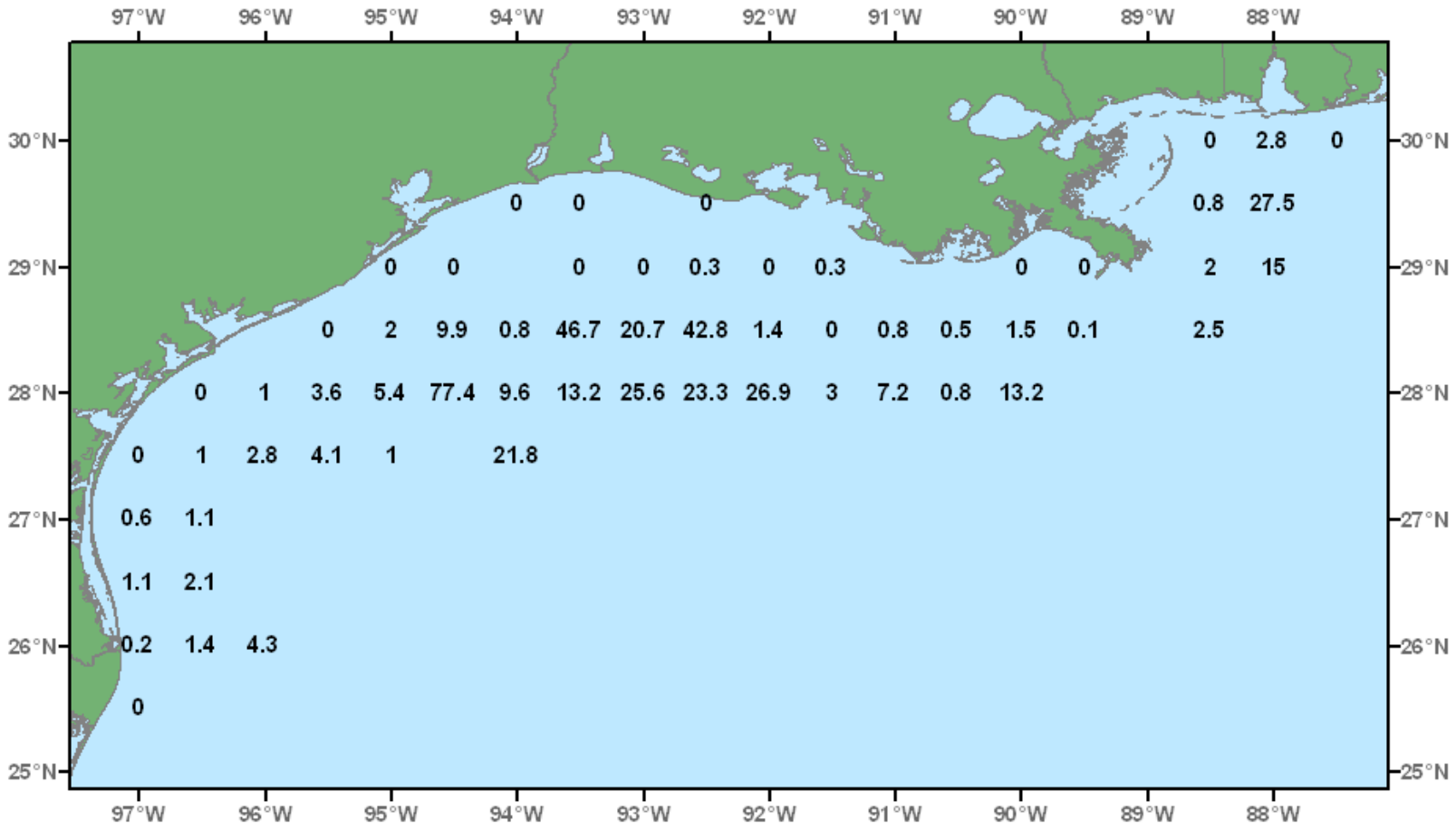

Figure 57. Longspine porgy, Stenotomus caprinus, lb/hour for October-December 2002.

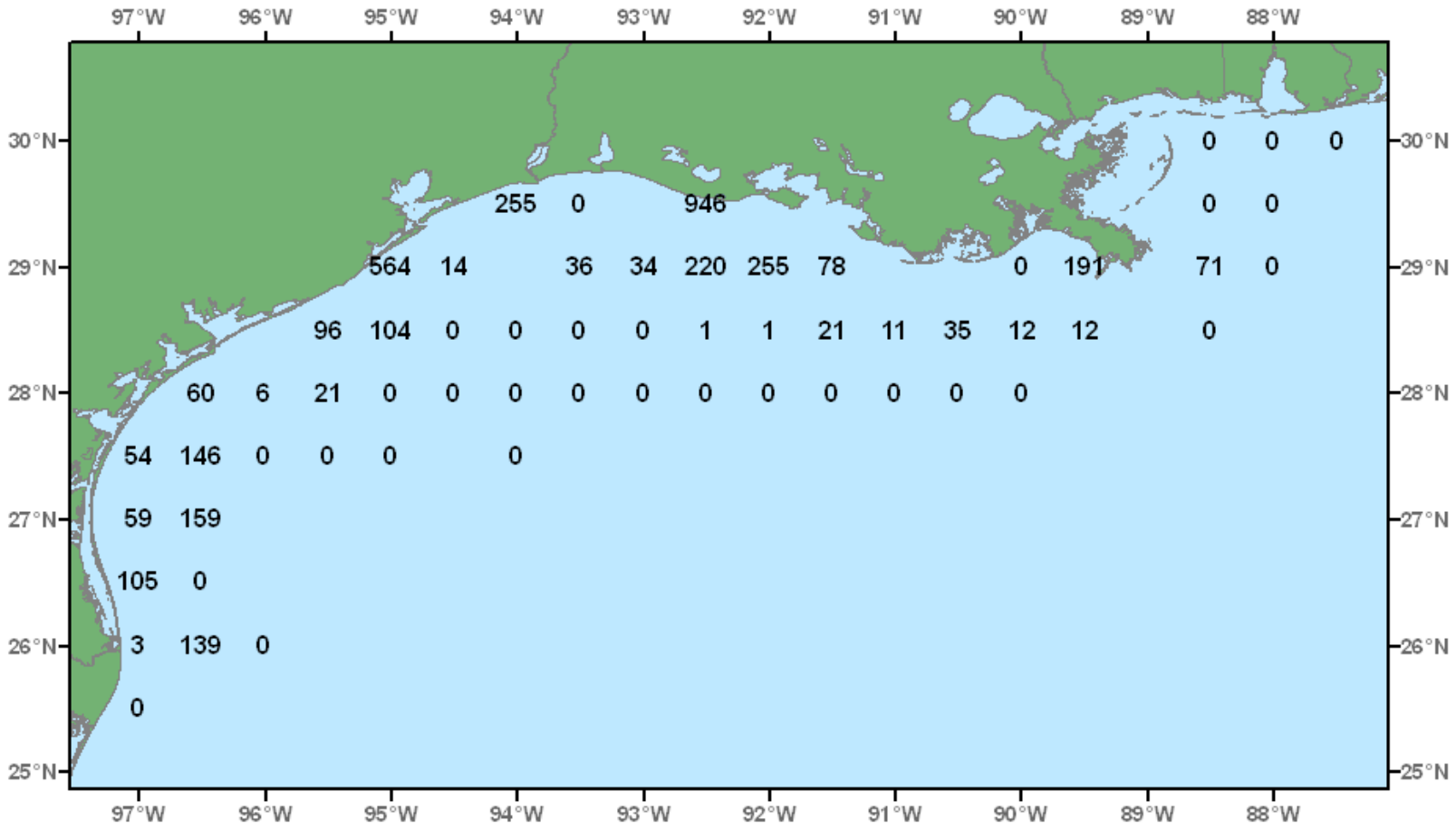

Figure 58. Seatrout, Cynoscion spp., number/hour for October-December 2002.

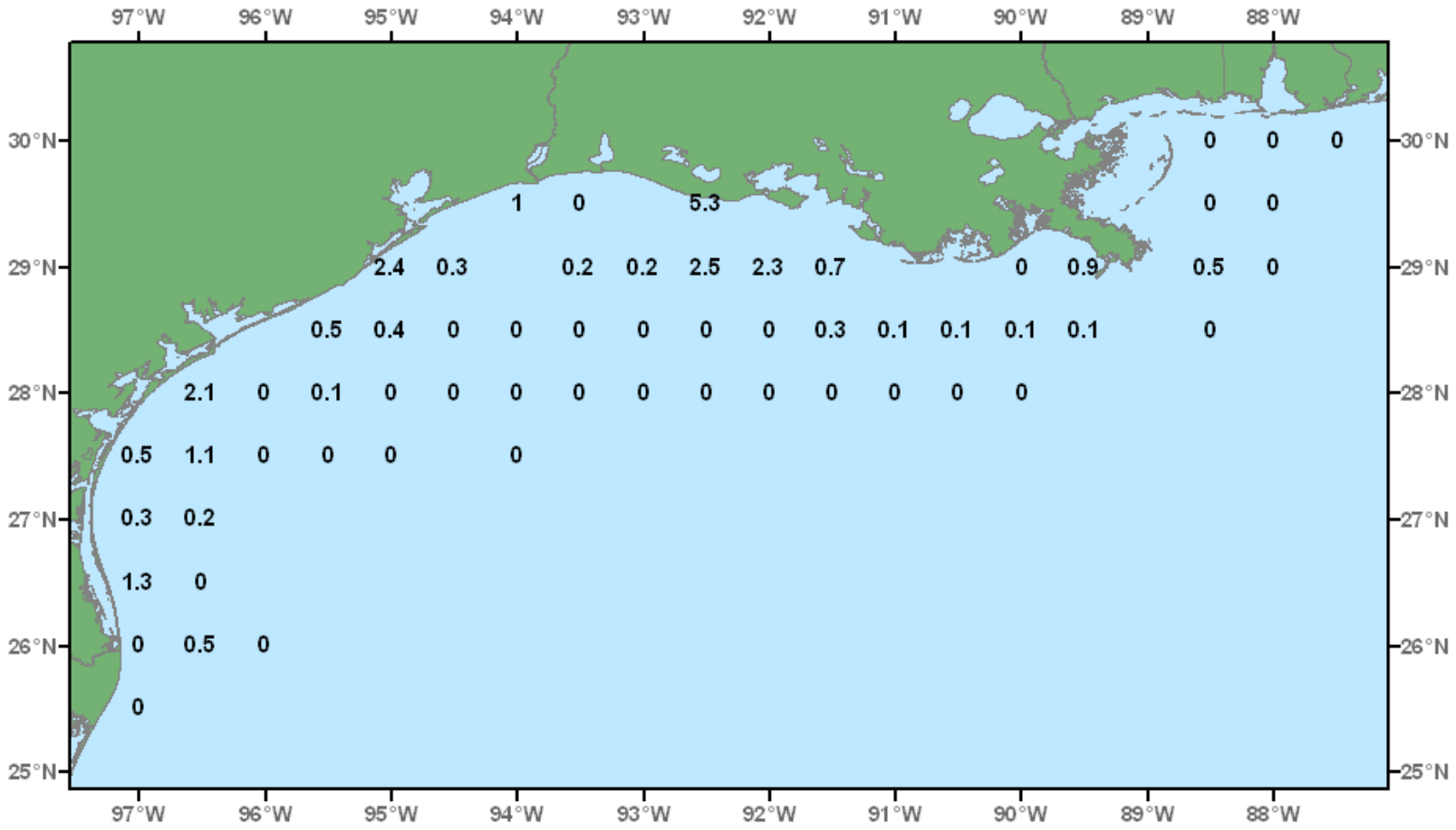

Figure 59. Seatrout, Cynoscion spp., number/hour for October-December 2002.

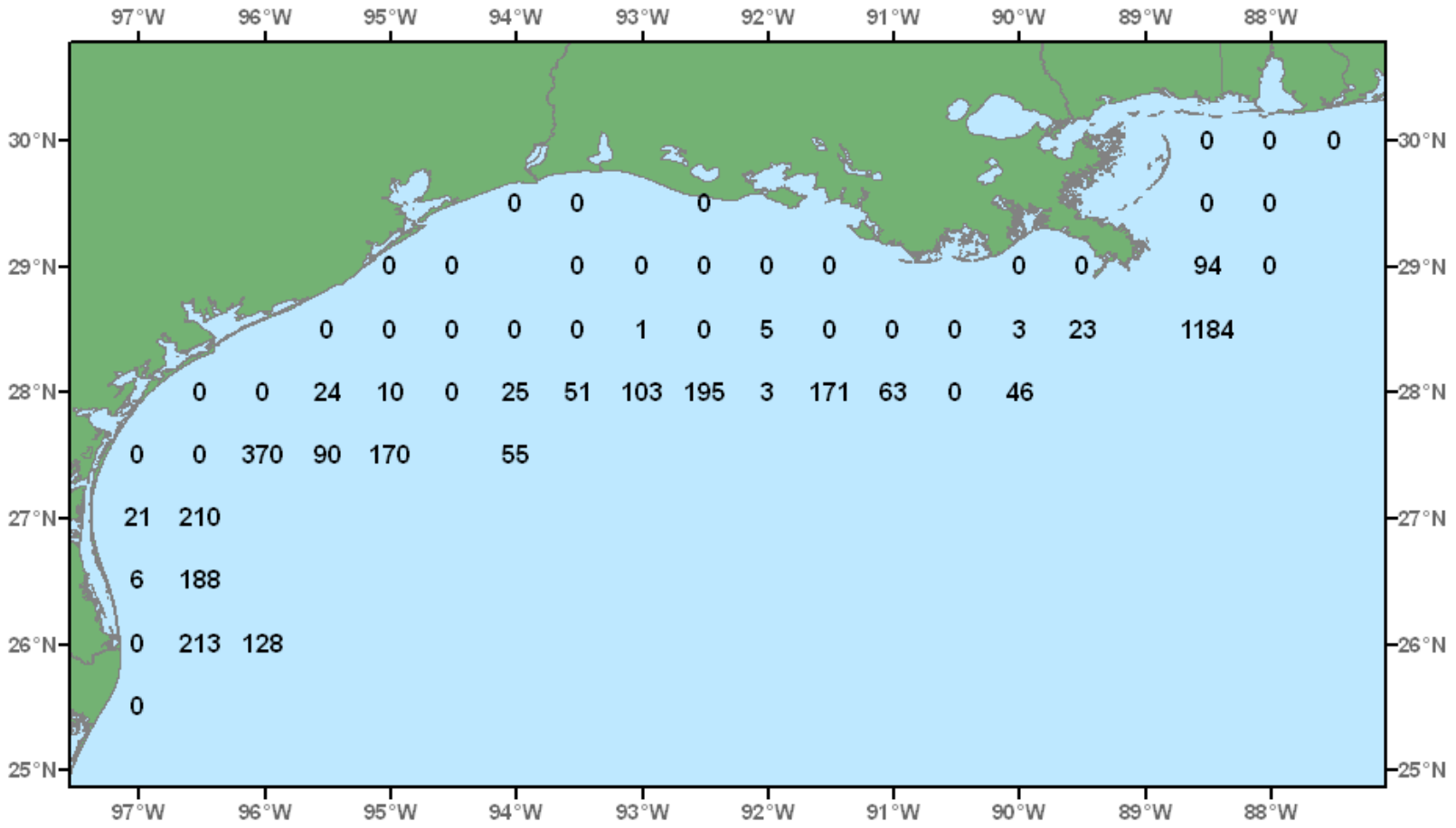

Figure 60. Blackear bass, Serranus atrobranchus, number/hour for October-December 2002.

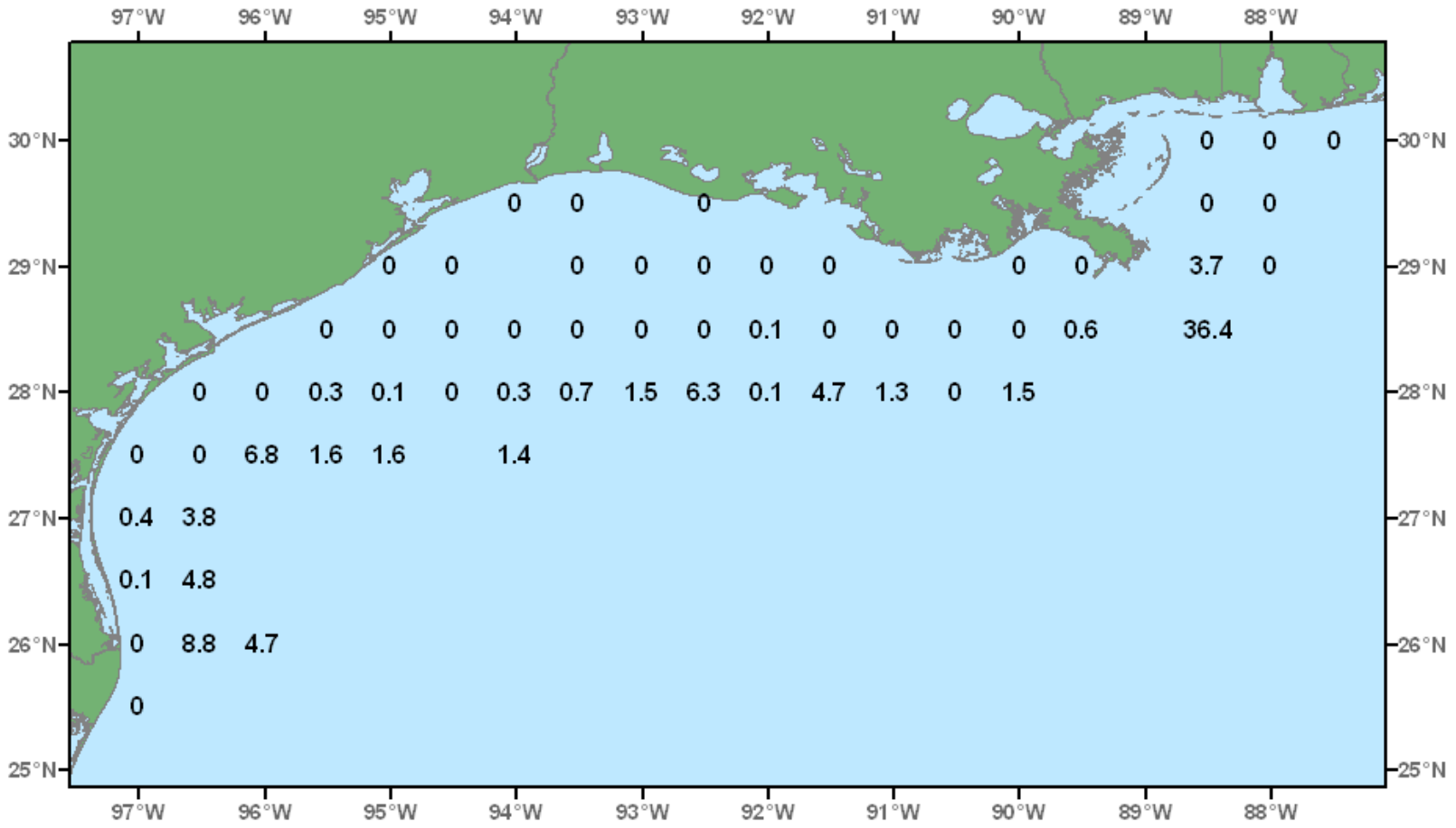

Figure 61. Blackear bass, Serranus atrobranchus, lb/hour for October-December 2002.

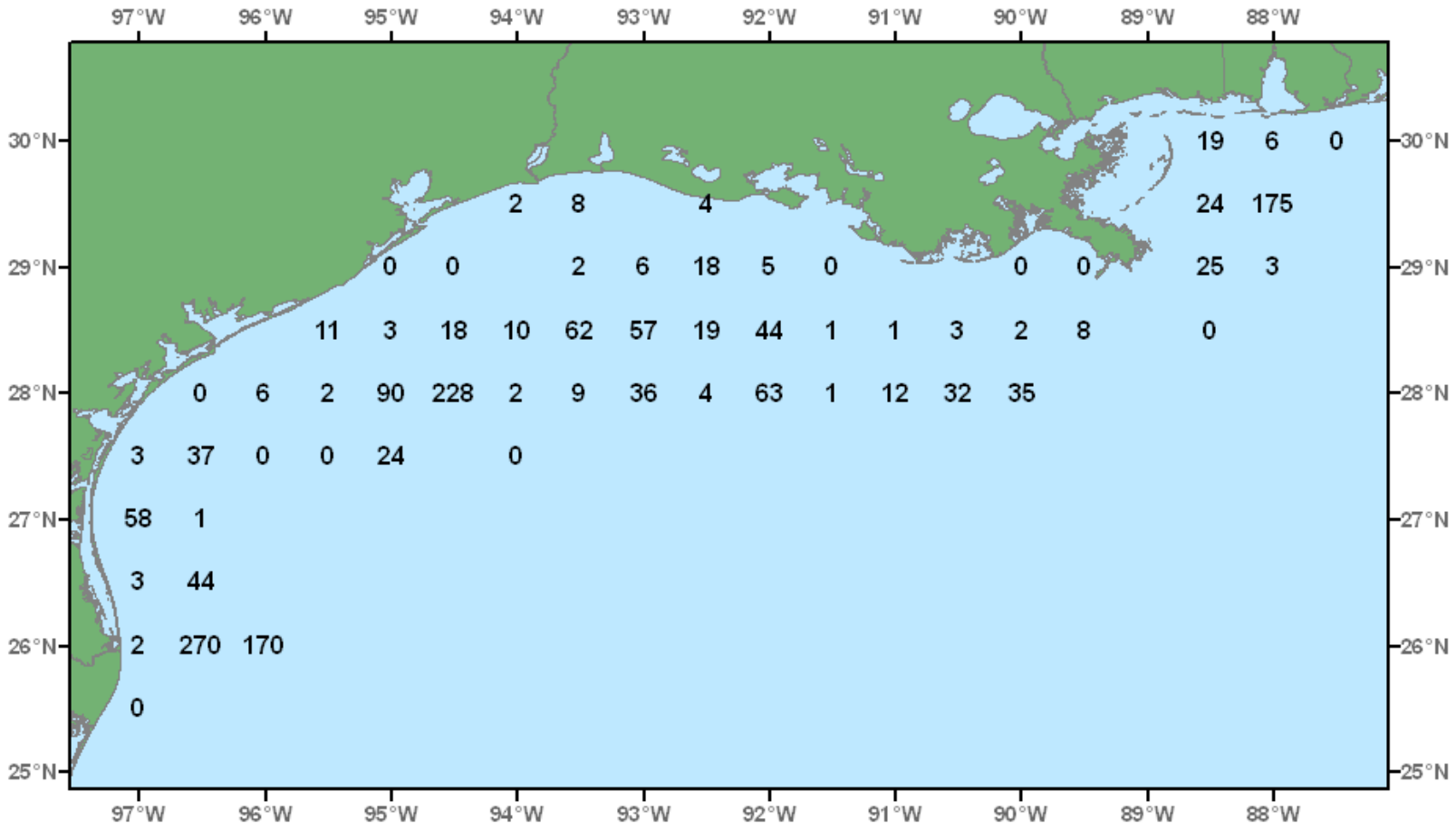

Figure 62. Gulf butterfish, Peprilus burti, number/hour for October-December 2002.

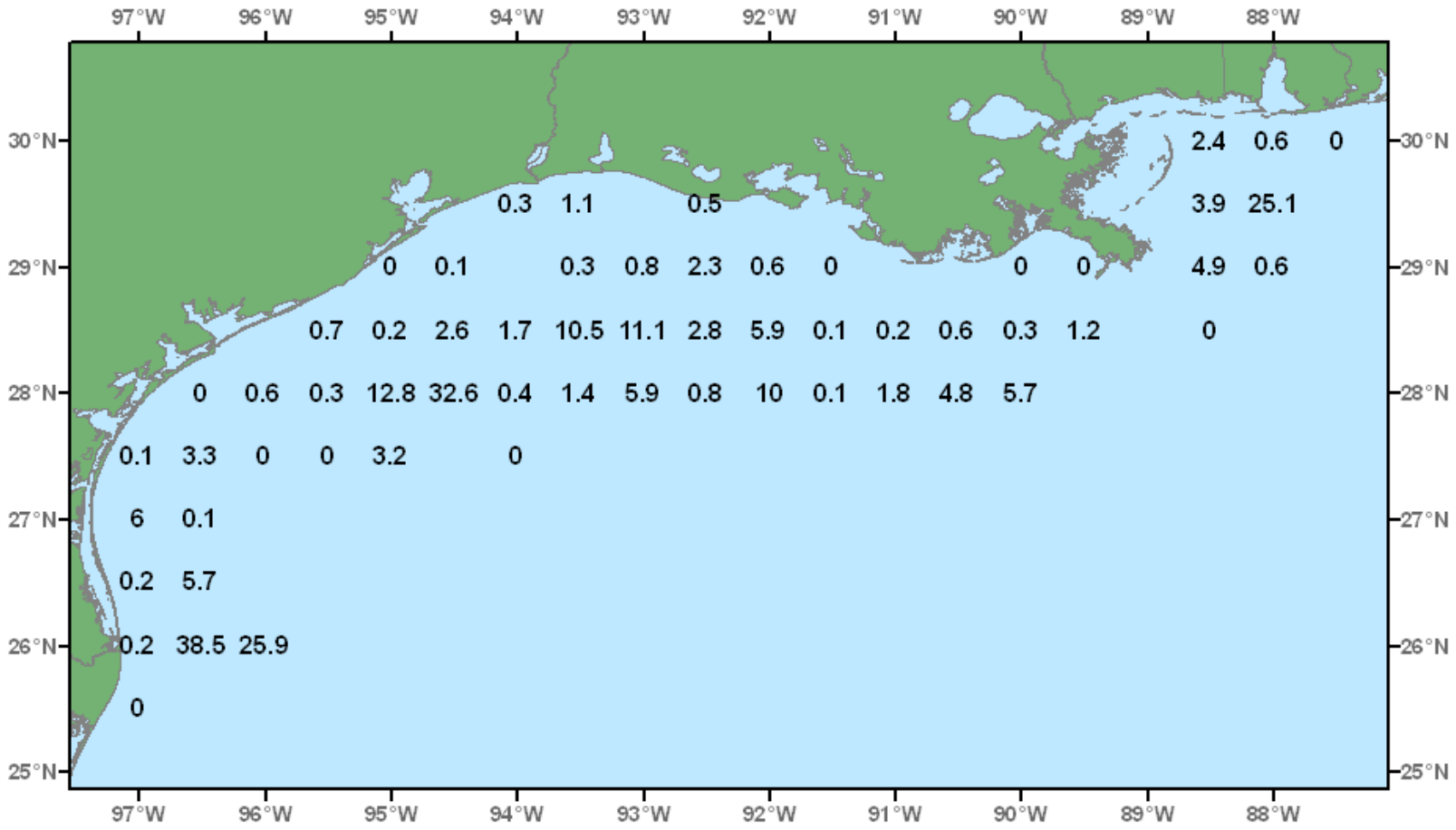

Figure 63. Gulf butterfish, Peprilus burti, lb/hour for October-December 2002.

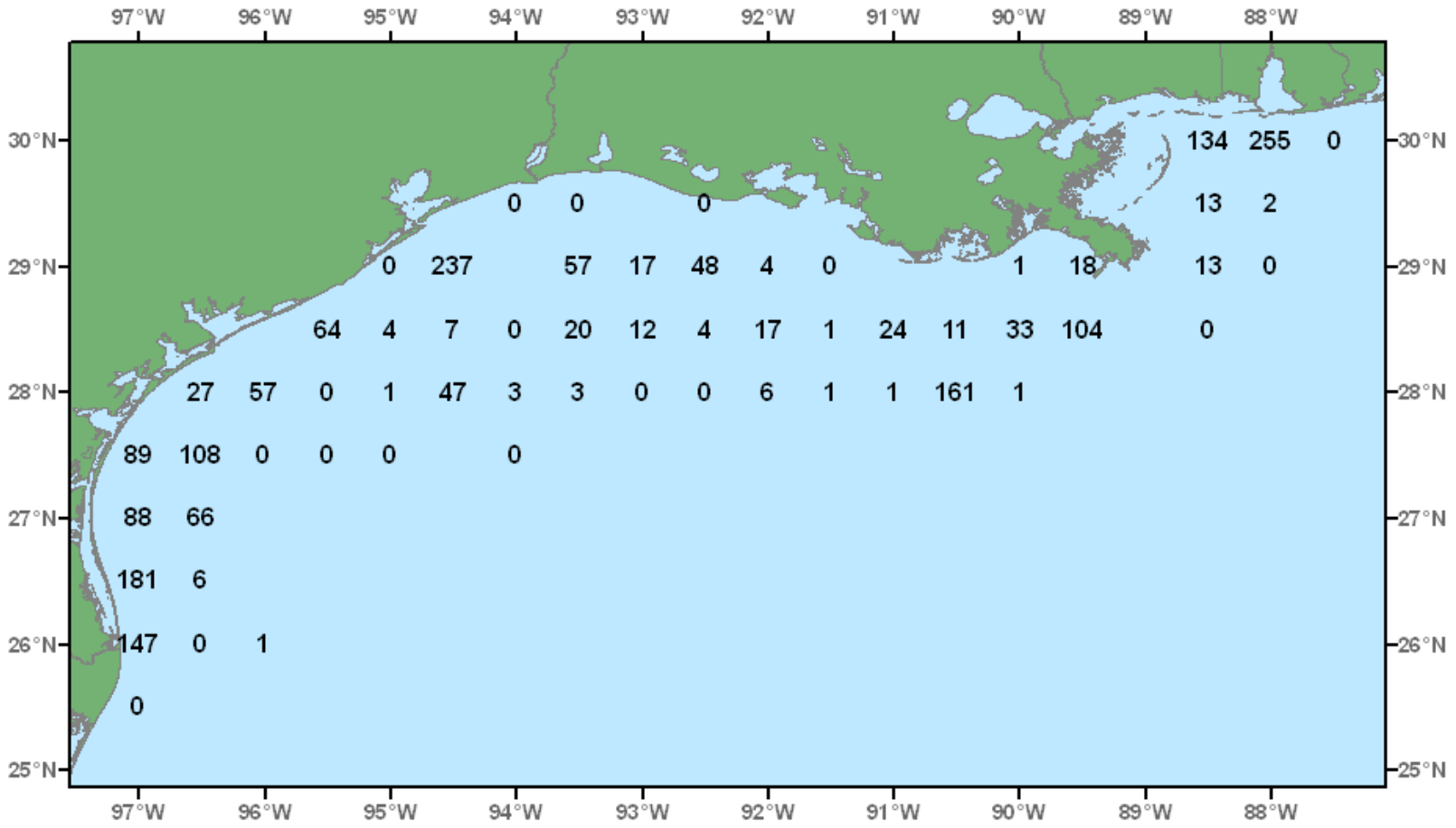

Figure 64. Silver seatrout, Cynoscion nothus, number/hour for October-December 2002.

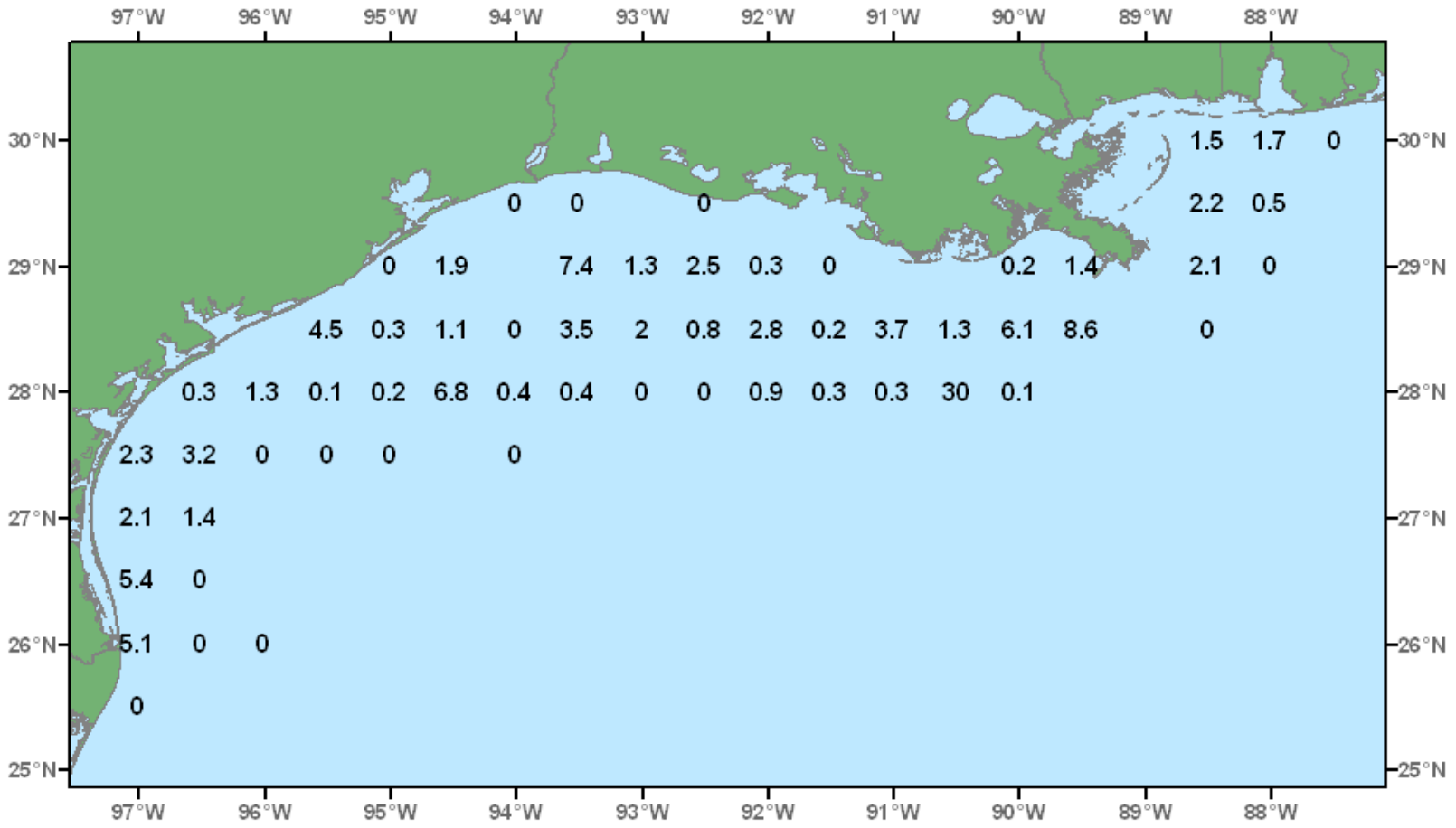

Figure 65. Silver seatrout, Cynoscion nothus, lb/hour for October-December 2002.

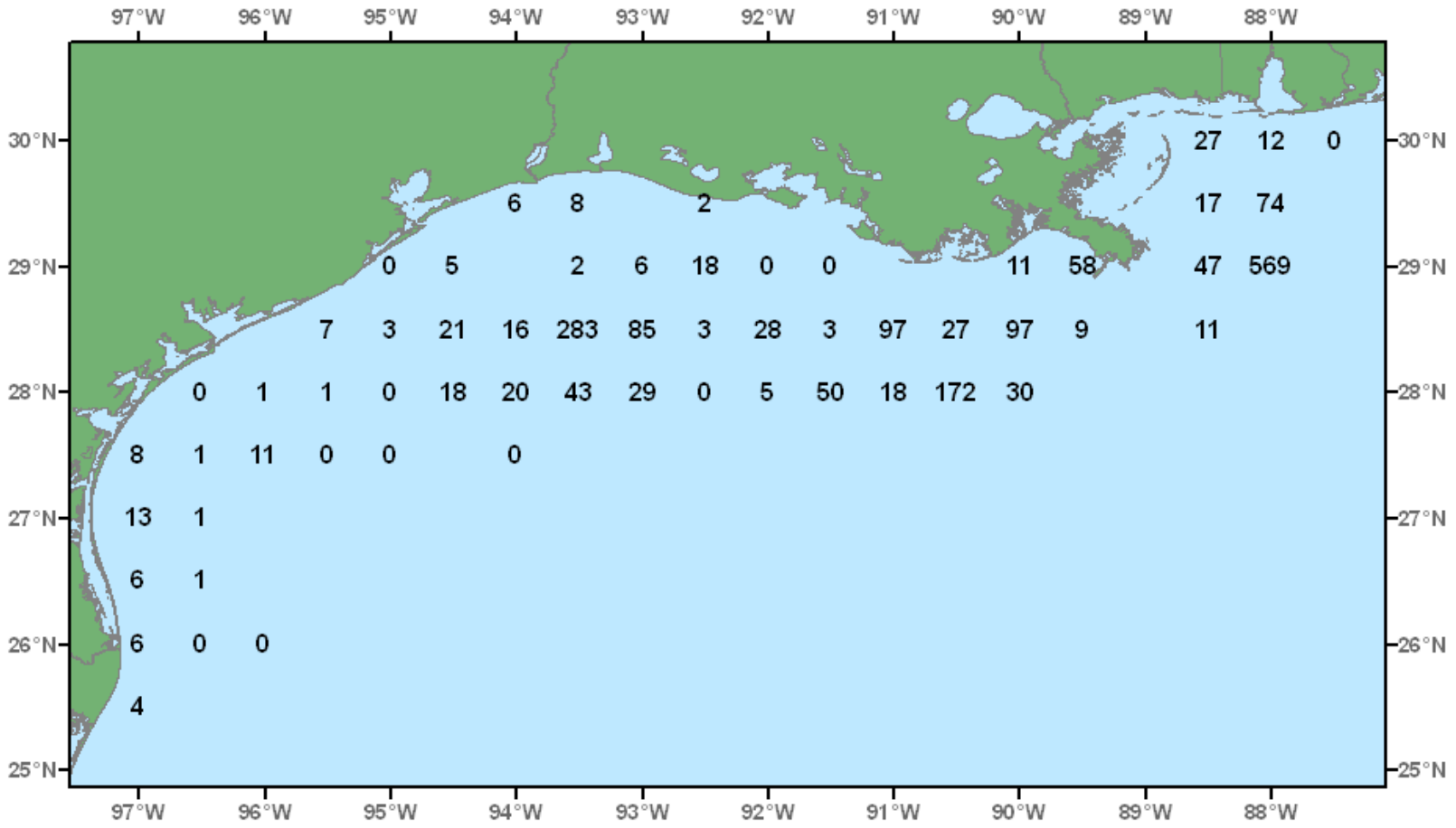

Figure 66. Spot, Leiostomus xanthurus, number/hour for October-December 2000.

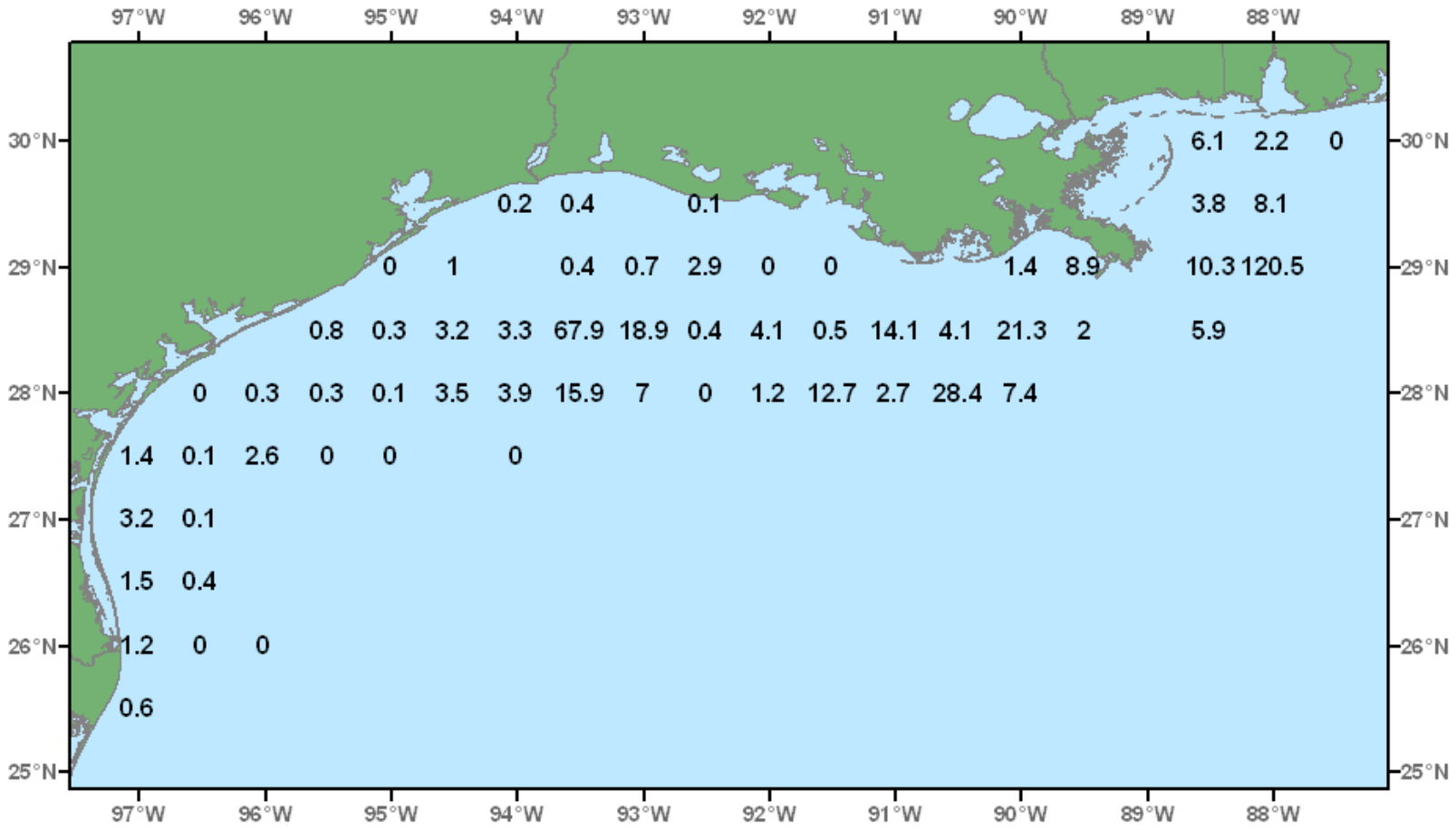

Figure 67. Spot, Leiostomus xanthurus, lb/hour for October-December 2000.

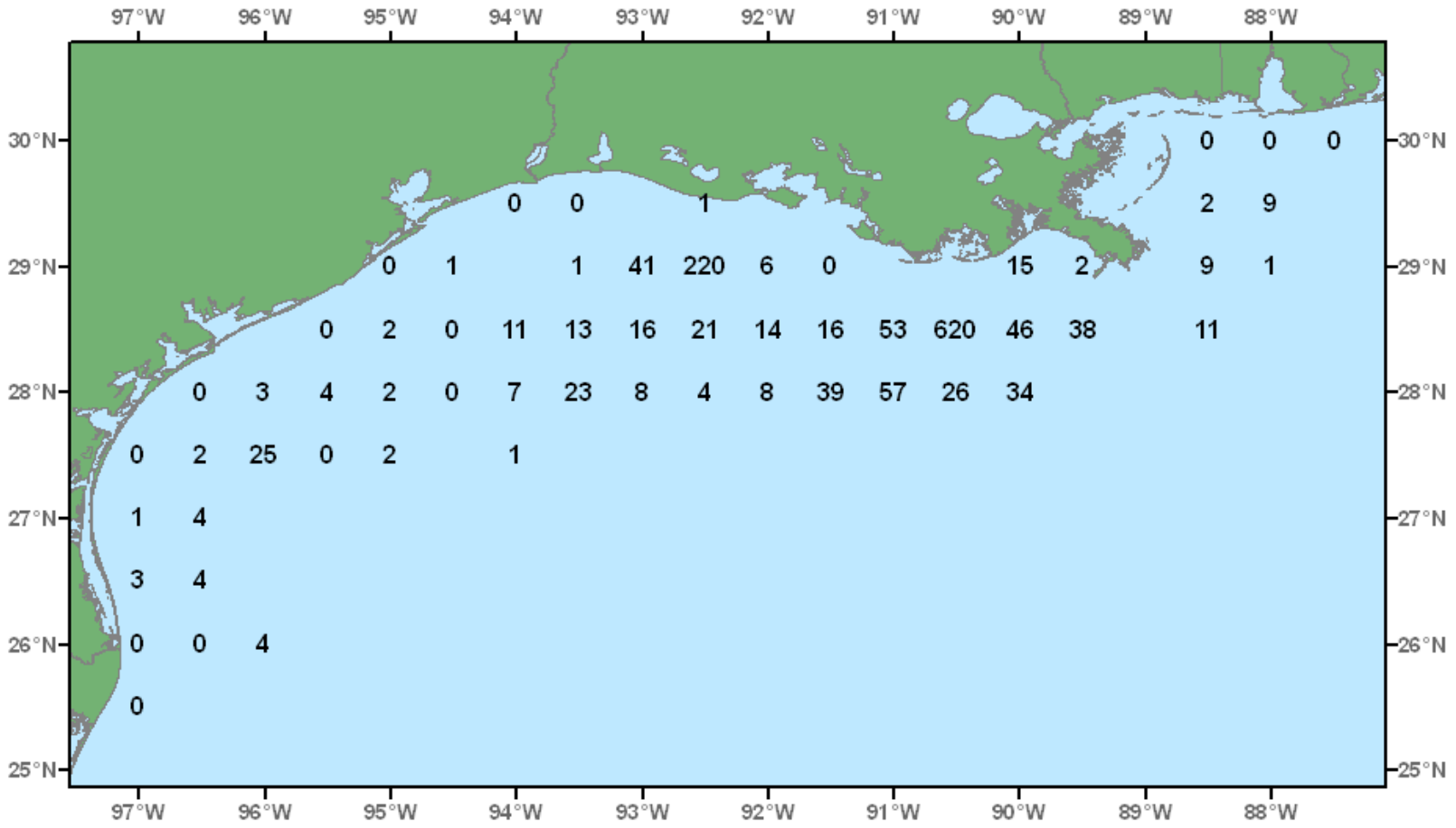

Figure 68. Bigeye searobin, Prionotus longispinosus, number/hour for October-December 2002.

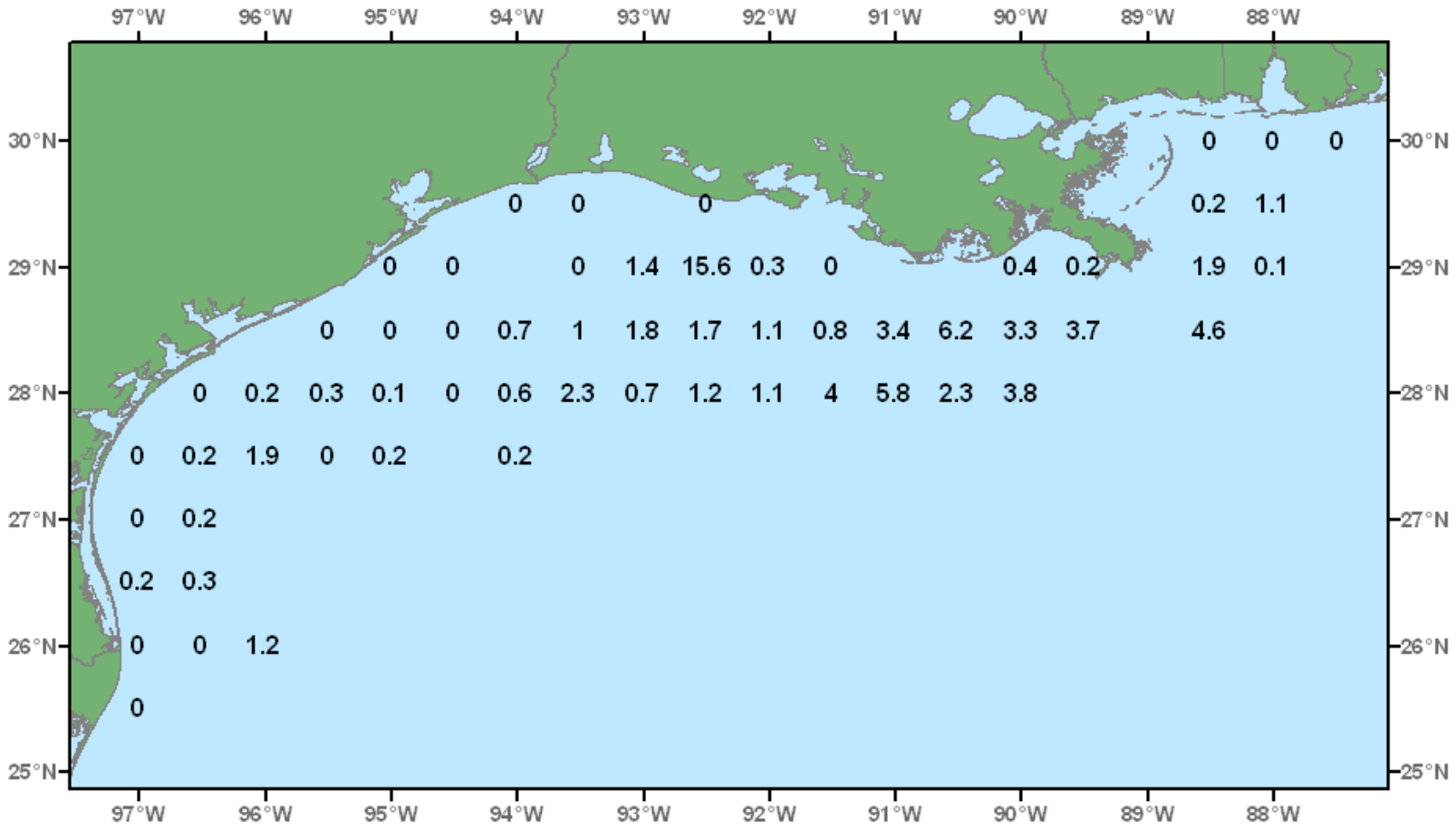

Figure 69. Bigeye searobin, Prionotus longispinosus, lb/hour for October-December 2002.

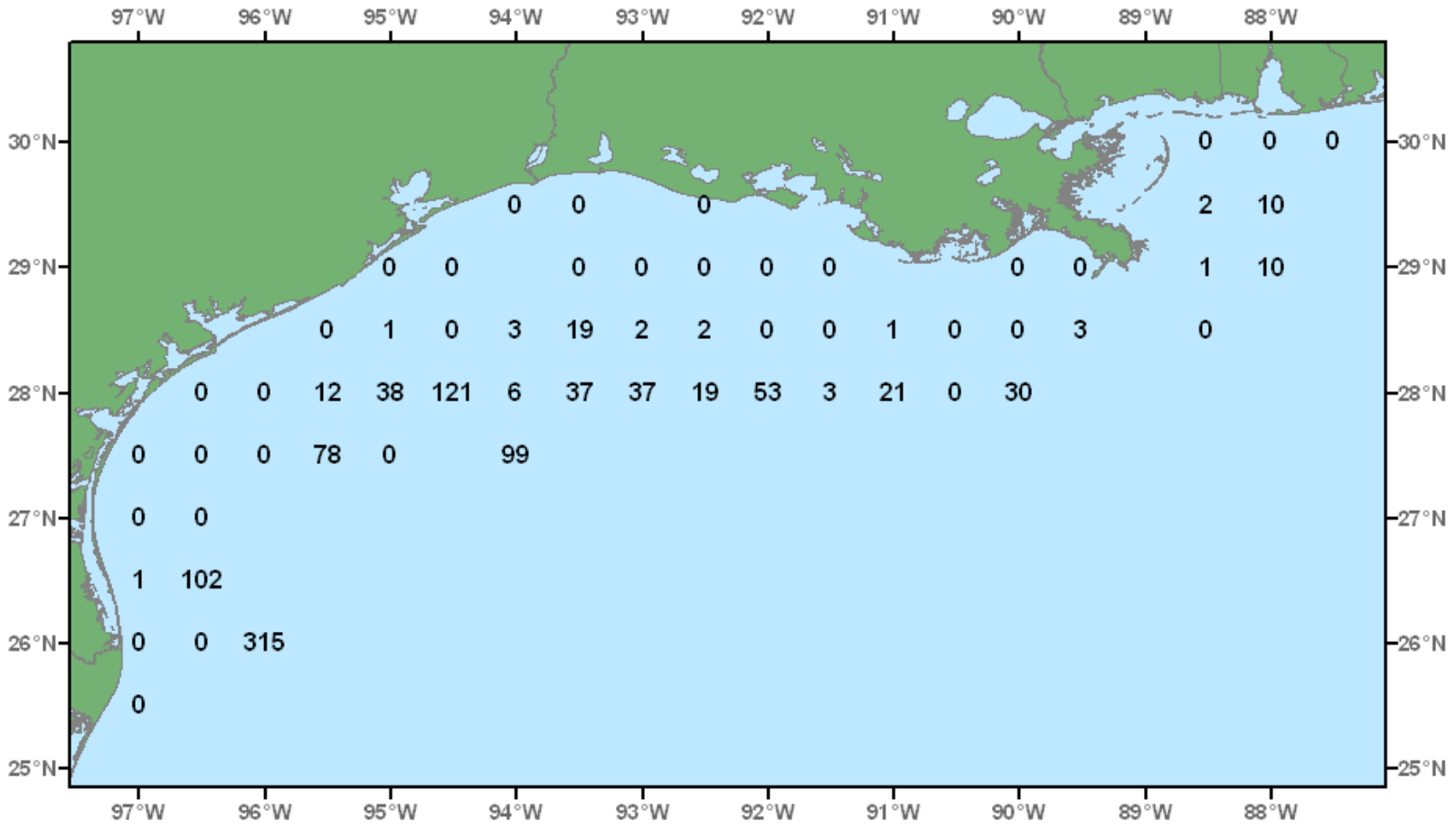

Figure 70. Rough scad, Trachurus lathami, number/hour for October-December 2002.

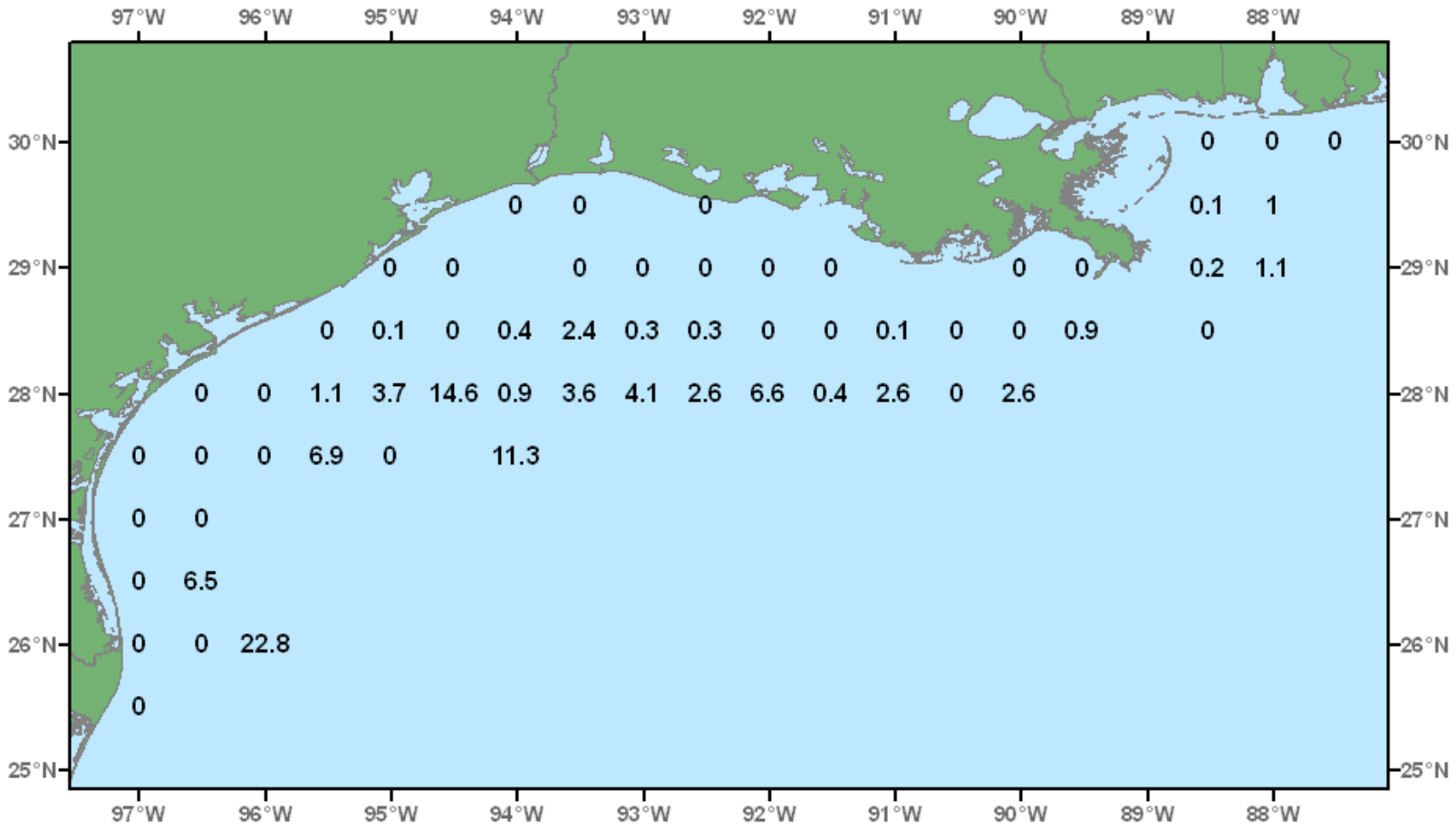

Figure 71. Rough scad, Trachurus lathami, lb/hour for October-December 2002.

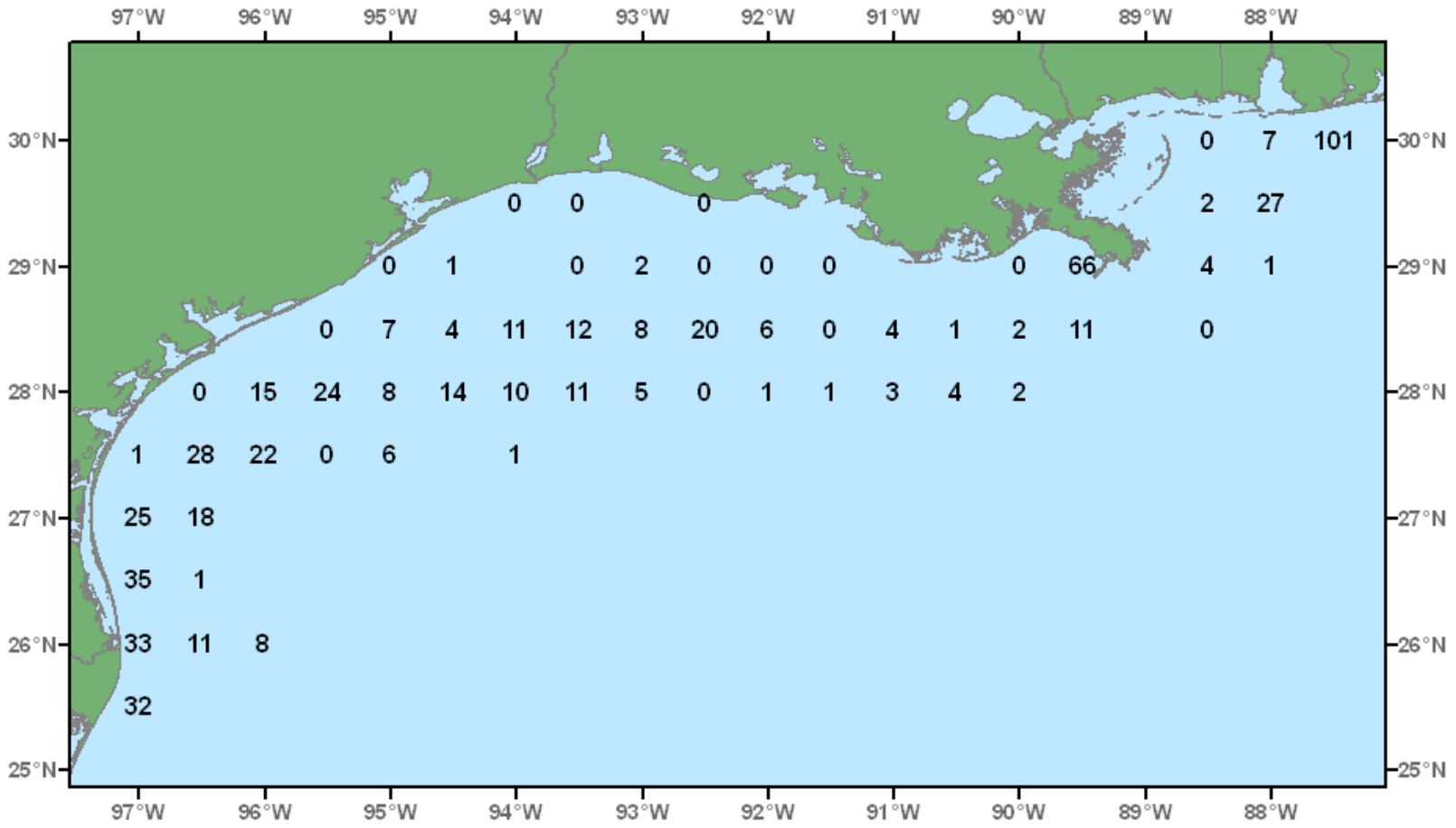

Figure 72. Red snapper, Lutjanus campechanus, number/hour for October-December 2002.

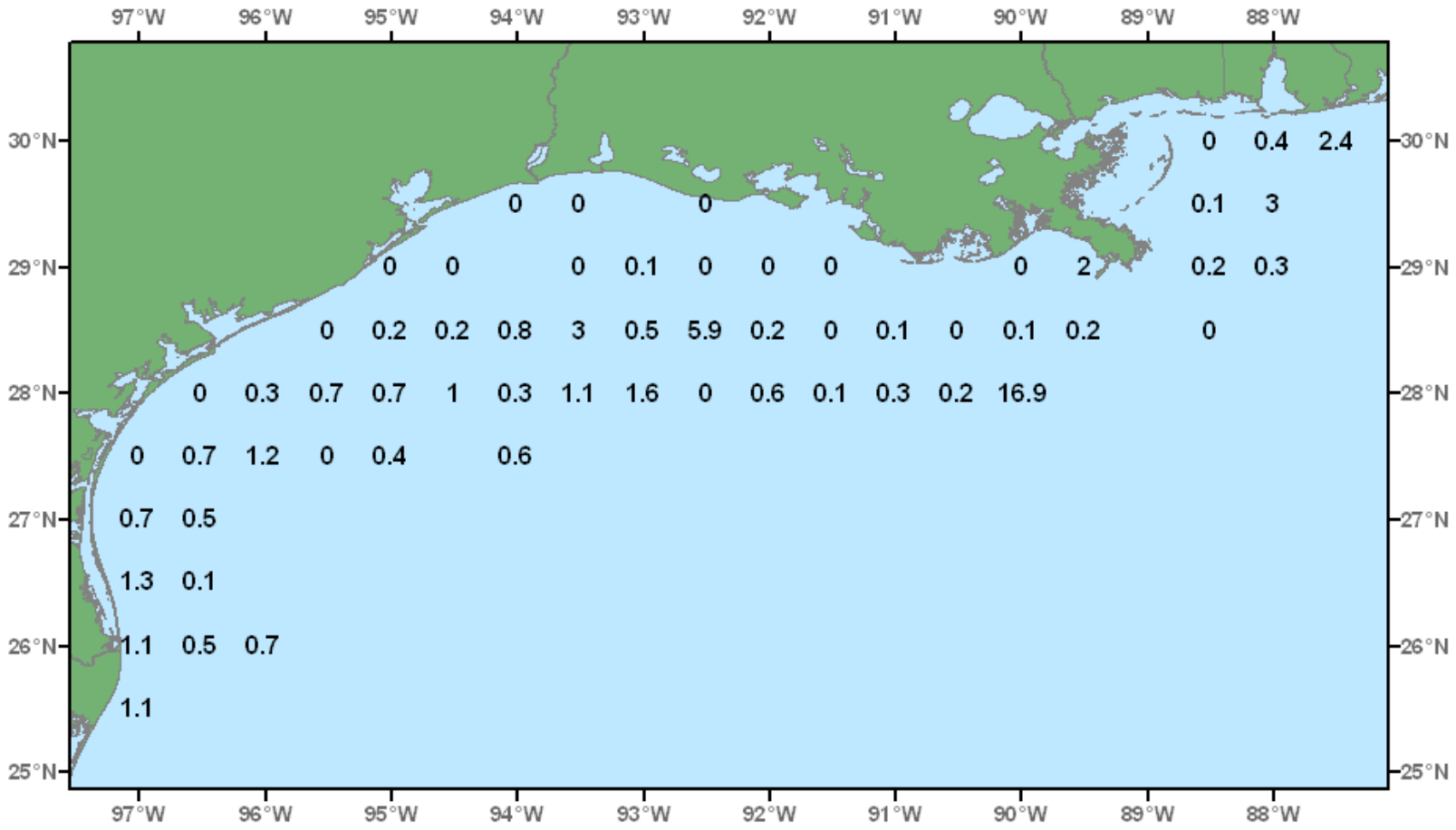

Figure 73. Red snapper, Lutjanus campechanus, lb/hour for October-December 2002.

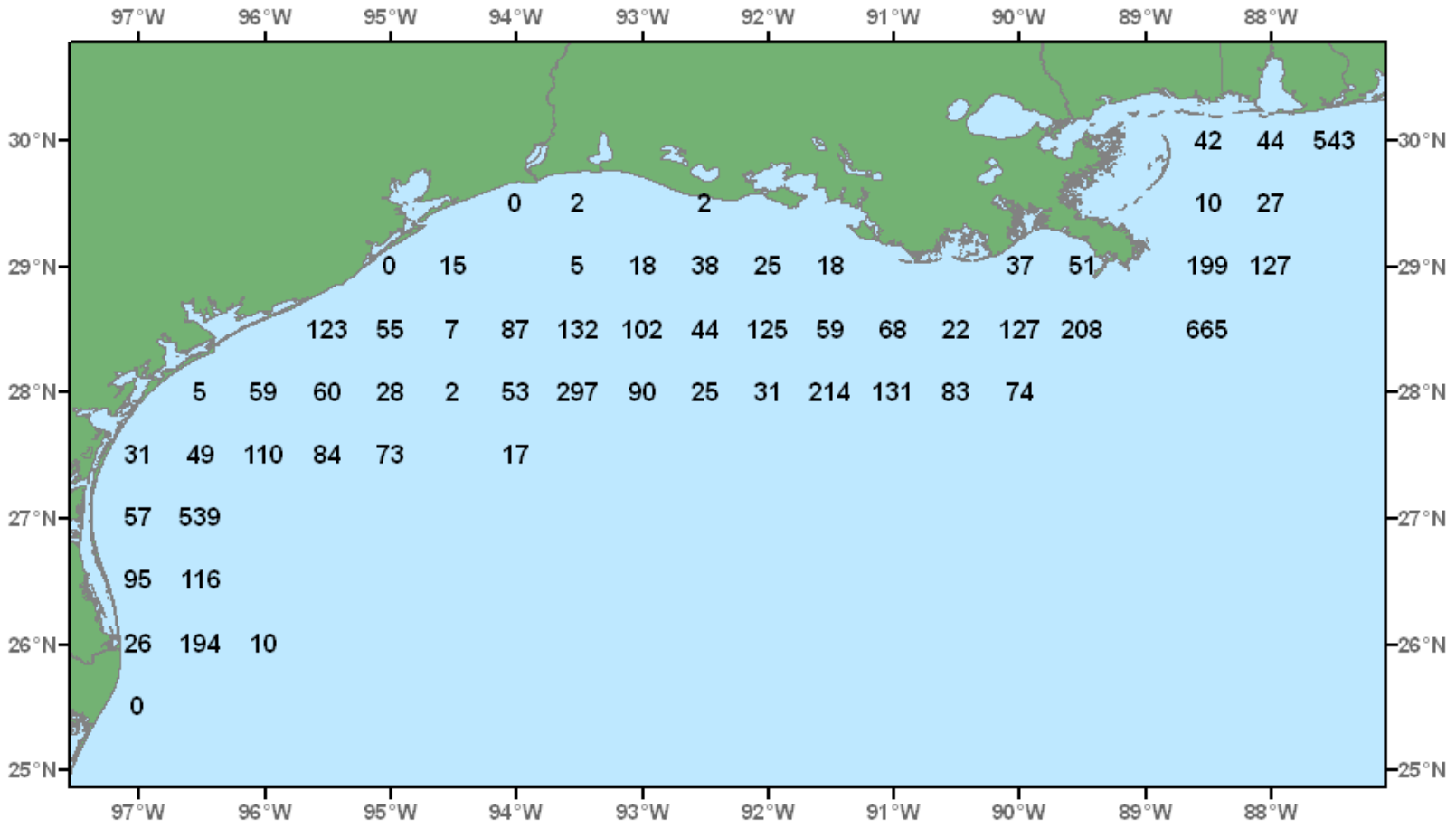

Figure 74. Brown shrimp, Farfantepenaeus aztecus, number/hour for October-December 2002.

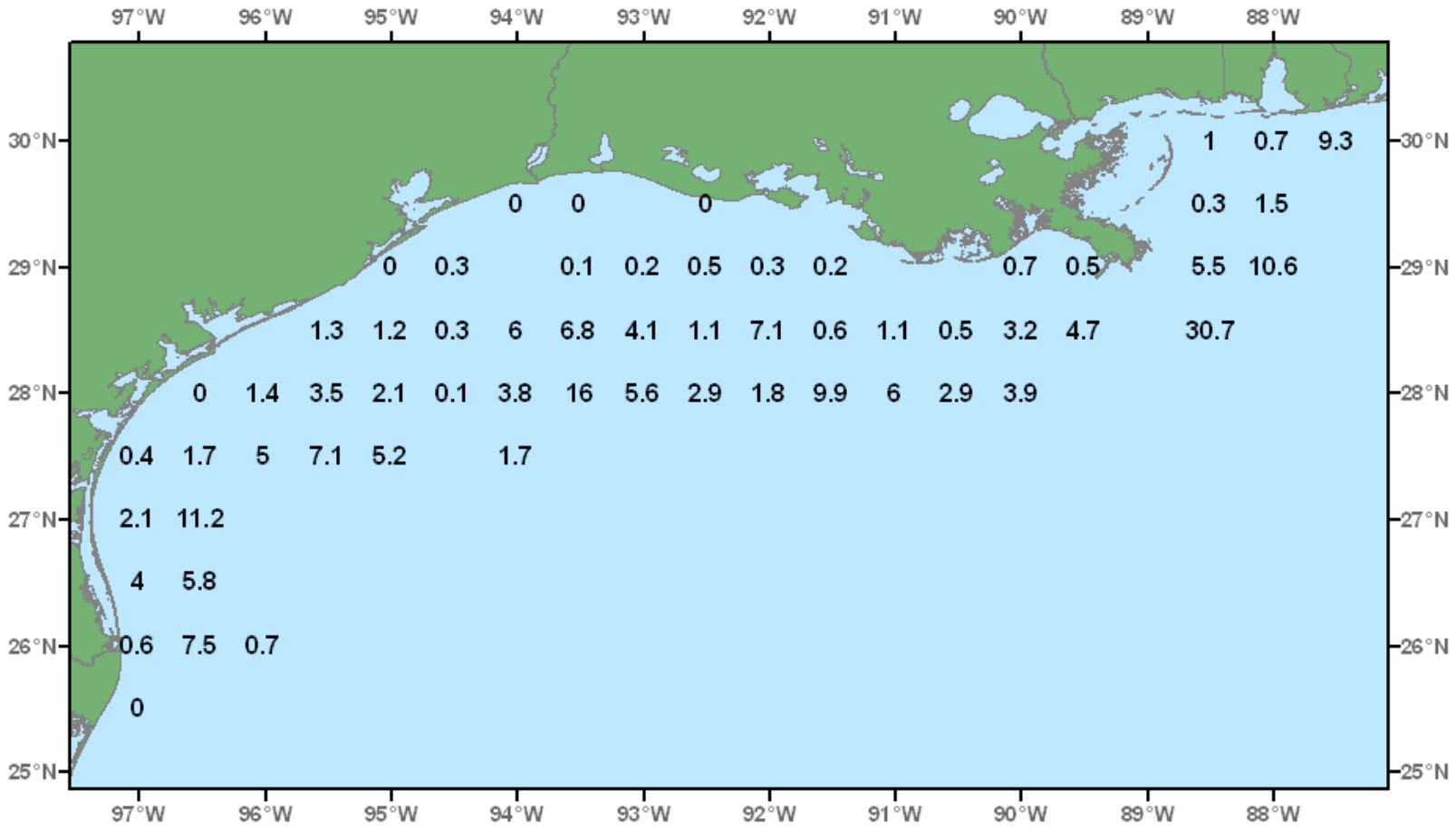

Figure 75. Brown shrimp, Farfantepenaeus aztecus, lb/hour for October-December 2002.

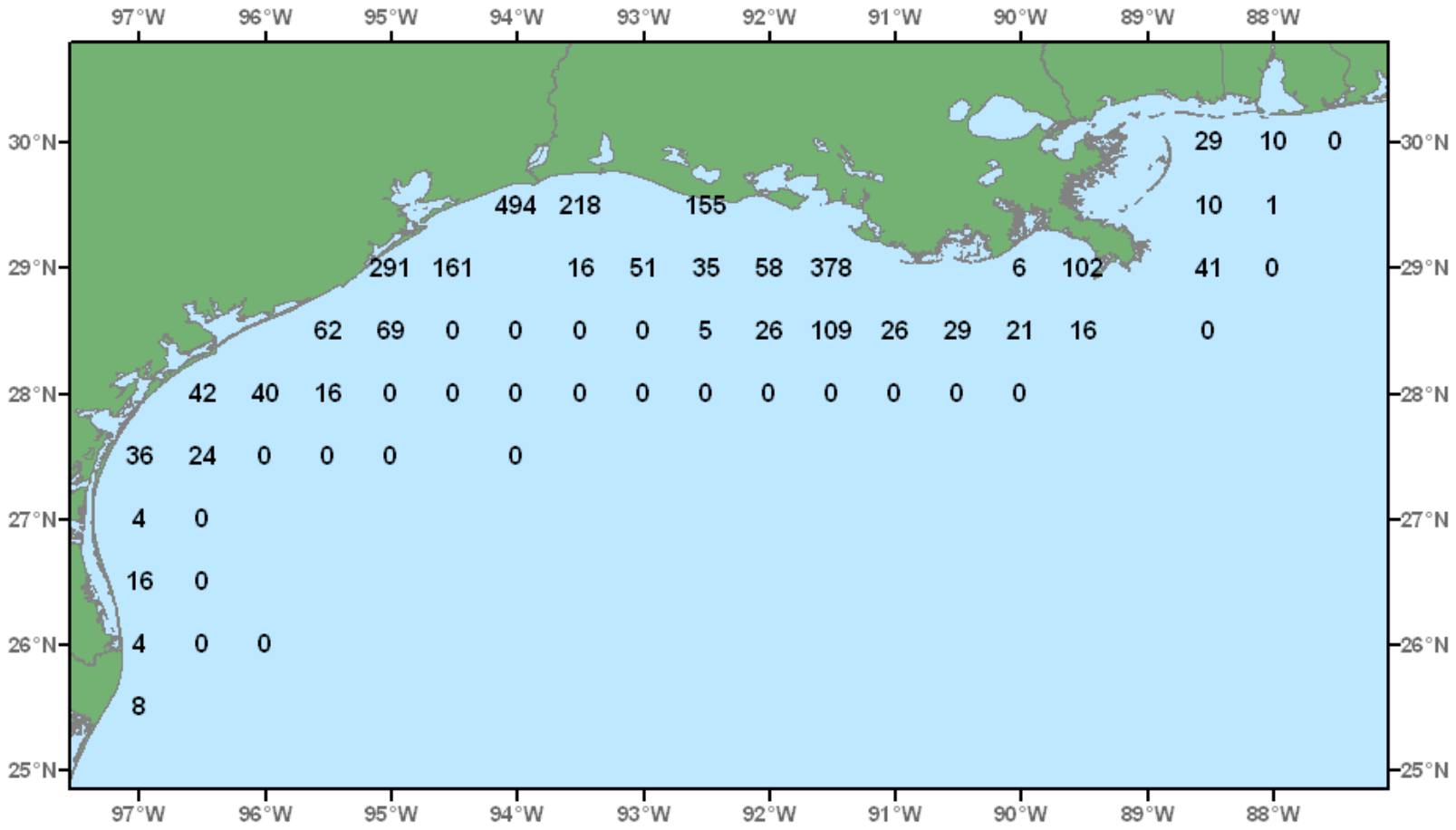

Figure 76. White shrimp, Litopenaeus setiferus, number/hour for October-December 2002.

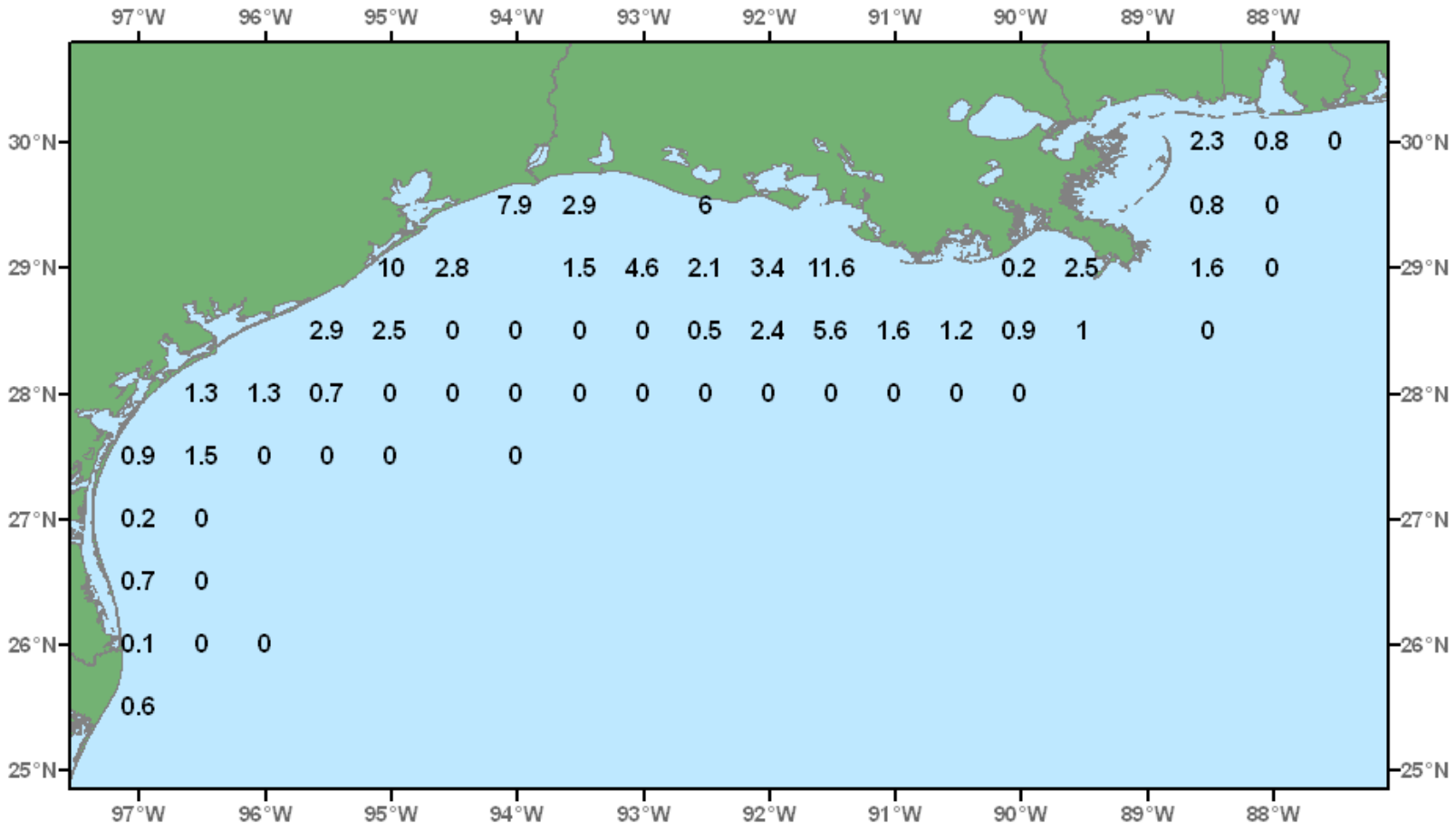

Figure 77. White shrimp, Litopenaeus setiferus, lb/hour for October-December 2002.

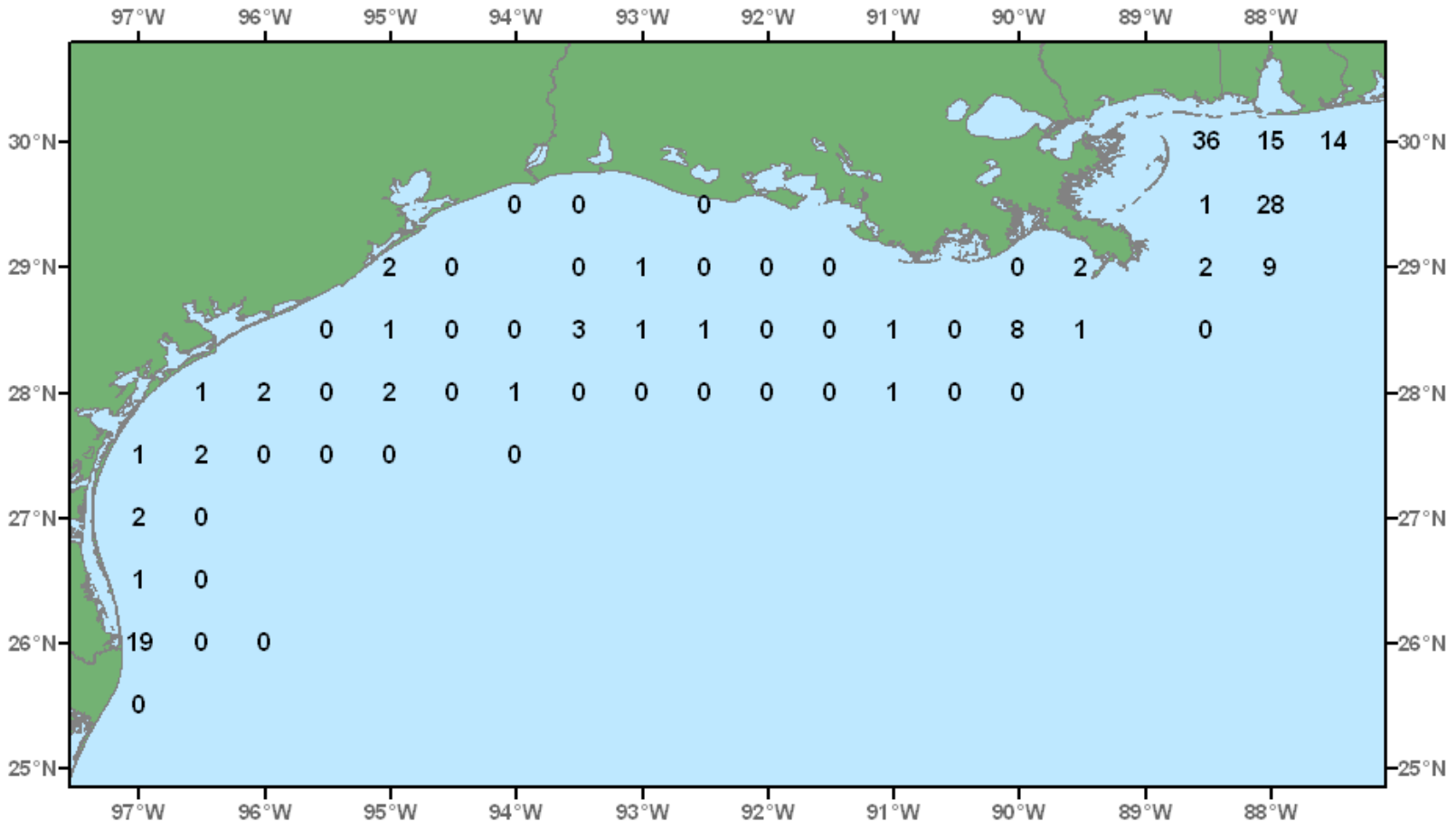

Figure 78. Pink shrimp, Farfantepenaeus duorarum, number/hour for October-December 2002.

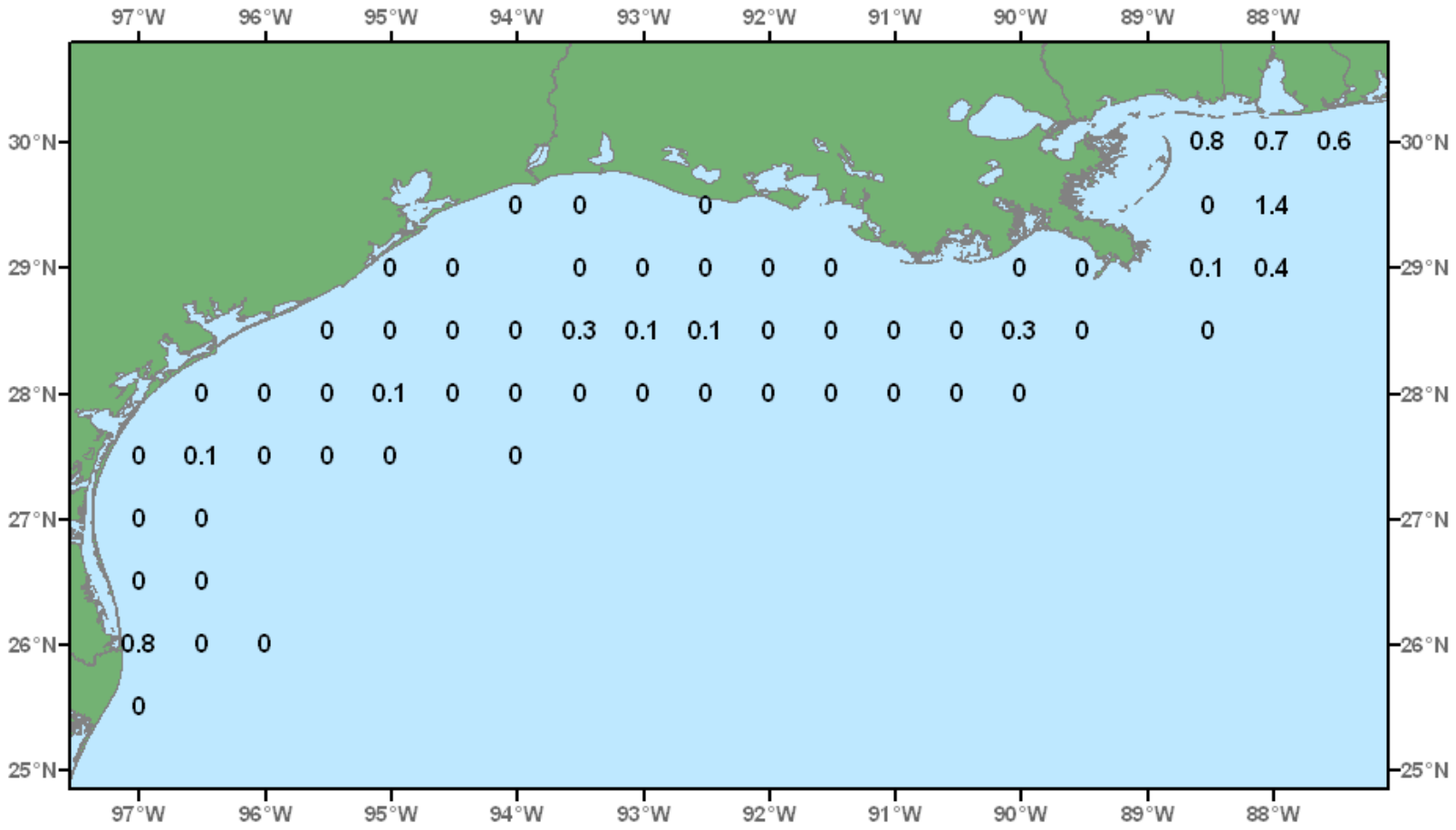

Figure 79. Pink shrimp, Farfantepenaeus duorarum, lb/hour for October-December 2002.

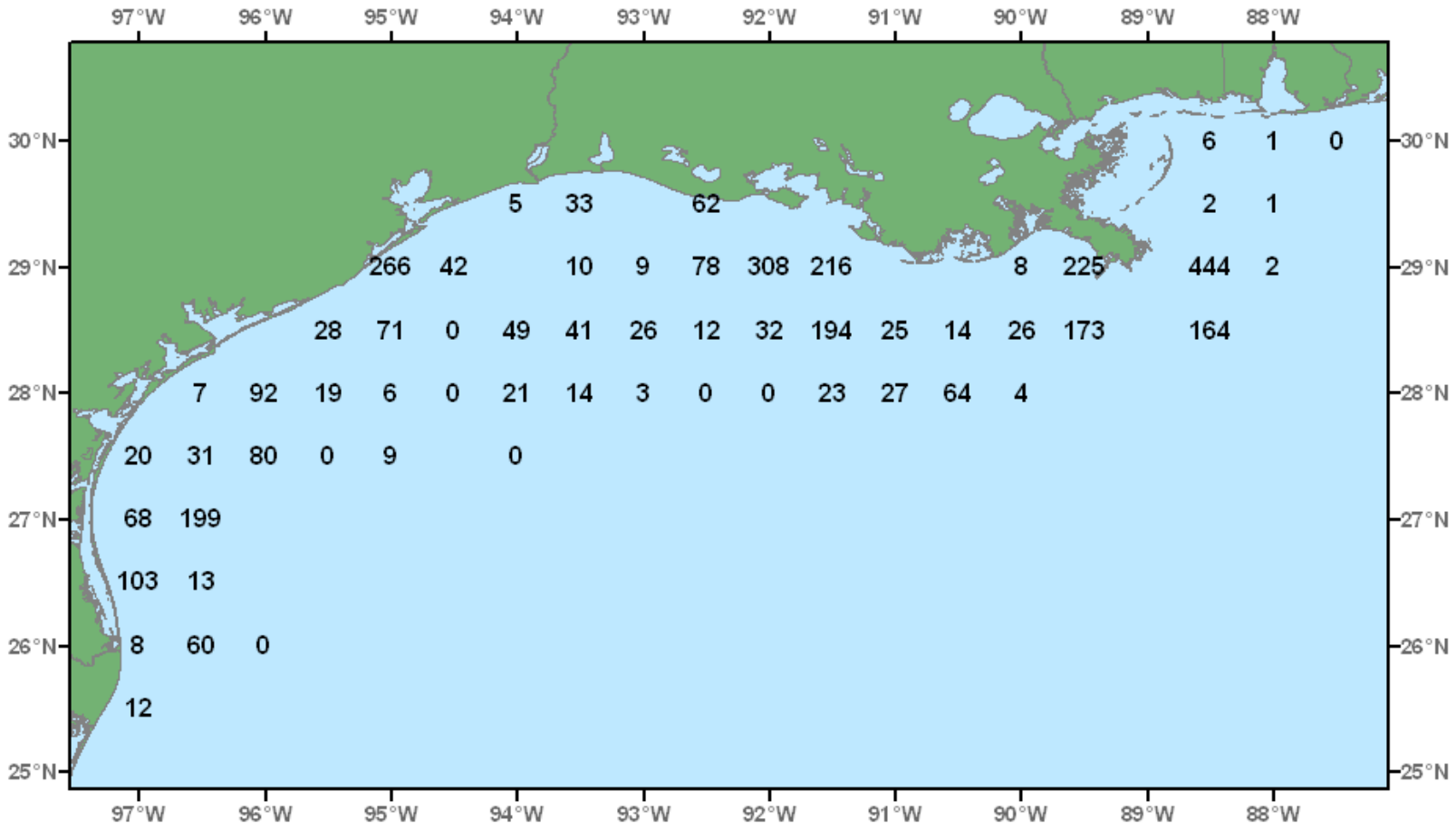

Figure 80. Lesser blue crab, Callinectes similis, number/hour for October-December 2002.

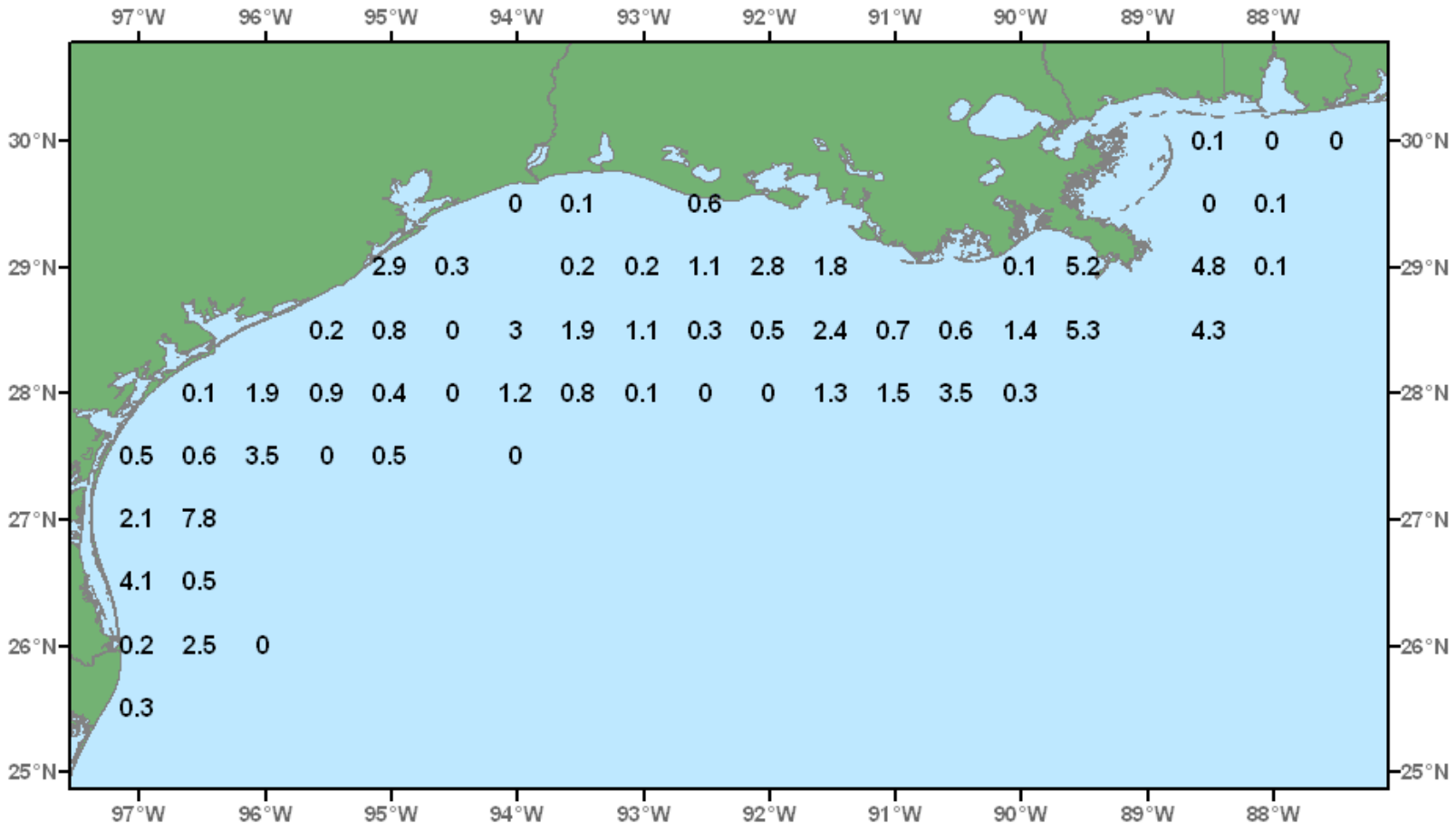

Figure 81. Lesser blue crab, Callinectes similis, lb/hour for October-December 2002.

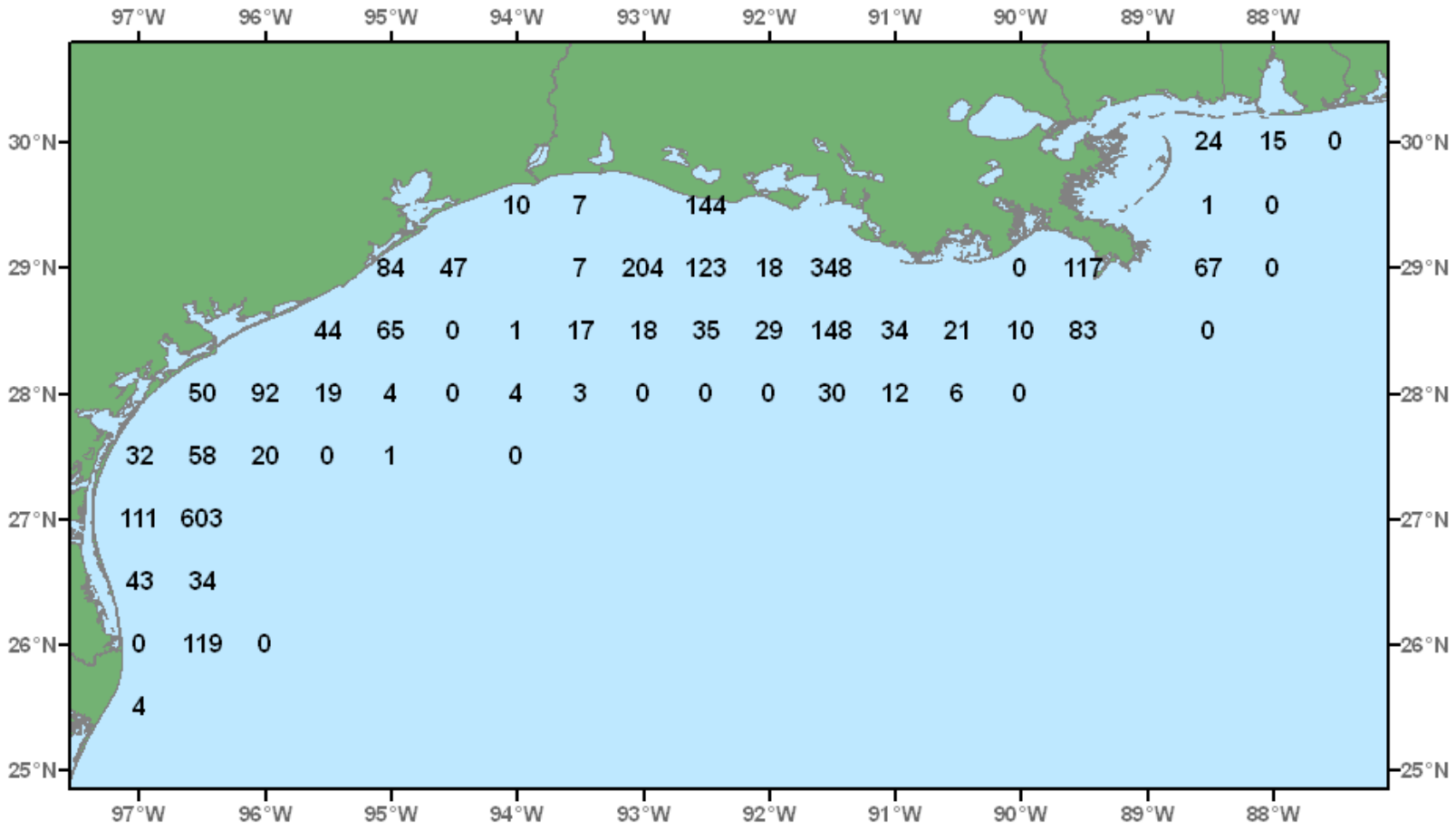

Figure 82. Roughback shrimp, Trachypenaeus similis, number/hour for October-December 2002.

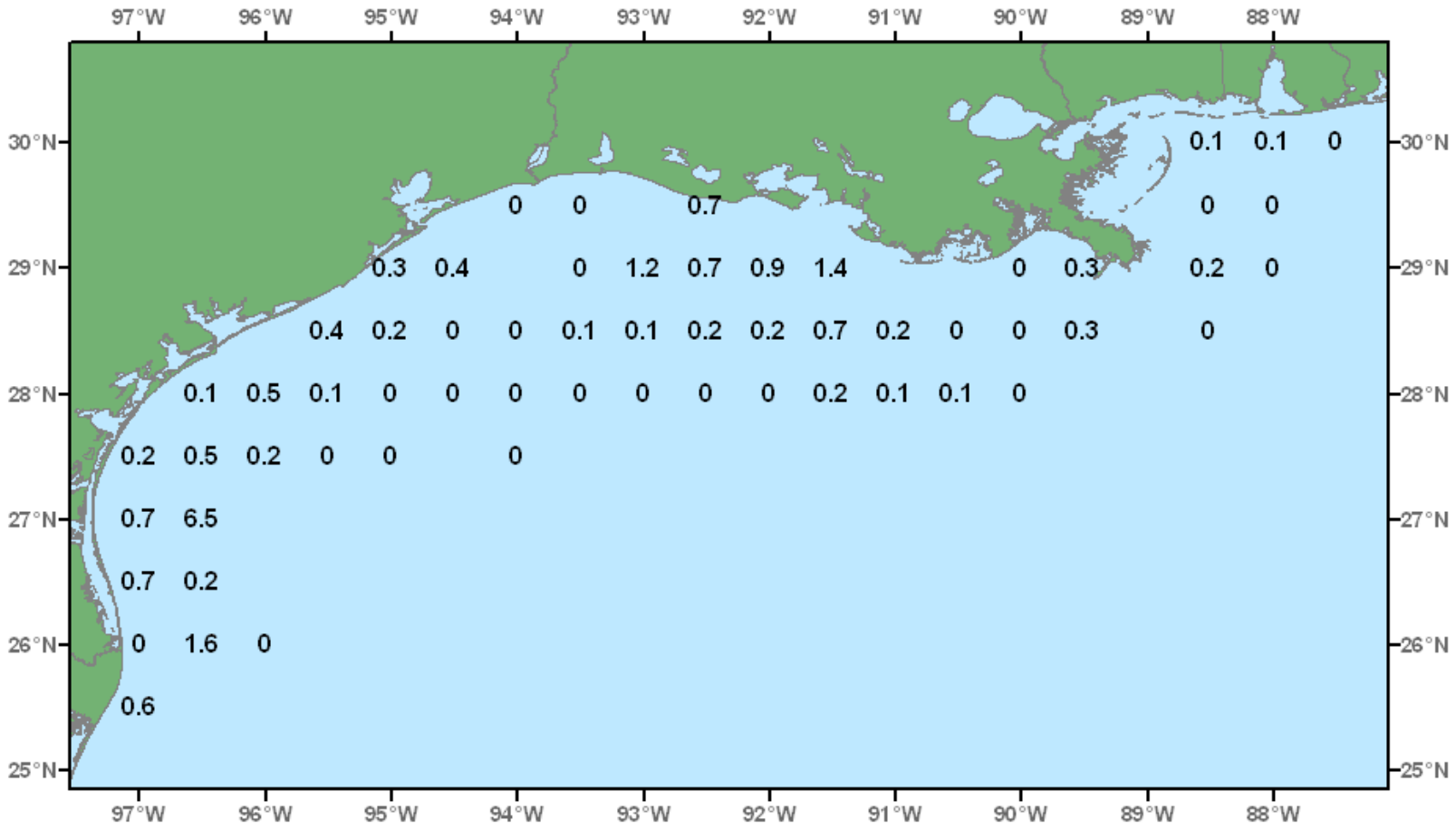

Figure 83. Roughback shrimp, Trachypenaeus similis, lb/hour for October-December 2002.

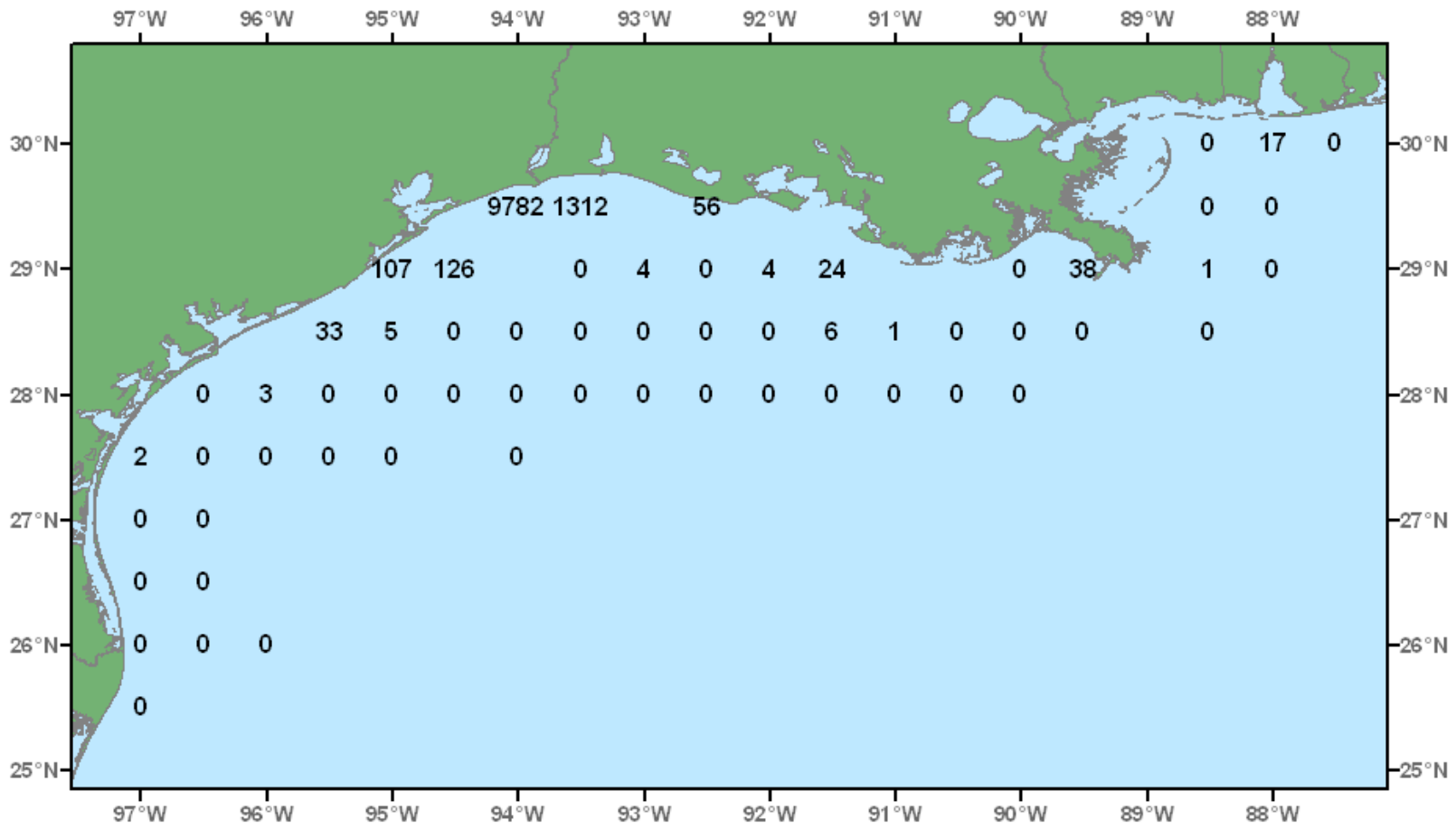

Figure 84. Seabob, Xiphopenaeus kroyeri, number/hour for October-December 2000.

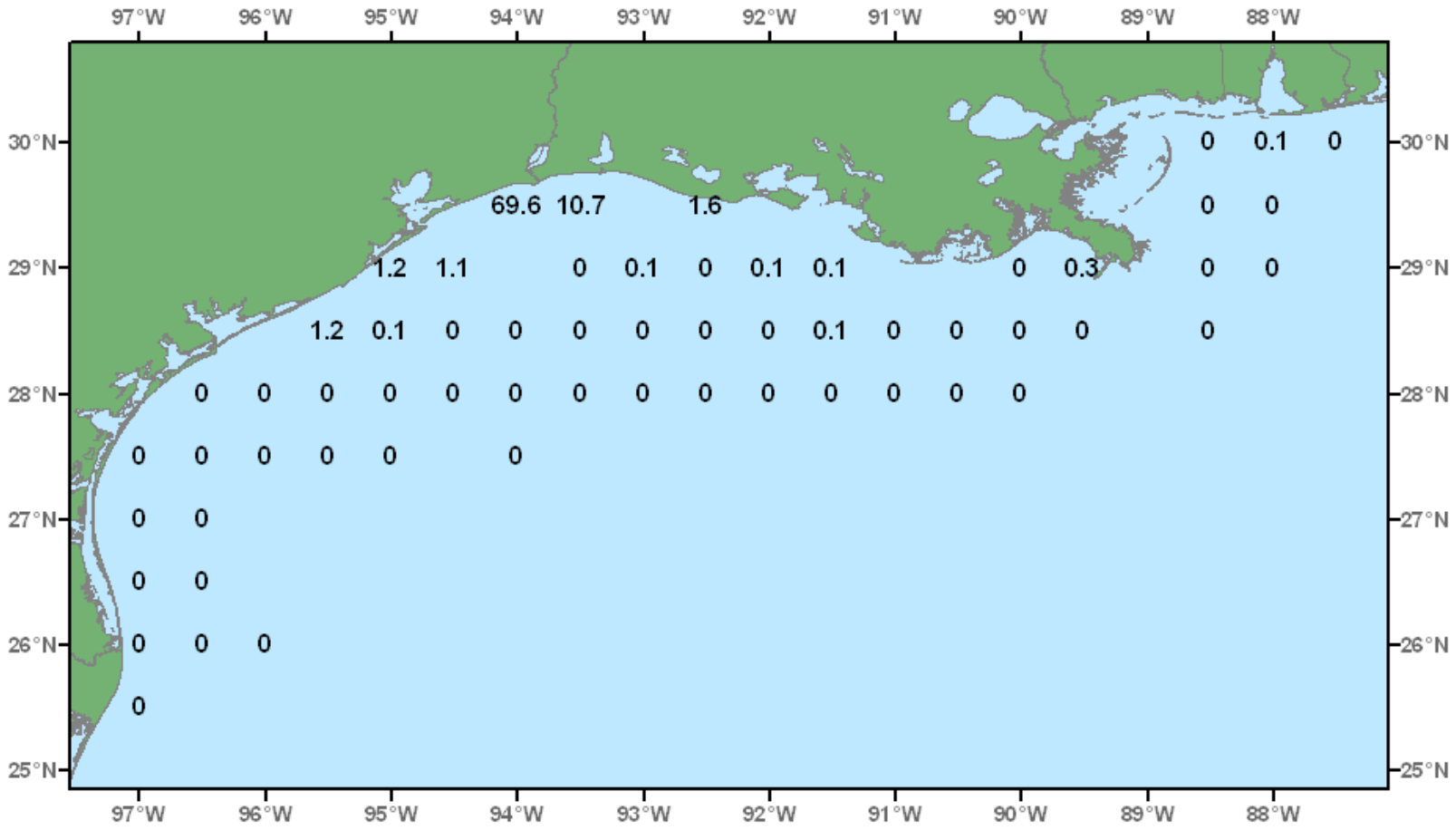

Figure 85. Seabob, Xiphopenaeus kroyeri, lb/hour for October-December 2000.

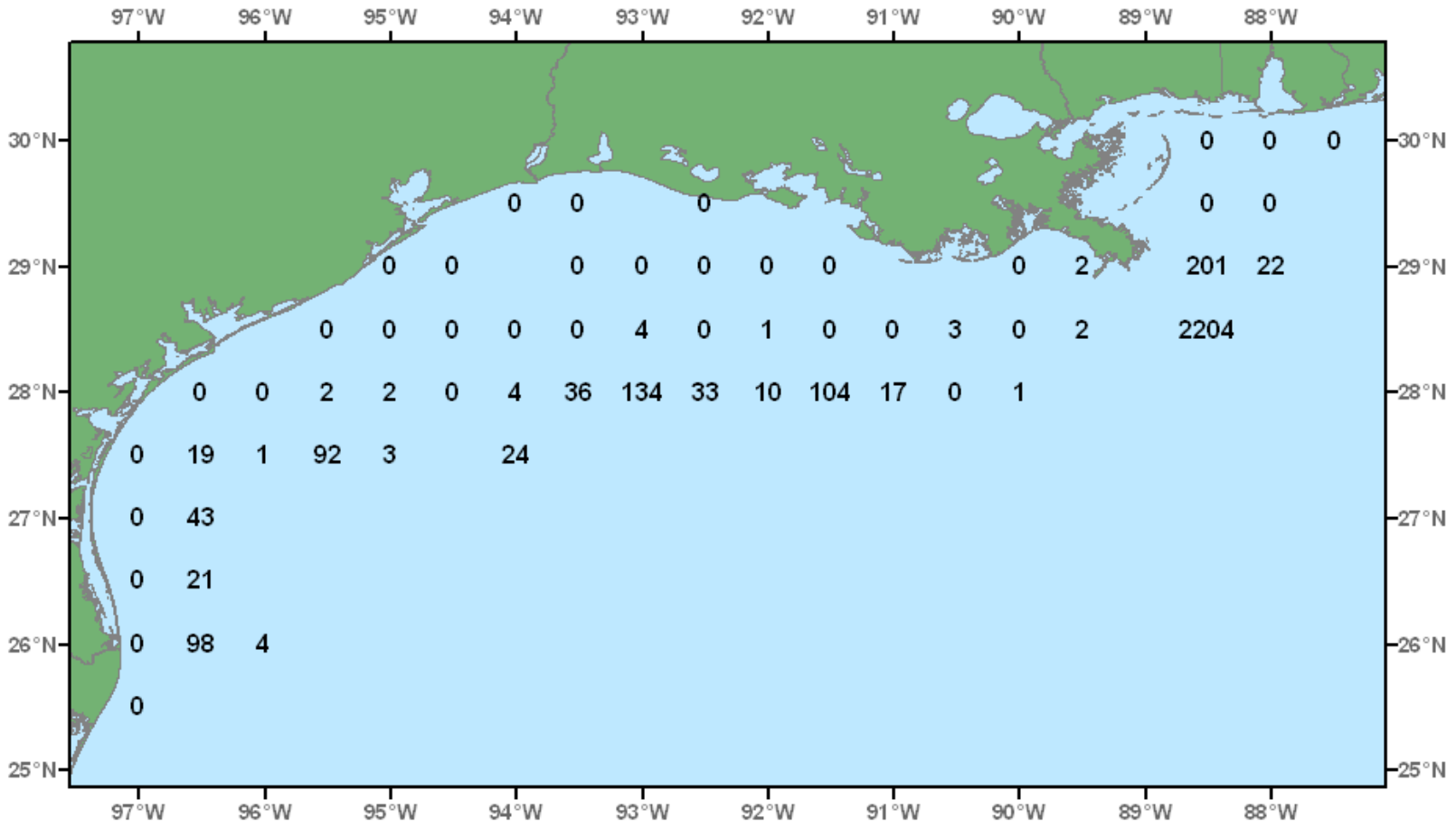

Figure 86. Longspine swimming crab, Portunis spinicarpus, number/hour for October-December 2002.

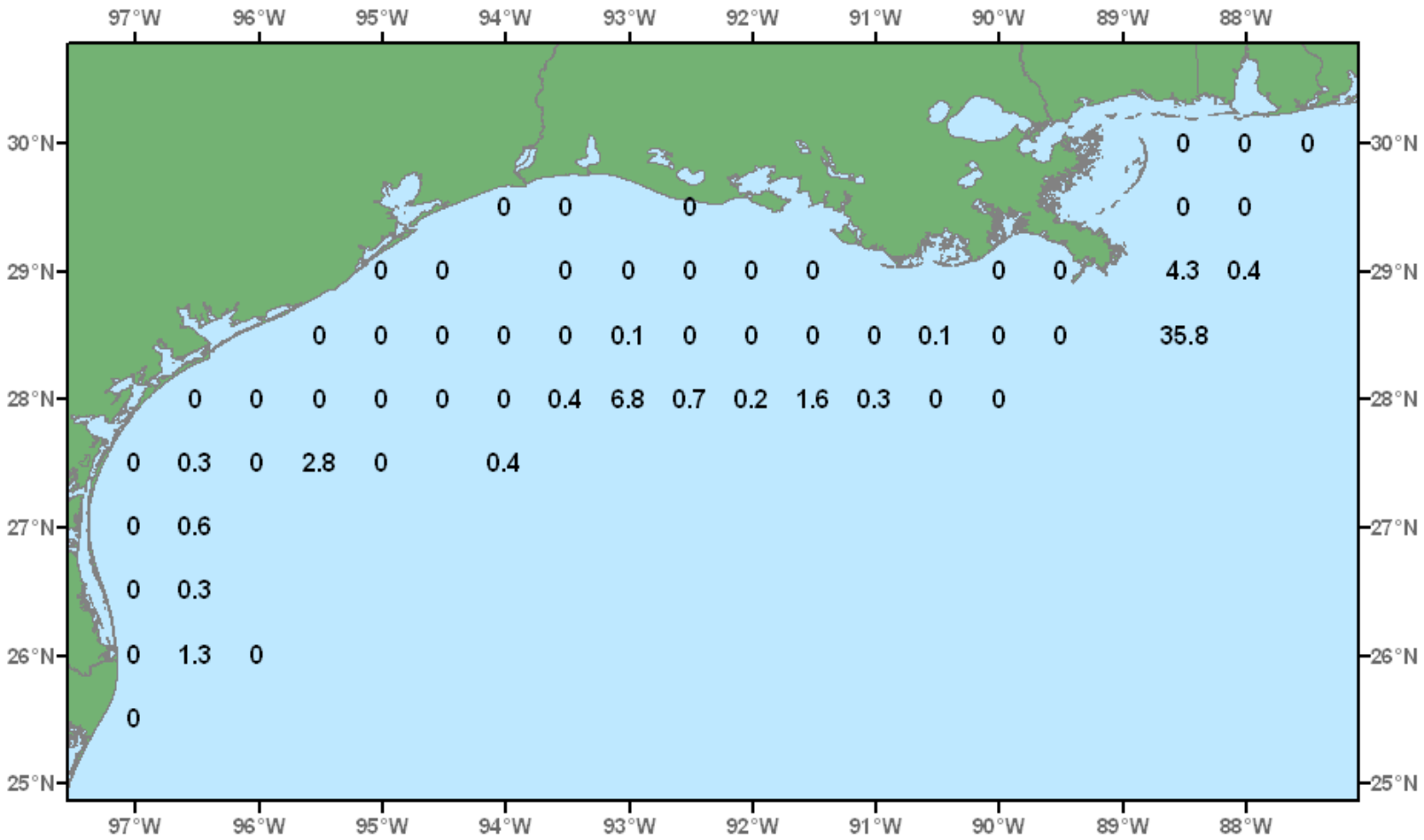

Figure 87. Longspine swimming crab, Portunis spinicarpus, lb/hour for October-December 2002.

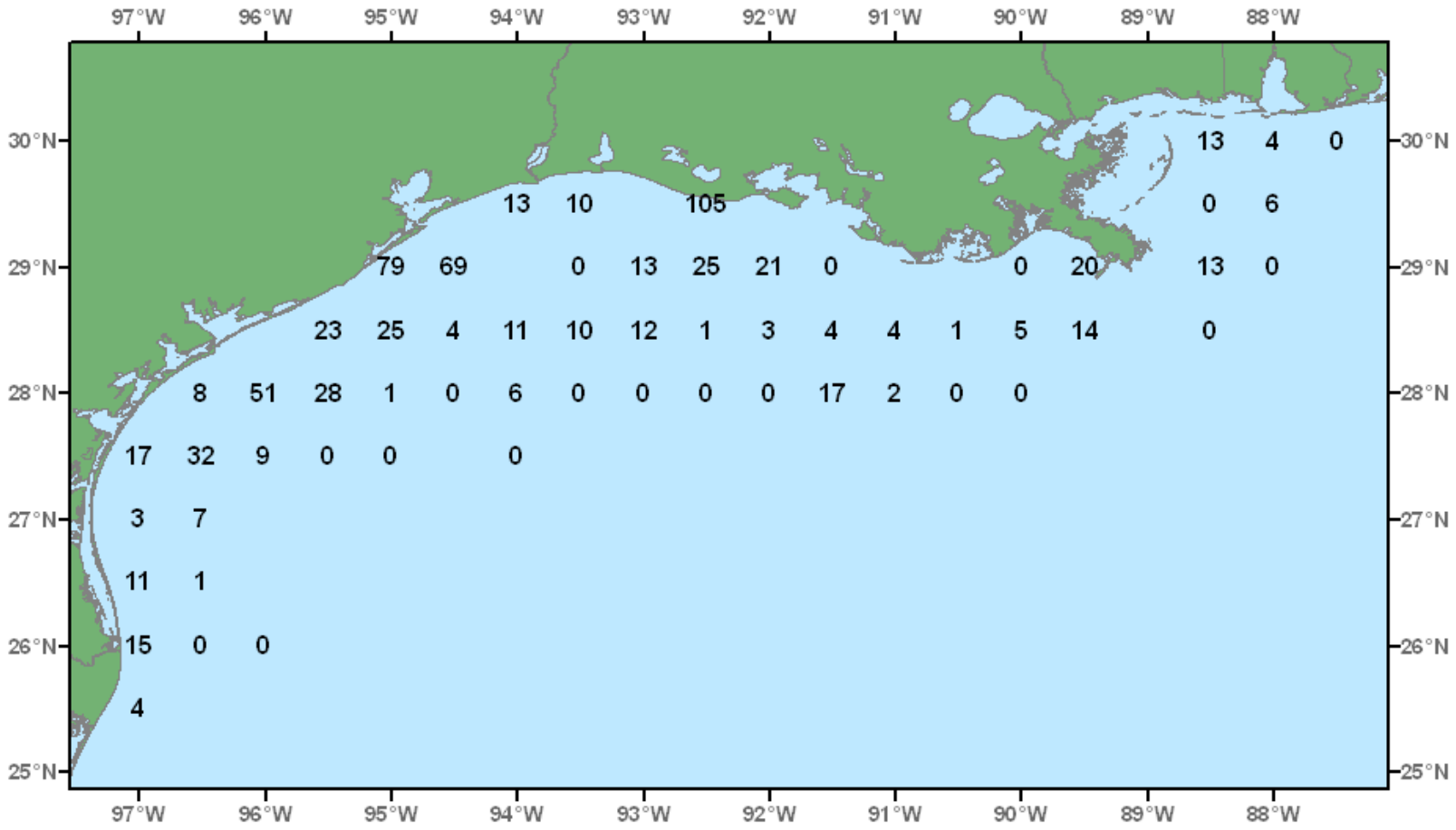

Figure 88. Mantis shrimp, Squilla empusa, number/hour for October-December 2002.

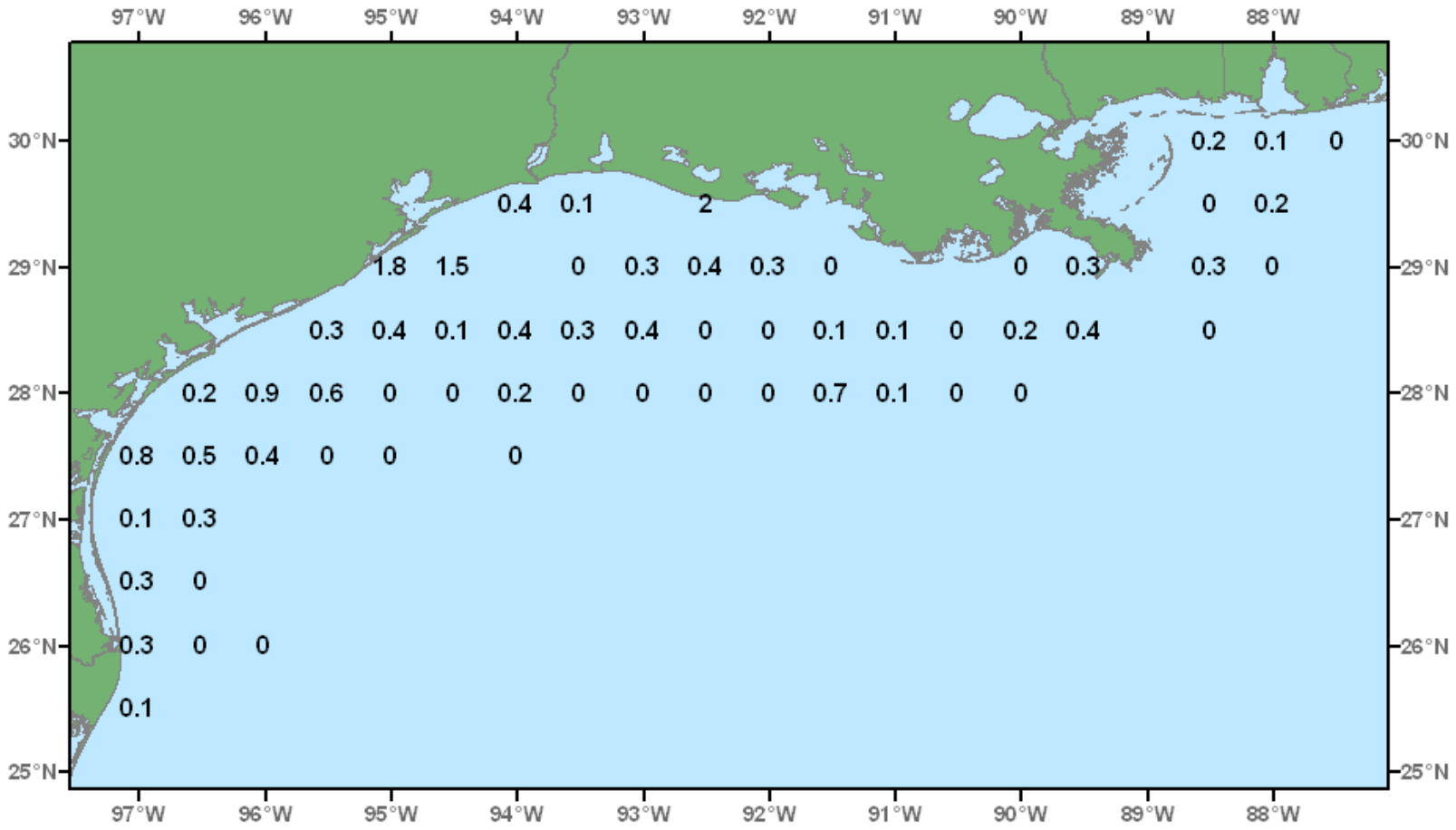

Figure 89. Mantis shrimp, Squilla empusa, lb/hour for October-December 2002.

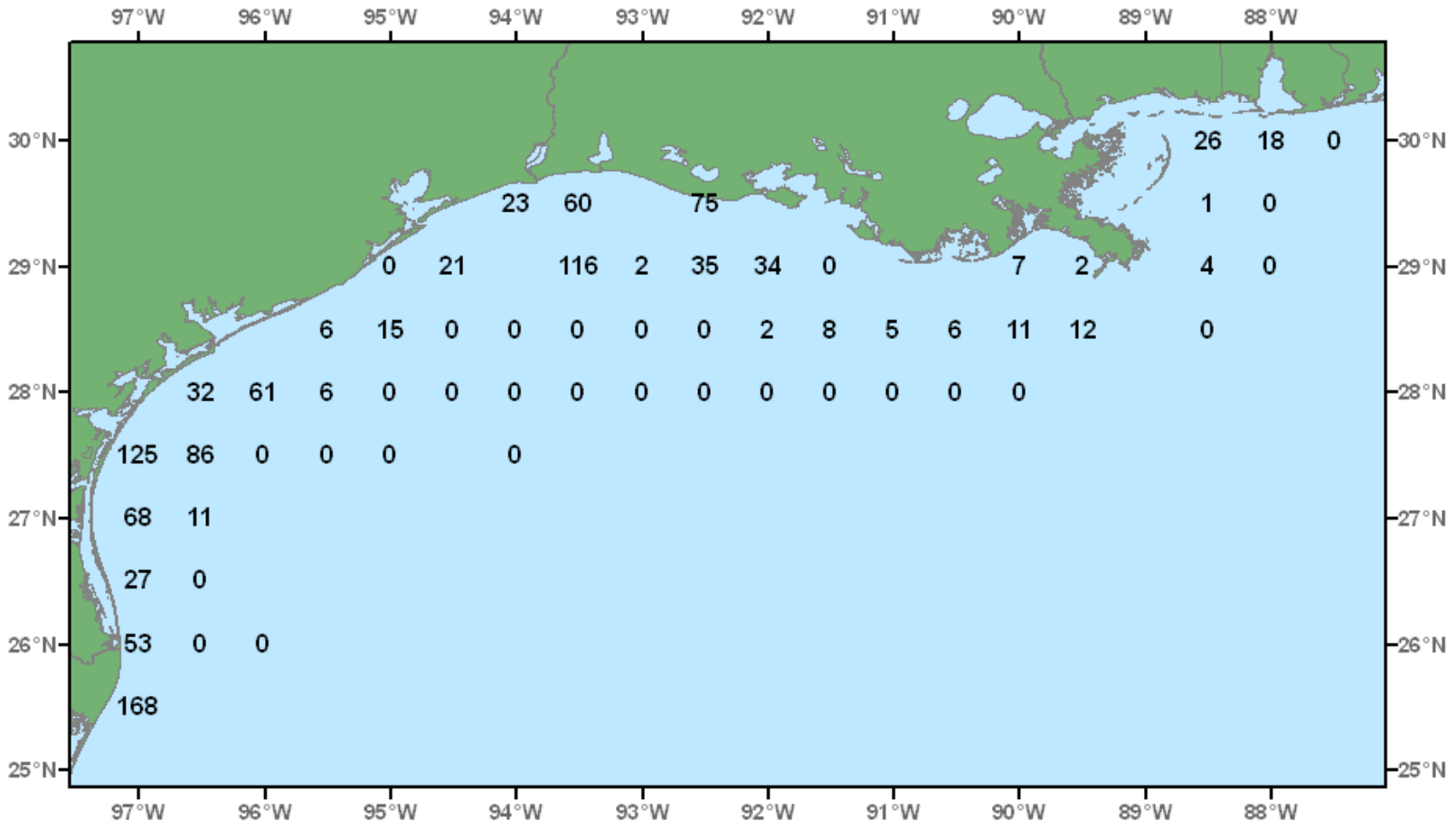

Figure 90. Atlantic brief squid, Lolliguncula brevis, number/hour for October-December 2002.

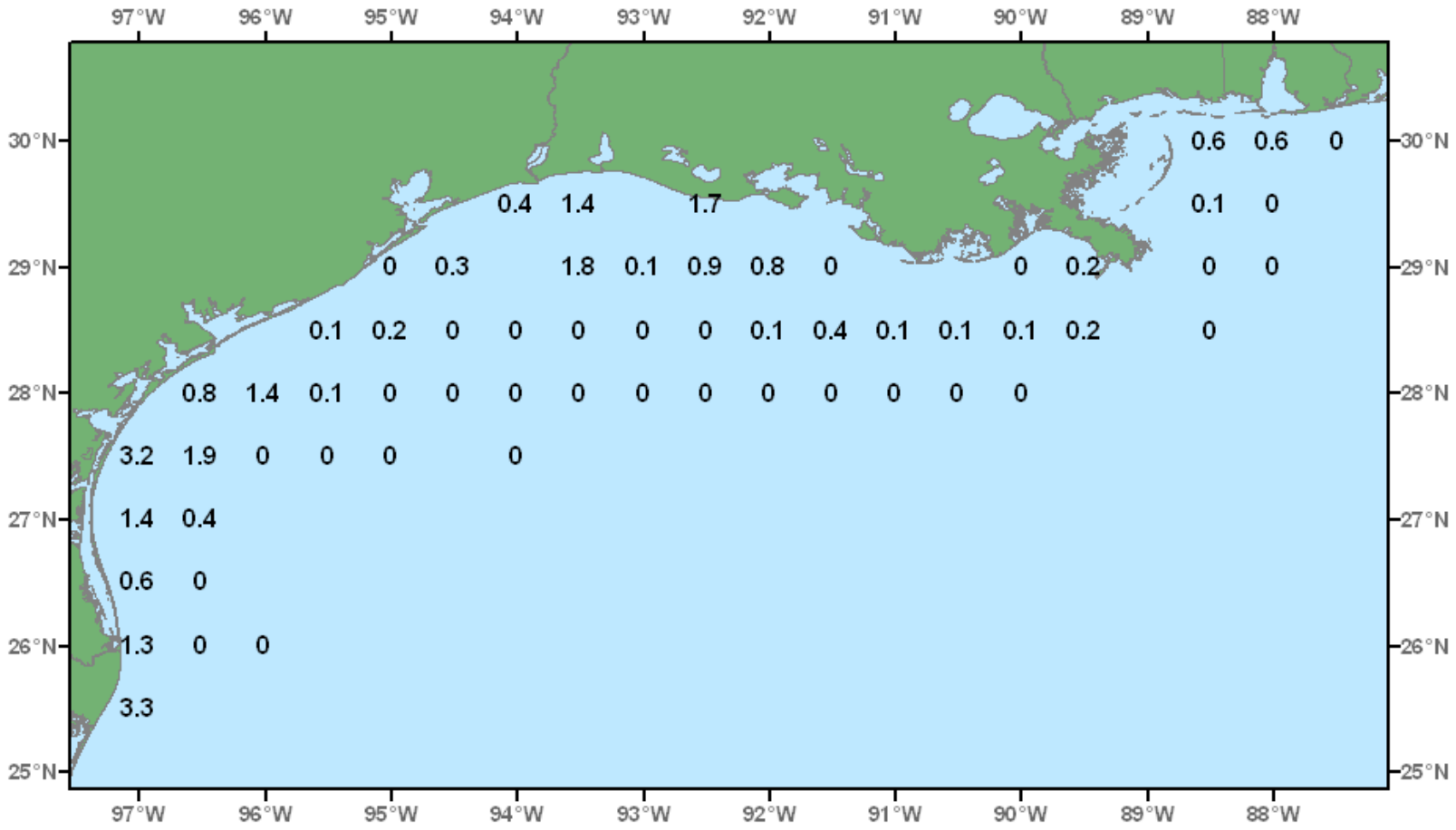

Figure 91. Atlantic brief squid, Lolliguncula brevis, lb/hour for October-December 2002.

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