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SEAMAP ENVIRONMENTAL AND BIOLOGICAL ATLAS OF THE GULF OF MEXICO, 2004

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GULF STATES MARINE FISHERIES COMMISSION

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The 2004 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, 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

This publication serves as a brief introduction to the SEAMAP Environmental and Biological Atlas of the Gulf of Mexico – 2004. The full Environmental and Biological Atlas of the Gulf of Mexico – 2004 (Atlas) is located on the enclosed CD.

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 2003 (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); 2002 (Rester et al. 2008); and 2003 (Rester et al. 2009). Environmental assessment activities occurred with each of the surveys found in Table 1.

In March 2004, 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 database, it was decided to continue the same types of survey activities conducted in 1982 through 2003. Overall survey objectives in 1982 to 2004 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-second in a series of SEAMAP environmental and biological atlases presents such data, in a summarized form, collected during the 2004 SEAMAP surveys. The area covered in the Gulf of Mexico for all SEAMAP survey activities during 2004 is shown in Figure 1.

MATERIALS AND METHODS

Methodology for the 2004 SEAMAP surveys is similar to that of the 1982 through 2003 surveys. Sampling was conducted within the U.S. Exclusive Economic Zone (EEZ) and state territorial waters. The USM/COST/GCRL vessel TOMMY MUNRO collected plankton and environmental data during the Winter Plankton Survey from January 14-15. The NOAA Ship OREGON II collected plankton and environmental data during the Spring Plankton Survey from April 15 to June 10 while the NOAA Ship OREGON II collected plankton and environmental data from May 13 to May 30.

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 11 – July 12), the Louisiana vessel PELICAN (July 12-15), and the NOAA Ship OREGON II (June 9 – July 16). The TPWD vessels SAN JACINTO, SABINE, R.J. KEMP, MATAGORDA BAY, and NUECES (June 2-29) and the Alabama vessel A.E. VERRILL (June 3) did not sample plankton in conjunction with the summer survey.

The NOAA Ship CARETTA participated in the Reef Fish Survey from February 22 – March 14.

Vessels that participated in collecting plankton and environmental data during the Fall Plankton Survey included the NOAA Ship GORDON GUNTER (September 3-29) and the USM/COST/GCRL vessel TOMMY MUNRO (September 25).

Vessels that participated in the Fall Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the NOAA Ships OREGON II (October 15 – November 18); the USM/COST/GCRL vessel TOMMY MUNRO (October 16-19); and the Louisiana vessel PELICAN (October 18 – December 9). The Alabama vessel A.E. VERRILL (October 21) and the TPWD vessels MATAGORDA BAY, SAN JACINTO, R.J. KEMP, NUECES, and SABINE (November 3 – December 12) 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 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 2004 are available for loan to researchers

[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.

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 2004.

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. 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 32,350 identified ichthyoplankton lots in 2004. 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. Plankton stations for the Winter Plankton Survey in conjunction with environmental stations are shown in Figure 12.

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

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

$$SEM = \frac{\alpha}{\sqrt{n}}$$ where α = population standard deviation
n = number of samples

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

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

Biological distributions of the ten most abundant finfish, plus red snapper, three main penaeid shrimps, five most abundant invertebrates and squid species, taken from Table 3 are displayed in plots of number/hour and lb/hour in Figures 13-52 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 15. The species lists for Table 15 are ranked in order of abundance within the categories of finfish, crustaceans, and other invertebrates.

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant invertebrates and squid species, taken from Table 15 are displayed in plots of number/hour and lb/hour in Figures 53 to 92 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 16a-26a present the biological data, from the 40-ft and 20-ft nets, of the eight most abundant fish, six most abundant invertebrates and squid species within NMFS shrimp statistical zones 11 through 22, by depth stratum. Tables 16b-26b list the total catch and environmental data from the 40-ft and 20-ft nets within the NMFS statistical zone listed above, by depth stratum.

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

REAL-TIME DATA MANAGEMENT

The SEAMAP Subcommittee agreed it was imperative to the success of the SEAMAP Program to distribute data on a near real-time basis to the fishing industry and others interested in SEAMAP. 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.

REEF FISH SURVEY

Primary data collection and sampling for reef fish assessment were conducted during February through May by NMFS personnel. Station data for these observations can be found in Table 2 and station locations are plotted in Figure 11. A species composition listing from the traps is presented in Table 27. The species list for Table 27 is ranked in order of abundance. Video tapes from all sources were analyzed using NMFS standardized protocols.

DISCUSSION

The quasisynoptic SEAMAP sampling program and the intended long-term nature of the sampling programs have been designed to provide the baseline data set needed for fishery management and conservation. In 1985, the SEAMAP long-term baseline data was disrupted by the loss of the Spring Gulf-wide plankton and Fall Mackerel Survey. In 1986, the SEAMAP Subcommittee renewed its commitment for the collection of baseline plankton data. These ichthyoplankton samples are and will 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, 1985-2004. 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 2003. This report contained the results and an overview of the effect of the 2003 Texas Closure. After review of these data and other information, the GMFMC voted to continue the Texas Closure for 2004.

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, 2404 Government Street, Ocean Springs, MS 39564; (228) 875-5912 or via e-mail at jrester@gsmfc.org.

Table 1. List of SEAMAP survey activities from 1982 to 2004.

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
2003	MAY	JUNE-JULY	--	AUGUST-OCTOBER	OCTOBER-DECEMBER	--	OCTOBER-NOVEMBER
2004	APRIL-JUNE	JUNE-JULY	--	SEPTEMBER	OCTOBER-DECEMBER	JANUARY	FEBRUARY-MARCH

Table 2. Selected environmental parameters measured during 2004 SEAMAP surveys in the Gulf of Mexico, by individual vessel and survey.
(Gear codes: ST = trawl; PN = bongo; NN = neuston net; BG = bathythermograph (CTD); TV = trap/video; EV = environmental).

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	5/13/2004	125	2730.0	8459.7		399	100	200	26.9	22.3	17.5	36.3	36.9	36.4		6.4	5.2	5.4	PN
2	5/13/2004	720	2658.3	8458.2		785	98	201	26.9	24.5	19.3	36.3	36.8	36.7		6.4	5.4	5.3	PN
3	5/13/2004	1121	2629.9	8500.0		3002	99	201	26.9	25.8	20.2	36.3	36.7	36.7		6.4	5.8	5.1	PN
4	5/13/2004	1518	0.0	0.0		3602	100	200	26.9	22.4	17.7	36.3	36.4	36.4		6.4	7.1	4.7	PN
5	5/13/2004	2119	2559.8	8429.9		220	100	199	25.2	19.0	14.6	36.5	36.4	35.9		5.6	5.2	4.3	PN
6	5/14/2004	204	2559.6	8359.7	3	138	67	137	25.4	21.3	16.9	36.5	36.5	36.2		6.7	6.9	4.1	PN
7	5/15/2004	810	2530.4	8359.6	3	138	69	134	26.0	20.7	17.4	36.4	36.5	36.3		6.5	6.3	4.6	PN
8	5/15/2004	1248	2459.0	8358.5		126	63	121	26.8	24.3	19.3	36.3	36.4	36.4		6.3	6.7	5.3	PN
9	5/15/2004	1851	2501.1	8429.7		2564	99	201	26.9	20.9	16.6	36.3	36.6	36.3		6.4	5.7	5.3	PN
10	5/15/2004	2309	2459.6	8459.8		3302	97	200	25.6	19.1	15.2	36.5	36.5	36.0		6.6	5.0	4.5	PN
11	5/16/2004	248	2459.8	8530.3		3413	99	200	25.5	18.6	15.0	36.5	36.5	36.0		6.6	4.9	4.6	PN
12	5/16/2004	615	2458.5	8601.6		3602	102	201	26.8	21.4	16.9	36.3	36.4	36.3		6.3	7.2	4.6	PN
13	5/16/2004	1023	2529.9	8600.1		3202	100	200	27.0	26.4	21.3	36.2	36.4	36.9		6.3	6.3	5.0	PN
14	5/16/2004	1301	2530.3	8625.7		3241	101	202	26.9	26.2	22.2	36.3	36.4	36.9		6.4	6.2	5.1	PN
15	5/16/2004	1746	2559.3	8559.5		3202	99	201	26.8	26.1	23.6	36.3	36.3	36.9		6.4	6.5	5.2	PN
16	5/16/2004	2231	2629.8	8559.7		3182	100	201	26.8	25.9	23.0	36.3	36.3	36.9		6.4	6.4	5.2	PN
17	5/17/2004	315	2659.3	8558.8		3309	100	201	27.2	24.7	18.5	36.3	36.7	36.5		6.3	5.6	5.2	PN
18	5/17/2004	752	2729.8	8559.9		3222	100	202	25.2	16.8	12.2	36.5	36.3	35.5		6.6	4.6	4.3	PN
19	5/17/2004	1158	2759.6	8600.1		931	100	200	25.9	18.9	14.3	36.4	36.5	35.9		6.4	4.5	4.4	PN
20	5/17/2004	1615	2829.8	8559.8		339	99	202	26.3	19.6	15.8	36.4	36.4	36.1		6.4	6.1	4.4	PN
21	5/17/2004	2112	2859.9	8629.8		383	99	200	25.7	20.1	15.7	36.4	36.5	36.1		6.6	5.6	4.5	PN
22	5/18/2004	113	2859.2	8659.8		699	100	200	25.5	19.0	15.7	36.4	36.5	36.1		6.6	4.5	5.1	PN
23	5/20/2004	2324	2930.4	8760.0	10	44	21	42	26.3	23.4	20.5	35.9	36.0	36.1		6.6	7.0	7.5	PN
24	5/21/2004	319	2859.7	8759.6		1430	101	201	25.7	18.3	13.8	35.7	36.3	35.8		6.6	5.1	4.1	PN
25	5/21/2004	638	2829.9	8759.9		2292	101	201	25.7	18.2	14.0	35.6	36.4	35.8		6.6	4.5	4.1	PN
26	5/21/2004	1216	2829.8	8659.9		891	101	201	26.4	19.5	15.7	36.4	36.6	36.1		6.4	4.7	4.6	PN
27	5/21/2004	1559	2759.2	8659.7		2839	101	201	26.3	18.8	13.9	36.3	36.5	35.8		6.4	4.6	4.5	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	5/21/2004	1942	2730.3	8659.9		4853	101	202	26.4	19.7	13.3	36.1	36.5	35.7		6.5	4.9	4.4	PN
29	5/22/2004	8	2701.7	8656.6		3062	100	200	27.5	22.4	17.1	36.3	36.4	36.3		6.2	7.0	4.4	PN
30	5/22/2004	444	2630.1	8700.1		2912	276	426			27.2			36.2				6.6	PN
31	5/22/2004	702	2616.2	8701.2		3077	100	200	26.9	26.4	23.3	36.3	36.3	36.9		6.3	6.4	5.1	PN
32	5/22/2004	1128	2600.1	8729.6		3149	101	201	26.6	26.0	22.6	36.3	36.3	36.9		6.3	6.3	5.2	PN
33	5/22/2004	1545	2600.4	8800.1		3022	102	203	27.2	25.2	19.2	36.3	36.7	36.6		6.2	5.6	4.9	PN
34	5/22/2004	1837	2630.2	8759.8		2732	100	200	27.4	21.1	16.7	36.3	36.4	36.3		6.2	6.9	5.0	PN
35	5/22/2004	2145	2659.7	8758.9		2962	101	201	26.3	20.5	15.7	36.2	36.7	36.1		6.4	4.9	4.7	PN
36	5/23/2004	135	2730.0	8800.1		2648	100	199	26.6	17.9	12.3	36.5	36.4	35.5		6.4	4.4	4.3	PN
37	5/23/2004	545	2700.0	8829.9		2362	101	202	26.1	18.7	15.4	36.3	36.5	36.0		6.5	4.4	4.9	PN
38	5/23/2004	909	2659.0	8859.8		2290	102	204	26.1	20.0	15.2	36.3	36.5	36.0		6.4	5.4	4.4	PN
39	5/23/2004	1252	2630.0	8859.9		2837	101	201	26.1	19.0	14.5	35.8	36.5	35.9		6.5	4.4	4.3	PN
40	5/23/2004	1640	2559.7	8859.9		3113	101	202	26.2	19.8	14.8	35.8	36.5	35.9		6.5	5.2	4.4	PN
41	5/23/2004	2010	2560.0	8929.8		2922	101	202	26.4	19.5	14.6	35.6	36.5	35.9		6.4	5.0	3.8	PN
42	5/24/2004	0	2559.4	8958.5		3042	100	200	26.6	19.8	14.7	35.6	36.4	35.9		6.4	5.0	3.9	PN
43	5/24/2004	334	2630.2	8959.9		3007	100	200	26.3	18.8	14.4	35.5	36.4	35.9		6.4	4.9	4.1	PN
44	5/24/2004	709	2700.1	9000.9		2181	102	203	26.6	19.4	14.7	36.2	36.5	35.9		6.3	4.5	4.6	PN
45	5/24/2004	1020	2659.8	9030.1		1701	100	200	26.1	18.7	14.4	35.8	36.5	35.9		6.4	4.3	4.1	PN
46	5/24/2004	1404	2659.2	9100.2		1666	100	200	26.2	20.2	14.6	36.4	36.5	35.9		6.4	5.6	4.1	PN
47	5/24/2004	1731	2630.0	9059.9		2001	102	203	26.2	18.2	14.3	35.8	36.4	35.9		6.4	4.4	3.9	PN
48	5/24/2004	2111	2559.7	9059.6		2902	101	201	26.5	19.6	14.9	35.8	36.5	35.9		6.3	4.7	4.1	PN
49	5/25/2004	48	2600.0	9130.2		2364	100	200	26.3	19.3	14.9	35.8	36.4	35.9		6.4	4.3	4.1	PN
50	5/25/2004	413	2559.5	9159.8		2270	101	202	26.1	18.9	14.3	35.6	36.5	35.9		6.4	4.4	4.1	PN
51	5/25/2004	754	2629.8	9160.0		1880	101	201	26.3	18.7	14.3	36.1	36.5	35.9		6.3	4.5	3.9	PN
52	5/25/2004	1133	2658.6	9200.2		1701	101	201	25.9	17.9	14.0	36.4	36.4	35.8		6.4	4.0	3.9	PN
53	5/25/2004	1505	2659.9	9230.1		1423	101	201	26.1	18.5	14.5	36.4	36.4	35.9		6.3	4.3	4.2	PN
54	5/25/2004	1821	2659.4	9259.9		1281	101	202	26.3	19.1	14.8	36.2	36.5	35.9		6.3	4.7	4.2	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
55	5/25/2004	2202	2630.2	9259.8		1648	101	201	26.6	18.9	14.8	35.6	36.4	35.9		6.3	4.6	4.2	PN
56	5/26/2004	7	2617.8	9300.0		2001	100	200	26.4	19.0	14.7	35.3	36.5	35.9		6.4	4.6	4.2	PN
57	5/26/2004	338	2601.1	9330.3		2364	100	199	25.7	20.5	16.6	35.6	36.4	36.2		6.4	6.1	4.2	PN
58	5/26/2004	722	2601.5	9401.4		2288	102	203	26.1	22.5	17.8	36.5	36.4	36.4		6.3	6.4	3.9	PN
59	5/26/2004	1039	2629.9	9359.9		1651	100	200	25.9	22.0	17.4	36.4	36.4	36.3		6.3	6.2	3.9	PN
60	5/26/2004	1430	2659.8	9400.4		980	101	202	26.0	20.2	16.1	35.9	36.3	36.1		6.3	6.4	3.9	PN
61	5/26/2004	1800	2659.7	9429.8		1121	100	200	26.3	21.1	17.0	35.9	36.4	36.3		6.2	5.8	3.8	PN
62	5/26/2004	2118	2659.5	9500.2		1661	102	203	26.1	21.4	17.3	36.4	36.4	36.3		6.3	6.5	4.1	PN
63	5/27/2004	123	2629.8	9460.0		1753	100	200	26.0	20.5	15.9	33.2	36.3	36.1		6.4	5.9	3.9	PN
64	5/27/2004	514	2602.5	9500.3		2652	101	202	26.2	19.8	14.8	32.3	36.4	35.9		6.4	5.2	3.8	PN
65	5/27/2004	837	2602.0	9529.7		1465	101	201	26.4	18.4	14.0	31.9	36.4	35.8		6.4	4.0	3.7	PN
66	5/27/2004	1224	2601.5	9600.1		1053	101	201	26.0	19.5	14.1	33.0	36.4	35.8		6.4	4.6	3.7	PN
67	5/27/2004	1621	2630.0	9559.8		1056	102	203	26.4	20.2	12.7	32.6	36.5	35.7		6.4	6.1	3.8	PN
68	5/27/2004	1952	2659.5	9560.0		806	101	202	26.4	20.3	14.0	34.3	36.7	36.1		6.3	6.2	3.8	PN
69	5/27/2004	2349	2730.0	9559.8	20	216	101	201	26.4	22.0	16.2	34.2	36.7	36.5		6.3	6.2	3.8	PN
70	5/28/2004	338	2759.6	9600.0	20	46	22	44	26.6	25.3	21.8	29.1	35.7	36.3		6.4	6.4	6.3	PN
71	5/28/2004	647	2759.8	9530.4	20	55	27	54	26.6	25.4	21.4	29.7	35.4	35.8		6.3	6.3	6.2	PN
72	5/28/2004	1008	2759.3	9500.1		83	41	81	26.0	22.1	20.4	34.1	35.7	36.3		6.2	6.9	6.0	PN
73	5/28/2004	1328	2800.3	9429.7	18	71	34	68	25.8	22.3	20.6	34.7	36.2	36.4		6.3	6.9	6.2	PN
74	5/28/2004	1638	2759.9	9400.5		83	41	82	26.0	21.3	20.3	35.0	36.3	36.4		6.2	6.8	6.0	PN
75	5/28/2004	1950	2759.6	9330.2		98	49	98	26.2	21.1	19.6	35.1	36.4	36.4		6.2	6.5	5.2	PN
76	5/28/2004	2341	2759.7	9257.5		107	49	98	26.5	22.0	19.4	35.2	36.5	36.5		6.2	6.9	4.5	PN
77	5/29/2004	317	2800.3	9229.9	16	105	53	105	26.3	21.8	19.6	36.4	36.5	36.5		6.2	6.7	4.6	PN
78	5/29/2004	658	2800.7	9200.5	16	119	60	119	26.5	21.4	19.1	36.4	36.5	36.5		6.1	6.7	4.2	PN
79	5/29/2004	1053	2759.8	9129.9		177	89	177	26.4	20.7	17.0	36.2	36.4	36.3		6.1	6.4	4.4	PN
80	5/29/2004	1457	2759.9	9100.1		155	78	155	26.8	20.9	18.6	36.1	36.4	36.5		6.0	6.6	4.6	PN
81	5/29/2004	1856	2804.9	9030.1	14	145	68	136	26.9	21.8	20.1	36.3	36.4	36.4		6.0	6.8	5.6	PN

Table 2. Selected environmental parameters (continued)

OREGON II, SPRING PLANKTON SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
82	5/29/2004	2226	2759.5	8959.7		537	101	201	26.9	20.0	15.6	36.3	36.5	36.1		6.0	5.1	4.2	PN
83	5/30/2004	215	2759.9	8930.0		1002	101	201	27.0	18.8	15.6	34.6	36.3	36.1		6.1	5.3	4.2	PN
84	5/30/2004	602	2759.6	8859.7		1337	101	202	27.1	19.4	14.9	35.0	36.5	36.0		6.1	4.6	4.3	PN
85	5/30/2004	953	2759.6	8830.1		2241	104	207	27.0	18.7	14.7	35.8	36.5	35.9		6.0	4.6	4.1	PN
86	5/30/2004	1350	2759.7	8800.4		2396	100	200	27.1	19.2	14.5	36.3	36.7	35.9		6.0	4.7	4.2	PN
87	5/30/2004	2002	2830.1	8830.1		1561	251	501	27.7	12.9	7.8	32.7	35.6	35.0		6.1	3.8	3.8	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
1	4/15/2004	1132	2836.8	8929.8		139	70	139	19.8	20.6	15.6	28.4	36.5	36.1		7.1	6.9	4.3	BG
2	4/16/2004	59	2719.5	8940.4		1000	501	1000	22.1	6.8	4.7	36.6	34.9	35.0		7.1	4.2	6.0	BG
3	4/17/2004	46	2605.2	9038.4		1000	501	1000	22.3	7.8	4.8	36.5	35.0	34.9		7.1	3.9	5.9	BG
4	4/18/2004	54	2727.2	9115.3		1000	501	1000	22.1	8.1	5.0	36.5	35.0	34.9		7.1	3.9	5.7	BG
5	4/19/2004	39	2640.9	9209.8		1000	502	1000	23.0	8.2	4.8	35.5	35.0	34.9		6.9	3.7	5.8	BG
6	4/20/2004	42	2705.6	9303.9		1000	501	1000	22.8	8.4	4.9	35.2	35.0	34.9		7.0	3.7	5.7	BG
7	4/21/2004	36	2653.7	9401.2		1000	501	1000	23.6	9.4	5.3	35.5	35.2	34.9		6.8	3.6	5.3	BG
8	4/22/2004	19	2600.9	9429.5		1000	501	1000	23.8	9.8	5.3	36.1	35.2	34.9		6.8	3.6	5.3	BG
9	4/23/2004	52	2741.6	9527.8		415	208	415	23.2	14.9	10.4	35.1	36.0	35.3		6.9	3.7	3.6	BG
10	4/24/2004	44	2703.0	9540.5		817	409	817	23.6	8.9	5.4	33.1	35.1	34.9		6.9	3.7	5.1	BG
11	4/25/2004	52	2636.7	9551.7		1000	501	1000	23.6	6.6	4.8	34.4	34.9	34.9		6.8	4.3	5.8	BG
12	4/26/2004	104	2605.8	9547.0		1000	503	1000	24.1	7.6	4.9	32.0	35.0	34.9		6.9	3.8	5.6	BG
13	4/28/2004	56	2601.9	9329.3		1000	501	1000	23.9	9.3	5.2	35.5	35.1	34.9		6.7	3.6	5.4	BG
14	4/29/2004	21	2729.8	9245.2		161	43	85	22.9	22.0	20.2	36.5	36.5	36.5		6.9	7.1	5.9	BG
15	5/5/2004	519	3000.3	8700.4		68	34	66	21.0	19.2	18.9	35.1	36.0	36.1		7.2	6.9	5.8	PN
16	5/5/2004	958	2929.7	8630.0		208	101	201	22.0	18.6	15.2	36.0	36.3	36.0		6.9	5.5	3.8	PN
17	5/5/2004	1415	2912.0	8600.4		191	93	185	21.3	18.9	15.3	36.0	36.3	36.0		7.1	6.1	3.7	PN
18	5/5/2004	2252	2839.6	8529.6		175	87	174	23.3	19.5	16.6	36.5	36.3	36.2		6.8	6.4	4.0	PN
19	5/6/2004	446	2800.6	8460.0		245	101	201	23.8	19.5	14.4	36.3	36.4	35.9		6.7	5.1	3.9	PN
20	5/7/2004	54	2656.5	8620.3		985	515	985	25.9	11.2	5.7	36.2	35.4	34.9		6.4	4.0	4.9	BG
21	5/8/2004	43	2601.7	8420.5		193	91	182	25.1	19.4	15.3	36.5	36.5	36.0		6.6	4.9	4.4	BG
22	5/9/2004	42	2534.9	8506.0		987	516	987	24.3	7.5	5.1	36.5	34.9	34.9		6.7	4.0	5.5	BG
23	5/10/2004	37	2457.0	8517.5		1000	497	1000	24.1	7.7	4.7	36.5	35.0	35.0		6.7	4.0	5.9	BG
24	5/11/2004	122	2404.6	8339.9		470	240	470	26.5	15.0	8.9	36.4	36.0	35.1		6.4	4.4	3.8	BG
25	5/12/2004	14	2405.4	8246.0		748	382	748	25.2	9.4	6.1	36.5	35.1	34.9		6.6	3.8	4.7	BG
26	5/14/2004	1731	2430.3	8330.3		273	110	194	25.1	22.2	13.2	36.5	36.4	35.7		6.6	6.8	4.2	PN
27	5/14/2004	2359	2400.5	8400.3		202	100	202	26.5	25.5	20.9	36.3	36.2	36.9		6.4	6.3	5.1	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	5/15/2004	446	2400.3	8329.9		193	107	193	26.9	23.9	17.0	36.3	36.7	36.3		6.3	5.7	4.8	PN
29	5/15/2004	1226	2430.0	8359.9		200	96	200	26.6	25.7	19.4	36.3	36.5	36.7		6.3	5.9	5.2	PN
30	5/15/2004	1707	2430.1	8430.6		201	101	201	26.7	25.4	19.8	36.3	36.3	36.7		6.4	6.1	5.1	PN
31	5/15/2004	2218	2430.5	8459.2		205	100	205	27.2	22.7	17.5	36.3	36.7	36.3		6.3	5.9	4.6	PN
32	5/16/2004	359	2440.4	8530.8		201	99	201	25.1	19.4	12.4	36.5	36.5	35.6		6.7	4.7	4.2	PN
33	5/17/2004	39	2521.4	8455.8		983	514	983	25.9	8.7	5.2	36.4	35.0	34.9		6.5	3.8	5.4	BG
34	5/18/2004	49	2620.8	8538.4		1000	498	1000	27.2	14.4	6.2	36.3	35.9	34.9		6.3	4.5	4.6	BG
35	5/19/2004	50	2732.4	8535.2		1000	501	1000	25.4	6.9	4.7	36.5	34.9	35.0		6.6	4.2	6.0	BG
36	5/20/2004	42	2906.0	8603.5		235	114	232	26.2	18.5	14.3	36.4	36.3	35.9		6.5	5.6	3.8	BG
37	5/27/2004	52	2738.5	8703.2		1000	501	1000	27.2	7.5	4.7	36.4	34.9	35.0		6.5	4.0	6.0	BG
38	5/28/2004	51	2614.0	8733.7		1000	500	1000	27.7	11.6	5.4	36.3	35.4	34.9		6.3	4.0	5.2	BG
39	5/29/2004	54	2736.5	8757.3		1000	501	1000	27.2	7.6	4.6	36.4	35.0	35.0		6.4	4.0	6.1	BG
40	5/30/2004	46	2852.4	8835.9		661	331	661	27.7	11.2	6.2	34.2	35.4	34.9		6.4	3.8	4.6	BG
41	5/30/2004	2318	2739.6	8857.1		1000	503	1000	27.2	7.3	4.6	36.3	34.9	35.0		6.4	4.1	6.1	BG
42	6/1/2004	108	2625.0	8918.1		1000	502	1000	27.2	7.9	4.8	35.7	35.0	34.9		6.4	3.9	5.8	BG
43	6/2/2004	59	2706.3	9005.9		1000	501	1000	26.7	8.5	5.0	36.4	35.0	34.9		6.5	3.8	5.6	BG
44	6/4/2004	119	2730.4	8905.6		1649	501	1000	27.3	6.7	4.7	35.8	34.9	35.0		6.4	4.3	6.0	BG
45	6/5/2004	103	2604.6	8836.8		1000	501	1000	27.9	8.3	4.9	36.5	35.0	34.9		6.4	3.9	5.7	BG
46	6/6/2004	9	2610.3	8814.5		999	500	999	28.6	8.8	5.2	36.4	35.0	34.9		6.3	3.9	5.5	BG
47	6/7/2004	52	2758.0	8751.0		1000	501	1000	28.0	8.1	4.9	35.6	35.0	34.9		6.4	3.9	5.8	BG
48	6/8/2004	129	2915.2	8723.2		889	445	889	27.4	9.5	5.5	35.9	35.1	34.9		6.5	3.8	5.1	BG
49	6/10/2004	105	2825.8	8605.1		403	212	398	29.0	16.1	9.8	36.5	36.2	35.2		6.3	4.7	3.8	BG

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
1	6/9/2004	1900	2959.9	8807.5	11	46	12	23	26.2	25.7	21.2	33.6	34.8	35.5	1.003	6.5	6.6	5.9	PN
2	6/9/2004	2341	2942.9	8800.5	11	38	18	35	27.3	24.1	20.5	34.8	35.7	35.8	0.512	6.5	6.7	6.0	ST
3	6/10/2004	118	2937.0	8807.8	11	36													ST
4	6/10/2004	402	2917.8	8809.3	11	92													ST
5	6/10/2004	652	2917.3	8820.6	11	72													ST
6	6/10/2004	817	2918.5	8826.0	11	64													ST
7	6/10/2004	1101	2915.0	8832.9	11	73													ST
8	6/10/2004	1246	2910.7	8836.2	11	82													ST
9	6/10/2004	1351	2908.5	8838.6	11	93													ST
10	6/10/2004	1517	2911.9	8840.1	11	74													ST
11	6/10/2004	1642	2914.2	8841.3	11	67													ST
12	6/10/2004	2102	2908.2	8856.0	11	35													ST
13	6/11/2004	58	2905.7	8856.2	11	56													ST
14	6/11/2004	305	2909.1	8840.8	11	82													ST
15	6/15/2004	2216	2928.2	8805.9	11	86	22	44	28.0	25.7	21.1	33.5	36.0	36.3	0.748	6.1	6.4	6.8	PN
16	6/16/2004	41	2914.1	8801.1	11	514	101	202	28.2	19.1	15.6	34.4	36.3	36.1	0.702	6.1	5.4	4.0	PN
17	6/16/2004	400	2912.8	8831.2	11	196	55	110	28.3	20.9	20.1	33.6	36.4	36.3	0.729	6.0	6.5	5.9	PN
18	6/16/2004	746	2859.0	8858.5	11	174	48	95	27.9	21.9	20.3	27.7	36.5	36.4	15.921	7.4	6.8	5.6	PN
19	6/18/2004	222	2608.2	9622.7	21	92	45	90	28.0	23.4	20.6	36.2	36.4	36.3	0.381	6.0	6.7	5.3	ST
20	6/18/2004	338	2608.9	9628.0	21	64													ST
21	6/18/2004	508	2609.6	9630.5	21	60	25	50	27.6	25.3	21.6	36.2	36.5	36.4	0.334	6.2	6.6	6.4	ST
22	6/18/2004	758	2619.2	9634.2	21	55													ST
23	6/18/2004	1122	2629.3	9630.7	21	145	41	82	27.8	22.8	20.8	36.3	36.4	36.3	0.276	6.1	6.3	5.3	PN
24	6/18/2004	1702	2603.9	9625.6	21	74	35	69	27.5	24.3	21.3	35.8	36.5	36.3	0.282	6.1	6.8	5.7	ST
25	6/18/2004	2140	2607.2	9655.2	21	33	17	33	28.1	25.2	22.5	34.9	36.0	36.1	0.542	6.1	6.4	4.8	ST
26	6/19/2004	128	2603.5	9707.4	21	14	7	13	27.5	27.5	26.7	35.9	35.9	35.8	0.694	6.3	6.3	6.3	ST
27	6/19/2004	245	2559.9	9700.6	22	26	13	25	27.2	27.1	24.6	35.3	35.2	35.8	0.760	6.1	6.1	5.4	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
28	6/19/2004	647	2610.1	9649.1	21	40	20	39	28.4	24.2	21.9	35.5	36.5	36.3	0.566	6.0	6.7	5.2	ST
29	6/19/2004	805	2610.7	9646.2	21	43													ST
30	6/19/2004	1105	2614.9	9655.0	21	37	18	35	27.7	25.5	22.0	35.2	35.5	36.2	0.489	6.0	6.0	5.0	ST
31	6/19/2004	1352	2626.8	9659.1	21	34	16	31	27.7	25.6	23.2	34.9	35.1	35.7	0.581	6.1	5.3	5.0	ST
32	6/19/2004	1736	2640.1	9710.3	21	22	10	20	28.6	27.7	26.4	33.8	34.5	34.7	0.511	6.1	6.0	5.0	ST
33	6/19/2004	1906	2642.7	9708.7	21	27	14	27	28.6	27.7	23.5	33.8	34.2	35.5	0.527	6.0	6.0	4.7	ST
34	6/19/2004	2045	2645.3	9701.8	21	37	18	36	28.8	26.7	21.9	34.0	35.8	36.0	0.513	6.1	6.3	5.5	ST
35	6/20/2004	200	2618.8	9649.6	21	40	19	38	28.1	25.4	21.8	35.0	36.2	36.3	0.599	6.0	6.3	5.5	ST
36	6/20/2004	318	2618.8	9652.4	21	38													ST
37	6/20/2004	647	2632.1	9706.0	21	24	11	21	28.5	28.1	27.5	33.9	34.2	35.3	0.522	6.1	6.0	5.9	ST
38	6/20/2004	821	2635.2	9715.0	21	14	7	14	28.2	28.0	27.8	34.7	35.1	35.6	0.456	6.0	6.1	6.2	ST
39	6/20/2004	1025	2647.4	9717.8	21	19	10	19	28.1	27.6	27.1	34.3	34.7	34.7	0.687	5.9	5.6	5.1	ST
40	6/20/2004	1352	2703.5	9707.5	20	31	15	29	28.3	27.9	24.0	33.4	34.2	35.6	0.520	6.0	5.7	4.4	ST
41	6/20/2004	1612	2655.1	9700.7	21	40	19	38	28.6	26.2	21.8	33.3	35.2	35.9	0.346	6.1	6.1	4.6	ST
42	6/20/2004	1938	2702.7	9657.4	20	46	21	42	29.1	25.7	21.8	33.0	36.1	36.1	0.419	6.0	6.3	5.8	ST
43	6/20/2004	2100	2703.1	9654.6	20	52													ST
44	6/20/2004	2241	2659.1	9653.0	21	55	27	54	29.0	23.6	21.5	33.6	36.1	36.3	0.392	6.1	6.5	5.1	ST
45	6/21/2004	1	2659.3	9650.0	21	62													ST
46	6/21/2004	242	2658.4	9632.7	21	209	55	109	28.7	22.2	19.7	35.4	36.3	36.4	0.283	6.1	6.4	4.6	PN
47	6/21/2004	310	2658.3	9633.6	21	109													ST
48	6/21/2004	441	2658.3	9636.5	21	98													ST
49	6/21/2004	933	2650.8	9714.8	21	22	11	21	28.3	28.2	27.6	34.0	34.1	34.8	0.636	6.0	6.0	5.6	ST
50	6/21/2004	1042	2650.3	9720.6	21	15	8	15	28.2	28.2	28.2	35.4	35.4	35.4	0.749	6.1	6.2	6.1	ST
51	6/21/2004	1322	2704.3	9714.7	20	24	12	23	28.0	28.0	26.8	34.4	34.4	34.9	0.741	6.0	6.0	5.2	ST
52	6/21/2004	2035	2737.7	9703.3	20	20	10	19	28.9	28.8	24.9	32.9	33.0	35.1	1.094	6.0	6.0	3.9	ST
53	6/21/2004	2321	2725.2	9702.0	20	28	13	25	29.1	27.3	22.4	33.1	34.5	35.9	0.787	6.1	5.9	5.3	ST
54	6/22/2004	50	2721.6	9706.6	20	25	13	25	28.6	28.6	23.1	34.0	34.0	35.7	0.992	6.0	6.0	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
55	6/22/2004	253	2724.4	9658.5	20	33	16	31	28.9	26.2	22.2	32.8	34.9	36.1	0.740	6.0	5.6	5.8	ST
56	6/22/2004	438	2722.3	9700.8	20	32	15	29	28.6	27.6	22.0	34.0	34.6	35.9	0.697	6.1	6.1	5.1	ST
57	6/22/2004	702	2715.9	9707.5	20	27	13	25	28.3	28.3	24.3	33.9	33.9	35.9	1.036	6.0	6.0	5.5	ST
58	6/22/2004	902	2711.2	9707.0	20	29	14	28	28.1	28.1	23.5	34.7	34.7	36.0	0.966	6.0	6.0	5.8	ST
59	6/22/2004	1201	2703.0	9721.8	20	12	6	12	28.3	28.3	28.3	35.4	35.4	35.4	1.406	6.1	6.0	6.0	ST
60	6/22/2004	1323	2706.4	9721.5	20	11	6	11	28.4	28.4	28.4	35.5	35.5	35.5	1.332	6.0	6.0	6.0	ST
61	6/22/2004	1444	2710.4	9720.6	20	14	7	14	28.4	28.4	28.5	35.0	35.0	35.2	0.916	6.0	5.9	5.9	ST
62	6/22/2004	1542	2709.4	9718.7	20	18	9	18	27.9	27.9	27.9	34.8	34.8	34.8	0.932	5.9	5.9	5.9	ST
63	6/22/2004	1711	2712.7	9718.7	20	16	8	16	28.6	28.6	28.6	35.2	35.2	35.3	0.661	5.9	5.9	5.9	ST
64	6/22/2004	1925	2724.4	9712.7	20	19	10	19	28.2	28.2	24.8	34.5	34.5	35.7	1.082	6.1	6.0	4.7	ST
65	6/22/2004	2208	2729.5	9659.4	20	52	14	27	28.5	27.0	22.3	34.2	34.9	36.1	0.816	6.0	5.9	5.9	PN
66	6/23/2004	119	2750.6	9700.7	20	13	7	13	29.1	28.1	25.5	33.6	34.0	35.3	3.381	5.9	5.2	4.8	ST
67	6/23/2004	343	2743.7	9654.0	20	24	12	23	28.6	28.2	24.5	33.9	34.3	36.1	1.055	6.0	6.0	6.1	ST
68	6/23/2004	606	2754.2	9650.1	20	20	10	20	28.5	28.5	26.1	33.5	33.5	36.2	1.436	5.9	5.9	5.9	ST
69	6/23/2004	954	2801.7	9629.9	19	46	13	25	28.8	28.7	23.3	32.0	32.3	36.2	0.899	5.9	5.8	5.6	PN
70	6/23/2004	1035	2803.7	9630.9	19	23	10	19	28.8	28.8	23.5	32.1	32.2	35.6	1.033	5.9	5.9	4.5	ST
71	6/23/2004	1231	2809.4	9626.0	19	22	10	19	28.8	28.8	24.0	32.0	32.1	35.6	1.262	6.0	6.0	4.8	ST
72	6/23/2004	1740	2737.4	9627.8	20	65	33	65	28.5	24.3	21.4	33.1	36.4	36.3	0.545	6.1	6.6	5.8	ST
73	6/23/2004	2009	2729.4	9629.8	20	139	36	72	28.6	23.8	21.0	33.2	36.3	36.3	0.485	6.1	6.6	5.3	PN
74	6/23/2004	2206	2718.7	9635.2	20	82	40	80	28.5	23.9	21.3	33.9	36.4	36.3	0.483	6.1	6.6	5.4	ST
75	6/23/2004	2328	2717.7	9632.9	20	90													ST
76	6/24/2004	233	2738.4	9626.8	20	64	32	63	28.3	24.5	21.6	34.1	36.5	36.2	0.477	6.1	6.6	5.8	ST
77	6/24/2004	451	2740.7	9618.7	20	74	36	71	28.1	24.5	20.9	34.8	36.4	36.4	0.356	6.0	6.6	5.0	ST
78	6/24/2004	833	2729.5	9600.5	20	400	101	201	28.0	19.0	14.9	35.9	36.5	35.9	0.339	6.0	4.0	3.7	PN
79	6/24/2004	1034	2746.6	9559.6	19	71	31	62	28.1	26.5	21.7	35.0	36.2	36.3	0.378	6.1	6.3	5.8	ST
80	6/24/2004	1248	2760.0	9560.0	20	84	22	44	28.3	26.1	23.1	32.7	36.3	36.3	0.882	6.0	6.2	6.2	BG
81	6/24/2004	1535	2807.8	9556.4	19	35	17	34	28.6	27.4	24.0	32.4	35.6	36.3	0.849	6.1	6.1	6.0	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
82	6/24/2004	1657	2808.4	9559.8	19	33	16	32	28.6	27.4	24.7	32.0	35.4	36.2	2.158	6.0	6.0	6.1	ST
83	6/24/2004	1838	2809.0	9551.0	19	38	19	38	28.2	27.2	22.7	32.9	36.2	36.1	0.965	6.0	6.2	5.6	ST
84	6/24/2004	2347	2746.9	9532.7	20	92	46	92	28.0	23.0	20.7	34.3	36.4	36.3	0.479	6.1	6.6	5.6	ST
85	6/25/2004	214	2746.7	9533.4	19	92	43	86	28.2	23.5	20.6	34.1	36.3	36.3	0.589	6.1	6.7	5.5	ST
86	6/25/2004	622	2802.6	9546.8	19	46	23	45	28.3	25.6	22.8	32.5	36.3	36.3	1.695	6.1	6.4	6.0	ST
87	6/25/2004	750	2805.6	9550.2	19	40	17	34	28.3	27.7	23.6	32.3	35.9	36.3	1.641	6.1	5.9	6.0	ST
88	6/25/2004	1026	2809.9	9558.6	19	31	16	31	28.4	27.0	24.3	32.0	35.8	36.3	1.956	6.0	5.8	6.0	ST
89	6/25/2004	1351	2829.2	9559.0	19	28	7	14	27.8	28.1	26.0	31.9	33.4	35.9	4.887	6.1	6.0	5.0	PN
90	6/25/2004	1730	2827.9	9520.6	19	31	14	27	28.1	27.8	26.0	32.2	34.4	35.6	1.528	6.1	6.1	5.6	ST
91	6/25/2004	1940	2836.6	9517.0	19	26	12	23	28.1	28.1	25.8	32.3	32.6	35.6	2.079	6.0	5.9	5.1	ST
92	6/25/2004	2226	2846.5	9523.3	19	15	7	13	26.8	26.8	26.7	32.8	32.9	35.1	4.767	5.5	5.3	4.3	ST
93	6/26/2004	29	2836.9	9525.2	19	21	9	17	28.1	28.1	27.0	32.2	32.3	35.3	1.767	6.1	6.1	5.9	ST
94	6/26/2004	235	2829.5	9530.7	19	26	13	25	28.1	27.6	26.7	32.0	34.8	35.6	1.508	6.1	6.1	5.8	ST
95	6/26/2004	444	2831.1	9541.4	19	20	10	20	27.7	27.2	26.8	32.9	34.4	35.8	3.089	6.0	5.8	5.5	ST
96	6/26/2004	758	2815.7	9536.6	19	33	16	32	27.7	27.3	22.5	31.7	35.9	36.0	1.170	6.1	6.0	5.1	ST
97	6/26/2004	1050	2759.9	9530.5	20	100	27	53	27.3	26.5	22.0	34.4	36.3	36.3	0.934	6.0	6.2	6.0	PN
98	6/26/2004	1327	2755.1	9512.1	19	94	47	94	27.7	23.2	19.9	34.2	36.2	36.4	0.577	6.0	6.5	4.9	ST
99	6/26/2004	1529	2801.1	9513.5	19	64	32	63	27.7	26.2	21.8	34.2	35.2	36.4	0.491	6.0	6.0	6.0	ST
100	6/26/2004	1648	2803.9	9513.9	19	57													ST
101	6/26/2004	1931	2802.2	9456.8	18	73	37	73	27.6	24.9	20.7	33.9	36.3	36.4	0.272	6.1	6.5	5.3	ST
102	6/26/2004	2210	2807.2	9503.8	19	57	29	57	27.6	24.9	22.3	34.3	35.7	33.5	0.376	6.1	6.2	5.6	ST
103	6/26/2004	2334	2809.9	9504.5	19	51													ST
104	6/27/2004	54	2812.6	9505.0	19	49													ST
105	6/27/2004	243	2819.4	9510.7	19	37	18	35	27.7	26.9	23.9	32.2	35.9	36.0	1.020	6.3	6.1	5.8	ST
106	6/27/2004	449	2814.3	9508.0	19	46	23	46	27.7	27.0	21.9	32.4	35.6	36.1	0.734	6.2	6.0	5.5	ST
107	6/27/2004	746	2802.0	9509.0	19	64	32	64	27.3	27.2	21.0	34.4	36.1	36.3	0.343	6.1	6.3	5.6	ST
108	6/27/2004	907	2804.6	9508.5	19	57													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
109	6/27/2004	1147	2759.6	9500.4	20	151	41	82	27.6	24.8	20.6	33.9	36.5	36.3	0.373	6.2	6.7	5.5	PN
110	6/27/2004	1410	2757.5	9444.2	18	90	43	86	27.9	23.1	20.1	34.5	36.2	36.4	0.244	6.1	6.6	5.2	ST
111	6/27/2004	1722	2759.9	9428.1	18	128	34	68	28.1	25.1	20.5	34.5	36.5	36.4	0.124	6.1	6.7	5.5	PN
112	6/27/2004	2111	2801.8	9401.5	18	81	41	81	28.1	23.9	19.8	33.9	35.8	36.4	0.290	6.2	6.4	4.8	ST
113	6/28/2004	29	2758.4	9359.5	17	151	41	81	28.1	23.6	19.9	33.9	35.7	36.4	0.364	6.2	6.4	4.8	PN
114	6/28/2004	126	2758.7	9357.6	17	82	41	81	27.9	23.7	20.4	34.2	35.9	36.4	0.304	6.2	6.5	5.4	ST
115	6/28/2004	451	2759.7	9420.2	18	100	50	100	28.2	23.2	19.8	34.7	36.6	36.5	0.247	6.1	6.6	4.8	ST
116	6/28/2004	947	2802.1	9449.3	18	74	35	70	27.9	24.4	20.5	34.1	36.5	36.4	0.228	6.2	6.7	5.2	ST
117	6/28/2004	1428	2822.7	9460.0	18	37	19	37	27.7	27.3	24.0	33.9	34.8	35.9	0.248	6.1	6.1	5.5	ST
118	6/28/2004	1619	2819.8	9458.2	18	41													ST
119	6/28/2004	1848	2830.6	9500.2	19	60	17	33	27.8	27.1	23.8	32.8	35.1	35.7	0.260	6.2	6.2	5.1	PN
120	6/28/2004	2105	2837.4	9446.8	18	29	15	29	28.6	28.1	23.6	32.1	34.6	35.4	0.561	6.3	6.2	4.7	ST
121	6/29/2004	41	2841.1	9423.3	18	26	13	26	28.3	27.9	24.4	32.3	32.5	35.2	0.633	6.3	6.1	5.5	ST
122	6/29/2004	318	2829.6	9429.7	18	68	18	35	28.4	27.8	23.2	32.8	34.4	35.7	0.561	6.3	6.1	5.6	PN
123	6/29/2004	507	2836.4	9438.4	18	32	15	30	27.9	27.7	23.2	32.7	32.9	35.5	0.598	6.3	6.2	4.7	ST
124	6/29/2004	842	2839.2	9457.1	18	28	13	26	28.4	28.2	24.3	31.0	34.3	35.1	0.701	6.4	6.1	5.1	ST
125	6/29/2004	1352	2902.5	9431.1	18	16	8	15	28.4	28.3	27.4	28.7	29.8	31.9	0.794	6.2	5.3	1.8	ST
126	6/29/2004	1523	2859.5	9430.4	18	35	9	17	28.5	28.0	26.0	29.7	30.8	34.2	0.916	6.1	5.1	3.2	PN
127	6/29/2004	1847	2906.4	9501.3	19	13	7	13	28.5	27.8	27.1	29.0	31.8	32.4	6.056	7.6	6.8	2.9	ST
128	6/29/2004	2101	2859.1	9500.3	19	31	8	15	28.5	28.2	27.5	30.7	32.0	33.9	4.458	8.0	6.4	3.1	PN
129	6/29/2004	2227	2850.6	9458.9	18	18	8	16	28.2	27.9	26.2	32.5	32.8	34.7	2.747	6.9	6.5	4.7	ST
130	6/29/2004	2351	2848.1	9457.1	18	19													ST
131	6/30/2004	224	2900.2	9509.2	19	13	7	13	28.8	27.5	27.3	29.0	31.9	32.6	2.546	7.0	6.7	4.6	ST
132	6/30/2004	401	2902.2	9505.4	19	13	6	11	28.6	28.5	27.2	26.3	27.9	31.6	5.536	7.7	7.4	4.5	ST
133	6/30/2004	620	2906.5	9501.5	19	11	6	11	28.3	28.1	27.3	26.8	28.8	31.7	3.681	6.7	6.0	4.4	ST
134	6/30/2004	816	2903.5	9454.6	18	16	8	16	28.4	28.0	27.4	30.6	32.3	34.0	3.181	7.1	6.6	1.4	ST
135	6/30/2004	1253	2921.8	9438.5	18	10	5	10	28.1	28.2	27.7	22.0	28.1	30.0	12.454	5.9	6.7	1.3	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY																			
			POSITION		STAT	DEPTH	SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			FL	DISSOLVED OXYGEN, PPM			
STA#	DATE MM/DD/YY	TIME	LAT	LONG	ZONE	(M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	GEAR
136	6/30/2004	1511	2922.7	9427.8	18	13	7	13	28.6	28.2	27.6	26.4	30.4	31.2	2.852	6.9	4.2	1.6	ST
137	6/30/2004	1659	2920.3	9426.8	18	14													ST
138	6/30/2004	2100	2929.2	9359.9	17	22	6	11	29.1	29.0	28.2	27.7	27.7	28.2	1.697	6.8	6.8	4.5	PN
139	7/1/2004	221	2854.7	9422.4	18	21	11	21	28.6	27.9	25.4	30.4	32.3	34.7	1.003	6.2	5.9	2.5	ST
140	7/1/2004	545	2911.6	9439.0	18	16	8	15	28.7	27.6	27.2	24.0	30.9	32.3	3.512	7.1	4.4	2.3	ST
141	7/3/2004	149	2850.3	9414.0	18	24	12	23	28.7	28.6	25.3	31.9	32.4	34.7	1.372	6.3	6.3	4.1	ST
142	7/3/2004	304	2847.7	9414.1	18	25													ST
143	7/3/2004	557	2900.4	9400.7	18	37	9	18	29.1	29.0	28.5	29.7	30.4	31.8	0.771	6.2	6.2	6.1	PN
144	7/3/2004	708	2857.1	9357.0	17	20	9	18	29.2	28.8	27.5	29.1	30.3	32.9	1.221	6.2	6.1	3.8	ST
145	7/3/2004	1003	2837.2	9359.7	17	33	17	33	28.4	27.7	23.7	32.6	34.3	35.5	0.398	6.1	6.2	6.2	ST
146	7/3/2004	1246	2847.9	9349.5	17	24	11	22	28.8	28.6	27.5	31.8	32.3	33.4	0.452	6.1	6.1	6.1	ST
147	7/3/2004	1405	2845.9	9351.4	17	25													ST
148	7/3/2004	1701	2829.9	9405.3	18	45	23	45	29.0	27.3	22.8	32.6	34.6	35.8	0.226	6.2	6.3	6.3	ST
149	7/3/2004	1818	2827.1	9405.1	18	45	23	45	29.0	27.3	22.8	32.6	34.6	35.8	0.226	6.2	6.3	6.3	ST
150	7/3/2004	2027	2830.3	9400.2	18	74													PN
151	7/3/2004	2118	2827.1	9356.5	17	46													ST
152	7/3/2004	2233	2829.5	9355.7	17	42													ST
153	7/4/2004	28	2833.6	9348.1	17	36	18	35	29.0	27.8	22.9	32.9	34.3	35.7	0.448	6.2	6.3	5.6	ST
154	7/4/2004	250	2828.1	9332.9	17	46	18	36	29.1	27.8	22.8	33.1	33.8	35.8	0.397	6.1	6.3	5.7	ST
155	7/4/2004	508	2835.3	9334.8	17	37	18	36	29.1	27.8	22.8	33.1	33.8	35.8	0.397	6.1	6.3	5.7	ST
156	7/4/2004	708	2840.7	9339.8	17	29	13	26	29.3	28.7	24.3	31.4	33.0	35.3	0.423	6.1	6.2	5.6	ST
157	7/4/2004	902	2839.7	9326.3	17	31	15	29	29.3	28.6	23.9	31.9	32.4	35.6	0.421	6.1	6.2	4.7	ST
158	7/4/2004	1102	2830.3	9330.5	17	78	21	42	28.9	27.2	22.2	32.2	34.2	36.1	0.413	6.1	6.2	5.8	PN
159	7/4/2004	1253	2833.9	9345.6	17	36	18	35	28.6	27.7	23.1	33.0	34.4	35.7	0.366	6.1	6.2	5.4	ST
160	7/4/2004	1525	2828.3	9334.0	17	46	22	44	28.6	26.6	21.9	33.2	34.4	36.1	0.325	6.1	6.3	6.0	ST
161	7/4/2004	1645	2825.7	9333.6	17	50													ST
162	7/4/2004	1801	2823.2	9333.0	17	53													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
163	7/4/2004	2021	2808.2	9326.3	17	75	38	75	29.0	23.7	20.4	34.0	36.0	36.4	0.149	6.1	6.6	5.4	ST
164	7/4/2004	2315	2808.2	9326.8	17	74	33	66	29.1	24.5	21.0	33.9	35.8	36.4	0.253	6.1	6.7	5.7	ST
165	7/5/2004	27	2804.8	9326.6	17	88	44	88	28.8	22.8	19.7	34.3	36.2	36.4	0.258	6.2	6.6	4.9	ST
166	7/5/2004	252	2759.4	9329.4	17	182	47	93	29.0	22.5	19.8	33.9	36.3	36.4	0.272	6.1	6.5	4.8	PN
167	7/5/2004	507	2808.4	9319.7	17	73	36	71	29.6	24.2	20.6	32.6	35.5	36.4	0.384	6.1	6.8	5.6	ST
168	7/5/2004	756	2804.0	9313.6	17	91	46	91	29.7	23.6	20.0	32.0	36.4	36.4	0.394	6.1	6.9	5.3	ST
169	7/5/2004	921	2801.9	9312.7	17	98													ST
170	7/5/2004	1201	2800.1	9259.3	16	198	53	105	29.1	22.4	19.5	33.8	36.5	36.4	0.316	6.1	7.1	4.6	PN
171	7/5/2004	1514	2759.8	9230.7	16	199	54	107	29.7	22.6	19.6	32.6	36.4	36.4	0.402	6.1	7.1	4.8	PN
172	7/5/2004	1754	2800.4	9246.3	16	113	57	113	29.8	22.4	19.4	34.1	36.5	36.5	0.152	6.0	7.1	4.5	ST
173	7/5/2004	2245	2829.0	9300.6	17	86	23	45	29.5	27.1	22.5	30.1	34.2	36.2	0.508	6.2	6.3	5.8	PN
174	7/6/2004	112	2846.1	9257.7	16	29	15	29	30.1	28.3	24.3	30.0	33.3	35.7	0.497	6.2	6.2	5.1	ST
175	7/6/2004	226	2848.5	9252.2	16	27	12	23	29.8	29.2	25.7	30.8	32.0	35.0	0.488	6.1	6.2	5.0	ST
176	7/6/2004	433	2851.3	9259.4	16	26	11	21	29.8	29.0	26.5	30.3	32.1	34.6	0.529	6.1	6.3	5.4	ST
177	7/6/2004	658	2900.1	9301.8	17	44	12	24	30.1	29.1	26.0	29.3	30.8	34.8	0.610	6.3	6.0	3.0	PN
178	7/6/2004	946	2900.8	9329.5	17	43	11	22	29.6	29.2	26.3	27.7	28.5	34.1	0.726	6.3	6.1	3.5	PN
179	7/6/2004	1247	2854.7	9302.6	17	23	10	20	29.5	28.6	26.5	30.3	32.4	34.6	0.655	6.1	6.2	5.4	ST
180	7/6/2004	1454	2850.1	9308.1	17	26	11	22	29.0	28.6	25.7	31.0	32.6	35.0	0.309	6.2	5.8	5.0	ST
181	7/6/2004	1717	2844.3	9303.2	17	31	16	31	29.2	28.8	23.7	32.1	32.6	35.8	0.264	6.2	6.1	5.7	ST
182	7/6/2004	1825	2846.3	9303.5	17	30	14	27	29.5	29.0	24.4	32.3	32.3	35.5	0.307	6.2	6.3	5.2	ST
183	7/6/2004	2048	2844.2	9256.2	16	31	14	28	29.4	29.1	25.8	31.2	32.0	34.9	0.333	6.2	6.3	6.3	ST
184	7/7/2004	247	2909.3	9342.0	17	18	9	17	29.6	29.3	27.4	26.7	27.2	33.0	2.125	6.4	6.1	2.2	ST
185	7/7/2004	513	2916.1	9354.6	17	15	7	13	29.9	29.6	28.3	25.4	28.0	31.4	3.404	7.0	6.1	3.3	ST
186	7/7/2004	802	2912.4	9332.2	17	16	8	16	29.6	28.9	26.9	25.0	29.1	33.3	1.876	6.4	5.5	0.4	ST
187	7/7/2004	1001	2923.9	9320.6	17	12	6	12	29.8	29.9	28.8	24.1	24.2	27.3	2.400	6.4	6.4	3.6	ST
188	7/7/2004	1206	2930.8	9330.2	17	19	5	9	29.6	29.8	29.2	21.7	25.5	27.5	3.583	6.5	6.1	3.7	PN
189	7/7/2004	1332	2940.0	9337.4	17	10	5	10	29.4	29.3	28.8	19.9	25.1	27.4	5.623	6.6	4.9	3.3	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH 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
190	7/7/2004	1834	2930.1	9259.4	16	25	6	12	30.1	29.6	28.0	16.7	18.5	31.1	4.810	7.2	6.4	0.0	PN
191	7/7/2004	1943	2930.8	9253.1	16	13	6	11	30.2	29.4	27.9	13.8	21.9	30.5	10.189	7.9	6.2	0.2	ST
192	7/7/2004	2053	2928.8	9253.1	16	14													ST
193	7/7/2004	2255	2931.1	9241.9	16	11	5	10	30.4	29.4	27.6	14.4	19.7	31.1	13.739	8.4	5.3	0.0	ST
194	7/8/2004	255	2909.5	9217.0	16	9	4	8	31.6	30.5	27.5	15.6	20.4	32.3	6.622	9.1	7.1	0.0	ST
195	7/8/2004	525	2900.6	9200.8	16	35	9	18	30.5	27.6	25.2	21.1	33.3	35.6	6.400	7.2	4.4	1.5	PN
196	7/8/2004	610	2901.7	9205.2	16	19	10	19	30.5	27.6	25.1	22.0	32.5	35.6	5.420	7.4	2.4	1.5	ST
197	7/8/2004	826	2901.1	9218.5	16	23	11	21	31.0	27.5	24.9	19.6	32.5	35.5	5.605	8.0	1.8	0.5	ST
198	7/8/2004	1045	2859.9	9231.1	16	47	12	23	30.8	28.3	24.8	21.5	31.2	35.6	6.768	7.4	3.1	1.6	PN
199	7/8/2004	1200	2910.0	9236.5	16	20													ST
200	7/8/2004	1311	2912.4	9236.1	16	19	9	17	29.3	29.8	25.8	20.7	24.0	34.4	5.346	6.2	6.4	0.0	ST
201	7/8/2004	1538	2920.6	9254.1	16	17													ST
202	7/8/2004	1652	2918.0	9253.6	16	17	9	17	30.3	29.4	27.0	23.5	28.2	33.9	1.453	6.4	6.0	1.8	ST
203	7/8/2004	2124	2842.7	9247.1	16	33	17	33	31.4	28.8	23.5	25.3	31.6	35.9	1.427	6.2	6.0	3.4	ST
204	7/9/2004	13	2830.2	9230.0	16	91	25	49	31.1	25.9	22.7	25.5	35.3	36.3	2.940	6.5	6.4	6.0	NN
205	7/9/2004	122	2832.1	9228.3	16	46	22	44	30.6	28.1	22.7	26.4	35.0	36.3	2.124	6.2	6.1	6.0	ST
206	7/9/2004	238	2829.7	9227.7	16	51													ST
207	7/9/2004	549	2826.5	9206.7	16	55	28	55	29.6	28.8	22.0	30.9	34.4	36.4	0.733	6.0	6.1	5.3	ST
208	7/9/2004	706	2824.1	9206.3	16	58													ST
209	7/9/2004	821	2821.7	9206.5	16	60													ST
210	7/9/2004	939	2817.8	9208.2	16	65													ST
211	7/9/2004	1054	2815.4	9208.7	16	68	33	66	30.0	25.4	21.2	30.3	36.1	36.4	0.721	6.0	6.5	5.7	ST
212	7/9/2004	1228	2817.8	9207.6	16	64													ST
213	7/9/2004	1342	2820.2	9207.3	16	61													ST
214	7/9/2004	1454	2822.6	9206.3	16	59	28	56	29.4	28.2	21.8	30.4	34.9	36.4	0.914	6.1	6.1	5.5	ST
215	7/9/2004	1902	2813.9	9147.4	15	74	37	73	29.3	24.5	21.0	32.0	36.3	36.4	0.629	5.9	6.9	5.6	ST
216	7/9/2004	2020	2811.3	9146.6	15	79													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
217	7/9/2004	2239	2811.3	9133.7	15	83	40	80	30.0	24.9	20.2	29.3	36.3	36.5	2.271	6.3	6.7	4.7	ST
218	7/10/2004	26	2808.7	9134.0	15	101	51	101	30.2	22.9	18.6	29.5	36.4	36.4	2.073	6.3	7.1	4.1	ST
219	7/10/2004	204	2805.5	9132.9	15	110													ST
220	7/10/2004	327	2807.9	9133.7	15	95	45	89	30.1	23.6	19.6	29.4	36.4	36.4	1.950	6.3	6.9	4.4	ST
221	7/10/2004	735	2829.7	9200.0	16	92	25	49	29.3	29.0	22.2	31.4	34.5	36.4	0.805	6.0	6.0	5.5	PN
222	7/10/2004	855	2837.8	9201.9	16	41	21	41	29.2	26.5	23.8	30.2	35.3	36.2	1.149	6.0	6.2	5.6	ST
223	7/10/2004	1009	2840.3	9201.2	16	38													ST
224	7/10/2004	1250	2859.6	9210.2	16	22	11	21	28.7	26.9	24.9	20.6	33.5	35.6	4.768	5.9	1.9	2.1	ST
225	7/10/2004	1434	2905.9	9206.4	16	15	7	13	29.1	28.8	26.7	20.8	29.3	34.7	8.118	6.8	4.5	0.3	ST
226	7/10/2004	1902	2853.2	9130.2	15	30	8	16	29.1	29.0	26.5	24.3	29.1	33.6	3.661	6.6	5.1	0.6	PN
227	7/10/2004	2007	2847.7	9124.9	15	18	9	17	29.9	30.0	26.1	25.7	27.4	35.6	3.353	6.4	3.4	3.2	ST
229	7/10/2004	2256	2840.9	9125.2	15	26	11	22	30.0	29.4	26.8	25.6	34.4	35.6	4.453	6.3	5.7	4.0	ST
230	7/11/2004	202	2900.8	9140.1	15	12	6	12	29.2	29.6	27.1	19.4	27.6	34.3	4.048	7.0	4.9	0.1	ST
231	7/11/2004	508	2842.8	9126.0	15	24	12	24	30.4	28.6	25.9	25.6	34.9	35.8	3.825	6.4	5.6	3.8	ST
232	7/11/2004	658	2832.6	9128.7	15	40	20	40	29.5	26.3	22.6	29.8	35.5	36.3	1.040	6.1	5.3	5.0	ST
233	7/11/2004	831	2830.0	9129.0	15	85	23	45	29.7	26.3	22.4	29.7	35.2	36.4	1.260	6.0	4.8	5.3	PN
234	7/11/2004	1003	2832.5	9116.0	15	36	18	36	29.7	28.2	22.5	26.8	35.3	36.3	3.516	5.6	5.6	4.0	ST
235	7/11/2004	1231	2820.4	9121.6	15	64	31	62	29.9	28.7	21.2	30.4	35.9	36.4	1.143	5.9	6.0	5.2	ST
236	7/11/2004	1348	2817.9	9122.2	15	70													ST
237	7/11/2004	1710	2834.3	9136.3	15	40	20	40	29.5	27.4	22.6	31.0	34.6	36.4	0.782	5.9	5.9	5.1	ST
238	7/11/2004	1945	2832.9	9123.0	15	37	18	35	29.8	27.8	23.5	29.1	33.6	36.2	0.993	6.1	4.9	4.4	ST
239	7/11/2004	2100	2834.5	9121.2	15	33	17	33	29.8	28.6	23.5	29.7	34.8	36.2	0.814	6.1	5.7	4.1	ST
240	7/11/2004	2321	2847.6	9106.0	15	10	5	10	30.3	30.4	29.6	26.7	29.2	33.0	2.302	6.5	6.0	3.1	ST
241	7/12/2004	229	2853.5	9044.0	14	12	6	12	30.1	30.0	28.0	23.8	26.0	34.7	5.767	7.2	4.5	0.1	ST
242	7/12/2004	311	2852.2	9043.9	14	16	8	16	30.6	30.1	27.5	21.7	28.8	35.7	6.535	9.1	4.0	0.0	ST
243	7/12/2004	548	2835.3	9042.5	14	21	11	21	29.9	29.8	25.9	29.1	33.6	36.2	1.760	6.2	5.8	2.3	ST
244	7/12/2004	722	2829.3	9036.8	14	37	19	37	29.9	27.2	22.9	28.5	35.4	36.4	2.207	6.0	4.6	3.1	ST

Table 2. Selected environmental parameters (continued)

OREGON II, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
245	7/12/2004	930	2833.7	9029.4	14	35	18	35	30.4	26.9	23.0	29.8	35.9	36.4	2.492	6.4	4.0	4.0	ST
246	7/12/2004	1100	2830.1	9030.3	14	71	19	38	30.0	26.8	22.7	29.2	36.0	36.4	3.060	6.6	5.3	3.9	PN
247	7/12/2004	1229	2822.7	9037.6	14	46	22	44	30.2	25.9	22.1	29.4	35.5	36.4	1.989	6.0	3.6	4.3	ST
248	7/12/2004	1342	2820.2	9037.6	14	50													ST
249	7/12/2004	1708	2824.1	9102.1	15	46	23	46	30.1	28.9	21.6	29.3	35.9	36.4	0.992	6.0	5.9	3.8	ST
250	7/12/2004	1859	2830.0	9100.4	15	61	17	33	30.1	29.1	22.7	26.2	35.9	36.3	1.831	6.3	5.9	3.8	PN
251	7/12/2004	1950	2834.2	9101.5	15	26	13	25	30.1	28.9	24.8	27.2	35.5	36.2	1.303	6.3	6.0	2.8	ST
252	7/12/2004	2119	2835.2	9055.2	14	22	11	21	30.4	27.0	25.4	27.2	35.1	36.1	1.849	6.3	4.0	3.1	ST
253	7/13/2004	104	2816.6	9054.0	14	65	31	61	30.1	23.8	21.4	27.4	36.3	36.4	2.626	5.8	6.4	4.5	ST
254	7/13/2004	543	2815.1	9019.3	14	83	41	81	30.4	24.3	21.0	33.2	36.3	36.4	0.948	6.0	6.2	4.6	ST
255	7/13/2004	744	2818.8	9010.1	14	82	40	80	29.5	25.0	19.9	33.3	36.3	36.4	1.035	5.8	5.5	4.5	ST
256	7/13/2004	1122	2841.0	9017.2	14	30	15	29	30.5	28.5	23.0	19.9	34.9	36.3	6.927	6.1	3.6	1.5	ST
257	7/13/2004	1319	2853.6	9019.4	14	20	9	18	30.4	30.0	25.0	16.9	30.8	36.1	6.298	7.5	5.4	0.1	ST
258	7/13/2004	1452	2853.8	9025.9	14	18	8	16	30.7	29.6	27.6	26.0	32.1	33.0	4.215	7.5	4.4	0.0	ST
259	7/13/2004	1712	2859.5	9029.0	14	21	6	11	30.7	29.8	27.2	20.5	29.7	35.7	6.740	7.6	5.2	0.0	PN
260	7/13/2004	1857	2900.1	9017.7	14	15	8	15	31.0	29.8	26.2	19.4	30.6	36.0	7.290	7.8	5.5	0.0	ST
261	7/13/2004	2202	2900.6	9000.5	14	42	12	23	30.3	26.7	23.7	19.0	36.0	36.3	5.228	5.3	1.7	3.8	PN
262	7/14/2004	102	2858.1	9004.0	14	24	12	24	30.7	26.9	23.5	20.8	35.9	36.3	5.655	7.1	0.9	3.3	ST
263	7/14/2004	247	2857.9	9014.7	14	17	8	16	31.2	29.5	25.5	24.9	32.2	36.1	7.181	8.2	3.7	0.0	ST
264	7/14/2004	558	2837.4	9022.3	14	31	15	30	31.1	28.6	23.3	21.1	35.2	36.3	4.953	7.2	3.4	2.2	ST
265	7/14/2004	811	2826.8	9025.0	14	46	23	45	30.7	26.2	22.3	26.6	36.1	36.4	2.821	6.5	5.8	4.0	ST
266	7/14/2004	928	2825.8	9021.9	14	49													ST
267	7/14/2004	1039	2823.9	9020.2	14	53													ST
268	7/14/2004	1543	2850.8	8943.1	13	64	27	53	30.1	24.1	21.5	22.7	36.4	36.4	6.575	5.2	6.1	2.9	ST
269	7/14/2004	1843	2901.3	8938.3	13	34	16	32	30.2	28.1	23.2	16.5	35.5	36.3	15.769	6.3	2.8	3.6	ST
270	7/14/2004	1946	2900.3	8935.8	13	29													ST
271	7/14/2004	2118	2900.3	8930.4	13	27	8	16	30.1	28.2	24.7	14.7	33.8	36.2	8.690	7.3	1.3	3.3	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
272	7/15/2004	102	2910.2	8955.9	13	13	6	11	31.6	29.7	26.9	15.5	30.4	34.7	22.146	10.3	2.5	0.0	ST
273	7/15/2004	220	2908.3	8952.1	13	19	8	16	30.8	28.8	25.7	17.2	33.2	35.7	25.868	8.4	2.4	0.6	ST
274	7/15/2004	344	2904.4	8946.2	13	30	14	27	30.6	28.4	23.7	14.8	35.2	36.2	23.311	10.6	3.4	3.3	ST
275	7/15/2004	458	2902.1	8937.2	13	26	9	17	30.5	30.5	25.8	13.6	30.4	35.8	13.702	10.1	4.7	2.2	ST
276	7/15/2004	647	2859.0	8933.0	13	31	16	31	30.5	27.6	23.5	13.7	35.1	36.3	11.615	8.6	1.8	3.4	ST
277	7/15/2004	825	2854.7	8942.5	13	56													ST
278	7/15/2004	944	2852.3	8941.8	13	62	31	62	30.1	23.7	20.8	20.3	36.4	36.4	13.064	6.7	6.0	2.2	ST
279	7/15/2004	1318	2912.9	8952.8	13	11	5	9	30.6	30.1	27.1	17.6	29.4	34.3	11.518	6.7	2.6	0.0	ST
280	7/15/2004	1526	2906.9	8935.4	13	16	8	16	30.4	30.3	25.9	14.3	31.4	35.8	17.683	8.0	4.7	2.0	ST
281	7/16/2004	353	3011.4	8823.8	11	11	6	11	26.0	24.9	24.7	34.4	35.3	35.4	3.199	2.5	1.3	1.2	ST

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
1	6/11/2004	1356	2919.0	8856.9	11	20	10	20	29.7	24.9	24.3	13.1	34.9	35.1		8.3	5.3	5.8	ST
2	6/11/2004	1545	2922.3	8858.5	11	16	8	16	29.1	27.4	25.3	17.8	33.1	34.2		11.8	4.9	4.5	ST
3	6/11/2004	1724	2920.2	8853.2	11	27	13	26	31.9	25.4	24.0	16.4	35.0	35.0		10.9	4.8	4.9	ST
4	6/11/2004	1902	2922.0	8844.3	11	46	23	45	28.4	25.7	24.2	29.5	35.0	34.8		6.1	5.1	5.0	ST
5	6/11/2004	2139	2921.6	8839.0	11	55	27	54	30.0	24.6	22.6	29.0	36.2	36.2		5.5	5.5	5.0	ST
6	6/12/2004	52	2927.9	8847.2	11	18	9	17	30.0	25.3	23.5	29.5	34.1	35.7		5.2	5.6	5.4	ST
7	6/12/2004	209	2923.7	8849.3	11	26	13	25	30.5	25.6	23.7	24.3	35.9	36.1		7.6	5.2	5.1	ST
8	6/12/2004	351	2923.6	8848.1	11	30	29	30	30.4	26.1	23.6	23.1	35.9	36.2		7.4	5.1	5.3	ST
9	6/12/2004	558	2926.0	8841.7	11	40	20	39	29.1	25.6	22.9	27.9	36.0	35.8		5.7	5.1	5.2	ST
10	6/12/2004	936	2935.5	8836.2	11	24	12	22	29.0	24.6	22.3	29.4	34.6	35.9		5.1	5.4	5.0	ST
11	6/12/2004	1040	2932.3	8836.3	11	35	18	35	28.5	24.5	22.1	30.5	35.7	35.7		6.1	5.3	5.0	ST
12	6/12/2004	1258	2934.0	8836.2	11	27	14	27	28.2	23.9	22.6	29.9	34.8	35.5		4.9	5.1	4.9	ST
13	6/12/2004	1455	2935.1	8847.9	11	15	7	14	29.6	28.2	26.2	25.7	31.8	33.1		5.5	5.0	4.6	ST
14	6/12/2004	1657	2942.7	8852.3	11	7	3	5	32.0	30.2	29.9	21.4	28.9	29.2		5.3	4.8	4.7	ST
15	6/12/2004	2013	2929.9	8830.2	11	88	24	48	30.1	26.5	23.4	30.4	35.6	35.3		4.9	5.1	5.0	PN
16	6/12/2004	2236	2934.5	8819.6	11	40	20	39	29.6	27.7	25.1	31.4	34.9	34.3		4.6	4.9	4.9	ST
17	6/13/2004	58	2947.4	8823.2	11	34	24	34	29.7	23.9	22.6	31.3	35.5	35.8		4.7	5.2	4.5	ST
18	6/13/2004	355	2932.3	8821.2	11	46	23	46	29.1	26.1	23.9	32.2	35.6	35.8		4.8	5.0	4.9	ST
19	6/13/2004	622	2940.7	8830.2	11	35	17	33	29.5	22.4	22.0	28.6	35.4	35.4		4.9	5.0	4.6	ST
20	6/13/2004	839	2936.8	8832.9	11	33	16	31	29.0	22.1	21.7	30.5	35.2	34.8		4.9	4.6	4.6	ST
21	6/13/2004	1010	2935.0	8837.9	11	18	9	17	29.0	26.2	23.0	29.4	33.7	35.0		4.7	5.0	4.6	ST
22	6/13/2004	1313	2957.5	8834.1	11	24	12	24	29.7	25.4	22.7	27.9	34.3	35.1		4.8	4.9	4.5	ST
23	6/13/2004	1549	3011.6	8832.1	11	9	4	8	30.8	30.1	28.6	20.9	26.4	31.6		5.0	4.7	4.7	ST
24	6/13/2004	1712	3012.3	8832.0	11	5	3	5	30.6	30.4	29.4	19.5	20.8	26.8		4.8	4.8	4.5	ST
25	6/13/2004	2022	3011.2	8835.3	11	11	6	11	30.6	27.6	25.0	22.3	31.3	34.1		5.1	4.9	4.4	ST
26	6/13/2004	2219	3010.6	8838.3	11	13	7	12	30.2	26.3	24.1	23.0	32.5	34.3		5.0	4.8	4.3	ST
27	6/14/2004	122	3005.1	8840.5	11	16	8	16	30.0	26.5	23.2	25.2	30.7	34.7		4.8	4.4	4.3	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
28	6/14/2004	429	3006.9	8854.7	11	13	6	12	29.6	30.1	23.7	23.8	26.2	33.5		5.4	4.7	3.3	ST
29	7/10/2004	350	2910.7	8932.8	13	7													ST
30	7/10/2004	1123	2902.8	9043.1	14	4													ST
31	7/10/2004	1853	2906.2	9148.4	15	7													ST
32	7/10/2004	2154	2918.3	9152.0	15	5													ST
33	7/11/2004	130	2909.3	9129.9	15	5													ST
34	7/11/2004	314	2910.7	9122.3	15	4													ST
35	7/11/2004	1157	2932.7	9238.3	16	7													ST
36	7/11/2004	1746	2944.8	9336.2	17	4													ST
37	7/11/2004	1942	2940.2	9348.9	17	5													ST
38	7/12/2004	125	2941.0	9341.6	17	7													ST
39	7/12/2004	303	2944.0	9335.8	17	5													ST

Table 2. Selected environmental parameters (continued)

PELICAN, SUMMER SHRIMP/GROUNDFISH SURVEY																			
							SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			FL	DISSOLVED OXYGEN, PPM			
STA#	DATE MM/DD/YY	TIME	POSITION LAT	LONG	STAT ZONE	DEPTH (M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	GEAR
35001	7/12/2004	835	2859.3	9030.0	14	9	5	9	29.9	30.3	27.5	19.8	24.4	35.3	4.113	7.3	6.1	0.3	PN
35002	7/12/2004	1205	2860.0	9100.1	15	6	3	6	30.5	30.5	30.0	21.5	22.0	23.0	8.258	8.3	7.3	3.9	PN
35003	7/12/2004	1533	2860.0	9129.9	15	9	5	9	30.2	29.8	28.5	25.1	26.2	31.1	2.186	5.7	6.4	0.9	PN
35004	7/12/2004	1900	2846.9	9104.6	15	10	5	10	31.0	30.1	29.7	27.6	28.7	32.8	0.455	6.5	6.1	2.3	ST
35005	7/12/2004	2110	2846.0	9104.7	15	10	5	10	31.0	30.1	29.7	27.6	28.7	32.7	0.455	6.5	6.1	2.3	ST
35006	7/12/2004	2249	2840.9	9104.4	15	15	8	13	30.9	30.1	26.8	28.2	32.6	35.1	0.503	5.2	4.8	0.3	ST
35007	7/13/2004	51	2836.1	9057.3	14	20	12	18	30.0	26.7	25.5	29.5	35.6	36.1	0.483	6.2	4.4	2.9	ST
35008	7/13/2004	247	2829.6	9057.5	14	33	12	31	30.1	28.6	22.8	30.6	35.8	36.3	0.509	6.3	6.5	4.3	ST
35009	7/13/2004	544	2831.5	9115.1	15	36	19	36	30.0	26.8	22.3	29.5	35.4	36.4	0.264	6.0	5.6	4.2	ST
35010	7/13/2004	725	2831.9	9115.2	15	36	19	36	30.0	26.8	22.3	29.5	35.4	36.4	0.264	6.0	5.6	4.2	ST
35011	7/13/2004	957	2841.2	9104.3	15	15	6	13	30.8	30.3	26.6	27.4	31.5	35.1	0.756	6.1	4.4	1.4	ST
35012	7/13/2004	1133	2836.1	9057.5	14	20	10	18	30.2	29.1	25.5	29.2	34.3	36.1	0.384	6.2	6.2	2.6	ST
35013	7/13/2004	1245	2830.0	9100.0	15	32	16	32	30.2	27.8	22.6	29.1	35.3	36.4	0.599	6.4	6.5	4.1	PN
35014	7/13/2004	1358	2829.5	9057.4	14	33	16	31	30.3	28.4	22.8	29.2	35.5	36.4	0.500	6.4	6.5	4.2	ST
35015	7/13/2004	1712	2829.9	9030.0	14	38	18	37	32.7	28.1	22.7	18.9	35.3	36.4	3.314	8.2	4.8	3.7	PN
35016	7/13/2004	1849	2835.8	9030.6	14	27	13	26	32.1	28.3	23.9	19.7	33.9	36.4	2.370	8.0	4.2	3.1	ST
35017	7/13/2004	2226	2835.9	9030.5	14	27	13	26	32.1	28.3	23.9	19.7	33.9	36.4	3.072	8.0	4.2	3.1	ST
35018	7/14/2004	39	2840.9	9032.8	14	18	8	16	31.1	29.7	28.2	25.6	30.4	35.5	3.010	7.6	6.3	4.5	ST
35019	7/14/2004	330	2846.7	9013.9	14	27	15	27	30.6	27.8	23.5	18.6	35.3	36.3	4.936	7.9	1.1	0.7	ST
35020	7/14/2004	738	2840.5	9032.9	14	18	8	17	30.7	29.5	28.4	28.2	30.6	35.3	1.576	6.3	5.8	4.6	ST
35021	7/14/2004	1024	2845.9	9015.1	14	27	14	26	30.8	27.5	23.5	21.1	35.7	36.3	5.022	6.8	0.1	0.8	ST
35022	7/14/2004	1325	2900.1	8960.0	13	26	12	22	30.7	26.7	24.2	15.2	36.0	36.2	8.125	7.0	2.3	3.5	PN
35023	7/14/2004	1453	2904.8	8954.0	13	22	9	21	31.3	29.0	24.8	17.0	33.6	36.0	12.943	9.5	3.7	1.2	ST
35024	7/14/2004	1647	2903.1	8942.0	13	31	16	30	30.6	27.0	23.3	17.7	35.9	36.3	12.188	6.5	1.4	3.6	ST
35025	7/14/2004	1844	2858.7	8930.3	13	24	13	23	30.2	27.2	23.6	13.3	36.0	36.3	15.201	6.9	4.9	4.0	ST
35026	7/14/2004	2203	2904.6	8953.9	13	24	11	21	30.9	27.9	24.8	15.7	35.4	36.0	8.469	8.9	3.6	1.8	ST
35027	7/15/2004	11	2903.0	8941.6	13	30	15	30	29.9	27.8	23.2	13.9	35.4	36.3	37.397	10.0	1.4	3.9	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
35028	7/15/2004	130	2905.7	8937.4	13	16	8	14	30.6	30.2	26.3	14.4	31.2	35.2	10.614	9.4	5.3	0.7	ST
35029	7/15/2004	323	2858.5	8929.8	13	27	10	22	30.7	28.4	25.1	14.0	32.2	36.2	15.302	8.6	0.5	3.8	ST
35030	7/15/2004	715	2860.0	8930.0	13	16	7	14	30.4	29.1	27.2	14.0	29.2	35.8	12.000	8.2	0.2	3.3	PN
35031	7/15/2004	903	2905.7	8937.6	13	16	7	15	30.3	30.6	26.4	13.4	30.2	35.3	16.718	8.0	5.6	1.4	ST

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
23001	6/3/2004	1543	3012.7	8818.8	11	5													ST
23002	6/3/2004	1800	2958.6	8812.6	11	29													ST
23003	6/3/2004	1910	2956.4	8811.5	11	31													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	6/2/2004	847	2560.0	9707.6	22	13	8	13	24.5	24.4	23.5	39.5	39.7	39.6		6.6	6.8	6.3	ST
31002	6/2/2004	958	2604.5	9659.5	21	27	14	27	26.1	26.0	24.5	39.7	39.7	39.8		7.0	6.9	7.2	ST
31003	6/2/2004	1037	2606.9	9700.5	21	26	13	26	26.2	26.1	24.0	39.8	39.8	39.8		7.2	7.0	7.1	ST
31004	6/2/2004	1118	2605.4	9702.5	21	23	13	23	26.2	26.1	24.2	39.8	39.8	39.9		7.2	7.2	7.2	ST
31005	6/2/2004	1150	2606.9	9702.5	21	23	11	23	26.4	26.3	24.2	39.8	39.8	39.9		7.1	7.3	7.2	ST
31006	6/2/2004	1243	2611.3	9701.4	21	24	12	24	26.4	26.1	24.0	39.8	39.9	39.9		7.0	7.0	7.0	ST
31007	6/2/2004	1338	2610.9	9706.5	21	18	9	18	26.0	25.7	24.3	39.9	39.9	39.9		7.0	7.0	7.0	ST
31008	6/2/2004	1420	2608.3	9709.6	21	7	4	7	25.5	23.7	23.7	39.6	39.7	39.8		6.8	6.7	6.6	ST
31009	6/16/2004	858	2612.5	9706.5	21	18	9	18	21.8	21.7	21.3	39.0	39.7	39.2		6.9	6.9	7.0	ST
31010	6/16/2004	1003	2612.6	9700.5	21	28	14	28	21.7	20.9	20.2	39.1	38.8	38.9		6.8	6.9	6.6	ST
31011	6/16/2004	1045	2615.4	9701.5	21	25	12	25	21.7	21.5	20.6	38.7	38.8	38.9		6.8	6.7	6.5	ST
31012	6/16/2004	1128	2614.8	9704.5	21	19	10	19	22.2	22.1	20.5	38.6	38.3	38.8		6.7	7.0	6.7	ST
31013	6/16/2004	1208	2617.4	9705.5	21	19	9	19	22.4	22.1	20.7	38.7	38.9	38.7		6.7	6.8	6.8	ST
31014	6/16/2004	1302	2620.9	9710.5	21	15	7	15	22.4	22.3	21.7	39.0	38.9	38.9		6.8	6.9	7.2	ST
31015	6/16/2004	1333	2619.4	9710.5	21	15	7	15	22.9	22.8	21.3	39.1	39.1	39.0		6.9	6.8	7.2	ST
31016	6/16/2004	1410	2617.7	9709.5	21	16	8	16	22.5	22.3	21.1	39.0	39.0	39.0		6.7	7.1	7.0	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	6/4/2004	906	2822.5	9620.5	19	9	5	9	28.1	27.1	26.6	28.7	34.3	35.2		5.9	5.5	5.2	ST
32002	6/4/2004	1007	2821.5	9612.5	19	18	9	18	27.7	26.9	25.6	33.7	35.7	36.2		6.0	5.9	4.2	ST
32003	6/4/2004	1049	2822.5	9610.5	19	18	9	18	27.7	27.0	25.4	35.2	35.5	36.2		5.8	5.8	3.9	ST
32004	6/4/2004	1132	2824.5	9612.5	19	15	8	15	28.0	27.0	26.1	34.7	35.2	35.8		5.9	6.0	5.0	ST
32005	6/4/2004	1240	2826.5	9604.5	19	15	8	15	28.3	26.9	25.3	34.3	35.1	36.0		5.9	6.0	3.6	ST
32006	6/4/2004	1325	2828.5	9608.6	19	13	7	13	28.8	27.9	27.4	34.8	34.8	35.2		5.8	5.9	4.6	ST
32007	6/4/2004	1405	2830.5	9608.5	19	9	5	9	30.0	28.3	28.0	34.1	34.5	34.7		6.0	6.2	5.6	ST
32008	6/4/2004	1545	2828.5	9610.5	19	12	6	12	29.5	29.5	27.9	34.4	34.6	35.0		6.2	6.2	5.9	ST
32009	6/16/2004	719	2820.5	9622.5	19	10	5	10	28.9	28.9	28.8	29.8	32.9	34.3		6.0	6.0	5.7	ST
32010	6/16/2004	803	2817.5	9621.5	19	17	9	17	28.3	28.4	28.3	33.3	34.6	35.1		6.1	6.0	6.0	ST
32011	6/16/2004	842	2817.6	9623.5	19	15	7	15	28.4	28.4	28.6	34.0	34.5	34.5		6.1	6.1	5.9	ST
32012	6/16/2004	937	2816.5	9628.5	19	9	4	9	29.0	29.0	29.0	30.1	30.8	31.4		6.2	6.3	5.9	ST
32013	6/16/2004	1023	2813.6	9627.5	19	16	8	16	28.7	28.6	28.5	33.8	34.0	34.4		6.1	6.1	5.7	ST
32014	6/16/2004	1112	2813.5	9623.5	19	20	10	20	28.5	28.3	27.6	34.4	34.7	36.1		6.0	5.9	6.0	ST
32015	6/16/2004	1151	2815.5	9621.6	19	20	10	20	28.5	27.9	27.6	34.3	35.9	36.9		6.2	6.2	5.5	ST
32016	6/16/2004	1255	2813.5	9618.5	19	23	11	23	28.5	27.4	25.3	36.9	34.1	36.0		6.2	6.2	4.2	ST

Table 2. Selected environmental parameters (continued)

NUECES, SUMMER SHRIMP/GROUNDFISH SURVEY																			
							SAMPLE DEPTHS (M)		TEMPERATURE, C			SALINITY, PPT			FL	DISSOLVED OXYGEN, PPM			
STA#	DATE MM/DD/YY	TIME	POSITION LAT	LONG	STAT ZONE	DEPTH (M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	GEAR
67001	6/14/2004	800	2745.6	9700.6	20	17	8	17	28.2	28.2	28.1	35.2	35.8	35.9		5.6	5.6	5.7	ST
67002	6/14/2004	839	2743.2	9704.8	20	14	7	14	28.3	28.3	28.3	35.6	35.8	35.8		5.8	5.8	5.8	ST
67003	6/14/2004	910	2743.6	9706.4	20	11	6	11	28.6	28.6	28.6	35.4	35.5	35.5		6.0	6.0	6.2	ST
67004	6/14/2004	1000	2740.3	9707.9	20	13	6	13	28.3	28.3	28.3	35.6	35.9	35.9		5.8	5.8	6.0	ST
67005	6/14/2004	1053	2737.8	9705.1	20	16	7	16	28.2	28.0	28.0	35.9	35.9	35.9		5.7	5.7	5.7	ST
67006	6/14/2004	1317	2741.3	9657.7	20	22	11	22	28.7	27.7	27.6	36.3	36.4	36.5		6.2	6.4	6.1	ST
67007	6/14/2004	1410	2746.5	9656.6	20	20	10	20	28.6	28.4	27.9	35.7	36.5	36.5		6.4	6.6	6.7	ST
67008	6/14/2004	1526	2750.2	9656.6	20	16	8	16	29.2	28.3	28.1	35.0	35.0	35.0		6.6	6.5	6.5	ST
67009	6/21/2004	801	2753.3	9657.3	20	13	6	13	29.4	29.4	29.3	34.9	35.0	35.0		5.6	5.6	5.5	ST
67010	6/21/2004	829	2754.9	9657.5	20	11	6	11	29.6	29.6	29.5	35.5	35.5	35.4		5.7	5.8	5.8	ST
67011	6/21/2004	900	2755.1	9655.4	20	13	6	13	29.4	29.5	29.5	35.1	35.1	35.2		6.0	5.9	5.8	ST
67012	6/21/2004	927	2756.9	9655.2	20	12	6	12	29.2	29.2	29.1	35.4	35.4	35.4		5.8	5.8	5.6	ST
67013	6/21/2004	955	2758.2	9653.7	20	12	6	12	29.1	29.1	29.0	35.4	35.3	35.3		5.7	5.8	5.9	ST
67014	6/21/2004	1032	2755.9	9653.1	20	15	8	15	29.4	29.4	29.1	35.0	35.1	35.2		5.8	6.0	5.9	ST
67015	6/21/2004	1123	2753.2	9648.3	20	21	11	21	29.2	29.2	29.1	34.5	34.5	34.0		5.9	6.2	6.2	ST
67016	6/21/2004	1225	2752.0	9655.3	20	17	8	17	29.2	29.2	29.2	34.9	34.9	35.0		6.0	6.2	6.3	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	6/2/2004	1023	2915.9	9446.1	18	8	4	8	27.1	27.1	27.2	32.3	32.4	30.1		7.4	6.6	6.2	ST
69002	6/2/2004	1055	2913.0	9447.0	18	10	5	10	27.1	27.1	27.2	34.7	34.9	34.9		5.5	5.5	5.2	ST
69003	6/2/2004	1116	2912.7	9447.1	18	11	6	11	27.2	27.0	27.1	33.9	34.9	35.1		5.5	5.3	5.2	ST
69004	6/2/2004	1141	2911.1	9445.9	18	13	6	13	27.6	27.2	27.0	33.5	34.4	34.8		5.4	5.5	5.4	ST
69005	6/2/2004	1216	2910.0	9446.1	18	15	7	15	27.6	27.4	27.3	32.9	34.2	33.2		5.4	5.4	5.4	ST
69006	6/2/2004	1241	2908.0	9446.0	18	15	7	15	27.8	27.7	27.4	32.1	33.9	34.1		5.2	5.4	5.4	ST
69007	6/2/2004	1311	2908.0	9447.1	18	15	7	15	27.9	27.6	27.7	32.2	32.5	32.8		5.4	5.4	5.4	ST
69008	6/2/2004	1348	2911.2	9441.8	18	15	7	15	28.0	27.9	27.9	34.3	34.6	36.6		5.4	5.4	5.4	ST
69009	6/29/2004	1020	2920.1	9434.9	18	12	6	12	28.1	28.1	28.3	21.9	27.4	22.3		6.9	6.8	6.7	ST
69010	6/29/2004	1118	2928.1	9431.6	18	6	3	6	28.7	28.7	28.5	22.3	22.4	24.4		7.3	7.2	7.1	ST
69011	6/29/2004	1307	2924.1	9436.0	18	9	5	9	29.3	29.2	28.8	23.3	27.4	30.8		7.5	7.4	7.3	ST
69012	6/29/2004	1348	2925.0	9438.1	18	7	4	7	29.2	29.1	29.1	22.6	24.0	23.8		7.5	7.3	7.4	ST
69013	6/29/2004	1416	2924.0	9441.9	18	3	2	2	29.3	29.3	29.3	24.3	24.4	24.5		7.4	7.2	7.2	ST
69014	6/29/2004	1441	2921.9	9440.1	18	7	4	7	29.2	29.2	29.1	23.8	24.3	25.5		7.5	7.3	7.3	ST
69015	6/29/2004	1521	2916.0	9436.9	18	12	6	12	29.3	29.2	28.2	22.9	30.2	31.5		7.5	7.5	7.1	ST
69016	6/29/2004	1548	2911.9	9439.1	18	12	6	12	28.9	28.7	27.7	22.6	29.0	29.7		7.6	7.2	5.5	ST

Table 2. Selected environmental parameters (continued)

SABINE, SUMMER SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
40001	6/4/2004	840	2940.2	9353.1	17	2	1	2	29.3	29.2	29.2	18.1	17.6	17.8		7.2	6.9	6.7	ST
40002	6/4/2004	953	2934.5	9350.8	17	11	5	11	29.3	28.1	27.4	16.7	28.2	31.2		7.3	6.2	4.2	ST
40003	6/4/2004	1037	2936.5	9353.2	17	6	3	6	29.6	29.0	28.1	17.4	17.2	26.1		7.1	6.1	4.9	ST
40004	6/4/2004	1112	2936.5	9355.9	17	6	3	6	30.1	28.6	27.8	17.3	17.2	28.3		7.1	5.8	4.0	ST
40005	6/4/2004	1148	2936.6	9357.3	17	7	3	7	30.1	29.0	28.8	17.5	17.2	18.3		7.3	6.6	6.0	ST
40006	6/4/2004	1224	2934.4	9356.8	17	9	5	9	30.1	28.7	28.3	17.1	18.0	27.7		7.5	6.2	5.3	ST
40007	6/4/2004	1306	2933.5	9358.2	17	10	5	10	30.3	27.9	26.6	17.5	27.1	32.8		8.3	5.2	0.5	ST
40008	6/4/2004	1409	2932.5	9359.8	17	11	6	11	30.5	27.9	26.9	18.0	26.7	32.6		7.4	5.2	0.9	ST
40009	6/21/2004	825	2938.5	9345.8	17	9	4	9	29.7	29.3	28.9	18.5	23.3	27.3		7.1	4.4	2.0	ST
40010	6/21/2004	858	2937.5	9346.1	17	9	5	9	29.7	29.1	29.0	16.4	22.8	27.5		6.7	3.2	2.5	ST
40011	6/21/2004	943	2935.5	9343.8	17	11	6	11	29.9	29.1	29.1	19.6	37.3	27.7		6.0	3.7	3.2	ST
40012	6/21/2004	1017	2936.5	9342.2	17	11	5	11	29.9	29.2	29.1	27.7	26.8	27.4		6.0	3.3	2.7	ST
40013	6/21/2004	1101	2940.5	9341.7	17	8	4	8	29.8	29.8	29.1	18.1	17.9	26.2		7.1	6.6	2.3	ST
40014	6/21/2004	1150	2943.6	9337.4	17	6	3	6	30.7	30.3	29.6	17.8	17.6	20.0		7.2	6.0	1.5	ST
40015	6/21/2004	1224	2941.5	9337.7	17	8	4	8	30.2	29.6	29.0	17.3	17.8	26.0		7.2	5.7	1.6	ST
40016	6/21/2004	1334	2938.4	9338.2	17	10	5	10	30.6	29.3	29.3	19.3	19.2	26.4		7.4	4.5	4.0	ST

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	9/25/2004	750	2859.8	8800.1		1373	100	200	26.3	19.2	15.5	35.0	35.2	34.7		6.9	6.9	6.9	PN
17002	9/25/2004	1200	2913.0	8830.1	11	112	56	111	27.2	24.3	20.5	33.7	35.1	35.1		5.5	5.8	4.1	PN
17003	9/25/2004	1453	2930.0	8830.0	11	49	25	48	27.1	26.4	22.6	34.0	33.8	34.9		4.8	4.6	3.9	PN
17004	9/25/2004	1837	2930.0	8800.1	11	42	21	42	26.7	25.8	25.2	34.2	33.8	34.9		5.1	4.6	5.3	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
1	9/3/2004	127	2603.0	9600.1		1044	102	203	30.0	21.4	16.0	36.5	36.4	36.1		6.0	5.9	4.0	PN
2	9/3/2004	437	2602.1	9630.7	21	60	30	59	29.4	26.2	21.5	36.2	36.6	36.5		6.1	6.8	5.6	PN
3	9/3/2004	817	2600.2	9700.3	21	27	14	27	28.0	27.5	26.0	36.5	36.5	36.5	0.095	6.3	6.5	6.4	PN
4	9/3/2004	1234	2630.3	9659.7	21	34	14	28	29.2	29.3	26.5	36.2	36.3	36.5	0.084	6.1	6.1	6.1	PN
5	9/3/2004	1552	2630.5	9630.4	21	83	39	77	28.2	23.0	19.7	36.3	36.5	36.5		6.2	6.1	4.0	PN
6	9/3/2004	2022	2659.5	9600.8		837	101	201	29.8	21.0	15.7	36.4	36.5	36.1	0.081	6.0	5.8	3.9	PN
7	9/4/2004	122	2660.0	9640.7	21	85	42	84	29.4	24.4	18.8	36.2	36.5	36.4	0.070	6.1	7.1	3.9	PN
8	9/4/2004	512	2700.2	9712.4	20	26	11	22	28.9	28.9	28.9	36.4	36.4	36.4	0.668	5.9	5.9	5.9	PN
9	9/4/2004	934	2729.2	9700.5	20	28	12	23	29.1	29.1	29.2	35.7	35.9	36.2		6.0	6.0	5.8	PN
10	9/4/2004	1301	2729.9	9630.3	20	74	37	74	29.2	26.8	20.5	36.3	36.5	36.5		6.1	7.0	4.5	PN
11	9/4/2004	1647	2800.4	9630.3	19	26	13	25	29.1	29.1	29.6	33.7	34.0	35.1	0.231	6.2	6.2	5.7	PN
12	9/4/2004	1937	2817.5	9621.2	19	17	8	16	29.4	29.1	29.0	32.9	33.0	33.5	0.487	5.5	6.0	5.8	PN
13	9/4/2004	2259	2830.3	9600.2	19	14	7	14	29.7	29.6	29.2	32.1	32.1	32.1	0.331	6.3	6.3	6.3	PN
14	9/5/2004	255	2800.5	9600.6	19	44	22	43	29.3	29.6	24.8	35.5	36.2	36.5	0.091	6.1	6.1	5.6	PN
15	9/5/2004	622	2733.7	9600.4	20	166	83	166	29.5	21.1	16.6	36.0	36.5	36.2	0.109	6.1	5.4	3.9	PN
16	9/5/2004	959	2731.1	9529.3		592	101	201	29.3	21.4	11.7	36.2	36.4	35.5		6.1	5.8	3.6	PN
17	9/5/2004	1245	2745.4	9530.0		114	57	114	29.2	22.5	18.7	35.6	36.5	36.4		6.1	6.2	3.9	PN
18	9/5/2004	1516	2800.1	9530.6	19	56	28	56	29.2	28.5	21.5	35.8	36.4	36.5		6.0	6.3	5.3	PN
19	9/5/2004	1918	2829.7	9530.6	19	26	13	26	29.9	29.3	28.9	32.3	32.5	35.2		6.3	6.2	3.8	PN
20	9/6/2004	38	2859.7	9500.1	19	17	8	16	29.7	29.6	29.1	31.0	31.1	31.3		6.4	6.3	6.3	PN
21	9/6/2004	423	2830.1	9459.8	18	34	17	34	29.2	29.5	28.0	33.4	34.8	36.2		6.2	6.1	5.3	PN
22	9/6/2004	759	2801.0	9500.0	19	78	39	78	29.5	24.7	19.9	35.5	36.5	36.4		6.1	7.0	4.4	PN
23	9/6/2004	1250	2729.1	9429.8		722	101	202	29.7	21.1	15.6	36.4	36.5	36.1		6.0	5.5	3.9	PN
24	9/6/2004	1658	2759.9	9429.4		70	33	66	29.9	30.0	21.8	36.3	36.6	36.5		6.0	6.1	5.5	PN
25	9/6/2004	2144	2831.9	9430.4	18	35	17	33	29.9	29.5	25.8	29.8	35.5	36.3		6.3	6.2	5.2	PN
26	9/7/2004	111	2859.8	9429.8	18	19	9	17	29.7	29.4	29.8	30.6	30.8	32.6		6.3	6.3	4.7	PN
27	9/7/2004	450	2925.2	9430.4	18	11	5	9	30.0	29.5	29.4	24.7	25.7	30.0		7.9	7.3	4.3	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	9/7/2004	829	2929.1	9359.9	17	13	6	12	29.4	29.4	29.3	28.0	28.0	28.5		6.5	6.5	5.0	PN
29	9/7/2004	1221	2900.7	9400.4	18	21	10	19	29.5	29.7	29.3	28.7	31.4	35.2		6.4	6.2	5.2	PN
30	9/7/2004	1550	2830.4	9400.1	18	40	20	40	29.5	29.2	26.4	32.1	36.0	36.4		6.2	6.2	6.4	PN
31	9/7/2004	1958	2800.7	9359.7	17	75	38	75	29.4	27.7	21.3	35.0	36.4	36.4		6.1	6.3	5.8	PN
32	9/8/2004	51	2729.2	9330.0		531	101	201	29.4	16.4	12.3	36.4	36.2	35.6		6.1	4.0	3.7	PN
33	9/8/2004	453	2759.3	9329.6		98	46	92	29.6	24.3	15.8	36.4	36.5	36.1		6.1	7.2	4.0	PN
34	9/8/2004	924	2830.3	9330.3	17	43	22	43	29.4	29.3	23.1	35.4	36.0	36.4		6.1	6.1	5.0	PN
35	9/8/2004	1353	2900.7	9330.1	17	24	12	23	29.4	29.4	29.3	29.4	34.2	35.5		6.0	4.8	5.4	PN
36	9/8/2004	1812	2931.8	9333.3	17	11	5	10	29.1	29.2	29.4	25.9	26.2	27.6		6.9	6.7	3.3	PN
37	9/8/2004	2156	2931.2	9300.6	17	13	5	10	29.3	29.2	29.4	26.4	26.7	28.6		6.3	6.3	4.5	PN
38	9/9/2004	206	2900.1	9258.1	16	24	12	24	29.8	29.9	27.0	27.9	31.1	35.5		6.6	5.8	0.7	PN
39	9/9/2004	558	2829.5	9300.0	17	46	23	46	29.5	29.4	23.8	35.2	36.3	36.3		6.1	6.2	5.2	PN
40	9/9/2004	1000	2802.3	9300.4	17	99	50	99	29.5	22.9	17.0	36.3	36.5	36.3		6.1	6.6	4.0	PN
41	9/9/2004	1321	2801.6	9232.6	16	105	52	104	29.4	22.9	16.6	36.4	36.5	36.2		6.1	6.7	3.9	PN
42	9/9/2004	1714	2830.6	9230.8	16	48	24	47	29.6	28.9	22.8	33.7	36.0	36.2		6.1	6.2	4.2	PN
43	9/9/2004	2048	2900.5	9233.0	16	25	11	22	30.1	29.7	26.1	32.6	33.7	35.5		6.1	6.2	2.2	PN
44	9/10/2004	33	2901.2	9159.4	15	18	9	18	30.1	30.1	29.3	31.6	32.0	35.3		6.3	6.2	4.6	PN
45	9/10/2004	441	2830.5	9159.9	15	48	24	48	29.7	29.1	22.5	34.9	36.2	36.4		6.1	6.4	4.9	PN
46	9/10/2004	828	2800.2	9200.2	16	119	60	119	29.7	22.5	17.1	36.2	36.5	36.2		6.1	6.4	3.9	PN
47	9/10/2004	1213	2800.5	9131.0	15	169	76	152	29.7	20.6	15.1	36.1	36.4	36.0		6.1	5.5	4.1	PN
48	9/10/2004	1652	2830.1	9130.4	15	46	22	44	29.8	29.9	23.2	34.1	36.3	36.3		6.1	6.2	3.4	PN
49	9/10/2004	2036	2858.7	9132.4	15	13	6	11	30.3	30.1	30.0	29.0	29.4	31.2		6.3	6.2	3.4	PN
50	9/11/2004	134	2847.0	9053.8	14	16	7	14	30.1	30.1	29.5	29.5	29.5	33.8		6.2	6.2	1.2	PN
51	9/11/2004	507	2853.2	9033.2	14	17	8	16	30.0	30.0	29.2	26.7	26.9	34.0		6.3	5.9	1.2	PN
52	9/11/2004	809	2830.6	9030.7	14	37	19	37	29.9	30.2	24.1	32.3	34.7	36.2		6.1	6.2	1.6	PN
53	9/11/2004	1148	2828.4	9059.2	14	36	18	36	29.8	30.1	23.7	33.8	34.8	36.2		6.1	6.3	2.9	PN
54	9/11/2004	1551	2800.0	9100.4	15	156	78	156	29.7	20.0	13.7	35.4	36.5	35.8		6.1	5.3	3.9	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
55	9/11/2004	2102	2730.6	9030.9		989	101	201	29.9	18.4	13.0	36.2	36.5	35.7		6.1	4.7	4.3	PN
56	9/12/2004	134	2805.3	9030.8	14	144	72	144	30.0	20.9	14.5	36.0	36.4	35.9		6.1	6.0	4.0	PN
57	9/12/2004	510	2800.6	9000.9	14	536	101	201	29.6	19.9	15.1	35.7	36.6	36.0		6.1	4.9	4.2	PN
58	9/12/2004	942	2830.7	9000.8	14	139	70	139	29.8	19.0	15.3	35.0	36.4	36.0		6.1	4.3	4.0	PN
59	9/12/2004	1531	2900.6	9001.1	14	23	12	23	29.7	29.7	27.8	29.1	32.7	35.5		6.5	6.1	1.6	PN
60	9/12/2004	1931	2858.2	8933.5	13	44	22	44	29.3	29.2	21.2	21.0	34.1	36.4		6.7	3.9	3.1	PN
61	9/20/2004	528	2830.0	8931.0	13	731	101	201	28.1	20.3	15.2	32.8	36.6	35.9		6.8	5.0	4.1	PN
62	9/20/2004	937	2830.4	8900.9	13	861	102	203	27.8	20.2	14.5	33.2	36.5	35.9		6.4	5.2	4.3	PN
63	9/20/2004	1407	2860.0	8900.9	13	62	35	70	27.0	24.9	21.6	34.3	35.7	36.1		6.1	5.4	4.9	PN
64	9/20/2004	1827	2900.2	8831.1	11	562	100	199	26.9	19.1	13.6	35.1	36.3	35.8		6.4	4.8	4.0	PN
65	9/20/2004	2329	2915.4	8801.0	11	224	104	207	26.9	19.5	13.8	34.6	36.3	35.8		6.3	4.8	4.0	PN
66	9/21/2004	420	2930.1	8730.1	10	69	34	68	27.0	27.0	22.2	34.7	34.7	35.9		6.3	6.2	5.2	PN
67	9/21/2004	853	2948.8	8700.8	10	187	93	186	26.9	17.7	13.5	34.8	36.3	35.7		6.3	4.3	3.9	PN
68	9/21/2004	1055	3000.5	8700.2	10	70	35	70	26.9	26.9	20.7	34.5	34.5	36.3		6.4	6.4	4.8	PN
69	9/21/2004	1341	3019.5	8659.7	9	20	9	18	26.7	26.7	26.7	33.6	33.6	33.7		6.2	6.2	6.3	PN
70	9/21/2004	1715	3017.1	8629.5	9	21	10	19	26.3	26.3	26.3	34.1	34.1	34.1		6.5	6.5	6.4	PN
71	9/21/2004	1946	3000.1	8630.6	9	57	26	52	26.9	26.9	23.6	34.2	34.5	35.7		6.6	6.4	5.4	PN
72	9/21/2004	2349	2930.0	8630.8		210	100	199	27.1	17.6	13.7	34.8	36.3	35.8		6.4	4.3	4.0	PN
73	9/22/2004	1421	3000.0	8600.1	9	31	15	29	26.5	26.5	25.5	34.5	34.5	35.3		6.4	6.4	5.5	PN
74	9/22/2004	1818	2947.7	8530.0	8	20	7	13	27.1	27.1	27.2	34.4	34.4	34.5		5.8	5.8	5.6	PN
75	9/22/2004	2057	2930.7	8530.6	8	15	7	14	26.6	26.5	26.6	35.6	35.6	35.6		6.4	6.5	6.4	PN
76	9/23/2004	134	2929.9	8455.8	7	13	6	11	26.9	26.9	26.9	34.4	34.4	34.4		6.4	6.4	6.4	PN
77	9/23/2004	446	2930.0	8430.5	7	23	11	22	27.3	27.3	27.4	35.3	35.3	35.4		6.2	6.2	6.2	PN
78	9/23/2004	834	2930.1	8400.3	7	21	10	19	27.1	27.1	27.1	35.4	35.4	35.4		6.1	6.1	6.1	PN
79	9/23/2004	1109	2930.0	8338.0	7	12	5	10	26.3	26.3	26.3	32.7	32.8	32.8		6.1	6.1	6.0	PN
80	9/23/2004	1455	2900.0	8300.4	7	16	8	16	26.9	26.9	27.1	34.4	34.4	35.3		6.2	6.2	5.7	PN
81	9/23/2004	1912	2859.9	8400.4	6	28	13	26	27.5	27.1	27.1	35.9	35.9	35.9		6.2	6.3	6.2	PN
82	9/23/2004	2238	2900.3	8430.7	7	34	17	34	26.8	26.7	26.6	35.6	35.6	35.7		6.5	6.5	6.2	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
83	9/24/2004	209	2859.8	8500.6	8	39	20	39	26.4	26.3	23.0	35.3	35.3	35.9		6.4	6.4	5.1	PN
84	9/24/2004	607	2859.8	8529.8	8	71	32	63	26.1	26.1	20.6	35.4	35.4	36.2		6.4	6.3	4.9	PN
85	9/24/2004	1004	2830.3	8530.9		197	97	194	26.4	18.2	12.8	35.7	36.4	35.6		6.4	4.3	3.8	PN
86	9/24/2004	1359	2829.9	8500.1		100	47	94	26.4	25.8	18.8	35.4	35.6	36.4		6.3	6.2	4.3	PN
87	9/24/2004	1750	2829.8	8430.5	6	52	23	46	27.0	26.8	24.2	35.3	35.4	36.1		6.3	6.3	5.1	PN
88	9/24/2004	2121	2831.6	8400.8	6	34	17	34	26.9	26.7	26.7	35.7	35.7	35.7		6.4	6.3	6.3	PN
89	9/25/2004	52	2829.3	8329.8	6	23	10	20	27.7	27.7	27.7	36.0	36.0	36.0		6.3	6.3	6.2	PN
90	9/25/2004	358	2830.0	8304.5	6	12	5	10	27.1	27.1	27.1	34.9	34.9	34.9		6.1	6.1	6.1	PN
91	9/25/2004	739	2759.8	8300.2	5	14	6	11	26.9	26.9	27.7	33.8	33.8	35.3		6.4	6.4	5.8	PN
92	9/25/2004	1104	2759.6	8330.4	5	31	13	26	27.2	27.2	27.2	36.0	36.0	36.0		6.1	6.1	6.1	PN
93	9/25/2004	1434	2759.9	8400.5	5	48	23	45	27.1	27.1	24.0	35.4	35.4	36.2		6.3	6.3	4.9	PN
94	9/25/2004	1805	2759.6	8430.5	5	78	38	75	27.2	24.0	21.3	35.3	36.0	36.4		6.3	6.3	5.5	PN
95	9/25/2004	2151	2809.2	8500.1		182	91	182	27.0	19.3	12.9	35.7	36.4	35.6		6.4	4.6	3.8	PN
96	9/28/2004	58	2958.9	8828.4	11	28	14	27	26.2	26.3	26.3	33.3	33.9	34.1		6.7	6.4	6.3	PN
97	9/28/2004	433	2959.7	8756.7	10	25	11	22	26.0	26.3	26.0	29.6	33.0	34.5		6.9	6.6	5.6	PN
98	9/28/2004	741	2958.1	8730.2	10	30	14	28	26.4	26.4	26.3	34.2	34.3	34.8		6.5	6.5	6.0	PN
99	9/28/2004	1118	3013.3	8729.7	10	14	5	10	26.5	26.5	26.5	33.4	33.4	34.0		5.9	5.9	5.9	PN
100	9/29/2004	146	2929.4	8559.4	8	57	30	59	26.4	25.9	21.9	35.2	35.5	36.2		6.4	6.5	5.3	PN
101	9/29/2004	456	2912.3	8559.6	8	185	95	189	26.3	19.5	12.4	35.3	36.4	35.6		6.4	4.7	3.9	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	10/15/2004	33	2607.1	9628.2	21	65	30	59	27.6	29.3	27.7	31.5	36.1	36.4	1.153	6.5	5.5	4.8	ST
2	10/15/2004	204	2608.1	9630.8	21	60													ST
3	10/15/2004	529	2612.8	9656.9	21	31	14	28	27.4	27.4	28.8	30.4	30.4	35.6	1.217	6.3	6.3	3.9	ST
4	10/15/2004	713	2607.7	9700.7	21	26	12	23	27.5	27.5	28.8	30.7	30.7	34.1	1.219	6.4	6.4	4.7	ST
5	10/15/2004	918	2601.0	9659.7	21	107	13	25	27.5	27.5	28.6	30.4	30.4	33.3	1.254	6.4	6.4	5.3	PN
6	10/15/2004	1236	2605.2	9707.2	21	16	7	14	27.4	27.4	27.4	30.8	30.8	30.8	1.564	6.0	5.9	5.9	ST
7	10/15/2004	1350	2606.4	9709.0	21	12	6	12	27.2	27.2	27.2	30.9	30.9	30.9	1.680	6.0	6.0	6.0	ST
8	10/15/2004	1551	2615.3	9709.0	21	16	8	16	27.4	27.4	27.4	30.6	30.6	30.7	1.428	6.2	6.2	6.1	ST
9	10/15/2004	1723	2613.5	9701.5	21	26	13	26	27.5	27.5	28.8	30.8	31.0	35.4	0.980	6.5	6.3	4.2	ST
10	10/15/2004	1840	2617.4	9702.2	21	22	11	21	27.6	27.5	28.6	30.8	30.8	34.1	1.316	6.5	6.4	4.3	ST
11	10/15/2004	2251	2629.7	9630.2	21	147	41	82	27.4	28.8	21.3	31.8	36.3	36.4	0.913	6.5	5.8	5.0	PN
12	10/16/2004	19	2632.3	9638.6	21	65	31	62	27.2	28.4	25.2	33.2	35.9	36.5	0.859	6.5	6.2	5.8	ST
13	10/16/2004	315	2620.9	9641.2	21	46													ST
14	10/16/2004	437	2621.6	9638.4	21	47													ST
15	10/16/2004	554	2621.7	9635.5	21	54	27	54	27.5	29.4	24.8	32.4	36.2	36.4	0.887	6.4	5.9	5.2	ST
16	10/16/2004	927	2632.2	9658.0	21	36	17	34	27.1	27.2	28.8	30.2	30.3	36.2	1.407	6.6	6.5	4.8	ST
17	10/16/2004	1159	2629.3	9702.8	21	54	16	32	27.1	27.7	28.7	30.2	30.9	36.1	1.369	6.6	6.2	4.6	PN
18	10/16/2004	1338	2635.6	9700.7	21	35	18	35	27.0	28.3	28.9	30.1	32.9	36.2	1.573	6.5	5.3	4.9	ST
19	10/16/2004	1533	2640.1	9653.2	21	46													ST
20	10/16/2004	1656	2640.7	9650.7	21	55	28	55	27.1	29.3	22.2	30.5	36.2	36.5	1.431	6.6	5.9	5.3	ST
21	10/16/2004	1958	2642.6	9706.4	21	32	15	30	27.4	28.3	29.0	30.6	32.7	36.1	1.827	6.6	5.8	4.4	ST
22	10/16/2004	2153	2637.4	9712.3	21	19	9	17	27.3	27.3	28.7	30.6	30.6	35.2	2.865	7.0	6.7	4.1	ST
23	10/17/2004	30	2637.4	9716.9	21	11													ST
24	10/17/2004	243	2629.8	9707.4	21	18	9	18	27.4	27.4	28.7	31.0	31.0	35.8	2.537	6.7	6.8	4.4	ST
25	10/17/2004	448	2642.6	9708.6	21	27	14	27	27.4	28.1	28.9	31.0	32.2	36.1	1.675	6.6	5.4	4.8	ST
26	10/17/2004	652	2636.2	9659.3	21	36	18	35	27.5	27.5	28.9	31.1	31.2	36.3	1.683	6.5	6.3	5.5	ST
27	10/17/2004	802	2636.4	9656.8	21	39													ST
28	10/17/2004	2233	2641.0	9640.8	21	73	36	71	27.5	27.8	19.9	30.8	36.4	36.5	1.085	6.7	5.7	4.4	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
29	10/18/2004	137	2657.1	9638.9	21	91	45	90	27.5	25.4	19.1	32.5	36.5	36.4	0.837	6.5	6.8	4.1	ST
30	10/18/2004	314	2656.3	9636.1	21	100													ST
31	10/18/2004	534	2658.9	9629.8	21	257	67	133	27.8	20.1	18.2	34.8	36.5	36.4	0.702	6.3	5.0	3.2	PN
32	10/18/2004	750	2710.2	9635.9	20	91	43	85	27.5	25.2	19.8	33.3	36.5	36.5	0.792	6.4	6.6	4.5	ST
33	10/18/2004	1129	2711.2	9655.5	20	86	23	45	27.3	29.4	22.1	30.5	36.1	36.5	1.048	6.6	6.0	5.2	ST
34	10/18/2004	1355	2705.2	9700.3	20	39	19	38	27.5	28.9	22.4	31.2	35.4	36.5	0.991	6.5	6.0	5.2	ST
35	10/18/2004	1527	2704.3	9657.9	20	44													ST
36	10/18/2004	1920	2645.1	9650.6	21	55	27	54	27.7	29.4	20.3	30.9	36.4	36.5	0.900	6.5	5.8	4.5	ST
37	10/18/2004	2038	2645.0	9647.8	21	60													ST
38	10/19/2004	16	2701.7	9705.9	20	33	17	33	27.9	28.6	23.3	32.5	34.3	36.4	1.255	6.4	6.0	5.1	ST
39	10/19/2004	255	2706.7	9715.9	20	23	12	23	28.7	28.7	25.3	35.7	35.8	36.4	3.274	5.8	5.7	5.2	ST
40	10/19/2004	553	2719.3	9701.1	20	33	16	32	27.7	29.0	23.7	31.6	35.3	36.5	1.190	6.6	6.0	4.9	ST
41	10/19/2004	737	2727.8	9709.6	20	20	10	19	28.7	28.7	27.4	35.8	35.8	36.2	2.735	5.5	5.5	4.9	ST
42	10/19/2004	856	2730.2	9712.3	20	15	8	15	28.7	28.7	28.2	35.3	35.3	36.1	3.912	5.9	5.8	4.8	ST
43	10/19/2004	1024	2724.4	9717.2	20	12	6	12	28.7	28.7	28.7	35.3	35.3	35.3	4.978	5.9	6.0	6.0	ST
44	10/19/2004	1231	2728.8	9714.0	20	13	6	12	28.6	28.6	28.6	35.1	35.1	35.8	4.552	5.9	5.8	5.1	ST
45	10/19/2004	1542	2713.9	9703.1	20	32	16	32	28.0	28.5	23.3	32.9	34.1	36.5	1.201	6.3	5.9	5.1	ST
46	10/19/2004	1833	2701.6	9710.3	20	27	13	26	28.5	28.6	23.8	34.5	35.0	36.4	1.050	6.2	6.2	4.8	ST
47	10/19/2004	2014	2711.2	9710.3	20	26	13	26	28.7	28.5	24.7	35.3	35.5	36.3	2.713	6.2	5.5	4.2	ST
48	10/19/2004	2209	2718.5	9719.1	20	13	7	13	28.1	28.1	27.2	35.8	35.8	36.1	6.471	6.6	6.5	5.3	ST
49	10/20/2004	137	2741.3	9706.8	20	13	6	11	28.7	28.7	27.6	35.1	35.1	36.0	4.360	6.6	6.6	5.0	ST
50	10/20/2004	515	2758.0	9636.9	20	25	12	23	28.4	28.5	26.7	33.9	34.8	36.3	1.571	6.4	6.2	5.3	ST
51	10/20/2004	710	2800.9	9644.7	19	17	8	15	28.5	28.5	27.6	35.5	35.5	35.9	2.999	6.2	6.2	5.4	ST
52	10/20/2004	926	2754.5	9652.2	20	17	8	15	28.5	28.3	27.5	35.3	35.5	35.9	3.152	6.1	5.8	5.2	ST
53	10/20/2004	1623	2742.7	9659.4	20	19	10	19	28.2	27.7	26.5	35.6	36.0	36.2	2.370	6.4	5.7	5.2	ST
54	10/20/2004	1859	2730.3	9658.9	20	51	13	26	28.7	28.5	25.4	34.7	35.3	36.4	1.117	6.3	6.2	5.0	PN
55	10/20/2004	2011	2732.7	9649.6	20	36	18	36	28.2	27.9	24.0	32.0	33.2	36.5	0.613	6.5	6.4	5.2	ST
56	10/20/2004	2215	2738.6	9649.1	20	31	15	30	28.9	28.5	26.5	34.5	35.3	36.4	1.469	6.4	6.5	5.3	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
57	10/21/2004	211	2730.0	9630.3	20	74	37	74	28.1	28.1	21.7	31.5	36.1	36.4	0.800	6.5	6.2	5.5	ST
58	10/21/2004	731	2801.8	9614.2	19	35	17	33	28.1	28.0	24.9	32.5	34.5	36.3	0.938	6.5	6.2	5.4	ST
59	10/21/2004	921	2801.4	9623.2	19	31	16	31	28.0	28.1	25.6	32.2	34.2	36.4	0.753	6.4	6.2	5.2	ST
60	10/21/2004	1233	2759.2	9629.5	19	28	13	26	28.4	29.0	26.8	34.2	35.3	36.4	0.781	6.3	5.6	5.0	ST
61	10/22/2004	604	2742.8	9558.7	19	92	45	90	28.0	26.9	19.6	31.9	36.5	36.4	0.763	6.6	6.6	4.3	ST
62	10/22/2004	825	2734.5	9600.4	20	271	72	144	27.6	20.4	16.5	33.7	36.4	36.2	0.662	6.4	5.1	4.0	PN
63	10/22/2004	1240	2729.1	9627.6	20	83	40	79	27.9	28.8	21.6	31.7	36.3	36.4	0.689	6.4	5.7	5.4	ST
64	10/22/2004	1417	2727.8	9624.9	20	92													ST
65	10/22/2004	1557	2726.4	9622.5	20	117	59	117		24.1	16.9		36.5	36.2			6.8	4.0	ST
66	10/22/2004	2033	2743.4	9620.4	20	64													ST
67	10/22/2004	2157	2740.9	9619.5	20	75		75											ST
68	10/23/2004	157	2759.2	9559.6	20	85	22	44	28.5	28.8	24.7	34.1	35.0	36.4	1.029	6.4	6.3	5.3	PN
69	10/23/2004	527	2759.4	9529.9	20	102	27	54	27.7	28.0	23.8	32.3	35.9	36.5	0.724	6.6	6.2	6.1	PN
70	10/23/2004	728	2751.1	9538.9	19	64	32	63											ST
71	10/23/2004	842	2748.9	9538.5	19	68													ST
72	10/23/2004	1112	2745.0	9546.4	19	74	35	70	27.7	27.9	20.6	32.1	36.1	36.4	0.703	6.6	6.2	4.9	ST
73	10/23/2004	1308	2746.8	9540.0	19	74	35	73											ST
74	10/23/2004	1547	2742.4	9549.1	19	92													ST
75	10/23/2004	1837	2747.2	9557.3	19	64	32	63	28.2	27.9	21.8	32.3	35.9	36.5	0.568	6.5	6.2	5.7	ST
76	10/23/2004	2128	2752.3	9536.8	19	63													ST
77	10/23/2004	2250	2755.0	9536.8	19	59	27	53	28.1	27.9	23.7	32.3	36.0	36.5	0.858	6.5	6.3	6.0	ST
78	10/24/2004	346	2819.8	9538.2	19	27	14	27	27.7	27.3	27.7	32.7	34.4	35.5	0.700	6.6	6.3	5.2	ST
79	10/24/2004	637	2829.7	9535.7	19	24	12	24	27.9	27.9	27.7	33.2	33.2	35.3	0.755	6.5	6.5	5.1	ST
80	10/24/2004	903	2826.6	9547.5	19	22	8	19											ST
81	10/24/2004	1151	2828.6	9600.3	19	28	8	15	28.2	28.2	28.1	34.5	34.5	35.5	0.855	6.3	6.2	3.7	PN
82	10/24/2004	1346	2823.7	9615.0	19	14	6	12	28.1	28.1	28.1	35.3	35.3	35.5	2.696	5.7	5.6	4.8	ST
83	10/24/2004	1834	2804.3	9540.1	19	47	23	46											ST
84	10/24/2004	1949	2802.1	9539.2	19	49													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
85	10/24/2004	2228	2812.3	9542.5	19	35	16	31	28.2	27.2	27.6	33.3	34.5	36.0	0.759	6.5	6.5	5.5	ST
86	10/25/2004	242	2843.4	9538.5	19	10	5	10	28.2	28.2	28.2	34.8	34.8	34.8	3.223	5.9	5.9	5.9	ST
87	10/25/2004	517	2837.4	9532.2	19	18	9	18	28.0	28.0	27.7	34.5	34.5	35.0	0.992	6.3	6.3	4.6	ST
88	10/27/2004	2343	2859.2	9430.3	18	35	9	17	27.0	27.0	27.2	32.5	32.6	33.5	2.852	5.6	5.6	3.7	PN
89	10/28/2004	352	2843.5	9500.5	19	24	11	21	27.6	27.6	27.5	33.3	33.5	34.8	0.648	6.4	6.4	5.2	ST
90	10/28/2004	646	2850.4	9517.1	19	16	8	16	27.9	27.9	27.9	34.9	34.9	34.9	2.231	6.0	6.0	6.0	ST
91	10/28/2004	905	2843.5	9527.9	19	15	8	15	27.8	27.8	27.9	34.6	34.6	34.8	1.338	6.2	6.2	6.1	ST
92	10/28/2004	1233	2847.7	9524.6	19	11	5	10	27.8	27.8	27.8	35.0	35.0	35.0	2.358	6.1	6.2	6.1	ST
93	10/28/2004	1410	2843.4	9518.9	19	18	9	18	27.8	27.8	27.7	34.6	34.6	34.8	1.890	6.1	6.1	5.3	ST
94	10/28/2004	1538	2844.8	9523.2	19	17	8	16	27.7	27.7	27.8	34.7	34.7	34.8	1.563	6.2	6.2	6.0	ST
95	10/28/2004	1731	2834.9	9529.3	19	21	11	21	27.7	27.7	27.8	33.9	33.9	34.8	0.767	6.4	6.4	4.5	ST
96	10/28/2004	1850	2832.5	9530.9	19	24	12	23	27.7	27.6	27.8	33.9	33.9	35.2	0.663	6.4	6.4	3.8	ST
97	10/28/2004	2106	2822.7	9524.6	19	31	15	29	27.7	27.7	27.9	33.8	34.2	35.7	0.731	6.5	6.4	5.0	ST
98	10/28/2004	2348	2830.6	9513.6	19	31	15	30	27.2	27.7	27.5	32.7	34.0	35.5	0.736	6.7	6.4	5.1	ST
99	10/29/2004	403	2830.8	9444.5	18	35	16	32	27.1	27.5	27.3	32.8	35.7	35.8	0.673	6.6	2.8	3.1	ST
100	10/29/2004	558	2829.2	9438.2	18	37	18	36	27.0	27.5	27.4	32.8	35.8	35.9	0.606	6.6	6.3	5.9	ST
101	10/29/2004	720	2826.9	9437.5	18	39													ST
102	10/29/2004	1025	2844.1	9429.6	18	26	12	25											ST
103	10/29/2004	1403	2846.5	9453.8	18	26	13	26	26.9	26.8	27.1	31.7	33.5	34.6	0.860	6.4	5.0	5.2	ST
104	10/29/2004	1629	2840.6	9505.3	19	25	13	25	27.4	27.3	27.6	33.6	33.6	34.2	0.677	6.4	6.4	5.5	ST
105	10/29/2004	1751	2836.9	9501.0	19	29	14	27	27.3	27.3	27.5	33.8	34.0	34.6	0.925	6.4	6.0	4.9	ST
106	10/29/2004	2110	2828.7	9505.3	19	36	17	33	27.3	27.4	27.4	33.1	34.7	35.5	0.687	6.6	6.3	5.6	ST
107	10/30/2004	200	2825.9	9430.3	18	40	19	38	27.1	27.5	27.3	33.2	35.9	36.1	0.602	6.5	6.3	5.4	ST
108	10/30/2004	322	2823.2	9430.6	18	42													ST
109	10/30/2004	605	2823.4	9414.2	18	46													ST
110	10/30/2004	722	2821.1	9413.3	18	48													ST
111	10/30/2004	839	2819.0	9412.0	18	50													ST
112	10/30/2004	959	2816.7	9410.5	18	55	28	55	27.0	27.7	22.9	33.9	36.0	36.4	0.482	6.5	6.3	4.6	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
113	10/30/2004	1552	2821.3	9450.7	18	41	21	41	27.2	27.4	27.0	33.5	35.6	36.0	0.547	6.5	5.5	4.6	ST
114	10/30/2004	1709	2819.1	9449.2	18	45													ST
115	10/30/2004	2019	2759.3	9459.7	18	152	40	79	27.7	27.9	20.6	33.4	36.2	36.4	0.610	6.4	6.1	4.6	PN
116	10/30/2004	2242	2758.1	9436.9	18	101	51	101	27.4	26.7	19.3	33.7	36.4	36.4	0.590	6.5	6.5	4.2	ST
117	10/31/2004	106	2757.4	9430.1	18	180	46	92	27.7	27.5	19.9	34.9	36.3	36.4	0.427	6.4	6.4	4.6	PN
118	10/31/2004	349	2811.4	9414.1	18	55	26	52	27.2	27.7	24.0	33.5	35.9	36.4	0.555	6.5	6.3	5.0	ST
119	10/31/2004	509	2809.4	9412.1	18	59													ST
120	10/31/2004	627	2807.2	9411.1	18	61													ST
121	10/31/2004	828	2758.8	9409.6	18	82	41	81	27.4	27.8	20.5	33.8	36.0	36.4	0.455	6.4	6.2	4.9	ST
122	10/31/2004	954	2756.4	9410.6	18	87													ST
123	10/31/2004	1208	2759.7	9400.1	18	151	41	82	27.3	27.8	20.0	33.8	36.0	36.4	0.505	6.4	6.2	4.3	PN
124	10/31/2004	1428	2814.0	9350.4	17	64	32	64	26.9	27.6	22.6	34.5	36.1	36.4	0.478	6.5	6.3	5.0	ST
125	10/31/2004	1550	2816.6	9351.5	17	61													ST
126	10/31/2004	1713	2819.2	9352.5	17	58													ST
127	10/31/2004	1959	2830.3	9358.2	17	40	20	39	26.9	27.1	27.1	34.0	35.3	35.9	0.672	6.3	5.7	5.4	ST
128	10/31/2004	2118	2832.9	9358.3	17	38													ST
129	10/31/2004	2242	2833.5	9404.2	18	37	18	35	26.8	27.1	27.2	33.8	34.8	35.4	0.741	6.4	5.8	5.4	ST
130	11/1/2004	100	2827.0	9357.0	17	44	22	44	26.9	27.2	26.8	34.3	35.8	36.2	0.635	6.0	5.8	5.2	ST
131	11/1/2004	217	2824.6	9357.6	17	50													ST
132	11/1/2004	550	2814.4	9345.0	17	64	30	61											ST
133	11/1/2004	734	2812.3	9343.9	17	65													ST
134	11/1/2004	852	2810.0	9343.7	17	68													ST
135	11/2/2004	1824	2927.7	9429.1	18	10	4	9											ST
136	11/2/2004	2300	2930.1	9359.9	17	23	5	10											PN
137	11/3/2004	141	2926.2	9428.4	18	11	6	11											ST
138	11/3/2004	731	2912.9	9344.8	17	16	8	15	26.3	26.3	26.6	30.8	30.8	31.2	1.538	6.0	6.0	5.6	ST
139	11/3/2004	1234	2916.9	9355.1	17	14	6	11	26.2	26.2	26.2	31.2	31.2	31.2	1.951	6.1	6.1	6.1	ST
140	11/3/2004	1420	2918.5	9402.5	18	13	6	12	26.0	26.0	26.0	30.7	30.7	30.7	2.037	6.0	6.0	6.0	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
141	11/3/2004	1532	2916.5	9400.8	18	14													ST
142	11/3/2004	1824	2910.0	9345.2	17	18	8	16	26.1	26.1	27.3	30.7	30.7	33.7	1.683	6.1	6.1	1.2	ST
143	11/3/2004	1934	2912.2	9345.6	17	16	6	12	26.1	26.1	26.1	30.5	30.5	30.5	2.332	6.2	6.2	6.2	ST
144	11/3/2004	2258	2928.9	9329.2	17	19	5	10	25.7	25.7	25.7	31.0	31.0	31.0	2.289	6.2	6.2	6.2	PN
145	11/4/2004	14	2923.7	9321.1	17	14	7	14	25.8	25.8	26.1	30.5	30.5	30.7	2.187	6.3	6.4	6.2	ST
146	11/4/2004	345	2932.5	9300.9	17	13	5	10	25.1	25.2	26.1	28.5	28.8	32.0	4.227	6.3	6.3	5.8	ST
147	11/4/2004	503	2935.8	9301.0	17	11													ST
148	11/4/2004	616	2937.7	9259.2	16	10	4	8	25.2	25.5	26.2	29.6	30.4	32.1	3.736	5.8	5.8	5.4	ST
149	11/4/2004	828	2929.5	9259.7	16	25	7	13	24.5	25.3	26.2	28.1	29.5	31.5	4.648	6.4	6.1	5.5	PN
150	11/4/2004	1235	2935.5	9251.8	16	9	5	9	24.9	24.9	25.9	30.2	30.2	31.9	3.099	5.8	5.8	5.6	ST
151	11/4/2004	1511	2930.5	9305.1	17	13	6	12	24.0	24.0	25.3	28.3	28.3	30.5	4.037	6.4	6.4	6.0	ST
152	11/4/2004	1635	2928.5	9302.1	17	14													ST
153	11/4/2004	1748	2926.5	9300.2	17	14													ST
154	11/4/2004	1954	2911.2	9306.3	17	18	8	16	25.2	25.2	27.1	31.1	31.1	34.3	3.260	6.0	6.0	3.4	ST
155	11/4/2004	2333	2909.5	9244.8	16	20	9	18	25.5	25.5	26.9	32.2	32.2	34.8	2.799	6.0	6.1	4.2	ST
156	11/5/2004	206	2913.5	9238.8	16	19	8	16	25.3	25.3	27.1	31.9	31.9	34.9	2.423	6.0	6.0	3.9	ST
157	11/5/2004	441	2910.8	9227.3	16	16	8	15	25.1	25.2	26.6	32.3	32.4	34.0	2.710	6.1	6.1	5.3	ST
158	11/5/2004	604	2904.1	9227.0	16	24	12	24	25.8	25.8	26.8	34.1	34.1	34.8	2.265	6.0	6.0	5.6	ST
159	11/5/2004	843	2859.3	9219.9	16	24	12	23	25.9	25.9	26.9	34.2	34.2	35.4	2.216	5.9	5.9	4.7	ST
160	11/5/2004	1034	2856.1	9215.4	16	26	11	22	25.8	25.8	25.9	34.3	34.3	34.4	2.255	5.9	5.9	5.8	ST
161	11/5/2004	1238	2845.7	9214.3	16	35	16	32	25.5	25.8	26.9	34.3	34.6	35.8	2.789	6.1	6.1	5.7	ST
162	11/5/2004	1441	2847.4	9222.7	16	33	17	33	25.9	26.0	26.8	35.1	35.2	35.7	1.920	6.1	6.1	5.8	ST
163	11/5/2004	1710	2851.7	9232.2	16	29	14	28	26.1	26.1	27.2	34.9	34.9	35.9	1.587	6.1	6.1	5.2	ST
164	11/5/2004	1957	2851.6	9255.0	16	26	12	23	25.5	25.5	27.1	34.3	34.3	35.6	1.157	6.2	6.2	5.0	ST
165	11/5/2004	2221	2837.6	9251.0	16	35	18	35	26.2	26.2	27.3	35.4	35.5	36.2	1.316	6.1	6.0	5.4	ST
166	11/5/2004	2351	2836.6	9244.8	16	37													ST
167	11/6/2004	105	2839.3	9245.3	16	36	17	33	26.2	26.2	27.2	35.1	35.1	36.0	1.730	6.0	6.0	5.1	ST
168	11/6/2004	429	2830.4	9229.3	16	91	24	48	26.6	26.6	26.6	36.2	36.2	36.2	1.455	5.9	5.9	5.9	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
169	11/6/2004	918	2829.9	9314.9	17	40	20	40	25.8	26.2	26.7	35.1	35.6	36.2	0.885	6.1	6.0	4.7	ST
170	11/6/2004	1036	2832.4	9316.5	17	38													ST
171	11/6/2004	1151	2834.5	9318.3	17	39													ST
172	11/6/2004	1455	2850.3	9309.3	17	24	12	23	24.9	24.9	27.1	32.9	32.9	35.5	1.475	6.2	6.1	4.7	ST
173	11/6/2004	1709	2901.1	9301.8	17	44	12	24	24.8	25.1	26.9	32.4	32.6	35.0	1.154	6.2	5.8	4.4	PN
174	11/6/2004	1907	2904.9	9316.2	17	22	11	21	24.7	24.5	26.9	31.4	31.4	34.4	3.786	7.2	6.6	4.9	ST
175	11/6/2004	2230	2859.0	9329.3	17	22	9	18	25.1	24.5	27.1	31.8	31.8	35.0	2.306	6.7	6.7	4.2	ST
176	11/7/2004	49	2842.7	9329.2	17	28	13	25	25.0	24.8	27.3	32.8	32.8	35.9	3.169	6.5	6.3	5.0	ST
177	11/7/2004	300	2840.0	9341.8	17	29	13	25	25.0	25.0	27.3	32.8	33.3	36.0	1.038	6.3	6.2	5.0	ST
178	11/7/2004	407	2838.3	9347.3	17	33	14	28	25.0	25.1	27.3	32.6	32.8	36.0	0.964	6.3	6.3	4.8	ST
179	11/7/2004	528	2836.9	9354.2	17	34	17	34	24.7	25.2	27.1	33.0	33.6	35.8	0.909	6.3	6.2	4.8	ST
180	11/7/2004	821	2830.4	9336.2	17	41	21	41	24.9	25.8	27.0	33.8	34.6	36.2	0.917	6.2	6.0	4.8	ST
181	11/7/2004	1030	2831.7	9330.3	17	73	20	40	24.9	26.0	25.9	33.5	34.7	36.3	0.982	6.2	6.0	4.0	PN
182	11/7/2004	1230	2831.5	9326.5	17	40	20	39	24.8	26.0	26.1	33.4	34.8	36.3	1.219	6.2	5.9	4.4	ST
183	11/7/2004	1346	2828.8	9326.2	17	44													ST
184	11/7/2004	1608	2841.5	9332.0	17	31	16	31	24.6	25.2	27.3	33.2	33.8	36.0	0.930	6.3	6.1	5.0	ST
185	11/7/2004	2049	2810.1	9302.4	17	73	35	69	26.5	26.5	21.9	35.9	36.1	36.4	0.738	5.8	5.8	4.2	ST
186	11/7/2004	2211	2807.1	9305.7	17	91	46	91	26.7	26.5	19.7	36.0	36.1	36.4	0.760	5.9	5.7	3.8	ST
187	11/8/2004	53	2800.4	9258.3	16	193	51	102	26.7	26.6	18.7	35.9	36.2	36.4	0.661	5.9	5.8	3.6	PN
188	11/8/2004	328	2812.5	9313.6	17	64	32	64	26.3	26.4	23.0	35.8	35.9	36.4	0.775	5.9	5.8	4.0	ST
189	11/8/2004	459	2814.6	9315.3	17	58													ST
190	11/8/2004	616	2817.0	9316.3	17	57													ST
191	11/8/2004	1010	2801.6	9329.5	17	156	43	85	26.2	28.2	20.5	34.8	36.3	36.4	0.668	5.9	5.6	4.1	PN
192	11/8/2004	1229	2758.0	9316.2	17	113	57	113	26.3	26.6	18.7	34.9	36.3	36.4	0.657	5.9	5.3	3.6	ST
193	11/8/2004	1805	2823.6	9246.8	16	55	27	54	26.4	26.4	24.6	36.2	36.2	36.3	0.643	5.7	5.7	4.0	ST
194	11/8/2004	1923	2826.1	9246.3	16	53													ST
195	11/8/2004	2042	2828.4	9246.0	16	50													ST
196	11/8/2004	2255	2830.3	9259.2	16	83	21	42											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
197	11/9/2004	232	2807.5	9236.8	16	82	39	78	26.5	26.5	20.0	36.2	36.2	36.4	0.670	5.8	5.8	3.9	ST
198	11/9/2004	444	2800.6	9229.7	16	187	53	105	26.4	24.8	18.7	35.9	36.4	36.4	0.716	5.8	5.8	3.6	PN
199	11/9/2004	634	2805.6	9218.7	16	92	44	88	26.4	26.4	19.7	36.3	36.3	36.4	0.701	5.8	5.8	3.9	ST
200	11/9/2004	802	2803.1	9218.6	16	106													ST
201	11/9/2004	953	2807.9	9213.1	16	82	41	82	26.4	26.4	20.0	36.2	36.2	36.4	0.667	5.8	5.8	4.0	ST
202	11/13/2004	1037	2830.2	9000.2	14	163	42	84	25.4	26.1	21.5	34.7	36.1	36.4	2.939	5.6	4.7	4.3	PN
203	11/13/2004	1353	2830.1	9030.3	14	69	18	36	24.4	26.7	26.1	33.1	35.8	36.0	7.784	6.1	3.3	3.7	PN
204	11/13/2004	1659	2830.2	9101.5	15	60	17	33	23.8	25.4	26.3	32.2	34.9	35.7	3.761	6.0	5.5	4.8	PN
205	11/13/2004	2029	2830.6	9129.5	15	83	21	42	25.6	25.6	26.0	35.9	35.9	36.1	1.432	5.7	5.7	5.5	PN
206	11/13/2004	2359	2829.1	9159.8	15	95	25	50	25.7	25.7	26.2	36.0	36.0	36.2	2.188	5.6	5.6	5.5	PN
207	11/14/2004	310	2852.5	9159.0	15	26	12	23	24.1	24.1	24.1	33.8	33.8	33.8	1.410	5.6	5.6	5.6	ST
208	11/14/2004	619	2852.6	9142.1	15	22	11	22	23.6	23.7	23.7	33.1	33.1	32.0	2.031	5.8	5.7	5.4	ST
209	11/14/2004	831	2855.6	9133.4	15	30	9	17	23.1	23.1	23.1	32.6	32.6	32.6	2.665	5.8	5.8	5.7	PN
210	11/14/2004	1109	2847.7	9113.4	15	11	6	11	22.2	22.3	22.3	31.9	31.9	31.9	3.341	6.1	6.1	6.1	ST
211	11/14/2004	1239	2846.7	9111.5	15	11	5	10	22.4	22.4	22.4	31.7	31.7	31.7	3.144	6.1	6.1	6.1	ST
212	11/14/2004	1657	2900.7	9137.0	15	10	5	9	22.4	22.4	22.4	32.7	32.7	32.7	3.671	6.0	6.0	6.0	ST
213	11/14/2004	1934	2844.4	9134.4	15	26	12	24	23.5	23.6	23.6	32.8	32.8	32.9	3.579	5.9	5.9	5.9	ST
214	11/14/2004	2107	2837.9	9132.8	15	33	15	30	23.8	24.0	25.7	34.0	34.1	35.3	3.735	6.1	6.0	5.3	ST
215	11/14/2004	2234	2837.8	9128.1	15	31	14	28	23.8	23.9	25.6	33.2	33.4	35.0	5.835	6.6	6.4	4.9	ST
216	11/15/2004	7	2833.9	9126.3	15	37	17	33	23.8	25.0	25.9	33.4	34.8	35.4	4.617	6.4	5.7	4.8	ST
217	11/15/2004	301	2828.4	9111.0	15	40	19	38	25.1	25.4	25.8	34.9	35.1	35.3	2.472	5.8	5.6	5.3	ST
218	11/15/2004	554	2820.2	9125.6	15	65	31	61	25.4	26.1	23.4	35.7	36.2	36.4	2.358	5.6	5.0	4.0	ST
219	11/15/2004	718	2817.7	9125.2	15	70													ST
220	11/15/2004	1046	2813.2	9150.1	15	75	36	72	25.8	25.8	22.9	36.2	36.3	36.4	1.167	5.6	5.6	3.9	ST
221	11/15/2004	1201	2810.7	9147.4	15	79													ST
222	11/15/2004	1408	2812.3	9154.8	15	73	36	71	25.8	25.9	23.1	36.3	36.3	36.4	0.988	5.6	5.6	4.6	ST
223	11/15/2004	1534	2810.5	9153.4	15	79													ST
224	11/15/2004	1830	2817.0	9210.4	16	66	31	62	25.8	25.8	25.0	36.2	36.2	36.3	1.031	5.6	5.6	5.3	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
225	11/15/2004	2004	2814.6	9209.7	16	68													ST
226	11/16/2004	650	2840.4	9106.4	15	17	9	17	23.7	23.7	23.7	31.7	31.7	31.4	2.248	5.8	5.8	5.8	ST
227	11/16/2004	1017	2834.4	9046.6	14	22	10	20	25.3	25.3	25.3	34.9	34.9	34.9	2.107	5.4	5.4	5.4	ST
228	11/16/2004	1233	2836.3	9103.7	15	25	13	25	25.2	25.2	25.2	34.9	34.9	34.3	2.119	5.3	5.3	4.8	ST
229	11/16/2004	1509	2836.5	9121.1	15	29	14	28	24.6	24.8	24.9	34.0	34.4	34.5	2.538	5.4	5.3	5.3	ST
230	11/16/2004	1657	2840.1	9128.2	15	27	13	26	23.9	24.0	24.0	32.7	32.8	33.0	2.735	5.7	5.6	5.6	ST
231	11/16/2004	1947	2825.8	9138.0	15	55	27	54	25.7	25.7	25.8	35.6	35.6	35.9	2.372	5.4	5.3	5.2	ST
232	11/16/2004	2106	2823.4	9137.5	15	59													ST
233	11/17/2004	325	2812.2	9053.0	14	83	39	78	25.4	25.5	23.7	35.6	35.9	36.3	1.602	5.5	4.9	4.5	ST
234	11/17/2004	554	2819.2	9052.5	14	55	26	52	25.4	25.4	25.5	35.6	35.6	35.8	1.549	5.5	5.5	5.2	ST
235	11/17/2004	906	2832.1	9044.6	14	29	14	27	25.4	25.4	25.4	35.5	35.5	35.5	1.618	5.1	5.1	5.1	ST
236	11/17/2004	1227	2833.7	9046.8	14	24	11	22	25.2	25.2	25.3	35.4	35.4	35.5	1.692	5.2	5.2	5.2	ST
237	11/17/2004	1404	2828.8	9049.8	14	35	18	35	25.7	25.7	25.7	35.6	35.6	34.5	1.750	5.1	5.1	4.6	ST
238	11/17/2004	1644	2822.7	9058.0	14	47	23	45	25.2	25.2	25.6	35.5	35.5	35.8	1.482	5.4	5.4	5.2	ST
239	11/17/2004	2015	2812.3	9045.9	14	81	38	76	25.5	25.2	23.1	35.6	36.2	36.3	1.287	5.4	4.7	4.1	ST
240	11/18/2004	6	2812.6	9023.8	14	91	41	82	25.4	25.6	22.3	35.4	36.1	36.4	2.097	5.3	5.3	4.2	ST
241	11/18/2004	310	2822.6	9036.4	14	46	22	43	25.2	25.2	25.2	35.7	35.7	35.7	2.040	5.4	5.4	5.4	ST
242	11/18/2004	752	2835.2	9031.5	14	30	14	28	25.0	25.0	25.0	35.6	35.6	35.6	1.833	5.3	5.3	5.3	ST
243	11/18/2004	1230	2837.0	9018.9	14	35	17	34	24.8	24.8	24.8	35.4	35.4	35.4	2.129	5.4	5.4	5.4	ST
244	11/18/2004	1508	2829.1	9006.4	14	65	32	63	24.3	24.8	24.7	34.6	35.2	36.0	1.827	5.3	5.3	4.7	ST
245	11/18/2004	1906	2815.2	9017.7	14	92	41	81	25.5	25.5	24.9	35.8	35.8	36.2	1.972	5.2	5.2	4.7	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
1	10/16/2004	1331	2916.5	8855.3	11	35	17	34	25.7	23.3	21.5	27.5	34.5	34.3		6.2	5.0	5.2	ST
2	10/16/2004	1537	2916.7	8839.7	11	64	32	63	26.7	26.6	22.5	30.9	34.4	34.5		6.2	5.5	5.0	ST
3	10/16/2004	1735	2922.6	8843.1	11	49	25	49	26.9	24.6	21.6	28.0	35.3	35.6		6.1	5.6	5.4	ST
4	10/16/2004	1935	2924.8	8850.1	11	20	19	20	26.8	26.5	24.1	30.0	33.6	34.0		5.3	5.1	5.3	ST
5	10/16/2004	2118	2930.6	8840.8	11	21	11	21	26.4	27.7	25.4	30.2	32.4	34.3		6.6	5.5	5.1	ST
6	10/16/2004	2251	2930.4	8829.9	11	90	24	27	27.0	28.4	24.1	32.6	34.9	34.1		6.7	5.6	5.2	PN
7	10/17/2004	27	2925.3	8834.0	11	55	26	52	27.2	28.4	23.3	31.6	34.8	34.3		7.1	5.6	5.5	ST
8	10/17/2004	348	2922.7	8844.5	11	48	22	44	25.8	24.0	22.1	26.6	34.4	34.2		7.0	5.7	5.3	ST
9	10/17/2004	614	2924.1	8845.7	11	35	17	34	26.0	25.1	22.2	27.8	34.6	34.4		6.5	5.2	5.2	ST
10	10/17/2004	727	2924.7	8845.8	11	31	16	31	25.8	25.6	22.4	28.3	34.4	34.2		6.6	5.2	5.0	ST
11	10/17/2004	843	2929.6	8843.0	11	19	9	18	26.1	27.1	24.6	29.9	32.8	34.5		6.4	5.3	4.9	ST
12	10/17/2004	941	2931.3	8843.9	11	16	8	16	26.1	26.7	24.6	30.8	32.2	34.6		6.2	5.5	4.9	ST
13	10/17/2004	1217	2938.3	8827.6	11	40	20	39	26.1	28.2	24.7	30.1	34.4	34.4		6.6	5.6	5.3	ST
14	10/17/2004	1428	2942.5	8830.2	11	33	16	32	27.6	28.0	24.9	29.3	32.6	34.0		6.3	5.8	4.9	ST
15	10/17/2004	1823	2951.5	8844.9	11	11	6	11	26.0	25.3	26.8	29.6	30.6	32.7		6.8	6.4	5.3	ST
16	10/17/2004	1933	2954.2	8848.8	11	4	2	3	26.0	26.6	27.3	27.6	26.9	26.4		7.2	6.8	6.8	ST
17	10/17/2004	2152	2940.1	8855.1	11	6	3	5	25.4	25.6	25.2	29.5	29.3	29.3		6.6	6.5	6.5	ST
18	10/18/2004	9	2937.2	8856.2	11	11	5	8	26.3	26.5	26.1	30.0	30.1	30.3		7.1	6.8	6.4	ST
19	10/18/2004	135	2936.6	8852.3	11	11	5	9	26.4	26.5	26.9	30.0	30.1	31.6		6.6	6.5	5.6	ST
20	10/18/2004	302	2934.0	8849.1	11	15	7	13	27.3	27.4	27.3	31.6	31.5	32.6		6.8	6.6	6.1	ST
21	10/18/2004	455	2932.1	8837.6	11	28	15	28	27.7	28.4	24.6	27.7	34.0	33.8		7.1	5.6	5.4	ST
22	10/18/2004	727	2936.1	8825.9	11	40	20	40	27.6	27.6	25.4	31.4	34.0	34.1		6.1	5.1	5.3	ST
23	10/18/2004	1015	2944.5	8834.9	11	26	13	25	26.3	27.0	25.0	30.0	32.2	34.1		6.5	5.8	4.8	ST
24	10/18/2004	1239	2952.4	8827.4	11	31	15	30	27.0	26.6	25.6	31.7	33.9	33.9		6.5	5.3	5.1	ST
25	10/18/2004	1442	3000.3	8830.0	11	46	12	24	27.7	27.2	28.0	30.2	32.0	33.6		6.8	6.5	5.1	PN
26	10/18/2004	1600	3002.2	8825.2	11	22	11	21	27.4	27.2	28.4	31.2	31.4	33.8		7.1	6.5	5.6	ST
27	10/18/2004	1740	3009.5	8827.1	11	13	7	13	26.8	27.2	27.6	28.1	30.0	31.6		6.8	5.9	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
28	10/18/2004	2019	3013.0	8845.3	11	10	4	8	27.2	27.1	27.9	27.2	27.4	31.2		7.1	6.6	5.4	ST
29	10/18/2004	2235	3006.5	8842.8	11	15	7	14	26.5	26.8	28.0	26.0	28.8	32.2					ST
30	10/19/2004	148	3000.8	8820.2	11	27	13	26	27.0	27.7	28.0	30.8	32.0	33.8		6.5	6.3	5.4	ST
31	10/19/2004	335	3003.0	8822.4	11	22	10	19	26.6	27.0	27.5	31.4	31.7	33.6		6.3	6.2	5.9	ST
32	10/19/2004	511	3003.8	8825.0	11	19	9	18	26.6	26.1	27.6	31.3	31.2	33.1		5.8	5.9	5.3	ST
33	10/19/2004	723	3009.5	8833.1	11	13	6	12	26.3	26.5	27.0	29.8	29.9	32.3		6.1	6.0	5.4	ST

Table 2. Selected environmental parameters (continued)

A.E. VERRILL, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
23001	10/21/2004	1202	3009.3	8812.2	11	17	9	17	25.3	25.0	25.5	31.7	33.6	34.8		9.8	9.1	7.3	BG
23002	10/21/2004	1339	3001.7	8813.9	11	24	12	24	25.4	26.1	24.7	32.1	35.9	36.0		7.5	6.4	5.4	BG
23003	10/21/2004	1441	2959.7	8815.8	11	28	14	28	25.8	25.9	24.2	32.9	35.9	36.1		6.0	5.0	4.1	BG
23004	10/21/2004	1608	2959.0	8815.4	11	30	15	30	26.1	25.8	24.0	33.0	36.0	36.1		6.1	5.0	3.4	BG
23005	10/21/2004	1808	2959.0	8809.1	11	28	14	28	26.0	27.6	23.8	31.9	36.2	36.1		5.9	5.0	3.9	BG
23006	10/21/2004	1956	3000.1	8809.2	11	26	13	26	25.8	27.6	24.9	30.6	36.2	35.9		5.9	5.1	3.8	ST
23007	10/21/2004	2054	3009.4	8802.6	11	9	5	9	25.4	25.6	25.8	29.0	35.2	35.2		5.8	5.6	4.2	ST
23008	10/21/2004	2141	3010.5	8804.3	11	7	3	6	25.4	24.8	24.9	30.6	33.1	33.5		5.9	5.9	4.4	ST

Table 2. Selected environmental parameters (continued)

PELICAN, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
35001	10/18/2004	850	2900.2	9029.9	14	11	4	8	25.0	25.0	25.7	29.4	29.4	31.5	2.658	6.5	6.5	5.1	PN
35002	10/18/2004	1330	2900.0	9100.0	15	7	2	4	25.1	25.1	24.9	25.7	25.7	26.2	6.284	7.3	7.3	6.6	PN
35003	10/18/2004	1700	2900.1	9130.1	15	11	5	9	26.0	26.0	25.7	33.1	33.1	33.0	2.172	6.2	6.1	5.8	PN
35004	10/18/2004	2117	2847.3	9115.6	15	13	4	11	25.9	25.9	26.1	33.2	33.2	33.6	1.382	6.2	6.2	5.7	ST
35005	10/18/2004	2326	2837.6	9113.6	15	24	12	22	25.7	25.8	27.4	31.5	32.3	35.6	0.391	6.3	6.3	3.6	ST
35006	10/19/2004	130	2834.4	9106.6	15	26	12	25	25.7	26.0	27.5	31.5	33.1	36.0	0.219	6.3	6.1	4.2	ST
35007	10/19/2004	349	2835.5	9055.3	14	22	10	20	25.9	25.9	27.2	32.0	32.2	35.6	0.174	6.2	6.2	4.1	ST
35008	10/19/2004	505	2838.3	9053.8	14	16	7	16	26.2	26.2	27.3	32.8	32.8	35.5	0.376	5.9	5.8	4.4	ST
35009	10/19/2004	919	2847.3	9115.6	15	13	6	11	26.0	26.0	26.1	33.2	33.2	33.4	1.221	5.9	6.0	5.7	ST
35010	10/19/2004	1126	2837.6	9113.8	15	24	11	22	25.7	25.9	27.3	31.9	32.8	35.4	0.569	6.2	6.2	3.5	ST
35011	10/19/2004	1311	2834.5	9106.6	15	26	12	25	26.1	26.2	27.5	31.9	33.6	36.0	0.408	6.3	6.1	3.9	ST
35012	10/19/2004	1418	2830.0	9100.1	15	31	15	31	26.1	26.9	26.5	31.3	34.3	36.0	0.522	6.3	5.0	3.9	PN
35013	10/19/2004	1549	2835.3	9055.3	14	22	9	19	26.5	26.2	27.2	32.2	32.7	35.6	0.483	6.2	6.1	4.0	ST
35014	10/19/2004	1708	2838.3	9053.8	14	16	8	16	26.6	27.3	27.3	30.5	35.4	35.6	0.683	6.4	4.6	4.2	ST
35015	10/19/2004	2112	2836.0	9023.7	14	33	15	31	26.1	27.3	27.6	31.4	35.3	36.0	0.219	6.3	5.9	4.6	ST
35016	10/19/2004	2242	2838.5	9026.3	14	20	9	17	26.1	26.4	27.5	31.5	34.4	35.7	0.120	6.3	6.1	5.2	ST
35017	10/20/2004	5	2834.8	9031.3	14	29	13	27	26.2	27.6	27.7	31.4	35.7	36.0	0.337	6.3	5.5	4.8	ST
35018	10/20/2004	226	2844.2	9035.1	14	15	7	15	26.0	25.6	27.3	30.3	31.8	35.1	0.410	6.3	6.3	3.9	ST
35019	10/20/2004	806	2844.3	9035.0	14	16	7	16	25.9	25.6	27.3	30.3	32.1	35.1	0.827	6.2	6.3	3.8	ST
35020	10/20/2004	951	2834.9	9031.3	14	29	13	28	26.5	27.5	27.7	31.1	35.6	35.9	0.567	6.0	5.6	4.5	ST
35021	10/20/2004	1051	2830.1	9030.2	14	37	17	37	26.4	27.6	27.0	31.4	35.6	36.1	0.296	6.0	5.5	4.4	PN
35022	10/20/2004	1243	2838.4	9026.2	14	20	9	19	26.4	26.4	27.6	31.2	34.3	35.7	0.311	6.3	6.0	4.7	ST
35023	10/20/2004	1332	2835.9	9023.6	14	33	15	30	26.4	27.1	27.3	31.1	35.2	36.0	0.227	6.2	5.7	4.1	ST
35024	10/20/2004	1731	2859.9	8959.9	13	24	10	23	26.5	25.9	26.9	30.6	32.5	35.2	1.068	6.5	6.4	2.6	PN
35025	10/20/2004	2038	2903.6	8945.2	13	31									0.475	7.1	5.7	4.6	ST
35026	10/21/2004	26	2902.5	8938.7	13	28	14	28	26.6	26.9	23.4	30.1	34.7	36.2	0.597	6.5	4.6	2.9	ST
35027	10/21/2004	134	2900.8	8937.2	13	35	16	33	26.7	26.9	22.0	29.5	34.4	36.3	0.378	6.5	4.8	3.0	ST

Table 2. Selected environmental parameters (continued)

PELICAN, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
35028	10/21/2004	713	2859.9	8930.0	13	16	7	14	26.4	26.0	25.9	29.7	31.7	32.2	0.863	5.9	5.9	4.6	PN
35029	10/21/2004	900	2900.5	8937.2	13	37	16	34	26.4	26.5	22.2	28.9	33.3	36.3	0.921	6.3	5.2	3.0	ST
35030	10/21/2004	955	2902.4	8938.7	13	29	12	26	26.3	26.2	26.5	29.3	32.3	35.8	0.724	6.3	5.9	3.2	ST
35031	10/21/2004	1107	2903.5	8945.4	13	31	14	30	26.5	26.2	24.9	31.1	33.0	36.1	0.513	6.2	6.0	2.6	ST

Table 2. Selected environmental parameters (continued)

PELICAN, FALL SHRIMP GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
35001	12/6/2004	1430	2900.1	9030.0	14	9	5	9	20.6	20.5	20.2	30.4	30.5	30.7	5.424	8.7	8.3	7.5	PN
35002	12/6/2004	1931	2905.6	8950.7	13	24	12	23	20.5	20.6	24.1	27.8	31.1	34.5	6.437	8.9	7.2	2.9	ST
35003	12/6/2004	2043	2905.4	8947.9	13	27	12	25	20.6	20.8	24.4	26.3	31.2	35.0	2.461	8.7	7.0	3.5	ST
35004	12/6/2004	2251	2914.3	8948.0	13	12	5	12	20.4	20.3	21.0	29.0	29.3	31.5	4.946	8.8	8.4	4.6	ST
35005	12/7/2004	33	2910.7	8943.1	13	15	7	14	20.2	20.0	22.7	27.9	29.2	33.0	3.006	8.4	8.0	3.6	ST
35006	12/7/2004	246	2900.6	8936.8	13	33	14	29	19.0	21.9	24.9	20.1	32.5	36.2	2.173	8.2	5.2	4.3	ST
35007	12/7/2004	342	2859.4	8935.4	13	35	16	31	18.7	22.4	24.8	19.2	33.0	36.2	1.036	8.2	4.6	4.2	ST
35008	12/7/2004	741	2900.0	8930.0	13	13	7	13	18.9	19.4	23.5	20.5	26.3	34.0	2.130	8.2	7.3	3.5	PN
35009	12/7/2004	939	2859.5	8935.4	13	33	14	27	18.8	22.7	24.8	19.4	33.3	36.2	1.673	8.2	4.5	4.4	ST
35010	12/7/2004	1041	2900.8	8936.9	13	33	14	26	18.8	22.0	25.0	19.4	32.7	36.1	2.048	8.2	4.9	4.5	ST
35011	12/7/2004	1245	2910.2	8943.2	13	15	7	15	20.3	20.2	22.7	28.8	29.4	33.0	4.773	8.7	7.4	3.9	ST
35012	12/7/2004	1425	2914.3	8948.0	13	11	5	11	20.4	20.4	21.5	29.2	29.7	31.9	7.790	9.3	7.7	3.5	ST
35013	12/7/2004	1608	2904.8	8947.9	13	27	11	26	20.2	20.2	24.6	27.4	30.1	35.2	10.183	9.0	7.2	3.0	ST
35014	12/7/2004	1714	2905.6	8950.8	13	24	11	24	20.1	20.2	24.3	28.5	29.8	34.8	4.070	8.4	7.3	3.2	ST
35015	12/7/2004	2319	2834.2	9035.6	14	29	14	29	21.8	22.9	24.4	31.3	33.6	35.6	1.532	7.1	6.0	4.0	ST
35016	12/8/2004	27	2837.7	9037.7	14	20	10	19	21.8	22.1	23.1	31.5	32.2	34.1	4.167	7.3	7.1	5.2	ST
35017	12/8/2004	259	2829.0	9047.7	14	35	17	34	22.1	22.9	23.7	32.8	34.7	35.6	1.345	6.9	6.6	5.7	ST
35018	12/8/2004	754	2830.0	9030.1	14	37	18	37	22.4	23.4	23.8	33.5	35.1	35.6	3.754	7.3	6.3	6.1	PN
35019	12/8/2004	917	2833.5	9035.6	14	29	14	28	21.9	22.8	24.9	31.6	34.2	36.1	1.264	7.0	6.5	4.5	ST
35020	12/8/2004	1050	2838.0	9037.8	14	20	10	19	21.7	22.1	23.0	31.3	32.4	33.9	1.008	7.1	6.8	5.4	ST
35021	12/8/2004	1321	2829.1	9047.6	14	35	17	35	22.5	22.7	24.1	33.2	34.4	35.9	2.564	7.3	6.7	5.2	ST
35022	12/8/2004	1459	2830.0	9060.0	14	33	16	33	22.5	22.8	23.6	34.0	34.8	35.5	2.119	7.5	6.6	6.0	PN
35023	12/8/2004	1824	2839.7	9120.9	15	26	12	25	22.3	22.1	22.5	33.7	33.7	34.4	0.653	7.2	6.9	6.2	ST
35024	12/8/2004	2010	2848.4	9125.7	15	18	8	18	21.4	21.3	21.2	33.2	33.2	33.2	0.851	6.9	6.8	6.3	ST
35025	12/8/2004	2302	2859.1	9125.9	15	9	4	8	19.5	19.5	19.6	30.9	30.9	31.2	2.446	7.2	7.3	7.0	ST
35026	12/9/2004	801	2839.5	9120.7	15	26	12	23	22.2	22.2	22.2	33.7	33.8	33.8	0.724	6.9	6.9	6.7	ST
35027	12/9/2004	941	2848.2	9125.5	15	18	9	16	21.4	21.3	21.3	33.1	33.1	33.1	0.726	6.8	6.8	6.8	ST

Table 2. Selected environmental parameters (continued)

PELICAN, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
35028	12/9/2004	1131	2859.9	9130.0	15	9	5	9	19.8	19.6	20.0	30.5	30.7	31.7	2.584	7.4	7.1	6.5	PN
35029	12/9/2004	1227	2859.1	9125.8	15	9	4	9	20.4	20.2	20.1	31.5	31.6	31.7	1.625	7.3	7.1	6.8	ST
35030	12/9/2004	1531	2860.0	9059.9	14	5	3	5	20.7	20.6	20.1	30.6	30.6	30.6	5.202	8.2	8.2	7.3	PN

Table 2. Selected environmental parameters (continued)

R.J. KEMP, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
31001	11/10/2004	803	2604.9	9707.5	21	17	7	15	24.6	24.7	24.6	38.0	38.2	38.2		6.2	6.2	6.2	ST
31002	11/10/2004	907	2601.4	9704.5	21	20	10	20	24.3	24.3	24.3	38.3	38.2	38.3		6.2	6.4	6.3	ST
31003	11/10/2004	944	2600.9	9705.5	21	18	9	18	24.5	24.5	24.5	38.2	38.2	38.3		6.4	6.5	6.8	ST
31004	11/10/2004	1058	2558.5	9659.5	22	27	14	27	25.3	25.4	25.3	38.2	38.2	38.2		6.4	6.3	6.7	ST
31005	11/10/2004	1152	2603.9	9659.5	21	27	14	27	25.3	25.2	25.2	38.1	38.2	38.8		6.0	6.2	6.1	ST
31006	11/10/2004	1223	2604.5	9700.5	21	26	13	26	24.9	24.9	24.8	38.3	38.2	38.2		6.2	6.1	6.1	ST
31007	11/10/2004	1259	2603.8	9701.5	21	24	12	24	24.7	24.7	24.6	38.3	38.2	38.3		6.2	6.1	6.3	ST
31008	11/10/2004	1350	2606.4	9706.5	21	18	9	18	25.2	25.1	24.5	38.1	37.5	38.0		6.6	6.3	6.2	ST
31009	11/26/2004	838	2608.2	9706.3	21	18	9	18	22.5	22.5	22.7	35.5	35.8	35.8		6.6	6.6	6.7	ST
31010	11/26/2004	933	2610.9	9704.5	21	18	9	18	22.8	22.8	22.4	35.8	35.8	35.8		6.6	6.6	6.7	ST
31011	11/26/2004	1049	2620.4	9705.5	21	19	9	19	22.4	22.4	22.2	35.4	35.4	35.3		6.7	6.5	6.6	ST
31012	11/26/2004	1132	2621.7	9706.5	21	18	9	18	22.4	22.5	22.4	35.4	35.4	35.4		6.7	6.7	6.7	ST
31013	11/26/2004	1207	2621.5	9708.5	21	15	8	15	22.5	22.4	22.3	35.5	35.5	35.6		7.0	6.7	6.8	ST
31014	11/26/2004	1247	2620.7	9708.4	21	15	8	15	22.4	22.2	24.2	35.5	35.5	35.6		6.8	6.7	6.7	ST
31015	11/26/2004	1448	2609.5	9708.4	21	15	7	15	22.6	22.6	22.6	35.8	35.8	35.8		6.8	6.7	6.6	ST
31016	11/26/2004	1526	2609.8	9707.5	21	16	8	16	22.7	22.6	22.7	35.9	35.9	35.9		6.5	6.4	6.5	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	11/4/2004	936	2823.5	9620.5	19	7	3	7	22.9	23.0	23.9	34.3	34.7	36.5		6.7	6.6	5.9	ST
32002	11/4/2004	1008	2822.5	9621.4	19	7	3	7	21.5	22.3	23.3	30.0	33.2	36.4		7.0	6.2	6.1	ST
32003	11/4/2004	1100	2822.5	9614.4	19	15	8	15	23.9	24.1	25.7	34.7	36.6	36.8		6.4	6.4	5.8	ST
32004	11/4/2004	1136	2824.4	9613.5	19	14	7	14	24.4	24.7	25.6	35.7	36.7	36.8		6.1	6.0	5.7	ST
32005	11/4/2004	1218	2825.5	9612.5	19	13	7	13	24.7	24.8	25.7	36.1	36.1	36.8		6.3	6.1	5.6	ST
32006	11/4/2004	1318	2826.5	9605.6	19	15	8	15	25.5	25.4	25.3	36.6	36.6	36.6		5.8	6.2	6.0	ST
32007	11/4/2004	1400	2829.5	9605.5	19	12	6	12	24.8	24.7	24.4	36.5	36.5	36.5		6.1	6.0	5.9	ST
32008	11/4/2004	1437	2831.5	9607.5	19	6	3	6	24.0	23.6	22.8	36.1	36.1	36.0		6.2	6.4	6.3	ST
32009	11/22/2004	934	2819.5	9615.5	19	18	9	18	21.7	21.6	21.7	30.1	29.9	30.2		7.6	7.3	7.2	ST
32010	11/22/2004	1009	2819.6	9617.5	19	18	9	18	21.7	21.6	21.7	29.8	29.8	30.2		7.7	7.5	7.4	ST
32011	11/22/2004	1056	2818.5	9620.6	19	17	8	17	21.8	21.7	21.7	28.2	30.2	30.5		7.8	7.5	7.2	ST
32012	11/22/2004	1132	2817.5	9622.5	19	16	8	16	22.1	21.7	21.7	29.4	30.5	30.5		7.9	7.3	7.3	ST
32013	11/22/2004	1221	2813.6	9620.5	19	22	11	22	21.8	21.3	22.6	29.9	30.5	34.0		7.6	6.8	6.1	ST
32014	11/22/2004	1259	2812.6	9623.5	19	21	11	21	21.8	21.7	22.1	30.4	30.7	32.2		7.4	7.5	6.9	ST
32015	11/22/2004	1338	2811.5	9624.4	19	22	11	22	21.8	21.7	24.5	30.4	30.8	32.4		7.4	7.2	6.3	ST
32016	11/22/2004	1414	2810.6	9625.5	19	21	11	21	21.9	21.7	22.4	30.6	30.7	31.8		7.4	7.3	6.3	ST

Table 2. Selected environmental parameters (continued)

SABINE, FALL SHRIMP/GROUNDFISH SURVEY

STA#	DATE MM/DD/YY	TIME	POSITION LAT	POSITION LONG	STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M) MID	SAMPLE DEPTHS (M) MAX	TEMPERATURE, C SUR	TEMPERATURE, C MID	TEMPERATURE, C MAX	SALINITY, PPT SUR	SALINITY, PPT MID	SALINITY, PPT MAX	FL SUR	DISSOLVED OXYGEN, PPM SUR	DISSOLVED OXYGEN, PPM MID	DISSOLVED OXYGEN, PPM MAX	GEAR
40001	11/7/2004	737	2940.6	9347.9	17	6	3	6	23.5	23.5	23.8	30.1	30.1	30.2		5.6	5.8	5.7	ST
40002	11/7/2004	816	2938.4	9350.1	17	5	2	5	20.8	21.5	21.9	24.7	28.7	29.0		7.5	7.5	7.3	ST
40003	11/7/2004	916	2939.5	9358.9	17	4	2	4	22.3	22.2	22.2	30.6	31.1	31.1		6.7	6.7	6.8	ST
40004	11/7/2004	1000	2938.4	9403.2	18	5	3	5	23.6	23.5	23.5	31.9	31.9	32.0		6.3	6.5	6.3	ST
40005	11/7/2004	1050	2935.3	9359.7	17	8	4	8	23.8	23.8	23.8	32.1	32.1	32.1		6.8	6.6	6.7	ST
40006	11/7/2004	1132	2935.5	9355.2	17	7	4	7	23.7	23.7	23.8	30.7	30.8	31.9		6.8	6.8	6.3	ST
40007	11/7/2004	1228	2932.5	9356.8	17	11	6	11	24.2	24.1	24.4	32.0	32.2	32.5		7.3	7.4	6.8	ST
40008	11/7/2004	1318	2934.5	9350.2	17	11	5	11	22.7	23.2	24.3	24.6	29.8	32.4		7.8	6.9	6.1	ST
40009	11/19/2004	813	2943.5	9343.9	17	4	2	4	19.6	19.8	19.9	27.9	27.8	27.8		7.4	7.2	7.2	ST
40010	11/19/2004	851	2944.4	9341.2	17	3	2	3	19.6	19.7	19.8	26.6	26.6	26.8		7.4	7.4	7.4	ST
40011	11/19/2004	935	2942.5	9337.8	17	7	4	7	19.7	19.7	20.1	25.6	25.7	27.0		7.3	7.3	7.4	ST
40012	11/19/2004	1008	2941.5	9338.4	17	8	4	8	19.4	19.6	20.2	24.0	25.5	26.7		7.5	7.3	7.5	ST
40013	11/19/2004	1058	2938.5	9335.0	17	10	5	10	19.9	20.1	20.7	24.9	28.0	30.6		7.4	7.5	6.9	ST
40014	11/19/2004	1149	2936.5	9340.3	17	11	5	11	20.9	20.6	20.7	27.9	29.3	30.3		7.5	7.3	6.8	ST
40015	11/19/2004	1224	2936.5	9342.7	17	10	5	10	20.6	20.2	20.1	26.9	28.2	28.5		7.4	7.2	6.6	ST
40016	11/19/2004	1312	2934.5	9345.2	17	11	6	11	21.3	20.4	20.5	28.7	29.3	30.4		7.5	7.2	7.1	ST
40017	12/12/2004	1234	2923.5	9431.1	18	11	6	11	19.0	19.0	19.1	29.4	31.0	32.3		7.6	7.5	7.4	ST
40018	12/12/2004	1315	2927.5	9434.8	18	5	3	5	18.1	18.1	18.8	28.5	28.6	30.0		7.4	7.2	6.2	ST
40019	12/12/2004	1403	2924.4	9434.2	18	9	5	9	18.7	18.7	19.3	27.7	30.1	32.1		7.5	7.4	6.4	ST
40020	12/12/2004	1421	2923.5	9435.1	18	9	5	9	18.7	18.8	19.8	28.8	29.9	32.5		7.2	7.1	5.7	ST
40021	12/12/2004	1456	2920.1	9434.1	18	12	6	12	18.7	19.2	20.1	25.7	32.0	33.1		7.4	6.2	6.0	ST
40022	12/12/2004	1543	2917.5	9439.2	18	11	6	11	18.7	18.7	18.7	30.2	33.0	30.3		7.8	7.8	7.8	ST
40023	12/12/2004	1628	2916.5	9441.9	18	9	5	9	19.1	19.0	20.1	30.8	31.2	33.1		7.9	7.4	6.5	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	11/4/2004	745	2750.4	9702.2	20	5	3	5	22.9	23.7	22.9	36.5	38.6	38.8		5.8	5.7	5.7	ST
67002	11/4/2004	854	2758.9	9654.2	20	10	5	10	24.2	24.2	24.0	38.8	38.9	38.8		5.5	5.7	5.7	ST
67003	11/4/2004	930	2755.2	9651.5	20	16	8	16	25.3	25.2	25.2	39.0	39.1	39.0		5.7	5.6	5.7	ST
67004	11/4/2004	1012	2750.8	9655.4	20	16	8	16	25.2	25.2	24.4	38.9	38.9	38.8		5.5	5.7	5.6	ST
67005	11/4/2004	1040	2749.1	9653.5	20	19	10	19	25.5	25.5	25.3	39.0	39.0	39.0		5.6	5.6	5.8	ST
67006	11/4/2004	1105	2749.9	9652.4	20	20	10	20	25.8	25.7	25.5	36.9	37.5	37.6		5.6	5.5	5.5	ST
67007	11/4/2004	1137	2747.8	9653.3	20	20	10	20	25.6	25.6	25.2	37.6	37.6	37.6		5.5	5.6	5.9	ST
67008	11/4/2004	1220	2744.9	9658.2	20	19	9	19	25.7	25.7	25.6	37.5	37.6	37.6		5.5	5.7	5.7	ST
67009	11/18/2004	821	2743.7	9657.7	20	21	10	21	21.9	22.0	22.5	33.4	34.3	34.5		7.3	7.2	7.0	ST
67010	11/18/2004	853	2741.0	9657.4	20	23	10	23	22.8	22.8	22.8	34.6	34.1	34.9		6.9	6.9	6.9	ST
67011	11/18/2004	933	2742.8	9701.4	20	17	8	17	21.3	21.4	21.8	32.9	33.6	33.8		7.2	7.2	7.0	ST
67012	11/18/2004	958	2741.1	9702.0	20	19	9	19	21.9	21.9	22.1	33.2	33.9	33.8		7.4	7.3	7.2	ST
67013	11/18/2004	1032	2737.7	9700.4	20	22	11	22	22.5	22.5	22.9	34.3	34.9	35.1		7.3	7.0	7.0	ST
67014	11/18/2004	1109	2736.1	9704.8	20	20	10	20	22.1	22.1	22.3	33.7	34.1	34.2		7.2	7.2	7.0	ST
67015	11/18/2004	1146	2739.9	9704.4	20	16	8	16	21.4	21.4	21.4	32.9	33.1	33.2		7.3	7.4	7.4	ST
67016	11/18/2004	1221	2742.1	9707.6	20	10	5	10	21.8	21.6	21.3	33.0	33.1	33.2		7.7	7.5	7.4	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	11/3/2004	1045	2919.3	9442.1	18	6	3	6	24.4	24.3	24.4	34.1	34.1	34.5		7.2	7.1	6.8	ST
69002	11/7/2004	1129	2914.3	9447.8	18	9	5	9	22.8	23.1	23.3	33.6	33.7	34.4		7.3	6.7	6.7	ST
69003	11/7/2004	1237	2914.6	9451.1	18	4	2	4	22.7	23.1	23.2	33.6	33.9	34.3		7.2	6.3	6.1	ST
69004	11/7/2004	1300	2913.4	9452.9	18	5	3	5	23.5	23.3	23.3	34.0	33.9	34.4		7.3	7.2	6.6	ST
69005	11/7/2004	1324	2911.9	9453.2	18	9	5	9	23.1	22.9	23.3	33.7	34.4	34.7		7.8	7.3	6.1	ST
69006	11/7/2004	1354	2910.2	9451.5	18	12	6	12	23.5	23.4	23.6	33.9	34.8	34.9		7.7	6.6	6.4	ST
69007	11/7/2004	1423	2910.5	9450.0	18	12	6	12	23.7	23.8	23.7	34.1	34.8	34.8		7.2	7.1	6.1	ST
69008	11/7/2004	1500	2909.2	9446.8	18	14	7	14	24.5	23.9	23.9	34.6	34.6	34.7		6.8	6.3	6.1	ST
69009	11/29/2004	1129	2919.8	9438.1	18	10	5	10	18.9	19.6	20.0	29.0	29.3	29.5		7.0	6.9	6.8	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	2/22/2004	805	2916.6	8539.0	8		28	56	18.4	18.4	17.3	35.7	35.7	35.7		7.7	7.6	6.6	
2	2/22/2004	919	2916.3	8538.9	8		28	55	18.5	18.4	17.3	35.7	35.7	35.7		7.5	7.6	6.4	
3	2/22/2004	1030	2916.2	8539.1	8		28	55	0.0	18.4	17.3	0.0	35.7	35.7		0.0	7.6	6.5	
4	2/22/2004	1142	2914.7	8540.4	8		32	65	18.5	18.3	17.6	35.7	35.7	35.7		7.4	7.5	6.8	
5	2/22/2004	1245	2914.8	8540.8	8	121	33	66	0.0	0.0	17.6	0.0	0.0	35.7		0.0	0.0	6.5	VC
6	2/22/2004	1350	2914.3	8540.9	8		32	65	18.7	18.3	17.7	35.7	35.7	35.7		7.6	7.3	6.6	
7	2/22/2004	1450	2914.1	8540.8	8		32	65	18.7	18.3	17.7	35.7	35.7	35.7		7.6	7.4	6.5	
8	2/22/2004	1547	2915.2	8541.3	8		34	67	0.0	18.4	17.7	0.0	35.7	35.7		0.0	7.5	6.7	
9	2/22/2004	1644	2915.2	8541.3	8	115													TR
10	2/23/2004	720	2913.7	8538.6	8		33	66	18.5	18.6	17.7	35.7	35.7	35.7		7.8	7.8	6.5	
11	2/23/2004	827	2911.0	8541.0	8		38	77	0.0	18.7	18.0	0.0	35.7	35.8		0.0	7.5	6.9	
12	2/23/2004	933	2910.0	8542.7	8		39	78	19.8	19.0	17.9	35.8	35.7	35.7		7.4	7.4	7.3	
13	2/23/2004	1033	2909.9	8543.1	8		36	73	0.0	19.0	17.9	0.0	35.7	35.7		0.0	7.4	7.3	
14	3/11/2004	703	2909.9	8543.5	8	150													VC
15	3/11/2004	823	2909.6	8545.5	8	172													VC
16	3/11/2004	934	2909.7	8545.7	8	166													VC
17	3/11/2004	1035	2908.4	8546.5	8	184													VC
18	3/11/2004	1144	2910.3	8547.6	8	174													VC
19	3/11/2004	1302	2913.1	8546.0	8	165													VC
20	3/11/2004	1400	2913.4	8545.9	8	168													VC
21	3/11/2004	1505	2913.7	8545.8	8	166													VC
22	3/11/2004	1606	2913.8	8545.6	8	165													VC
23	3/11/2004	1704	2913.4	8545.9	8	167													TR
24	3/12/2004	735	2913.8	8541.8	8	146													VC
25	3/12/2004	836	2912.4	8542.4	8	158													VC
26	3/12/2004	942	2911.0	8544.2	8	163													VC
27	3/12/2004	1104	2915.6	8546.9	8	162													VC
28	3/12/2004	1208	2916.9	8543.5	8	125													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
29	3/12/2004	1337	2916.3	8542.5	8	117													VC
30	3/12/2004	1437	2915.7	8541.7	8	113													VC
31	3/12/2004	1531	2915.6	8541.7	8	141													VC
32	3/12/2004	1621	2915.6	8541.7	8	139													TR
33	3/13/2004	657	2915.5	8541.6	8	114													VC
34	3/13/2004	755	2915.4	8541.4	8	111													VC
35	3/13/2004	853	2915.3	8541.4	8	116													VC
36	3/13/2004	1255	2859.4	8522.5	8	117													VC
37	3/13/2004	1352	2859.2	8522.2	8	118													VC
38	3/13/2004	1447	2859.2	8522.1	8	114													VC
39	3/13/2004	1543	2859.3	8521.9	8	107													VC
40	3/13/2004	1633	2959.3	8521.9	8	111													TR
41	3/14/2004	654	2859.3	8521.9	8	111													VC
42	3/14/2004	751	2859.1	8521.6	8	115													VC
43	3/14/2004	851	2858.6	8521.6	8	126													VC
44	3/14/2004	943	2858.5	8521.5	8	121													VC
45	3/14/2004	1038	2858.4	8521.5	8	124													VC

Table 2. Selected environmental parameters (continued)

TOMMY MUNRO, WINTER 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	1/14/2004	1932	2930.0	8830.0	11	46	24	46	14.4	19.6	20.2	29.6	36.6	36.9		10.2	6.4	6.8	PN
17002	1/15/2004	820	2930.1	8759.9	10	41	21	41	19.1	19.0	19.0	36.5	36.4	36.6		7.2	7.3	7.2	PN
17003	1/15/2004	1320	3000.0	8830.0	11	26	13	25	19.6	18.4	18.2	35.9	36.2	36.3		6.4	7.0	6.3	PN

Table 3. 2004 Summer Shrimp/Groundfish Survey species composition list, 401 trawl stations, for those vessels that used either a 40-ft or 20-ft trawl. Species with a total weight of less than 0.0227 kg (0.05 lb) are indicated on the table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Finfishes					
Micropogonias undulatus	Atlantic croaker	62403	1759.0	201	50.1
Stenotomus caprinus	longspine porgy	49398	1052.0	228	56.9
Peprilus burti	gulf butterfish	29151	1154.0	186	46.4
Chloroscombrus chrysurus	Atlantic bumper	26947	499.3	152	37.9
Prionotus roseus	bluespotted searobin	19404	71.7	18	4.5
Serranus atrobranchus	blackear bass	5785	56.4	126	31.4
Cynoscion arenarius	sand seatrout	5689	194.5	148	36.9
Leiostomus xanthurus	spot	5479	327.7	103	25.7
Prionotus longispinosus	bigeye searobin	5361	67.8	111	27.7
Syacium gunteri	shoal flounder	4975	88.7	174	43.4
Anchoa hepsetus	striped anchovy	4843	59.3	89	22.2
Trachurus lathami	rough scad	4776	99.4	100	24.9
Upeneus parvus	dwarf goatfish	4200	73.2	127	31.7
Saurida brasiliensis	largescale lizardfish	4175	28.4	136	33.9
Trichiurus lepturus	Atlantic cutlassfish	4052	105.1	127	31.7
Synodus foetens	inshore lizardfish	3993	373.2	202	50.4
Stellifer lanceolatus	star drum	3810	59.8	63	15.7
Prionotus stearnsi	shortwing searobin	3111	26.4	81	20.2
Lagodon rhomboides	pinfish	2932	130.8	168	41.9
Prionotus tribulus	bighead searobin	2867	31.6	29	7.2
Centropristis philadelphica	rock sea bass	2658	101.3	164	40.9
Pristipomoides aquilonaris	wenchman	2656	146.3	111	27.7
Prionotus paralatus	Mexican searobin	2266	56.2	63	15.7
Peprilus alepidotus	harvestfish	1835	14.2	62	15.5
Etropus crossotus	fringed flounder	1829	22.7	80	20.0
Diplectrum bivittatum	dwarf sand perch	1701	35.9	103	25.7
Bagre marinus	gafftopsail catfish	1687	12.4	8	2.0

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Harengula jaguana	scaled sardine	1594	54.3	86	21.4
Opisthonema oglinum	Atlantic thread herring	1545	85.3	50	12.5
Bollmannia communis	ragged goby	1505	4.5	36	9.0
Larimus fasciatus	banded drum	1482	49.4	45	11.2
Sphoeroides parvus	least puffer	1433	8.6	94	23.4
Anchoa mitchilli	bay anchovy	1402	2.6	37	9.2
Lutjanus campechanus	red snapper	1348	88.4	120	29.9
Lepophidium brevibarbe	blackedge cusk-eel	1116	29.0	80	20.0
Etrumeus teres	round herring	1094	13.9	26	6.5
Trichopsetta ventralis	sash flounder	976	24.1	41	10.2
Porichthys plectrodon	Atlantic midshipman	964	19.2	106	26.4
Cynoscion spp.	seatrouts	896	4.9	24	6.0
Citharichthys spilopterus	bay whiff	892	11.4	42	10.5
Mullus auratus	red goatfish	873	26.3	15	3.7
Anchoa lyolepis	dusky anchovy	853	4.1	10	2.5
Selene setapinnis	Atlantic moonfish	841	36.7	103	25.7
Halieutichthys aculeatus	pancake batfish	825	5.0	102	25.4
Cynoscion nothus	silver seatrout	822	31.0	61	15.2
Eucinostomus gula	silver jenny	796	26.7	46	11.5
Lagocephalus laevigatus	smooth puffer	634	15.4	98	24.4
Synodus poeyi	offshore lizardfish	633	7.7	38	9.5
Urophycis floridana	southern hake	556	37.5	53	13.2
Menticirrhus americanus	southern kingfish	512	66.1	36	9.0
Symphurus plagiusa	blackcheek tonguefish	473	7.2	47	11.7
Prionotus rubio	blackwing searobin	461	12.1	49	12.2
Syacium papillosum	dusky flounder	423	19.1	12	3.0
Lutjanus synagris	lane snapper	408	27.9	35	8.7
Cyclopsetta chittendeni	Mexican flounder	398	47.7	73	18.2
Brevoortia patronus	gulf menhaden	317	8.3	25	6.2
Anchoa nasus	longnose anchovy	283	0.8	3	0.7

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Monacanthus hispidus	planehead filefish	271	2.7	54	13.5
Steindachneria argentea	luminous hake	253	0.9	4	1.0
Ogcocephalus parvus	roughback batfish	236	8.3	35	8.7
Prionotus ophryas	bandtail searobin	235	2.2	19	4.7
Anchoa	anchovy	230	0.6	1	0.2
Scorpaena calcarata	smoothhead scorpionfish	210	3.1	17	4.2
Ancylopsetta dilecta	three-eye flounder	202	10.3	37	9.2
Arius felis	hardhead catfish	187	26.0	26	6.5
Engyophrys senta	spiny flounder	175	1.4	28	7.0
Sphyraena guachancho	guaguanche	169	17.0	34	8.5
Scomberomorus cavalla	king mackerel	157	6.2	13	3.2
Scomberomorus maculatus	Spanish mackerel	152	8.0	24	6.0
Ancylopsetta quadrocellata	ocellated flounder	135	16.5	32	8.0
Hildebrandia flava	yellow conger	135	10.1	30	7.5
Hoplunnis macrurus	freckled pike-conger	135	1.4	29	7.2
Antennarius radiosus	singlespot frogfish	123	2.8	27	6.7
Gymnachirus texae	fringed sole	123	1.5	13	3.2
Cyclopsetta fimbriata	spotfin flounder	121	3.1	11	2.7
Chaetodipterus faber	Atlantic spadefish	111	1.5	17	4.2
Sardinella aurita	spanish sardine	108	7.0	21	5.2
Bregmaceros atlanticus	antenna codlet	104	0.1	20	5.0
Kathetostoma albigutta	lancer stargazer	103	4.7	17	4.2
Gobionellus hastatus	darter gobies	92	0.3	4	1.0
Lepophidium jeannae	mottled cusk-eel	85	4.1	8	2.0
Brotula barbata	bearded brotula	79	3.9	19	4.7
Polydactylus octonemus	Atlantic threadfin	71	3.2	14	3.5
Raja texana	roundel skate	70	25.4	34	8.5
Hemicaranx amblyrhynchus	bluntnose jack	68	9.1	8	2.0
Equetus umbrosus	cubbyu	66	5.5	13	3.2
Caranx crysos	blue runner	65	8.9	17	4.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Diplectrum formosum	sand perch	63	6.5	7	1.7
Gobionellus boleosoma	darter goby	59	0.3	8	2.0
Caulolatilus intermedius	anchor tilefish	58	6.0	19	4.7
Selar crumenophthalmus	bigeye scad	52	4.4	21	5.2
Seriola dumerili	greater amberjack	52	5.6	4	1.0
Bellator militaris	horned searobin	49	0.2	12	3.0
Pontinus longispinis	longspine scorpionfish	49	1.4	7	1.7
Orthopristis chrysoptera	pigfish	45	1.3	8	2.0
Selene vomer	lookdown	43	0.8	12	3.0
Rhizoprionodon terraenovae	Atlantic sharpnose shark	42	33.1	17	4.2
Decapterus punctatus	round scad	41	2.9	9	2.2
Ophidion welshi	crested cusk-eel	39	0.8	9	2.2
Balistes capriscus	gray triggerfish	37	5.2	18	4.5
Urophycis cirrata	gulf hake	37	0.8	11	2.7
Carcharhinus brevipinna	spinner shark	33	6.8	1	0.2
Sphoeroides dorsalis	marbled puffer	32	1.3	10	2.5
Paralichthys squamilentus	broad flounder	31	7.7	14	3.5
Scorpaena agassizii	longfin scorpionfish	30	0.4	5	1.2
Squatina dumeril	Atlantic angel shark	30	15.0	10	2.5
Gymnothorax nigromarginatus	blackedge moray	28	1.0	4	1.0
Paralichthys albigutta	gulf flounder	28	3.0	3	0.7
Haemulon aurolineatum	tomtate	27	2.0	2	0.5
Gymnachirus melas	naked sole	25	0.2	3	0.7
Paralichthys lethostigma	southern flounder	24	7.4	15	3.7
Trachinocephalus myops	snakefish	24	1.3	5	1.2
Hippocampus erectus	lined seahorse	23	0.2	7	1.7
Ophidion holbrooki	bank cusk-eel	23	1.4	4	1.0
Dorosoma petenense	threadfin shad	20	0.5	6	1.5
Rypticus maculatus	whitespotted soapfish	20	0.7	4	1.0
Citharichthys macrops	spotted whiff	19	0.9	7	1.7

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Bathyanthias mexicanus	yellowtail bass	18	0.3	5	1.2
Aluterus scriptus	scrawled filefish	17	1.8	3	0.7
Bairdiella chrysoura	silver perch	17	0.6	10	2.5
Priacanthus arenatus	bigeye	16	2.5	10	2.5
Carcharhinus acronotus	blacknose shark	15	7.4	4	1.0
Centropristis ocyura	bank sea bass	14	1.0	3	0.7
Neomerinthe hemingwayi	spinycheek scorpionfish	14	2.0	6	1.5
Etropus cyclosquamus	shelf flounder	13	0.1	3	0.7
Lumpenus medius	stout eelblenny	13	0.0	2	0.5
Ophichthus gomesi	shrimp eel	13	1.2	5	1.2
Ogcocephalus declivirostris	slantbrow batfish	12	0.1	6	1.5
Opsanus pardus	leopard toadfish	12	0.3	4	1.0
Physiculus fulvus	metallic codling	12	0.1	3	0.7
Chilomycterus schoepfi	striped burrfish	11	2.3	8	2.0
Mustelus canis	smooth dogfish	11	13.4	9	2.2
Ogcocephalus radiatus	polka-dot batfish	11	2.9	6	1.5
Peprilus triacanthus	butterfish	11	0.0	1	0.2
Prionotus scitulus	leopard searobin	10	0.3	1	0.2
Rhomboplites aurorubens	vermilion snapper	10	0.5	7	1.7
Carcharhinus limbatus	blacktip shark	9	100.0	8	2.0
Echiophis punctifer	snapper eel	9	2.2	1	0.2
Mulloidichthys martinicus	yellow goatfish	9	0.2	1	0.2
Narcine brasiliensis	lesser electric ray	9	3.9	3	0.7
Ophidion grayi	blotched cusk-eel	8	0.2	4	1.0
Rhinoptera bonasus	cownose ray	8	94.2	7	1.7
Dasyatis say	bluntnose stingray	7	1.9	4	1.0
Otophidium dormitator	sleeper cusk-eel	7	0.1	2	0.5
Achirus lineatus	lined sole	6	0.2	5	1.2
Ariomma bondi	silver-rag	6	0.1	4	1.0
Epinephelus flavolimbatus	yellowedge grouper	6	0.6	4	1.0

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Ogcocephalus nasutus	shortnose batfish	6	0.1	1	0.2
Parexocoetus brachypterus	sailfin flyingfish	6	0.1	2	0.5
Gymnothorax saxicola	honeycomb moray	5	0.1	2	0.5
Pisces	fishes	5	2.0	4	1.0
Seriola zonata	banded rudderfish	5	0.1	2	0.5
Serraniculus pumilio	pygmy sea bass	5	0.0	2	0.5
Conodon nobilis	barred grunt	4	0.1	3	0.7
Menticirrhus littoralis	gulf kingfish	4	0.3	2	0.5
Peristedion gracile	slender searobin	4	0.0	2	0.5
Prionotus alatus	spiny searobin	4	0.0	3	0.7
Sphyrna tiburo	bonnethead	4	12.1	2	0.5
Aluterus heudeloti	dotterel filefish	3	0.0	2	0.5
Apogon aurolineatus	bridle cardinalfish	3	0.0	1	0.2
Dasyatis americana	southern stingray	3	5.9	1	0.2
Engraulis eurystole	silver anchovy	3	0.0	1	0.2
Hemanthias vivanus	red barbier	3	0.0	1	0.2
Lophius americanus	goosefish	3	0.2	1	0.2
Lophius gastrophysus	blackfin goosefish	3	0.4	2	0.5
Mugil curema	silver mullet	3	0.0	1	0.2
Mustelus norrisi	Florida smoothhound	3	9.4	2	0.5
Neobythites gillii	cusk-eel	3	0.0	1	0.2
Pomatomus saltatrix	bluefish	3	0.6	2	0.5
Pristigenys alta	short bigeye	3	0.1	2	0.5
Rachycentron canadum	cobia	3	1.2	2	0.5
Rhinobatos lentiginosus	Atlantic guitarfish	3	0.9	3	0.7
Scomber scombrus	Atlantic mackerel	3	0.5	1	0.2
Sphoeroides spengleri	bandtail puffer	3	0.1	1	0.2
Synodontidae	lizardfishes	3	0.0	1	0.2
Trachinotus carolinus	Florida pompano	3	0.1	1	0.2
Citharichthys cornutus	horned whiff	2	0.0	1	0.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Clinidae	clinid	2	0.0	1	0.2
Dasyatis sabina	Atlantic stingray	2	0.4	1	0.2
Equetus wamotoi	blackbar drum	2	0.1	1	0.2
Hemanthias aureorubens	streamer bass	2	0.0	2	0.5
Lonchopisthus micrognathus	swordtail jawfish	2	0.0	2	0.5
Menticirrhus saxatilis	northern kingfish	2	0.0	1	0.2
Trinectes maculatus	hogchoker	2	0.0	2	0.5
Aluterus schoepfi	orange filefish	1	0.0	1	0.2
Antennarius striatus	striated frogfish	1	0.0	1	0.2
Astroscopus y-graecum	southern stargazer	1	0.2	1	0.2
Caranx bartholomaei	yellow jack	1	0.0	1	0.2
Caranx hippos	crevalle jack	1	0.0	1	0.2
Citharichthys arenaceus	sand whiff	1	0.0	1	0.2
Conger oceanicus	conger eel	1	0.2	1	0.2
Cynoscion nebulosus	spotted seatrout	1	0.2	1	0.2
Echeneis naucrates	sharksucker	1	0.4	1	0.2
Epinephelus niveatus	snowy grouper	1	0.0	1	0.2
Etelis oculatus	queen snapper	1	0.0	1	0.2
Eucinostomus argenteus	spotfin mojarra	1	0.0	1	0.2
Gobiosoma bosc	naked goby	1	0.0	1	0.2
Hemanthias leptus	longtail bass	1	0.0	1	0.2
Mycteroperca phenax	scamp	1	7.9	1	0.2
Pagrus pagrus	red porgy	1	0.0	1	0.2
Raja olseni	spreadfin skate	1	0.7	1	0.2
Sciaenops ocellatus	red drum	1	5.1	1	0.2
Sphoeroides nephelus	southern puffer	1	0.0	1	0.2
Sphyrna lewini	scalloped hammerhead	1	0.8	1	0.2
Symphurus civitatus	offshore tonguefish	1	0.0	1	0.2
Syngnathus louisianae	chain pipefish	1	0.0	1	0.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Crustaceans					
Farfantepenaeus aztecus	brown shrimp	39378	569.6	310	77.3
Trachypenaeus similis	roughback shrimp	37504	155.9	135	33.7
Callinectes similis	lesser blue crab	16852	170.9	247	61.6
Squilla empusa	mantis shrimp	15988	154.7	185	46.1
Trachypenaeus spp.	roughneck shrimp	13752	43.8	21	5.2
Portunus spinicarpus	longspine swimming crab	6260	36.8	94	23.4
Squilla chydaea	mantis shrimp	5271	29.8	105	26.2
Sicyonia brevirostris	brown rock shrimp	4188	47.3	89	22.2
Xiphopenaeus kroyeri	seabob	3963	11.6	30	7.5
Trachypenaeus constrictus	roughneck shrimp	2466	10.6	29	7.2
Portunus gibbesii	irridescent swimming crab	2090	10.1	132	32.9
Litopenaeus setiferus	white shrimp	2024	65.5	98	24.4
Solenocera vioscai	humpback shrimp	1613	8.5	38	9.5
Farfantepenaeus duorarum	pink shrimp	1056	22.2	64	16.0
Sicyonia dorsalis	lesser rock shrimp	1018	2.8	64	16.0
Callinectes sapidus	blue crab	420	60.7	73	18.2
Anasimus latus	stilt spider crab	377	3.1	32	8.0
Parapenaeus politus	deepwater rose shrimp	332	0.5	7	1.7
Portunus spinimanus	blotched swimming crab	316	10.1	50	12.5
Calappa sulcata	yellow box crab	291	60.5	54	13.5
Portunus spp.	swimming crab	218	1.2	10	2.5
Sicyonia spp.	rock shrimp	144	0.3	6	1.5
Ovalipes floridanus	Florida lady crab	73	0.7	23	5.7
Pseudorhombila quadridentata	flecked squareback crab	48	0.6	8	2.0
Raninoides louisianensis	gulf frog crab	41	0.3	15	3.7
Sicyonia burkenroadi	spiny rock shrimp	40	0.4	13	3.2
Acanthocarpus alexandri	gladiator box crab	37	0.2	1	0.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Hepatus epheliticus	calico crab	37	0.9	17	4.2
Persephona mediterranea	mottled purse crab	35	0.2	10	2.5
Libinia emarginata	portly spider crab	26	1.1	5	1.2
Plesionika longicauda	pandalid shrimp	26	0.1	4	1.0
Pyromaia cuspidata	dartnose pear crab	23	0.2	1	0.2
Squilla neglecta	mantis shrimp	23	0.3	6	1.5
Persephona crinita	pink purse crab	21	0.1	16	4.0
Portunus sayi	sargassum swimming crab	21	0.1	9	2.2
Pagurus bullisi	hermit crab	20	0.0	3	0.7
Leiolambrus nitidus	white elbow crab	19	0.0	9	2.2
Stenorhynchus seticornis	yellowline arrow crab	19	0.6	8	2.0
Libinia dubia	longnose spider crab	18	0.2	16	4.0
Arenaeus cribrarius	speckled swimming crab	17	0.8	10	2.5
Parthenope granulata	bladetooth elbow crab	17	0.0	7	1.7
Pagurus pollicaris	flatclaw hermit crab	14	0.1	8	2.0
Ethusa microphthalma	broadback sumo crab	13	0.0	3	0.7
Collodes robustus	spider crab	11	0.0	4	1.0
Libinia	spider crab	11	1.2	4	1.0
Ovalipes stephensoni	coarsehand lady crab	11	0.1	3	0.7
Menippe adina	gulf stone crab	10	0.2	3	0.7
Podochela sidneyi	shortfinger neck crab	10	0.0	7	1.7
Raninoides loevis	furrowed frog crab	8	0.0	3	0.7
Unidentified crustacean	unidentified crustacean	8	0.1	3	0.7
Euphrosynoplax clausa	craggy bathyal crab	7	0.0	2	0.5
Parthenope serrata	sawtooth elbow crab	7	0.0	2	0.5
Dardanus fucosus	bareye hermit	6	0.1	3	0.7
Paguristes spp.	hermit crab	6	0.0	1	0.2
Paguristes triangulatus	hermit crab	6	0.0	1	0.2
Speocarcinus lobatus	gulf squareback crab	6	0.0	4	1.0
Xanthidae	mud crab	6	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
Axiopsis hirsutimana	lobster shrimp	4	0.0	2	0.5
Danielum ixbauchac	red sea crab	4	0.0	2	0.5
Iliacantha liodactylus	purse crab	4	0.0	2	0.5
Metoporhaphis calcarata	false arrow crab	4	0.0	3	0.7
Munida forceps	squat lobster	4	0.0	1	0.2
Porcellana sayana	spotted porcelain crab	4	0.0	3	0.7
Alpheus	snapping shirmp	3	0.0	2	0.5
Stomatopoda	mantis shrimp	3	0.1	1	0.2
Calappa flammea	flame box crab	2	0.6	2	0.5
Raninidae	frog crab	2	0.0	1	0.2
Stenocionops coelata	spider crab	2	0.1	1	0.2
Stenocionops spinimanus	prickly spider crab	2	0.4	2	0.5
Dromidia antillensis	hairy sponge crab	1	0.0	1	0.2
Lysiosquilla scabricauda	mantis shrimp	1	0.0	1	0.2
Lysmata wurdemanni	peppermint shrimp	1	0.0	1	0.2
Menippe spp.	stone crab	1	0.0	1	0.2
Neopanope packardii	Florida grassflat crab	1	0.0	1	0.2
Ovalipes	lady crab	1	0.0	1	0.2
Paguridae	right-handed hermit crab	1	0.0	1	0.2
Pagurus	hermit	1	0.0	1	0.2
Parasquilla coccinea	mantis shrimp	1	0.0	1	0.2
Petrochirus diogenes	giant hermit crab	1	0.1	1	0.2
Podochela lamelligera	neck crab	1	0.0	1	0.2
Porcellana sigsbeiana	striped porcelain crab	1	0.0	1	0.2
Scyllarides nodifer	ridged slipper lobster	1	0.4	1	0.2
Sicyonia laevigata	rock shrimp	1	0.0	1	0.2
Sicyonia parri	rock shrimp	1	0.0	1	0.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Others					
Loligo pleii	arrow squid	7354	83.5	95	23.7
Loligo pealeii	longfin squid	6585	98.0	111	27.7
Amusium papyraceum	paper scallop	6236	58.9	80	20.0
Lolliguncula brevis	Atlantic brief squid	5325	55.8	165	41.1
Renilla mulleri	short-stemmed sea pansy	2652	15.2	89	22.2
Chrysaora quinquecirrha	sea nettle	880	16.0	70	17.5
Astropecten cingulatus	starfish	859	8.3	38	9.5
Astropecten duplicatus	spiny beaded sea star	718	1.1	57	14.2
Loligo spp.	squids	582	9.7	7	1.7
Anadara baughmani	baughman's ark	290	4.6	4	1.0
Luidia clathrata	sea star	249	5.3	46	11.5
Aurelia aurita	moon jellyfish	206	20.8	31	7.7
Mnemiopsis	sea walnuts	170	1.5	3	0.7
Sconsia striata	royal bonnet	105	1.2	3	0.7
Ophiolepis elegans	brittle star	62	0.1	10	2.5
Polystira albida	white giant turris	56	0.5	7	1.7
Styela plicata	tunicate	56	2.4	7	1.7
Clypeaster ravenelii	cake urchin	49	5.4	5	1.2
Paranthus rapiformis	onion anemone	44	0.1	12	3.0
Phyllorhiza punctata	jellyfish	44	43.2	15	3.7
Agriopuma texasianum	texas venus	43	0.8	8	2.0
Pitar cordatus	schwengel's pitar	42	1.4	10	2.5
Actinidae	sea anemones	41	0.3	15	3.7
Chione clenchi	clench venus	39	0.4	8	2.0
Acetes americanus	aviu shrimp	30	0.0	3	0.7
Encope aberrans	sand dollar	27	0.7	2	0.5
Luidia alternata	banded luidia	26	0.5	7	1.7
Semirossia equalis	greater shining bobtail	22	0.0	1	0.2

Table 3. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Aequipecten muscosus	rough scallop	21	1.0	2	0.5
Tethyaster grandis	starfish	20	1.5	7	1.7
Macoma brevifrons	short macoma	19	0.2	2	0.5
Tamoya haplonema	sea wasp	15	0.2	5	1.2
Unidentified other	unidentified other	15	0.4	9	2.2
Calliactis spp.	anemone	13	0.1	2	0.5
Distorsio clathrata	Atlantic distorsio	12	0.1	3	0.7
Gorgonidae	gorgonians	12	0.0	5	1.2
Laevicardium mortoni	yellow eggcockle	12	0.2	3	0.7
Molpadia spp.	sea cucumber	10	0.3	3	0.7
Aplysia brasiliana	mottled seahare	9	0.1	4	1.0
Mnemiopsis mccradyi	comb jelly	8	0.0	4	1.0
Anthozoa	anthozoans	7	0.2	2	0.5
Circomphalus strigillinus	empress venus	7	0.1	1	0.2
Stomolophus meleagris	many-mouthed sea jelly	7	1.5	5	1.2
Anadara ovalis	blood ark	6	0.3	2	0.5
Busycon pulleyi	prickly whelk	6	0.2	1	0.2
Hydrozoa	hydralike animals	6	0.2	3	0.7
Neverita duplicata	shark eye	6	0.0	2	0.5
Muricanthus fulvescens	giant eastern murex	5	0.1	2	0.5
Octopus vulgaris	common Atlantic octopus	5	1.0	4	1.0
Porifera	sponges	5	0.4	2	0.5
Unidentified invertebrates	unidentified invertebrate	5	0.1	2	0.5
Atrina serrata	sawtooth penshell	3	0.2	1	0.2
Beroe ovata	comb jelly	3	0.0	2	0.5
Calliactris tricolor	common sea anemone	3	0.0	2	0.5
Cantharus cancellarius	cancellate cantharus	3	0.0	3	0.7
Conus	cones	3	0.0	1	0.2
Ctenophora	comb jelly	3	0.0	2	0.5
Holothuroidea	sea cucumber	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
Pleurobranchus	slug	3	0.0	1	0.2
Polystira tellea	delicate giant turret	3	0.0	1	0.2
Argopecten gibbus	calico scallop	2	0.0	1	0.2
Asteroporpa annulata	starfish	2	0.0	1	0.2
Busycon perversum	whelk	2	0.2	1	0.2
Busycon sinistrum	lightning whelk	2	1.2	2	0.5
Hemipholis elongata	brittle star	2	0.0	2	0.5
Rossia bullisi	gulf bobtail squid	2	0.0	1	0.2
Schizaster orbignyanus	heart urchin	2	0.2	1	0.2
Ventricolaria rigida	rigid venus	2	0.0	1	0.2
Anthenoides piercei	starfish	1	0.0	1	0.2
Arcinella cornuta	Florida spiny jewelbox	1	0.0	1	0.2
Asteroidea	starfishes	1	0.0	1	0.2
Cardiidae	bivalve	1	0.0	1	0.2
Eucrassatella speciosa	beautiful crassatella	1	0.0	1	0.2
Fasciolaria spp.	tulip shell	1	0.1	1	0.2
Fasciolaria tulipa	true tulip	1	0.0	1	0.2
Lepidochelys kempi	Atlantic ridley	1	22.2	1	0.2
Pennatulidae	sea pens	1	0.0	1	0.2
Sinum perspectivum	white baby-ear	1	0.0	1	0.2

Table 4a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	2.6	2.61	0.0	0.00	9	45.3	37.96	0.1	0.13	18	514.2	265.93	1.5	0.60	27
Farfantepenaeus aztecus	36.4	23.33	0.3	0.17	9	42.2	25.05	0.5	0.25	18	51.5	20.84	0.7	0.24	27
Squilla spp	13.9	7.09	0.1	0.04	9	27.9	18.58	0.2	0.13	18	45.3	13.51	0.3	0.09	27
Callinectes similis	17.2	7.80	0.1	0.07	9	38.7	18.52	0.2	0.10	18	18.3	5.98	0.1	0.04	27
Portunus spinicarpus	0.0	0.00	0.0	0.00	9	0.2	0.18	0.0	0.00	18	10.1	3.41	0.0	0.01	27
Sicyonia brevirostris	0.0	0.00	0.0	0.00	9	0.8	0.67	0.0	0.01	18	7.8	3.91	0.1	0.05	27
Peprilus burti	4.0	3.32	0.2	0.13	9	11.9	6.84	0.5	0.25	18	88.6	48.03	3.5	1.96	27
Micropogonias undulatus	44.7	31.29	1.7	1.30	9	188.3	106.88	7.7	4.09	18	222.9	140.30	11.1	7.03	27
Stenotomus caprinus	0.0	0.00	0.0	0.00	9	31.6	28.34	0.1	0.11	18	183.8	88.84	2.2	1.48	27
Chloroscombrus chrysurus	367.7	277.28	11.8	7.60	9	506.5	393.88	4.7	2.83	18	26.2	23.78	1.2	1.09	27
Anchoa hepsetus	158.4	87.64	0.5	0.27	9	362.8	282.14	4.8	3.18	18	48.0	41.45	0.3	0.19	27
Lagodon rhomboides	14.3	9.24	0.3	0.19	9	26.9	21.13	1.1	0.92	18	11.1	4.53	0.5	0.18	27
Opisthonema oglinum	152.9	127.89	2.1	1.81	9	78.6	51.06	2.5	1.69	18	1.9	1.42	0.1	0.04	27
Harengula jaguana	32.7	17.65	0.8	0.41	9	50.9	38.05	0.7	0.49	18	15.7	8.95	0.6	0.37	27
Squid spp	174.3	85.97	0.9	0.40	9	99.7	42.88	0.7	0.30	18	61.3	32.00	0.4	0.14	27

Table 4a (continued)

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	260.0	159.85	0.9	0.51	11	0.0	0.00	0.0	0.00	6	0.6	0.65	0.0	0.00	3
Farfantepenaeus aztecus	135.8	87.89	2.2	1.13	11	6.1	3.81	0.3	0.18	6	18.3	16.98	1.0	0.90	3
Squilla spp	90.7	54.58	0.6	0.36	11	0.8	0.78	0.0	0.00	6	8.4	8.39	0.1	0.07	3
Callinectes similis	110.4	97.16	0.9	0.62	11	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Portunus spinicarpus	24.7	16.11	0.1	0.09	11	34.7	30.44	0.3	0.22	6	52.3	41.60	0.5	0.42	3
Sicyonia brevirostris	47.6	24.57	0.7	0.38	11	4.7	3.81	0.1	0.05	6	2.2	2.22	0.0	0.03	3
Peprilus burti	143.7	100.41	6.1	3.77	11	893.5	659.24	33.9	22.82	6	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	52.0	33.14	2.9	1.82	11	114.8	83.64	6.8	4.91	6	63.2	63.23	3.6	3.64	3
Stenotomus caprinus	224.6	99.07	7.7	3.89	11	446.0	125.91	20.8	5.79	6	75.9	43.78	3.0	1.73	3
Chloroscombrus chrysurus	2.2	1.99	0.2	0.20	11	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Anchoa hepsetus	23.4	23.40	0.4	0.41	11	1.3	1.27	0.0	0.02	6	0.0	0.00	0.0	0.00	3
Lagodon rhomboides	69.8	38.53	3.9	2.12	11	69.0	26.84	4.6	1.66	6	3.2	3.23	0.2	0.22	3
Opisthonema oglinum	0.0	0.00	0.0	0.00	11	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
Harengula jaguana	5.4	4.05	0.2	0.20	11	5.5	4.63	0.3	0.29	6	0.0	0.00	0.0	0.00	3
Squid spp	13.2	6.32	0.2	0.07	11	17.7	9.32	0.2	0.07	6	55.5	27.58	0.5	0.24	3

Table 4b

Statistical Zone 11

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	28.8	9.3	9	33.3	8.04	18	40.6	8.63	27	0.0	0	0	82.0	30.39	6	27.4	7.11	3
Total finfish	24.6	9.23	9	30.3	8.23	18	36.0	8.96	27	0.0	0	0	81.0	30.3	6	24.6	5.84	3
Total crustacean	1.5	0.68	9	1.4	0.61	18	3.2	0.84	27	0.0	0	0	0.7	0.33	6	1.6	1.61	3
Total other	2.7	0.55	9	1.6	0.54	18	1.3	0.47	27	0.0	0	0	0.2	0.09	6	0.8	0.29	3
Surface temperature	28.0	0.93	8	27.9	0.41	18	28.1	0.36	23	0.0	0	0	26.7	0	1	28.3	0.42	6
Midwater temperature	27.7	0.79	8	26.9	0.26	18	25.5	0.37	23	0.0	0	0	26.6	0	1	23.7	1.49	6
Bottom temperature	27.4	0.68	8	25.5	0.4	18	23.8	0.44	23	0.0	0	0	22.5	0	1	20.8	1.23	6
Surface salinity	26.3	1.85	8	27.4	0.89	18	28.1	1.02	23	0.0	0	0	30.9	0	1	32.0	1.03	6
Midwater salinity	28.1	1.44	8	31.3	0.46	18	34.2	0.3	23	0.0	0	0	34.4	0	1	35.9	0.24	6
Bottom salinity	30.0	1.01	8	33.5	0.28	18	34.8	0.18	23	0.0	0	0	34.5	0	1	35.7	0.37	6
Surface chlorophyll	3.2	0	1	0.0	0	0	0.5	0	1	0.0	0	0	0.0	0	0	4.5	3.8	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	5.7	0.58	8	6.1	0.4	17	6.4	0.29	23	0.0	0	0	6.2	0	1	6.2	0.34	6
Midwater oxygen	5.3	0.66	8	5.4	0.16	17	5.4	0.11	23	0.0	0	0	5.5	0	1	6.0	0.28	6
Bottom oxygen	5.0	0.63	8	4.9	0.16	17	5.1	0.09	23	0.0	0	0	5.0	0	1	5.4	0.38	6

Table 5a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm or greater than 40 fm.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	0.0	0.00	0.0	0.00	1	3116.7	2975.80	7.5	7.13	6	447.0	214.67	1.5	0.79	11
Squilla spp	0.0	0.00	0.0	0.00	1	1122.6	1025.00	6.0	5.55	6	856.1	377.17	7.9	3.59	11
Callinectes similis	0.0	0.00	0.0	0.00	1	63.9	57.02	0.3	0.26	6	235.2	44.96	2.3	0.57	11
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	1	183.3	119.44	1.4	0.89	6	224.2	29.81	3.5	0.45	11
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	6	331.6	219.28	1.1	0.79	11
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	11.8	11.82	0.0	0.01	6	76.9	76.91	0.3	0.30	11
Prionotus roseus	0.0	0.00	0.0	0.00	1	5450.3	5450.30	13.1	13.08	6	539.7	405.13	5.6	3.70	11
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	461.0	461.00	3.0	3.04	6	82.4	47.86	0.9	0.54	11
Bollmannia communis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	6	18.4	10.90	0.1	0.04	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	311.7	287.58	2.1	1.95	6	4.7	2.48	0.0	0.02	11
Etropus crossotus	0.0	0.00	0.0	0.00	1	171.3	169.34	0.9	0.88	6	66.7	37.95	0.9	0.48	11
Centropristis philadelphica	0.0	0.00	0.0	0.00	1	68.2	31.50	0.3	0.13	6	70.9	40.59	0.7	0.41	11
Citharichthys spilopterus	0.0	0.00	0.0	0.00	1	22.0	13.95	0.2	0.10	6	140.5	55.04	1.4	0.57	11
Syacium gunteri	0.0	0.00	0.0	0.00	1	42.3	34.62	0.6	0.53	6	123.8	65.04	2.2	1.24	11
Squid spp	0.0	0.00	0.0	0.00	1	294.1	254.83	4.7	4.11	6	164.8	46.53	2.5	0.56	11

Table 5a (continued)

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm or greater than 40 fm.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Squilla spp	4443.3	0.00	45.4	0.00	1	1540.5	1444.50	17.5	16.23	2	0.0	0.00	0.0	0.00	0
Callinectes similis	721.1	0.00	16.4	0.00	1	379.0	296.05	8.6	6.42	2	0.0	0.00	0.0	0.00	0
Farfantepenaeus aztecus	53.5	0.00	1.6	0.00	1	243.5	153.55	5.8	3.49	2	0.0	0.00	0.0	0.00	0
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	525.8	0.00	3.1	0.00	1	235.5	164.55	1.0	0.59	2	0.0	0.00	0.0	0.00	0
Prionotus roseus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Prionotus longispinosus	19.6	0.00	0.7	0.00	1	42.5	42.50	1.3	1.31	2	0.0	0.00	0.0	0.00	0
Bollmannia communis	1130.2	0.00	3.2	0.00	1	206.6	203.36	0.5	0.53	2	0.0	0.00	0.0	0.00	0
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Etropus crossotus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Centropristis philadelphica	58.9	0.00	2.3	0.00	1	76.7	48.32	4.4	2.67	2	0.0	0.00	0.0	0.00	0
Citharichthys spilopterus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0
Syacium gunteri	29.5	0.00	0.8	0.00	1	5.0	5.00	0.1	0.13	2	0.0	0.00	0.0	0.00	0
Squid spp	0.0	0.00	0.0	0.00	1	28.9	28.91	0.6	0.57	2	0.0	0.00	0.0	0.00	0

Table 5b

Statistical Zone 13

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths less than 6 fm or greater than 40 fm.

	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
Environmental category	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch	10.8	0	1	50.4	28.31	6	73.5	18.08	11	0.0	0	0	68.6	23.89	2	0.0	0	0
Total finfish	10.8	0	1	29.2	14.83	6	40.1	15.87	11	0.0	0	0	20.3	0.31	2	0.0	0	0
Total crustacean	0.0	0	1	16.5	13.29	6	24.3	4.9	11	0.0	0	0	34.9	21.07	2	0.0	0	0
Total other	0.0	0	1	4.7	4.13	6	9.3	3.59	11	0.0	0	0	13.6	3.37	2	0.0	0	0
Surface temperature	0.0	0	0	30.7	0.18	7	30.5	0.11	12	0.0	0	0	30.1	0.04	2	0.0	0	0
Midwater temperature	0.0	0	0	29.8	0.24	7	28.0	0.29	12	0.0	0	0	23.9	0.19	2	0.0	0	0
Bottom temperature	0.0	0	0	26.5	0.22	7	24.2	0.25	12	0.0	0	0	21.2	0.36	2	0.0	0	0
Surface salinity	0.0	0	0	15.2	0.61	7	15.0	0.42	12	0.0	0	0	21.5	1.17	2	0.0	0	0
Midwater salinity	0.0	0	0	30.7	0.52	7	34.5	0.5	12	0.0	0	0	36.4	0.01	2	0.0	0	0
Bottom salinity	0.0	0	0	35.3	0.21	7	36.2	0.05	12	0.0	0	0	36.4	0	2	0.0	0	0
Surface chlorophyll	0.0	0	0	16.6	2.19	7	15.2	2.34	12	0.0	0	0	9.8	3.24	2	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	8.4	0.43	7	8.4	0.44	12	0.0	0	0	6.0	0.75	2	0.0	0	0
Midwater oxygen	0.0	0	0	3.3	0.74	7	2.7	0.41	12	0.0	0	0	6.1	0.05	2	0.0	0	0
Bottom oxygen	0.0	0	0	1.1	0.45	7	3.1	0.26	12	0.0	0	0	2.6	0.35	2	0.0	0	0

Table 6a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2004 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	36.4	36.43	0.2	0.20	2	7.0	7.00	0.1	0.07	6	421.9	82.06	5.2	1.09	16
Squilla spp	0.0	0.00	0.0	0.00	2	20.9	19.82	0.2	0.24	6	164.9	77.88	1.6	0.64	16
Callinectes similis	0.0	0.00	0.0	0.00	2	1.0	1.00	0.0	0.01	6	113.7	56.70	0.8	0.25	16
Trachypenaeus spp.	0.0	0.00	0.0	0.00	2	3.3	2.62	0.0	0.01	6	134.2	84.50	0.6	0.40	16
Portunus gibbesii	0.0	0.00	0.0	0.00	2	0.3	0.33	0.0	0.00	6	58.9	26.55	0.3	0.15	16
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	31.7	15.72	0.2	0.09	16
Micropogonias undulatus	3.2	3.21	0.1	0.06	2	139.0	139.00	11.7	11.70	6	1009.2	469.23	36.0	10.87	16
Prionotus tribulus	0.0	0.00	0.0	0.00	2	2.3	1.67	0.2	0.13	6	459.6	429.94	4.6	4.04	16
Peprilus burti	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	186.5	93.83	8.4	4.34	16
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	0.3	0.33	0.0	0.00	6	68.3	37.65	0.3	0.16	16
Chloroscombrus chrysurus	710.6	388.73	8.6	1.89	2	41.7	33.64	1.7	1.34	6	45.6	17.87	1.8	0.75	16
Anchoa hepsetus	64.3	64.29	0.0	0.05	2	4.7	4.67	0.1	0.13	6	147.2	130.65	1.2	1.11	16
Syacium gunteri	0.0	0.00	0.0	0.00	2	28.0	22.22	0.9	0.76	6	89.6	55.17	1.4	0.60	16
Upeneus parvus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	96.8	95.86	0.7	0.67	16
Squid spp	40.4	13.15	0.6	0.16	2	11.3	11.33	0.1	0.09	6	86.3	35.98	0.7	0.23	16

Table 6a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2004 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	193.9	63.20	3.6	1.15	5	167.5	0.00	4.5	0.00	1	56.0	30.27	2.7	1.14	2
Squilla spp	33.1	13.39	0.5	0.22	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Callinectes similis	23.3	10.04	0.4	0.23	5	4.5	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	2
Trachypenaeus spp.	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	2
Portunus gibbesii	5.8	3.83	0.0	0.02	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Trachypenaeus similis	16.7	8.43	0.1	0.06	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	705.3	280.41	37.7	14.87	5	48.7	0.00	2.9	0.00	1	503.2	108.21	35.6	6.75	2
Prionotus tribulus	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	2
Peprilus burti	279.5	121.00	14.4	6.10	5	13.6	0.00	0.5	0.00	1	18.2	6.79	1.4	0.57	2
Stenotomus caprinus	135.1	38.29	4.8	1.39	5	272.8	0.00	9.1	0.00	1	58.9	36.07	2.6	1.69	2
Chloroscombrus chrysurus	6.2	4.06	0.4	0.23	5	4.5	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	2
Anchoa hepsetus	8.3	7.50	0.2	0.16	5	4.5	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	2
Syacium gunteri	14.3	6.42	0.3	0.15	5	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Upeneus parvus	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	2
Squid spp	8.1	4.96	0.0	0.02	5	14.7	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	2

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 2004 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	49.9	26.99	2	20.7	17.66	6	92.1	23.49	16	0.0	0	0	25.5	0	1	60.4	6.16	2
Total finfish	43.8	23.26	2	18.4	15.53	6	79.5	21.46	16	0.0	0	0	20.3	0	1	56.3	7.69	2
Total crustacean	0.2	0.21	2	2.2	2.15	6	11.1	2.42	16	0.0	0	0	4.6	0	1	3.4	1.64	2
Total other	5.9	3.94	2	0.1	0.12	5	1.8	0.64	13	0.0	0	0	0.7	0	1	0.9	0.26	2
Surface temperature	30.0	0.11	2	30.9	0.1	6	30.6	0.16	17	0.0	0	0	30.0	0.09	2	29.9	0.45	2
Midwater temperature	30.1	0.14	2	29.7	0.09	6	28.2	0.26	17	0.0	0	0	25.3	1.52	2	24.7	0.35	2
Bottom temperature	27.8	0.26	2	27.2	0.48	6	24.2	0.33	17	0.0	0	0	22.0	0.65	2	20.4	0.55	2
Surface salinity	21.8	2	2	24.3	1.3	6	24.2	1.2	17	0.0	0	0	28.3	0.9	2	33.2	0.07	2
Midwater salinity	25.2	0.77	2	30.8	0.52	6	34.5	0.43	17	0.0	0	0	36.1	0.19	2	36.3	0.02	2
Bottom salinity	35.0	0.27	2	35.3	0.47	6	36.2	0.05	17	0.0	0	0	36.4	0	2	36.4	0	2
Surface chlorophyll	4.9	0.83	2	5.0	0.98	6	3.3	0.57	17	0.0	0	0	2.8	0.22	2	1.0	0.04	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	7.3	0.05	2	7.8	0.37	6	6.8	0.18	17	0.0	0	0	6.2	0.4	2	5.9	0.1	2
Midwater oxygen	5.3	0.8	2	5.0	0.43	6	4.1	0.46	17	0.0	0	0	5.9	0.55	2	5.9	0.35	2
Bottom oxygen	0.2	0.1	2	1.5	0.96	6	2.4	0.33	17	0.0	0	0	4.2	0.3	2	4.6	0.05	2

Table 7a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2004 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
Xiphopenaeus kroyeri	600.6	549.76	1.7	1.56	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	8
Callinectes similis	9.2	8.48	0.0	0.01	7	6.0	1.69	0.1	0.06	4	580.8	301.09	9.9	5.72	8
Trachypenaeus spp.	0.0	0.00	0.0	0.00	7	1.0	1.00	0.0	0.00	4	583.8	505.07	3.4	2.93	8
Farfantepenaeus aztecus	94.4	55.83	0.5	0.28	7	3.3	2.29	0.0	0.02	4	242.3	82.22	3.7	1.31	8
Squilla spp	1.4	1.06	0.0	0.01	7	64.0	63.34	0.1	0.14	4	419.5	211.05	3.1	1.62	8
Trachypenaeus similis	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	4	294.5	217.35	1.3	0.89	8
Peprilus burti	0.5	0.54	0.0	0.00	7	16.9	12.65	0.6	0.47	4	346.9	147.10	14.9	6.43	8
Micropogonias undulatus	477.8	239.35	7.3	3.43	7	3.4	2.30	0.1	0.05	4	11.8	9.26	0.4	0.25	8
Chloroscombrus chrysurus	199.6	100.82	6.3	2.81	7	213.2	195.49	7.7	7.04	4	102.8	97.90	4.2	3.99	8
Stenotomus caprinus	0.0	0.00	0.0	0.00	7	22.7	22.70	0.1	0.13	4	72.6	46.38	0.3	0.16	8
Serranus atrobranchus	0.0	0.00	0.0	0.00	7	1.0	1.00	0.0	0.01	4	227.9	127.06	1.0	0.55	8
Syacium gunteri	0.0	0.00	0.0	0.00	7	1.0	1.00	0.0	0.02	4	244.5	150.80	5.0	3.02	8
Anchoa hepsetus	1.1	1.14	0.0	0.00	7	1.5	0.96	0.0	0.00	4	225.7	129.19	3.1	1.76	8
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	4	0.3	0.31	0.0	0.01	8
Squid spp	337.6	318.79	4.3	4.01	7	91.6	56.70	1.0	0.67	4	120.9	45.61	1.0	0.40	8

Table 7a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2004 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
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Callinectes similis	58.3	52.00	0.6	0.48	3	14.7	9.60	0.3	0.19	3	0.0	0.00	0.0	0.00	5
Trachypenaeus spp.	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Farfantepenaeus aztecus	167.5	123.83	2.8	2.09	3	57.7	23.28	1.6	0.55	3	32.2	9.61	1.8	0.50	5
Squilla spp	76.7	76.67	0.8	0.85	3	5.2	3.27	0.1	0.03	3	1.0	0.69	0.0	0.00	5
Trachypenaeus similis	205.3	204.56	1.3	1.28	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Peprilus burti	423.5	298.49	19.6	13.65	3	913.4	456.33	55.1	27.88	3	333.4	227.06	23.2	15.46	5
Micropogonias undulatus	1.3	0.66	0.1	0.04	3	9.8	5.98	0.6	0.41	3	3.8	1.82	0.6	0.32	5
Chloroscombrus chrysurus	31.1	26.60	1.5	1.27	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Stenotomus caprinus	7.4	4.16	0.1	0.09	3	100.5	21.78	3.7	0.52	3	222.4	35.75	9.9	1.57	5
Serranus atrobranchus	93.1	88.50	0.7	0.59	3	1.8	1.31	0.0	0.03	3	51.6	30.11	0.9	0.53	5
Syacium gunteri	17.5	16.79	0.3	0.29	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Anchoa hepsetus	26.7	26.67	0.5	0.45	3	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5
Pristipomoides aquilonaris	11.1	10.55	0.3	0.29	3	3.4	0.65	0.2	0.03	3	170.4	148.17	7.4	4.75	5
Squid spp	42.7	30.08	0.4	0.25	3	47.8	29.07	0.3	0.16	3	16.1	8.41	0.2	0.09	5

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 2004 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	26.0	5.97	7	13.2	11.4	4	85.5	25.42	8	0.0	0	0	75.2	29.57	3	68.3	15.88	5
Total finfish	17.6	3.23	7	11.8	10.78	4	59.6	19.77	8	0.0	0	0	71.4	29.65	3	62.7	14.9	5
Total crustacean	3.3	2.12	6	0.3	0.13	4	24.9	12.29	8	0.0	0	0	2.0	0.71	3	2.9	0.88	5
Total other	5.6	3.95	7	1.2	0.87	3	1.0	0.42	8	0.0	0	0	1.7	0.84	3	2.8	0.73	5
Surface temperature	30.6	0.17	5	30.2	0.4	4	29.9	0.11	10	0.0	0	0	29.8	0.23	3	30.0	0.12	4
Midwater temperature	30.2	0.13	5	30.0	0.14	4	28.2	0.28	10	0.0	0	0	27.4	1.46	3	24.4	0.73	4
Bottom temperature	29.5	0.25	5	26.6	0.2	4	24.1	0.56	10	0.0	0	0	21.7	0.55	3	20.2	0.8	4
Surface salinity	25.7	1.13	5	25.2	1.98	4	27.6	0.63	10	0.0	0	0	29.5	1.73	3	29.5	0.09	4
Midwater salinity	27.0	1.34	5	29.8	1.34	4	34.4	0.61	10	0.0	0	0	36.0	0.14	3	36.1	0.31	4
Bottom salinity	30.5	1.9	5	35.0	0.26	4	35.9	0.27	10	0.0	0	0	36.4	0.03	3	36.4	0.02	4
Surface chlorophyll	2.7	1.44	5	2.2	0.9	4	2.0	0.53	10	0.0	0	0	1.2	0.35	3	1.9	0.22	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	6.7	0.43	5	6.2	0.38	4	6.2	0.09	10	0.0	0	0	6.0	0.13	3	6.2	0.07	4
Midwater oxygen	6.4	0.24	5	4.4	0.34	4	5.6	0.14	10	0.0	0	0	6.3	0.32	3	6.4	0.53	4
Bottom oxygen	2.5	0.5	5	1.3	0.71	4	3.6	0.36	10	0.0	0	0	4.9	0.55	3	4.6	0.26	4

Table 8a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	163.1	157.81	0.5	0.43	9	336.7	287.65	1.2	0.93	8
Farfantepenaeus aztecus	6.5	6.52	0.0	0.03	2	35.3	32.10	0.4	0.38	9	83.7	37.35	1.7	0.87	8
Squilla spp	0.0	0.00	0.0	0.00	2	144.0	126.33	0.9	0.84	9	145.3	71.53	1.2	0.46	8
Sicyonia brevirostris	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	9	18.8	11.54	0.2	0.12	8
Xiphopenaeus kroyeri	1329.1	1329.10	3.7	3.67	2	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	8
Callinectes similis	9.1	9.13	0.0	0.01	2	18.2	14.02	0.1	0.11	9	75.3	32.44	0.8	0.30	8
Micropogonias undulatus	113.5	113.48	2.0	1.96	2	86.9	60.90	1.7	1.15	9	868.0	536.93	22.4	12.76	8
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	191.0	139.09	1.1	0.77	9	265.7	84.53	5.6	2.75	8
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	201.3	146.31	5.7	4.11	9	154.1	80.30	6.1	3.21	8
Peprilus burti	0.0	0.00	0.0	0.00	2	5.5	3.65	0.2	0.15	9	51.9	27.63	2.2	1.08	8
Prionotus longispinosus	6.4	6.43	0.0	0.03	2	29.6	25.12	0.2	0.13	9	236.9	211.65	1.6	1.32	8
Leiostomus xanthurus	1.3	1.30	0.0	0.01	2	20.6	13.71	1.9	1.26	9	158.5	153.13	14.2	13.71	8
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	9	67.5	67.50	0.3	0.34	8
Centropristis philadelphica	0.0	0.00	0.0	0.00	2	4.2	3.28	0.0	0.01	9	21.3	17.67	0.5	0.44	8
Squid spp	0.0	0.00	0.0	0.00	2	28.5	21.24	0.3	0.17	9	46.0	30.02	0.6	0.34	8

Table 8a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	37.9	14.29	0.3	0.09	4	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Farfantepenaeus aztecus	232.6	33.46	5.8	0.58	4	109.7	18.42	4.3	0.68	6	5.9	0.00	0.4	0.00	1
Squilla spp	109.6	42.19	1.2	0.52	4	4.1	1.92	0.1	0.04	6	0.0	0.00	0.0	0.00	1
Sicyonia brevirostris	277.6	134.73	3.6	1.78	4	55.7	22.40	0.7	0.30	6	0.0	0.00	0.0	0.00	1
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Callinectes similis	99.0	39.58	1.8	0.60	4	1.8	1.43	0.0	0.02	6	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	24.3	13.83	1.5	0.86	4	27.6	6.23	2.1	0.45	6	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	176.2	53.08	6.6	2.34	4	190.5	66.77	8.7	3.16	6	191.9	0.00	8.7	0.00	1
Chloroscombrus chrysurus	3.5	3.55	0.2	0.16	4	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Peprilus burti	4.6	3.63	0.3	0.22	4	74.2	38.64	5.2	2.62	6	820.9	0.00	59.2	0.00	1
Prionotus longispinosus	12.8	6.08	0.6	0.31	4	23.1	17.55	1.0	0.68	6	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	8.5	4.93	0.7	0.42	4	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Serranus atrobranchus	121.9	36.90	0.8	0.31	4	20.8	10.58	0.2	0.12	6	5.9	0.00	0.1	0.00	1
Centropristis philadelphica	94.4	22.46	5.0	1.44	4	53.3	16.04	3.7	1.01	6	5.9	0.00	1.1	0.00	1
Squid spp	0.5	0.55	0.0	0.01	4	35.3	22.12	0.3	0.13	6	5.9	0.00	0.1	0.00	1

Table 8b

Statistical Zone 16

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	11.2	8.15	2	19.9	10.14	9	75.7	26.83	8	0.0	0	0	38.7	7.66	6	99.6	0	1
Total finfish	7.2	4.24	2	17.5	9.73	9	68.8	26.71	8	0.0	0	0	29.1	5.55	6	98.0	0	1
Total crustacean	3.8	3.78	2	2.1	1.91	9	6.2	1.97	8	0.0	0	0	8.0	2.59	6	0.4	0	1
Total other	0.0	0	2	0.3	0.17	9	0.7	0.33	8	0.0	0	0	1.6	0.76	6	1.2	0	1
Surface temperature	31.6	0	1	30.0	0.24	6	30.1	0.27	9	0.0	0	0	29.7	0.29	2	29.8	0.34	5
Midwater temperature	30.5	0	1	29.1	0.33	6	28.5	0.31	9	0.0	0	0	26.8	1.44	2	24.4	1.32	5
Bottom temperature	27.5	0	1	26.7	0.44	6	25.4	0.43	9	0.0	0	0	21.5	0.28	2	20.7	0.74	5
Surface salinity	15.6	0	1	19.2	1.67	6	25.1	1.89	9	0.0	0	0	30.3	0.04	2	31.5	1.56	5
Midwater salinity	20.4	0	1	25.9	1.98	6	31.0	1.57	9	0.0	0	0	35.5	0.6	2	35.9	0.39	5
Bottom salinity	32.3	0	1	33.4	0.84	6	34.9	0.49	9	0.0	0	0	36.4	0.01	2	36.4	0.04	5
Surface chlorophyll	6.6	0	1	7.4	1.75	6	2.8	0.85	9	0.0	0	0	0.8	0.1	2	0.9	0.52	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	9.1	0	1	7.2	0.35	6	6.6	0.24	9	0.0	0	0	6.1	0.05	2	6.1	0.09	5
Midwater oxygen	7.1	0	1	5.1	0.62	6	5.1	0.64	9	0.0	0	0	6.3	0.2	2	6.7	0.23	5
Bottom oxygen	0.0	0	1	0.6	0.33	6	3.3	0.77	9	0.0	0	0	5.6	0.1	2	5.1	0.29	5

Table 9a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2004 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	44.5	20.07	0.2	0.08	19	37.6	36.41	0.5	0.44	6	163.5	106.93	2.6	1.43	13
Portunus spinicarpus	0.0	0.00	0.0	0.00	19	0.0	0.00	0.0	0.00	6	2.6	1.84	0.0	0.00	13
Trachypenaeus similis	0.6	0.43	0.0	0.00	19	7.5	7.50	0.0	0.02	6	105.6	59.34	0.6	0.34	13
Sicyonia brevirostris	0.0	0.00	0.0	0.00	19	0.0	0.00	0.0	0.00	6	75.9	48.96	0.7	0.47	13
Callinectes similis	7.0	2.57	0.0	0.00	19	99.8	57.75	0.7	0.41	6	24.2	10.63	0.4	0.16	13
Xiphopenaeus kroyeri	69.2	40.39	0.2	0.09	19	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	13
Chloroscombrus chrysurus	1408.1	1309.40	3.2	2.87	19	23.8	8.22	0.7	0.23	6	273.0	120.74	10.5	4.38	13
Stenotomus caprinus	0.0	0.00	0.0	0.00	19	154.7	104.90	1.0	0.71	6	1236.4	353.79	27.8	5.36	13
Micropogonias undulatus	535.6	211.73	6.4	2.53	19	128.8	118.32	3.7	3.27	6	79.6	65.99	3.7	2.88	13
Peprilus alepidotus	207.1	55.90	1.2	0.35	19	8.0	6.87	0.0	0.03	6	0.0	0.00	0.0	0.00	13
Bagre marinus	181.4	101.82	1.3	0.68	19	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	13
Peprilus burti	0.5	0.36	0.0	0.00	19	9.6	6.36	0.3	0.17	6	30.7	16.63	1.4	0.79	13
Synodus foetens	0.0	0.00	0.0	0.00	19	0.0	0.00	0.0	0.00	6	63.4	12.33	5.5	1.16	13
Upeneus parvus	0.0	0.00	0.0	0.00	19	0.0	0.00	0.0	0.00	6	54.8	31.38	0.7	0.47	13
Squid spp	38.0	11.44	0.5	0.16	19	64.3	30.07	1.0	0.47	6	28.9	19.27	0.3	0.18	13

Table 9a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2004 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	65.6	46.39	1.7	1.12	6	10.6	9.07	0.6	0.52	2	40.8	11.58	2.2	0.47	3
Portunus spinicarpus	197.5	160.09	0.8	0.63	6	2.6	0.41	0.0	0.00	2	61.9	38.33	0.9	0.57	3
Trachypenaeus similis	37.4	37.36	0.2	0.22	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Sicyonia brevirostris	94.4	78.28	1.0	0.78	6	3.0	3.00	0.0	0.03	2	1.7	1.67	0.0	0.02	3
Callinectes similis	43.3	28.96	0.7	0.43	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	36.3	19.09	1.8	0.95	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	447.1	104.57	18.1	4.24	6	370.2	23.66	16.5	0.19	2	319.6	76.21	14.6	3.99	3
Micropogonias undulatus	0.0	0.00	0.0	0.00	6	37.6	37.64	3.2	3.17	2	54.5	54.47	4.0	3.98	3
Peprilus alepidotus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Bagre marinus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Peprilus burti	21.2	7.26	1.5	0.49	6	32.2	32.18	2.4	2.38	2	324.9	271.64	23.8	19.58	3
Synodus foetens	67.0	15.71	7.9	1.61	6	67.1	19.09	7.9	2.40	2	21.4	9.45	3.0	1.39	3
Upeneus parvus	7.6	6.24	0.0	0.03	6	127.9	70.09	4.6	2.42	2	110.9	44.50	4.2	1.62	3
Squid spp	20.0	7.02	0.3	0.10	6	16.6	3.07	0.5	0.03	2	17.6	1.29	0.8	0.14	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 2004 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	18.6	5.55	19	13.1	6.55	6	77.8	14.07	13	0.0	0	0	48.3	8.99	2	88.4	7.28	3
Total finfish	16.7	5.28	19	9.3	5.81	6	67.9	12.61	13	0.0	0	0	45.3	8.39	2	81.7	9.51	3
Total crustacean	1.3	0.39	19	2.1	1.1	6	6.6	2.87	13	0.0	0	0	0.5	0.55	2	3.5	0.83	3
Total other	1.0	0.14	19	1.7	0.9	6	3.2	2.33	13	0.0	0	0	2.4	0.13	2	3.3	2.15	3
Surface temperature	29.9	0.11	15	29.8	0.12	7	29.1	0.09	13	0.0	0	0	29.3	0.19	3	28.8	0.24	7
Midwater temperature	29.1	0.16	15	29.2	0.25	7	28.4	0.14	13	0.0	0	0	24.1	0.24	3	24.3	0.75	7
Bottom temperature	28.6	0.21	15	28.1	0.38	7	24.9	0.53	13	0.0	0	0	20.7	0.17	3	20.6	0.45	7
Surface salinity	18.4	0.7	15	22.9	1.22	7	31.5	0.45	13	0.0	0	0	33.5	0.46	3	32.9	0.59	7
Midwater salinity	20.9	1.08	15	28.3	1.62	7	32.5	0.51	13	0.0	0	0	35.8	0.15	3	35.6	0.37	7
Bottom salinity	26.0	1.09	15	30.4	1.06	7	34.5	0.59	13	0.0	0	0	36.4	0.01	3	36.3	0.04	7
Surface chlorophyll	5.6	0	1	2.7	0.34	5	0.6	0.12	13	0.0	0	0	0.3	0.07	3	0.4	0.03	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	7.1	0.13	15	6.6	0.18	7	6.2	0.05	13	0.0	0	0	6.1	0	3	6.2	0.02	7
Midwater oxygen	5.4	0.3	15	5.6	0.35	7	6.2	0.06	13	0.0	0	0	6.7	0.06	3	6.5	0.09	7
Bottom oxygen	3.4	0.46	15	2.5	0.51	7	5.3	0.18	13	0.0	0	0	5.6	0.09	3	5.3	0.17	7

Table 10a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	1.4	1.36	0.0	0.00	8	32.6	19.96	0.1	0.04	16	1513.7	712.56	7.3	3.34	7
Farfantepenaeus aztecus	180.7	75.03	1.3	0.54	8	284.6	122.40	2.9	1.50	16	553.5	203.88	8.7	3.27	7
Squilla spp	4.6	3.83	0.0	0.01	8	55.3	30.24	0.5	0.31	16	103.9	44.16	1.2	0.46	7
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	8	0.2	0.20	0.0	0.00	16	139.2	139.17	0.8	0.80	7
Litopenaeus setiferus	50.3	18.00	1.7	0.68	8	47.1	18.64	1.8	0.72	16	0.0	0.00	0.0	0.00	7
Callinectes similis	7.7	5.03	0.0	0.01	8	16.6	7.45	0.1	0.08	16	76.7	39.42	1.1	0.60	7
Micropogonias undulatus	1052.3	220.63	14.9	3.83	8	1705.8	856.02	35.6	20.24	16	0.0	0.00	0.0	0.00	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	8	57.1	39.53	0.4	0.24	16	1551.5	675.51	11.4	4.68	7
Chloroscombrus chrysurus	14.8	14.00	0.4	0.37	8	209.6	101.08	6.4	3.10	16	85.6	43.62	3.4	1.87	7
Leiostomus xanthurus	73.4	27.26	1.9	0.77	8	193.9	94.21	6.2	3.18	16	0.0	0.00	0.0	0.00	7
Stellifer lanceolatus	54.2	9.44	0.7	0.13	8	136.5	88.83	2.7	1.79	16	0.0	0.00	0.0	0.00	7
Peprilus burti	0.0	0.00	0.0	0.00	8	173.6	130.44	6.0	4.94	16	19.4	8.76	0.4	0.12	7
Cynoscion arenarius	70.3	32.08	1.4	0.64	8	126.0	48.75	3.0	1.19	16	1.3	1.32	0.2	0.15	7
Syacium gunteri	0.0	0.00	0.0	0.00	8	12.5	7.49	0.2	0.10	16	205.7	84.02	3.4	1.19	7
Squid spp	20.2	7.21	0.4	0.14	8	160.7	53.97	2.3	0.77	16	216.1	72.72	2.2	0.66	7

Table 10a (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Farfantepenaeus aztecus	10.2	4.73	0.2	0.07	3	167.1	0.00	6.4	0.00	1	42.6	32.41	2.3	1.58	2
Squilla spp	0.0	0.00	0.0	0.00	3	18.8	0.00	0.2	0.00	1	0.9	0.94	0.0	0.02	2
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Litopenaeus setiferus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Callinectes similis	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	2.2	2.18	0.1	0.09	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	829.2	147.81	35.1	3.81	3	28.2	0.00	3.5	0.00	1	187.6	75.07	9.1	4.52	2
Chloroscombrus chrysurus	81.1	44.87	3.8	2.11	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Leiostomus xanthurus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Stellifer lanceolatus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Peprilus burti	35.1	29.11	2.6	2.40	3	2.4	0.00	0.1	0.00	1	2.6	0.76	0.3	0.07	2
Cynoscion arenarius	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Syacium gunteri	1.7	1.67	0.0	0.03	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Squid spp	5.7	3.48	0.0	0.01	3	4.7	0.00	0.1	0.00	1	10.3	10.31	0.4	0.36	2

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 2004 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	28.7	6.35	8	76.8	28.37	16	60.0	12.17	7	0.0	0	0	28.8	0	1	49.0	10.76	2
Total finfish	22.7	5.34	8	66.7	26.29	16	35.1	6.97	7	0.0	0	0	20.0	0	1	43.7	13.55	2
Total crustacean	3.6	0.74	8	5.8	2.54	16	22.6	6.83	7	0.0	0	0	8.4	0	1	4.5	2.39	2
Total other	2.7	1.23	8	4.2	1.08	16	2.4	0.67	7	0.0	0	0	0.5	0	1	0.7	0.39	2
Surface temperature	28.5	0.34	8	28.2	0.15	14	28.4	0.14	9	0.0	0	0	28.0	0.17	4	28.1	0.08	3
Midwater temperature	28.5	0.33	8	27.9	0.15	14	28.1	0.16	9	0.0	0	0	25.2	0.88	4	23.8	0.64	3
Bottom temperature	28.4	0.31	8	27.5	0.14	14	25.0	0.54	9	0.0	0	0	21.1	0.72	4	20.1	0.2	3
Surface salinity	25.6	1.74	8	29.2	1.25	14	31.5	0.47	9	0.0	0	0	33.7	0.3	4	34.6	0.07	3
Midwater salinity	27.3	1.57	8	31.9	0.63	14	32.8	0.53	9	0.0	0	0	35.8	0.46	4	36.4	0.11	3
Bottom salinity	28.0	1.42	8	32.4	0.92	14	34.7	0.41	9	0.0	0	0	36.2	0.17	4	36.4	0.04	3
Surface chlorophyll	12.5	0	1	2.6	0.48	5	0.8	0.11	9	0.0	0	0	0.3	0.08	4	0.2	0.04	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	7.0	0.29	8	6.3	0.24	14	6.2	0.03	9	0.0	0	0	6.2	0.04	4	6.1	0	3
Midwater oxygen	6.9	0.23	8	5.8	0.26	14	6.0	0.12	9	0.0	0	0	6.4	0.13	4	6.6	0.03	3
Bottom oxygen	6.1	0.74	8	4.5	0.51	14	4.6	0.39	9	0.0	0	0	5.2	0.17	4	5.2	0.2	3

Table 11a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	4	22.6	6.54	0.0	0.01	14	665.5	236.06	2.4	0.85	16
Farfantepenaeus aztecus	40.5	20.98	0.2	0.10	4	119.2	27.28	1.0	0.23	14	731.2	183.61	9.5	2.50	16
Callinectes similis	6.0	2.45	0.0	0.02	4	52.8	15.72	0.3	0.09	14	364.0	136.49	2.8	0.94	16
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	14	0.3	0.24	0.0	0.00	16
Squilla spp	0.0	0.00	0.0	0.00	4	83.4	24.22	0.5	0.18	14	324.0	104.74	2.9	0.97	16
Sicyonia brevirostris	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	14	23.6	23.61	0.2	0.22	16
Micropogonias undulatus	810.0	566.05	21.7	16.26	4	1880.2	622.57	47.8	17.01	14	39.9	26.42	1.3	0.84	16
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	14	173.6	61.81	1.9	1.39	16
Peprilus burti	1.5	1.50	0.0	0.00	4	5.3	2.43	0.1	0.06	14	289.0	112.07	6.4	2.36	16
Cynoscion arenarius	34.5	12.82	0.5	0.17	4	277.2	78.85	5.1	1.57	14	115.5	54.21	2.6	0.97	16
Stellifer lanceolatus	34.5	24.78	0.9	0.67	4	185.1	61.05	3.1	0.99	14	5.5	3.09	0.1	0.08	16
Larimus fasciatus	157.5	88.16	4.6	2.70	4	196.8	144.55	6.7	4.99	14	0.0	0.00	0.0	0.00	16
Syacium gunteri	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	14	58.0	13.44	0.8	0.21	16
Saurida brasiliensis	0.0	0.00	0.0	0.00	4	1.7	1.21	0.0	0.00	14	30.7	12.36	0.2	0.08	16
Squid spp	22.5	7.89	0.4	0.18	4	49.5	10.45	0.6	0.13	14	265.3	79.14	2.5	0.66	16

Table 11a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	1436.1	961.69	6.6	4.33	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Farfantepenaeus aztecus	242.7	112.53	4.1	1.65	5	141.5	77.09	4.0	1.94	5	14.4	0.00	0.8	0.00	1
Callinectes similis	273.2	162.86	2.5	1.44	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Portunus spinicarpus	10.8	6.84	0.3	0.28	5	871.0	452.92	4.6	2.44	5	63.3	0.00	0.5	0.00	1
Squilla spp	80.7	50.07	1.3	0.66	5	4.6	3.50	0.1	0.06	5	0.0	0.00	0.0	0.00	1
Sicyonia brevirostris	13.5	7.85	0.1	0.08	5	197.0	114.58	2.3	1.34	5	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	365.9	136.13	13.7	5.58	5	152.1	59.09	5.2	1.76	5	618.9	0.00	19.3	0.00	1
Peprilus burti	6.9	5.84	0.4	0.28	5	4.3	4.29	0.2	0.21	5	32.2	0.00	2.0	0.00	1
Cynoscion arenarius	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Stellifer lanceolatus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Larimus fasciatus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1
Syacium gunteri	77.4	59.57	1.4	0.84	5	6.3	3.59	0.1	0.05	5	0.0	0.00	0.0	0.00	1
Saurida brasiliensis	79.7	57.25	0.8	0.64	5	9.0	6.66	0.1	0.04	5	7.8	0.00	0.1	0.00	1
Squid spp	77.8	38.92	1.0	0.30	5	53.2	23.79	0.6	0.41	5	47.8	0.00	1.2	0.00	1

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 2004 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	34.1	15.48	4	82.1	25.4	14	47.1	8.34	16	0.0	0	0	29.0	5.98	5	55.9	0	1
Total finfish	30.8	15.01	4	71.3	24.03	14	24.2	4.57	16	0.0	0	0	16.1	2.45	5	51.6	0	1
Total crustacean	0.8	0.15	4	6.4	1.86	14	19.5	5.22	16	0.0	0	0	11.2	5.79	5	2.8	0	1
Total other	2.7	1.72	4	4.6	0.92	14	3.5	0.58	16	0.0	0	0	1.7	0.77	5	1.7	0	1
Surface temperature	29.0	0.39	4	28.3	0.17	14	28.3	0.09	18	0.0	0	0	27.7	0.18	4	27.9	0.28	2
Midwater temperature	28.3	0.44	4	27.8	0.22	14	27.8	0.13	18	0.0	0	0	26.8	0.22	4	23.3	0.12	2
Bottom temperature	28.1	0.54	4	27.1	0.3	14	25.3	0.4	18	0.0	0	0	22.1	0.59	4	20.2	0.34	2
Surface salinity	30.7	1.19	4	32.3	0.83	14	32.6	0.32	18	0.0	0	0	34.1	0.45	4	34.2	0.02	2
Midwater salinity	33.1	0.85	4	33.4	0.65	14	34.3	0.36	18	0.0	0	0	35.7	0.29	4	36.3	0.02	2
Bottom salinity	33.9	0.87	4	34.4	0.44	14	35.8	0.14	18	0.0	0	0	36.2	0.16	4	36.4	0.06	2
Surface chlorophyll	0.0	0	0	4.5	0.63	5	2.0	0.32	15	0.0	0	0	0.4	0.05	4	0.6	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	6.0	0.06	4	6.3	0.18	14	6.2	0.11	18	0.0	0	0	6.1	0.04	4	6.1	0.05	2
Midwater oxygen	6.0	0.18	4	6.2	0.14	14	6.0	0.04	18	0.0	0	0	6.2	0.07	4	6.6	0.1	2
Bottom oxygen	5.6	0.15	4	4.7	0.25	14	5.3	0.18	18	0.0	0	0	5.6	0.19	4	5.2	0.3	2

Table 12a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2004 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	23.7	21.72	0.2	0.14	4	135.1	62.19	1.4	0.66	18	569.7	197.52	6.5	2.46	12
Trachypenaeus similis	13.0	8.17	0.0	0.01	4	62.7	28.40	0.2	0.09	18	622.2	216.12	2.2	0.83	12
Callinectes similis	139.7	111.70	1.2	0.97	4	210.5	108.81	1.2	0.60	18	253.0	85.65	1.6	0.55	12
Squilla spp	14.1	10.19	0.2	0.13	4	41.1	23.14	0.3	0.22	18	42.1	14.51	0.4	0.15	12
Portunus spinicarpus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	18	0.0	0.00	0.0	0.00	12
Solenocera vioscai	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	18	0.2	0.17	0.0	0.00	12
Peprilus burti	0.0	0.00	0.0	0.00	4	8.1	5.66	0.3	0.20	18	445.7	204.79	10.7	5.07	12
Micropogonias undulatus	1117.4	1003.90	23.0	20.11	4	193.9	66.91	4.5	1.58	18	0.7	0.55	0.0	0.02	12
Trachurus lathami	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	18	213.6	124.10	4.6	2.64	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	34.7	33.94	0.2	0.22	18	77.1	29.45	0.3	0.13	12
Chloroscombrus chrysurus	350.0	347.35	16.3	16.29	4	166.4	48.67	4.6	1.48	18	34.2	23.93	1.2	0.82	12
Cynoscion arenarius	74.3	74.35	1.8	1.79	4	79.2	47.53	2.1	1.27	18	0.8	0.54	0.1	0.04	12
Trichiurus lepturus	8.5	8.48	0.1	0.06	4	12.7	11.18	0.4	0.32	18	78.0	49.58	0.5	0.22	12
Prionotus stearnsi	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	18	0.0	0.00	0.0	0.00	12
Squid spp	55.6	17.68	0.7	0.28	4	71.9	16.82	0.8	0.23	18	362.9	100.04	3.7	1.02	12

Table 12a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2004 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	20.0	10.59	0.4	0.23	2	65.8	30.15	2.7	1.27	3	23.1	13.85	0.9	0.53	2
Trachypenaeus similis	21.5	17.76	0.1	0.11	2	71.2	71.15	0.5	0.47	3	0.0	0.00	0.0	0.00	2
Callinectes similis	154.9	121.13	1.3	1.06	2	4.6	3.06	0.0	0.04	3	0.0	0.00	0.0	0.00	2
Squilla spp	6.6	6.56	0.0	0.03	2	7.8	6.02	0.1	0.09	3	0.0	0.00	0.0	0.00	2
Portunus spinicarpus	2.8	2.81	0.0	0.01	2	113.5	101.55	0.7	0.61	3	0.0	0.00	0.0	0.00	2
Solenocera vioscai	2.2	2.18	0.1	0.08	2	93.3	57.66	0.6	0.38	3	1.7	1.73	0.0	0.01	2
Peprilus burti	22.1	12.77	0.7	0.38	2	43.4	41.66	2.9	2.79	3	122.3	25.38	7.4	1.29	2
Micropogonias undulatus	0.9	0.94	0.1	0.08	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2
Trachurus lathami	13.9	10.13	0.1	0.05	2	1.9	1.85	0.1	0.05	3	130.4	51.92	3.0	1.20	2
Stenotomus caprinus	26.1	2.06	0.6	0.08	2	165.3	105.36	5.6	3.12	3	123.5	24.23	4.6	1.14	2
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	1.9	1.85	0.1	0.07	3	0.0	0.00	0.0	0.00	2
Cynoscion arenarius	0.0	0.00	0.0	0.00	2	1.2	1.15	0.2	0.17	3	0.0	0.00	0.0	0.00	2
Trichiurus lepturus	13.1	13.09	0.1	0.08	2	1.2	1.15	0.1	0.09	3	15.6	12.12	0.8	0.29	2
Prionotus stearnsi	64.4	4.36	0.3	0.02	2	77.7	25.17	1.0	0.34	3	276.3	83.65	3.0	0.75	2
Squid spp	72.5	55.02	0.9	0.56	2	50.7	36.95	1.8	1.08	3	662.9	181.73	12.0	0.16	2

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 2004 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	59.6	28.4	4	23.5	4.94	18	38.4	8.42	12	0.0	0	0	36.6	2.98	3	54.0	1.85	2
Total finfish	54.9	26.57	4	18.1	3.91	18	23.2	8.68	12	0.0	0	0	26.8	1.97	3	40.0	1.5	2
Total crustacean	3.3	2.65	4	4.1	1.72	18	11.2	3.8	12	0.0	0	0	5.4	3.1	3	0.9	0.52	2
Total other	1.6	0.53	4	1.3	0.21	18	4.0	0.99	12	0.0	0	0	4.5	1.69	3	12.8	0.35	2
Surface temperature	28.9	0.29	4	28.7	0.12	18	28.6	0.11	12	0.0	0	0	28.3	0.1	3	28.1	0.19	7
Midwater temperature	28.6	0.34	4	28.6	0.12	18	28.0	0.22	12	0.0	0	0	24.5	0.07	3	23.9	0.94	7
Bottom temperature	28.0	0.87	4	28.2	0.27	18	24.5	0.65	12	0.0	0	0	21.3	0.21	3	20.5	0.99	7
Surface salinity	34.9	0.45	4	35.1	0.13	18	34.0	0.27	12	0.0	0	0	34.0	0.49	3	34.1	0.38	7
Midwater salinity	35.1	0.36	4	35.2	0.15	18	34.4	0.23	12	0.0	0	0	36.4	0.02	3	36.4	0.03	7
Bottom salinity	35.4	0.03	4	35.5	0.11	18	35.6	0.19	12	0.0	0	0	36.3	0.04	3	36.3	0.06	7
Surface chlorophyll	2.4	0.99	2	1.1	0.12	6	0.9	0.06	10	0.0	0	0	0.5	0.06	3	0.6	0.09	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	5.9	0.09	4	5.9	0.06	18	6.0	0.02	12	0.0	0	0	6.1	0.03	3	6.1	0.03	7
Midwater oxygen	5.8	0.19	4	5.9	0.06	18	6.0	0.06	12	0.0	0	0	6.6	0	3	6.1	0.36	7
Bottom oxygen	5.7	0.31	4	5.9	0.1	18	5.3	0.21	12	0.0	0	0	5.5	0.27	3	5.4	0.31	7

Table 13a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2004 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	3.0	3.00	0.0	0.00	2	37.2	23.83	0.2	0.12	10	1098.2	497.52	11.1	5.13	16
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	95.3	79.30	0.4	0.31	16
Callinectes similis	51.0	39.00	0.5	0.45	2	117.2	68.59	0.9	0.48	10	194.6	79.37	1.7	0.74	16
Squilla spp	3.0	3.00	0.0	0.04	2	16.4	12.60	0.2	0.16	10	41.2	18.61	0.4	0.21	16
Portunus spinicarpus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	0.5	0.50	0.0	0.00	16
Farfantepenaeus duorarum	87.0	87.00	0.3	0.32	2	100.8	71.15	2.1	1.53	10	10.2	3.55	0.1	0.05	16
Stenotomus caprinus	6.0	6.00	0.0	0.01	2	407.3	187.93	2.3	1.18	10	1283.3	209.72	8.1	1.90	16
Peprilus burti	0.0	0.00	0.0	0.00	2	1.8	1.27	0.1	0.04	10	272.8	138.81	3.8	1.61	16
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	14.7	9.23	0.1	0.08	16
Prionotus stearnsi	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	98.0	82.02	0.5	0.41	16
Trichiurus lepturus	21.0	21.00	0.0	0.00	2	51.7	51.71	1.4	1.45	10	62.8	33.48	0.5	0.30	16
Saurida brasiliensis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	56.2	28.05	0.3	0.14	16
Micropogonias undulatus	30.0	30.00	0.4	0.45	2	213.5	212.79	5.3	5.24	10	6.5	4.91	0.2	0.16	16
Prionotus paralatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	16
Squid spp	111.0	111.00	1.5	1.48	2	282.6	211.23	2.9	1.93	10	324.8	80.71	4.1	1.14	16

Table 13a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2004 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	228.5	82.53	5.1	1.87	5	37.2	17.85	1.6	0.77	4	37.6	8.44	2.3	0.43	3
Trachypenaeus similis	404.1	186.62	1.7	0.79	5	12.5	5.26	0.1	0.03	4	6.5	6.55	0.0	0.01	3
Callinectes similis	74.2	39.89	0.6	0.24	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3
Squilla spp	31.0	12.05	0.2	0.09	5	7.7	4.15	0.1	0.03	4	29.7	25.10	0.5	0.47	3
Portunus spinicarpus	25.2	18.47	0.1	0.06	5	87.8	41.02	0.5	0.25	4	26.3	8.16	0.3	0.13	3
Farfantepenaeus duorarum	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
Stenotomus caprinus	70.8	31.42	0.4	0.12	5	66.4	13.64	2.4	0.54	4	22.0	11.88	1.2	0.63	3
Peprilus burti	376.6	296.19	9.0	6.79	5	38.0	35.78	1.5	1.32	4	7.3	6.18	0.3	0.23	3
Serranus atrobranchus	144.6	60.02	1.8	0.82	5	42.2	6.79	0.6	0.12	4	423.3	4.88	6.6	0.50	3
Prionotus stearnsi	39.4	8.27	0.2	0.05	5	93.0	27.92	0.7	0.27	4	120.7	105.62	1.5	1.33	3
Trichiurus lepturus	64.2	61.71	0.3	0.33	5	7.1	6.09	0.1	0.06	4	0.0	0.00	0.0	0.00	3
Saurida brasiliensis	76.9	36.35	0.6	0.26	5	140.0	121.32	0.8	0.76	4	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	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
Prionotus paralatus	52.1	23.96	0.3	0.14	5	12.6	6.42	0.3	0.10	4	180.9	71.35	6.4	2.44	3
Squid spp	229.4	52.98	4.3	1.52	5	176.0	50.82	3.2	1.42	4	0.0	0.00	0.0	0.00	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 2004 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	15.0	3.6	2	27.7	14.46	10	50.5	13.4	16	0.0	0	0	23.7	4.97	4	64.3	7.42	3
Total finfish	10.8	1.8	2	18.4	11.54	10	31.3	9.56	16	0.0	0	0	17.5	4.28	4	54.5	5.7	3
Total crustacean	2.1	0.3	2	5.6	3.17	10	14.9	6.17	16	0.0	0	0	2.4	1.08	4	5.3	1.43	3
Total other	2.1	1.5	2	3.7	1.9	10	4.3	1.16	16	0.0	0	0	3.8	1.62	4	4.5	2.19	3
Surface temperature	26.9	1.36	2	24.4	0.85	10	26.7	0.59	15	0.0	0	0	27.5	0.05	2	28.2	0.25	3
Midwater temperature	26.0	2.26	2	24.2	0.84	10	25.8	0.55	15	0.0	0	0	24.8	0.53	2	22.8	0.35	3
Bottom temperature	26.0	2.26	2	23.2	0.92	10	23.7	0.57	15	0.0	0	0	21.4	0.14	2	20.3	0.34	3
Surface salinity	37.5	2.1	2	37.8	0.64	10	36.7	0.71	15	0.0	0	0	36.0	0.21	2	35.9	0.26	3
Midwater salinity	37.5	2.16	2	38.0	0.61	10	37.1	0.63	15	0.0	0	0	36.5	0.02	2	36.4	0.04	3
Bottom salinity	37.6	2.2	2	38.0	0.59	10	37.4	0.55	15	0.0	0	0	36.3	0.01	2	36.4	0.02	3
Surface chlorophyll	0.7	0	1	0.6	0.08	3	0.5	0.02	8	0.0	0	0	0.3	0.03	2	0.3	0.03	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	6.5	0.35	2	6.6	0.12	10	6.5	0.13	15	0.0	0	0	6.2	0.05	2	6.1	0.03	3
Midwater oxygen	6.5	0.25	2	6.7	0.15	10	6.5	0.15	15	0.0	0	0	6.7	0.1	2	6.5	0.12	3
Bottom oxygen	6.4	0.25	2	6.7	0.2	10	6.0	0.26	15	0.0	0	0	6.1	0.35	2	5.1	0.23	3

Table 14a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths less than 6 fm or greater than 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
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	1911.1	0.00	20.2	0.00	1
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	248.9	0.00	0.6	0.00	1
Callinectes similis	0.0	0.00	0.0	0.00	0	12.0	0.00	0.2	0.00	1	140.0	0.00	1.6	0.00	1
Squilla spp	0.0	0.00	0.0	0.00	0	6.0	0.00	0.1	0.00	1	120.0	0.00	1.8	0.00	1
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	0	108.0	0.00	0.8	0.00	1	75.6	0.00	0.6	0.00	1
Sicyonia brevirostris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	71.1	0.00	0.4	0.00	1
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	3442.2	0.00	20.5	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	420.0	0.00	8.5	0.00	1	42.2	0.00	1.4	0.00	1
Larimus fasciatus	0.0	0.00	0.0	0.00	0	516.0	0.00	9.9	0.00	1	0.0	0.00	0.0	0.00	1
Centropristis philadelphica	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	186.7	0.00	1.6	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	12.0	0.00	0.2	0.00	1	162.2	0.00	3.2	0.00	1
Upeneus parvus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	148.9	0.00	1.4	0.00	1
Lagodon rhomboides	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	1	48.9	0.00	1.3	0.00	1
Squid spp	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1	231.1	0.00	2.8	0.00	1

Table 14b

Statistical Zone 22

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 Summer Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths less than 6 fm or greater than 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	0.0	0	0	25.8	0	1	64.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish	0.0	0	0	22.2	0	1	35.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean	0.0	0	0	3.0	0	1	26.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total other	0.0	0	0	1.2	0	1	2.9	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	24.5	0	1	27.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	24.4	0	1	27.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	23.5	0	1	24.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	39.5	0	1	35.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	39.7	0	1	35.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	39.6	0	1	35.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.8	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	6.6	0	1	6.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	6.8	0	1	6.1	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	6.3	0	1	5.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0

Table 15. 2004 Fall Shrimp/Groundfish Survey species composition list, 343 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
Finfish					
Micropogonias undulatus	Atlantic croaker	54227	2642.0	237	69.1
Stenotomus caprinus	longspine porgy	44291	1207.0	190	55.4
Chloroscombrus chrysurus	Atlantic bumper	43698	850.2	153	44.6
Peprilus burti	gulf butterfish	6953	443.3	141	41.1
Prionotus longispinosus	bigeye searobin	6425	167.3	118	34.4
Cynoscion nothus	silver seatrout	6201	226.6	160	46.6
Leiostomus xanthurus	spot	5973	568.1	144	42.0
Lutjanus campechanus	red snapper	5135	199.3	190	55.4
Serranus atrobranchus	blackear bass	4715	48.8	77	22.4
Syacium gunteri	shoal flounder	4296	76.4	203	59.2
Stellifer lanceolatus	star drum	3920	49.1	74	21.6
Trachurus lathami	rough scad	3888	179.7	59	17.2
Synodus foetens	inshore lizardfish	3633	452.0	177	51.6
Upeneus parvus	dwarf goatfish	3167	97.6	115	33.5
Cynoscion spp.	seatrout	2918	15.9	53	15.5
Lagodon rhomboides	pinfish	2895	181.0	127	37.0
Centropristis philadelphica	rock sea bass	2443	108.0	176	51.3
Harengula jaguana	scaled sardine	2397	76.8	75	21.9
Diplectrum bivittatum	dwarf sand perch	2386	43.6	109	31.8
Trichiurus lepturus	Atlantic cutlassfish	2366	109.0	117	34.1
Cynoscion arenarius	sand seatrout	2198	186.2	140	40.8
Prionotus paralatus	Mexican searobin	2092	77.5	51	14.9
Mullus auratus	red goatfish	1884	90.1	46	13.4
Pristipomoides aquilonaris	wenchman	1701	141.2	53	15.5
Sphoeroides parvus	least puffer	1604	8.0	118	34.4

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Trichopsetta ventralis	sash flounder	1583	35.2	66	19.2
Halieutichthys aculeatus	pancake batfish	1551	8.5	131	38.2
Larimus fasciatus	banded drum	1439	81.6	99	28.9
Prionotus rubio	blackwing searobin	1340	47.4	84	24.5
Arius felis	hardhead catfish	1297	194.0	62	18.1
Etropus crossotus	fringed flounder	1242	19.0	119	34.7
Lutjanus synagris	lane snapper	1227	73.7	89	25.9
Anchoa hepsetus	striped anchovy	1032	16.0	53	15.5
Cyclopsetta chittendeni	Mexican flounder	975	70.2	127	37.0
Prionotus stearnsi	shortwing searobin	929	9.0	36	10.5
Chaetodipterus faber	Atlantic spadefish	893	42.4	111	32.4
Lepophidium brevibarbe	blackedge cusk-eel	777	22.9	76	22.2
Selar crumenophthalmus	bigeye scad	739	45.1	35	10.2
Porichthys plectrodon	Atlantic midshipman	702	10.5	102	29.7
Citharichthys spilopterus	bay whiff	631	6.3	54	15.7
Eucinostomus gula	silver jenny	621	14.6	72	21.0
Haemulon aurolineatum	tomtate	589	34.7	18	5.2
Menticirrhus americanus	southern kingfish	521	54.0	66	19.2
Opisthonema oglinum	Atlantic thread herring	443	25.4	58	16.9
Scorpaena calcarata	smoothhead scorpionfish	413	5.6	53	15.5
Brevoortia patronus	gulf menhaden	398	27.2	33	9.6
Saurida brasiliensis	largescale lizardfish	397	1.7	56	16.3
Selene setapinnis	Atlantic moonfish	385	23.9	72	21.0
Peprilus alepidotus	harvestfish	313	11.1	46	13.4
Lagocephalus laevigatus	smooth puffer	287	32.6	83	24.2
Ogcocephalus declivirostris	slantbrow batfish	255	3.9	51	14.9
Synodus poeyi	offshore lizardfish	212	2.4	41	12.0
Balistes capriscus	gray triggerfish	208	17.5	68	19.8
Symphurus plagiusa	blackcheek tonguefish	202	3.0	65	19.0
Rhomboplites aurorubens	vermilion snapper	182	11.3	24	7.0

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Hildebrandia flava	yellow conger	177	10.4	26	7.6
Ancylopsetta quadrocellata	ocellated flounder	157	22.9	44	12.8
Syacium papillosum	dusky flounder	153	6.4	13	3.8
Symphurus diomedianus	spottedfin tonguefish	150	3.7	22	6.4
Gymnachirus texae	fringed sole	143	1.7	32	9.3
Prionotus tribulus	bighead searobin	142	8.9	29	8.5
Monacanthus hispidus	planehead filefish	130	2.2	28	8.2
Urophycis floridana	southern hake	128	18.2	17	5.0
Microgobius gulosus	clown goby	119	0.3	8	2.3
Ancylopsetta dilecta	three-eye flounder	118	8.1	16	4.7
Ophidion welshi	crested cusk-eel	113	4.0	29	8.5
Brotula barbata	bearded brotula	112	8.5	28	8.2
Anchoa mitchilli	bay anchovy	110	0.2	24	7.0
Equetus umbrosus	cubbyu	107	5.4	17	5.0
Ophidion holbrooki	bank cusk-eel	105	5.2	4	1.2
Diplectrum formosum	sand perch	102	11.0	18	5.2
Sphyraena guachancho	guaguanche	102	9.7	33	9.6
Bagre marinus	gafftopsail catfish	101	7.9	23	6.7
Symphurus civitatus	offshore tonguefish	96	1.2	7	2.0
Bellator militaris	horned searobin	95	0.6	15	4.4
Peristedion gracile	slender searobin	94	2.3	2	0.6
Sphoeroides dorsalis	marbled puffer	93	2.5	10	2.9
Selene vomer	lookdown	83	1.2	28	8.2
Sardinella aurita	Spanish sardine	82	3.0	8	2.3
Scomberomorus cavalla	king mackerel	73	13.5	29	8.5
Orthopristis chrysoptera	pigfish	71	5.1	23	6.7
Etrumeus teres	round herring	70	1.1	4	1.2
Caranx crysos	blue runner	69	5.5	22	6.4
Bollmannia communis	ragged goby	67	0.6	10	2.9
Conodon nobilis	barred grunt	59	6.9	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Decapterus punctatus	round scad	59	1.9	10	2.9
Lepophidium jeannae	mottled cusk-eel	57	3.0	8	2.3
Menticirrhus saxatilis	northern kingfish	55	4.2	5	1.5
Hoplunnis macrurus	freckled pike-conger	47	0.4	17	5.0
Hemicaranx amblyrhynchus	bluntnose jack	46	2.8	27	7.9
Centropristis ocyura	bank sea bass	44	4.6	14	4.1
Equetus wamotoi	blackbar drum	44	1.6	7	2.0
Prionotus ophryas	bandtail searobin	44	1.2	17	5.0
Kathetostoma albigutta	lancer stargazer	42	1.7	16	4.7
Prionotus roseus	bluespotted searobin	40	1.3	10	2.9
Paralichthys lethostigma	southern flounder	39	9.6	24	7.0
Raja texana	roundel skate	37	11.0	24	7.0
Priacanthus arenatus	bigeye	36	4.1	8	2.3
Engyophrys senta	spiny flounder	35	0.5	4	1.2
Bathyanthias mexicanus	yellowtail bass	34	0.9	8	2.3
Scomberomorus maculatus	Spanish mackerel	32	7.2	13	3.8
Antennarius radiosus	singlespot frogfish	31	0.5	10	2.9
Rhizoprionodon terraenovae	Atlantic sharpnose shark	31	29.5	13	3.8
Pontinus longispinis	longspine scorpionfish	30	0.5	4	1.2
Caulolatilus intermedius	anchor tilefish	29	2.3	8	2.3
Sphyrna tiburo	bonnethead	28	17.3	8	2.3
Neomerinthe hemingwayi	spinycheek scorpionfish	26	4.5	7	2.0
Citharichthys macrops	spotted whiff	25	0.5	10	2.9
Gobionellus hastatus	darter gobies	23	0.1	3	0.9
Bellator egretta	streamer searobin	22	0.1	4	1.2
Dorosoma petenense	threadfin shad	21	0.6	7	2.0
Prionotus scitulus	leopard searobin	21	0.4	5	1.5
Alectis ciliaris	african pompano	20	0.9	12	3.5
Sphoeroides spengleri	bandtail puffer	20	0.3	5	1.5
Cynoscion nebulosus	spotted seatrout	18	0.6	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Scorpaena brasiliensis	barbfish	17	1.2	8	2.3
Eucinostomus argenteus	spotfin mojarra	16	0.3	5	1.5
Lactophrys quadricornis	scrawled cowfish	16	1.3	8	2.3
Symphurus spp.	tonguefish	16	0.0	2	0.6
Trachinocephalus myops	snakefish	16	0.7	3	0.9
Rachycentron canadum	cobia	15	7.4	11	3.2
Mustelus canis	smooth dogfish	14	14.7	10	2.9
Narcine brasiliensis	lesser electric ray	14	3.2	6	1.7
Synodus intermedius	sand diver	12	1.1	3	0.9
Menticirrhus littoralis	gulf kingfish	11	1.6	3	0.9
Ogcocephalus pantostictus	spotted batfish	11	3.1	10	2.9
Citharichthys cornutus	horned whiff	10	0.0	4	1.2
Bellator brachychir	shortfin searobin	9	0.0	3	0.9
Calamus leucosteus	whitebone porgy	9	3.2	6	1.7
Elops saurus	ladyfish	9	2.5	2	0.6
Ogcocephalus corniger	longnose batfish	9	0.0	7	2.0
Ophichthus gomesi	shrimp eel	9	0.3	3	0.9
Squatina dumeril	Atlantic angel shark	9	38.8	6	1.7
Anchoa	anchovy	8	0.0	3	0.9
Cyclopsetta fimbriata	spotfin flounder	8	0.7	3	0.9
Menticirrhus	kingfish	8	0.0	3	0.9
Rhinoptera bonasus	cownose ray	8	77.6	4	1.2
Seriola dumerili	greater amberjack	8	2.7	5	1.5
Bothus ocellatus	eyed flounder	7	0.3	3	0.9
Epinephelus flavolimbatus	yellowedge grouper	7	0.5	7	2.0
Gymnothorax nigromarginatus	blackedge moray	7	1.8	6	1.7
Mugil curema	silver mullet	7	0.2	1	0.3
Neobythites gillii	cusk-eel	7	0.0	1	0.3
Sciaenops ocellatus	red drum	7	33.7	7	2.0
Bothus lunatus	peacock flounder	6	0.1	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Bregmaceros atlanticus	antenna codlet	6	0.0	2	0.6
Brevoortia gunteri	finescale menhaden	6	0.5	1	0.3
Carcharhinus limbatus	blacktip shark	6	5.6	5	1.5
Echeneis naucrates	sharksucker	6	2.3	6	1.7
Lonchopisthus micrognathus	swordtail jawfish	6	0.0	4	1.2
Paralichthys squamilentus	broad flounder	6	1.5	4	1.2
Raja olseni	spreadfin skate	6	11.8	4	1.2
Aluterus heudeloti	dotterel filefish	5	0.3	3	0.9
Hemanthias aureorubens	streamer bass	5	0.1	2	0.6
Ophidion grayi	blotched cusk-eel	5	0.2	4	1.2
Pogonias cromis	black drum	5	35.6	4	1.2
Rypticus maculatus	whitespotted soapfish	5	0.1	5	1.5
Dasyatis sabina	Atlantic stringray	4	3.8	3	0.9
Ogcocephalus parvus	roughback batfish	4	0.2	4	1.2
Serranus phoebe	tattler	4	0.2	2	0.6
Antennarius	anglerfish	3	0.1	3	0.9
Apogon aurolineatus	bridle cardinalfish	3	0.2	2	0.6
Bairdiella chrysoura	silver perch	3	0.1	2	0.6
Calamus penna	sheepshead porgy	3	0.5	1	0.3
Chilomycterus schoepfi	striped burrfish	3	0.5	3	0.9
Dasyatis americana	southern stingray	3	3.5	2	0.6
Gobiesox	common clingfish	3	0.1	1	0.3
Haemulon striatum	striped grunt	3	0.0	1	0.3
Ogcocephalus radiatus	polka-dot batfish	3	0.0	1	0.3
Ophidion marginatum	striped cusk-eel	3	0.2	1	0.3
Pomatomus saltatrix	bluefish	3	1.6	2	0.6
Pristigenys alta	short bigeye	3	0.1	3	0.9
Prognichthys gibbifrons	bluntnose flyingfish	3	0.2	1	0.3
Stephanolepis setifer	pygmy filefish	3	0.1	1	0.3
Trachinotus carolinus	Florida pompano	3	0.9	3	0.9

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Trinectes maculatus	hogchoker	3	0.1	3	0.9
Urophycis cirrata	gulf hake	3	0.1	1	0.3
Aluterus monoceros	unicorn filefish	2	0.8	2	0.6
Antennarius ocellatus	ocellated frogfish	2	0.0	2	0.6
Ariosoma balearicum	bandtooth conger	2	0.1	1	0.3
Bothus robinsi	twospot flounder	2	0.0	1	0.3
Calamus nodosus	knobbed porgy	2	1.4	2	0.6
Caranx hippos	crevalle jack	2	10.3	2	0.6
Gobionellus oceanicus	highfin goby	2	0.0	2	0.6
Gymnothorax saxicola	honeycomb moray	2	1.7	1	0.3
Menidia menidia	Atlantic silverside	2	0.0	1	0.3
Mustelus norrisi	Florida smoothhound	2	1.9	2	0.6
Ophidion selenops	mooneye cusk-eel	2	0.0	1	0.3
Opsanus beta	gulf toadfish	2	0.4	2	0.6
Opsanus pardus	leopard toadfish	2	0.1	1	0.3
Scomber scombrus	Atlantic mackerel	2	0.2	2	0.6
Seriola zonata	banded rudderfish	2	0.2	2	0.6
Abudefduf saxatilis	sergeant major	1	0.0	1	0.3
Aetobatus narinari	bonnetray	1	11.0	1	0.3
Aluterus scriptus	scrawled filefish	1	0.2	1	0.3
Carangidae	jacks	1	0.0	1	0.3
Caranx bartholomaei	yellow jack	1	0.0	1	0.3
Carcharhinus acronotus	blacknose shark	1	1.8	1	0.3
Carcharhinus isodon	finetooth shark	1	9.7	1	0.3
Chaetodon sedentarius	reef butterflyfish	1	0.0	1	0.3
Dactylopterus volitans	flying gurnard	1	0.2	1	0.3
Dasyatis say	bluntnose stingray	1	1.2	1	0.3
Echeneis neucratoides	whitefin sharksucker	1	0.3	1	0.3
Gymnothorax vicinus	purplemouth moray	1	0.8	1	0.3
Gymnura altavela	spiny butterfly ray	1	1.4	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Heteropriacanthus cruentatus	glasseye snapper	1	0.1	1	0.3
Hippocampus erectus	lined seahorse	1	0.0	1	0.3
Hyporhamphus unifasciatus	silverstripe halfbeak	1	0.0	1	0.3
Lophius americanus	goosefish	1	0.4	1	0.3
Lutjanus griseus	grey snapper	1	1.1	1	0.3
Manta birostris	Atlantic manta	1	20.6	1	0.3
Myliobatis freminvillii	bullnose ray	1	0.8	1	0.3
Opistognathus spp.	jawfish	1	0.0	1	0.3
Opsanus tau	oyster toadfish	1	0.3	1	0.3
Paraconger caudilimbatus	margintail conger	1	0.1	1	0.3
Paralichthys albigutta	gulf flounder	1	0.4	1	0.3
Prionotus	searobin	1	0.0	1	0.3
Remora remora	remora	1	0.6	1	0.3
Sargocentron coruscum	reef squirrelfish	1	0.0	1	0.3
Scomber japonicus	chub mackerel	1	0.2	1	0.3
Seriola fasciata	lesser amberjack	1	0.3	1	0.3
Seriola rivoliana	almaco jack	1	0.4	1	0.3
Torpedo nobiliana	Atlantic torpedo	1	3.3	1	0.3
Uroconger syringinus	threadtail conger	1	0.8	1	0.3
Crustaceans					
Farfantepenaeus aztecus	brown shrimp	15348	326.0	242	70.6
Callinectes similis	lesser blue crab	11172	179.1	220	64.1
Portunus spinicarpus	longspine swimming crab	7455	48.0	50	14.6
Litopenaeus setiferus	white shrimp	4741	96.9	154	44.9
Portunus gibbesii	irridescent swimming crab	4218	21.7	140	40.8
Sicyonia brevirostris	brown rock shrimp	3720	57.6	68	19.8
Trachypenaeus constrictus	roughneck shrimp	3489	8.0	83	24.2
Xiphopenaeus kroyeri	seabob	3403	13.9	30	8.7

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Squilla empusa	mantis shrimp	3052	33.6	154	44.9
Trachypenaeus similis	roughback shrimp	1766	5.2	88	25.7
Sicyonia dorsalis	lesser rock shrimp	1158	4.3	43	12.5
Squilla chydaea	mantis shrimp	834	6.3	71	20.7
Portunus spinimanus	blotched swimming crab	502	12.8	51	14.9
Solenocera vioscai	humpback shrimp	454	2.5	26	7.6
Anasimus latus	stilt spider crab	290	2.7	29	8.5
Callinectes sapidus	blue crab	209	11.8	33	9.6
Farfantepenaeus duorarum	pink shrimp	209	5.1	28	8.2
Calappa sulcata	yellow box crab	181	39.0	56	16.3
Callinectes	swimming crab	131	0.4	1	0.3
Ovalipes floridanus	Florida lady crab	32	0.4	10	2.9
Parapenaeus politus	deepwater rose shrimp	32	0.1	5	1.5
Stenorhynchus seticornis	yellowline arrow crab	30	0.1	12	3.5
Persephona crinita	pink purse crab	26	0.1	18	5.2
Leiolambrus nitidus	white elbow crab	25	0.1	7	2.0
Pseudorhombila quadridentata	flecked squareback crab	23	0.3	8	2.3
Paguristes sericeus	blue-eyed hermit	22	0.0	1	0.3
Paguristes triangulatus	hermit crab	17	0.2	2	0.6
Pagurus pollicaris	flatclaw hermit crab	17	0.2	14	4.1
Raninoides louisianensis	gulf frog crab	17	0.1	9	2.6
Squilla neglecta	mantis shrimp	16	0.1	7	2.0
Scyllarides nodifer	ridged slipper lobster	14	0.1	3	0.9
Arenaeus cribrarius	speckled swimming crab	13	1.3	7	2.0
Persephona mediterranea	mottled purse crab	13	0.1	11	3.2
Petrochirus diogenes	giant hermit crab	11	0.9	5	1.5
Hepatus epheliticus	calico crab	10	1.1	7	2.0
Myropsis quinquespinosa	fivespine purse crab	10	0.1	4	1.2
Pseudomedaeus agassizii	rough rubble crab	10	0.0	1	0.3
Libinia dubia	longnose spider crab	8	0.1	7	2.0

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Dardanus insignis	red brocade hermit	7	0.0	1	0.3
Pagurus bullisi	hermit crab	7	0.0	1	0.3
Stenocionops spinimanus	prickly spider crab	7	2.2	4	1.2
Iliacantha liodactylus	purse crab	6	0.0	2	0.6
Sicyonia burkenroadi	spiny rock shrimp	6	0.0	2	0.6
Dardanus fucosus	bareye hermit	4	0.0	1	0.3
Libinia emarginata	portly spider crab	4	0.1	3	0.9
Lironeca ovalis	isopod	4	0.0	2	0.6
Menippe adina	gulf stone crab	4	0.0	3	0.9
Parthenope granulata	bladetooth elbow crab	4	0.0	4	1.2
Dromidia antillensis	hairy sponge crab	3	0.0	3	0.9
Metoporhaphis calcarata	false arrow crab	3	0.0	3	0.9
Plesionika longicauda	pandalid shrimp	3	0.0	2	0.6
Podochela lamelligera	neck crab	3	0.0	1	0.3
Scyllarus chacei	chace slipper lobster	3	0.0	1	0.3
Speocarcinus lobatus	gulf squareback crab	3	0.0	3	0.9
Acanthocarpus alexandri	gladiator box crab	2	0.0	2	0.6
Dyspanopeus texana	gulf grassflat crab	2	0.0	2	0.6
Sicyonia spp.	rock shrimp	2	0.0	1	0.3
Stenocionops furcata	furcate crab	2	0.2	2	0.6
Collodes robustus	spider crab	1	0.0	1	0.3
Dawsonius latispina	broadspine ghost shrimp	1	0.0	1	0.3
Euphrosynoplax clausa	craggy bathyal crab	1	0.0	1	0.3
Exhippolysmata oplophoroides	redleg humpback shrimp	1	0.0	1	0.3
Heterocarpus ensifer	armed nylon shrimp	1	0.0	1	0.3
Hypoconcha arcuata	granulate shellback crab	1	0.0	1	0.3
Isocheles wurdemanni	surf hermit	1	0.0	1	0.3
Lysiosquilla scabricauda	mantis shrimp	1	0.1	1	0.3
Macrobrachium ohione	ohio river shrimp	1	0.0	1	0.3
Pagurus brevidactylus	hermit crab	1	0.0	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Parthenope serrata	sawtooth elbow crab	1	0.0	1	0.3
Phimochirus holthuisi	red-striped hermit	1	0.0	1	0.3
Pilumnus sayi	spineback hairy crab	1	0.0	1	0.3
Portunus sayi	sargassum swimming crab	1	0.0	1	0.3
Stenocionops coelata	spider crab	1	0.0	1	0.3
Synalpheus townsendi	townsend snapping shrimp	1	0.0	1	0.3
Others					
Amusium papyraceum	paper scallop	5944	64.9	82	23.9
Lolliguncula brevis	Atlantic brief squid	1955	20.1	138	40.2
Renilla mulleri	short-stemmed sea pansy	1865	4.3	73	21.3
Aurelia aurita	moon jellyfish	1222	352.0	71	20.7
Loligo pleii	arrow squid	851	9.3	63	18.4
Loligo pealeii	longfin squid	554	41.7	46	13.4
Astropecten duplicatus	spiny beaded sea star	485	1.2	51	14.9
Astropecten cingulatus	starfish	368	4.9	40	11.7
Ophiolepis elegans	brittle star	233	0.3	15	4.4
Hydrozoa	hydralike animals	179	0.1	8	2.3
Anadara baughmani	baughman's ark	145	2.0	17	5.0
Beroe ovata	comb jelly	131	1.3	13	3.8
Polystira albida	white giant turris	126	1.6	11	3.2
Loligo spp.	squids	109	1.0	12	3.5
Luidia clathrata	sea star	94	2.2	38	11.1
Tamoya haplonema	sea wasp	86	8.1	17	5.0
Argopecten gibbus	calico scallop	82	2.3	2	0.6
Clypeaster ravenelii	cake urchin	69	8.3	7	2.0
Chrysaora quinquecirrha	sea nettle	56	1.7	28	8.2
Pitar cordatus	schwengel's pitar	52	1.0	10	2.9
Encope aberrans	sand dollar	48	1.2	3	0.9

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Calliactris tricolor	common sea anemone	28	0.1	8	2.3
Mnemiopsis mccradyi	comb jelly	28	0.2	7	2.0
Actinidae	sea anemones	25	0.1	15	4.4
Styela plicata	tunicate	16	0.5	4	1.2
Pisces	fish	15	42.9	6	1.7
Tethyaster grandis	starfish	15	1.3	3	0.9
Agriopuma texasianum	texas venus	13	0.2	4	1.2
Laevicardium mortoni	yellow eggcockle	13	1.2	2	0.6
Astropecten articulatus	plated-margined sea star	11	0.1	5	1.5
Muricanthus fulvescens	giant eastern murex	10	0.3	4	1.2
Sconsia striata	royal bonnet	9	0.1	3	0.9
Ctenophora	comb jellies	8	0.0	1	0.3
Luidia alternata	banded luidia	8	0.1	5	1.5
Neverita duplicata	shark eye	8	0.1	7	2.0
Cancellaria reticulata	common nutmeg	7	0.1	1	0.3
Clypeaster prostratus	sea biscuit	7	1.9	2	0.6
Molpadiidae	sea cucumber	7	0.2	3	0.9
Conus austini	cone shell	6	0.2	2	0.6
Anadara ovalis	blood ark	5	0.0	3	0.9
Calliactis spp.	anemone	5	0.0	3	0.9
Chione clenchi	clench venus	5	0.1	2	0.6
Busycon sinistrum	lightning whelk	4	0.1	4	1.2
Echinaster spp.	thorny sea star	4	0.0	3	0.9
Hemipholis elongata	brittle star	4	0.0	3	0.9
Macoma brevifrons	short macoma	4	0.0	2	0.6
Thais haemastoma	rocksnail	4	0.0	4	1.2
Bryozoa	moss animals	3	0.0	2	0.6
Gorgonocephalus	brittle star	3	0.7	2	0.6
Mellita quinquiesperforata	five-slotted sand dollar	3	0.0	3	0.9
Rossia bullisi	gulf bobtail squid	3	0.0	1	0.3

Table 15. Species composition list (continued)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OCCURRENCE
Anthenoides piercei	starfish	2	0.0	2	0.6
Arca imbric	mossy ark	2	0.0	1	0.3
Distorsio clathrata	Atlantic distorsio	2	0.0	1	0.3
Molpadia spp.	sea cucumber	2	0.0	2	0.6
Octopus vulgaris	common Atlantic octopus	2	0.0	2	0.6
Ophiothrix angulata	angular brittle star	2	0.0	1	0.3
Pecten raveneli	ravenel's scallop	2	0.0	1	0.3
Tonna galea	giant tun	2	0.5	2	0.6
Aequipecten muscosus	rough scallop	1	0.0	1	0.3
Anadara transversa	transverse ark	1	0.0	1	0.3
Cantharus cancellarius	cancellate cantharus	1	0.0	1	0.3
Caretta caretta	loggerhead turtle	1	40.0	1	0.3
Chione cancellata	cross-barred venus	1	0.0	1	0.3
Eucrassatella speciosa	beautiful crassatella	1	0.0	1	0.3
Fasciolhunter	mollusk	1	0.1	1	0.3
Hexaplex	murex's	1	0.0	1	0.3
Phalium granulatum	scotch bonnet	1	0.0	1	0.3
Polychaeta	bristleworm	1	0.0	1	0.3
Porifera	sponges	1	0.0	1	0.3
Stomolophus meleagris	many-mouthed sea jelly	1	0.0	1	0.3
Unidentified invertebrates	unidentified invertebrate	1	0.0	1	0.3
Unidentified other	unidentified other	1	0.0	1	0.3

Table 16a

Statistical Zone 11

Summary of dominant organisms taken in statistical zone 11 during the 2004 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken. No trawl samples were taken in depths greater than 20 fm.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus constrictus	204.0	96.00	0.2	0.13	2	0.0	0.00	0.0	0.00	1	0.8	0.75	0.0	0.00	5
Farfantepenaeus duorarum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	15.6	14.86	0.5	0.47	5
Portunus gibbesii	6.0	6.00	0.0	0.03	2	0.0	0.00	0.0	0.00	1	9.7	3.85	0.1	0.05	5
Ovalipes floridanus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	6.3	4.34	0.0	0.02	5
Sicyonia brevirostris	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1	3.4	3.38	0.0	0.04	5
Squilla spp	3.0	3.00	0.0	0.04	2	0.0	0.00	0.0	0.00	1	2.4	1.40	0.0	0.02	5
Stenotomus caprinus	3.0	3.00	0.2	0.25	2	716.4	0.00	12.5	0.00	1	535.9	275.56	10.1	4.77	5
Micropogonias undulatus	45.0	39.00	1.5	1.37	2	38.2	0.00	1.4	0.00	1	296.5	102.21	13.1	4.48	5
Synodus foetens	3.0	3.00	0.2	0.25	2	81.8	0.00	5.7	0.00	1	100.8	27.03	7.5	1.66	5
Chloroscombrus chrysurus	93.0	33.00	0.7	0.19	2	152.7	0.00	3.0	0.00	1	67.4	26.66	3.0	1.27	5
Eucinostomus gula	0.0	0.00	0.0	0.00	2	98.2	0.00	2.0	0.00	1	50.7	28.89	1.0	0.61	5
Peprilus burti	3.0	3.00	0.0	0.04	2	0.0	0.00	0.0	0.00	1	41.8	23.93	2.0	1.13	5
Leiostomus xanthurus	21.0	3.00	1.5	0.02	2	0.0	0.00	0.0	0.00	1	38.4	17.46	2.5	1.09	5
Syacium papillosum	12.0	6.00	0.6	0.13	2	12.7	0.00	0.4	0.00	1	43.7	18.40	1.4	0.53	5
Squid spp	36.0	18.00	0.3	0.28	2	1.8	0.00	0.0	0.00	1	8.2	3.80	0.1	0.07	5

Table 16b

Statistical Zone 11

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m³, and oxygen in ppm. No trawl samples were taken in depths greater than 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	12.3	0.9	2	28.2	0	1	47.9	8.67	5	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish	9.9	0.9	2	27.6	0	1	45.3	9.29	5	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean	0.6	0	2	0.4	0	1	1.5	0.83	3	0.0	0	0	0.0	0	0	0.0	0	0
Total other	2.4	0	2	0.2	0	1	1.6	0.6	5	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	25.4	0	2	25.3	0	1	25.8	0.12	5	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	25.2	0.43	2	25.0	0	1	26.6	0.4	5	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	25.3	0.47	2	25.5	0	1	24.3	0.2	5	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	29.8	0.8	2	31.7	0	1	32.1	0.45	5	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	34.1	1.05	2	33.6	0	1	36.0	0.07	5	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	34.3	0.86	2	34.8	0	1	36.0	0.04	5	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	5.9	0.05	2	9.8	0	1	6.3	0.31	5	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	5.8	0.15	2	9.1	0	1	5.3	0.28	5	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	4.3	0.1	2	7.3	0	1	4.1	0.34	5	0.0	0	0	0.0	0	0	0.0	0	0

Table 17a

Statistical Zone 13

Summary of dominant organisms taken in statistical zone 13 during the 2004 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
Callinectes similis	0.0	0.00	0.0	0.00	0	78.0	34.40	0.3	0.14	4	631.8	110.24	7.6	1.52	14
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	379.0	266.91	3.4	2.55	4	108.5	35.69	1.6	0.37	14
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	20.9	10.60	0.0	0.01	4	213.0	90.14	0.4	0.14	14
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	20.8	10.65	0.0	0.01	4	109.7	30.72	0.2	0.07	14
Squilla spp	0.0	0.00	0.0	0.00	0	7.8	4.11	0.1	0.03	4	108.0	36.77	1.0	0.35	14
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	0	8.6	4.97	0.0	0.02	4	95.9	39.42	0.9	0.39	14
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	102.0	69.17	4.4	2.88	4	310.6	80.21	14.7	3.78	14
Citharichthys spilopterus	0.0	0.00	0.0	0.00	0	18.1	8.10	0.1	0.06	4	134.1	43.03	1.3	0.44	14
Stellifer lanceolatus	0.0	0.00	0.0	0.00	0	145.8	76.02	1.3	0.97	4	21.6	13.57	0.3	0.17	14
Cynoscion nothus	0.0	0.00	0.0	0.00	0	23.0	12.96	0.2	0.10	4	112.9	50.32	1.2	0.53	14
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	4.2	3.34	0.0	0.01	4	88.5	33.32	1.8	0.69	14
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	15.9	9.69	0.6	0.27	4	67.0	20.47	2.0	1.01	14
Etropus crossotus	0.0	0.00	0.0	0.00	0	17.9	7.94	0.3	0.13	4	43.3	13.60	0.8	0.24	14
Porichthys plectrodon	0.0	0.00	0.0	0.00	0	1.3	0.74	0.0	0.01	4	66.5	24.42	0.4	0.13	14
Squid spp	0.0	0.00	0.0	0.00	0	10.5	7.92	0.2	0.12	4	134.4	46.99	0.6	0.17	14

Table 17b

Statistical Zone 13

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	0.0	0	0	13.0	8.16	4	40.4	5.7	14	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish	0.0	0	0	8.6	5.27	4	27.7	4.63	14	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean	0.0	0	0	5.5	3.5	3	12.1	2.29	14	0.0	0	0	0.0	0	0	0.0	0	0
Total other	0.0	0	0	0.4	0.16	2	1.2	0.2	6	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	21.1	1.08	6	22.5	0.96	14	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	21.0	1.01	6	23.5	0.73	14	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	22.9	0.7	6	24.5	0.36	14	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	27.5	1.43	6	26.2	1.23	14	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	29.3	0.71	6	32.4	0.38	14	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	32.6	0.37	6	35.7	0.17	14	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	3.9	1	6	2.3	0.7	15	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	8.2	0.49	6	7.5	0.28	15	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	7.5	0.35	6	5.8	0.27	15	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	4.0	0.21	6	3.5	0.19	15	0.0	0	0	0.0	0	0	0.0	0	0

Table 18a

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2004 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	111.5	40.48	0.8	0.35	4	141.4	25.71	1.7	0.32	19
Portunus gibbesii	0.0	0.00	0.0	0.00	0	38.5	12.34	0.3	0.13	4	182.4	168.80	1.0	0.84	19
Callinectes similis	0.0	0.00	0.0	0.00	0	31.0	5.92	0.4	0.14	4	120.9	29.14	2.4	0.56	19
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	6.0	6.00	0.0	0.01	4	53.2	43.30	0.2	0.12	19
Squilla spp	0.0	0.00	0.0	0.00	0	4.0	4.00	0.0	0.04	4	21.1	9.35	0.2	0.06	19
Litopenaeus setiferus	0.0	0.00	0.0	0.00	0	35.0	20.37	1.3	0.71	4	10.5	2.70	0.4	0.10	19
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	1664.0	960.86	76.8	41.11	4	1736.4	278.47	76.4	11.59	19
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	103.5	73.54	2.4	1.77	4	605.0	443.77	13.3	8.79	19
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	348.5	83.40	29.4	7.43	4	47.7	13.10	3.9	1.13	19
Syacium gunteri	0.0	0.00	0.0	0.00	0	3.5	2.06	0.1	0.04	4	66.3	15.52	1.3	0.28	19
Larimus fasciatus	0.0	0.00	0.0	0.00	0	54.0	37.35	3.8	2.79	4	50.3	9.74	3.5	0.69	19
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	1.5	0.96	0.0	0.01	4	11.9	3.85	0.2	0.07	19
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	32.5	23.58	1.5	1.19	4	54.9	32.18	2.6	1.63	19
Prionotus rubio	0.0	0.00	0.0	0.00	0	29.5	17.84	0.7	0.43	4	45.2	21.50	0.7	0.38	19
Squid spp	0.0	0.00	0.0	0.00	0	3.5	2.06	0.0	0.01	4	15.4	5.40	0.1	0.05	19

Table 18a (continued)

Statistical Zone 14

Summary of dominant organisms taken in statistical zone 14 during the 2004 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	231.9	0.00	4.6	0.00	1	1344.0	0.00	23.7	0.00	1	103.2	60.46	4.0	2.23	4
Portunus gibbesii	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Callinectes similis	130.4	0.00	2.1	0.00	1	4.4	0.00	0.1	0.00	1	10.0	7.23	0.2	0.13	4
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Squilla spp	109.6	0.00	2.2	0.00	1	2.2	0.00	0.0	0.00	1	1.3	0.88	0.0	0.01	4
Litopenaeus setiferus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Micropogonias undulatus	84.2	0.00	5.2	0.00	1	57.8	0.00	3.5	0.00	1	9.9	4.27	1.0	0.42	4
Prionotus longispinosus	31.2	0.00	1.8	0.00	1	48.0	0.00	3.1	0.00	1	31.6	10.37	1.6	0.39	4
Leiostomus xanthurus	103.8	0.00	9.0	0.00	1	182.2	0.00	19.0	0.00	1	41.1	39.08	4.7	4.40	4
Syacium gunteri	5.8	0.00	0.2	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Larimus fasciatus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	20.8	0.00	0.7	0.00	1	24.0	0.00	1.0	0.00	1	175.9	83.58	9.1	3.53	4
Trichiurus lepturus	0.0	0.00	0.0	0.00	1	4.4	0.00	0.2	0.00	1	4.7	4.69	0.2	0.24	4
Prionotus rubio	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	4
Squid spp	1.2	0.00	0.2	0.00	1	4.4	0.00	19.2	0.00	1	14.3	5.82	2.0	0.66	4

Table 18b

Statistical Zone 14

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	0.0	0	0	134.0	52.39	4	126.0	14.99	19	0.0	0	0	111.0	0	1	61.7	9.05	4
Total finfish	0.0	0	0	130.0	52.43	4	119.0	13.97	19	0.0	0	0	67.4	0	1	53.0	8.74	4
Total crustacean	0.0	0	0	4.0	1.36	4	7.1	1.32	19	0.0	0	0	24.5	0	1	4.6	2.13	4
Total other	0.0	0	0	0.0	0	0	0.3	0.1	10	0.0	0	0	19.4	0	1	4.1	0.81	4
Surface temperature	20.6	0.01	2	25.9	0.26	5	24.5	0.4	23	0.0	0	0	24.3	0.05	2	25.4	0.03	5
Midwater temperature	20.5	0.06	2	25.9	0.39	5	25.0	0.39	23	0.0	0	0	25.8	0.94	2	25.6	0.14	5
Bottom temperature	20.2	0.08	2	27.0	0.33	5	25.6	0.34	23	0.0	0	0	25.4	0.71	2	23.1	0.59	5
Surface salinity	30.5	0.11	2	30.7	0.57	5	32.8	0.37	23	0.0	0	0	33.8	0.73	2	35.4	0.18	5
Midwater salinity	30.6	0.05	2	32.3	0.97	5	34.6	0.24	23	0.0	0	0	35.5	0.3	2	36.0	0.06	5
Bottom salinity	30.7	0.04	2	34.6	0.77	5	35.5	0.12	23	0.0	0	0	36.0	0.04	2	36.3	0.03	5
Surface chlorophyll	5.3	0.11	2	1.0	0.43	5	1.4	0.23	23	0.0	0	0	4.8	2.98	2	2.0	0.28	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	8.5	0.25	2	6.3	0.1	5	6.3	0.16	23	0.0	0	0	5.7	0.4	2	5.4	0.07	5
Midwater oxygen	8.3	0.05	2	5.9	0.34	5	5.9	0.12	23	0.0	0	0	4.3	1	2	5.0	0.12	5
Bottom oxygen	7.4	0.1	2	4.3	0.23	5	4.9	0.13	23	0.0	0	0	4.2	0.5	2	4.4	0.11	5

Table 19a

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2004 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	11.3	9.40	0.0	0.03	3	37.1	19.17	0.2	0.14	7	124.2	35.75	1.1	0.35	15
Callinectes similis	2.7	2.67	0.0	0.02	3	54.3	14.53	0.3	0.10	7	83.2	16.73	1.1	0.35	15
Trachypenaeus constrictus	17.3	16.34	0.0	0.02	3	192.4	175.27	0.4	0.37	7	24.7	11.57	0.1	0.02	15
Litopenaeus setiferus	162.7	45.33	3.2	0.71	3	93.7	27.59	2.7	0.75	7	21.9	5.12	0.9	0.20	15
Portunus gibbesii	38.0	4.62	0.1	0.01	3	48.8	16.22	0.2	0.07	7	52.8	15.46	0.2	0.07	15
Squilla spp	32.0	15.01	0.3	0.16	3	12.9	6.42	0.1	0.06	7	31.8	12.30	0.3	0.12	15
Micropogonias undulatus	543.3	215.61	18.3	8.56	3	717.7	363.78	31.9	16.70	7	1212.3	186.11	54.9	7.25	15
Stenotomus caprinus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	7	77.7	27.43	1.4	0.53	15
Cynoscion nothus	56.0	37.81	0.6	0.42	3	29.6	18.30	0.7	0.34	7	122.0	43.98	8.0	3.27	15
Cynoscion arenarius	75.3	29.04	1.0	0.12	3	46.7	21.01	1.2	0.37	7	50.7	19.61	3.9	1.40	15
Stellifer lanceolatus	185.3	73.62	1.3	0.30	3	114.6	69.65	0.9	0.50	7	1.1	1.07	0.1	0.07	15
Prionotus longispinosus	1.3	1.33	0.0	0.02	3	2.8	1.38	0.1	0.03	7	57.9	33.26	1.4	0.70	15
Trichiurus lepturus	24.7	23.67	0.4	0.34	3	14.4	8.52	0.2	0.12	7	58.8	28.99	2.7	1.35	15
Peprilus burti	2.0	2.00	0.1	0.14	3	2.9	1.97	0.2	0.15	7	67.0	30.08	4.2	2.00	15
Squid spp	24.0	12.22	0.3	0.11	3	8.2	2.80	0.1	0.05	7	9.2	2.70	0.1	0.04	15

Table 19a (continued)

Statistical Zone 15

Summary of dominant organisms taken in statistical zone 15 during the 2004 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	138.8	26.48	2.9	0.69	2	179.5	53.40	4.1	1.15	5	110.5	55.07	3.6	1.58	2
Callinectes similis	48.6	42.06	1.1	0.95	2	12.3	5.84	0.2	0.10	5	0.0	0.00	0.0	0.00	2
Trachypenaeus constrictus	6.0	6.00	0.0	0.03	2	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Litopenaeus setiferus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Portunus gibbesii	7.1	7.09	0.0	0.04	2	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Squilla spp	10.7	10.67	0.1	0.13	2	28.4	15.37	0.5	0.26	5	10.8	4.59	0.1	0.01	2
Micropogonias undulatus	203.0	175.70	12.1	10.07	2	4.5	2.75	0.4	0.22	5	0.0	0.00	0.0	0.00	2
Stenotomus caprinus	121.1	37.09	3.6	1.66	2	66.9	33.37	2.4	1.21	5	97.3	55.78	3.7	2.30	2
Cynoscion nothus	13.2	12.12	1.3	1.24	2	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Cynoscion arenarius	16.5	15.45	2.4	2.30	2	8.2	3.96	0.9	0.41	5	0.8	0.77	0.2	0.19	2
Stellifer lanceolatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2
Prionotus longispinosus	27.8	13.58	1.6	0.92	2	30.6	9.59	1.3	0.32	5	6.2	6.21	0.3	0.29	2
Trichiurus lepturus	3.3	3.27	0.3	0.29	2	19.5	16.60	1.5	1.25	5	4.1	2.04	0.3	0.09	2
Peprilus burti	2.2	2.18	0.1	0.13	2	21.3	18.73	0.8	0.65	5	19.9	9.10	1.3	0.60	2
Squid spp	3.3	3.27	0.1	0.08	2	2.1	0.56	0.1	0.06	5	17.2	2.76	0.2	0.04	2

Table 19b

Statistical Zone 15

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	41.1	19.8	3	51.8	20.43	7	109.0	13.59	15	0.0	0	0	30.2	5.1	5	30.2	7.88	2
Total finfish	36.9	20.39	3	45.8	19.31	7	105.0	13.61	15	0.0	0	0	21.9	6.3	5	23.2	5.53	2
Total crustacean	3.9	0.79	3	4.2	1	7	4.3	0.88	15	0.0	0	0	5.7	1.6	5	5.0	2.49	2
Total other	0.4	0.12	3	2.6	2.35	5	0.2	0.05	9	0.0	0	0	2.5	1.02	5	2.0	0.15	2
Surface temperature	21.4	1.04	5	23.6	0.73	8	24.3	0.3	17	0.0	0	0	25.2	0.47	4	25.7	0.01	2
Midwater temperature	21.4	1.06	5	23.6	0.74	8	24.5	0.34	17	0.0	0	0	25.8	0.14	4	25.7	0.04	2
Bottom temperature	21.4	0.99	5	23.6	0.75	8	25.1	0.43	17	0.0	0	0	23.9	0.81	4	26.1	0.1	2
Surface salinity	30.2	1.21	5	32.6	0.26	8	32.9	0.25	17	0.0	0	0	35.1	0.99	4	35.9	0.02	2
Midwater salinity	30.3	1.21	5	32.6	0.25	8	33.5	0.19	17	0.0	0	0	35.9	0.34	4	35.9	0.04	2
Bottom salinity	30.7	1.14	5	32.7	0.3	8	34.5	0.31	17	0.0	0	0	36.2	0.17	4	36.2	0.04	2
Surface chlorophyll	3.3	0.81	5	1.9	0.35	8	2.0	0.41	17	0.0	0	0	2.1	0.64	4	1.8	0.38	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	7.0	0.26	5	6.3	0.14	8	6.1	0.12	17	0.0	0	0	5.7	0.1	4	5.7	0.05	2
Midwater oxygen	7.0	0.24	5	6.2	0.13	8	5.9	0.13	17	0.0	0	0	5.4	0.14	4	5.7	0.05	2
Bottom oxygen	6.6	0.17	5	6.0	0.13	8	5.0	0.23	17	0.0	0	0	4.3	0.22	4	5.5	0	2

Table 20a

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2004 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	460.8	435.68	1.6	1.53	2	11.0	3.32	0.1	0.01	2	63.9	24.80	1.1	0.43	11
Callinectes similis	62.7	36.16	0.2	0.11	2	222.1	42.14	1.5	0.11	2	40.4	13.76	0.6	0.23	11
Trachypenaeus constrictus	143.6	68.21	0.1	0.03	2	286.6	53.75	0.6	0.10	2	7.1	3.06	0.0	0.01	11
Litopenaeus setiferus	331.5	70.34	6.2	1.32	2	51.2	13.05	2.0	0.35	2	4.8	2.89	0.2	0.13	11
Squilla spp	71.7	32.91	0.6	0.28	2	63.7	50.60	0.5	0.33	2	10.3	5.12	0.1	0.07	11
Portunus gibbesii	44.0	23.06	0.1	0.07	2	64.5	5.55	0.2	0.04	2	12.3	5.18	0.1	0.04	11
Micropogonias undulatus	2.8	2.79	0.1	0.11	2	768.1	96.14	30.8	4.67	2	1642.8	478.52	73.2	19.89	11
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	774.5	733.10	13.1	12.45	2	1195.1	419.26	22.5	7.99	11
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	5.8	2.94	0.1	0.03	2	134.0	56.17	2.6	1.07	11
Leiostomus xanthurus	0.0	0.00	0.0	0.00	2	16.9	16.91	1.3	1.28	2	109.2	58.87	10.1	5.31	11
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.8	0.78	0.0	0.01	11
Prionotus longispinosus	0.0	0.00	0.0	0.00	2	83.9	71.03	1.4	1.17	2	51.6	14.34	1.3	0.37	11
Peprilus burti	7.7	0.66	0.1	0.11	2	47.7	9.48	2.4	0.46	2	22.7	11.66	1.3	0.69	11
Synodus foetens	0.0	0.00	0.0	0.00	2	3.6	0.75	0.1	0.02	2	63.9	27.81	8.1	3.98	11
Squid spp	15.4	8.33	0.1	0.04	2	36.6	17.99	0.8	0.36	2	1.2	0.58	0.0	0.03	11

Table 20a (continued)

Statistical Zone 16

Summary of dominant organisms taken in statistical zone 16 during the 2004 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	23.6	4.41	0.6	0.09	3	14.0	8.52	0.4	0.26	2	32.7	8.20	1.6	0.38	3
Callinectes similis	22.1	17.54	0.4	0.28	3	1.6	1.61	0.0	0.03	2	0.0	0.00	0.0	0.00	3
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Litopenaeus setiferus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Squilla spp	1.1	1.05	0.0	0.02	3	0.0	0.00	0.0	0.00	2	51.0	23.35	0.4	0.22	3
Portunus gibbesii	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	64.3	31.65	5.1	2.06	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	599.1	188.44	23.8	7.21	3	81.2	43.05	5.4	4.07	2	150.5	55.91	6.7	2.90	3
Chloroscombrus chrysurus	21.7	8.09	0.9	0.38	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Leiostomus xanthurus	25.8	24.22	2.6	2.47	3	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Serranus atrobranchus	5.8	4.30	0.1	0.05	3	0.5	0.54	0.0	0.00	2	448.3	131.31	5.2	1.39	3
Prionotus longispinosus	41.3	16.83	2.1	0.99	3	4.9	0.50	0.2	0.02	2	41.8	34.11	3.1	2.61	3
Peprilus burti	118.9	70.28	9.0	4.93	3	17.8	0.38	1.3	0.01	2	0.0	0.00	0.0	0.00	3
Synodus foetens	78.8	25.61	8.0	3.07	3	12.5	3.90	1.4	0.23	2	8.4	8.36	1.1	1.10	3
Squid spp	3.2	1.89	0.0	0.00	3	0.5	0.54	0.0	0.03	2	1.8	1.82	0.2	0.19	3

Table 20b

Statistical Zone 16

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	19.1	2.52	2	62.1	8.81	2	144.0	28.74	11	0.0	0	0	14.3	7.01	2	84.2	22.27	3
Total finfish	7.8	0.02	2	56.4	9.21	2	137.0	27.2	11	0.0	0	0	12.1	6	2	75.3	18.99	3
Total crustacean	10.9	1.76	2	4.9	0.78	2	2.4	0.77	11	0.0	0	0	0.5	0.32	2	6.0	2.75	3
Total other	0.6	0.56	2	0.8	0.33	2	3.9	3.89	11	0.0	0	0	1.7	0.74	2	2.7	0.7	3
Surface temperature	25.0	0.13	2	25.2	0.1	2	25.7	0.15	11	0.0	0	0	25.8	0	1	26.5	0.06	6
Midwater temperature	25.2	0.32	2	25.3	0.05	2	25.8	0.09	11	0.0	0	0	25.8	0	1	26.2	0.28	6
Bottom temperature	26.0	0.16	2	26.9	0.27	2	26.8	0.13	11	0.0	0	0	25.0	0	1	20.6	1.22	6
Surface salinity	29.9	0.3	2	32.1	0.24	2	33.8	0.63	11	0.0	0	0	36.2	0	1	36.1	0.08	6
Midwater salinity	30.3	0.06	2	32.1	0.27	2	34.0	0.52	11	0.0	0	0	36.2	0	1	36.3	0.03	6
Bottom salinity	32.0	0.08	2	34.5	0.43	2	35.1	0.4	11	0.0	0	0	36.3	0	1	36.4	0.03	6
Surface chlorophyll	3.4	0.32	2	2.6	0.14	2	2.2	0.29	11	0.0	0	0	1.0	0	1	0.8	0.13	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	5.8	0	2	6.1	0.05	2	6.1	0.04	11	0.0	0	0	5.6	0	1	5.8	0.02	6
Midwater oxygen	5.8	0	2	6.1	0.05	2	6.0	0.03	11	0.0	0	0	5.6	0	1	5.8	0.02	6
Bottom oxygen	5.5	0.1	2	4.6	0.7	2	5.3	0.15	11	0.0	0	0	5.3	0	1	4.2	0.36	6

Table 21a

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2004 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus spinicarpus	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	10
Sicyonia brevirostris	0.0	0.00	0.0	0.00	13	0.3	0.19	0.0	0.01	13	73.1	47.58	1.1	0.71	10
Xiphopenaeus kroyeri	511.8	312.17	1.5	0.97	13	98.9	60.02	0.4	0.22	13	0.0	0.00	0.0	0.00	10
Farfantepenaeus aztecus	0.9	0.62	0.0	0.00	13	36.2	9.87	0.2	0.06	13	58.8	27.05	1.7	0.75	10
Callinectes similis	9.7	3.37	0.0	0.01	13	66.5	28.00	0.3	0.11	13	20.6	8.87	0.5	0.21	10
Litopenaeus setiferus	66.0	24.92	0.4	0.14	13	57.4	19.41	1.6	0.43	13	0.0	0.00	0.0	0.00	10
Stenotomus caprinus	0.0	0.00	0.0	0.00	13	177.2	103.88	3.4	2.02	13	460.6	118.73	15.7	3.25	10
Micropogonias undulatus	1.8	0.80	0.0	0.02	13	84.7	44.03	4.7	2.83	13	324.8	112.25	22.0	6.23	10
Trachurus lathami	0.0	0.00	0.0	0.00	13	0.0	0.00	0.0	0.00	13	2.2	2.18	0.1	0.15	10
Chloroscombrus chrysurus	36.9	35.44	0.1	0.12	13	174.0	146.47	2.9	2.50	13	56.3	51.58	1.3	1.13	10
Peprilus burti	1.8	1.05	0.0	0.00	13	61.7	32.53	3.9	2.10	13	55.6	37.64	3.7	2.33	10
Cynoscion nothus	143.1	68.91	0.5	0.26	13	91.8	63.94	1.2	0.70	13	68.2	67.03	4.9	4.74	10
Leiostomus xanthurus	0.0	0.00	0.0	0.00	13	4.6	2.15	0.4	0.25	13	62.1	23.31	6.4	2.29	10
Lagodon rhomboides	0.0	0.00	0.0	0.00	13	8.6	7.48	0.5	0.48	13	83.0	71.81	5.0	4.17	10
Squid spp	69.2	17.53	0.8	0.19	13	95.7	24.85	1.0	0.34	13	0.3	0.26	0.0	0.00	10

Table 21a (continued)

Statistical Zone 17

Summary of dominant organisms taken in statistical zone 17 during the 2004 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	21-30 fm					31-40 fm					>40 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus spinicarpus	7.6	3.92	0.0	0.02	8	499.5	231.10	2.8	1.25	10	84.0	0.00	0.7	0.00	1
Sicyonia brevirostris	55.5	27.57	0.9	0.42	8	187.5	95.80	3.0	1.51	10	0.0	0.00	0.0	0.00	1
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	1
Farfantepenaeus aztecus	104.5	30.45	3.4	0.93	8	84.0	18.07	3.0	0.62	10	39.3	0.00	1.6	0.00	1
Callinectes similis	31.1	13.06	0.7	0.31	8	0.8	0.76	0.0	0.02	10	0.0	0.00	0.0	0.00	1
Litopenaeus setiferus	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	726.8	157.34	30.1	5.92	8	393.7	121.75	13.8	3.92	10	158.2	0.00	8.4	0.00	1
Micropogonias undulatus	113.4	25.82	9.7	2.18	8	9.4	2.77	1.0	0.29	10	0.0	0.00	0.0	0.00	1
Trachurus lathami	6.4	6.10	0.4	0.35	8	156.6	126.82	8.0	6.45	10	722.2	0.00	44.0	0.00	1
Chloroscombrus chrysurus	6.0	2.91	0.2	0.11	8	1.2	1.20	0.1	0.07	10	0.0	0.00	0.0	0.00	1
Peprilus burti	72.0	35.31	5.5	2.70	8	60.2	36.65	4.5	2.73	10	121.1	0.00	8.4	0.00	1
Cynoscion nothus	1.2	0.86	0.1	0.10	8	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	1
Leiostomus xanthurus	17.9	8.36	1.8	0.84	8	36.5	27.61	4.1	3.05	10	0.0	0.00	0.0	0.00	1
Lagodon rhomboides	54.7	34.67	4.0	2.48	8	5.0	2.32	0.3	0.18	10	0.0	0.00	0.0	0.00	1
Squid spp	1.5	1.01	0.0	0.02	8	2.7	1.22	0.1	0.05	10	26.2	0.00	1.8	0.00	1

Table 21b

Statistical Zone 17

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	7.9	1.4	13	82.9	40.9	13	100.0	19.87	10	0.0	0	0	65.1	11.07	1	0 97.0	0	1
Total finfish	2.4	0.4	13	56.5	25.53	13	95.4	19.95	10	0.0	0	0	53.2	10.8	1	0 91.1	0	1
Total crustacean	2.3	1.05	13	3.1	0.72	13	3.9	1.63	10	0.0	0	0	9.0	3.16	1	0 2.7	0	1
Total other	3.3	0.67	13	23.3	18.8	13	1.0	0.98	10	0.0	0	0	2.9	1.1	1	0 3.2	0	1
Surface temperature	21.3	0.47	13	25.1	0.45	11	24.9	0.07	8	0.0	0	0	26.2	0.43	4	26.4	0.15	3
Midwater temperature	21.4	0.47	13	25.0	0.52	11	24.9	0.1	8	0.0	0	0	26.6	0.34	4	27.1	0.53	3
Bottom temperature	21.6	0.48	13	25.6	0.56	11	27.1	0.05	8	0.0	0	0	23.4	0.87	4	19.6	0.52	3
Surface salinity	27.4	0.75	13	30.3	0.37	11	32.5	0.22	8	0.0	0	0	35.0	0.57	4	35.3	0.38	3
Midwater salinity	28.7	0.57	13	30.4	0.35	11	32.8	0.29	8	0.0	0	0	35.7	0.33	4	36.2	0.07	3
Bottom salinity	29.6	0.58	13	31.6	0.4	11	35.6	0.21	8	0.0	0	0	36.4	0.03	4	36.4	0.01	3
Surface chlorophyll	0.0	0	0	2.6	0.33	9	1.8	0.4	8	0.0	0	0	0.7	0.1	4	0.7	0.03	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	0.16	13	6.4	0.15	11	6.5	0.12	8	0.0	0	0	6.1	0.16	4	5.9	0	3
Midwater oxygen	7.0	0.13	13	6.4	0.14	11	6.3	0.08	8	0.0	0	0	6.0	0.12	4	5.5	0.12	3
Bottom oxygen	6.8	0.15	13	5.5	0.52	11	4.8	0.09	8	0.0	0	0	4.3	0.24	4	3.8	0.15	3

Table 22a

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2004 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	1.0	0.67	0.0	0.00	12	15.2	11.54	0.1	0.08	9	109.6	50.22	2.8	1.14	5
Litopenaeus setiferus	83.4	42.85	1.0	0.55	12	66.1	45.69	1.1	0.66	9	0.0	0.00	0.0	0.00	5
Xiphopenaeus kroyeri	175.6	89.30	0.6	0.27	12	33.3	33.33	0.1	0.11	9	0.0	0.00	0.0	0.00	5
Sicyonia brevirostris	0.0	0.00	0.0	0.00	12	0.4	0.26	0.0	0.00	9	40.5	26.77	0.5	0.35	5
Portunus spinicarpus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	5
Callinectes similis	4.3	2.46	0.0	0.01	12	4.3	1.47	0.0	0.01	9	32.1	20.81	0.8	0.49	5
Stenotomus caprinus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	9	269.3	55.45	10.6	3.83	5
Micropogonias undulatus	0.6	0.50	0.0	0.02	12	1.9	1.02	0.1	0.05	9	443.3	243.77	29.7	14.91	5
Leiostomus xanthurus	0.2	0.20	0.0	0.02	12	0.1	0.12	0.0	0.01	9	258.7	248.11	25.3	23.90	5
Chloroscombrus chrysurus	2.1	1.12	0.0	0.01	12	1.7	1.14	0.0	0.01	9	174.2	150.88	2.8	2.32	5
Lutjanus campechanus	0.0	0.00	0.0	0.00	12	0.4	0.26	0.0	0.01	9	110.9	46.44	2.8	0.71	5
Upeneus parvus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	9	31.2	4.22	0.8	0.13	5
Stellifer lanceolatus	67.2	26.18	0.4	0.18	12	62.7	61.96	0.4	0.41	9	0.0	0.00	0.0	0.00	5
Mullus auratus	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	9	6.3	6.33	0.3	0.32	5
Squid spp	53.4	13.16	0.5	0.16	12	71.1	11.86	0.6	0.11	9	18.9	18.95	0.1	0.12	5

Table 22 (continued)

Statistical Zone 18

Summary of dominant organisms taken in statistical zone 18 during the 2004 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	110.6	18.92	3.9	0.66	10	141.6	36.85	4.9	1.32	2	14.1	5.83	0.6	0.25	3
Litopenaeus setiferus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Xiphopenaeus kroyeri	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Sicyonia brevirostris	64.7	18.64	0.9	0.25	10	94.5	33.40	1.5	0.60	2	10.9	5.97	0.4	0.19	3
Portunus spinicarpus	14.6	10.64	0.1	0.12	10	209.1	41.77	1.4	0.26	2	74.4	39.62	0.7	0.42	3
Callinectes similis	18.3	9.25	0.4	0.19	10	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Stenotomus caprinus	412.2	65.93	14.4	2.41	10	64.9	1.69	2.4	0.23	2	2454.6	2077.30	13.5	7.57	3
Micropogonias undulatus	47.4	17.26	4.3	1.47	10	5.1	0.36	0.6	0.09	2	0.0	0.00	0.0	0.00	3
Leiostomus xanthurus	67.2	25.10	7.2	2.85	10	2.2	2.18	0.2	0.22	2	0.0	0.00	0.0	0.00	3
Chloroscombrus chrysurus	61.5	40.84	2.2	1.46	10	1.1	1.09	0.0	0.05	2	0.0	0.00	0.0	0.00	3
Lutjanus campechanus	64.1	11.85	2.7	0.44	10	3.8	0.60	0.1	0.02	2	1.7	0.95	1.1	0.91	3
Upeneus parvus	44.0	9.62	1.3	0.31	10	20.3	5.00	0.5	0.18	2	232.3	173.17	9.1	6.43	3
Stellifer lanceolatus	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Mullus auratus	26.7	10.43	1.5	0.64	10	111.2	71.94	4.4	2.76	2	42.9	36.57	2.4	2.01	3
Squid spp	0.6	0.60	0.0	0.00	10	2.4	0.85	0.0	0.00	2	2.5	1.51	0.2	0.14	3

Table 22b

Statistical Zone 18

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	6.2	2.28	12	16.0	8.11	9	95.7	42.88	5	0.0	0	0	24.2	4.42	2	61.0	33.03	3
Total finfish	3.8	1.63	12	7.6	3.53	9	90.7	41.1	5	0.0	0	0	14.9	3.43	2	57.4	32.62	3
Total crustacean	1.9	0.71	12	1.8	0.85	9	4.8	2.14	5	0.0	0	0	8.2	1.3	2	1.6	0.6	3
Total other	0.9	0.17	12	6.9	5.15	9	0.2	0.12	5	0.0	0	0	1.0	0.39	2	1.8	0.65	3
Surface temperature	21.2	0.75	11	22.0	1.17	7	27.0	0.05	5	0.0	0	0	0.0	0	0	27.5	0.09	5
Midwater temperature	21.3	0.73	11	22.0	1.12	7	27.2	0.14	5	0.0	0	0	0.0	0	0	27.5	0.23	5
Bottom temperature	21.7	0.63	11	22.2	1.07	7	27.2	0.05	5	0.0	0	0	0.0	0	0	20.0	0.24	5
Surface salinity	31.4	0.76	11	31.2	1.21	7	32.7	0.34	5	0.0	0	0	0.0	0	0	33.9	0.25	5
Midwater salinity	31.9	0.66	11	33.0	0.68	7	34.5	0.63	5	0.0	0	0	0.0	0	0	36.2	0.08	5
Bottom salinity	32.9	0.55	11	32.9	0.74	7	35.0	0.44	5	0.0	0	0	0.0	0	0	36.4	0	5
Surface chlorophyll	0.0	0	0	2.0	0	1	1.1	0.43	5	0.0	0	0	0.0	0	0	0.5	0.04	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	7.3	0.13	11	7.2	0.24	7	6.3	0.19	5	0.0	0	0	0.0	0	0	6.4	0.02	5
Midwater oxygen	7.0	0.11	11	6.8	0.26	7	5.1	0.61	5	0.0	0	0	0.0	0	0	6.3	0.07	5
Bottom oxygen	6.4	0.1	11	6.5	0.28	7	4.7	0.54	5	0.0	0	0	0.0	0	0	4.5	0.12	5

Table 23a

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2004 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	7.8	7.08	0.0	0.03	5	6.2	2.16	0.0	0.01	16	82.2	32.80	1.5	0.57	19
Squilla spp	56.3	46.02	0.5	0.44	5	98.5	23.10	0.8	0.20	16	45.5	15.75	0.3	0.08	19
Callinectes similis	26.4	18.48	0.1	0.11	5	25.8	9.87	0.1	0.06	16	30.5	7.67	0.4	0.12	19
Trachypenaeus similis	6.3	6.29	0.0	0.01	5	50.1	12.31	0.1	0.02	16	64.4	19.33	0.2	0.05	19
Litopenaeus setiferus	99.3	41.62	2.0	1.03	5	50.8	8.99	1.0	0.23	16	12.6	5.15	0.2	0.10	19
Portunus spinicarpus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	16	0.0	0.00	0.0	0.00	19
Chloroscombrus chrysurus	36.4	36.44	0.9	0.92	5	103.6	73.27	1.7	1.05	16	1209.7	706.84	20.2	10.23	19
Stenotomus caprinus	0.0	0.00	0.0	0.00	5	0.2	0.16	0.0	0.00	16	201.8	57.96	4.8	1.48	19
Micropogonias undulatus	3.1	1.42	0.2	0.08	5	51.6	24.15	3.1	1.46	16	110.1	40.66	7.2	2.64	19
Stellifer lanceolatus	338.8	169.18	6.1	3.26	5	180.3	66.84	2.6	1.06	16	13.5	7.24	0.1	0.05	19
Peprilus burti	0.6	0.57	0.0	0.03	5	11.4	6.38	0.6	0.36	16	108.2	97.48	6.1	5.45	19
Lagodon rhomboides	0.9	0.89	0.0	0.04	5	2.5	1.52	0.1	0.07	16	4.3	2.13	0.2	0.11	19
Diplectrum bivittatum	0.0	0.00	0.0	0.00	5	1.6	1.64	0.0	0.02	16	107.9	31.43	1.9	0.52	19
Lutjanus campechanus	0.0	0.00	0.0	0.00	5	3.6	3.27	0.1	0.10	16	79.7	19.62	1.9	0.66	19
Squid spp	29.0	6.11	0.3	0.07	5	17.6	4.52	0.1	0.04	16	40.9	14.54	0.4	0.18	19

Table 23a (continued)

Statistical Zone 19

Summary of dominant organisms taken in statistical zone 19 during the 2004 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	14.7	2.73	0.5	0.09	2	41.7	25.51	1.4	0.84	6	13.1	0.00	0.7	0.00	1
Squilla spp	0.0	0.00	0.0	0.00	2	1.2	0.79	0.0	0.01	6	3.3	0.00	0.1	0.00	1
Callinectes similis	84.0	62.18	2.1	1.54	2	5.6	3.74	0.1	0.09	6	0.0	0.00	0.0	0.00	1
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	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	6	0.0	0.00	0.0	0.00	1
Portunus spinicarpus	0.0	0.00	0.0	0.00	2	36.1	21.84	0.3	0.17	6	61.1	0.00	0.6	0.00	1
Chloroscombrus chrysurus	114.5	30.55	5.3	1.37	2	5.2	5.22	0.3	0.29	6	0.0	0.00	0.0	0.00	1
Stenotomus caprinus	1132.4	185.45	35.4	6.69	2	134.3	46.68	5.3	1.67	6	29.5	0.00	1.9	0.00	1
Micropogonias undulatus	28.9	2.73	2.4	0.70	2	0.8	0.58	0.1	0.05	6	0.0	0.00	0.0	0.00	1
Stellifer lanceolatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Peprilus burti	306.5	90.55	20.6	5.10	2	44.5	24.95	3.2	1.87	6	0.0	0.00	0.0	0.00	1
Lagodon rhomboides	61.1	43.64	3.2	2.30	2	293.3	286.75	17.4	16.82	6	0.0	0.00	0.0	0.00	1
Diplectrum bivittatum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	1
Lutjanus campechanus	51.3	9.82	3.0	1.32	2	18.9	7.08	0.8	0.29	6	3.3	0.00	1.5	0.00	1
Squid spp	0.0	0.00	0.0	0.00	2	8.0	6.70	0.2	0.10	6	39.3	0.00	4.4	0.00	1

Table 23b

Statistical Zone 19

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	19.4	7.61	5	24.2	7.15	16	59.4	13.64	19	0.0	0	0	58.6	23.18	6	63.1	0	1
Total finfish	13.6	5.07	5	16.3	5.3	16	55.7	13.57	19	0.0	0	0	54.1	22.71	6	52.9	0	1
Total crustacean	2.9	1.51	5	2.2	0.47	16	2.8	0.67	19	0.0	0	0	2.5	1.3	6	3.7	0	1
Total other	3.1	2.1	5	5.7	3.1	16	0.9	0.39	19	0.0	0	0	2.1	0.86	6	6.3	0	1
Surface temperature	24.9	1.34	5	25.4	0.65	16	26.5	0.57	19	0.0	0	0	28.0	0.16	3	28.0	0	1
Midwater temperature	25.0	1.25	5	25.4	0.66	16	26.4	0.6	19	0.0	0	0	27.9	0.01	3	26.9	0	1
Bottom temperature	25.2	1.16	5	25.5	0.64	16	26.3	0.47	19	0.0	0	0	22.0	0.9	3	19.6	0	1
Surface salinity	34.0	1.05	5	33.8	0.69	16	32.7	0.32	19	0.0	0	0	32.2	0.07	3	31.9	0	1
Midwater salinity	34.8	0.47	5	34.2	0.64	16	33.4	0.35	19	0.0	0	0	36.0	0.05	3	36.5	0	1
Bottom salinity	35.7	0.35	5	34.4	0.63	16	34.8	0.32	19	0.0	0	0	36.4	0.02	3	36.4	0	1
Surface chlorophyll	2.8	0.43	2	2.0	0.28	7	0.8	0.02	15	0.0	0	0	0.7	0.08	3	0.8	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	6.4	0.2	5	6.5	0.19	16	6.7	0.1	19	0.0	0	0	6.5	0.03	3	6.6	0	1
Midwater oxygen	6.3	0.12	5	6.4	0.15	16	6.5	0.1	19	0.0	0	0	6.2	0.03	3	6.6	0	1
Bottom oxygen	6.1	0.07	5	6.0	0.21	16	5.3	0.18	19	0.0	0	0	5.5	0.33	3	4.3	0	1

Table 24a

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2004 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	1.5	1.50	0.0	0.00	4	29.1	16.25	0.4	0.25	15	112.5	37.97	2.2	0.63	14
Callinectes similis	0.0	0.00	0.0	0.00	4	67.5	23.65	0.5	0.15	15	129.9	63.04	1.3	0.48	14
Portunus gibbesii	90.0	90.00	0.5	0.49	4	121.1	72.80	0.5	0.29	15	50.0	22.47	0.2	0.10	14
Squilla spp	0.0	0.00	0.0	0.00	4	47.3	20.14	0.6	0.28	15	39.5	19.82	0.4	0.23	14
Trachypenaeus similis	0.0	0.00	0.0	0.00	4	23.5	13.90	0.0	0.03	15	40.3	23.14	0.1	0.06	14
Litopenaeus setiferus	43.5	43.50	0.4	0.39	4	37.2	12.49	0.8	0.32	15	11.9	4.36	0.3	0.11	14
Chloroscombrus chrysurus	376.5	254.93	8.2	7.15	4	138.8	53.11	3.3	1.58	15	1207.2	650.76	23.9	10.45	14
Cynoscion nothus	75.0	34.68	1.1	0.80	4	159.8	110.57	3.8	2.87	15	75.3	40.32	1.7	1.07	14
Micropogonias undulatus	0.0	0.00	0.0	0.00	4	54.7	23.47	3.5	1.56	15	153.1	79.05	8.5	4.14	14
Stenotomus caprinus	0.0	0.00	0.0	0.00	4	4.9	4.55	0.1	0.07	15	48.6	24.58	0.8	0.40	14
Peprilus burti	4.5	2.87	0.0	0.01	4	9.6	7.26	0.4	0.33	15	18.5	11.25	0.9	0.52	14
Syacium gunteri	10.5	10.50	0.3	0.27	4	66.8	13.44	0.9	0.18	15	127.4	30.87	1.7	0.40	14
Harengula jaguana	3.0	3.00	0.0	0.00	4	48.9	42.77	1.3	1.07	15	69.3	42.84	2.1	1.28	14
Cynoscion spp.	0.0	0.00	0.0	0.00	4	107.5	60.68	0.8	0.54	15	23.7	9.01	0.2	0.07	14
Squid spp	25.5	13.94	0.2	0.17	4	16.6	6.33	0.2	0.07	15	22.6	7.62	0.2	0.07	14

Table 24a (continued)

Statistical Zone 20

Summary of dominant organisms taken in statistical zone 20 during the 2004 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	48.7	1.81	1.2	0.01	2	64.8	22.43	2.0	0.69	3	31.0	9.75	1.2	0.35	4
Callinectes similis	29.3	11.80	0.6	0.22	2	1.2	1.18	0.0	0.02	3	0.0	0.00	0.0	0.00	4
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	4
Squilla spp	1.1	1.09	0.0	0.00	2	3.3	1.92	0.0	0.03	3	9.8	8.78	0.1	0.11	4
Trachypenaeus similis	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	4
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	4
Chloroscombrus chrysurus	1.1	1.09	0.0	0.04	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	4
Cynoscion nothus	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	4
Micropogonias undulatus	9.0	6.80	0.7	0.51	2	4.8	3.29	0.6	0.40	3	0.0	0.00	0.0	0.00	4
Stenotomus caprinus	134.9	7.23	2.0	0.22	2	183.2	90.57	5.1	2.71	3	111.6	46.45	5.3	2.24	4
Peprilus burti	33.2	30.06	1.6	1.44	2	38.9	28.36	2.3	1.68	3	178.0	68.31	13.3	5.58	4
Syacium gunteri	31.6	0.03	0.5	0.08	2	1.1	1.11	0.1	0.05	3	0.0	0.00	0.0	0.00	4
Harengula jaguana	15.4	9.90	0.7	0.45	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	4
Cynoscion spp.	3.2	3.16	0.0	0.01	2	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	4
Squid spp	94.8	3.13	0.5	0.05	2	14.9	13.76	0.1	0.05	3	45.7	24.76	2.9	1.34	4

Table 24b

Statistical Zone 20

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	70.8	61.47	4	31.6	9.33	15	51.6	9.9	14	0.0	0	0	25.3	5.15	3	54.8	11.54	4
Total finfish	52.5	49.71	4	26.6	8.72	15	46.4	9.99	14	0.0	0	0	18.5	5.36	3	45.1	10.32	4
Total crustacean	1.6	0.8	3	3.0	1.06	15	4.8	1.25	14	0.0	0	0	2.4	0.88	3	4.1	1.83	4
Total other	17.1	11.76	4	2.2	0.98	15	0.6	0.17	13	0.0	0	0	4.3	1.35	3	5.6	1.73	4
Surface temperature	24.4	1.51	4	25.7	0.73	15	26.9	0.69	14	0.0	0	0	28.1	0	1	27.7	0.17	6
Midwater temperature	24.5	1.49	4	25.6	0.71	15	27.0	0.7	14	0.0	0	0	28.1	0	1	26.4	1.25	7
Bottom temperature	24.2	1.59	4	25.3	0.62	15	24.4	0.42	14	0.0	0	0	21.7	0	1	20.8	1.2	7
Surface salinity	35.9	1.21	4	35.7	0.55	15	34.2	0.44	14	0.0	0	0	31.5	0	1	32.6	0.55	6
Midwater salinity	36.5	1.37	4	36.0	0.52	15	35.0	0.28	14	0.0	0	0	36.1	0	1	36.1	0.21	7
Bottom salinity	36.5	1.4	4	36.2	0.49	15	36.1	0.21	14	0.0	0	0	36.4	0	1	36.4	0.05	7
Surface chlorophyll	5.0	0	1	4.1	0.57	6	1.7	0.28	10	0.0	0	0	0.8	0	1	0.8	0.07	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	6.2	0.5	4	6.3	0.18	15	6.4	0.15	14	0.0	0	0	6.5	0	1	6.5	0.04	6
Midwater oxygen	6.2	0.43	4	6.2	0.19	15	6.2	0.15	14	0.0	0	0	6.2	0	1	6.1	0.22	7
Bottom oxygen	6.2	0.41	4	5.8	0.23	15	5.5	0.24	14	0.0	0	0	5.5	0	1	4.9	0.3	7

Table 25a

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2004 Fall Shrimp/Groundfish Survey by depth stratum, collected with either a 40-ft or 20-ft trawl. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight (WT) in kg per hour, the SEM for weight and the number (N) of samples taken.

	0-5 fm					6-10 fm					11-20 fm				
SPECIES	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes similis	0.0	0.00	0.0	0.00	2	0.5	0.39	0.0	0.02	16	309.3	115.40	7.2	2.77	12
Farfantepenaeus aztecus	0.0	0.00	0.0	0.00	2	1.7	1.37	0.0	0.03	16	266.8	93.81	4.4	1.28	12
Portunus spinicarpus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	16	2.2	2.19	0.0	0.01	12
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	0.8	0.51	0.0	0.00	16	0.6	0.63	0.0	0.00	12
Squilla spp	0.0	0.00	0.0	0.00	2	1.1	1.07	0.0	0.01	16	27.0	13.01	0.4	0.19	12
Trachypenaeus similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	16	17.0	7.26	0.0	0.02	12
Chloroscombrus chrysurus	1221.1	566.07	72.8	54.56	2	1964.3	1732.50	28.5	21.13	16	472.0	301.15	12.5	7.75	12
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	16	19.3	11.87	0.2	0.10	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	26.6	15.42	0.6	0.31	16	136.0	59.75	3.9	2.41	12
Lutjanus campechanus	7.5	7.50	0.2	0.22	2	117.8	43.95	3.7	1.83	16	178.3	58.91	4.5	1.72	12
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	2.9	1.51	0.2	0.12	16	144.5	51.88	9.5	3.16	12
Peprilus burti	0.0	0.00	0.0	0.00	2	0.8	0.75	0.0	0.05	16	4.2	3.64	0.2	0.17	12
Cynoscion nothus	0.0	0.00	0.0	0.00	2	13.8	9.46	0.3	0.21	16	88.6	59.04	2.9	1.95	12
Syacium gunteri	0.0	0.00	0.0	0.00	2	10.4	6.57	0.3	0.14	16	89.4	28.99	1.7	0.45	12
Squid spp	165.0	165.00	2.6	2.64	2	27.3	5.41	0.3	0.08	16	22.1	8.73	0.2	0.09	12

Table 25a (continued)

Statistical Zone 21

Summary of dominant organisms taken in statistical zone 21 during the 2004 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	248.3	111.57	5.7	2.67	7	45.1	16.91	0.8	0.27	4	0.0	0.00	0.0	0.00	2
Farfantepenaeus aztecus	160.6	41.41	3.8	1.07	7	119.8	37.58	3.2	1.00	4	24.2	12.21	1.2	0.48	2
Portunus spinicarpus	0.0	0.00	0.0	0.00	7	312.3	251.13	2.2	1.79	4	224.6	6.05	1.9	0.02	2
Sicyonia dorsalis	152.9	83.87	0.6	0.30	7	104.1	35.75	0.4	0.15	4	0.0	0.00	0.0	0.00	2
Squilla spp	50.3	16.50	0.5	0.16	7	21.4	10.19	0.2	0.12	4	9.6	9.64	0.1	0.09	2
Trachypenaeus similis	32.7	27.66	0.2	0.18	7	12.1	6.51	0.1	0.03	4	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	329.2	255.48	12.1	9.22	7	0.6	0.57	0.0	0.01	4	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	228.6	87.62	1.7	0.62	7	229.4	79.10	2.3	0.92	4	371.5	111.15	5.7	2.12	2
Stenotomus caprinus	238.3	65.69	5.0	1.43	7	91.5	22.09	2.7	0.66	4	0.0	0.00	0.0	0.00	2
Lutjanus campechanus	73.1	13.73	2.3	0.43	7	28.9	9.75	1.0	0.39	4	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	52.6	12.05	3.7	0.81	7	30.8	14.51	2.3	1.07	4	0.0	0.00	0.0	0.00	2
Peprilus burti	111.2	58.03	5.3	2.76	7	41.1	41.11	2.0	1.98	4	58.3	55.06	4.5	4.30	2
Cynoscion nothus	1.2	1.22	0.1	0.13	7	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	2
Syacium gunteri	34.4	5.19	0.7	0.13	7	15.5	6.90	0.3	0.12	4	0.0	0.00	0.0	0.00	2
Squid spp	11.3	6.36	0.1	0.05	7	23.5	14.15	0.5	0.30	4	0.0	0.00	0.0	0.00	2

Table 25b

Statistical Zone 21

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	98.4	62.36	2	40.2	22.34	16	63.0	16.33	12	0.0	0	0	30.5	2.34	4	78.0	24.17	2
Total finfish	77.5	51.04	2	37.5	22.14	16	46.8	14.13	12	0.0	0	0	20.4	1.47	4	71.9	25	2
Total crustacean	1.1	1.07	2	1.2	0.48	14	14.2	3.58	11	0.0	0	0	7.9	2.61	4	4.9	0.53	2
Total other	19.3	10.29	2	2.1	1.36	16	3.3	2.83	12	0.0	0	0	2.2	0.8	4	1.1	0.3	2
Surface temperature	27.2	0	1	24.3	0.51	16	26.8	0.32	12	0.0	0	0	27.5	0.14	3	27.5	0.09	4
Midwater temperature	27.2	0	1	24.2	0.52	16	27.0	0.38	12	0.0	0	0	28.5	0.42	3	25.4	1.91	4
Bottom temperature	27.2	0	1	24.5	0.58	16	27.8	0.52	12	0.0	0	0	24.3	2.31	3	21.8	2.36	4
Surface salinity	30.9	0	1	35.0	0.69	16	32.5	1	12	0.0	0	0	31.8	0.71	3	32.3	0.92	4
Midwater salinity	30.9	0	1	35.0	0.68	16	33.1	0.92	12	0.0	0	0	36.2	0.14	3	34.9	1.51	4
Bottom salinity	30.9	0	1	35.6	0.56	16	36.3	0.43	12	0.0	0	0	36.4	0.01	3	35.7	0.77	4
Surface chlorophyll	1.7	0	1	2.1	0.36	4	1.4	0.09	9	0.0	0	0	1.0	0.09	3	0.9	0.12	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	6.0	0	1	6.6	0.07	16	6.4	0.06	12	0.0	0	0	6.6	0.07	3	6.4	0.05	4
Midwater oxygen	6.0	0	1	6.5	0.06	16	6.1	0.11	12	0.0	0	0	5.8	0.21	3	6.0	0.39	4
Bottom oxygen	6.0	0	1	6.2	0.2	16	5.0	0.23	12	0.0	0	0	5.0	0.42	3	4.4	0.47	4

Table 26a

Statistical Zone 22

Summary of dominant organisms taken in statistical zone 22 during the 2004 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	0.0	0.00	0.0	0.00	0	6.0	0.00	0.0	0.00	1
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	84.0	0.00	5.8	0.00	1
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	60.0	0.00	0.9	0.00	1
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	60.0	0.00	1.1	0.00	1
Lutjanus campechanus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	48.0	0.00	1.6	0.00	1
Cynoscion nothus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	18.0	0.00	0.8	0.00	1
Eucinostomus argenteus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	18.0	0.00	0.3	0.00	1
Syacium gunteri	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	18.0	0.00	0.4	0.00	1
Diplectrum bivittatum	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	12.0	0.00	0.3	0.00	1
Squid															

Table 26b

Statistical Zone 22

Summary of mean total catch and environmental data (X), the standard error of the mean (SEM) and the number (n) of samples taken during the 2004 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	0.0	0	0	0.0	0	0	11.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total finfish	0.0	0	0	0.0	0	0	11.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total crustacean	0.0	0	0	0.0	0	0	0.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Total other	0.0	0	0	0.0	0	0	0.6	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface temperature	0.0	0	0	0.0	0	0	25.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater temperature	0.0	0	0	0.0	0	0	25.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom temperature	0.0	0	0	0.0	0	0	25.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface salinity	0.0	0	0	0.0	0	0	38.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater salinity	0.0	0	0	0.0	0	0	38.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom salinity	0.0	0	0	0.0	0	0	38.2	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Surface chlorophyll	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface fluorescence	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0	0.0	0	0
Surface oxygen	0.0	0	0	0.0	0	0	6.4	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Midwater oxygen	0.0	0	0	0.0	0	0	6.3	0	1	0.0	0	0	0.0	0	0	0.0	0	0
Bottom oxygen	0.0	0	0	0.0	0	0	6.7	0	1	0.0	0	0	0.0	0	0	0.0	0	0

Table 27. 2004 Reef Fish Survey species composition list, 45 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	13	5.1	2	4.4
Mycteroperca phenax	scamp	5	3.5	1	2.2
Balistes capriscus	gray triggerfish	1	1.6	1	2.2
Epinephelus morio	red grouper	1	0.9	1	2.2
Epinephelus nigritus	warsaw grouper	1	12.6	1	2.2
Pagrus pagrus	red porgy	1	1.6	1	2.2

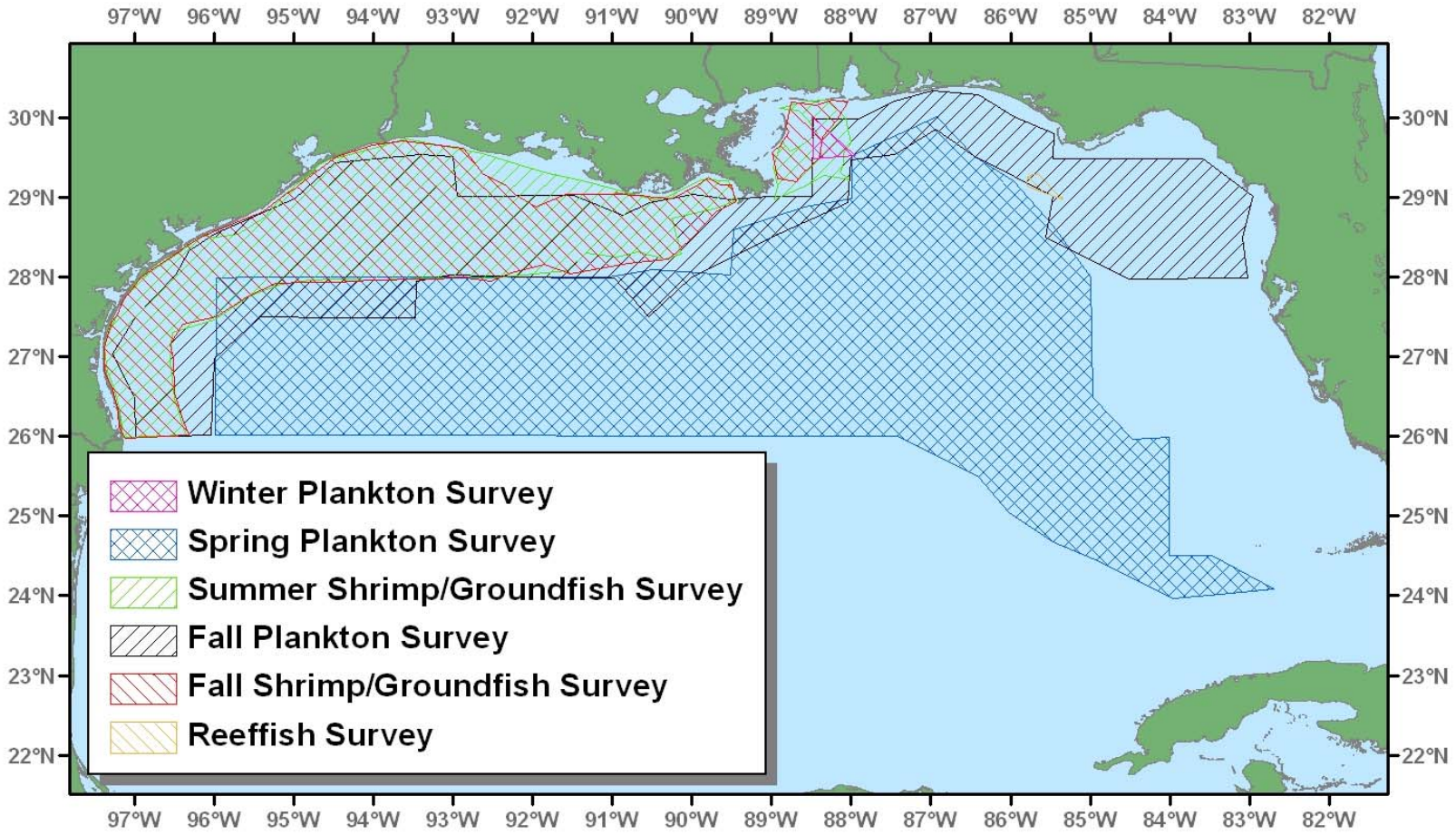

Figure 1. 2004 SEAMAP Surveys, Gulf of Mexico.

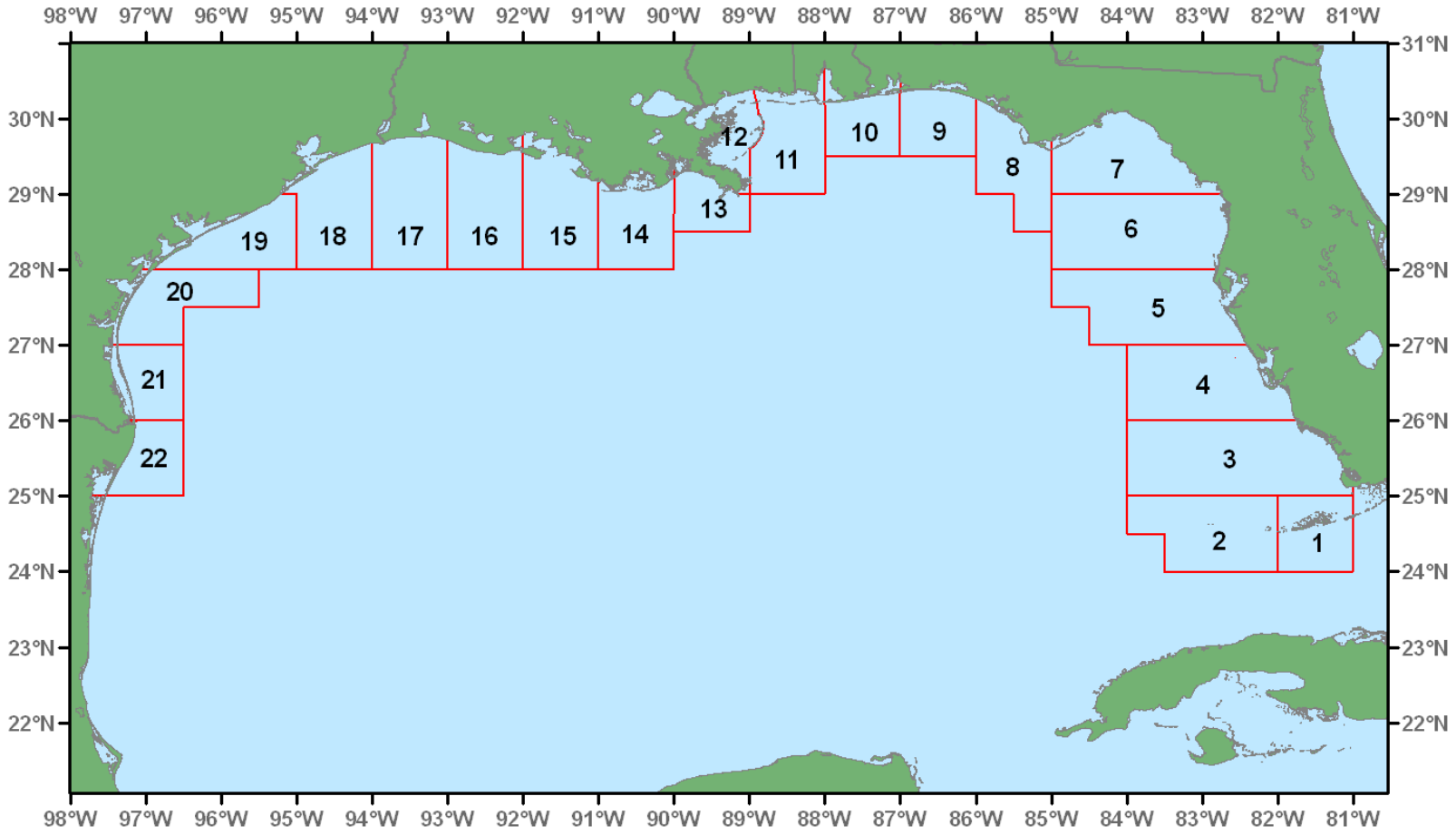

Figure 2. Statistical zones for shrimp in the Gulf of Mexico.

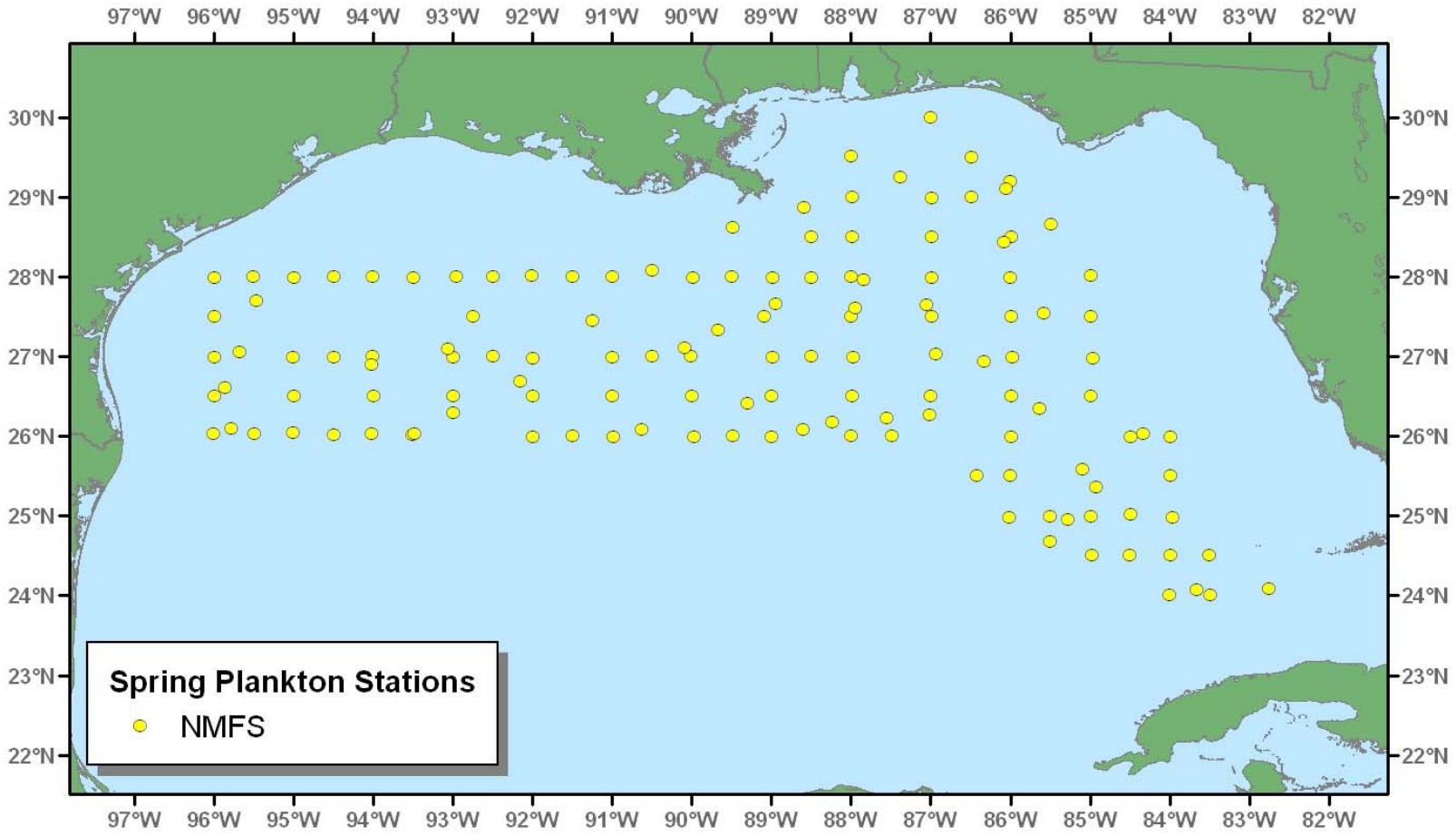

Figure 3. Locations of plankton and environmental stations during the 2004 Spring Plankton Survey.

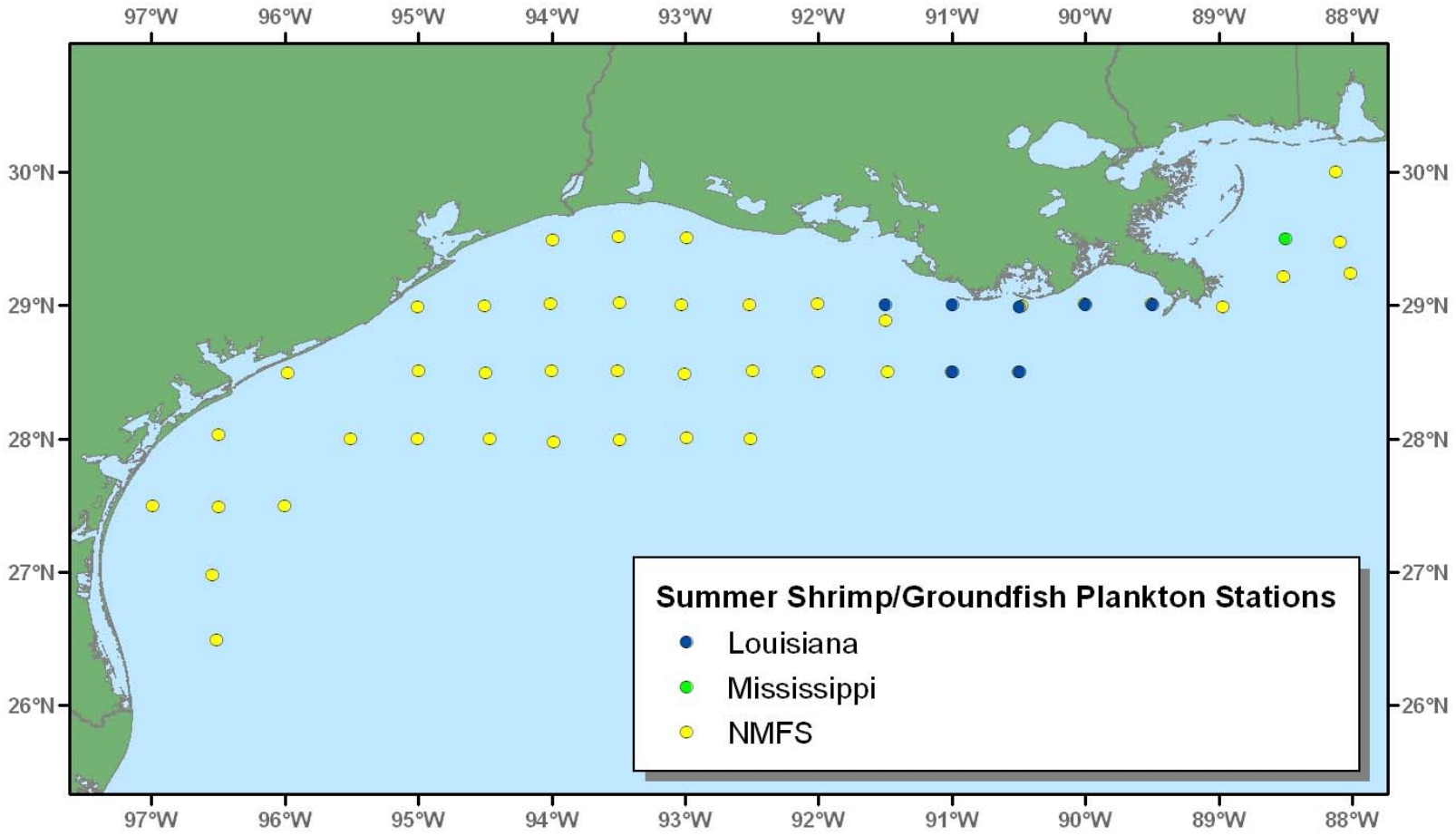

Figure 4. Locations of plankton stations during the 2004 Summer Shrimp/Groundfish Survey.

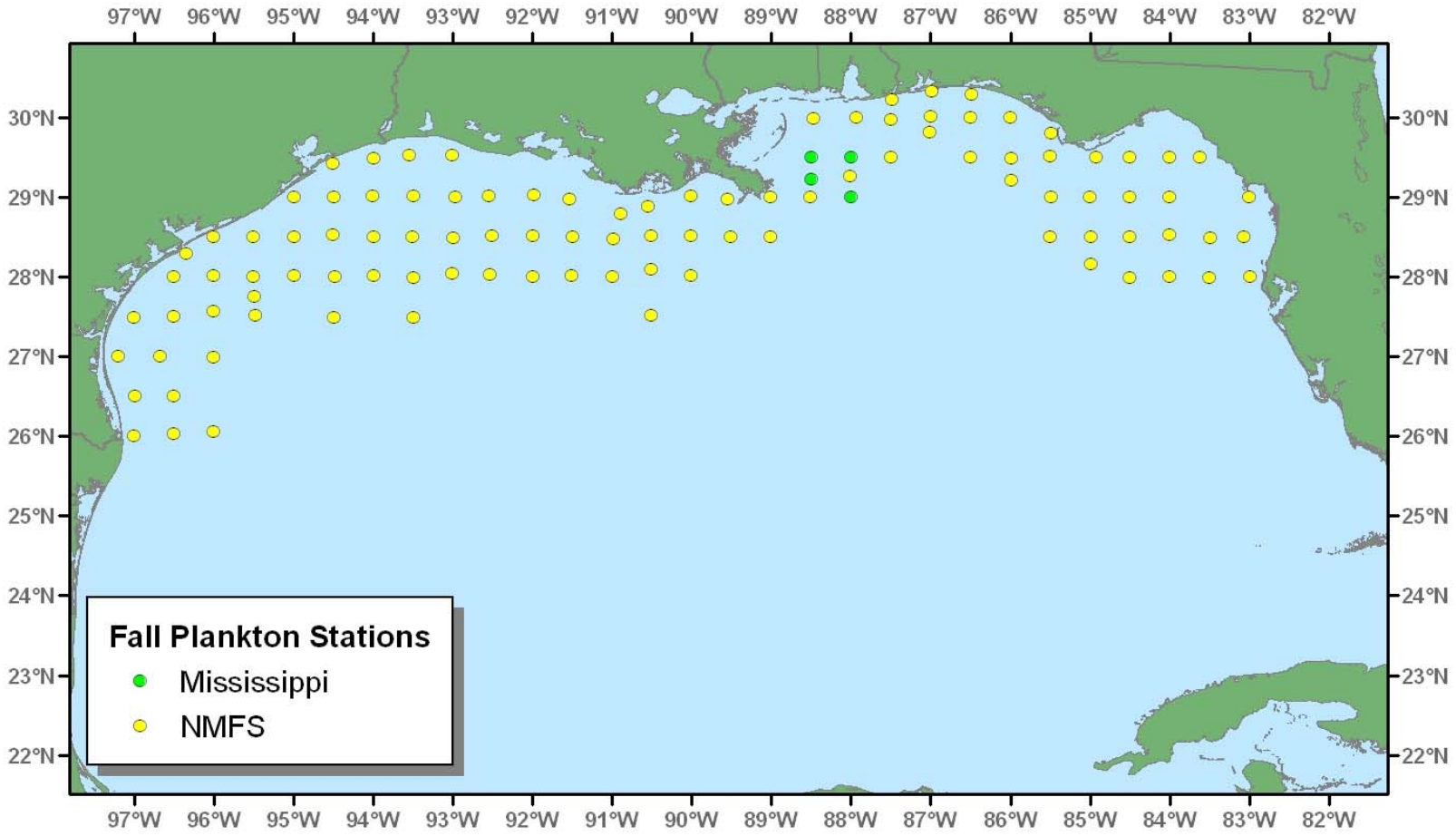

Figure 5. Locations of plankton and environmental stations during the 2004 Fall Plankton Survey.

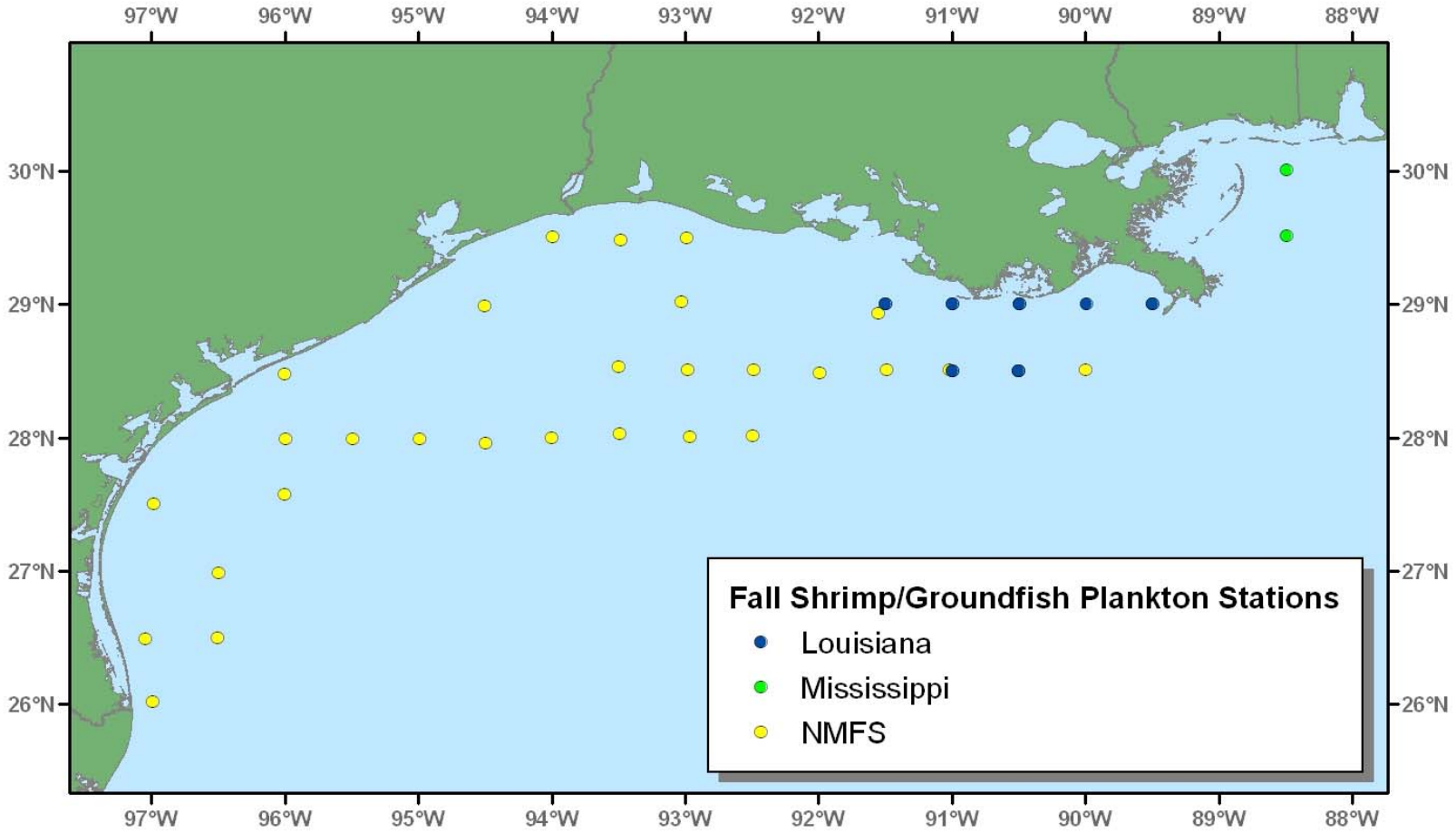

Figure 6. Locations of plankton stations during the 2004 Fall Shrimp/Groundfish Survey.

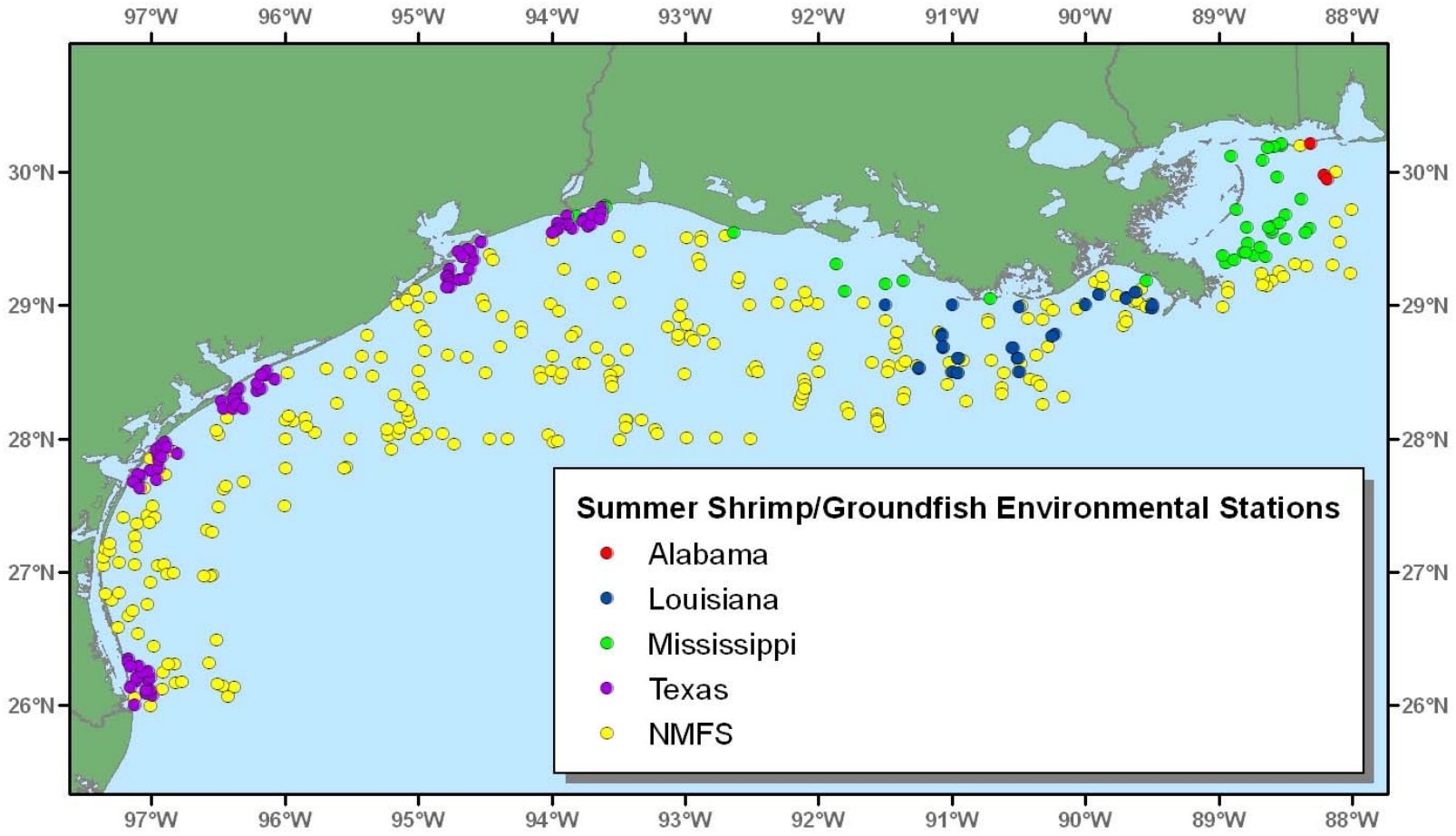

Figure 7. Locations of environmental stations during the 2004 Summer Shrimp/Groundfish Survey.

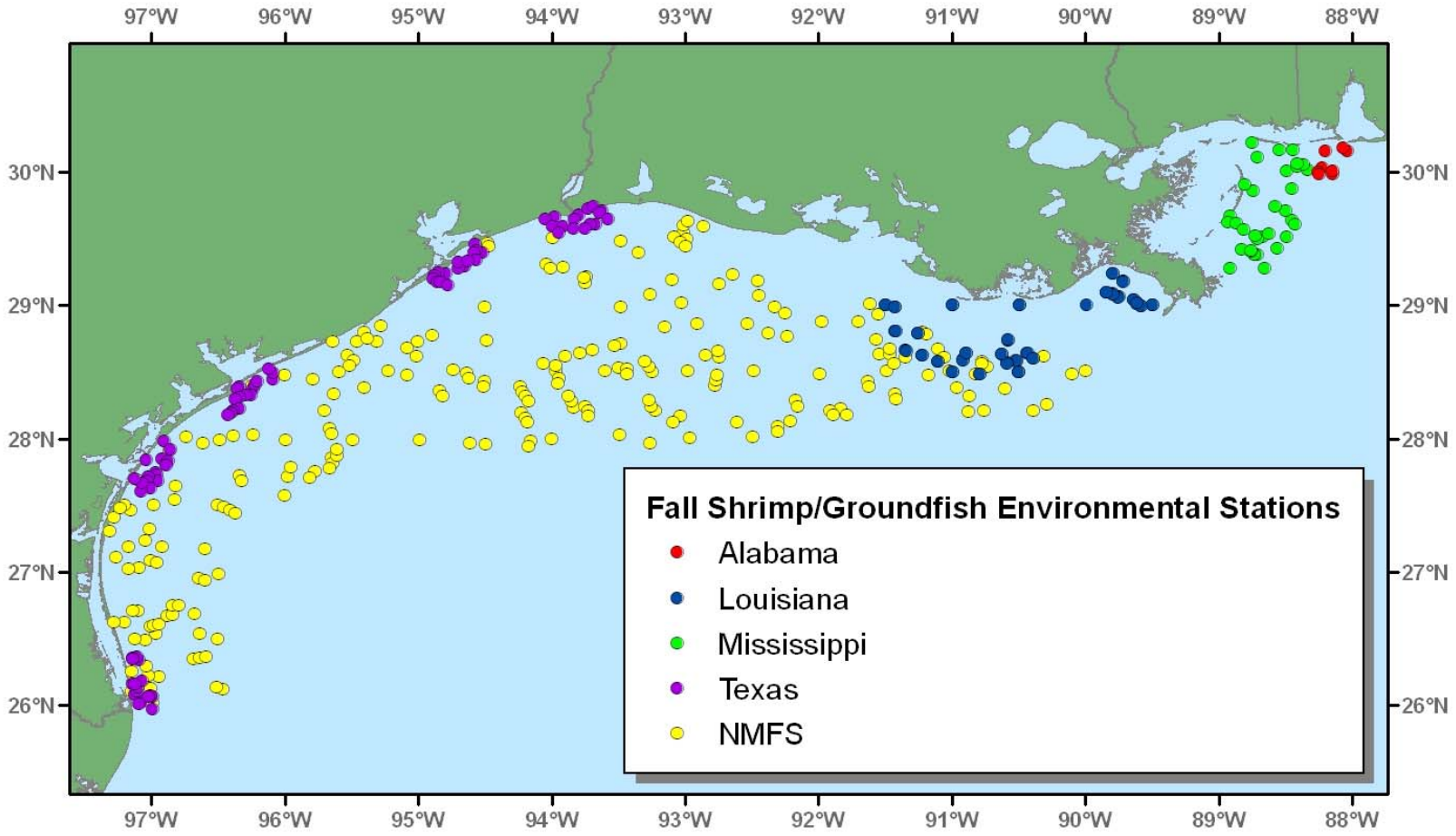

Figure 8. Locations of environmental stations during the 2004 Fall Shrimp/Groundfish Survey.

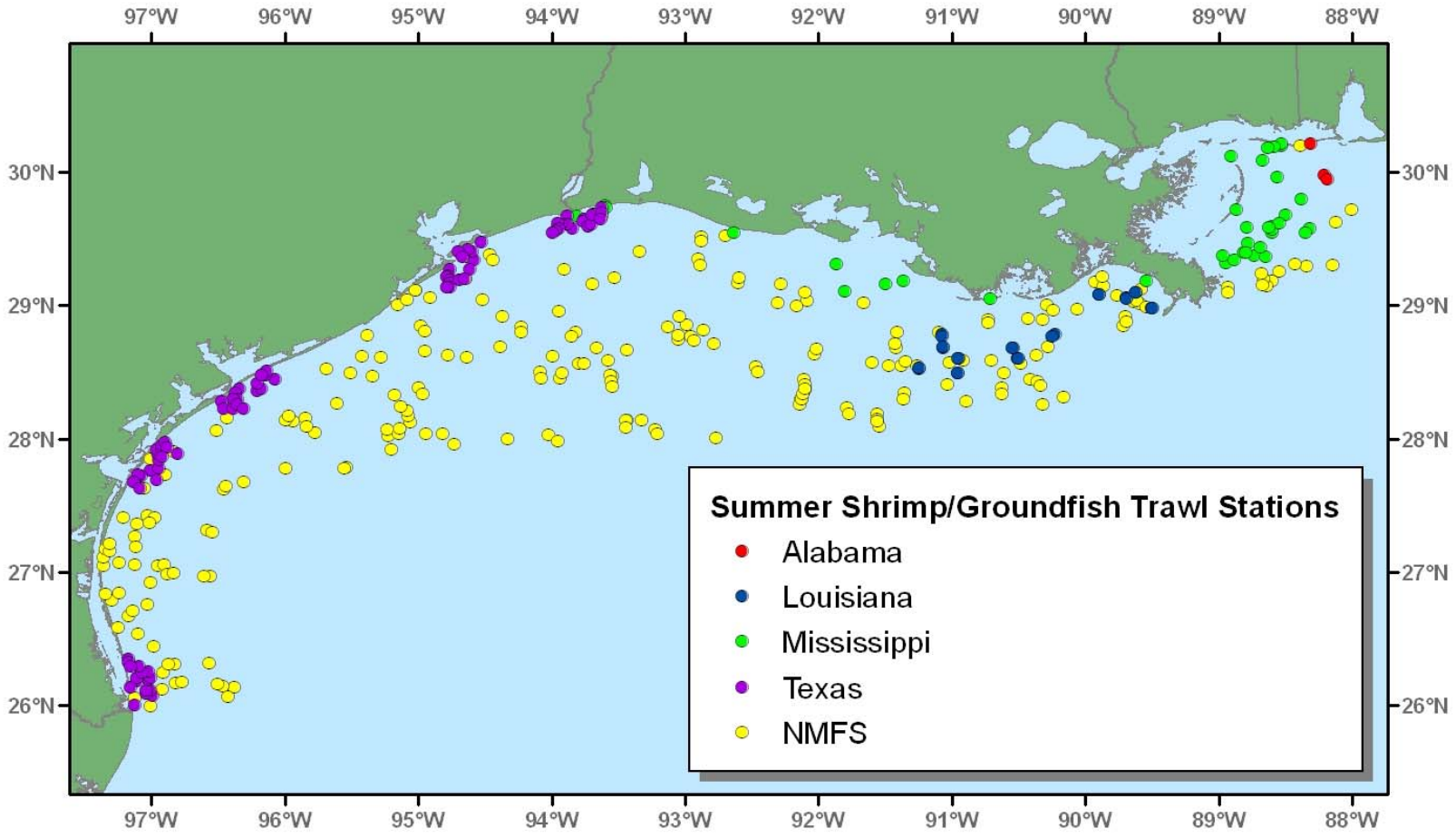

Figure 9. Locations of trawl stations during the 2004 Summer Shrimp/Groundfish Survey.

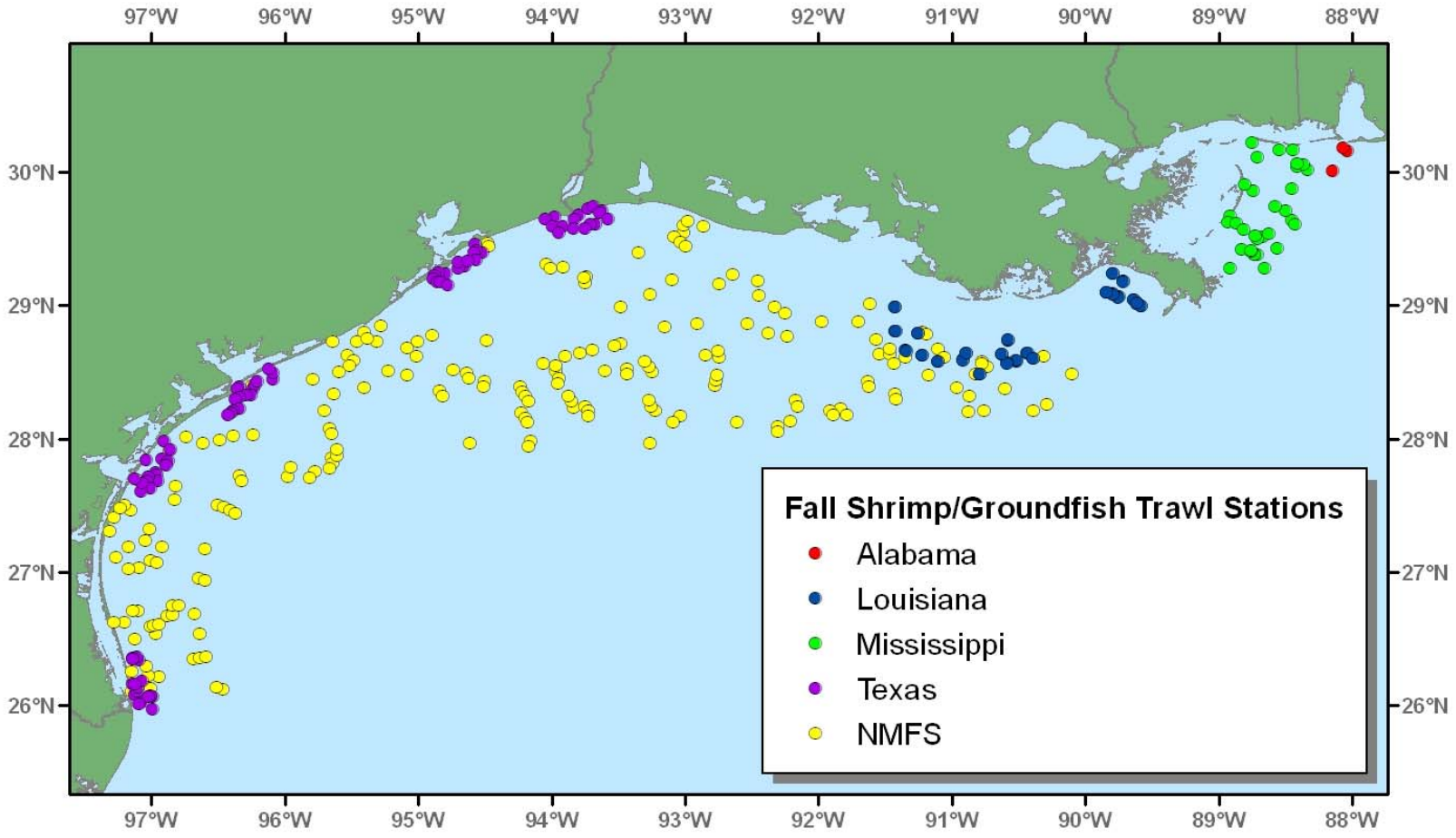

Figure 10. Locations of trawl stations during the 2004 Fall Shrimp/Groundfish Survey.

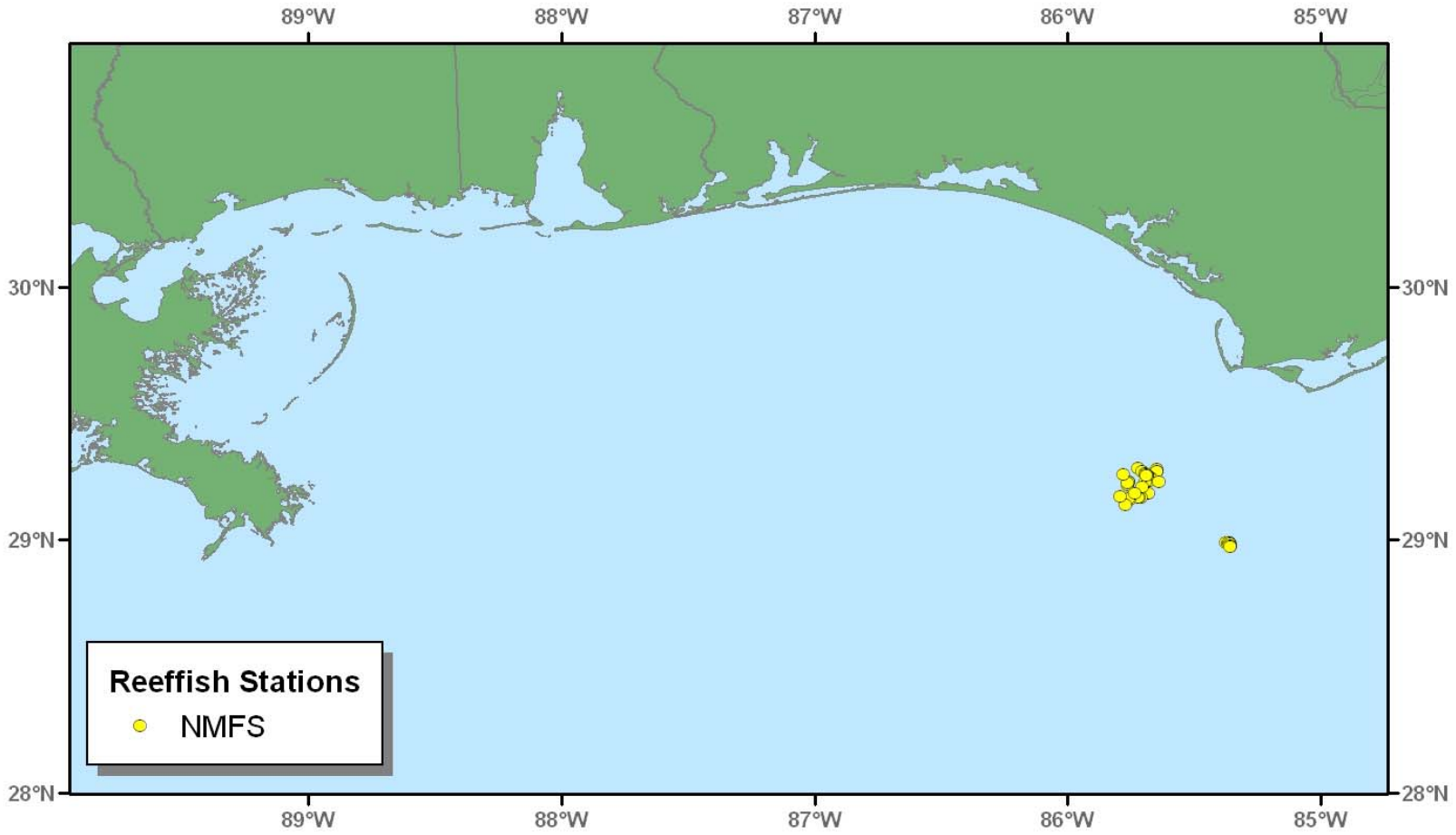

Figure 11. Locations of trap stations during the 2004 Reef Fish Survey.

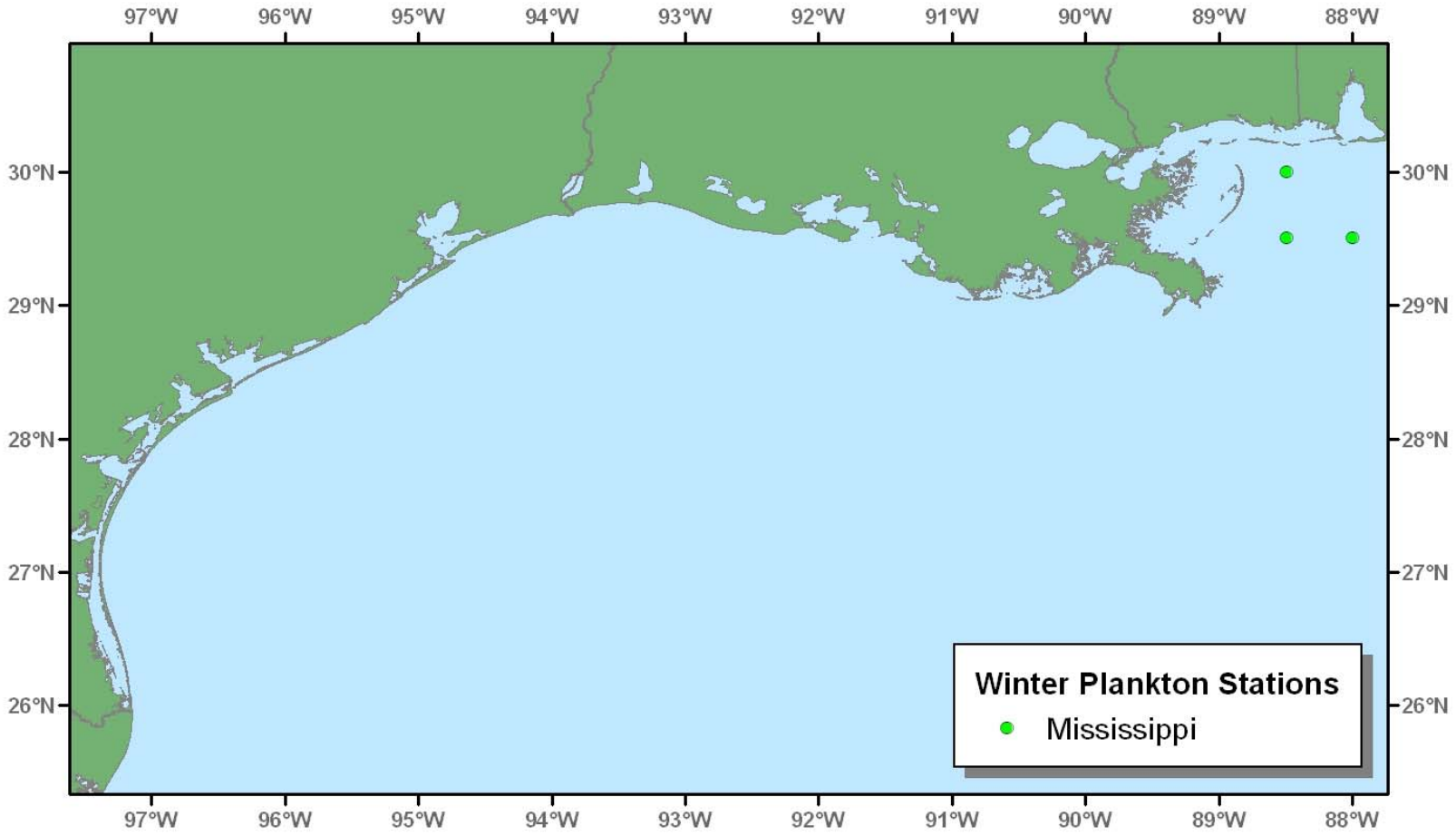

Figure 12. Locations of plankton and environmental stations during the 2004 Winter Plankton Survey.

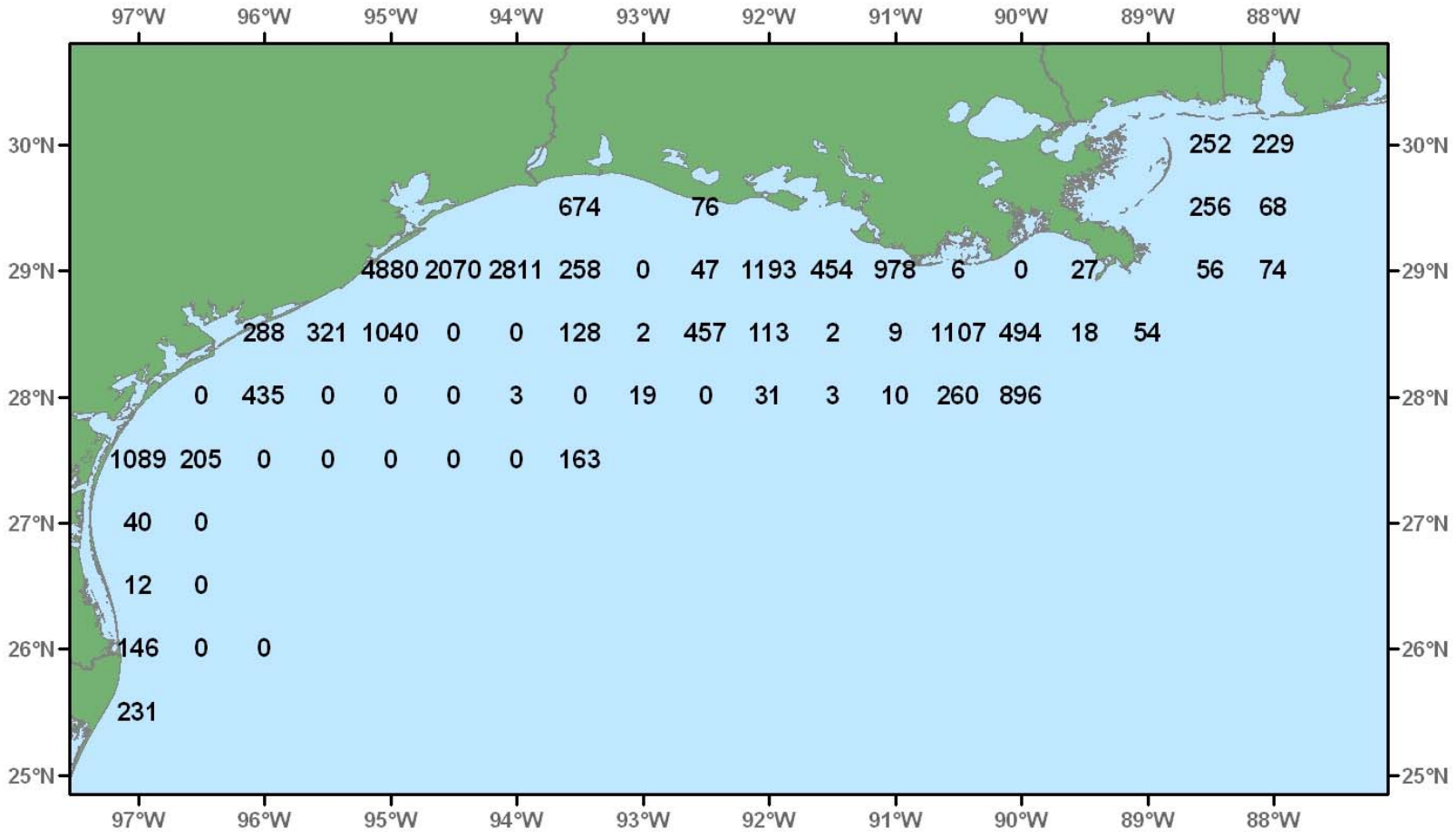

Figure 13. Atlantic croaker, Micropogonias undulatus, number/hour for June-July 2004.

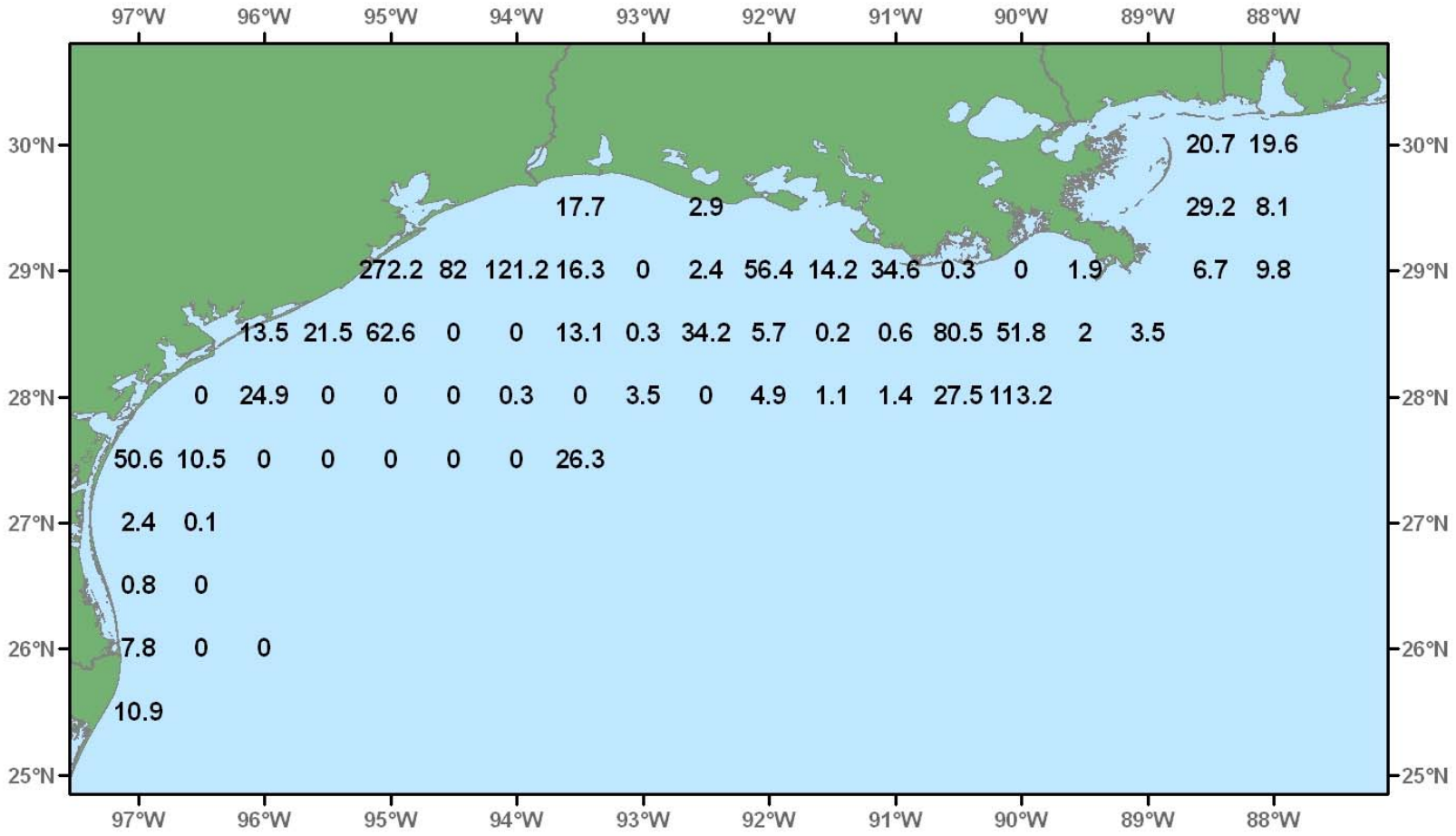

Figure 14. Atlantic croaker, Micropogonias undulatus, lb/hour for June-July 2004.

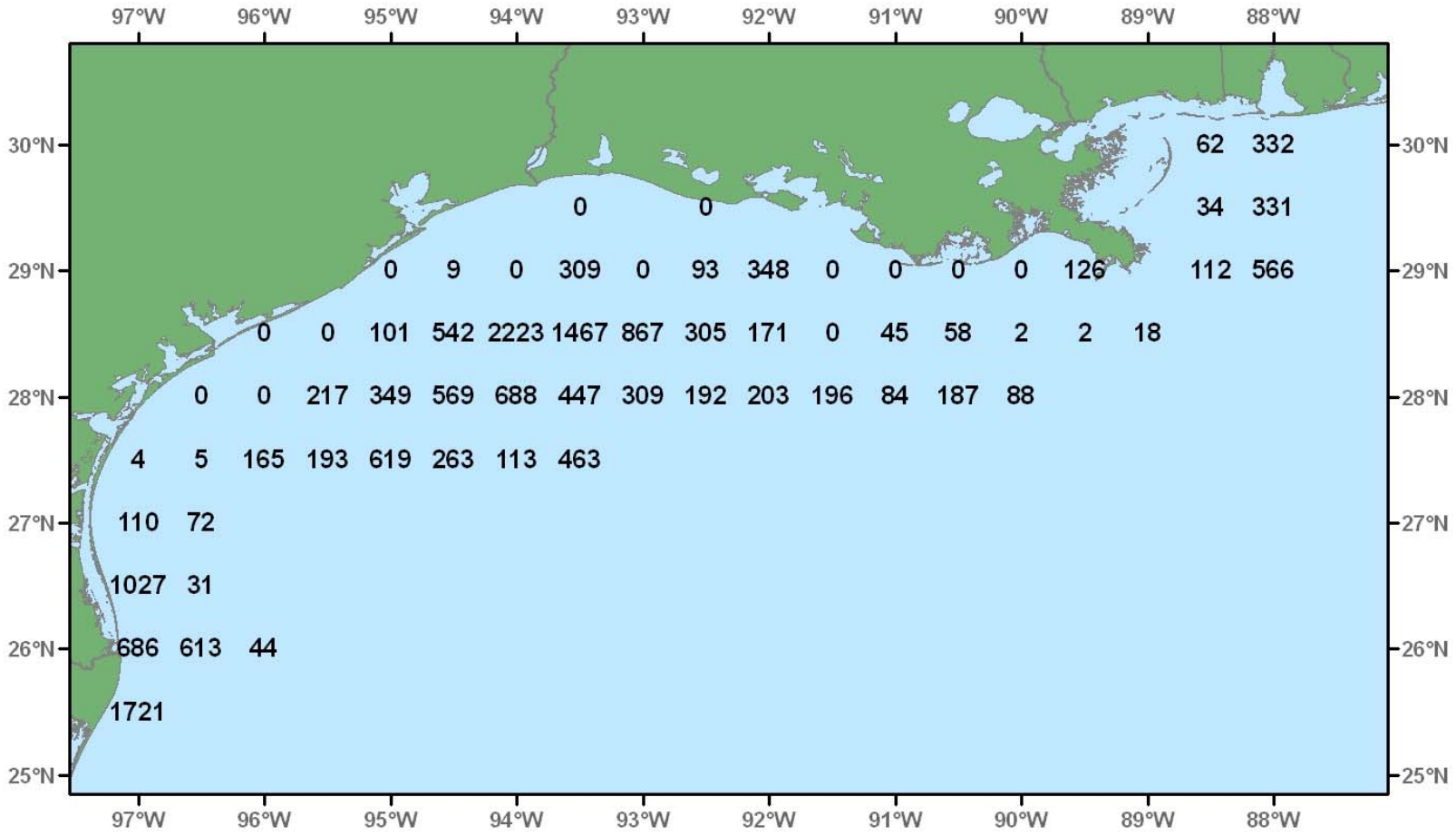

Figure 15. Longspine porgy, Stenotomus caprinus, number/hour for June-July 2004.

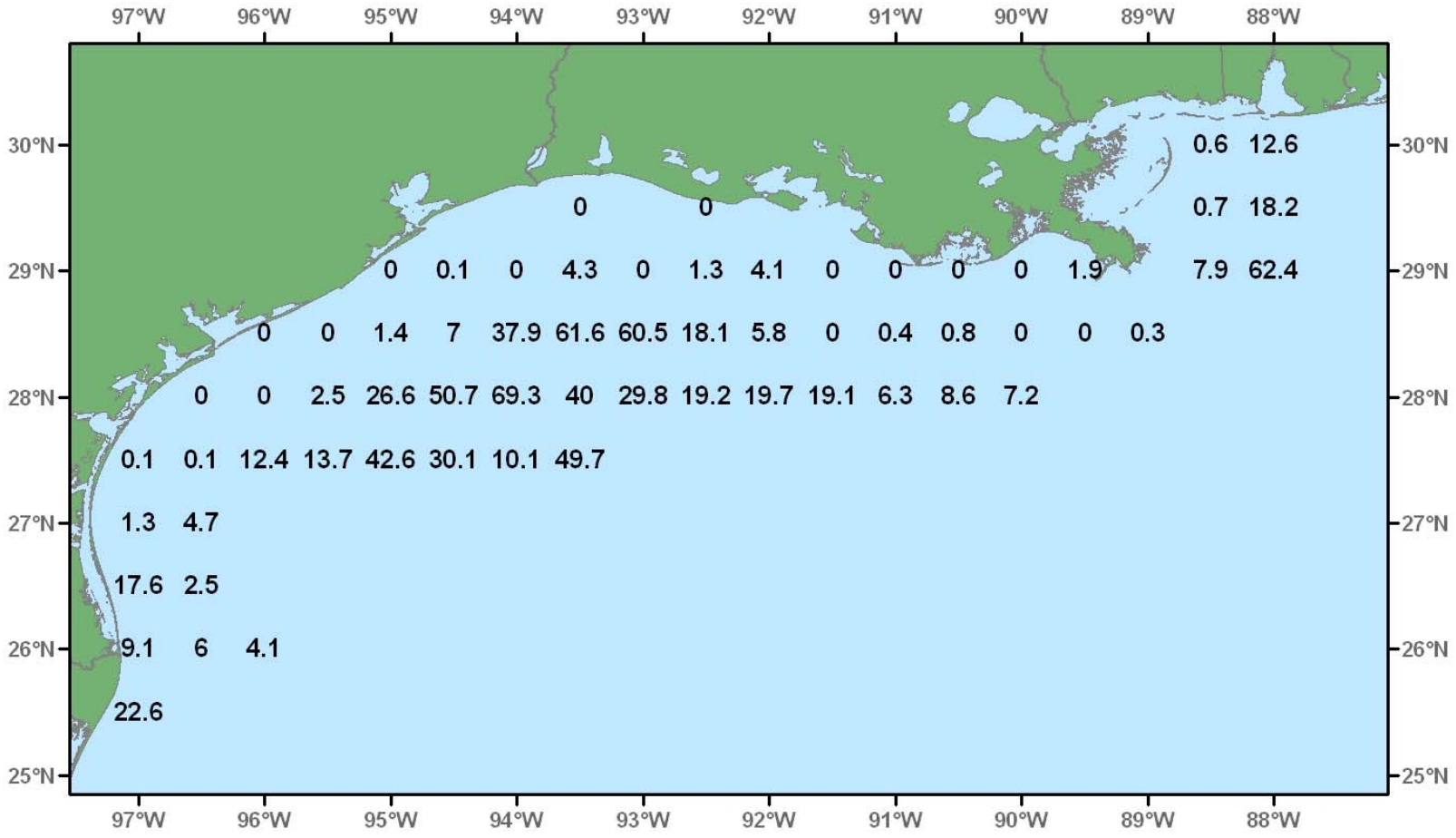

Figure 16. Longspine porgy, Stenotomus caprinus, lb/hour for June-July 2004.

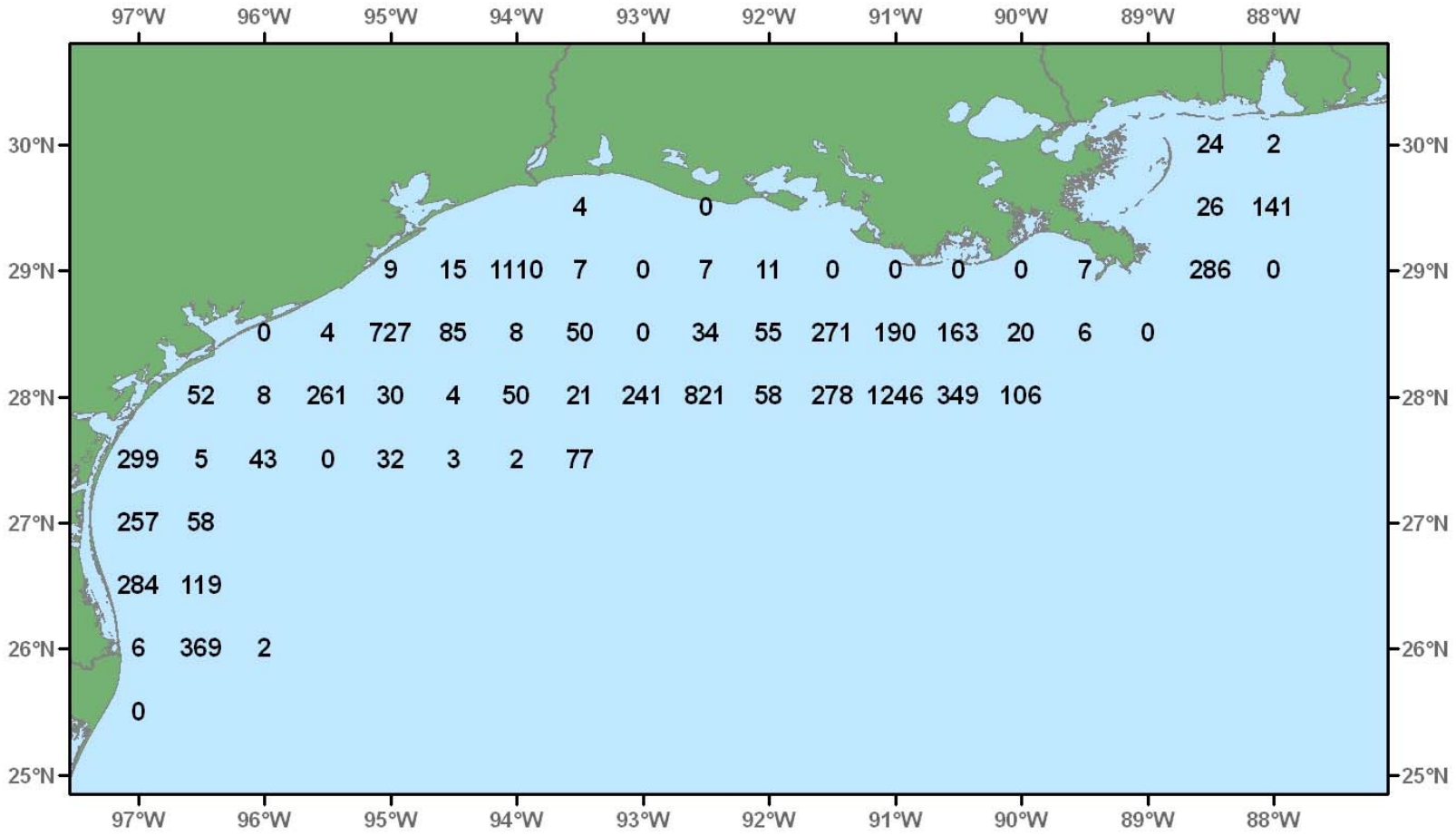

Figure 17. Gulf butterfish, Peprilus burti, number/hour for June-July 2004.

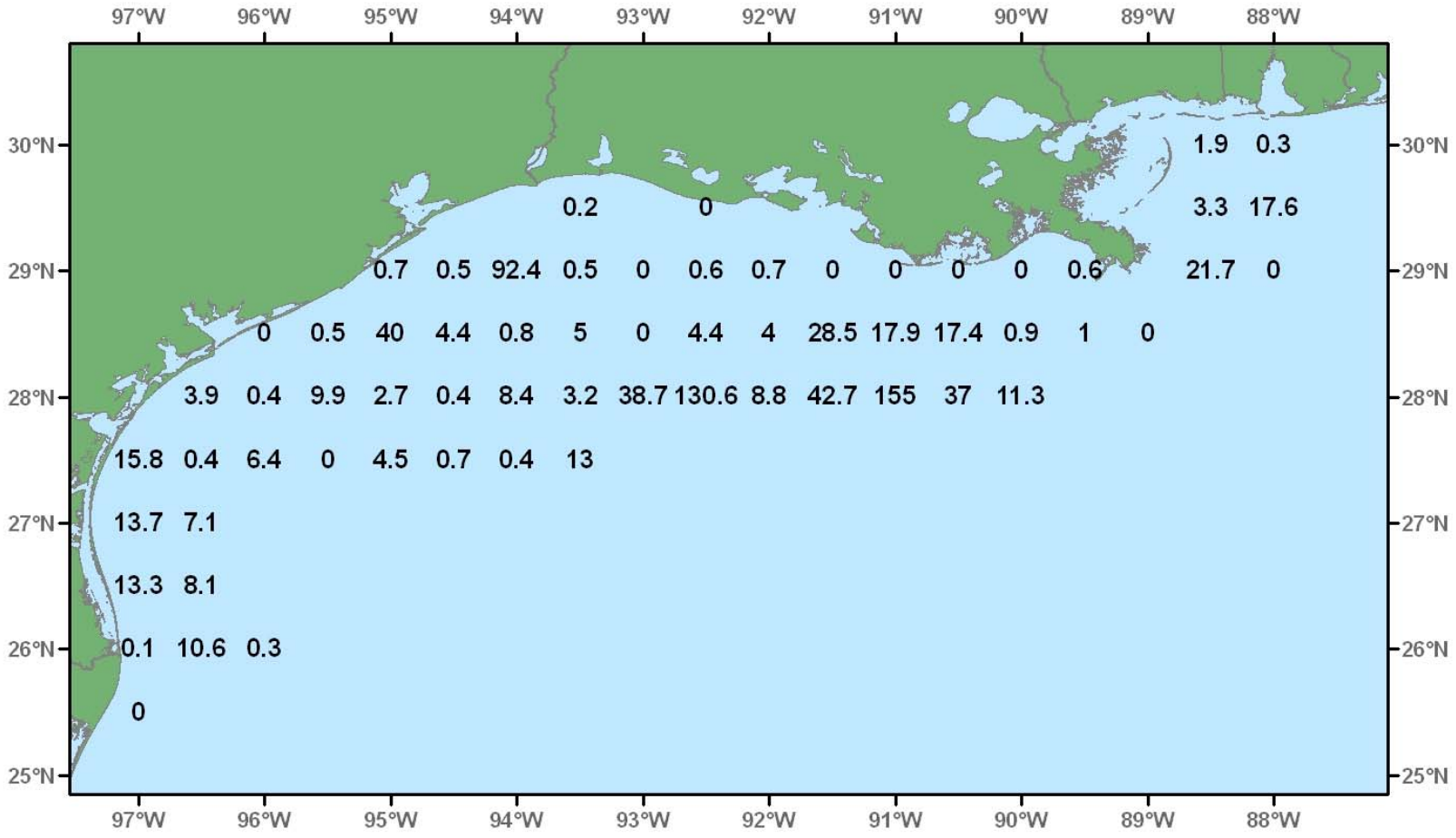

Figure 18. Gulf butterfish, Peprilus burti, lb/hour for June-July 2004.

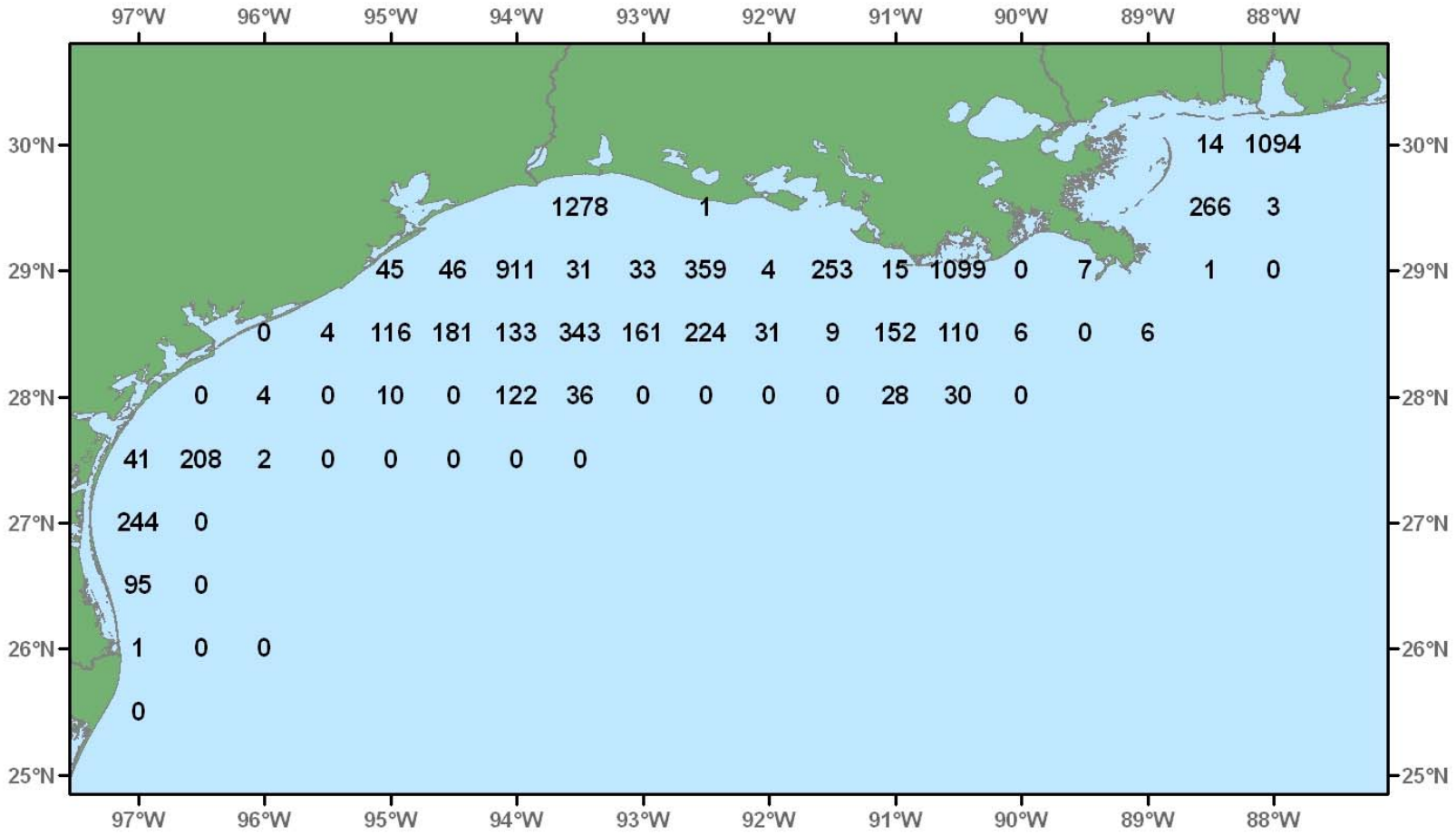

Figure 19. Atlantic bumper, Chloroscombrus chrysurus, number/hour for June-July 2004.

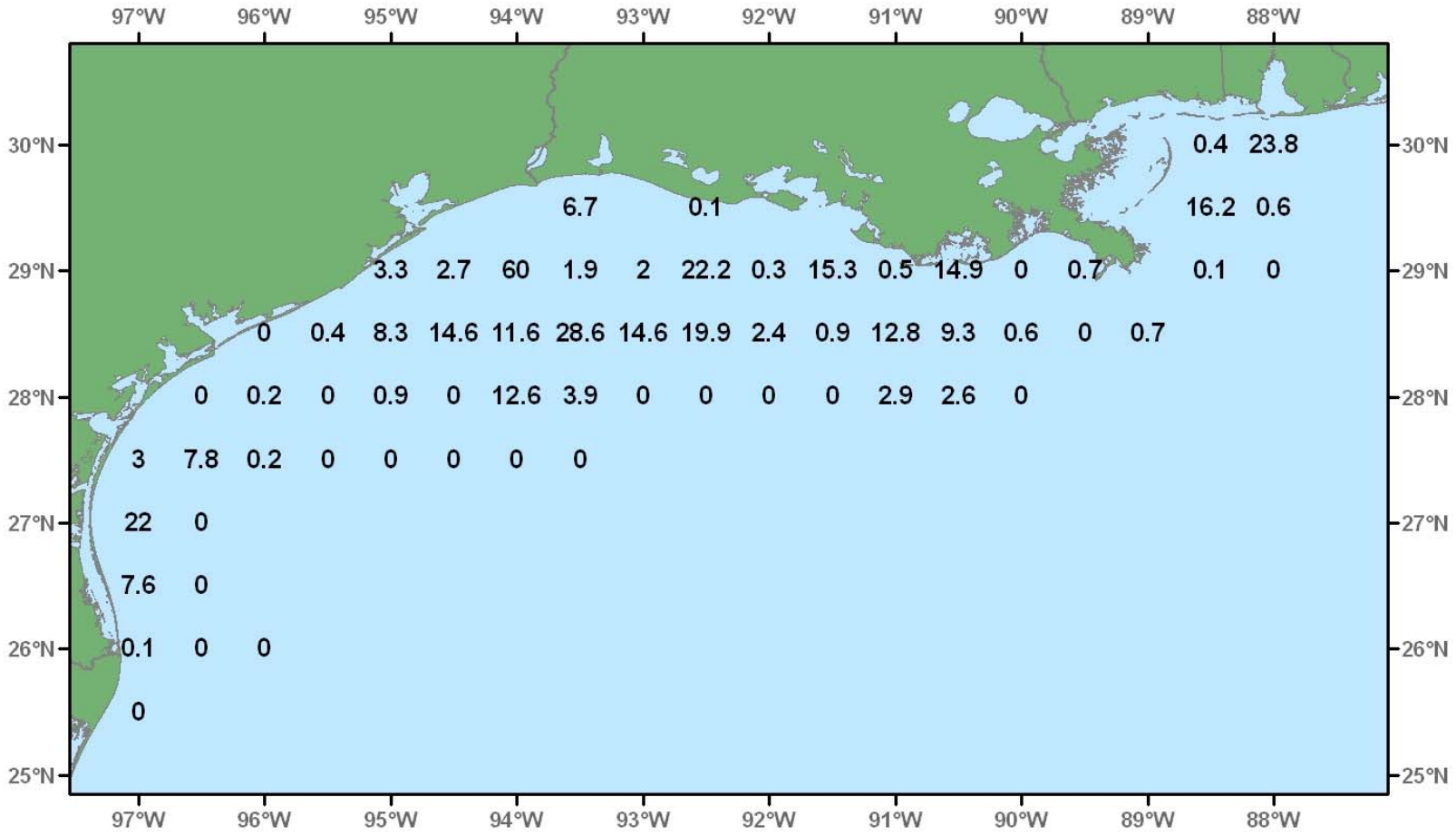

Figure 20. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for June-July 2004.

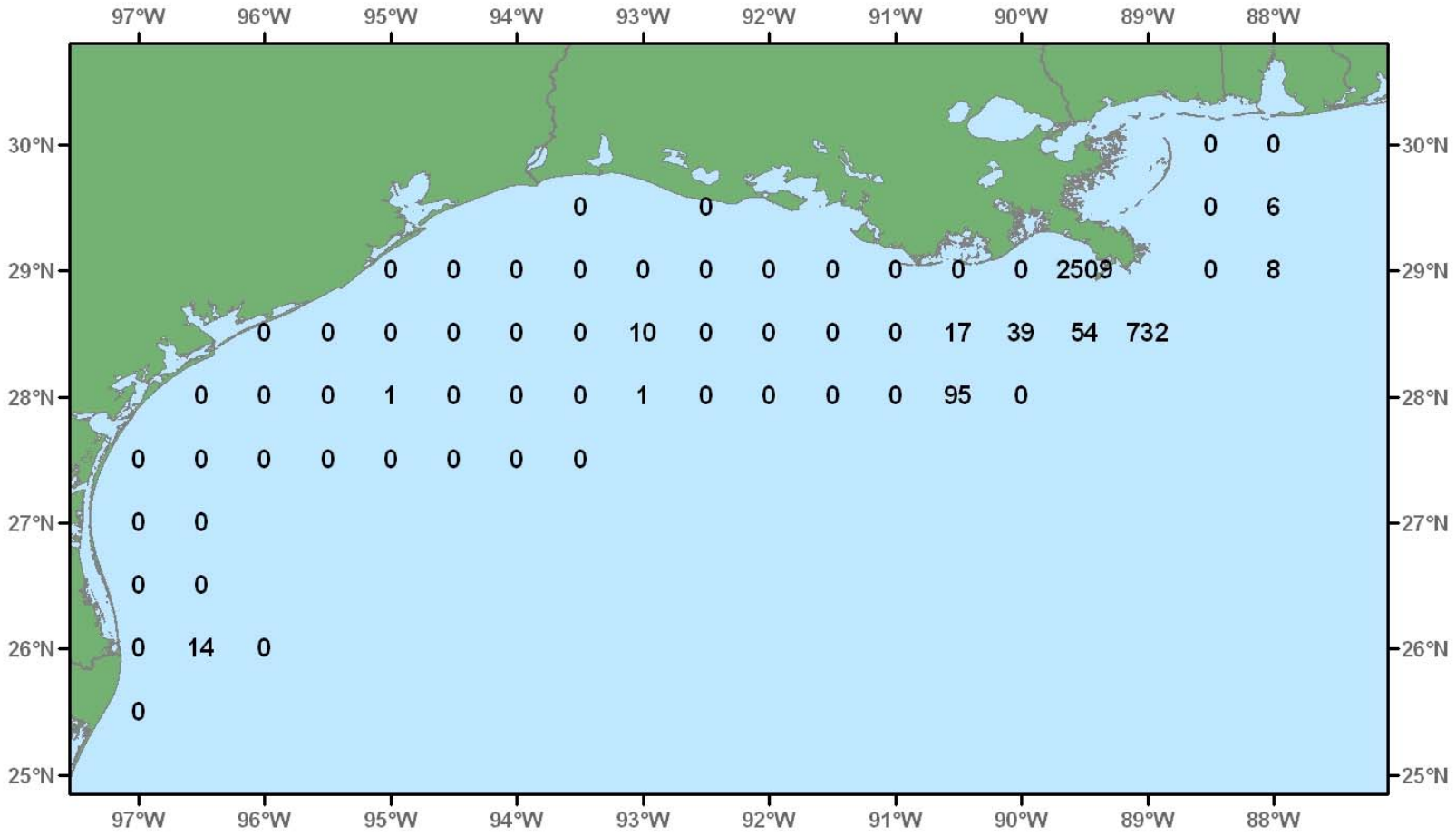

Figure 21. Bluespotted searobin, Prionotus roseus, number/hour for June-July 2004.

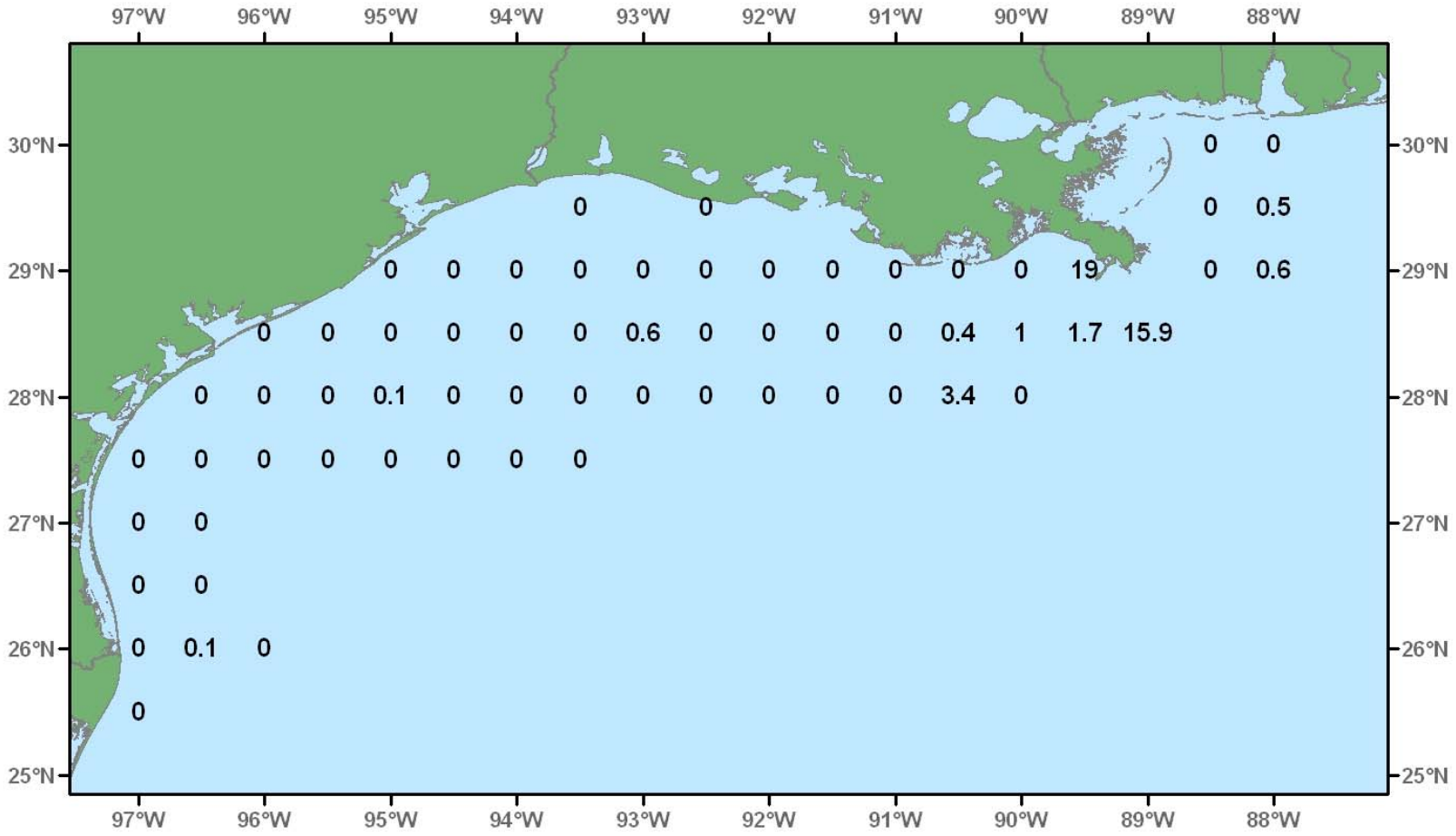

Figure 22. Bluespotted searobin, Prionotus roseus, lb/hour for June-July 2004.

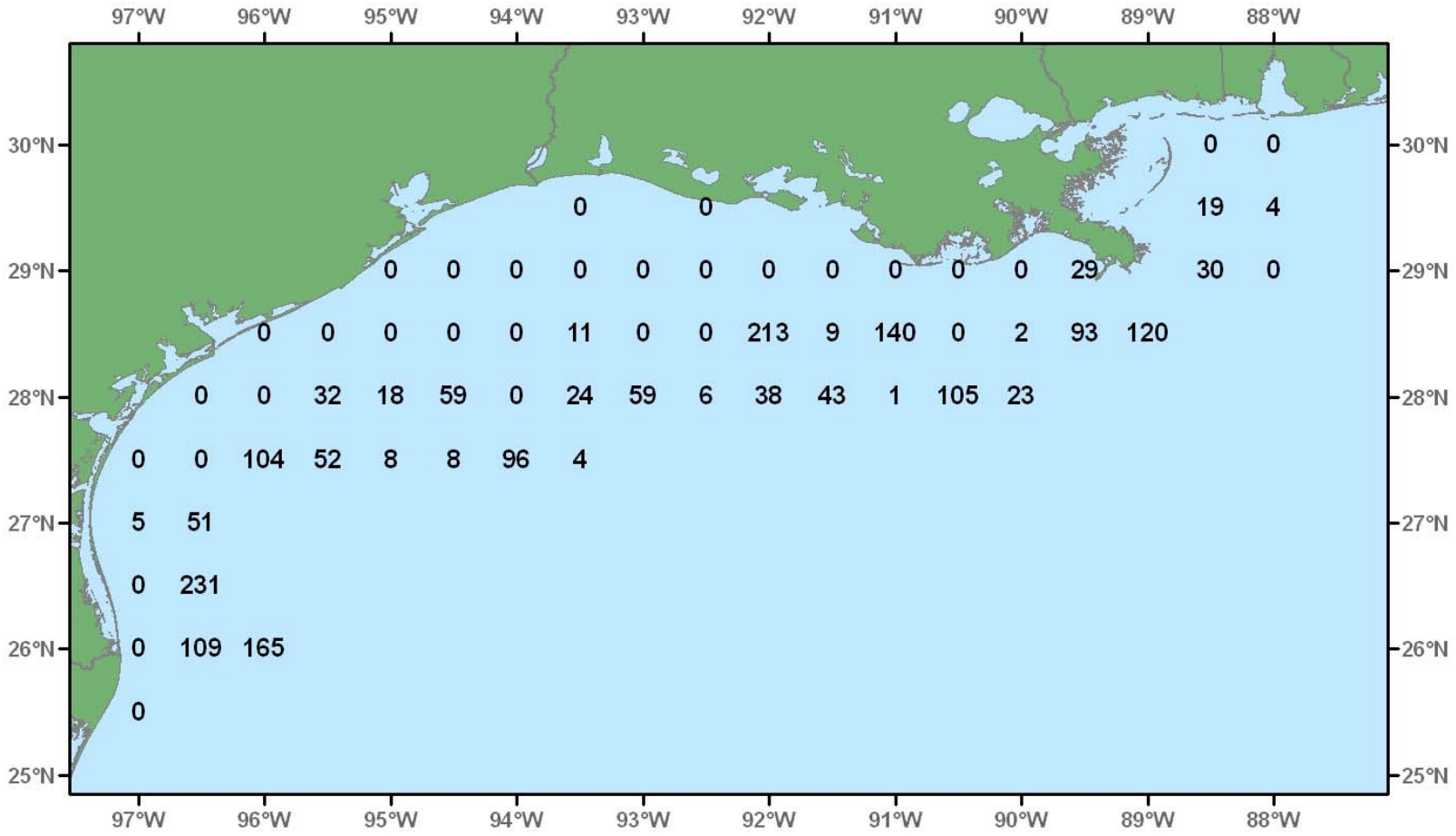

Figure 23. Blackear bass, Serranus atrobranchus, number/hour for June-July 2004.

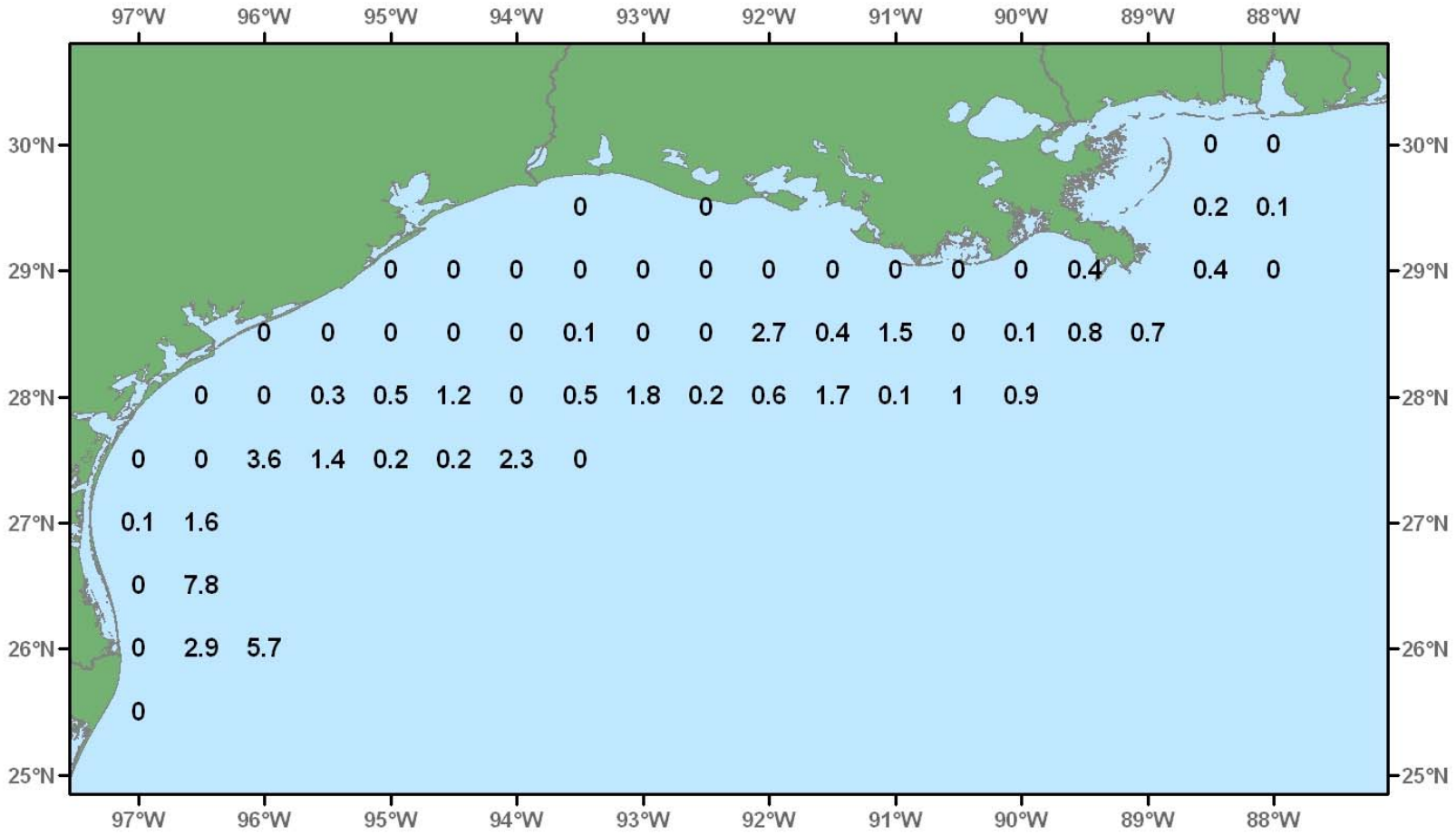

Figure 24. Blackear bass, Serranus atrobranchus, lb/hour for June-July 2004.

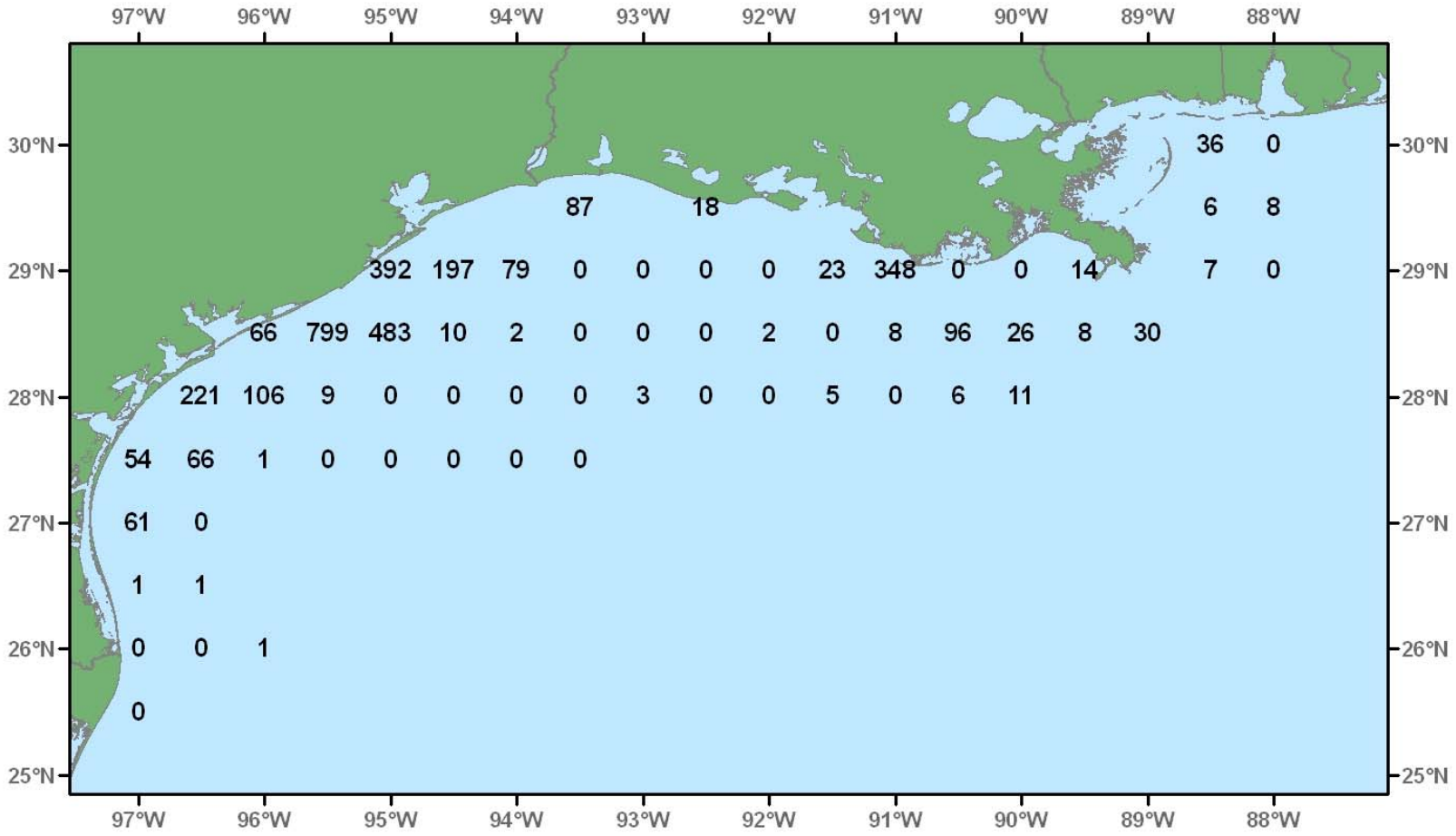

Figure 25. Sand seatrout, Cynoscion arenarius, number/hour for June-July 2004.

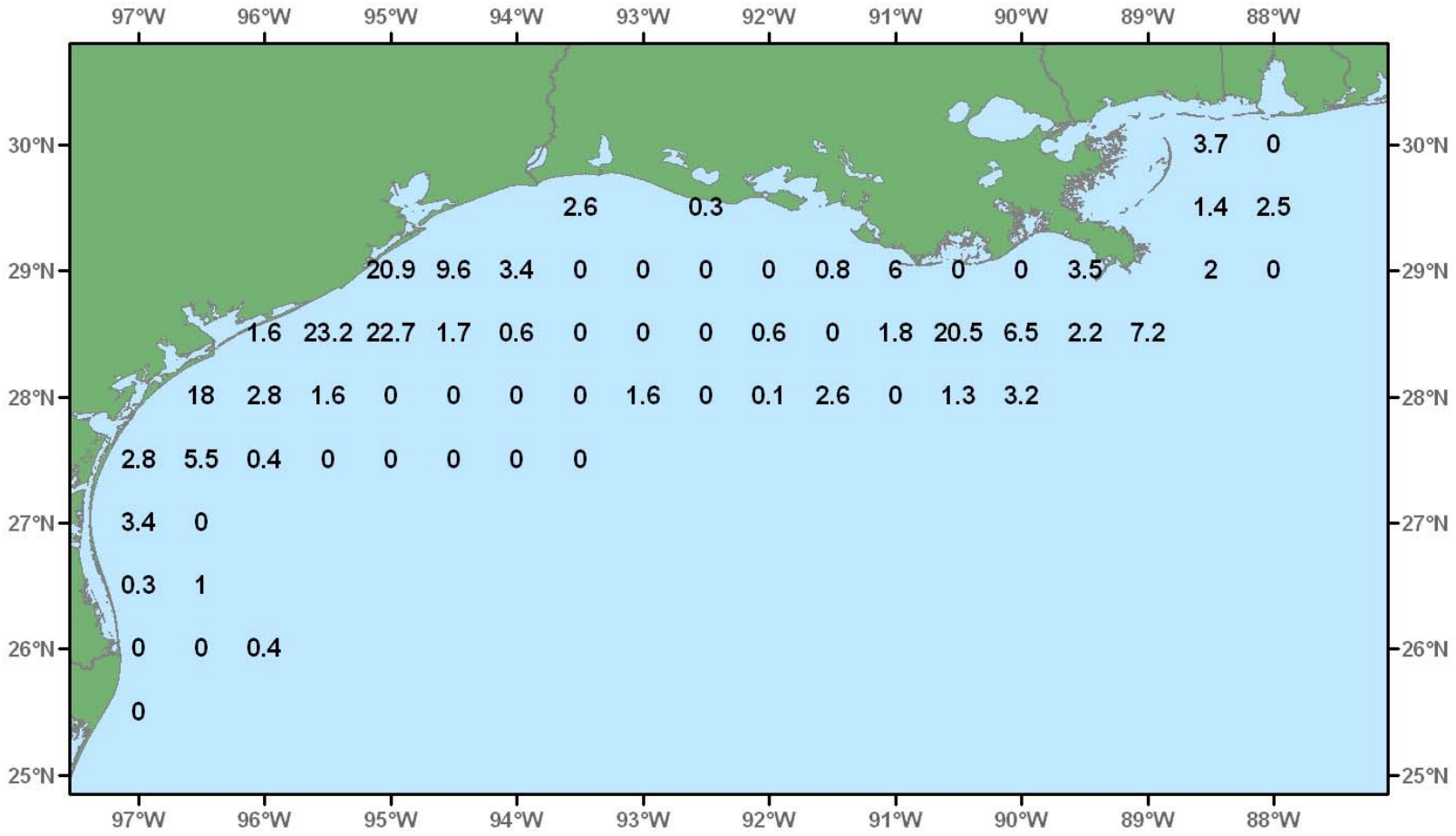

Figure 26. Sand seatrout, Cynoscion arenarius, lb/hour for June-July 2004.

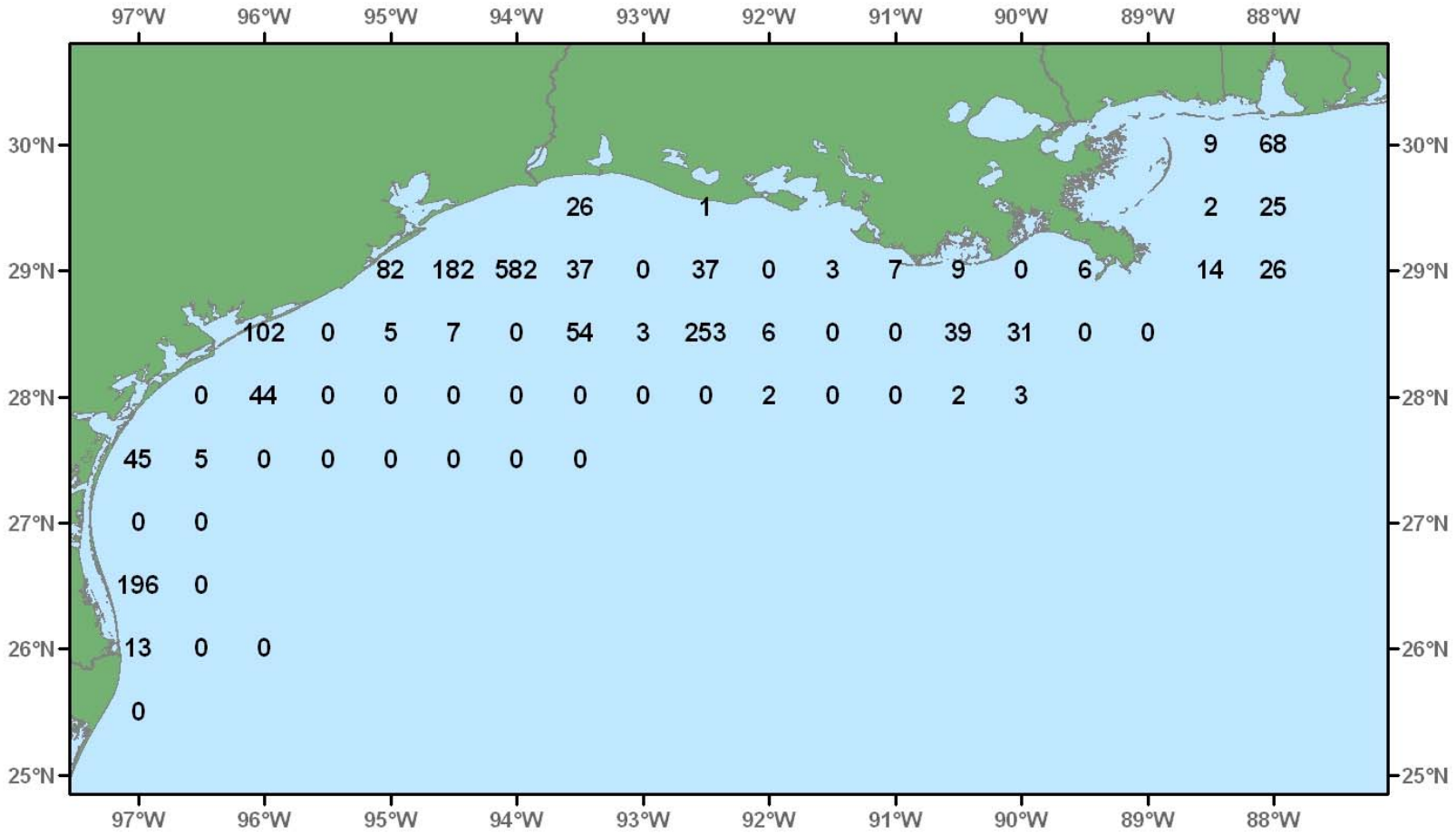

Figure 27. Spot, Leiostomus xanthurus, number/hour for June-July 2004.

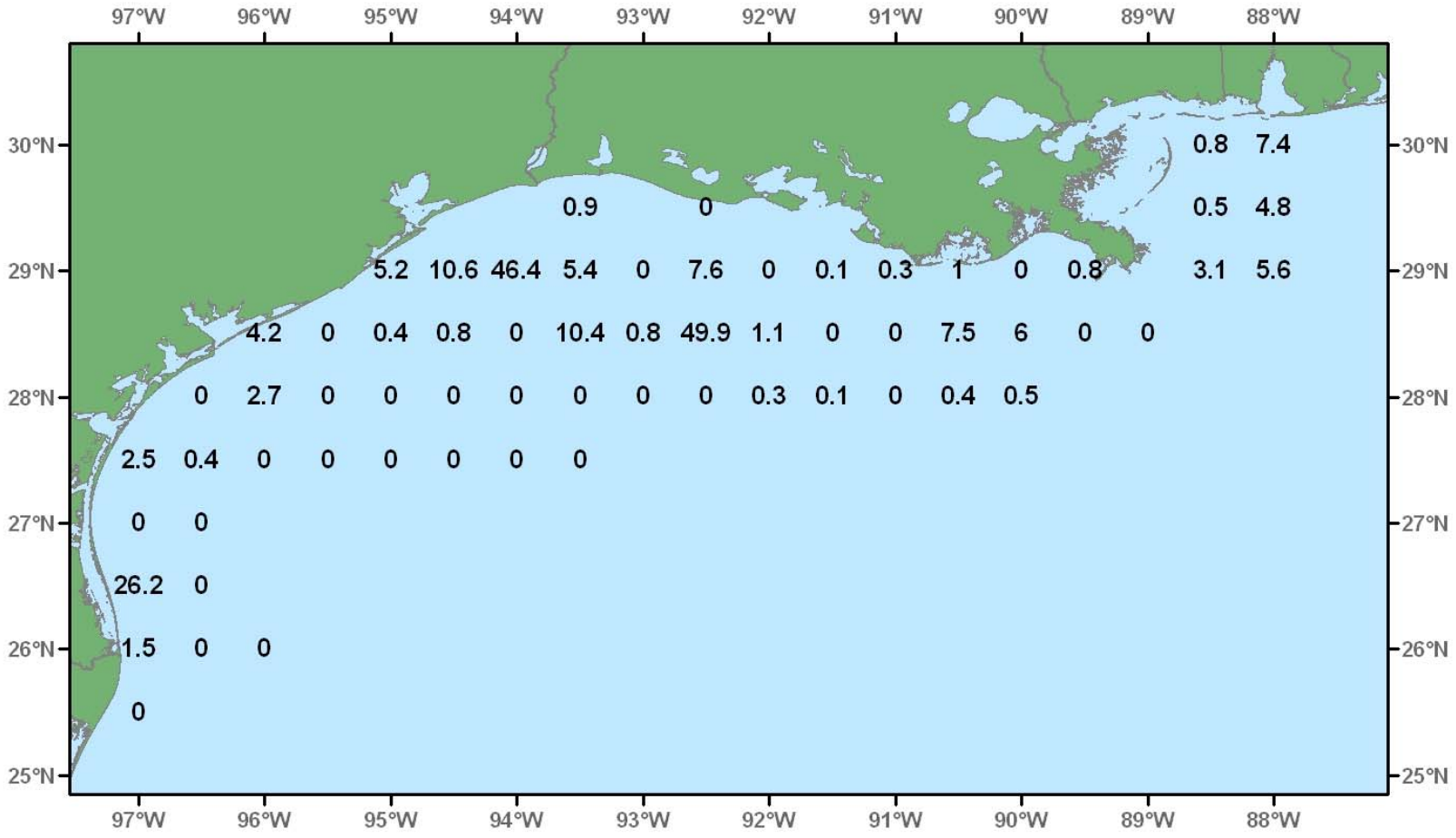

Figure 28. Spot, Leiostomus xanthurus, lb/hour for June-July 2004.

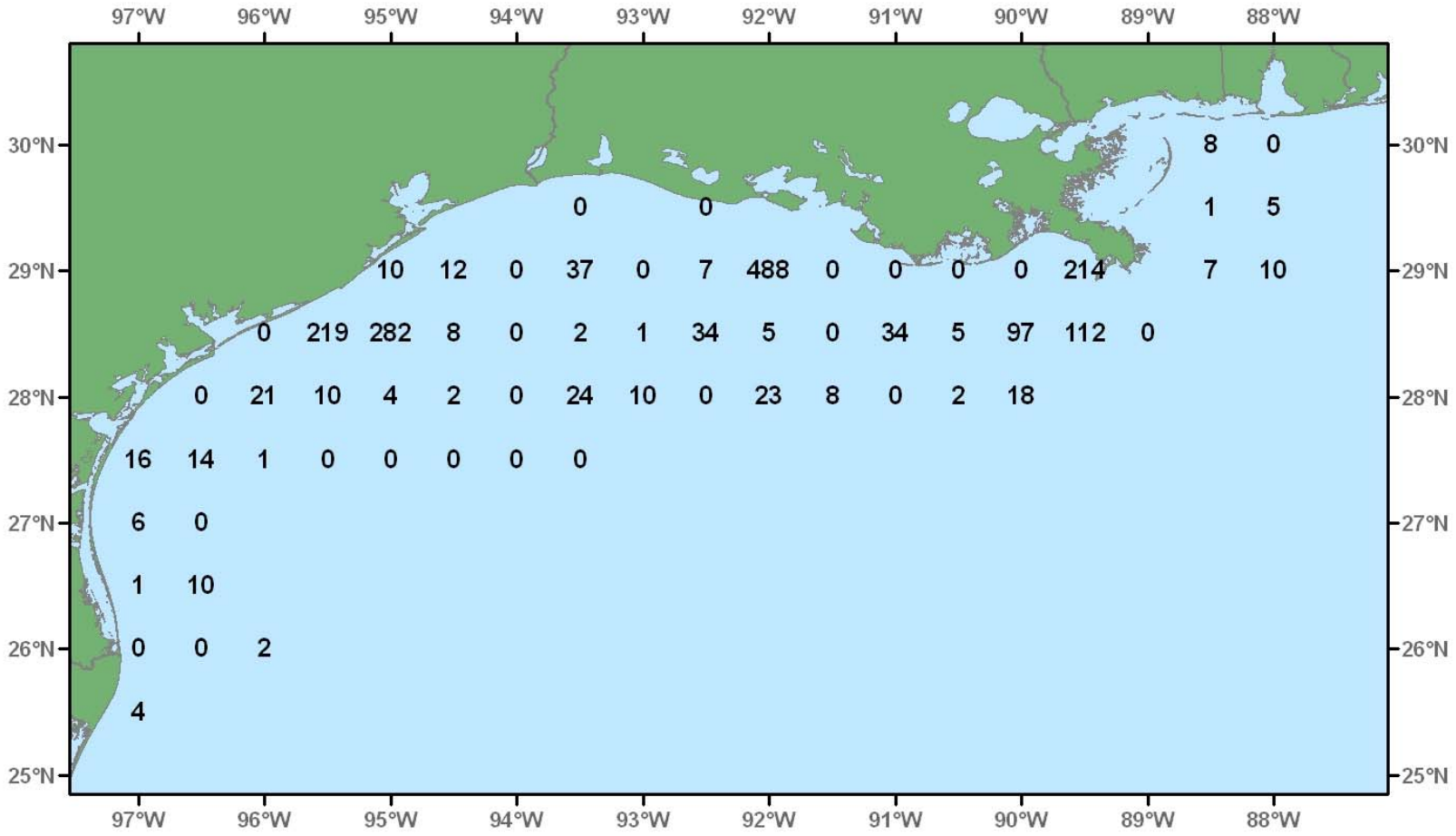

Figure 29. Bigeye searobin, Prionotus longispinosus, number/hour for June-July 2004.

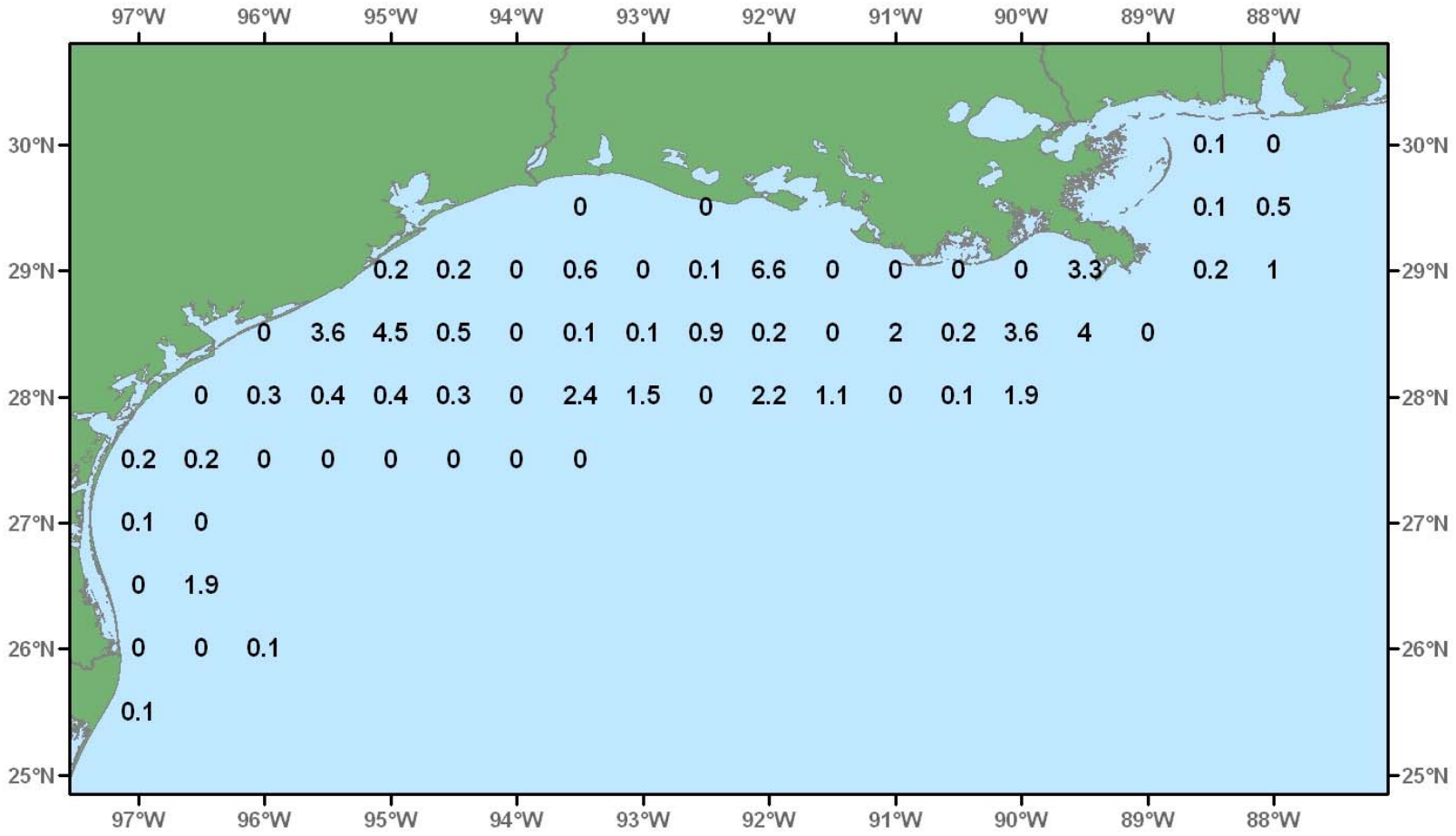

Figure 30. Bigeye searobin, Prionotus longispinosus, lb/hour for June-July 2004.

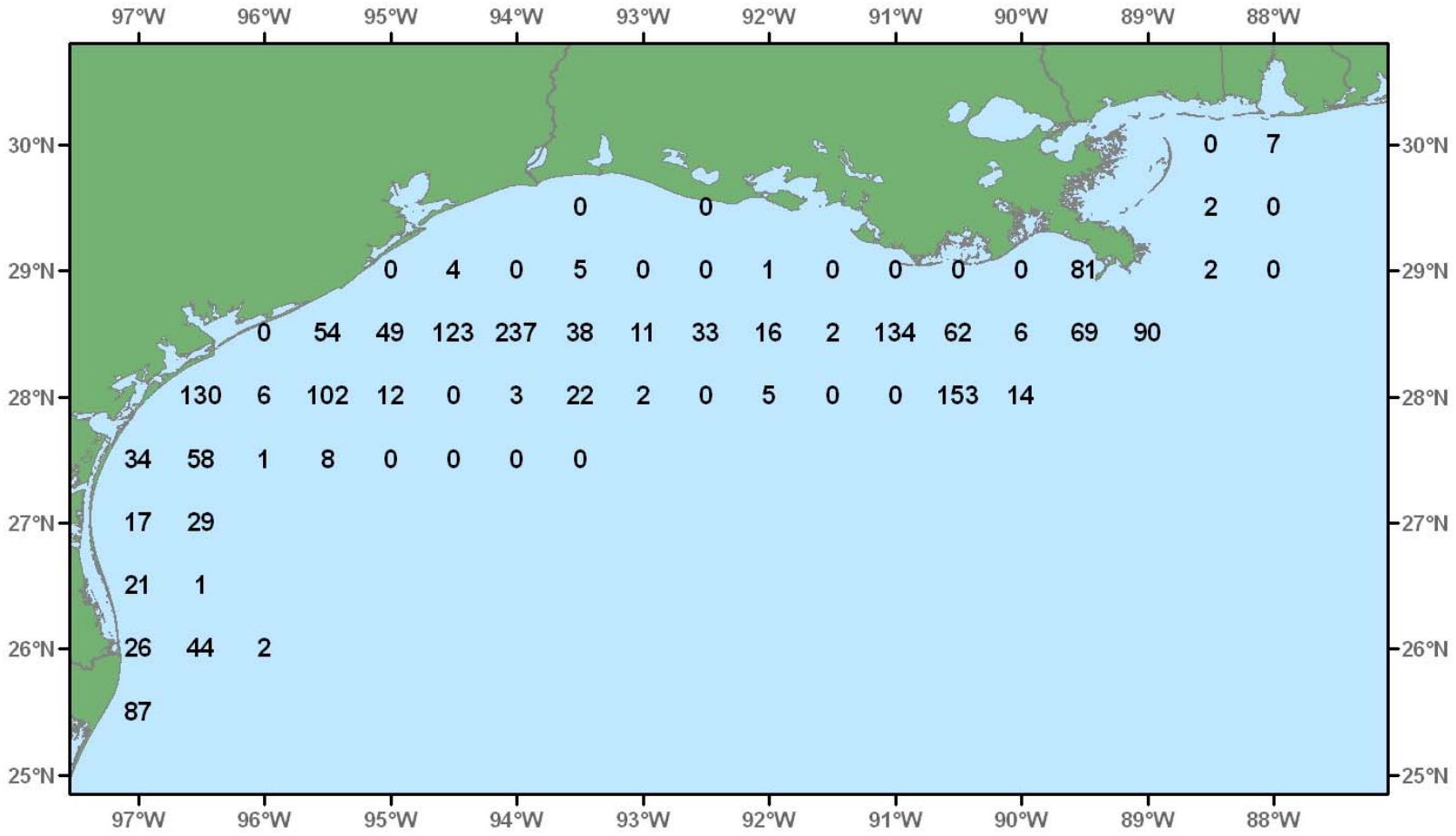

Figure 31. Shoal flounder, Syacium gunteri, number/hour for June-July 2004.

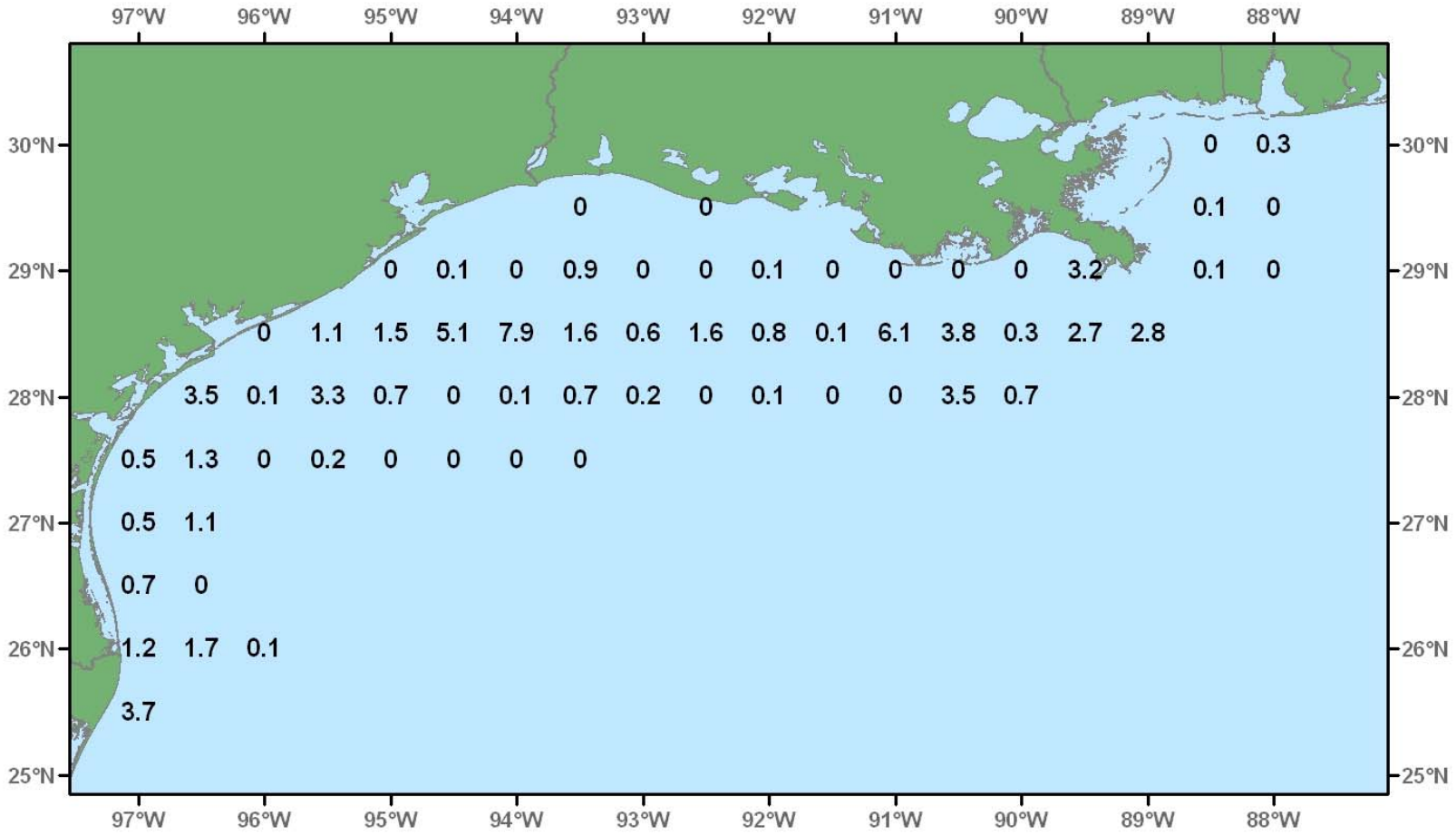

Figure 32. Shoal flounder, Syacium gunteri, lb/hour for June-July 2004.

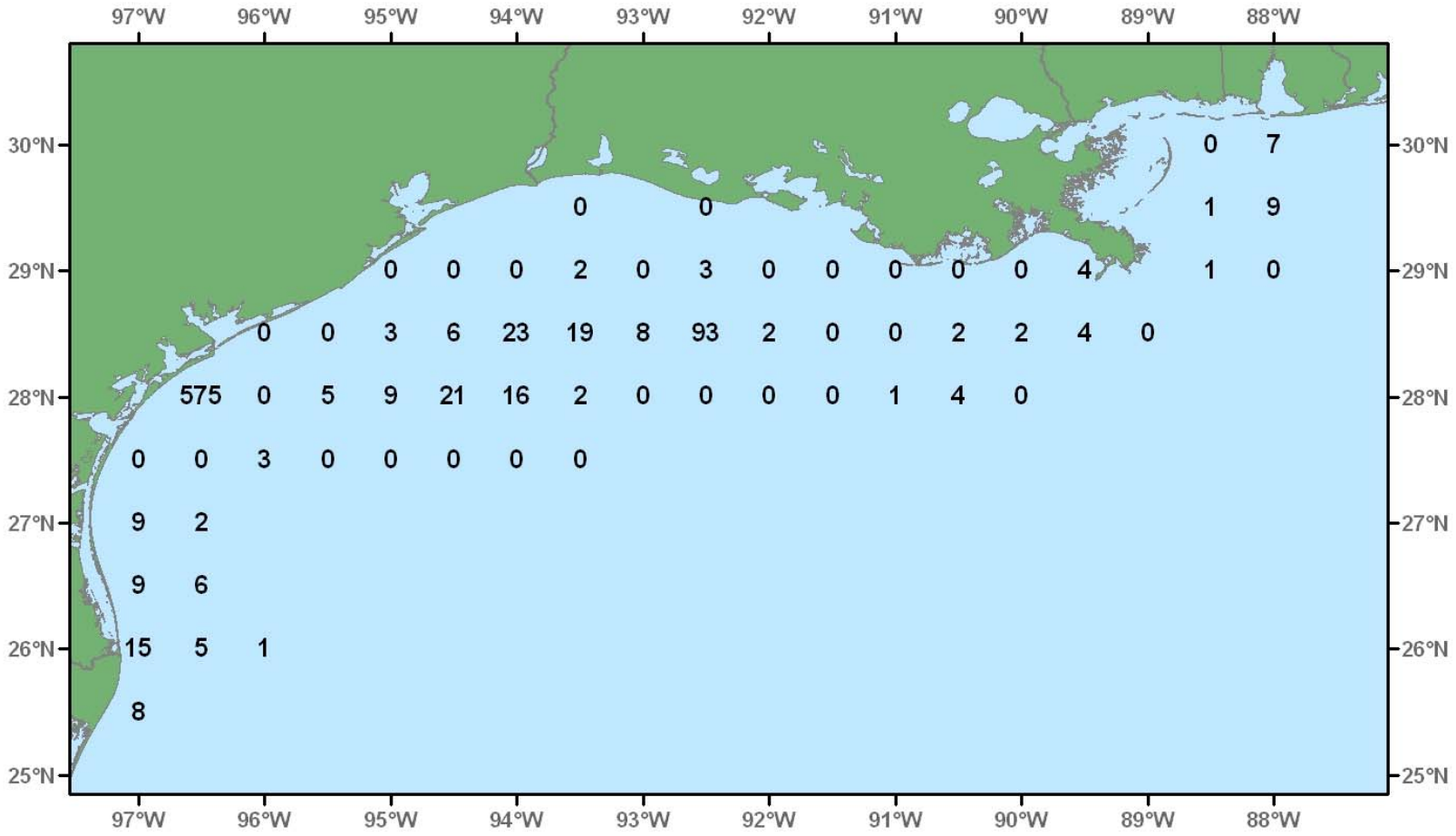

Figure 33. Red snapper, Lutjanus campechanus, number/hour for June-July 2004.

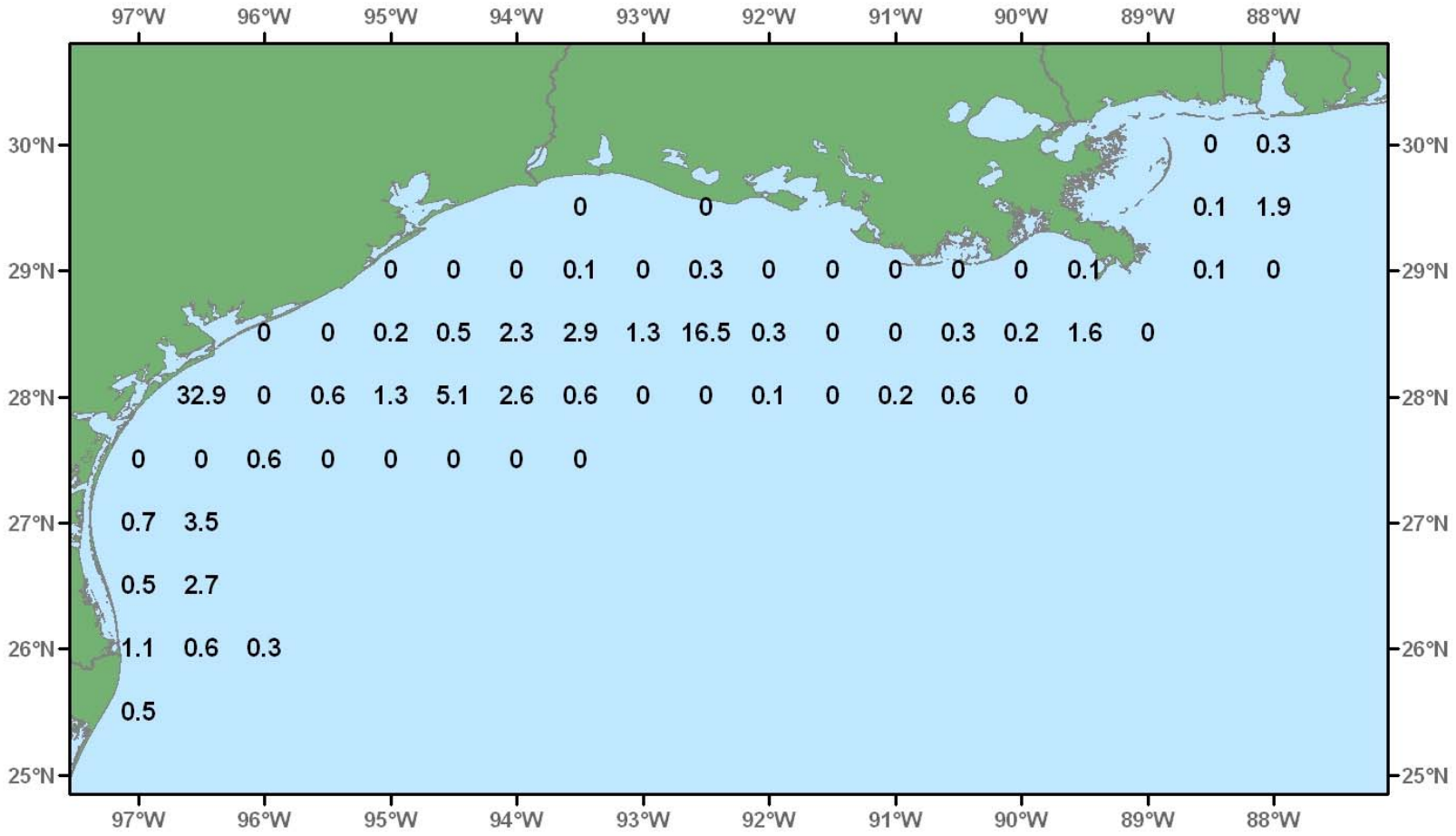

Figure 34. Red snapper, Lutjanus campechanus, lb/hour for June-July 2004.

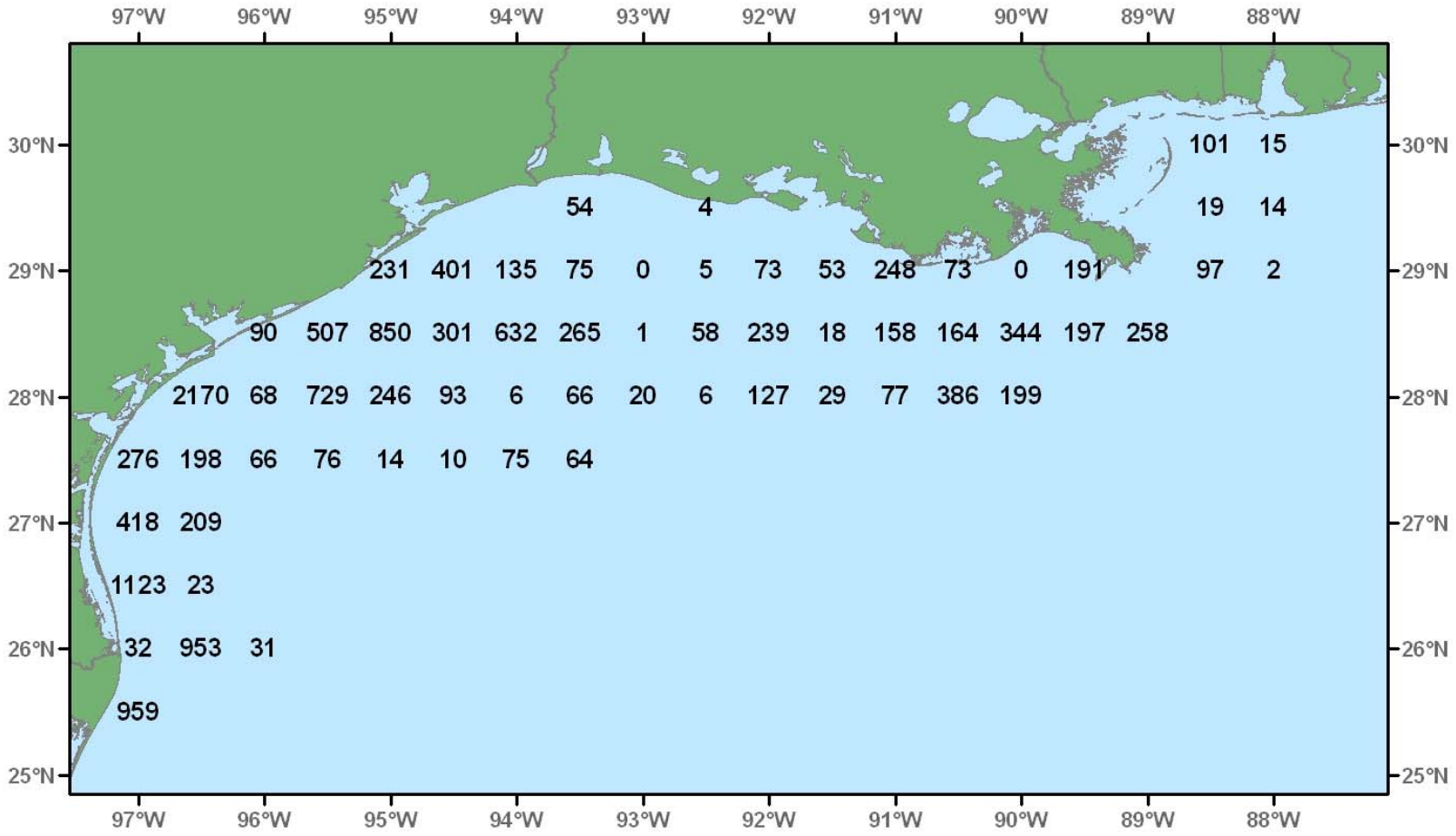

Figure 35. Brown shrimp, Farfantepenaeus aztecus, number/hour for June-July 2004.

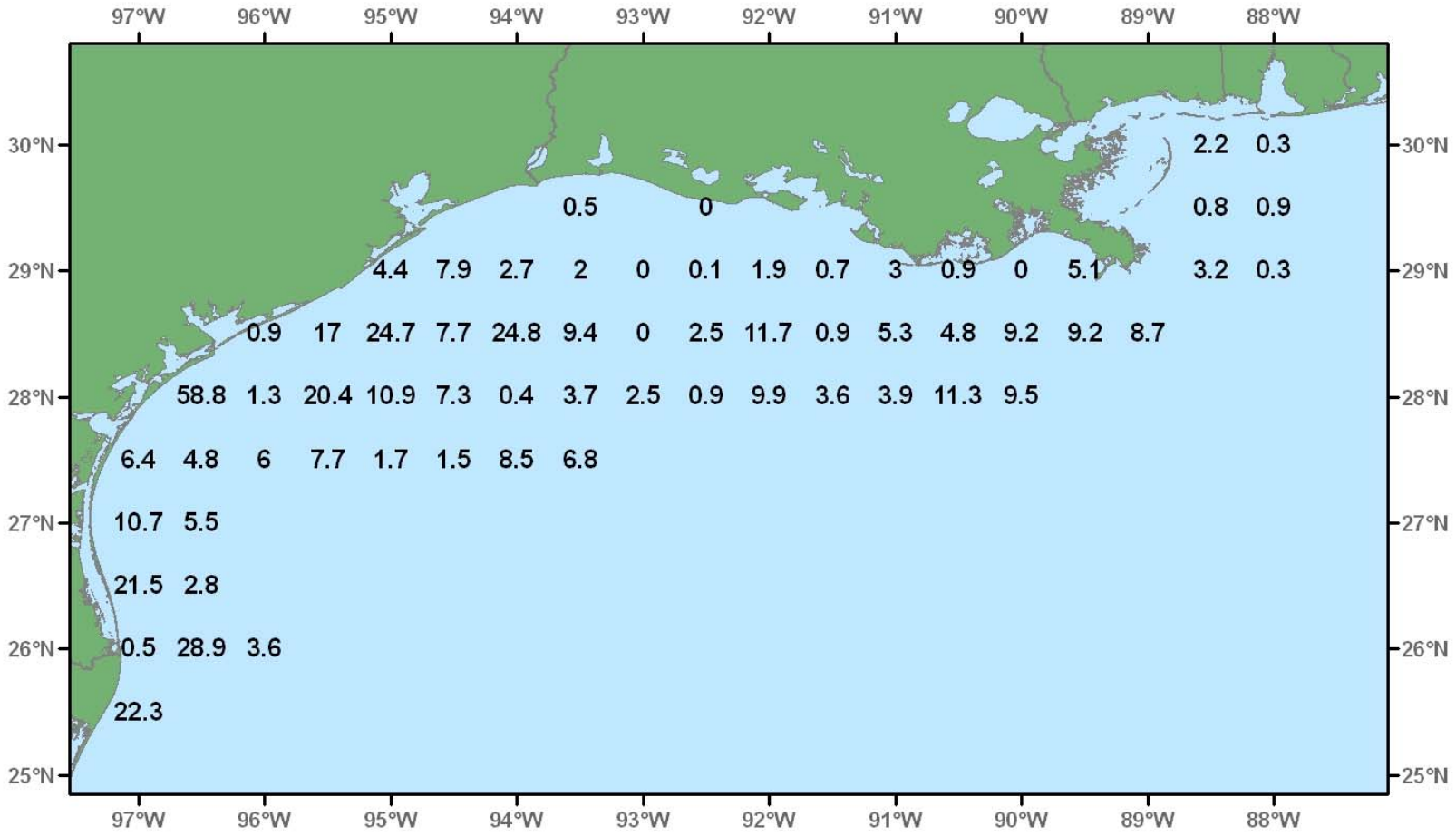

Figure 36. Brown shrimp, Farfantepenaeus aztecus, lb/hour for June-July 2004.

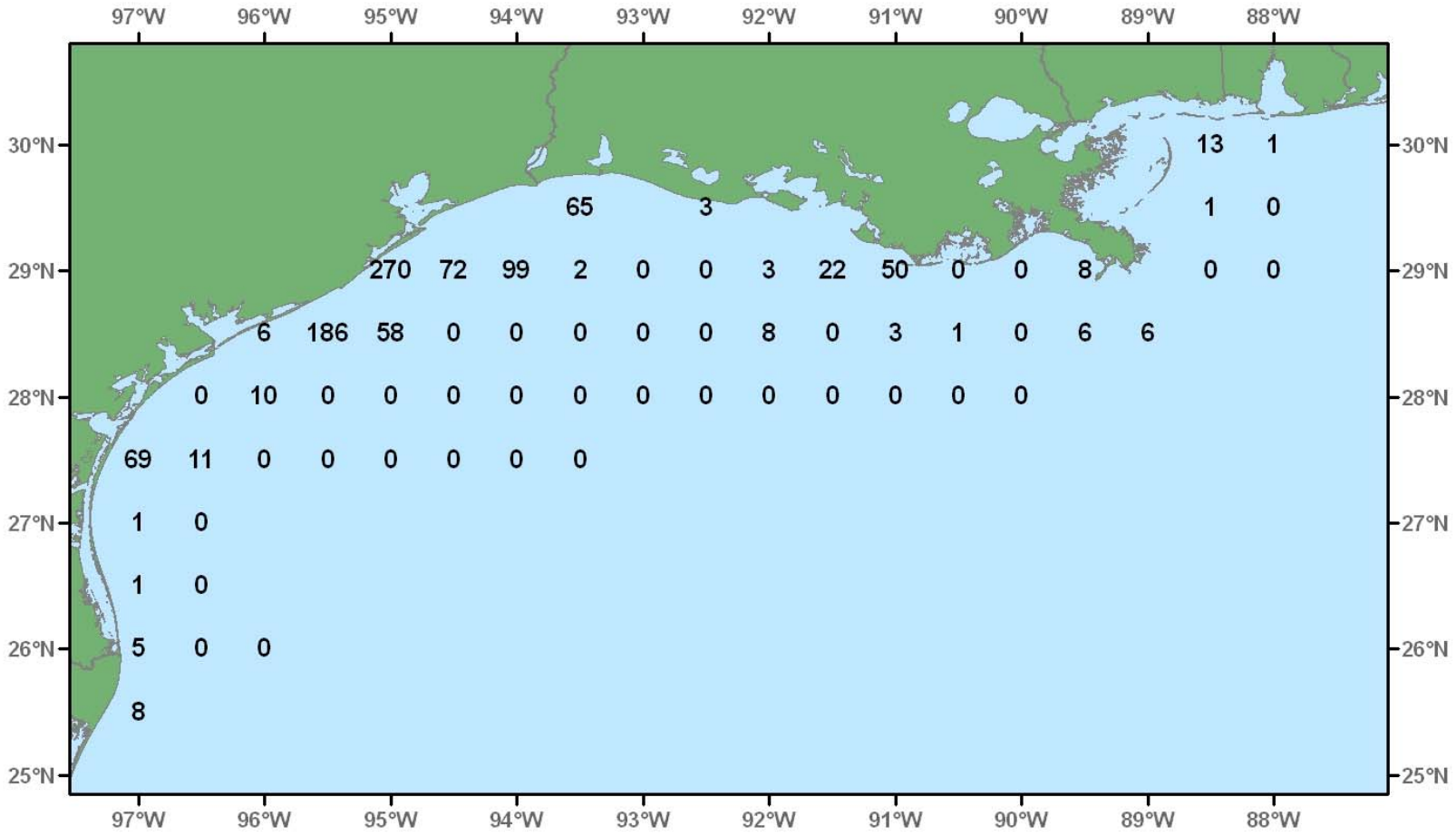

Figure 37. White shrimp, Litopenaeus setiferus, number/hour for June-July 2004.

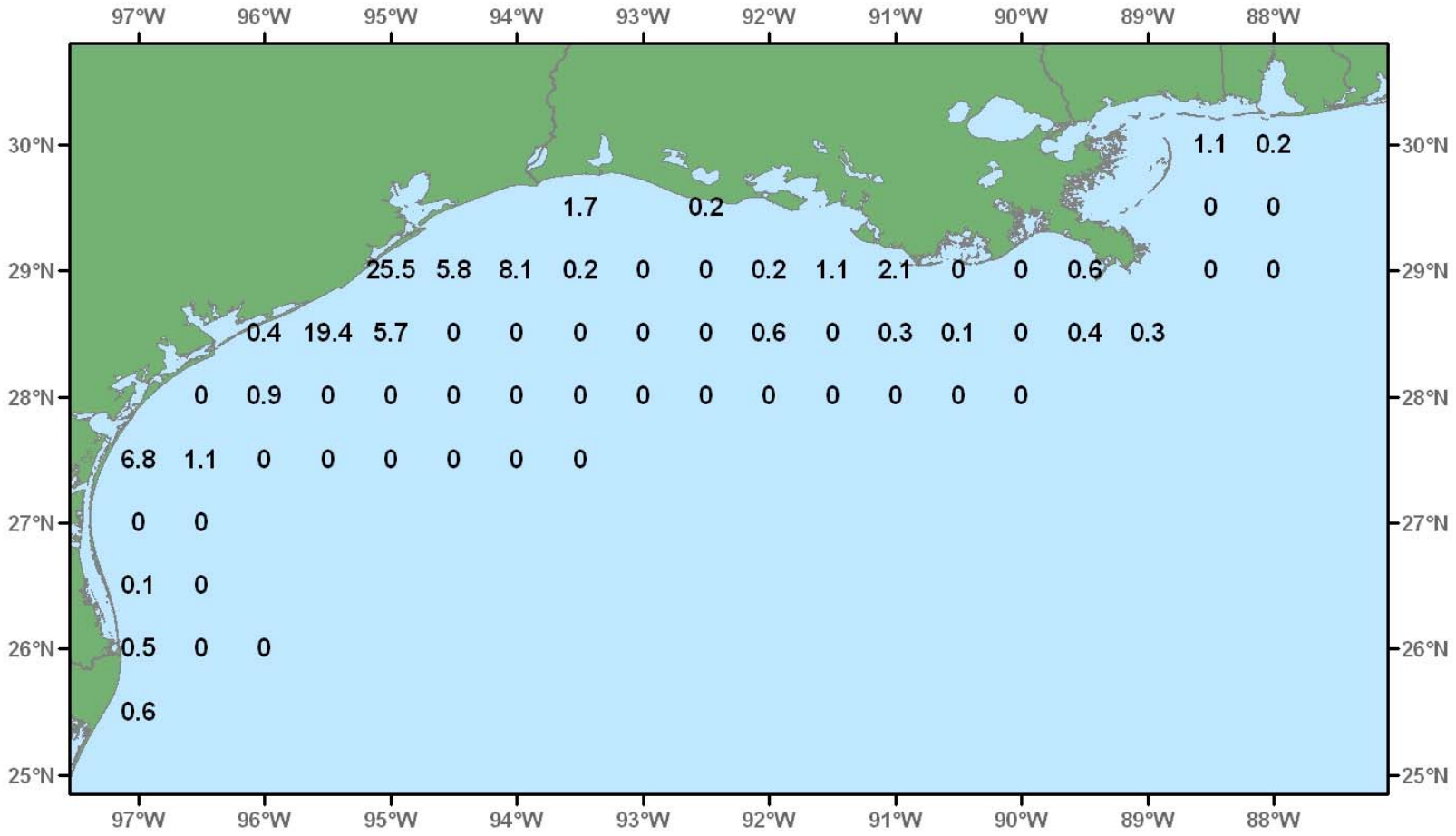

Figure 38. White shrimp, Litopenaeus setiferus, lb/hour for June-July 2004.

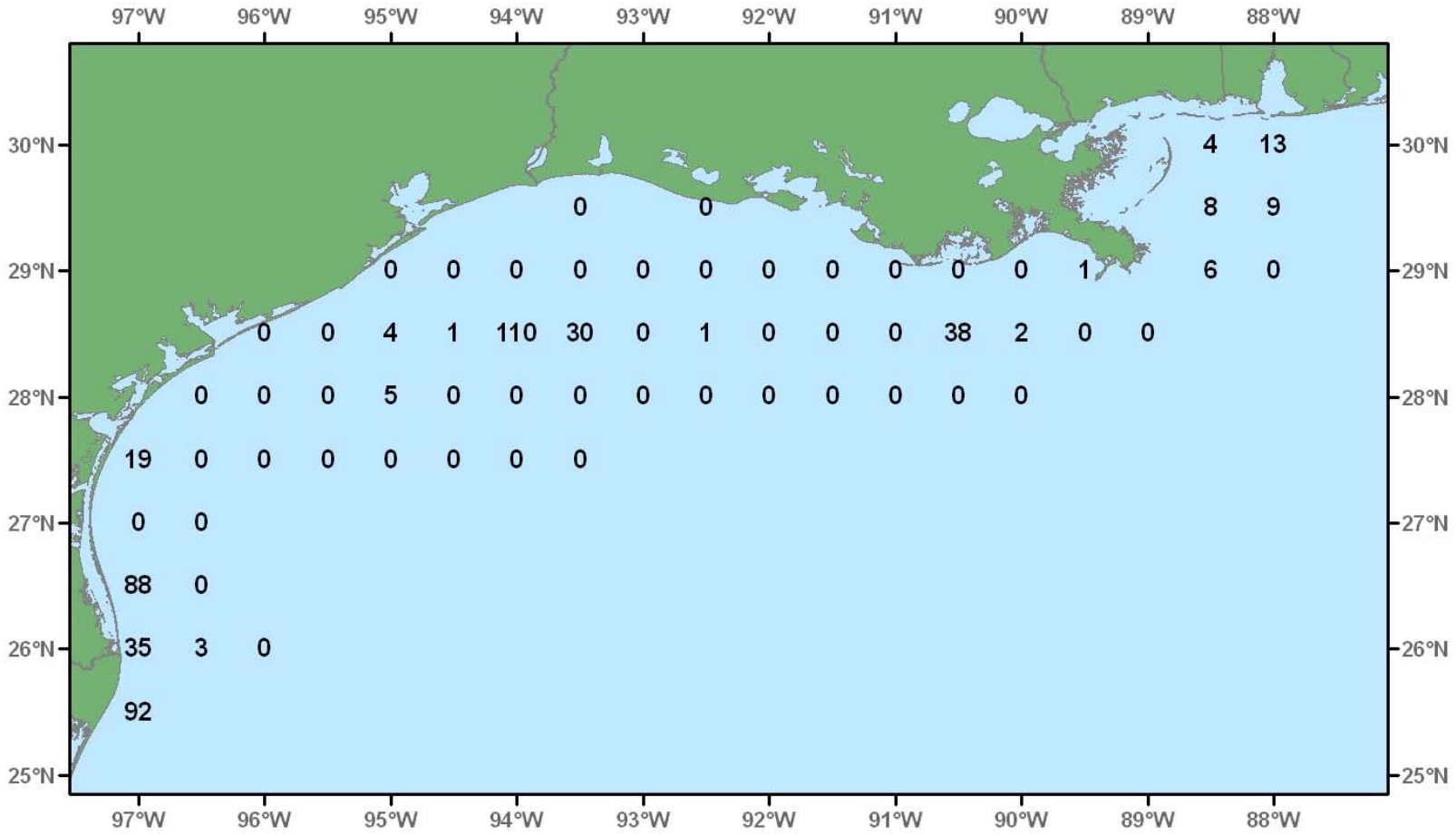

Figure 39. Pink shrimp, Farfantepenaeus duorarum, number/hour for June-July 2004.

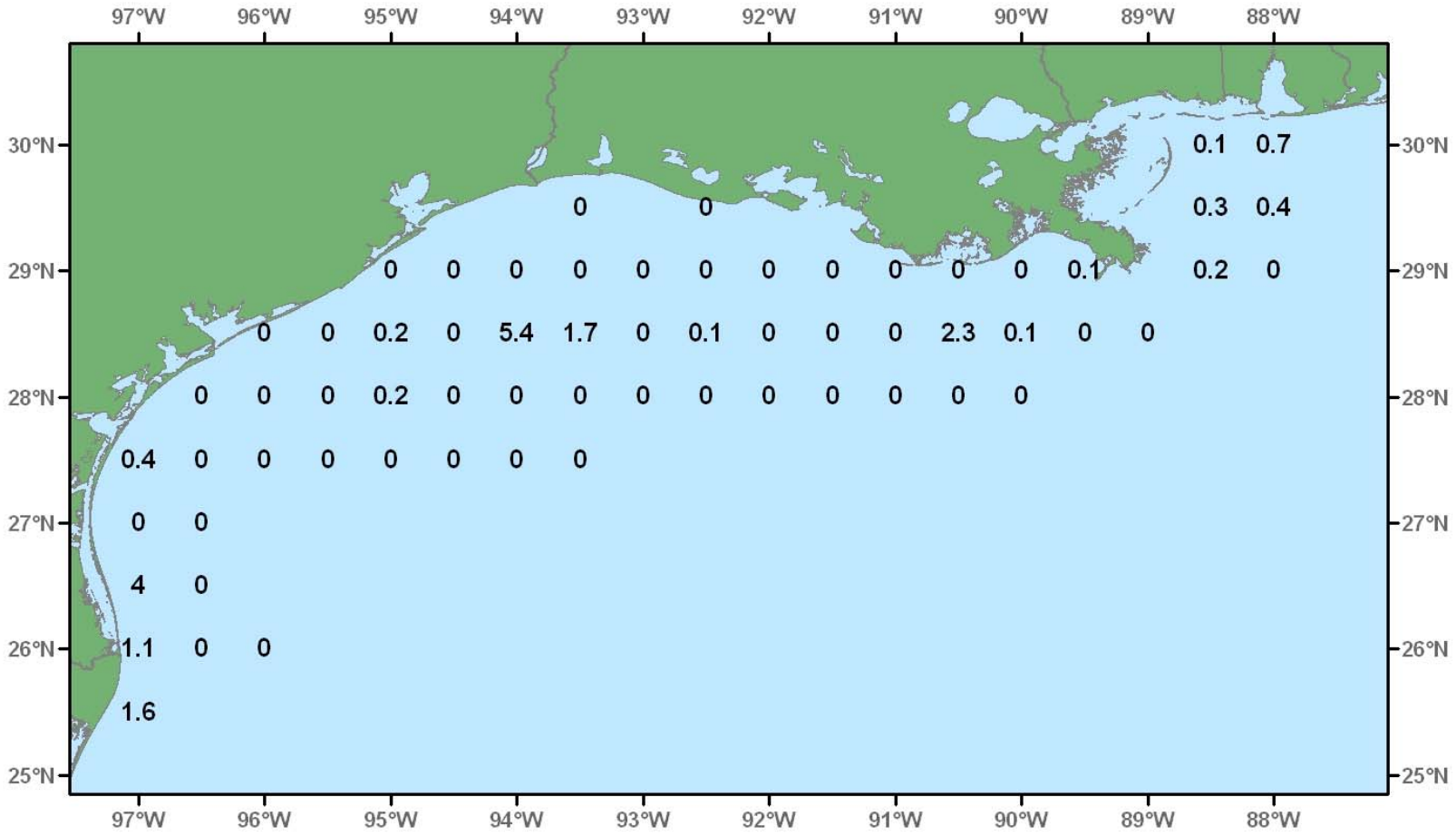

Figure 40. Pink shrimp, Farfantepenaeus duorarum, lb/hour for June-July 2004.

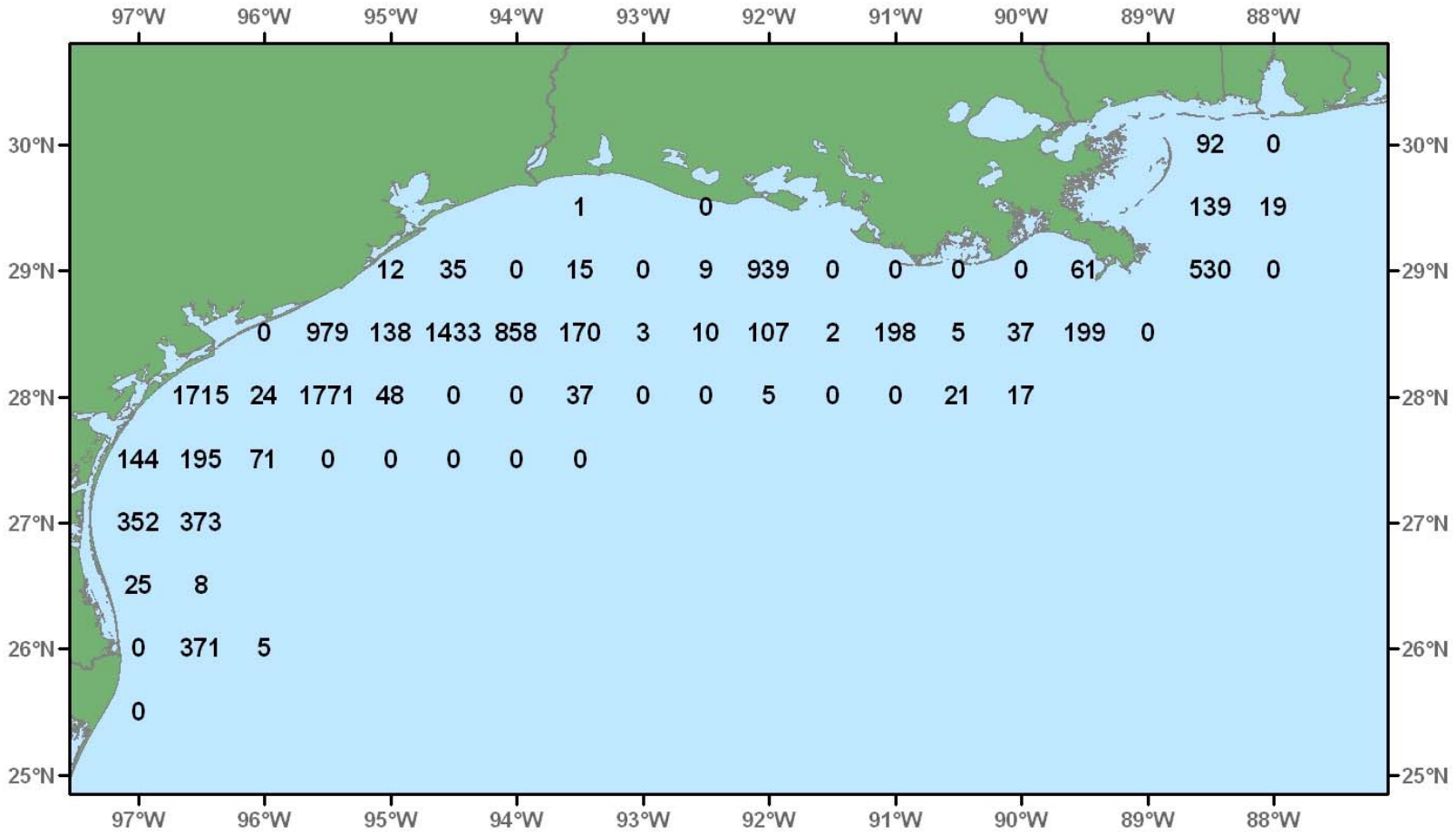

Figure 41. Roughback shrimp, Trachypenaeus similis, number/hour for June-July 2004.

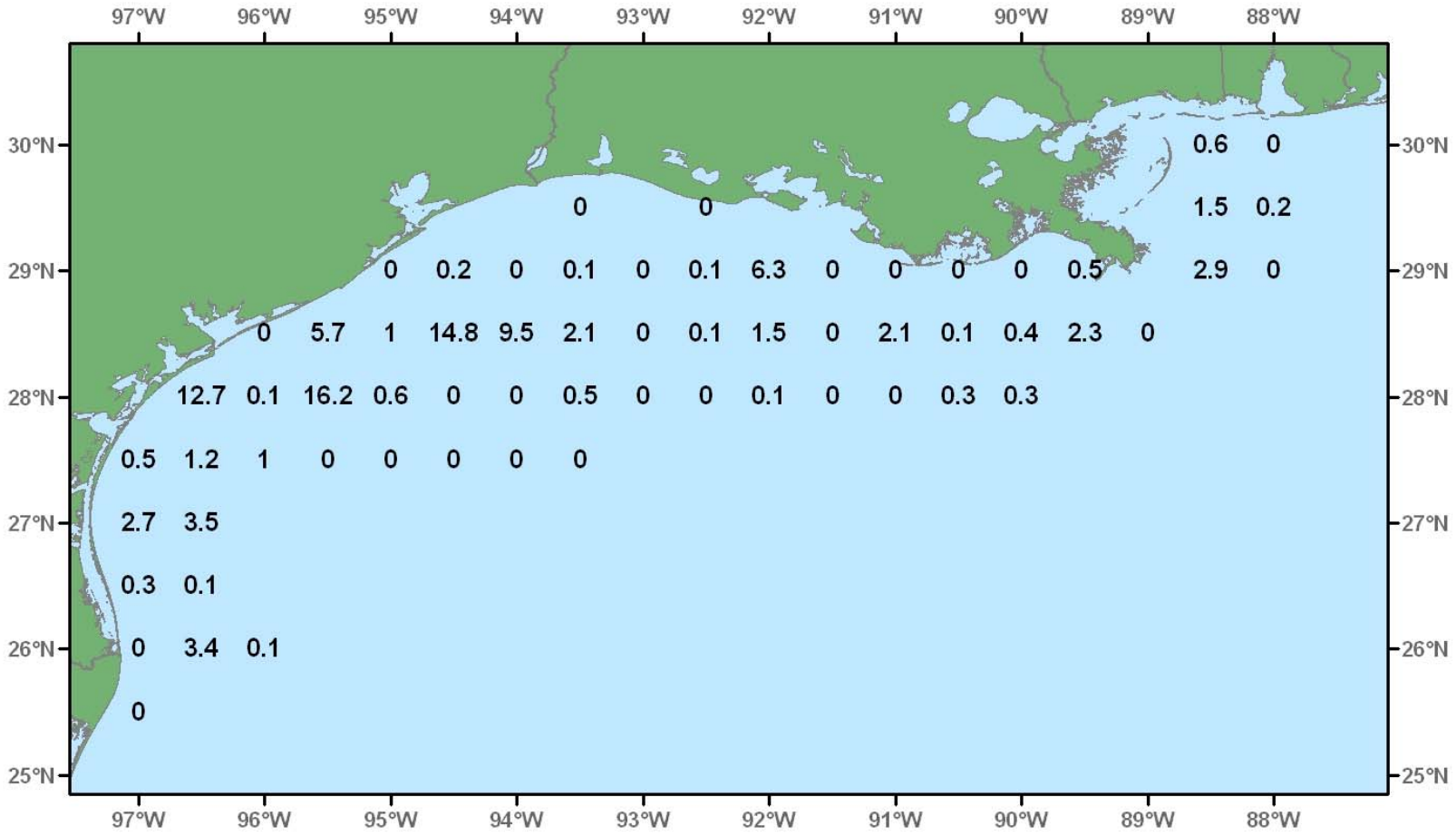

Figure 42. Roughback shrimp, Trachypenaeus similis, lb/hour for June-July 2004.

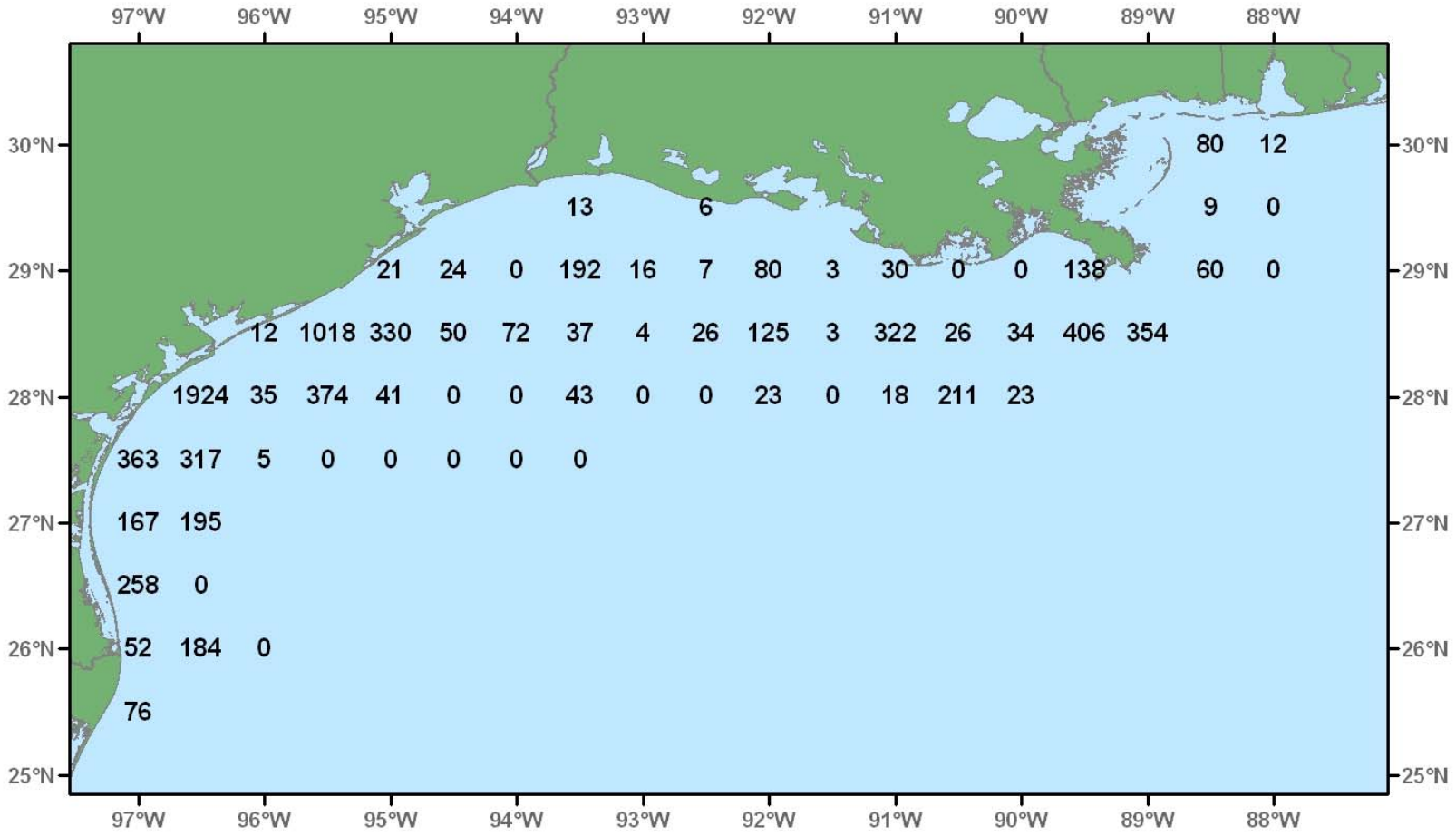

Figure 43. Lesser blue crab, Callinectes similis, number/hour for June-July 2004.

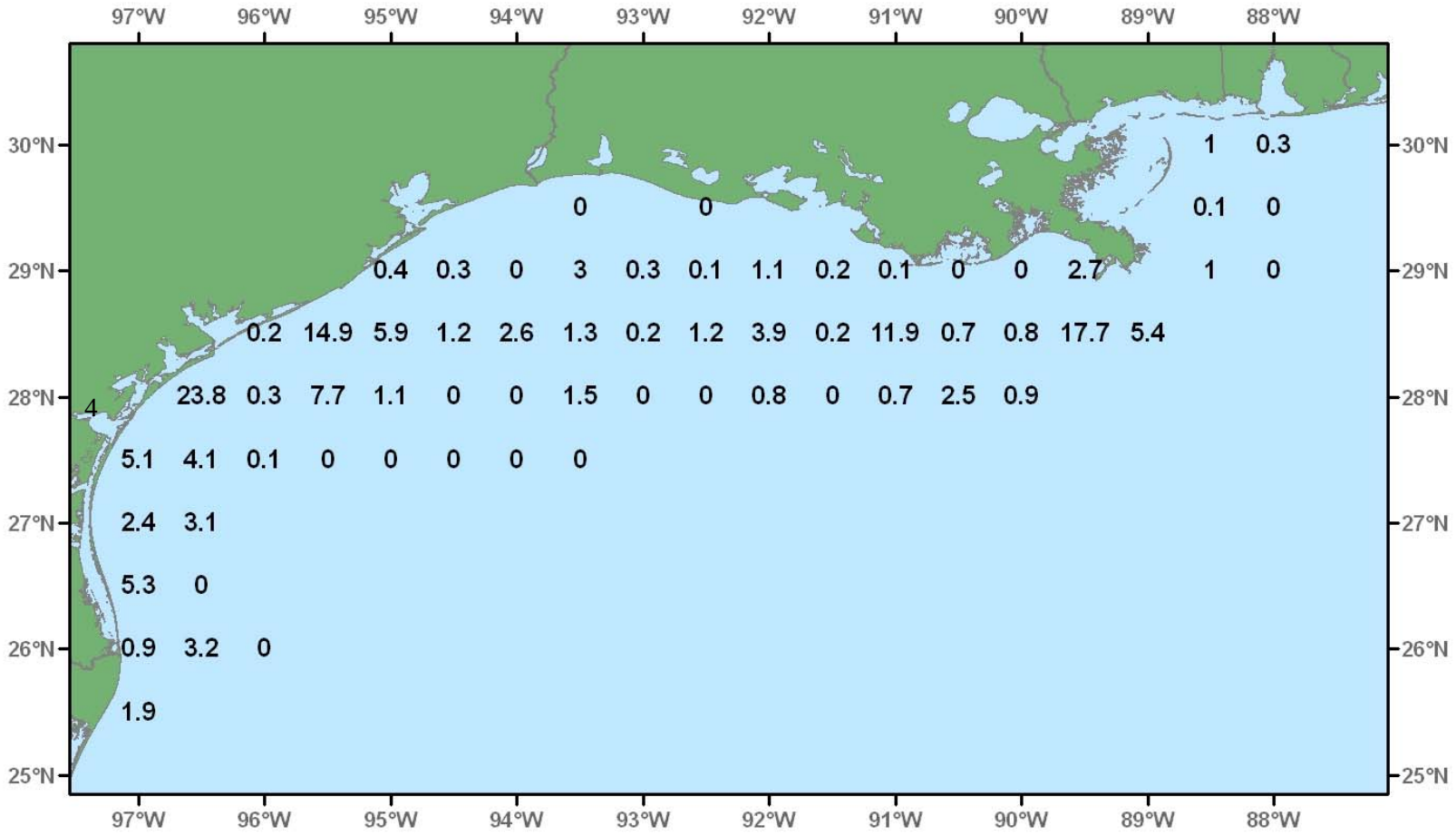

Figure 44. Lesser blue crab, Callinectes similis, lb/hour for June-July 2004.

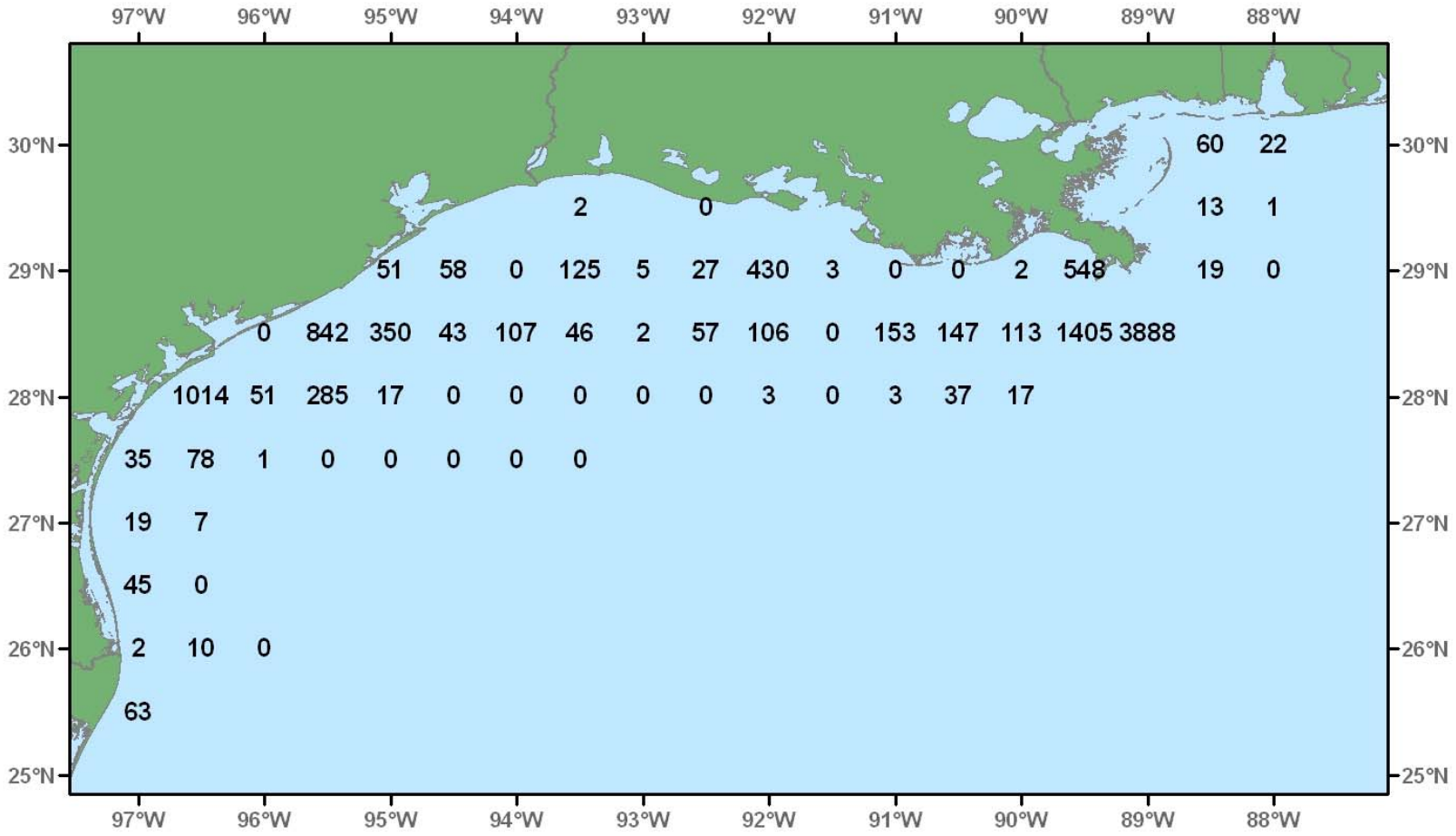

Figure 45. Mantis shrimp, Squilla empusa, number/hour for June-July 2004.

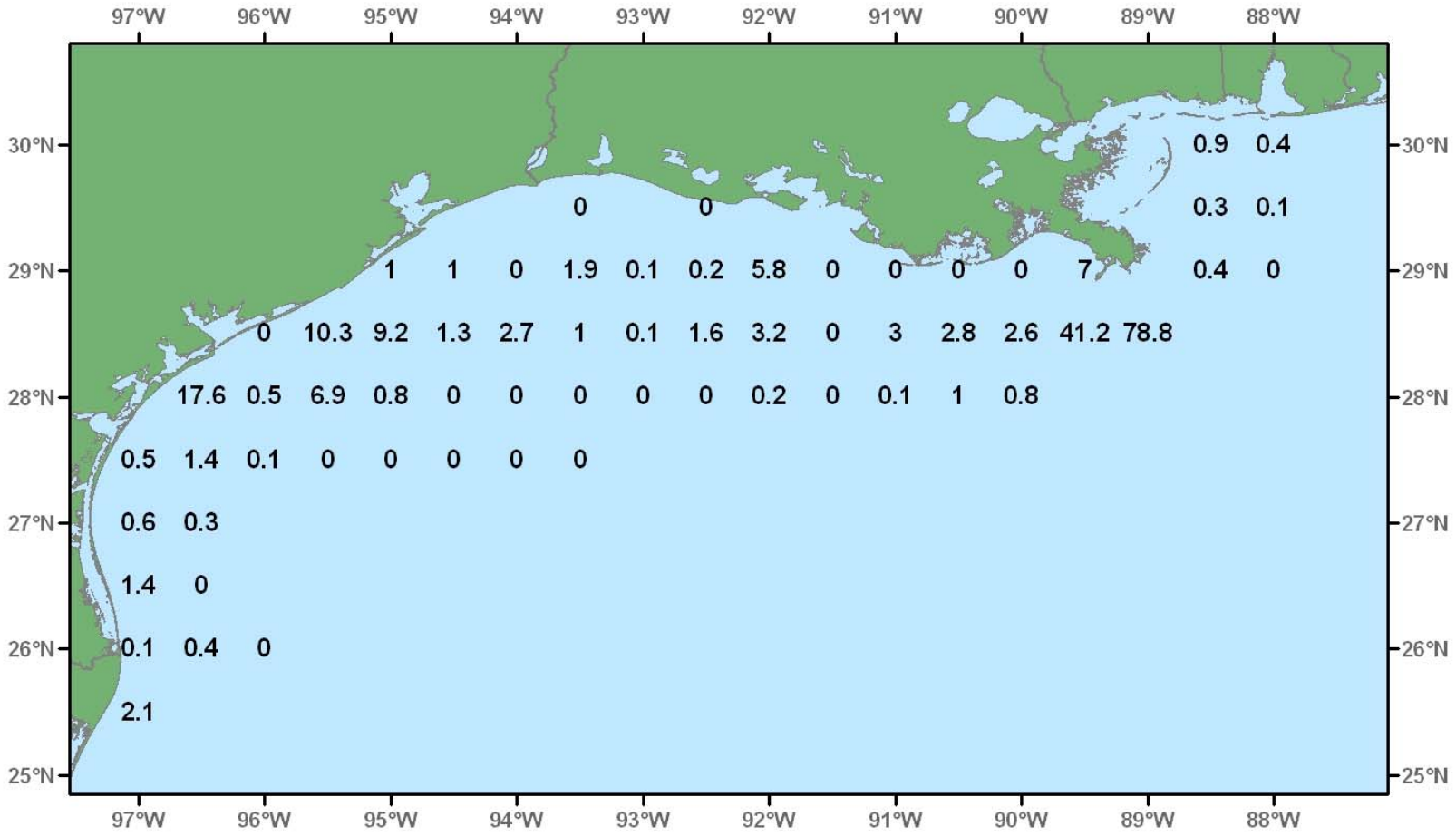

Figure 46. Mantis shrimp, Squilla empusa, lb/hour for June-July 2004.

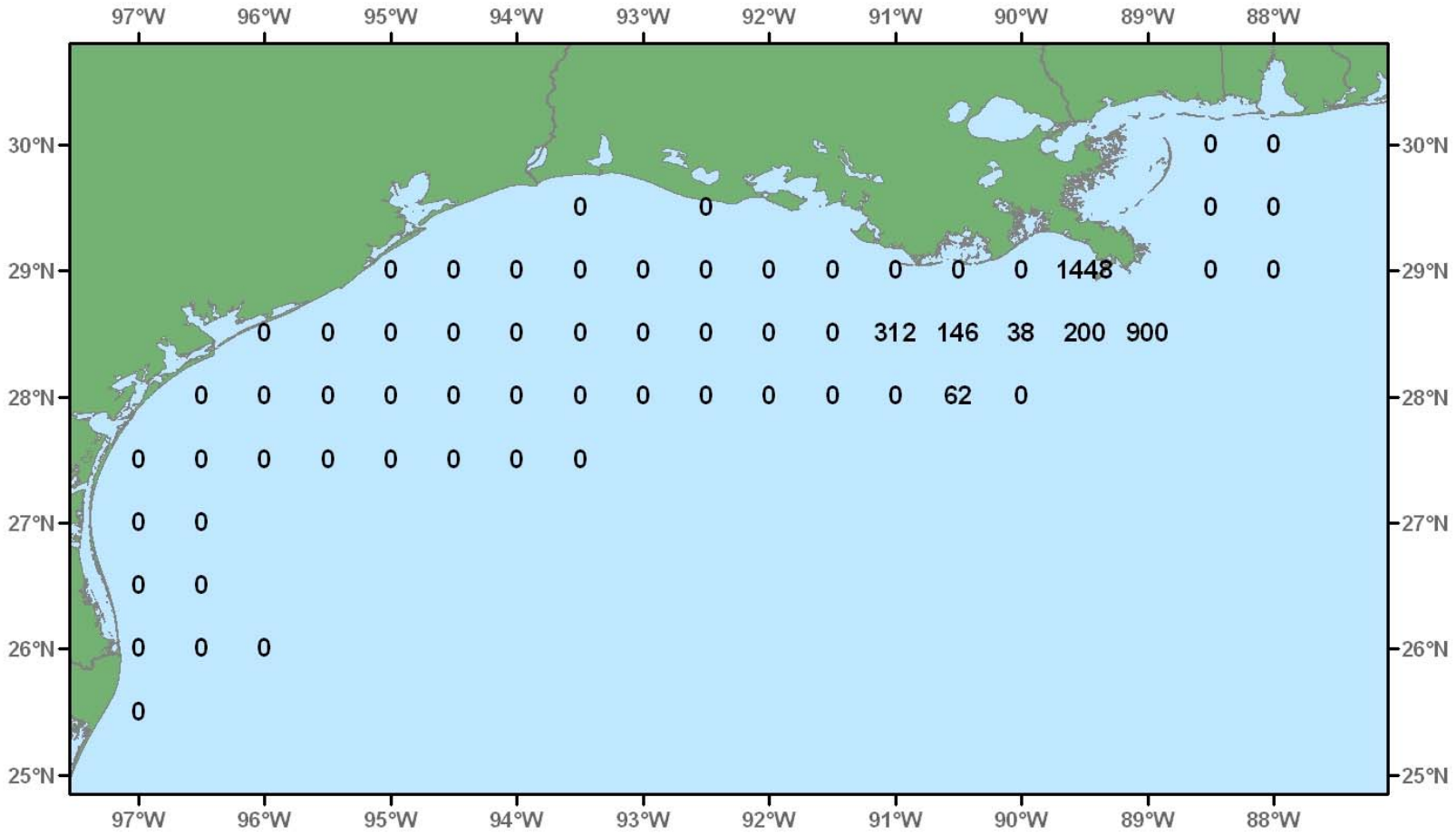

Figure 47. Roughneck shrimp, Trachypenaeus spp., number/hour for June-July 2004.

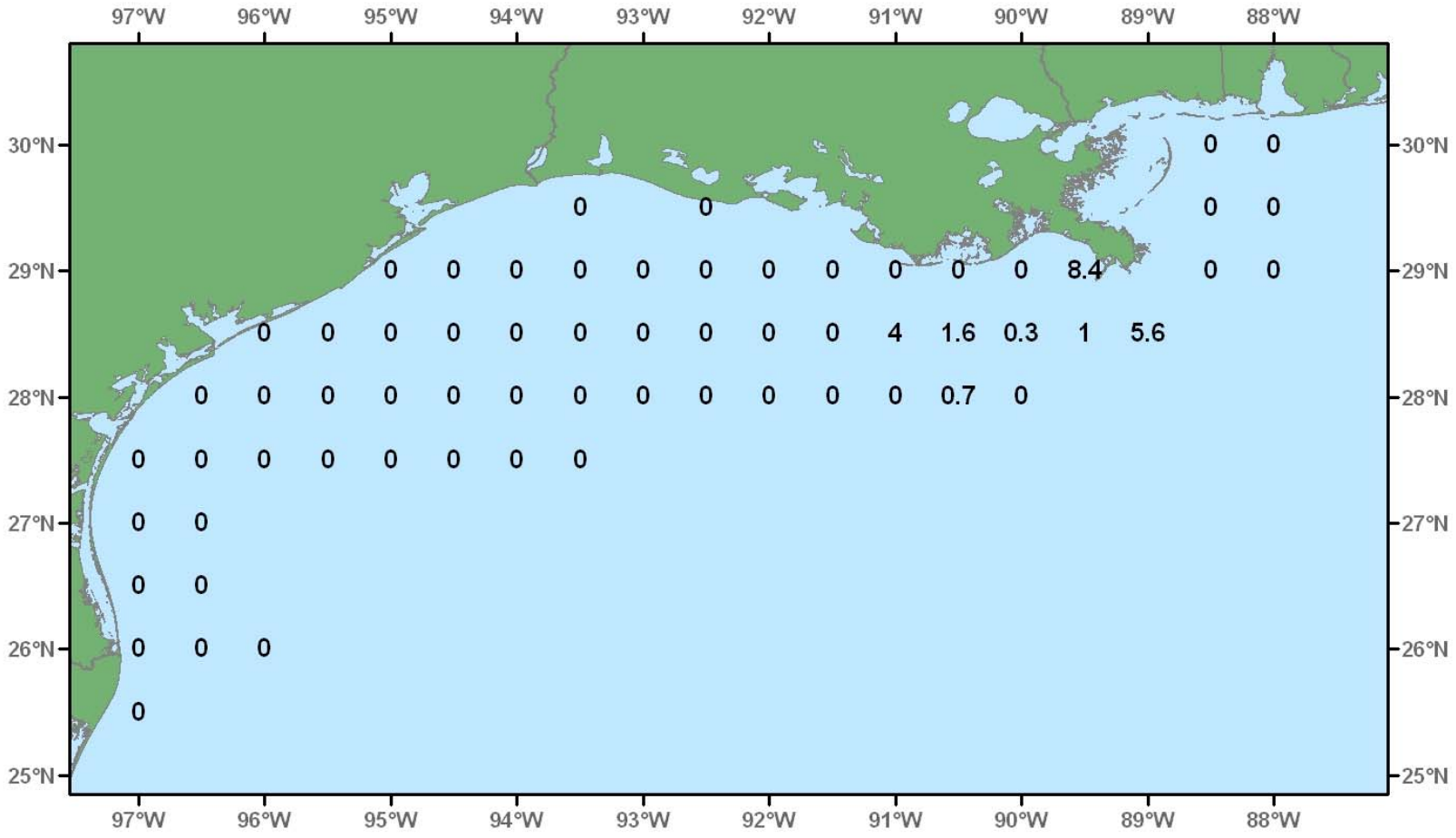

Figure 48. Roughneck shrimp, Trachypenaeus spp., number/hour for June-July 2004.

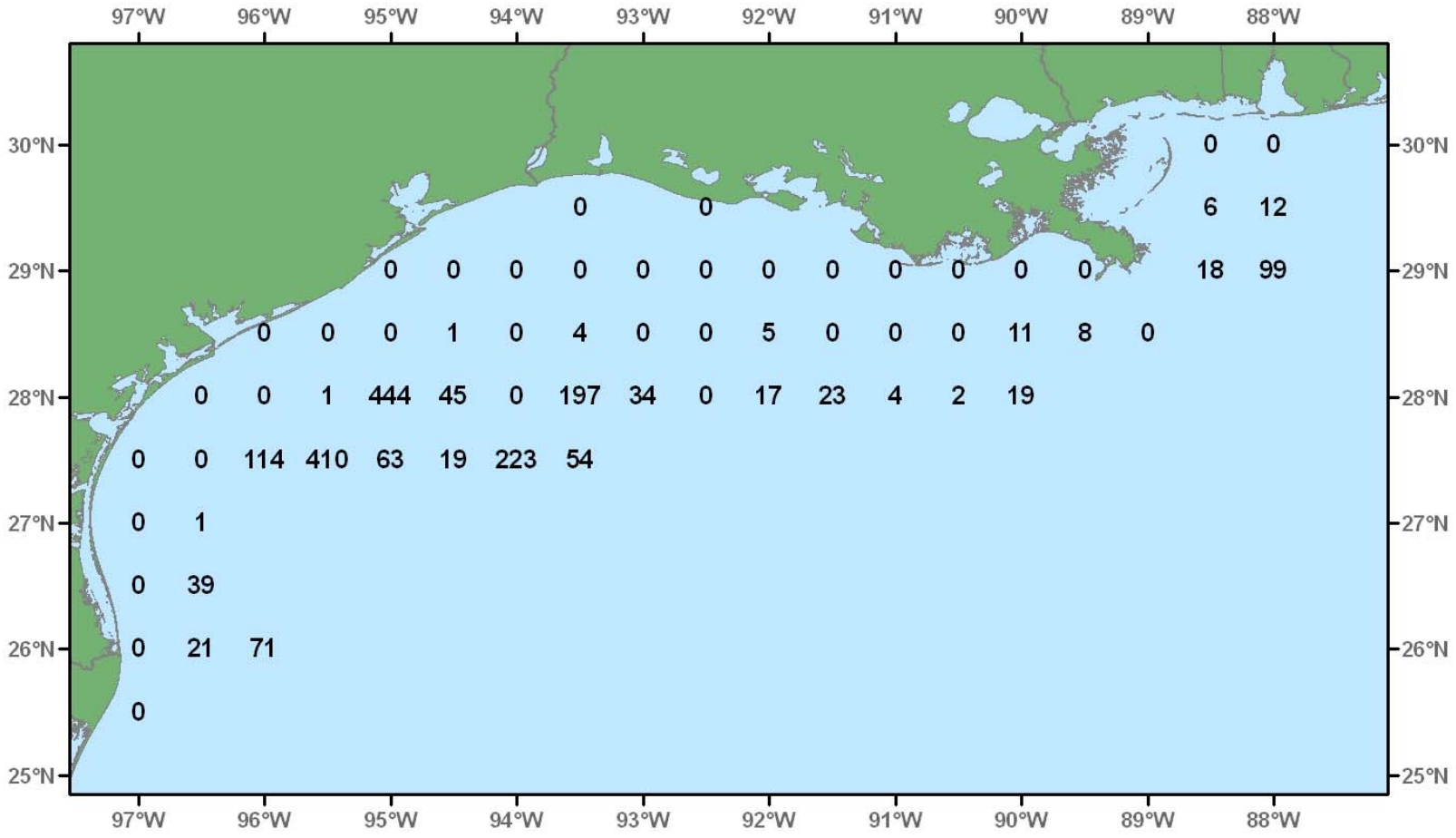

Figure 49. Longspine swimming crab, Portunis spinicarpus, number/hour for June-July 2004.

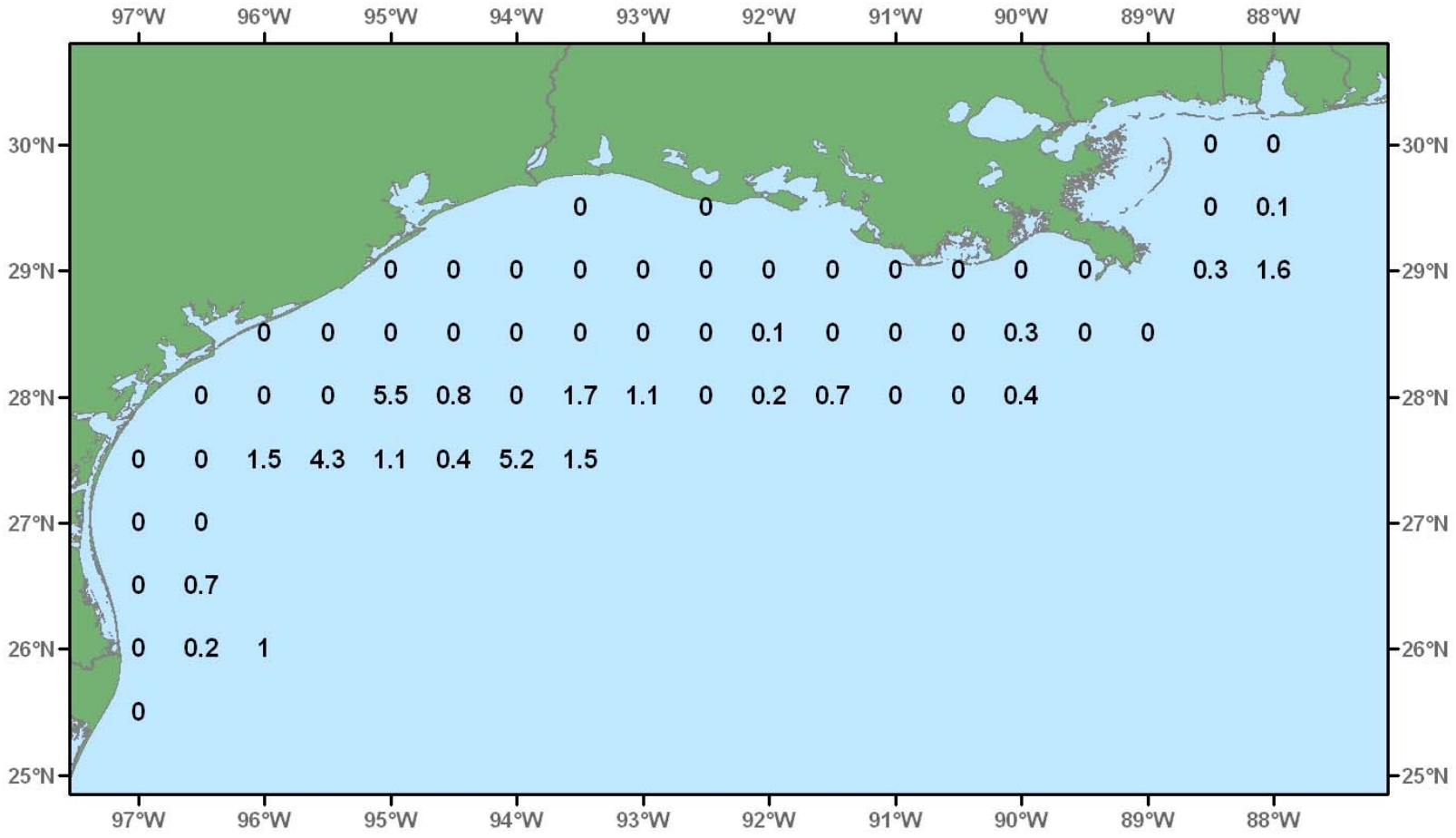

Figure 50. Longspine swimming crab, Portunis spinicarpus, lb/hour for June-July 2004.

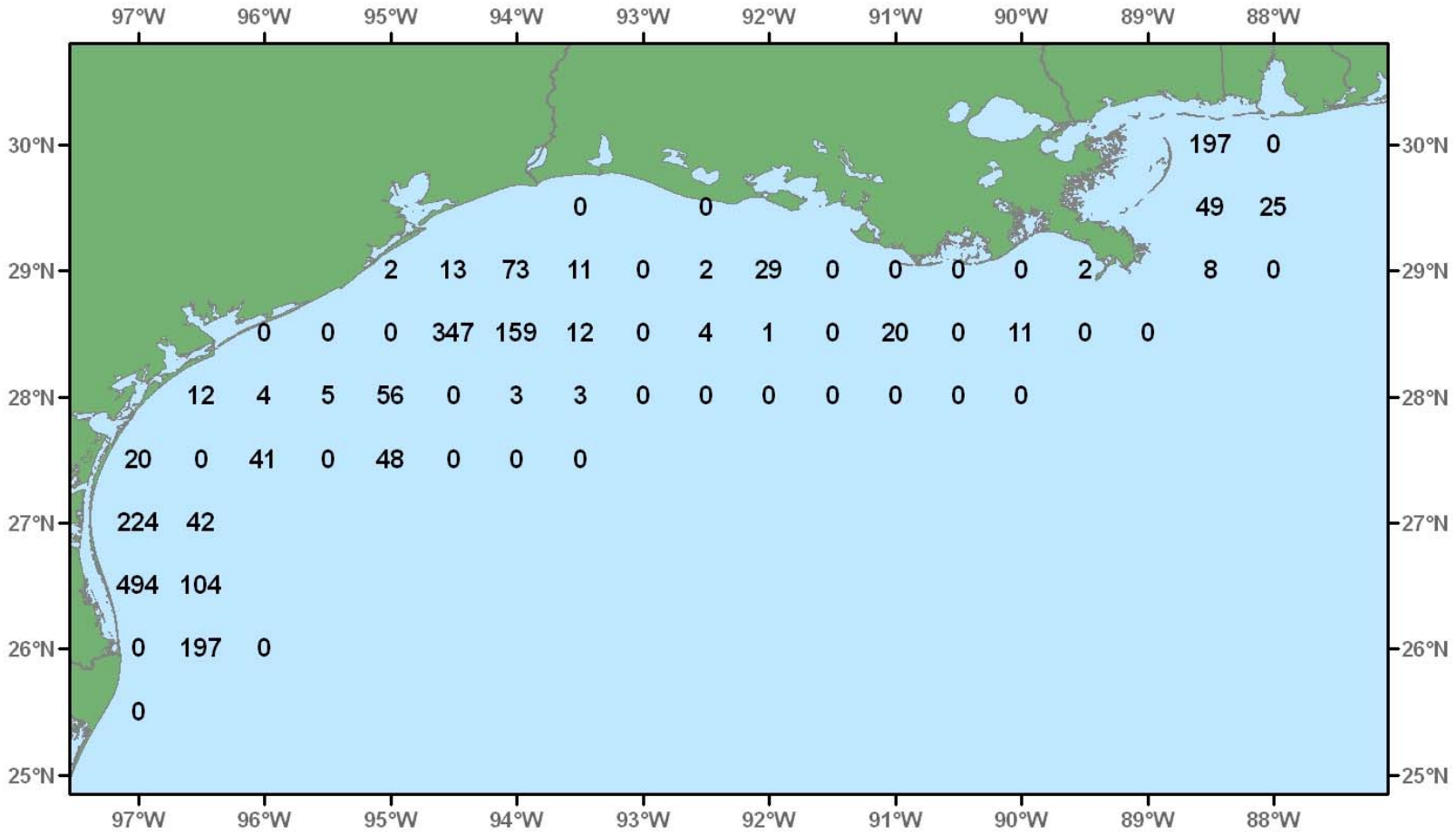

Figure 51. Arrow squid, Loligo pleii, number/hour for June-July 2004.

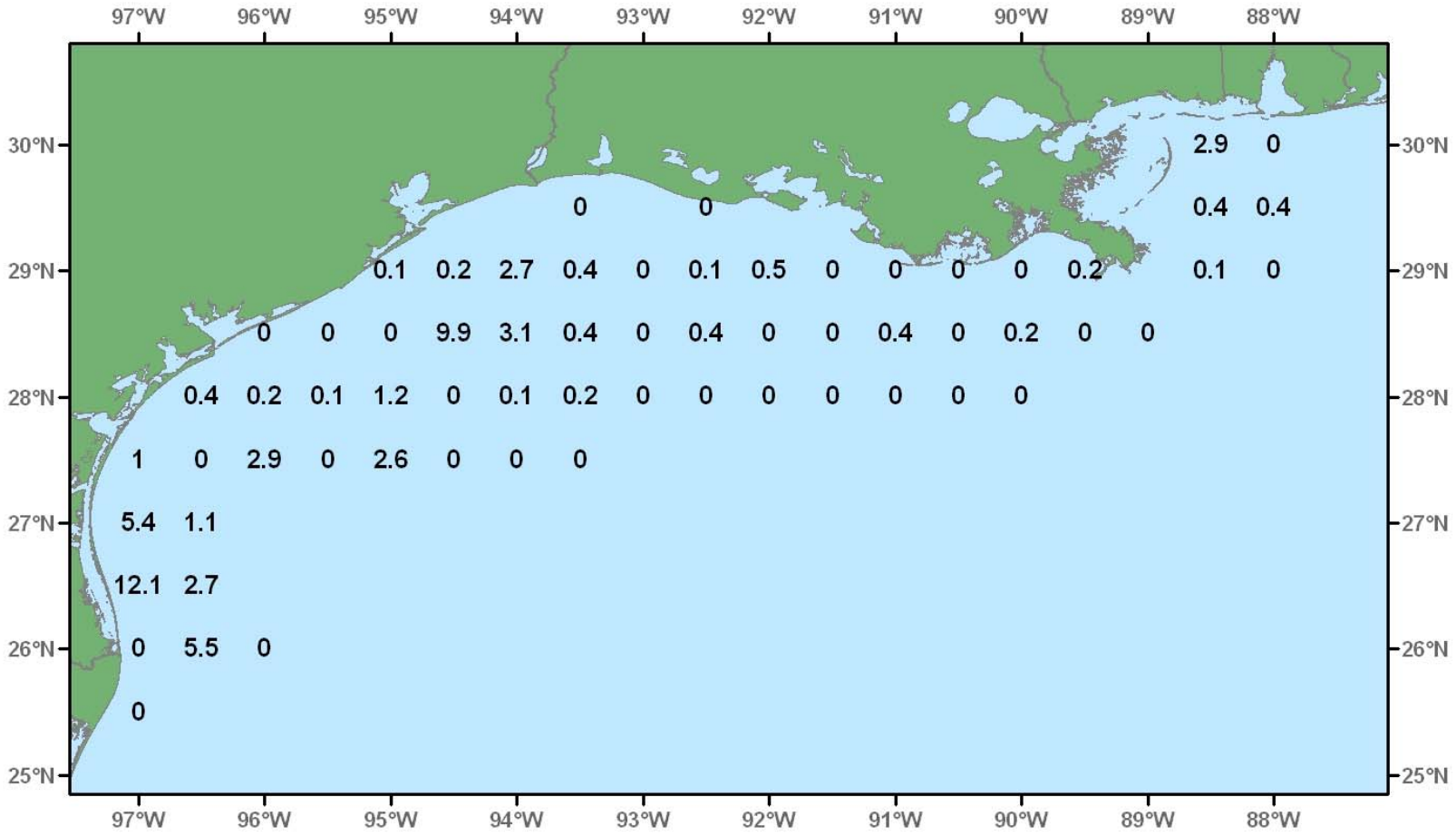

Figure 52. Arrow squid, Loligo pleii, lb/hour for June-July 2009.

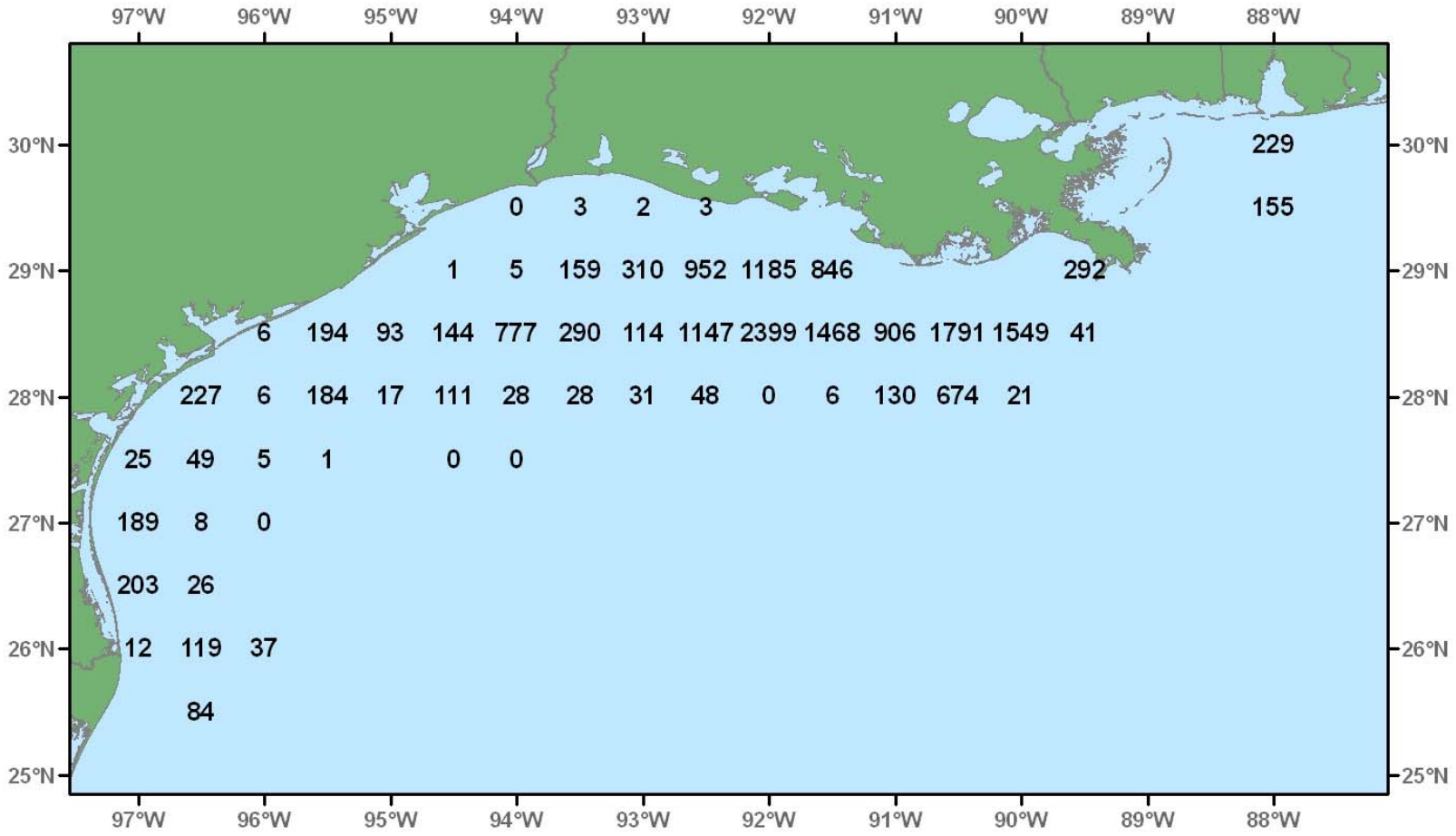

Figure 53. Atlantic croaker, Micropogonias undulatus, number/hour for October-December 2004.

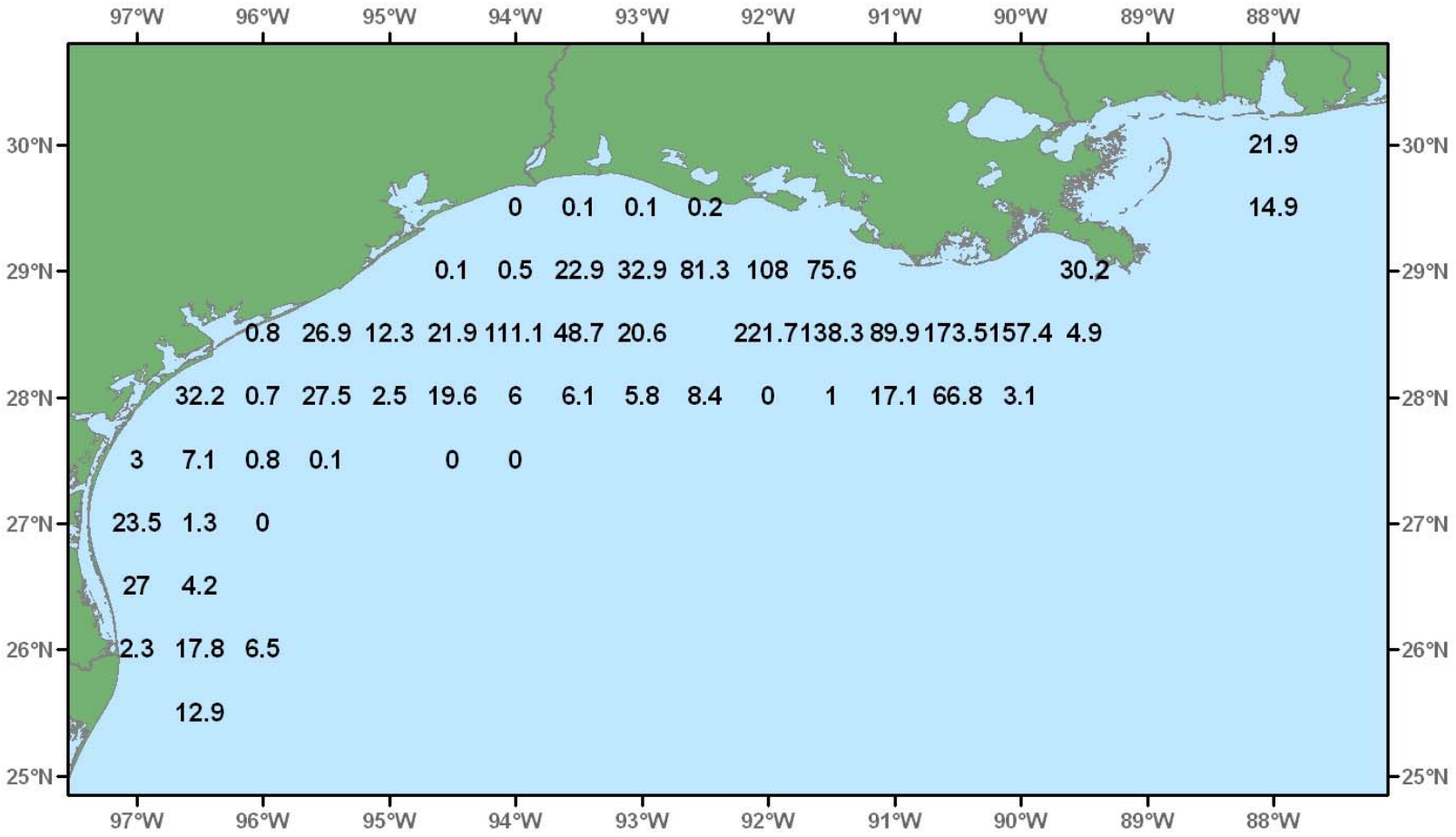

Figure 54. Atlantic croaker, Micropogonias undulatus, lb/hour for October-December 2004.

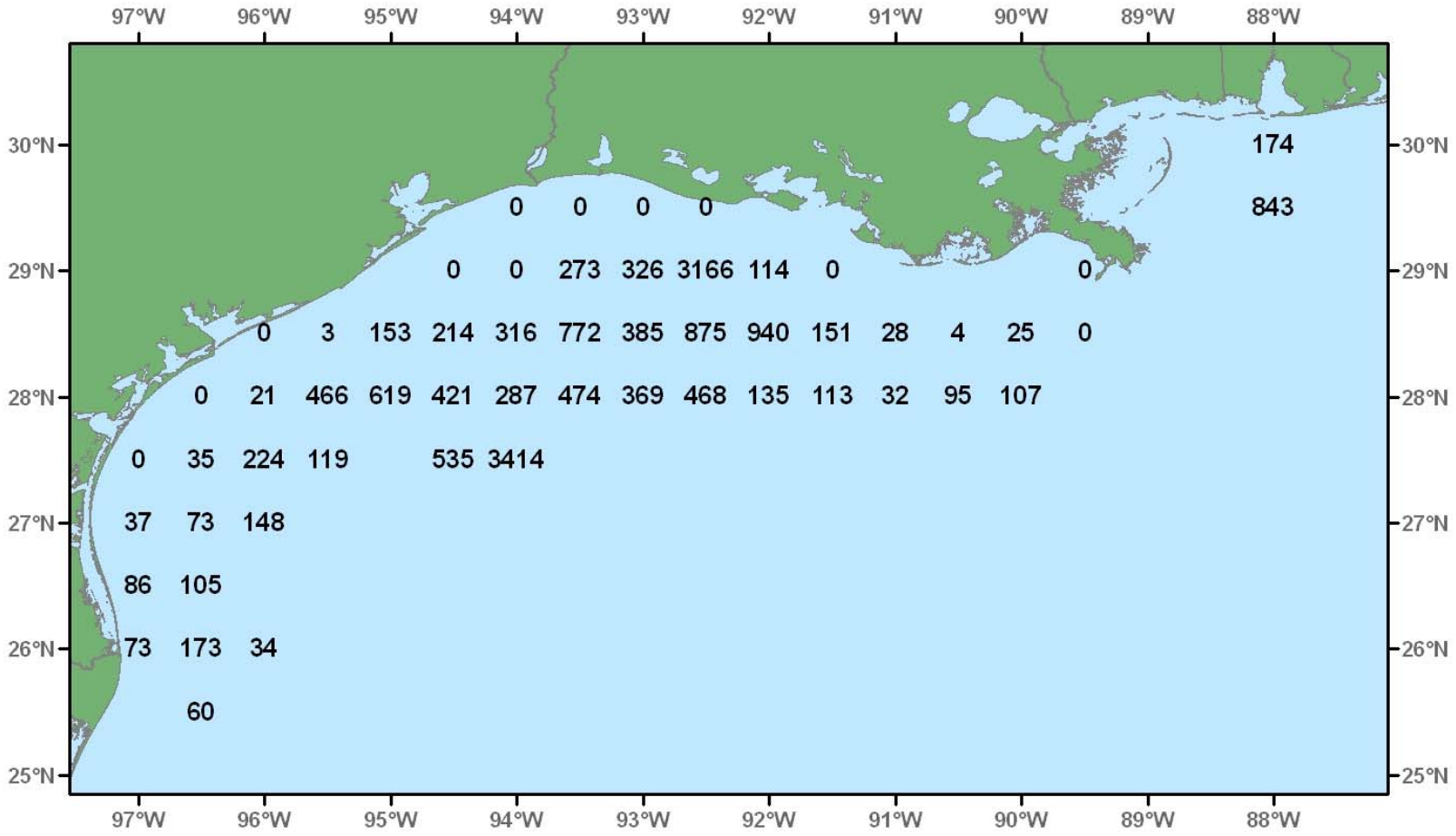

Figure 55. Longspine porgy, Stenotomus caprinus, number/hour for October-December 2004.

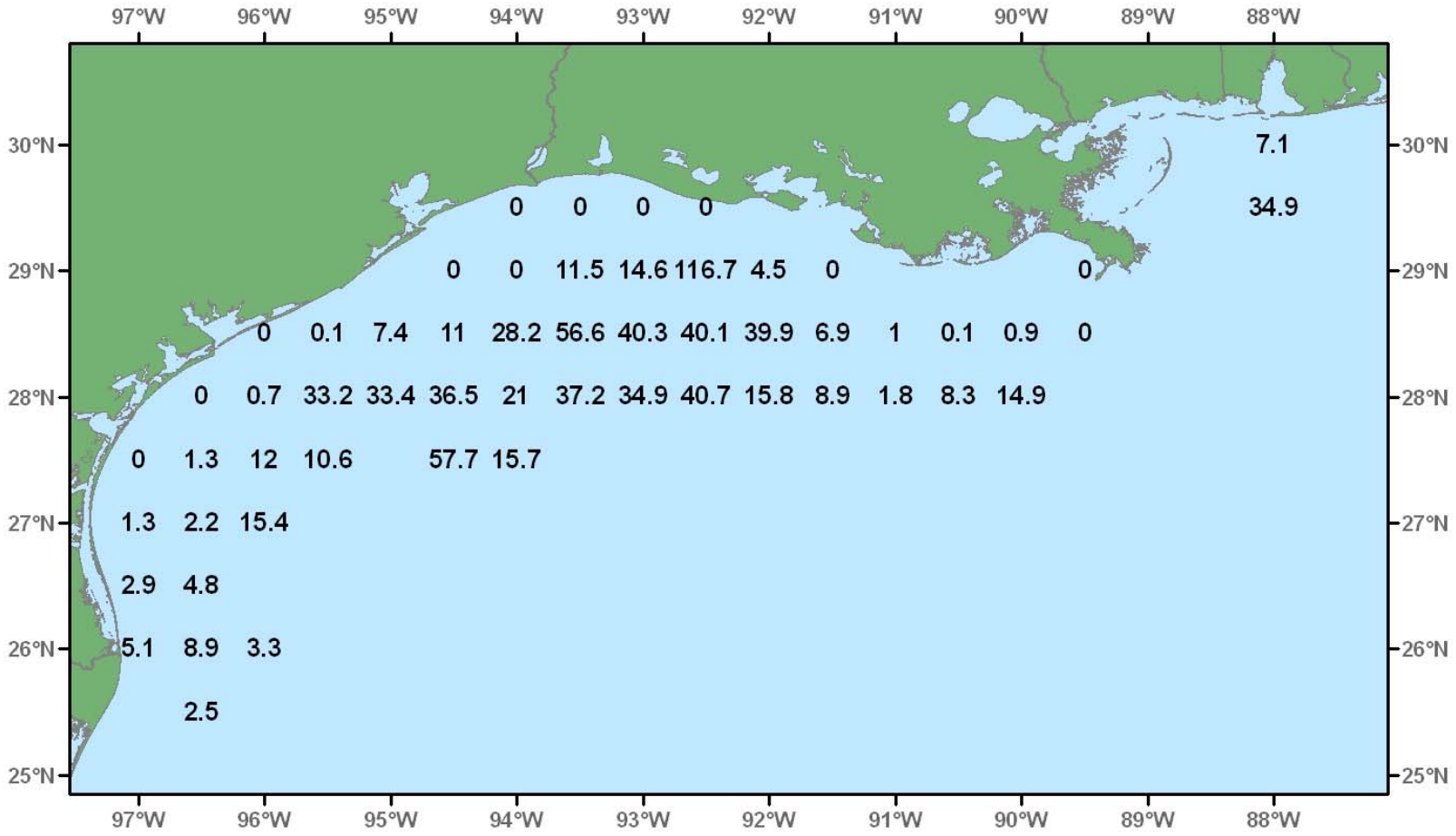

Figure 56. Longspine porgy, Stenotomus caprinus, lb/hour for October-December 2004.

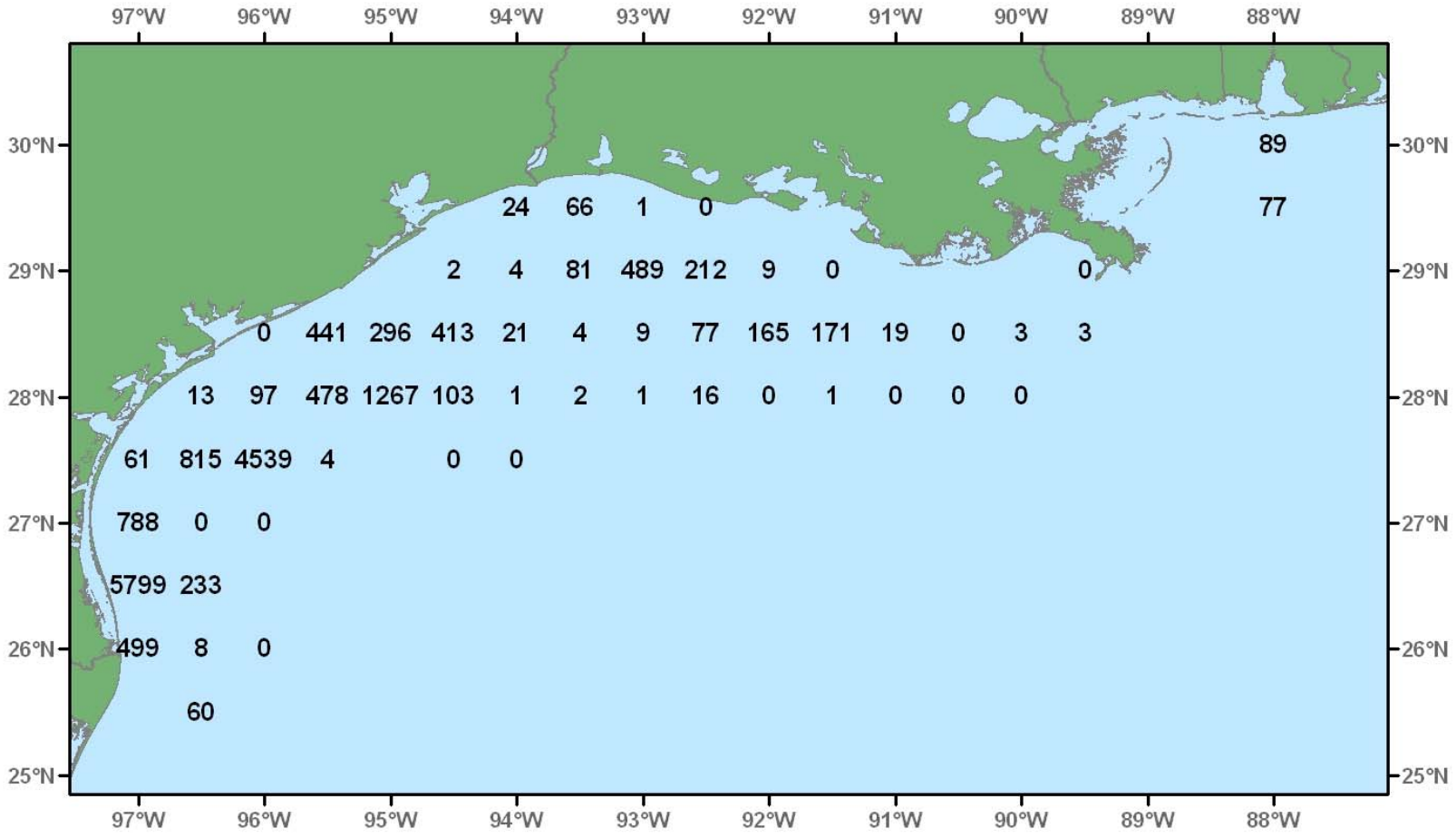

Figure 57. Atlantic bumper, Chloroscombrus chrysurus, number/hour for October-December 2004.

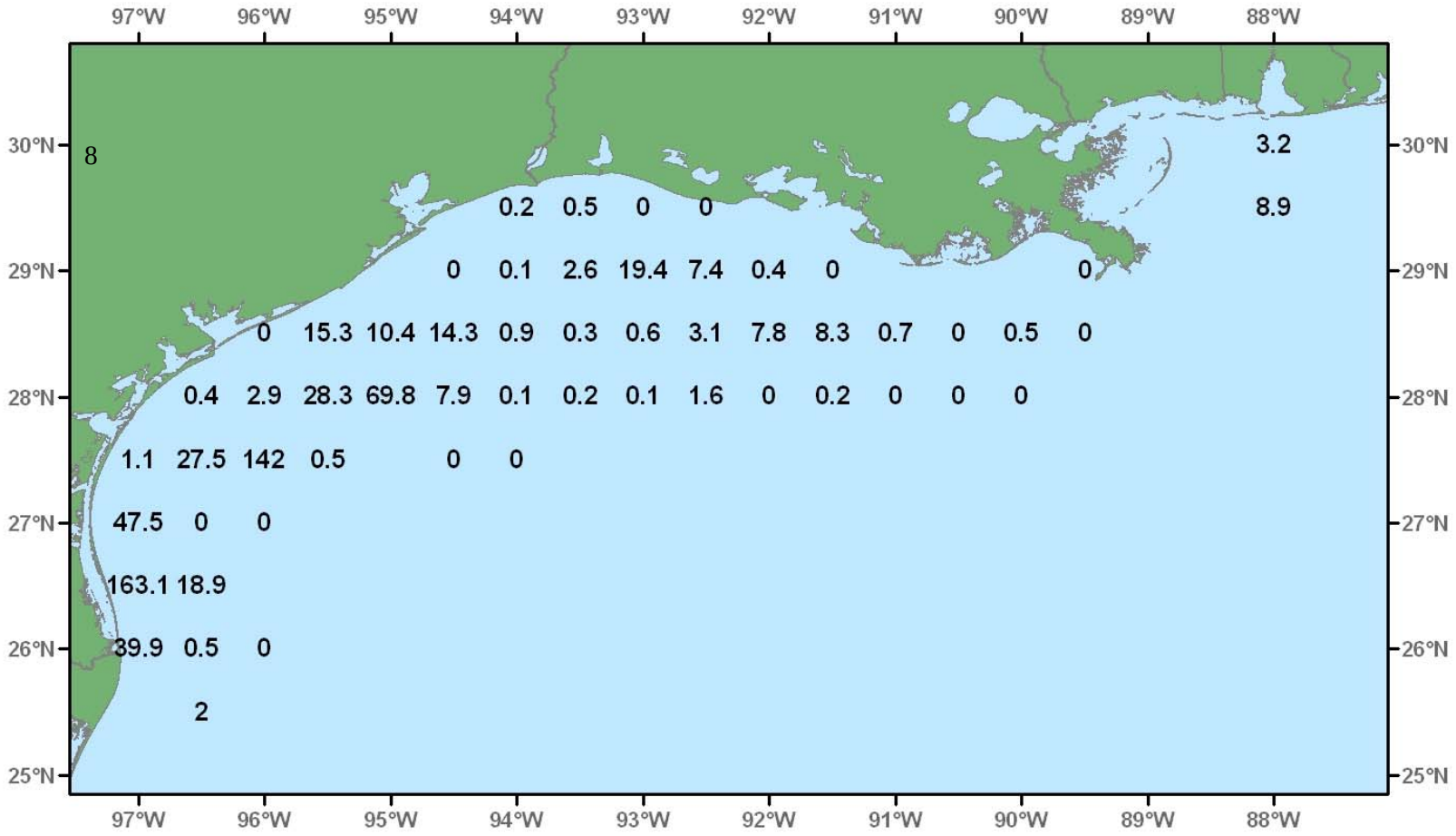

Figure 58. Atlantic bumper, Chloroscombrus chrysurus, lb/hour for October-December 2004.

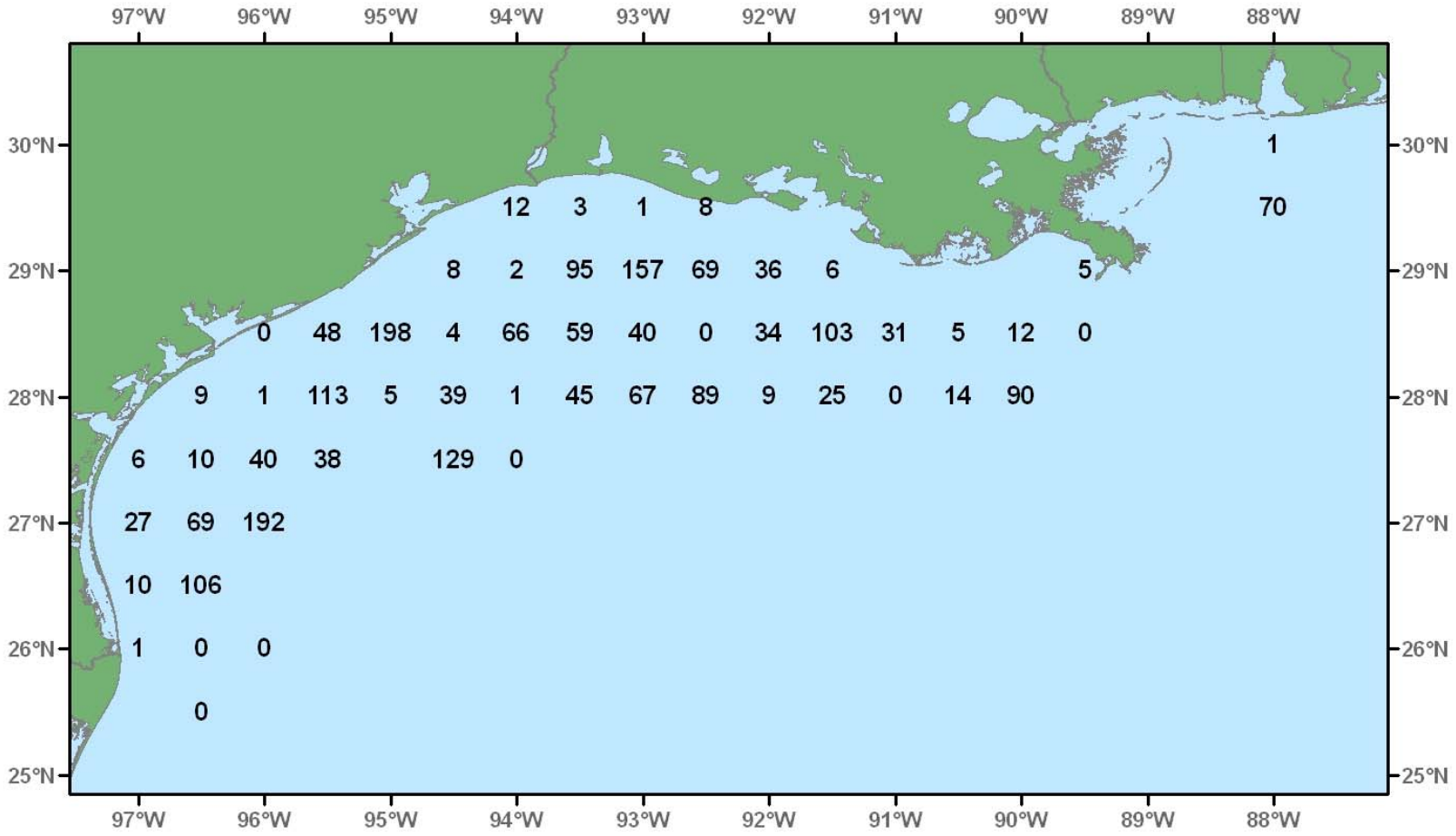

Figure 59. Gulf butterfish, Peprilus burti, number/hour for October-December 2004.

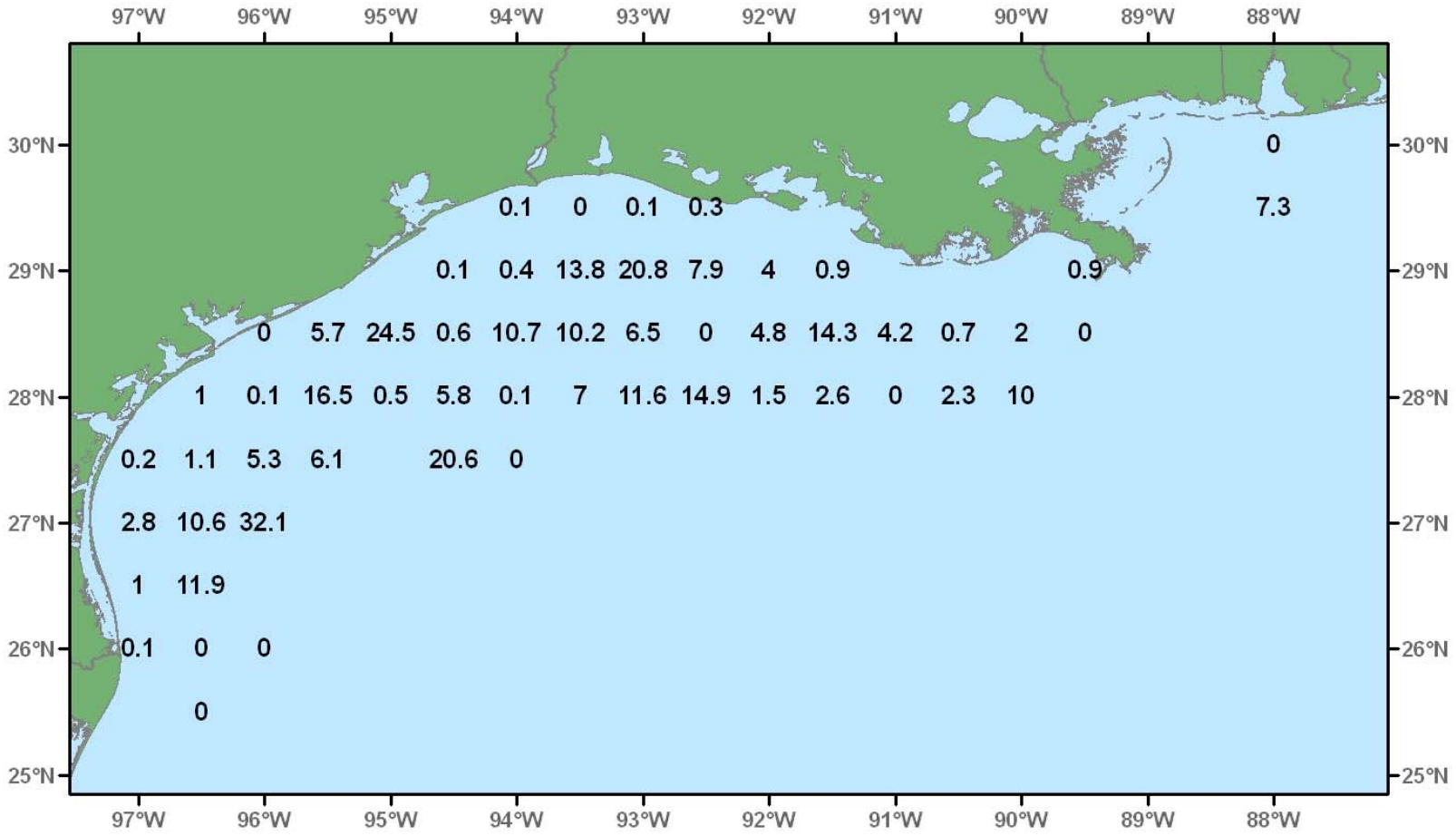

Figure 60. Gulf butterfish, Peprilus burti, lb/hour for October-December 2004.

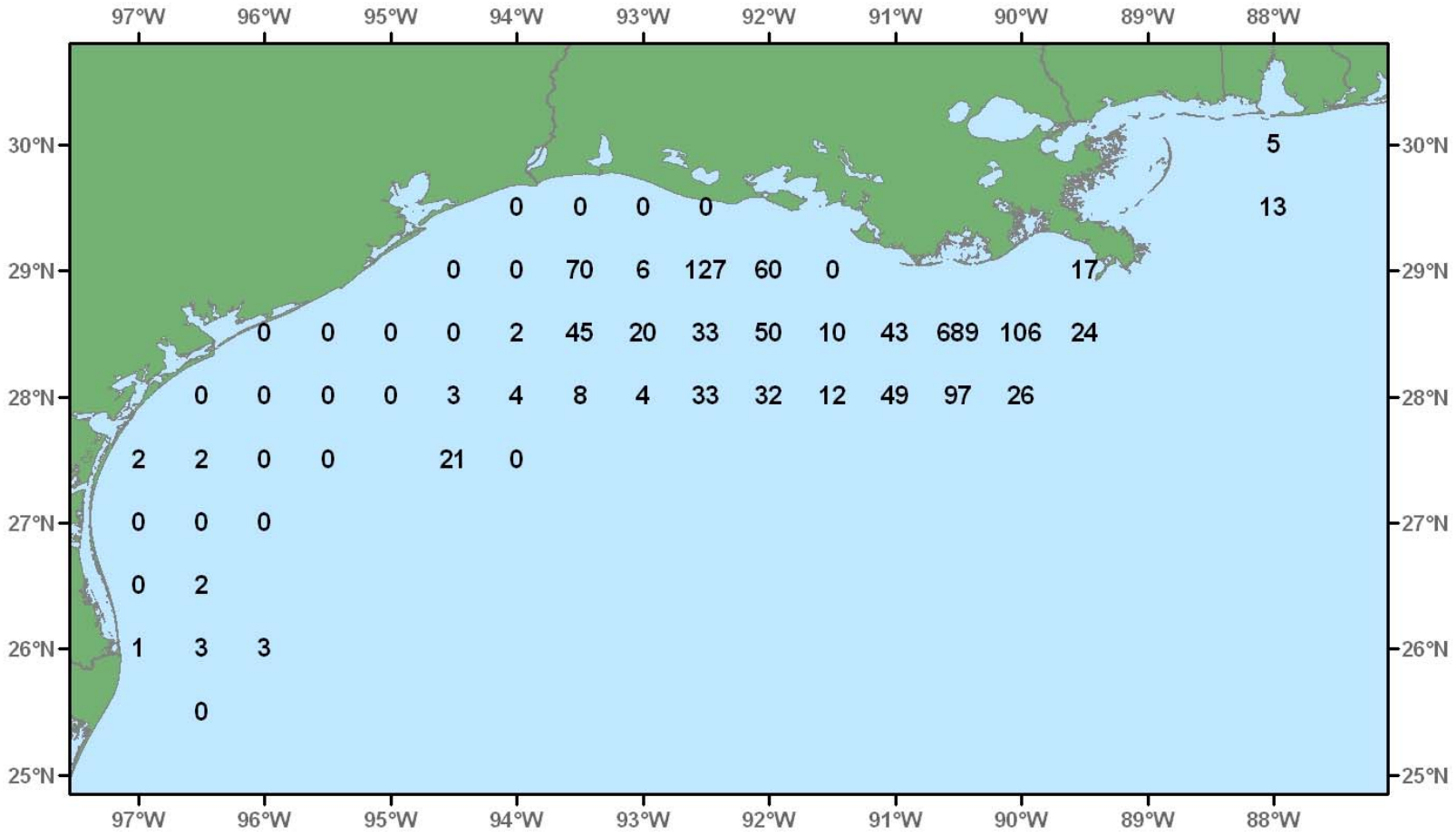

Figure 61. Bigeye searobin, Prionotus longispinosus, number/hour for October-December 2004.

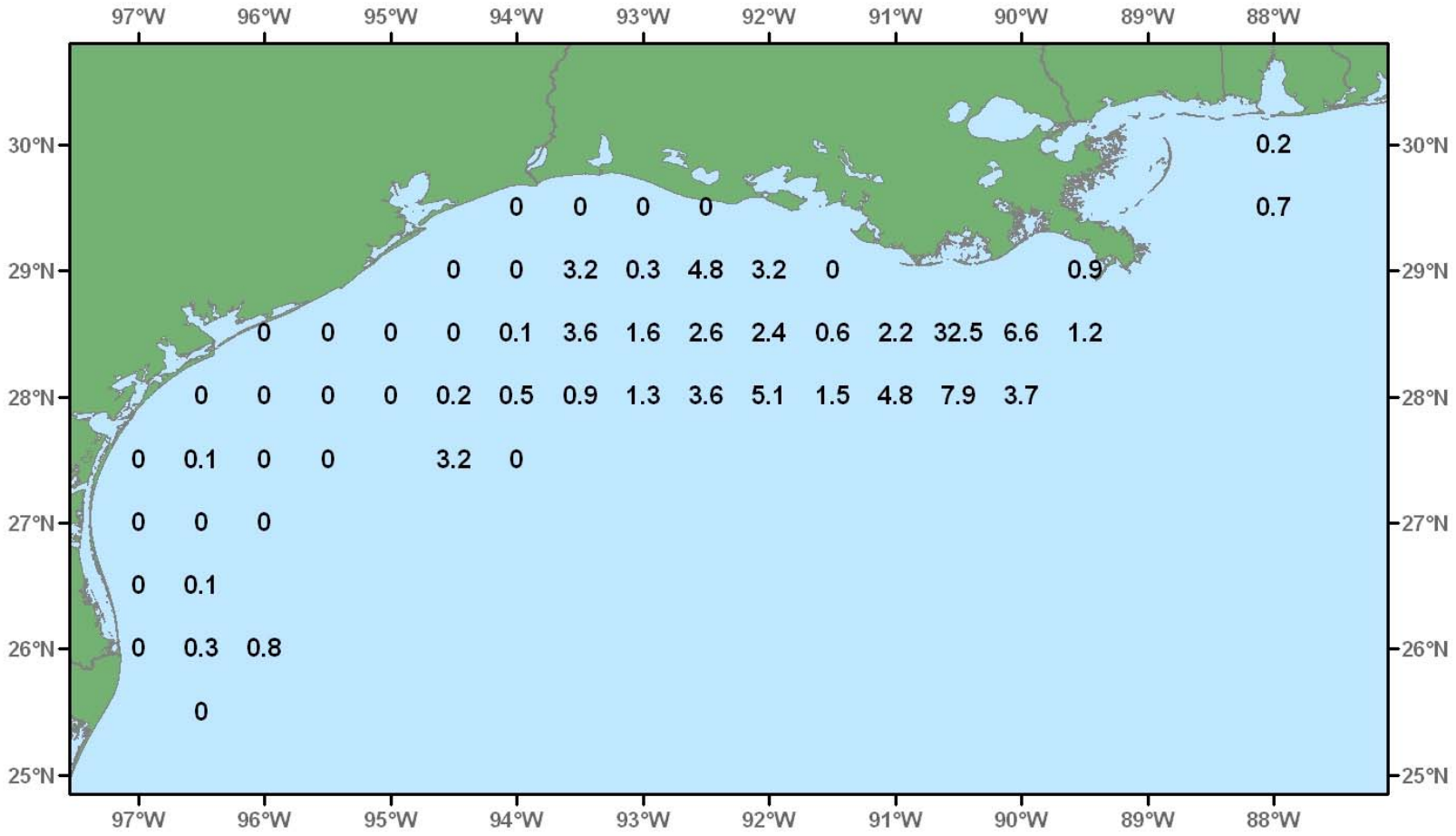

Figure 62. Bigeye searobin, Prionotus longispinosus, lb/hour for October-December 2004.

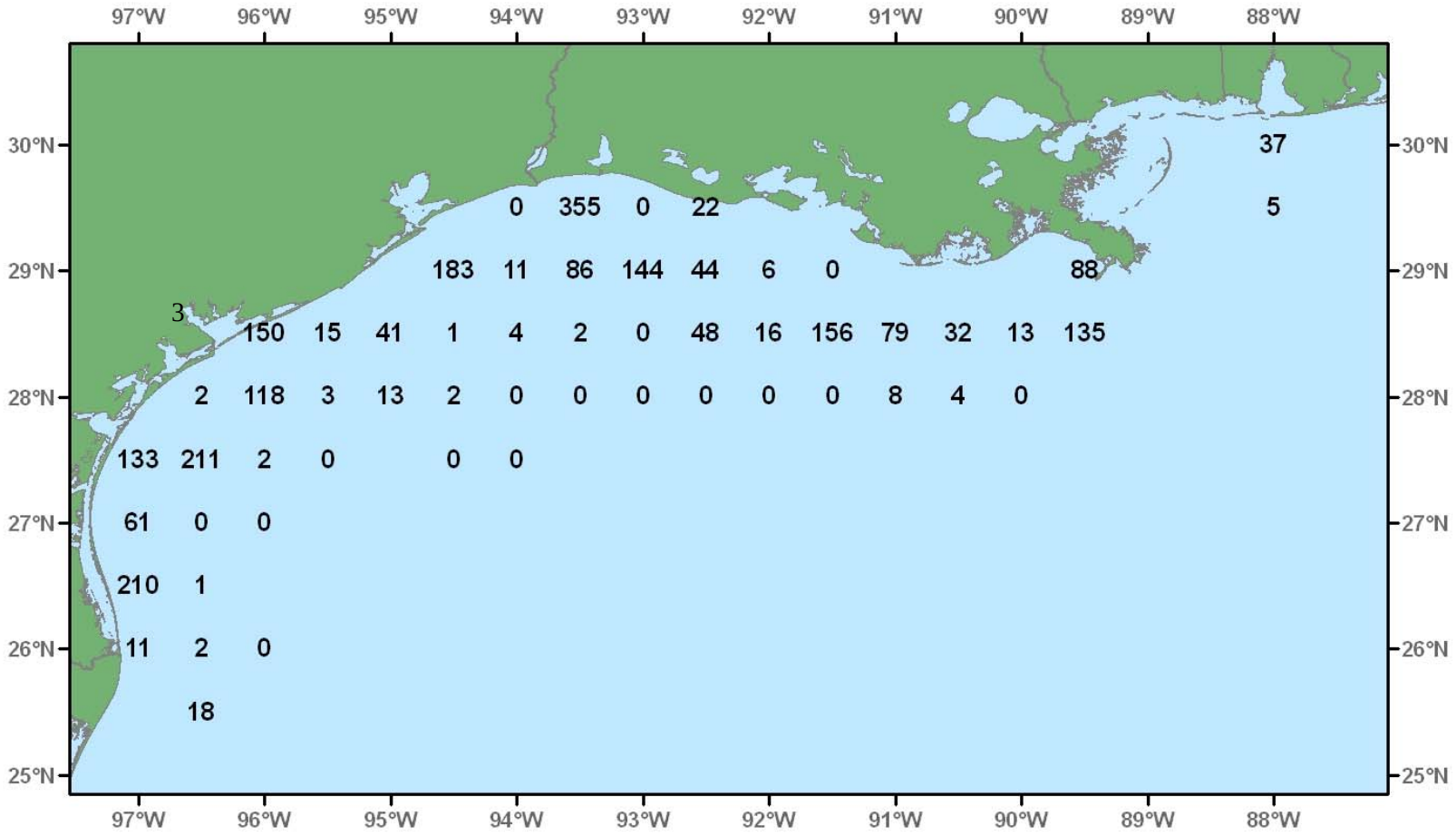

Figure 62. Silver seatrout, Cynoscion nothus, number/hour for October-December 2004.

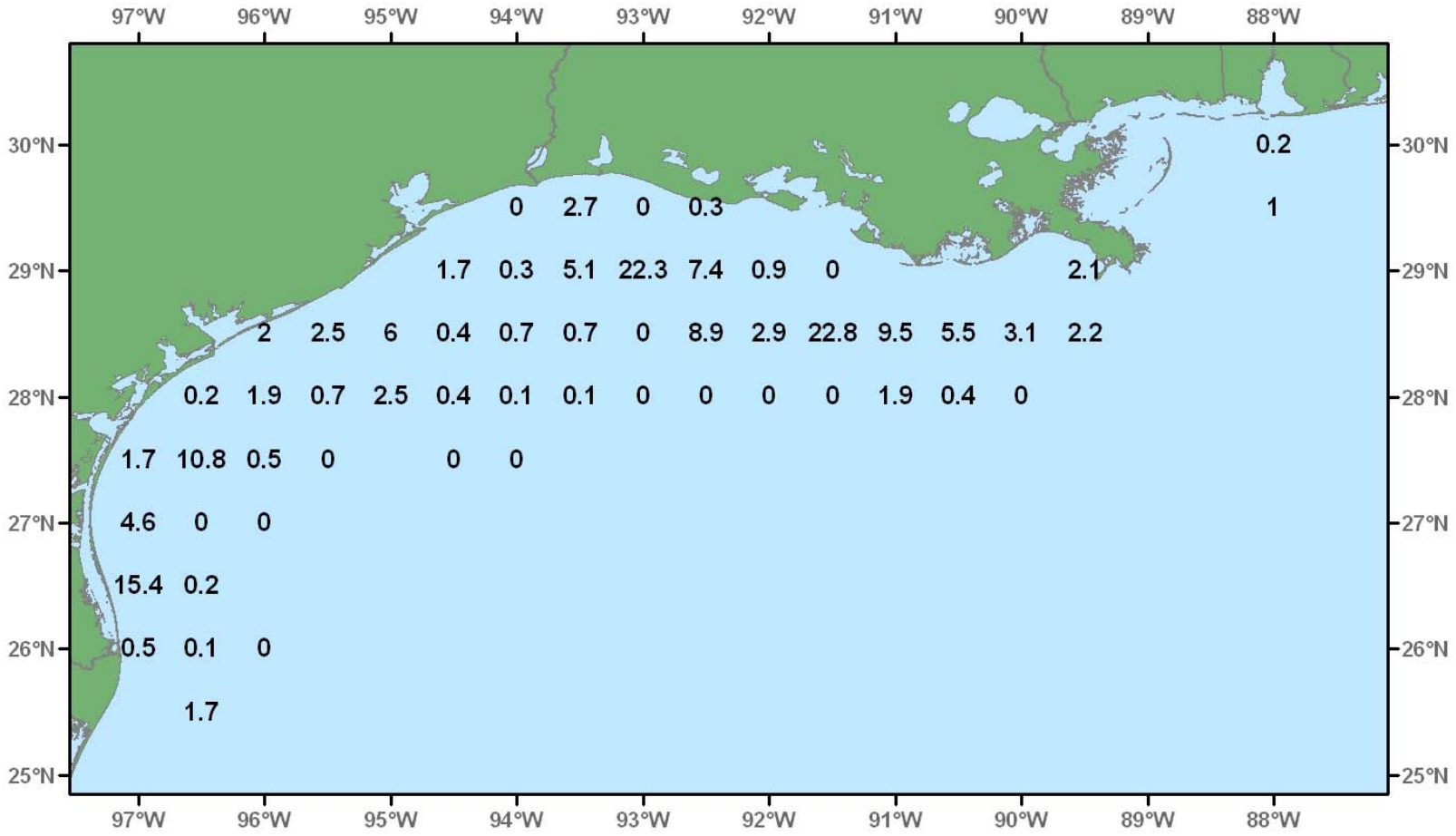

Figure 64. Silver seatrout, Cynoscion nothus, lb/hour for October-December 2004.

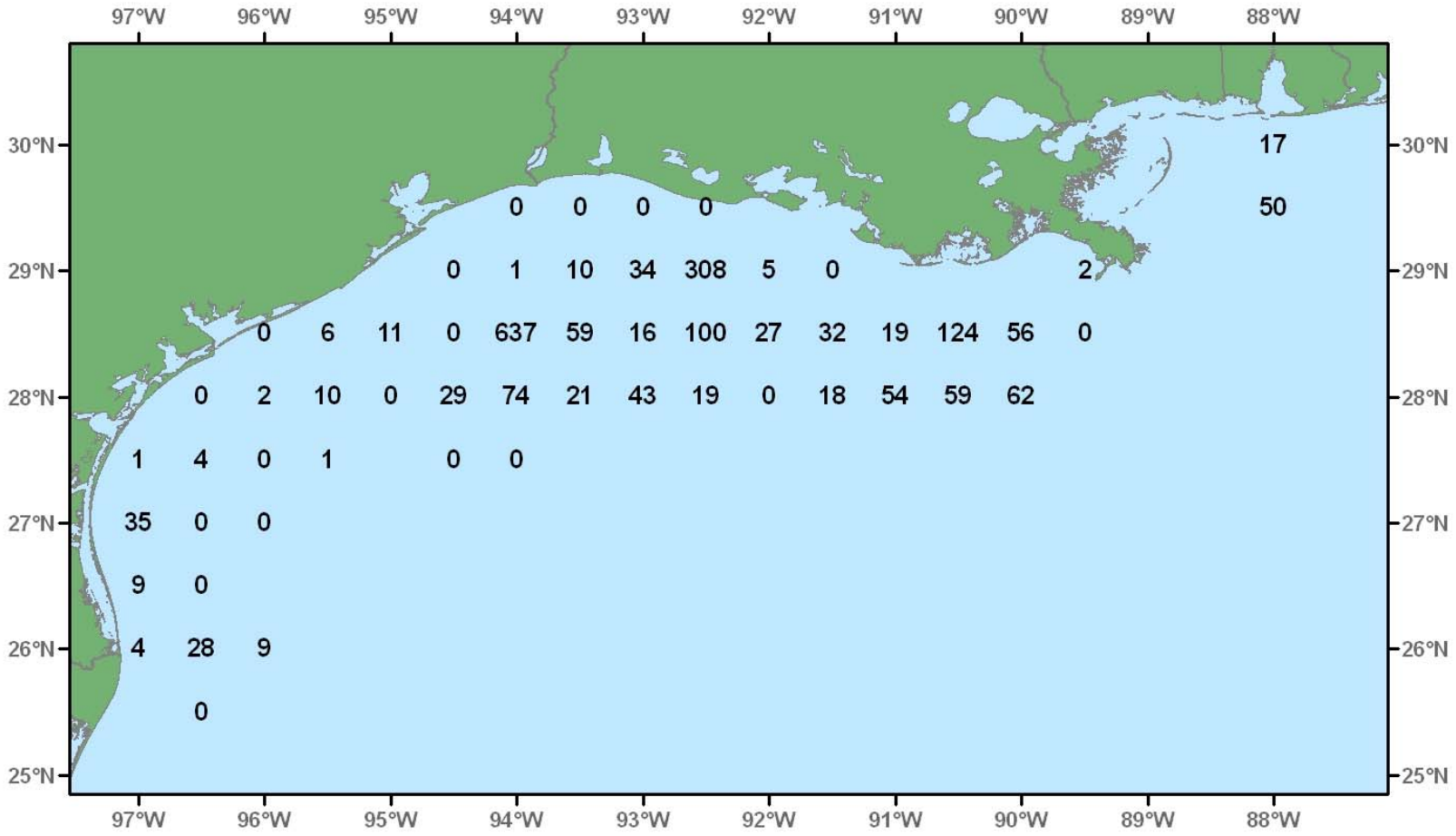

Figure 65. Spot, Leiostomus xanthurus, number/hour for October-December 2004.

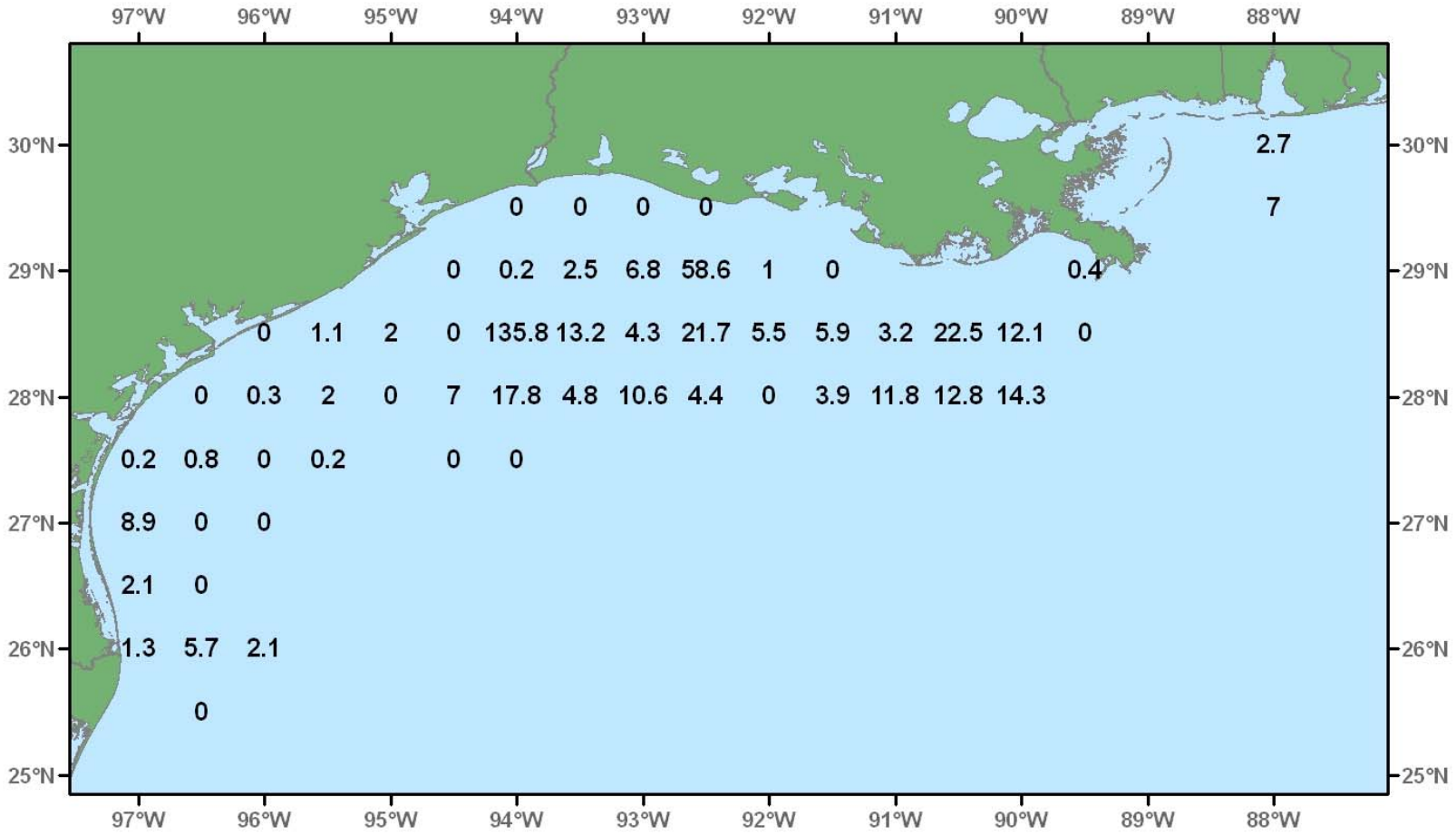

Figure 66. Spot, Leiostomus xanthurus, lb/hour for October-December 2004.

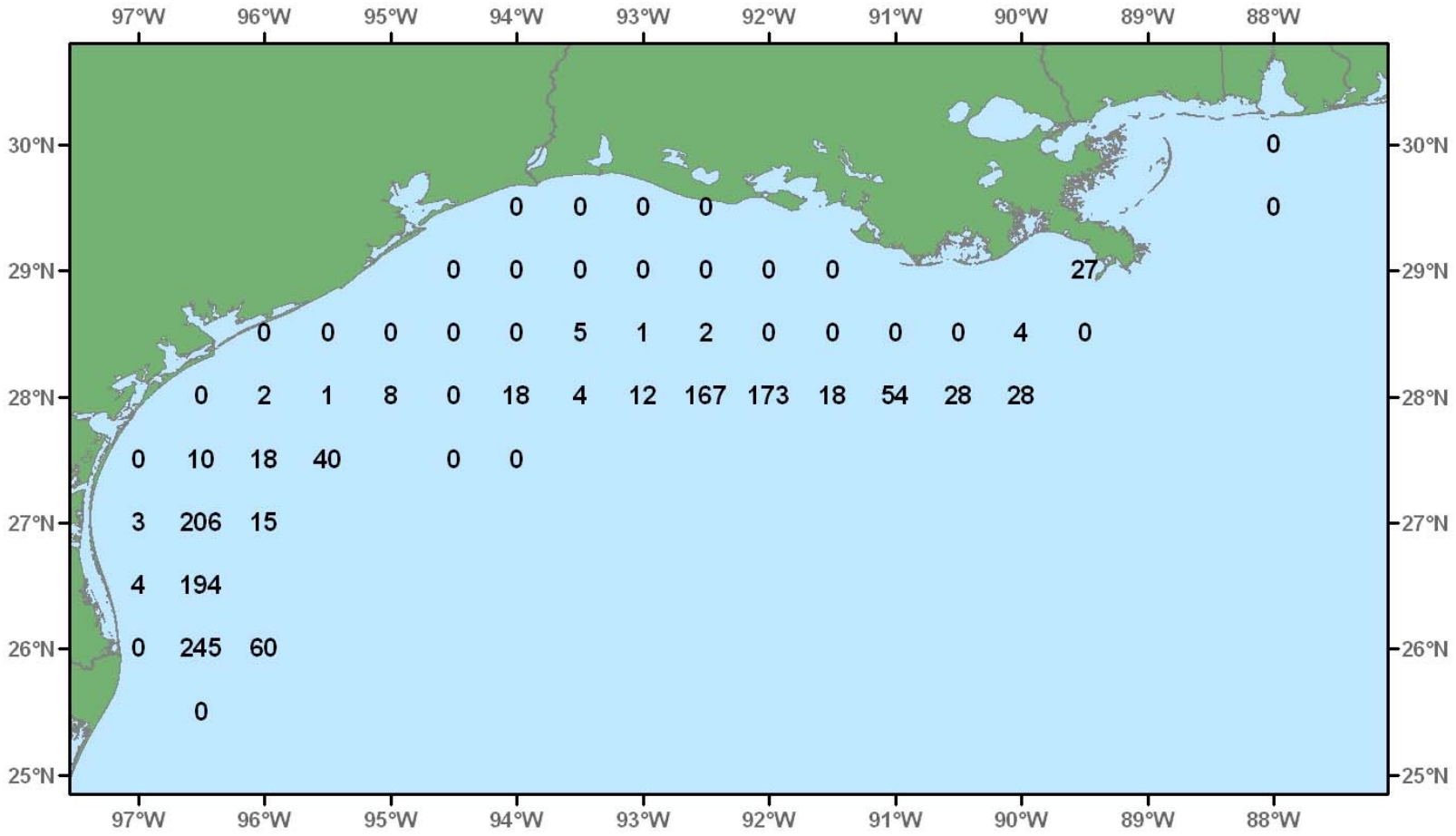

Figure 67. Blackear bass, Serranus atrobranchus, number/hour for October-December 2004.

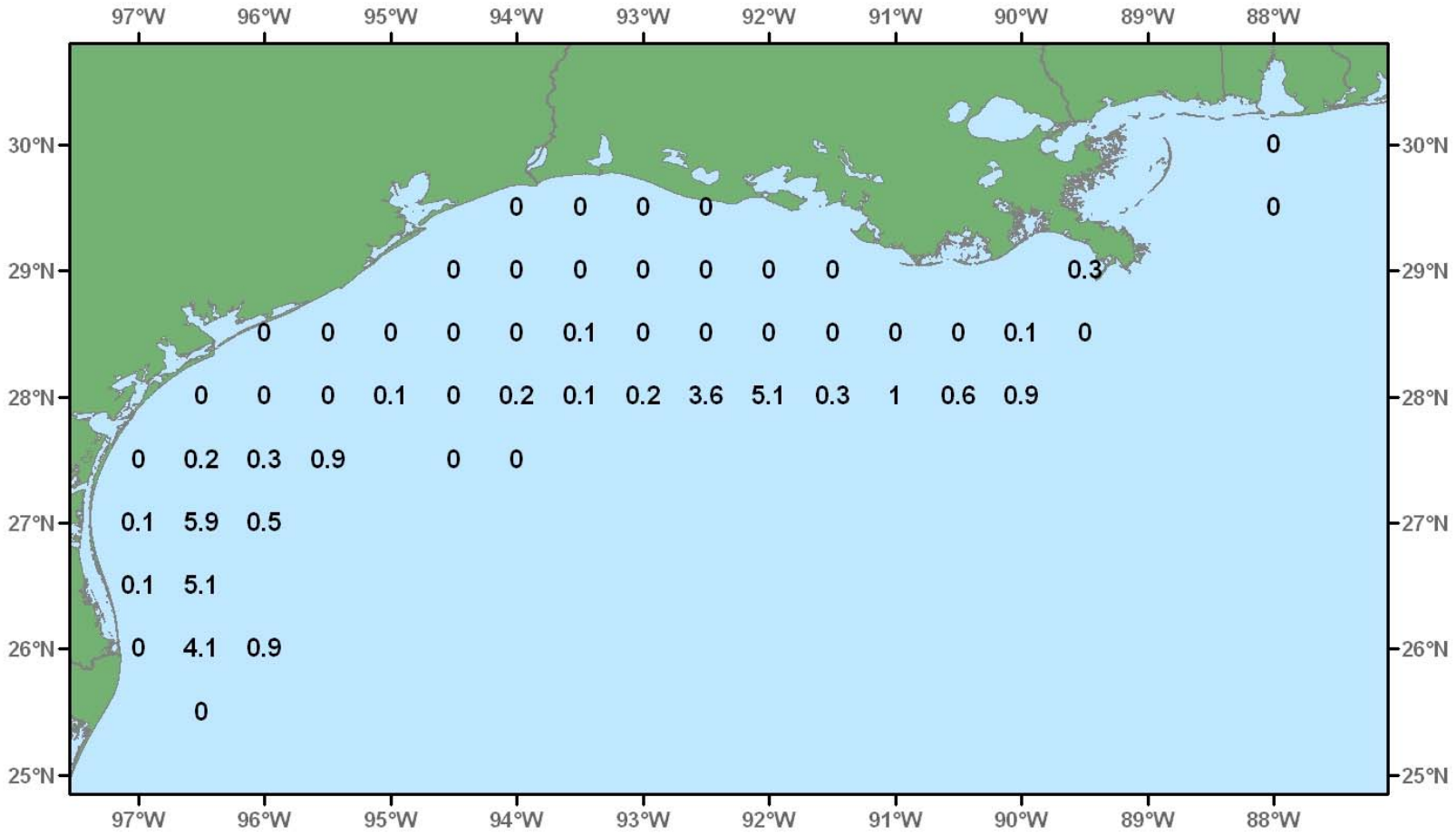

Figure 68. Blackear bass, Serranus atrobranchus, lb/hour for October-December 2004.

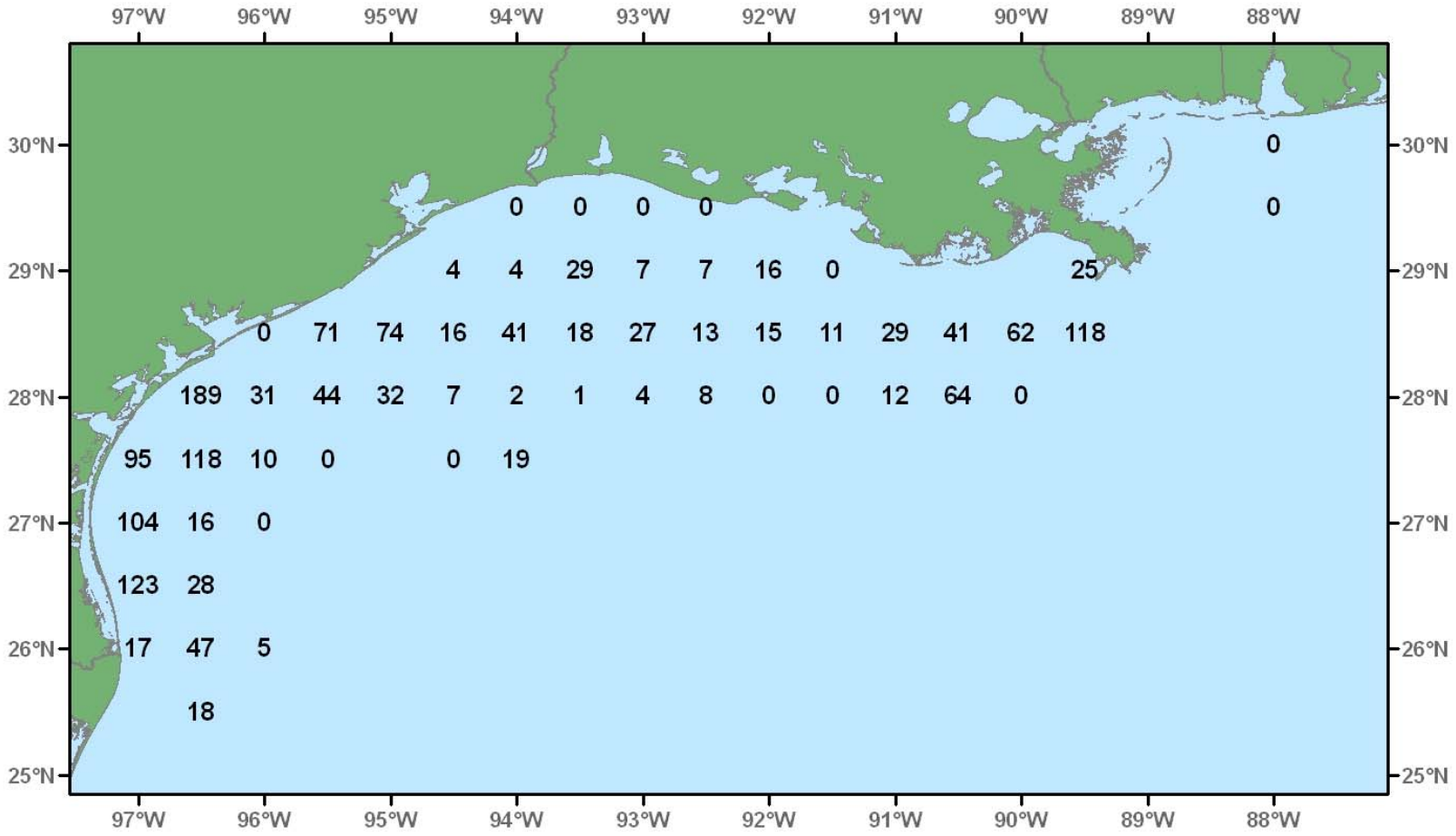

Figure 69. Shoal flounder, Syacium gunteri, number/hour for October-December 2004.

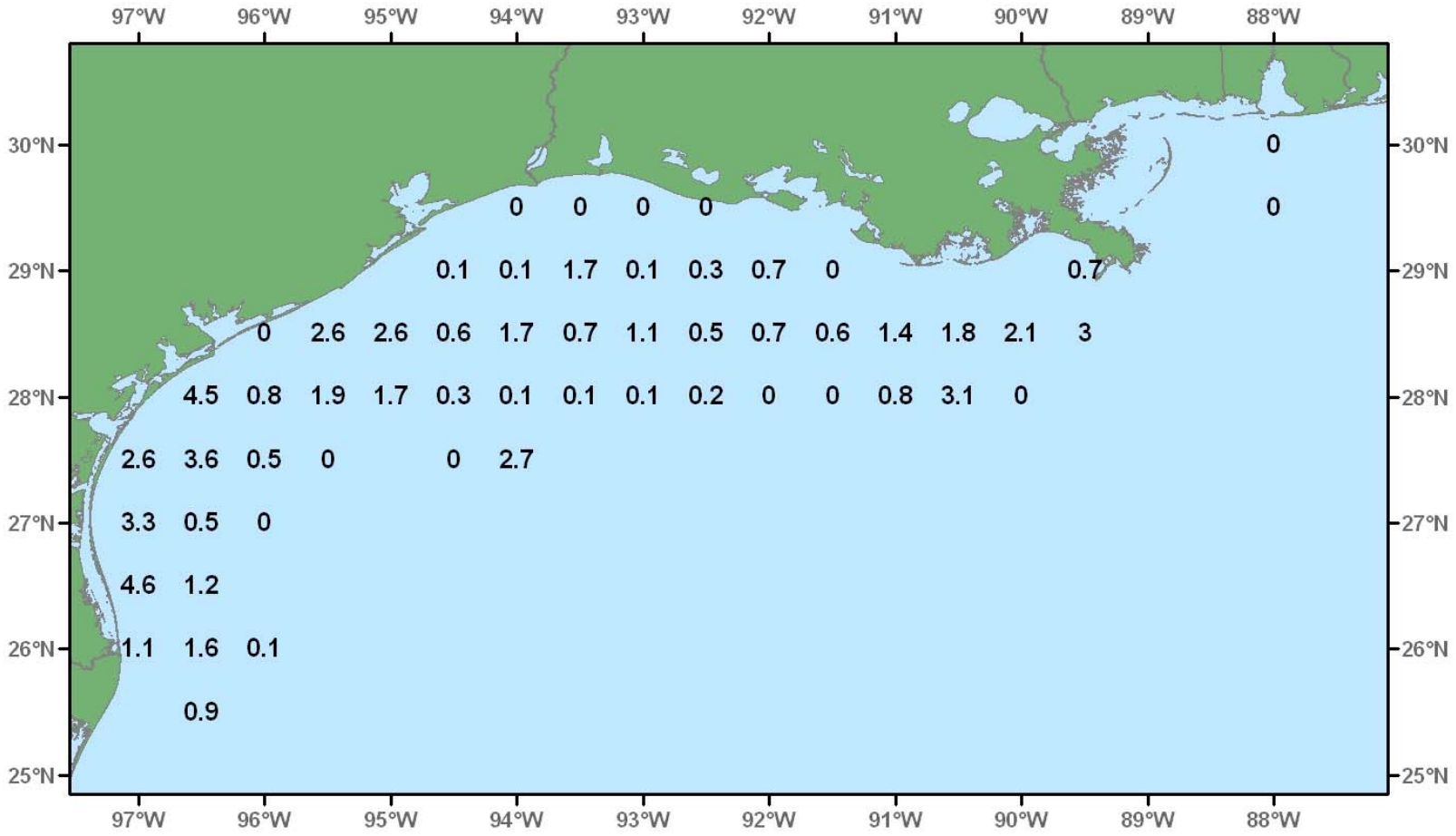

Figure 70. Shoal flounder, Syacium gunteri, lb/hour for October-December 2004.

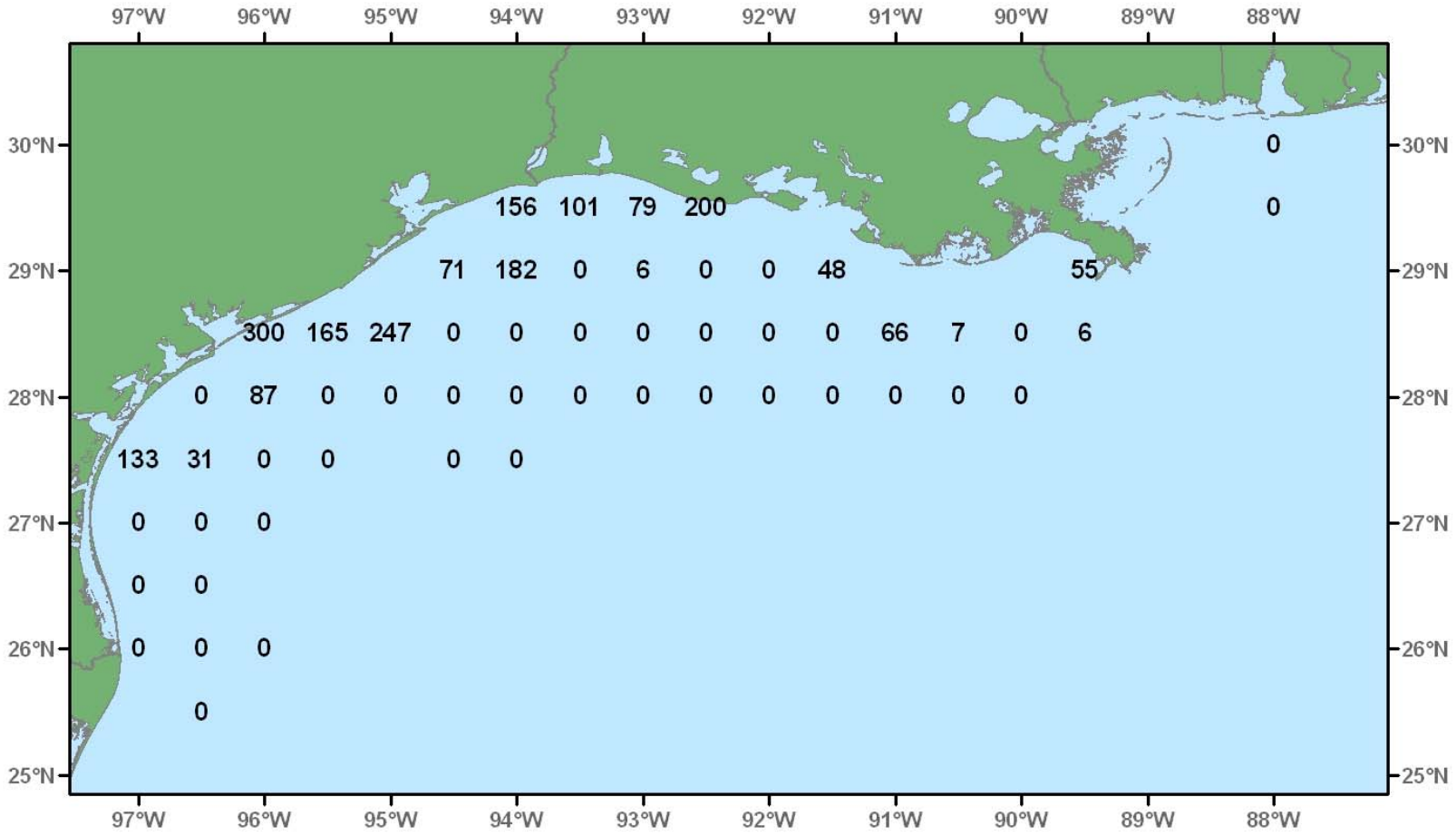

Figure 71. Star drum, Stellifer lanceolatus, number/hour for October-December 2004.

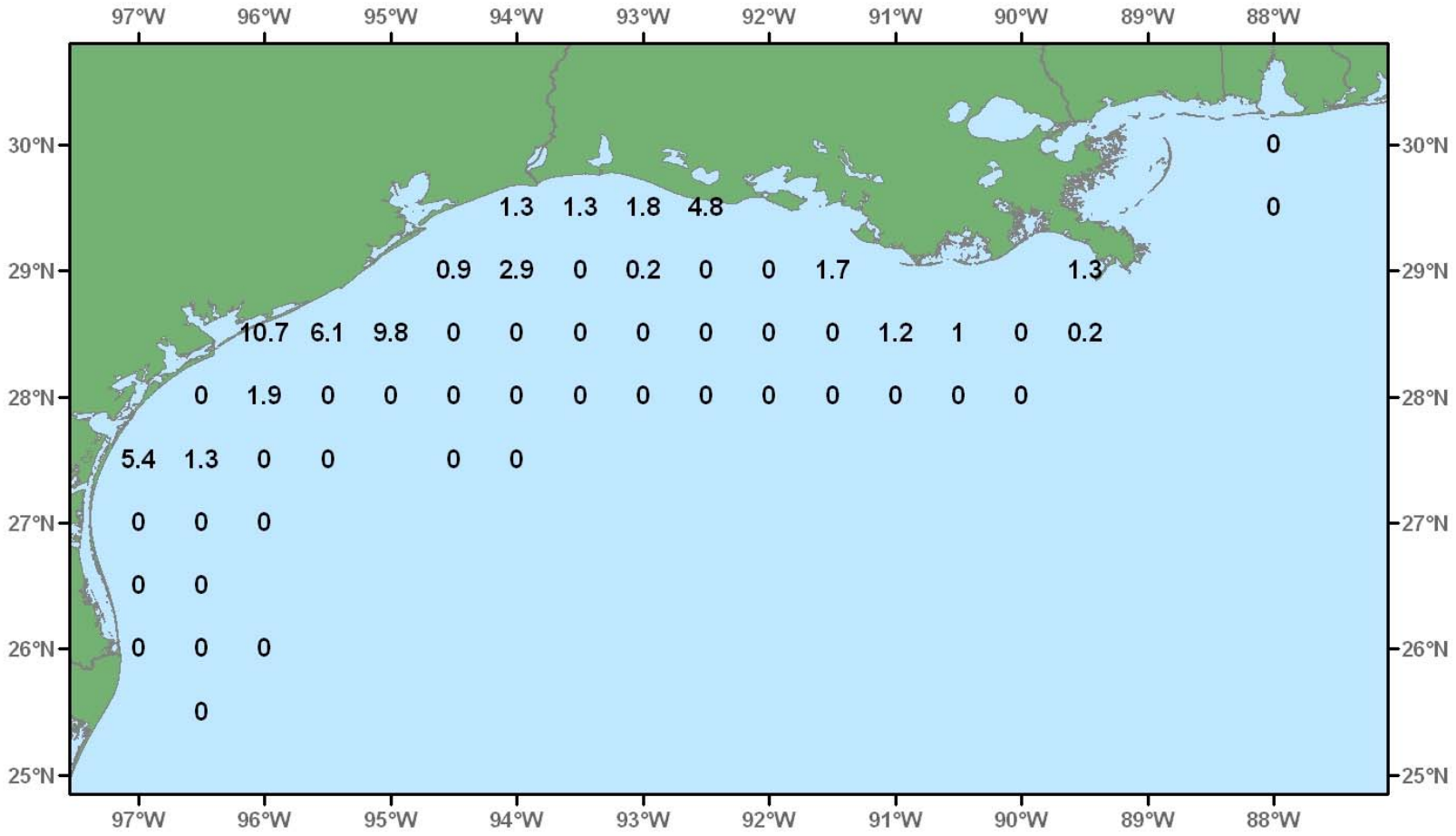

Figure 72. Star drum, Stellifer lanceolatus, lb/hour for October-December 2004.

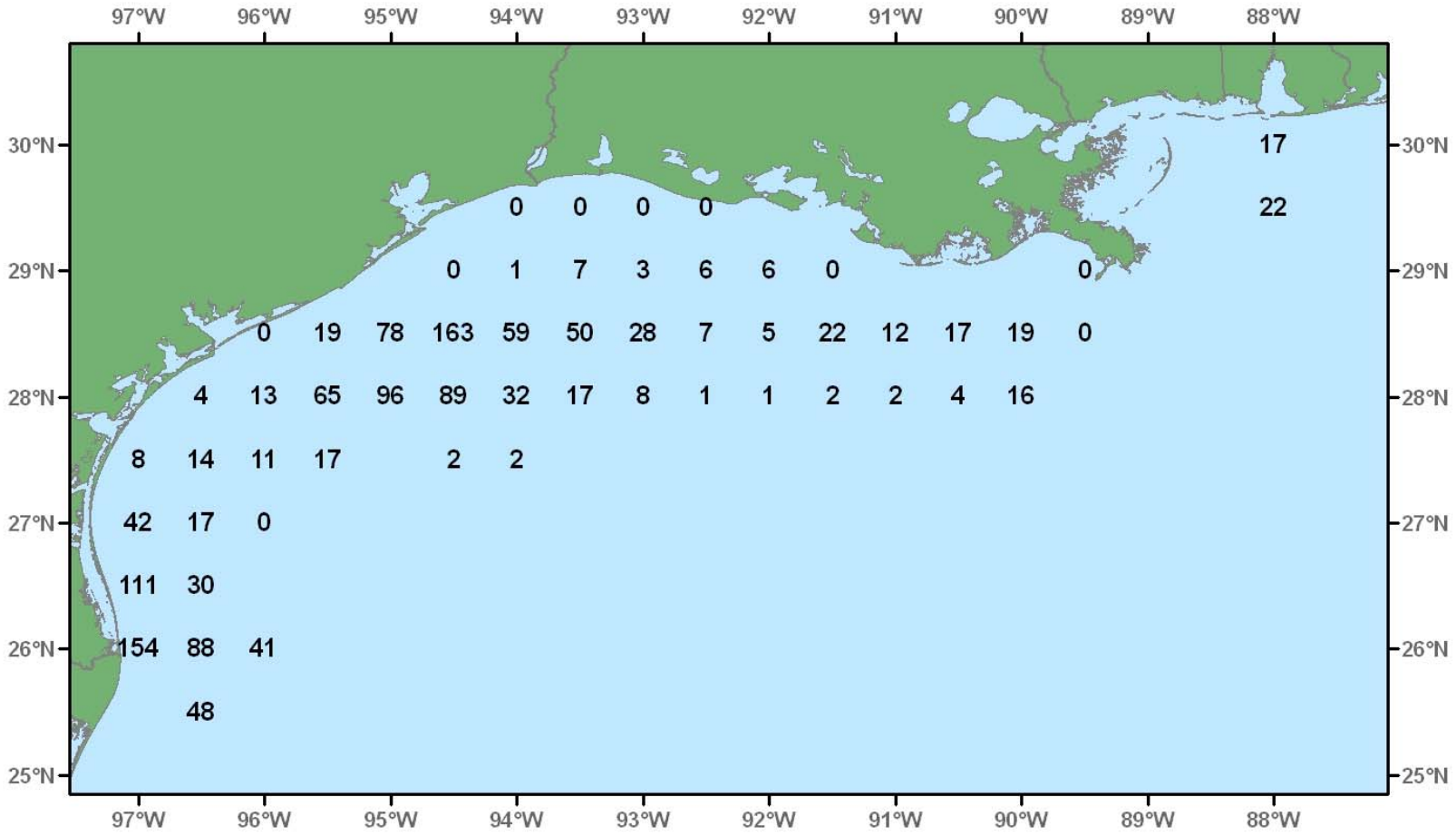

Figure 73. Red snapper, Lutjanus campechanus, number/hour for October-December 2004.

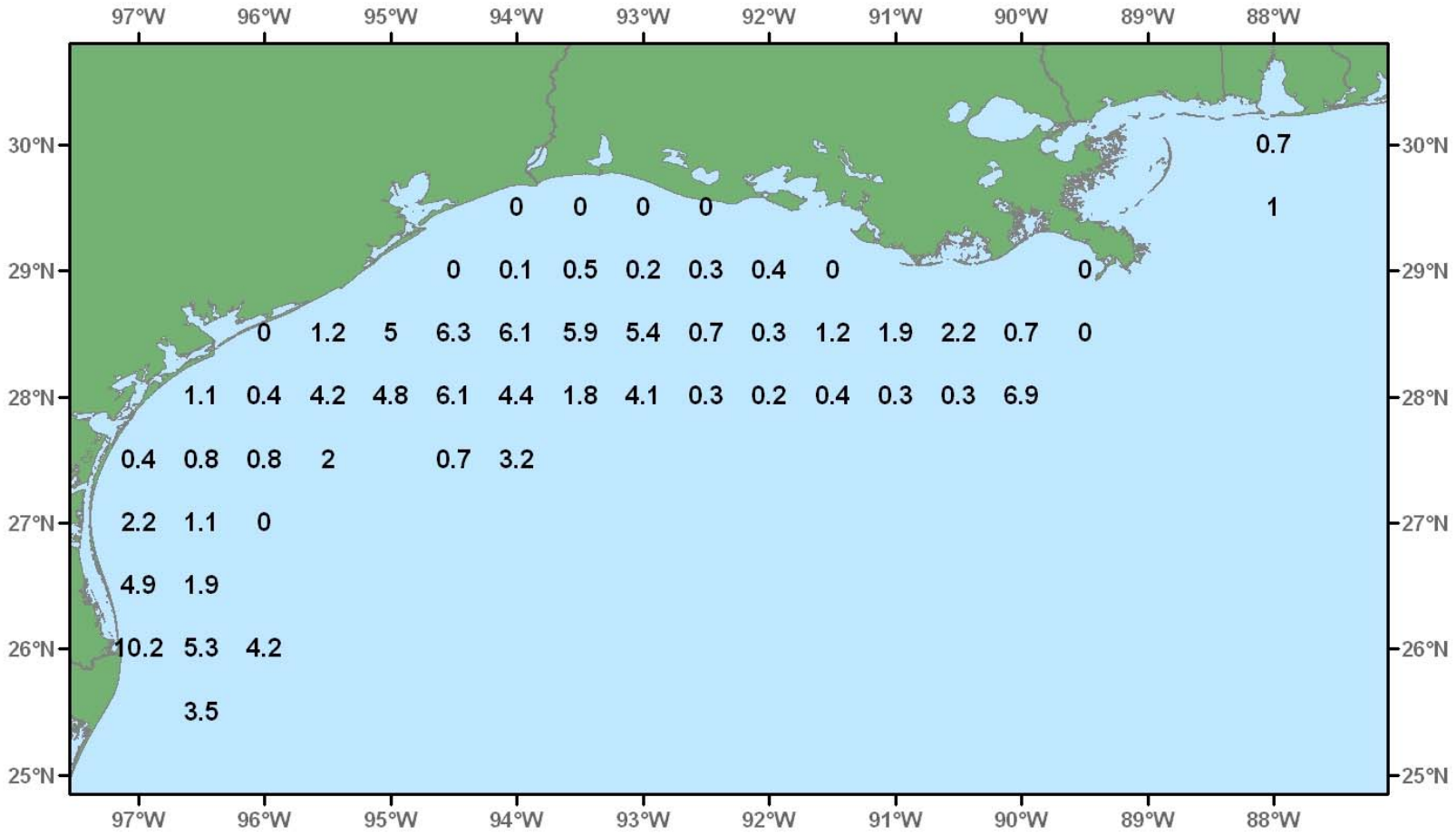

Figure 74. Red snapper, Lutjanus campechanus, lb/hour for October-December 2004.

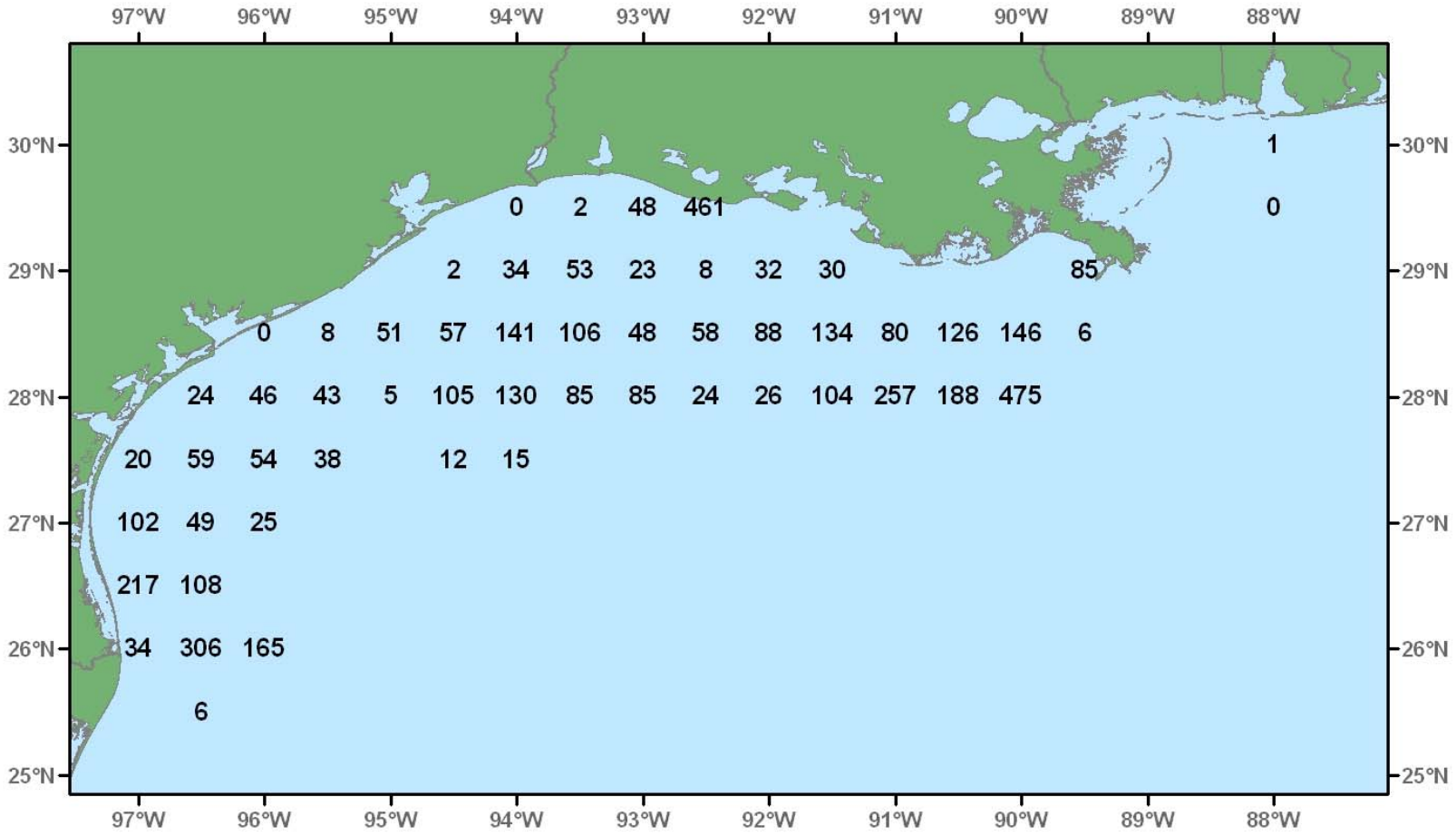

Figure 75. Brown shrimp, Farfantepenaeus aztecus, number/hour for October-December 2004.

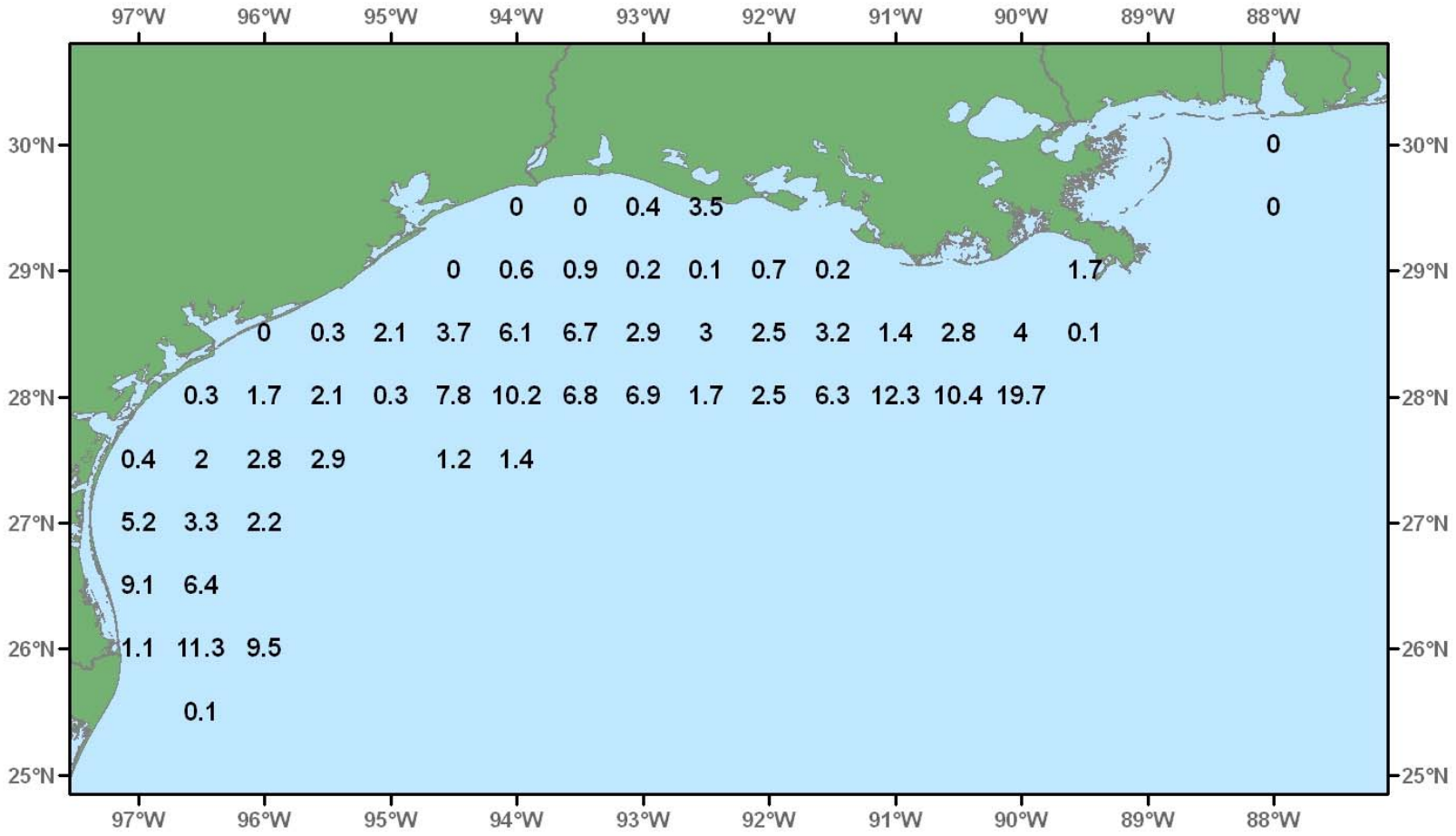

Figure 76. Brown shrimp, Farfantepenaeus aztecus, lb/hour for October-December 2004.

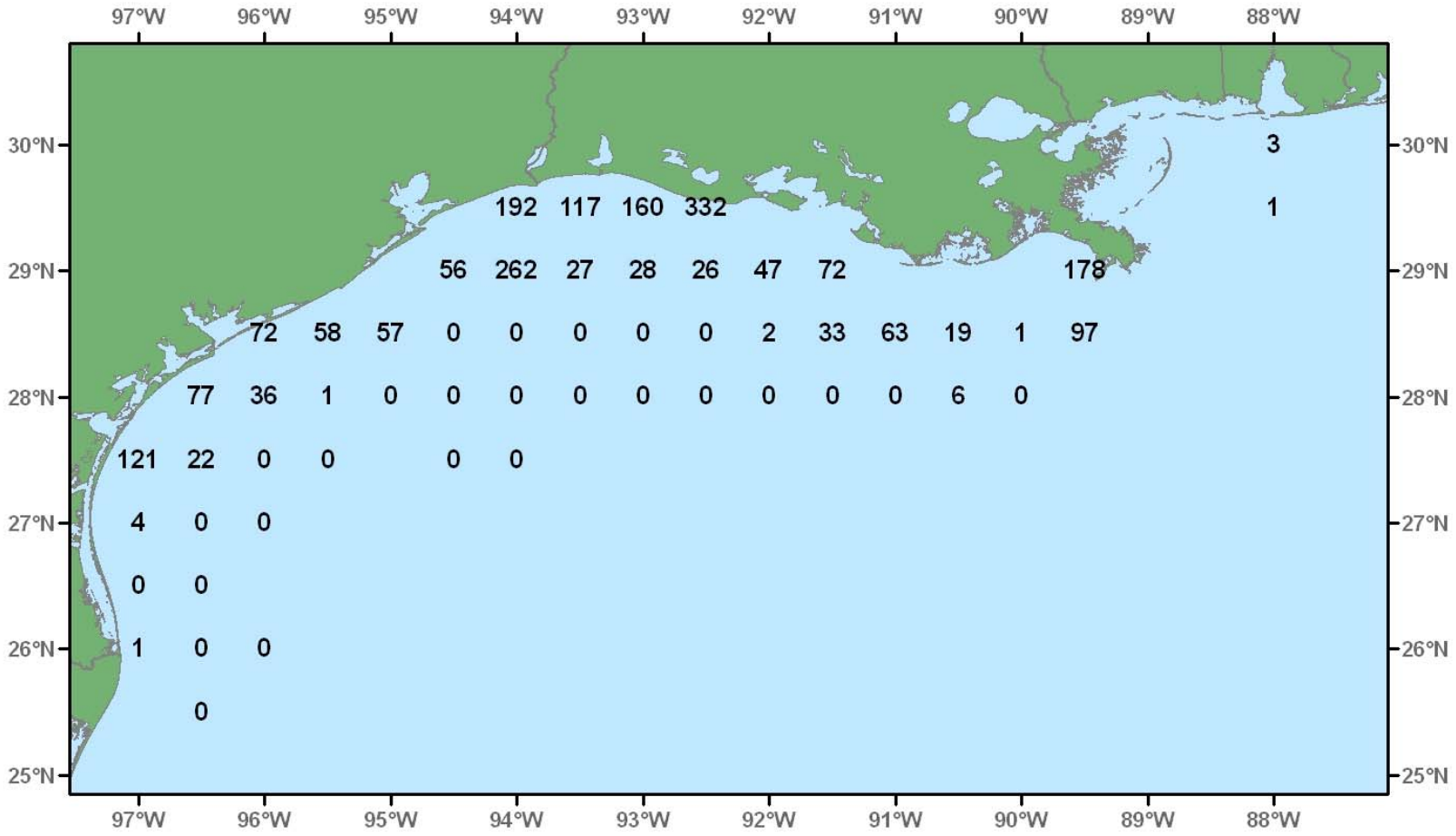

Figure 77. White shrimp, Litopenaeus setiferus, number/hour for October-December 2004.

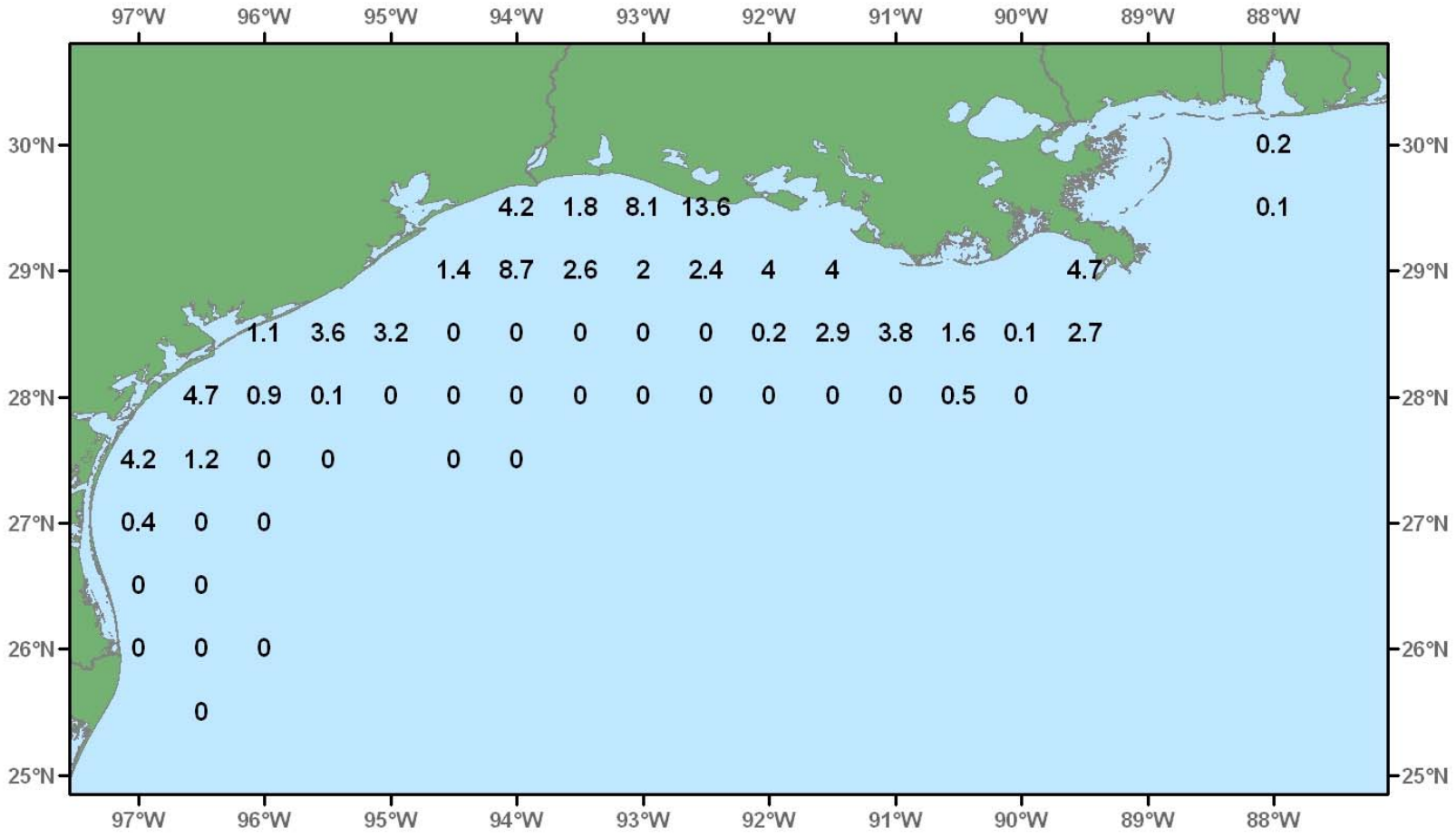

Figure 78. White shrimp, Litopenaeus setiferus, lb/hour for October-December 2004.

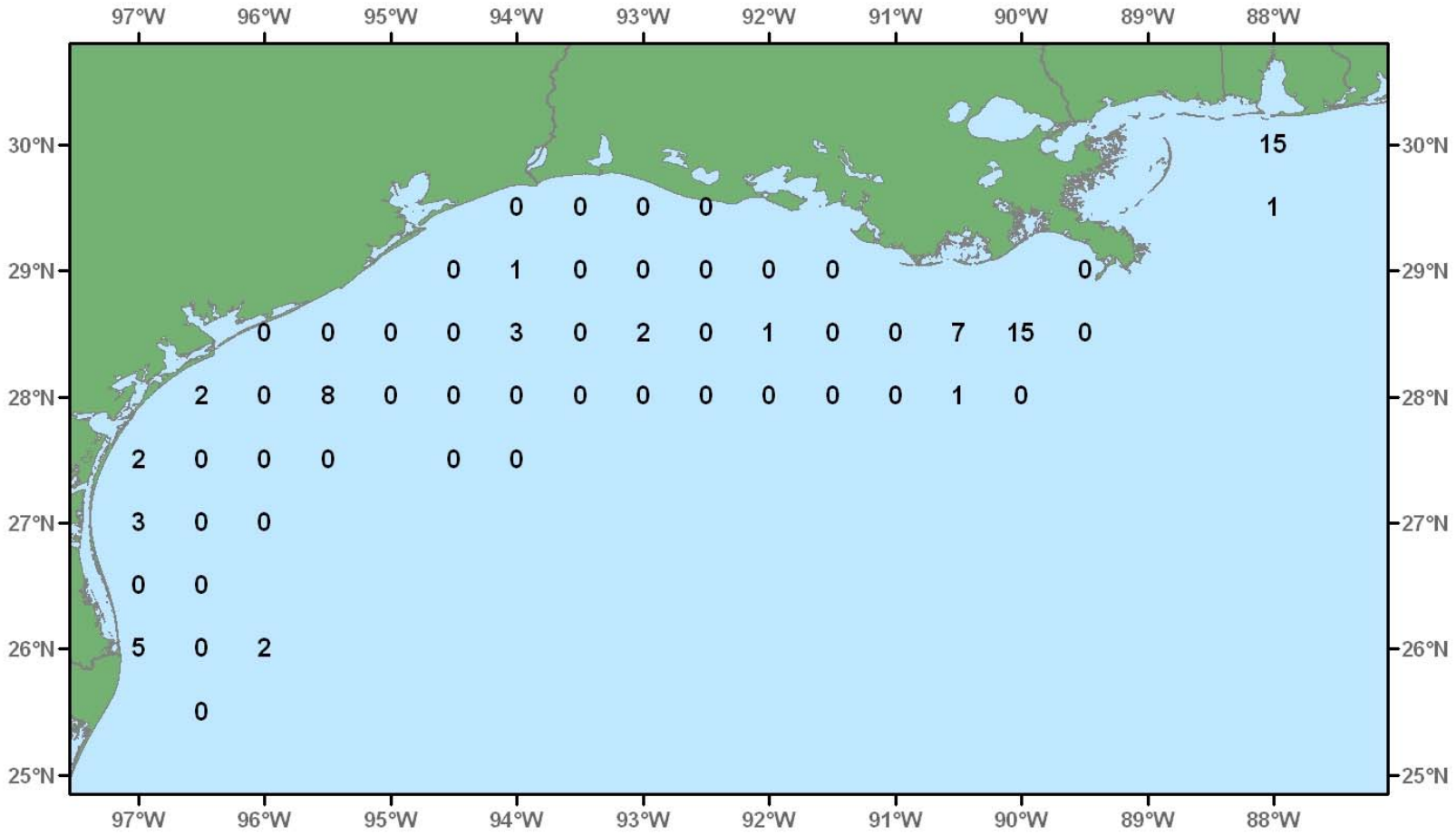

Figure 79. Pink shrimp, Farfantepenaeus duorarum, number/hour for October-December 2004.

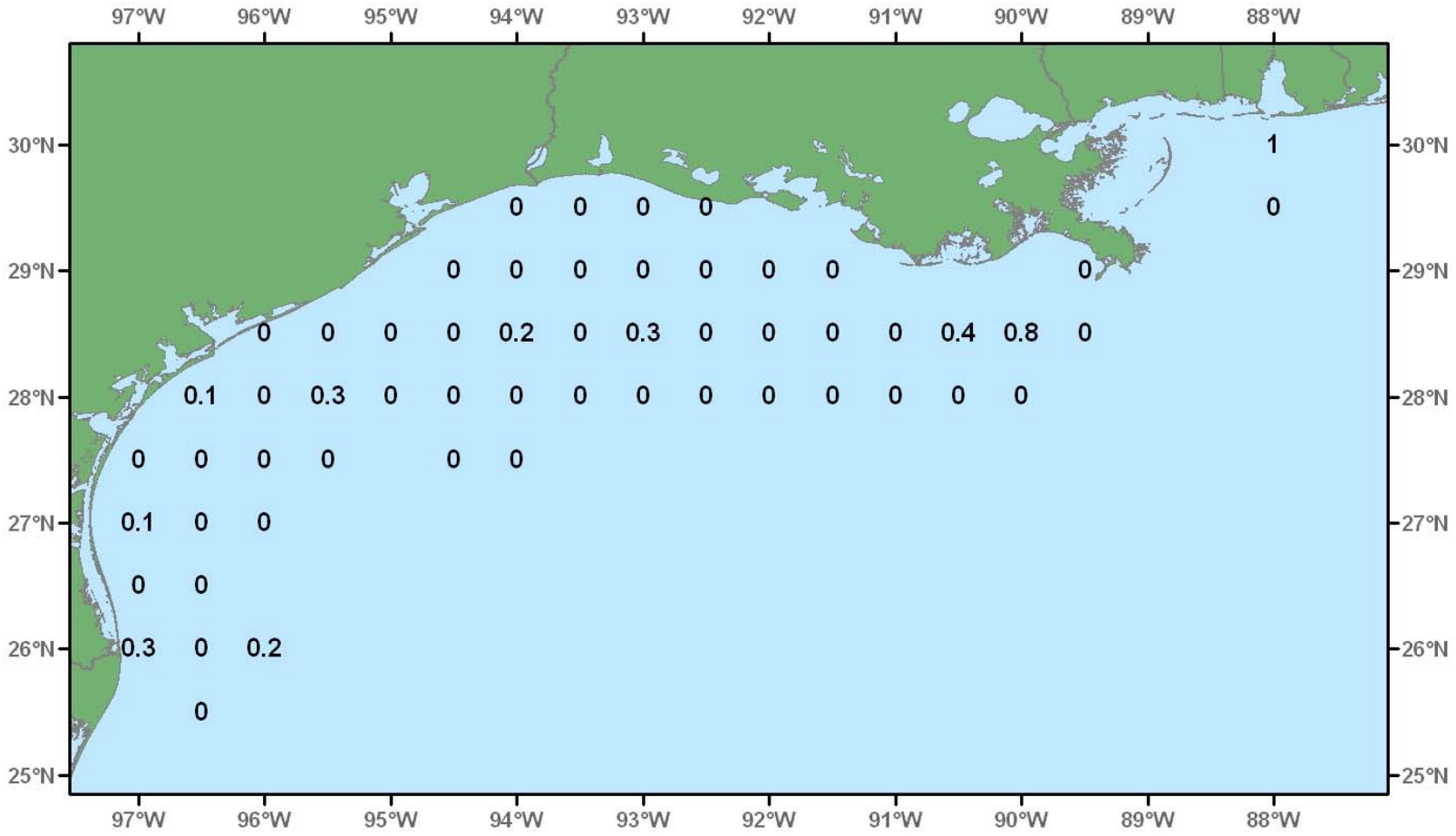

Figure 80. Pink shrimp, Farfantepenaeus duorarum, lb/hour for October-December 2004.

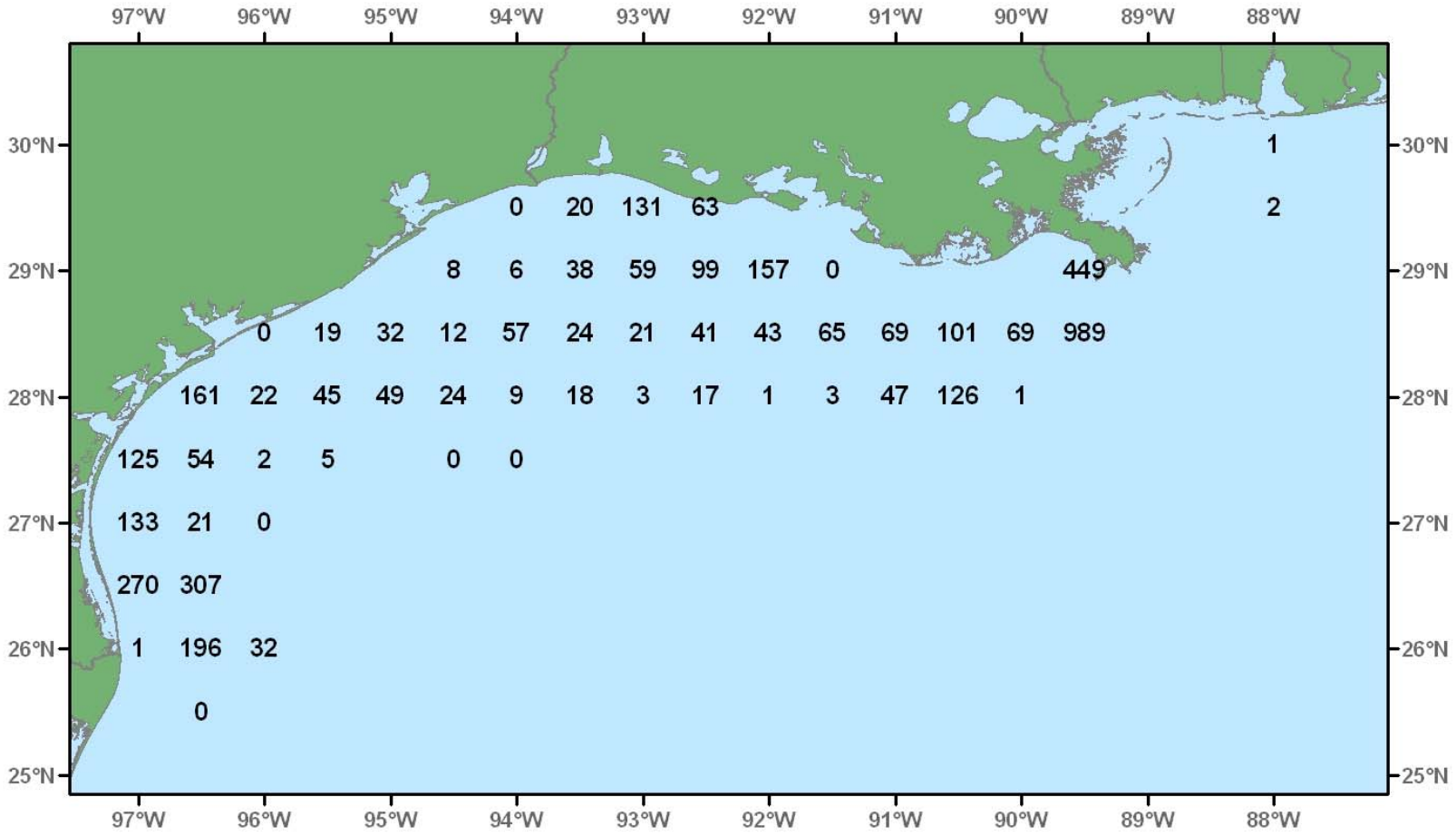

Figure 81. Lesser blue crab, Callinectes similis, number/hour for October-December 2004.

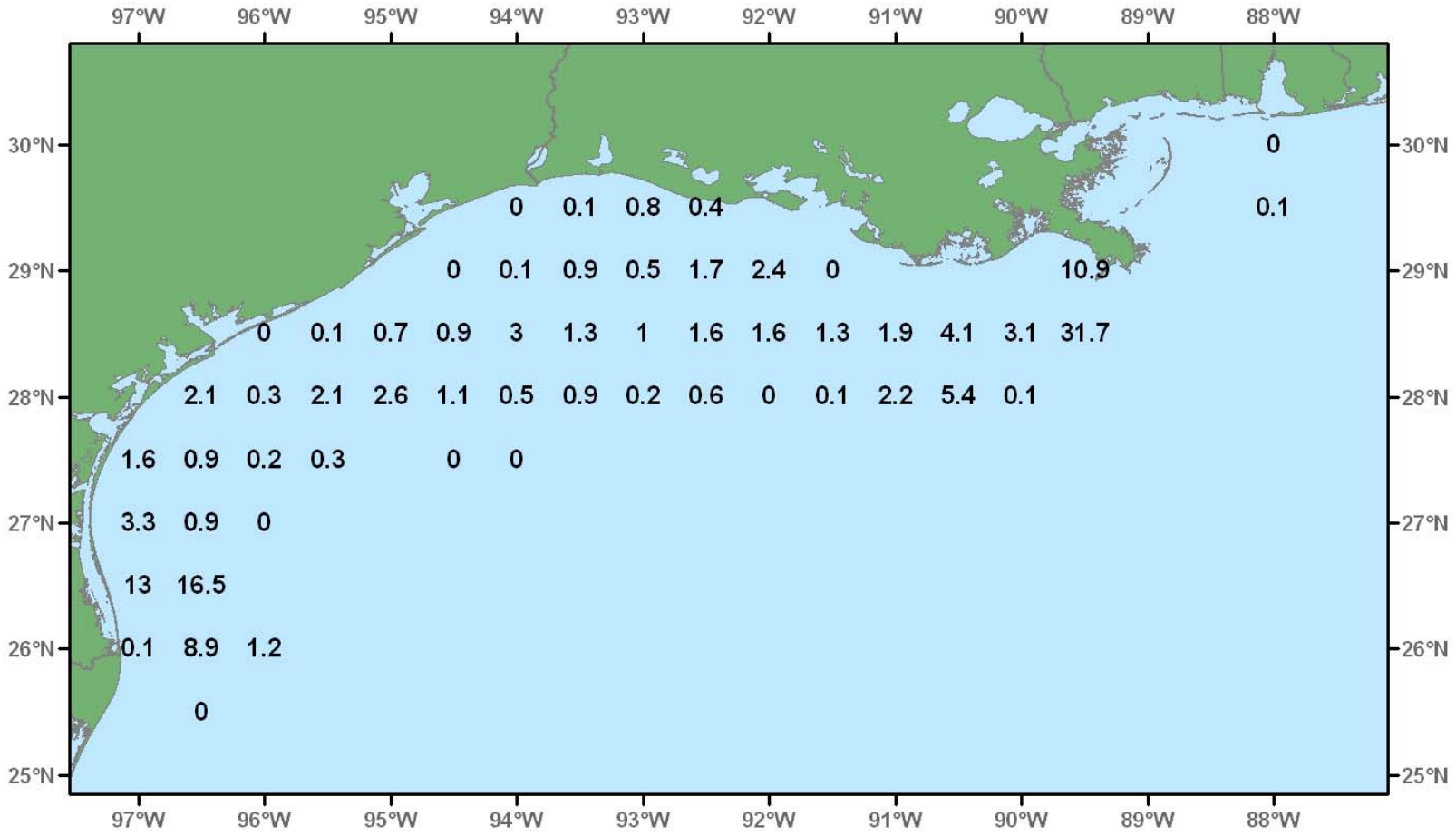

Figure 82. Lesser blue crab, Callinectes similis, lb/hour for October-December 2004.

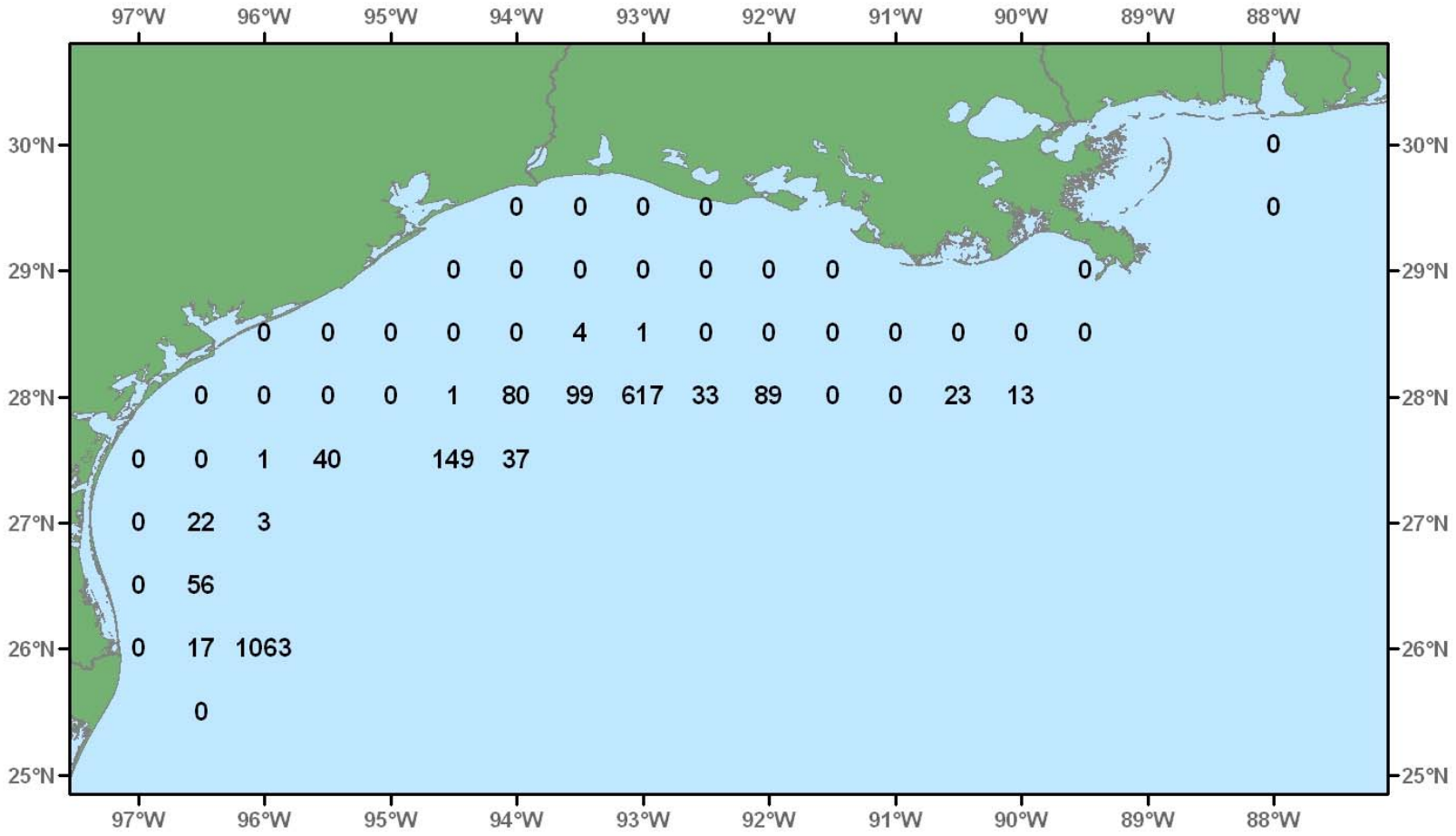

Figure 83. Longspine swimming crab, Portunis spinicarpus, number/hour for October-December 2004.

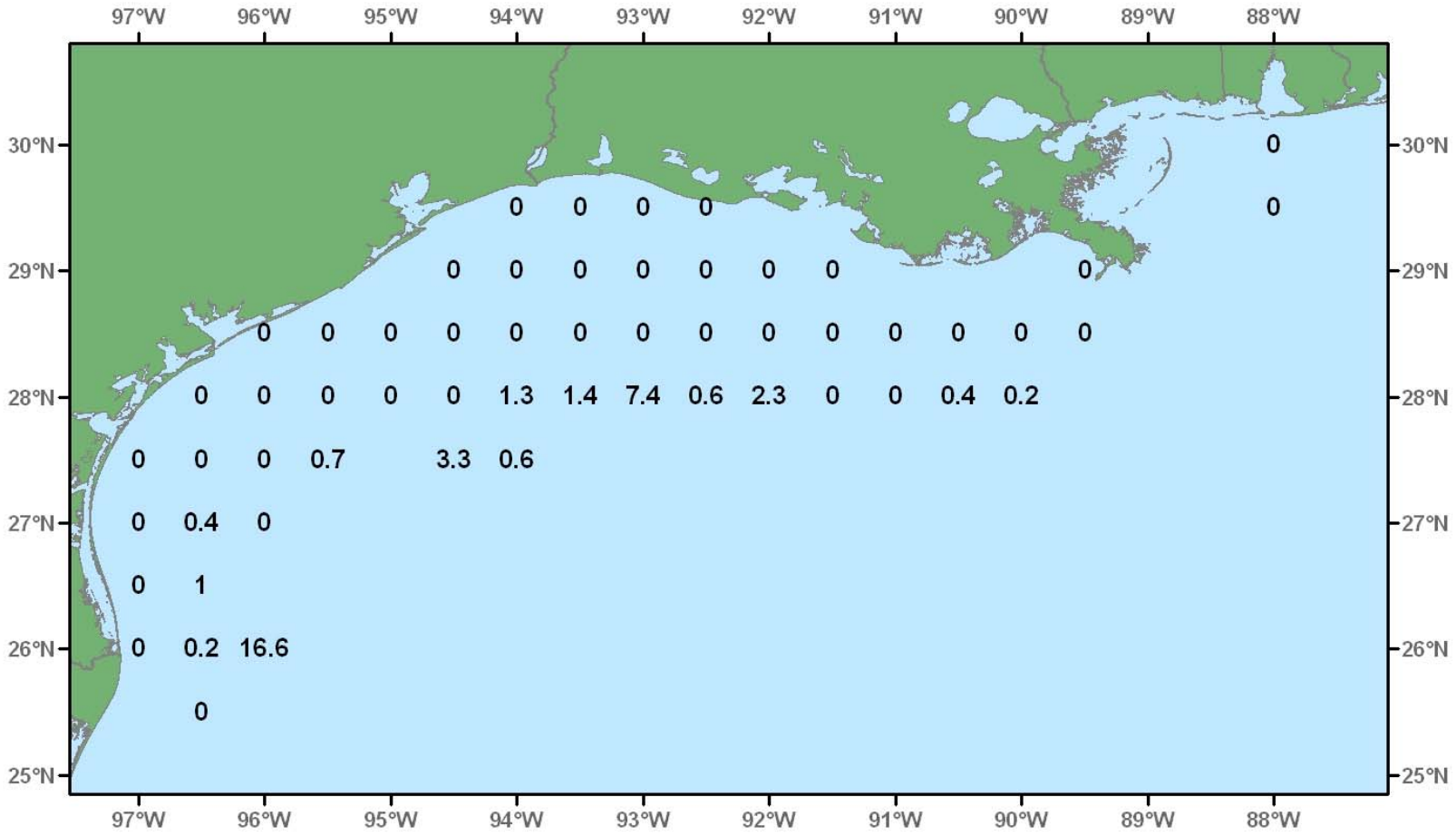

Figure 84. Longspine swimming crab, Portunis spinicarpus, lb/hour for October-December 2004.

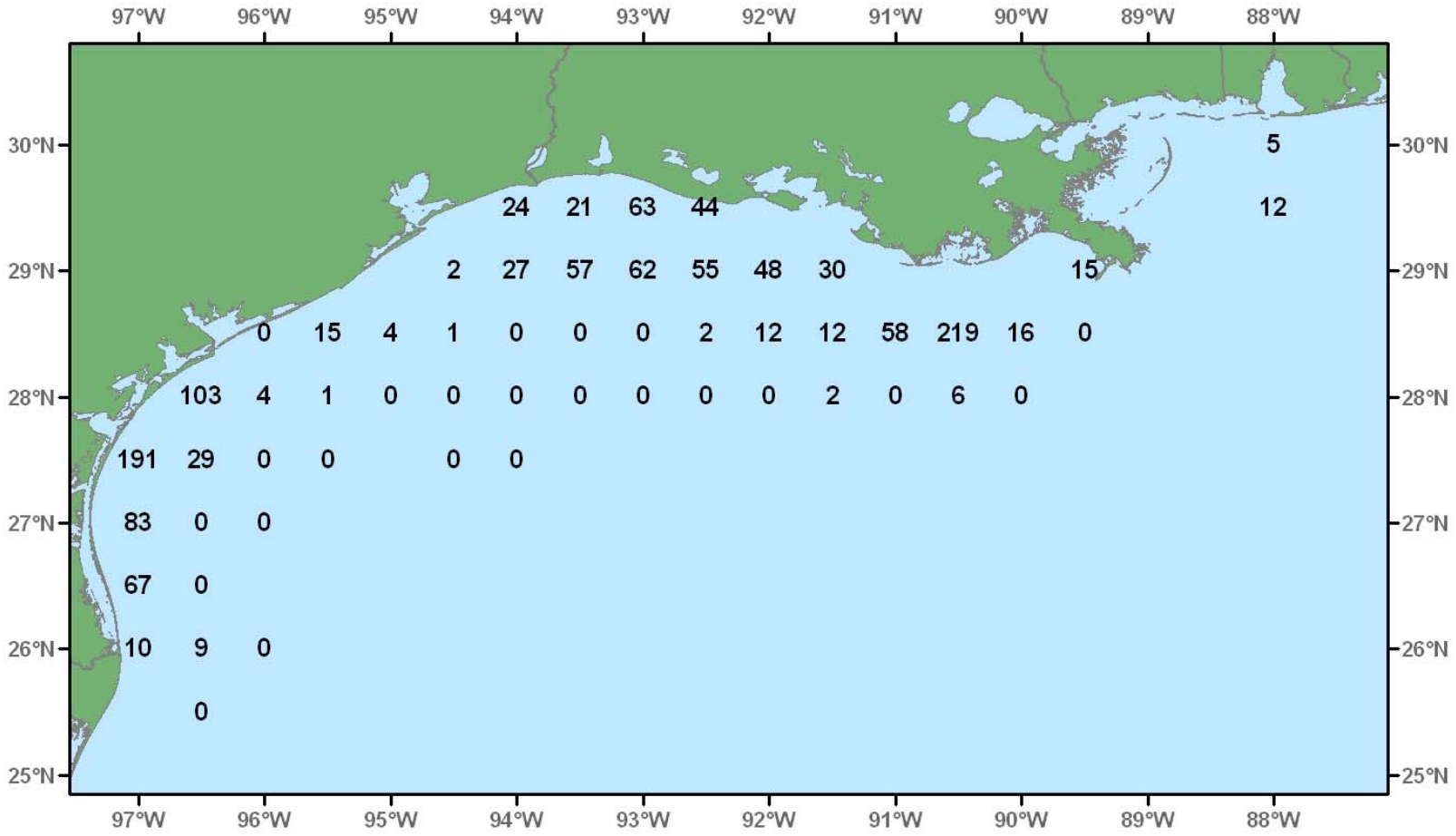

Figure 85. Irridescent swimming crab, Portunus gibbesii, number/hour for October-December 2004.

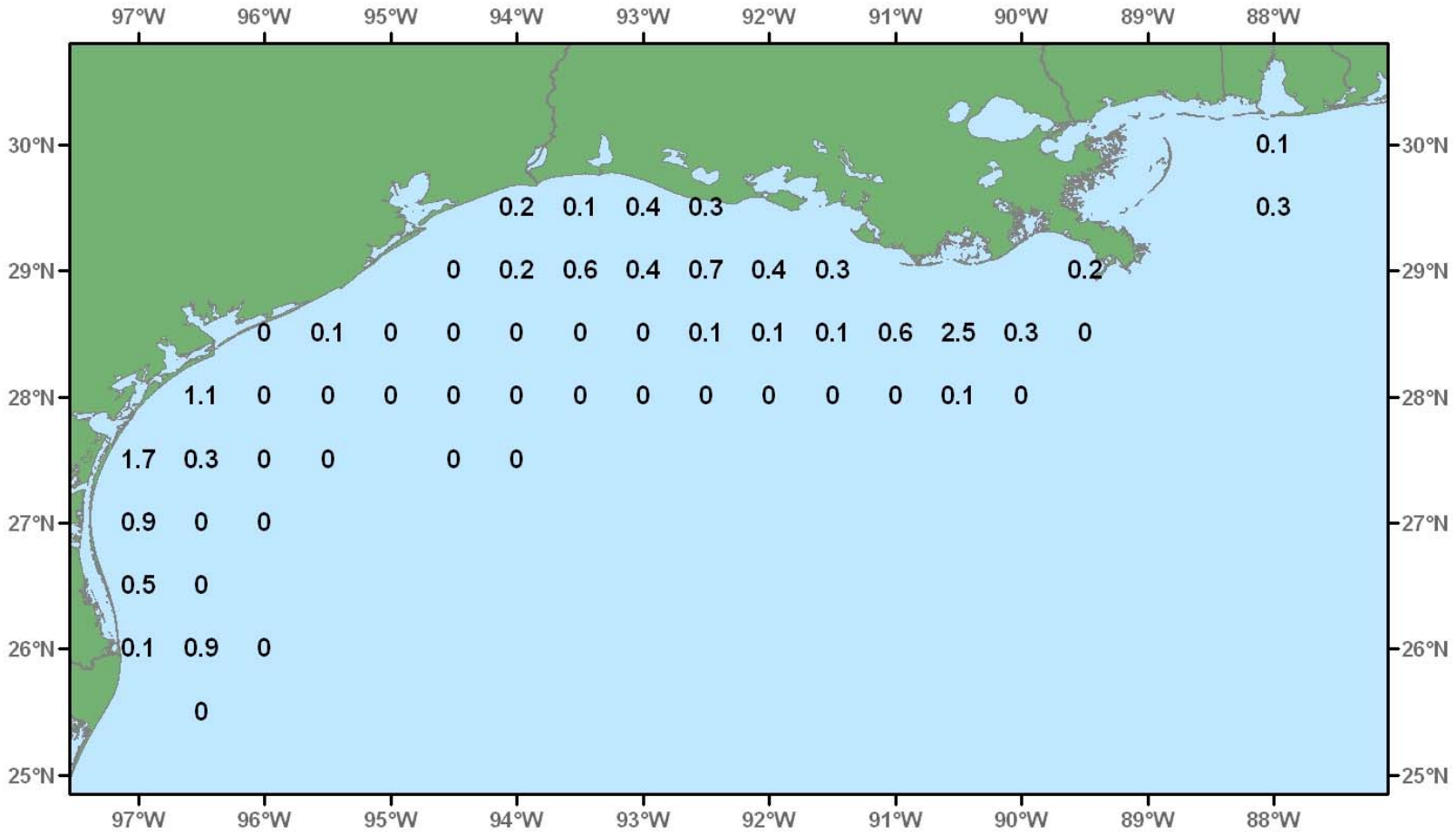

Figure 86. Irridescent swimming crab, Portunus gibbesii, lb/hour for October-December 2004.

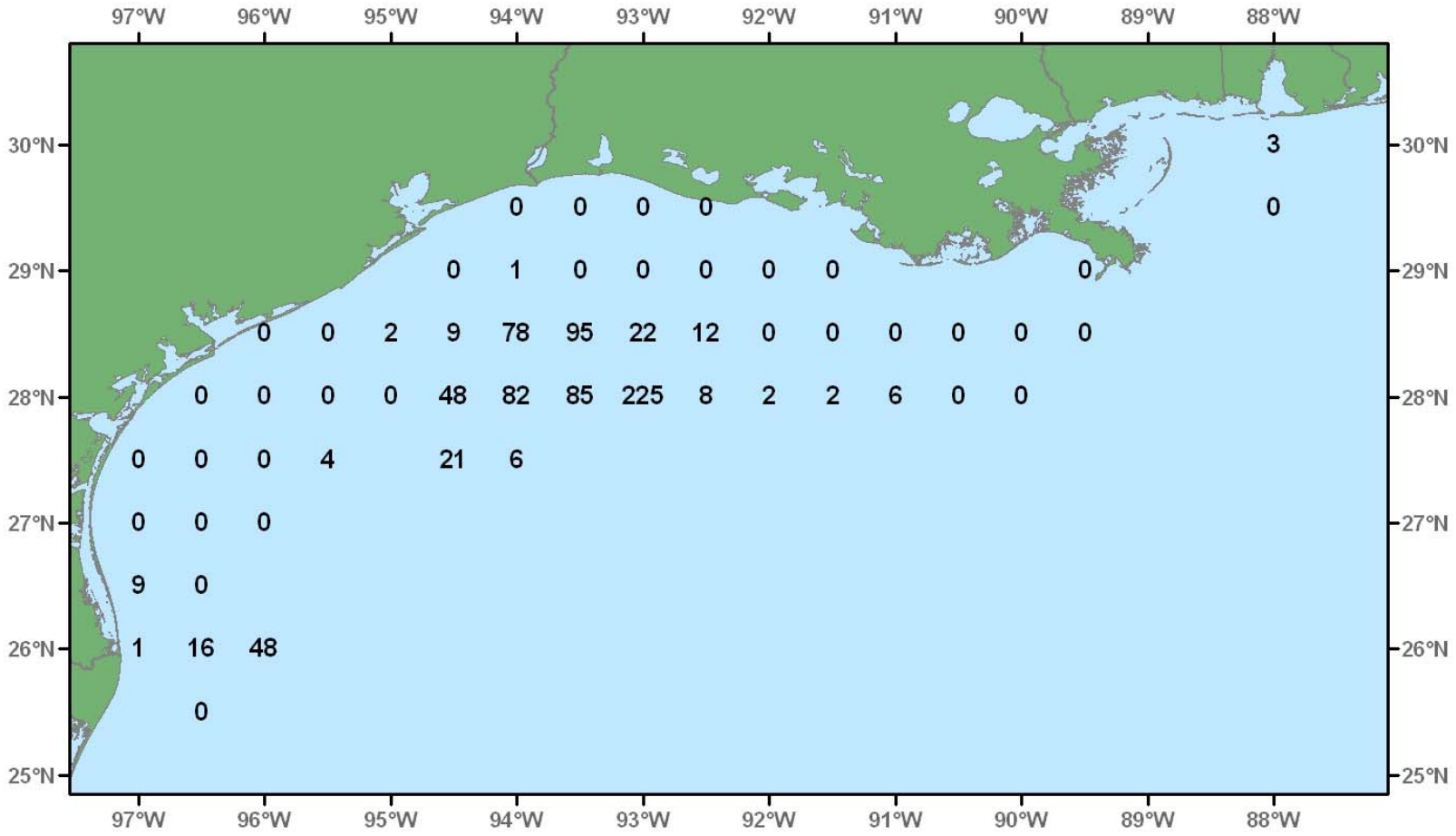

Figure 87. Brown rock shrimp, Sicyonia brevirostris, number/hour for October-December 2004.

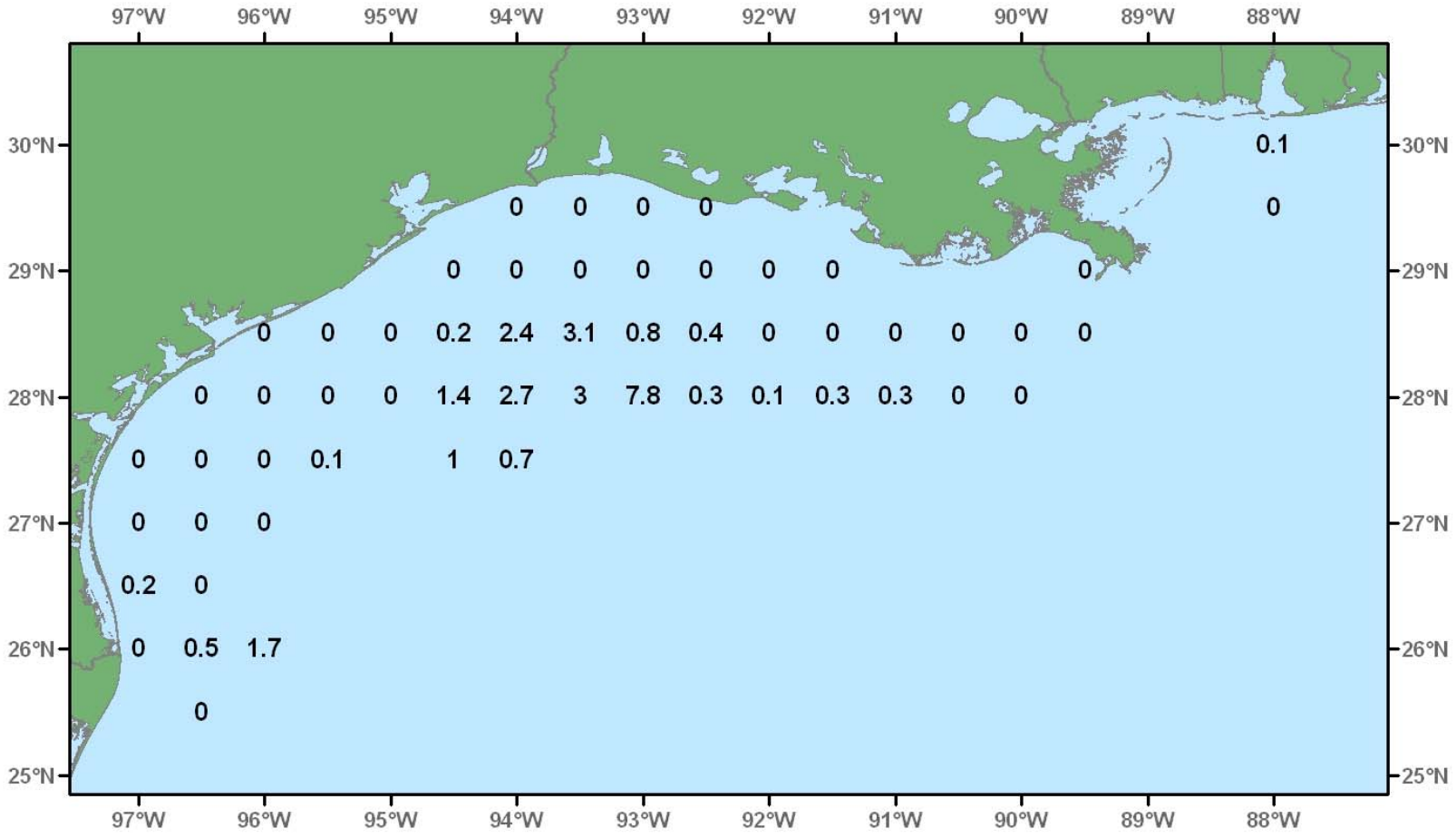

Figure 88. Brown rock shrimp, Sicyonia brevirostris, lb/hour for October-December 2004.

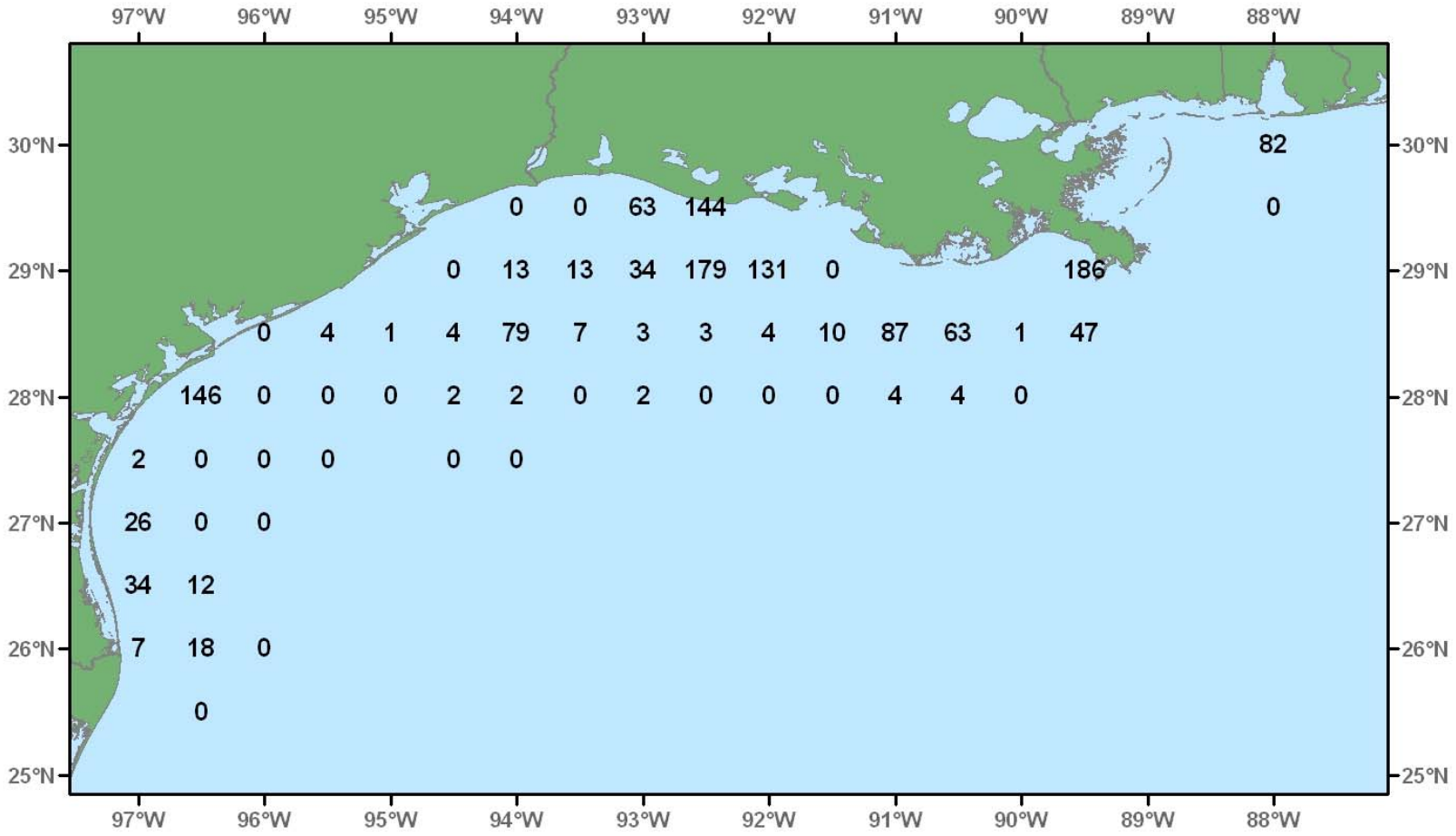

Figure 89. Roughneck shrimp, Trachypenaeus constrictus, number/hour for October-December 2004.

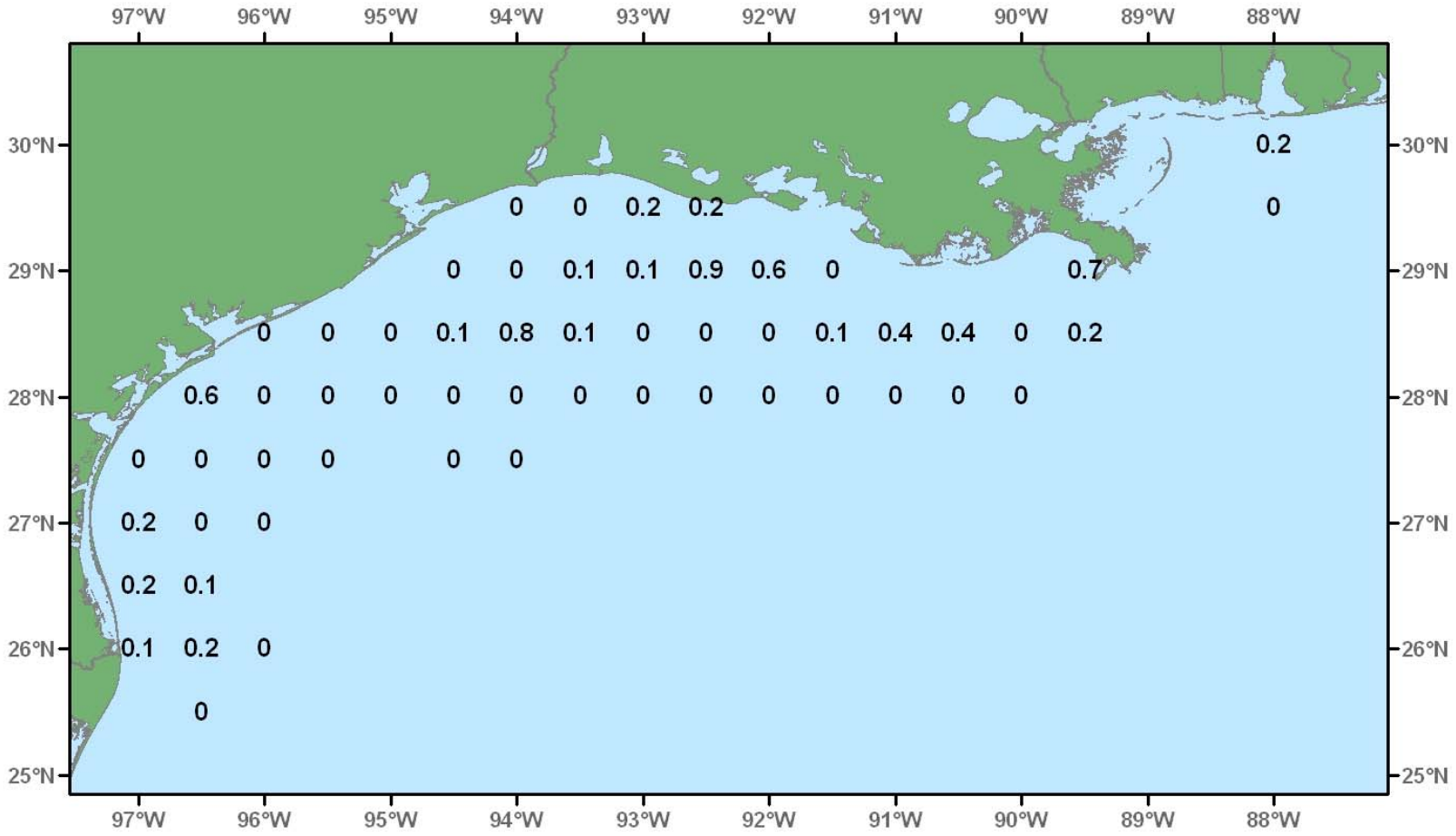

Figure 90. Roughneck shrimp, Trachypenaeus constrictus, lb/hour for October-December 2004.

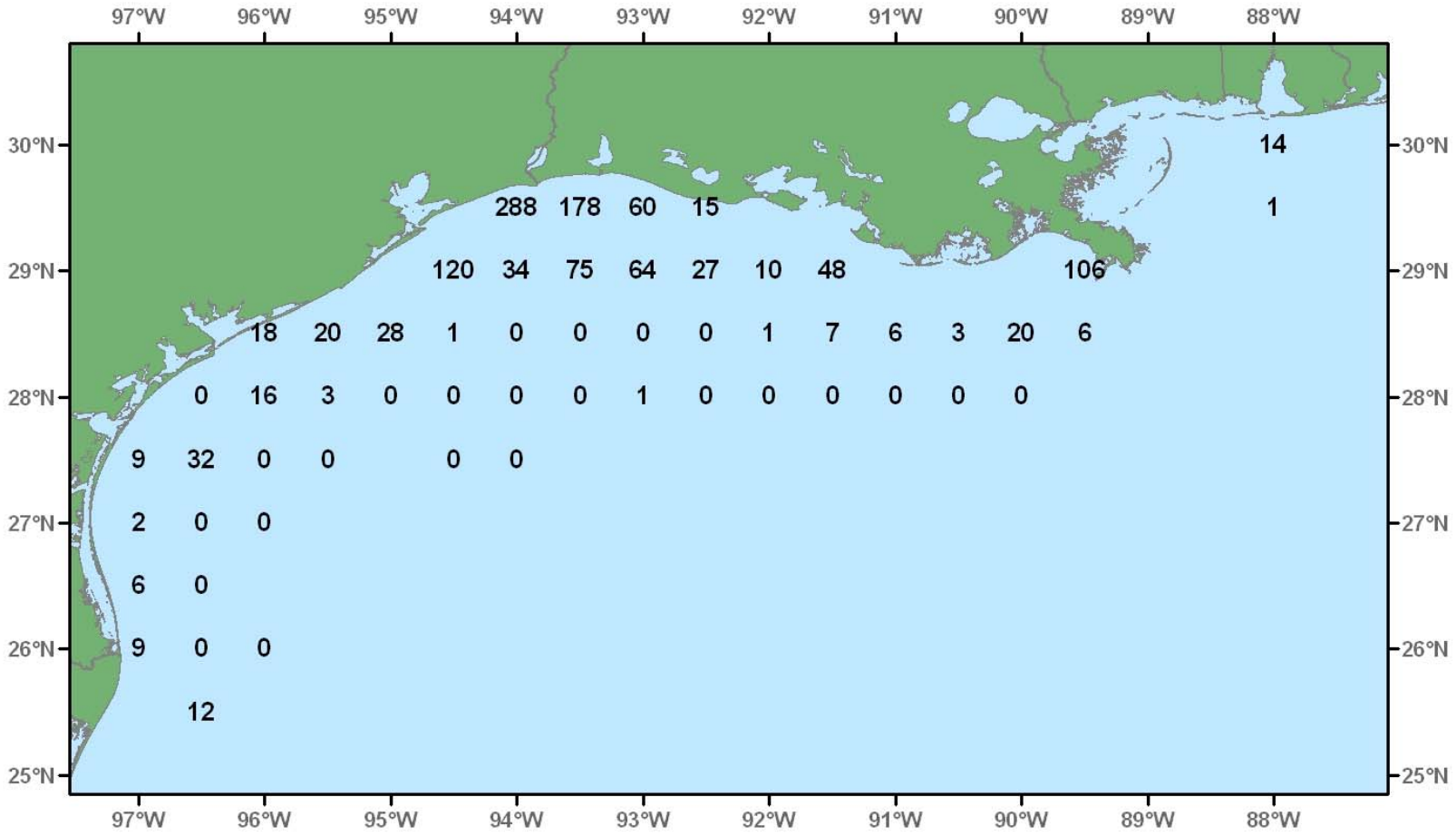

Figure 91. Atlantic brief squid, Lolliguncula brevis, number/hour for October-December 2004.

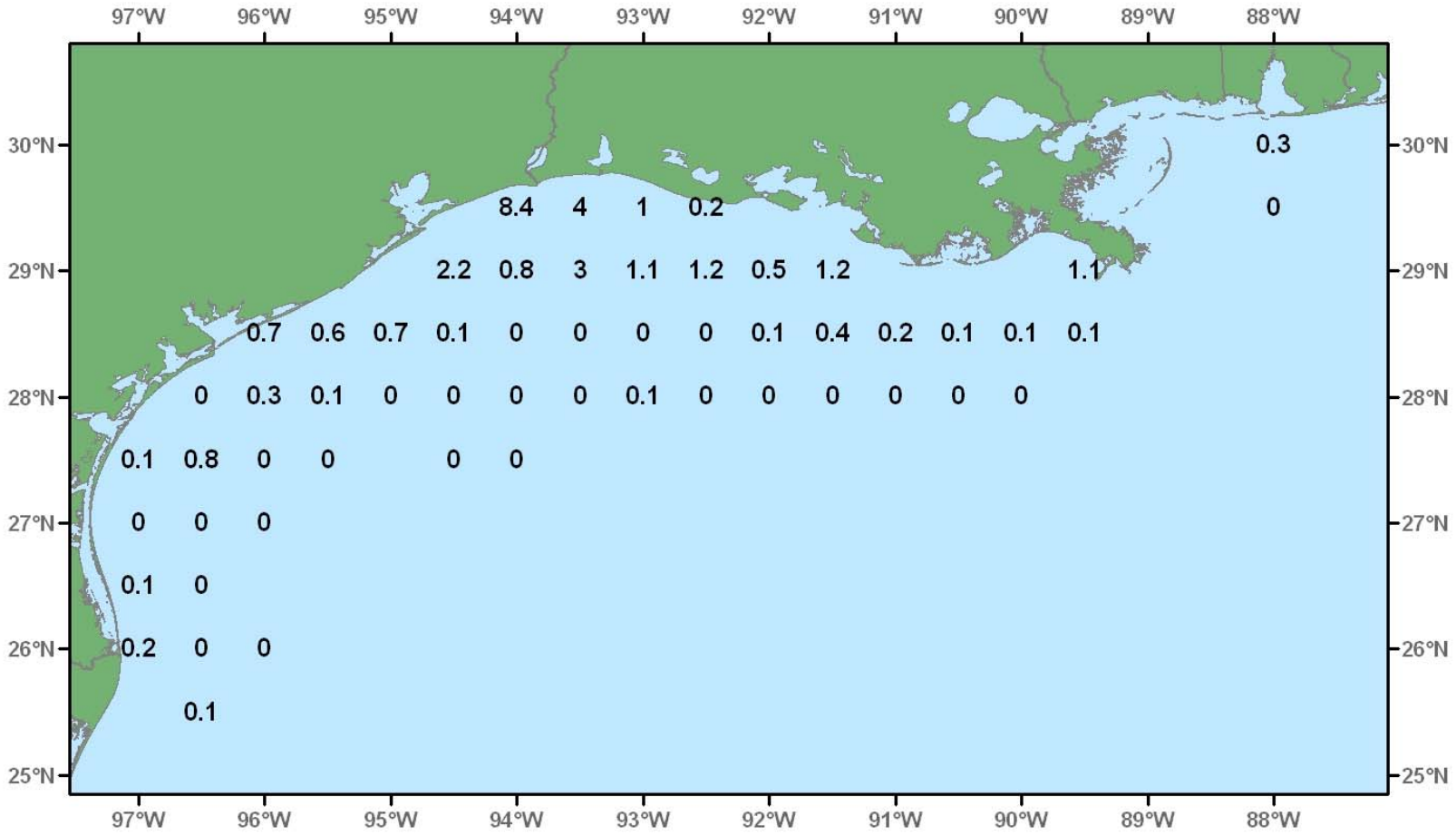

Figure 92. Atlantic brief squid, Lolliguncula brevis, lb /hour for October-December 2004.

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