

**seamap**

**environmental and  
biological atlas of  
the gulf of mexico  
1991**

**gulf states marine fisheries commission**

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# SEAMAP ENVIRONMENTAL AND BIOLOGICAL ATLAS OF THE GULF OF MEXICO, 1991

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## INTRODUCTION

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

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

In January 1991, the SEAMAP Subcommittee identified and began to plan the year's SEAMAP survey activities for the Gulf of Mexico. In keeping with the program goal of establishing a coordinated long-term resource data base, it was decided to continue the same types of survey activities conducted in 1982 through 1990. Overall survey objectives in 1982 to 1990 were to assess the distribution and abundance of recreational and commercial ichthyoplankton and trawl-caught organisms and document environmental factors that might affect their distribution and abundance. The basis for plankton work was primarily assessment of selected finfish and invertebrate eggs and larvae across the northern Gulf of Mexico (Sherman et al. 1983). The basis for the trawl surveys which started with the Texas Closure (Nichols 1982, 1984; Nichols and Poffenberger 1987), was to establish a seasonal data base to assess the abundance and distribution of the shrimp and groundfish stocks across the northern Gulf of Mexico.

A major purpose of SEAMAP is to provide resource survey data to State and Federal management agencies and universities participating in SEAMAP activities. This tenth in a series of SEAMAP environmental and biological atlases presents such data, in a summarized form, collected during the 1991 SEAMAP surveys. The area covered in the Gulf of Mexico for all SEAMAP survey activities during 1991 is shown in Figure 1.

## MATERIALS AND METHODS

Methodology for the 1991 SEAMAP surveys is similar to that of the 1982 through 1990 surveys. Sampling was conducted within the U.S. Exclusive Economic Zone (EEZ) and state territorial waters.

Vessels that participated in collecting plankton and environmental data during the Spring Plankton Survey included the NOAA Ship OREGON II (April 17-May 22) and the Florida vessel HERNAN CORTEZ II (May 7-9). The Louisiana vessel PELICAN collected plankton samples off Louisiana during its trawl survey (March 25-April 4).

Vessels that participated in the Summer Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the NOAA Ship OREGON II (June 13-July 13); the GCRL vessel TOMMY MUNRO (June 14-16; June 24-25; July 8-11); the Louisiana vessel PELICAN (July 8-12); and Louisiana small inshore vessels (July 9-10). The Alabama vessel A.E. VERRILL (June 3-5) and TPWD vessels ARANSAS BAY, MATAGORDA BAY, LAGUNA MADRE, GALVESTON BAY and SABINE (June 3-20) did not sample plankton in conjunction with the summer survey.

Vessels that participated in collecting plankton and environmental data during the Fall Plankton Survey included the Florida vessel HERNAN CORTEZ II (August 21-25); the NOAA Ship CHAPMAN (September 6-26); the Alabama vessel A.E. VERRILL (September 12); and the GCRL vessel TOMMY MUNRO (September 14-16; 21-23; 28-29).

Vessels that participated in the Fall Shrimp/Groundfish Survey and concurrently sampled plankton and environmental data included the Louisiana vessel PELICAN (September 30-October 4 and December 2-6); the NOAA Ship OREGON II (October 14-November 18); the Alabama vessel A.E. VERRILL (October 17); Louisiana inshore vessels (November 5-6); and the GCRL vessel TOMMY MUNRO (November 14-16). The TPWD vessels ARANSAS BAY, MATAGORDA BAY, LAGUNA MADRE, GALVESTON BAY and SABINE (November 6-22) did not sample plankton in conjunction with the fall survey.

## PLANKTON SURVEYS

Plankton samples were taken at stations arranged in a systematic grid across the Gulf of Mexico. Such a grid was chosen because of the large survey area. Stations were set at minimum intervals of 30 miles (1/2 degree). The exceptions were with LDWF vessels, which collected samples opportunistically at the end of a trawl station.

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

At each designated plankton station, either an oblique bongo/surface neuston tow or a surface neuston tow was made. In deep water bongo stations (more than 95 m) a standard oblique tow was made to 200 m, or to 5 m off the bottom at depths less than 200 m, with a payout speed of 50 m/min, 1-minute settling time, and a retrieval speed of 20 m/min, at a vessel speed of 1.5 knots to maintain a 45° angle. Neuston tows were made at the surface with the net half-submerged for 10 minutes at a vessel speed of 1.5 knots. The Louisiana vessels made plankton tows with small, 20-cm bongo nets with 0.333-mm mesh and soft cod ends.

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

Sorted ichthyoplankton specimens from PSC were returned to the SEAMAP Archiving Center (SAC), managed in conjunction with the FDNR, for long-term storage under museum-like conditions. Sorted ichthyoplankton samples from 1982 through 1990 are available for loan to researchers throughout the country. Plankton volumes were determined according to procedures in Smith and Richardson (1977). The alternate bongo sample from each station was retained at GCRL as a backup for those samples transshipped to the PSIC, in case of loss or damage during transit. These backup unsorted plankton



samples containing zooplankton and phytoplankton are stored at the SEAMAP Invertebrate Plankton Archiving Center (SIPAC), managed in conjunction with GCRL, for use by researchers.

## ENVIRONMENTAL SURVEYS

Standardized methodology was used although the actual parameters measured varied among vessels participating in each survey. 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 type: Types of clouds recorded in daylight stations.

Cloud cover: Estimated visually in percent cloud cover.

Secchi depth: Secchi depth in meters, estimated at each daylight station. Standard oceanographic 30-cm white discs were lowered until no longer visible, then raised until visible. If different depths were recorded, an average was used.

Water Color: Forel-Ule data was recorded.

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

Water temperature: Temperatures were measured by a hand-held thermometer onboard ship, in situ electronic sensors, or in situ reversing thermometers. 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.

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 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.

Dissolved oxygen: Dissolved oxygen values were measured by electronic probes (depending on the vessel) 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 (depending on the vessel).

## **Satellite Images**

Thermal data were collected by the Advanced Very High Resolution Radiometers (AVHRR) carried on the NOAA Polar Orbiter series of satellites. The data were analyzed by the National Environmental Satellite Data and Information Service (NESDIS).

## **TRAWL SURVEYS**

### **Spring Louisiana Trawl Survey**

The Louisiana Department of Wildlife and Fisheries conducted a seasonal day/night trawl survey and concurrently took environmental samples at each trawl station and plankton samples opportunistically. The trawl survey was conducted as part of an effort to provide comparative information on critical life states of major Gulf species, especially shrimp, and associated environmental parameters in Louisiana and adjacent EEZ waters. The LDWF sampled day and night stations with a 40-ft shrimp trawl to depths of 21 fm. A stratified random station selection design was maintained. All organisms captured were identified, counted, measured and weighed.

### **Summer Shrimp/Groundfish Survey**

The sampling strategy and a description of the statistical rationale for the sampling design as described by Nichols in the 1982 SEAMAP Atlas (Stuntz et al. 1985) has been modified. Since 1987, the strategy has been that day/night sampling sites were chosen randomly in areas stratified by depth and statistical area. These areas are shrimp statistical zones 10-22, (Figure 2). Trawl stations for NMFS, Alabama, Mississippi and Louisiana vessels are made with a standard SEAMAP 40-ft net, 20-ft net for Texas vessels and 16-ft net for Louisiana inshore vessels. Depth strata consisted of 1 fm intervals from 5 to 20 fm, a 2 fm interval from 20 to 22 fm, a 3 fm interval from 22 to 25 fm, 5 fm intervals from 25 to 50 fm and a 10 fm interval from 50 to 60 fms. Additionally, the GCRL vessel TOMMY MUNRO sampled 1 fm intervals from 2 to 5 fm off Louisiana in July. Trawls were towed perpendicularly to the depth contours and covered the entire depth stratum on each station. Single tows were for a maximum of 60 minutes; for certain stations, a series of consecutive trawl tows was necessary to cover a given depth stratum, with a minimum individual tow across each stratum of 10 minutes and a maximum tow of 60 minutes. The Texas vessels towed 10 minutes parallel to the depth stratum. The Louisiana vessels did not cover a complete depth stratum on several stations because of the distance between depth stratum.

The Louisiana Department of Wildlife and Fisheries used small inshore vessels (less than 30 ft) to sample seven study areas in NMFS statistical zones 11, 12, 13, 14, 16 and 17, utilizing 16-ft shrimp trawls during daylight hours. Statistical zone 15 was not sampled, as stations were made along set transects occurring only in the six other zones with the 16-ft trawl. Six samples were taken weekly in each study area during the survey period. A sampling station consisted of a 10 minute tow at depths of 1, 3 and 5 fm made parallel to the depth contour.

All Penaeus spp. shrimp were separated from the trawl catch at each station. Total count and weight by species were recorded for each station. A sample of up to 200 shrimp of each species from every trawl was sexed and measured to obtain length-frequency information. Estimated total numbers

were derived from the total weights of those processed. Other species of fishes and invertebrates were identified, enumerated and weighed. Weights and individual measurements on selected species other than commercial shrimp were also recorded.

## **Fall Shrimp/Groundfish Survey**

The design of the fall survey was similar to the Summer Shrimp/Groundfish Survey. During the Fall survey trawl stations were made with the standard 40-ft, 20-ft and 16-ft SEAMAP net 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.

## **RESULTS**

### **PLANKTON SURVEYS**

Thirty one thousand three hundred forty one (31,341) identified ichthyoplankton samples were received at the SAC. A total of 10,308 of these samples were from the 1991 collection year, the remainder represent backlogged samples collected between 1986 and 1990. Approximately 25,000 of these samples have been accessioned into the SAC computer database.

Plankton stations for the Spring Plankton Survey in conjunction with environmental stations are shown in Figure 3, the Summer Shrimp/Groundfish Survey stations are shown in Figure 4, the Fall Plankton Survey Stations in conjunction with environmental stations are shown in Figure 5, and the Fall Shrimp/Groundfish survey stations are shown in Figure 6.

### **ENVIRONMENTAL SURVEYS**

Environmental data was collected in conjunction with each plankton station for the Spring (Figure 3) and Fall (Figure 5) plankton surveys. Environmental data stations for the Summer Shrimp/Groundfish Survey are shown in Figure 7 and the Fall Shrimp/Groundfish Survey in Figure 8. Environmental sampling locations are summarized in Figures 7 and 8 by 10-minute squares. A complete listing of environmental stations and dates of sampling by vessel for all SEAMAP surveys is shown in Table 2. In Table 2 under statistical zone, the 99 codes are stations located outside the shrimp statistical zones.

Additional environmental information (Secchi readings, Forel-Ule, cloud cover, etc.) may be obtained from the SEAMAP Information System by contacting the SEAMAP Data Manager.

Satellite-derived sea-surface temperatures are shown for the months of March (Figure 9), April (Figure 10), May (Figure 11), June (Figure 12), July (Figure 13), August (Figure 14), September (Figure 15), October (Figure 16), November (Figure 17) and December (Figure 18).

### **TRAWL SURVEYS**

#### **Spring Louisiana Trawl Survey**

Louisiana Department of Wildlife and Fisheries conducted their seasonal day/night trawl survey in March-April 1991. Trawl station data can be found in Table 2 and the plankton/environmental stations are plotted in Figure 3. A species composition listing from the trawls is presented in Table 3, ranked in order of abundance within the categories of finfish, crustaceans and other invertebrates.

Tables 4a-6a present the biological data, from 40-ft nets, of the eight most abundant fish, six most abundant invertebrates and squids within NMFS statistical zones 13-15 by depth stratum. Tables 4b-6b list the total catch and environmental data from the 40-ft nets within NMFS statistical zones 13-15 depth stratum.

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

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

where  $\alpha$  = 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 was collected.

## Summer Shrimp/Groundfish Survey

Shrimp and groundfish sampling was conducted during June and July from off Gulf Shores, Alabama to Brownsville, Texas and summarized by 10-minute squares in Figure 19. 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 trawls is presented in Table 7, ranked in order of abundance, within the categories of finfish, crustaceans and other invertebrates. Species composition listing from 20-ft trawls is presented in Table 8 and the 16-ft trawls is presented in Table 9.

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant non-Penaeus invertebrates and squid species, taken from Table 7, 8 and 9, are displayed in plots of number/hour and lb/hour in Figures 21-60. Data for the biological plots were computed from the 40-ft, 20-ft and 16-ft trawl data, standardized to 40-ft trawls using relative headrope length. In the plots of lb/hour, a zero value indicates less than 0.5 lb/hr taken; only stations where some of the species were taken are shown. During this time frame, the state of Florida did not participate in any SEAMAP survey activities.

Tables 10a-19a present the biological data, from the 40-ft nets, of the eight most abundant fish, six most abundant invertebrates and squid within NMFS statistical zones 11 and 13 through 21, by depth stratum. Tables 10b-19b list the total catch and environmental data from the 40-ft nets within NMFS statistical zone listed above, by depth stratum.

Tables 20a-25a present the biological data from the 20-ft nets of the eight most abundant fish, six most abundant invertebrates and squid within NMFS statistical zones 17 through 22, by depth stratum. Tables 20b-25b present the total catch and environmental data from the 20-ft nets within the NMFS statistical zones listed above, by depth stratum.

Tables 26a-31a present the biological data from the 16-ft nets of the eight most abundant fish, six most abundant invertebrates and squid within NMFS statistical zones 11, 12, 13, 14, 16 and 17, inside 5 fm. Tables 26b-31b present the total catch and environmental data from the 16-ft nets within the NMFS statistical zones listed above, inside 5 fm.

Catch rates for the survey were computed with the same equations used to compute the Spring Louisiana Trawl Survey catch rates.

As in the Spring Louisiana Trawl Survey, discrepancies in the "b" tables may have occurred.

## Fall Shrimp/Groundfish Survey

Shrimp and groundfish sampling was conducted during October through December from off Mobile Bay, Alabama to Brownsville, Texas and summarized by 10-minute squares in Figure 20. The Fall Shrimp/Groundfish Survey consisted of biological trawl data and concomitant environmental and plankton data. A species composition listing from the 40-ft trawls is presented in Table 32, 20-ft trawls in Table 33 and 16-ft trawls in Table 34. The species list for Tables 32 to 34 are ranked in order of abundance within the categories of finfish, crustaceans and other invertebrates.

Biological distributions of the ten most abundant finfish plus red snapper, three main penaeid shrimps, five most abundant non-Penaeus invertebrates and squid species, taken from Tables 32 to 34 are displayed in plots of number/hour and lb/hour in Figures 61 to 100. Data for the biological plots were computed from the 40-ft, 20-ft and from 16-ft trawl data, standardized to 40-ft trawls using relative headrope length. In the plots of lb/hour, a zero value indicates less than 0.5 lb/hr taken; only stations where some of the species were taken are shown. During this time frame, the state of Florida did not participate in any SEAMAP survey activities.

Tables 35a-44a present the biological data, from the 40-ft nets, of the eight most abundant fish, six most abundant invertebrates and squid species within NMFS statistical zones 11 and 13 through 21, by depth stratum. Tables 35b-44b list the total catch and environmental data from the 40-ft nets within the NMFS statistical zone listed above, by depth stratum.

Tables 45a-50a present the biological data from the 20-ft nets of the eight most abundant finfish, six most abundant invertebrates and squid within each NMFS shrimp statistical zones 17 through 22, by depth stratum. Tables 45b-50b present the total catch and environmental data from the 20-ft nets within the NMFS statistical zones listed above, by depth stratum.

Tables 51a-56a present the biological data from the 16-ft nets of the eight most abundant fish, six most abundant invertebrates and squid within NMFS statistical zones 11, 12, 13, 14, 16 and 17, inside 5 fm. Tables 51b-56b present the total catch and environmental data from the 16-ft nets within the NMFS statistical zones listed above, inside 5 fm.

The catch data were calculated using the same equation that was used to compute catch rates for the Spring Louisiana Trawl Survey.

As in the Spring Louisiana Trawl Survey, discrepancies in the "b" tables may have occurred.

## REAL-TIME DATA MANAGEMENT

The SEAMAP Subcommittee agreed it was imperative to the success of the SEAMAP Program to distribute data on a near real-time basis to the fishing industry and others interested in SEAMAP. To distribute near real-time data, NMFS utilized a cellular phone aboard the NOAA Ship OREGON 11. This enabled personnel aboard the vessel to transmit daily catch rates and environmental data to the NMFS computer system located at the NMFS Mississippi Laboratories in Pascagoula.

Summarized data were distributed weekly to approximately 300 individuals during the Summer Shrimp/Groundfish Survey. The summarized data in the form of computer plots and data listings was 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.

## DISCUSSION

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

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

Much use has already been made of SEAMAP data. For example, during the past SEAMAP surveys an area of very low dissolved bottom oxygen was found off Louisiana in the summers of 1982, 1985-1991. Additionally in 1991, areas of low dissolved oxygen were consistently found inside 20 m from Texas to Mississippi and occasionally out to 39 m off Louisiana. The presence of this phenomenon and some of the related conditions and biological effects were reported by Leming and Stuntz (1984), 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 by some coastal states to determine the status of shrimp stocks and their movements just as the shrimping seasons were to be opened.

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

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

National Marine Fisheries Service was charged with evaluating the effects of the Texas Closure and submitted a report (Nance et al. 1992) to the GCMFC in January 1992. This report contained the results and an overview of the effect of the 1991 Texas Closure. After review of these data and other information, the GCMFC voted to continue the Texas Closure in 1992.

## 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 SEAMAP Management Plan: 1990-1995 (Atlantic States Marine Fisheries Commission 1990).

Data requests and inquiries, as well as requests for plankton samples, can be made by contacting the SEAMAP Coordinator, Gulf States Marine Fisheries Commission, P.O. Box 726, Ocean Springs, MS 39564; 601/875-5912.

Table 1. List of SEAMAP survey activities from 1982 to 1990.

SEAMAP SURVEY ACTIVITIES

YEAR	SPRING PLANKTON	SUMMER SHRIMP/GOURNDFISH	BUTTERFISH	FALL PLANKTON	FALL SHRIMP/GROUND FISH	WINTER PLANKTON
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	--



Table 2. Selected environmental parameters measured during 1991 SEAMAP surveys in the Gulf of Mexico, by individual vessel and survey.

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LUMCON PELICAN

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36682	3/25/91	1316	2900.1	9100.1	15	6	3	6	21.1	20.5	19.4	23.8	24.2	25.0	0.808	9.7	9.8	4.5	PN
36683	3/25/91	1647	2900.0	9130.0	15	10	5	10	20.9	20.7	19.3	25.4	25.5	27.2	0.852	11.6	10.2	5.8	PN
36684	3/25/91	2012	2843.5	9130.1	15	24	11	24	20.9	19.9	20.2	29.4	32.8	35.4	9.654	11.5	6.4	5.7	ST
36685	3/25/91	2248	2850.0	9118.3	15	11	5	11	21.2	21.2	19.5	24.4	24.6	29.1	3.103	9.2	5.8	6.4	ST
36686	3/26/91	0131	2848.8	9103.7	15	9	4	9	20.8	20.0	19.3	24.5	25.8	29.8	3.412	9.6	9.0	5.4	ST
36687	3/26/91	0259	2846.0	9105.0	15	10	4	10	20.6	20.1	19.2	24.5	26.0	29.8	4.694	9.5	9.5	5.7	ST
36688	3/26/91	0455	2838.6	9108.9	15	18	9	18	20.5	19.4	20.6	26.8	32.6	35.4	3.601	9.2	5.1	6.2	ST
36689	3/26/91	0846	2843.6	9130.2	15	24	12	24	20.7	19.5	20.3	30.4	32.9	35.6	9.328	10.6	5.8	9.5	ST
36690	3/26/91	1115	2849.9	9118.3	15	12	5	12	21.0	19.5	19.5	24.9	27.5	29.5	7.010	11.1	8.4	7.5	ST
36691	3/26/91	1344	2845.6	9103.8	15	8	4	8	21.9	21.0	19.8	24.7	25.4	27.8	12.016	10.7	10.9	5.5	ST
36692	3/26/91	1507	2845.9	9105.0	15	9	5	9	21.8	20.0	19.3	23.5	25.9	31.0	6.149	11.1	10.2	5.7	ST
36693	3/26/91	1658	2838.7	9109.0	15	18	10	18	22.6	20.4	20.7	25.8	34.2	35.3	6.225	10.8	7.7	7.0	ST
36694	3/26/91	1957	2832.7	9100.1	15	27	13	27	21.1	21.1	20.7	33.3	34.4	35.6	3.243	8.4	7.8	6.3	ST
36695	3/26/91	2252	2834.2	9044.5	14	19	10	19	21.3	20.6	20.3	33.7	34.0	34.9	2.560	8.8	7.5	5.6	ST
36696	3/27/91	0105	2840.6	9035.6	14	17	8	17	21.3	20.7	20.1	32.2	32.4	34.4	1.722	9.4	8.7	3.1	ST
36697	3/27/91	0653	2832.8	9059.8	14	27	16	27	20.7	20.1	20.6	33.8	34.2	35.4	3.090	7.9	7.2	6.3	ST
36698	3/27/91	1007	2834.3	9044.4	14	20	10	20	21.0	20.9	20.3	34.2	34.2	34.6	2.158	7.8	7.6	6.5	ST
36699	3/27/91	1241	2840.4	9035.6	14	17	8	17	21.4	21.2	20.0	32.7	32.7	34.1	2.756	8.8	9.1	4.8	ST
36700	3/27/91	1623	2900.0	9030.0	14	9	4	9	20.9	20.4	19.5	26.1	22.2	27.7	0.846	11.4	11.7	6.5	PN
36701	4/ 3/91	0650	2838.6	9022.0	14	28	14	28	19.9	20.5	20.5	30.5	34.4	35.6	6.350	8.2	4.6	3.1	ST
36702	4/ 3/91	0811	2837.1	9021.1	14	34	17	34	20.2	20.6	20.5	32.8	35.0	35.9	0.704	7.6	5.2	3.5	ST
36703	4/ 3/91	1307	2830.0	9100.0	15	32	17	32	21.0	21.0	21.4	34.5	35.5	36.0	1.125	7.3	7.2	6.7	PN
36704	4/ 4/91	0357	2902.2	8939.5	13	28	14	28	18.5	19.6	21.0	20.5	31.7	36.2	11.579	9.5	6.7	5.7	ST
36705	4/ 4/91	0620	2900.0	8930.0	13	14	6	14	19.4	19.6	19.9	21.8	24.5	32.6	0.718	9.9	9.3	5.2	PN
36706	4/ 4/91	0747	2902.6	8939.5	13	29	14	29	18.5	20.1	21.0	20.9	33.4	36.3	12.836	9.6	7.0	5.2	ST
36707	4/ 4/91	1005	2900.0	9000.0	14	23	11	23	19.8	20.3	20.2	30.1	31.7	34.9	0.970	9.6	8.9	4.6	PN
36708	4/ 4/91	1352	2839.6	9014.5	14	34	17	34	20.6	20.6	20.5	30.9	35.1	36.0	3.050	9.1	5.5	4.1	ST
36709	4/ 4/91	1623	2830.0	9030.0	14	38	19	38	20.9	20.9	20.7	34.6	35.3	36.1	1.126	6.5	7.4	4.3	PN
36710	4/ 4/91	1930	2839.6	9014.8	14	33	16	33	20.8	20.9	20.5	31.8	35.0	36.0	0.152	7.9	6.4	3.9	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
52730	4/17/91	0252	2959.9	8700.1	10	71	31	69	21.9	20.5	18.7	34.8	36.0	35.8	0.196	6.9	7.0	6.5	PN
52732	4/17/91	0724	2930.2	8630.2	9	208	101	201	22.6	19.6	15.4	35.7	36.5	36.1	0.131	8.2	6.2	5.8	PN
52734	4/17/91	1146	2900.1	8600.1	99	249									0.122				PN
52736	4/17/91	1658	2830.2	8530.2	6	201	100	200	18.3	14.7		36.7	36.1		0.077	7.9	6.1	5.5	PN
52738	4/17/91	2123	2759.9	8500.0	5	252	101	200	25.3	20.4	14.9	36.4	36.5	36.1		6.6	6.4		PN
52740	4/18/91	0124	2800.0	8500.0	6	405		200							0.066	6.7			PN
52742	4/18/91	0459	2700.1	8500.0	5	774		200							0.174				PN
52744	4/18/91	0843	2629.8	8459.6	4	1829	99	200	27.0	23.6	17.9	36.2	36.7	36.5	0.048	6.3	6.5	5.0	PN
52746	4/18/91	1210	2600.0	8459.8	4	1800	100	200	27.2	25.7	19.6	36.3	36.2	36.8		6.2	6.3		PN
52748	4/18/91	1553	2600.3	8430.1	4	238	101	200	27.3	21.6	15.8	36.6		36.2	0.102	6.5	6.4	5.0	PN
52750	4/18/91	1917	2600.6	8400.4	4	136	70	136	26.8	21.3	16.7	36.4	36.5	36.5	0.094	6.4	6.5	4.5	PN
52752	4/18/91	2351	2530.0	8359.9	3	138	70	136	26.3	21.1	17.4	36.5	36.5	36.3	0.037	6.5	6.8	4.7	PN
52754	4/19/91	0306	2500.2	8400.1	3	126	60	125	22.5	17.7		36.4	36.4		0.037		6.8	5.0	PN
52756	4/19/91	0648	2430.2	8400.0	2	1829	100	200	26.2	19.5		36.3	36.4		0.063	6.3	5.5		PN
52758	4/19/91	0947	2429.9	8430.2	2	3438	101	201	25.6	20.1	14.9	36.5	36.6	36.1	0.070	6.3	5.4	5.1	PN
52760	4/19/91	1316	2429.6	8500.0	99	342	101	201	27.1	25.5	19.2	36.1	36.5	36.6	0.027	6.2	6.2	4.7	PN
52762	4/19/91	1729	2459.9	8459.8	2	325	100	200	27.2	25.8	20.8	36.2	36.2	36.9		2.6			PN
52764	4/19/91	2116	2459.8	8529.8	99	3329	50	100	26.5			36.2							PN
52766	4/20/91	0151	2500.0	8559.9	99	3292	100	200	26.5	25.8	23.7	36.2	36.2	37.0		6.3	6.2	5.5	PN
52768	4/20/91	0824	2530.4	8600.1	99	3201	100	201	26.5	25.8	23.5	36.1	36.2	37.0		6.5		5.7	PN
52770	4/20/91	1207	2530.0	8628.0	99	3252	101	201	26.7	25.9	24.4				0.056	6.4	6.4	5.6	PN
52772	4/20/91	1735	2559.9	8600.0	99	3237	100	200	27.0	25.8	23.3	36.1	36.2	36.9	0.075	6.5	6.4	5.4	PN
52774	4/20/91	2230	2630.0	8600.0	99	3201	100	201	27.3	26.0	20.1	36.2	36.3	36.8	0.037	6.3		5.4	PN
52776	4/21/91	0236	2700.0	8600.0	99	3200	102	201	20.2	13.6		36.6	35.8		0.078	6.9	5.5	5.1	PN
52778	4/21/91	0738	2729.8	8600.1	99	3200	100	200	25.1	19.4	14.0	36.4	36.5	35.9	0.062	6.1	6.0	7.9	PN
52780	4/21/91	1201	2800.1	8600.1	99	988	102	201	23.0	18.8	14.7	35.7	36.4	36.0	0.101	7.1	6.7	5.0	PN
52782	4/21/91	1643	2830.0	8600.2	99	339	100	200	23.4	18.2	14.0	36.1	36.4	35.9	0.050	6.9	5.4	4.7	PN
52784	4/21/91	2138	2900.0	8630.0	99	384	100	200	23.1	19.7	15.0	35.2	36.6	36.2	0.075	7.4	5.4	5.1	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
52786	4/22/91	0126	2900.0	8700.1	99	248	100	201	22.7	17.7	14.9	34.5	36.4	36.1	0.103	7.1	5.2	4.9	PN
52788	4/22/91	0531	2829.9	8700.0	99	322	100	200	24.4	20.6	16.8	35.7	36.7	36.4	0.262	6.8			PN
52790	4/22/91	0925	2759.8	8700.1	99	2861	101	200	23.8	19.5	16.3	36.3	36.8	36.3		6.8	5.4	5.2	PN
52792	4/22/91	1447	2730.0	8700.0	99	3053	100	201	25.0	20.0	15.9	36.6	36.7	36.2	0.069	6.8	5.4	5.2	PN
52794	4/22/91	1853	2700.0	8700.0	99	2945	100	200	24.8	21.6	15.1	36.3	36.5	36.1	0.094	6.9	5.9	4.6	PN
52796	4/22/91	2339	2630.2	8659.8	99	2981	100	200	27.2	24.9	19.3	36.3	36.7	36.8	0.044	6.3	5.8	5.2	PN
52798	4/23/91	0223	2616.0	8700.0	99	3091	101	200	28.9	26.1	21.0	36.2	36.3	37.0	0.043	6.3	6.4	5.3	PN
52800	4/23/91	0903	2559.9	8729.8	99	3146	100	200	26.7	25.8	22.0	36.2	36.2	36.5	0.075	7.6		7.7	PN
52802	4/23/91	1359	2559.9	8759.9	99	2981	101	201	27.0	24.4	18.5	36.3	36.8	36.5	0.037	6.6	6.2	6.4	PN
52804	4/23/91	1820	2629.8	8759.9	99	2705	100	200	25.7	21.3	16.0	36.5	36.5	36.2	0.056	7.1	7.0	4.9	PN
52806	4/23/91	2206	2659.9	8800.2	99	2743	101	200	25.7	21.1	15.3	36.6	36.6	36.1	0.075	6.6	6.0	4.6	PN
52808	4/24/91	0203	2700.0	8830.0	99	2560	102	202	24.9	20.4	14.8	36.1	36.5	36.0	0.103	6.5	5.4	4.5	PN
52810	4/24/91	0525	2700.0	8900.0	13	2195	101	201	24.7	18.8	14.8	35.9	36.6	36.0	0.081	6.7	4.6	4.1	PN
52812	4/24/91	0952	2630.0	8900.1	13	2853	100	201	25.6	20.1	15.1	36.6	36.6	36.1	0.056	7.6	6.6	6.0	PN
52814	4/24/91	1431	2600.1	8900.0	13	3109	100	200	26.2	20.7	15.5	36.4	36.6	36.2	0.079	6.7	5.6	4.5	PN
52816	4/24/91	1857	2559.9	8929.3	13	3201	100	200	26.3	19.4	13.4	36.6	36.6	35.8	0.075	6.7	5.0	4.8	PN
52818	4/24/91	2218	2659.8	9000.0	99	2908	100	201	25.9	19.5	14.3	36.5	36.7	36.9					PN
52820	4/25/91	0252	2630.0	9000.0	99	2798	100	200	24.7	20.8	15.6	36.2	36.5	36.2		6.9	7.1	4.6	PN
52822	4/25/91	0647	2700.0	9000.0	99	2542	101	201	24.4	20.0	14.7	36.1	36.7	36.0	0.062	6.7	5.3	4.8	PN
52824	4/25/91	1057	2659.7	9030.0	99	1518	102	200	25.3	20.7	15.9	36.5	36.4	36.2		6.5	6.9	4.3	PN
52826	4/25/91	1448	2700.0	9100.2	99	1664	99	201	25.4	20.1	15.0	35.9	36.4	36.1	0.212	6.7	6.0	4.8	PN
52828	4/25/91	1902	2630.0	9059.8	99	2121	100	199	25.6	20.3	15.4	35.9	36.4	36.1	0.065	6.7	6.5	4.5	PN
52830	4/25/91	2245	2600.0	9100.0	99	3109	101	200	25.5	22.0	16.5	36.1	36.4	36.3		6.6	6.4	4.5	PN
52832	4/26/91	0237	2559.9	9130.0	99	2177	100	200	25.6	20.8	16.3	36.1	36.4	36.3	0.080	6.7	6.8	4.5	PN
52834	4/26/91	0612	2559.8	9200.0	99	2242	100	201	25.6	21.0	16.1	36.2	36.5	36.2	0.075	6.9	7.0	4.5	PN
52836	4/26/91	1021	2630.3	9200.3	99	1811	101	199	25.1	19.5	14.7	35.9	36.4	36.0	0.056	6.7	5.6	4.4	PN
52838	4/26/91	1419	2700.0	9159.9	99	1701	100	131	25.2	18.6	16.8	36.0	36.5	36.3	0.043	6.6	4.8	4.3	PN
52840	4/26/91	1912	2659.9	9229.9	99	1426	100	201	25.0	18.8	14.5	36.1	36.5	36.0	0.125	6.8			PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
52842	4/26/91	2347	2659.8	9259.8	99	1244	100	200	25.5						0.131	6.5	6.5	4.5	PN
52844	4/27/91	0539	2629.9	9259.7	99	1865	100	200	25.4	24.4	23.1	36.4	35.6	0.104	6.7	6.9	4.5	PN	
52846	4/27/91	1900	2659.8	9359.9	99	987	100	200	25.5	25.0	24.0	36.5	36.3		7.0	6.9	4.9	PN	
52848	4/28/91	0011	2729.8	9329.8	99	549	100	200	25.4	21.1	17.8	36.4	36.4	0.085	6.7	6.9	4.9	PN	
52850	4/28/91	0503	2800.0	9258.0	16	106	50	100	25.0	23.3	21.3	34.8		0.098	7.1	7.4	7.2	PN	
52852	4/28/91	0849	2800.2	9230.1	16	106	50	100	24.6	22.6	21.5	36.1		0.062	7.0	6.6	5.2	PN	
52854	4/29/91	0157	2800.1	8930.3	99	946	100	200	24.0	19.5	15.8	36.0	36.0	0.094	7.5	5.3	5.3	PN	
52856	4/29/91	0813	2800.2	8829.7	99	2400	100	200	24.1	19.1	14.5	36.3	36.5	0.089				PN	
52858	5/ 2/91	0136	2859.9	8800.0	99	1427	100	200	23.8	18.6	15.7	35.7	36.3	0.110	7.3	5.7	4.7	PN	
52860	5/ 2/91	0614	2830.0	8800.0	99	2286	100	200	25.4	19.8	22.9	36.5	36.6	0.068	6.9	6.9	6.9	PN	
52862	5/ 2/91	1026	2800.0	8800.0	99	2394	100	200	26.1	20.3	15.5	36.6	36.6	0.098	7.3	5.5	5.1	PN	
52864	5/ 2/91	1629	2759.8	8859.9	99	1335	100	200	25.6	19.5	14.5	36.2	36.6	0.067	6.7	6.7	6.7	PN	
52866	5/ 2/91	2246	2800.1	8959.9	99	549	101	201	24.9	18.4	15.0	36.0	36.6	0.106	6.9	5.0	4.8	PN	
52868	5/ 3/91	0226	2800.1	9030.2	14	305	100	200	24.6	20.1	15.8	35.6		0.117	6.9	5.2	4.6	PN	
52870	5/ 3/91	2257	2959.9	8659.9	9	72	30	70	24.3	22.7	18.8	35.4	35.9	0.106	7.1	7.2	5.8	PN	
52872	5/ 4/91	0536	2930.0	8630.1	9	210	100	200	24.0	20.2	14.3	35.0	38.0	0.143	7.0	6.8	6.9	PN	
52874	5/ 4/91	1123	2900.1	8600.1	99	243	100	200	25.2	19.2	14.6	35.9	36.1	0.199	7.1	6.1	4.9	PN	
52876	5/ 4/91	1642	2830.0	8530.0	6	199	98	195	26.3			36.1		0.080	6.8	6.8	6.8	PN	
52885	5/ 4/91	2146	2800.0	8500.1	6	240	100	200	27.0			36.2	36.6	0.032	6.6	5.4	5.5	PN	
52887	5/ 5/91	0139	2730.0	8500.1	5	419	100	200	26.8			36.4			6.9	5.2	4.5	PN	
52889	5/ 5/91	0457	2700.0	8500.0	5	796	100	200	27.2			36.3			6.7			PN	
52891	5/ 5/91	0902	2630.0	8500.0	99	3660	100	200	26.7	21.5	19.3	36.2		0.084	6.5			PN	
52893	5/ 5/91	1223	2600.0	8459.9	4	3294	100	200	27.4			36.4		0.037	6.4			PN	
52895	5/ 5/91	1533	2600.1	8430.1	4	218	100	200	27.8			36.3		0.039	6.5			PN	
52897	5/ 5/91	1857	2559.8	8359.9	3	113	50	113	27.7			36.1		0.037	6.6			PN	
52899	5/ 5/91	2205	2529.8	8400.2	3	135	65	130	27.4			36.2		0.056	6.7			PN	
52901	5/ 6/91	0052	2500.2	8400.0	3	123	60	122	27.0			36.4		0.032	6.4			PN	
52903	5/ 6/91	0425	2430.0	8400.1	2	2105	100	200	26.7			36.4		0.056		5.5	5.2	PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
52905	5/ 6/91	0706	2429.7	8429.6	2	3366	100	200	27.1				35.9		0.063	6.6		PN	
52907	5/ 6/91	1030	2429.8	8500.2	99	3386	100	200	27.5				36.1		0.053	6.6		PN	
52909	5/ 6/91	1414	2500.0	8500.0	99	3331	100	200	27.8				36.2		0.027	6.9		PN	
52911	5/ 6/91	1808	2500.1	8530.1	99	3329	100	200	27.8				36.1		0.032	6.3		PN	
52913	5/ 6/91	2101	2459.8	8600.4	99	2814	100	200	27.6				36.1		0.032	6.6		PN	
52915	5/ 7/91	0101	2530.0	8600.0	99	3203	100	200	27.7				36.1		0.056	6.4		PN	
52917	5/ 7/91	0358	2530.2	8628.1	99	3300	100	200	27.4				36.1		0.162	6.4		PN	
52919	5/ 7/91	0749	2600.0	8559.8	99	3239	100	200	27.7				35.9		0.032	6.3		PN	
52921	5/ 7/91	1223	2629.8	8559.9	99	3203	100	200	27.0				36.3		0.053	6.7		PN	
52923	5/ 7/91	1549	2659.9	8559.8	99	3300	100	200	26.7				36.2		0.037	6.7		PN	
52925	5/ 7/91	1954	2730.2	8600.0	99	3230	100	200	26.9				36.4		0.081	6.0		PN	
52927	5/ 7/91	2248	2800.1	8559.9	6	985	100	200	27.1				36.4			6.4		PN	
52929	5/ 8/91	0234	2830.1	8600.0	99	337	100	200	26.6				36.4		0.064	6.7		PN	
52939	5/ 8/91	0730	2900.0	8630.1	99	384	100	200	24.9	18.8	14.7		35.6		0.106	6.9		PN	
52947	5/ 8/91	1137	2900.0	8700.0	99	659	100	200	25.0				36.1		0.131	6.9		PN	
52949	5/ 8/91	1523	2830.1	8700.1	99	869	100	200	26.0				36.4		0.080	6.9		PN	
52959	5/ 8/91	2002	2800.0	8700.0	99	2855	100	200	26.4				36.3		0.092	6.7		PN	
52961	5/ 8/91	2342	2730.0	8659.9	99	3074	100	200	26.4				36.1		0.087	6.6		PN	
52963	5/ 9/91	0255	2700.1	8659.8	99	2846	100	200	26.5				36.3		0.104	6.9		PN	
52965	5/ 9/91	0709	2630.0	8659.7	99	2999	100	200	27.4				36.1		0.055			PN	
52967	5/ 9/91	0905	2616.1	8700.0	99	3800	100	200	27.5	25.6	20.5		36.0		0.040	6.7		PN	
52969	5/ 9/91	1331	2600.0	8729.9	99	3147	100	200	27.9				36.2		0.070	0.9		PN	
52971	5/ 9/91	1733	2600.2	8759.9	99	3000	100	200	28.0				36.5		0.032	6.4		PN	
52973	5/ 9/91	2121	2559.9	8830.1	99	3010	100	200	27.3				36.4		0.062	6.4		PN	
52975	5/10/91	0011	2600.0	8900.0	13	3111	100	200	26.5				36.2		0.041	6.7		PN	
52977	5/10/91	0332	2600.0	8930.1	13	3111	100	200	26.7				36.1		0.037	6.7		PN	
52979	5/10/91	0615	2559.7	9000.2	99	3111	100	200	26.4				36.1		0.045	6.7		PN	
52981	5/10/91	0927	2600.1	9030.1	99	3240	100	200	26.5	20.6	15.2		36.3		0.102	6.7		PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR	
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
52983	5/10/91	1216	2600.1	9059.9	99	3129	100	200	26.3				36.2			0.083	6.7		PN	
52985	5/10/91	1641	2600.0	9130.0	99	2158	100	200	26.6				36.0			0.075	6.7		PN	
52987	5/10/91	1946	2559.9	9200.0	99	2233	100	200	26.4				35.7			0.045	6.5		PN	
52989	5/10/91	2330	2559.9	9230.1	99	2205	100	200	26.3				36.0			0.100	6.6		PN	
52991	5/11/91	0239	2559.9	9300.2	99	1745	100	200	26.6				36.3			0.093	6.7		PN	
52993	5/11/91	0611	2600.0	9300.1	99	3200	100	200	26.8				36.3			0.057	6.7		PN	
52995	5/11/91	0902	2600.0	9400.3	99	3150	100	200	27.2	22.2	17.0		36.3			0.057	6.3		PN	
52997	5/11/91	1333	2630.1	9400.5	99	1482	100	200	26.8				36.0			0.098	6.8		PN	
52999	5/11/91	1633	2700.1	9359.8	99	988	100	200	26.8				35.7			0.067	6.6		PN	
53001	5/11/91	2048	2729.3	9324.0	99	544	100	200	25.9				35.3			0.087	7.3		PN	
53003	5/19/91	1733	2800.3	9258.5	16	102	50	100	25.7	21.3	19.8		35.6	36.4	36.3	0.112	6.9	7.4	6.3	PN
53005	5/19/91	2102	2730.1	9300.2	99	750	100	200	26.2	20.1	15.2		35.3	36.3	35.9	0.102	6.9	4.9	4.9	PN
53007	5/20/91	0010	2700.0	9300.0	99	1300	100	200	26.5	19.7	15.1		34.9	36.4	35.9	0.068	6.7	5.3	4.8	PN
53009	5/20/91	0402	2700.1	9230.2	99	1372	100	198	26.0	19.0	14.6		35.8	36.4	35.8	0.114	6.8	5.0	4.2	PN
53011	5/20/91	0714	2700.0	9159.8	99	1373	100	200	25.8	18.9	14.2		35.8	36.4	32.3	0.112	6.9	5.1	4.5	PN
53013	5/20/91	1047	2730.0	9200.0	99	767	100	200	25.7	19.7	14.8		35.6	36.3	35.9	0.131	6.6	5.7	5.4	PN
53015	5/20/91	1427	2800.1	9200.0	16	120	60	120	26.1	22.0	18.4		36.1	36.3	36.3	0.032		7.0	5.7	PN
53017	5/20/91	1745	2800.2	9130.0	15	164	82	164	25.6	20.5	15.9		35.6	36.3		0.106	7.0	5.6	4.9	PN
53019	5/20/91	2131	2800.0	9100.2	15	143	70	140	25.3	20.8	17.0		35.3	36.2	36.2	0.084	6.9	6.3	5.7	PN
53021	5/21/91	0113	2730.1	9100.0	99	1040	100	200	25.3	19.6	14.6		35.7	36.5	35.8	0.070	6.8	5.1	4.7	PN
53023	5/21/91	0408	2700.9	9059.9	99	1692	100	192	26.3	18.6	14.3		35.6	36.4	35.8	0.087	6.6	4.6	4.6	PN
53025	5/21/91	0731	2659.9	9030.3	99	1048	100	200	25.2	18.4	14.3		35.0	36.4	35.8	0.126	6.9	5.5	5.2	PN
53027	5/21/91	1039	2700.1	8959.6	13	2470	100	200	26.3	20.3	13.9		35.9	36.3	35.7	0.064	6.7	6.4	4.7	PN
53029	5/21/91	1438	2730.1	9000.0	99	1180	100	200	25.6	19.0	14.3		35.7	36.5	35.8	0.056	6.8	5.0	4.6	PN
53031	5/21/91	1744	2800.1	9000.0	14	545	99	198	25.2	19.9	14.7		35.4	36.4	35.9	0.168	7.0	5.8	5.0	PN
53033	5/21/91	2117	2800.1	8930.1	99	970	100	200	25.4	19.6	13.8		32.8	36.4	35.7	0.270	7.0	5.5	4.9	PN
53035	5/22/91	1008	2730.4	8900.2	13	1811	100	200	26.1	19.3	14.2		36.3	36.3	35.8	0.066	7.1	5.7		PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
HERNAN CORTEZ II

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
00001	5/ 7/91	0008	2600.1	8359.9	4	131	62	125	27.3	26.1	21.6	36.5	36.6	36.3	0.052	6.0	5.9	5.7	PN
00002	5/ 7/91	0515	2530.6	8400.3	99	138	61	132	26.4	25.4	25.0	36.2	36.4	36.9	0.082	5.9	6.1	6.0	PN
00003	5/ 7/91	0912	2459.9	8359.9	99	125	60	120	27.1	23.7	20.5	36.5	36.5	36.4	0.264	6.2	6.4	4.3	PN
00004	5/ 7/91	1335	2429.8	8400.0	99	500	100	200	27.1	21.8	18.0	36.9	36.8	35.8	0.193	6.2	5.1	4.5	PN
00005	5/ 7/91	1717	2429.7	8430.0	99	3421	100	200	27.1	24.0	21.7	36.4	36.3	36.3	0.222	5.8	6.5	4.5	PN
00006	5/ 8/91	0551	2600.2	8430.0	99	218	100	200	24.3	22.2	20.5	36.4	36.7	36.8	0.126	5.5	4.0	4.4	PN
00007	5/ 8/91	1007	2600.0	8459.9	99	3328	100	200				36.0	36.3	36.1	0.376				PN
00008	5/ 8/91	1531	2630.1	8500.1	99	1618	100	200	26.9	21.6	19.1	36.6	36.2	36.0	0.177	6.1	6.4	5.0	PN
00009	5/ 8/91	1950	2659.8	8459.9	99	878	100	200	25.6	21.9	18.7	36.7	36.7	36.1	0.140	6.5	5.5	4.8	PN
00010	5/ 9/91	0002	2730.1	8459.8	5	457	100	200	25.7	20.8	18.4	37.1	36.5	36.2	0.146	5.4	5.0	4.4	PN
00011	5/ 9/91	0415	2759.8	8459.9	5	252	100	200	25.8	21.3	18.3	37.1	36.9	36.2	0.165	6.5	5.0	4.9	PN
00012	5/ 9/91	0926	2830.0	8529.9	8	199	97	194	25.8	21.2	18.3	36.1	36.4	36.1	0.183	6.5	6.5	4.3	PN
00013	5/ 9/91	1448	2859.9	8559.9	99	242	100	200	26.2	22.0	19.0	36.6	36.6	36.0	0.125	6.4	5.8	4.4	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
A.E. VERRILL

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
23001	6/ 3/91	1255	3011.0	8803.2	11	4	2	4	26.0	25.6	25.6	29.5	33.9	34.2		6.5	6.0	5.8	ST
23002	6/ 3/91	1524	3012.4	8818.4	11	7	3	7	28.9	25.6	25.7	6.8	33.9	33.8		6.9	3.8	3.8	ST
23003	6/ 3/91	2004	3013.5	8817.3	11	4	2	4	26.1	25.6	25.6	29.0	33.8	33.7		4.2	4.0	3.2	ST
23004	6/ 3/91	2027	3010.4	8818.2	11	14	8	14	27.2	25.8	25.7	18.7	34.1	34.1		4.7	4.9	4.7	ST
23005	6/ 3/91	2107	3009.6	8819.1	11	15	8	15	27.8	25.7	25.7	14.2	34.2	34.2		4.5	4.6	4.8	ST
23006	6/ 3/91	2324	3005.6	8806.2	11	20	10	20	27.9	25.2	25.1	25.9	34.6	34.7		6.3	4.6	4.6	ST
23007	6/ 5/91	1918	3002.2	8810.8	11	26	13	26	28.8	24.2	24.2	19.3	35.7	35.6		5.1	4.8	4.9	ST
23008	6/ 5/91	2003	3001.0	8811.5	11	29	15	29	28.5	24.5	24.4	16.3	35.8	35.8		5.9	5.2	4.8	ST
23009	6/ 5/91	2130	3001.5	8810.4	11	28	14	28	29.8	24.5	24.5	18.0	35.8	35.8		5.5	5.1	4.9	ST
23010	6/ 5/91	2241	3004.1	8811.4	11	25	13	25	28.2	24.2	24.2	20.2	35.7	35.6		4.9	4.7	4.9	ST



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
ARANSAS BAY

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
31001	6/11/91	0944	2750.3	9702.3	20	5	2	5	28.2	28.2	28.2	22.9	23.0	23.0	0.567	5.5	5.6	5.7	ST
31002	6/11/91	1038	2753.3	9656.6	20	14	7	14	28.2	28.1	28.2	25.7	22.0	22.5	0.436	6.3	6.2	6.3	ST
31003	6/11/91	1145	2756.5	9649.4	20	18	8	17	28.3	27.9	26.9	21.6	27.0	31.2	0.386	6.2	5.0	4.5	ST
31004	6/11/91	1230	2753.3	9652.5	20	18	9	18	28.2	28.0	27.0	22.0	22.3	24.9	0.393	6.3	5.6	4.3	ST
31005	6/11/91	1312	2750.5	9652.5	20	20	10	20	28.4	27.8	27.3	23.0	22.4	25.8	0.293	5.9	5.0	4.0	ST
31006	6/11/91	1407	2746.3	9655.6	20	21	10	21	28.3	27.7	27.9	23.0	24.4	0.279	6.2	5.7	5.1	ST	
31007	6/11/91	1444	2747.5	9656.5	20	20	10	20	28.4	27.7	27.8	22.6	23.1	23.6	0.504	6.5	5.9	5.0	ST
31008	6/11/91	1517	2747.4	9658.7	20	18	9	18	28.9	28.1	28.0	22.0	22.8	23.3	0.349	6.5	5.3	5.2	ST
31009	6/18/91	0842	2743.6	9704.5	20	14	7	14	28.8	28.6	27.2	25.7	25.8	31.4	1.346	6.5	6.0	2.7	ST
31010	6/18/91	0919	2742.6	9704.5	20	15	7	15	28.8	28.3	27.2	25.7	27.9	31.4	0.115	6.0	5.3	2.4	ST
31011	6/18/91	0954	2741.8	9706.4	20	13	7	13	29.0	28.1	27.8	25.7	29.8	29.8	0.139	6.6	4.7	2.9	ST
31012	6/18/91	1027	2742.5	9707.5	20	11	6	11	29.0	27.7	27.6	25.9	25.9	30.2	0.168	6.5	2.6	1.6	ST
31013	6/18/91	1115	2738.6	9706.4	20	16	8	16	28.9	28.0	27.6	27.8	29.1	31.6	0.174	6.5	5.7	4.7	ST
31014	6/18/91	1212	2735.6	9701.5	20	24	12	24	28.9	27.5	26.6	26.7	27.5	33.9	0.131	6.7	5.1	3.7	ST
31015	6/18/91	1319	2744.7	9658.1	20	20	10	20	29.6	28.2	26.3	26.9	29.1	34.4	0.106	6.7	6.1	3.1	ST
31016	6/18/91	1353	2745.6	9659.5	20	18	9	18	29.7	27.4	27.2	26.4	27.7	34.2	0.117	6.5	3.1	3.1	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
MATAGORDA BAY

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
32001	6/ 4/91	1015	2825.5	9615.4	19	11	6	11	27.7	27.4	27.0	22.7	24.8	26.0	11.625	6.6	6.0	4.1	ST
32002	6/ 5/91	1050	2829.3	9608.3	19	11	5	11	28.1	27.0	26.9	22.4	25.2	27.3	4.074	6.2	5.1	4.8	ST
32003	6/ 5/91	1127	2828.5	9608.8	19	12	6	12	28.1	27.4	27.1	22.7	25.2	27.3	3.215	6.5	5.6	5.5	ST
32004	6/ 5/91	1222	2828.5	9605.5	19	14	7	14	28.1	27.5	27.3	23.8	24.5	26.8	2.542	6.7	6.8	6.4	ST
32005	6/ 5/91	1307	2825.7	9607.4	19	15	8	15	29.0	27.6	27.3	21.5	25.9	28.2	2.579	6.3	6.2	6.0	ST
32006	6/ 5/91	1408	2821.5	9610.5	19	18	9	18	29.5	27.2	27.1	21.2	27.0	34.6	2.766	6.5	5.7	5.1	ST
32007	6/ 5/91	1447	2819.6	9612.5	19	20	10	20	28.9	27.1	27.0	24.9	27.4	28.6	2.280	6.3	5.9	5.3	ST
32008	6/ 5/91	1521	2820.6	9614.5	19	18	9	18	30.0	27.4	27.1	20.7	27.7	28.6	1.607	6.2	6.0	5.9	ST
32009	6/20/91	1004	2823.5	9616.5	19	13	7	13	28.7	26.3	26.0	24.5	26.3	33.3	0.972	6.3	1.6	1.1	ST
32010	6/20/91	1050	2819.5	9615.4	19	19	9	19	28.5	26.9	26.0	24.0	30.8	34.6	0.972	6.7	3.5	2.2	ST
32011	6/20/91	1134	2820.5	9618.4	19	16	8	16	28.5	26.2	25.9	24.2	29.0	33.9	0.956	6.9	1.8	1.3	ST
32012	6/20/91	1249	2813.5	9626.5	19	17	9	17	29.1	27.1	25.9	24.0	24.2	33.7	1.159	6.3	5.3	2.4	ST
32013	6/20/91	1345	2811.5	9632.6	19	14	7	14	29.0	26.8	26.0	23.7	25.5	32.8	0.598	6.4	4.6	1.3	ST
32014	6/20/91	1518	2822.6	9621.5	19	7	4	7	30.2	29.2	26.7	22.1	22.5	28.6	3.813	6.6	5.6	1.5	ST
32015	6/20/91	1538	2823.6	9620.5	19	7	3	7	30.4	28.4	27.5	22.8	23.4	27.7	2.841	6.9	5.6	4.0	ST
32016	6/20/91	1602	2823.5	9619.4	19	8	4	8	30.5	27.5	26.2		26.3	31.0	2.729	6.8	2.9	0.6	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LAGUNA MADRE

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
33001	6/ 5/91	0830	2603.6	9707.8	21	15	7	15	25.3	23.9	23.5	34.6	34.8	35.3	1.888	7.0	6.1	3.8	ST	
33002	6/ 5/91	0858	2602.6	9708.6	21	7	3	7	25.0	24.9	24.8	34.5	34.7	34.8	1.383	6.6	6.4	6.6	ST	
33003	6/ 5/91	0948	2559.6	9704.6	22	20	10	20	26.0	25.7	24.2	34.2	34.2	35.6	1.570	7.5	7.2	5.7	ST	
33004	6/ 5/91	1209	2558.8	9659.5	22	28	14	28	26.8	23.9	23.7	33.7	35.0	35.6	1.084	7.7	5.7	5.4	ST	
33005	6/ 5/91	1255	2602.8	9659.4	21	27	13	27	26.7	26.0	24.8	33.9	35.2	35.6	0.841	7.8	7.9	6.8	ST	
33006	6/ 5/91	1410	2607.8	9701.5	21	25	12	25	26.7	24.8	24.0	34.2	35.2	35.5	0.785	8.0	7.0	6.3	ST	
33007	6/ 5/91	1444	2607.5	9702.5	21	22	11	22	26.6	25.8	24.2	34.3	35.1	35.5	0.804	7.8	8.0	6.2	ST	
33008	6/ 5/91	1522	2608.7	9704.4	21	19	9	19	26.5	25.3	24.3	34.3	35.1	35.4	1.607	7.8	7.3	6.4	ST	
33009	6/18/91	0857	2608.8	9707.4	21	17	9	17	27.1	26.0	25.4	33.0	34.8	34.9	0.972	6.3	4.9	4.3	ST	
33010	6/18/91	0935	2609.7	9709.5	21	10	5	10	26.7	26.6	25.3	33.6	34.8	34.9	0.972	6.1	5.1	2.9	ST	
33011	6/18/91	1016	2610.9	9706.5	21	17	9	17	27.4	26.5	25.1	32.9	34.6	35.0	0.956	6.9	5.7	3.8	ST	
33012	6/18/91	1100	2612.8	9707.4	21	17	9	17	27.6	26.4	25.3	32.9	34.7	34.8	2.243	7.4	5.3	4.0	ST	
33013	6/18/91	1205	2616.7	9704.5	21	19	10	19	27.9	27.1	26.0	32.5	33.8	34.6	1.009	7.0	5.9	5.0	ST	
33014	6/18/91	1253	2620.7	9703.4	21	21	10	21	28.0	27.4	25.1	32.4	33.1	35.2	0.953	7.0	6.1	3.9	ST	
33015	6/18/91	1626	2619.6	9708.6	21	15	7	15	28.1	27.0	25.8	33.2	34.6	34.6	1.720	8.1	7.7	4.5	ST	
33016	6/18/91	1710	2616.7	9710.6	21	10	5	10	27.9	25.6	25.5	34.1	34.8	34.8	2.878	8.2	4.2	3.6	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
GALVESTON BAY

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
34001	6/ 5/91	1055	2921.1	9439.0	18	8	4	8	29.5	28.3	27.0	12.9	21.3	29.2	6.878	11.4	5.0	3.1	ST
34002	6/ 5/91	1131	2922.0	9439.0	18	8	4	8	29.7	27.5	26.9	12.9	24.2	27.6	7.775	11.7	5.6	2.8	ST
34003	6/11/91	1218	2921.1	9431.1	18	13	6	13	27.3	26.7	26.7	18.5	26.0	23.6	2.093	6.5	5.2	4.7	ST
34004	6/11/91	1306	2923.1	9430.4	18	12	5	12	27.9	26.6	26.9	17.2	25.4	25.4	3.439	6.8	5.1	4.8	ST
34005	6/11/91	1345	2922.9	9431.1	18	11	6	11	28.1	26.7	26.8	17.1	24.9	25.0	4.187	7.1	4.8	4.6	ST
34006	6/11/91	1420	2923.1	9432.1	18	11	6	11	28.5	26.7	27.1	16.8	25.0	24.8	3.284	7.2	4.9	3.8	ST
34007	6/11/91	1547	2924.9	9440.1	18	5	2	5	29.0	28.4	27.2	17.9	18.1	18.3	5.158	7.2	6.9	6.0	ST
34008	6/11/91	1616	2923.8	9440.3	18	6	3	6	28.2	27.8	27.0	17.7	18.2	19.4	6.803	7.3	6.7	6.1	ST
34009	6/18/91	1137	2918.9	9440.2	18	10	5	10	28.9	28.5	27.0	16.2	21.6	30.7	3.589	7.2	6.4	1.5	ST
34010	6/18/91	1225	2915.8	9445.2	18	9	5	9	29.8	28.0	27.2	21.9	23.7	24.9	1.196	6.3	6.6	2.1	ST
34011	6/18/91	1310	2913.1	9448.8	18	10	5	10	29.0	27.4	27.1	24.1	25.2	25.9	1.645	6.9	6.4	3.1	ST
34012	6/18/91	1358	2911.8	9453.1	18	9	5	9	29.2	27.4	27.1	24.5	25.9	26.4	3.215	7.2	6.1	2.0	ST
34013	6/18/91	1454	2910.0	9447.7	18	14	7	14	29.1	27.2	26.8	22.5	25.6	32.2	1.420	7.1	6.7	1.5	ST
34014	6/18/91	1523	2911.9	9446.3	18	13	6	13	29.3	27.4	26.8	23.0	25.9	32.7	1.121	6.9	6.8	1.0	ST
34015	6/18/91	1552	2910.8	9445.8	18	14	7	14	29.5	27.5	26.8	22.7	26.5	33.8	1.266	6.8	6.3	1.5	ST
34016	6/18/91	1630	2908.4	9445.5	18	16	8	16	29.7	27.4	26.9	22.6	27.5	34.5	0.972	6.5	5.5	1.6	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
SABINE

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
40001	6/ 3/91	1028	2938.5	9351.7	17	5	2	5	28.6	28.5	27.3	9.5	10.6	15.9	7.364	7.0	7.3	8.4	ST	
40002	6/ 3/91	1107	2937.6	9353.2	17	6	3	6	28.6	28.3	27.3	8.2	12.7	18.7	5.757	8.0	7.6	7.8	ST	
40003	6/ 3/91	1159	2940.5	9400.3	18	3	2	3	28.8	28.6	28.2	10.2	10.4	10.3	4.149	8.4	7.9	9.7	ST	
40004	6/ 3/91	1254	2935.8	9402.4	18	8	4	8	29.0	28.9	27.9	10.2	22.1		3.888	8.8	8.3	10.1	ST	
40005	6/ 3/91	1339	2935.6	9400.7	18	8	4	8	29.2	28.5	27.0	8.2	11.7	22.0	4.224	8.3	7.6	8.7	ST	
40006	6/ 3/91	1428	2936.6	9356.7	17	7	4	7	29.4	28.6	26.8	8.4	10.3	21.3	4.261	8.3	8.5	7.1	ST	
40007	6/ 3/91	1505	2935.8	9354.5	17	8	4	8	29.8	28.9	26.9	8.2	15.8	23.1	7.588	8.3	8.2	8.8	ST	
40008	6/ 3/91	1544	2934.4	9353.4	17	10	5	10	29.7	28.5	26.8	8.8	20.3	24.4	8.822	10.0	7.6	9.4	ST	
40009	6/18/91	0842	2943.5	9343.4	17	5	2	5	27.0	27.0	26.2	18.4	21.4	26.5	2.542	6.3	5.9	4.3	ST	
40010	6/18/91	0930	2944.2	9337.6	17	6	3	6	27.0	26.5	26.8	17.0	24.0	28.0	2.953	8.7	3.2	4.6	ST	
40011	6/18/91	1008	2941.4	9338.5	17	8	4	8	27.3	26.9	26.6	16.3	26.8	29.7	7.439	9.0	3.8	6.3	ST	
40012	6/18/91	1102	2940.5	9335.4	17	9	4	9	28.1	27.0	26.2	15.8	29.2	30.6	5.233	7.2	5.2	6.8	ST	
40013	6/18/91	1136	2938.4	9334.5	17	10	5	10	28.4	27.9	26.7	15.4	31.1	31.0	2.635	7.4	6.3	6.4	ST	
40014	6/18/91	1205	2937.5	9335.5	17	11	6	11	28.8	27.7	26.6	15.0	30.8	31.4	2.766	10.6	6.7	6.3	ST	
40015	6/18/91	1327	2935.5	9342.3	17	11	6	11	28.5	27.1	26.8	15.6	32.2	32.2	3.065	8.9	5.7	6.3	ST	
40016	6/18/91	1403	2935.6	9346.6	17	11	6	11	28.6	27.2	26.7	14.6	29.5	32.1	1.720	6.4	5.1	6.0	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON 11

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53076	6/13/91	1827	2955.9	8810.1	11	31	15	31	27.2	26.4	25.2	33.3	33.7	35.1	0.212	7.0	6.9	5.4	ST
53077	6/13/91	2027	2955.5	8818.5	11	30	15	30	27.5	26.2	25.0	30.1	33.8	35.4	0.206	7.0	6.9	5.4	ST
53078	6/13/91	2304	2953.3	8834.9	11	24	12	24	27.3	26.1	25.8	25.7	32.8	34.1	0.598	9.2	7.8	5.9	ST
53079	6/14/91	125	2943.3	8830.2	11	34	16	34	27.5		24.0	21.1		36.0	0.615	8.0		5.3	ST
53080	6/14/91	255	2938.3	8828.7	11	40	20	40	27.0	25.1	24.1	27.5	36.3	36.0	0.505	7.3	5.8	5.4	ST
53082	6/14/91	0620	2935.2	8819.2	11	40	20	40	26.5	26.4	26.7	33.1	33.2	34.7	0.150	6.5	6.5	5.8	ST
53083	6/14/91	0802	2931.8	8819.5	11	45	23	45	26.5	25.7	25.2	33.9	35.8	35.8	0.143	6.6	6.5	6.0	ST
53084	6/14/91	1045	2923.9	8815.4	11	53	26	52	27.2	26.8	23.9	35.4	35.7	36.2	0.168	6.4	6.4	6.1	ST
53085	6/14/91	1404	2916.9	8822.4	11	68	34	68	27.9	26.8	21.3	31.4	36.4	36.5	4.579	7.2	6.7	5.7	ST
53086	6/14/91	2059	2915.3	8828.5	11	74	37	74	26.8	26.5	22.1	32.2	36.5	36.4	1.031	7.1		6.5	ST
53087	6/14/91	2158	2916.8	8825.0	11	66	33	66	27.7	26.2	21.4	31.7	36.4	36.4	1.931	7.3		5.7	ST
53088	6/14/91	2321	2916.6	8825.3	11	66	33	66	27.4	26.4	21.6	32.4	36.2	36.3	1.844	7.4		5.5	ST
53090	6/15/91	0144	2923.7	8825.2	11	54	27	52	27.7	26.8	23.1	32.8	27.3	27.5	1.485	7.0	6.9	6.2	ST
53091	6/16/91	1239	3010.7	8826.1	11	12	6	12	28.6	26.1	25.9	21.6	31.8	32.7	2.387	7.1	4.7	3.9	ST
53092	6/16/91	1423	2959.7	8821.0	11	30	15	30	28.6	26.4	24.8	20.2	33.8	35.7	1.340	7.9	6.3	4.6	ST
53093	6/18/91	1405	2635.8	9635.1	21	82	41	81	29.3	23.2	21.0	26.4	36.5	36.4	0.760	7.1	6.4	5.4	ST
53094	6/18/91	1636	2629.9	9629.9	21	84	42	83	28.9	22.7	20.9	36.4	36.4	36.4	0.393	7.1	6.3	6.3	PN
53095	6/18/91	1757	2622.6	9620.0	21	125	64	122	29.3	21.0	17.5	28.7	36.4	36.5	0.103	4.3	4.0	2.8	ST
53096	6/18/91	1949	2615.8	9631.6	21	57	30	57	30.1	25.2	22.1	28.0	36.0	36.5	0.137	6.6	5.6	5.6	ST
53097	6/18/91	2228	2614.3	9633.3	21	54	28	54	30.0	26.3	23.3	27.4	35.8	36.3	0.168	6.2	5.6	5.3	ST
53098	6/19/91	0027	2615.3	9625.1	21	70	35	70	29.5	23.9	21.2	29.3	36.4	36.4	0.100	6.4	6.2	5.8	ST
53099	6/19/91	0231	2607.2	9622.6	21	88	44	88	29.4	22.7	20.2	28.3	36.3	36.4	0.187	6.3	6.3	5.2	ST
53100	6/19/91	0438	2601.2	9631.2	21	62	31	61	29.3	25.3	22.3	28.8	35.8	36.5	0.181	6.4	5.4	5.8	PN
53101	6/19/91	0856	2559.9	9700.0	21	26	14	26	29.1	28.4	25.9	31.3	28.3	25.9		6.3	5.5	4.1	PN
53102	6/19/91	1015	2604.3	9704.4	21	19	10	19	29.6	27.6	26.0	33.9	33.9	35.2	0.411	6.6	5.1		ST
53103	6/19/91	1123	2605.5	9657.9	21	28	15	28	29.2	28.1	25.8	29.2	33.1	36.0	0.530	6.5	5.7	5.0	ST
53104	6/19/91	1158	2607.7	9654.7	21	35	17	35	29.3	28.2	25.6	31.3	33.4	36.0	0.212	6.5	5.3	5.1	ST
53105	6/19/91	1357	2615.0	9650.1	21	39	15	39	29.5	28.3	25.4	28.8	31.6	35.6	0.193	6.3	5.5	4.5	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR		MID	MAX		
53107	6/19/91	1610	2615.5	9655.0	21	36	17	35	29.3	28.3	25.4	30.9	32.1	35.7	0.249	6.2	5.6	4.2	ST	
53108	6/19/91	1739	2613.1	9701.6	21	22	12	21	30.1	28.8	26.4	32.4	32.8	35.6	0.552	6.8	6.6	5.2	ST	
53109	6/19/91	2038	2614.0	9709.8	21	11	6	11	28.8	28.7	26.8	33.9	34.0	35.1	2.031	7.8	7.7	3.0	ST	
53110	6/19/91	2220	2619.0	9708.3	21	15	7	15	29.3	28.4	26.6	33.2	33.9	34.9	0.783	7.1	7.0	4.0	ST	
53111	6/20/91	0003	2622.0	9657.9	21	34	17	34	29.7	28.6	25.5	29.1	31.8	35.6	0.212	6.4	5.9	4.2	ST	
53112	6/20/91	0108	2625.1	9701.7	21	29	15	29	29.2	28.9	25.6	31.1	32.3	35.5	0.193	6.1	6.4	3.5	ST	
53113	6/20/91	0231	2626.5	9704.8	21	21	10	21	29.4	29.2	27.0	32.1	32.4	34.9	0.262	6.5	6.4	4.7	ST	
53114	6/20/91	0419	2629.2	9659.9	21	35	17	35	29.3	28.2	25.6	30.9	33.6	35.5	0.162	6.3	5.8	4.1	PN	
53115	6/20/91	0713	2632.3	9711.2	21	18	8	17	28.5	28.2	26.3	34.0	34.3	35.2	1.526	7.1	7.0	2.8	ST	
53116	6/20/91	1021	2659.3	9721.3	21	12	6	12	28.9	27.6	27.1	32.0	33.1	33.6	1.059	6.8		4.1	ST	
53117	6/20/91	1057	2658.7	9717.9	21	17	8	17	29.7	28.9	26.4	31.1	32.2	35.1	1.111	6.0	4.8	2.3	ST	
53118	6/20/91	1244	2653.1	9714.8	21	22	11	22	29.5	28.3	26.2	32.1	34.0	35.2	0.623	7.2	7.3	3.3	ST	
53119	6/20/91	1454	2659.9	9700.0	21	40	20	40	29.3	28.3	24.7	30.0	35.1	36.1	1.148	6.8	5.8	5.0	PN	
53120	6/20/91	1701	2651.3	9700.3	21	40	21	39	30.2	26.7	25.3	32.4	35.0	35.6	0.199	6.4	4.9	4.7	ST	
53121	6/20/91	2053	2652.5	9642.0	21	79	40	79	30.1	23.1	20.8	25.9	36.5	36.5	0.231	6.5	6.6	5.9	ST	
53123	6/21/91	0103	2641.6	9654.3	21	44	22	44	29.2	27.5	24.4	31.4	35.3	36.1	0.383	7.0	6.0	5.2	ST	
53124	6/21/91	0314	2643.8	9707.4	21	31	15	31	28.8	28.3	25.8	33.3	33.6	35.6	0.614	6.5	6.2	3.8	ST	
53125	6/21/91	0501	2648.5	9718.6	21	16	7	15	29.1	29.2	26.6	33.3	33.3	34.8	0.641	6.8	6.9	2.9	ST	
53126	6/21/91	0823	2722.6	9717.3	20	12	7	12	29.1	29.1	29.0	31.5	31.5	31.6	1.153	6.6	6.5	6.2	ST	
53127	6/21/91	0917	2723.1	9717.5	20	12	7	12	29.1	29.1	29.0	31.5	31.5	31.6	1.121	6.6	6.5	6.2	ST	
53128	6/21/91	1101	2732.3	9711.5	20	12	6	12	29.1	28.9	22.5	28.9	29.9	33.3		7.0	6.6	2.8	ST	
53129	6/21/91	1222	2729.9	9703.2	20	24	12	23	29.9	27.3	26.1	27.0	32.4	35.3	0.521	6.9	4.5	4.1	ST	
53130	6/21/91	1318	2730.1	9659.9	20	27	14	24	29.6	27.3	26.3	27.1	33.7	35.3	0.454	7.2	4.4	4.5	PN	
53131	6/21/91	1458	2723.6	9704.4	20	25	14	23	29.7	27.0	25.8	27.0	34.2	35.5	0.519	7.1	4.4	4.4	ST	
53132	6/21/91	2052	2705.7	9715.9	20	22	11	22	29.3	27.3	26.6	33.0	34.0	35.0	0.525	7.4	6.7	4.9	ST	
53133	6/21/91	2323	2714.1	9705.4	20	28	14	28	29.4	27.9	25.7	31.4	35.2	35.7	0.890	7.4	6.5	6.7	ST	
53134	6/22/91	0115	2723.6	9706.3	20	25	14	24	29.2	27.0	25.8	30.2	33.8	35.5	1.780	7.2	4.4	4.4	ST	
53135	6/22/91	0242	2727.5	9711.7	20	16	8	15	29.3	29.3	26.6	31.9	31.9	34.2	0.955	7.0	6.7	2.2	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	SUR	MID	
53136	6/22/91	0452	2731.7	9659.7	20	27	16	26	29.6	29.6	27.9	26.9	27.3	33.1	0.454	7.0	7.1	5.3	ST
53137	6/22/91	0825	2728.6	9631.6	20	75	60	75	29.7	24.3	20.8	26.8	36.9	36.4	0.358	7.2	6.9	5.9	ST/PN
53138	6/22/91	1344	2741.8	9612.5	20	82	42	81	29.7	24.0	20.8	27.5	36.1	36.7	0.512	7.4	6.9	6.1	ST
53139	6/22/91	1544	2747.8	9621.4	20	55	26	54	29.5	27.1	21.8	28.6	35.5	36.4	0.828	7.4	6.7	5.8	ST
53140	6/22/91	1832	2749.6	9638.2	20	30	15	29	29.7	27.8	25.1	27.5	34.1	36.0	0.486	7.1	5.9	5.4	ST
53141	6/22/91	2113	2733.6	9642.9	20	42	24	42	29.8	26.6	22.8	27.1	35.7	36.4	0.463	7.0	6.5	5.4	ST
53142	6/23/91	0016	2724.2	9653.0	20	40	21	39	29.1	27.4	23.6	31.4	35.5	36.1	0.872	6.8	6.5	5.9	ST
53143	6/23/91	0312	2744.3	9706.1	20	11	5	10	28.7	28.7	26.9	32.2	32.2	34.1	4.192	6.3	6.3	2.2	ST
53144	6/23/91	0516	2757.2	9651.9	20	13	7	12	28.8	28.3	26.3	31.3	32.4	35.2	6.317	7.2	6.6	3.2	ST
53145	6/23/91	0731	2801.4	9645.3	19	16	7	16	29.0	28.8	26.4	29.4	31.2	35.0	1.420	6.9	6.8	3.2	ST
53146	6/23/91	0910	2801.6	9642.0	19	17	14	17	29.5	26.4	26.4	29.4	35.1	35.1	0.950	6.9	3.5	3.4	ST
53147	6/23/91	1107	2758.1	9630.4	20	27	14	27	29.5	27.4	25.6	27.2	31.5	36.0	0.519	6.6	4.6	5.0	ST/PN
53148	6/23/91	1319	2803.6	9623.0	19	27	15	27	29.7	28.4	25.8	27.9	31.2	36.6	0.361	6.4	6.6	5.3	ST
53149	6/23/91	1527	2813.8	9632.8	19	10	6	10	29.6	29.6	27.0	30.9	30.6	34.0	10.267	8.9	8.4	1.5	ST
53150	6/23/91	2047	2806.7	9644.5	19	11	5	11	29.1	26.8	24.0	32.0	34.3	34.3	7.912	7.2	7.3	0.5	ST
53151	6/23/91	2329	2754.0	9629.5	20	33	16	33	29.8	27.6	25.4	27.4	33.4	35.7	0.582	7.3	6.4	6.1	ST
53152	6/24/91	0106	2759.4	9622.6	20	33	16	33	29.8	27.3	25.7	27.5	32.6	35.9	0.365	6.7	4.2	5.8	ST
53153	6/24/91	0247	2812.9	9624.8	19	20	10	20	29.2	29.2	26.3	30.2	33.2	35.4	2.016	6.9	3.6	3.0	ST
53154	6/24/91	0329	2815.6	9627.6	19	11	6	11	29.0	27.4	27.0	30.8	32.3	34.4	4.904	7.6	3.7	1.4	ST
53155	6/24/91	0547	2827.6	9612.9	19	10	5	9	29.3	27.8	27.8	27.9	33.3	33.3	4.299	6.6	5.9	2.1	ST
53156	6/24/91	0855	2818.3	9558.0	19	22	11	22	29.3	27.7	26.7	29.8	33.1	35.3	1.547	6.9	5.8	4.8	ST
53157	6/24/91	1122	2815.7	9542.2	19	30	15	30	29.7	27.5	25.9	27.0	34.4	35.6	0.361	6.5	5.4	5.6	ST
53158	6/24/91	1259	2809.5	9536.8	19	40	25	40	29.9	27.3	24.8	25.6	34.6	36.0	0.374	6.7	4.9	5.4	ST
53159	6/24/91	1519	2810.8	9542.0	19	36	18	35	29.4	27.8	25.6	28.5	33.4	34.0	0.442	6.4	5.9	5.3	ST
53160	6/24/91	1723	2802.7	9545.6	19	37	18	36	29.5	27.8	24.4	28.2	35.1	36.1	0.280	6.4	6.1	5.5	ST
53162	6/24/91	2102	2752.5	9535.8	20	62	35	62	29.2	26.0	21.6	31.2	36.0	36.4	0.258	6.8	6.7	6.2	ST
53164	6/25/91	0205	2817.2	9526.6	19	36	18	35	29.7	28.3	25.8	24.9	34.8	35.9	0.833	6.7	6.2	6.1	ST
53165	6/25/91	0340	2828.5	9528.5	19	28	18	27	29.3	27.3	26.3	25.8	32.9	35.5	0.773	6.9	4.8	4.8	ST



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
53166	6/25/91	0511	2830.5	9535.5	19	24	12	24	29.3	28.1	26.3	27.5	30.4	35.3	0.454	6.5	6.3	3.8	ST	
53167	6/25/91	0610	2830.0	9530.0	19	27	15	25	29.3	27.6	26.4	26.2	30.5	35.6	0.654	6.5	5.8	4.4	PN	
53168	6/25/91	0934	2828.6	9559.9	19	15	7	15	29.1	28.3	26.7	30.1	33.0	34.9	1.632	7.1	6.5	3.9	PN	
53169	6/25/91	1305	2759.7	9559.7	20	45	23	45	29.5	27.9	24.5	29.2	34.4	36.3	0.262	6.4	6.2	5.2	PN	
53170	6/25/91	1558	2800.0	9529.9	19	55	27	54	29.9	26.6	25.6	27.6	35.7	36.4	0.207	6.7	6.8	6.3	PN	
53171	6/25/91	2037	2813.0	9511.3	19	45	22	44	29.9	27.7	24.2	26.1	35.3	36.2	0.262	6.9	6.7	6.3	ST	
53174	6/26/91	0301	2806.3	9440.7	18	53	27	52	29.4	28.8	21.8	34.1	35.3	36.4	0.090	6.6	7.7	6.9	ST	
53175	6/26/91	0536	2802.4	9451.1	18	72	37	70	29.3	25.1	20.9	33.7	36.2	36.4	0.094	7.0	7.5	6.5	ST	
53176	6/26/91	0745	2759.9	9500.0	18	80	41	79	29.2	24.2	20.7	34.2	36.6	36.5	0.100	7.3	8.1	6.7	PN	
53177	6/26/91	1036	2757.3	9452.2	18	90	45	89	29.5	24.1	19.9	33.6	36.6	36.6	0.069	6.8	7.6	6.4	ST	
53178	6/26/91	1305	2801.0	9442.2	18	70	35	69	29.5	25.3	21.2	33.6	36.3	36.4	0.100	6.0	6.1	5.2	ST	
53179	6/26/91	1601	2801.1	9425.5	18	63	31	62	30.2	24.2	20.9	33.4	36.2	36.7	0.075	5.5	5.6	4.8	ST	
53180	6/26/91	1806	2758.3	9427.7	18	93	47	92	29.7	24.0	19.6	33.6	36.4	36.5	0.027	5.5		4.1	ST/PN	
53181	6/26/91	2109	2801.6	9437.5	18	62	30	61	30.3	25.0	22.2	33.5	36.6	36.8	0.056	6.1	6.4		ST	
53182	6/27/91	0057	2757.7	9409.4	18	81	40	80	30.7	24.7	20.9	32.3	35.8	36.7	0.095	6.2	6.7	5.3	ST	
53183	6/27/91	0258	2755.0	9407.5	18	90	44	89	30.1	23.6	20.4	32.2	36.0	36.6	0.103	6.4	6.7	5.2	ST	
53184	6/27/91	0653	2814.6	9408.5	18	55	27	53	30.1	27.3	22.4	27.5	36.1	36.4	0.125	6.6	6.5	5.9	ST	
53186	6/27/91	1155	2836.0	9359.9	17	31	16	31	29.9	27.8	27.3	25.2	36.2	36.0	0.255	6.5	6.0	5.5	ST	
53187	6/27/91	1433	2841.1	9419.0	18	27	14	27	30.3	27.8	27.4	25.6	35.6	36.0	0.598	5.9	5.9	4.7	ST	
53188	6/27/91	1527	2840.5	9419.5	18	31	15	30	30.4	27.3	27.3	25.2	35.6	36.0	0.413	7.3	6.3	5.1	ST	
53189	6/27/91	1825	2830.0	9429.9	18	37	18	35	30.8	27.4	26.7	24.5	35.9	35.9	0.428	7.2	4.6	3.9	PN	
53190	6/27/91	2022	2833.9	9439.1	18	31	16	31	30.5	28.1	27.4	24.9	35.9	36.1	0.374	6.7	6.2	5.0	ST	
53191	6/27/91	2247	2822.5	9447.4	18	20	10	20	30.2	27.8	26.2	25.2	35.2	35.9	0.199	6.6	6.3	5.2	ST	
53193	6/28/91	0424	2838.1	9520.2	19	24	11	21	29.3	27.9	26.6	28.7	33.2	35.5	0.573	6.6	5.1	4.3	ST	
53194	6/28/91	0659	2851.1	9521.6	19	8	4	7	28.8	28.8	27.0	30.0	30.6	34.4	1.308	6.4	6.1	0.9	ST	
53195	6/28/91	0905	2859.9	9500.0	19	16	8	16	28.9	27.1	27.0	30.3	35.1	35.2	1.205	6.7	3.4		PN	
53196	6/28/91	1320	2905.2	9452.6	18	16	8	16	28.4	27.5	27.1	31.5	33.9	35.2	5.993	6.6	4.7	2.4	ST	
53197	6/28/91	1712	2848.3	9446.8	18	21	11	20	29.4	27.8	27.3	24.9	30.3	35.4	0.614	6.6	5.1	3.1	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE	TIME	POSITION		STAT	DEPTH	SAMPLE		TEMPERATURE, °C			SALINITY, PPT			CL,	DISSOLVED			GEAR
			LAT	LONG			ZONE	DEPTH	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	MG/M <sup>3</sup>	SUR	
53198	6/28/91	2058	2839.2	9441.8	18	27	13	25	29.5	28.0	27.7	25.5	33.4	35.8	0.386	6.6	5.4	5.2	ST
53199	6/29/91	0118	2832.5	9415.0	18	35	18	35	29.1	27.3	26.9	25.9	35.7	36.0	0.330	6.8	6.1	5.2	ST
53201	6/29/91	0530	2843.6	9418.3	18	25	12	24	28.9	27.8	27.6	25.0	35.7	35.8	0.676	7.0	6.2	4.8	ST
53202	6/29/91	0816	2855.2	9421.7	18	22	10	20	28.8	28.9	27.5	26.7	27.3	35.4	0.771	6.7	6.4	2.6	ST
53203	6/29/91	1221	2912.5	9401.1	18	15	8	13	29.3	29.3	27.6	26.7	26.8	33.2	1.067	7.0	7.1	4.5	ST
53204	6/29/91	1408	2915.8	9358.2	17	10	5	10	29.5	29.5	29.4	27.5	27.5	27.9	0.890	7.0	7.2	6.9	ST
53205	6/29/91	1643	2922.2	9420.3	18	14	7	13	29.3	28.2	27.4	29.4	32.4	34.6	1.545	6.7	4.8	0.8	ST
53207	6/29/91	1907	2927.1	9430.0	18	9	4	8	28.9	28.8	28.6	31.4	31.5	31.7	6.744	7.9	7.6	6.8	PN
53208	6/29/91	2242	2905.2	9412.6	18	16	8	16	29.0	28.0	27.8	26.0	32.2	33.2	1.086	6.6	3.6	3.4	ST
53209	6/30/91	0029	2853.0	9412.4	18	21	10	20	29.1	28.5	28.1	29.0	34.3	35.0	0.231	6.6	6.4	5.1	ST
53210	6/30/91	0231	2857.3	9420.5	18	13	6	13	28.8	28.8	28.0	26.3	26.3	32.6	0.698	6.8	6.7	4.5	ST
53211	7/ 1/91	2232	2845.9	9346.5	17	23	11	22	29.9	28.8	28.5	29.6	35.4	35.7	0.107	6.5		6.3	ST
53212	7/ 2/91	0033	2834.2	9350.3	17	35	17	34	29.5	28.3	27.6	30.1	35.8	36.0	0.097	6.6		5.8	ST
53213	7/ 2/91	0257	2821.7	9343.1	17	54	27	52	29.8	27.6	22.4	32.9	36.4	37.2	0.156	6.6	6.8	5.9	ST
53216	7/ 2/91	0758	2813.8	9357.3	17	63	31	62	29.6	27.6	21.7	33.1	36.1	36.5	0.196	6.3	6.5	6.1	ST
53219	7/ 2/91	1454	2822.4	9348.3	17	54	27	53	29.5	27.5	22.3	33.8	35.9	36.6	0.224	6.4	6.3	6.1	ST/PN
53221	7/ 2/91	1834	2837.1	9355.0	17	32	16	32	30.3	28.4	27.5	29.4	35.6	36.0	0.150	6.6		5.8	ST
53222	7/ 2/91	2136	2842.0	9329.4	17	28	14	28	30.1	28.7	27.8	30.9	35.3	36.1	0.131	6.4	6.5	6.3	ST
53223	7/ 2/91	2303	2839.3	9324.3	17	31	15	30	30.0	28.8	27.8	30.9	34.8	35.9	0.312	6.4	6.5	6.4	ST
53224	7/ 3/91	0042	2840.4	9315.3	17	32	16	31	30.2	28.1	26.6	31.2	35.5	36.1	0.086	6.5	6.2	5.9	ST
53225	7/ 3/91	0251	2836.6	9258.0	16	32	16	31	29.2	28.7	26.4	34.1	35.3	35.7	0.070	6.7	6.6	6.6	ST
53226	7/ 3/91	0502	2850.1	9252.2	16	26	13	25	29.8	28.7	28.0	24.7	35.0	35.9	0.327	7.0	6.8	6.5	ST
53227	7/ 3/91	0739	2849.4	9310.2	17	24	12	23	29.3	28.7	27.7	29.1	34.1	36.0	0.243	6.6	6.6	6.2	ST
53228	7/ 3/91	0928	2838.7	9305.5	17	34	17	34	29.3	28.2	27.2	32.1	35.9	36.1	0.137	6.5	6.6	6.4	ST
53229	7/ 3/91	1128	2839.4	9316.5	17	34	17	34	29.7	28.2	26.4	30.9	35.6	36.3	0.104	6.4	6.3	5.8	ST
53230	7/ 3/91	1319	2842.0	9329.3	17	29	14	28	31.2	28.5	27.8	31.4	35.5	36.0	0.077	6.2	6.3	6.0	ST
53231	7/ 3/91	1525	2840.6	9340.1	17	30	15	29	30.3	28.5	27.6	30.1	35.7	36.0	0.113	6.3	6.1	5.3	ST
53232	7/ 3/91	1635	2843.2	9340.3	17	24	12	22	31.5	28.8	28.5	29.8	34.5	35.7	0.118	6.4	6.3	6.1	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCACOUOLA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
53233	7/ 3/91	2028	2904.4	9312.1	17	22	11	22	30.8	28.7	27.5	25.0	29.4	34.8	0.318	7.0	6.8	4.1	ST	
53234	7/ 3/91	2248	2909.9	9300.9	17	19	9	19	31.1	29.8	27.5	25.6	27.3	34.0	0.639	6.7	6.8	3.2	ST	
53236	7/ 4/91	0429	2930.5	9335.0	17	11	5	10	30.7	30.6	28.5	27.3	28.1	30.2	0.721	7.9	7.8	2.1	ST	
53237	7/ 4/91	0709	2929.8	9334.8	17	9	4	8	30.4	30.5	29.5	26.8	26.8	28.6	0.676	8.6	8.0	8.5	ST/PN	
53238	7/ 4/91	0952	2910.8	9326.1	17	17	8	17	30.1	29.9	28.4	28.9	30.4	32.8	0.449	6.6	6.5	2.1	ST	
53239	7/ 4/91	1119	2900.6	9329.8	17	23	11	23	29.9	28.5	28.0	27.9	31.5	35.0	0.417	6.6	4.6		PN	
53240	7/ 4/91	1424	2900.0	9300.0	17	23	11	22	31.1	28.3	27.3	26.7	30.4	35.4	0.393	7.6	6.2	4.1	PN	
53241	7/ 4/91	1720	2900.1	9230.4	16	24	12	23	30.6	28.0	27.2	26.2	30.8	35.6	0.318	7.5	3.8	4.1	PN	
53242	7/ 4/91	2016	2903.4	9215.4	16	18	9	18	31.2	28.1	27.3	23.2	31.3	35.6	2.374	8.3	4.8	4.3	ST	
53243	7/ 4/91	2157	2908.6	9220.3	16	13	6	13	31.0	28.9	27.0	20.0	25.4	34.8	1.516	7.7	3.8	1.7	ST	
53244	7/ 4/91	2336	2915.6	9227.7	16	11	5	11	30.6	30.2	27.1	23.7	24.1	33.1	1.616	7.4	6.2	0.7	ST	
53245	7/ 5/91	0134	2916.7	9235.2	16	15	7	14	30.6	30.4	27.4	25.2	27.9	34.4	0.360	6.9	6.5	2.4	ST	
53246	7/ 5/91	0423	2926.4	9243.3	16	13	7	12	30.3	28.5	27.7	23.8	30.5	31.9	0.723	7.8	3.3	0.7	ST	
53248	7/ 5/91	0807	2932.2	9238.0	16	10	5	9	30.1	29.2	27.8	24.4	26.2	31.3	1.153	7.6	5.2	0.6	ST/PN	
53249	7/ 5/91	0954	2927.0	9244.8	16	13	6	13	30.4	29.6	27.6	22.4	25.3	32.7	0.981	8.0	6.3	0.7	ST	
53251	7/ 5/91	1300	2911.2	9242.2	16	19	9	18	30.6	28.9	27.6	24.5	29.2	34.5	0.474	6.6	5.7	4.0	ST	
53252	7/ 5/91	1809	2858.1	9202.1	16	20	10	20	31.1	27.7	26.6	22.3	35.5	36.0	2.280	7.4	6.0	1.4	ST/PN	
53253	7/ 5/91	2040	2853.7	9214.4	16	26	13	26	30.4	28.5	27.4	27.4	35.4	35.9	0.569	7.0	6.8	5.7	ST	
53254	7/ 6/91	0052	2834.2	9237.0	16	38	19	37	29.6	28.5	26.4	34.8	35.7	35.8	0.094	6.7	6.9	7.3	ST	
53255	7/ 6/91	0311	2832.3	9231.3	16	44	22	43	29.4	28.8	26.4	34.9	35.5	35.9	0.094	6.7	6.8	6.4	ST/PN	
53257	7/ 6/91	0716	2835.3	9222.2	16	38	19	35	29.2	28.6	27.1	34.6	35.4	36.1	0.100	7.0	7.1	6.9	ST	
53258	7/ 6/91	1048	2841.3	9200.0	16	36	18	36	29.0	28.1	26.3	34.0	37.4	36.1	0.216	6.9	6.9	4.3	ST	
53259	7/ 6/91	1445	2826.4	9223.7	16	54	27	53	29.0	27.5	22.9	34.8	35.6	36.4	0.081	6.6	6.9	6.8	ST	
53262	7/ 6/91	1909	2807.7	9219.4	16	86	43	86	29.2	25.5	19.8	33.0	36.3	36.5	0.162	7.6	7.3	6.2	ST	
53263	7/ 6/91	2209	2816.0	9228.4	16	64	32	64	29.0	26.8	21.5	33.8	35.7	35.6	0.118	6.8	6.9	6.7	ST	
53265	7/ 7/91	0119	2810.3	9224.7	16	72	36	71	29.1	26.6	19.9	33.3	36.0	36.6	0.034	6.6	6.9	4.7	ST	
53266	7/ 7/91	0234	2805.9	9225.5	16	95	47	94	29.2	23.3	19.6	32.7	36.6	36.5		6.8	7.7	5.5	ST	
53267	7/ 7/91	0451	2801.1	9231.2	16	99	49	98	29.1	23.3	19.8	33.5	36.2	36.5	0.112	7.2	7.5	5.7	ST/PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53268	7/ 7/91	0925	2805.7	9211.9	16	92	46	92	28.9	24.1	18.9	33.7	36.8	36.5	0.108	6.7	7.1	4.8	ST
53269	7/ 7/91	1203	2808.2	9204.4	16	80	40	80	29.0	25.6	19.5	33.9	36.5	36.6	0.268	6.4	6.8	4.8	ST
53270	7/ 7/91	1442	2812.8	9154.1	15	70	35	69	29.0	26.9	20.5	33.9	35.6	36.5	0.230	7.0	6.3	5.2	ST
53272	7/ 7/91	1804	2807.0	9141.4	15	91	45	89	28.9	24.0	20.0	31.9	36.3	36.5	0.486	7.0	6.8	5.3	ST
53273	7/ 7/91	2228	2832.3	9154.8	15	44	22	44	28.8	28.6	23.9	34.2	35.2	36.1	0.100	6.7	6.7	4.8	ST/PN
53275	7/ 8/91	0254	2845.7	9143.3	15	25	12	24	28.7	28.9	27.1	27.4	34.8	35.9	0.455	7.1	7.0	4.8	ST
53276	7/ 8/91	0530	2847.3	9132.1	15	21	11	21	28.6	28.8	26.2	30.1	33.8	35.4	0.393	7.4	7.9	3.5	ST
53277	7/ 8/91	0850	2854.7	9118.5	15	9	4	9	28.8	28.9	28.1	28.2	28.3	32.4	1.053	7.4	7.6	3.4	ST/PN
53278	7/ 8/91	1121	2836.7	9123.9	15	29	14	29	29.1	27.3	24.3	31.1	34.0	36.5	0.739	7.0		4.1	ST
53279	7/ 8/91	1308	2836.4	9126.3	15	30	15	29	29.0	28.0	25.4	32.1	34.4	36.2	0.526	6.9	6.2	4.4	ST/PN
53280	7/ 8/91	1522	2830.7	9111.5	15	33	16	32	28.9	27.7	23.5	32.6	35.4	36.3	0.514	6.9	5.9	4.9	ST
53281	7/ 8/91	1708	2830.4	9108.2	15	32	16	32	28.9	28.4	24.1	33.6	34.8	36.2	0.349	6.9	6.8	3.1	ST
53282	7/ 8/91	2021	2815.5	9106.6	15	72	36	72	29.3	28.8	25.7	32.5	36.2	36.5	0.312	6.7	7.1	5.3	ST
53283	7/ 8/91	2348	2836.5	9113.0	15	25	12	25	29.3	28.0	26.1	28.3	34.4	35.9	0.237	7.1	6.5	3.1	ST
53284	7/ 9/91	0213	2847.5	9103.5	15	9	4	8	29.3	29.2	27.7	28.3	28.5	32.9	0.970	6.9	6.9	2.2	ST/PN
53285	7/ 9/91	0750	2900.3	9028.5	14	9	4	9	28.4	28.4	27.0	21.0	21.6	31.2	4.552	7.4	6.3	1.1	ST/PN
53286	7/ 9/91	1112	2854.8	9021.2	14	16	8	16	28.9	28.6	25.7	23.3	23.8	34.5	2.430	7.4	6.5	1.1	ST
53287	7/ 9/91	1247	2857.4	9017.4	14	14	7	13	30.1	28.9	26.1	24.5	25.9	33.7	1.522	7.6	7.0	1.2	ST
53288	7/ 9/91	1443	2901.4	9012.6	14	10	5	9	31.4	28.4	26.7	13.3	22.8	27.9	10.612	11.2	5.4	1.4	ST
53289	7/ 9/91	1735	2900.0	8955.7	13	27	14	27	30.3	26.8	23.8	22.5	34.5	36.3	2.341	8.4	4.6	3.6	ST
53290	7/ 9/91	1915	2851.6	8956.6	13	36	18	36	29.6	26.1	22.5	23.3	34.8	36.3		8.4	3.0	2.2	ST
53291	7/ 9/91	2214	2853.6	8954.1	13	39	19	39	29.8	27.0	22.2	22.6	35.7	36.5	2.754	8.4	6.1	2.7	ST
53292	7/10/91	0112	2847.1	9009.0	14	30	15	29	29.0	27.9	23.4	23.9	35.1	36.3	2.056	8.9	6.3	1.8	ST
53293	7/10/91	0334	2837.7	9018.4	14	31	15	30	29.3	27.8	24.7	25.5	35.1	36.6	1.326	8.4	6.4	6.8	ST
53294	7/10/91	0459	2838.4	9019.2	14	25	12	25	29.2	27.3	25.3	25.8	32.3	36.4	1.106	7.8	4.6	5.6	ST
53295	7/10/91	0900	2833.4	9050.1	14	23	11	23	29.8	28.5	26.7	28.6	33.8	35.7	0.467	6.9	4.4	1.6	ST
53296	7/10/91	0952	2832.7	9051.0	14	24	12	24	29.9	28.2	25.8	28.6	34.0	36.8	0.399	7.0	6.1	3.4	ST
53297	7/10/91	1128	2829.8	9100.1	15	32	16	32	29.9	27.6	24.2	30.7	35.3	36.4	0.498	6.8	6.2	4.4	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	SUR	MID	
53298	7/10/91	1427	2850.6	9051.5	14	12	6	11	30.6	29.0	26.5	18.6	27.5	34.2	6.205	8.1	4.8	0.4	ST
53299	7/10/91	2008	2858.0	9029.4	14	11	6	11	29.8	28.0	26.7	20.9	27.2	34.0	4.252	7.5	5.9	0.1	ST
53300	7/10/91	2244	2852.1	9046.9	14	10	5	10	30.2	29.3	27.3	19.4	28.1	33.7	1.153	7.5	6.7	0.1	ST
53301	7/11/91	0056	2834.5	9043.0	14	19	9	18	30.1	28.9	26.9	27.5	30.6	36.0	0.676	6.6	4.4	3.1	ST
53302	7/11/91	0332	2818.5	9042.4	14	52	26	51	29.9	28.0	21.9	31.2	35.6	36.7	0.181	6.3	6.4	4.9	ST
53303	7/11/91	0623	2822.3	9043.0	14	43	22	43	29.5	27.4	22.5	31.8	32.6	36.5	0.215	6.5	6.0	4.0	ST
53305	7/11/91	0921	2818.5	9040.5	14	52	26	52	29.9	27.0	21.9	29.0	36.0	36.8	0.395	6.7	6.8	5.1	ST
53306	7/11/91	1116	2812.4	9043.6	14	82	41	82	29.9	24.9	18.5	32.8	36.3	36.7	0.187	6.5	6.7	4.0	ST
53307	7/11/91	2013	2831.9	9028.2	14	34	17	34	30.7	27.6	23.7	27.6	35.7	36.5	0.498	6.6	5.8	2.7	ST/PN
53308	7/11/91	2254	2821.7	9013.5	14	63	31	63	30.8	28.1	21.9	27.0	36.0	36.6	0.483	6.9	6.7	4.6	ST
53309	7/12/91	0228	2840.4	9001.8	14	59	29	58	30.1	25.5	21.1	23.4	36.0	36.5	0.885	7.1	4.6	4.2	ST
53310	7/12/91	0441	2843.0	8950.7	13	86	43	86	29.9	23.1	18.0	22.8	37.0	36.3	2.056	7.7	6.3	4.4	ST
53311	7/12/91	0716	2845.9	8950.6	13	61	32	61	29.8	25.9	20.8	22.5	36.6	36.8	1.994	7.6	6.7	3.3	ST
53312	7/12/91	1113	2858.9	8931.3	13	20	10	20	30.0	26.3	25.3	17.1	33.4	35.1	7.056	9.5	2.6	1.9	ST/PN
53313	7/12/91	1212	2859.3	8931.3	13	16	8	15	30.8	26.6	25.6	16.0	32.2	34.4	9.054	9.5	1.4	1.0	ST
53314	7/12/91	1438	2907.7	8946.9	13	19	9	18	29.9	27.3	24.3	21.3	33.0	36.0	8.099	7.7	3.7	1.0	ST
53315	7/12/91	1614	2900.0	9000.0	14	23	12	23	30.3	26.5	24.4	23.0	34.4	35.8	1.682	7.6	2.1	2.1	PN
53316	7/12/91	2006	2906.3	9002.4	14	12	6	12	30.2	28.5	24.7	21.8	25.4	34.6	2.212	7.8	3.1	0.1	ST
53317	7/12/91	2108	2903.7	8959.2	13	18	9	18	31.1	27.1	25.0	22.9	32.0	35.9	1.506	7.3	3.4	1.8	ST
53318	7/12/91	2229	2906.4	8957.1	13	16	8	16	30.7	28.4	24.4	23.1	29.2	34.9	1.256	6.8		0.4	ST
53319	7/12/91	2348	2902.9	8951.0	13	30	15	30	30.8	27.3	24.1	20.5	34.7	36.0	1.994	8.1	4.1	2.2	ST
53320	7/13/91	0138	2910.0	8942.6	13	13	6	12	29.9	28.4	25.1	22.2	26.4	33.8	2.803	7.2	4.1	0.5	ST
53321	7/13/91	0843	2907.8	8845.1	11	80	40	80	29.4	22.7	19.7	29.9	36.6	36.5	39.156	6.5	5.3	4.7	ST
53322	7/13/91	1357	2929.8	8800.4	11	44	22	43	29.6	27.4	22.9	27.5	35.9	36.5	3.026	6.7	5.5	4.9	PN
53323	7/13/91	1802	2959.8	8800.4	11	23	12	23	29.5	26.8	26.1	29.2	35.8	36.3	1.916	8.0	5.9	4.7	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
17001	6/14/91	0914	2924.1	8856.2	11	17	8	16	27.4	26.0	25.1	15.4	30.7	33.4	19.774	9.1	5.4	4.4	ST
17002	6/14/91	1057	2919.8	8855.4	11	25	12	24	27.4	25.5	24.5	15.0	33.5	35.3	32.446	14.0	6.0	5.1	ST
17003	6/14/91	1309	2908.0	8852.8	11	65	32	64	27.6	25.3	25.3	15.5	36.1	36.0	22.746	12.2	6.6	6.7	ST
17004	6/14/91	1722	2904.1	8853.0	11	94	47	93	28.8	22.8	19.1	12.4	35.8	36.3	41.417	15.0	6.6	6.0	ST
17005	6/14/91	2100	2906.7	8845.5	11	94	47	93	28.3	22.1	19.6	13.9	36.0	36.4	41.361	14.2	6.4	6.4	ST
17006	6/15/91	0030	2916.3	8856.1	11	28	14	27	28.3	25.4	24.6	9.7	31.8	34.4	6.411	8.2	6.7	5.0	ST
17007	6/15/91	0407	2917.3	8852.0	11	49	24	48	27.8	25.1	22.9	11.4	35.7	35.9	9.158	8.2	6.0	5.6	ST
17008	6/15/91	0825	2923.0	8851.5	11	23	11	22	27.7	25.3	24.1	15.5	32.3	35.5	30.633	10.0	6.0	4.6	ST
17009	6/15/91	1007	2931.4	8856.3	11	10	5	9	26.6	25.8	25.8	23.1	28.6	30.5	10.990	8.0	5.6	5.0	ST
17010	6/15/91	1227	2922.1	8849.4	11	35	17	34	27.9	25.2	24.6	15.8	35.6	35.1	33.343	11.7	5.5	5.3	ST
17011	6/15/91	1436	2923.7	8848.5	11	27	13	26	28.2	25.2	23.7	16.7	32.3	35.3	34.035	13.1	6.1	5.4	ST
17012	6/15/91	1611	2926.1	8843.9	11	32	16	31	28.2	25.8	23.4	18.8	34.2	35.6	25.325	11.1	8.8	5.4	ST
17013	6/15/91	1806	2931.1	8836.7	11	34	17	33	28.2	25.3	23.7	21.9	33.0	35.7	5.981	11.0	8.2	7.4	ST
17014	6/15/91	1940	2930.0	8830.1	11	48	23	46	26.9	25.1		22.9	35.7	36.0	1.430	10.2	5.6		PN
17015	6/15/91	2258	2925.0	8844.1	11	39	19	38	27.5	26.1	24.5	19.7	34.8	35.6	6.299	7.7	5.4	5.3	ST
17016	6/16/91	0120	2933.4	8834.3	11	34	17	33	27.1	24.8	23.5	24.1	35.2	35.8	1.906	7.4	5.5	5.0	ST
17017	6/16/91	0437	2956.4	8838.4	11	18	9	17	26.9	25.6	25.1	21.9	33.1	34.0	0.822	6.6	6.0	5.2	ST
17018	6/16/91	0814	2956.4	8839.8	11	17	8	16	27.3	25.8	25.4	20.9	32.2	33.6	1.215	6.6	6.0	5.8	ST
17019	6/16/91	1003	2950.6	8838.6	11	19	9	18	27.5	25.7	25.2	21.7	33.5	34.3	0.860	6.3	5.8	4.9	ST
17020	6/16/91	1232	2959.7	8830.1	11	25	12	24	27.6	26.0	25.5	19.6	33.4	34.0	2.037	8.0	6.3	5.6	PN
17021	6/16/91	1434	3007.2	8834.9	11	13	6	12	27.7	26.2	26.1	19.5	29.5	32.7	1.495	7.6	6.1	5.8	ST
17022	6/16/91	1614	3011.9	8828.1	11	10	5	9	28.7	25.4	25.5	19.4	31.8	32.1	2.075	7.3	4.9	4.3	ST
17023	6/16/91	2000	3001.6	8847.1	11	8	4	7	27.5	27.4	27.0	18.4	18.4	20.4	1.991	7.3	7.5	7.1	ST
17024	6/24/91	2020	3000.5	8848.2	11	5	2	4	29.7	29.6	29.1	16.9	17.8	20.7	7.700	7.8	7.6	6.2	ST
17025	6/24/91	2222	3005.1	8838.2	11	16	8	15	30.0	25.9	24.5	17.6	31.7	35.5	3.869	6.9	5.0	4.4	ST
17026	6/25/91	0043	3012.3	8843.9	11	12	6	11	29.0	26.0	25.9	19.0	32.6	34.1	4.056	5.6	4.4	3.6	ST
17027	7/ 8/91	1824	2916.9	8943.9	13	8	4	7	28.0	28.5	28.2	9.2	19.0	23.1	0.796	6.5	5.0	4.2	ST
17028	7/ 8/91	2021	2913.6	8933.7	13	6	3	5	28.3	28.4	28.7	9.6	18.1	20.2	0.710	6.1	5.4	3.9	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
17029	7/ 8/91	2334	2914.8	8957.8	13	4	2	3	26.8	27.4	27.6	6.9	9.8	11.9	1.465	7.6	6.6	5.4	ST
17033	7/ 9/91	2017	2853.8	9046.9	14	8	4	7	28.2	27.9	27.6	17.6	20.1	25.6	1.133	8.9	6.3	3.6	ST
17034	7/10/91	0711	2909.0	9136.6	15	4	2	3	28.5	28.6	28.5	21.1	20.8	22.5	4.448	5.7	5.9	5.2	ST
17035	7/10/91	1153	2911.9	9214.4	16	4	2	3	29.5	29.6	29.1	20.4	20.5	23.1	5.607	7.2	6.8	5.8	ST
17036	7/10/91	1546	2933.8	9232.5	16	7	3	5	29.8	28.4	28.7	9.0	16.6	20.9	1.234	9.3	5.2	5.0	ST
17037	7/10/91	1828	2937.2	9249.9	16	8	4	7	29.5	28.9	28.2	14.1	16.8	26.5	0.662	9.3	7.5	5.0	ST
17038	7/10/91	2317	2944.6	9328.6	17	5	2	4	29.6	29.6	29.4	20.1	20.2	21.1	3.420	8.2	7.9	7.7	ST
17039	7/11/91	0315	2939.0	9256.0	16	7	3	6	29.2	29.1	28.3	17.4	17.5	21.5	4.691	8.0	7.8	6.3	ST
17040	7/11/91	0553	2933.5	9237.4	16	6	3	5	28.5	28.7	27.9	11.8	11.9	23.5	7.663	8.1	8.0	3.9	ST
17041	7/11/91	1556	2900.5	9108.0	15	6	3	5	30.7	29.7	28.6	6.8	14.0	26.3	27.250	13.5	7.7	3.9	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY SEAMAP ENVIRONMENTAL DATA LUMCON PELICAN																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36711	7/ 8/91	1434	2838.6	9022.3	14	19	9	19	29.3	27.3	26.2	29.2	32.9	35.2	2.966	8.9	3.9	2.8	ST
36712	7/ 8/91	1640	2830.0	9030.0	14	36	17	36	28.8	28.4	28.4	30.1	35.4	36.2	1.164	6.7	5.8	1.6	PN
36713	7/ 8/91	2002	2830.0	9100.0	15	32	16	32	29.3	27.7	24.5	29.2	35.3	36.0	1.141	6.4	6.0	2.9	PN
36714	7/ 8/91	2230	2835.2	9050.3	14	19	10	19	30.1	27.7	26.4	27.0	35.0	35.4	0.938	6.6	4.9	0.6	ST
36715	7/ 9/91	0243	2838.3	9022.4	14	26	12	26	28.8	27.9	24.6	25.8	35.0	35.7	0.374	6.8	5.4	1.0	ST
36716	7/ 9/91	0521	2833.4	9029.6	14	31	16	31	29.5	28.3	24.5	29.3	35.6	36.1	2.015	6.6	5.8	1.2	ST
36717	7/ 9/91	0704	2833.0	9029.3	14	31	15	31	29.1	28.9	24.6	24.8	35.6	36.1	2.278	6.6	5.9	1.0	ST
36718	7/ 9/91	1115	2854.6	9020.9	14	16	8	16	29.1	27.4	25.4	23.2	33.6	34.7	3.793	0.0	0.0	0.0	ST
36719	7/ 9/91	1253	2857.1	9017.3	14	14	7	14	28.9	28.8	25.4	24.4	25.6	33.7	4.259	7.0	6.6	0.5	ST
36720	7/ 9/91	1448	2901.3	9012.5	14	10	5	10							13.850				ST
36721	7/ 9/91	1743	2859.9	8955.1	13	27	13	27	30.2	27.1	24.1	22.3	34.1	35.5	4.169	7.1	2.1	2.9	ST
36722	7/ 9/91	1915	2851.6	8956.8	13	37	16	37	30.0	25.6	29.1	23.2	34.7	31.0	3.970	6.9	3.5	1.8	ST
36723	7/ 9/91	2219	2853.8	8954.6	13	39	17	39	25.7	31.5	25.2	24.8	32.0	33.7	5.212	8.0	3.2	1.3	ST
36724	7/10/91	0114	2846.2	9008.9	14	31	15	31	25.7	31.8	23.5	26.6	32.4	35.5	2.232	7.0	4.4	0.8	ST
36725	7/10/91	0334	2837.2	9018.5	14	30	14	30							2.181				ST
36726	7/10/91	0500	2838.7	9019.5	14	26	13	26							2.071				ST
36727	7/10/91	0814	2900.0	9030.0	14	11	5	11							0.796				PN
36728	7/10/91	1011	2859.4	9022.7	14	12	5	12							16.349				ST
36729	7/10/91	1304	2900.0	9000.0	14	25	13	25							0.890				PN
36730	7/10/91	1634	2900.0	8930.0	13	15	7	15							0.713				PN
36731	7/10/91	1817	2905.9	8930.3	13	9	4	9							30.257				ST
36732	7/10/91	2017	2906.1	8930.0	13	10	4	10							36.565				ST
36733	7/11/91	0308	2859.6	9023.2	14	13	6	13							6.934				ST
36734	7/11/91	0522	2856.9	9031.4	14	14	7	14							4.291				ST
36735	7/11/91	0636	2857.2	9031.3	14	14	7	14							3.993				ST
36736	7/11/91	1007	2848.3	9053.7	14	15	8	15							3.433				ST
36737	7/11/91	1320	2900.0	9100.0	15	6	3	6							0.720				PN
36738	7/11/91	1643	2900.0	9130.0	15	8	4	8	31.7	29.5	28.4	17.5	27.5	33.2	0.752	7.8	5.5	3.2	PN



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 LUMCON PELICAN

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36739	7/11/91	1806	2857.9	9123.5	15	7	3	7	31.7	29.8	28.7	16.4	26.8	32.6	13.068	7.7	6.6	3.9	ST
36740	7/11/91	2044	2858.0	9123.6	15	7	4	7	31.3	29.6	28.7	15.9	28.1	32.7	11.472	8.1	5.0	3.6	ST
36741	7/12/91	0115	2848.3	9053.6	14	14	6	14	30.6	28.8	26.8	19.3	32.1	34.4	2.422	7.0	3.1	0.1	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 LOUISIANA INSHORE VESSELS

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36742	7/ 9/91	0728	2856.2	9058.0	14	9	9	29.0	26.8	17.5	22.1	14.965	8.3	0.0	ST/PN				
36743	7/ 9/91	0817	2916.3	8956.0	13	1	1	27.8	27.8	9.9	10.9	19.531	6.6	6.0	ST/PN				
36744	7/ 9/91	0821	2901.0	9058.9	14	5	5	28.8	28.7	15.4	15.8	16.994	7.5	6.1	ST/PN				
36745	7/ 9/91	0913	2915.1	8954.2	13	3	3	29.3	28.8	10.0	23.5	18.517	7.6	2.8	ST/PN				
36746	7/ 9/91	0916	2904.5	9035.7	14	2	2	29.0	29.0	16.5	16.5	14.458	6.0	4.3	ST/PN				
36747	7/ 9/91	0924	2909.5	9058.3	14	2	2	29.6	29.4	8.4	8.7	13.444	6.8	6.4	ST/PN				
36748	7/ 9/91	0930	2909.5	9209.5	16	9	9	29.1	29.1	21.8	30.2	7.001	7.1	3.2	ST/PN				
36749	7/ 9/91	1005	2913.9	8952.7	13	5	5	29.2	27.3	11.7	31.4	8.624	7.7	4.3	ST/PN				
36750	7/ 9/91	1010	2902.0	9035.7	14	6	6	29.5	28.9	19.1	19.6	12.429	8.2	8.1	ST/PN				
36751	7/ 9/91	1045	2919.3	9206.8	16	5	5	28.9	29.2	7.6	21.0	16.640	9.2	4.3	ST/PN				
36752	7/ 9/91	1102	2900.5	9035.7	14	10	10	29.4	28.8	19.8	20.3	13.190	8.0	7.7	ST/PN				
36753	7/ 9/91	1156	2934.0	9201.8	16	2	2	28.1	27.8	1.0	2.6	10.907	6.4	6.5	ST/PN				
36754	7/10/91	0933	2924.8	8904.3	12	9	9	28.0	25.9	26.5	30.3	3.805	8.0	4.2	ST/PN				
36755	7/10/91	0955	3003.1	8851.2	11	29	29	29.1	26.5	25.6	34.9	11.499	6.9	1.2	ST/PN				
36756	7/10/91	1016	2940.0	9322.0	17	9	9	29.1	28.8	18.6	23.5	3.044	6.6	5.8	ST/PN				
36757	7/10/91	1031	3003.2	8851.3	11	17	17	28.9	26.3	22.6	36.3	8.455	5.3	1.8	ST/PN				
36758	7/10/91	1039	2926.9	8909.6	12	5	5	28.7	26.6	22.2	30.5	5.327	7.8	4.5	ST/PN				
36759	7/10/91	1055	3003.1	8851.4	11	5	5	29.2	29.1	23.0	23.4	7.102	7.3	5.0	ST/PN				
36760	7/10/91	1057	2944.0	9322.0	17	5	5	28.8	28.6	18.2	18.7	4.566	6.8	6.7	ST/PN				
36761	7/10/91	1118	2927.4	8912.2	12	2	2	28.8	27.9	23.6	24.4	5.580	8.1	6.8	ST/PN				
36762	7/10/91	1126	2945.0	9322.0	17	2	2	28.7	28.7	17.7	17.9	6.257	6.7	6.4	ST/PN				

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
HERNAN CORTEZ II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
00014	8/21/91	1438	2700.1	8230.0	5	9	2	4	31.3	31.2	31.0	35.8	35.4	35.3	71.132	8.9	6.6	5.2	PN
00015	8/21/91	1839	2630.3	8229.8	4	18	7	13	31.8	31.2	31.0	36.4	36.1	36.3	2.563	5.2	5.2	4.3	PN
00016	8/21/91	2235	2600.2	8229.9	4	27	11	22	30.5	30.5	30.2	36.8	36.5	37.0	0.502	6.8	6.8	6.7	PN
00017	8/22/91	0213	2600.1	8259.7	4	43	19	38	29.2	29.2	24.0	36.0	36.8	36.5	0.203	7.1	7.0	7.2	PN
00018	8/22/91	0549	2600.1	8330.5	4	63	29	58	29.8	27.5	22.8	36.5	36.6	36.6	0.154	7.1	7.8	6.2	PN
00019	8/22/91	2125	2700.2	8259.8	5	30	12	24	29.8	29.5	29.6	36.6	36.7	36.5	0.124	6.9	6.9	6.8	PN
00020	8/23/91	0120	2630.3	8259.9	4	36	15	30	29.4	29.1	28.7	36.1	36.1	36.5	0.200	7.3	7.2	7.3	PN
00021	8/23/91	0448	2630.0	8330.0	4	57	26	52	29.0	27.3	22.1	36.1	36.1	36.4	0.009	7.3	8.1	6.7	PN
00022	8/23/91	0950	2600.2	8359.7	4	135	65	130	30.0	24.2	22.0	35.4	36.4	36.9	0.182	7.2	7.4	5.4	PN
00023	8/23/91	1330	2559.9	8430.1	99	218	100	200	30.5	22.1	19.4	35.0	36.6	36.7	0.259	7.1	5.9	5.4	PN
00024	8/23/91	1813	2629.7	8430.0	99	198	92	192	30.7	22.9	20.2	33.5	36.6	36.0	0.249	7.0	5.6	4.8	PN
00025	8/23/91	2150	2630.0	8400.0	99	122	58	116	29.3	23.9	22.0	34.6	36.5	36.4	0.224	7.0	7.7	5.1	PN
00026	8/24/91	0300	2659.7	8330.3	4	50	22	44	28.7	28.9	23.5	34.5	36.8	36.8	0.153	7.6	7.7	7.8	PN
00027	8/24/91	0623	2700.1	8400.1	5	81	38	76	28.8	25.9	22.3	33.4	36.0	36.4	0.297	7.2	7.7	5.8	PN
00028	8/24/91	1010	2700.0	8429.8	5	176	85	170	29.2	23.7	20.8	32.4	36.2	36.3	0.274	6.8	6.8	4.8	PN
00029	8/24/91	1430	2730.0	8430.0	5	132	63	126	29.4	24.2	22.6	32.2	36.4	36.3	0.330	6.9	7.2	4.9	PN
00030	8/24/91	1836	2759.8	8430.0	5	77	36	72	27.8	25.9	21.6	31.5	36.2	36.3	0.319	7.0	7.2	4.8	PN
00031	8/24/91	2212	2800.0	8400.0	6	44	19	38	27.8	25.9	21.6	35.2	36.4	36.9	0.324	7.0	7.2	4.8	PN
00032	8/25/91	0224	2730.0	8400.0	5	59	27	54	28.3	27.0	23.0	32.9	36.1	36.7	0.172	6.9	7.1	5.8	PN
00033	8/25/91	0627	2730.1	8330.0	5	39	17	34	28.7	28.7	26.6	36.2	36.1	36.7	0.368	7.0	6.9	7.2	PN
00034	8/25/91	1016	2759.8	8330.0	5	29	12	24	29.9	29.7	29.8	36.6	37.3	36.7	1.683	6.6	6.6	6.6	PN
00035	8/25/91	1355	2800.1	8259.9	6	11	3	6	28.6	28.6	28.3	35.4	35.4	35.3	17.779	6.5	6.4	6.3	PN
00036	8/25/91	1644	2730.3	8259.9	5	17	6	12	29.4	29.2	29.1	36.0	35.9	36.6	8.306	6.3	6.2	5.9	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
CHAPMAN

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
00071	9/ 6/91	2356	2835.1	8930.1	13	181	89	177	28.2	19.9	14.6	31.3	36.5	35.8	0.678	6.6	4.4	4.7	PN
00072	9/ 7/91	0515	2859.4	8929.2	13	12	6	12	27.5	28.5	28.8	24.5	28.4	30.8	2.064	6.7	6.5	4.8	PN
00073	9/ 7/91	0839	2900.3	8959.7	99	24	12	24	28.3	28.7	28.8	29.3	31.1	33.0	1.146	6.4	6.2	5.6	PN
00074	9/ 7/91	1345	2830.0	9000.0	14	90	46	90	29.3	25.3	20.4	32.7	36.1	36.4	0.256	6.2	6.1	5.3	PN
00075	9/ 7/91	1510	2819.9	9000.0	14	109	52	105	29.4	23.5	19.7	32.8	36.2	36.4	0.151	6.2	5.9	4.2	PN
00076	9/ 7/91	1929	2805.1	9030.2	14	139	69	138	29.3	22.8	17.4	33.3	36.4	36.3	0.160	6.4	6.5	4.8	PN
00077	9/ 7/91	2230	2829.9	9030.0	14	35	17	33	28.7	29.6	28.8	32.6	35.7	36.0	0.218	6.2	6.3	6.2	PN
00078	9/ 8/91	0210	2859.4	9029.9	14	9	4	9	27.1	28.4	29.1	26.1	28.4	31.7	3.134	6.6	6.2	5.8	PN
00079	9/ 8/91	0631	2844.7	9058.7	14	11	5	10	28.5	28.6	28.9	32.4	32.4	32.7	0.312	6.6	6.4	6.2	PN
00080	9/ 8/91	0838	2830.2	9100.1	15	30	15	29	29.2	29.6	27.7	32.6	34.1	35.3	0.199	6.5	6.2	3.8	PN
00081	9/ 8/91	1200	2800.1	9100.0	15	138	68	137	29.6	22.0	17.2	32.5	36.3	36.3	0.093	6.2	6.2	4.2	PN
00082	9/ 8/91	1548	2759.9	9129.9	99	160	80	160	30.0	20.6	15.9	33.9	36.4	36.1	0.129	6.2	5.8	4.4	PN
00083	9/ 8/91	1921	2829.7	9130.0	15	45	22	44	29.5	28.6	24.4	32.6	35.3	36.1	0.150	6.2	6.0	3.2	PN
00084	9/ 8/91	2201	2849.7	9129.9	15	17	8	16	29.4	29.4	28.9	30.9	32.2	32.6	0.779	6.1	6.1	6.0	PN
00085	9/ 9/91	0038	2857.3	9156.8	15	16	8	16	29.7	29.2	29.2	32.0	32.4	32.6	0.305	6.2	6.2	6.1	PN
00086	9/ 9/91	0450	2830.0	9200.0	16	48	24	47	29.3	29.4	23.0	33.9	35.2	36.2	0.110	6.3	6.2	5.4	PN
00087	9/ 9/91	0822	2800.3	9200.1	16	113	56	112	29.1	22.8	19.4	35.3	36.2	36.4	0.089	6.2	6.7	6.0	PN
00088	9/ 9/91	1148	2800.1	9229.8	16	102	51	101	29.4	23.2	19.6	34.0	36.3	36.4	0.085	6.4	7.0	5.0	PN
00089	9/ 9/91	1509	2829.9	9229.9	16	51	25	51	29.4	29.2	23.2	33.5	34.8	36.2	0.100	6.4	6.3	4.6	PN
00090	9/ 9/91	1845	2900.3	9229.9	16	23	11	22	29.4	29.2	29.0	32.7	32.9	34.8	0.262	7.6	7.6	7.4	PN
00091	9/ 9/91	2109	2918.9	9229.8	16	9	4	9	29.4	29.4	29.1	29.6	29.6	31.1	0.443	7.0	7.1	7.0	PN
00092	9/10/91	0031	2910.1	9259.9	16	20	11	20	29.1	29.1	29.1	32.9	33.0	33.5	0.122	6.3	6.3	6.1	PN
00093	9/10/91	0204	2900.1	9300.1	17	20	9	19	29.1	29.1	29.9	32.8	32.8	34.4	0.143	6.4	6.3	6.1	PN
00094	9/10/91	0623	2830.0	9200.0	16	46	23	46	29.3	29.4	25.3	34.4	34.8	36.0	0.061	6.1	6.1	5.8	PN
00095	9/10/91	0957	2800.3	9300.0	17	104	52	104	29.3	24.5	19.2	34.1	36.0	36.4	0.071	6.0	5.9	4.8	PN
00096	9/10/91	1351	2759.9	9330.1	99	87	44	87	29.6	28.7	20.9	35.9	36.5	36.3	0.053	6.2	6.3	5.6	PN
00097	9/10/91	1745	2830.0	9329.6	17	45	22	45	29.2	29.2	25.6	35.4	35.4	36.2	0.053	6.1	6.1	6.3	PN
00098	9/10/91	2120	2859.8	9328.7	17	20	10	18	29.4	29.4	29.4	32.7	32.7	32.8	0.164	6.2	6.2	6.2	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY SEAMAP ENVIRONMENTAL DATA CHAPMAN																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
00099	9/11/91	0028	2920.0	9329.3	17	13	7	13	29.0	29.0	29.1	31.8	31.8	31.8	2.204	6.0	5.7	5.8	PN
00100	9/11/91	0525	2930.1	9400.0	18	11	6	11	29.0	29.0	29.0	31.5	31.5	31.5	1.533	6.1	6.1	6.0	PN
00101	9/11/91	0850	2900.5	9400.0	18	17	9	17	29.2	29.2	29.2	33.6	33.6	33.6	0.218	6.2	6.2	6.2	PN
00102	9/11/91	1518	2830.1	9400.0	18	39	19	39	29.3	29.1	26.1	34.8	35.2	35.9	0.049	6.3	6.3	6.0	PN
00103	9/11/91	1841	2800.0	9400.0	18	82	41	82	29.4	28.6	22.0	35.3	36.5	36.4	0.056	7.5	7.7	7.4	PN
00104	9/11/91	2155	2800.1	9429.9	18	66	33	66	29.3	28.5	23.4	35.4	36.3	36.4	0.045	6.2	6.4	5.7	PN
00105	9/12/91	0116	2829.9	9430.0	18	34	17	34	29.1	29.1	26.7	34.3	34.3	35.8	0.077	6.5	6.5	6.2	PN
00106	9/12/91	0452	2900.0	9429.9	18	18	9	18	29.2	29.3	29.3	33.8	33.8	33.8	0.332	6.1	6.2	6.1	PN
00107	9/12/91	0740	2925.0	9430.1	18	18	9	18	29.2	29.3	29.3	33.8	33.8	33.8	1.981	6.3	6.3	6.3	PN
00108	9/12/91	1144	2900.0	9459.7	18	17	8	17	29.2	29.0	29.3	30.6	31.6	32.5	1.231	6.3	5.5	6.2	PN
00109	9/12/91	1443	2831.0	9500.3	19	30	15	30	29.5	29.2	29.8	33.3	33.7	34.2	0.150	6.3	6.3	6.2	PN
00110	9/12/91	1819	2800.1	9500.1	19	80	40	80	29.2	26.0	22.7	35.6	36.4	36.4	0.068	6.8	7.3	7.0	PN
00111	9/12/91	2125	2745.1	9530.1	20	104	52	96	29.0	22.5	19.8	35.4	36.4	36.5	0.050	8.3	8.4	6.3	PN
00112	9/12/91	2351	2759.9	9530.1	20	54	26	54	29.2	28.7	23.7	35.7	36.3	36.4	0.043	6.1	6.4	6.5	PN
00113	9/13/91	0318	2830.0	9529.9	19	22	10	22	29.3	29.3	29.2	33.9	33.9	33.9	0.288	6.5	6.6	6.7	PN
00114	9/13/91	0645	2828.4	9559.8	19	14	7	14	28.8	28.8	29.1	26.6	26.6	32.4	1.798	4.7	4.7	4.5	PN
00115	9/13/91	0855	2820.1	9619.9	19	10	5	10	28.8	28.9	29.1	27.1	27.4	29.2	1.595	5.0	5.3	4.8	PN
00116	9/13/91	1211	2800.0	9600.2	19	42	22	42	29.4	29.1	29.0	34.3	34.5	35.6	0.166	6.5	6.4	6.2	PN
00117	9/13/91	1455	2735.2	9600.0	20	144	72	144	29.4	22.6	16.5	35.6	36.4	36.2	0.096	6.2	6.4	4.6	PN
00118	9/13/91	1938	2800.0	9629.7	19	24	11	22	29.2	29.2	29.1	34.1	34.1	34.1	0.491	6.3	6.4	6.4	PN
00119	9/13/91	2303	2730.2	9630.0	20	71	35	71	29.1	25.8	22.5	34.7	36.1	36.4	0.144	6.3	6.1	5.9	PN
00120	9/14/91	0245	2730.0	9659.1	20	28	14	28	29.1	29.2	29.2	31.2	34.7	34.7	0.762	6.9	6.5	5.8	PN
00121	9/14/91	0658	2659.9	9711.9	21	24	12	24	29.1	29.1	29.3	33.2	33.3	34.1	0.950	6.5	6.7	6.2	PN
00122	9/14/91	1012	2659.7	9640.2	21	80	40	80	28.9	24.7	21.3	34.7	36.2	36.4	0.168	6.4	6.4	5.8	PN
00123	9/14/91	1328	2630.4	9630.1	21	81	41	81	29.2	27.0	21.3	35.1	35.9	36.4	0.143	6.2	6.0	5.5	PN
00124	9/14/91	1731	2629.9	9700.0	21	32	15	32	29.4	29.3	29.4	34.9	35.0	35.4	0.368	6.2	6.3	6.0	PN
00125	9/14/91	2034	2602.2	9700.1	21	23	11	22	29.3	29.3	29.2	35.6	35.7	35.7	0.150	6.0	6.0	6.0	PN
00126	9/15/91	0003	2603.8	9630.0	21	60	31	60	29.2	29.2	25.9	35.4	35.4	36.2	0.100	6.2	6.2	5.7	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
CHAPMAN

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
00127	9/16/91	1753	2900.0	8900.0	99	67	34	66	30.5	26.1	22.2	25.4	35.9	36.4	11.868	7.8	5.5	4.2	PN	
00128	9/16/91	1848	2905.1	8900.1	99	20	9	18	30.1	29.0	28.3	28.0	31.3	34.4	4.137	7.5	6.7	4.6	PN	
00129	9/16/91	2215	2912.9	8830.2	11	115	58	115	28.5	22.4	18.5	32.0	36.4	36.4	0.143	6.9	6.3	5.4	PN	
00130	9/18/91	0208	3013.9	8729.9	10	15	7	14	29.8	29.5	29.0	30.3	31.3	33.4	0.540	7.2	7.1	7.1	PN	
00131	9/18/91	0400	2959.9	8730.0	10	25	13	25	29.2	29.3	29.3	31.8	32.2	33.9	0.130	7.1	7.0	7.0	PN	
00132	9/18/91	0658	2959.9	8700.0	10	72	35	71	29.4	27.0	20.8	32.9	36.0	36.4	0.130	4.8	4.5	4.0	PN	
00133	9/18/91	0825	2948.2	8700.1	10	190	94	189	29.7	19.7	15.3	31.0	36.5	36.0	0.168	6.9	6.1	5.8	PN	
00134	9/18/91	1235	2930.0	8730.0	10	70	35	70	29.2	27.7	21.7	31.1	36.1	36.4	0.131	7.3	7.0	6.6	PN	
00135	9/18/91	1545	2915.1	8800.0	11	243	96	194	29.8	20.4	15.0	32.5	36.5	36.0	0.103	6.9	5.8	5.1	PN	
00136	9/21/91	1751	3018.6	8659.9	9	17	9	17	28.5	28.4	28.9	31.6	31.6	34.2	0.153	7.2	7.1	6.5	PN	
00137	9/21/91	2100	3019.6	8630.5	9	22	11	21	28.6	28.6	28.9	31.6	31.7	34.6	0.181	7.1	7.2	6.7	PN	
00138	9/21/91	2325	3000.0	8630.1	9	58	29	58	28.8	28.7	20.4	32.9	35.9	36.3	0.118	6.8	6.8	5.4	PN	
00139	9/22/91	0317	2930.0	8630.1	9	218	99	199	29.0	18.6	14.5	31.4	36.4	35.9	0.131	6.7	5.1	4.8	PN	
00140	9/22/91	0810	2912.0	8600.2	99	292	96	194	29.0	18.6	14.5	33.8	36.4	35.8	0.131	6.4	5.2	5.8	PN	
00141	9/22/91	1125	2929.8	8559.9	8	54	28	54	29.0	29.7	21.1	33.8	35.7	36.4	0.255	6.6	6.5	6.0	PN	
00142	9/22/91	1508	3000.0	8559.9	8	31	15	31	29.2	29.0	28.7	33.4	33.5	35.4	0.210	6.4	6.3	6.4	PN	
00143	9/22/91	1831	2948.0	8530.0	8	17	8	16	29.6	28.6	28.7	32.7	33.1	34.2	1.190	7.6	7.6	6.7	PN	
00144	9/22/91	2045	2930.1	8530.1	8	10	5	9	29.1	29.1	29.1	33.7	33.7	33.7	1.308	6.9	7.0	7.0	PN	
00145	9/23/91	0026	2923.0	8459.9	7	20	10	20	28.9	28.9	29.0	33.9	33.8	34.1	0.536	6.4	6.3	6.3	PN	
00146	9/23/91	0512	2930.0	8429.9	7	22	12	22	29.3	29.3	29.3	35.5	35.5	35.5	0.678	6.5	6.4	6.3	PN	
00147	9/23/91	0859	2944.8	8400.2	7	7	3	6	28.5	28.5	28.5	33.2	33.2	33.2	3.811	6.5	6.2	6.2	PN	
00148	9/23/91	1101	2930.3	8359.9	7	16	8	16	29.2	29.1	29.3	34.7	34.7	34.8	0.829	6.8	6.7	6.5	PN	
00149	9/23/91	1310	2930.1	8339.8	7	11	6	11	28.9	28.5	29.4	32.3	32.3	34.3	2.367	6.5	6.5	6.3	PN	
00150	9/23/91	1643	2859.7	8330.3	6	16	8	16	29.7	29.5	29.5	35.9	35.9	36.0	0.604	6.5	6.6	6.5	PN	
00151	9/23/91	1813	2859.9	8320.0	6	11	5	9	29.4	29.2	29.3	35.0	35.1	35.3	0.822	7.2	7.2	7.2	PN	
00152	9/23/91	2158	2830.3	8305.0	6	10	5	10	29.5	29.5	29.5	35.5	35.5	35.5	1.273	6.8	6.9	6.7	PN	
00153	9/24/91	0043	2830.1	8329.7	6	20	11	20	29.8	29.8	29.8	36.2	36.2	36.3	0.436	6.2	6.3	6.3	PN	
00154	9/24/91	0403	2830.0	8400.0	6	35	17	33	29.5	29.5	29.8	35.8	35.8	36.1	0.118	6.3	6.3	5.7	PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
CHAPMAN

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
00155	9/24/91	0800	2859.8	8359.7	6	23	11	23	29.5	29.5	29.5	36.3	36.3	36.3	0.492	6.6	6.5	6.5	PN
00156	9/24/91	1112	2900.3	8429.7	7	29	14	28	29.3	29.3	29.2	35.5	35.5	35.5	0.206	6.1	6.1	6.1	PN
00157	9/24/91	1443	2830.0	8429.9	6	41	20	41	29.3	29.6	27.4	33.9	35.6	36.1	0.085	6.3	6.2	6.2	PN
00158	9/24/91	1848	2810.0	8500.0	6	178	85	170	29.2	20.3	15.0	33.7	36.4	36.0	0.083	7.1	5.2	6.3	PN
00159	9/24/91	2155	2829.9	8500.3	6	102	50	99	29.0	22.2	18.1	33.2	36.4	36.3	0.125	6.5	6.2	5.6	PN
00160	9/25/91	0124	2859.9	8500.0	6	36	18	36	29.1	29.3	26.8	34.6	34.9	36.2	0.086	6.4	6.5	6.2	PN
00161	9/25/91	0455	2859.8	8530.0	6	75	36	72	28.9	26.7	20.1	33.0	36.1	36.4	0.126				PN
00162	9/25/91	0803	2840.1	8530.0	6	182	90	182	28.7	19.3	14.9	33.2	36.4	35.9	0.104	6.6	6.1	5.3	PN
00163	9/26/91	0405	3000.0	8800.2	11	24	13	24	28.1	28.0	27.9	32.4	32.4	35.5	0.117	6.9	6.8	5.6	PN
00164	9/26/91	0830	2930.2	8800.1	11	42	22	42	27.7	28.9	25.9	32.6	34.9	35.9	0.148	7.1	6.9	5.1	PN
00165	9/26/91	1223	2930.0	8830.0	11	51	24	51	27.9	28.7	22.1	32.7	35.0	36.4	0.187	6.6	6.7	6.4	PN
00166	9/26/91	1605	3000.0	8800.0	11	27	13	27	27.4	27.4	27.2	31.4	31.6	35.5	0.299	6.7	6.5	3.5	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 A.E. VERRILL

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
23011	9/12/91	1739	3008.4	8801.0	11	18	9	18	23.5	20.5	21.0	26.0	30.0	30.0		4.2	5.6	6.6	PN
23012	9/12/91	1715	3008.2	8803.1	11	18	9	18	23.0	21.0	21.0	22.0	29.0	29.0		4.6	5.6	5.2	PN
23013	9/12/91	1639	3009.8	8806.3	11	14	7	14	23.0	21.0	21.0	21.0	30.0	30.0		4.6	4.0	6.0	PN
23021	9/12/91	1812	3012.1	8800.1	11	8		8	22.0		20.5	21.0		29.0		4.0		6.2	PN
23022	9/12/91	1906	3013.0	8801.5	11	14	7	14	21.5	21.0	20.5	25.0	28.0	28.0		6.0	4.0	3.0	PN
23023	9/12/91	1521	3014.1	8804.0	11	4		4	22.0		22.0	19.0		21.0		4.0		4.6	PN
23024	9/12/91	1551	3014.7	8807.0	11	4		4	23.5		22.0	21.0		28.0		4.4		6.0	PN
23031	9/12/91	1935	3016.3	8759.5	10	4		4	21.5		20.0	20.0		25.0		6.0		6.0	PN
23032	9/12/91	2002	3017.7	8801.3	11	3		3	21.0		21.0	20.0		27.0		3.2		6.0	PN
23033	9/12/91	2030	3017.4	8804.2	11	4		4	21.5		21.0	16.0		21.0		4.6		6.0	PN



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
17001	9/14/91	0907	2946.6	8744.2	10	37	18	35	28.2	29.2	26.8	31.5	34.2	35.8	0.150	6.2	5.7	4.8	PN
17002	9/14/91	1028	2952.9	8744.1	10	34	16	31	28.5	29.6	27.5	30.8	34.2	35.6	0.168	6.0	5.2	4.7	PN
17003	9/14/91	1137	2959.0	8744.0	10	30	15	29	29.4	29.4	28.8	31.0	32.1	35.5	0.252	5.8	6.0	4.9	PN
17004	9/14/91	1238	3004.9	8744.0	10	19	11	18	30.4	29.2	28.8	30.9	31.6	33.2	0.533	6.2	6.1	5.8	PN
17005	9/14/91	1328	3010.8	8744.0	10	13	7	12	29.9	29.2	29.0	30.9	30.9	31.7	0.449	6.3	6.4	6.2	PN
17006	9/14/91	1454	3010.7	8756.0	10	14	7	13	29.9	28.9	29.0	29.4	30.8	31.8	1.308	6.3	6.2	5.8	PN
17007	9/14/91	1559	3005.0	8755.9	10	16	8	15	30.2	28.9	28.8	28.1	31.3	31.8	0.935	6.3	5.3	5.3	PN
17008	9/14/91	1912	2959.1	8756.0	10	29	15	28	30.4	28.5	27.5	27.4	35.3	31.5	0.748	6.2	5.8	5.8	PN
17009	9/14/91	2013	2952.7	8756.1	10	27	14	27	29.1	27.1	28.8	30.8	34.5	35.5	0.118	6.0	5.4	5.0	PN
17010	9/14/91	2132	2952.9	8808.1	11	34	14	34	29.1	29.1	26.5	31.0	34.3	35.6	0.165	5.8	5.7	4.2	PN
17011	9/14/91	2229	2958.9	8808.0	11	28	14	28	28.5	28.8	27.5	28.3	32.0	35.2	0.286	6.3	5.8	4.4	PN
17012	9/14/91	2323	3005.0	8808.0	11	20	10	20	29.0	28.6	28.4	29.5	31.3	33.5	0.176	5.8	5.8	5.5	PN
17013	9/15/91	0017	3011.1	8807.8	11	13	6	12	29.2	29.0	28.5	28.3	29.6	31.1	0.625	6.4	6.0	5.7	PN
17014	9/15/91	0136	3010.9	8820.0	11	13	7	12	29.2	28.8	28.6	27.3	31.1	31.4	0.881	6.5	5.8	5.2	PN
17015	9/15/91	0235	3005.0	8820.0	11	19	10	18	29.0	28.6	28.6	30.6	31.2	32.9	0.203	6.1	5.9	5.5	PN
17016	9/15/91	0330	2959.0	8820.1	11	30	15	29	28.2	28.7	26.5	30.8	32.9	35.6	0.120	6.1	5.6	3.2	PN
17017	9/15/91	0431	2953.0	8820.0	11	34	17	33	29.0	28.4	26.4	32.0	35.4	35.6	0.267	6.0	5.3	3.5	PN
17018	9/15/91	0528	2947.0	8820.0	11	37	19	36	28.4	27.5	25.7	31.6	35.5	35.9	0.184	6.1	5.6	3.9	PN
17019	9/15/91	0747	2940.9	8832.0	11	31	16	31	28.6	28.5	25.7	31.0	32.0	35.9	0.267	5.8	5.8	3.8	PN
17020	9/15/91	0851	2947.2	8832.1	11	29	15	29	28.6	28.8	26.7	31.4	33.8	35.7	0.224	5.9	5.4	3.4	PN
17021	9/15/91	0949	2952.9	8832.0	11	27	14	25	28.0	28.8	27.5	31.3	33.3	35.2	0.336	6.0	5.8	3.9	PN
17022	9/15/91	1049	2958.9	8832.1	11	26	13	25	28.6	28.8	28.1	31.2	32.0	34.9	0.196	6.1	5.9	4.4	PN
17023	9/15/91	1149	3004.9	8832.0	11	18	9	17	29.2	28.9	28.8	29.4	30.1	31.3	0.393	5.9	5.9	5.8	PN
17024	9/15/91	1237	3010.8	8832.1	11	12	6	11	29.2	29.5	28.7	25.6	27.7	30.9	2.374	6.4	5.7	5.2	PN
17025	9/15/91	1354	3010.9	8844.0	11	12	6	11	29.7	29.0	28.6	27.9	28.5	31.0	1.477	6.7	6.5	5.6	PN
17026	9/15/91	1443	3005.0	8844.1	11	14	7	13	29.2	29.4	29.0	29.0	29.3	31.2	1.159	6.7	6.2	5.4	PN
17027	9/15/91	1539	2957.4	8843.3	11	14	7	13	29.8	29.4	28.3	28.8	29.3	31.3	0.991	6.9	6.9	4.7	PN
17028	9/15/91	1637	2953.0	8844.0	11	14	7	13	29.7	28.7	28.5	30.3	30.4	30.7	0.486	6.3	6.7	5.6	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
17029	9/15/91	1738	2947.0	8844.0	11	14	7	13	29.3	28.8	28.6	30.7	30.8	30.9	0.262	6.7	6.7	6.1	PN	
17030	9/15/91	1829	2940.9	8844.0	11	14	7	14	28.5	28.5	28.4	30.8	30.8	31.0	0.232	6.0	6.0	5.9	PN	
17031	9/15/91	1922	2934.6	8843.8	11	15	8	14	28.8	28.3	28.7	31.0	31.0	31.3	0.164	6.4	6.2	6.0	PN	
17032	9/15/91	2010	2928.9	8844.0	11	21	11	21	28.7	28.7	26.7	31.4	31.4	35.7	0.224	6.2	6.0	4.2	PN	
17033	9/15/91	2113	2922.9	8843.8	11	49	25	48	28.5	27.4	25.2	31.2	35.5	36.0	0.280	6.1	5.1	4.2	PN	
17034	9/15/91	2245	2922.9	8856.1	11	19	10	19	28.6	28.4	28.4	25.1	31.1	31.9	1.364	6.8	6.5	5.8	PN	
17035	9/15/91	2335	2929.0	8856.0	11	12	6	12	28.9	28.7	28.5	31.3	31.1	25.3	1.869	6.8	6.2	6.1	PN	
17036	9/16/91	0015	2934.9	8856.0	11	8	4	8	29.1	28.6	28.8	31.0	31.1	31.1	0.542	6.4	6.1	6.1	PN	
17037	9/16/91	0138	2928.1	8902.5	13	8	5	8	29.5	28.7	28.8	21.8	31.1	31.0	3.217	8.6	6.0	6.0	PN	
17038	9/16/91	0300	2923.1	8908.0	13	8	4	8	28.9	28.9	28.9	23.6	29.7	29.8	5.401	6.9	5.7	5.3	PN	
17039	9/16/91	0357	2924.0	8916.0	13	4		3	27.8		29.1	14.2		27.5	10.306	7.0		4.6	PN	
17040	9/16/91	0458	2930.9	8915.2	13	5		4	29.1		29.1	22.0		28.3	5.741	7.8		4.9	PN	
17041	9/16/91	0621	2935.2	8911.2	13	16		16	28.9		29.0	28.1		29.3	3.044	6.2		5.6	PN	
17042	9/16/91	0710	2937.7	8908.4	13	5		4	28.6		29.1	27.7		29.5	3.177	5.8		5.6	PN	
17043	9/16/91	0758	2941.8	8905.6	13	4		4	28.2		29.0	24.0		27.9	2.430	6.5		6.2	PN	
17044	9/16/91	0843	2946.2	8903.5	13	5		4	28.4		29.3	30.8		30.8	3.713	5.8		5.6	PN	
17045	9/16/91	0949	2950.6	8901.5	13	5		5	29.5		29.4	30.0		30.6	3.613	5.9		5.6	PN	
17046	9/16/91	1033	2954.6	8859.1	11	5		5	29.7		29.2	28.8		30.2	4.187	5.8		5.2	PN	
17047	9/16/91	1121	2959.4	8859.0	11	6		5	29.3		29.3	27.1			2.417	6.4		4.6	PN	
17048	9/16/91	1210	3003.4	8859.3	11	6		6	29.6		29.0	26.6		28.2	3.551	7.5		4.8	PN	
17049	9/16/91	1303	3008.0	8900.0	11	8		8	28.7		28.0	25.8		28.6	4.930	7.6		3.7	PN	
17050	9/16/91	1404	3009.4	8851.5	11	11		6	30.3	29.1	28.6	26.6	28.0	30.3	1.869	7.2	6.3	9.3	PN	
17051	9/21/91	0926	2953.1	8743.8	10	32		15	27.7	28.2	27.3	32.2	34.0	35.7	0.206	8.2	8.0	7.2	PN	
17052	9/21/91	1025	2959.0	8744.0	10	30		14	27.9	27.9	27.1	32.1	32.6	35.6	0.299	8.0	7.8	7.6	PN	
17053	9/21/91	1129	3004.9	8744.0	10	17		7	28.4	28.1	27.8	32.4	32.4	32.4	0.280	8.2	8.2	7.8	PN	
17054	9/21/91	1219	3010.8	8744.1	10	13		7	27.5	27.4	28.2	30.7	30.7	32.7	0.421	7.7	7.7	6.8	PN	
17055	9/21/91	1338	3011.0	8756.0	10	14		7	27.4	27.7	28.6	30.9	30.9	33.4	0.486	8.4	8.0	6.2	PN	
17056	9/21/91	1430	3005.0	8756.0	10	14		8	28.1	28.0	28.6	32.1	32.1	33.6	0.336	8.4	7.6	7.8	PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
17057	9/21/91	1524	2959.0	8756.0	10	26	13	25	28.0	28.3	28.0	32.1	32.2	35.4	0.308	8.0	7.9	6.6	PN	
17058	9/21/91	1623	2953.0	8756.0	10	28	14	27	27.7	28.6	27.5	32.0	32.2	35.4	0.160	7.8	7.9	6.8	PN	
17059	9/21/91	1751	2946.8	8756.0	10	30	15	30	28.2	28.5	26.6	32.0	34.8	35.6	0.196	7.8	7.5	6.9	PN	
17060	9/21/91	2003	2952.5	8808.0	11	34	17	31	27.9	28.4	26.2	32.3	33.7	35.7	0.280	8.4	8.1	6.2	PN	
17061	9/21/91	2119	2959.0	8808.0	11	27	13	24	28.1	28.1	27.9	31.8	32.0	35.1	0.374	8.2	8.2	7.2	PN	
17062	9/21/91	2216	3004.9	8808.1	11	20	10	17	27.6	28.0	27.9	30.9	34.8	32.1	0.467	8.2	8.1	7.6	PN	
17063	9/21/91	2316	3010.9	8808.1	11	14	6	11	27.3	27.5	27.9	29.6	29.7	31.3	1.009	8.8	8.7	7.8	PN	
17064	9/22/91	0035	3010.9	8820.1	11	12	7	12	27.4	27.6	27.5	30.2	30.0	30.3	0.308	8.2	8.0	8.0	PN	
17065	9/22/91	0129	3005.0	8820.1	11	19	10	18	28.0	27.6	27.9	30.6	30.7	31.4	0.430	8.0	8.0	7.2	PN	
17066	9/22/91	0228	2959.0	8820.1	11	30	15	29	27.6	28.0	26.8	32.0	32.1	35.5	0.168	8.0	8.0	5.2	PN	
17067	9/22/91	0328	2953.0	8820.1	11	33	16	32	27.9	27.8	26.5	32.3	32.5	35.5	0.280	8.1	8.2	6.4	PN	
17068	9/22/91	0429	2947.0	8820.0	11	36	18	35	27.4	28.0	28.0	31.9	31.9	35.5	0.262	8.1	8.1	7.4	PN	
17069	9/22/91	0654	2934.9	8832.1	11	41	20	37	28.0	28.3	25.4	31.5	33.3	36.1	0.533	8.1	8.2	5.4	PN	
17070	9/22/91	0758	2940.9	8832.0	11	31	15	27	27.7	27.5	28.3	32.1	32.2	33.7	0.336	8.3	8.2	8.2	PN	
17071	9/22/91	0858	2947.0	8832.0	11	29	15	25	27.8	28.1	28.2	32.7	32.8	33.4	0.240	8.3	8.2	8.4	PN	
17072	9/22/91	1000	2952.9	8832.1	11	27	16	23	27.6	28.1	28.2	32.2	32.3	33.0	0.252	8.3	8.2	8.2	PN	
17073	9/22/91	1108	2958.9	8832.0	11	26	13	22	27.8	27.9	28.2	30.9	32.7	0.673	8.3	8.2	8.1	PN		
17074	9/22/91	1202	3004.9	8832.1	11	18	9	17	27.5	28.0	28.2	31.8	31.9	32.2	0.374	8.0	8.0	8.1	PN	
17075	9/22/91	1312	3010.8	8832.0	11	12	6	11	27.5	27.6	27.6	30.6	30.6	30.7	0.841	8.2	8.3	8.4	PN	
17076	9/22/91	1425	3010.9	8844.0	11	13	6	12	27.4	27.7	27.5	30.3	30.3	30.3	2.187	8.5	8.1	8.0	PN	
17077	9/22/91	1516	3005.0	8844.0	11	14	7	13	27.5	27.5	27.7	30.5	30.5	30.5	1.252	8.5	8.2	8.2	PN	
17078	9/22/91	1616	2959.0	8844.0	11	15	8	14	28.1	28.3	27.8	31.1	31.2	31.1	0.533	8.1	8.2	8.2	PN	
17079	9/22/91	1704	2953.0	8844.1	11	14	7	13	27.7	27.7	27.8	31.5	31.5	31.6	0.486	8.6	8.0	8.2	PN	
17080	9/22/91	1806	2946.8	8844.0	11	14	7	10	27.9	28.0	28.1	31.8	31.8	31.8	0.374	8.5	8.4	8.3	PN	
17081	9/22/91	1901	2940.9	8844.0	11	14	7	11	27.9	28.1	28.4	31.9	31.9	31.9	0.449	8.4	8.4	8.2	PN	
17082	9/22/91	2001	2935.0	8844.1	11	14	7	11	27.8	27.5	27.7	32.4	32.4	32.4	0.449	8.3	8.4	8.4	PN	
17083	9/22/91	2121	2928.9	8844.5	11	22	11	19	28.4	27.9	28.2	31.1	32.6	0.467	8.6	8.4	8.2	PN		
17084	9/22/91	2222	2922.9	8843.9	11	49	24	46	27.8	27.9	24.1	31.0	33.4	36.1	0.598	8.3	6.8	5.3	PN	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
17085	9/22/91	2350	2923.1	8856.0	11	19	9	16	28.4	28.1	27.9	31.0	30.9	30.8	0.673	8.2	8.2	7.9	PN	
17086	9/23/91	0038	2928.9	8856.0	11	12	6	11	27.9	28.0	27.9	31.1	31.1	31.0	0.916	8.2	8.1	8.0	PN	
17087	9/23/91	0135	2934.9	8855.9	11	8	4	7	27.7	27.7	27.4	30.9	31.0	31.0	0.822	8.2	8.1	8.1	PN	
17088	9/23/91	0246	2928.1	8902.6	13	8	7	7	27.3	27.5	29.7	30.9	30.0	1.215	8.0	7.8	7.8	PN		
17089	9/23/91	0424	2923.0	8907.9	13	8	0	8	26.5	27.6	20.2	30.0	30.0	13.008	7.6	7.0	7.0	PN		
17090	9/23/91	0531	2923.9	8916.1	13	4	4	4	26.2	26.9	7.3	25.9	25.9	10.765	9.0	7.0	7.0	PN		
17091	9/23/91	0633	2930.8	8915.0	13	5	3	3	26.3	26.5	27.0	27.0	27.0	7.028	8.4	8.6	8.6	PN		
17092	9/23/91	0716	2934.2	8911.4	13	6	5	5	26.1	26.8	26.7	28.4	28.4	5.271	8.2	6.5	6.5	PN		
17093	9/22/91	0801	2937.5	8907.6	13	5	3	3	26.4	27.0	28.5	29.8	29.8	7.476	6.2	6.2	6.2	PN		
17094	9/22/91	0849	2941.9	8905.6	13	4	4	4	26.7	27.0	29.1	29.1	29.1	7.513	6.1	6.3	6.3	PN		
17095	9/22/91	0939	2946.5	8903.6	13	5	4	4	27.3	27.0	28.5	28.6	28.6	3.925	6.5	6.4	6.4	PN		
17096	9/23/91	1035	2950.5	8901.4	13	6	4	4	27.0	27.0	28.7	28.7	28.7	2.392	7.0	7.0	7.0	PN		
17097	9/23/91	1124	2954.6	8858.9	11	6	5	5	27.4	27.5	28.8	28.8	28.8	1.533	6.8	6.6	6.6	PN		
17098	9/23/91	1219	2959.3	8858.9	11	6	5	5	27.4	27.5	29.0	29.0	29.0	1.589	6.8	6.6	6.6	PN		
17099	9/23/91	1301	3003.5	8859.4	11	7	0	6	26.4	27.5	29.1	28.2	28.2	2.654	7.1	6.8	6.8	PN		
17100	9/23/91	1413	3008.0	8900.1	13	8	8	8	27.3	27.1	27.3	28.7	28.7	3.196	7.5	6.2	6.2	PN		
17101	9/23/91	1511	3009.5	8851.5	11	12	6	11	27.8	27.8	27.9	30.3	30.2	30.5	0.972	6.9	6.2	5.0	PN	
17102	9/28/91	0903	2953.0	8744.1	10	32	16	29	26.9	26.9	27.0	32.7	32.7	34.9	0.206	6.4	6.0	5.8	PN	
17103	9/28/91	1503	3010.9	8820.1	11	13	7	12	25.6	26.1	25.7	31.2	31.2	31.2	0.692	6.4	6.4	6.5	PN	
17104	9/28/91	1631	3010.9	8832.0	11	12	6	11	25.7	25.9	25.7	30.8	30.8	30.8	0.766	6.7	6.6	6.5	PN	
17105	9/28/91	1735	3010.9	8844.1	11	12	6	11	25.7	25.5	25.8	31.1	31.1	31.2	0.841	6.8	6.8	6.8	PN	
17106	9/28/91	1829	3009.5	8851.4	11	11	5	10	25.4	25.7	25.4	31.6	31.7	31.7	0.860	5.9	6.7	6.7	PN	
17107	9/28/91	1928	3008.0	8900.2	13	8	4	7	24.8	24.7	24.4	30.7	30.8	30.7	1.794	6.2	6.8	6.8	PN	
17108	9/28/91	2030	3003.5	8859.2	11	7	4	4	25.1	25.1	30.9	30.9	30.9	2.691	6.8	6.8	6.8	PN		
17109	9/28/91	2124	2959.2	8900.0	11	6	5	5	24.7	24.9	30.8	30.8	30.8	1.470	7.0	7.4	7.4	PN		
17110	9/28/91	2209	2954.5	8859.1	11	6	4	4	24.2	24.4	30.0	30.1	30.1	1.757	7.2	6.8	6.8	PN		
17111	9/28/91	2254	2950.5	8901.6	13	6	5	5	24.0	24.2	29.2	29.2	29.2	1.906	7.1	7.2	7.2	PN		
17112	9/28/91	2334	2946.2	8903.5	13	5	4	4	23.7	24.0	29.4	29.4	29.4	1.869	7.0	7.1	7.1	PN		

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
17113	9/29/91	0022	2941.9	8905.6	13	4	4	23.5	23.7	29.5	29.5	3.154	7.0	7.1	PN				
17114	9/29/91	0103	2937.6	8907.7	13	5	5	23.3	23.4	29.2	29.2	4.005	7.1	7.2	PN				
17115	9/29/91	0147	2934.5	8911.2	13	4	4	23.8	23.8	28.9	28.9	3.688	7.2	7.0	PN				
17116	9/29/91	0233	2930.8	8915.2	13	5	5	23.4	23.3	27.6	27.6	3.845	7.0	7.1	PN				
17117	9/29/91	0343	2924.0	8916.1	13	5	4	23.2	23.7	23.6	26.2	5.009	6.4	6.8	PN				
17118	9/29/91	0444	2922.9	8908.0	13	7	7	23.7	24.3	27.4	28.9	4.886	7.2	6.7	PN				

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LUMCON PELICAN

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
36763	9/30/91	1059	2900.0	9030.0	14	10	5	10	26.0	26.0	25.9	30.2	30.2	30.2	1.106	8.6	6.2	8.1	PN
36764	9/30/91	1509	2858.8	9014.9	14	16	8	16	26.7	26.7	26.7	30.3	30.3	30.3	4.237	7.7	7.6	7.4	ST
36765	9/30/91	1738	2900.0	9000.0	14	24	12	24	26.9	26.9	27.4	30.5	30.5	31.0	1.133	7.5	7.6	6.2	PN
36766	9/30/91	1933	2858.1	9014.1	14	16	8	16	26.9	26.9	26.9	30.6	30.6	30.6	2.568	7.9	7.8	7.5	ST
36767	10/ 1/91	0042	2901.6	8948.4	13	34	16	34	26.7	26.9	28.0	29.2	30.3	32.8	3.931	7.2	7.3	2.7	ST
36768	10/ 1/91	0255	2902.6	8938.7	13	28	14	28	26.3	26.5	28.6	28.4	29.1	34.1	4.688	7.2	7.4	4.1	ST
36769	10/ 1/91	0412	2900.5	8935.2	13	19	10	19	26.2	26.2	28.4	28.3	28.3	33.0	5.484	9.2	7.4	4.4	ST
36770	10/ 1/91	0726	2900.0	8930.3	13	15	7	15	25.6	25.9	27.6	27.3	27.9	31.9	1.001	7.3	7.1	4.0	PN
36771	10/ 1/91	0835	2900.5	8935.1	13	20	10	20	25.9	25.9	27.2	28.2	28.1	30.6	12.779	7.8	2.8	5.7	ST
36772	10/ 1/91	0948	2902.7	8938.5	13	27	13	27	26.2	26.3	28.6	28.4	28.5	33.9	5.285	8.7	7.5	4.6	ST
36773	10/ 1/91	1132	2901.7	8948.6	13	34	17	34	26.4	26.7	27.2	28.6	29.9	31.6	4.529	8.0	6.8	6.4	ST
36774	10/ 2/91	0835	2913.3	8955.5	13	7	4	7	25.6	25.6	25.6	29.3	29.3	29.3	5.951	6.8	6.5	7.9	ST
36775	10/ 2/91	1001	2909.8	9000.4	14	11	5	11	25.8	25.8	25.8	29.2	29.4	29.4	5.722	7.8	6.9	7.2	ST
36776	10/ 2/91	1207	2901.7	8953.2	13	28	15	28	26.6	26.5	27.0	30.0	30.3	31.9	2.617	7.1	6.8	7.3	ST
36777	10/ 2/91	1348	2906.9	8949.0	13	22	11	22	26.7	26.5	26.6	29.5	29.5	29.9	4.847	7.8	7.4	6.3	ST
36778	10/ 2/91	1915	2907.1	8948.8	13	22	11	22	26.6	26.5	26.5	29.6	29.7	29.9	3.815	7.9	6.7	6.5	ST
36779	10/ 2/91	2101	2913.1	8955.5	13	7	4	7	25.7	25.7	25.7	28.5	28.6	28.6	4.795	8.1	7.4	8.8	ST
36780	10/ 2/91	2212	2909.6	9000.3	14	11	6	11	26.0	26.0	26.0	29.3	29.3	29.4	2.942	7.8	7.1	7.6	ST
36781	10/ 3/91	0044	2901.8	8953.7	13	18	10	18	26.6	26.7	26.6	29.5	29.8	30.8	1.749	6.5	6.0	6.5	ST
36782	10/ 3/91	0448	2841.5	9017.4	14	30	14	30	27.2	27.5	27.6	33.3	33.7	34.2	0.377	6.2	5.7	6.0	ST
36783	10/ 3/91	0720	2841.5	9017.3	14	30	14	30	27.2	27.5	27.6	33.5	33.7	34.2	0.235	6.7	5.9	6.7	ST
36784	10/ 3/91	0944	2830.0	9030.0	14	39	20	39	27.9	28.0	28.3	35.2	35.2	35.9	1.313	6.2	6.6	6.4	PN
36785	10/ 3/91	1130	2833.8	9041.0	14	22	11	22	27.5	27.5	27.5	35.0	35.0	35.0	0.494	7.4	6.2	6.8	ST
36786	10/ 3/91	1352	2830.0	9100.0	15	33	17	33	27.7	27.6	27.6	35.2	35.3	35.4	1.308	6.7	6.5	6.8	PN
36787	10/ 3/91	1550	2839.1	9111.4	15	18	10	18	27.2	27.1	27.0	32.8	33.5	34.8	0.957	5.1	6.9	9.2	ST
36788	10/ 3/91	1840	2846.5	9118.8	15	15	8	15	27.0	26.9	26.4	31.4	31.4	31.8	1.301	8.6	8.1	6.9	ST
36790	10/ 3/91	2152	2840.4	9111.1	15	17	8	17	27.0	27.1	27.0	33.0	33.4	34.6	0.610	7.9	7.1	6.2	ST
36791	10/ 4/91	0213	2834.1	9041.7	14	22	11	22	27.7	27.7	27.7	35.0	35.0	35.0	0.154	6.7	6.1	6.5	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 LUMCON PELICAN

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36792	10/ 4/91	0825	2900.0	9130.0	15	10	5	10	26.3	26.3	26.3	30.8	30.8	30.8	1.133	8.1	6.7	6.7	PN
36793	10/ 4/91	1209	2900.0	9100.0	15	6	3	6	26.3	26.0	26.0	29.9	29.9	29.9	1.102	7.2	7.2	6.9	PN

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR		MID	MAX		
53364	10/14/91	2110	2629.1	9629.0	21	80	40	80	27.0	24.6	20.3	35.5	36.7	36.7	0.094	6.3	5.5	4.5	ST/PN	
53365	10/14/91	2326	2624.1	9628.4	21	71	35	71	26.8	26.8	21.0	35.1	36.0	37.0	0.143	6.4	6.4	5.1	ST	
53367	10/15/91	247	2613.1	9624.6	21	73	36	73	26.9	27.0	21.2	34.5	36.0	37.0	0.083	6.6	5.3	5.2	ST	
53368	10/15/91	529	2602.1	9634.9	21	52	26	52	26.5	27.5	22.7	33.4	35.8	37.4	0.106	6.7	6.3	5.3	ST	
53370	10/15/91	852	2601.2	9623.6	21	91	45	91	26.5	26.9	19.2	33.8	36.3	36.8	0.312	6.4	6.4	4.5	ST	
53371	10/15/91	1040	2604.1	9623.5	21	92	46	92	26.1	27.9	19.5	33.1	36.2	37.0	0.174	8.1	7.4	5.6	ST	
53372	10/15/91	1218	2612.0	9628.7	21	62	31	62	26.5	27.3	22.2	33.3	35.8	37.1	0.143	6.3	5.7	5.5	ST	
53374	10/15/91	1515	2618.2	9625.9	21	73	36	73	27.2	27.1	21.1	34.7	36.0	36.8	0.101	6.3	6.2	4.9	ST	
53375	10/15/91	1828	2608.9	9653.8	21	30	15	30	26.8	27.2	27.3	33.7	35.1	35.8	0.132	7.7	7.6	6.4	ST	
53376	10/15/91	2041	2600.3	9659.9	21	25	12	25	27.1	27.4	27.4	34.3	35.0	35.5	0.190	6.3	6.0	5.6	PN	
53377	10/15/91	2341	2624.7	9650.6	21	38	19	38	26.4	27.4	25.9	33.1	35.6	36.5	0.100	7.9	7.4	6.8	ST	
53379	10/16/91	444	2630.5	9704.2	21	27	14	27	26.5	26.9	27.2	33.4	34.5	35.7	0.093	6.5	5.8	5.7	ST/PN	
53380	10/16/91	759	2619.6	9656.9	21	35	17	35							0.100	6.4			ST	
53381	10/16/91	854	2619.9	9702.0	21	26									0.143				ST	
53382	10/16/91	1032	2628.2	9711.7	21	20	10	20				36.4	35.6	35.0	0.218	6.2	6.1	5.9	ST	
53383	10/16/91	1239	2641.6	9717.4	21	14	7	14				35.9	35.5	35.2	0.287	6.6	6.5	6.0	ST	
53384	10/16/91	1351	2643.0	9714.8	21	18	9	18				36.3	36.1	35.4	0.118	6.5	6.7	6.1	ST	
53385	10/16/91	1547	2640.0	9706.3	21	31	15	30				36.9	36.4	35.7	0.100	6.4	6.3	5.9	ST	
53386	10/16/91	1940	2632.9	9714.6	21	14	7	14				36.0	36.2	35.3	0.110	6.1	6.2	5.9	ST	
53387	10/16/91	2140	2642.1	9710.2	21	21	10	21	26.8	26.9	27.1	33.6	34.0	35.7	0.093	6.4	6.4	5.4	ST	
53388	10/16/91	2341	2640.5	9653.2	21	44	22	44	26.4	27.1	22.4	32.8	35.7	37.7	0.062	6.4	6.2	4.9	ST	
53389	10/17/91	216	2644.9	9637.8	21	90	45	89	26.8	27.7	20.8	37.7	36.9	36.8		6.2		4.9	ST	
53391	10/17/91	0621	2657.2	9630.9	21	126	63	126	26.8	23.1	19.0	36.1	36.7	36.8	0.027	6.5	6.2	4.5	PN	
53392	10/17/91	822	2656.0	9642.4	21	80	40	80	26.6	25.6	21.4	35.7	36.4	36.5	0.069	6.3	6.3	4.7	ST	
53393	10/17/91	1118	2700.1	9659.9	20	39	19	39	25.9	26.7	26.9	33.4	35.0	36.0	0.100	6.5	6.5	6.3	PN	
53394	10/17/91	1258	2707.1	9706.5	20	30	17	30	26.2	26.9	27.0	32.9	34.0	35.9	0.098	6.7		6.1	ST	
53395	10/17/91	1503	2714.7	9720.3	20	9	5	9	26.8	26.7	26.7	34.6	34.6	34.7	0.224	6.5	6.5	6.5	ST	
53396	10/17/91	1649	2721.2	9711.7	20	18	9	18	26.7	26.8	27.2	34.1	34.4	35.4	0.184	6.7	6.0	5.8	ST	



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE	TIME	POSITION		STAT	DEPTH	SAMPLE DEPTHS		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			ZONE	(M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	
53397	10/17/91	1948	2703.4	9709.2	20	28	14	28	26.6	26.7	27.1	33.7	33.8	35.9	0.104	7.0	6.2	6.0	ST
53398	10/17/91	2201	2712.2	9716.1	20	18	9	18	26.7	26.7	27.2	34.1	34.2	35.3	0.143	7.1	6.9	6.8	ST
53399	10/18/91	101	2734.9	9704.4	20	19	10	19	26.5	26.5	27.1	34.6	34.7	35.4	0.162	6.7		5.8	ST
53400	10/18/91	207	2733.7	9704.8	20	19	10	19	26.5	26.5	27.1	34.6	34.7	35.4		6.7		5.8	ST
53401	10/18/91	514	2749.8	9659.2	20	11	5	10	26.1	26.1	26.1	34.0	34.0	34.0	0.327	7.0	6.7	6.6	ST
53402	10/18/91	1829	2745.2	9650.5	20	22	11	22	26.0	26.3	26.0	32.7	33.6	35.4	0.139	7.0		5.9	ST
53403	10/18/91	1959	2744.0	9645.2	20	28	14	28	25.7	26.5	27.0	31.9	34.1	35.6	0.109	7.0		5.9	ST
53404	10/18/91	2137	2741.8	9653.7	20	23	11	23	26.0	26.0	27.1	33.0	33.1	35.5	0.110	6.9	7.0	5.9	ST
53405	10/18/91	2312	2736.2	9649.2	20	33	16	33	26.0	26.5	27.1	32.7	33.1	35.8	0.077	6.7	6.7	5.5	ST
53406	10/19/91	209	2723.8	9713.2	20	17	7	15	26.5	26.5	26.7	34.6	34.6	34.8	0.143	6.4	6.5	6.3	ST
53407	10/19/91	322	2721.8	9718.4	20	9	5	8	26.5	26.5	26.4	34.5	34.5	34.5	0.212	6.6	6.6	6.6	ST
53408	10/19/91	433	2718.0	9719.3	20	8	4	8	26.5	26.5	26.5	34.6	34.6	34.6	0.505	6.4	6.4	6.2	ST
53409	10/19/91	757	2716.9	9653.2	20	43	21	43	25.6	27.0	26.8	32.6	35.1	36.0	0.119	6.4	6.5	6.0	ST
53410	10/19/91	1026	2724.9	9652.6	20	38	19	38	25.8	26.9	27.1	32.7	34.7	35.9	0.137	6.9	6.4	5.8	ST
53411	10/19/91	1237	2730.0	9700.1	20	28	14	26	26.2	26.4	27.2	33.5	34.2	35.6	0.131	6.9	6.7	6.0	PN
53412	10/19/91	1417	2727.6	9708.6	20	20	10	19	26.4	26.5	26.5	34.5	34.6	34.6	0.118	6.7	6.6	6.5	ST
53413	10/19/91	1536	2734.2	9710.4	20	13	7	12	26.3	26.2	26.3	34.0	34.0	34.0	0.468	6.6	6.5	6.6	ST
53414	10/19/91	1719	2741.2	9708.5	20	10	5	10	26.2	26.2	26.2	33.9	34.0	34.0	0.530	6.6	6.5	6.4	ST
53415	10/19/91	2129	2750.9	9628.7	20	39	19	39	25.3	26.7	26.9	32.0	34.9	35.8	0.142	7.1	6.3	5.5	ST
53416	10/19/91	2305	2756.0	9626.0	20	32	16	32	25.2	26.7	26.9	31.7	34.4	35.5	0.253	7.0	6.1	5.5	ST
53417	10/20/91	22	2759.8	9624.4	20	29	14	29	25.1	26.5	26.8	31.6	33.7	35.3	0.230	7.0	5.9	5.7	ST
53418	10/20/91	130	2802.0	9629.4	19	24	12	24	25.2	26.3	26.6	32.0	34.8	34.9	0.156	6.9	6.4	5.8	ST
53419	10/20/91	338	2809.7	9641.2	19	8	4	8	25.6	25.6	25.6	33.7	33.7	33.7	0.678	6.8	6.7	6.7	ST
53420	10/20/91	533	2811.2	9632.7	19	12	6	12	25.1	25.1	25.3	32.4	32.5	32.9	0.218	7.1	7.1	7.0	ST
53421	10/20/91	807	2814.8	9627.3	19	12	6	12	24.9	24.9	25.0	31.8	31.9	32.0	0.199	7.0	6.9	6.8	ST
53422	10/20/91	1017	2804.6	9638.0	19	16	8	16	25.0	25.5	25.5	32.6	33.0	33.4	0.231	6.8	6.7	6.5	ST
53423	10/20/91	1148	2800.0	9630.0	19	25	12	25	25.1	26.4	26.5	31.8	33.5	34.8	0.262	6.9	6.1		PN
53424	10/20/91	1301	2756.9	9634.0	20	25	13	24	25.1	25.9	26.6	32.3	32.6	35.0	0.330	7.0	6.1	5.7	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53425	10/20/91	1437	2756.1	9624.2	20	34	18	34	25.0	26.8	26.8	31.6	35.4	35.5	0.268	7.1	6.1	6.0	ST
53426	10/20/91	1633	2756.1	9623.6	20	34	17	34	24.9	26.8	26.8	31.8	35.4	35.5	0.112	7.2	6.0	5.5	ST
53427	10/20/91	1947	2759.8	9600.5	20	44	22	44	25.7	27.1	26.9	34.1	35.8	36.0	0.206	6.8	6.4	5.9	PN
53428	10/20/91	2114	2803.0	9600.0	19	39	19	39	25.7	27.0	27.0	34.4	35.7	35.9	0.081	6.6	6.1	5.9	ST
53429	10/20/91	2251	2804.8	9607.4	19	33	16	33	26.1	26.2	26.6	34.7	34.8	35.0	0.299	6.5	6.4	5.9	ST
53430	10/21/91	20	2810.4	9605.6	19	26	13	26	25.9	25.9	25.9	34.4	34.4	34.4	0.555	6.6	6.6	6.6	ST
53431	10/21/91	357	2814.5	9541.9	19	32	15	31	26.2	26.2	26.2	35.0	35.1	35.1	0.305	6.4	6.3	6.3	ST
53432	10/21/91	0635	2829.6	9600.0	19	12	6	12	24.3	24.3	24.3	32.2	32.3	32.3	0.318	6.8	6.9	6.7	PN
53433	10/21/91	803	2832.6	9604.0	19	7	4	7	24.2	24.2	24.2	32.6	32.6	32.6	1.106	7.3	7.1	7.1	ST
53434	10/21/91	920	2826.1	9607.1	19	14	7	14	24.3	24.3	24.3	32.3	32.4	32.4	0.794	7.0	6.9	6.9	ST
53435	10/21/91	1156	2815.8	9605.5	19	22	11	22	25.3	25.5	25.5	33.4	34.1	34.1	0.445	6.6	6.5	6.4	ST
53436	10/21/91	1348	2814.1	9557.1	19	25	13	25	25.5	25.8	26.0	33.6	34.2	34.8	0.678	6.4	6.3	6.3	ST
53437	10/21/91	1527	2805.8	9549.9	19	38	19	37	25.8	26.6	26.6	35.0	35.6	35.6	0.262	6.6	6.3	6.3	ST
53439	10/21/91	2024	2830.0	9530.0	19	24	12	24	25.2	25.2	25.2	33.6	33.6	33.7	0.455	6.6	6.6	6.5	PN
53440	10/21/91	2135	2835.1	9531.0	19	18	9	18	24.4	24.4	24.5	32.5	32.5	32.7	0.548	6.8	6.7	6.6	ST
53441	10/22/91	47	2843.5	9513.6	19	20	10	20	24.5	24.7	24.8	32.7	33.1	33.2	0.547	6.9	6.9	6.8	ST
53442	10/22/91	344	2847.2	9454.1	18	19	10	18	24.9	24.9	24.9	33.8	33.8	33.8	0.312	7.0	7.0	6.9	ST
53443	10/22/91	621	2841.7	9440.0	18	25	12	25	25.3	25.3	25.3	34.3	34.3	34.4	0.268	6.6	6.7	6.5	ST
53444	10/22/91	800	2841.6	9441.7	18	25	12	25	25.2	25.2	25.2	34.2	34.3	34.3	0.305	7.0	7.0	7.0	ST
53445	10/22/91	1204	2839.0	9522.0	19	19	9	19	24.6	24.4	24.5	32.2	32.5	32.7	0.361	7.3	7.4	7.3	ST
53446	10/22/91	1449	2818.9	9530.0	19	30	15	30	26.5	26.3	26.4	35.2	35.2	35.4	0.196	6.5	6.3	6.5	ST
53448	10/22/91	1725	2814.0	9524.5	19	35	17	35	26.6	26.2	26.3	35.3	35.3	35.3	0.206	6.5	6.7	6.7	ST
53450	10/22/91	2151	2829.9	9500.3	19	32	16	32	26.0	25.7	25.8	34.8	34.8	34.8	0.150	7.3	7.4	7.3	PN
53451	10/22/91	2359	2818.0	9449.0	18	43	21	43	26.4	26.6	26.6	35.4	35.7	35.8	0.094	6.9	6.6	6.3	ST
53454	10/23/91	602	2759.9	9450.1	18	78	39	78	26.7	26.6	21.4	36.2	36.2	36.6	0.125	6.9	6.8	5.5	ST/PN
53455	10/23/91	916	2802.4	9440.1	18	60	30	60	26.5	26.5	22.2	35.9	36.0	36.8	0.069	6.8	6.8	5.9	ST
53456	10/23/91	1156	2757.7	9422.2	18	90	45	90	26.7	26.5	20.5	36.1	36.2	36.7	0.056	7.5	7.5	5.4	ST
53457	10/23/91	1431	2759.5	9417.0	18	79	39	79	26.8	26.6	21.0	36.1	36.1	36.9	0.056	6.9	6.9	5.0	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
OREGON II																			
STA#	DATE	TIME	POSITION		STAT	DEPTH	SAMPLE DEPTHS		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			ZONE	(M)	MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	
53458	10/23/91	1710	2758.0	9405.8	18	82	41	82	26.9	26.6	20.9	36.1	36.2	37.1		5.5	6.0	4.7	ST
53460	10/23/91	2137	2802.0	9428.0	18	64	32	64	26.7	26.6	22.3	36.1	36.1	36.7	0.087	7.2	7.1	5.8	ST/PN
53461	10/24/91	129	2830.0	9430.0	18	35	17	35	25.9	26.1	26.3	34.8	35.4	35.8	0.106	7.6	7.5	7.0	PN
53462	10/26/91	1011	2921.6	9432.1	18	9	7	9	24.3	24.4	24.4	30.4	30.7	30.8	0.517	8.3	8.2	8.3	ST
53464	10/26/91	1454	2911.8	9453.1	18	9	4	8	24.8	24.6	24.6	29.5	29.6	29.8	1.994	6.9	6.8	6.8	ST
53465	10/26/91	1723	2900.1	9430.0	18	17	9	17	26.2	25.4	25.3	33.8	33.9	33.9	0.231	7.8	7.7	7.6	PN
53466	10/26/91	2053	2859.9	9500.3	19	14	7	14	24.5	24.4	24.6	30.8	31.0	31.8	0.819	6.5	6.6	5.9	PN
53467	10/26/91	2258	2906.0	9504.4	19	10	6	10	24.9	25.0	25.1	29.9	29.9	30.0	1.542	7.0	7.1	7.0	ST
53468	10/27/91	42	2903.9	9454.3	18	14	7	13	24.7	24.5	24.6	30.0	30.5	32.0	1.073	7.0	6.7	6.3	ST
53469	10/27/91	323	2921.8	9431.8	18	11	6	10	24.8	24.8	24.7	31.1	31.2	31.2	1.009	6.9	6.8	6.8	ST
53470	10/27/91	722	2859.9	9400.8	18	18	9	18	25.6	25.6	25.6	34.3	34.3	34.4	0.126	6.4	6.3	6.2	PN
53471	10/27/91	856	2855.5	9404.5	18	21	11	21	25.5	25.5	25.5	34.4	34.4	34.4	0.224	6.2	6.2	6.1	ST
53472	10/27/91	1056	2844.5	9354.0	17	23	12	23	25.9	25.8	25.9	34.7	34.9	35.1	0.125	6.4	6.3	6.2	ST
53473	10/27/91	1301	2841.7	9406.1	18	27	13	26	26.2	25.9	26.0	35.3	35.1	35.3	0.226	6.4	6.3	6.4	ST
53474	10/27/91	1511	2840.7	9419.1	18	29	15	28	26.6	26.1	26.1	35.2	35.2	35.2	0.161	6.3	6.2	6.2	ST
53475	10/27/91	1656	2835.8	9409.2	18	33	17	33	26.6	26.2	26.2	35.5	35.5	35.6	0.165	6.5	6.6	6.4	ST
53476	10/27/91	2018	2855.6	9358.0	17	22	10	21	26.1	25.8	25.8	34.6	34.7	34.7	0.100	6.8	6.7	7.0	ST
53477	10/27/91	2317	2836.1	9403.7	18	33	17	32	26.4	26.2	26.1	35.5	35.7	35.5	0.156	6.2	6.0	5.9	ST
53478	10/28/91	53	2830.8	9407.7	18	38	19	37	26.4	26.4	26.3	35.7	35.6	35.6	0.134	6.5	6.4	6.4	ST
53480	10/28/91	403	2830.1	9359.9	17	39	20	39	26.4	26.4	26.3	35.8	35.8	35.8	0.193	7.5	7.3	7.3	PN
53481	10/28/91	719	2830.1	9330.4	17	41	21	41	26.4	26.3	26.3	35.7	35.8	35.8	0.125	6.5	6.5	6.4	PN
53482	10/28/91	1036	2825.9	9401.3	18	43	23	43	26.4	26.4	26.3	35.8	35.8	35.8	0.132	6.3	6.3	6.1	ST
53484	10/28/91	1428	2815.4	9405.3	18	53	26	52	26.6	26.5	26.4	35.9	35.9	36.1	0.126	6.2	6.2	6.2	ST
53486	10/28/91	1815	2812.3	9411.9	18	53	28	53	26.7	26.4	26.1	35.9	36.0	36.4	0.224	6.3	6.3	6.1	ST
53488	10/28/91	2152	2802.8	9404.4	18	72	35	72	26.8	26.7	21.9	36.1	36.1	36.8	0.150	6.7	6.8	5.7	ST
53489	10/29/91	55	2755.9	9408.9	18	89	44	88	26.8	26.8	20.8	36.1	36.1	36.6	0.117	6.5		5.3	ST
53491	10/29/91	400	2800.0	9400.0	18	81	41	80	26.8	26.8	21.5	36.2	36.2	36.7	0.108	6.5	6.4	5.0	PN
53492	10/29/91	906	2806.0	9314.5	17	80	40	80	26.7	26.7	21.3	36.0	36.0	36.5	0.105	6.3	6.3	4.5	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53493	10/29/91	1137	2812.8	9308.8	17	61	31	61	26.6	26.4	23.9	35.8	35.9	37.0	0.100	6.3	6.2	4.6	ST
53494	10/29/91	1440	2805.1	9304.7	17	85	42	84	26.2	26.4	21.7	35.9	36.1	36.5	0.076	6.4	6.3	5.9	ST/PN
53496	10/29/91	1909	2807.3	9302.6	17	81	40	80	26.8	26.3	22.2	35.9	36.1	36.6		6.3	6.3	6.3	ST
53497	10/29/91	2156	2804.0	9311.3	17	90	46	90	26.7	26.3	21.0	36.0	36.0	36.6	0.069	6.3	6.3	4.7	ST
53499	10/30/91	243	2812.8	9308.6	17	61	30	60	26.5	26.4	24.9	35.8	35.9	36.3	0.055	6.6	6.5	6.1	ST
53500	10/30/91	614	2807.3	9245.9	16	82	41	81	26.6	26.6	21.8	36.1	36.2	36.5	0.054	6.5	6.3	5.4	ST
53501	10/30/91	859	2810.4	9252.4	16	70	37	70	26.6	26.6	23.2	36.0	36.2	36.5	0.098	6.4	6.5	5.6	ST
53502	10/30/91	1330	2829.4	9314.4	17	37	18	36	26.1	26.3	26.5	35.4	35.6	35.8	0.405	7.1	7.0	7.0	ST
53503	10/30/91	1540	2837.6	9308.5	17	35	17	34	25.8	26.0	26.5	34.8	35.0	35.7	0.478	6.7	6.7	6.6	ST
53504	10/30/91	1741	2830.1	9300.2	17	44	21	44	26.2	26.3	26.5	35.4	35.6	35.9	0.242	6.7	6.6	6.5	PN
53505	10/30/91	2004	2830.7	9315.7	17	38	19	38	26.2	26.2	26.5	35.4	35.5	35.9	0.797	6.7	6.7	6.6	ST
53507	10/30/91	2359	2828.2	9320.6	17	44	21	44	26.3	26.3	26.4	35.7	35.7	35.9	0.204	6.6	6.9	6.7	ST
53509	10/31/91	435	2836.0	9332.5	17	35	17	34	26.0	26.1	26.2	35.3	35.4	35.6	0.667	6.4	6.4	6.3	ST
53511	10/31/91	847	2847.2	9319.4	17	26	13	26	25.4	25.9	25.9	34.0	34.8	34.9	0.729	6.2	6.5	6.7	ST
53512	10/31/91	1035	2840.6	9313.8	17	32	16	31	25.9	25.9	26.0	34.9	34.9	35.1	0.349	6.7	6.7	6.5	ST
53513	10/31/91	1340	2838.2	9248.7	16	35	17	34	26.0	26.2	26.3	35.0	35.5	35.7	0.358	6.5	6.6	6.4	ST
53514	10/31/91	1626	2855.4	9256.1	16	22	11	22	25.5	25.5	25.8	33.8	33.8	34.2	0.467	6.4	6.3	6.2	ST
53515	10/31/91	1828	2848.8	9246.2	16	28	15	28	26.0	26.3	26.3	34.8	35.1	35.3	0.480	6.0	6.3	6.1	ST
53516	10/31/91	2045	2847.0	9258.1	16	27	13	26	25.6	25.6	25.9	34.0	34.0	34.3	0.442	6.5	6.6	6.2	ST
53517	10/31/91	2320	2843.7	9257.5	16	33	15	33	25.7	26.1	26.3	34.3	34.9	35.3	0.361	6.3		6.1	ST
53518	11/ 1/91	1123	2901.5	9349.7	17	17	9	16	24.6	24.6	24.6	33.2	33.4	33.4	0.206	6.8	6.7		ST
53521	11/ 1/91	1611	2913.1	9346.9	17	14	7	14	24.0	24.1	24.1	32.3	32.5	32.5	1.109	7.5	7.3	7.2	ST
53523	11/ 1/91	1923	2917.3	9355.3	17	10	5	10	23.5	23.5	23.6	32.5	32.7	32.7	1.682	7.5	7.3	7.3	ST
53524	11/ 1/91	2118	2910.6	9341.3	17	16	7	16	24.0	24.1	24.1	32.8	32.8	32.9	0.897	7.0	6.9	7.0	ST
53525	11/ 1/91	2358	2901.1	9339.1	17	17	9	17	24.3	24.4	24.4	33.7	33.8	33.8	0.426	7.1	7.1	7.0	ST
53526	11/ 2/91	238	2848.9	9327.0	17	23	11	22	24.6	24.7	24.7	33.9	34.0	34.0	0.491	8.0	8.1	7.9	ST
53527	11/ 2/91	436	2859.0	9329.5	17	19	10	19	24.3	24.4	24.4	32.9	33.5	33.5	0.447	7.4	7.2	7.2	PN
53528	11/ 2/91	711	2906.0	9310.2	17	20	9	19	24.3	24.3	24.3	33.8	34.0	34.0	0.880	6.8	6.5	6.5	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53529	11/ 2/91	903	2913.5	9311.0	17	16	9	16	23.6	23.7	23.7	32.9	33.1	33.1	0.675	7.2	7.8	8.0	ST
53530	11/ 2/91	1306	2943.0	9318.1	17	6	3	5	21.4	21.6	22.5	26.5	27.5	27.9	2.679	9.2	8.7	8.6	ST
53531	11/ 2/91	1546	2937.7	9301.0	17	8	4	7	21.2	22.3	22.9	26.9	27.6	29.9	2.139	8.8	8.4	8.3	ST
53533	11/ 2/91	1814	2936.9	9258.5	16	9	4	8	20.9	22.5	22.5	26.5	29.4	30.1	1.480	8.0	7.3	7.2	ST
53534	11/ 2/91	2001	2930.1	9300.0	17	11	6	11	22.6	22.6	22.8	31.2	31.7	32.0	1.433	6.8	7.0	6.8	PN
53535	11/ 2/91	2309	2910.7	9305.9	17	19	10	19	23.7	23.7	23.7	33.6	33.7	33.7	0.514	7.1	7.1	7.0	ST
53537	11/ 3/91	226	2907.8	9259.3	16	19	9	18	23.8	23.8	23.9	33.8	33.9	33.9	0.737	7.7	7.5	7.4	ST
53538	11/ 3/91	413	2900.0	9300.1	17	22	11	22	24.1	24.1	24.1	33.6	34.0	34.0	0.759	6.9	6.7	6.5	PN
53539	11/ 3/91	719	2906.6	9236.3	16	20	10	20	23.7	23.7	23.7	33.2	33.4	33.4	0.847	7.0	7.2	6.7	ST
53540	11/ 3/91	1057	2847.4	9230.5	16	31	14	31	25.1	25.1	25.1	35.4	35.5	36.5	0.567	6.7	6.6	6.5	ST
53542	11/ 3/91	1547	2908.7	9220.1	16	13	6	12	21.6	21.6	21.6	31.9	32.0	32.0	2.554	7.7	7.6	7.5	ST
53543	11/ 3/91	1853	2928.5	9227.7	16	7	3	6	20.7	20.8	20.8	30.0	30.3	30.4	2.255	8.4	8.4	8.3	ST
53544	11/ 3/91	2055	2916.1	9230.9	16	13	6	12	21.3	21.3	21.3	31.9	32.1	32.1	1.776	8.7	8.7	8.6	ST
53545	11/ 3/91	2335	2900.2	9230.0	16	24	12	23	23.9	23.9	23.9	34.3	34.4	34.4	0.810	6.8	6.7	6.7	
53546	11/ 4/91	340	2843.8	9213.4	16	35	17	34	24.6	24.7	24.7	34.9	35.0	35.0	0.579	7.7	7.7	7.6	ST
53547	11/ 4/91	610	2845.4	9203.6	16	30	15	28	24.2	24.2	24.3	34.5	34.7	34.7	0.639	7.0	6.4	7.3	ST
53548	11/ 4/91	940	2857.4	9152.3	15	19	9	18	22.7	22.7	22.7	33.7	35.7	33.7	0.950	7.2	7.0	7.2	ST
53549	11/ 4/91	2243	2841.2	9143.7	15	32	16	31	24.3	24.4	24.4	34.6	34.7	34.7	0.654	6.5	7.3		ST
53550	11/ 5/91	131	2858.1	9145.0	15	17	8	16	21.4	21.4	21.4	33.2	33.3	33.3	0.800	7.8	7.5	7.4	ST
53551	11/ 5/91	330	2900.1	9200.0	16	18	9	17	22.1	22.2	22.2	33.3	33.7	33.7	0.689	7.5	7.2	7.0	PN
53552	11/ 5/91	700	2852.0	9215.2	16	27	14	27	23.6	23.7	23.7	34.8	35.0	35.0	0.804	7.2	7.0	7.0	ST
53553	11/ 5/91	956	2829.4	9230.4	16	49	24	49	25.1	25.1	25.1	36.1	36.2	36.2	0.542	6.4	6.3	6.3	PN
53554	11/ 5/91	1155	2827.5	9225.7	16	56	29	56	25.3	25.3	25.3	36.2	36.4	36.4	0.324	6.2	6.3	6.2	ST
53558	11/ 5/91	1852	2827.6	9206.3	16	54	27	54	25.3	25.4	25.4	36.3	36.4	36.4	2.604	6.5	6.3	6.3	ST
53561	11/ 6/91	110	2803.4	9157.0	15	91	45	91	25.4	25.4	22.1	36.0	36.2	36.7	0.399	6.2	6.1	5.2	ST
53562	11/ 6/91	421	2809.8	9142.0	15	80	41	80	25.4	25.4	23.9	36.2	36.2	36.8	0.935	6.8	6.9	6.8	ST
53563	11/ 6/91	708	2811.3	9134.4	15	80	40	80	25.5	25.5	24.8	35.9	36.1	36.8	0.698	6.8	6.5	6.2	ST
53564	11/ 6/91	1105	2833.3	9135.4	15	41	20	41	23.4	23.6	25.1	34.4	34.5	35.2	0.665	6.9	6.9	6.8	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
53565	11/ 6/91	1424	2832.9	9202.0	16	45	22	44	24.5	25.0	25.1	35.1	35.8	36.2	0.427	7.1	7.0	6.9	ST/PN
53567	11/ 6/91	1802	2827.7	9155.8	15	52	26	52	25.2	25.3	25.4	35.7	36.2	36.3	0.399	7.2	7.1	7.0	ST
53570	11/ 7/91	4	2829.8	9129.8	15	45	22	44	23.5	23.8	23.8	34.3	34.7	34.8	0.903	7.3	7.2	7.1	PN
53571	11/ 7/91	205	2827.4	9114.9	15	44	22	43	24.7	25.0	24.9	35.3	35.6	35.6	0.514	6.8	6.7	6.7	ST
53572	11/ 7/91	343	2830.0	9108.9	15	35	17	34	23.7	23.8	24.4	34.7	34.8	35.2	1.184	7.1	7.0	6.9	ST
53573	11/ 7/91	658	2812.0	9047.9	14	80	40	80	25.5	25.6	21.4	36.1	36.3	36.9	0.199	6.3	6.0	4.0	ST
53574	11/ 7/91	841	2816.9	9051.8	14	64	31	64	25.3	25.3	25.3	36.1	36.2	36.2	0.365	6.1	6.1	6.0	ST
53575	11/ 7/91	1130	2826.3	9059.9	14	39	20	39	24.4	24.5	25.1	35.3	35.4	35.9	0.928	6.5	6.5	6.2	ST/PN
53576	11/ 7/91	1315	2835.3	9105.0	15	24	12	23	22.0	22.4	23.6	32.9	33.3	34.6	0.818	6.9	6.6	6.6	ST
53577	11/ 7/91	1423	2840.1	9108.1	15	16	8	15	21.7	21.6	21.6	32.8	33.0	33.1	1.271	6.9	6.7	6.7	ST
53578	11/ 7/91	1518	2843.9	9106.4	15	11	5	10	21.7	21.7	21.7	32.9	33.0	33.0	1.252	7.2	7.2	7.2	ST
53580	11/ 7/91	1909	2853.4	9045.2	14	10	5	8	21.0	21.0	21.0	33.0	33.1	33.1	0.972	7.2	7.2	7.1	ST
53581	11/ 7/91	2146	2836.3	9052.2	14	17	9	17	22.7	22.7	22.7	34.1	34.2	34.2	1.454	7.0	7.1	7.0	ST
53582	11/ 7/91	2244	2833.5	9051.5	14	23	12	23	24.2	24.2	24.2	35.1	35.2	35.2	0.785	6.5	6.4	6.3	ST
53583	11/ 7/91	2354	2833.1	9046.9	14	23	12	23	23.6	23.6	24.2	34.5	34.6	35.0	0.654	6.5	6.3	6.2	ST
53584	11/ 8/91	403	2842.9	9110.1	15	12	6	11	21.4	21.5	21.5	32.9	33.0	33.0	0.683	7.4	7.5	7.4	ST
53585	11/ 8/91	720	2849.1	9114.4	15	8	4	7	19.6	19.6	19.6	32.7	32.8	32.8	1.215	7.3	7.3	7.5	ST
53586	11/13/91	709	2837.7	9011.7	14	52	26	52	23.7	24.1	24.2	35.6	35.8	36.0	0.643	7.1	6.9	6.6	ST
53588	11/13/91	1004	2837.5	9017.7	14	35	17	35	23.9	23.9	23.9	35.7	35.8	35.9	0.218	6.1	6.0	5.9	ST
53589	11/13/91	1113	2838.5	9024.9	14	23	13	23	22.4	23.4	23.7	34.2	35.0	35.6	1.550	6.6	6.1	5.8	ST
53590	11/13/91	1236	2835.5	9032.8	14	25	13	25	21.4	22.7	23.4	33.3	33.7	35.5	1.645	7.3	8.5	5.5	ST
53591	11/13/91	1518	2833.5	9051.3	14	22	11	22	21.8	21.6	21.9	33.5	33.8	34.1	2.679	8.3	7.6	7.3	ST
53592	11/13/91	1812	2830.5	9034.0	14	33	16	33	23.3	23.3	23.4	35.3	35.7	35.8	0.430	6.0	5.8	5.8	ST/PN
53593	11/13/91	2005	2825.7	9027.9	14	44	22	44	23.8	24.0	23.9	35.8	36.0	36.1	0.162	6.8	6.7	6.5	ST
53595	11/14/91	9	2836.1	9026.0	14	29	15	29	23.3	23.9	23.9	34.9	35.7	36.0	1.570	6.7	6.7	6.7	ST
53596	11/14/91	115	2836.3	9021.9	14	33	17	33	23.9	23.9	23.9	35.6	35.8	36.0	0.199	6.9	6.9	6.8	ST
53597	11/14/91	208	2839.5	9023.0	14	18	9	18	22.7	22.8	23.7	34.3	34.9	35.7	1.888	7.8	7.5	6.6	ST
53598	11/14/91	333	2846.3	9024.0	14	16	8	16	20.3	21.4	22.8	32.1	32.3	33.4	3.782	8.0	7.7	6.6	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
53599	11/14/91	507	2844.4	9016.1	14	26	13	26	22.3	22.9	23.9	33.9	34.8	35.7	1.763	7.6	7.1	6.6	ST	
53600	11/14/91	706	2854.7	9016.9	14	18	9	17	19.9	20.8	21.6	31.8	32.5	32.4	3.839	8.6	7.9	5.0	ST	
53601	11/14/91	820	2857.7	9018.2	14	14	7	14	20.7	20.7	20.4	32.6	32.6	32.8	1.994	8.2	8.2	6.8	ST	
53602	11/14/91	1030	2859.0	9000.0	14	23	12	23	19.3	20.0	18.7	30.7	32.8	32.8	8.891	9.4	8.1	7.4	PN	
53603	11/14/91	1140	2858.0	8959.0	13	27	14	27	19.8	20.6	24.1	30.8	33.0	34.8	5.489	9.4	7.3	4.9	ST	
53604	11/14/91	1311	2852.8	9004.9	14	28	14	28	19.9	21.5	21.5	30.3	32.6	32.6	6.859	9.8	7.3	4.7	ST	
53605	11/14/91	1546	2831.0	9000.4	14	86	44	86	24.5	24.4	19.3	36.3	36.4	37.1	0.132	6.6	6.6	4.0	PN	
53606	11/14/91	1752	2841.4	8959.0	13	62	30	62	20.8	23.6	24.5	32.4	35.1	36.9	1.626	8.3	6.8	5.1	ST	
53607	11/14/91	1854	2840.8	9001.9	14	52	26	51	21.5	23.6	23.9	32.9	35.1	35.6	1.196	7.8	7.0	6.6	ST/PN	
53608	11/14/91	2151	2858.0	9017.5	14	14	7	14	20.6	20.6	20.2	32.4	32.4	32.7	2.083	8.6	8.5	7.5	ST	
53609	11/14/91	2327	2900.1	9030.0	14	8	4	8	20.1	20.0	19.7	32.9	32.9	32.9	0.774	7.7	7.7	7.4	PN	
53610	11/15/91	217	2903.3	9012.1	14	8	3	8	16.8	16.8	16.9	31.9	31.8	31.9	0.779	8.4	8.4	8.1	ST	
53611	11/15/91	700	2911.1	8955.2	13	11	5	10	19.4	18.3	18.3	30.6	32.5	32.3	2.596	9.0	7.3	7.0	ST	
53612	11/15/91	912	2900.8	8943.3	13	37	20	37	19.3	22.6	25.1	27.3	32.1	36.3	3.372	8.6	6.5	5.4	ST	
53613	11/15/91	1111	2900.0	8929.9	13	12	7	12	19.3	18.7	18.7	22.0	32.5	32.8	4.744	9.4	7.2	6.1	PN	
53614	11/15/91	1312	2851.5	8942.2	13	62	31	62	19.5	25.0	22.1	20.4	36.0	36.8	1.659	8.3	6.4	4.4	ST	
53615	11/15/91	1532	2845.1	8934.0	13	88	44	88	24.0	24.3	20.1	35.4	36.2	36.7	0.716	7.5	7.1	4.1	ST	
53618	11/15/91	2140	2900.0	8900.2	13	69	33	69	20.4	23.6	23.7	32.3	35.5	35.9	2.129	7.9	7.0	6.9	PN	
53619	11/15/91	2344	2903.3	8855.5	11	80	40	80	20.1	23.5	23.0	32.9	35.7	36.4	0.888	7.5	6.6	4.9	ST	
53620	11/16/91	205	2905.9	8855.2	11	56	28	56	19.4	22.4	23.4	29.5	35.9	35.8	3.377	7.9	6.4	5.2	ST	
53621	11/16/91	659	2904.4	8855.9	11	60	30	60	16.2	22.6	23.5	21.6	34.9	35.9	4.585	8.7	6.6	5.5	ST	
53622	11/16/91	928	2912.6	8838.1	11	69	35	69	23.3	23.4	23.2	35.7	35.7	36.0	5.333	6.8	6.7	6.0	ST	
53623	11/16/91	1200	2915.3	8827.8	11	112	56	112	23.0	23.4	19.5	35.5	35.9	36.6	13.656	6.7	6.1	4.2	ST	
53624	11/16/91	1334	2916.4	8822.0	11	73	36	73	23.5	23.7	21.6	35.5	36.0	36.7	0.455	6.7	6.5	5.0	ST	
53625	11/16/91	1515	2919.6	8833.0	11	63	32	63	22.9	22.8	22.7	35.4	35.4	36.0	0.262	6.7	6.8	5.3	ST	
53627	11/16/91	1815	2929.8	8830.3	11	49	25	49	22.5	22.7	22.7	35.2	35.4	35.5	0.191	6.9	6.7	6.5	PN	
53628	11/16/91	1950	2926.5	8832.2	11	52	26	52	22.3	22.4	22.8	35.2	35.3	35.6	0.255	6.8	6.7	5.9	ST	
53630	11/16/91	2350	2915.9	8823.8	11	87	43	87	23.2	23.7	20.5	35.5	36.0	36.7	0.710	6.6	6.4	4.7	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
OREGON II

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
53631	11/17/91	246	2923.3	8801.9	11	76	37	75	23.1	23.2	21.7	35.6	35.7	36.6	0.417	6.6	6.5	4.9	ST	
53632	11/17/91	424	2929.6	8800.0	11	45	23	45	22.6	22.6	22.6	35.4	35.4	35.4	1.639	6.6	6.6	6.6	PN	
53633	11/17/91	728	2947.0	8804.2	11	33	17	33	21.3	21.3	21.7	34.8	34.8	35.0	0.172	6.9	6.9	6.9	ST	
53634	11/17/91	856	2947.4	8812.4	11	34	16	32	21.7	21.7	21.4	35.1	35.2	35.2	0.224	6.9	6.8	6.7	ST	
53635	11/17/91	1146	2933.9	8824.6	11	43	22	43	22.1	21.9	21.9	35.2	35.2	35.2	0.405	6.8	6.8		ST	
53637	11/17/91	1749	2932.6	8818.3	11	41	21	40	22.6	22.6	22.7	35.4	35.4	35.4	0.299	6.8	6.9	6.7	ST	
53640	11/17/91	2311	2929.0	8805.0	11	46	22	46	22.7	22.7	23.2	35.5	35.5	35.7	0.312	6.6	6.7	6.6	ST	
53642	11/18/91	326	2949.0	8817.8	11	35	18	35	21.6	21.7	21.1	35.0	35.0	34.9	0.243	6.8	6.8	6.7	ST	
53643	11/18/91	449	2951.8	8817.2	11	30	15	29	20.7	20.6	20.9	34.7	34.6	34.8	1.103	7.2	7.3	6.9	ST	
53645	11/18/91	736	2952.6	8817.0	11	32	16	32	20.6	20.8	21.4	34.5	34.7	35.1		7.1	7.1	6.9	ST	
53646	11/18/91	955	2946.1	8815.5	11	36	18	36	21.9	21.8	21.6	35.1	35.2	35.2		7.0	7.0	6.9	ST	
53647	11/18/91	1235	2959.3	8807.9	11	24	12	24	21.0	21.0	21.0	34.6	34.6	34.7		7.1	7.2	6.9	ST	
53648	11/18/91	1435	2959.0	8800.0	11	25	12	25	19.8	19.5	19.8	34.1	34.0	34.0		7.3	7.4	6.9	ST	
53649	11/18/91	1735	3000.0	8759.6	10	22	11	22	19.7	19.7	19.0	34.0	34.0	33.8		7.0	7.1	7.1	PN	
53650	11/18/91	2038	2959.9	8829.8	11	25	12	25	21.1	21.2	21.0	34.8	34.9	35.0		7.0	7.0	6.8	PN	



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 A.E. VERRILL

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
23001	10/17/91	1213	2958.9	8807.8	11	26	13	26	24.1	24.2	25.3	33.3	33.4	34.0		6.2	6.2	5.8	ST
23002	10/17/91	1441	3012.2	8809.1	11	12	6	12	23.4	23.0	24.7	31.4	31.4	33.2		6.4	6.4	6.0	ST
23003	10/17/91	1602	3011.7	8814.1	11	13	7	13	23.3	23.0	24.8	31.5	31.6	33.2		6.6	6.6	6.1	ST
23004	10/17/91	1822	3010.5	8817.6	11	13	7	13	23.2	23.1	24.9	31.7	31.9	33.3		6.4	6.4	6.2	ST
23005	10/17/91	1901	3010.2	8816.8	11	15	8	15	23.2	23.1	25.2	31.7	31.9	33.6		6.4	6.3	6.0	ST
23006	10/17/91	2038	3013.5	8808.5	11	10	5	10	22.8	22.8	24.7	31.4	31.5	33.0		6.4	6.5	6.1	ST
23007	10/17/91	2119	3013.8	8806.5	11	7	4	7	21.9	22.8	23.7	27.4	31.4	32.3		6.8	6.5	6.3	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LOUISIANA INSHORE VESSELS

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36794	11/ 5/91	0940	2940.0	9322.0	17	9	9	17.7	17.7	29.5	29.5	2.191	7.3	7.1	ST/PN				
36795	11/ 5/91	0945	2900.5	9035.7	14	10	10	16.4	16.0	32.7	32.7	4.855	8.0	8.0	ST/PN				
36796	11/ 5/91	1021	2944.0	9322.0	17	5	5	12.9	13.2	23.7	23.8	9.896	8.6	8.8	ST/PN				
36797	11/ 5/91	1035	2902.0	9035.7	14	6	6	14.5	14.5	31.2	31.2	7.980	8.5	8.3	ST/PN				
36798	11/ 5/91	1051	2945.0	9322.0	17	2	2	15.8	15.8	27.2	27.2	7.091	8.4	8.4	ST/PN				
36799	11/ 5/91	1130	2904.5	9035.7	14	2	2	16.0	16.0	32.3	32.3	9.523	8.3	8.4	ST/PN				
36800	11/ 6/91	0718	2856.2	9058.0	14	9	9	18.0	17.1	33.2	33.9	1.579	9.2	9.0	ST/PN				
36801	11/ 6/91	0815	2901.0	9058.9	14	5	5	14.7	14.6	30.5	30.5	6.874	8.9	9.5	ST/PN				
36802	11/ 6/91	0912	2909.5	9209.5	16	9	9	18.4	18.9	32.2	27.1	4.514	7.5	8.0	ST/PN				
36803	11/ 6/91	0925	2909.5	9058.3	14	2	2	10.9	10.7	19.8	20.4	11.230	10.3	10.0	ST/PN				
36804	11/ 6/91	0930	2916.3	8956.0	13	2	2	12.4	12.4	28.9	28.9	8.319	8.5	8.6	ST/PN				
36805	11/ 6/91	1021	3003.1	8851.2	11	28	28	18.2	17.9	32.6	30.1	1.397	7.6	7.9	ST/PN				
36806	11/ 6/91	1030	2919.3	9206.8	16	5	5	15.8	15.7	29.2	30.3	3.655	8.6	8.7	ST/PN				
36807	11/ 6/91	1037	2915.1	8954.2	13	5	5	16.0	17.2	31.2	31.2	7.447	8.1	8.2	ST/PN				
36808	11/ 6/91	1049	3003.2	8851.3	11	16	16	18.5	18.7	28.7	28.3	1.676	7.4	7.5	ST/PN				
36809	11/ 6/91	1138	2924.8	8904.3	12	30	30	18.4	16.9		29.3	1.972	4.4	8.1	ST/PN				
36810	11/ 6/91	1119	3003.1	8851.4	11	5	5	18.0	18.3	28.5	28.9	1.096	8.6	7.9	ST/PN				
36811	11/ 6/91	1201	2934.0	9201.8	16	2	2	11.5	12.6	9.4	9.6	6.333	10.6	10.4	ST/PN				
36812	11/ 6/91	1213	2926.9	8909.6	12	18	18					9.194	8.3	8.5	ST/PN				
36813	11/ 6/91	1218	2913.9	8952.7	13	9	9	21.8	20.6	33.1	33.1	2.850	8.7	5.7	ST/PN				
36814	11/ 6/91	1244	2927.4	8912.2	12	6	6					11.461	8.2	8.4	ST/PN				

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY SEAMAP ENVIRONMENTAL DATA ARANSAS BAY																			
STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
31001	11/10/91	0824	2755.5	9657.5	20	11	5	11	16.7	16.8	16.9	30.4	30.1	30.4		8.5	8.2	8.1	ST
31002	11/10/91	0906	2756.4	9654.5	20	13	6	13	17.5	17.5	17.5	30.1	30.1	30.1		8.3	7.5	7.5	ST
31003	11/10/91	0944	2753.5	9656.5	20	13	7	13	18.1	18.1	17.5	30.5	30.6	30.5		8.0	7.8	8.0	ST
31004	11/10/91	1040	2746.3	9655.6	20	19	9	19	19.7	19.8	20.2	31.4	31.4	31.4		7.6	7.1	6.8	ST
31005	11/10/91	1118	2745.6	9658.4	20	18	9	18	19.1	19.2	19.4	31.0	31.1	31.3		7.6	7.1	6.3	ST
31006	11/10/91	1153	2743.2	9658.6	20	21	10	21	19.3	19.5	19.7	31.2	31.4	31.5		7.6	6.9	6.8	ST
31007	11/10/91	1229	2743.5	9701.5	20	17	9	17	18.1	18.3	18.3	30.8	30.7	31.0		8.5	7.5	7.4	ST
31008	11/10/91	1319	2749.4	9702.5	20	5	2	5	19.1	17.0	17.4	30.2	30.4	30.6		7.1	8.1	8.1	ST
31009	11/21/91	0825	2744.5	9704.4	20	12	6	12	18.5	18.8	19.3	29.9	29.8	30.1		8.3	7.8	7.5	ST
31010	11/21/91	0859	2744.5	9705.3	20	10	5	10	18.7	19.1	19.1	29.5	30.0	29.8		7.7	7.7	7.8	ST
31011	11/21/91	0930	2743.5	9705.4	20	12	6	12	18.6	19.4	19.4	29.5	30.4	30.3		7.7	7.4	7.7	ST
31012	11/21/91	1001	2741.6	9705.3	20	14	7	14	18.9	19.1	19.4	30.0	30.3	30.4		7.6	7.6	7.6	ST
31013	11/21/91	1036	2739.4	9705.5	20	15	8	15	19.0	19.4	19.7	30.0	30.7	31.2		7.8	7.6	7.6	ST
31014	11/21/91	1118	2739.7	9709.5	20	11	5	11	19.0	18.8	18.9	29.8	29.7	29.8		7.9	8.0	8.0	ST
31015	11/21/91	1219	2735.4	9701.6	20	23	11	23	20.1	20.1	20.9	32.1	32.5	33.0		7.3	7.0	6.4	ST
31016	11/21/91	1306	2739.6	9703.5	20	18	9	18	19.2	19.8	21.1	30.3	31.7	32.0		7.6	7.2	7.0	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
MATAGORDA BAY

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR		MID	MAX		
32001	11/ 6/91	1010	2827.5	9616.5	19	4	2	4	18.6	18.6	18.6	30.3	30.4	30.3		7.1	7.1	7.2	ST	
32002	11/ 6/91	1151	2827.5	9613.5	19	14	7	14	19.4	19.3	19.3	30.6	30.6	30.4		6.9	6.9	6.9	ST	
32003	11/ 6/91	1231	2826.5	9611.5	19	16	8	16	19.9	19.9	19.9	30.8	30.7	30.9		6.7	6.7	6.8	ST	
32004	11/ 6/91	1312	2824.5	9609.5	19	19	9	19	20.6	20.6	20.6	31.2	31.3	31.4		6.7	6.6	6.6	ST	
32005	11/ 6/91	1348	2822.5	9611.5	19	20	10	20	20.7	20.5	20.3	31.4	31.6	31.6		6.5	6.4	6.5	ST	
32006	11/ 6/91	1432	2819.5	9613.5	19	22	11	22	20.9	20.8	20.6	31.8	31.8	32.0		6.4	6.4	6.4	ST	
32007	11/ 6/91	1517	2820.5	9614.5	19	19	9	19	20.1	20.1	20.2	31.6	31.5	31.3		6.4	6.4	6.3	ST	
32008	11/ 6/91	1608	2824.5	9620.5	19	9	5	9	17.7	17.7	17.7	29.8	30.3	30.0		6.9	6.9	6.9	ST	
32009	11/21/91	1026	2819.5	9619.5	19	16	8	16	18.1	18.3	19.4	28.7	29.5	30.5		7.2	7.1	6.7	ST	
32010	11/21/91	1107	2815.5	9619.5	19	21	10	21	18.6	18.8	19.1	30.1	30.3	30.2		6.9	6.8	6.8	ST	
32011	11/21/91	1143	2813.5	9620.5	19	23	12	23	18.5	19.0	19.2	30.4	30.7	32.0		7.2	7.2	7.2	ST	
32012	11/21/91	1216	2814.5	9622.5	19	20	10	20	18.3	18.8	20.3	29.0	29.3	30.7		7.3	6.8	6.2	ST	
32013	11/21/91	1242	2813.5	9624.5	19	20	10	20	18.3	18.8	20.3	28.9	29.0	29.8		7.4	6.9	6.1	ST	
32014	11/21/91	1319	2813.5	9628.5	19	14	7	14	18.6	18.2	19.3	29.0	29.0	29.3		7.3	7.1	6.0	ST	
32015	11/21/91	1417	2819.5	9623.5	19	9	5	9	18.7	17.9	18.4	28.7	28.7	28.7		7.3	7.1	6.8	ST	
32016	11/21/91	1450	2822.5	9622.5	19	4	2	4	18.2	18.0	17.5	26.6	26.5	26.5		7.7	7.7	7.6	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LAGUNA MADRE

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX		SUR	MID	MAX	
33001	11/ 7/91	0928	2605.2	9709.2	21	7	4	7	21.1	21.2	21.2	32.2	32.3	32.5		6.1	11.8	11.8	ST
33002	11/ 7/91	1003	2603.5	9706.8	21	17	8	17	21.2	20.8	20.3	32.4	32.5	32.3		8.8	11.6	12.3	ST
33003	11/ 7/91	1032	2602.5	9707.3	21	15	8	15	21.4	20.5	20.4	32.2	32.4	32.2		11.8	11.3	11.9	ST
33004	11/ 7/91	1102	2601.6	9706.5	21	18	9	18	21.5	21.5	20.8	32.2	32.2	32.6		10.3	11.5	12.3	ST
33005	11/ 7/91	1135	2600.6	9708.5	21	8	4	8	21.2	21.2	20.8	32.1	32.4	32.3		11.8	11.7	12.2	ST
33006	11/ 7/91	1241	2559.5	9659.4	22	28	14	28	21.9	22.0	22.9	32.7	33.6	33.7		12.4	11.9	11.1	ST
33007	11/ 7/91	1343	2604.5	9701.3	21	25	12	25	21.6	21.8	23.1	32.5	32.7	33.9		12.0	11.4	10.7	ST
33008	11/ 7/91	1418	2605.1	9700.5	21	26	13	26	21.7	21.9	23.3	32.4	32.9	34.4		12.4	11.4	10.7	ST
33009	11/22/91	0831	2607.5	9705.4	21	18	9	18	19.5	19.5	19.5	32.3	32.5	32.6		6.9	7.0	6.9	ST
33010	11/22/91	0909	2608.2	9707.4	21	17	8	17	19.5	19.4	19.4	32.2	32.3	32.2		7.1	7.1	7.6	ST
33011	11/22/91	0953	2608.7	9703.5	21	20	10	20	19.7	19.7	19.7	32.3	32.3	32.3		7.3	7.4	7.4	ST
33012	11/22/91	1037	2608.2	9700.6	21	26	13	26	19.8	19.8	19.7	32.2	32.4	32.4		7.4	7.5	7.5	ST
33013	11/22/91	1137	2611.7	9706.5	21	18	9	18	17.7	19.7	19.7	32.3	32.1	32.2		7.6	7.6	7.9	ST
33014	11/22/91	1215	2614.1	9704.5	21	18	9	18	19.8	19.7	19.6	32.4	32.2	32.2		7.7	7.7	7.8	ST
33015	11/22/91	1315	2620.6	9705.4	21	20	10	20	19.9	19.8	19.7	32.3	32.3	32.1		7.8	7.8	7.9	ST
33016	11/22/91	1350	2621.2	9707.6	21	17	8	17	19.7	19.6	19.6	31.9	32.2	32.2		7.8	7.7	7.9	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY																			
SEAMAP ENVIRONMENTAL DATA																			
GALVESTON BAY																			
STA#	DATE	TIME	POSITION		STAT	DEPTH	SAMPLE DEPTHS		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			ZONE	(M)	MID	MAX	SUR	MID	MAX	SUR		MID	MAX	SUR	
34001	11/11/91	1110	2921.9	9433.0	18	11	6	11	17.0	17.0	17.8	29.2	29.5	29.5		8.2	8.2	6.1	ST
34002	11/11/91	1150	2923.2	9430.6	18	11	6	11	17.1	17.4	18.2	29.1	29.3	31.0		7.8	7.7	6.4	ST
34003	11/11/91	1224	2924.9	9431.4	18	10	5	10	16.8	17.0	17.2	28.8	28.7	29.0		7.9	7.6	7.3	ST
34004	11/11/91	1254	2923.9	9432.9	18	10	5	10	16.7	17.3	17.8	28.5	29.0	29.4		8.3	7.9	5.6	ST
34005	11/11/91	1323	2924.9	9433.3	18	9	5	9	16.7	17.3	17.1	28.0	28.1	29.0		8.2	8.0	6.3	ST
34006	11/11/91	1359	2926.8	9436.3	18	4	2	4	17.0	17.3	17.9	26.4	26.5	26.6		9.0	8.9	8.4	ST
34007	11/11/91	1422	2926.5	9437.5	18	3	2	3	16.5	16.5	16.8	26.1	26.0	26.1		10.3	10.3	10.1	ST
34008	11/11/91	1515	2918.7	9440.1	18	10	5	10	14.6	16.3	17.5	23.5	27.7	29.4		8.7	8.5	7.6	ST
34009	11/18/91	1139	2917.8	9440.1	18	9	5	9	17.9	17.5	17.5	24.2	28.5	28.7		8.1	7.3	7.3	ST
34010	11/18/91	1212	2915.7	9439.5	18	11	6	11	17.9	17.4	17.6	25.4	29.5	30.9		7.8	7.7	7.7	ST
34011	11/18/91	1245	2914.1	9439.8	18	15	8	15	17.1	17.2	17.1	26.7	30.0	30.8		7.6	7.5	7.4	ST
34012	11/18/91	1317	2914.2	9442.3	18	13	7	13	18.7	17.2	17.2	27.1	31.0	31.7		7.8	7.6	7.6	ST
34013	11/18/91	1359	2911.8	9448.3	18	13	7	13	18.6	17.9	17.8	26.9	30.3	30.8		8.1	8.0	7.7	ST
34014	11/18/91	1432	2910.2	9450.2	18	13	7	13	18.1	17.5	17.1	27.0	30.9	30.8		8.2	7.9	7.8	ST
34015	11/18/91	1456	2909.2	9449.9	18	15	7	15	18.7	17.5	17.5	27.1	31.1	31.1		8.1	7.4	7.3	ST
34016	11/18/91	1535	2909.6	9447.9	18	15	8	15	18.7	18.3	18.3	29.3	31.5	32.5		7.5	7.5	7.4	ST

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
SABINE

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup> SUR	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR		MID	MAX		
40001	11/13/91	0923	2939.3	9350.5	17	2	1	2	14.6	14.8	15.1	26.1	26.2	26.5		10.0	9.6	8.9	ST	
40002	11/13/91	0958	2937.8	9352.5	17	4	2	4	14.1	14.3	15.5	26.1	26.1	26.5		11.2	10.3	8.4	ST	
40003	11/13/91	1059	2938.6	9359.2	17	4	2	4	14.6	14.3	14.3	26.8	26.9	26.9		10.3	11.7	10.5	ST	
40004	11/13/91	1129	2938.4	9400.3	18	4	2	4	14.8	14.5	14.6	27.1	27.1	26.8		11.2	10.6	10.5	ST	
40005	11/13/91	1212	2937.6	9402.7	18	5	3	5	14.8	14.7	16.3	27.1	26.9	28.7		13.0	10.1	7.2	ST	
40006	11/13/91	1256	2938.9	9404.2	18	4	2	4	14.8	14.8	15.2	26.7	26.8	27.9		10.8	10.5	10.3	ST	
40007	11/13/91	1428	2933.4	9351.8	17	10	5	10	15.4	15.1	15.0	23.6	26.3	27.1		11.0	12.8	12.4	ST	
40008	11/13/91	1534	2935.3	9348.6	17	9	5	9	16.2	17.1	16.9	24.6	28.5	30.7		9.3	8.3	12.3	ST	
40009	11/22/91	0748	2939.6	9347.6	17	6	3	6	14.9	16.1	17.3	24.0	29.4	31.9		8.7	8.4	8.1	ST	
40010	11/22/91	0838	2935.7	9346.5	17	9	5	9	15.8	16.0	17.5	24.6	27.7	31.7		7.9	8.8	7.4	ST	
40011	11/22/91	0921	2934.6	9346.7	17	10	5	10	15.5	15.7	17.4	24.0	25.9	27.6		7.9	7.4	7.5	ST	
40012	11/22/91	1005	2937.6	9344.4	17	9	4	9	16.1	16.2	17.8	25.0	27.1	31.5		6.7	7.3	7.4	ST	
40013	11/22/91	1108	2937.7	9335.7	17	10	5	10	15.5	15.6	18.3	24.6	25.8	30.5		10.3	10.0	8.8	ST	
40014	11/22/91	1142	2938.4	9336.1	17	10	5	10	15.6	16.1	18.2	24.5	26.3	32.6		10.2	11.0	9.2	ST	
40015	11/22/91	1219	2939.5	9334.8	17	9	5	9	15.6	16.2	18.1	24.5	27.0	32.5		10.6	11.2	8.9	ST	
40016	11/22/91	1323	2941.6	9342.2	17	7	4	7	16.8	16.6	17.5	25.3	26.9	30.9		9.4	9.2	8.7	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
TOMMY MUNRO

STA#	DATE MM/DD/YY	TIME	POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
			LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
17001	11/14/91	0511	2927.8	8855.7	11	13	6	12	18.4	18.3	18.2	33.1	33.0	33.1	0.336	7.2	7.0	7.0	ST
17002	11/14/91	0738	2931.1	8857.9	11	9	4	8	16.1	16.5	17.0	33.8	33.8	33.5	0.627	7.9	7.9	7.6	ST
17003	11/14/91	0935	2935.7	8858.7	11	5	2	4	14.6	14.9	14.7	33.4	33.4	33.4	0.692	8.4	8.2	8.3	ST
17004	11/14/91	1154	2922.2	8852.5	11	25	12	24	21.5	22.0	21.6	34.1	34.4	34.6	0.561	7.1	6.8	6.5	ST
17005	11/14/91	1350	2921.5	8851.9	11	33	16	32	19.9	21.7	21.6	33.1	34.4	34.7	0.766	7.3	6.6	6.5	ST
17006	11/14/91	1535	2921.7	8848.6	11	43	21	42	21.4	21.7	21.7	34.0	34.3	34.7	0.710	6.4	6.4	6.1	ST
17007	11/14/91	1814	2922.3	8849.8	11	31	15	30	20.1	21.3	21.2	33.2	34.1	34.5	0.710	7.2	6.9	6.6	ST
17008	11/14/91	2027	2930.4	8836.8	11	41	20	40	20.1	21.7	22.1	33.2	35.0	35.5	0.542	7.1	6.8	5.4	ST
17009	11/14/91	2158	2931.1	8837.6	11	31	15	30	20.6	21.2	20.5	36.6	35.2	35.5	0.542	7.1	6.7	6.6	ST
17010	11/14/91	2345	2938.2	8833.8	11	25	12	24	22.2	22.0	21.2	35.1	35.1	35.1	0.430	6.6	6.7	6.7	ST
17011	11/15/91	0211	2947.3	8835.9	11	24	12	23	21.2	21.2	20.3	35.2	35.2	35.5	0.267	6.6	6.4	6.6	ST
17012	11/15/91	0426	2940.9	8849.2	11	12	6	11	19.6	19.7	19.7	35.5	35.6	35.5	0.318	6.8	6.6	7.0	ST
17013	11/15/91	0647	2934.0	8838.1	11	23	11	22	21.7	21.7	20.5	35.0	35.0	35.4	0.542	6.5	6.4	6.7	ST
17014	11/15/91	0812	2937.8	8833.6	11	27	13	26	22.3	22.3	22.3	35.2	35.2	35.3	0.598	6.3	6.4	6.1	ST
17015	11/15/91	0955	2942.1	8836.0	11	23	11	22	22.0	22.1	22.2	35.2	35.2	35.2	0.766	6.3	6.3	6.4	ST
17016	11/15/91	1236	2950.2	8840.1	11	20	9	18	21.2	21.1	20.9	35.2	35.3	35.3	0.304	6.6	6.4	6.2	ST
17017	11/15/91	1419	2952.3	8839.8	11	20	10	19	21.1	21.1	20.8	35.3	35.2	35.2	0.288	6.6	6.4	6.4	ST
17018	11/15/91	1622	2955.2	8847.7	11	8	4	7	19.0	19.1	18.5	35.9	35.9	36.1	0.339	7.2	7.0	7.2	ST
17019	11/15/91	1723	2956.1	8848.3	11	6	3	5	18.6	18.4	18.2	36.1	36.1	36.2	0.248	7.0	7.2	7.2	ST
17020	11/15/91	1813	2954.0	8848.4	11	5	2	4	18.4	18.4	18.4	36.1	36.2	36.1	0.280	7.5	7.5	7.5	ST
17021	11/15/91	1945	2947.2	8850.4	11	6	3	5	18.5	18.3	18.3	36.2	36.2	36.2	0.235	7.6	7.6	7.6	ST
17022	11/15/91	2121	2950.1	8839.0	11	19	9	18	21.4	21.4	20.7	35.2	35.2	35.3	0.374	6.4	6.8	6.6	ST
17023	11/15/91	2346	2957.2	8839.8	11	17	8	16	20.6	20.6	20.3	35.2	35.2	35.3	0.748	6.8	6.8	6.7	ST
17024	11/16/91	0210	2951.4	8833.4	11	27	13	26	21.6	21.7	21.1	35.0	35.0	35.2	0.262	6.6	6.6	6.6	ST
17025	11/16/91	0431	3002.3	8828.8	11	24	12	23	20.6	20.6	20.6	35.3	35.3	35.3	0.350	6.6	6.6	6.4	ST
17026	11/16/91	0645	3005.8	8833.1	11	14	7	13	19.1	19.0	19.0	36.3	36.4	36.4	0.318	7.2	7.2	7.2	ST
17027	11/16/91	0917	3004.9	8845.9	11	11	5	10	18.8	18.9	19.0	36.1	36.3	37.0	0.328	7.3	7.3	7.3	ST



Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
SEAMAP ENVIRONMENTAL DATA  
LUMCON PELICAN

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)			TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX		
36815	12/ 2/91	1758	2900.0	9030.0	14	10	5	10	20.5	20.5	20.5	31.0	31.7	32.2	1.013	10.5	8.1	7.0	PN	
36816	12/ 2/91	2228	2911.4	8957.7	13	10	5	10	20.3	19.8	20.3	25.5	31.2	32.5	10.043	9.3	8.9	5.2	ST	
36817	12/ 2/91	2256	2909.2	8957.8	13	13	7	13	20.4	20.7	20.5	29.9	32.4	32.8	4.471	10.9	9.7	8.8	ST	
36818	12/ 3/91	0227	2908.6	8943.1	13	17	9	17	20.3	20.2	16.7	31.3	31.8	33.3	2.271	7.0	7.4	2.5	ST	
36819	12/ 3/91	0506	2902.4	8931.5	13	11	5	11	19.9	19.9	20.5	25.2	25.1	33.3	4.834	9.6	8.0	3.7	ST	
36820	12/ 3/91	0716	2900.0	8930.0	13	15	7	15	19.6	20.7	23.7	21.1	33.4	36.0	0.702	9.3	2.6	4.0	PN	
36821	12/ 3/91	0848	2902.3	8931.3	13	12	6	12	19.8	19.7	20.5	26.0	26.0	32.3	4.281	10.9	7.6	4.3	ST	
36822	12/ 3/91	1141	2908.9	8943.4	13	17	8	17	19.9	20.0	21.5	30.3	30.5	34.2	4.296	12.2	9.6	3.7	ST	
36823	12/ 3/91	1417	2911.0	8957.5	13	10	6	10	19.7	19.7	20.4	29.7	29.7	32.6	7.664	12.9	6.7	6.2	ST	
36824	12/ 3/91	1536	2908.1	8959.1	13	14	7	14	19.8	19.9	21.6	28.8	28.9	33.8	10.349	8.7	8.3	2.9	ST	
36826	12/ 4/91	0442	2902.8	9126.3	15	7	3	7	17.0	17.1	18.6	28.0	28.7	32.9	1.873	10.0	7.0	6.8	ST	
36827	12/ 4/91	0713	2903.1	9126.2	15	7	4	7	17.0	17.0	18.4	28.4	28.4	32.2	1.776	8.8	8.1	6.9	ST	
36828	12/ 4/91	0859	2900.0	9130.0	15	9	4	9	19.0	19.1	19.0	33.3	33.3	33.3	1.046	8.5	7.4	7.4	PN	
36829	12/ 4/91	1241	2848.8	9117.9	15	15	7	15	19.4	19.4	20.4	33.3	33.3	34.0	1.405	7.6	7.2	6.6	ST	
36830	12/ 4/91	1436	2844.9	9121.9	15	21	10	21	20.1	20.1	21.4	33.7	33.9	34.6	1.362	10.6	8.2	6.1	ST	
36831	12/ 4/91	1637	2839.8	9117.8	15	23	12	23	20.4	20.4	21.5	34.0	34.0	34.9	1.048	8.1	7.2	6.3	ST	
36832	12/ 4/91	1801	2840.4	9119.0	15	25	12	25	20.3	20.3	21.4	34.0	34.0	34.8	0.921	8.8	8.2	6.4	ST	
36833	12/ 4/91	2003	2843.8	9121.4	15	21	11	21	20.0	20.0	21.0	33.8	33.8	34.5	0.773	9.2	8.6	7.1	ST	
36834	12/ 4/91	2152	2847.3	9117.6	15	15	7	15	18.9	18.9	18.9	33.1	33.1	33.1	1.344	10.4	9.2	7.9	ST	
36835	12/ 5/91	0254	2831.6	9046.4	14	28	14	28	20.7	20.8	20.8	34.3	34.3	34.2	1.130	6.5	6.9	6.2	ST	
36836	12/ 5/91	0503	2830.3	9037.7	14	34	18	34	21.1	21.3	22.5	34.5	34.7	35.6	0.696	6.4	6.6	6.0	ST	
36837	12/ 5/91	0715	2830.5	9037.1	14	35	17	35	21.1	21.1	22.6	34.6	34.6	35.6	0.762	5.9	6.6	5.8	ST	
36838	12/ 5/91	0945	2834.4	9028.1	14	32	16	32	21.8	21.8	23.3	34.9	34.9	36.0	3.476	7.7	6.6	4.8	ST	
36839	12/ 5/91	1057	2830.0	9030.0	14	39	15	39	21.4	21.4	23.0	34.0	35.0	36.1	1.120	7.1	6.7	6.1	PN	
36840	12/ 5/91	1301	2831.9	9046.5	14	27	14	27	20.7	20.8	20.9	33.8	34.2	34.3	1.457	9.0	7.2	7.1	ST	
36841	12/ 5/91	1452	2830.0	9100.0	15	33	16	33	20.8	20.8	22.9	34.5	34.5	35.9	1.120	6.4	7.0	6.0	PN	
36842	12/ 5/91	1835	2841.0	9035.8	14	10	5	10	20.3	20.4	20.5	31.3	33.3	33.4	7.337	11.6	9.4	8.3	ST	
36843	12/ 5/91	2049	2834.5	9027.5	14	33	16	33	21.8	21.8	22.6	35.2	35.3	35.8	4.182	10.1	7.1	6.4	ST	

Table 2. Selected environmental parameters (cont'd.)

NMFS, SEFC, MS. LABS, PASCAGOULA FACILITY  
 SEAMAP ENVIRONMENTAL DATA  
 LUMCON PELICAN

STA#	DATE		POSITION		STAT ZONE	DEPTH (M)	SAMPLE DEPTHS (M)		TEMPERATURE, °C			SALINITY, PPT			CL, MG/M <sup>3</sup>	DISSOLVED OXYGEN, PPM			GEAR
	MM/DD/YY	TIME	LAT	LONG			MID	MAX	SUR	MID	MAX	SUR	MID	MAX	SUR	SUR	MID	MAX	
36844	12/ 6/91	0709	2841.1	9036.0	14	17	9	17	19.8	19.9	20.3	33.0	32.9	33.4	6.993	8.6	7.9	7.4	ST
36845	12/ 6/91	1125	2900.0	9100.0	15	6	3	6	17.1	17.1	17.1	31.2	31.2	31.2	0.945	8.0	7.7	7.5	PN

Table 3. 1991 Spring Louisiana Trawl Survey species composition list, 22 trawl stations, for those vessels that used a 40-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
Micropogonias undulatus	Atlantic croaker	1179	10.9	9	40.9
Prionotus longispinosus	bigeye searobin	1082	18.0	18	81.8
Syacium gunteri	shoal flounder	797	9.6	13	59.1
Etropus crossotus	fringed flounder	795	9.5	19	86.4
Cynoscion nothus	silver seatrout	789	15.5	11	50.0
Cynoscion arenarius	sand seatrout	757	81.1	17	77.3
Synodus foetens	inshore lizardfish	690	29.9	19	86.4
Stenotomus caprinus	longspine porgy	382	11.1	8	36.4
Prionotus tribulus	bighead searobin	358	5.3	12	54.5
Sphoeroides parvus	least puffer	347	2.5	13	59.1
Anchoa hepsetus	striped anchovy	243	4.9	9	40.9
Diplectrum bivittatum	dwarf sand perch	233	4.0	9	40.9
Citharichthys spilopterus	bay whiff	218	4.9	11	50.0
Leiostomus xanthurus	spot	148	14.0	4	18.2
Prionotus rubio	blackwing searobin	140	4.8	10	45.5
Symphurus plagiusa	blackcheek tonguefish	117	1.9	15	68.2
Centropristis philadelphica	rock sea bass	105	3.3	12	54.5
Halieutichthys aculeatus	pancake batfish	102	0.5	9	40.9
Anchoa mitchilli	bay anchovy	83	0.3	7	31.8
Serranus atrobranchus	blackear bass	80	0.4	4	18.2
Trichiurus lepturus	Atlantic cutlassfish	79	1.6	8	36.4
Upeneus parvus	dwarf goatfish	53	1.6	2	9.1
Urophycis floridana	southern hake	47	3.5	12	54.5
Saurida brasiliensis	largescale lizardfish	47	0.5	3	13.6
Peprilus burti	gulf butterfish	46	3.6	7	31.8
Bollmannia communis	ragged goby	41	0.1	3	13.6
Lepophidium breviarbe	blackedge cusk-eel	40	0.8	6	27.3
Trachurus lathamii	rough scad	37	0.4	5	22.7
Lutjanus campechanus	red snapper	30	1.5	7	31.8
Menticirrhus americanus	southern kingfish	22	3.7	5	22.7
Arius felis	hardhead catfish	22	6.5	7	31.8
Ogcocephalus declivirostris	slantbrow batfish	21	0.2	5	22.7
Pristipomoides aquilonaris	wenchman	19	0.4	2	9.1
Etrumeus teres	round herring	18	0.4	3	13.6

Table 3. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Eucinostomus gula</i>	silver jenny	16	0.4	3	13.6
<i>Antennarius radiosus</i>	singlespot frogfish	16	0.0	6	27.3
<i>Porichthys plectrodon</i>	Atlantic midshipman	15	0.3	4	18.2
<i>Diplectrum formosum</i>	sand perch	13	0.3	1	4.5
Sciaenidae	drums	12	0.0	1	4.5
<i>Scorpaena calcarata</i>	smoothhead scorpionfish	12	0.1	2	9.1
<i>Cyclopsetta chittendeni</i>	Mexican flounder	11	1.4	4	18.2
<i>Brotula barbata</i>	bearded brotula	8	0.3	2	9.1
<i>Raja texana</i>	roundel skate	7	3.3	3	13.6
<i>Astroscopus y-graecum</i>	southern stargazer	6	0.0	2	9.1
<i>Engyophrys senta</i>	spiny flounder	6	0.0	1	4.5
<i>Monacanthus hispidus</i>	planehead filefish	5	0.0	1	4.5
<i>Chaetodipterus faber</i>	Atlantic spadefish	5	0.3	2	9.1
<i>Ophidion welshi</i>	crested cusk-eel	5	0.1	1	4.5
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	5	0.3	2	9.1
<i>Lagodon rhomboides</i>	pinfish	5	0.3	1	4.5
<i>Larimus fasciatus</i>	banded drum	4	0.0	3	13.6
<i>Paralichthys lethostigma</i>	southern flounder	3	1.8	1	4.5
<i>Opsanus beta</i>	gulf toadfish	2	1.6	1	4.5
<i>Lagocephalus laevigatus</i>	smooth puffer	2	0.0	1	4.5
<i>Scomberomorus cavalla</i>	king mackerel	2	0.2	1	4.5
<i>Priacanthus arenatus</i>	bigeye	2	0.1	1	4.5
<i>Gymnothorax nigromarginatus</i>	blackedge moray	2	0.1	1	4.5
<i>Polydactylus octonemus</i>	Atlantic threadfin	2	0.0	1	4.5
<i>Urophycis cirrata</i>	gulf hake	2	0.0	1	4.5
<i>Hildebrandia flava</i>	yellow conger	2	0.1	1	4.5
<i>Ophichthus gomesi</i>	shrimp eel	1	0.1	1	4.5
<i>Equetus lanceolatus</i>	jackknife fish	1	0.0	1	4.5
<i>Ancylopsetta quadrocellata</i>	ocellated flounder	1	0.1	1	4.5
<u>Crustaceans</u>					
<i>Trachypenaeus similis</i>	roughback shrimp	8722	30.9	20	90.9
<i>Squilla empusa</i>	mantis shrimp	5614	36.9	21	95.5
<i>Sicyonia dorsalis</i>	lesser rock shrimp	3500	9.8	16	72.7
<i>Trachypenaeus constrictus</i>	roughneck shrimp	2470	7.4	11	50.0
<i>Callinectes similis</i>	lesser blue crab	2060	35.5	21	95.5
<i>Portunus gibbesii</i>	iridescent swimming crab	1752	12.1	21	95.5

Table 3. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Penaeus setiferus</i>	white shrimp	115	4.5	16	72.7
<i>Sicyonia brevirostris</i>	brown rock shrimp	67	0.4	7	31.8
<i>Penaeus aztecus</i>	brown shrimp	60	1.3	15	68.2
<i>Squilla chydrea</i>	mantis shrimp	52	0.2	3	13.6
<i>Callinectes sapidus</i>	blue crab	40	7.7	7	31.8
<i>Penaeus duorarum</i>	pink shrimp	36	1.2	8	36.4
<i>Ovalipes stephensoni</i>	coarsehand lady crab	34	0.1	6	27.3
<i>Persephona crinita</i>	pink purse crab	25	0.1	4	18.2
<i>Libinia emarginata</i>	portly spider crab	25	5.2	7	31.8
<i>Xiphopenaeus kroyeri</i>	seabob	23	0.0	2	9.1
<i>Portunus spinimanus</i>	blotched swimming crab	21	0.4	7	31.8
<i>Calappa sulcata</i>	yellow box crab	13	4.4	5	22.7
<i>Portunus spinicarpus</i>	longspine swimming crab	11	0.0	1	4.5
<i>Libinia</i> spp.	spider crabs	8	2.3	2	9.1
<i>Persephona mediterranea</i>	mottled purse crab	8	0.0	2	9.1
<i>Alpheus normanni</i>	green snapping shrimp	6	0.0	1	4.5
<i>Libinia dubia</i>	longnose spider crab	5	2.7	1	4.5
<i>Porcellana sayana</i>	spotted porcelain crab	5	0.0	1	4.5
<i>Raninoides louisianensis</i>	gulf frog crab	4	0.0	1	4.5
<i>Hepatus epheliticus</i>	calico crab	4	0.2	3	13.6
<i>Porcellana sigsbeiana</i>	striped porcelain crab	2	0.0	1	4.5
<i>Pyromaia cuspidata</i>	dartnose pear crab	2	0.0	1	4.5
<i>Upogebia affinis</i>	coastal mud shrimp	2	0.0	1	4.5
<u>Others</u>					
<i>Lolliguncula brevis</i>	Atlantic brief squid	2031	12.6	17	77.3
<i>Loligo pealeii</i>	longfin squid	359	6.3	15	68.2
<i>Loligo pleii</i>	arrow squid	124	2.3	3	13.6

Table 4a  
 Statistical Zone 13  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Spring Louisiana Trawl Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 10 fm or greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Sicyonia dorsalis</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	1336.4	103.64	2.6	1.12	2
<i>Trachypenaeus similis</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	504.5	417.27	1.7	1.49	2
<i>Squilla</i> spp.	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	425.5	65.45	3.2	0.25	2
<i>Callinectes similis</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	212.7	92.73	3.5	1.98	2
<i>Portunus gibbesii</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	70.9	70.91	0.5	0.50	2
<i>Xiphopenaeus kroyeri</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	62.7	51.82	0.1	0.12	2
<i>Bollmannia communis</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	87.3	16.36	0.2	0.00	2
<i>Syacium gunteri</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	81.8	16.36	0.9	0.37	2
<i>Diplectrum bivittatum</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	60.0	10.91	1.2	0.25	2
<i>Citharichthys spilopterus</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	38.2	5.45	0.4	0.12	2
<i>Cynoscion nothus</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	38.2	21.82	1.0	0.25	2
<i>Serranus atrobranchus</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	27.3	0.00	0.0	0.00	2
<i>Synodus foetens</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	19.1	2.73	0.4	0.12	2
<i>Symphurus plagiusa</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	13.6	2.73	0.2	0.00	2
<i>Squid</i>	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	70.9	38.18	0.9	0.12	2

Table 4b  
 Statistical Zone 13  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Spring Louisiana Trawl Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 10 fm greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	0.0	0.00	0	21.1	6.20	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	0	0.0	0.00	0	7.4	2.48	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	0	0.0	0.00	0	12.4	4.96	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	0	0.0	0.00	0	0.0	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	0.0	0.00	0	19.4	0.00	1	18.5	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	19.6	0.00	1	19.9	0.27	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	0.0	0.00	0	19.9	0.00	1	21.0	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	0.0	0.00	0	21.8	0.00	1	20.7	0.19	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	24.5	0.00	1	32.6	0.84	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	0.0	0.00	0	32.6	0.00	1	36.2	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.7	0.00	1	12.2	0.63	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.8	0.00	1	6.1	4.30	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	1.0	0.00	1	0.9	0.04	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	9.9	0.00	1	9.6	0.05	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	9.3	0.00	1	6.9	0.15	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	0.0	0.00	0	5.2	0.00	1	5.5	0.25	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 5a  
 Statistical Zone 14  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Spring Louisiana Trawl Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm or greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Squilla spp.	0.0	0.00	0.0	0.00	0	408.0	112.00	3.5	1.00	2	875.7	435.41	6.6	3.08	7
Trachypenaeus similis	0.0	0.00	0.0	0.00	0	393.0	209.00	1.6	0.91	2	620.6	378.57	3.0	1.76	7
Portunus gibbesii	0.0	0.00	0.0	0.00	0	205.0	43.00	1.4	0.36	2	598.1	258.17	4.7	2.10	7
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	43.0	33.00	0.1	0.09	2	444.5	333.79	1.5	1.21	7
Callinectes similis	0.0	0.00	0.0	0.00	0	25.0	7.00	0.5	0.05	2	238.5	95.95	5.4	2.15	7
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	262.0	226.00	1.3	1.14	2	0.0	0.00	0.0	0.00	7
Prionotus longispinosus	0.0	0.00	0.0	0.00	0	68.0	18.00	0.6	0.18	2	290.3	70.93	6.9	2.15	7
Cynoscion arenarius	0.0	0.00	0.0	0.00	0	12.0	2.00	1.1	0.41	2	192.2	173.49	22.0	19.29	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	2.0	2.00	0.0	0.05	2	210.6	90.08	6.3	2.91	7
Synodus foetens	0.0	0.00	0.0	0.00	0	16.0	12.00	0.5	0.36	2	158.3	38.73	10.8	2.40	7
Sphoeroides parvus	0.0	0.00	0.0	0.00	0	153.0	63.00	1.3	0.55	2	98.5	39.12	0.6	0.26	7
Etropus crossotus	0.0	0.00	0.0	0.00	0	22.0	0.00	0.3	0.09	2	111.6	45.46	1.7	0.91	7
Prionotus tribulus	0.0	0.00	0.0	0.00	0	158.0	28.00	1.9	0.23	2	22.1	10.49	1.4	1.01	7
Diplectrum bivittatum	0.0	0.00	0.0	0.00	0	94.0	68.00	1.6	1.14	2	58.6	26.66	1.0	0.35	7
Squid	0.0	0.00	0.0	0.00	0	186.0	150.00	3.0	2.41	2	71.3	28.18	1.6	0.62	7



Table 5b  
 Statistical Zone 14  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Spring Louisiana Trawl Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 5 fm or greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	27.7	0.45	2	108.8	21.68	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	0	12.7	0.00	2	79.2	21.93	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	0	11.8	1.82	2	27.7	8.92	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	0	3.2	2.27	2	1.5	0.73	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	20.9	0.00	1	21.3	0.02	3	20.4	0.17	7	20.9	0.00	1	0.0	0.00	0	0.0	0.00	0
Midwater temperature	20.4	0.00	1	20.8	0.21	3	20.6	0.11	7	20.9	0.00	1	0.0	0.00	0	0.0	0.00	0
Bottom temperature	19.5	0.00	1	20.1	0.11	3	20.4	0.04	7	20.7	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface salinity	26.1	0.00	1	32.9	0.43	3	32.0	0.62	7	34.6	0.00	1	0.0	0.00	0	0.0	0.00	0
Midwater salinity	22.2	0.00	1	33.0	0.51	3	34.2	0.44	7	35.3	0.00	1	0.0	0.00	0	0.0	0.00	0
Bottom salinity	27.7	0.00	1	34.5	0.22	3	35.5	0.21	7	36.1	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.8	0.00	1	2.3	0.32	3	2.4	0.79	7	1.1	0.00	1	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.7	0.00	1	1.9	0.38	3	1.3	0.25	7	1.1	0.00	1	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.9	0.00	1	2.9	0.85	3	2.4	0.74	7	1.2	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface oxygen	11.4	0.00	1	9.0	0.20	3	8.3	0.28	7	6.5	0.00	1	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	11.7	0.00	1	8.4	0.48	3	6.5	0.57	7	7.4	0.00	1	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	6.5	0.00	1	4.5	0.74	3	4.6	0.50	7	4.3	0.00	1	0.0	0.00	0	0.0	0.00	0

Table 6a  
 Statistical Zone 15  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 15 during the 1991 Spring Louisiana Trawl Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Trachypenaeus similis</i>	18.8	18.75	0.0	0.00	2	268.5	244.80	0.8	0.79	4	2623.9	769.64	8.9	2.26	5
<i>Squilla spp.</i>	39.5	35.50	0.2	0.17	2	299.0	273.93	0.9	0.72	4	1151.1	418.76	7.6	3.35	5
<i>Trachypenaeus constrictus</i>	663.0	657.00	1.5	1.53	2	824.5	733.39	2.4	2.13	4	11.2	6.12	0.0	0.02	5
<i>Sicyonia dorsalis</i>	0.0	0.00	0.0	0.00	2	2.5	1.89	0.0	0.00	4	797.2	299.93	2.1	1.06	5
<i>Callinectes similis</i>	5.8	1.75	0.2	0.07	2	32.0	16.87	0.4	0.24	4	590.6	101.75	9.3	2.76	5
<i>Portunus gibbesii</i>	13.8	3.75	0.1	0.06	2	17.0	9.00	0.1	0.04	4	221.6	18.74	1.3	0.08	5
<i>Micropogonias undulatus</i>	168.5	156.50	1.3	1.20	2	504.5	434.09	4.2	3.67	4	6.8	6.80	0.1	0.07	5
<i>Cynoscion nothus</i>	6.3	6.25	0.1	0.11	2	255.5	241.70	4.6	4.37	4	102.3	42.44	2.3	0.90	5
<i>Syacium gunteri</i>	0.0	0.00	0.0	0.00	2	1.0	1.00	0.0	0.02	4	274.3	115.70	3.3	1.14	5
<i>Etropus crossotus</i>	6.3	6.25	0.1	0.06	2	21.5	6.85	0.2	0.09	4	208.9	81.52	2.3	0.82	5
<i>Prionotus longispinosus</i>	1.3	1.25	0.0	0.00	2	7.0	5.74	0.0	0.05	4	205.0	89.73	2.7	0.87	5
<i>Synodus foetens</i>	2.0	2.00	0.0	0.05	2	5.0	2.08	0.1	0.02	4	134.6	40.11	3.7	1.06	5
<i>Cynoscion arenarius</i>	3.8	3.75	0.4	0.40	2	42.5	39.24	3.9	3.36	4	56.6	15.82	5.4	2.21	5
<i>Prionotus tribulus</i>	14.8	12.75	0.1	0.06	2	69.5	55.13	0.4	0.30	4	0.8	0.80	0.0	0.02	5
<i>Squid</i>	90.5	75.50	0.7	0.63	2	175.5	27.63	1.6	0.29	4	686.0	384.11	4.3	2.73	5

Table 6b  
 Statistical Zone 15  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Spring Louisiana Trawl Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	8.6	5.00	2	25.5	16.21	4	62.5	6.82	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	4.4	3.52	2	16.4	12.81	4	25.8	5.88	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	4.3	2.50	2	7.5	4.04	4	32.3	8.07	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.9	0.91	2	1.6	0.44	4	4.2	2.69	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	21.2	0.22	6	21.3	0.44	4	20.9	0.09	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	20.4	0.17	6	20.1	0.43	4	20.4	0.40	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	19.4	0.09	6	20.1	0.31	4	20.6	0.27	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	24.4	0.27	6	25.5	0.53	4	31.9	1.20	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	25.5	0.27	6	29.7	2.23	4	33.9	0.66	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	28.4	0.90	6	32.3	1.75	4	35.7	0.13	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	4.7	1.71	6	5.0	0.96	4	5.8	2.15	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	8.0	2.43	6	4.3	0.94	4	1.2	0.11	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	5.0	1.49	6	3.8	0.70	4	1.2	0.09	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	10.4	0.36	6	10.1	0.51	4	9.5	0.97	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	9.9	0.27	6	6.8	0.78	4	6.8	0.44	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.4	0.20	6	6.8	0.30	4	7.1	0.84	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 7. 1991 Summer Shrimp/Groundfish Survey species composition list, 297 trawl stations, for those vessels that used a 40-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
<i>Micropogonias undulatus</i>	Atlantic croaker	90821	2742.1	154	51.9
<i>Stenotomus caprinus</i>	longspine porgy	24898	664.1	178	59.9
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	19936	556.0	106	35.7
<i>Peprilus burti</i>	gulf butterflyfish	11715	605.9	126	42.4
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	10712	389.8	99	33.3
<i>Leiostomus xanthurus</i>	spot	8863	620.5	69	23.2
<i>Prionotus longispinosus</i>	bigeye searobin	8352	113.0	141	47.5
<i>Anchoa hepsetus</i>	striped anchovy	8197	135.9	56	18.9
<i>Cynoscion arenarius</i>	sand seatrout	7615	245.4	99	33.3
<i>Trachurus lathami</i>	rough scad	7014	153.4	78	26.3
<i>Serranus atrobranchus</i>	blackear bass	6440	71.4	107	36.0
<i>Upeneus parvus</i>	dwarf goatfish	5871	103.9	121	40.7
<i>Lagodon rhomboides</i>	pinfish	5173	186.0	121	40.7
<i>Synodus foetens</i>	inshore lizardfish	4500	415.1	177	59.6
<i>Cynoscion nothus</i>	silver seatrout	3632	143.1	51	17.2
<i>Diplectrum bivittatum</i>	dwarf sand perch	3268	58.7	99	33.3
<i>Centropristis philadelphica</i>	rock sea bass	3072	136.0	132	44.4
<i>Saurida caribbaea</i>	smallscale lizardfish	3028	20.4	40	13.5
<i>Saurida brasiliensis</i>	largescale lizardfish	2889	12.3	78	26.3
<i>Prionotus stearnsi</i>	shortwing searobin	2825	27.7	65	21.9
<i>Pristipomoides aquilonaris</i>	wenchman	2247	128.8	93	31.3
<i>Prionotus roseus</i>	bluespotted searobin	2026	29.2	18	6.1
<i>Polydactylus octonemus</i>	Atlantic threadfin	1951	32.7	47	15.8
<i>Prionotus paralatus</i>	Mexican searobin	1780	45.2	64	21.5
<i>Cynoscion spp.</i>	seatrouts	1674	12.5	17	5.7
<i>Arius felis</i>	hardhead catfish	1651	217.5	34	11.4
<i>Lepophidium brevibarbe</i>	blackedge cusk-eel	1628	50.8	67	22.6
<i>Prionotus tribulus</i>	bighead searobin	1596	25.1	51	17.2
<i>Haliieutichthys aculeatus</i>	pancake batfish	1387	11.4	77	25.9
<i>Syacium gunteri</i>	shoal flounder	1363	29.0	65	21.9
<i>Lagocephalus laevigatus</i>	smooth puffer	1332	45.2	76	25.6
<i>Syacium spp.</i>	lefteye flounders	1134	18.0	33	11.1
<i>Trichopsetta ventralis</i>	sash flounder	965	27.7	40	13.5
<i>Harengula jaguana</i>	scaled sardine	890	36.1	40	13.5

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Peprilus alepidotus</i>	harvestfish	837	8.8	32	10.8
<i>Porichthys plectrodon</i>	Atlantic midshipman	817	18.8	74	24.9
<i>Sphoeroides parvus</i>	least puffer	774	5.2	56	18.9
<i>Syacium papillosum</i>	dusky flounder	769	28.5	53	17.8
<i>Etropus crossotus</i>	fringed flounder	695	13.3	54	18.2
<i>Selene setapinnis</i>	Atlantic moonfish	655	25.0	58	19.5
<i>Prionotus rubio</i>	blackwing searobin	615	11.7	40	13.5
<i>Anchoa mitchilli</i>	bay anchovy	570	0.7	26	8.8
<i>Lutjanus campechanus</i>	red snapper	544	66.7	89	30.0
<i>Urophycis floridana</i>	southern hake	525	41.5	33	11.1
<i>Bollmannia communis</i>	ragged goby	517	3.8	38	12.8
<i>Steindachneria argentea</i>	luminous hake	494	5.1	4	1.3
<i>Dibranchius atlanticus</i>	Atlantic batfish	444	3.1	2	0.7
<i>Ophidion welshi</i>	crested cusk-eel	425	12.4	17	5.7
<i>Larimus fasciatus</i>	banded drum	397	18.6	23	7.7
<i>Sardinella aurita</i>	Spanish sardine	384	22.0	22	7.4
<i>Etrumeus teres</i>	round herring	371	3.9	12	4.0
<i>Engraulis eurystole</i>	silver anchovy	368	2.0	8	2.7
<i>Monacanthus hispidus</i>	planehead filefish	366	7.2	78	26.3
<i>Diplectrum formosum</i>	sand perch	350	11.4	21	7.1
<i>Mullus auratus</i>	red goatfish	348	22.2	21	7.1
<i>Anchoa nasuta</i>	longnose anchovy	339	1.2	5	1.7
<i>Lepophidium</i> spp.	cusk-eels	331	7.2	19	6.4
<i>Eucinostomus gula</i>	silver jenny	326	10.7	24	8.1
<i>Synodus poeyi</i>	offshore lizardfish	320	2.3	40	13.5
<i>Stellifer lanceolatus</i>	star drum	275	5.0	8	2.7
<i>Chaetodipterus faber</i>	Atlantic spadefish	258	4.7	15	5.1
<i>Symphurus plagiusa</i>	blackcheek tonguefish	249	5.0	36	12.1
<i>Bagre marinus</i>	gafttopsail catfish	242	2.4	6	2.0
<i>Cyclopsetta chittendeni</i>	Mexican flounder	227	22.0	36	12.1
<i>Prionotus scitulus</i>	leopard searobin	224	2.5	10	3.4
<i>Scorpaena calcarata</i>	smoothhead scorpionfish	223	3.4	21	7.1
<i>Bregmaceros atlanticus</i>	antenna codlet	222	0.5	21	7.1
<i>Rhomboplites aurorubens</i>	vermilion snapper	221	24.5	10	3.4
<i>Brotula barbata</i>	bearded brotula	204	36.2	36	12.1
<i>Hoplunnis macrurus</i>	freckled pike-conger	203	4.8	24	8.1
<i>Menticirrhus americanus</i>	southern kingfish	197	24.9	25	8.4

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER	TOTAL WEIGHT	NUMBER OF	% FREQUENCY OF OCCURRENCE
		CAUGHT	CAUGHT (KG)	TOWS WHERE CAUGHT	
<i>Decapterus punctatus</i>	round scad	186	8.6	15	5.1
<i>Citharichthys spilopterus</i>	bay whiff	180	3.0	29	9.8
<i>Scomberomorus maculatus</i>	Spanish mackerel	176	14.2	24	8.1
<i>Symphurus civitatus</i>	offshore tonguefish	170	3.5	12	4.0
<i>Orthopristis chrysoptera</i>	pigfish	168	14.8	27	9.1
<i>Haemulon aurolineatum</i>	tomtate	154	13.3	11	3.7
<i>Ogcocephalus</i> spp.	batfishes	154	3.9	21	7.1
<i>Antennarius radiosus</i>	singlespot frogfish	150	3.6	23	7.7
<i>Hildebrandia flava</i>	yellow conger	149	12.5	27	9.1
<i>Caulolatilus intermedius</i>	anchor tilefish	142	19.2	25	8.4
<i>Urophycis cirrata</i>	gulf hake	140	4.7	13	4.4
<i>Balistes capriscus</i>	gray triggerfish	138	26.8	35	11.8
<i>Lutjanus synagris</i>	lane snapper	128	21.7	22	7.4
<i>Priacanthus arenatus</i>	bigeye	127	11.4	31	10.4
<i>Anchoa</i> spp.	anchovies	122	2.0	6	2.0
<i>Symphurus diomedianus</i>	spottedfin tonguefish	118	3.5	15	5.1
<i>Ophidion holbrookii</i>	bank cusk-eel	117	3.4	9	3.0
<i>Bellator militaris</i>	horned searobin	113	4.0	14	4.7
<i>Opisthonema oglinum</i>	Atlantic thread herring	112	6.1	22	7.4
<i>Equetus umbrosus</i>	cubbyu	111	14.5	11	3.7
<i>Scomberomorus cavalla</i>	king mackerel	110	8.5	14	4.7
<i>Sphyaena guachancho</i>	guaguanche	94	14.3	25	8.4
<i>Brevoortia patronus</i>	gulf menhaden	89	4.7	7	2.4
<i>Anchoviella perfasciata</i>	flat anchovy	82	0.5	7	2.4
<i>Kathetostoma albigutta</i>	lancer stargazer	77	4.8	18	6.1
<i>Ancylopsetta dilecta</i>	three-eye flounder	74	8.9	23	7.7
<i>Gymnothorax saxicola</i>	honeycomb moray	73	6.4	7	2.4
<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	72	29.7	17	5.7
<i>Neomerinthe hemingwayi</i>	spinycheek scorpionfish	72	15.2	7	2.4
<i>Centropristis ocyura</i>	bank sea bass	68	3.6	7	2.4
<i>Pontinus longispinis</i>	longspine scorpionfish	67	2.0	8	2.7
<i>Equetus acuminatus</i>	high-hat	66	2.8	8	2.7
<i>Selar crumenophthalmus</i>	bigeye scad	65	4.3	18	6.1
<i>Anchoa lyolepis</i>	dusky anchovy	62	0.4	6	2.0
<i>Bathyanthias mexicanus</i>	yellowtail bass	57	1.8	8	2.7
<i>Ogcocephalus declivirostris</i>	slantbrow batfish	57	4.0	16	5.4
<i>Paraconger caudilimbatus</i>	margintail conger	55	4.5	3	1.0

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Serraniculus pumilio</i>	pygmy sea bass	54	0.2	8	2.7
<i>Caranx crysos</i>	blue runner	52	11.8	15	5.1
<i>Gymnachirus texae</i>	fringed sole	52	1.8	16	5.4
<i>Neobythites gillii</i>	cusk-eel	51	0.6	6	2.0
<i>Gymnothorax nigromarginatus</i>	blackedge moray	49	5.1	10	3.4
<i>Engyophrys senta</i>	spiny flounder	48	0.4	17	5.7
<i>Paralichthys lethostigma</i>	southern flounder	42	12.8	20	6.7
<i>Chilomycterus schoepfi</i>	striped burrfish	40	1.3	6	2.0
<i>Priacanthus cruentatus</i>	glasseye snapper	38	0.7	5	1.7
Bothidae	lefteye flounders	37	0.4	3	1.0
<i>Raja texana</i>	roundel skate	33	11.9	20	6.7
<i>Prionotus ophryas</i>	bandtail searobin	32	1.1	9	3.0
<i>Prionotus martis</i>	barred searobin	30	0.4	2	0.7
<i>Decodon puellaris</i>	red hogfish	29	1.0	7	2.4
<i>Selene vomer</i>	lookdown	29	0.8	4	1.3
<i>Seriola dumerili</i>	greater amberjack	27	5.8	12	4.0
<i>Trichopsetta</i> spp.	flounders	27	1.4	3	1.0
<i>Ancylopsetta quadrocellata</i>	ocellated flounder	26	5.5	15	5.1
<i>Serranus phoebe</i>	tattler	26	0.5	3	1.0
Saurida spp.	lizardfishes	26	0.1	2	0.7
<i>Ophichthus gomesi</i>	shrimp eel	25	4.4	4	1.3
<i>Etropus rimosus</i>	gray flounder	24	0.1	6	2.0
<i>Sphoeroides spengleri</i>	bandtail puffer	24	0.1	3	1.0
<i>Etropus microstomus</i>	smallmouth flounder	23	0.1	5	1.7
Gobiidae	gobies	23	0.0	2	0.7
<i>Scomber japonicus</i>	chub mackerel	23	0.8	3	1.0
<i>Synagrops spinosus</i>	keelcheek bass	23	0.3	6	2.0
<i>Equetus</i> spp.	drums	23	1.9	6	2.0
<i>Anchoa cubana</i>	Cuban anchovy	22	0.1	2	0.7
<i>Pogonias cromis</i>	black drum	22	0.7	1	0.3
<i>Symphurus</i> spp.	tonguefishes	22	0.3	1	0.3
<i>Peristedion gracile</i>	slender searobin	20	0.4	7	2.4
<i>Caranx</i> spp.	jacks	20	0.7	3	1.0
<i>Sphoeroides</i> spp.	puffers	18	0.1	4	1.3
<i>Prionotus</i> spp.	searobins	17	0.3	1	0.3
<i>Ariomma bondi</i>	silver-rag	17	0.4	2	0.7
<i>Ophidion grayi</i>	blotched cusk-eel	17	0.9	2	0.7

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Lepophidium jeannae</i>	mottled cusk-eel	17	1.2	2	0.7
<i>Astroscoptes y-graecum</i>	southern stargazer	16	0.5	3	1.0
<i>Sphoeroides dorsalis</i>	marbled puffer	16	0.3	5	1.7
<i>Menticirrhus littoralis</i>	gulf kingfish	16	2.3	3	1.0
<i>Rhinoptera bonasus</i>	cownose ray	16	89.9	4	1.3
<i>Hildebrandia gracilior</i>	whiptail conger	15	1.5	1	0.3
<i>Euthynnus alletteratus</i>	little tunny	15	2.3	1	0.3
<i>Paralichthys squamilentus</i>	broad flounder	14	0.8	3	1.0
<i>Antennarius striatus</i>	striated frogfish	12	0.3	6	2.0
<i>Calamus leucosteus</i>	whitebone porgy	12	3.9	3	1.0
<i>Etropus cyclosquamus</i>	shelf flounder	11	0.0	6	2.0
<i>Chascanopsetta lugubris</i>	pelican flounder	11	0.0	1	0.3
<i>Gobionellus hastatus</i>	sharptail goby	10	0.0	1	0.3
<i>Trachinocephalus myops</i>	snakefish	10	1.0	5	1.7
<i>Gymnachirus melas</i>	naked sole	9	0.7	2	0.7
<i>Aluterus schoepfi</i>	orange filefish	9	2.1	5	1.7
<i>Ogcocephalus pantostictus</i>	spotted batfish	8	1.8	5	1.7
<i>Calamus nodosus</i>	knobbed porgy	8	6.8	3	1.0
<i>Pagrus pagrus</i>	red porgy	8	3.2	2	0.7
<i>Bembrops gobioides</i>	goby flathead	8	0.4	1	0.3
<i>Epinephelus flavolimbatus</i>	yellowedge grouper	8	0.3	5	1.7
Carangidae	jacks	7	0.4	2	0.7
<i>Scorpaena brasiliensis</i>	barbfish	7	1.3	4	1.3
<i>Syacium micrurum</i>	channel flounder	7	0.4	3	1.0
<i>Achirus lineatus</i>	lined sole	6	0.0	1	0.3
<i>Lactophrys triqueter</i>	smooth trunkfish	6	0.3	1	0.3
<i>Prionotus alatus</i>	spiny searobin	6	0.0	2	0.7
<i>Alectis ciliaris</i>	African pompano	6	0.1	2	0.7
<i>Selene</i> spp.	moonfishes	6	0.0	1	0.3
<i>Pristigenys alta</i>	short bigeye	6	0.0	2	0.7
<i>Conger oceanicus</i>	conger eel	6	0.9	1	0.3
<i>Dasyatis say</i>	bluntnose stingray	6	2.5	3	1.0
<i>Mustelus norrisi</i>	Florida smoothhound	5	12.4	4	1.3
<i>Synodus intermedius</i>	sand diver	5	0.4	3	1.0
<i>Scorpaena dispar</i>	hunchback scorpionfish	5	0.9	2	0.7
<i>Chilomycterus atinga</i>	spotted burrfish	5	0.0	1	0.3
<i>Trinectes maculatus</i>	hogchoker	5	0.0	3	1.0



Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Citharichthys cornutus</i>	horned whiff	5	0.0	3	1.0
<i>Citharichthys macrops</i>	spotted whiff	4	0.1	3	1.0
<i>Etropus</i> spp.	lefteye flounders	4	0.0	1	0.3
<i>Trinectes inscriptus</i>	scrawled sole	4	0.0	1	0.3
<i>Ogcocephalus radiatus</i>	polka-dot batfish	4	2.3	1	0.3
<i>Symphurus pelicanus</i>	longtail tonguefish	4	0.2	1	0.3
<i>Opistognathus</i> spp.	jawfishes	4	0.2	2	0.7
<i>Chaetodon aya</i>	bank butterflyfish	4	0.3	1	0.3
<i>Rypticus maculatus</i>	whitespotted soapfish	4	0.4	2	0.7
<i>Hippocampus erectus</i>	lined seahorse	4	0.0	2	0.7
<i>Rypticus saponaceus</i>	greater soapfish	3	0.0	1	0.3
<i>Apogon pseudomaculatus</i>	twospot cardinalfish	3	0.0	1	0.3
<i>Rachycentron canadum</i>	cobia	3	1.5	2	0.7
<i>Raja olseni</i>	spreadfin skate	3	6.3	2	0.7
<i>Aluterus monoceros</i>	unicorn filefish	3	0.9	2	0.7
Ogcocephalidae	batfishes	3	0.1	2	0.7
Cynoglossidae	tonguefishes	3	0.0	1	0.3
<i>Diodon hystrix</i>	porcupinefish	2	0.0	1	0.3
<i>Ogcocephalus radiatus</i>	polka-dot batfish	2	0.0	2	0.7
<i>Zalieutes mcgintyi</i>	tricorn batfish	2	0.0	1	0.3
<i>Chromis enchrysurus</i>	yellowtail reeffish	2	0.2	1	0.3
<i>Mulloidichthys martinicus</i>	yellow goatfish	2	0.3	1	0.3
<i>Pseudupeneus maculatus</i>	spotted goatfish	2	0.1	1	0.3
<i>Lonchopisthus micrognathus</i>	swordtail jawfish	2	0.0	1	0.3
Ophidiidae	cusk-eels	2	0.0	1	0.3
<i>Scomber</i> spp.	mackerals	2	0.0	1	0.3
<i>Carcharhinus limbatus</i>	blacktip shark	2	3.9	1	0.3
<i>Carcharhinus falciformis</i>	silky shark	2	1.1	1	0.3
<i>Carcharhinus acronotus</i>	blacknose shark	2	5.7	1	0.3
<i>Squatina dumeril</i>	Atlantic angel shark	2	0.8	1	0.3
<i>Physiculus fulvus</i>	metallic codling	2	0.0	1	0.3
<i>Pomatomus saltatrix</i>	bluefish	2	0.3	1	0.3
<i>Apogon</i> spp.	cardinalfishes	2	0.0	1	0.3
Apogonidae	cardinalfishes	2	0.0	1	0.3
<i>Hemanthias leptus</i>	longtail bass	2	0.0	1	0.3
<i>Fistularia tabacaria</i>	bluespotted cornetfish	2	0.3	2	0.7
Serranidae	sea basses	2	0.0	1	0.3

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Cynoscion nebulosus</i>	spotted seatrout	2	0.5	1	0.3
<i>Bairdiella chrysoura</i>	silver perch	1	0.0	1	0.3
<i>Menticirrhus saxatilis</i>	northern kingfish	1	0.3	1	0.3
<i>Hippocampus zosterae</i>	dwarf seahorse	1	0.0	1	0.3
<i>Epinephelus nigritus</i>	warsaw grouper	1	5.5	1	0.3
<i>Mycteroperca phenax</i>	scamp	1	0.1	1	0.3
<i>Anthias</i> spp.	sea basses	1	0.0	1	0.3
<i>Echeneis naucrates</i>	sharksucker	1	0.0	1	0.3
<i>Echiophis intertinctus</i>	spotted spoon-nose eel	1	0.1	1	0.3
<i>Cypselurus exsiliens</i>	bandwing flyingfish	1	0.0	1	0.3
<i>Gymnothorax kolpos</i>	blacktail moray	1	0.2	1	0.3
<i>Mustelus canis</i>	smooth dogfish	1	0.6	1	0.3
<i>Myliobatis goodei</i>	southern eagle ray	1	2.6	1	0.3
<i>Dasyatis sabina</i>	Atlantic stringray	1	0.2	1	0.3
Engraulidae	anchovies	1	0.0	1	0.3
Scombridae	mackerals	1	0.0	1	0.3
<i>Foetorepus agassizi</i>	spotfin dragonet	1	0.0	1	0.3
<i>Epinnula orientalis</i>	sackfish	1	0.1	1	0.3
<i>Diplogrammus pauciradiatus</i>	spotted dragonet	1	0.0	1	0.3
<i>Bembrops anatirostris</i>	duckbill flathead	1	0.0	1	0.3
<i>Ogcocephalus corniger</i>	longnose batfish	1	0.1	1	0.3
<i>Canthidermis sufflamen</i>	ocean triggerfish	1	1.4	1	0.3
<i>Aluterus heudeloti</i>	dotterel filefish	1	0.0	1	0.3
<i>Paralichthys albigutta</i>	gulf flounder	1	0.1	1	0.3
<i>Monolene sessilicauda</i>	deepwater flounder	1	0.0	1	0.3
<u>Crustaceans</u>					
<i>Trachypenaeus</i> spp.	roughneck shrimps	51494	201.8	78	26.3
<i>Penaeus aztecus</i>	brown shrimp	40351	624.3	218	73.4
<i>Callinectes similis</i>	lesser blue crab	16326	258.2	168	56.6
<i>Squilla empusa</i>	mantis shrimp	16224	157.7	117	39.4
<i>Trachypenaeus similis</i>	roughback shrimp	13985	58.5	41	13.8
<i>Trachypenaeus constrictus</i>	roughneck shrimp	7749	28.1	14	4.7
<i>Sicyonia brevirostris</i>	brown rock shrimp	4878	51.2	85	28.6
<i>Solenocera</i> spp.	humpback shrimps	4078	17.4	43	14.5
<i>Portunus gibbesii</i>	irridescent swimming crab	3751	22.9	94	31.6

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Sicyonia dorsalis</i>	lesser rock shrimp	3592	12.7	73	24.6
<i>Portunus spinicarpus</i>	longspine swimming crab	3373	26.0	60	20.2
<i>Penaeus duorarum</i>	pink shrimp	3130	62.6	63	21.2
<i>Parapenaeus</i> spp.	penaeid shrimps	2648	6.4	10	3.4
<i>Squilla chydæa</i>	mantis shrimp	2630	25.4	59	19.9
<i>Penaeus setiferus</i>	white shrimp	1265	48.8	65	21.9
<i>Callinectes sapidus</i>	blue crab	1243	145.6	72	24.2
<i>Xiphopenaeus kroyeri</i>	seabob	693	3.5	6	2.0
<i>Portunus spinimanus</i>	blotched swimming crab	629	16.5	47	15.8
<i>Squilla</i> spp.	mantis shrimps	427	5.0	3	1.0
<i>Calappa sulcata</i>	yellow box crab	246	60.4	54	18.2
<i>Anasimus latus</i>	stilt spider crab	171	2.4	16	5.4
<i>Ovalipes stephensoni</i>	coarsehand lady crab	98	1.3	10	3.4
<i>Arenæus cribrarius</i>	speckled swimming crab	85	1.3	10	3.4
<i>Sicyonia stimpsoni</i>	eyespot rock shrimp	83	0.0	4	1.3
<i>Hepatus epheliticus</i>	calico crab	54	5.0	18	6.1
<i>Ovalipes</i> spp.	lady crabs	50	1.1	5	1.7
<i>Sicyonia burkenroadi</i>	spiny rock shrimp	49	0.0	4	1.3
Portunidae	swimming crabs	47	1.5	3	1.0
<i>Ranilia muricata</i>	muricate frog crab	46	0.3	5	1.7
<i>Portunus</i> spp.	swimming crabs	45	0.2	1	0.3
Majidae	spider crabs	44	0.5	3	1.0
<i>Ovalipes ocellatus</i>	lady crab	35	0.7	1	0.3
<i>Libinia emarginata</i>	portly spider crab	33	5.7	16	5.4
<i>Raninoides louisianensis</i>	gulf frog crab	33	0.6	5	1.7
<i>Stenorhynchus seticornis</i>	yellowline arrow crab	30	0.0	6	2.0
<i>Libinia dubia</i>	longnose spider crab	29	2.5	10	3.4
<i>Solenocera necopina</i>	deepwater humpback shrimp	28	0.3	1	0.3
Xanthidae	mud crabs	21	0.4	6	2.0
<i>Scyllarus chacei</i>	chace slipper lobster	20	0.2	3	1.0
<i>Ovalipes floridanus</i>	Florida lady crab	13	0.1	4	1.3
<i>Porcellana sigsbeiana</i>	striped porcelain crab	10	0.0	1	0.3
<i>Persephona</i> spp.	purse crabs	10	0.1	5	1.7
<i>Portunus sayi</i>	sargassum swimming crab	9	0.3	1	0.3
<i>Parthenope</i> spp.	elbow crabs	9	0.0	1	0.3
<i>Ethusa microphthalma</i>	broadback Sumo crab	8	0.0	2	0.7
Paguridae	right-handed hermit crabs	8	0.7	4	1.3

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Persephona crinita</i>	pink purse crab	8	0.0	2	0.7
<i>Petrochirus diogenes</i>	giant hermit crab	6	0.3	2	0.7
<i>Stenocionops spinosissimus</i>	tenspine spider crab	6	1.3	2	0.7
<i>Calappa flammea</i>	flame box crab	6	1.2	2	0.7
Dromiidae	sponge crabs	5	0.1	2	0.7
<i>Porcellana sayana</i>	spotted porcelain crab	5	0.0	1	0.3
Caridea	caridean shrimps	5	0.0	3	1.0
<i>Myropsis quinquespinosa</i>	fivespine purse crab	4	0.0	1	0.3
<i>Alpheus</i> spp.	snapping shrimps	4	0.0	1	0.3
<i>Persephona mediterranea</i>	mottled purse crab	3	0.0	2	0.7
<i>Plesionika</i> spp.	pandalid shrimps	3	0.0	1	0.3
<i>Ocypode quadrata</i>	Atlantic ghost crab	3	0.0	1	0.3
<i>Leiolambrus nitidus</i>	white elbow crab	3	0.0	1	0.3
Parthenopidae	elbow crabs	2	0.0	2	0.7
<i>Scyllarides nodifer</i>	ridged slipper lobster	2	0.7	2	0.7
<i>Munida forceps</i>	squat lobster	2	0.0	1	0.3
<i>Scyllarides</i> spp.	slipper lobsters	1	0.0	1	0.3
<i>Ocypode</i> spp.	ghost crabs	1	0.0	1	0.3
Porcellanidae	porcelain crabs	1	0.0	1	0.3
<i>Metoporphaphis calcarata</i>	false arrow crab	1	0.0	1	0.3
<i>Nibilia antilocapra</i>	shorthorn spiny crab	1	0.0	1	0.3
<i>Menippe adina</i>	Gulf stone crab	1	0.0	1	0.3
<i>Menippe mercenaria</i>	Florida stone crab	1	0.0	1	0.3
<i>Libinia</i> spp.	spider crabs	1	0.0	1	0.3
<i>Palaemonetes</i> spp.	shore shrimps	1	0.0	1	0.3
Stomatopoda	stomatopods	1	0.1	1	0.3
Stenothoidea	seed amphipods	1	0.0	1	0.3
<i>Lysiosquilla scabricauda</i>	mantis shrimp	1	0.1	1	0.3
<i>Dromidia</i> spp.	sponge crabs	1	0.0	1	0.3
<u>Others</u>					
<i>Loligo pealeii</i>	longfin squid	12569	240.1	115	38.7
<i>Lolliguncula brevis</i>	Atlantic brief squid	5672	65.5	118	39.7
<i>Amusium papyraceum</i>	paper scallop	3253	24.4	53	17.8
<i>Loligo</i> spp.	squids	2917	35.7	39	13.1
<i>Loligo pleii</i>	arrow squid	2365	51.1	21	7.1

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Mellita quinquiesperforata</i>	five-slotted sand dollar	1664	3.0	2	0.7
Myopsida	squids	482	5.5	2	0.7
Asteroidea	starfishes	381	3.7	43	14.5
<i>Aurelia</i> spp.	jellyfishes	177	6.5	16	5.4
<i>Chrysaora quinquecirrha</i>	sea nettle	156	8.0	3	1.0
<i>Clypeaster</i> spp.	cake urchins	123	20.6	15	5.1
Nudibranchia	sea slugs	58	9.4	3	1.0
<i>Arca</i> spp.	arcs	50	2.0	1	0.3
Gastropoda	snails	47	0.1	2	0.7
Ophiuroidea	brittlestars	44	0.1	4	1.3
<i>Renilla mulleri</i>	short-stemmed sea pansy	37	0.2	4	1.3
<i>Mercenaria</i> spp.	quahogs	24	0.0	2	0.7
Anthozoa	anthozoans	21	0.1	7	2.4
<i>Luidia</i> spp.	sea stars	19	0.8	4	1.3
<i>Pteria colymbus</i>	Atlantic wing-oyster	16	0.1	1	0.3
<i>Cymatium pileare</i>	Atlantic hairy triton	14	0.0	1	0.3
Gorgonidae	gorgonians	12	0.3	3	1.0
<i>Mercenaria mercenaria</i>	northern quahog	12	0.0	1	0.3
<i>Rossia</i> spp.	bob-tailed squids	8	0.0	2	0.7
<i>Dinocardium</i> spp.	cockles	8	0.0	1	0.3
Pelecypoda	bivalve mollusks	7	0.2	5	1.7
<i>Echinarachnius parma</i>	sanddollar	7	0.6	2	0.7
Turbellaria	flatworms	6	0.0	2	0.7
<i>Luidia clathrata</i>	sea star	6	0.0	1	0.3
<i>Distorsio</i> spp.	distorsios	5	0.1	1	0.3
Ophiothricidae	spiny brittle stars	5	0.1	1	0.3
<i>Astarte</i> spp.	astartes	4	0.2	1	0.3
<i>Ophionereis reticulata</i>	reticulate brittle star	4	0.0	1	0.3
<i>Dosinia</i> spp.	dosinias	4	0.1	1	0.3
<i>Octopus vulgaris</i>	common Atlantic octopus	4	1.1	2	0.7
Octopoda	octopuses	3	1.0	1	0.3
<i>Gorgonocephalus</i> spp.	basket stars	3	0.1	2	0.7
Porifera	sponges	3	0.2	3	1.0
<i>Architectonica nobilis</i>	common sundial	3	0.0	1	0.3
<i>Neverita duplicata</i>	shark eye	2	0.0	2	0.7
<i>Carditamera floridana</i>	broad-ribbed carditid	2	0.1	1	0.3
<i>Argopecten gibbus</i>	calico scallop	2	0.0	2	0.7

Table 7. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Noetia ponderosa</i>	ponderous ark	2	0.0	1	0.3
<i>Murex</i> spp.	murexes	2	0.2	1	0.3
<i>Distorsio clathrata</i>	Atlantic distorsio	2	0.0	1	0.3
<i>Ctenophora</i>	comb jellies	2	0.0	1	0.3
<i>Echinodermata</i>	echinoderms	2	0.0	1	0.3
<i>Pyrosoma</i> spp.	pelagic tunicates	2	0.2	1	0.3
<i>Chione clenchi</i>	Clench venus	2	0.0	1	0.3
<i>Tellina</i> spp.	tellin shells	2	0.0	1	0.3
<i>Laevicardium pictum</i>	painted eggcockle	2	0.0	1	0.3
<i>Semirossia tenera</i>	lesser shining bobtail	2	0.0	1	0.3
<i>Echinoidea</i>	echinoderms	2	0.0	1	0.3
<i>Alcyonidiidae</i>	bryozoans	1	0.0	1	0.3
<i>Oliva sayana</i>	lettered olive	1	0.0	1	0.3
<i>Thais haemastoma</i>	rocksnail	1	0.0	1	0.3
<i>Anadara baughmani</i>	Baughman's ark	1	0.0	1	0.3
<i>Atrina seminuda</i>	half-naked penshell	1	0.3	1	0.3

Table 8. 1991 Summer Shrimp/Groundfish Survey species composition list, 80 trawl stations, for those vessels that used a 20-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
<i>Micropogonias undulatus</i>	Atlantic croaker	7366	154.9	61	76.3
<i>Cynoscion nothus</i>	silver seatrout	798	30.7	29	36.2
<i>Leiostomus xanthurus</i>	spot	513	9.0	29	36.2
<i>Polydactylus octonemus</i>	Atlantic threadfin	309	6.2	33	41.3
<i>Cynoscion arenarius</i>	sand seatrout	288	6.0	40	50.0
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	213	3.6	26	32.5
<i>Syacium gunteri</i>	shoal flounder	193	2.0	27	33.8
<i>Arius felis</i>	hardhead catfish	186	6.3	16	20.0
<i>Stenotomus caprinus</i>	longspine porgy	167	1.4	9	11.3
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	153	3.8	35	43.8
<i>Selene setapinnis</i>	Atlantic moonfish	116	0.3	19	23.7
<i>Peprilus alepidotus</i>	harvestfish	101	0.6	27	33.8
<i>Peprilus burti</i>	gulf butterfish	97	0.8	24	30.0
<i>Priacanthus arenatus</i>	bigeye	88	0.0	1	1.3
<i>Larimus fasciatus</i>	banded drum	80	2.6	14	17.5
<i>Lagodon rhomboides</i>	pinfish	78	1.9	20	25.0
<i>Stellifer lanceolatus</i>	star drum	36	0.5	12	15.0
<i>Prionotus longispinosus</i>	bigeye searobin	36	0.0	11	13.8
<i>Prionotus tribulus</i>	bighead searobin	27	0.1	19	23.7
<i>Brevoortia patronus</i>	gulf menhaden	22	1.1	11	13.8
<i>Chaetodipterus faber</i>	Atlantic spadefish	18	0.2	8	10.0
<i>Scomberomorus maculatus</i>	Spanish mackerel	16	0.4	4	5.0
<i>Dorosoma petenense</i>	threadfin shad	14	0.3	2	2.5
<i>Etropus crossotus</i>	fringed flounder	13	0.1	9	11.3
<i>Upeneus parvus</i>	dwarf goatfish	10	0.1	4	5.0
<i>Bairdiella chrysoura</i>	silver perch	10	0.3	5	6.3
<i>Anchoa mitchilli</i>	bay anchovy	9	0.0	6	7.5
<i>Anchoa nasuta</i>	longnose anchovy	8	0.0	4	5.0
<i>Selene vomer</i>	lookdown	6	0.0	5	6.3
<i>Citharichthys spilopterus</i>	bay whiff	6	0.0	5	6.3
<i>Lagocephalus laevigatus</i>	smooth puffer	6	0.1	5	6.3
<i>Orthopristis chrysoptera</i>	pigfish	5	0.1	4	5.0
<i>Trachinotus falcatus</i>	permit	4	0.0	2	2.5
<i>Serraniculus pumilio</i>	pygmy sea bass	4	0.0	4	5.0

Table 8. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Sardinella aurita</i>	Spanish sardine	4	0.2	2	2.5
<i>Symphurus plagiusa</i>	blackcheek tonguefish	4	0.1	4	5.0
<i>Symphurus urospilus</i>	spottail tonguefish	3	0.0	2	2.5
<i>Monacanthus hispidus</i>	planehead filefish	3	0.0	3	3.7
<i>Balistes capriscus</i>	gray triggerfish	3	0.0	2	2.5
<i>Halieutichthys aculeatus</i>	pancake batfish	3	0.0	2	2.5
<i>Menticirrhus littoralis</i>	gulf kingfish	3	0.1	1	1.3
<i>Anchoa hepsetus</i>	striped anchovy	3	0.0	2	2.5
<i>Harengula jaguana</i>	scaled sardine	2	0.0	1	1.3
<i>Synodus foetens</i>	inshore lizardfish	2	0.1	2	2.5
<i>Diplectrum bivittatum</i>	dwarf sand perch	2	0.1	2	2.5
<i>Hippocampus erectus</i>	lined seahorse	2	0.0	2	2.5
<i>Bagre marinus</i>	gafftopsail catfish	2	0.1	2	2.5
<i>Trachurus lathami</i>	rough scad	2	0.0	2	2.5
<i>Lutjanus synagris</i>	lane snapper	2	0.0	1	1.3
<i>Lutjanus campechanus</i>	red snapper	2	0.0	2	2.5
<i>Citharichthys macrops</i>	spotted whiff	2	0.0	2	2.5
<i>Ogcocephalus radiatus</i>	polka-dot batfish	2	0.0	1	1.3
<i>Porichthys plectrodon</i>	Atlantic midshipman	2	0.1	2	2.5
<i>Chilomycterus schoepfi</i>	striped burrfish	1	0.0	1	1.3
<i>Trinectes maculatus</i>	hogchoker	1	0.0	1	1.3
<i>Ancylopsetta quadrocellata</i>	ocellated flounder	1	0.1	1	1.3
<i>Prionotus rubio</i>	blackwing searobin	1	0.0	1	1.3
<i>Caranx hippos</i>	crevalle jack	1	0.0	1	1.3
<i>Raja eglanteria</i>	clearnose skate	1	0.0	1	1.3
<u>Crustaceans</u>					
<i>Penaeus aztecus</i>	brown shrimp	568	4.5	48	60.0
<i>Callinectes similis</i>	lesser blue crab	148	1.4	24	30.0
<i>Penaeus setiferus</i>	white shrimp	106	2.9	26	32.5
<i>Callinectes sapidus</i>	blue crab	86	3.5	17	21.3
<i>Trachypenaeus similis</i>	roughback shrimp	59	0.0	16	20.0
<i>Libinia dubia</i>	longnose spider crab	57	0.0	16	20.0
<i>Sicyonia dorsalis</i>	lesser rock shrimp	47	0.1	12	15.0
<i>Portunus gibbesii</i>	iridescent swimming crab	35	0.1	21	26.3
<i>Squilla empusa</i>	mantis shrimp	33	0.1	17	21.3



Table 8. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Portunus spinimanus</i>	blotched swimming crab	27	0.5	9	11.3
<i>Calappa sulcata</i>	yellow box crab	18	1.0	8	10.0
<i>Xiphopenaeus kroyeri</i>	seabob	15	0.0	7	8.8
<i>Ovalipes floridanus</i>	Florida lady crab	14	0.2	7	8.8
<i>Sicyonia brevirostris</i>	brown rock shrimp	8	0.0	4	5.0
<i>Penaeus duorarum</i>	pink shrimp	6	0.0	5	6.3
<i>Persephona crinita</i>	pink purse crab	6	0.0	3	3.7
<i>Petrochirus diogenes</i>	giant hermit crab	6	0.1	3	3.7
<i>Lysmata wurdemanni</i>	peppermint shrimp	5	0.0	2	2.5
<i>Trachypenaeus constrictus</i>	roughneck shrimp	4	0.0	3	3.7
<i>Pagurus pollicaris</i>	flatclaw hermit crab	3	0.0	3	3.7
<i>Persephona mediterranea</i>	mottled purse crab	3	0.0	2	2.5
<i>Libinia emarginata</i>	portly spider crab	2	0.0	2	2.5
<i>Arenaeus cribrarius</i>	speckled swimming crab	2	0.1	2	2.5
<i>Dromidia antillensis</i>	hairy sponge crab	2	0.0	2	2.5
<i>Hepatus epheliticus</i>	calico crab	2	0.0	2	2.5
<i>Speocarcinus lobatus</i>	gulf squareback crab	1	0.0	1	1.3
<i>Portunus ventralis</i>	swimming crab	1	0.0	1	1.3
<i>Porcellana sayana</i>	spotted porcelain crab	1	0.0	1	1.3
<i>Portunus sayi</i>	sargassum swimming crab	1	0.0	1	1.3
<i>Alpheus heterochelis</i>	big-clawed snapping shrimp	1	0.0	1	1.3
<i>Squilla neglecta</i>	mantis shrimp	1	0.0	1	1.3
<u>Others</u>					
<i>Renilla mulleri</i>	short-stemmed sea pansy	974	4.6	33	41.3
<i>Lolliguncula brevis</i>	Atlantic brief squid	824	12.5	51	63.8
<i>Chrysaora quinquecirrha</i>	sea nettle	674	23.3	22	27.5
Actinidae	sea anemones	107	0.7	16	20.0
<i>Luidia clathrata</i>	sea star	70	1.3	17	21.3
<i>Loligo pealeii</i>	longfin squid	40	1.1	5	6.3
Asteroidea	starfishes	25	0.2	8	10.0
<i>Sargassum</i> spp.	sargassum	21	1.8	17	21.3
<i>Astropecten antillensis</i>	beaded sea star	6	0.0	3	3.7
Ascidacea	sea squirts	6	0.0	1	1.3
<i>Loligo pleii</i>	arrow squid	5	0.2	1	1.3
Algae	algae	3	0.1	3	3.7

Table 8. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Busycon sinistrum</i>	lightning whelk	3	0.0	3	3.7
<i>Astropecten duplicatus</i>	spiny beaded sea star	2	0.0	1	1.3
<i>Brissopsis alta</i>	heart urchin	1	0.0	1	1.3
<i>Chione cancellata</i>	cross-barred venus	1	0.0	1	1.3
Gorgonidae	gorgonians	1	0.0	1	1.3
<i>Cantharus cancellarius</i>	cancellate cantharus	1	0.0	1	1.3
<i>Thais haemastoma</i>	rocksnail	1	0.0	1	1.3
<i>Phalium granulatum</i>	scotch bonnet	1	0.0	1	1.3

Table 9. 1991 Summer Shrimp/Groundfish Survey species composition list, 21 trawl stations, for those vessels that used a 16-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
Anchoa mitchilli	bay anchovy	3589	2.9	9	42.9
Chaetodipterus faber	Atlantic spadefish	450	0.6	6	28.6
Micropogonias undulatus	Atlantic croaker	437	10.4	6	28.6
Cynoscion arenarius	sand seatrout	391	0.5	8	38.1
Anchoa nasuta	longnose anchovy	332	0.2	1	4.8
Anchoa hepsetus	striped anchovy	69	0.1	5	23.8
Bagre marinus	gafftopsail catfish	59	0.8	3	14.3
Caranx hippos	crevalle jack	43	0.1	4	19.0
Stellifer lanceolatus	star drum	38	0.1	3	14.3
Sphyraena guachancho	guaguanche	32	0.0	1	4.8
Sphoeroides parvus	least puffer	26	0.0	4	19.0
Arius felis	hardhead catfish	24	1.7	5	23.8
Peprilus alepidotus	harvestfish	22	0.1	3	14.3
Trichiurus lepturus	Atlantic cutlassfish	21	0.4	5	23.8
Prionotus longispinosus	bigeye searobin	15	0.1	1	4.8
Symphurus plagiusa	blackcheek tonguefish	12	0.0	3	14.3
Chloroscombrus chrysurus	Atlantic bumper	11	0.2	3	14.3
Sardinella aurita	Spanish sardine	8	0.0	1	4.8
Polydactylus octonemus	Atlantic threadfin	4	0.0	1	4.8
Leiostomus xanthurus	spot	4	0.0	1	4.8
Trinectes maculatus	hogchoker	4	0.0	1	4.8
Ophidion welshi	crested cusk-eel	4	0.0	1	4.8
Selene vomer	lookdown	3	0.0	2	9.5
Selene setapinnis	Atlantic moonfish	2	0.0	1	4.8
Diplectrum bivittatum	dwarf sand perch	2	0.0	1	4.8
Scomberomorus maculatus	Spanish mackerel	2	0.1	2	9.5
Lepophidium brevibarbe	blackedge cusk-eel	2	0.0	1	4.8
Prionotus ophryas	bandtail searobin	2	0.0	1	4.8
Prionotus roseus	bluespotted searobin	1	0.0	1	4.8
Etropus crossotus	fringed flounder	1	0.0	1	4.8
Citharichthys spilopterus	bay whiff	1	0.0	1	4.8
Echeneis naucrates	sharksucker	1	0.1	1	4.8
Menticirrhus littoralis	gulf kingfish	1	0.0	1	4.8
Larimus fasciatus	banded drum	1	0.0	1	4.8

Table 9. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
Lagodon rhomboides	pinfish	1	0.0	1	4.8
Pogonias cromis	black drum	1	0.3	1	4.8
Synodus foetens	inshore lizardfish	1	0.0	1	4.8
Syngnathus floridae	dusky pipefish	1	0.0	1	4.8
<u>Crustaceans</u>					
Palaemonetes spp.	shore shrimps	147	0.0	1	4.8
Callinectes sapidus	blue crab	66	7.9	11	52.4
Penaeus aztecus	brown shrimp	41	0.1	6	28.6
Acetes americanus	sergestid shrimp	40	0.0	1	4.8
Xiphopenaeus kroyeri	seabob	36	0.1	3	14.3
Penaeus setiferus	white shrimp	25	0.2	4	19.0
Libinia spp.	spider crabs	3	0.0	1	4.8
Trachypenaeus spp.	roughneck shrimps	2	0.0	1	4.8
Portunus sayi	sargassum swimming crab	2	0.0	1	4.8
Macrobrachium ohione	Ohio shrimp	1	0.0	1	4.8
Callinectes similis	lesser blue crab	1	0.0	1	4.8
<u>Others</u>					
Lolliguncula brevis	Atlantic brief squid	103	0.1	5	23.8
Loligo pealeii	longfin squid	4	0.0	1	4.8

Table 10a  
 Statistical Zone 11  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	12.7	12.73	0.0	0.04	6	184.4	121.85	0.5	0.36	9	422.7	187.49	1.7	0.82	21
Trachypenaeus spp.	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	9	268.4	244.05	1.2	1.09	21
Squilla spp.	0.0	0.00	0.0	0.00	6	35.9	19.89	0.3	0.17	9	196.8	72.34	2.2	0.78	21
Parapenaeus spp.	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	21
Solenocera spp.	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	9	83.2	68.28	0.1	0.07	21
Callinectes similis	1.7	1.11	0.0	0.03	6	21.4	12.20	0.1	0.09	9	137.1	62.25	1.6	0.70	21
Micropogonias undulatus	203.7	196.89	3.6	3.53	6	13.3	7.75	0.3	0.18	9	2.3	0.90	0.1	0.05	21
Stenotomus caprinus	0.0	0.00	0.0	0.00	6	156.7	115.64	1.1	0.80	9	91.0	35.22	0.5	0.19	21
Chloroscombrus chrysurus	114.3	69.71	5.1	3.56	6	624.8	272.57	22.5	9.62	9	29.7	19.53	1.3	0.81	21
Saurida brasiliensis	0.0	0.00	0.0	0.00	6	4.5	1.89	0.0	0.00	9	146.3	78.21	0.7	0.36	21
Serranus atrobranchus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	9	26.9	10.44	0.2	0.06	21
Leiostomus xanthurus	16.9	8.14	0.9	0.45	6	0.2	0.19	0.0	0.01	9	0.0	0.00	0.0	0.00	21
Anchoa hepsetus	47.7	31.96	0.4	0.32	6	12.0	11.63	0.1	0.11	9	108.7	59.54	1.5	0.87	21
Syacium spp.	0.0	0.00	0.0	0.00	6	25.5	11.65	0.3	0.17	9	149.9	45.23	2.7	0.83	21
Squid	63.9	25.06	0.6	0.23	6	86.4	22.43	1.3	0.37	9	40.2	9.43	0.6	0.17	21

Table 10a (cont'd.)  
 Statistical Zone 11  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	206.6	206.59	0.8	0.79	6	48.5	48.52	0.1	0.12	5	0.0	0.00	0.0	0.00	5
Trachypenaeus spp.	203.2	165.26	1.0	0.86	6	0.0	0.00	0.0	0.00	5	4.7	2.87	0.0	0.01	5
Squilla spp.	177.4	90.53	2.6	1.42	6	81.4	79.44	1.1	1.06	5	43.6	34.23	0.6	0.51	5
Parapenaeus spp.	15.9	15.85	0.0	0.01	6	93.4	93.39	0.1	0.09	5	890.3	861.82	1.8	1.72	5
Solenocera spp.	72.2	66.52	0.3	0.25	6	110.6	110.61	0.5	0.47	5	474.0	430.41	2.6	2.42	5
Callinectes similis	135.6	83.85	2.0	1.06	6	1.0	1.04	0.0	0.02	5	0.0	0.00	0.0	0.00	5
Micropogonias undulatus	6.1	4.90	0.3	0.21	6	1882.1	1175.21	101.9	64.16	5	3020.3	2683.74	170.5	150.76	5
Stenotomus caprinus	223.3	113.78	7.7	3.81	6	328.1	135.99	11.1	5.15	5	559.7	477.53	24.1	20.32	5
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	6	1.0	1.04	0.0	0.02	5	0.0	0.00	0.0	0.00	5
Saurida brasiliensis	5.2	2.12	0.0	0.01	6	22.3	15.80	0.1	0.05	5	1.7	1.71	0.0	0.01	5
Serranus atrobranchus	132.6	69.85	1.6	0.96	6	126.8	124.82	2.4	2.36	5	85.5	56.02	1.8	1.15	5
Leiostomus xanthurus	1.0	1.00	0.1	0.08	6	279.5	218.05	30.9	25.62	5	13.0	11.80	1.6	1.45	5
Anchoa hepsetus	60.0	60.00	0.8	0.80	6	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5
Syacium spp.	19.5	19.51	0.2	0.23	6	2.7	1.69	0.1	0.03	5	0.0	0.00	0.0	0.00	5
Squid	8.5	5.45	0.2	0.09	6	104.7	104.73	0.9	0.89	5	22.6	22.57	0.2	0.23	5

Table 10b  
 Statistical Zone 11  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	40.8	24.28	6	33.8	8.83	9	34.0	6.25	21	53.6	12.91	6	190.4	80.42	5	262.9	165.54	5
Total finfish kg	35.6	20.38	6	28.6	9.45	9	21.9	5.20	21	42.5	11.74	6	178.9	82.08	5	253.8	167.11	5
Total crustacean kg	1.8	0.91	6	3.8	1.82	9	11.1	2.93	21	9.6	4.56	6	7.6	3.20	5	8.3	4.65	5
Total others kg	3.9	3.07	6	1.2	0.36	9	0.6	0.20	21	1.5	0.83	6	4.5	2.14	5	0.9	0.38	5
Surface temperature	27.6	0.56	7	27.9	0.31	10	28.1	0.16	20	27.4	0.32	9	27.5	0.20	5	28.8	0.31	3
Midwater temperature	26.4	0.59	7	25.9	0.06	10	25.4	0.18	19	26.1	0.29	9	26.2	0.25	5	22.5	0.22	3
Bottom temperature	26.3	0.50	7	25.5	0.16	10	24.5	0.16	20	24.2	0.46	8	22.3	0.75	5	19.5	0.18	3
Surface salinity	20.4	2.95	7	19.1	0.85	10	20.8	1.30	20	27.1	2.65	9	28.6	3.28	5	18.7	5.59	3
Midwater salinity	28.3	2.73	7	32.3	0.47	10	34.1	0.31	19	34.5	0.95	9	36.3	0.06	5	36.1	0.25	3
Bottom salinity	29.4	2.32	7	33.9	0.26	10	35.3	0.14	20	34.9	0.94	9	36.3	0.08	5	36.4	0.05	3
Surface chlorophyll	5.7	2.22	4	4.3	2.25	8	11.8	3.72	15	2.5	1.07	9	6.4	4.12	5	40.6	0.74	3
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.9	0.48	7	6.5	0.43	10	8.5	0.58	20	7.4	0.40	9	8.2	0.99	5	11.9	2.71	3
Midwater oxygen	5.6	0.58	7	5.3	0.21	10	6.2	0.27	19	6.1	0.18	9	6.7	0.05	2	6.1	0.40	3
Bottom oxygen	5.1	0.53	7	4.8	0.23	10	5.2	0.14	20	5.7	0.16	8	6.0	0.24	5	5.7	0.51	3

Table 11a  
 Statistical Zone 13  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	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	3	7.8	7.83	0.0	0.00	4	633.9	533.94	2.4	2.16	7
Squilla spp.	0.0	0.00	0.0	0.00	3	9.8	9.78	0.0	0.03	4	143.9	80.08	1.0	0.59	7
Penaeus aztecus	200.6	163.72	1.2	0.94	3	0.0	0.00	0.0	0.00	4	84.4	32.32	1.1	0.34	7
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	4	90.7	90.71	0.3	0.29	7
Callinectes similis	0.0	0.00	0.0	0.00	3	1.0	1.00	0.0	0.02	4	14.6	10.46	0.1	0.07	7
Sicyonia dorsalis	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7
Anchoa hepsetus	8.7	8.70	0.1	0.12	3	0.0	0.00	0.0	0.00	4	1777.4	1198.44	29.7	22.38	7
Micropogonias undulatus	1182.3	892.00	23.0	15.14	3	31.0	17.92	1.0	0.58	4	48.8	20.58	2.5	1.22	7
Trichiurus lepturus	4.5	1.52	0.1	0.05	3	0.0	0.00	0.0	0.00	4	1197.6	728.91	15.2	7.64	7
Prionotus longispinosus	0.0	0.00	0.0	0.00	3	18.8	18.10	0.1	0.06	4	322.3	147.50	2.3	0.98	7
Peprilus burti	0.0	0.00	0.0	0.00	3	0.5	0.50	0.0	0.02	4	229.3	229.29	20.2	20.19	7
Arius felis	542.8	403.10	30.5	17.87	3	0.5	0.50	0.1	0.14	4	0.0	0.00	0.0	0.00	7
Centropristis philadelphia	0.0	0.00	0.0	0.00	3	0.7	0.65	0.0	0.00	4	70.8	43.42	0.3	0.21	7
Cynoscion arenarius	70.8	31.60	1.5	0.62	3	8.3	4.98	0.1	0.06	4	233.8	109.03	12.4	4.28	7
Squid	13.0	13.04	0.1	0.08	3	16.2	13.34	0.1	0.11	4	457.4	324.89	3.2	2.25	7



Table 11a (cont'd.)  
 Statistical Zone 13  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	1778.9	982.84	7.2	4.02	3	82.1	0.00	0.1	0.00	1	622.9	0.00	1.1	0.00	1
Squilla spp.	3219.6	1562.57	27.7	12.66	3	353.7	0.00	4.2	0.00	1	152.7	0.00	2.2	0.00	1
Penaeus aztecus	639.4	217.16	13.3	4.13	3	82.1	0.00	1.9	0.00	1	2.2	0.00	0.1	0.00	1
Trachypenaeus similis	1057.3	1057.27	5.5	5.50	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Callinectes similis	677.3	348.56	11.8	5.73	3	382.1	0.00	10.9	0.00	1	0.0	0.00	0.0	0.00	1
Sicyonia dorsalis	206.4	81.56	0.8	0.31	3	28.4	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Anchoa hepsetus	550.2	550.18	11.9	11.95	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	59.0	41.44	3.4	2.42	3	0.0	0.00	0.0	0.00	1	1737.8	0.00	129.2	0.00	1
Trichiurus lepturus	73.5	67.03	1.6	1.53	3	328.4	0.00	31.4	0.00	1	0.0	0.00	0.0	0.00	1
Prionotus longispinosus	103.1	97.33	1.3	0.76	3	246.3	0.00	12.3	0.00	1	21.8	0.00	3.3	0.00	1
Peprilus burti	61.4	61.40	5.4	5.39	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Arius felis	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	1
Centropristis philadelphia	162.0	58.42	2.9	0.73	3	41.1	0.00	4.2	0.00	1	10.9	0.00	2.2	0.00	1
Cynoscion arenarius	16.5	8.31	2.8	1.44	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1
Squid	124.9	52.26	1.3	0.80	3	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	1

Table 11b  
 Statistical Zone 13  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	91.2	39.75	3	1.7	0.66	4	113.3	55.07	7	118.5	12.51	3	80.4	0.00	1	181.5	0.00	1
Total finfish kg	71.4	24.72	3	1.4	0.57	4	103.5	53.41	7	49.8	23.67	3	51.7	0.00	1	168.1	0.00	1
Total crustacean kg	19.8	19.07	3	0.0	0.00	4	6.6	3.22	7	67.2	15.55	3	27.3	0.00	1	10.9	0.00	1
Total others kg	0.0	0.00	3	0.0	0.00	4	3.0	2.21	7	1.4	0.83	3	0.0	0.00	1	2.0	0.00	1
Surface temperature	27.7	0.46	3	30.5	0.24	5	30.1	0.16	6	27.7	2.06	2	29.8	0.00	1	29.9	0.00	1
Midwater temperature	28.1	0.35	3	27.6	0.36	5	26.5	0.27	6	29.3	2.23	2	25.9	0.00	1	23.1	0.00	1
Bottom temperature	28.2	0.32	3	24.9	0.22	5	24.8	0.93	6	23.7	1.45	2	20.8	0.00	1	18.0	0.00	1
Surface salinity	8.5	0.84	3	21.1	1.31	5	21.5	0.97	6	23.7	1.10	2	22.5	0.00	1	22.8	0.00	1
Midwater salinity	15.6	2.94	3	30.5	1.22	5	34.4	0.21	6	33.9	1.85	2	36.6	0.00	1	37.0	0.00	1
Bottom salinity	18.4	3.34	3	35.0	0.41	5	35.0	0.83	6	35.1	1.41	2	36.8	0.00	1	36.3	0.00	1
Surface chlorophyll	14.0	8.00	5	3.9	1.51	6	3.9	0.90	5	4.0	1.23	2	2.0	0.00	1	2.1	0.00	1
Midwater chlorophyll	7.0	3.88	2	0.9	0.00	1	0.2	0.03	2	0.2	0.00	1	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	2.6	0.86	2	0.6	0.14	6	0.6	0.17	6	0.8	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.7	0.45	3	7.7	0.47	5	8.1	0.39	6	8.2	0.20	2	7.6	0.00	1	7.7	0.00	1
Midwater oxygen	5.7	0.48	3	3.2	0.60	4	3.3	0.38	6	4.7	1.45	2	6.7	0.00	1	6.3	0.00	1
Bottom oxygen	4.5	0.46	3	0.9	0.25	5	2.4	0.28	6	2.0	0.70	2	3.3	0.00	1	4.4	0.00	1

Table 12a  
 Statistical Zone 14  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	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	19	1553.7	851.65	5.5	3.02	16
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	0.3	0.34	0.0	0.00	19	1340.7	913.73	6.0	4.06	16
Squilla spp.	0.0	0.00	0.0	0.00	1	2.6	2.10	0.0	0.00	19	803.6	243.45	7.2	2.20	16
Callinectes similis	0.0	0.00	0.0	0.00	1	2.6	1.49	0.1	0.06	19	824.1	397.06	13.1	6.26	16
Penaeus aztecus	0.0	0.00	0.0	0.00	1	0.9	0.61	0.0	0.00	19	272.8	107.42	3.2	1.17	16
Portunus gibbesii	0.0	0.00	0.0	0.00	1	1.8	1.27	0.0	0.01	19	286.4	84.69	1.8	0.60	16
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	0.7	0.46	0.0	0.01	19	369.6	114.56	3.9	1.17	16
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.2	0.23	0.0	0.00	19	281.8	112.95	2.0	0.81	16
Peprilus burti	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	19	11.9	11.95	0.9	0.86	16
Centropristis philadelphica	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	19	81.9	26.50	1.3	0.48	16
Serranus atrobranchus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	19	41.8	22.64	0.2	0.17	16
Ophidion welshi	0.0	0.00	0.0	0.00	1	0.2	0.23	0.0	0.01	19	116.5	92.80	2.9	2.27	16
Syacium gunteri	0.0	0.00	0.0	0.00	1	0.3	0.23	0.0	0.00	19	67.1	29.16	1.6	0.60	16
Diplectrum bivittatum	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	19	73.4	28.17	1.7	0.73	16
Squid	0.0	0.00	0.0	0.00	1	11.1	6.11	0.1	0.03	19	70.0	58.42	0.8	0.70	16

Table 12a (cont'd.)  
 Statistical Zone 14  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	4.9	2.96	0.0	0.01	4	8.6	0.00	0.0	0.00	1	24.0	24.00	0.0	0.00	2
Trachypenaeus similis	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Squilla spp.	30.1	22.78	0.5	0.46	4	69.6	0.00	0.9	0.00	1	36.0	36.00	0.4	0.41	2
Callinectes similis	69.4	59.93	2.4	2.11	4	0.0	0.00	0.0	0.00	1	48.0	48.00	1.2	1.23	2
Penaeus aztecus	172.9	72.17	3.7	2.03	4	82.5	0.00	3.5	0.00	1	18.3	6.27	0.8	0.22	2
Portunus gibbesii	29.8	23.23	0.1	0.08	4	2.1	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Prionotus longispinosus	74.3	54.75	3.2	2.27	4	24.6	0.00	3.2	0.00	1	49.4	46.64	2.4	2.19	2
Stenotomus caprinus	38.8	23.88	1.4	0.90	4	42.9	0.00	2.0	0.00	1	22.9	1.09	1.8	0.67	2
Peprilus burti	360.6	176.42	29.4	14.11	4	0.0	0.00	0.0	0.00	1	64.1	64.09	6.0	6.01	2
Centropristis philadelphia	22.8	11.60	2.3	1.39	4	36.4	0.00	2.7	0.00	1	72.0	72.00	7.1	7.09	2
Serranus atrobranchus	31.8	24.49	0.4	0.28	4	145.7	0.00	2.5	0.00	1	189.0	189.00	4.8	4.77	2
Ophidion welshi	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Syacium gunteri	0.6	0.63	0.0	0.00	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Diplectrum bivittatum	0.6	0.63	0.2	0.23	4	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2
Squid	33.3	22.29	0.2	0.12	4	0.0	0.00	0.0	0.00	1	219.3	195.27	0.5	0.02	2

Table 12b  
 Statistical Zone 14  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	24.9	0.00	1	9.0	7.79	19	71.3	17.50	16	59.2	16.38	4	34.1	0.00	1	80.1	59.01	2
Total finfish kg	24.1	0.00	1	8.5	7.82	19	31.8	8.42	16	48.4	14.16	4	26.8	0.00	1	68.6	48.72	2
Total crustacean kg	0.8	0.00	1	0.2	0.11	19	38.5	12.83	16	10.4	5.49	4	7.3	0.00	1	11.5	10.29	2
Total others kg	0.0	0.00	1	0.0	0.00	19	0.7	0.68	16	0.1	0.15	4	0.0	0.00	1	0.0	0.00	2
Surface temperature	29.6	0.77	4	29.8	0.19	11	29.2	0.36	12	29.7	0.15	3	30.5	0.35	2	29.9	0.00	1
Midwater temperature	28.5	0.29	4	28.4	0.19	11	28.3	0.37	12	27.5	0.31	3	26.8	1.30	2	24.9	0.00	1
Bottom temperature	27.2	0.19	4	26.1	0.21	11	25.0	0.41	12	22.1	0.19	3	21.5	0.42	2	18.5	0.00	1
Surface salinity	17.8	1.67	4	23.6	1.02	11	26.6	0.64	12	30.6	0.86	3	25.2	1.81	2	32.8	0.00	1
Midwater salinity	23.2	1.75	4	29.1	1.17	11	34.5	0.35	12	34.7	1.07	3	36.0	0.00	2	36.3	0.00	1
Bottom salinity	29.6	1.80	4	34.6	0.21	11	36.1	0.12	12	36.7	0.09	3	36.5	0.05	2	36.7	0.00	1
Surface chlorophyll	6.3	2.57	5	4.0	0.88	17	1.4	0.19	15	0.3	0.07	3	0.7	0.20	2	0.2	0.00	1
Midwater chlorophyll	4.4	0.00	1	1.9	0.36	11	0.6	0.15	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	1.4	0.17	4	1.3	0.39	16	0.7	0.18	15	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.8	0.89	4	6.8	0.71	11	7.2	0.22	12	6.5	0.12	3	7.0	0.10	2	6.5	0.00	1
Midwater oxygen	6.2	0.28	4	4.6	0.61	11	5.3	0.35	12	6.4	0.23	3	5.7	1.05	2	6.7	0.00	1
Bottom oxygen	1.6	0.74	4	0.9	0.33	11	2.5	0.55	12	4.7	0.34	3	4.4	0.20	2	4.0	0.00	1

Table 13a  
 Statistical Zone 15  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 15 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	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	5	158.0	0.00	0.3	0.00	1	1428.6	1005.38	3.6	2.42	7
Penaeus aztecus	13.9	7.64	0.1	0.06	5	8.8	0.00	0.1	0.00	1	285.9	225.79	3.0	2.38	7
Squilla spp.	3.2	3.20	0.0	0.02	5	16.1	0.00	0.1	0.00	1	124.3	87.43	0.7	0.51	7
Callinectes similis	2.4	1.94	0.0	0.02	5	23.4	0.00	0.1	0.00	1	64.1	34.22	1.4	0.46	7
Solenocera 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	7
Sicyonia brevirostris	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	7
Peprilus burti	136.8	121.89	7.0	6.22	5	4.4	0.00	0.3	0.00	1	584.4	441.92	23.6	13.56	7
Stenotomus caprinus	0.4	0.40	0.0	0.00	5	22.0	0.00	0.1	0.00	1	260.2	136.12	1.0	0.52	7
Chloroscombrus chrysurus	595.9	438.11	23.9	16.83	5	4.4	0.00	0.5	0.00	1	33.9	18.63	1.9	0.93	7
Micropogonias undulatus	567.9	347.99	17.9	11.00	5	0.0	0.00	0.0	0.00	1	13.0	5.61	0.5	0.24	7
Serranus atrobranchus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	172.7	170.58	0.5	0.50	7
Trichiurus lepturus	8.0	8.00	0.6	0.61	5	0.0	0.00	0.0	0.00	1	217.9	95.93	4.9	2.27	7
Prionotus roseus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	1	91.5	91.52	0.7	0.74	7
Anchoa hepsetus	12.0	12.00	0.2	0.24	5	0.0	0.00	0.0	0.00	1	148.1	67.77	2.6	1.20	7
Squid	106.6	50.48	1.7	0.97	5	2.9	0.00	0.0	0.00	1	85.0	29.04	0.6	0.24	7

Table 13a (cont'd.)  
 Statistical Zone 15  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 15 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	23.2	3.82	0.1	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Penaeus aztecus	167.7	32.26	4.9	1.02	2	46.6	31.56	1.8	1.25	2	15.0	9.55	0.7	0.19	2
Squilla spp.	135.5	71.55	1.7	0.64	2	5.1	5.09	0.0	0.03	2	0.0	0.00	0.0	0.00	2
Callinectes similis	58.2	11.77	1.7	0.11	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Solenocera spp.	158.7	131.66	0.5	0.48	2	7.4	7.36	0.0	0.03	2	0.0	0.00	0.0	0.00	2
Sicyonia brevirostris	55.1	1.06	1.0	0.06	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Peprilus burti	0.0	0.00	0.0	0.00	2	8.0	8.00	0.8	0.80	2	132.3	124.09	10.7	8.93	2
Stenotomus caprinus	195.0	102.05	8.6	4.86	2	182.1	60.13	11.0	2.54	2	477.3	68.18	33.4	1.80	2
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Micropogonias undulatus	23.2	3.82	2.5	0.32	2	2.3	2.26	0.2	0.18	2	0.0	0.00	0.0	0.00	2
Serranus atrobranchus	165.8	143.84	2.2	1.62	2	66.3	50.30	0.9	0.56	2	77.7	42.27	1.4	0.56	2
Trichiurus lepturus	0.0	0.00	0.0	0.00	2	77.0	77.00	4.9	4.86	2	85.9	50.45	7.1	4.52	2
Prionotus roseus	96.2	49.77	3.9	2.05	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Anchoa hepsetus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Squid	4.8	4.84	0.5	0.48	2	120.4	105.64	0.5	0.45	2	561.8	141.82	2.9	1.12	2

Table 13b  
 Statistical Zone 15  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	101.6	42.24	5	2.7	0.00	1	57.4	14.44	7	50.3	12.45	2	36.2	3.45	2	125.8	40.29	2
Total finfish kg	99.1	41.49	5	1.3	0.00	1	47.2	14.62	7	37.1	10.67	2	33.2	2.78	2	117.8	40.91	2
Total crustacean kg	0.8	0.33	5	1.3	0.00	1	9.0	5.84	7	12.3	1.77	2	2.0	1.09	2	0.6	0.62	2
Total others kg	1.6	0.95	5	0.0	0.00	1	0.4	0.29	7	0.9	0.01	2	0.7	0.20	2	8.7	1.24	2
Surface temperature	30.3	0.52	7	0.0	0.00	0	29.1	0.13	9	28.8	0.00	1	29.1	0.13	2	28.9	0.00	1
Midwater temperature	29.3	0.17	7	0.0	0.00	0	28.0	0.19	9	28.6	0.00	1	27.9	0.94	2	24.0	0.00	1
Bottom temperature	28.4	0.14	7	0.0	0.00	0	25.0	0.40	9	23.9	0.00	1	23.1	2.57	2	20.0	0.00	1
Surface salinity	19.2	2.86	7	0.0	0.00	0	30.6	0.69	9	34.2	0.00	1	33.2	0.67	2	31.9	0.00	1
Midwater salinity	24.8	2.07	7	0.0	0.00	0	34.7	0.19	9	35.2	0.00	1	35.9	0.31	2	36.3	0.00	1
Bottom salinity	30.4	1.60	7	0.0	0.00	0	36.1	0.10	9	36.1	0.00	1	36.5	0.01	2	36.5	0.00	1
Surface chlorophyll	7.5	3.33	8	0.0	0.00	0	0.5	0.09	9	0.1	0.00	1	0.3	0.04	2	0.5	0.00	1
Midwater chlorophyll	3.1	1.31	4	0.0	0.00	0	1.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	2.5	0.92	6	0.0	0.00	0	0.8	0.12	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.2	0.94	7	0.0	0.00	0	6.9	0.09	9	6.7	0.00	1	6.9	0.15	2	7.0	0.00	1
Midwater oxygen	6.5	0.39	7	0.0	0.00	0	6.6	0.23	8	6.7	0.00	1	6.7	0.40	2	6.8	0.00	1
Bottom oxygen	3.6	0.34	7	0.0	0.00	0	3.9	0.26	9	4.8	0.00	1	5.3	0.05	2	5.3	0.00	1



Table 14a  
 Statistical Zone 16  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	238.4	111.66	1.8	0.84	6	3.5	3.53	0.0	0.03	7	131.5	73.85	2.6	1.48	7
Squilla spp.	0.0	0.00	0.0	0.00	6	61.4	29.59	0.8	0.49	7	53.3	29.52	0.6	0.32	7
Trachypenaeus spp.	0.0	0.00	0.0	0.00	6	54.7	53.43	0.5	0.49	7	86.2	52.91	0.4	0.29	7
Portunus spinicarpus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	1.4	1.43	0.0	0.00	7
Sicyonia brevirostris	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	33.2	22.45	0.4	0.32	7
Xiphopenaeus kroyeri	212.7	201.59	1.4	1.38	6	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	7
Micropogonias undulatus	986.3	526.38	21.0	10.89	6	1805.0	1800.34	45.4	45.35	7	1501.9	1083.09	44.9	26.49	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	135.7	60.40	3.9	2.99	7
Chloroscombrus chrysurus	1209.0	1207.20	39.3	39.23	6	1.6	1.03	0.1	0.05	7	50.1	20.96	1.8	0.67	7
Peprilus burti	7.2	3.80	0.3	0.16	6	0.8	0.82	0.0	0.04	7	238.9	106.16	14.7	6.72	7
Trichiurus lepturus	43.0	21.40	1.3	0.65	6	0.0	0.00	0.0	0.00	7	36.3	28.72	0.9	0.72	7
Anchoa hepsetus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	241.7	141.00	3.2	2.23	7
Trachurus lathami	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	3.8	2.16	0.1	0.07	7
Serranus atrobranchus	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7	17.2	15.51	0.1	0.04	7
Squid	165.0	45.64	2.3	0.62	6	16.7	10.70	0.5	0.49	7	143.9	57.03	1.2	0.58	7

Table 14a (cont'd.)  
 Statistical Zone 16  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	116.2	43.15	2.8	1.00	5	47.0	11.24	2.4	0.61	6	16.5	7.80	0.8	0.38	3
<i>Squilla</i> spp.	84.4	50.62	0.9	0.61	5	2.6	1.97	0.0	0.03	6	5.9	5.95	0.0	0.05	3
<i>Trachypenaeus</i> spp.	22.4	19.10	0.0	0.00	5	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
<i>Portunus spinicarpus</i>	82.2	72.41	0.6	0.50	5	4.4	1.85	0.1	0.06	6	15.7	15.67	0.2	0.15	3
<i>Sicyonia brevirostris</i>	71.0	34.55	0.8	0.36	5	5.8	2.61	0.1	0.06	6	1.7	1.67	0.0	0.02	3
<i>Xiphopenaeus kroyeri</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
<i>Micropogonias undulatus</i>	5.5	1.92	0.3	0.15	5	14.3	12.17	1.3	1.09	6	14.1	14.05	2.0	1.99	3
<i>Stenotomus caprinus</i>	117.7	39.83	3.1	1.06	5	199.0	71.48	11.4	4.15	6	248.4	39.32	14.3	3.63	3
<i>Chloroscombrus chrysurus</i>	7.3	7.33	0.7	0.73	5	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
<i>Peprilus burti</i>	12.0	12.00	0.9	0.95	5	45.8	30.55	3.4	2.14	6	78.0	47.03	6.7	4.07	3
<i>Trichiurus lepturus</i>	6.9	5.63	0.3	0.21	5	200.0	121.89	5.8	4.07	6	57.5	57.50	0.7	0.74	3
<i>Anchoa hepsetus</i>	0.2	0.20	0.0	0.00	5	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	3
<i>Trachurus lathami</i>	268.4	268.17	5.3	5.30	5	0.2	0.24	0.0	0.00	6	13.3	13.33	0.5	0.47	3
<i>Serranus atrobranchus</i>	188.6	83.16	0.7	0.32	5	55.7	28.63	0.7	0.26	6	87.8	70.42	0.7	0.54	3
<i>Squid</i>	44.6	27.40	0.4	0.22	5	21.6	15.44	0.1	0.08	6	85.8	85.83	0.2	0.25	3

Table 14b  
 Statistical Zone 16  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	100.3	46.25	6	56.0	49.04	7	118.3	43.04	7	30.5	3.72	5	45.7	8.38	6	47.3	12.53	3
Total finfish kg	87.0	43.44	6	54.2	47.57	7	110.5	41.57	7	23.8	4.21	5	41.9	7.48	6	44.4	11.77	3
Total crustacean kg	11.4	3.74	6	1.3	1.04	7	6.6	3.28	7	6.0	2.21	5	2.7	0.64	6	1.3	0.10	3
Total others kg	2.2	0.66	6	0.5	0.46	7	1.2	0.64	7	0.7	0.31	5	1.1	0.39	6	1.8	0.98	3
Surface temperature	29.4	0.23	6	30.7	0.11	7	30.0	0.34	6	29.3	0.13	4	29.0	0.04	2	29.1	0.06	5
Midwater temperature	29.0	0.17	6	29.2	0.33	7	28.3	0.17	6	28.3	0.27	4	26.7	0.10	2	24.4	0.50	5
Bottom temperature	28.3	0.20	6	27.4	0.09	7	27.0	0.26	6	25.7	0.95	4	20.7	0.79	2	19.5	0.18	5
Surface salinity	16.2	2.32	6	23.3	0.64	7	28.1	2.00	6	34.8	0.06	4	33.5	0.28	2	33.4	0.23	5
Midwater salinity	18.2	1.94	6	27.7	1.06	7	34.9	0.88	6	35.5	0.06	4	35.9	0.14	2	36.5	0.11	5
Bottom salinity	24.5	1.58	6	33.9	0.49	7	35.9	0.06	6	36.1	0.13	4	36.1	0.50	2	36.5	0.01	5
Surface chlorophyll	3.5	1.18	6	1.1	0.27	7	0.6	0.34	6	0.1	0.00	4	0.1	0.04	2	0.2	0.04	4
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	3.1	0.00	1	1.7	0.30	7	0.8	0.37	4	0.3	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.3	0.36	6	7.5	0.23	7	7.1	0.12	6	6.8	0.09	4	6.7	0.10	2	6.9	0.21	5
Midwater oxygen	6.8	0.52	6	5.2	0.48	7	6.2	0.49	6	6.9	0.06	4	6.9	0.00	2	7.3	0.16	5
Bottom oxygen	4.4	0.84	6	2.1	0.59	7	4.8	0.80	6	6.9	0.18	4	5.7	1.00	2	5.4	0.27	5

Table 15a  
 Statistical Zone 17  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 40 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	54.7	40.85	0.5	0.04	2	400.6	398.15	5.3	5.28	4	84.5	52.75	1.4	0.82	15
<i>Sicyonia brevirostris</i>	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4	112.0	44.21	1.1	0.42	15
<i>Trachypenaeus spp.</i>	4.6	4.62	0.0	0.00	2	242.0	234.39	1.1	1.01	4	59.8	41.87	0.2	0.11	15
<i>Callinectes sapidus</i>	251.3	242.05	17.6	16.80	2	42.0	41.00	5.2	5.08	4	23.3	23.33	3.8	3.76	15
<i>Squilla spp.</i>	6.9	6.92	0.0	0.00	2	25.6	18.55	0.5	0.38	4	27.5	21.01	0.2	0.11	15
<i>Xiphopenaeus kroyeri</i>	213.3	213.33	0.7	0.71	2	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	15
<i>Micropogonias undulatus</i>	551.2	546.58	9.1	9.14	2	3657.2	3652.60	77.3	77.11	4	393.1	270.50	10.5	7.09	15
<i>Stenotomus caprinus</i>	0.0	0.00	0.0	0.00	2	401.2	399.62	2.0	2.05	4	292.9	149.16	5.5	2.49	15
<i>Prionotus roseus</i>	0.0	0.00	0.0	0.00	2	543.8	543.75	4.1	4.09	4	63.1	50.88	0.5	0.41	15
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	2	2.3	2.31	0.3	0.31	4	116.6	62.90	11.6	6.56	15
<i>Prionotus stearnsi</i>	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4	2.4	2.42	0.0	0.02	15
<i>Cynoscion arenarius</i>	818.9	818.89	18.4	18.38	2	22.7	19.15	1.2	0.97	4	8.4	5.33	0.7	0.47	15
<i>Diplectrum bivittatum</i>	0.0	0.00	0.0	0.00	2	0.6	0.60	0.0	0.00	4	144.3	82.19	0.9	0.34	15
<i>Chloroscombrus chrysurus</i>	184.5	180.09	5.6	5.56	2	494.1	467.64	17.4	16.57	4	14.1	4.99	0.7	0.26	15
<i>Squid</i>	285.7	216.50	3.9	3.53	2	69.2	61.73	0.9	0.89	4	38.1	11.40	0.3	0.10	15

Table 15a (cont'd.)  
 Statistical Zone 17  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 40 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	32.8	28.10	1.6	1.35	3	40.0	22.01	2.0	1.05	5	0.0	0.00	0.0	0.00	0
<i>Sicyonia brevirostris</i>	55.8	52.16	0.7	0.70	3	47.0	28.66	0.5	0.37	5	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus</i> spp.	1.0	1.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Callinectes sapidus</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Squilla</i> spp.	1.0	1.00	0.0	0.00	3	8.0	6.55	0.0	0.03	5	0.0	0.00	0.0	0.00	0
<i>Xiphopenaeus kroyeri</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Micropogonias undulatus</i>	8.0	8.00	0.9	0.88	3	1.3	1.33	0.2	0.21	5	0.0	0.00	0.0	0.00	0
<i>Stenotomus caprinus</i>	594.4	249.01	32.3	11.23	3	317.1	100.99	18.2	6.33	5	0.0	0.00	0.0	0.00	0
<i>Prionotus roseus</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Prionotus stearnsi</i>	59.3	59.33	0.6	0.61	3	319.8	213.37	3.1	1.92	5	0.0	0.00	0.0	0.00	0
<i>Cynoscion arenarius</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Diplectrum bivittatum</i>	1.5	0.87	0.0	0.04	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
<i>Chloroscombrus chrysurus</i>	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0
Squid	63.8	60.15	0.4	0.44	3	121.9	51.26	1.5	0.49	5	0.0	0.00	0.0	0.00	0

Table 15b  
 Statistical Zone 17  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 40 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	101.9	28.44	2	160.2	107.96	4	61.7	18.02	15	50.4	9.58	3	54.9	23.10	5	0.0	0.00	0
Total finfish kg	76.0	6.80	2	145.4	95.96	4	51.8	14.34	15	47.0	10.49	3	48.9	21.50	5	0.0	0.00	0
Total crustacean kg	21.3	19.15	2	13.2	12.27	4	8.2	5.42	15	2.4	2.20	3	3.7	1.99	5	0.0	0.00	0
Total others kg	4.6	2.49	2	1.0	1.05	4	1.5	1.09	15	0.9	0.45	3	2.4	0.37	5	0.0	0.00	0
Surface temperature	29.8	0.30	3	30.6	0.29	3	30.2	0.17	16	29.7	0.12	2	29.6	0.00	1	0.0	0.00	0
Midwater temperature	29.8	0.31	3	30.1	0.24	3	28.4	0.08	16	27.5	0.06	2	27.6	0.00	1	0.0	0.00	0
Bottom temperature	29.4	0.05	3	28.1	0.34	3	27.6	0.14	16	22.4	0.04	2	21.7	0.00	1	0.0	0.00	0
Surface salinity	24.8	2.35	3	27.3	0.94	3	29.4	0.54	16	33.3	0.45	2	33.1	0.00	1	0.0	0.00	0
Midwater salinity	24.8	2.33	3	28.6	0.93	3	34.5	0.52	16	36.1	0.23	2	36.1	0.00	1	0.0	0.00	0
Bottom salinity	25.9	2.38	3	32.4	1.11	3	35.8	0.10	16	36.9	0.32	2	36.5	0.00	1	0.0	0.00	0
Surface chlorophyll	1.7	0.88	3	0.6	0.08	3	0.2	0.03	16	0.2	0.03	2	0.2	0.00	1	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	1.0	0.00	1	2.8	1.93	3	0.8	0.09	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.9	0.48	3	7.1	0.42	3	6.6	0.09	15	6.5	0.10	2	6.3	0.00	1	0.0	0.00	0
Midwater oxygen	7.7	0.25	3	7.0	0.39	3	6.4	0.06	13	6.6	0.25	2	6.5	0.00	1	0.0	0.00	0
Bottom oxygen	7.7	0.46	3	2.5	0.37	3	5.7	0.19	16	6.0	0.10	2	6.1	0.00	1	0.0	0.00	0

Table 16a  
 Statistical Zone 18  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Callinectes similis</i>	0.0	0.00	0.0	0.00	0	55.6	23.59	0.9	0.34	6	351.5	150.33	6.8	3.63	9
<i>Sicyonia brevirostris</i>	0.0	0.00	0.0	0.00	0	42.7	42.73	0.5	0.45	6	226.6	163.38	1.7	1.07	9
<i>Penaeus aztecus</i>	0.0	0.00	0.0	0.00	0	60.1	53.98	0.9	0.75	6	175.3	81.33	3.1	1.41	9
<i>Squilla</i> spp.	0.0	0.00	0.0	0.00	0	163.1	70.06	1.6	0.70	6	230.6	98.37	2.7	1.16	9
<i>Trachypenaeus</i> spp.	0.0	0.00	0.0	0.00	0	43.1	29.66	0.2	0.12	6	78.0	45.11	0.3	0.21	9
<i>Portunus gibbesii</i>	0.0	0.00	0.0	0.00	0	32.8	24.39	0.2	0.16	6	152.9	94.98	1.1	0.66	9
<i>Micropogonias undulatus</i>	0.0	0.00	0.0	0.00	0	1698.7	744.86	59.5	25.28	6	103.8	76.11	4.4	2.74	9
<i>Stenotomus caprinus</i>	0.0	0.00	0.0	0.00	0	1.3	1.33	0.1	0.06	6	313.4	148.78	4.3	2.73	9
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	0	246.1	166.21	25.8	17.92	6	467.4	358.67	47.0	36.15	9
<i>Trichiurus lepturus</i>	0.0	0.00	0.0	0.00	0	205.6	170.33	7.0	5.36	6	10.2	8.11	1.1	1.08	9
<i>Upeneus parvus</i>	0.0	0.00	0.0	0.00	0	1.3	1.27	0.1	0.06	6	84.1	34.24	1.1	0.56	9
<i>Chloroscombrus chrysurus</i>	0.0	0.00	0.0	0.00	0	45.8	37.84	1.8	1.23	6	181.1	114.74	7.8	4.99	9
<i>Cynoscion nothus</i>	0.0	0.00	0.0	0.00	0	118.7	82.56	3.0	1.35	6	22.9	20.14	2.2	1.88	9
<i>Prionotus paralatus</i>	0.0	0.00	0.0	0.00	0	4.7	4.73	0.0	0.02	6	10.3	8.91	0.1	0.05	9
<i>Squid</i>	0.0	0.00	0.0	0.00	0	67.1	49.86	1.2	0.68	6	122.2	57.77	1.7	0.68	9

Table 16a (cont'd.)  
 Statistical Zone 18  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Callinectes similis</i>	3.1	2.27	0.2	0.10	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
<i>Sicyonia brevirostris</i>	271.6	83.50	2.4	0.63	5	14.8	11.12	0.1	0.09	4	0.6	0.59	0.0	0.03	4
<i>Penaeus aztecus</i>	106.9	31.40	3.1	0.74	5	23.2	13.00	1.2	0.59	4	29.1	10.15	1.8	0.62	4
<i>Squilla</i> spp.	7.7	2.58	0.3	0.21	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
<i>Trachypenaeus</i> spp.	94.0	51.92	0.4	0.24	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
<i>Portunus gibbesii</i>	2.2	1.36	0.0	0.00	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
<i>Micropogonias undulatus</i>	7.2	7.20	0.5	0.51	5	0.0	0.00	0.0	0.00	4	2.5	1.01	0.6	0.17	4
<i>Stenotomus caprinus</i>	310.0	158.90	12.9	5.86	5	150.3	47.59	8.8	2.34	4	142.8	26.53	8.9	1.23	4
<i>Leiostomus xanthurus</i>	44.4	41.94	4.6	4.44	5	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	4
<i>Trichiurus lepturus</i>	0.0	0.00	0.0	0.00	5	0.3	0.35	0.0	0.05	4	1.4	1.36	0.0	0.00	4
<i>Upeneus parvus</i>	48.7	37.73	0.3	0.24	5	63.0	46.29	2.1	1.62	4	65.9	21.95	2.5	0.83	4
<i>Chloroscombrus chrysurus</i>	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	4
<i>Cynoscion nothus</i>	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	4
<i>Prionotus paralatus</i>	74.7	29.62	0.2	0.10	5	34.7	24.29	0.4	0.21	4	50.4	21.16	2.0	0.70	4
<i>Squid</i>	88.6	18.42	1.5	0.56	5	91.6	39.84	0.7	0.40	4	385.3	351.63	1.7	1.43	4



Table 16b  
 Statistical Zone 18  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	138.1	51.13	6	117.7	40.28	9	43.1	14.66	5	34.0	6.54	4	41.3	7.70	4
Total finfish kg	0.0	0.00	0	124.7	45.98	6	95.8	41.13	9	33.0	11.59	5	31.8	6.88	4	38.0	8.02	4
Total crustacean kg	0.0	0.00	0	12.4	5.01	6	19.4	6.77	9	8.5	3.17	5	1.4	0.90	4	2.0	0.69	4
Total others kg	0.0	0.00	0	1.2	0.78	6	2.3	0.77	9	1.8	0.52	5	0.8	0.51	4	2.3	1.74	4
Surface temperature	28.9	0.00	1	28.9	0.17	5	29.7	0.22	11	29.7	0.34	2	29.8	0.25	4	29.8	0.25	5
Midwater temperature	28.8	0.00	1	28.3	0.31	5	27.9	0.15	11	28.1	0.78	2	24.9	0.25	4	24.1	0.18	5
Bottom temperature	28.6	0.00	1	27.6	0.15	5	27.2	0.16	11	22.1	0.30	2	21.3	0.31	4	20.3	0.24	5
Surface salinity	31.4	0.00	1	28.0	1.07	5	25.7	0.38	11	30.8	3.32	2	33.6	0.08	4	33.2	0.39	5
Midwater salinity	31.5	0.00	1	30.3	1.57	5	34.1	0.84	11	35.7	0.38	2	36.3	0.10	4	36.3	0.16	5
Bottom salinity	31.7	0.00	1	33.8	0.49	5	35.8	0.10	11	36.4	0.02	2	36.6	0.09	4	36.6	0.04	5
Surface chlorophyll	6.7	0.00	1	2.1	0.99	5	0.5	0.06	11	0.1	0.02	2	0.1	0.01	4	0.1	0.01	5
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.9	0.00	1	6.7	0.07	5	6.7	0.11	11	6.6	0.00	2	6.2	0.31	4	6.4	0.30	5
Midwater oxygen	7.6	0.00	1	5.4	0.66	5	5.9	0.18	11	7.1	0.60	2	6.4	0.40	4	7.3	0.35	4
Bottom oxygen	6.8	0.00	1	3.1	0.70	5	4.5	0.28	11	6.4	0.50	2	5.5	0.51	3	5.5	0.47	5

Table 17a  
 Statistical Zone 19  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	13.6	13.64	0.0	0.00	2	0.0	0.00	0.0	0.00	5	1942.0	975.65	7.6	3.31	9
Penaeus aztecus	412.3	357.73	2.5	1.55	2	816.6	307.30	7.6	2.81	5	562.0	225.02	9.6	4.09	9
Squilla spp.	12.7	7.27	0.2	0.23	2	241.2	162.71	0.8	0.31	5	308.8	128.62	2.4	0.94	9
Callinectes similis	62.7	62.73	0.9	0.87	2	104.1	100.27	0.7	0.68	5	168.7	60.98	2.7	0.92	9
Portunus spinicarpus	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	9
Sicyonia brevis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	6.8	5.72	0.0	0.03	9
Micropogonias undulatus	3249.5	3200.45	60.8	59.02	2	11680.9	3560.21	218.7	64.22	5	714.7	650.23	16.6	13.45	9
Cynoscion arenarius	581.8	241.82	6.1	0.86	2	605.2	150.60	8.8	3.15	5	507.9	497.97	7.3	7.00	9
Lagodon rhomboides	50.2	44.77	1.1	1.14	2	1002.2	871.17	25.2	21.78	5	33.5	17.81	0.9	0.65	9
Trachurus lathami	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	135.3	71.55	2.5	1.16	9
Trichiurus lepturus	35.5	35.45	1.1	1.12	2	505.5	482.12	22.6	22.07	5	38.2	20.86	1.1	0.50	9
Peprilus burti	15.0	15.00	0.0	0.00	2	41.5	30.83	0.2	0.13	5	207.0	101.00	8.9	4.63	9
Cynoscion nothus	107.7	102.27	2.6	2.14	2	350.8	168.73	10.1	6.29	5	97.7	49.51	1.8	0.80	9
Chloroscombrus chrysurus	17.7	12.27	0.0	0.00	2	40.4	20.49	1.2	0.65	5	135.4	87.53	3.9	2.54	9
Squid	75.9	65.91	0.6	0.33	2	71.9	23.89	0.6	0.35	5	477.7	156.90	11.4	4.49	9

Table 17a (cont'd.)  
 Statistical Zone 19  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	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	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	116.5	50.55	4.1	1.81	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squilla spp.	24.6	13.99	0.4	0.24	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	7.9	4.09	0.3	0.20	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus spinicarpus	163.7	142.71	0.5	0.41	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sicyonia brevisrostris	107.7	62.76	1.2	0.55	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	0.8	0.80	0.1	0.11	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Lagodon rhomboides	6.0	1.57	0.3	0.12	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachurus lathami	333.3	270.55	5.7	4.55	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	3.0	1.90	0.2	0.10	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus burti	58.6	40.64	4.1	2.73	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion nothus	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	0.4	0.40	0.0	0.03	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	273.5	111.79	4.1	1.35	5	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 17b  
 Statistical Zone 19  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 30 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	89.8	62.50	2	331.3	60.85	5	95.2	22.89	9	42.9	6.77	5	0.0	0.00	0	0.0	0.00	0
Total finfish kg	81.6	59.30	2	310.8	55.97	5	58.9	20.76	9	30.9	6.32	5	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	7.0	2.07	2	16.3	5.52	5	24.8	8.11	9	7.7	2.97	5	0.0	0.00	0	0.0	0.00	0
Total others kg	1.1	1.14	2	4.7	2.82	5	11.6	4.51	9	4.6	1.38	5	0.0	0.00	0	0.0	0.00	0
Surface temperature	29.3	0.23	3	29.1	0.08	6	29.4	0.06	11	29.9	0.01	3	0.0	0.00	0	0.0	0.00	0
Midwater temperature	29.2	0.40	2	27.5	0.38	6	28.0	0.16	11	27.2	0.31	3	0.0	0.00	0	0.0	0.00	0
Bottom temperature	27.3	0.27	3	26.2	0.46	6	26.0	0.19	11	24.9	0.40	3	0.0	0.00	0	0.0	0.00	0
Surface salinity	29.6	0.88	3	30.3	0.40	6	27.7	0.50	11	26.4	0.61	3	0.0	0.00	0	0.0	0.00	0
Midwater salinity	30.6	0.00	2	33.5	0.64	6	32.9	0.49	11	35.2	0.31	3	0.0	0.00	0	0.0	0.00	0
Bottom salinity	33.9	0.30	3	34.8	0.15	6	35.5	0.20	11	36.2	0.12	3	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	5.3	2.63	3	3.0	1.15	6	0.8	0.16	11	0.3	0.05	3	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.3	0.80	3	7.1	0.13	6	6.6	0.06	11	6.8	0.07	3	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.8	0.80	3	5.2	0.75	6	5.7	0.27	10	6.1	0.62	3	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	1.5	0.35	3	2.5	0.65	5	4.8	0.27	11	6.0	0.30	3	0.0	0.00	0	0.0	0.00	0

Table 18a  
 Statistical Zone 20  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	138.0	0.00	0.0	0.00	1	1385.2	1385.22	5.0	4.96	5	2408.2	1045.05	10.2	4.37	10
Penaeus aztecus	0.0	0.00	0.0	0.00	1	1668.3	1148.17	12.4	8.62	5	1367.3	657.66	21.0	9.42	10
Trachypenaeus similis	12.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	5	844.4	805.25	3.6	3.06	10
Callinectes similis	408.0	0.00	7.4	0.00	1	72.8	58.59	4.2	4.05	5	525.3	190.32	5.8	1.79	10
Squilla spp.	24.0	0.00	0.0	0.00	1	79.0	48.84	1.2	0.85	5	106.7	38.27	1.4	0.56	10
Penaeus setiferus	174.0	0.00	8.5	0.00	1	45.4	36.95	2.5	1.89	5	14.3	13.42	0.7	0.68	10
Micropogonias undulatus	11448.0	0.00	222.3	0.00	1	1504.6	663.21	28.8	12.85	5	606.2	543.17	23.5	20.62	10
Peprilus burti	288.0	0.00	0.5	0.00	1	26.2	19.42	0.0	0.02	5	363.9	195.23	13.3	7.08	10
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	310.7	239.46	1.4	1.13	5	220.0	112.29	1.6	0.85	10
Saurida caribbaea	12.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	5	21.9	11.67	0.3	0.16	10
Trachurus lathami	0.0	0.00	0.0	0.00	1	2.5	2.53	0.2	0.20	5	227.9	132.28	8.4	5.55	10
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	5	193.3	63.56	1.4	0.38	10
Polydactylus octonemus	234.0	0.00	1.4	0.00	1	347.7	183.69	2.6	1.37	5	80.0	43.10	1.0	0.39	10
Cynoscion arenarius	486.0	0.00	8.2	0.00	1	252.7	176.83	4.4	2.65	5	83.3	51.55	1.7	0.97	10
Squid	12.0	0.00	0.0	0.00	1	101.5	47.57	1.5	0.74	5	918.9	280.37	17.0	6.66	10

Table 18a (cont'd.)  
 Statistical Zone 20  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus spp.	1826.4	1434.48	9.4	5.99	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Penaeus aztecus	145.5	81.20	2.4	1.52	4	137.8	64.62	5.8	2.87	3	43.3	0.00	1.6	0.00	1
Trachypenaeus similis	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Callinectes similis	218.6	149.89	3.6	2.65	4	2.7	2.67	0.1	0.08	3	7.0	0.00	0.1	0.00	1
Squilla spp.	107.4	80.79	0.6	0.38	4	2.0	1.15	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Penaeus setiferus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	1.0	1.00	0.1	0.09	4	4.5	4.55	0.9	0.91	3	0.0	0.00	0.0	0.00	1
Peprilus burti	87.6	72.30	4.7	3.65	4	13.7	13.67	0.8	0.82	3	2.8	0.00	0.1	0.00	1
Prionotus longispinosus	8.8	5.33	0.2	0.10	4	0.9	0.91	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Saurida caribbaea	400.3	107.73	2.4	0.79	4	41.2	39.89	0.5	0.48	3	94.9	0.00	0.8	0.00	1
Trachurus lathami	141.8	89.77	2.0	1.12	4	20.3	20.33	0.3	0.27	3	30.7	0.00	0.7	0.00	1
Stenotomus caprinus	116.2	70.15	1.1	0.45	4	93.3	46.94	4.0	2.00	3	72.6	0.00	3.2	0.00	1
Polydactylus octonemus	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Cynoscion arenarius	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	1
Squid	287.4	187.34	4.0	2.34	4	133.5	76.26	3.3	1.13	3	819.1	0.00	15.3	0.00	1

Table 18b  
 Statistical Zone 20  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	294.5	0.00	1	100.0	27.25	5	134.6	33.76	10	45.0	7.89	4	44.5	10.30	3	44.4	0.00	1
Total finfish kg	275.5	0.00	1	70.9	11.35	5	71.4	26.04	10	24.2	3.82	4	33.7	8.40	3	26.0	0.00	1
Total crustacean kg	19.1	0.00	1	27.1	20.45	5	45.9	15.00	10	16.9	10.63	4	6.8	3.17	3	2.5	0.00	1
Total others kg	0.0	0.00	1	1.2	0.92	5	17.3	6.66	10	4.0	2.41	4	4.0	0.86	3	16.5	0.00	1
Surface temperature	0.0	0.00	0	29.0	0.09	6	29.6	0.07	11	29.5	0.14	4	29.2	0.00	1	29.7	0.02	2
Midwater temperature	0.0	0.00	0	28.9	0.15	6	27.6	0.22	11	27.2	0.26	4	26.0	0.00	1	24.2	0.16	2
Bottom temperature	0.0	0.00	0	26.7	0.97	6	26.0	0.23	11	23.2	0.58	4	21.6	0.00	1	20.8	0.03	2
Surface salinity	0.0	0.00	0	31.2	0.48	6	28.4	0.64	11	29.1	0.88	4	31.2	0.00	1	27.2	0.38	2
Midwater salinity	0.0	0.00	0	31.6	0.37	6	32.9	0.64	11	35.3	0.29	4	36.0	0.00	1	36.5	0.36	2
Bottom salinity	0.0	0.00	0	33.3	0.60	6	35.4	0.24	11	36.3	0.07	4	36.4	0.00	1	36.6	0.15	2
Surface chlorophyll	0.0	0.00	0	2.7	1.08	5	0.6	0.12	11	0.6	0.15	4	0.3	0.00	1	0.4	0.08	2
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	6.8	0.14	6	7.1	0.08	11	6.9	0.21	4	6.8	0.00	1	7.3	0.10	2
Midwater oxygen	0.0	0.00	0	6.5	0.06	6	5.4	0.34	11	6.5	0.10	4	6.7	0.00	1	6.9	0.00	2
Bottom oxygen	0.0	0.00	0	3.8	0.77	6	5.1	0.24	11	5.6	0.17	4	6.2	0.00	1	6.0	0.10	2

Table 19a  
 Statistical Zone 21  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	0	45.6	36.62	0.7	0.47	6	3638.2	1505.27	41.9	17.38	10
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	0	34.3	34.29	0.1	0.13	6	1226.3	827.47	3.0	1.99	10
Callinectes similis	0.0	0.00	0.0	0.00	0	144.2	125.94	2.3	1.67	6	441.8	151.73	5.4	1.88	10
Trachypenaeus spp.	0.0	0.00	0.0	0.00	0	57.8	56.75	0.3	0.26	6	874.2	874.20	2.8	2.84	10
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	3.8	3.85	0.0	0.03	6	122.0	70.50	0.4	0.19	10
Penaeus duorarum	0.0	0.00	0.0	0.00	0	316.3	171.36	5.8	3.14	6	214.4	212.54	3.9	3.85	10
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	6	2809.5	2507.31	69.7	62.89	10
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	689.7	227.77	24.0	7.33	6	2403.4	1425.58	75.7	40.95	10
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	385.0	257.47	3.4	2.44	6	801.4	259.37	6.8	2.23	10
Upeneus parvus	0.0	0.00	0.0	0.00	0	498.1	202.71	5.7	2.38	6	372.4	135.23	3.3	1.13	10
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	246.6	170.75	5.6	3.97	6	654.5	441.31	16.5	9.39	10
Peprilus burti	0.0	0.00	0.0	0.00	0	4.8	3.68	0.0	0.03	6	76.1	41.29	1.2	0.62	10
Lagodon rhomboides	0.0	0.00	0.0	0.00	0	508.5	236.62	11.6	4.93	6	64.9	35.90	1.6	0.76	10
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	6	2.9	2.03	0.1	0.09	10
Squid	0.0	0.00	0.0	0.00	0	564.6	218.56	10.1	4.41	6	797.6	230.03	13.8	4.41	10



Table 19a (cont'd.)  
 Statistical Zone 21  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	336.1	93.04	7.3	2.54	6	127.5	61.50	5.3	1.45	2	52.1	38.92	2.5	1.79	4
<i>Trachypenaeus constrictus</i>	1257.6	807.48	5.9	3.82	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4
<i>Callinectes similis</i>	379.7	232.81	5.3	3.40	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4
<i>Trachypenaeus</i> spp.	1.5	1.50	0.0	0.00	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4
<i>Sicyonia dorsalis</i>	486.9	375.85	1.0	0.67	6	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	4
<i>Penaeus duorarum</i>	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	4
<i>Trichiurus lepturus</i>	112.8	53.02	3.5	1.49	6	0.0	0.00	0.0	0.00	2	36.5	35.61	2.3	2.25	4
<i>Micropogonias undulatus</i>	1.5	1.50	0.1	0.10	6	1.5	1.50	1.5	1.50	2	0.0	0.00	0.0	0.00	4
<i>Stenotomus caprinus</i>	74.1	32.44	0.9	0.39	6	41.3	15.75	2.5	0.34	2	28.1	11.85	1.8	0.82	4
<i>Upeneus parvus</i>	128.6	83.03	1.5	0.89	6	153.8	125.25	6.8	4.94	2	111.7	53.89	3.3	1.62	4
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	6	1.5	1.50	0.3	0.30	2	0.8	0.75	0.1	0.11	4
<i>Peprilus burti</i>	224.0	163.54	7.6	6.58	6	10.0	10.00	0.7	0.70	2	4.1	2.39	0.2	0.14	4
<i>Lagodon rhomboides</i>	3.3	1.97	0.1	0.05	6	14.5	0.50	1.5	0.25	2	2.5	2.50	0.2	0.18	4
<i>Pristipomoides aquilonaris</i>	88.0	44.62	2.8	1.59	6	133.5	31.50	8.4	0.51	2	181.4	76.01	16.6	6.53	4
Squid	422.9	260.16	6.7	2.72	6	331.3	275.75	11.1	9.22	2	229.5	176.19	5.6	4.46	4

Table 19b  
 Statistical Zone 21  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	100.5	26.16	6	285.2	132.96	10	64.2	11.08	6	65.8	20.11	2	50.4	4.66	4
Total finfish kg	0.0	0.00	0	77.7	23.01	6	210.6	116.15	10	32.1	9.42	6	46.1	7.95	2	40.0	7.28	4
Total crustacean kg	0.0	0.00	0	12.3	4.25	6	60.8	20.92	10	25.4	12.05	6	8.5	2.39	2	3.8	2.57	4
Total others kg	0.0	0.00	0	11.0	4.52	6	13.8	4.37	10	6.9	2.82	6	11.7	9.66	2	6.9	5.15	4
Surface temperature	0.0	0.00	0	29.1	0.15	7	29.4	0.10	11	29.6	0.20	5	29.6	0.23	3	29.4	0.19	5
Midwater temperature	0.0	0.00	0	28.3	0.23	7	28.5	0.10	11	27.4	0.41	5	24.8	0.45	3	22.6	0.40	5
Bottom temperature	0.0	0.00	0	26.5	0.13	7	25.9	0.14	11	24.6	0.39	5	21.9	0.32	3	20.1	0.66	5
Surface salinity	0.0	0.00	0	33.0	0.42	7	31.3	0.38	11	30.0	0.89	5	28.7	0.37	3	29.2	1.90	5
Midwater salinity	0.0	0.00	0	33.5	0.28	7	32.5	0.46	11	34.6	0.74	5	36.1	0.17	3	36.4	0.04	5
Bottom salinity	0.0	0.00	0	34.8	0.21	7	34.7	0.89	11	35.9	0.14	5	36.5	0.03	3	36.4	0.01	5
Surface chlorophyll	0.0	0.00	0	1.1	0.21	7	0.4	0.06	10	0.4	0.19	5	0.1	0.02	3	0.3	0.12	5
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	6.9	0.21	7	6.5	0.09	11	6.5	0.15	5	6.5	0.07	3	6.3	0.52	5
Midwater oxygen	0.0	0.00	0	6.4	0.48	6	6.1	0.18	11	5.6	0.19	5	5.7	0.24	3	5.9	0.48	5
Bottom oxygen	0.0	0.00	0	3.2	0.29	6	4.3	0.19	11	4.9	0.15	5	5.7	0.07	3	5.1	0.61	5

Table 20a  
 Statistical Zone 17  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 10 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	79.3	30.74	0.4	0.15	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	0
Callinectes sapidus	37.3	17.43	1.9	1.19	9	1.5	1.50	0.1	0.07	4	0.0	0.00	0.0	0.00	0
Penaeus setiferus	20.7	8.84	0.4	0.17	9	21.0	9.95	0.2	0.13	4	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	8.0	3.61	0.0	0.03	9	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	4.0	2.65	0.0	0.00	9	3.0	3.00	0.0	0.00	4	0.0	0.00	0.0	0.00	0
Persephona crinita	2.0	2.00	0.0	0.00	9	3.0	3.00	0.0	0.00	4	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	910.0	288.40	14.2	5.19	9	699.0	28.72	12.8	1.67	4	0.0	0.00	0.0	0.00	0
Leiostomus xanthurus	188.0	176.07	2.8	2.61	9	6.0	3.46	0.1	0.08	4	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	80.0	27.24	1.4	0.54	9	69.0	32.91	2.3	1.48	4	0.0	0.00	0.0	0.00	0
Arius felis	35.3	20.09	1.3	0.81	9	22.5	18.71	1.6	1.09	4	0.0	0.00	0.0	0.00	0
Polydactylus octonemus	5.3	2.54	0.1	0.05	9	31.5	23.80	1.1	0.83	4	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	13.3	8.71	0.1	0.06	9	13.5	5.12	0.2	0.13	4	0.0	0.00	0.0	0.00	0
Cynoscion nothus	3.3	3.33	0.2	0.21	9	25.5	7.50	1.3	0.39	4	0.0	0.00	0.0	0.00	0
Stellifer lanceolatus	8.0	3.46	0.2	0.08	9	13.5	13.50	0.1	0.14	4	0.0	0.00	0.0	0.00	0
Squid	16.0	9.17	0.1	0.09	9	88.5	13.28	0.9	0.17	4	0.0	0.00	0.0	0.00	0

Table 20b  
 Statistical Zone 17  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 10 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	23.9	6.95	9	21.8	3.34	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	20.6	6.15	9	19.8	3.92	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	2.4	1.24	9	0.0	0.00	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	9	0.7	0.68	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.4	0.33	10	28.6	0.09	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	27.8	0.28	10	27.3	0.19	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	26.8	0.12	10	26.7	0.06	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	12.6	1.35	10	15.1	0.30	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	20.2	2.41	10	30.9	0.78	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	24.9	1.64	10	31.9	0.26	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	5.5	0.73	10	2.5	0.41	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	2.2	0.45	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.0	0.34	10	8.6	1.22	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.4	0.58	10	5.8	0.47	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	7.0	0.53	10	6.2	0.10	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 21a  
 Statistical Zone 18  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 10 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	34.7	19.99	0.2	0.13	9	13.8	6.39	0.1	0.06	10	0.0	0.00	0.0	0.00	0
Penaeus setiferus	20.7	9.39	0.5	0.22	9	1.8	1.28	0.1	0.06	10	0.0	0.00	0.0	0.00	0
Callinectes sapidus	16.0	8.83	0.3	0.19	9	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	2.0	2.00	0.0	0.00	9	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	2.0	1.00	0.0	0.00	9	0.0	0.00	0.0	0.00	10	0.0	0.00	0.0	0.00	0
Squilla spp.	0.0	0.00	0.0	0.00	9	1.2	1.20	0.0	0.00	10	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	774.0	357.33	21.3	14.28	9	496.2	241.26	10.0	4.83	10	0.0	0.00	0.0	0.00	0
Arius felis	75.3	44.77	1.6	0.86	9	1.8	1.28	0.4	0.33	10	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	30.0	10.15	0.7	0.29	9	15.0	5.67	0.4	0.19	10	0.0	0.00	0.0	0.00	0
Leiostomus xanthurus	24.0	14.21	0.5	0.36	9	0.6	0.60	0.0	0.00	10	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	13.3	11.91	0.4	0.36	9	6.0	3.22	0.2	0.10	10	0.0	0.00	0.0	0.00	0
Cynoscion nothus	2.7	2.67	0.2	0.24	9	8.4	5.88	0.3	0.25	10	0.0	0.00	0.0	0.00	0
Peprilus alepidotus	6.0	4.69	0.1	0.06	9	4.8	2.50	0.0	0.03	10	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	3.3	1.45	0.1	0.09	9	6.6	3.52	0.1	0.04	10	0.0	0.00	0.0	0.00	0
Squid	9.3	4.59	0.2	0.09	9	52.8	26.61	0.5	0.22	10	0.0	0.00	0.0	0.00	0

Table 21b  
 Statistical Zone 18  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 10 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	27.6	14.22	9	13.4	5.34	10	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	25.5	14.06	9	12.0	5.24	10	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.9	0.64	9	0.0	0.00	10	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.3	0.30	9	1.1	0.60	10	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	29.1	0.13	11	28.7	0.30	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	28.1	0.16	11	27.0	0.14	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	27.2	0.13	11	26.9	0.04	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	16.6	1.79	10	20.0	1.02	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	19.1	1.80	11	25.9	0.31	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	23.3	1.76	11	29.0	1.66	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	4.4	0.63	11	2.2	0.44	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.2	0.54	11	6.9	0.09	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.7	0.29	11	5.7	0.29	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.0	0.98	11	2.9	0.59	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 22a  
 Statistical Zone 19  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	3	74.5	19.52	0.5	0.15	12	60.0	0.00	0.3	0.00	1
Trachypenaeus similis	0.0	0.00	0.0	0.00	3	11.0	5.21	0.0	0.00	12	78.0	0.00	0.3	0.00	1
Penaeus setiferus	0.0	0.00	0.0	0.00	3	11.5	6.02	0.5	0.30	12	0.0	0.00	0.0	0.00	1
Squilla spp.	0.0	0.00	0.0	0.00	3	10.0	4.75	0.0	0.03	12	6.0	0.00	0.0	0.00	1
Callinectes similis	0.0	0.00	0.0	0.00	3	5.5	3.94	0.0	0.02	12	24.0	0.00	0.0	0.00	1
Portunus gibbesii	0.0	0.00	0.0	0.00	3	4.0	2.59	0.0	0.02	12	0.0	0.00	0.0	0.00	1
Micropogonias undulatus	204.0	204.00	4.1	4.09	3	1368.5	360.42	28.9	7.76	12	120.0	0.00	3.0	0.00	1
Cynoscion nothus	0.0	0.00	0.0	0.00	3	233.5	50.08	7.5	2.27	12	474.0	0.00	19.9	0.00	1
Leiostomus xanthurus	2.0	2.00	0.0	0.00	3	81.0	58.29	1.6	1.11	12	0.0	0.00	0.0	0.00	1
Polydactylus octonemus	0.0	0.00	0.0	0.00	3	74.5	42.83	1.5	0.99	12	36.0	0.00	0.5	0.00	1
Chloroscombrus chrysurus	114.0	108.06	0.6	0.64	3	29.0	15.01	0.7	0.37	12	6.0	0.00	0.0	0.00	1
Trichiurus lepturus	0.0	0.00	0.0	0.00	3	35.5	10.87	1.2	0.61	12	54.0	0.00	1.9	0.00	1
Larimus fasciatus	0.0	0.00	0.0	0.00	3	32.0	25.61	1.0	0.81	12	0.0	0.00	0.0	0.00	1
Peprilus alepidotus	20.0	11.14	0.1	0.09	3	20.0	12.48	0.1	0.09	12	0.0	0.00	0.0	0.00	1
Squid	8.0	8.00	0.0	0.00	3	164.5	79.55	2.9	1.27	12	114.0	0.00	1.6	0.00	1

Table 22b  
 Statistical Zone 19  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	14.5	5.96	3	51.1	8.95	12	27.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	6.4	5.06	3	43.9	8.85	12	24.5	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	3	1.1	0.53	12	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	8.2	5.68	3	5.9	1.64	12	2.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	30.4	0.09	3	28.7	0.19	12	28.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	28.4	0.49	3	27.1	0.13	12	27.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	26.8	0.38	3	26.6	0.17	12	27.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	22.4	0.33	2	23.0	0.37	12	24.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	24.1	1.15	3	26.3	0.57	12	27.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	29.1	1.00	3	30.6	1.00	12	28.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	3.1	0.34	3	2.8	0.87	12	2.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.8	0.09	3	6.5	0.06	12	6.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	4.7	0.90	3	4.8	0.49	12	5.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	2.0	1.02	3	3.8	0.59	12	5.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0



Table 23a  
 Statistical Zone 20  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	1	26.4	18.72	0.2	0.14	10	49.2	32.44	0.5	0.36	5
Libinia dubia	0.0	0.00	0.0	0.00	1	25.8	13.18	0.0	0.00	10	9.6	4.07	0.0	0.00	5
Portunus gibbesii	0.0	0.00	0.0	0.00	1	9.0	2.72	0.0	0.03	10	3.6	1.47	0.0	0.00	5
Callinectes similis	0.0	0.00	0.0	0.00	1	3.6	1.83	0.0	0.03	10	10.8	5.50	0.1	0.11	5
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	0.6	0.60	0.0	0.00	10	12.0	6.29	0.0	0.00	5
Squilla spp.	0.0	0.00	0.0	0.00	1	2.4	1.33	0.0	0.00	10	4.8	2.94	0.0	0.00	5
Micropogonias undulatus	6.0	0.00	0.0	0.00	1	271.2	90.85	6.0	2.04	10	273.6	124.38	7.4	3.01	5
Cynoscion nothus	0.0	0.00	0.0	0.00	1	86.4	60.73	4.3	3.09	10	81.6	68.37	3.8	3.03	5
Polydactylus octonemus	0.0	0.00	0.0	0.00	1	34.2	16.03	0.7	0.37	10	72.0	43.52	1.0	0.65	5
Selene setapinnis	0.0	0.00	0.0	0.00	1	33.0	14.54	0.1	0.04	10	20.4	7.25	0.0	0.00	5
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	25.2	13.14	0.2	0.06	10	28.8	27.32	0.8	0.70	5
Peprilus burti	0.0	0.00	0.0	0.00	1	33.0	25.44	0.1	0.08	10	7.2	2.94	0.1	0.05	5
Syacium gunteri	0.0	0.00	0.0	0.00	1	4.2	3.58	0.0	0.03	10	58.8	26.99	0.4	0.22	5
Cynoscion arenarius	0.0	0.00	0.0	0.00	1	21.6	9.26	0.4	0.15	10	15.6	10.15	0.2	0.11	5
Squid	0.0	0.00	0.0	0.00	1	124.2	66.54	2.1	1.18	10	130.8	14.12	2.8	0.32	5

Table 23b  
 Statistical Zone 20  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	16.4	0.00	1	25.4	7.62	10	18.5	6.06	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	1	13.1	5.62	10	14.2	6.59	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	1	0.3	0.27	10	0.5	0.55	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	16.4	0.00	1	11.5	7.10	10	4.4	0.67	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.2	0.00	1	28.8	0.14	10	28.7	0.24	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	28.2	0.00	1	28.0	0.10	10	27.8	0.12	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	28.2	0.00	1	27.5	0.14	10	27.2	0.32	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	22.9	0.00	1	24.8	0.68	10	24.4	0.96	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	23.0	0.00	1	26.0	0.89	10	25.5	1.65	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	23.0	0.00	1	29.1	1.26	10	28.4	2.37	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.6	0.00	1	0.4	0.12	10	0.3	0.07	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	5.5	0.00	1	6.4	0.06	10	6.4	0.15	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	5.6	0.00	1	4.9	0.38	10	5.6	0.22	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.7	0.00	1	3.8	0.46	10	4.2	0.38	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 24a  
 Statistical Zone 21  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	2	3.4	2.57	0.0	0.04	7	99.6	39.28	1.3	0.43	5
Callinectes similis	0.0	0.00	0.0	0.00	2	4.3	2.84	0.0	0.00	7	73.2	24.98	0.8	0.24	5
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	6.9	4.23	0.0	0.00	7	32.4	9.60	0.1	0.07	5
Portunus spinimanus	9.0	9.00	0.1	0.14	2	0.9	0.86	0.0	0.00	7	25.2	7.68	0.5	0.18	5
Calappa sulcata	0.0	0.00	0.0	0.00	2	5.1	5.14	0.2	0.23	7	9.6	3.60	0.8	0.41	5
Ovalipes floridanus	3.0	3.00	0.0	0.00	2	5.1	2.76	0.2	0.12	7	2.4	2.40	0.0	0.00	5
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	4.3	2.16	0.0	0.00	7	183.6	116.76	1.6	1.15	5
Syacium gunteri	3.0	3.00	0.0	0.00	2	34.3	9.68	0.4	0.13	7	66.0	14.70	0.8	0.18	5
Priacanthus arenatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7	105.6	105.60	0.0	0.00	5
Prionotus tribulus	0.0	0.00	0.0	0.00	2	1.7	1.71	0.0	0.04	7	9.6	2.40	0.1	0.07	5
Etropus crossotus	0.0	0.00	0.0	0.00	2	0.9	0.86	0.0	0.00	7	4.8	2.24	0.1	0.05	5
Lagocephalus laevigatus	0.0	0.00	0.0	0.00	2	1.7	1.11	0.0	0.04	7	2.4	2.40	0.1	0.05	5
Lagodon rhomboides	9.0	3.00	0.1	0.14	2	0.0	0.00	0.0	0.00	7	1.2	1.20	0.0	0.00	5
Upeneus parvus	3.0	3.00	0.0	0.00	2	0.0	0.00	0.0	0.00	7	3.6	3.60	0.1	0.05	5
Squid	21.0	21.00	0.4	0.41	2	1.7	1.71	0.0	0.04	7	3.6	3.60	0.0	0.00	5

Table 24b  
 Statistical Zone 21  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.4	1.36	2	0.8	0.50	7	8.2	1.22	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	2	0.0	0.00	7	3.8	1.39	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	2	0.4	0.39	7	3.3	0.55	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	2	0.0	0.00	7	0.5	0.55	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	26.5	0.84	3	27.1	0.36	7	27.0	0.33	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	25.7	0.49	3	26.0	0.42	7	26.0	0.54	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	25.2	0.21	3	25.1	0.33	7	24.5	0.26	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	34.1	0.24	3	33.3	0.30	7	33.7	0.43	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	34.7	0.04	3	34.6	0.15	7	34.6	0.52	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	34.8	0.03	3	34.9	0.12	7	35.4	0.08	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	1.7	0.58	3	1.5	0.19	7	0.8	0.04	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.0	0.63	3	7.2	0.23	7	7.7	0.22	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	5.2	0.64	3	6.1	0.39	7	7.3	0.44	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	4.4	1.13	3	4.5	0.35	7	5.8	0.65	4	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 25a  
 Statistical Zone 22  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 22 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 10 fm or greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	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	0.0	0.00	0.0	0.00	0	144.0	102.00	1.5	1.23	2
Penaeus aztecus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	129.0	111.00	1.8	1.50	2
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	27.0	21.00	0.0	0.00	2
Calappa sulcata	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	9.0	3.00	0.3	0.27	2
Portunus spinimanus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	6.0	0.00	0.1	0.14	2
Sicyonia brevis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	3.0	3.00	0.0	0.00	2
Syacium gunteri	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	87.0	69.00	1.4	1.09	2
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	27.0	9.00	0.1	0.14	2
Peprilus burti	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	21.0	21.00	0.1	0.14	2
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	9.0	3.00	0.1	0.14	2
Prionotus tribulus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	9.0	3.00	0.0	0.00	2
Sardinella aurita	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	9.0	9.00	0.4	0.41	2
Anchoa nasuta	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	3.0	3.00	0.0	0.00	2
Trichiurus lepturus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	3.0	3.00	0.0	0.00	2
Squid	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	12.0	12.00	0.3	0.27	2

Table 25b  
 Statistical Zone 22  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 10 fm or greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	0.0	0.00	0	6.8	4.09	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	0	0.0	0.00	0	1.4	1.36	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	0	0.0	0.00	0	2.7	2.73	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	0	0.0	0.00	0	0.0	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	0.0	0.00	0	0.0	0.00	0	26.4	0.40	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	24.8	0.90	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	0.0	0.00	0	0.0	0.00	0	24.0	0.25	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	0.0	0.00	0	0.0	0.00	0	33.9	0.25	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	34.6	0.43	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	0.0	0.00	0	0.0	0.00	0	35.6	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	1.3	0.24	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	0.0	0.00	0	7.6	0.10	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	6.5	0.75	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	0.0	0.00	0	0.0	0.00	0	5.5	0.15	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 26a  
 Statistical Zone 11  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes sapidus	66.0	54.44	9.2	7.23	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachypena spp.	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sphyræna guachancho	64.0	64.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	34.0	34.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	16.0	16.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	12.0	12.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	10.0	10.00	0.4	0.36	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Diplectrum bivittatum	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Prionotus ophryas	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Etropus crossotus	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	188.0	176.14	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 26b  
 Statistical Zone 11  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	10.0	7.44	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	10.0	7.44	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	29.2	0.00	1	28.9	0.00	1	29.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	29.1	0.00	1	26.3	0.00	1	26.5	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	23.0	0.00	1	22.6	0.00	1	25.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	23.4	0.00	1	36.3	0.00	1	34.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	7.1	0.00	1	8.5	0.00	1	11.5	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.3	0.00	1	5.3	0.00	1	6.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.0	0.00	1	1.8	0.00	1	1.2	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0



Table 27a  
 Statistical Zone 12  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 12 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes sapidus	4.0	2.00	0.4	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Synodus foetens	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 27b  
 Statistical Zone 12  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.5	0.25	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	26.8	0.59	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	24.1	1.27	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	28.4	2.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	4.9	0.55	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.0	0.09	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.2	0.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 28a  
 Statistical Zone 13  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes sapidus	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	2798.0	2567.56	1.7	1.46	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa nasuta	664.0	664.00	0.5	0.45	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Caranx hippos	78.0	72.08	0.3	0.16	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	8.0	8.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 28b  
 Statistical Zone 13  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.8	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	1.8	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.8	0.48	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	28.0	0.44	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	10.5	0.58	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	21.9	5.97	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	15.6	3.48	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.3	0.35	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	4.4	0.92	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 29a  
 Statistical Zone 14  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes sapidus	11.0	7.33	1.4	1.11	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	8.0	5.06	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus setiferus	1.0	1.00	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	1916.0	1235.05	1.6	1.12	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	37.0	24.02	0.1	0.06	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Bagre marinus	19.0	19.00	0.2	0.23	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	11.0	11.00	0.2	0.23	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	9.0	9.00	0.2	0.18	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sardinella aurita	8.0	8.00	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Leiostomus xanthurus	4.0	4.00	0.0	0.05	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	3.0	3.00	0.0	0.05	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 29b  
 Statistical Zone 14  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	4.1	2.61	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	2.3	1.78	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	1.8	1.35	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	29.2	0.13	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	28.6	0.37	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	16.1	1.68	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	17.2	1.95	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	14.2	0.66	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.5	0.37	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	5.4	1.22	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 30a  
 Statistical Zone 16  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Palaemonetes spp.	294.0	294.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	56.0	56.00	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	56.0	8.72	0.3	0.16	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus setiferus	40.0	26.46	0.4	0.24	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes sapidus	26.0	20.00	2.7	2.08	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Libinia spp.	6.0	6.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	838.0	529.00	20.1	13.87	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	726.0	605.09	0.7	0.24	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chaetodipterus faber	422.0	371.49	0.7	0.73	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	134.0	110.87	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Arius felis	44.0	38.00	3.1	2.69	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Prionotus longispinosus	30.0	30.00	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Symphurus plagiusa	18.0	18.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	12.0	6.00	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	16.0	13.11	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 30b  
 Statistical Zone 16  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	30.9	10.24	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	26.4	12.63	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	3.6	2.41	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.7	0.31	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	28.7	0.45	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	10.1	6.14	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	17.9	8.11	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	11.5	2.80	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.6	0.84	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	4.7	0.97	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0



Table 31a  
 Statistical Zone 17  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Acetes americanus	80.0	80.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	16.0	8.72	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes sapidus	12.0	12.00	0.8	0.82	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	10.0	10.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus setiferus	8.0	8.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chaetodipterus faber	478.0	412.93	0.5	0.33	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	398.0	301.80	0.5	0.42	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Bagre marinus	78.0	78.00	1.1	1.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Stellifer lanceolatus	70.0	67.02	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	52.0	46.13	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sphoeroides parvus	48.0	45.03	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus alepidotus	40.0	37.04	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	16.0	7.21	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	8.0	8.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 31b  
 Statistical Zone 17  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Summer Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	3.6	3.64	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	2.7	2.73	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	28.9	0.12	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	28.7	0.06	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	18.2	0.26	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	20.0	1.75	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	4.6	0.93	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.7	0.06	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	6.3	0.26	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 32. 1991 Fall Shrimp/Groundfish Survey species composition list, 328 trawl stations, for those vessels that used a 40-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
<i>Micropogonias undulatus</i>	Atlantic croaker	46592	2883.0	248	75.6
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	32947	399.8	154	47.0
<i>Stenotomus caprinus</i>	longspine porgy	14872	673.9	162	49.4
<i>Arius felis</i>	hardhead catfish	12818	1781.6	103	31.4
<i>Peprilus burti</i>	gulf butterflyfish	10803	766.5	156	47.6
<i>Leiostomus xanthurus</i>	spot	7462	759.7	156	47.6
<i>Synodus foetens</i>	inshore lizardfish	5389	594.3	266	81.1
<i>Serranus atrobranchus</i>	blackear bass	4907	64.0	90	27.4
<i>Cynoscion arenarius</i>	sand seatrout	4143	372.4	181	55.2
<i>Lutjanus campechanus</i>	red snapper	3430	118.2	207	63.1
<i>Diplectrum bivittatum</i>	dwarf sand perch	3319	53.6	144	43.9
<i>Prionotus longispinosus</i>	bigeye searobin	3234	122.7	157	47.9
<i>Syacium</i> spp.	lefteye flounders	3168	51.5	60	18.3
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	2950	126.1	93	28.4
<i>Lagodon rhomboides</i>	pinfish	2920	180.0	133	40.5
<i>Prionotus paralatus</i>	Mexican searobin	2194	93.4	50	15.2
<i>Cynoscion nothus</i>	silver seatrout	2176	156.5	108	32.9
<i>Upeneus parvus</i>	dwarf goatfish	2081	75.8	110	33.5
<i>Trachurus lathamii</i>	rough scad	1992	93.7	68	20.7
<i>Sphoeroides parvus</i>	least puffer	1926	12.9	102	31.1
<i>Pristipomoides aquilonaris</i>	wenchman	1914	144.1	49	14.9
<i>Centropristis philadelphia</i>	rock sea bass	1798	117.5	178	54.3
<i>Syacium gunteri</i>	shoal flounder	1633	36.4	85	25.9
<i>Anchoa mitchilli</i>	bay anchovy	1607	2.3	17	5.2
<i>Balistes capriscus</i>	gray triggerfish	1470	143.4	126	38.4
<i>Etropus crossotus</i>	fringed flounder	1389	23.7	88	26.8
<i>Anchoa hepsetus</i>	striped anchovy	1370	20.4	47	14.3
<i>Lutjanus synagris</i>	lane snapper	1240	66.7	77	23.5
<i>Harengula jaguana</i>	scaled sardine	1201	52.5	79	24.1
<i>Cynoscion</i> spp.	seatrouts	1181	2.8	20	6.1
<i>Chaetodipterus faber</i>	Atlantic spadefish	1033	58.4	109	33.2
<i>Peprilus alepidotus</i>	harvestfish	957	21.6	56	17.1
<i>Halieutichthys aculeatus</i>	pancake batfish	799	6.5	101	30.8
<i>Trichopsetta ventralis</i>	sash flounder	778	20.5	41	12.5
<i>Saurida brasiliensis</i>	largescale lizardfish	772	4.8	78	23.8

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Lepophidium brevibarbe</i>	blackedge cusk-eel	764	29.7	72	22.0
<i>Prionotus stearnsi</i>	shortwing searobin	654	7.0	32	9.8
<i>Scorpaena calcarata</i>	smoothhead scorpionfish	564	6.5	57	17.4
<i>Eucinostomus gula</i>	silver jenny	547	13.5	91	27.7
<i>Citharichthys spilopterus</i>	bay whiff	507	7.7	77	23.5
<i>Haemulon aurolineatum</i>	tomtate	484	21.7	19	5.8
<i>Cyclopsetta chittendeni</i>	Mexican flounder	462	34.2	107	32.6
<i>Syacium papillosum</i>	dusky flounder	439	17.2	30	9.1
<i>Mullus auratus</i>	red goatfish	413	25.7	36	11.0
<i>Opisthonema oglinum</i>	Atlantic thread herring	394	25.1	50	15.2
<i>Prionotus rubio</i>	blackwing searobin	378	15.9	53	16.2
<i>Porichthys plectrodon</i>	Atlantic midshipman	375	7.9	72	22.0
<i>Prionotus roseus</i>	bluespotted searobin	367	14.6	23	7.0
<i>Orthopristis chrysoptera</i>	pigfish	343	31.5	40	12.2
<i>Lagocephalus laevigatus</i>	smooth puffer	317	54.6	72	22.0
<i>Anchoa lyolepis</i>	dusky anchovy	304	0.2	7	2.1
<i>Selene setapinnis</i>	Atlantic moonfish	259	15.1	47	14.3
<i>Polydactylus octonemus</i>	Atlantic threadfin	254	18.5	20	6.1
<i>Priacanthus arenatus</i>	bigeye	253	29.5	32	9.8
<i>Prionotus tribulus</i>	bighead searobin	242	12.0	43	13.1
<i>Equetus umbrosus</i>	cubbyu	224	10.4	15	4.6
<i>Hildebrandia flava</i>	yellow conger	209	15.5	32	9.8
<i>Sphyræna guachancho</i>	guaguanche	200	23.4	41	12.5
<i>Caranx crysos</i>	blue runner	198	17.8	32	9.8
<i>Prionotus scitulus</i>	leopard searobin	195	3.5	17	5.2
<i>Symphurus plagiosa</i>	blackcheek tonguefish	172	3.0	34	10.4
<i>Rhomboplites aurorubens</i>	vermillion snapper	172	11.8	27	8.2
<i>Brevoortia patronus</i>	gulf menhaden	170	13.5	20	6.1
<i>Menticirrhus americanus</i>	southern kingfish	168	20.2	28	8.5
<i>Stellifer lanceolatus</i>	star drum	165	2.8	12	3.7
<i>Paralichthys lethostigma</i>	southern flounder	148	44.1	61	18.6
<i>Bellator militaris</i>	horned searobin	144	1.7	17	5.2
<i>Monacanthus hispidus</i>	planehead filefish	139	3.2	41	12.5
<i>Selene vomer</i>	lookdown	136	4.0	24	7.3
<i>Brotula barbata</i>	bearded brotula	129	19.5	38	11.6
<i>Lepophidium</i> spp.	cusk-eels	115	3.0	15	4.6
<i>Bollmannia communis</i>	ragged goby	115	0.6	14	4.3

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Bagre marinus</i>	gafftopsail catfish	114	77.8	12	3.7
<i>Pontinus longispinis</i>	longspine scorpionfish	112	3.1	5	1.5
<i>Urophycis floridana</i>	southern hake	110	16.0	12	3.7
<i>Steindachneria argentea</i>	luminous hake	106	0.4	6	1.8
<i>Decapterus punctatus</i>	round scad	95	3.0	7	2.1
<i>Ancylopsetta quadrocellata</i>	ocellated flounder	93	15.5	32	9.8
<i>Ogcocephalus</i> spp.	batfishes	92	4.7	37	11.3
<i>Synodus poeyi</i>	offshore lizardfish	87	0.9	26	7.9
<i>Scomberomorus maculatus</i>	Spanish mackerel	86	27.4	23	7.0
<i>Larimus fasciatus</i>	banded drum	82	3.6	20	6.1
<i>Equetus acuminatus</i>	high-hat	81	5.2	5	1.5
<i>Eucinostomus argenteus</i>	spotfin mojarra	81	1.4	14	4.3
<i>Lepophidium jeannae</i>	mottled cusk-eel	81	3.7	8	2.4
<i>Diplectrum formosum</i>	sand perch	80	10.0	11	3.4
<i>Urophycis cirrata</i>	gulf hake	77	8.3	4	1.2
<i>Caranx hippos</i>	crevalle jack	77	4.5	10	3.0
<i>Ancylopsetta dilecta</i>	three-eye flounder	69	7.8	14	4.3
<i>Ophidion welshi</i>	crested cusk-eel	67	2.9	15	4.6
<i>Caulolatilus intermedius</i>	anchor tilefish	59	6.8	13	4.0
<i>Etropus cyclosquamus</i>	shelf flounder	57	0.7	7	2.1
<i>Kathetostoma albigutta</i>	lancer stargazer	53	4.9	14	4.3
<i>Gymnachirus texae</i>	fringed sole	50	2.4	22	6.7
<i>Dasyatis sabina</i>	Atlantic stringray	49	33.4	12	3.7
<i>Rhizoprionodon terraenovae</i>	Atlantic sharpnose shark	48	48.5	25	7.6
<i>Sardinella aurita</i>	Spanish sardine	47	1.6	8	2.4
<i>Selar crumenophthalmus</i>	bigeye scad	43	3.8	16	4.9
<i>Antennarius radiosus</i>	singlespot frogfish	42	1.7	13	4.0
<i>Dasyatis say</i>	bluntnose stingray	40	64.3	9	2.7
<i>Hoplunnis macrurus</i>	freckled pike-conger	38	1.2	21	6.4
<i>Pomatomus saltatrix</i>	bluefish	37	13.4	22	6.7
<i>Bairdiella chrysoura</i>	silver perch	35	1.1	5	1.5
<i>Prionotus ophryas</i>	bandtail searobin	32	0.6	15	4.6
<i>Raja texana</i>	roundel skate	32	13.5	21	6.4
<i>Anchoa</i> spp.	anchovies	31	0.0	3	0.9
<i>Trachinocephalus myops</i>	snakefish	31	1.9	5	1.5
<i>Decodon puellaris</i>	red hogfish	30	2.9	6	1.8
<i>Seriola dumerili</i>	greater amberjack	29	11.4	8	2.4

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Citharichthys macrops</i>	spotted whiff	29	1.3	13	4.0
<i>Engyophrys senta</i>	spiny flounder	24	0.1	11	3.4
<i>Centropristis ocyura</i>	bank sea bass	23	1.7	8	2.4
<i>Ophidion holbrookii</i>	bank cusk-eel	22	1.3	4	1.2
<i>Sphoeroides dorsalis</i>	marbled puffer	21	0.4	6	1.8
<i>Narcine brasiliensis</i>	lesser electric ray	20	10.6	4	1.2
<i>Ogcocephalus declivirostris</i>	slantbrow batfish	19	0.4	9	2.7
<i>Symphurus diomedianus</i>	spottedfin tonguefish	19	0.5	7	2.1
<i>Echeneis naucrates</i>	sharksucker	18	4.6	13	4.0
<i>Calamus leucosteus</i>	whitebone porgy	17	4.9	3	0.9
<i>Etrumeus teres</i>	round herring	17	0.5	5	1.5
<i>Neomerinthe hemingwayi</i>	spinycheek scorpionfish	16	7.1	5	1.5
<i>Gymnothorax nigromarginatus</i>	blackedge moray	16	1.8	11	3.4
<i>Sphyrna tiburo</i>	bonnethead	15	9.9	8	2.4
<i>Gymnachirus melas</i>	naked sole	14	0.3	4	1.2
<i>Etropus</i> spp.	lefteye flounders	13	0.1	2	0.6
<i>Chilomycterus schoepfi</i>	striped burrfish	13	5.0	8	2.4
Pisces	fishes	13	0.0	1	0.3
<i>Bathyanthias mexicanus</i>	yellowtail bass	12	0.1	2	0.6
<i>Menticirrhus littoralis</i>	gulf kingfish	11	0.9	3	0.9
<i>Pagrus pagrus</i>	red porgy	11	4.0	4	1.2
<i>Rhinoptera bonasus</i>	cownose ray	11	61.9	1	0.3
<i>Prionotus alatus</i>	spiny searobin	9	0.3	2	0.6
<i>Scomberomorus cavalla</i>	king mackerel	9	5.4	7	2.1
<i>Opistognathus</i> spp.	jawfishes	9	0.2	3	0.9
<i>Hemicaranx amblyrhynchus</i>	bluntnose jack	9	0.3	3	0.9
<i>Hemanthias leptus</i>	longtail bass	8	0.2	1	0.3
<i>Squatina dumeril</i>	Atlantic angel shark	8	2.2	3	0.9
<i>Aluterus schoepfi</i>	orange filefish	8	2.8	3	0.9
<i>Dorosoma petenense</i>	threadfin shad	7	0.7	1	0.3
<i>Pikea</i> spp.	seabasses	7	0.2	1	0.3
<i>Rachycentron canadum</i>	cobia	7	4.0	7	2.1
<i>Neobythites gillii</i>	cusk-eel	6	0.1	2	0.6
<i>Paralichthys squamilentus</i>	broad flounder	6	0.9	3	0.9
<i>Pristigenys alta</i>	short bigeye	5	0.1	2	0.6
<i>Serraniculus pumilio</i>	pygmy sea bass	5	0.0	2	0.6
<i>Ophichthus gomesi</i>	shrimp eel	5	0.7	3	0.9

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Epinephelus flavolimbatus</i>	yellowedge grouper	5	0.9	4	1.2
<i>Mustelus canis</i>	smooth dogfish	5	17.8	5	1.5
<i>Carcharhinus acronotus</i>	blacknose shark	4	6.7	3	0.9
<i>Sphryaena picudilla</i>	southern sennet	4	0.4	1	0.3
<i>Sphyaena borealis</i>	northern sennet	4	0.4	2	0.6
<i>Anchoa lamprotaenia</i>	bigeye anchovy	4	0.0	1	0.3
<i>Apogon pseudomaculatus</i>	twospot cardinalfish	4	0.0	1	0.3
<i>Alectis ciliaris</i>	African pompano	4	0.7	4	1.2
<i>Lonchopisthus micrognathus</i>	swordtail jawfish	4	0.0	1	0.3
<i>Ophidion grayi</i>	blotched cusk-eel	4	0.2	3	0.9
<i>Sciaenops ocellatus</i>	red drum	4	19.0	3	0.9
<i>Trinectes maculatus</i>	hogchoker	4	0.0	3	0.9
<i>Symphurus civitatus</i>	offshore tonguefish	4	0.0	1	0.3
<i>Lactophrys quadricornis</i>	scrawled cowfish	4	0.4	4	1.2
<i>Aluterus monoceros</i>	unicorn filefish	3	3.1	3	0.9
<i>Ogcocephalus parvus</i>	roughback batfish	3	0.0	3	0.9
<i>Monacanthus ciliatus</i>	fringed filefish	3	0.1	1	0.3
<i>Achirus lineatus</i>	lined sole	3	0.0	2	0.6
<i>Etropus rimosus</i>	gray flounder	3	0.1	2	0.6
<i>Syacium micrurum</i>	channel flounder	3	0.1	2	0.6
<i>Pogonias cromis</i>	black drum	3	24.9	3	0.9
<i>Scomber japonicus</i>	chub mackerel	3	0.3	3	0.9
<i>Scorpaena agassizi</i>	longfin scorpionfish	3	0.2	1	0.3
Gobiidae	gobies	3	0.0	1	0.3
<i>Hemanthias vivanus</i>	red barbier	3	0.1	1	0.3
<i>Conger oceanicus</i>	conger eel	3	0.3	1	0.3
<i>Holocentrus adscensionis</i>	squirrelfish	3	0.5	1	0.3
<i>Carcharhinus limbatus</i>	blacktip shark	3	20.0	3	0.9
<i>Elops saurus</i>	ladyfish	2	0.6	1	0.3
<i>Physiculus fulvus</i>	metallic codling	2	0.0	1	0.3
<i>Gymnothorax saxicola</i>	honeycomb moray	2	0.2	2	0.6
<i>Phaeoptyx</i> spp.	cardinalfishes	2	0.0	2	0.6
<i>Remora remora</i>	remora	2	1.1	2	0.6
<i>Ariomma bondi</i>	silver-rag	2	0.1	1	0.3
<i>Prionotus</i> spp.	searobins	2	0.0	1	0.3
<i>Archosargus probatocephalus</i>	sheepshead	2	3.5	2	0.6
<i>Equetus wamotoi</i>	blackbar drum	2	1.2	1	0.3

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Conodon nobilis</i>	barred grunt	2	0.0	1	0.3
<i>Ogcocephalus pantostictus</i>	spotted batfish	2	1.5	1	0.3
<i>Sphoeroides spengleri</i>	bandtail puffer	2	0.0	1	0.3
<i>Aluterus scriptus</i>	scrawled filefish	1	0.1	1	0.3
<i>Opsanus tau</i>	oyster toadfish	1	0.4	1	0.3
<i>Ogcocephalus radiatus</i>	polka-dot batfish	1	0.0	1	0.3
<i>Chromis enchrysurus</i>	yellowtail reeffish	1	0.0	1	0.3
<i>Ariomma regulus</i>	spotted driftfish	1	0.0	1	0.3
<i>Seriola rivoliana</i>	almaco jack	1	0.5	1	0.3
<i>Rypticus maculatus</i>	whitespotted soapfish	1	0.1	1	0.3
<i>Serranus phoebe</i>	tattler	1	0.0	1	0.3
<i>Hoplunnis</i> spp.	pike-congers	1	0.0	1	0.3
<i>Anchoa nasuta</i>	longnose anchovy	1	0.0	1	0.3
<i>Fistularia petimba</i>	red cornetfish	1	0.4	1	0.3
<i>Ablennes hians</i>	flat needlefish	1	0.1	1	0.3
<i>Prognichthys gibbifrons</i>	bluntnose flyingfish	1	0.1	1	0.3
<i>Anacanthobatis longirostris</i>	skate	1	0.7	1	0.3
<i>Myliobatis fremin</i>	bullnose ray	1	0.7	1	0.3
<i>Dorosoma cepedianum</i>	gizzard shad	1	0.0	1	0.3
<i>Rhinobatos lentiginosus</i>	Atlantic guitarfish	1	1.1	1	0.3
<i>Dasyatis americana</i>	southern stingray	1	1.4	1	0.3
<i>Raja olseni</i>	spreadfin skate	1	0.7	1	0.3
<i>Raja eglanteria</i>	clearnose skate	1	1.1	1	0.3
<u>Crustaceans</u>					
<i>Penaeus aztecus</i>	brown shrimp	14673	344.9	270	82.3
<i>Callinectes similis</i>	lesser blue crab	5116	78.0	196	59.8
<i>Penaeus setiferus</i>	white shrimp	3605	70.5	107	32.6
<i>Portunus spinicarpus</i>	longspine swimming crab	3390	26.9	83	25.3
<i>Portunus gibbesii</i>	iridescent swimming crab	3034	19.2	135	41.2
<i>Squilla empusa</i>	mantis shrimp	3017	27.5	115	35.1
<i>Trachypenaeus</i> spp.	roughneck shrimps	2906	8.0	77	23.5
<i>Sicyonia brevirostris</i>	brown rock shrimp	2584	30.6	92	28.0
<i>Trachypenaeus similis</i>	roughback shrimp	1384	4.6	30	9.1
<i>Sicyonia dorsalis</i>	lesser rock shrimp	1196	3.7	64	19.5
<i>Solenocera</i> spp.	humpback shrimps	945	4.5	39	11.9



Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Penaeus duorarum</i>	pink shrimp	765	18.0	52	15.9
<i>Trachypenaeus constrictus</i>	roughneck shrimp	748	2.3	14	4.3
<i>Portunus spinimanus</i>	blotched swimming crab	250	4.8	44	13.4
<i>Calappa sulcata</i>	yellow box crab	189	32.3	72	22.0
<i>Squilla chydrea</i>	mantis shrimp	165	0.9	29	8.8
<i>Parapenaeus</i> spp.	penaeid shrimps	151	0.2	2	0.6
<i>Squilla</i> spp.	mantis shrimps	117	1.7	16	4.9
<i>Portunus sayi</i>	sargassum swimming crab	102	0.5	1	0.3
<i>Anasimus latus</i>	stilt spider crab	81	0.8	19	5.8
<i>Stenorhynchus seticornis</i>	yellowline arrow crab	47	0.2	12	3.7
<i>Raninoides louisianensis</i>	gulf frog crab	46	0.2	11	3.4
<i>Callinectes sapidus</i>	blue crab	44	6.2	18	5.5
<i>Hepatus epheliticus</i>	calico crab	24	2.2	12	3.7
<i>Pagurus</i> spp.	right-handed hermit crabs	22	1.1	4	1.2
<i>Libinia dubia</i>	longnose spider crab	19	1.9	5	1.5
<i>Persephona mediterranea</i>	mottled purse crab	17	0.1	10	3.0
Paguridae	right-handed hermit crabs	17	0.5	2	0.6
<i>Sicyonia burkenroadi</i>	spiny rock shrimp	15	0.0	4	1.2
<i>Arenaeus cribrarius</i>	speckled swimming crab	13	0.3	3	0.9
Caridea	caridean shrimps	13	0.1	2	0.6
<i>Libinia emarginata</i>	portly spider crab	9	2.1	8	2.4
<i>Parthenope</i> spp.	elbow crabs	9	0.0	4	1.2
<i>Calappa flammea</i>	flame box crab	8	1.3	5	1.5
Xanthidae	mud crabs	7	0.1	3	0.9
<i>Ovalipes stephensoni</i>	coarsehand lady crab	7	0.1	1	0.3
<i>Parthenope serrata</i>	sawtooth elbow crab	6	0.1	3	0.9
<i>Munida forceps</i>	squat lobster	6	0.1	2	0.6
<i>Porcellana sayana</i>	spotted porcelain crab	6	0.0	3	0.9
<i>Podochela sidneyi</i>	shortfinger neck crab	5	0.0	4	1.2
<i>Ranilia muricata</i>	muricate frog crab	4	0.0	3	0.9
<i>Tetraxanthus bidentatus</i>	cornered mud crab	4	0.1	1	0.3
<i>Scyllarides nodifer</i>	ridged slipper lobster	3	0.9	2	0.6
<i>Libinia</i> spp.	spider crabs	3	0.0	3	0.9
<i>Myropsis quinquespinosa</i>	fivespine purse crab	3	0.0	1	0.3
<i>Petrochirus diogenes</i>	giant hermit crab	3	1.2	2	0.6
<i>Solenocera vioscai</i>	humpback shrimp	3	0.0	1	0.3
<i>Sicyonia</i> spp.	rock shrimps	3	0.0	2	0.6

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Euceramus praelongus</i>	olivepit porcelain crab	3	0.0	1	0.3
<i>Parapandalus longicauda</i>	pandalid shrimp	3	0.0	2	0.6
<i>Alpheus formosus</i>	striped snapping shrimp	2	0.0	1	0.3
<i>Porcellana</i> spp.	porcelain crabs	2	0.0	1	0.3
<i>Macrocoeloma camptocerum</i>	Florida decorator crab	2	0.0	1	0.3
<i>Munida iris</i>	squat lobster	2	0.0	1	0.3
Majidae	spider crabs	2	0.0	1	0.3
<i>Dromidia antillensis</i>	hairy sponge crab	2	0.0	1	0.3
<i>Panopeus bermudensis</i>	strongtooth mud crab	2	0.0	1	0.3
<i>Tetraxanthus rathbunae</i>	inflated mud crab	2	0.0	1	0.3
<i>Ovalipes ocellatus</i>	lady crab	2	0.0	1	0.3
<i>Menippe adina</i>	Gulf stone crab	1	0.3	1	0.3
<i>Scyllarus chacei</i>	chace slipper lobster	1	0.0	1	0.3
<i>Portunus</i> spp.	swimming crabs	1	0.0	1	0.3
<i>Pagurus bullisi</i>	hermit crab	1	0.0	1	0.3
<i>Raninoides loevis</i>	furrowed frog crab	1	0.0	1	0.3
<i>Parthenope granulata</i>	bladetooth elbow crab	1	0.0	1	0.3
<i>Podochela</i> spp.	neck crabs	1	0.0	1	0.3
<i>Nibilia antilocapra</i>	shorthorn spiny crab	1	0.4	1	0.3
<i>Rochinia crassa</i>	inflated spider crab	1	0.1	1	0.3
<i>Stenocionops spinimanus</i>	prickly spider crab	1	0.5	1	0.3
<i>Stenocionops furcata</i>	furcate crab	1	0.6	1	0.3
<i>Euceramus</i> spp.	porcelain crabs	1	0.0	1	0.3
<i>Xiphopenaeus kroyeri</i>	seabob	1	0.0	1	0.3
<u>Others</u>					
<i>Aurelia</i> spp.	jellyfishes	6109	1671.2	61	18.6
<i>Amusium papyraceum</i>	paper scallop	3211	29.9	57	17.4
<i>Loligo</i> spp.	squids	2600	16.3	75	22.9
<i>Lolliguncula brevis</i>	Atlantic brief squid	1852	19.2	78	23.8
<i>Loligo pealeii</i>	longfin squid	1636	29.9	88	26.8
Asteroidea	starfishes	492	3.7	57	17.4
<i>Loligo pleii</i>	arrow squid	479	2.7	17	5.2
<i>Luidia clathrata</i>	sea star	356	2.5	12	3.7
<i>Anadara</i> spp.	ark shells	87	0.5	5	1.5
Ophiuroidea	brittlestars	26	0.0	3	0.9

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Macoma constricta</i>	constricted macoma	24	0.7	2	0.6
<i>Mellita quinquesperforata</i>	five-slotted sand dollar	18	1.0	4	1.2
Ophiothricidae	spiny brittle stars	17	0.0	1	0.3
<i>Luidia</i> spp.	sea stars	15	1.0	3	0.9
Coelenterata	coelenterates	13	1.3	3	0.9
<i>Renilla mulleri</i>	short-stemmed sea pansy	12	0.2	5	1.5
<i>Ophiopholis</i> spp.	brittle stars	12	0.0	1	0.3
<i>Polystira</i> spp.	turret shells	11	0.1	3	0.9
<i>Chrysaora quinquecirrha</i>	sea nettle	10	0.2	1	0.3
Cubomedusae	sea wasps	10	0.9	4	1.2
<i>Ophionereis reticulata</i>	reticulate brittle star	10	0.0	1	0.3
<i>Ophioderma</i> spp.	brittle stars	8	0.0	2	0.6
Scyphozoa	jellyfishes	8	112.0	5	1.5
<i>Argopecten gibbus</i>	calico scallop	7	0.1	3	0.9
<i>Tellina alternata</i>	alternate tellin	6	0.1	1	0.3
<i>Clypeaster</i> spp.	cake urchins	6	0.8	3	0.9
Anthozoa	anthozoans	6	0.1	2	0.6
Holothuroidea	sea cucumbers	6	0.0	1	0.3
<i>Chione</i> spp.	venus shells	5	0.1	4	1.2
<i>Polystira albida</i>	white giant turris	5	0.1	2	0.6
Porifera	sponges	5	0.1	1	0.3
<i>Chione clenchi</i>	Clench venus	5	0.0	1	0.3
<i>Distorsio clathrata</i>	Atlantic distorsio	5	0.0	1	0.3
<i>Lucina</i> spp.	lucines	4	0.1	1	0.3
<i>Ventricolaria</i> spp.	venuses	3	0.0	1	0.3
<i>Vesicomya venusta</i>	vesicomya	2	0.0	1	0.3
<i>Barbatia cancellaria</i>	red-brown arc	2	0.0	1	0.3
<i>Pecten raveneli</i>	Ravenel's scallop	2	0.0	1	0.3
<i>Octopus</i> spp.	octopuses	2	0.4	2	0.6
<i>Distorsio</i> spp.	distorsios	2	0.0	1	0.3
<i>Murex fulvescens</i>	giant eastern murex	2	0.2	1	0.3
<i>Tonna galea</i>	giant tun	1	0.1	1	0.3
<i>Pleuroploca gigantea</i>	horse conch	1	0.1	1	0.3
<i>Murex pomum</i>	apple murex	1	0.0	1	0.3
<i>Caretta caretta</i>	loggerhead turtle	1	28.0	1	0.3
<i>Pitar</i> spp.	Venus shells	1	0.0	1	0.3
<i>Physalia pelagica</i>	Portuguese man-o-war	1	0.0	1	0.3

Table 32. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Stomolophus meleagris</i>	many-mouthed sea jelly	1	0.2	1	0.3
<i>Pteria colymbus</i>	Atlantic wing-oyster	1	0.0	1	0.3
<i>Atrina</i> spp.	penshells	1	0.3	1	0.3
<i>Tellina</i> spp.	tellin shells	1	0.0	1	0.3
<i>Ctenophora</i>	comb jellies	1	0.0	1	0.3
<i>Astropecten</i> spp.	sea stars	1	0.0	1	0.3
<i>Eucidaris tribuloides</i>	slate-pencil urchin	1	0.0	1	0.3
<i>Echinarachnius</i> spp.	sand dollars	1	0.0	1	0.3

Table 33. 1991 Fall Shrimp/Groundfish Survey species composition list, 80 trawl stations, for those vessels that used a 20-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
<i>Syacium gunteri</i>	shoal flounder	384	5.8	29	36.2
<i>Lagodon rhomboides</i>	pinfish	280	5.6	13	16.3
<i>Chloroscombrus chrysurus</i>	Atlantic bumper	249	1.5	21	26.3
<i>Cynoscion nothus</i>	silver seatrout	208	2.1	32	40.0
<i>Cynoscion arenarius</i>	sand seatrout	57	3.7	27	33.8
<i>Anchoa mitchilli</i>	bay anchovy	53	0.0	11	13.8
<i>Micropogonias undulatus</i>	Atlantic croaker	52	2.2	25	31.3
<i>Etropus crossotus</i>	fringed flounder	52	0.7	22	27.5
<i>Stellifer lanceolatus</i>	star drum	51	0.7	11	13.8
<i>Peprilus alepidotus</i>	harvestfish	36	0.4	9	11.3
<i>Chaetodipterus faber</i>	Atlantic spadefish	36	0.7	12	15.0
<i>Symphurus plagiosa</i>	blackcheek tonguefish	33	0.4	21	26.3
<i>Citharichthys spilopterus</i>	bay whiff	27	0.3	13	16.3
<i>Lutjanus campechanus</i>	red snapper	26	0.3	10	12.5
<i>Dorosoma petenense</i>	threadfin shad	23	0.5	4	5.0
<i>Sphoeroides parvus</i>	least puffer	20	0.0	12	15.0
<i>Synodus foetens</i>	inshore lizardfish	19	0.8	10	12.5
<i>Selene setapinnis</i>	Atlantic moonfish	16	0.0	12	15.0
<i>Prionotus tribulus</i>	bighead searobin	15	0.2	7	8.8
<i>Halieutichthys aculeatus</i>	pancake batfish	15	0.0	8	10.0
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	14	0.2	9	11.3
<i>Arius felis</i>	hardhead catfish	13	0.2	3	3.7
<i>Larimus fasciatus</i>	banded drum	9	0.0	5	6.3
<i>Ophidion welsbi</i>	crested cusk-eel	6	0.2	1	1.3
<i>Peprilus burti</i>	gulf butterflyfish	5	0.0	4	5.0
<i>Cyclopsetta chittendeni</i>	Mexican flounder	4	0.1	1	1.3
<i>Selene vomer</i>	lookdown	4	0.0	3	3.7
<i>Brevoortia patronus</i>	gulf menhaden	4	0.2	3	3.7
<i>Diplectrum bivittatum</i>	dwarf sand perch	3	0.0	3	3.7
<i>Anchoa hepsetus</i>	striped anchovy	3	0.0	3	3.7
<i>Centropristis philadelphia</i>	rock sea bass	3	0.0	3	3.7
<i>Orthopristis chrysoptera</i>	pigfish	3	0.1	3	3.7
<i>Menticirrhus americanus</i>	southern kingfish	3	0.4	3	3.7
<i>Prionotus longispinosus</i>	bigeye searobin	3	0.0	3	3.7

Table 33. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Pontinus longispinis</i>	longspine scorpionfish	2	0.0	1	1.3
<i>Chilomycterus schoepfi</i>	striped burrfish	2	0.2	2	2.5
<i>Monacanthus hispidus</i>	planehead filefish	2	0.0	2	2.5
<i>Achirus lineatus</i>	lined sole	2	0.0	2	2.5
<i>Paralichthys lethostigma</i>	southern flounder	2	0.6	2	2.5
<i>Gymnachirus texae</i>	fringed sole	1	0.0	1	1.3
Balistidae	leatherjackets	1	0.0	1	1.3
<i>Ogcocephalus pantostictus</i>	spotted batfish	1	0.0	1	1.3
<i>Scorpaena plumieri</i>	spotted scorpionfish	1	0.1	1	1.3
<i>Scorpaena calcarata</i>	smoothhead scorpionfish	1	0.0	1	1.3
<i>Citharichthys macrops</i>	spotted whiff	1	0.0	1	1.3
<i>Paralichthys albigutta</i>	gulf flounder	1	0.3	1	1.3
<i>Leiostomus xanthurus</i>	spot	1	0.0	1	1.3
<i>Eucinostomus argenteus</i>	spotfin mojarra	1	0.0	1	1.3
<i>Hemicaranx amblyrhynchus</i>	bluntnose jack	1	0.0	1	1.3
<i>Etrumeus teres</i>	round herring	1	0.0	1	1.3
<i>Saurida brasiliensis</i>	largescale lizardfish	1	0.0	1	1.3
<i>Hippocampus erectus</i>	lined seahorse	1	0.0	1	1.3
<u>Crustaceans</u>					
<i>Penaeus setiferus</i>	white shrimp	165	2.0	32	40.0
<i>Portunus gibbesii</i>	irridescent swimming crab	138	0.5	44	55.0
<i>Sicyonia dorsalis</i>	lesser rock shrimp	131	0.2	26	32.5
<i>Callinectes similis</i>	lesser blue crab	120	0.5	29	36.2
<i>Trachypenaeus similis</i>	roughback shrimp	99	0.1	23	28.8
<i>Trachypenaeus spp.</i>	roughneck shrimps	45	0.1	3	3.7
<i>Squilla empusa</i>	mantis shrimp	36	0.3	11	13.8
<i>Penaeus aztecus</i>	brown shrimp	18	0.3	5	6.3
<i>Pagurus pollicaris</i>	flatclaw hermit crab	15	0.7	10	12.5
<i>Dyspanopeus texana</i>	gulf grassflat crab	12	0.0	3	3.7
<i>Calappa sulcata</i>	yellow box crab	11	2.7	4	5.0
<i>Portunus spinimanus</i>	blotched swimming crab	10	0.0	6	7.5
<i>Libinia dubia</i>	longnose spider crab	8	0.0	6	7.5
<i>Penaeus duorarum</i>	pink shrimp	6	0.0	3	3.7
<i>Sicyonia brevirostris</i>	brown rock shrimp	5	0.0	2	2.5
<i>Alpheus spp.</i>	snapping shrimps	5	0.0	1	1.3

Table 33. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Porcellana sayana</i>	spotted porcelain crab	5	0.0	2	2.5
<i>Persephona crinita</i>	pink purse crab	4	0.0	4	5.0
<i>Petrochirus diogenes</i>	giant hermit crab	3	0.0	2	2.5
<i>Callinectes sapidus</i>	blue crab	3	0.0	2	2.5
<i>Arenaeus cribrarius</i>	speckled swimming crab	2	0.0	1	1.3
<i>Persephona mediterranea</i>	mottled purse crab	2	0.0	2	2.5
<i>Xiphopenaeus kroyeri</i>	seabob	2	0.0	2	2.5
<i>Pagurus longicarpus</i>	longwrist hermit crab	1	0.0	1	1.3
<i>Clibanarius vittatus</i>	thinripe hermit crab	1	0.0	1	1.3
Paguridae	right-handed hermit crabs	1	0.0	1	1.3
<i>Lysmata wurdemanni</i>	peppermint shrimp	1	0.0	1	1.3
<i>Trachypenaeus constrictus</i>	roughneck shrimp	1	0.0	1	1.3
<i>Hexapanopeus angustifrons</i>	smooth mud crab	1	0.0	1	1.3
<i>Ovalipes floridanus</i>	Florida lady crab	1	0.0	1	1.3
<i>Metoporhaphis calcarata</i>	false arrow crab	1	0.0	1	1.3
<i>Dromidia antillensis</i>	hairy sponge crab	1	0.0	1	1.3
<i>Albunea paretii</i>	beach mole crab	1	0.0	1	1.3
<u>OTHERS</u>					
<i>Lolliguncula brevis</i>	Atlantic brief squid	1058	7.4	59	73.8
<i>Renilla mulleri</i>	short-stemmed sea pansy	414	0.8	24	30.0
<i>Luidia clathrata</i>	sea star	102	1.8	19	23.7
<i>Loligo pleii</i>	arrow squid	79	0.3	3	3.7
Hydroidae	hydras	62	0.3	5	6.3
<i>Aurelia</i> spp.	jellyfishes	53	0.8	4	5.0
Actinidae	sea anemones	39	0.0	13	16.3
<i>Loligo pealeii</i>	longfin squid	20	0.2	6	7.5
<i>Sargassum</i> spp.	sargassum	17	0.1	5	6.3
Asteroidea	starfishes	13	0.4	3	3.7
Algae	algae	11	0.1	3	3.7
<i>Stomolophus meleagris</i>	many-mouthed sea jelly	6	0.8	3	3.7
<i>Aurelia aurita</i>	moon jellyfish	5	0.2	2	2.5
Ascidacea	sea squirts	5	0.0	1	1.3
Gorgonidae	gorgonians	4	0.0	3	3.7
<i>Cantharus cancellarius</i>	cancellate cantharus	4	0.0	3	3.7

Table 33. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Luidia alternata</i>	banded luidia	4	0.0	4	5.0
<i>Astropecten duplicatus</i>	spiny beaded sea star	3	0.0	2	2.5
<i>Busycon sinistrum</i>	lightning whelk	2	0.1	2	2.5
<i>Nudibranchia</i>	sea slugs	1	0.0	1	1.3
<i>Fasciolaria lilium</i>	banded tulip	1	0.0	1	1.3
<i>Neverita duplicata</i>	shark eye	1	0.0	1	1.3
<i>Pennatula</i> spp.	sea pens	1	0.0	1	1.3
<i>Chiropsalmus quadrumanus</i>	jellyfish	1	0.0	1	1.3
Hydrozoa	hydroids	1	0.0	1	1.3
<i>Chrysaora quinquecirrha</i>	sea nettle	1	0.0	1	1.3
<i>Chione clenchi</i>	Clench venus	1	0.0	1	1.3
<i>Trachycardium</i> spp.	pricklycockles	1	0.0	1	1.3
<i>Polychaeta</i>	bristleworms	1	0.0	1	1.3
<i>Luidia</i> spp.	sea stars	1	0.0	1	1.3
<i>Ophiuroidea</i>	brittlestars	1	0.0	1	1.3



Table 34. 1991 Fall Shrimp/Groundfish Survey species composition list, 21 trawl stations, for those vessels that used a 16-ft trawl. Species with a total weight of less than 0.0277 kg (0.05 lbs) are indicated on table as 0.0 kg.

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<u>Finfishes</u>					
Anchoa mitchilli	bay anchovy	2166	2.2	15	71.4
Arius felis	hardhead catfish	607	5.6	7	33.3
Cynoscion arenarius	sand seatrout	180	1.3	12	57.1
Larimus fasciatus	banded drum	69	0.1	5	23.8
Chloroscombrus chrysurus	Atlantic bumper	66	0.1	8	38.1
Menticirrhus americanus	southern kingfish	41	0.1	9	42.9
Prionotus tribulus	bighead searobin	26	0.0	2	9.5
Stellifer lanceolatus	star drum	21	0.1	5	23.8
Symphurus plagiosa	blackcheek tonguefish	19	0.1	5	23.8
Sphoeroides parvus	least puffer	17	0.0	6	28.6
Peprilus burti	gulf butterfish	14	0.0	4	19.0
Trichiurus lepturus	Atlantic cutlassfish	8	0.1	3	14.3
Etropus crossotus	fringed flounder	8	0.0	4	19.0
Peprilus alepidotus	harvestfish	7	0.0	1	4.8
Anchoa spp.	anchovies	7	0.0	1	4.8
Bairdiella chrysoura	silver perch	6	0.1	2	9.5
Orthopristis chrysoptera	pigfish	6	0.5	1	4.8
Micropogonias undulatus	Atlantic croaker	6	0.1	3	14.3
Menticirrhus littoralis	gulf kingfish	5	0.0	3	14.3
Leiostomus xanthurus	spot	5	0.4	3	14.3
Citharichthys spilopterus	bay whiff	4	0.0	4	19.0
Chaetodipterus faber	Atlantic spadefish	3	0.1	2	9.5
Astroscopus y-graecum	southern stargazer	2	0.0	2	9.5
Prionotus longispinosus	bigeye searobin	2	0.0	1	4.8
Peprilus triacanthus	butterfish	2	0.0	1	4.8
Chilomycterus schoepfi	striped burrfish	2	0.3	1	4.8
Selene setapinnis	Atlantic moonfish	2	0.0	2	9.5
Synodus foetens	inshore lizardfish	2	0.0	2	9.5
Anchoa hepsetus	striped anchovy	2	0.0	1	4.8
Dorosoma petenense	threadfin shad	2	0.0	2	9.5
Opisthonema oglinum	Atlantic thread herring	1	0.0	1	4.8
Brevoortia patronus	gulf menhaden	1	0.0	1	4.8
Dasyatis sabina	Atlantic stringray	1	0.1	1	4.8
Diplectrum formosum	sand perch	1	0.0	1	4.8

Table 34. Species composition list (cont'd.)

GENUS/SPECIES	COMMON NAME	TOTAL NUMBER CAUGHT	TOTAL WEIGHT CAUGHT (KG)	NUMBER OF TOWS WHERE CAUGHT	% FREQUENCY OF OCCURRENCE
<i>Selene vomer</i>	lookdown	1	0.0	1	4.8
<i>Centropristis philadelphia</i>	rock sea bass	1	0.0	1	4.8
<i>Cynoscion nebulosus</i>	spotted seatrout	1	0.0	1	4.8
<i>Eucinostomus argenteus</i>	spotfin mojarra	1	0.0	1	4.8
<i>Porichthys plectrodon</i>	Atlantic midshipman	1	0.0	1	4.8
<i>Gobiomorus dormitor</i>	bigmouth sleeper	1	0.0	1	4.8
<u>Crustaceans</u>					
<i>Penaeus setiferus</i>	white shrimp	2353	7.8	12	57.1
<i>Xiphopenaeus kroyeri</i>	seabob	742	3.0	6	28.6
<i>Acetes americanus</i>	sergestid shrimp	51	0.0	2	9.5
<i>Portunus</i> spp.	swimming crabs	32	0.1	2	9.5
<i>Portunus sayi</i>	sargassum swimming crab	22	0.1	2	9.5
<i>Callinectes similis</i>	lesser blue crab	19	0.0	6	28.6
<i>Trachypenaeus</i> spp.	roughneck shrimps	18	0.0	3	14.3
<i>Portunus gibbesii</i>	irridescent swimming crab	16	0.0	2	9.5
<i>Trachypenaeus constrictus</i>	roughneck shrimp	15	0.0	2	9.5
<i>Trachypenaeus similis</i>	roughback shrimp	15	0.0	2	9.5
<i>Sicyonia dorsalis</i>	lesser rock shrimp	10	0.0	3	14.3
<i>Callinectes sapidus</i>	blue crab	4	0.0	3	14.3
<i>Penaeus aztecus</i>	brown shrimp	4	0.0	3	14.3
<i>Squilla empusa</i>	mantis shrimp	1	0.0	1	4.8
<i>Libinia</i> spp.	spider crabs	1	0.0	1	4.8
<i>Eurypanopeus depressus</i>	flatback mud crab	1	0.0	1	4.8
<u>Others</u>					
<i>Lolliguncula brevis</i>	Atlantic brief squid	278	0.6	14	66.7
<i>Loligo pealeii</i>	longfin squid	2	0.0	1	4.8

Table 35a  
 Statistical Zone 11  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	6.6	3.48	0.1	0.07	6	52.2	50.25	1.0	0.91	11	38.0	10.42	0.9	0.25	24
<i>Trachypenaeus similis</i>	23.5	8.55	0.1	0.05	6	87.1	58.65	0.3	0.21	11	65.7	35.70	0.2	0.12	24
<i>Portunus spinicarpus</i>	0.0	0.00	0.0	0.00	6	1.4	0.97	0.0	0.02	11	0.9	0.59	0.0	0.00	24
<i>Callinectes similis</i>	6.0	6.00	0.5	0.45	6	15.4	5.32	0.4	0.17	11	33.8	9.97	0.7	0.25	24
<i>Portunus gibbesii</i>	6.0	4.90	0.0	0.05	6	9.1	3.77	0.0	0.02	11	55.6	25.32	0.4	0.18	24
<i>Sicyonia brevirostris</i>	0.0	0.00	0.0	0.00	6	5.1	2.62	0.1	0.02	11	22.5	9.29	0.3	0.11	24
<i>Arius felis</i>	280.0	247.75	12.6	6.54	6	629.6	601.03	91.9	88.54	11	266.3	222.57	38.9	28.41	24
<i>Micropogonias undulatus</i>	9.0	9.00	0.1	0.14	6	13.9	12.26	0.9	0.76	11	239.5	125.95	13.1	6.62	24
<i>Stenotomus caprinus</i>	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	11	42.1	22.35	1.7	0.84	24
<i>Peprilus burti</i>	16.4	11.29	0.0	0.05	6	2.2	1.70	0.1	0.03	11	3.0	2.06	0.2	0.14	24
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	6	18.3	18.28	1.3	1.32	11	32.7	18.88	2.4	1.41	24
<i>Syacium spp.</i>	5.4	5.38	0.1	0.10	6	110.9	70.70	1.4	0.83	11	157.8	34.93	3.0	0.71	24
<i>Cynoscion arenarius</i>	0.0	0.00	0.0	0.00	6	8.2	6.14	0.1	0.08	11	15.3	7.62	1.2	0.55	24
<i>Chloroscombrus chrysurus</i>	76.1	58.07	0.5	0.45	6	33.0	29.41	0.3	0.26	11	94.0	77.56	1.3	1.00	24
<i>Squid</i>	147.8	40.52	0.6	0.14	6	68.7	28.89	1.3	0.78	11	57.5	39.24	0.4	0.27	24

Table 35a (cont'd.)  
 Statistical Zone 11  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	80.8	31.18	2.6	0.79	9	139.8	53.43	3.3	1.08	6	48.6	17.14	2.1	1.02	5
<i>Trachypenaeus similis</i>	23.5	23.48	0.0	0.04	9	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5
<i>Portunus spinicarpus</i>	0.7	0.55	0.0	0.01	9	19.4	9.65	0.2	0.08	6	478.9	412.49	5.2	4.56	5
<i>Callinectes similis</i>	22.7	21.31	0.8	0.73	9	65.8	40.71	0.7	0.39	6	4.0	4.00	0.0	0.05	5
<i>Portunus gibbesii</i>	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5
<i>Sicyonia brevirostris</i>	5.3	2.38	0.1	0.04	9	1.2	1.22	0.0	0.02	6	12.6	10.49	0.3	0.27	5
<i>Arius felis</i>	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5
<i>Micropogonias undulatus</i>	597.6	327.01	30.8	14.59	9	76.1	39.85	5.5	2.69	6	166.9	68.55	12.1	5.20	5
<i>Stenotomus caprinus</i>	425.6	162.81	13.5	4.37	9	16.9	15.75	1.1	1.10	6	35.5	24.40	1.9	1.12	5
<i>Peprilus burti</i>	185.0	144.76	13.6	10.56	9	142.6	71.53	11.9	5.97	6	492.8	304.12	41.1	25.65	5
<i>Leiostomus xanthurus</i>	96.8	30.86	8.9	2.84	9	153.3	72.46	13.6	5.76	6	276.4	192.64	23.4	13.81	5
<i>Syacium</i> spp.	21.4	21.45	0.2	0.16	9	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5
<i>Cynoscion arenarius</i>	125.1	72.25	8.4	5.13	9	113.5	63.72	9.4	5.35	6	130.2	61.50	13.5	5.74	5
<i>Chloroscombrus chrysurus</i>	48.5	43.22	2.7	2.58	9	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	5
Squid	12.1	11.54	0.1	0.06	9	34.8	18.98	0.1	0.07	6	3.5	3.53	0.0	0.03	5

Table 35b  
 Statistical Zone 11  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	61.5	34.52	6	117.0	88.13	11	89.6	30.47	24	124.4	46.11	9	64.6	9.62	6	143.0	29.34	5
Total finfish kg	29.6	10.04	6	111.5	87.46	11	85.5	30.29	24	119.0	43.45	9	59.3	10.56	6	133.1	31.35	5
Total crustacean kg	2.1	0.99	6	3.5	1.54	11	3.6	0.88	24	5.2	2.86	9	4.9	1.84	6	9.2	5.31	5
Total others kg	29.1	26.39	6	1.9	0.88	11	0.5	0.33	24	0.1	0.05	9	0.1	0.09	6	0.9	0.91	5
Surface temperature	18.7	0.95	8	21.1	0.65	10	21.3	0.19	23	22.0	0.31	8	21.1	1.42	5	22.4	0.77	4
Midwater temperature	18.9	0.98	8	21.0	0.62	10	21.5	0.18	23	22.3	0.16	8	23.0	0.25	5	23.5	0.10	4
Bottom temperature	19.2	1.18	8	21.7	0.91	10	21.3	0.22	23	22.5	0.18	8	22.9	0.35	5	21.2	0.77	4
Surface salinity	33.8	1.09	8	33.8	0.65	10	34.8	0.16	23	34.9	0.30	8	31.5	2.76	5	34.9	0.66	4
Midwater salinity	34.3	0.74	8	33.8	0.65	10	34.8	0.10	23	35.2	0.14	8	35.6	0.19	5	35.8	0.08	4
Bottom salinity	34.6	0.60	8	34.6	0.47	10	35.0	0.08	23	35.4	0.11	8	36.1	0.16	5	36.6	0.06	4
Surface chlorophyll	0.4	0.08	6	0.4	0.07	6	0.5	0.06	17	0.5	0.17	8	2.8	1.05	5	3.9	3.25	4
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.4	0.23	8	6.8	0.12	10	6.8	0.07	23	6.8	0.08	8	7.4	0.40	5	6.9	0.22	4
Midwater oxygen	7.3	0.22	8	6.7	0.11	10	6.7	0.07	23	6.7	0.05	8	6.6	0.07	5	6.4	0.11	4
Bottom oxygen	7.2	0.25	8	6.6	0.16	10	6.6	0.06	23	6.3	0.18	7	5.4	0.17	5	4.7	0.17	4

Table 36a  
 Statistical Zone 13  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes similis	198.1	111.09	1.0	0.47	3	288.1	201.90	1.0	0.64	8	35.5	14.39	0.4	0.23	11
Squilla spp.	30.8	25.99	0.3	0.27	3	159.5	82.25	1.2	0.56	8	83.4	30.15	0.7	0.27	11
Penaeus setiferus	238.3	89.74	4.4	1.88	3	135.3	55.27	1.3	0.44	8	26.5	7.25	0.8	0.26	11
Solenocera spp.	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	8	0.0	0.00	0.0	0.00	11
Portunus spinicarpus	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	8	2.2	2.18	0.0	0.00	11
Penaeus aztecus	47.5	37.94	0.3	0.17	3	28.9	13.36	0.1	0.08	8	50.3	26.36	0.6	0.32	11
Micropogonias undulatus	448.3	199.26	26.8	12.04	3	546.6	208.21	33.5	13.28	8	2540.9	865.95	161.4	53.99	11
Trichiurus lepturus	3.3	3.33	0.1	0.08	3	100.2	63.60	1.8	1.13	8	55.6	31.48	1.4	0.58	11
Arius felis	239.0	193.70	8.6	6.69	3	242.2	129.01	10.6	6.99	8	24.8	19.13	5.5	3.38	11
Leiostomus xanthurus	144.0	89.96	11.7	7.31	3	27.4	19.25	1.3	0.86	8	24.2	11.08	2.5	1.07	11
Lutjanus campechanus	108.3	108.33	1.1	1.10	3	77.9	76.88	1.2	1.14	8	89.0	72.65	1.9	1.01	11
Chloroscombrus chrysurus	75.8	67.09	3.6	3.55	3	33.0	18.55	0.3	0.17	8	137.1	111.51	7.1	6.53	11
Prionotus longispinosus	49.2	44.26	0.6	0.53	3	4.7	3.73	0.0	0.03	8	163.3	71.39	3.5	1.32	11
Cynoscion arenarius	57.0	25.08	4.0	2.03	3	52.6	24.35	3.2	1.48	8	48.0	17.71	3.2	1.16	11
Squid	13.2	6.79	0.2	0.13	3	106.8	41.32	1.6	0.78	8	129.8	78.27	0.5	0.29	11

Table 36a (cont'd.)  
 Statistical Zone 13  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes similis	20.9	0.00	0.7	0.00	1	13.5	4.50	0.3	0.05	2	1.7	1.67	0.0	0.00	2
Squilla spp.	7.8	0.00	0.0	0.00	1	58.5	49.50	0.9	0.77	2	8.0	8.00	0.1	0.09	2
Penaeus setiferus	52.2	0.00	1.1	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Solenocera spp.	0.0	0.00	0.0	0.00	1	147.0	147.00	0.4	0.41	2	206.0	206.00	1.6	1.59	2
Portunus spinicarpus	0.0	0.00	0.0	0.00	1	1233.0	1233.00	11.0	11.05	2	1.0	1.00	0.0	0.02	2
Penaeus aztecus	15.7	0.00	0.1	0.00	1	128.5	8.50	2.6	0.16	2	5.8	0.83	0.2	0.11	2
Micropogonias undulatus	399.1	0.00	27.2	0.00	1	204.5	197.50	13.2	12.45	2	1.0	1.00	0.2	0.20	2
Trichiurus lepturus	920.9	0.00	30.5	0.00	1	370.5	298.50	13.6	10.84	2	64.0	56.00	1.7	1.07	2
Arius felis	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	2
Leiostomus xanthurus	13.0	0.00	0.7	0.00	1	21.5	14.50	3.0	1.59	2	297.3	120.67	32.3	12.94	2
Lutjanus campechanus	2.6	0.00	0.1	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2
Prionotus longispinosus	0.0	0.00	0.0	0.00	1	78.0	78.00	5.5	5.45	2	8.0	8.00	3.4	3.39	2
Cynoscion arenarius	33.9	0.00	4.0	0.00	1	69.5	38.50	8.0	4.77	2	43.0	33.00	9.7	6.67	2
Squid	93.9	0.00	0.5	0.00	1	15.0	15.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2

Table 36b  
 Statistical Zone 13  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	124.9	50.03	3	71.3	27.44	8	205.3	56.93	11	87.7	0.00	1	74.5	37.27	2	76.0	33.56	2
Total finfish kg	78.1	9.09	3	64.6	26.59	8	201.4	57.26	11	78.3	0.00	1	58.9	25.68	2	73.0	32.05	2
Total crustacean kg	6.7	2.38	3	4.3	1.52	8	3.3	1.19	11	2.4	0.00	1	15.2	12.05	2	2.0	2.05	2
Total others kg	40.2	40.15	3	2.8	1.17	8	0.2	0.25	11	7.1	0.00	1	0.5	0.45	2	0.0	0.00	2
Surface temperature	22.8	1.64	4	21.4	0.83	12	25.1	0.92	10	0.0	0.00	0	20.2	0.38	3	24.0	0.00	1
Midwater temperature	22.7	1.70	4	21.4	0.87	12	25.5	0.68	10	0.0	0.00	0	24.1	0.45	3	24.3	0.00	1
Bottom temperature	23.0	1.54	4	22.0	1.09	12	26.9	0.46	10	0.0	0.00	0	23.4	0.71	3	20.1	0.00	1
Surface salinity	28.3	0.96	4	27.5	0.97	12	29.0	0.32	10	0.0	0.00	0	28.4	3.98	3	35.4	0.00	1
Midwater salinity	29.7	0.55	4	29.9	0.79	12	30.0	0.48	10	0.0	0.00	0	35.5	0.25	3	36.2	0.00	1
Bottom salinity	30.8	1.06	4	33.0	0.37	12	32.6	0.69	10	0.0	0.00	0	36.6	0.31	3	36.7	0.00	1
Surface chlorophyll	7.1	1.14	4	3.9	0.75	12	5.1	0.89	10	0.0	0.00	0	1.8	0.16	3	0.7	0.00	1
Midwater chlorophyll	5.7	0.86	4	3.2	0.72	10	4.2	0.83	8	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	4.6	0.65	4	2.4	0.62	12	2.6	0.52	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	9.3	1.31	4	9.2	0.48	12	8.0	0.24	10	0.0	0.00	0	8.2	0.13	3	7.5	0.00	1
Midwater oxygen	7.4	0.54	4	7.4	0.53	12	6.7	0.44	10	0.0	0.00	0	6.7	0.18	3	7.1	0.00	1
Bottom oxygen	7.0	0.81	4	4.8	0.54	12	5.4	0.43	10	0.0	0.00	0	5.5	0.74	3	4.1	0.00	1



Table 37a  
 Statistical Zone 14  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	192.9	0.00	1.4	0.00	1	29.2	15.06	0.2	0.11	10	116.1	39.96	2.0	0.58	24
<i>Penaeus setiferus</i>	0.0	0.00	0.0	0.00	1	119.5	61.14	2.1	0.77	10	7.9	5.64	0.2	0.13	24
<i>Callinectes similis</i>	0.0	0.00	0.0	0.00	1	26.7	19.26	0.2	0.18	10	42.1	21.58	1.2	0.67	24
<i>Squilla</i> spp.	0.0	0.00	0.0	0.00	1	21.5	15.65	0.1	0.10	10	9.5	4.89	0.1	0.07	24
<i>Portunus gibbesii</i>	25.7	0.00	0.2	0.00	1	8.6	3.46	0.0	0.02	10	19.1	8.08	0.2	0.08	24
<i>Solenocera</i> spp.	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	10	2.4	1.45	0.0	0.01	24
<i>Micropogonias undulatus</i>	0.0	0.00	0.0	0.00	1	337.9	168.27	22.3	11.12	10	883.0	197.01	48.8	10.57	24
<i>Leiostomus xanthurus</i>	0.0	0.00	0.0	0.00	1	80.9	51.73	9.0	5.94	10	170.5	141.48	18.0	15.55	24
<i>Stenotomus caprinus</i>	0.0	0.00	0.0	0.00	1	0.6	0.60	0.0	0.02	10	176.8	152.20	3.7	3.05	24
<i>Prionotus longispinosus</i>	0.0	0.00	0.0	0.00	1	40.9	21.40	1.3	0.73	10	82.7	18.70	2.4	0.55	24
<i>Arius felis</i>	47.1	0.00	12.1	0.00	1	110.1	61.00	27.1	19.08	10	2.2	2.04	0.6	0.55	24
<i>Cynoscion arenarius</i>	4.3	0.00	0.4	0.00	1	38.7	22.88	3.4	2.04	10	33.2	8.69	3.7	1.00	24
<i>Peprilus burti</i>	0.0	0.00	0.0	0.00	1	6.8	4.43	0.3	0.26	10	24.0	14.08	1.8	1.13	24
<i>Serranus atrobranchus</i>	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	10	1.0	0.99	0.0	0.01	24
<i>Squid</i>	42.9	0.00	0.4	0.00	1	64.9	38.30	0.3	0.13	10	16.5	5.53	0.1	0.02	24

Table 37a (cont'd.)  
 Statistical Zone 14  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	45.6	19.37	1.7	0.76	5	120.2	101.82	2.1	1.41	2	19.1	0.00	0.7	0.00	1
<i>Penaeus setiferus</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
<i>Callinectes similis</i>	13.0	10.19	0.3	0.32	5	63.1	56.94	1.6	1.44	2	2.7	0.00	0.1	0.00	1
<i>Squilla</i> spp.	2.4	1.61	0.0	0.02	5	60.0	60.00	0.4	0.41	2	0.0	0.00	0.0	0.00	1
<i>Portunus gibbesii</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	5.5	0.00	0.0	0.00	1
<i>Solenocera</i> spp.	10.4	7.07	0.0	0.02	5	123.0	123.00	0.1	0.14	2	0.0	0.00	0.0	0.00	1
<i>Micropogonias undulatus</i>	243.8	53.44	16.9	3.15	5	73.2	70.78	5.5	5.37	2	0.0	0.00	0.0	0.00	1
<i>Leiostomus xanthurus</i>	45.8	21.98	4.7	2.24	5	6.0	6.00	0.5	0.55	2	0.0	0.00	0.0	0.00	1
<i>Stenotomus caprinus</i>	39.3	16.67	1.3	0.66	5	25.0	19.04	0.9	0.67	2	5.5	0.00	0.2	0.00	1
<i>Prionotus longispinosus</i>	14.4	9.73	0.9	0.60	5	78.0	78.00	3.0	3.00	2	0.0	0.00	0.0	0.00	1
<i>Arius felis</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	1
<i>Cynoscion arenarius</i>	9.9	5.49	1.2	0.68	5	12.0	12.00	1.5	1.50	2	0.0	0.00	0.0	0.00	1
<i>Peprilus burti</i>	44.0	26.42	3.8	2.35	5	30.6	30.61	2.7	2.70	2	12.3	0.00	0.9	0.00	1
<i>Serranus atrobranchus</i>	69.4	42.55	0.8	0.51	5	174.6	173.39	2.2	2.18	2	1.4	0.00	0.0	0.00	1
<i>Squid</i>	18.7	10.24	0.1	0.03	5	29.4	29.39	0.1	0.11	2	25.9	0.00	0.1	0.00	1

Table 37b  
 Statistical Zone 14  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	284.4	0.00	1	77.1	28.74	10	107.1	21.91	24	45.0	7.73	5	34.8	19.76	2	8.7	0.00	1
Total finfish kg	280.5	0.00	1	69.2	29.16	10	103.2	21.43	24	42.8	7.23	5	28.8	14.86	2	7.4	0.00	1
Total crustacean kg	1.9	0.00	1	3.3	0.99	10	3.8	0.99	24	2.1	1.08	5	6.0	4.90	2	0.6	0.00	1
Total others kg	0.0	0.00	1	4.6	3.39	10	0.0	0.00	24	0.0	0.00	5	0.0	0.00	2	0.0	0.00	1
Surface temperature	20.8	1.21	6	22.9	0.88	11	23.2	0.53	23	23.8	0.97	6	25.3	0.00	1	25.0	0.50	2
Midwater temperature	20.8	1.20	6	23.1	0.82	11	23.4	0.51	23	24.2	0.87	6	25.3	0.00	1	25.0	0.58	2
Bottom temperature	20.8	1.19	6	23.4	0.79	11	23.8	0.50	23	24.7	0.76	6	25.3	0.00	1	20.3	1.06	2
Surface salinity	31.7	0.45	6	31.8	0.53	11	34.0	0.32	23	34.8	0.45	6	36.1	0.00	1	36.2	0.13	2
Midwater salinity	32.2	0.48	6	31.9	0.55	11	34.4	0.26	23	35.4	0.17	6	36.2	0.00	1	36.4	0.06	2
Bottom salinity	32.3	0.47	6	32.2	0.62	11	34.8	0.27	23	35.9	0.07	6	36.2	0.00	1	37.0	0.08	2
Surface chlorophyll	2.0	1.07	6	3.4	0.52	11	1.8	0.46	23	0.9	0.17	6	0.4	0.00	1	0.2	0.03	2
Midwater chlorophyll	3.1	2.08	3	4.4	0.86	5	1.0	0.26	11	1.2	0.08	2	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	2.2	1.24	5	3.4	0.72	11	1.0	0.16	23	1.3	0.06	2	0.0	0.00	0	0.4	0.00	1
Surface oxygen	9.0	0.69	6	8.0	0.15	11	7.3	0.26	23	6.9	0.23	6	6.1	0.00	1	6.5	0.15	2
Midwater oxygen	7.8	0.44	6	7.7	0.15	11	6.8	0.15	23	6.7	0.08	6	6.1	0.00	1	6.3	0.30	2
Bottom oxygen	7.7	0.23	6	7.0	0.22	11	6.2	0.14	23	6.4	0.09	6	6.0	0.00	1	4.0	0.00	2

Table 38a  
 Statistical Zone 15  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 15 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus gibbesii	355.0	67.00	1.2	0.27	2	75.1	39.70	0.3	0.18	12	64.2	37.63	1.0	0.78	9
Penaeus aztecus	3.0	1.00	0.0	0.00	2	5.2	2.34	0.0	0.02	12	106.2	63.25	1.5	0.90	9
Callinectes similis	0.0	0.00	0.0	0.00	2	60.0	32.89	0.4	0.19	12	77.5	43.26	1.1	0.55	9
Penaeus setiferus	87.0	13.00	1.1	0.23	2	68.9	37.02	1.5	0.60	12	34.6	13.42	1.0	0.35	9
Trachypenaeus spp.	0.0	0.00	0.0	0.00	2	77.8	77.79	0.2	0.18	12	15.9	10.50	0.0	0.03	9
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	2	9.5	9.50	0.0	0.03	12	57.8	42.14	0.2	0.18	9
Micropogonias undulatus	6.0	4.00	0.4	0.27	2	980.8	555.99	52.0	29.89	12	660.0	460.36	33.0	22.20	9
Serranus atrobranchus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	12	11.2	9.42	0.1	0.06	9
Stenotomus caprinus	0.0	0.00	0.0	0.00	2	0.4	0.30	0.0	0.01	12	13.2	7.01	0.4	0.20	9
Prionotus longispinosus	16.0	6.00	0.1	0.00	2	48.0	18.93	1.0	0.38	12	44.2	21.14	1.5	0.66	9
Etropus crossotus	36.0	6.00	0.3	0.09	2	60.3	25.48	0.9	0.38	12	32.4	12.01	0.7	0.23	9
Sphoeroides parvus	17.0	1.00	0.1	0.05	2	43.9	29.15	0.2	0.18	12	48.1	27.51	0.2	0.13	9
Arius felis	189.0	27.00	1.4	0.23	2	44.0	19.91	4.7	3.18	12	10.4	10.20	1.0	1.02	9
Cynoscion arenarius	18.0	10.00	0.3	0.09	2	44.8	22.67	3.4	1.84	12	33.3	9.89	3.4	0.97	9
Squid	33.0	17.00	0.4	0.14	2	8.2	2.73	0.1	0.06	12	20.4	8.70	0.2	0.08	9

Table 38a (cont'd.)  
 Statistical Zone 15  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 15 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus gibbesii	2.0	2.00	0.0	0.03	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Penaeus aztecus	150.3	32.33	4.0	0.05	2	91.6	14.43	3.7	0.30	2	26.3	11.76	1.4	0.77	3
Callinectes similis	15.2	6.17	0.5	0.20	2	7.1	2.86	0.1	0.11	2	0.0	0.00	0.0	0.00	3
Penaeus setiferus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Trachypenaeus spp.	22.0	18.00	0.2	0.18	2	3.5	3.50	0.0	0.00	2	2.2	2.18	0.0	0.00	3
Trachypenaeus constrictus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Micropogonias undulatus	182.0	154.00	11.9	9.08	2	47.4	10.43	5.6	1.34	2	0.0	0.00	0.0	0.00	3
Serranus atrobranchus	159.0	25.00	1.6	0.25	2	177.6	23.36	1.6	0.08	2	45.8	20.90	0.6	0.18	3
Stenotomus caprinus	53.0	21.00	3.4	2.68	2	113.1	33.86	4.2	1.55	2	127.0	66.28	6.6	3.05	3
Prionotus longispinosus	26.0	10.00	1.4	0.41	2	18.9	6.86	0.7	0.26	2	12.4	6.70	1.1	0.62	3
Etropus crossotus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Spherooides parvus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Arius felis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	3
Cynoscion arenarius	28.8	25.83	3.9	3.36	2	4.6	0.36	0.5	0.01	2	2.2	2.18	0.7	0.71	3
Squid	0.5	0.50	0.0	0.00	2	0.0	0.00	0.0	0.00	2	48.8	46.14	0.5	0.08	3

Table 38b  
 Statistical Zone 15  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	11.4	1.36	2	92.5	39.39	12	64.0	28.48	9	37.5	11.59	2	52.3	10.97	2	34.3	10.34	3
Total finfish kg	7.7	1.36	2	75.5	39.40	12	57.5	29.06	9	32.3	11.89	2	47.4	11.04	2	31.7	10.37	3
Total crustacean kg	2.7	0.00	2	3.1	1.34	12	5.4	1.72	9	5.0	0.45	2	4.2	0.32	2	1.6	0.58	3
Total others kg	0.5	0.45	2	13.7	10.13	12	0.9	0.79	9	0.5	0.45	2	0.7	0.26	2	1.1	0.19	3
Surface temperature	20.3	1.59	7	22.8	0.99	10	22.1	0.87	9	24.2	0.43	4	0.0	0.00	0	25.4	0.05	3
Midwater temperature	20.3	1.56	7	22.8	0.98	10	22.2	0.87	9	24.4	0.43	4	0.0	0.00	0	25.4	0.05	3
Bottom temperature	20.7	1.43	7	22.9	0.91	10	23.1	0.71	9	24.8	0.34	4	0.0	0.00	0	23.6	0.80	3
Surface salinity	30.6	0.76	7	32.9	0.19	10	34.2	0.22	9	34.9	0.35	4	0.0	0.00	0	36.0	0.06	3
Midwater salinity	30.7	0.71	7	33.3	0.33	10	34.3	0.20	9	35.2	0.41	4	0.0	0.00	0	36.2	0.03	3
Bottom salinity	31.9	0.47	7	33.4	0.28	10	34.9	0.15	9	35.5	0.33	4	0.0	0.00	0	36.7	0.02	3
Surface chlorophyll	1.3	0.14	7	1.1	0.09	10	1.0	0.08	9	0.6	0.11	4	0.0	0.00	0	0.7	0.16	3
Midwater chlorophyll	1.3	0.15	6	1.2	0.17	5	1.0	0.09	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	1.2	0.11	7	1.2	0.18	9	0.9	0.10	8	0.5	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.3	0.36	7	7.6	0.42	10	7.8	0.49	9	7.1	0.12	4	0.0	0.00	0	6.6	0.20	3
Midwater oxygen	7.3	0.17	7	7.4	0.23	10	7.4	0.25	9	7.0	0.11	4	0.0	0.00	0	6.5	0.23	3
Bottom oxygen	7.1	0.13	7	7.3	0.26	10	6.5	0.14	8	6.9	0.09	4	0.0	0.00	0	6.1	0.47	3

Table 39a  
 Statistical Zone 16  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 40 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	21.8	0.00	0.0	0.00	1	104.5	78.02	0.7	0.63	3	102.6	40.39	2.1	0.85	12
Squilla spp.	594.5	0.00	5.5	0.00	1	223.8	90.65	1.7	0.72	3	13.7	6.83	0.1	0.08	12
Callinectes similis	169.1	0.00	0.3	0.00	1	165.2	159.61	0.8	0.77	3	50.1	14.52	1.0	0.36	12
Trachypenaeus spp.	329.1	0.00	0.3	0.00	1	195.3	130.44	0.3	0.20	3	20.8	13.87	0.1	0.05	12
Penaeus setiferus	332.7	0.00	4.4	0.00	1	110.7	25.59	2.5	0.40	3	1.2	1.12	0.0	0.01	12
Sicyonia brevirostris	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	3	31.9	14.60	0.3	0.21	12
Micropogonias undulatus	9.1	0.00	0.2	0.00	1	347.8	172.10	17.3	8.59	3	608.3	112.40	39.2	7.37	12
Stenotomus caprinus	0.0	0.00	0.0	0.00	1	1.1	1.05	0.0	0.05	3	64.8	20.48	3.1	1.27	12
Leiostomus xanthurus	0.0	0.00	0.0	0.00	1	1.4	0.93	0.1	0.09	3	45.1	20.94	5.1	2.21	12
Peprilus burti	14.5	0.00	0.9	0.00	1	96.7	93.75	6.8	6.58	3	86.0	50.45	6.4	3.81	12
Synodus foetens	0.0	0.00	0.0	0.00	1	3.1	1.57	0.0	0.02	3	41.4	8.23	5.2	1.14	12
Arius felis	85.5	0.00	0.6	0.00	1	246.4	51.03	5.8	2.79	3	19.4	9.39	6.0	3.35	12
Balistes caprisicus	0.0	0.00	0.0	0.00	1	1.1	1.05	0.0	0.05	3	126.2	97.80	13.4	11.36	12
Cynoscion spp.	536.4	0.00	0.9	0.00	1	50.5	37.79	0.1	0.10	3	0.0	0.00	0.0	0.00	12
Squid	27.3	0.00	0.2	0.00	1	42.5	17.97	0.4	0.17	3	3.6	2.54	0.0	0.01	12

Table 39a (cont'd.)  
 Statistical Zone 16  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 40 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	29.3	24.72	1.1	0.92	4	89.3	13.71	3.3	0.47	7	0.0	0.00	0.0	0.00	0
<i>Squilla</i> spp.	3.8	3.75	0.0	0.00	4	3.3	1.81	0.0	0.01	7	0.0	0.00	0.0	0.00	0
<i>Callinectes similis</i>	11.3	9.62	0.5	0.32	4	16.1	6.85	0.6	0.37	7	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus</i> spp.	1.0	0.71	0.0	0.00	4	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	0
<i>Penaeus setiferus</i>	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	0
<i>Sicyonia brevirostris</i>	1.5	1.50	0.0	0.01	4	9.2	5.73	0.1	0.06	7	0.0	0.00	0.0	0.00	0
<i>Micropogonias undulatus</i>	16.2	9.30	1.9	1.20	4	41.1	31.68	4.4	3.22	7	0.0	0.00	0.0	0.00	0
<i>Stenotomus caprinus</i>	138.1	34.71	7.4	1.86	4	173.5	31.41	8.9	1.39	7	0.0	0.00	0.0	0.00	0
<i>Leiostomus xanthurus</i>	6.9	3.55	0.8	0.42	4	156.3	143.07	18.0	16.78	7	0.0	0.00	0.0	0.00	0
<i>Peprilus burti</i>	24.4	13.10	2.1	1.15	4	43.2	23.51	3.4	1.94	7	0.0	0.00	0.0	0.00	0
<i>Synodus foetens</i>	45.7	18.83	5.7	2.32	4	46.7	12.56	7.0	1.71	7	0.0	0.00	0.0	0.00	0
<i>Arius felis</i>	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	0
<i>Balistes capriscus</i>	14.2	8.03	1.7	0.61	4	0.6	0.57	0.1	0.07	7	0.0	0.00	0.0	0.00	0
<i>Cynoscion</i> spp.	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	7	0.0	0.00	0.0	0.00	0
Squid	24.0	20.12	0.1	0.04	4	34.2	25.07	0.4	0.22	7	0.0	0.00	0.0	0.00	0



Table 39b  
 Statistical Zone 16  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 40 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	53.7	0.00	1	49.7	16.20	3	110.5	29.85	12	33.2	4.24	4	66.6	21.70	7	0.0	0.00	0
Total finfish kg	43.0	0.00	1	42.8	17.30	3	106.1	30.13	12	31.1	4.17	4	59.1	21.55	7	0.0	0.00	0
Total crustacean kg	10.7	0.00	1	6.4	2.05	3	4.3	1.22	12	1.7	1.42	4	5.4	0.90	7	0.0	0.00	0
Total others kg	0.0	0.00	1	0.6	0.61	3	0.0	0.00	12	0.1	0.11	4	1.8	0.29	7	0.0	0.00	0
Surface temperature	20.8	0.10	2	22.2	0.56	4	24.9	0.28	11	25.0	0.25	3	25.9	0.63	2	26.6	0.00	1
Midwater temperature	21.7	0.85	2	22.2	0.57	4	25.0	0.31	11	25.2	0.10	3	26.0	0.64	2	26.6	0.00	1
Bottom temperature	21.7	0.84	2	22.2	0.57	4	25.1	0.33	11	25.2	0.08	3	24.3	1.05	2	21.8	0.00	1
Surface salinity	28.2	1.74	2	32.7	0.49	4	34.5	0.19	11	35.8	0.38	3	36.1	0.14	2	36.1	0.00	1
Midwater salinity	29.8	0.49	2	32.9	0.52	4	34.7	0.20	11	36.1	0.18	3	36.3	0.08	2	36.2	0.00	1
Bottom salinity	30.2	0.16	2	32.9	0.51	4	34.9	0.25	11	36.3	0.07	3	36.4	0.08	2	36.5	0.00	1
Surface chlorophyll	1.9	0.39	2	1.4	0.45	4	0.6	0.05	11	1.2	0.71	3	0.2	0.11	2	0.1	0.00	1
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	2.1	0.78	2	1.3	0.66	3	0.6	0.07	9	0.0	0.00	0	2.3	0.00	1	0.0	0.00	0
Surface oxygen	8.2	0.20	2	7.9	0.27	4	6.7	0.14	11	6.7	0.22	3	6.3	0.10	2	6.5	0.00	1
Midwater oxygen	7.9	0.55	2	7.8	0.33	4	6.7	0.14	10	6.5	0.23	3	6.4	0.10	2	6.3	0.00	1
Bottom oxygen	7.8	0.55	2	7.6	0.34	4	6.6	0.15	11	6.5	0.20	3	5.9	0.30	2	5.4	0.00	1

Table 40a  
 Statistical Zone 17  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	0.0	0.00	0.0	0.00	1	125.7	64.24	2.1	1.09	8	93.0	42.75	2.0	0.74	13
<i>Portunus spinicarpus</i>	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	8	5.0	3.44	0.0	0.02	13
<i>Sicyonia brevirostris</i>	0.0	0.00	0.0	0.00	1	3.7	1.89	0.0	0.00	8	18.3	9.04	0.1	0.06	13
<i>Portunus gibbesii</i>	3.5	0.00	0.1	0.00	1	38.8	20.63	0.2	0.10	8	10.7	7.87	0.1	0.05	13
<i>Callinectes similis</i>	0.0	0.00	0.0	0.00	1	28.2	13.53	0.1	0.08	8	8.9	6.51	0.2	0.10	13
<i>Trachypenaeus spp.</i>	0.0	0.00	0.0	0.00	1	16.4	8.12	0.1	0.03	8	14.9	9.07	0.0	0.04	13
<i>Micropogonias undulatus</i>	55.4	0.00	2.8	0.00	1	123.6	64.77	7.8	3.99	8	192.6	54.59	13.9	3.91	13
<i>Arius felis</i>	107.3	0.00	1.4	0.00	1	332.3	126.15	64.6	26.13	8	77.6	26.09	16.1	5.18	13
<i>Stenotomus caprinus</i>	0.0	0.00	0.0	0.00	1	2.9	2.92	0.1	0.14	8	57.4	30.07	3.1	1.62	13
<i>Peprilus burti</i>	162.7	0.00	10.4	0.00	1	35.5	18.49	2.4	1.28	8	15.2	6.19	1.1	0.40	13
<i>Chloroscombrus chrysurus</i>	203.1	0.00	1.0	0.00	1	60.7	19.27	1.0	0.54	8	87.5	34.25	2.0	0.66	13
<i>Prionotus paralatus</i>	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	8	1.3	1.29	0.1	0.10	13
<i>Synodus foetens</i>	10.4	0.00	0.4	0.00	1	13.8	4.82	1.2	0.56	8	40.0	9.35	5.4	1.13	13
<i>Syacium gunteri</i>	0.0	0.00	0.0	0.00	1	53.7	24.44	1.3	0.65	8	27.0	9.27	0.6	0.19	13
<i>Squid</i>	190.4	0.00	2.8	0.00	1	174.5	146.77	1.3	0.96	8	8.4	3.36	0.1	0.04	13

Table 40a (cont'd.)  
 Statistical Zone 17  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	78.4	25.61	3.6	1.21	5	60.4	32.98	2.1	1.48	2	21.6	4.96	1.1	0.14	5
<i>Portunus spinicarpus</i>	183.8	68.77	1.1	0.45	5	171.7	153.83	1.6	1.42	2	8.2	0.85	0.1	0.04	5
<i>Sicyonia brevirostris</i>	150.1	58.36	2.3	0.89	5	28.7	20.23	0.2	0.05	2	0.0	0.00	0.0	0.00	5
<i>Portunus gibbesii</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5
<i>Callinectes similis</i>	1.0	1.03	0.0	0.02	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5
<i>Trachypenaeus</i> spp.	1.4	0.87	0.0	0.00	5	0.0	0.00	0.0	0.00	2	1.6	1.60	0.0	0.00	5
<i>Micropogonias undulatus</i>	145.9	39.27	12.5	3.69	5	1.1	1.05	0.1	0.10	2	0.0	0.00	0.0	0.00	5
<i>Arius felis</i>	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5
<i>Stenotomus caprinus</i>	276.3	82.84	17.3	5.82	5	115.2	36.35	4.8	2.30	2	186.0	21.01	11.7	0.93	5
<i>Peprilus burti</i>	16.5	10.46	0.9	0.67	5	94.7	94.74	7.6	7.58	2	338.9	204.79	23.2	14.20	5
<i>Chloroscombrus chrysurus</i>	53.0	51.06	2.8	2.52	5	1.1	1.05	0.1	0.10	2	0.0	0.00	0.0	0.00	5
<i>Prionotus paralatus</i>	12.7	9.51	0.4	0.27	5	13.3	11.17	0.5	0.28	2	170.8	61.36	9.3	3.72	5
<i>Synodus foetens</i>	44.5	11.84	6.9	1.81	5	45.8	6.87	5.4	1.48	2	16.2	3.07	3.4	1.07	5
<i>Syacium gunteri</i>	6.7	3.08	0.2	0.10	5	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5
Squid	3.6	2.24	0.4	0.29	5	15.0	5.00	1.0	0.47	2	9.0	5.63	0.6	0.41	5

Table 40b  
 Statistical Zone 17  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	34.6	0.00	1	99.6	26.53	8	65.9	7.03	13	74.9	12.28	5	47.6	2.64	2	76.2	12.67	5
Total finfish kg	29.9	0.00	1	94.5	26.47	8	62.7	6.59	13	66.3	13.51	5	40.9	4.55	2	72.9	12.63	5
Total crustacean kg	2.1	0.00	1	4.1	2.13	8	3.1	1.09	13	7.3	2.28	5	4.3	2.82	2	1.7	0.24	5
Total others kg	2.6	0.00	1	1.4	1.00	8	0.0	0.03	13	1.2	0.17	5	2.4	0.92	2	1.8	0.39	5
Surface temperature	22.0	0.72	3	23.9	0.22	8	25.4	0.25	10	26.3	0.04	5	26.5	0.02	2	26.6	0.14	4
Midwater temperature	22.4	0.56	3	23.9	0.22	8	25.5	0.25	10	26.3	0.02	5	26.4	0.00	2	26.4	0.08	4
Bottom temperature	23.0	0.30	3	24.0	0.21	8	25.6	0.28	10	26.4	0.04	5	24.4	0.52	2	21.5	0.25	4
Surface salinity	28.6	1.96	3	32.8	0.29	8	34.5	0.20	10	35.6	0.08	5	35.8	0.01	2	35.9	0.02	4
Midwater salinity	29.3	1.71	3	33.1	0.25	8	34.7	0.19	10	35.7	0.05	5	35.9	0.01	2	36.0	0.02	4
Bottom salinity	30.2	1.38	3	33.1	0.22	8	34.9	0.23	10	35.8	0.01	5	36.6	0.37	2	36.5	0.02	4
Surface chlorophyll	2.2	0.29	3	0.7	0.14	8	0.5	0.08	10	0.3	0.12	5	0.1	0.02	2	0.1	0.01	3
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	1.5	0.08	3	0.8	0.10	7	0.4	0.09	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.5	0.51	3	7.1	0.09	8	6.8	0.16	10	6.8	0.18	5	6.5	0.15	2	6.3	0.03	4
Midwater oxygen	8.1	0.43	3	7.1	0.11	8	6.8	0.16	10	6.8	0.14	5	6.3	0.15	2	6.3	0.00	4
Bottom oxygen	8.1	0.39	3	7.2	0.15	7	6.7	0.15	10	6.7	0.16	5	5.4	0.75	2	5.4	0.44	4

Table 41a  
 Statistical Zone 18  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	0	244.8	222.39	2.4	2.23	6	29.5	14.47	0.9	0.45	7
Sicyonia brevirostris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	6	20.0	19.34	0.2	0.21	7
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	6.3	5.45	0.0	0.00	6	0.0	0.00	0.0	0.00	7
Squilla spp.	0.0	0.00	0.0	0.00	0	95.5	61.07	0.9	0.56	6	5.5	3.56	0.1	0.05	7
Penaeus setiferus	0.0	0.00	0.0	0.00	0	81.7	49.37	1.6	1.00	6	0.0	0.00	0.0	0.00	7
Trachypenaeus spp.	0.0	0.00	0.0	0.00	0	35.2	22.26	0.1	0.06	6	5.7	3.22	0.0	0.03	7
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	4.4	4.44	0.2	0.22	6	131.4	84.91	5.0	3.21	7
Micropogonias undulatus	0.0	0.00	0.0	0.00	0	107.6	75.07	5.8	4.94	6	542.8	215.93	39.7	13.62	7
Leiostomus xanthurus	0.0	0.00	0.0	0.00	0	4.7	4.41	0.4	0.33	6	44.7	22.89	4.3	2.02	7
Peprilus burti	0.0	0.00	0.0	0.00	0	66.7	24.59	4.4	1.67	6	33.8	15.71	2.2	1.08	7
Synodus foetens	0.0	0.00	0.0	0.00	0	15.5	9.06	0.9	0.52	6	48.5	11.82	7.5	2.07	7
Anchoa hepsetus	0.0	0.00	0.0	0.00	0	289.3	147.89	4.3	2.25	6	0.0	0.00	0.0	0.00	7
Lagodon rhomboides	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	6	25.5	11.03	1.5	0.68	7
Lutjanus synagris	0.0	0.00	0.0	0.00	0	7.4	7.41	0.3	0.30	6	36.5	22.28	1.8	1.13	7
Squid	0.0	0.00	0.0	0.00	0	128.4	66.66	0.7	0.33	6	2.4	1.66	0.1	0.09	7

Table 41a (cont'd.)  
 Statistical Zone 18  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	64.5	19.31	2.9	0.91	9	52.6	24.36	2.5	1.07	5	11.0	5.50	0.6	0.31	5
<i>Sicyonia brevirostris</i>	65.4	19.70	0.8	0.29	9	6.5	6.13	0.1	0.12	5	0.4	0.40	0.0	0.00	5
<i>Portunus spinicarpus</i>	16.5	8.38	0.1	0.04	9	23.6	20.43	0.2	0.12	5	50.4	33.60	0.6	0.35	5
<i>Squilla</i> spp.	5.3	2.22	0.1	0.03	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5
<i>Penaeus setiferus</i>	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5
<i>Trachypenaeus</i> spp.	0.3	0.33	0.0	0.01	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5
<i>Stenotomus caprinus</i>	236.3	42.93	10.9	1.79	9	183.2	57.31	11.6	3.97	5	180.7	49.83	11.0	2.88	5
<i>Micropogonias undulatus</i>	83.1	22.55	7.6	2.03	9	1.9	0.60	0.4	0.22	5	0.0	0.00	0.0	0.00	5
<i>Leiostomus xanthurus</i>	56.4	25.14	6.5	2.82	9	33.2	33.20	4.1	4.13	5	0.0	0.00	0.0	0.00	5
<i>Peprilus burti</i>	42.0	26.40	2.8	1.92	9	7.4	4.53	0.4	0.31	5	8.2	3.47	0.5	0.23	5
<i>Synodus foetens</i>	32.4	5.06	4.1	0.70	9	20.9	4.36	3.0	0.71	5	32.7	14.51	6.4	2.32	5
<i>Anchoa hepsetus</i>	0.0	0.00	0.0	0.00	9	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	5
<i>Lagodon rhomboides</i>	49.2	21.05	3.3	1.33	9	11.5	5.98	1.1	0.55	5	1.4	0.98	0.1	0.05	5
<i>Lutjanus synagris</i>	44.1	18.47	2.4	1.07	9	0.3	0.32	0.0	0.03	5	0.0	0.00	0.0	0.00	5
<i>Squid</i>	0.8	0.57	0.0	0.01	9	66.8	50.30	0.6	0.46	5	64.4	52.50	0.7	0.29	5

Table 41b  
 Statistical Zone 18  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	37.4	4.33	6	82.7	13.35	7	56.4	5.67	9	53.3	18.28	5	51.9	20.30	5
Total finfish kg	0.0	0.00	0	26.0	5.72	6	80.4	12.67	7	50.9	6.16	9	49.0	17.45	5	42.2	13.93	5
Total crustacean kg	0.0	0.00	0	4.9	2.86	6	2.3	0.92	7	4.4	1.11	9	3.2	1.22	5	1.4	0.67	5
Total others kg	0.0	0.00	0	6.3	3.10	6	0.1	0.13	7	1.1	0.45	9	1.0	0.46	5	8.0	6.23	5
Surface temperature	24.6	0.25	2	25.2	0.30	5	25.9	0.20	8	26.5	0.07	5	26.7	0.08	3	26.8	0.04	6
Midwater temperature	24.5	0.11	2	25.0	0.20	5	25.8	0.15	8	26.5	0.04	5	26.6	0.08	3	26.6	0.05	6
Bottom temperature	24.5	0.11	2	25.0	0.19	5	25.8	0.15	8	26.4	0.09	5	22.1	0.12	3	21.0	0.16	6
Surface salinity	29.9	0.45	2	32.6	0.85	5	34.9	0.19	8	35.8	0.10	5	36.0	0.08	3	36.1	0.02	6
Midwater salinity	30.2	0.56	2	32.7	0.79	5	35.0	0.20	8	35.8	0.08	5	36.1	0.04	3	36.2	0.02	6
Bottom salinity	30.3	0.51	2	33.0	0.62	5	35.1	0.21	8	35.9	0.12	5	36.7	0.03	3	36.8	0.07	6
Surface chlorophyll	1.3	0.74	2	0.6	0.20	5	0.2	0.02	8	0.1	0.02	5	0.1	0.02	3	0.1	0.02	5
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.6	0.70	2	7.0	0.22	5	6.6	0.17	8	6.4	0.12	5	6.9	0.15	3	6.6	0.27	6
Midwater oxygen	7.5	0.70	2	6.9	0.23	5	6.6	0.18	8	6.4	0.07	5	6.9	0.10	3	6.7	0.25	5
Bottom oxygen	7.6	0.75	2	6.8	0.25	5	6.4	0.14	8	6.2	0.06	5	5.8	0.06	3	5.2	0.12	6

Table 42a  
 Statistical Zone 19  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	2	47.0	45.52	0.8	0.76	5	215.6	77.94	4.0	1.25	11
Callinectes similis	5.0	5.00	0.1	0.08	2	6.9	3.35	0.2	0.10	5	14.2	4.26	0.3	0.11	11
Trachypenaeus spp.	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	17.4	11.01	0.1	0.05	11
Penaeus setiferus	139.6	79.57	2.5	1.16	2	12.6	6.75	0.4	0.20	5	1.4	0.95	0.1	0.05	11
Squilla spp.	15.0	15.00	0.2	0.23	2	4.4	4.36	0.0	0.05	5	9.3	3.70	0.1	0.04	11
Portunus gibbesii	57.4	57.39	0.6	0.59	2	2.8	2.11	0.0	0.01	5	5.9	2.28	0.0	0.01	11
Chloroscombrus chrysurus	320.0	320.00	3.9	3.86	2	949.5	531.78	8.9	4.87	5	258.7	97.49	3.8	1.03	11
Peprilus burti	411.7	411.67	22.9	22.88	2	25.5	19.77	1.6	1.32	5	19.8	10.94	1.1	0.58	11
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	154.1	94.32	8.3	4.38	11
Diplectrum bivittatum	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	83.4	21.97	1.1	0.28	11
Synodus foetens	5.2	5.22	2.3	2.31	2	9.8	7.34	0.3	0.21	5	40.0	7.93	2.9	0.91	11
Peprilus alepidotus	53.3	53.33	1.0	0.98	2	95.0	78.79	1.5	1.14	5	2.7	2.38	0.0	0.04	11
Cynoscion nothus	25.0	25.00	0.5	0.45	2	14.7	13.21	0.8	0.66	5	21.0	16.20	1.1	0.69	11
Lutjanus campechanus	0.0	0.00	0.0	0.00	2	7.6	3.44	0.2	0.07	5	20.9	3.83	0.4	0.05	11
Squid	10.0	10.00	0.2	0.15	2	13.2	5.60	0.2	0.10	5	44.0	9.22	0.4	0.12	11



Table 42a (cont'd.)  
 Statistical Zone 19  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus aztecus</i>	43.1	31.39	1.3	1.03	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Callinectes similis</i>	46.5	23.12	1.2	0.61	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus</i> spp.	3.8	3.75	0.0	0.03	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Penaeus setiferus</i>	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Squilla</i> spp.	6.8	6.82	0.1	0.12	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Portunus gibbesii</i>	1.4	1.36	0.0	0.02	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Chloroscombrus chrysurus</i>	214.9	73.08	9.6	3.88	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Peprilus burti</i>	344.4	140.28	25.5	12.00	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Micropogonias undulatus</i>	78.5	36.01	6.4	3.14	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Diplectrum bivittatum</i>	28.3	21.03	0.6	0.39	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Synodus foetens</i>	63.3	13.91	4.8	1.38	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Peprilus alepidotus</i>	7.3	7.25	0.4	0.36	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Cynoscion nothus</i>	10.5	8.34	0.8	0.59	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Lutjanus campechanus</i>	24.3	5.73	0.3	0.11	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Squid</i>	15.7	14.79	0.0	0.03	4	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 42b  
 Statistical Zone 19  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 30 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	280.0	174.51	2	338.6	101.39	5	28.8	7.08	11	59.7	9.88	4	0.0	0.00	0	0.0	0.00	0
Total finfish kg	49.3	27.96	2	24.4	6.03	5	22.9	5.74	11	57.1	11.32	4	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	3.1	1.61	2	1.8	1.15	5	5.2	1.64	11	2.6	1.50	4	0.0	0.00	0	0.0	0.00	0
Total others kg	227.6	148.16	2	312.3	102.03	5	0.3	0.12	11	0.0	0.00	4	0.0	0.00	0	0.0	0.00	0
Surface temperature	24.9	0.41	3	24.6	0.11	8	25.7	0.18	12	25.7	0.07	2	0.0	0.00	0	0.0	0.00	0
Midwater temperature	24.9	0.41	3	24.7	0.15	8	25.9	0.15	12	26.8	0.22	2	0.0	0.00	0	0.0	0.00	0
Bottom temperature	25.0	0.41	3	24.7	0.17	8	26.0	0.16	12	26.8	0.20	2	0.0	0.00	0	0.0	0.00	0
Surface salinity	32.1	1.12	3	32.1	0.21	8	33.9	0.35	12	34.7	0.28	2	0.0	0.00	0	0.0	0.00	0
Midwater salinity	32.1	1.13	3	32.3	0.21	8	34.4	0.21	12	35.6	0.07	2	0.0	0.00	0	0.0	0.00	0
Bottom salinity	32.1	1.09	3	32.5	0.18	8	34.6	0.19	12	35.8	0.12	2	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	1.1	0.25	3	0.4	0.09	8	0.4	0.05	12	0.2	0.09	2	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.0	0.15	3	6.9	0.09	8	6.7	0.08	12	6.6	0.00	2	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	7.0	0.13	3	6.9	0.09	8	6.5	0.10	12	6.2	0.10	2	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	6.9	0.12	3	6.7	0.15	8	6.5	0.12	11	6.1	0.20	2	0.0	0.00	0	0.0	0.00	0

Table 43a  
 Statistical Zone 20  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	3.0	3.00	0.3	0.27	2	116.3	85.06	1.4	1.07	5	229.4	72.01	4.3	1.18	15
Callinectes similis	6.0	6.00	0.0	0.00	2	4.2	2.76	0.0	0.03	5	51.3	19.75	0.9	0.32	15
Trachypenaeus spp.	0.0	0.00	0.0	0.00	2	9.8	9.75	0.0	0.03	5	64.3	20.54	0.2	0.05	15
Penaeus duorarum	9.0	9.00	0.1	0.14	2	216.3	185.56	2.6	2.18	5	1.4	1.27	0.0	0.01	15
Sicyonia dorsalis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	24.3	9.95	0.1	0.04	15
Portunus gibbesii	42.0	42.00	0.1	0.14	2	37.4	16.93	0.2	0.13	5	15.0	4.93	0.1	0.04	15
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	2	726.5	693.36	5.6	5.13	5	2760.0	1405.87	19.8	9.46	15
Peprilus burti	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	5	65.9	45.88	3.2	2.24	15
Syacium spp.	0.0	0.00	0.0	0.00	2	15.9	9.74	0.6	0.34	5	95.2	28.26	1.6	0.47	15
Lutjanus campechanus	9.0	9.00	0.0	0.00	2	113.0	73.94	2.0	1.47	5	35.8	16.05	0.6	0.27	15
Peprilus alepidotus	0.0	0.00	0.0	0.00	2	55.5	53.64	0.3	0.27	5	49.7	31.79	0.6	0.39	15
Diplectrum bivittatum	0.0	0.00	0.0	0.00	2	8.3	5.12	0.1	0.07	5	54.3	14.95	0.6	0.16	15
Synodus foetens	21.0	9.00	0.4	0.14	2	0.0	0.00	0.0	0.00	5	36.7	9.97	1.6	0.46	15
Micropogonias undulatus	0.0	0.00	0.0	0.00	2	4.6	3.70	0.2	0.17	5	35.6	8.52	2.7	0.66	15
Squid	12.0	6.00	0.0	0.00	2	57.6	38.81	1.2	0.76	5	58.7	20.90	0.5	0.21	15

Table 43a (cont'd.)  
 Statistical Zone 20  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	80.7	48.73	2.5	1.56	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	99.0	41.16	2.4	0.97	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachypenaeus spp.	22.4	22.42	0.2	0.25	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus duorarum	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sicyonia dorsalis	56.1	23.22	0.2	0.06	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus gibbesii	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	106.6	74.12	3.4	2.44	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus burti	129.8	79.99	5.7	3.48	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Syacium spp.	97.7	24.83	1.7	0.60	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Lutjanus campechanus	31.0	11.00	2.0	0.94	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus alepidotus	9.8	4.96	0.7	0.34	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Diplectrum bivittatum	30.3	7.92	0.6	0.24	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Synodus foetens	54.1	29.70	4.2	2.12	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Micropogonias undulatus	40.0	4.11	3.8	0.57	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	6.9	3.91	0.2	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 43b  
 Statistical Zone 20  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 30 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	170.5	69.55	2	414.7	233.48	5	48.3	8.85	15	40.8	7.52	3	0.0	0.00	0	0.0	0.00	0
Total finfish kg	47.7	45.00	2	39.6	22.36	5	38.5	9.11	15	33.6	9.08	3	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	1.4	1.36	2	5.6	3.83	5	6.6	1.43	15	7.4	2.25	3	0.0	0.00	0	0.0	0.00	0
Total others kg	121.4	115.91	2	369.5	242.59	5	3.3	2.06	15	0.1	0.15	3	0.0	0.00	0	0.0	0.00	0
Surface temperature	26.5	0.13	4	26.4	0.09	7	25.7	0.17	13	25.7	0.10	5	0.0	0.00	0	0.0	0.00	0
Midwater temperature	26.5	0.11	4	26.5	0.09	7	26.5	0.08	13	26.9	0.08	5	0.0	0.00	0	0.0	0.00	0
Bottom temperature	26.5	0.11	4	26.8	0.18	7	26.8	0.09	13	26.9	0.05	5	0.0	0.00	0	0.0	0.00	0
Surface salinity	34.4	0.15	4	34.3	0.11	7	32.6	0.25	13	32.9	0.37	5	0.0	0.00	0	0.0	0.00	0
Midwater salinity	34.4	0.16	4	34.4	0.12	7	34.0	0.24	13	35.1	0.19	5	0.0	0.00	0	0.0	0.00	0
Bottom salinity	34.5	0.16	4	34.9	0.24	7	35.5	0.10	13	35.9	0.04	5	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.4	0.09	4	0.2	0.05	6	0.2	0.02	13	0.1	0.02	5	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	6.5	0.05	4	6.7	0.09	7	6.9	0.04	13	6.7	0.13	5	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	6.5	0.04	4	6.5	0.15	5	6.3	0.12	10	6.4	0.04	5	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	6.4	0.09	4	6.2	0.17	7	5.9	0.08	13	5.9	0.13	5	0.0	0.00	0	0.0	0.00	0

Table 44a  
 Statistical Zone 21  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	0.0	0.00	0.0	0.00	0	38.2	38.18	0.1	0.12	4	106.3	69.35	1.7	1.11	6
Portunus spinicarpus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	6
Sicyonia brevirostris	0.0	0.00	0.0	0.00	0	0.8	0.83	0.0	0.00	4	2.0	1.26	0.1	0.06	6
Trachypenaeus spp.	0.0	0.00	0.0	0.00	0	40.9	40.91	0.1	0.12	4	5.0	3.92	0.0	0.00	6
Solenocera spp.	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	2.7	1.24	0.0	0.00	6
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	2.0	2.00	0.0	0.05	6
Serranus atrobranchus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	2.7	1.98	0.1	0.05	6
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	0	105.1	41.21	0.9	0.31	4	1148.4	490.32	10.8	3.75	6
Pristipomoides aquilonaris	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	6
Stenotomus caprinus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	4.0	2.97	0.1	0.09	6
Upeneus parvus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	3.8	2.08	0.2	0.10	6
Prionotus stearnsi	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	6
Lutjanus campechanus	0.0	0.00	0.0	0.00	0	134.4	41.25	1.7	0.66	4	80.1	32.38	1.8	0.60	6
Prionotus paralatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	4	0.0	0.00	0.0	0.00	6
Squid	0.0	0.00	0.0	0.00	0	84.1	45.53	0.8	0.42	4	143.3	50.96	0.6	0.18	6

Table 44a (cont'd.)  
 Statistical Zone 21  
 40-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 5 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus aztecus	76.5	11.05	2.6	0.28	4	18.3	7.37	0.8	0.34	6	11.5	5.45	0.7	0.33	7
Portunus spinicarpus	18.5	18.55	0.1	0.11	4	11.9	7.07	0.1	0.06	6	118.0	59.81	0.9	0.48	7
Sicyonia brevirostris	0.0	0.00	0.0	0.00	4	46.0	45.00	0.2	0.22	6	0.0	0.00	0.0	0.00	7
Trachypenaeus spp.	16.3	7.28	0.1	0.04	4	0.0	0.00	0.0	0.00	6	1.7	1.71	0.0	0.02	7
Solenocera spp.	15.4	11.97	0.0	0.02	4	1.7	1.67	0.0	0.00	6	8.5	4.81	0.1	0.04	7
Sicyonia dorsalis	22.6	10.41	0.1	0.04	4	2.4	2.36	0.0	0.02	6	1.1	1.07	0.0	0.02	7
Serranus atrobranchus	230.4	37.30	1.8	0.29	4	35.9	17.28	0.4	0.22	6	192.9	75.97	3.9	1.62	7
Chloroscombrus chrysurus	3.3	2.63	0.1	0.04	4	0.0	0.00	0.0	0.00	6	0.0	0.00	0.0	0.00	7
Pristipomoides aquilonaris	33.4	14.41	0.2	0.14	4	38.4	21.20	1.7	0.65	6	212.4	56.83	18.8	4.62	7
Stenotomus caprinus	15.2	10.73	0.5	0.33	4	95.9	18.79	3.2	0.51	6	65.1	21.60	4.3	1.43	7
Upeneus parvus	14.8	7.37	0.4	0.19	4	69.7	40.12	2.5	1.43	6	75.9	24.25	2.9	1.08	7
Prionotus stearnsi	12.5	12.19	0.1	0.09	4	65.8	37.56	0.6	0.36	6	10.7	4.85	0.2	0.07	7
Lutjanus campechanus	15.7	3.58	0.7	0.35	4	26.0	11.96	1.2	0.47	6	0.4	0.44	0.0	0.01	7
Prionotus paralatus	1.4	1.36	0.0	0.05	4	17.1	9.99	0.6	0.30	6	79.2	32.68	2.3	1.16	7
Squid	7.7	4.95	0.2	0.16	4	156.8	69.89	1.5	0.36	6	190.5	95.55	1.8	0.89	7

Table 44b  
 Statistical Zone 21  
 40-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	19.9	1.47	4	43.9	12.41	6	16.5	2.76	4	33.4	3.21	6	61.5	9.82	7
Total finfish kg	0.0	0.00	0	10.3	2.05	4	40.2	11.04	6	12.4	1.86	4	30.0	3.08	6	56.0	9.07	7
Total crustacean kg	0.0	0.00	0	0.6	0.62	4	3.2	1.75	6	3.6	0.55	4	1.3	0.65	6	2.4	1.14	7
Total others kg	0.0	0.00	0	9.0	3.81	4	0.5	0.33	6	0.5	0.50	4	2.1	0.34	6	3.2	1.08	7
Surface temperature	0.0	0.00	0	0.0	0.00	0	26.8	0.14	4	26.4	0.03	3	26.8	0.14	4	26.6	0.13	6
Midwater temperature	0.0	0.00	0	0.0	0.00	0	27.1	0.12	4	27.4	0.12	3	27.0	0.11	4	26.0	0.77	6
Bottom temperature	0.0	0.00	0	0.0	0.00	0	27.2	0.06	4	23.7	1.11	3	21.4	0.26	4	20.0	0.39	6
Surface salinity	0.0	0.00	0	36.1	0.12	3	34.7	0.63	6	33.1	0.18	3	34.4	0.38	4	35.3	0.68	6
Midwater salinity	0.0	0.00	0	35.9	0.22	3	35.1	0.35	6	35.7	0.06	3	36.0	0.05	4	36.5	0.11	6
Bottom salinity	0.0	0.00	0	35.3	0.06	3	35.6	0.12	6	37.2	0.35	3	37.0	0.06	4	36.8	0.06	6
Surface chlorophyll	0.0	0.00	0	0.2	0.06	3	0.1	0.02	8	0.1	0.01	3	0.1	0.02	4	0.1	0.05	5
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	6.4	0.15	3	6.6	0.19	7	7.0	0.46	3	6.4	0.07	4	6.6	0.30	6
Midwater oxygen	0.0	0.00	0	6.5	0.15	3	6.4	0.26	6	6.6	0.38	3	5.9	0.25	4	6.4	0.30	5
Bottom oxygen	0.0	0.00	0	6.0	0.06	3	5.8	0.14	6	5.7	0.58	3	5.2	0.12	4	4.8	0.18	6



Table 45a  
 Statistical Zone 17  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 10 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus setiferus	13.8	8.72	0.1	0.04	10	4.0	4.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0
Portunus gibbesii	6.6	3.03	0.0	0.00	10	16.0	8.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Callinectes similis	2.4	1.60	0.0	0.00	10	30.0	3.46	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Trachypenaeus similis	2.4	1.33	0.0	0.00	10	10.0	7.21	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Sicyonia dorsalis	3.0	1.61	0.0	0.00	10	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Pagurus pollicaris	0.6	0.60	0.0	0.03	10	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	24.0	16.95	0.0	0.03	10	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	7.8	7.16	0.0	0.03	10	12.0	9.17	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Symphurus plagiusa	8.4	4.12	0.1	0.08	10	4.0	4.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	7.8	2.01	0.4	0.11	10	4.0	4.00	0.2	0.18	3	0.0	0.00	0.0	0.00	0
Chaetodipterus faber	7.8	7.80	0.2	0.16	10	4.0	2.00	0.2	0.18	3	0.0	0.00	0.0	0.00	0
Citharichthys spilopterus	4.8	3.07	0.0	0.03	10	10.0	5.29	0.1	0.09	3	0.0	0.00	0.0	0.00	0
Dorosoma petenense	7.2	6.56	0.2	0.16	10	0.0	0.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	3.6	1.33	0.1	0.05	10	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0
Squid	150.6	26.01	1.5	0.24	10	140.0	52.46	1.4	0.47	3	0.0	0.00	0.0	0.00	0

Table 45b  
 Statistical Zone 17  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 10 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	3.0	0.49	10	2.7	1.57	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.5	0.36	10	0.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	10	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	1.6	0.45	10	0.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	15.4	0.20	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	15.7	0.24	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	16.8	0.38	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	24.9	0.26	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	26.9	0.29	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	29.8	0.67	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	9.5	0.38	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	9.7	0.47	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	9.1	0.46	13	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 46a  
 Statistical Zone 18  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 18 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 10 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Callinectes similis</i>	0.9	0.86	0.0	0.00	7	37.5	11.87	0.2	0.06	12	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus similis</i>	0.9	0.86	0.0	0.00	7	24.0	9.34	0.0	0.03	12	0.0	0.00	0.0	0.00	0
<i>Portunus gibbesii</i>	10.3	7.37	0.0	0.04	7	16.0	13.32	0.1	0.07	12	0.0	0.00	0.0	0.00	0
<i>Penaeus setiferus</i>	6.9	4.02	0.0	0.04	7	17.5	4.81	0.2	0.05	12	0.0	0.00	0.0	0.00	0
<i>Squilla spp.</i>	2.6	2.57	0.0	0.00	7	15.0	5.55	0.2	0.05	12	0.0	0.00	0.0	0.00	0
<i>Sicyonia dorsalis</i>	0.9	0.86	0.0	0.00	7	11.5	3.94	0.0	0.00	12	0.0	0.00	0.0	0.00	0
<i>Cynoscion nothus</i>	12.9	12.86	0.0	0.04	7	45.0	25.16	0.3	0.14	12	0.0	0.00	0.0	0.00	0
<i>Stellifer lanceolatus</i>	3.4	1.78	0.0	0.04	7	9.5	6.42	0.1	0.05	12	0.0	0.00	0.0	0.00	0
<i>Cynoscion arenarius</i>	5.1	2.42	0.4	0.22	7	5.5	2.02	0.2	0.08	12	0.0	0.00	0.0	0.00	0
<i>Etropus crossotus</i>	1.7	1.71	0.0	0.04	7	6.5	2.27	0.1	0.04	12	0.0	0.00	0.0	0.00	0
<i>Peprilus alepidotus</i>	11.1	5.92	0.2	0.10	7	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	0
<i>Anchoa mitchilli</i>	11.1	7.22	0.0	0.00	7	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	0
<i>Dorosoma petenense</i>	9.4	7.62	0.2	0.12	7	0.0	0.00	0.0	0.00	12	0.0	0.00	0.0	0.00	0
<i>Citharichthys spilopterus</i>	4.3	3.39	0.1	0.05	7	3.0	1.73	0.0	0.03	12	0.0	0.00	0.0	0.00	0
Squid	87.4	39.30	0.7	0.33	7	39.5	14.52	0.3	0.12	12	0.0	0.00	0.0	0.00	0

Table 46b  
 Statistical Zone 18  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 10 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.9	0.78	7	2.5	0.41	12	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.4	0.39	7	1.1	0.41	12	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	7	0.0	0.00	12	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.4	0.39	7	0.0	0.00	12	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	16.1	0.38	10	18.0	0.25	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	16.3	0.38	10	17.5	0.13	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	16.8	0.35	10	17.6	0.15	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	26.6	0.54	10	27.5	0.45	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	27.5	0.32	10	30.3	0.27	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	28.2	0.39	10	31.0	0.27	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	9.6	0.54	10	7.9	0.09	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	9.0	0.41	10	7.7	0.09	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	8.1	0.54	10	7.3	0.20	9	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 47a  
 Statistical Zone 19  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 19 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus setiferus</i>	109.5	103.53	1.4	1.43	4	8.4	4.49	0.2	0.11	5	8.6	7.62	0.2	0.19	7
<i>Sicyonia dorsalis</i>	0.0	0.00	0.0	0.00	4	9.6	6.18	0.1	0.11	5	64.3	24.62	0.0	0.04	7
<i>Trachypenaeus</i> spp.	0.0	0.00	0.0	0.00	4	2.4	2.40	0.0	0.00	5	36.9	27.48	0.1	0.08	7
<i>Trachypenaeus similis</i>	7.5	7.50	0.0	0.00	4	3.6	2.40	0.0	0.00	5	13.7	11.01	0.0	0.04	7
<i>Portunus gibbesii</i>	6.0	2.45	0.0	0.00	4	4.8	2.24	0.0	0.00	5	12.9	5.31	0.1	0.05	7
<i>Pagurus pollicaris</i>	4.5	4.50	0.5	0.55	4	6.0	3.29	0.2	0.16	5	1.7	1.11	0.0	0.00	7
<i>Syacium gunteri</i>	1.5	1.50	0.0	0.00	4	24.0	5.69	0.3	0.09	5	60.0	13.73	0.6	0.14	7
<i>Chloroscombrus chrysurus</i>	24.0	16.43	0.2	0.07	4	1.2	1.20	0.0	0.00	5	40.3	34.46	0.4	0.39	7
<i>Cynoscion nothus</i>	19.5	15.56	0.1	0.07	4	19.2	5.82	0.7	0.28	5	24.0	9.07	0.5	0.33	7
<i>Micropogonias undulatus</i>	10.5	8.62	0.3	0.26	4	22.8	13.34	0.9	0.46	5	7.7	3.64	0.4	0.18	7
<i>Stellifer lanceolatus</i>	42.0	36.08	0.8	0.66	4	0.0	0.00	0.0	0.00	5	0.0	0.00	0.0	0.00	7
<i>Peprilus alepidotus</i>	25.5	15.95	0.1	0.07	4	3.6	2.40	0.1	0.05	5	0.0	0.00	0.0	0.00	7
<i>Cynoscion arenarius</i>	0.0	0.00	0.0	0.00	4	7.2	3.50	0.7	0.36	5	10.3	4.08	0.9	0.32	7
<i>Synodus foetens</i>	0.0	0.00	0.0	0.00	4	2.4	1.47	0.2	0.11	5	10.3	4.67	0.3	0.13	7
Squid	207.0	105.09	1.5	0.60	4	100.8	52.56	0.9	0.26	5	129.4	47.19	0.5	0.18	7

Table 47b  
 Statistical Zone 19  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	7.5	2.81	4	9.8	3.06	5	5.1	0.71	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	2.0	1.31	4	2.7	0.86	5	4.3	0.55	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	2.0	2.05	4	2.7	2.73	5	0.4	0.39	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	2.7	1.11	4	2.7	0.86	5	0.0	0.00	7	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	18.3	0.23	4	19.4	0.39	6	19.2	0.50	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	18.1	0.19	4	19.4	0.40	6	19.5	0.38	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	18.1	0.27	4	19.8	0.22	6	20.0	0.26	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	28.8	0.82	4	30.3	0.48	6	30.3	0.50	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	29.0	0.92	4	30.4	0.41	6	30.4	0.47	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	28.9	0.85	4	30.6	0.31	6	31.1	0.38	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.3	0.17	4	6.9	0.14	6	7.0	0.17	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	7.2	0.17	4	6.8	0.12	6	6.8	0.13	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	7.1	0.18	4	6.6	0.14	6	6.5	0.17	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 48a  
 Statistical Zone 20  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 20 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Trachypenaeus similis	0.0	0.00	0.0	0.00	1	2.5	1.73	0.0	0.00	12	22.0	14.00	0.0	0.00	3
Sicyonia dorsalis	0.0	0.00	0.0	0.00	1	1.5	1.50	0.0	0.00	12	26.0	17.78	0.0	0.00	3
Portunus gibbesii	0.0	0.00	0.0	0.00	1	7.0	2.07	0.0	0.03	12	4.0	4.00	0.0	0.00	3
Penaeus setiferus	6.0	0.00	0.0	0.00	1	2.0	1.13	0.0	0.03	12	2.0	2.00	0.1	0.09	3
Callinectes similis	0.0	0.00	0.0	0.00	1	1.5	0.78	0.0	0.00	12	4.0	2.00	0.0	0.00	3
Portunus spinimanus	0.0	0.00	0.0	0.00	1	0.5	0.50	0.0	0.00	12	2.0	2.00	0.0	0.00	3
Lagodon rhomboides	1140.0	0.00	19.6	0.00	1	33.5	31.88	0.8	0.75	12	4.0	4.00	0.2	0.18	3
Chloroscombrus chrysurus	0.0	0.00	0.0	0.00	1	67.0	65.37	0.3	0.30	12	0.0	0.00	0.0	0.00	3
Syacium gunteri	0.0	0.00	0.0	0.00	1	16.5	13.46	0.3	0.21	12	106.0	35.38	1.7	0.45	3
Cynoscion nothus	0.0	0.00	0.0	0.00	1	18.0	7.24	0.1	0.07	12	8.0	8.00	0.2	0.18	3
Lutjanus campechanus	0.0	0.00	0.0	0.00	1	8.0	5.88	0.1	0.07	12	10.0	7.21	0.1	0.09	3
Chaetodipterus faber	0.0	0.00	0.0	0.00	1	2.5	1.37	0.0	0.03	12	6.0	6.00	0.1	0.09	3
Selene setapinnis	0.0	0.00	0.0	0.00	1	3.0	2.02	0.0	0.00	12	0.0	0.00	0.0	0.00	3
Etropus crossotus	0.0	0.00	0.0	0.00	1	1.0	0.67	0.0	0.02	12	6.0	3.46	0.2	0.09	3
Squid	54.0	0.00	0.3	0.00	1	118.5	27.02	0.5	0.13	12	62.0	15.62	0.3	0.00	3

Table 48b  
 Statistical Zone 20  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	21.8	0.00	1	3.6	0.91	12	3.6	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	19.1	0.00	1	2.0	1.01	12	1.8	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	1	0.0	0.00	12	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	1	1.4	0.41	12	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	18.9	0.20	2	18.5	0.24	12	19.7	0.40	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	18.1	1.05	2	18.8	0.27	12	19.8	0.30	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	18.3	0.85	2	19.0	0.35	12	20.3	0.60	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	29.9	0.37	2	30.3	0.16	12	31.7	0.46	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	30.2	0.19	2	30.6	0.18	12	31.9	0.55	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	30.2	0.38	2	30.7	0.19	12	32.3	0.76	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	7.4	0.30	2	8.0	0.10	12	7.5	0.15	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	7.9	0.20	2	7.6	0.10	12	7.0	0.05	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	8.0	0.15	2	7.5	0.15	12	6.6	0.20	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0



Table 49a  
 Statistical Zone 21  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 21 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Portunus gibbesii	0.0	0.00	0.0	0.00	2	12.0	5.89	0.0	0.03	8	16.8	7.45	0.1	0.05	5
Penaeus aztecus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	16.8	12.78	0.3	0.21	5
Dyspanopeus texana	0.0	0.00	0.0	0.00	2	7.5	7.50	0.0	0.00	8	0.0	0.00	0.0	0.00	5
Portunus spinimanus	0.0	0.00	0.0	0.00	2	5.3	2.64	0.0	0.00	8	1.2	1.20	0.0	0.00	5
Calappa sulcata	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	8.4	7.00	0.2	0.16	5
Callinectes similis	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	6.0	3.79	0.1	0.05	5
Syacium gunteri	0.0	0.00	0.0	0.00	2	3.8	2.52	0.1	0.04	8	130.8	66.66	2.4	1.11	5
Chloroscombrus chrysurus	3.0	3.00	0.0	0.00	2	9.8	8.17	0.1	0.07	8	13.2	10.46	0.1	0.07	5
Etropus crossotus	0.0	0.00	0.0	0.00	2	3.0	1.96	0.1	0.04	8	18.0	15.06	0.2	0.16	5
Lagodon rhomboides	36.0	36.00	1.1	1.09	2	0.0	0.00	0.0	0.00	8	2.4	2.40	0.1	0.11	5
Haliutichthys aculeatus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	9.6	5.23	0.1	0.05	5
Cynoscion arenarius	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	8.4	8.40	0.6	0.60	5
Lutjanus campechanus	0.0	0.00	0.0	0.00	2	0.8	0.75	0.0	0.00	8	4.8	3.50	0.2	0.16	5
Prionotus tribulus	0.0	0.00	0.0	0.00	2	1.5	1.50	0.0	0.00	8	3.6	3.60	0.0	0.00	5
Squid	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	8	6.0	4.65	0.0	0.00	5

Table 49b  
 Statistical Zone 21  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.4	1.36	2	0.3	0.34	8	5.5	2.86	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	1.4	1.36	2	0.3	0.34	8	3.8	2.38	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	2	0.0	0.00	8	0.5	0.55	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	2	0.0	0.00	8	0.0	0.00	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	21.2	0.05	2	20.0	0.45	8	20.5	0.45	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	21.2	0.00	2	20.1	0.27	8	20.6	0.51	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	21.0	0.20	2	19.9	0.18	8	21.1	0.86	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	32.2	0.05	2	32.2	0.06	8	32.3	0.05	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	32.3	0.05	2	32.3	0.06	8	32.5	0.12	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	32.4	0.06	2	32.3	0.06	8	33.0	0.47	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	9.0	2.85	2	8.5	0.61	8	9.4	1.16	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	11.8	0.05	2	8.9	0.75	8	9.1	0.94	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	12.0	0.20	2	9.3	0.84	8	8.8	0.76	5	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 50a  
 Statistical Zone 22  
 20-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 22 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths less than 10 fm or greater than 20 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	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	0.0	0.00	0.0	0.00	0	42.0	0.00	0.5	0.00	1
Portunus gibbesii	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	36.0	0.00	0.3	0.00	1
Calappa sulcata	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
Penaeus aztecus	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
Sicyonia brevirostris	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
Sicyonia dorsalis	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	6.0	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	540.0	0.00	7.9	0.00	1
Prionotus tribulus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	30.0	0.00	0.5	0.00	1
Cyclopsetta chittendeni	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	24.0	0.00	0.8	0.00	1
Etropus crossotus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	24.0	0.00	0.3	0.00	1
Halieutichthys aculeatus	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	18.0	0.00	0.0	0.00	1
Prionotus longispinosus	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
Centropristis philadelphia	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0	6.0	0.00	0.3	0.00	1
Diplectrum bivittatum	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

Table 50b  
 Statistical Zone 22  
 20-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths less than 10 fm or greater than 20 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	0.0	0.00	0	0.0	0.00	0	13.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	0.0	0.00	0	0.0	0.00	0	10.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	0	0.0	0.00	0	2.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	0.0	0.00	0	0.0	0.00	0	21.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	22.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	0.0	0.00	0	0.0	0.00	0	22.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	0.0	0.00	0	0.0	0.00	0	32.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	33.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	0.0	0.00	0	0.0	0.00	0	33.7	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	0.0	0.00	0	0.0	0.00	0	12.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	11.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	0.0	0.00	0	0.0	0.00	0	11.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 51a  
 Statistical Zone 11  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 11 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Anchoa spp.	14.0	14.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Orthopristis chryoptera	12.0	12.00	1.0	1.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chilomycterus schoepfi	4.0	4.00	0.5	0.55	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sphoeroides parvus	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Citharichthys spilopterus	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Diplectrum formosum	2.0	2.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Synodus foetens	2.0	2.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 51b  
 Statistical Zone 11  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.8	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	1.8	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	18.0	0.00	1	18.5	0.00	1	18.2	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	18.3	0.00	1	18.7	0.00	1	17.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	28.5	0.00	1	28.7	0.00	1	32.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	28.9	0.00	1	28.3	0.00	1	30.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	1.1	0.00	1	1.7	0.00	1	1.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.6	0.00	1	7.4	0.00	1	7.6	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	7.9	0.00	1	7.5	0.00	1	7.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 52a  
 Statistical Zone 12  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 12 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes similis	3.0	3.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	180.0	120.00	0.4	0.41	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	159.0	141.00	0.4	0.41	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Arius felis	150.0	150.00	0.4	0.41	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Spherooides parvus	9.0	9.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus triacanthus	6.0	6.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	0.0	0.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Menticirrhus littoralis	3.0	3.00	0.0	0.00	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	3.0	3.00	0.3	0.27	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	168.0	132.00	0.1	0.14	2	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 52a (cont'd.)  
 Statistical Zone 12  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 12 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 30 fm.

SPECIES	21-30 FM					31-40 FM					>40 FM				
	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	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	12.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Chloroscombrus chrysurus	12.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Arius felis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Spherooides parvus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus triacanthus	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa hepsetus	12.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Menticirrhus littoralis	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	0.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	30.0	0.00	0.0	0.00	1	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0



Table 52b  
 Statistical Zone 12  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 30 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	1.4	1.36	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0
Total finfish kg	1.4	1.36	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.0	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	2	0.0	0.00	0	0.0	0.00	0	0.0	0.00	1	0.0	0.00	0	0.0	0.00	0
Surface temperature	0.0	0.00	0	0.0	0.00	0	18.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	0.0	0.00	0	0.0	0.00	0	16.9	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	0.0	0.00	0	0.0	0.00	0	29.3	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	11.5	0.00	1	9.2	0.00	1	2.0	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.2	0.00	1	8.3	0.00	1	4.4	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	8.4	0.00	1	8.5	0.00	1	8.1	0.00	1	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 53a  
 Statistical Zone 13  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 13 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Callinectes similis	28.0	14.42	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus setiferus	84.0	72.08	0.5	0.33	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus gibbesii	32.0	21.17	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Penaeus aztecus	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squilla spp.	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	728.0	550.01	0.6	0.40	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	86.0	80.00	0.5	0.45	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus burti	24.0	12.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Arius felis	12.0	6.93	1.4	1.23	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Eucinostomus argenteus	2.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Dasyatis sabina	2.0	2.00	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	176.0	50.48	0.4	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 53b  
 Statistical Zone 13  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	3.6	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	2.7	1.57	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	0.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	16.7	2.74	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	16.7	2.38	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	31.1	1.21	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	31.1	1.21	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	6.2	1.70	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.4	0.18	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	7.5	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 54a  
 Statistical Zone 14  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 14 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus setiferus	1791.0	1519.99	5.6	4.03	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	570.0	560.45	2.6	2.59	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus sayi	22.0	14.00	0.1	0.06	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachypenaeus spp.	8.0	5.06	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Sicyonia dorsalis	4.0	4.00	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	2.0	1.26	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	1137.0	1116.66	1.1	1.09	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Arius felis	530.0	521.63	4.0	3.99	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Menticirrhus americanus	24.0	14.53	0.0	0.05	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	19.0	8.96	0.1	0.09	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Stellifer lanceolatus	9.0	7.86	0.0	0.05	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Larimus fasciatus	8.0	5.93	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Peprilus alepidotus	7.0	7.00	0.0	0.00	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trichiurus lepturus	6.0	4.10	0.1	0.06	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	99.0	68.05	0.3	0.22	6	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 54b  
 Statistical Zone 14  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	14.5	8.95	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	5.9	4.13	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	8.2	5.17	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	15.1	0.98	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	14.8	0.91	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	30.0	2.07	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	30.2	2.01	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	7.0	1.41	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.9	0.34	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	8.9	0.32	6	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 55a  
 Statistical Zone 16  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 16 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
<i>Penaeus setiferus</i>	742.0	715.05	2.7	2.46	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus constrictus</i>	26.0	26.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Trachypenaeus similis</i>	16.0	16.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Xiphopenaeus kroyeri</i>	8.0	8.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Sicyonia dorsalis</i>	6.0	6.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Penaeus aztecus</i>	4.0	2.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Anchoa mitchilli</i>	874.0	609.13	0.9	0.55	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Cynoscion arenarius</i>	62.0	47.79	1.0	1.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Arius felis</i>	42.0	42.00	1.5	1.55	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Menticirrhus littoralis</i>	8.0	4.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Chloroscombrus chrysurus</i>	6.0	6.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Micropogonias undulatus</i>	6.0	6.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Prionotus longispinosus</i>	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
<i>Trichiurus lepturus</i>	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	56.0	34.87	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0

Table 55b  
 Statistical Zone 16  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	7.3	3.28	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	3.6	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	2.7	2.73	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	15.2	2.01	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	15.7	1.82	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	23.6	7.15	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	22.3	6.43	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	4.8	0.79	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.9	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	9.0	0.71	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

Table 56a  
 Statistical Zone 17  
 16-ft trawls

Summary of dominant organisms taken in shrimp statistical zone 17 during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. The mean number (NUM) of organisms per hour, the standard error of the mean (SEM) for numbers, the mean weight in kg per hour, the SEM of weight and the number (n) of samples taken. No trawl samples were taken in depths greater than 5 fm.

SPECIES	0- 5 FM					6-10 FM					11-20 FM				
	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N	NUM	SEM	WT	SEM	N
Penaeus setiferus	298.0	191.01	1.2	0.71	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Xiphopenaeus kroyeri	244.0	182.03	0.6	0.51	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Acetes americanus	100.0	100.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Portunus spp.	64.0	61.02	0.3	0.27	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Trachypenaeus spp.	20.0	20.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Callinectes similis	4.0	4.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Anchoa mitchilli	332.0	244.22	0.4	0.24	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Cynoscion arenarius	172.0	104.23	0.7	0.40	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Larimus fasciatus	118.0	118.00	0.2	0.18	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Prionotus tribulus	52.0	28.00	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Symphurus plagiusa	32.0	17.44	0.3	0.16	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Stellifer lanceolatus	22.0	11.14	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Menticirrhus americanus	20.0	10.58	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Etropus crossotus	10.0	7.21	0.0	0.00	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0
Squid	4.0	4.00	0.1	0.09	3	0.0	0.00	0.0	0.00	0	0.0	0.00	0.0	0.00	0



Table 56b  
 Statistical Zone 17  
 16-ft trawls

Summary of the mean total catch and environmental data (X), the standard error of the mean (SEM) and the number of samples taken (n) during the 1991 Fall Shrimp/Groundfish Survey by depth stratum. Catch values in kg per hour, temperature in °C, salinity in ppt, chlorophyll in mg/m<sup>3</sup>, and oxygen in ppm. No trawl samples were taken in depths greater than 5 fm.

Environmental category	0-5 fm			6-10 fm			11-20 fm			21-30 fm			31-40 fm			Over 40 fm		
	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n	X	SEM	n
Total catch kg	4.5	2.41	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total finfish kg	1.8	0.91	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total crustacean kg	2.7	1.57	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Total others kg	0.0	0.00	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface temperature	15.5	1.40	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater temperature	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom temperature	15.6	1.30	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface salinity	26.8	1.69	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater salinity	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom salinity	26.8	1.66	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface chlorophyll	6.4	2.25	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom chlorophyll	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Surface oxygen	8.1	0.40	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Midwater oxygen	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0
Bottom oxygen	8.1	0.51	3	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0	0.0	0.00	0

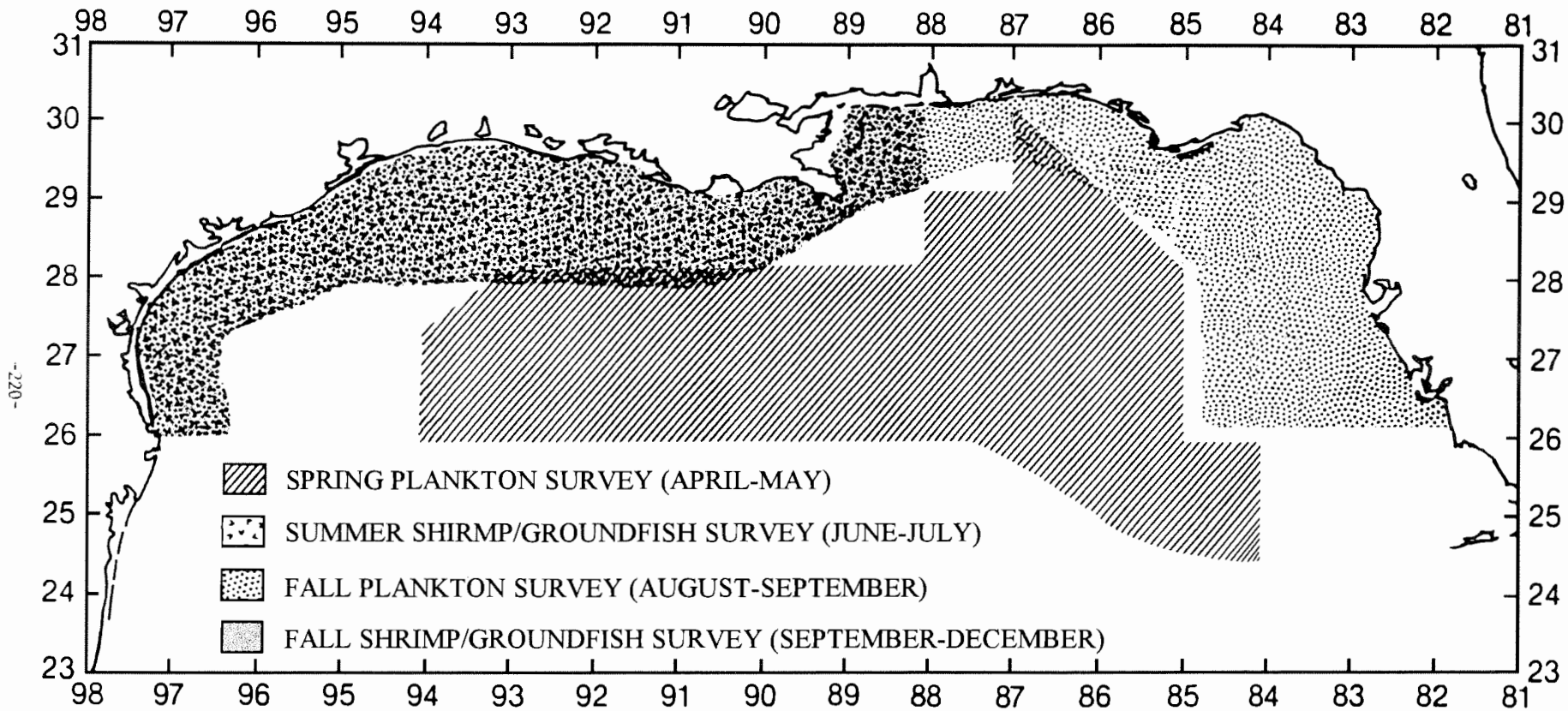


Figure 1. 1991 SEAMAP Surveys, Gulf of Mexico.

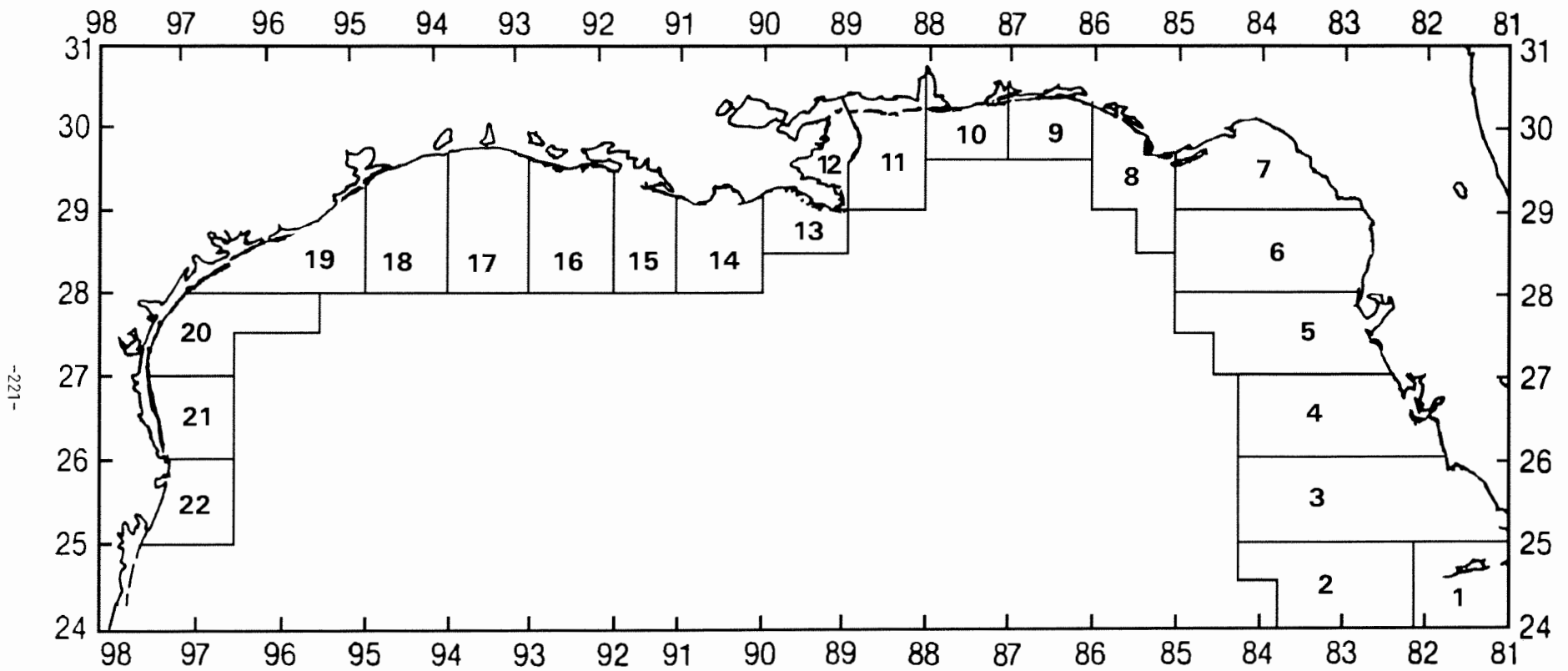


Figure 2. Statistical zones for shrimp in the Gulf of Mexico.

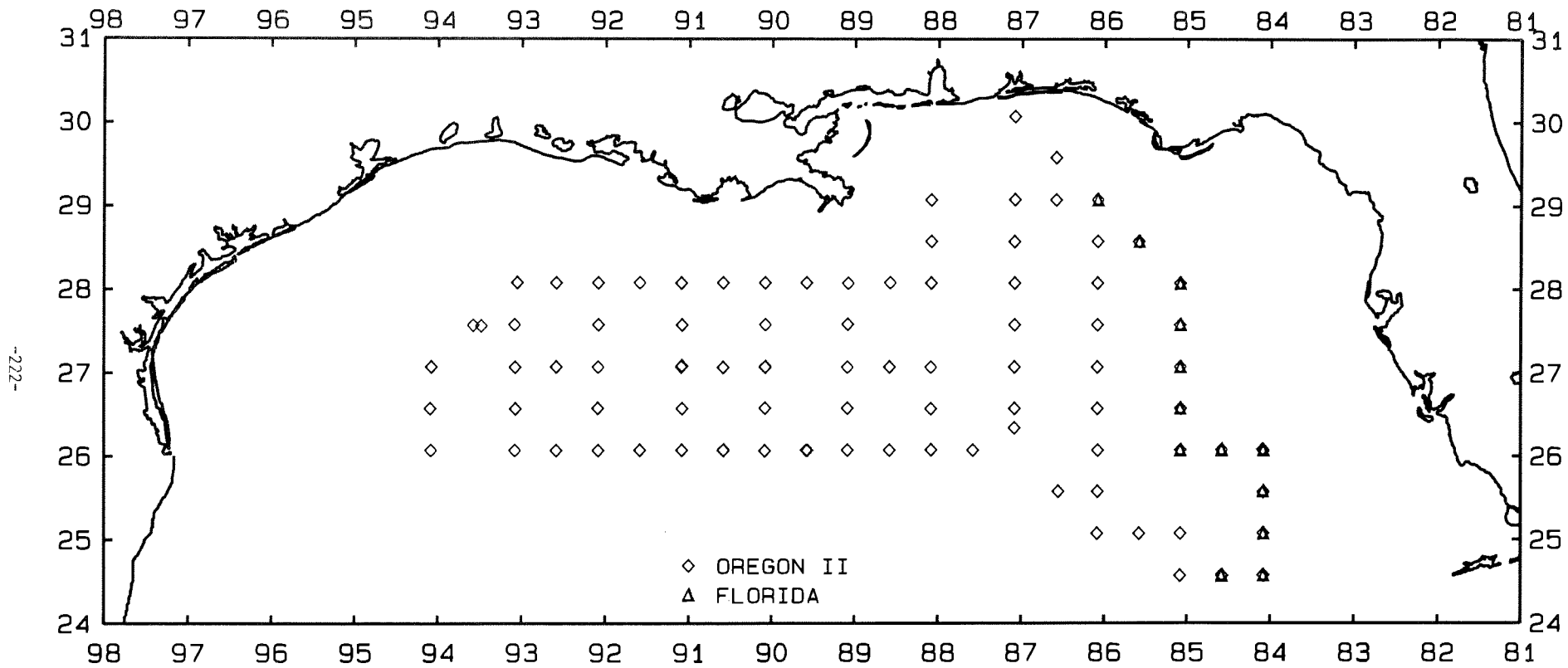


Figure 3. Locations of plankton and environmental stations during 1991 Spring Plankton Survey.

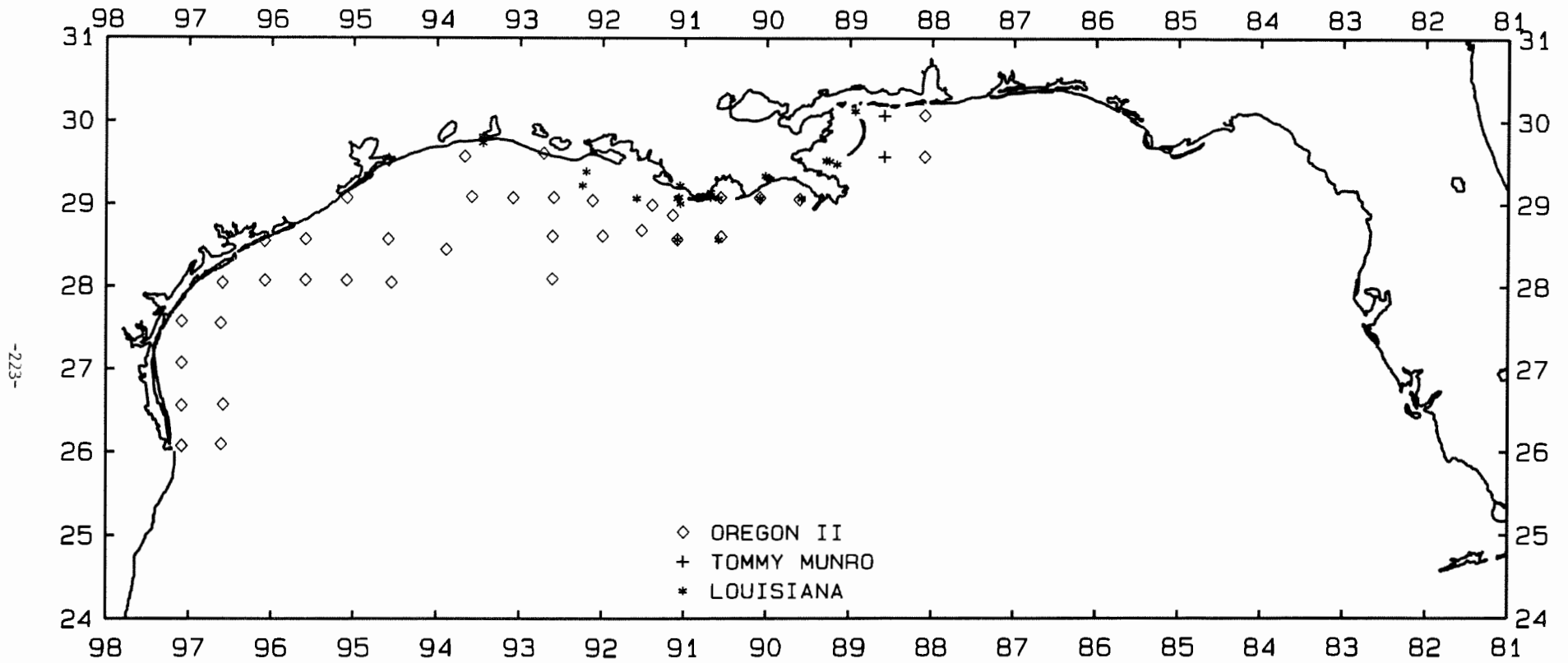


Figure 4. Locations of plankton stations during 1991 Summer Shrimp/Groundfish Survey.

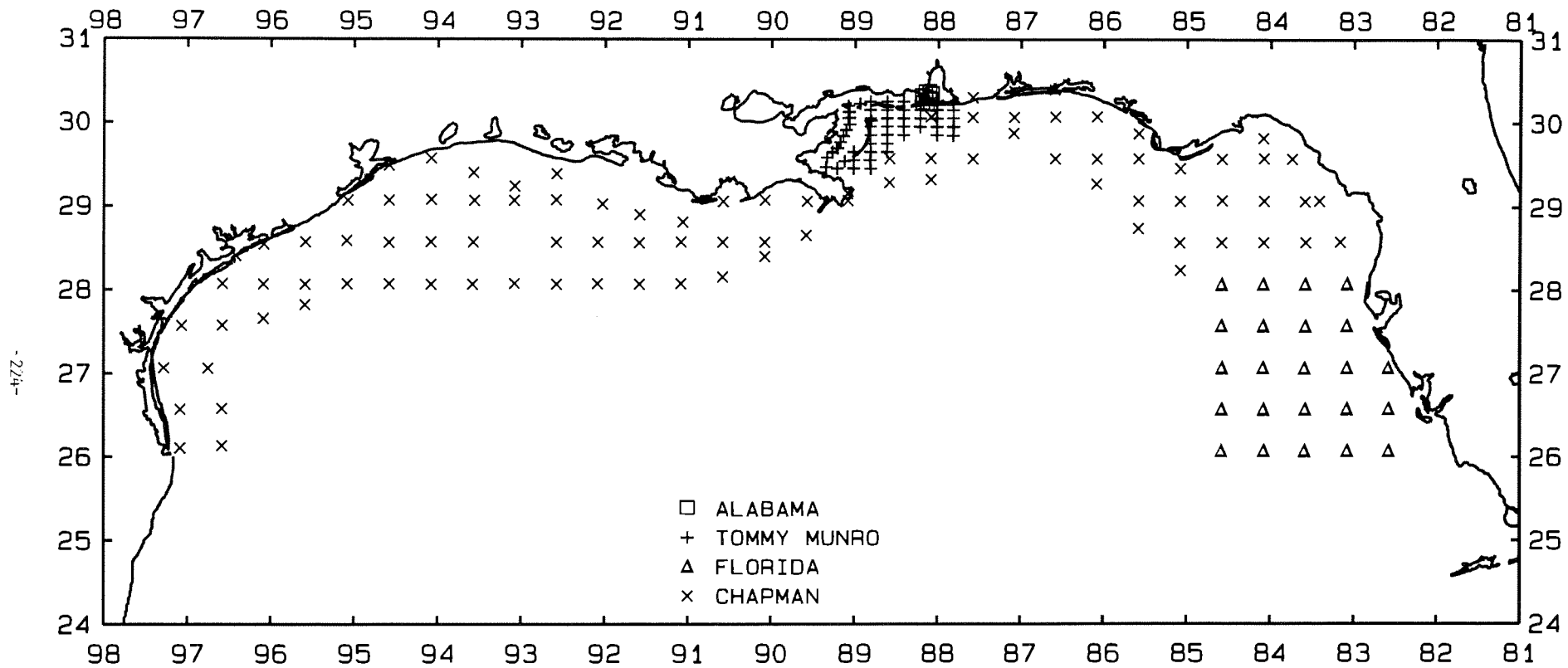


Figure 5. Locations of plankton and environmental stations during 1991 Fall Plankton Survey.

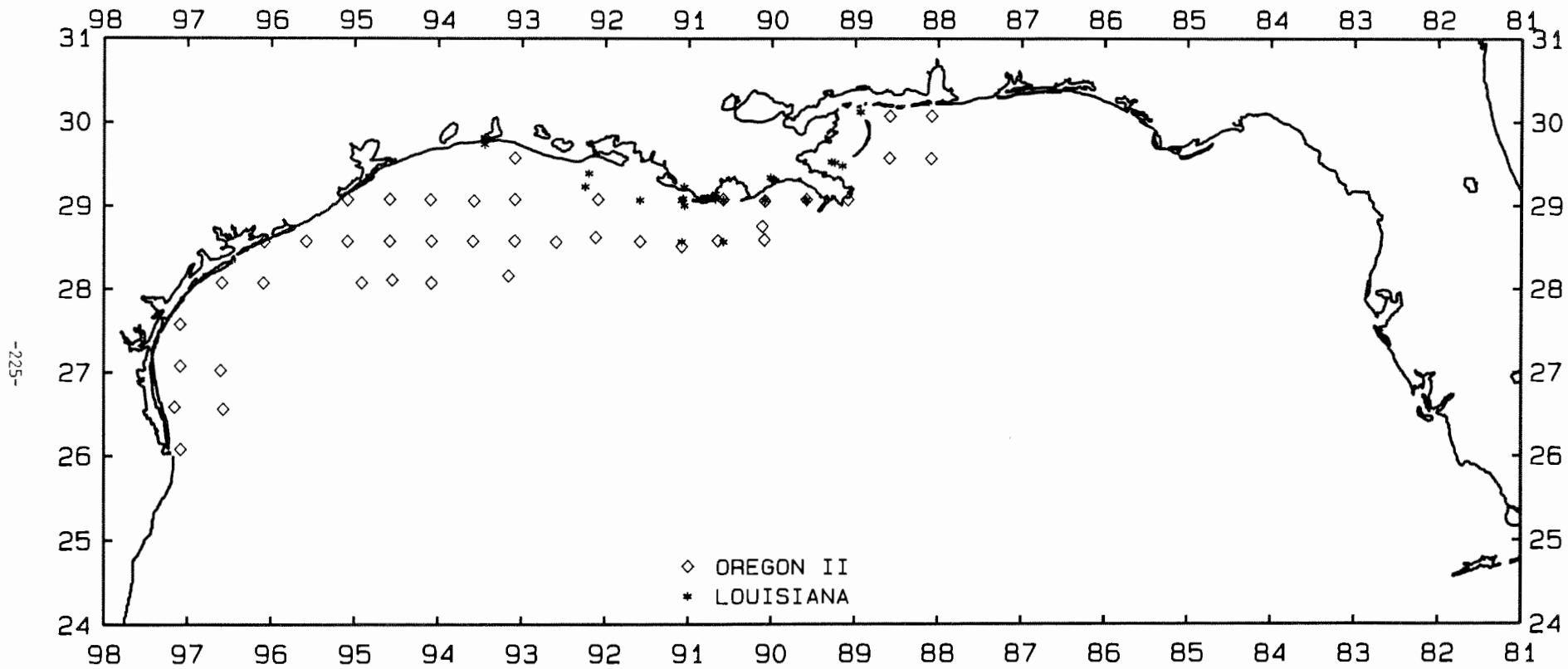


Figure 6. Locations of plankton stations during 1991 Fall Shrimp/Groundfish Survey.

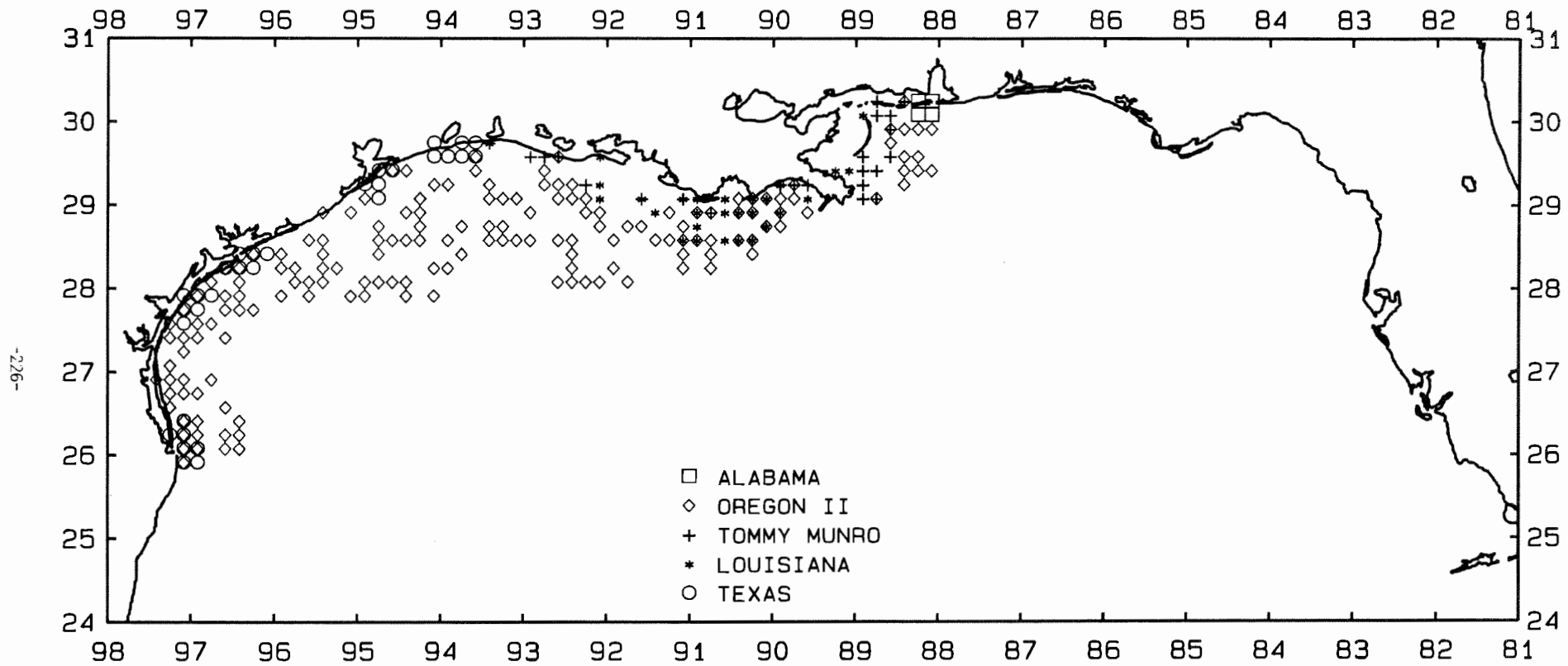


Figure 7. Locations of 1991 Summer Shrimp/Groundfish Survey environmental stations, summarized by 10-minute squares.



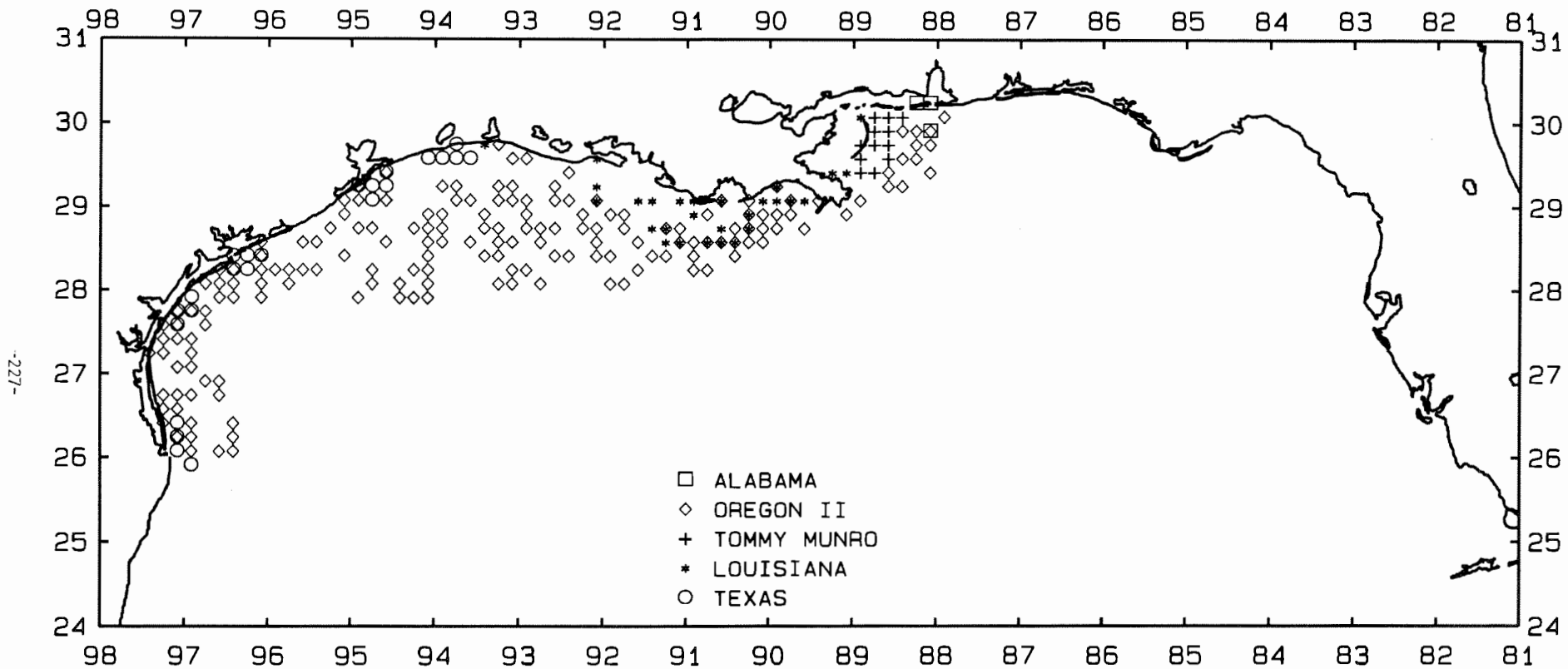


Figure 8. Locations of 1991 Fall Shrimp/Groundfish Survey environmental stations, summarized by 10-minute squares.

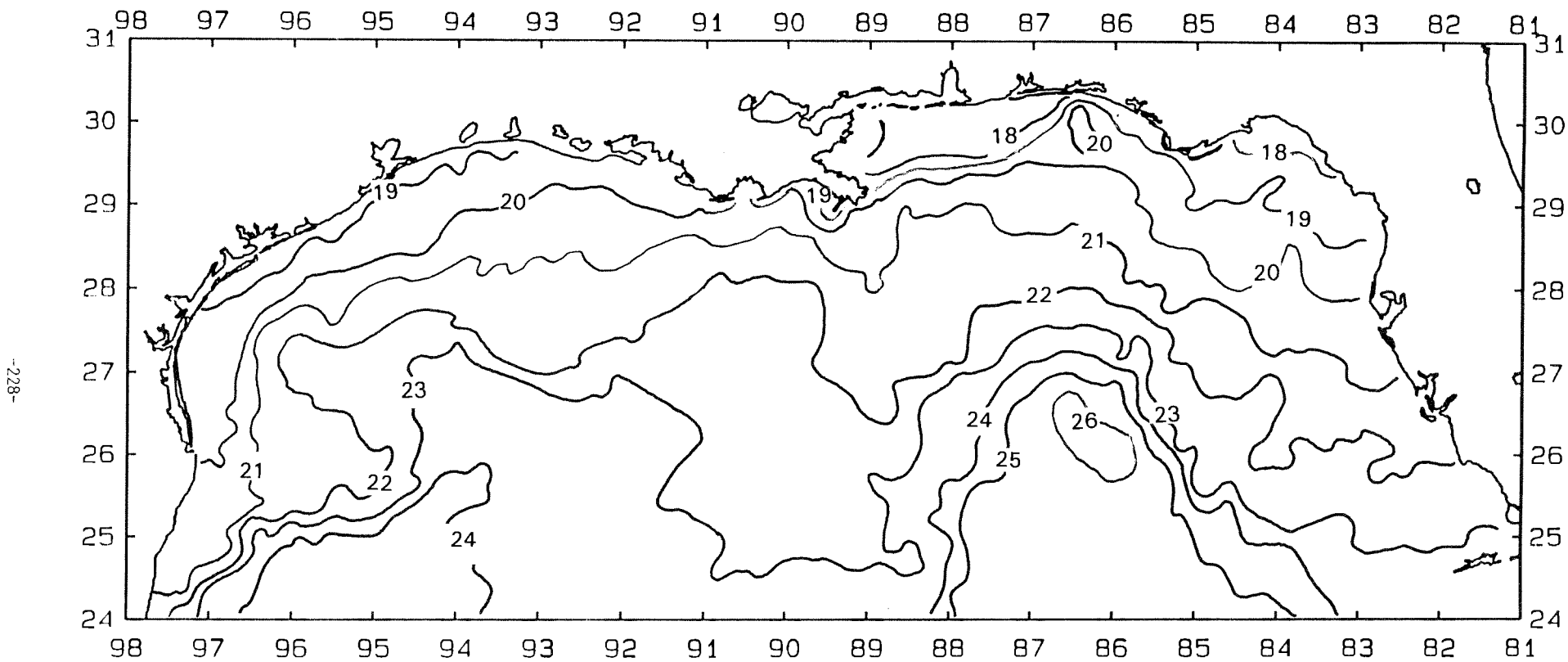


Figure 9. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, March 19, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

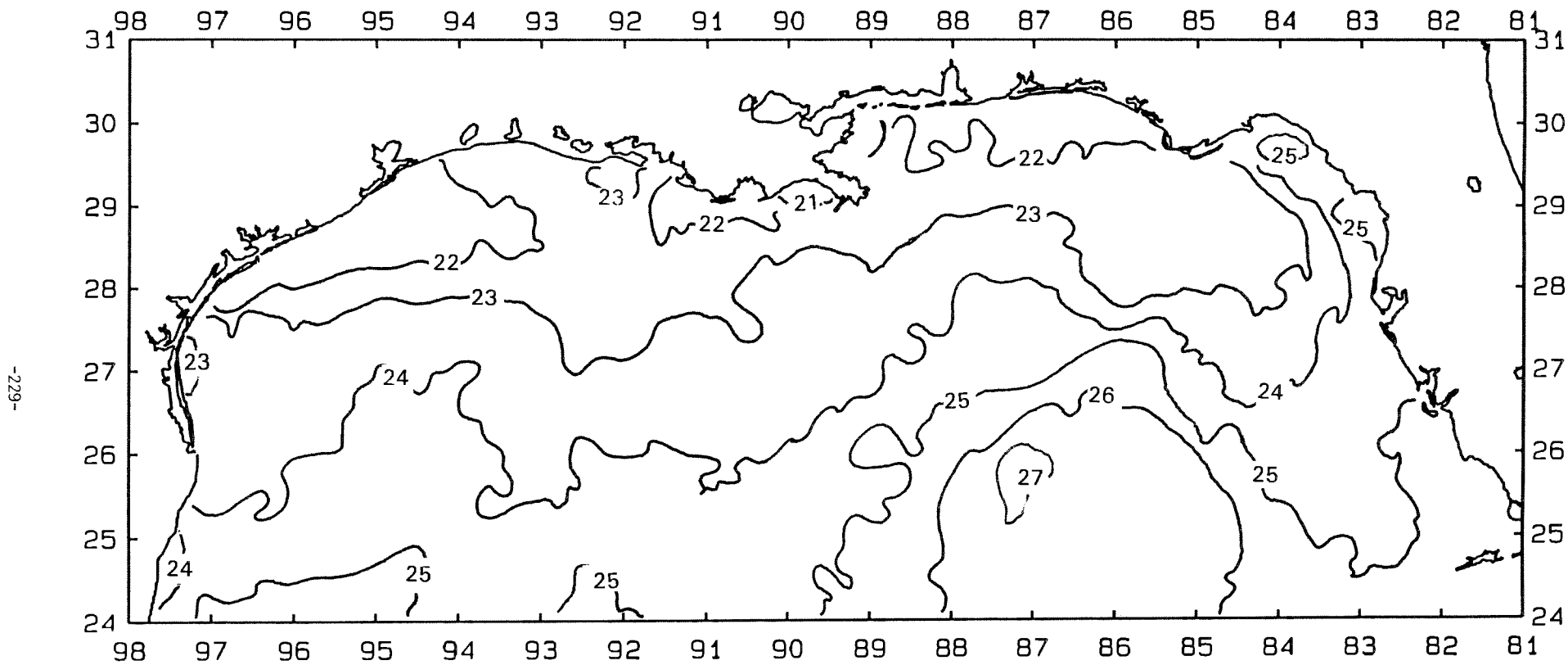


Figure 10. Satellite measurement of surface temperature (°C) in the Gulf of Mexico, April 16, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

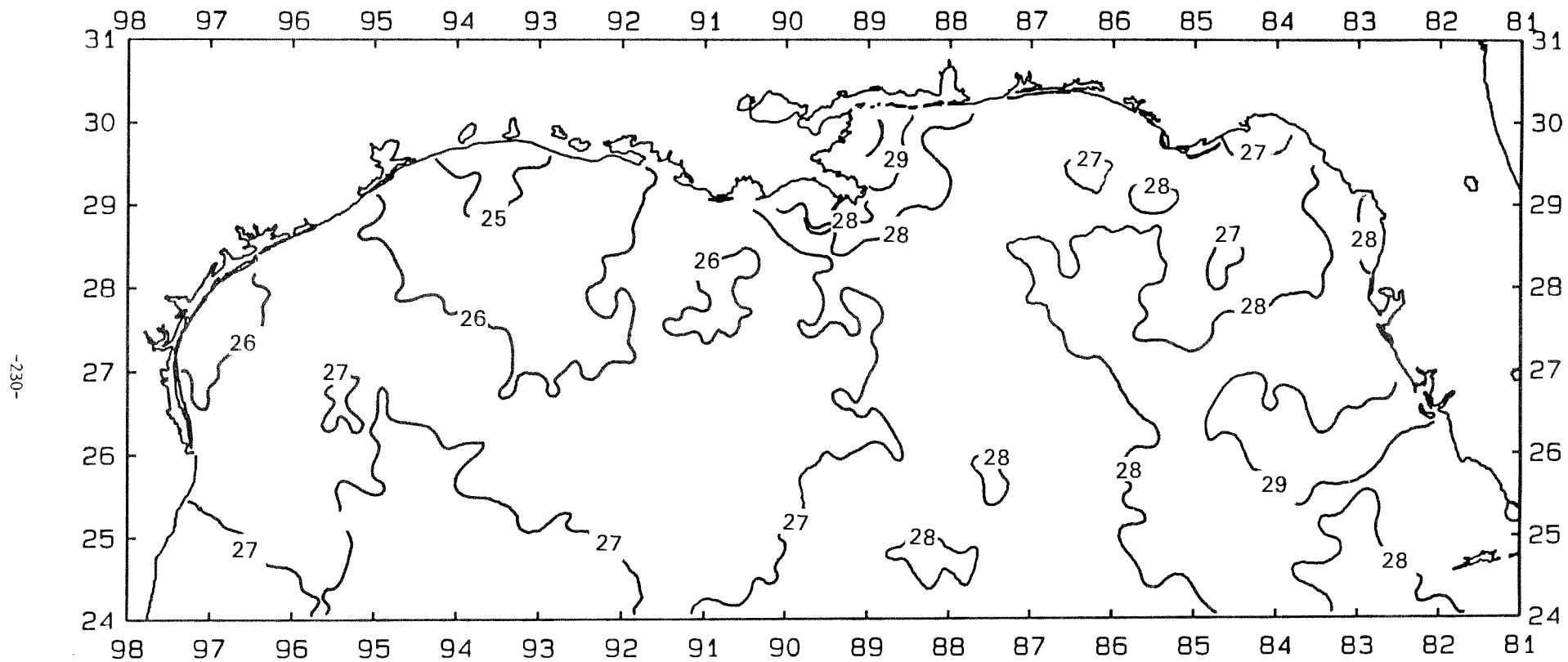


Figure 11. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, May 14, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

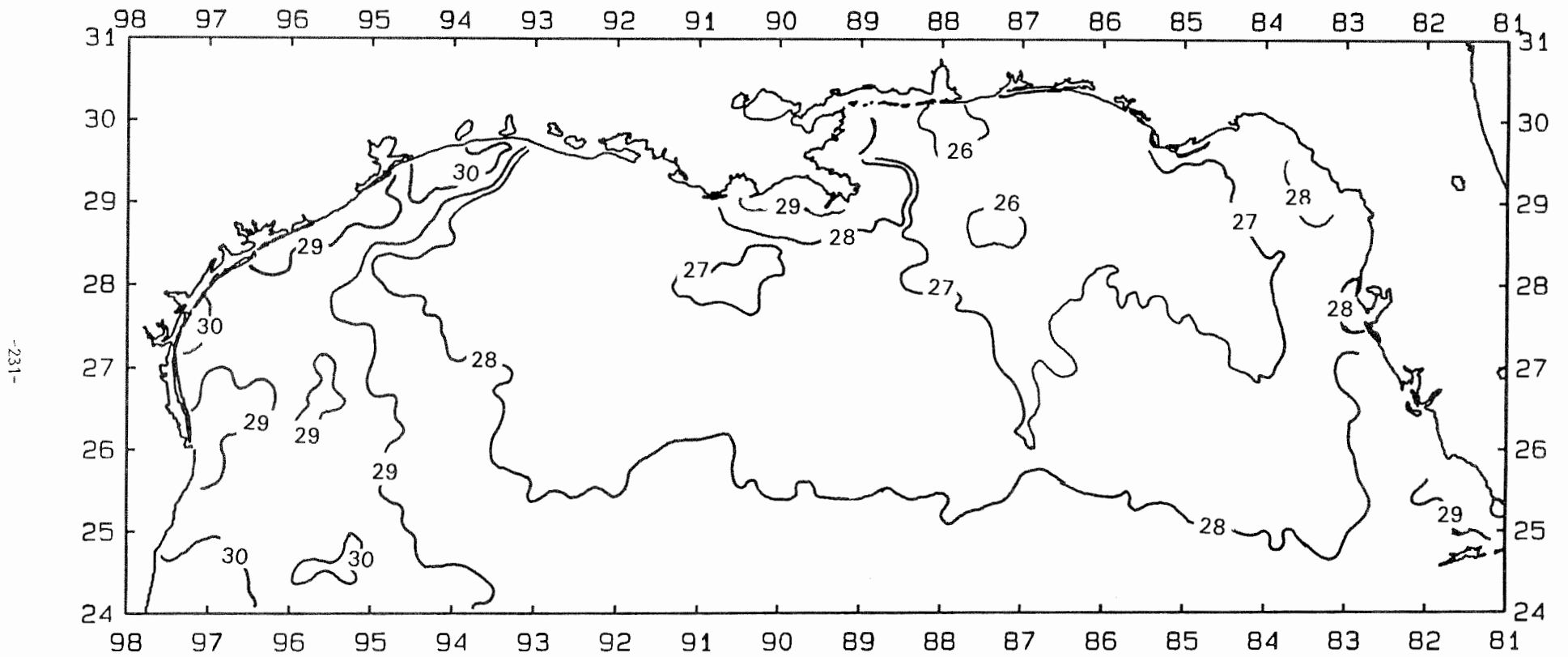


Figure 12. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, June 11, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

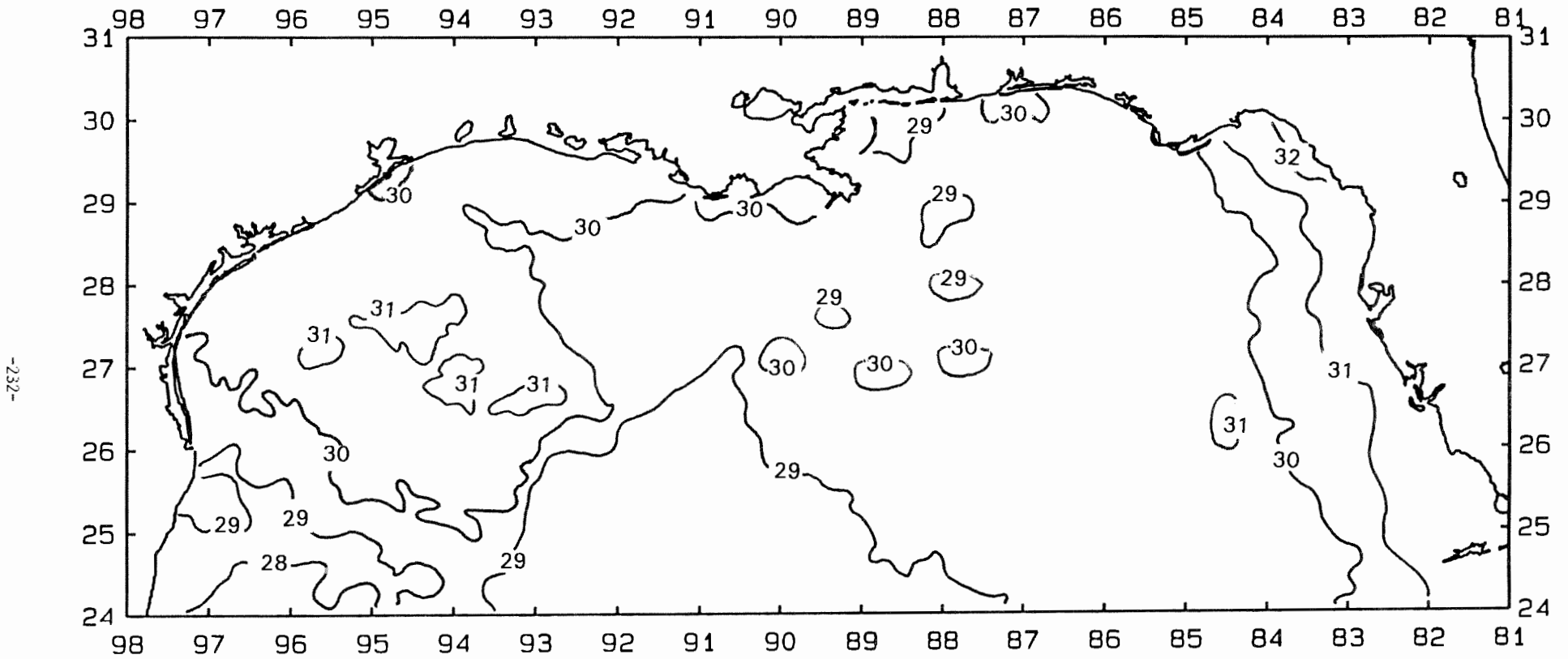


Figure 13. Satellite measurement of surface temperature (°C) in the Gulf of Mexico, July 9, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

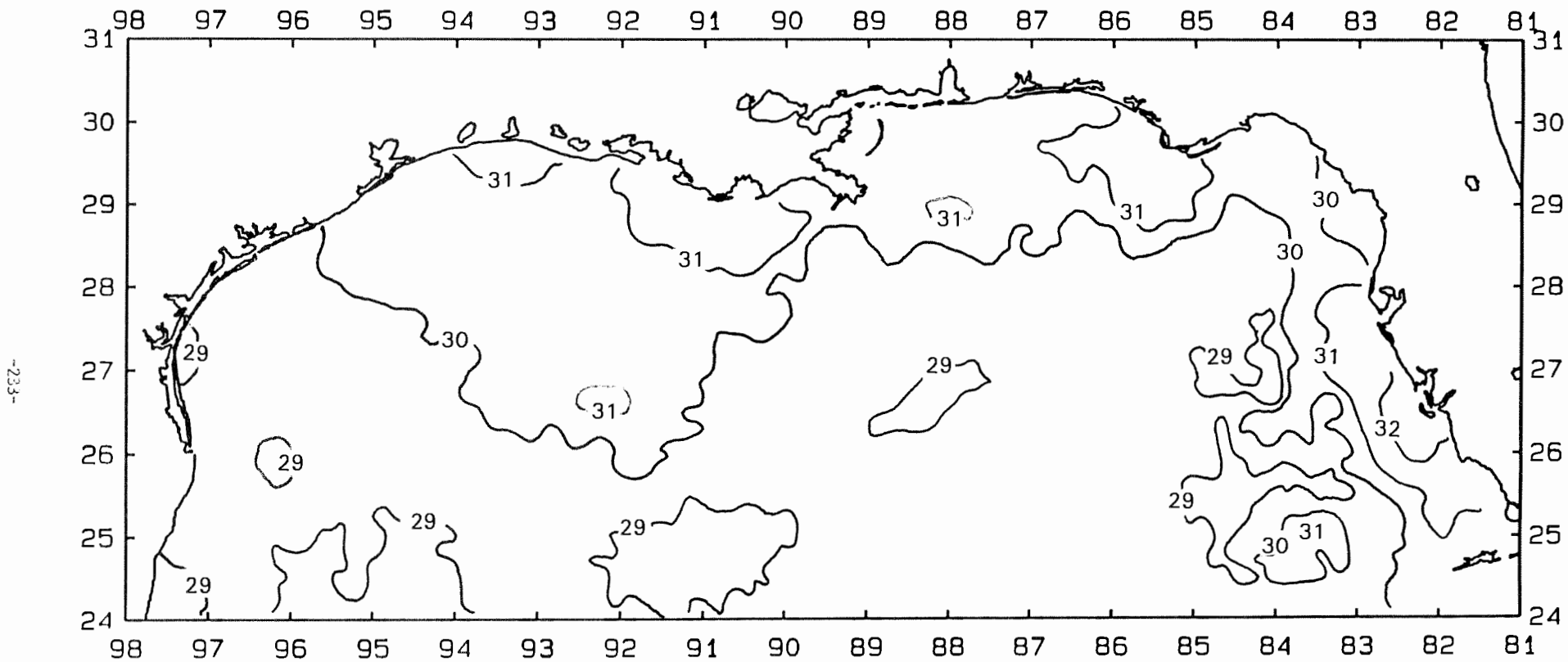


Figure 14. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, August 10, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

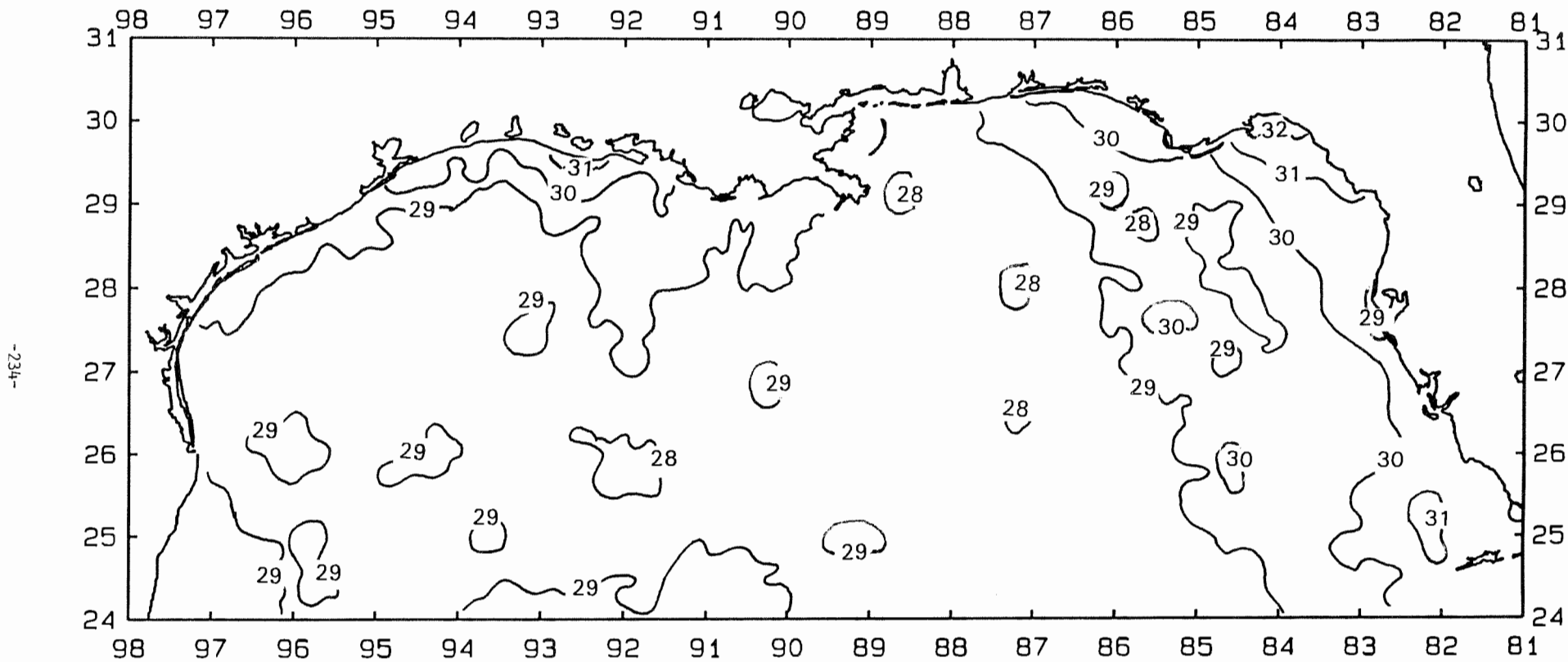


Figure 15. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, September 10, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).



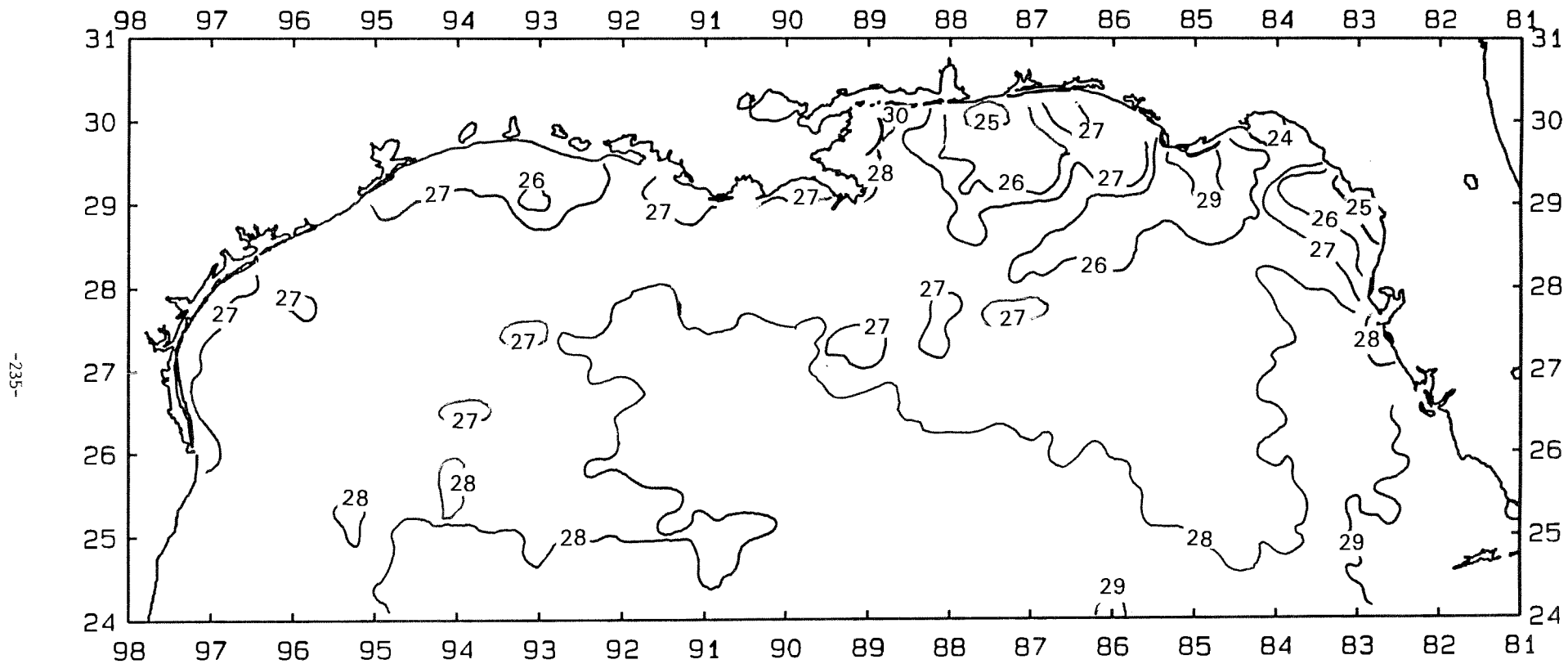


Figure 16. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, October 8, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

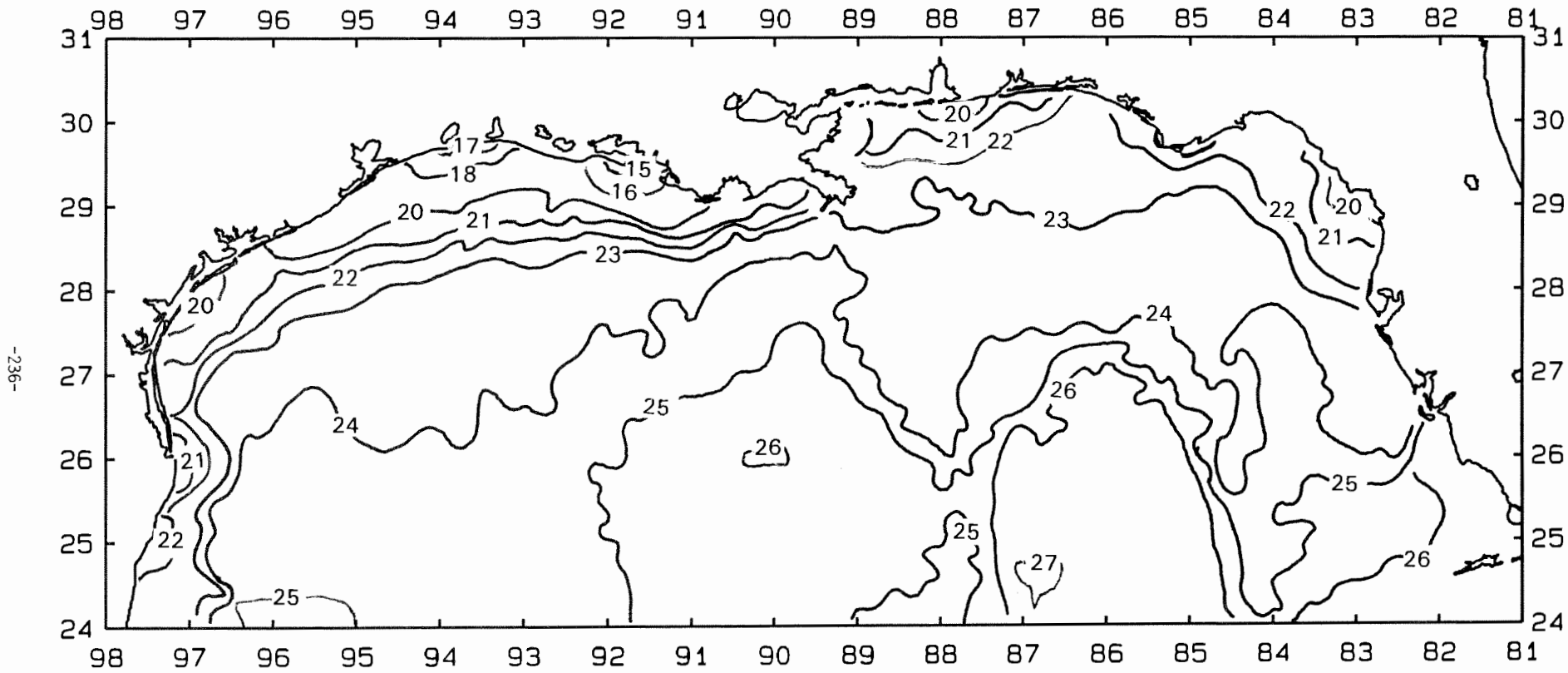


Figure 17. Satellite measurement of surface temperature ( $^{\circ}\text{C}$ ) in the Gulf of Mexico, November 12, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

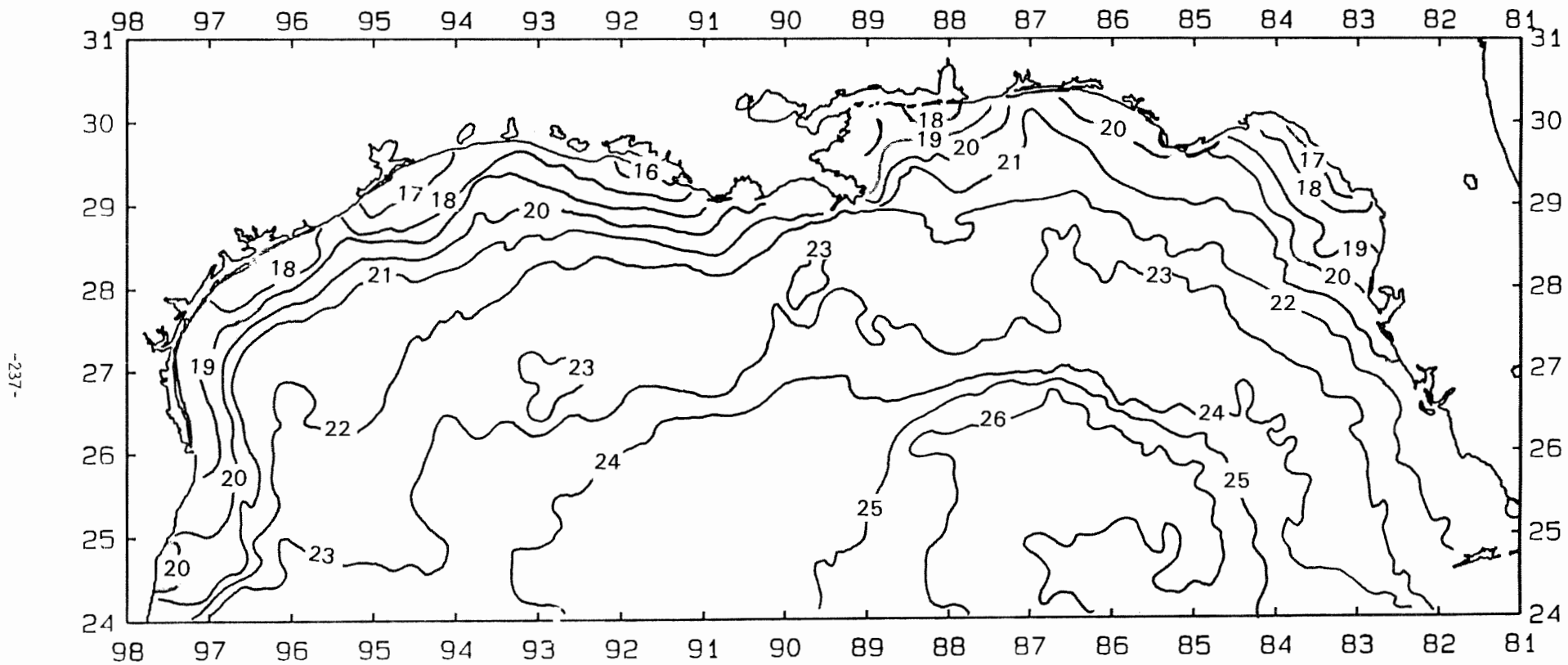


Figure 18. Satellite measurement of surface temperature (°C) in the Gulf of Mexico, December 10, 1991 (modified from NWS/NESS Sea Surface Thermal Analysis).

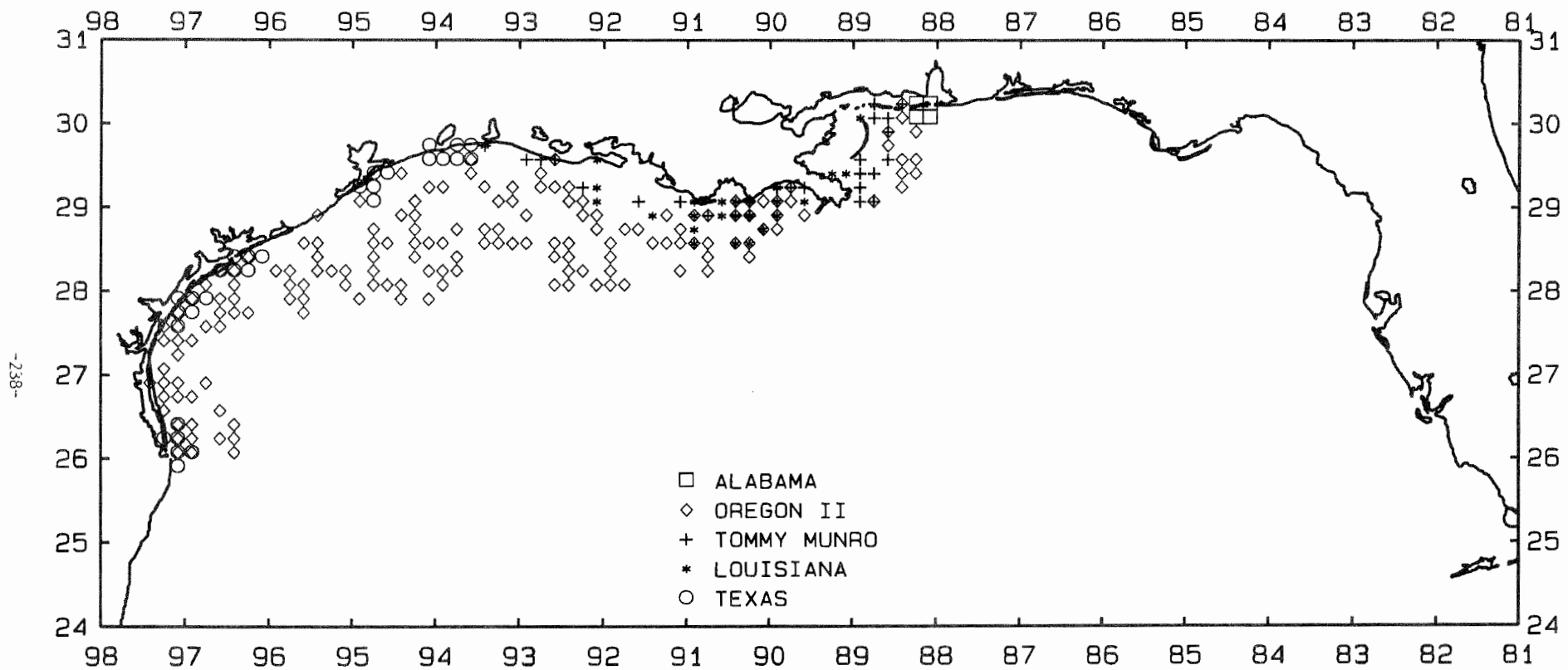


Figure 19. Locations of 1991 Summer Shrimp/Groundfish trawl stations, summarized by 10-minute squares.

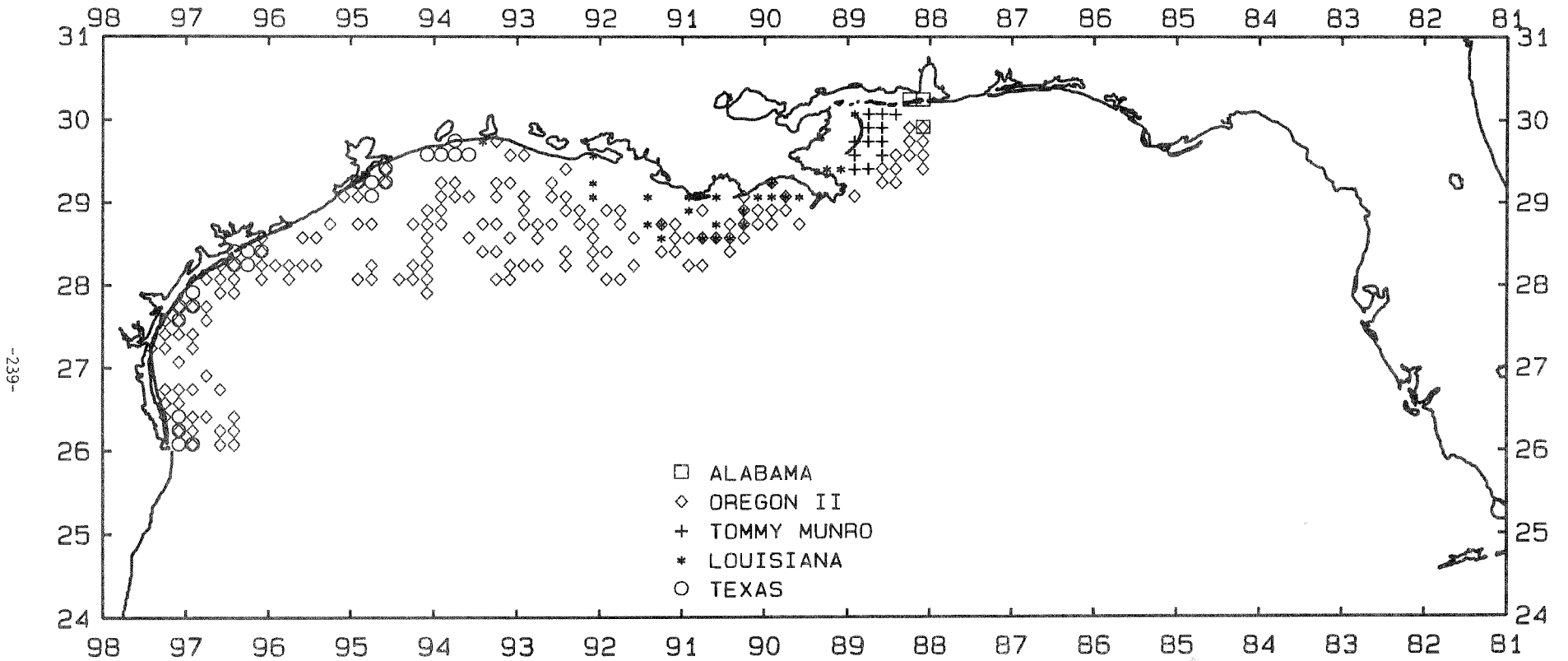


Figure 20. Locations of 1991 Fall Shrimp/Groundfish trawl stations, summarized by 10-minute squares.

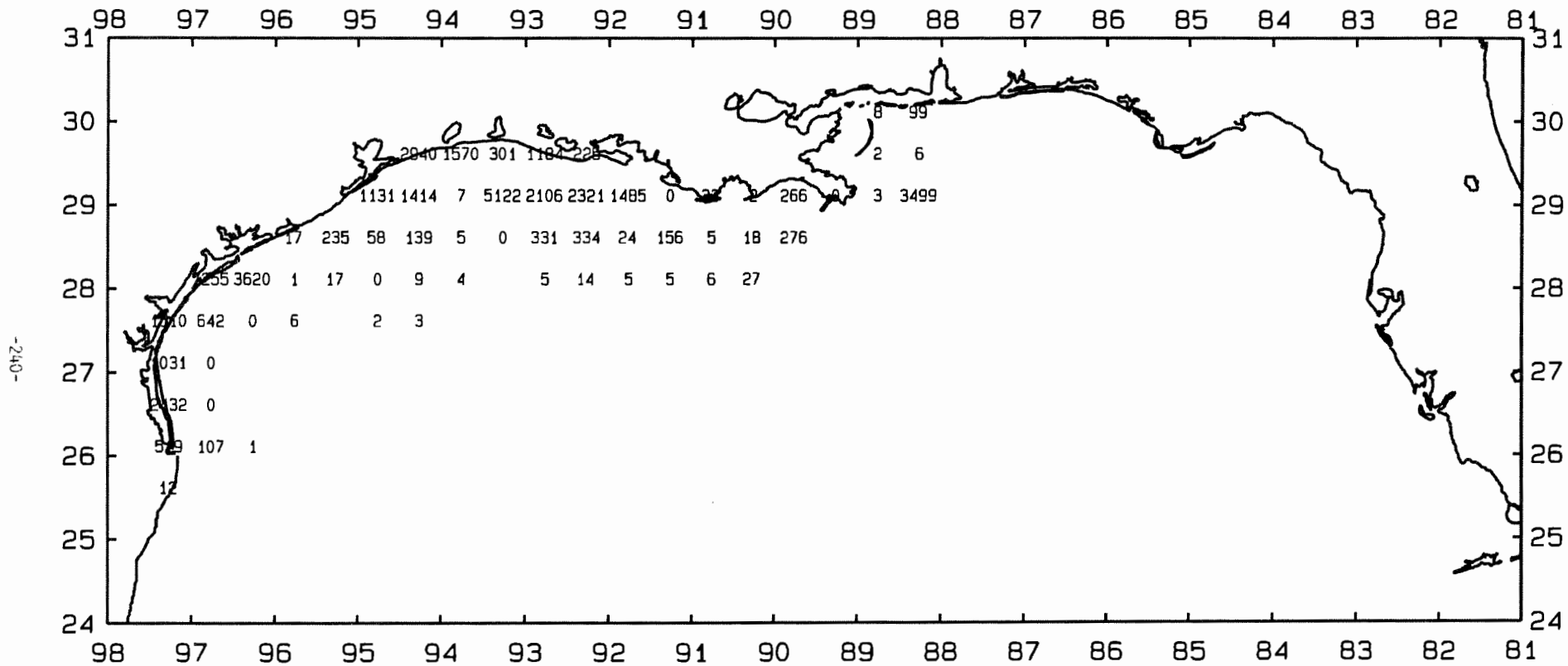


Figure 21. Atlantic croaker, *Micropogonias undulatus*, number/hour for June-July 1991.

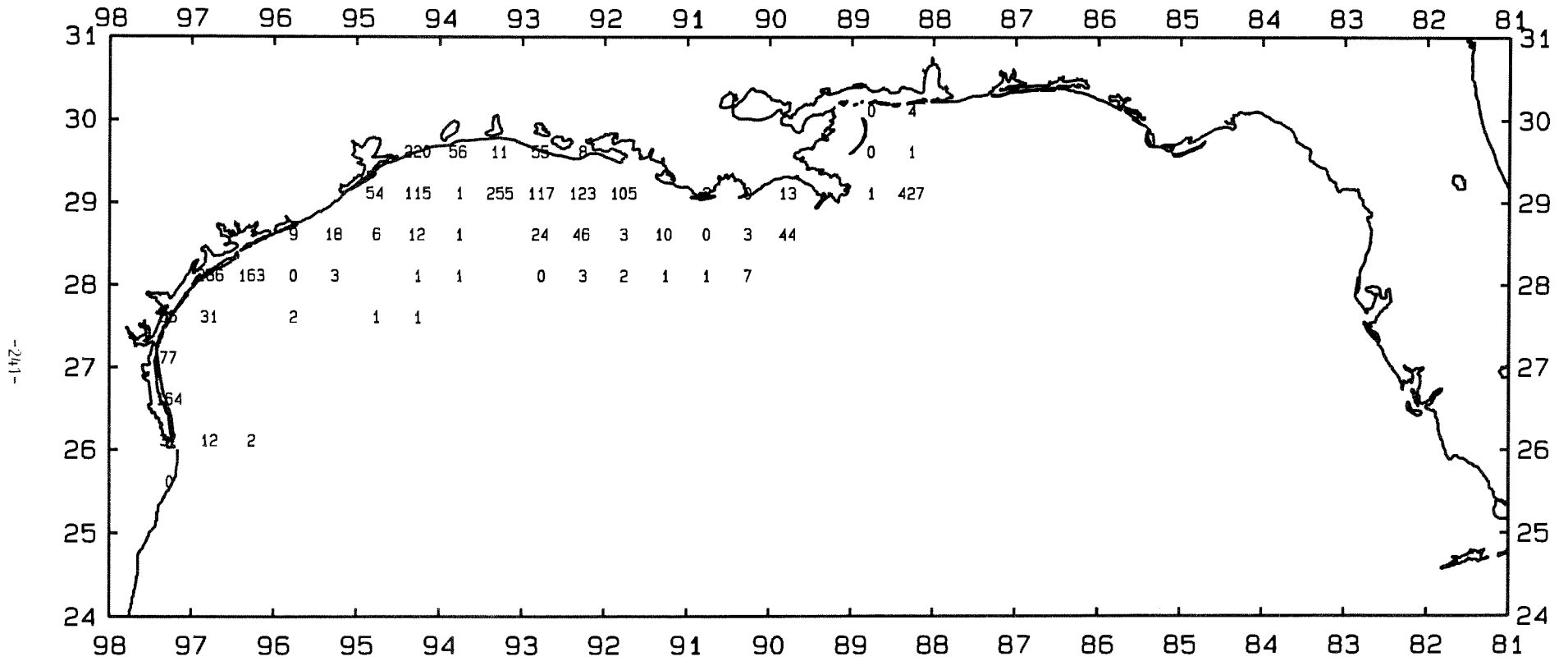


Figure 22. Atlantic croaker, *Micropogonias undulatus*, lb/hour for June-July 1991.

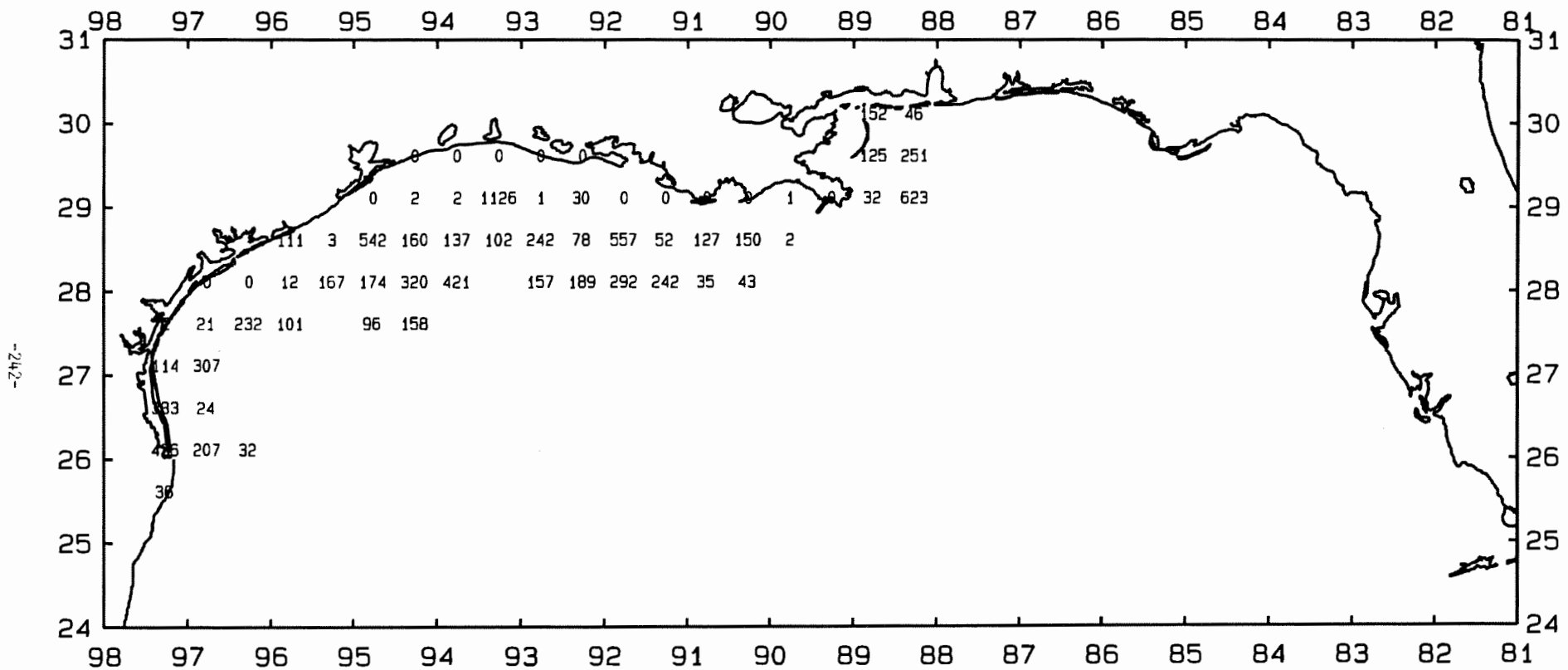


Figure 23. Longspine porgy, *Stenotomus caprinus*, number/hour for June-July 1991.



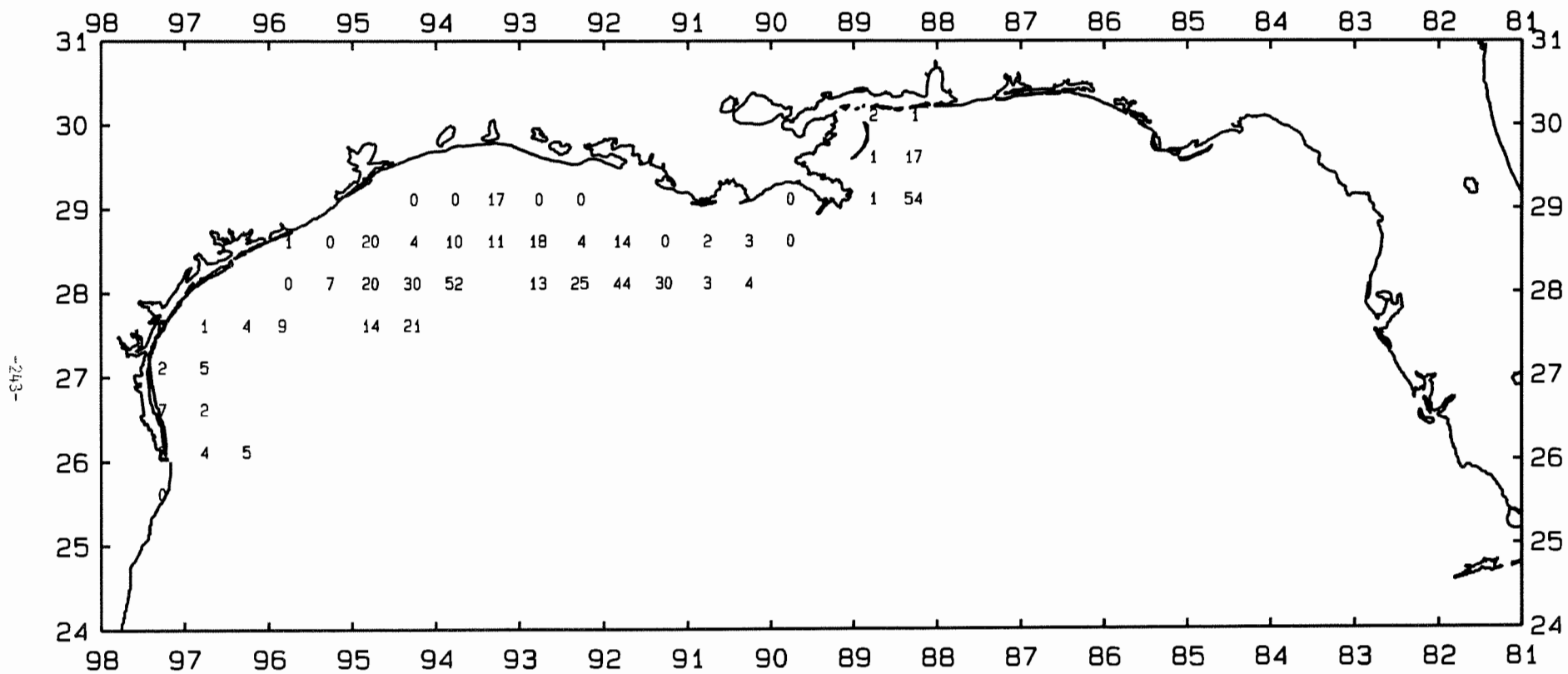


Figure 24. Longspine pogy, *Stenotomus caprinus*, lb/hour for June-July 1991.

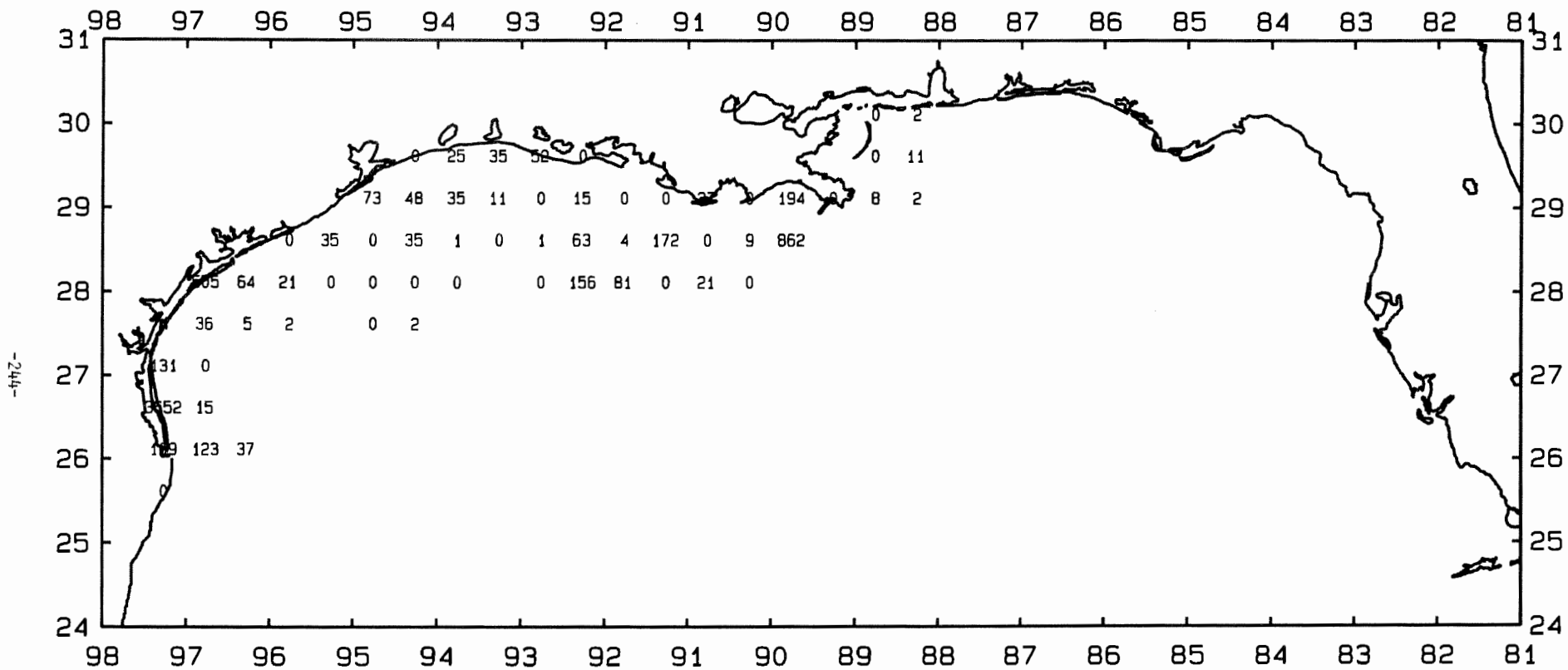


Figure 25. Atlantic cutlassfish, *Trichiurus lepturus*, number/hour for June-July 1991.

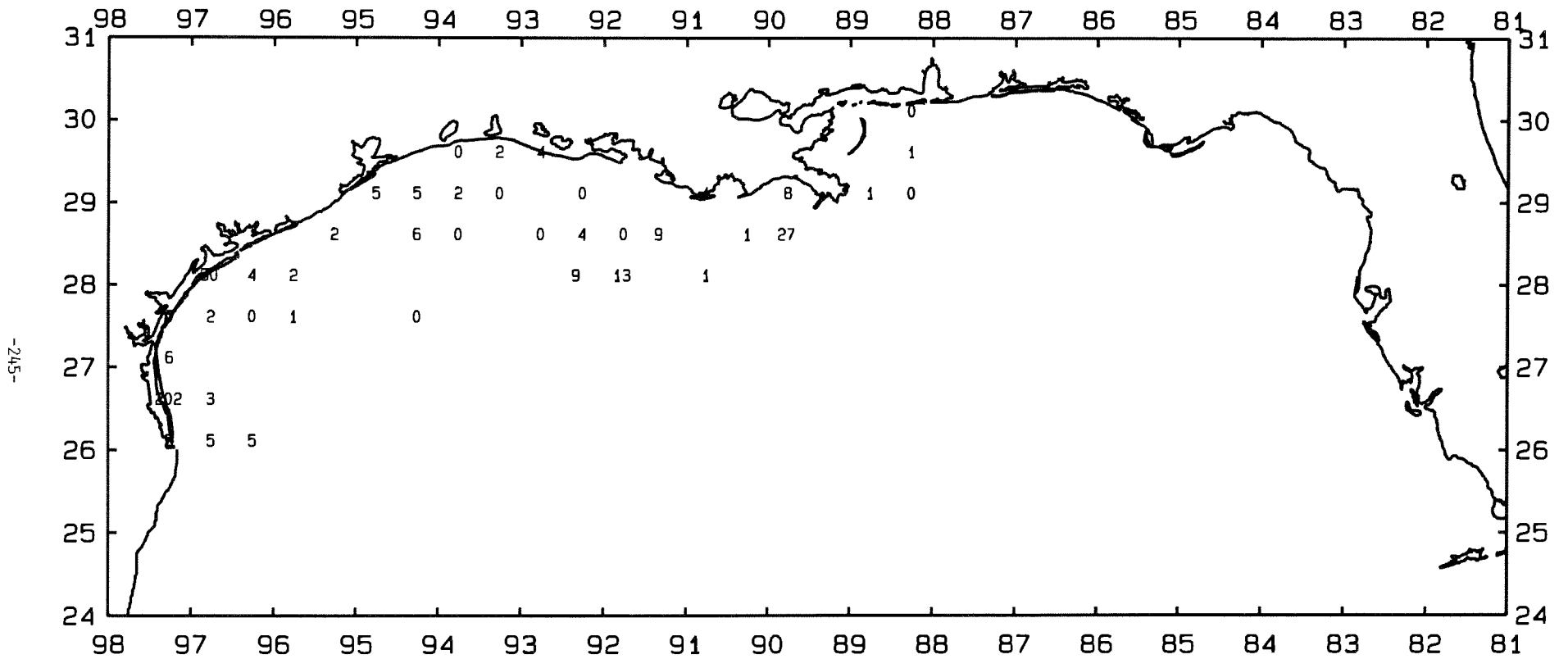


Figure 26. Atlantic cutlassfish, *Trichiurus lepturus*, lb/hour for June-July 1991.

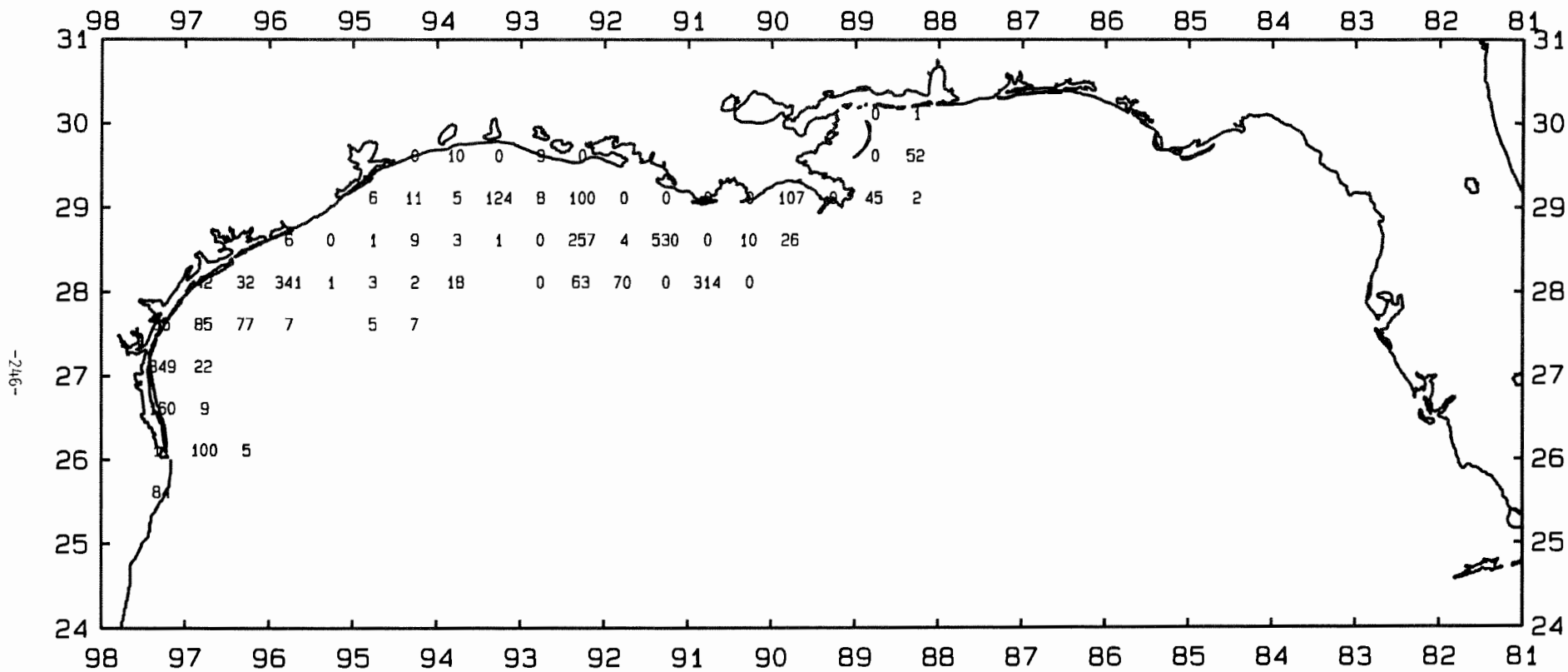


Figure 27. Gulf butterfish, *Peprilus burti*, number/hour for June-July 1991.

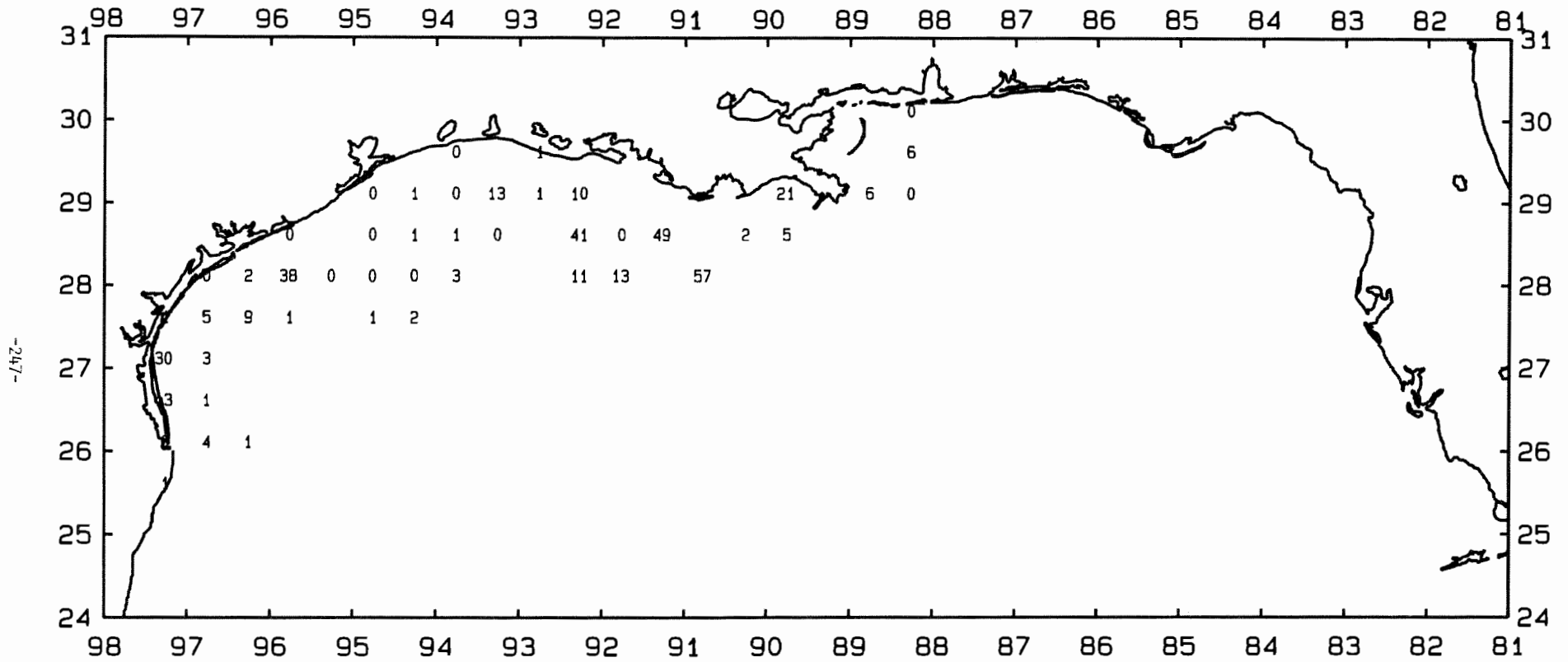


Figure 28. Gulf butterfish, *Peprilus burti*, lb/hour for June-July 1991.

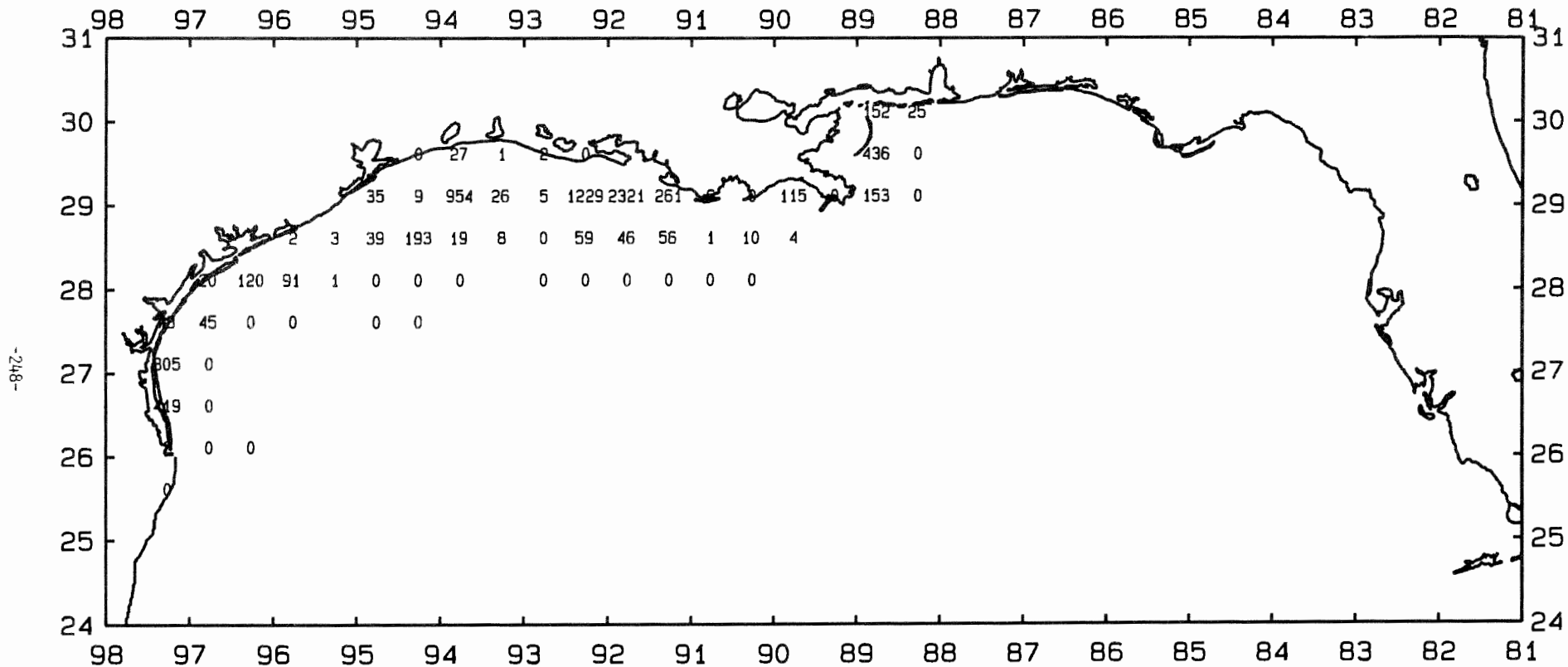


Figure 29. Atlantic bumper, *Chloroscombus chrysurus*, number/hour for June-July 1991.

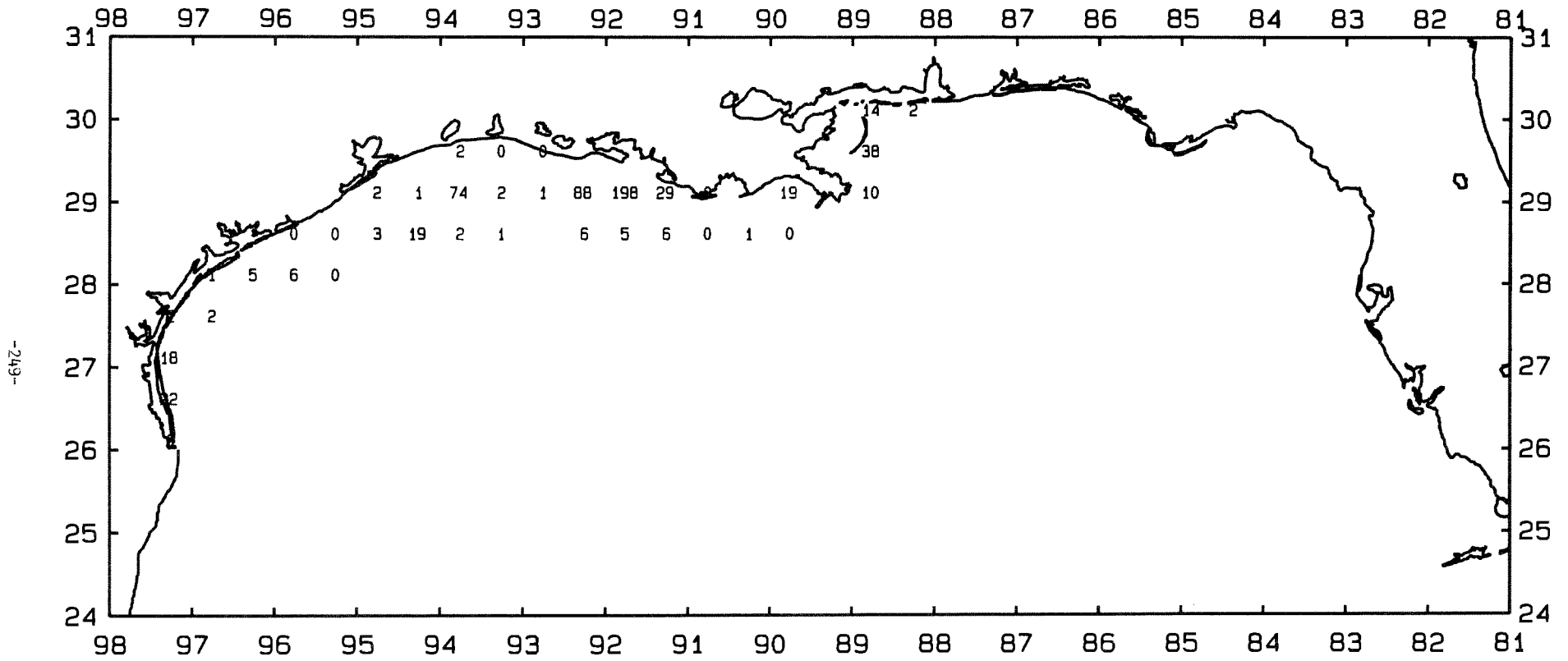


Figure 30. Atlantic bumper, *Chloroscombus chrysurus*, lb/hour for June-July 1991.

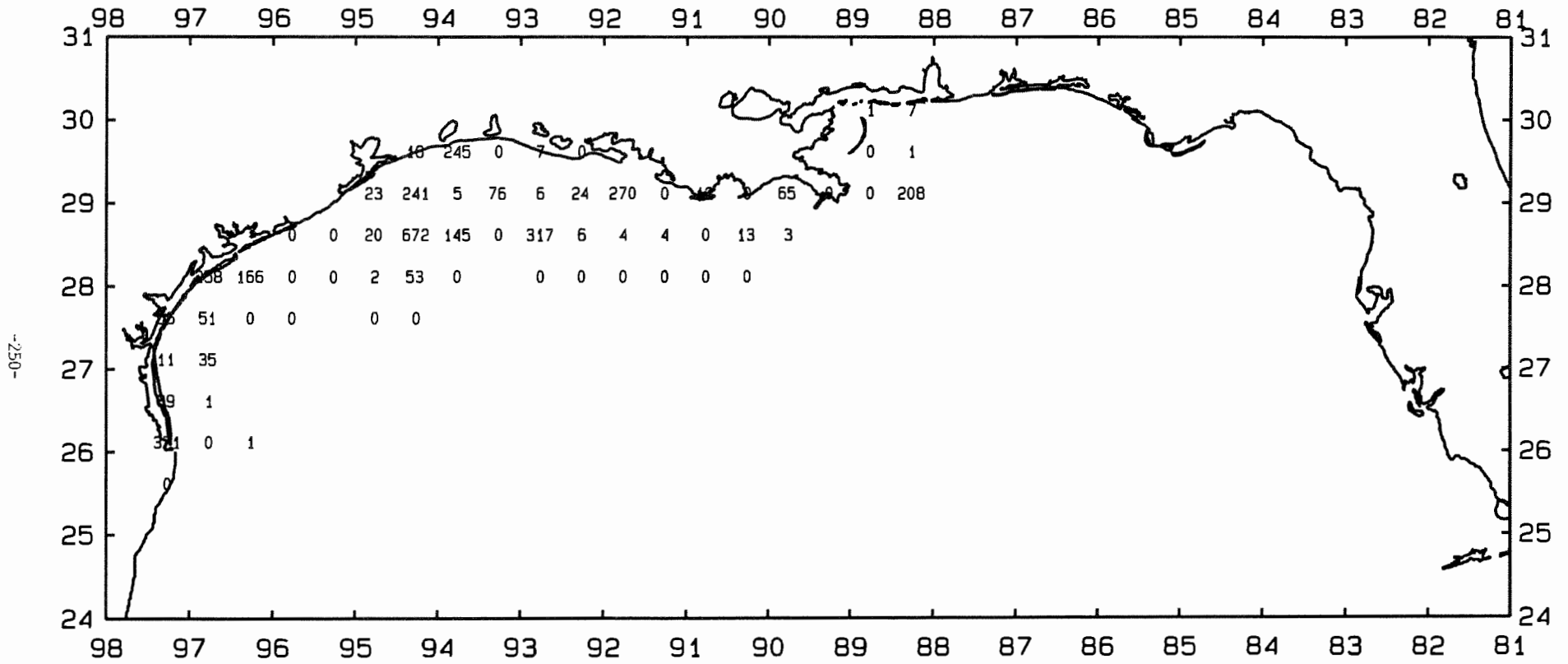


Figure 31. Spot, *Leiostomus xanthurus*, number/hour for June-July 1991.



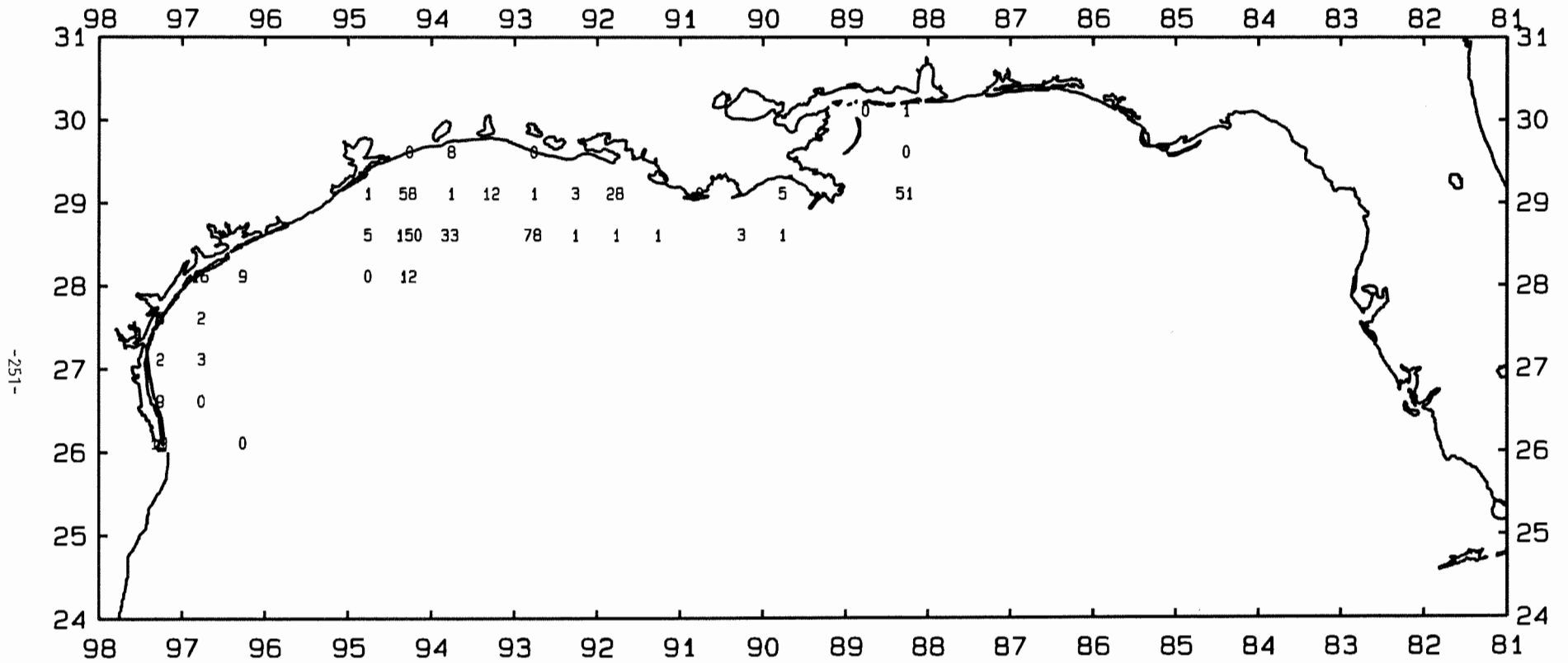


Figure 32. Spot, *Leiostomus xanthurus*, lb/hour for June-July 1991.

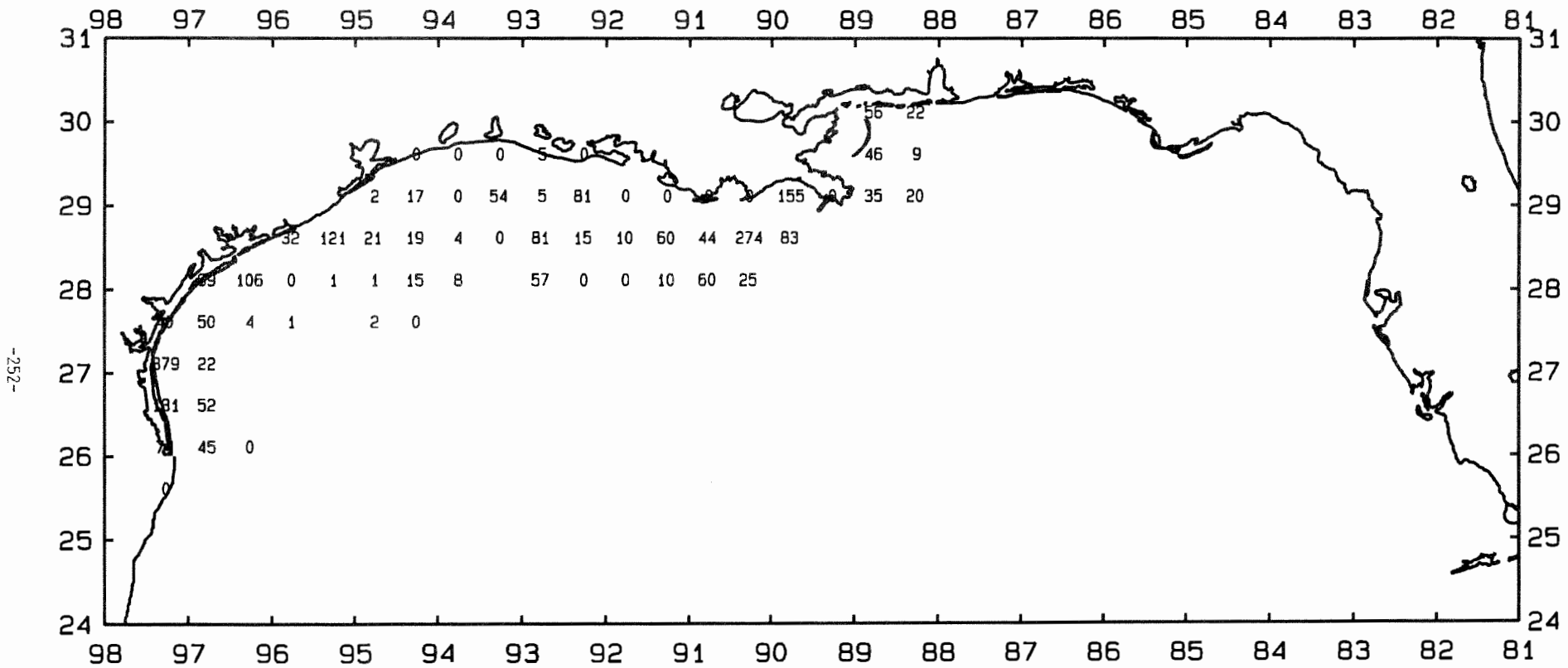


Figure 33. Bigeye searobin, *Prionotus longispinosus*, number/hour for June-July 1991.

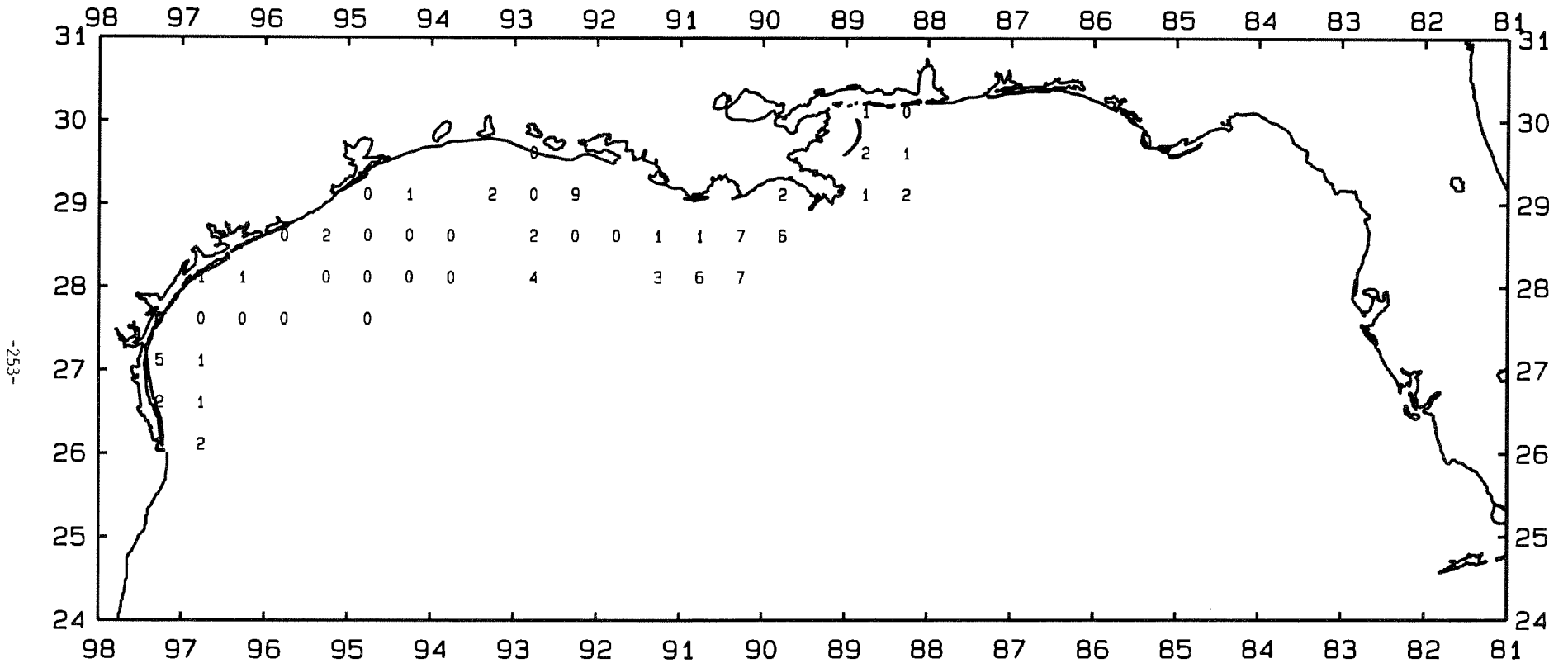


Figure 34. Bigeye searobin, *Prionotus longispinosus*, lb/hour for June-July 1991.

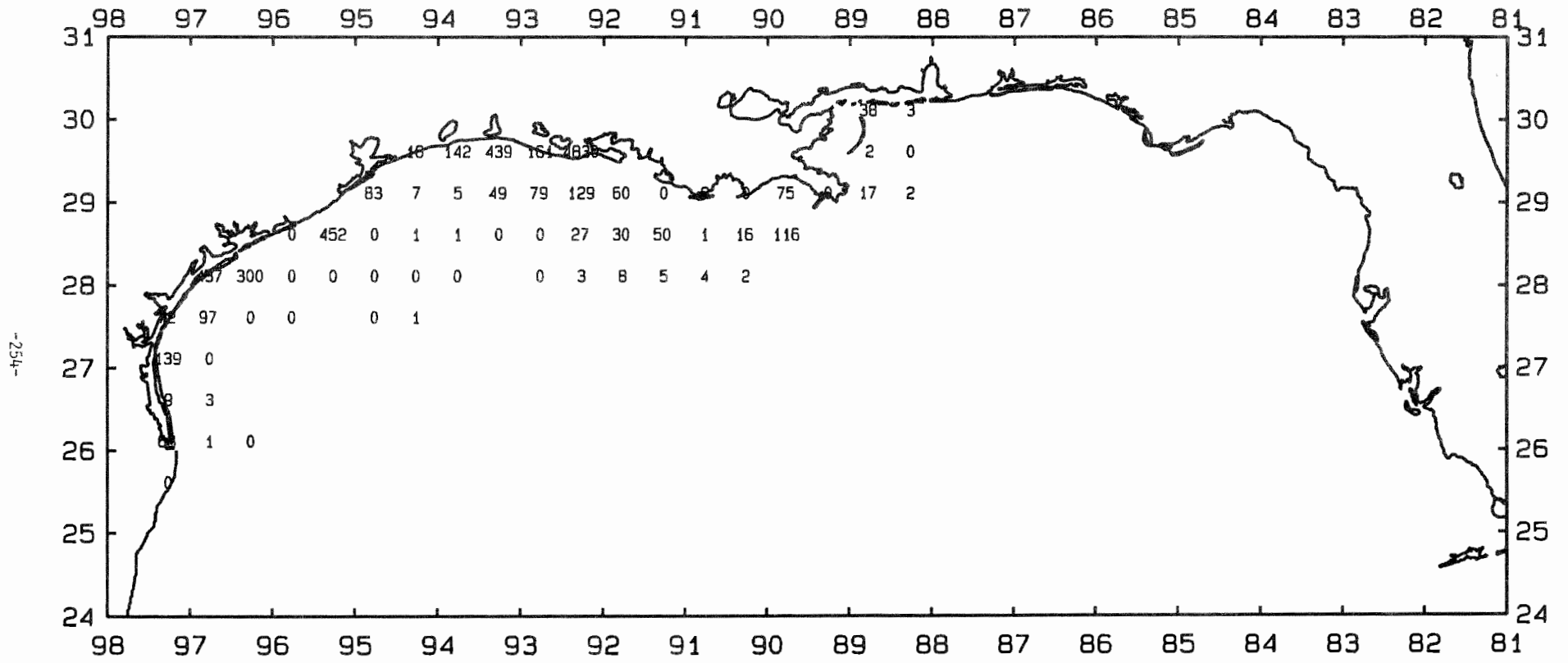


Figure 35. Sand seatrout, *Cynoscion arenarius*, number/hour for June-July 1991.

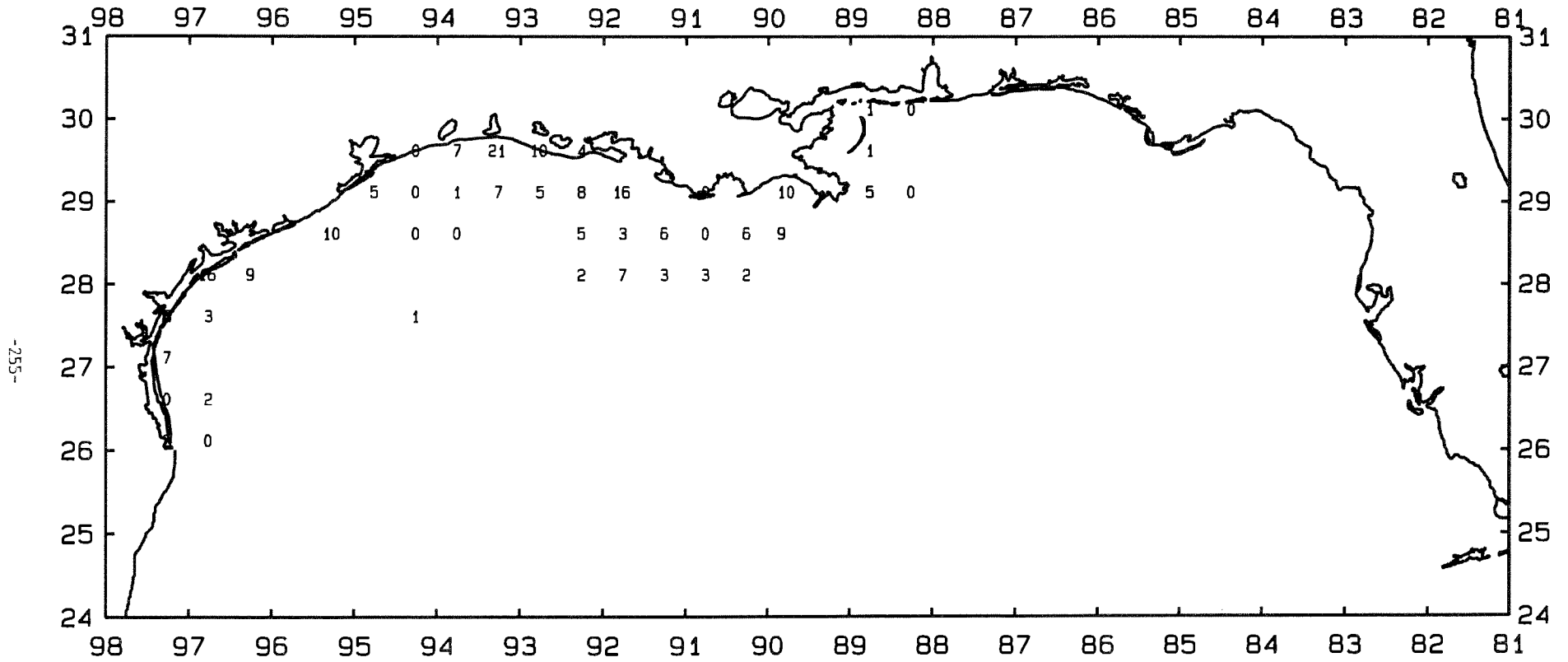


Figure 36. Sand seatrout, *Cynoscion arenarius*, lb/hour for June-July 1991.

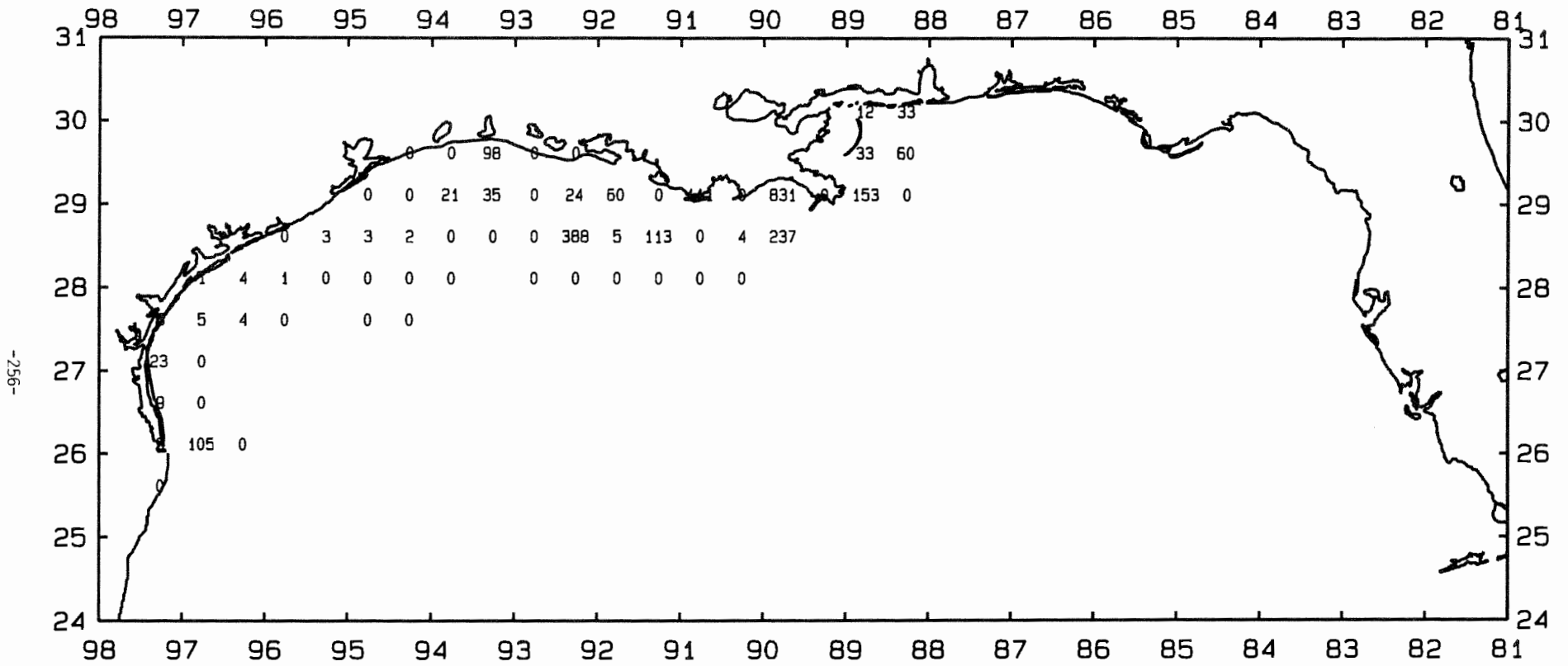


Figure 37. Striped anchovy, *Anchoa hepsetus*, number/hour for June-July 1991.

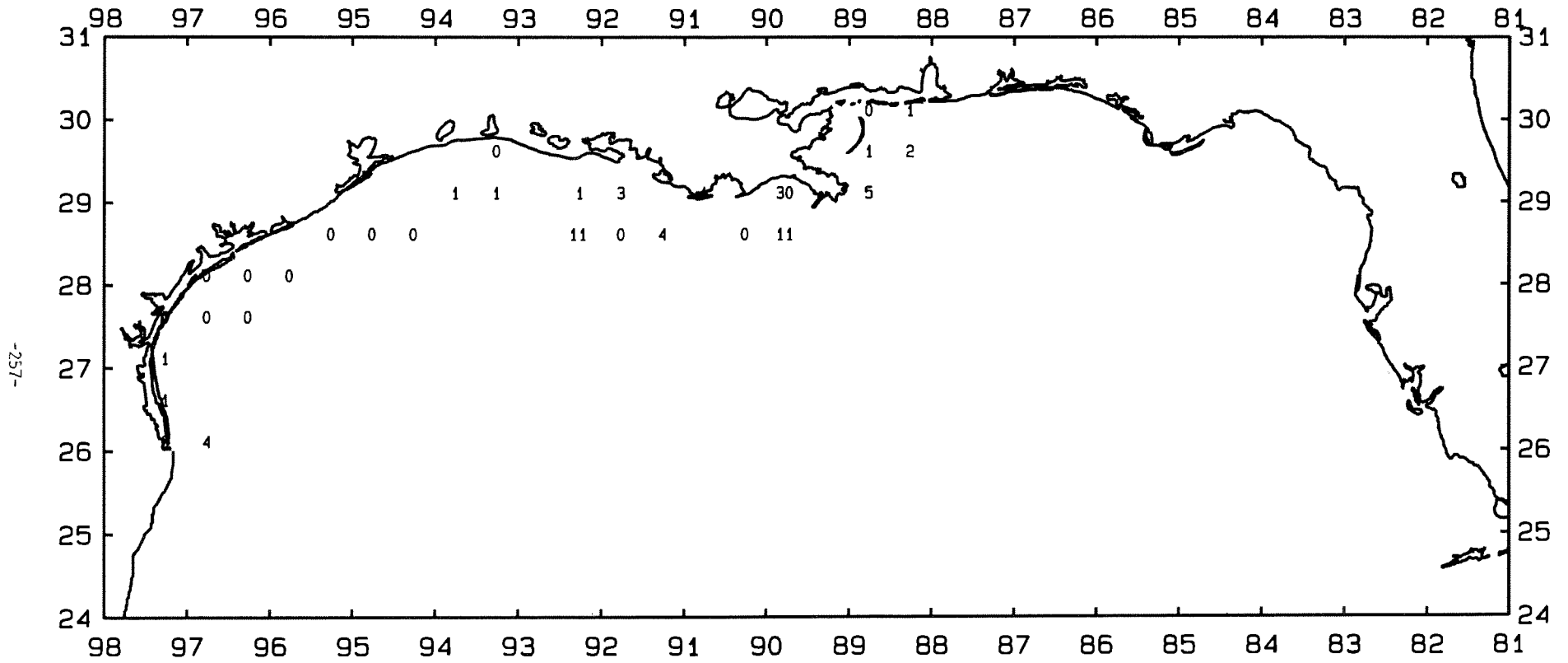


Figure 38. Striped anchovy, *Anchoa hepsetus*, lb/hour for June-July 1991.

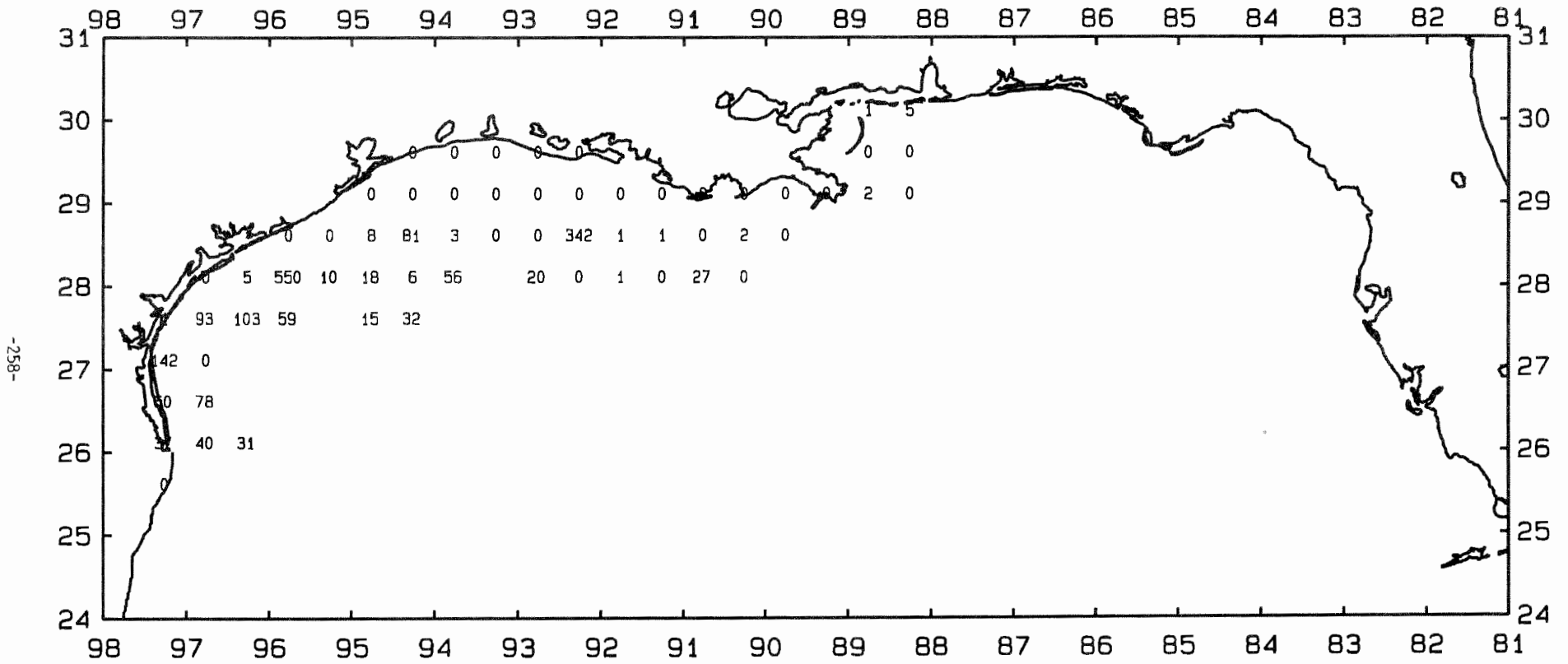


Figure 39. Rough scad, *Trachurus lathami*, number/hour for June-July 1991.



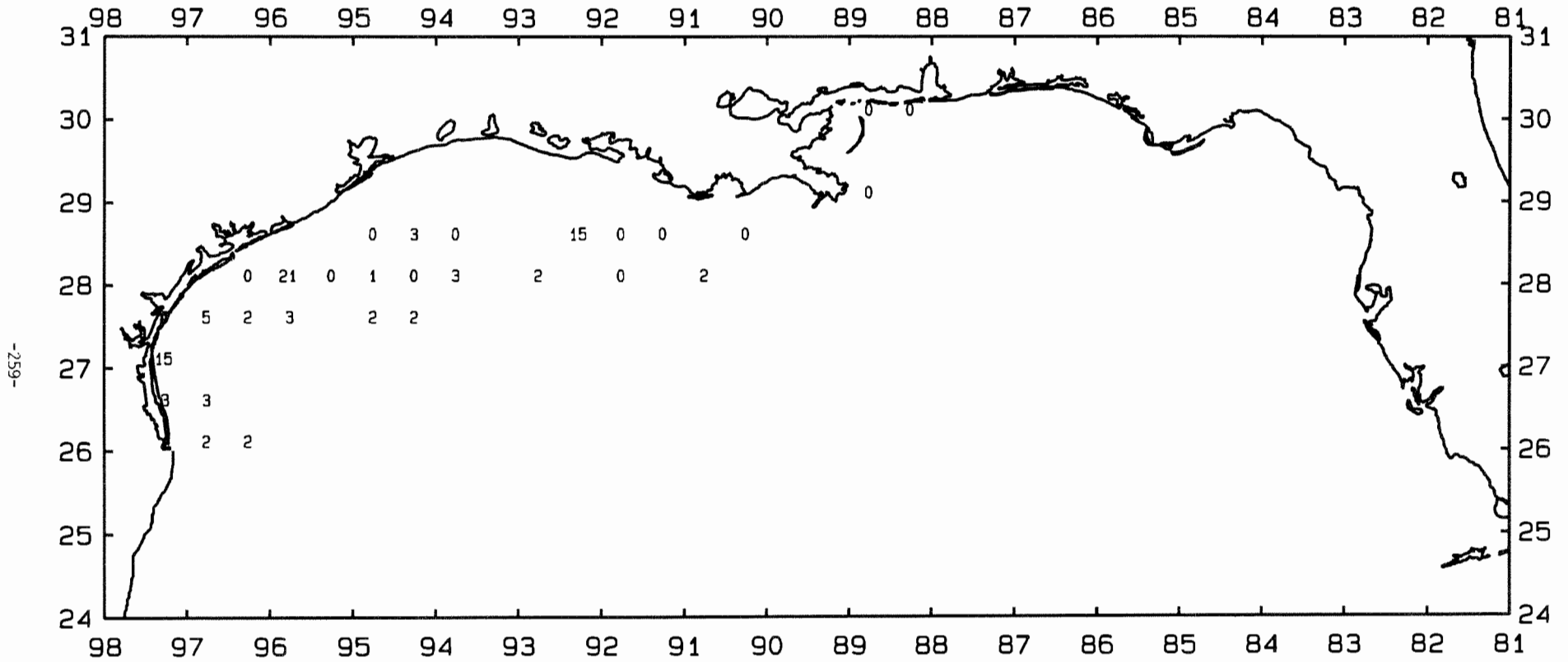


Figure 40. Rough scad, *Trachurus lathami*, lb/hour for June-July 1991.

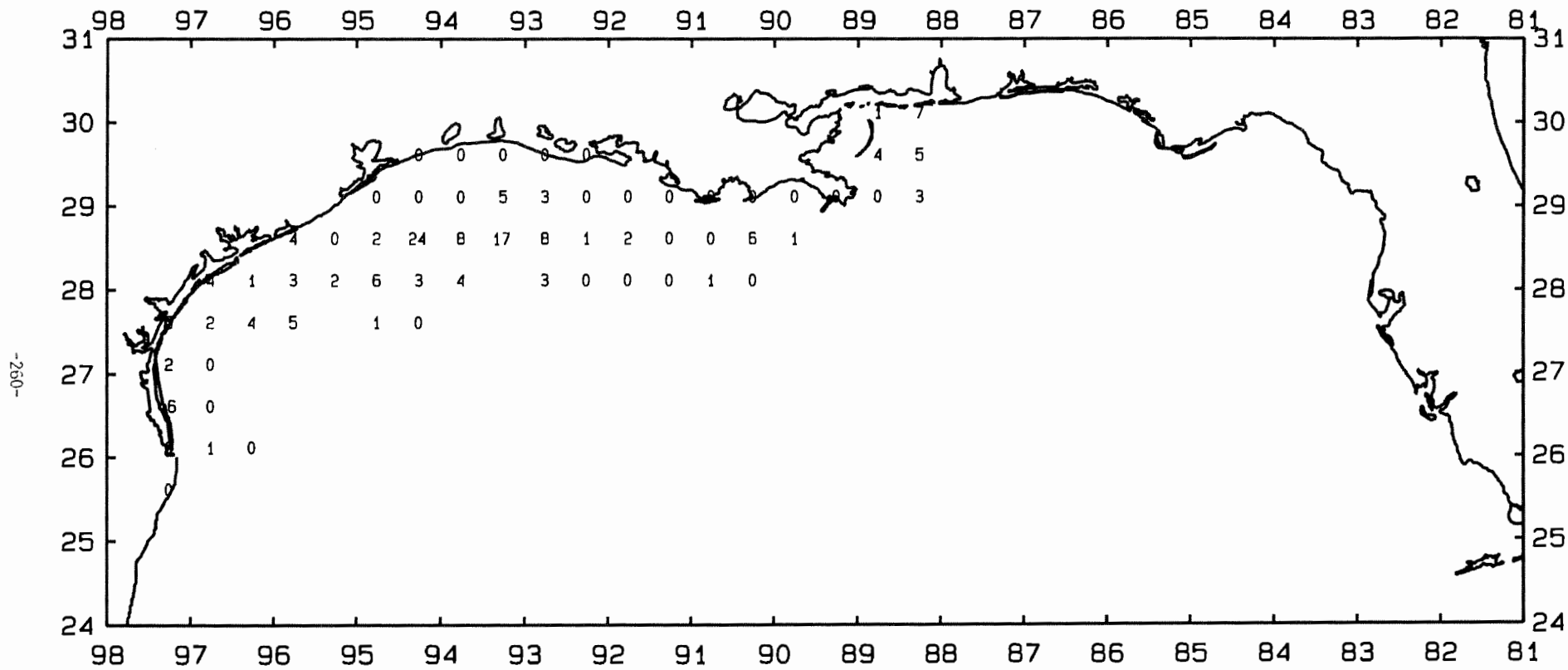


Figure 41. Red snapper, Lutjanus campechanus, number/hour for June-July 1991.

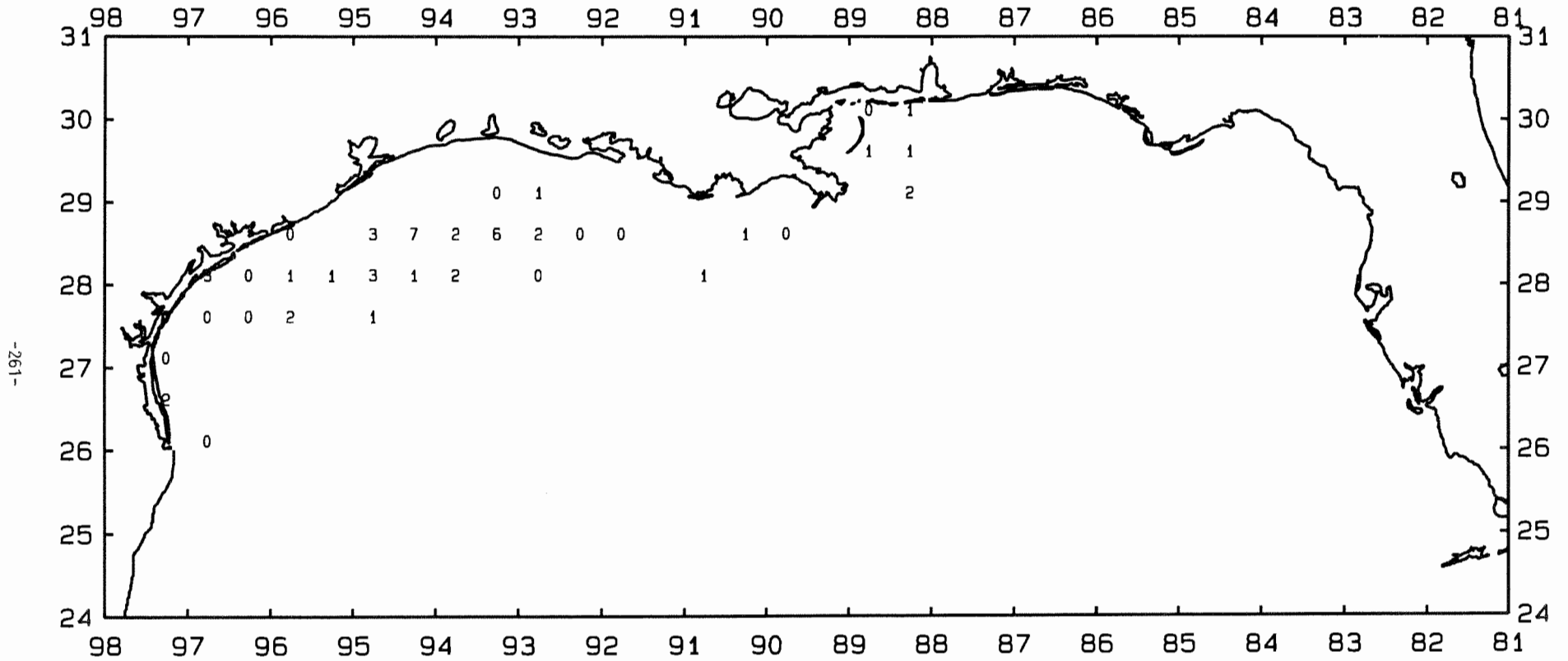


Figure 42. Red snapper, *Lutjanus campechanus*, lb/hour for June-July 1991.

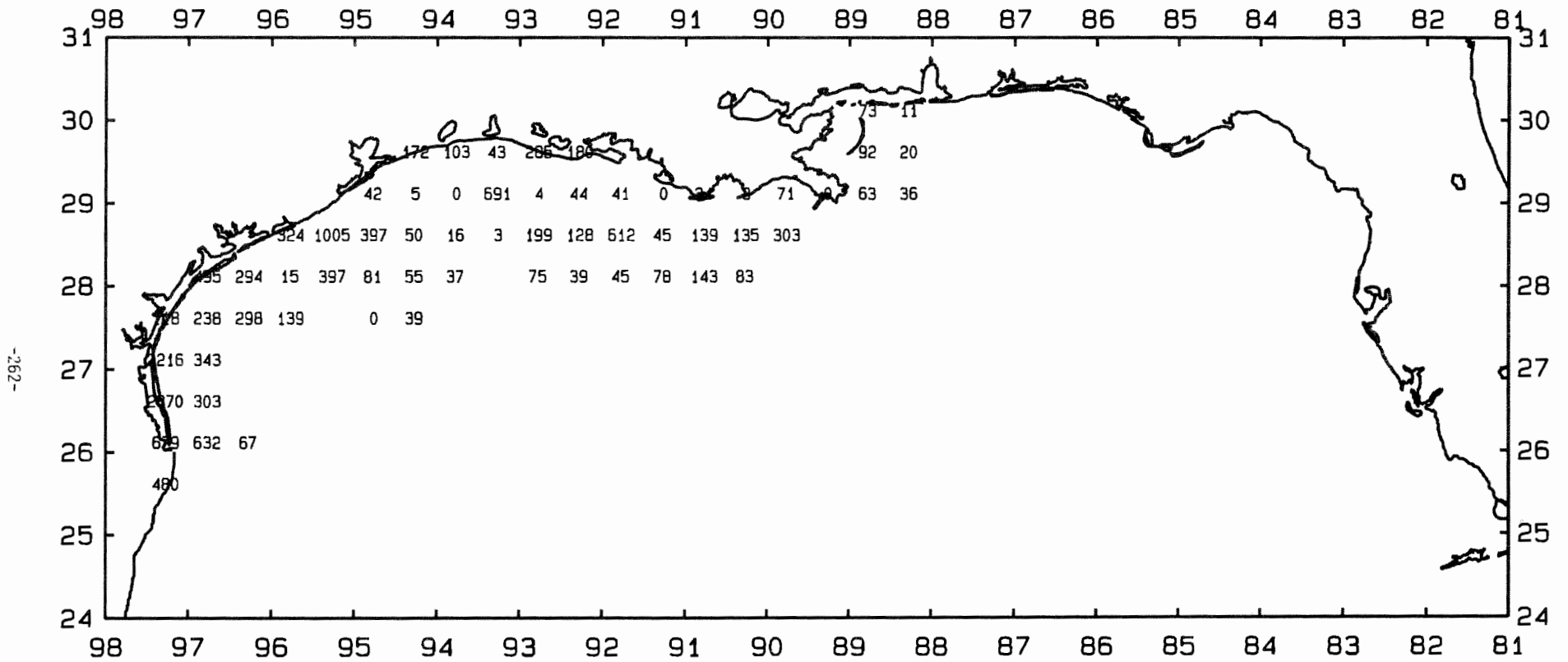


Figure 43. Brown shrimp, *Penaeus aztecus*, number/hour for June-July 1991.

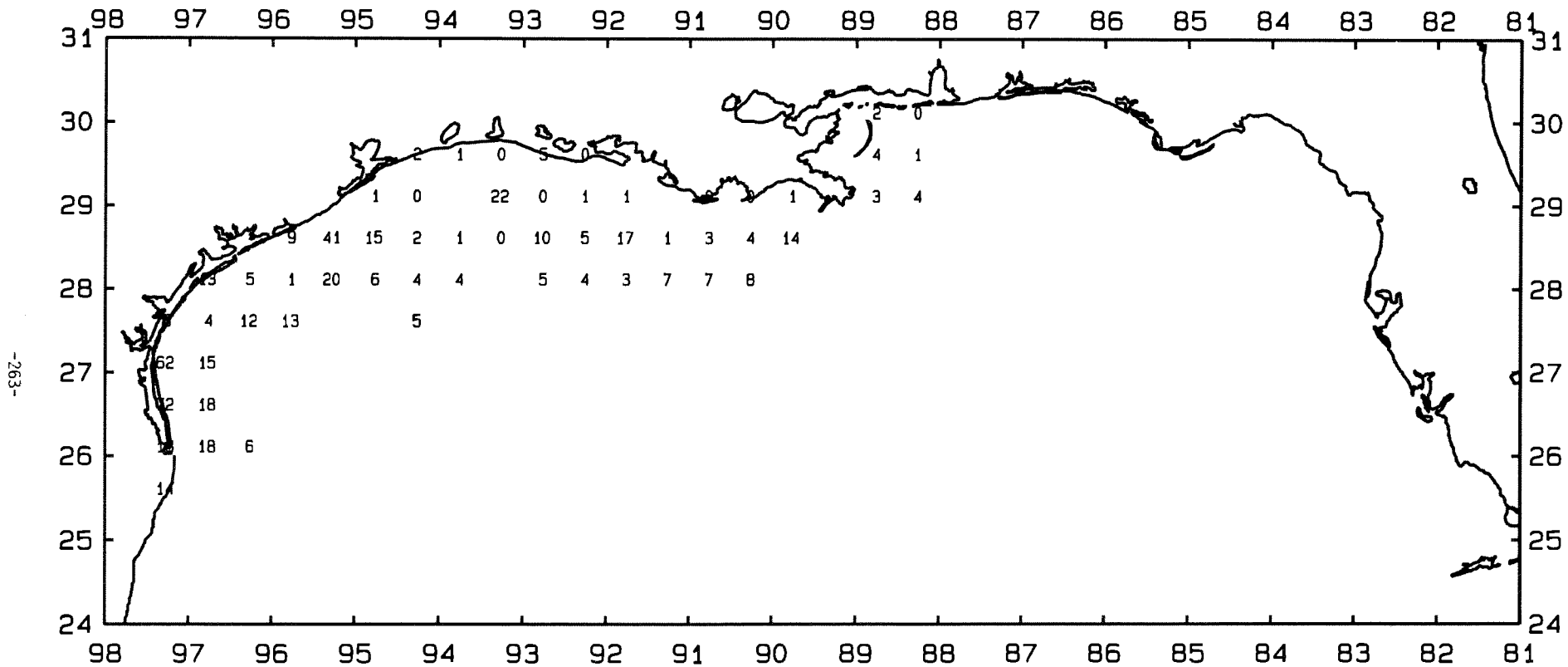


Figure 44. Brown shrimp, *Penaeus aztecus*, lb/hour for June-July 1991.

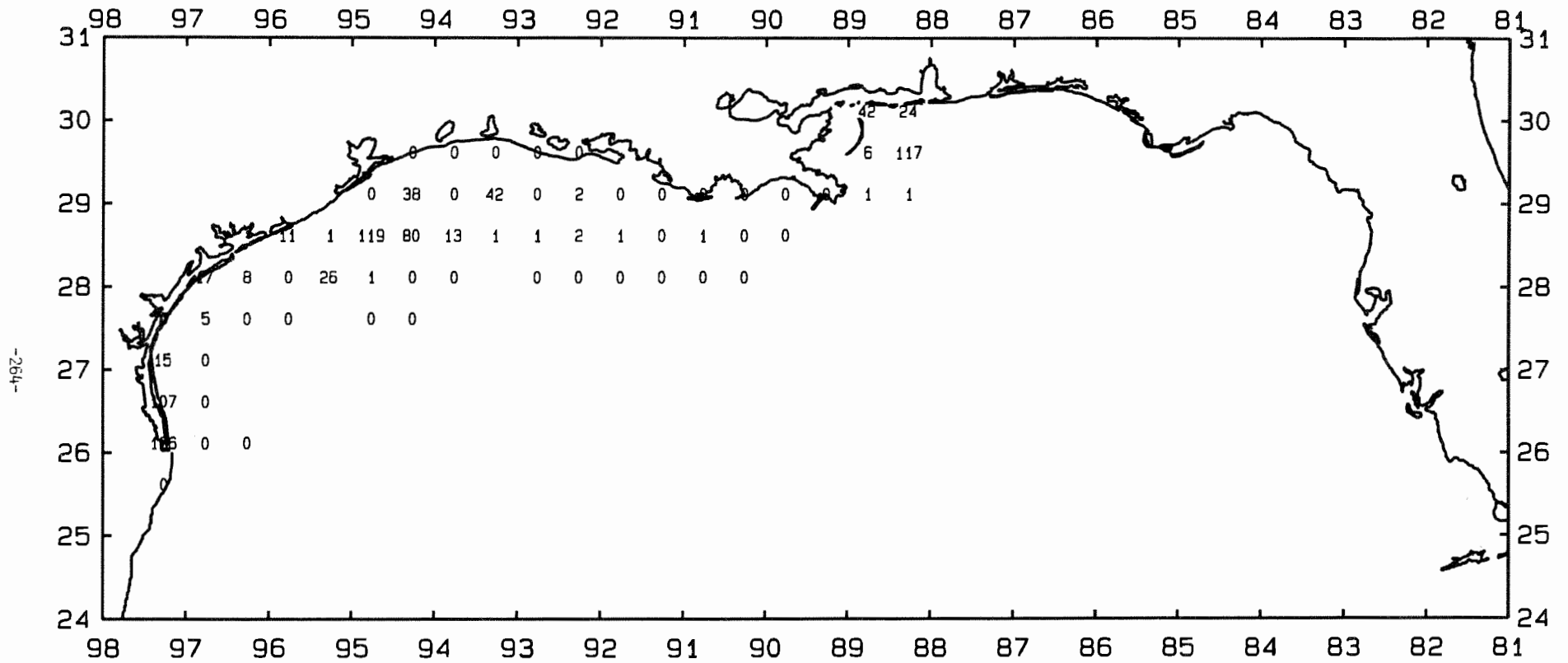


Figure 45. Pink shrimp, *Penaeus duorarum*, number/hour for June-July 1991.

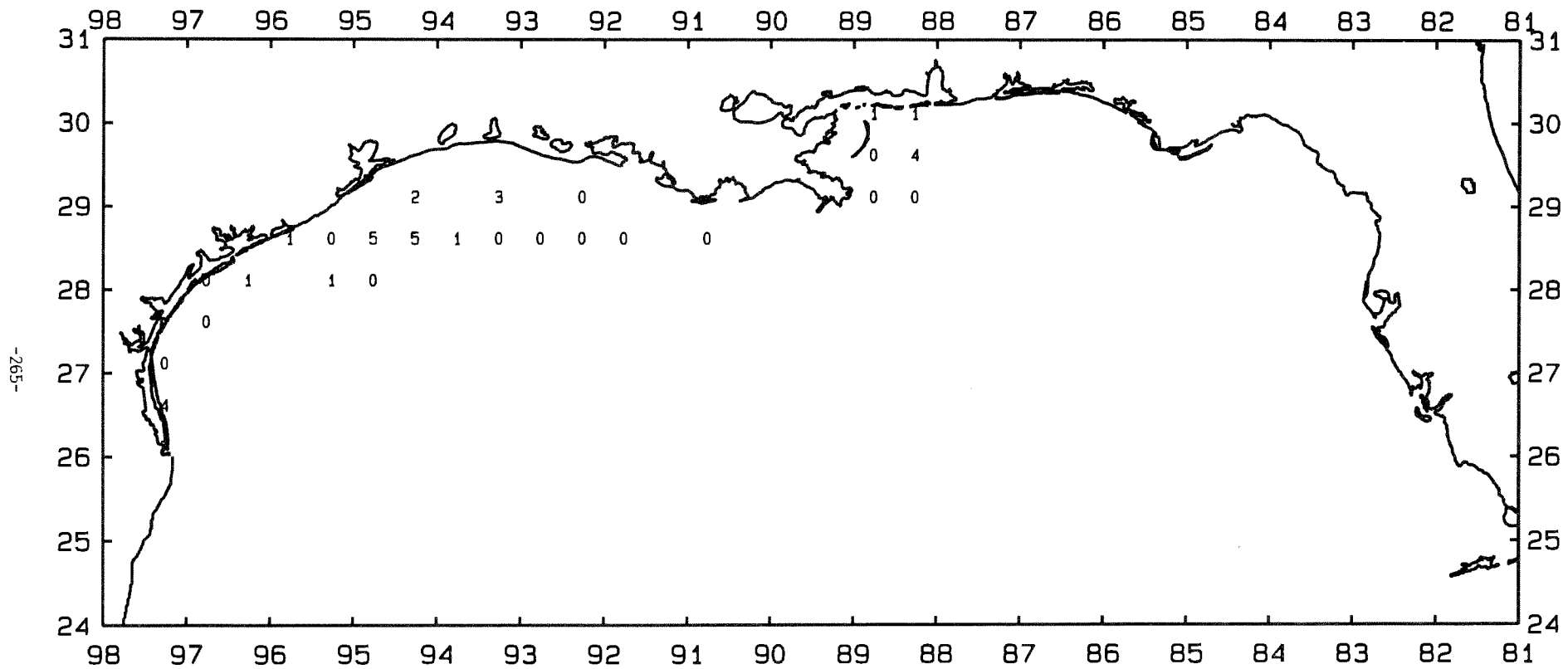


Figure 46. Pink shrimp, *Penaeus duorarum*, lb/hour for June-July 1991.

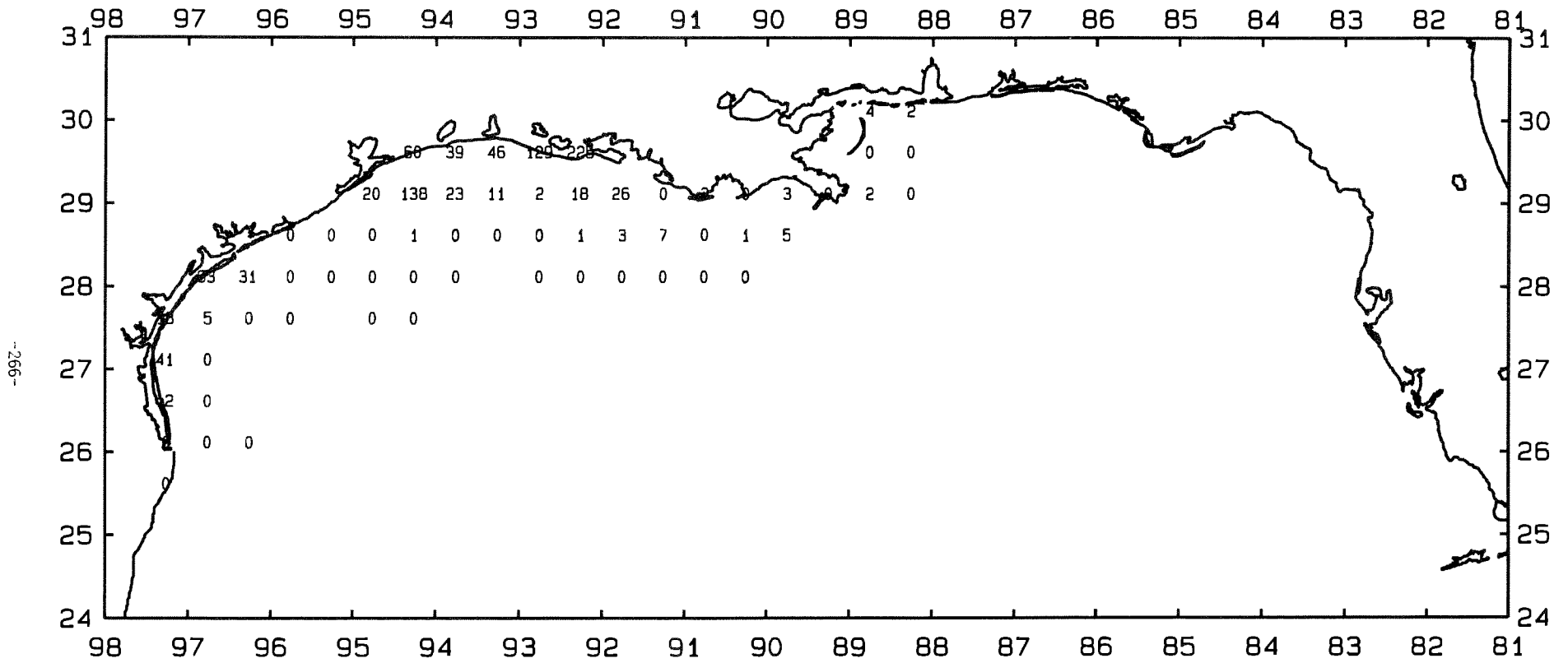


Figure 47. White shrimp, *Penaeus setiferus*, number/hour for June-July 1991.



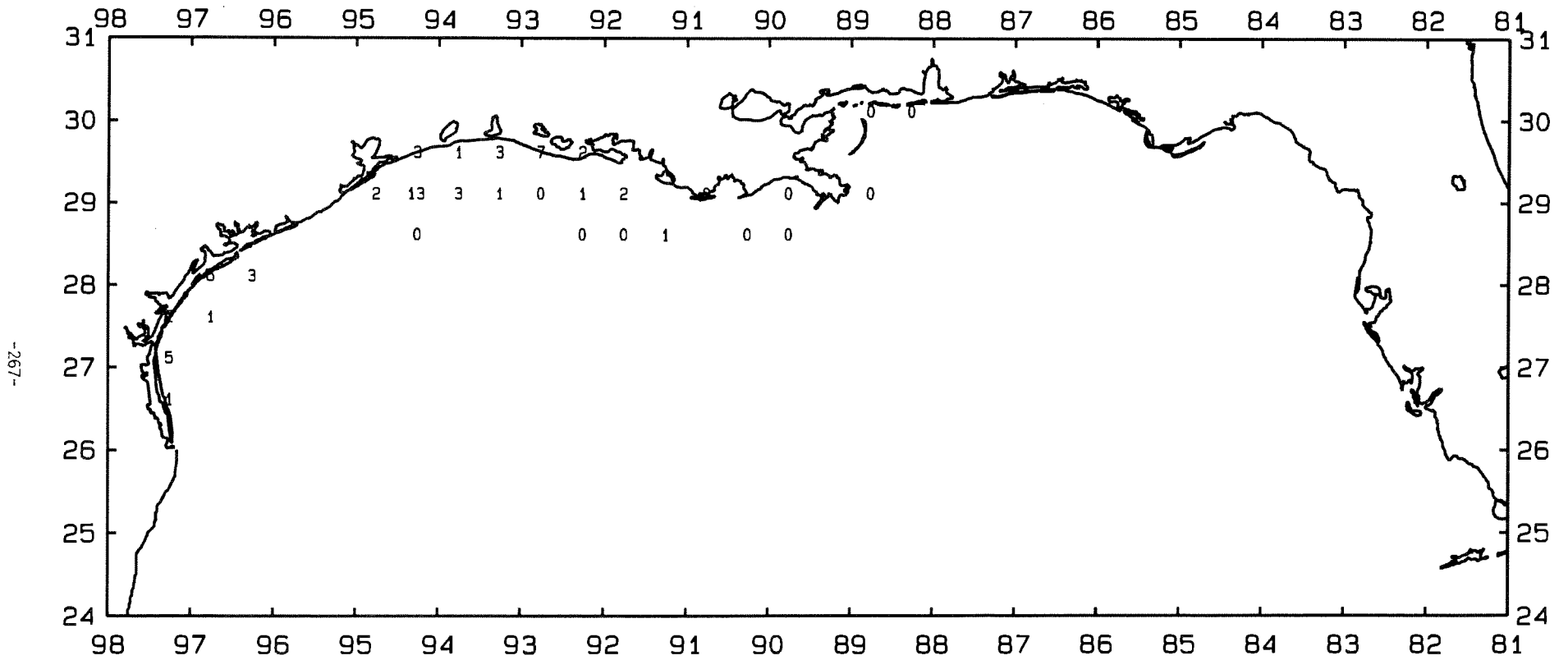


Figure 48. White shrimp, *Penaeus setiferus*, lb/hour for June-July 1991.

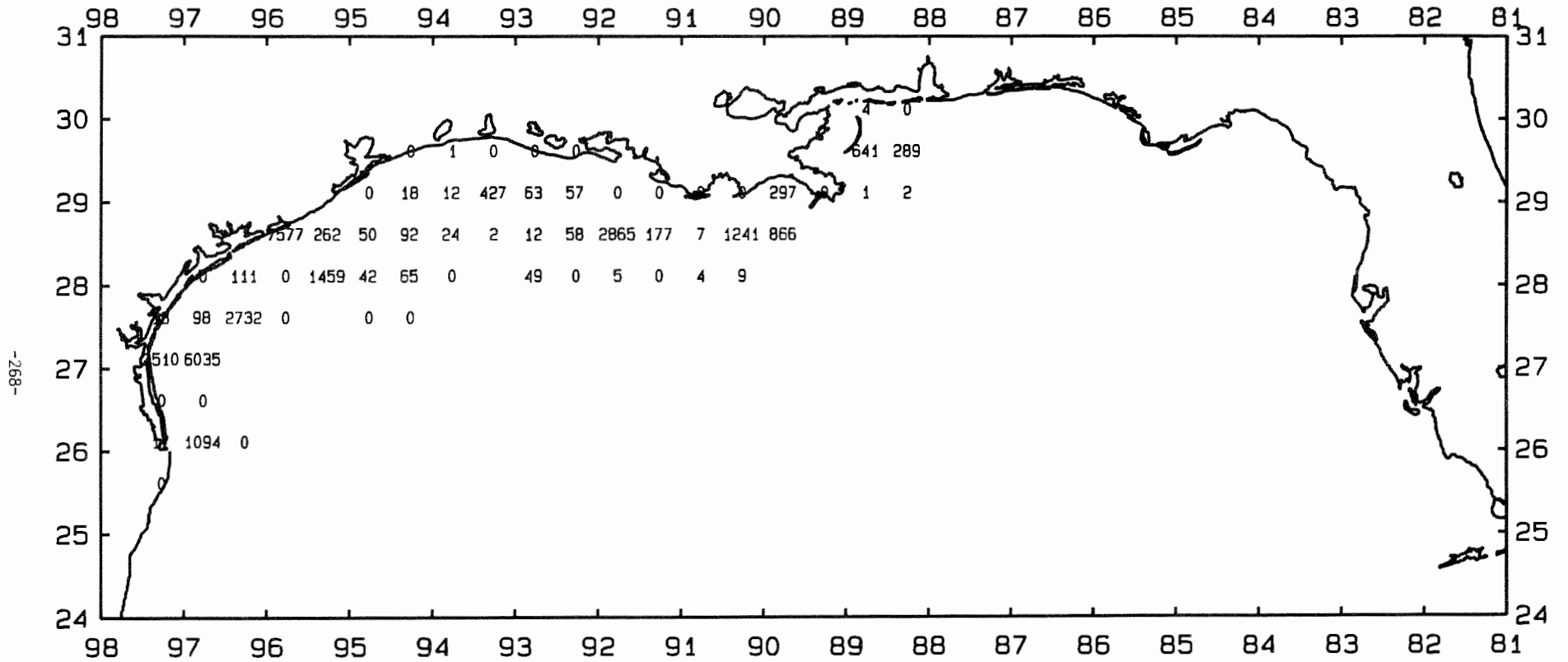


Figure 49. Roughneck shrimp, *Trachypenaeus* spp., number/hour for June-July 1991.

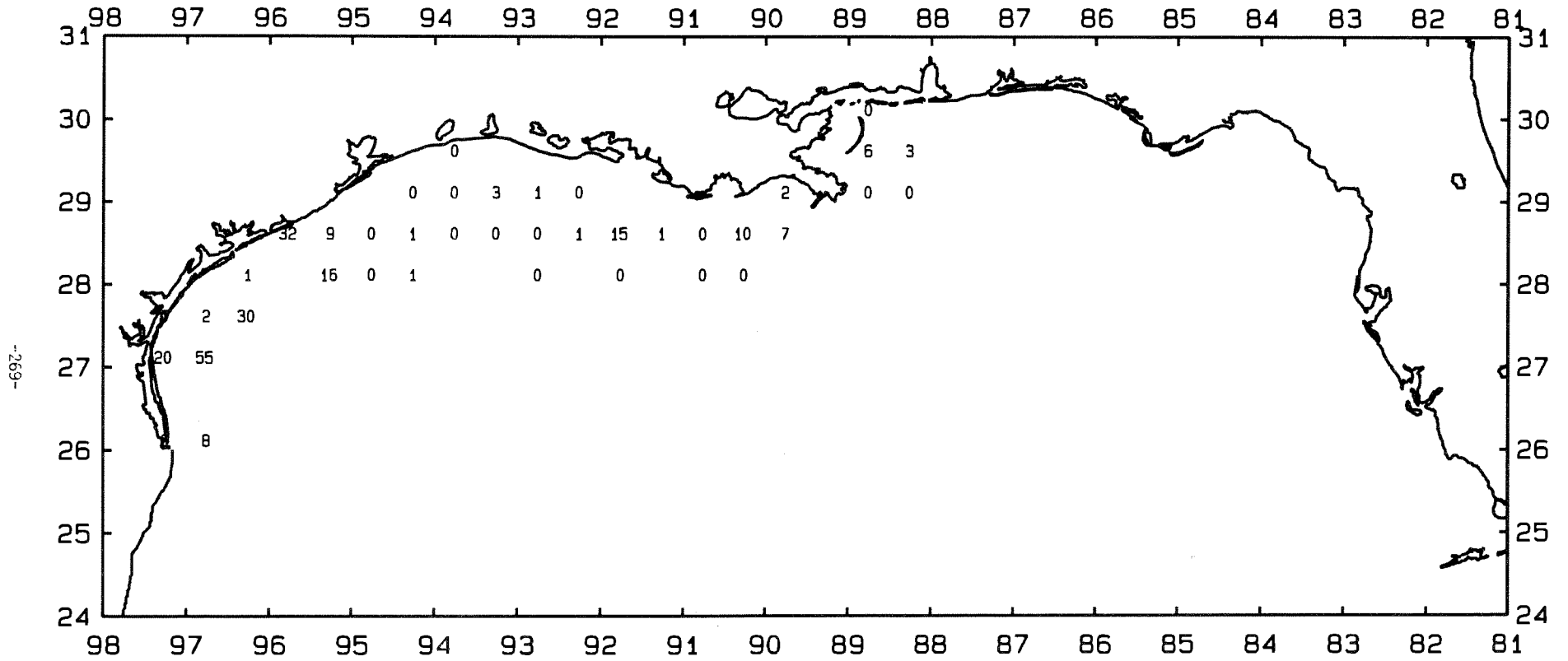


Figure 50. Roughneck shrimp, *Trachypenaeus* spp., lb/hour for June-July 1991.

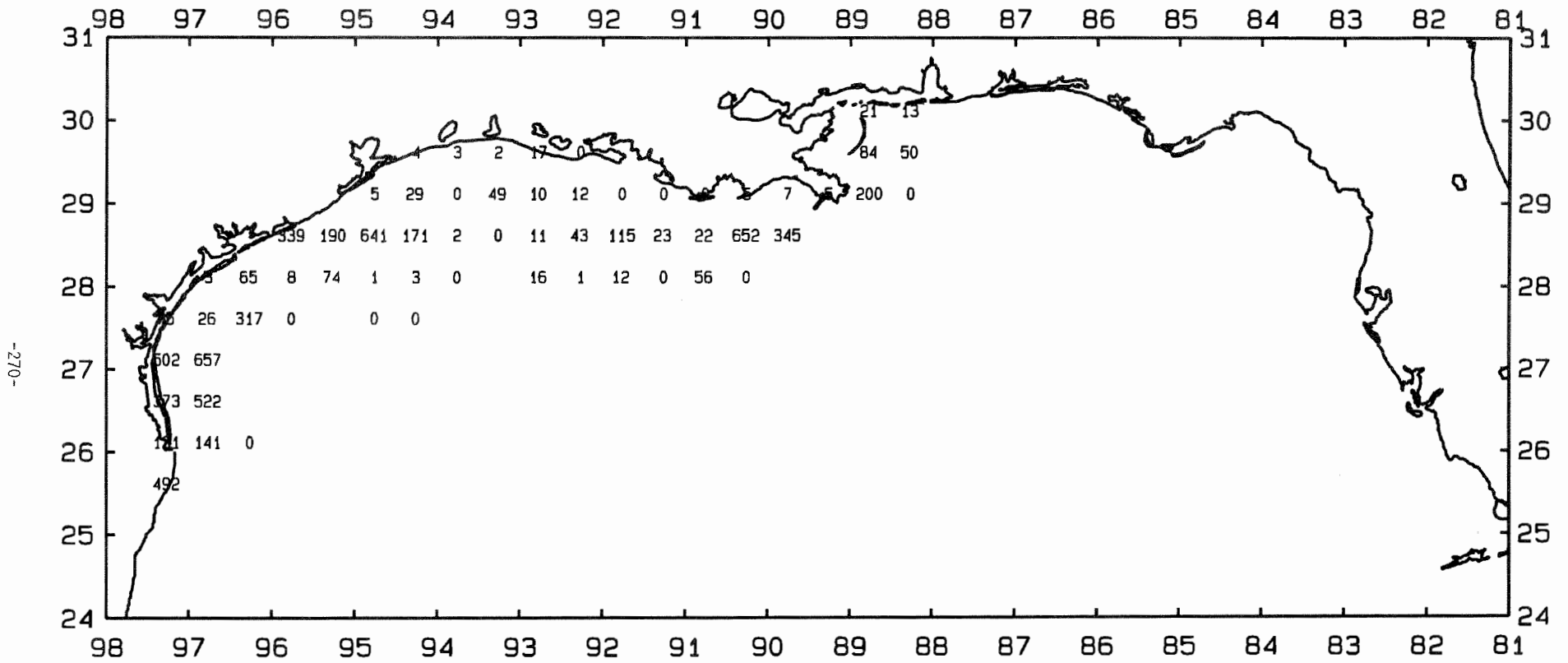


Figure 51. Lesser blue crab, *Callinectes similis*, number/hour for June-July 1991.

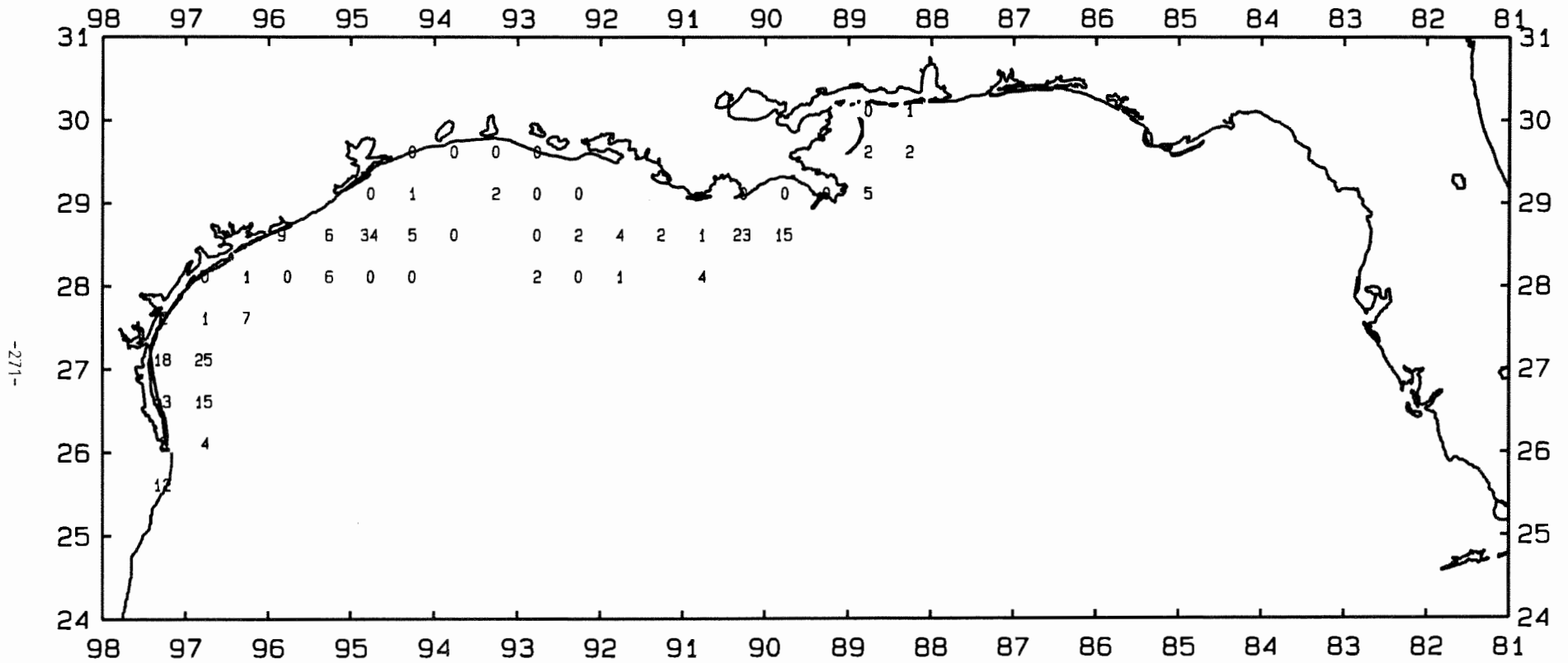


Figure 52. Lesser blue crab, *Callinectes similis*, lb/hour for June-July 1991.

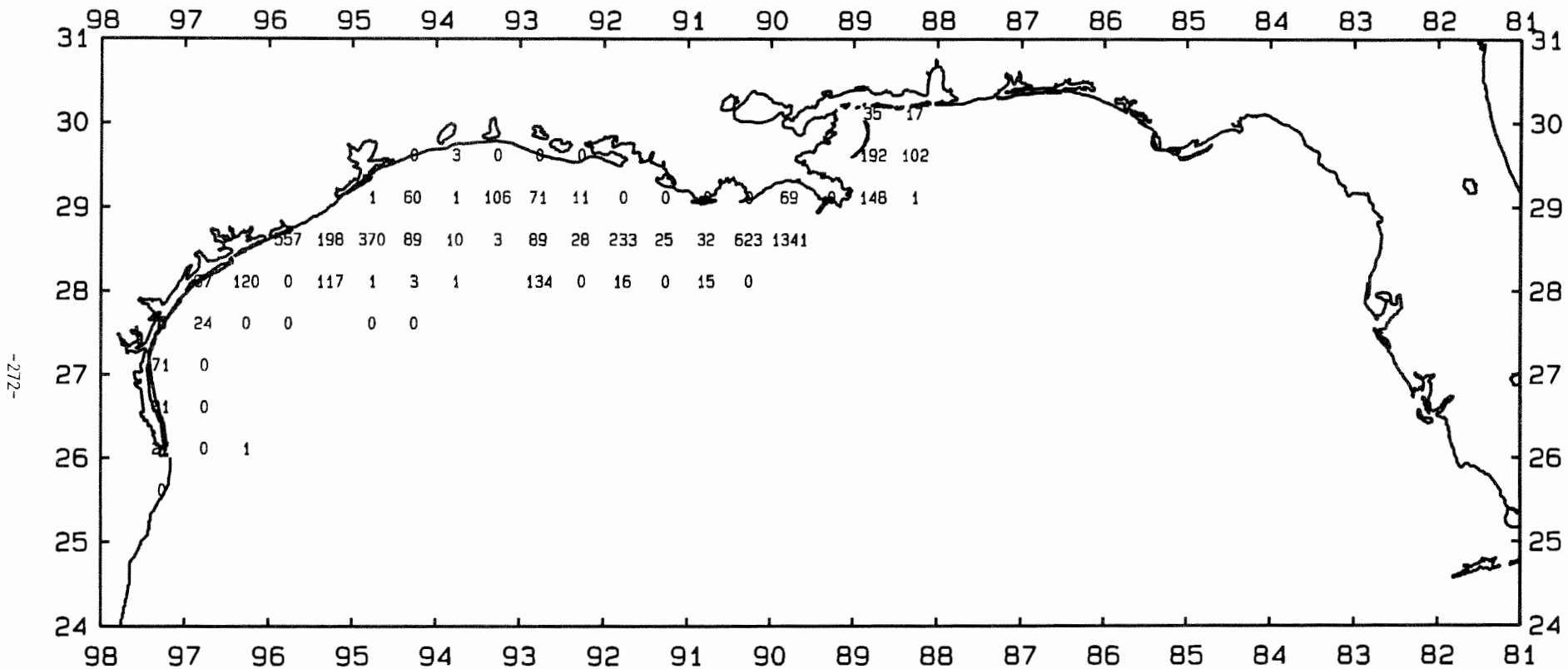


Figure 53. Mantis shrimp, *Squilla empusa*, number/hour for June-July 1991.

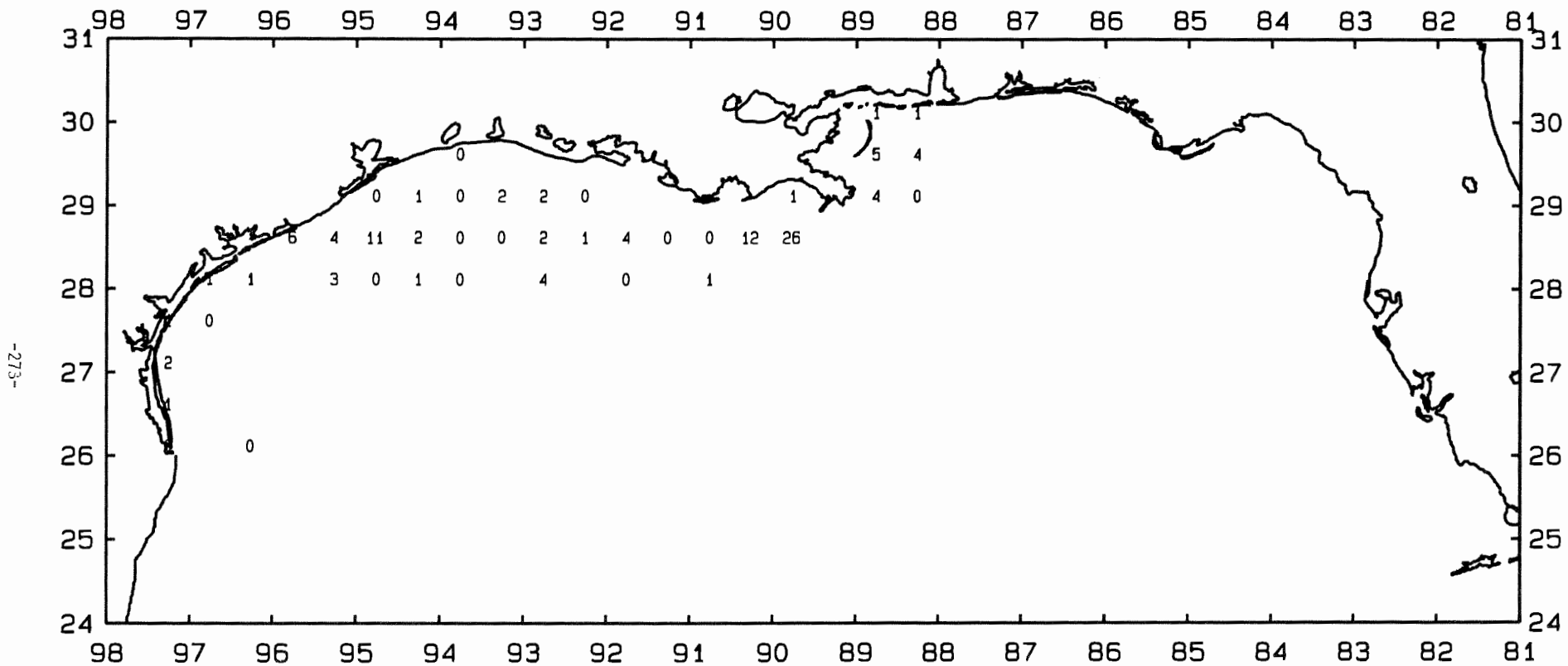


Figure 54. Mantis shrimp, *Squilla empusa*, lb/hour for June-July 1991.

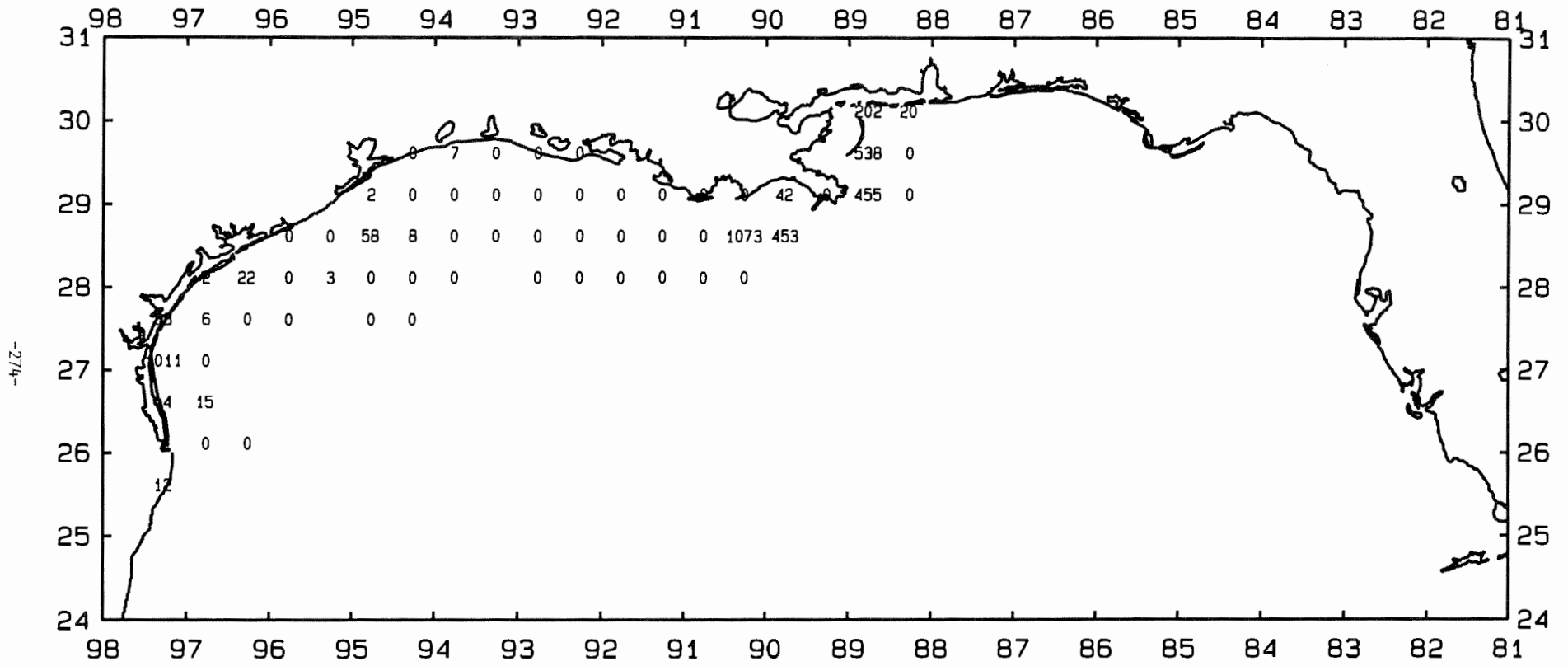


Figure 55. Roughback shrimp, *Trachypenaeus similis*, number/riour for June-July 1991.



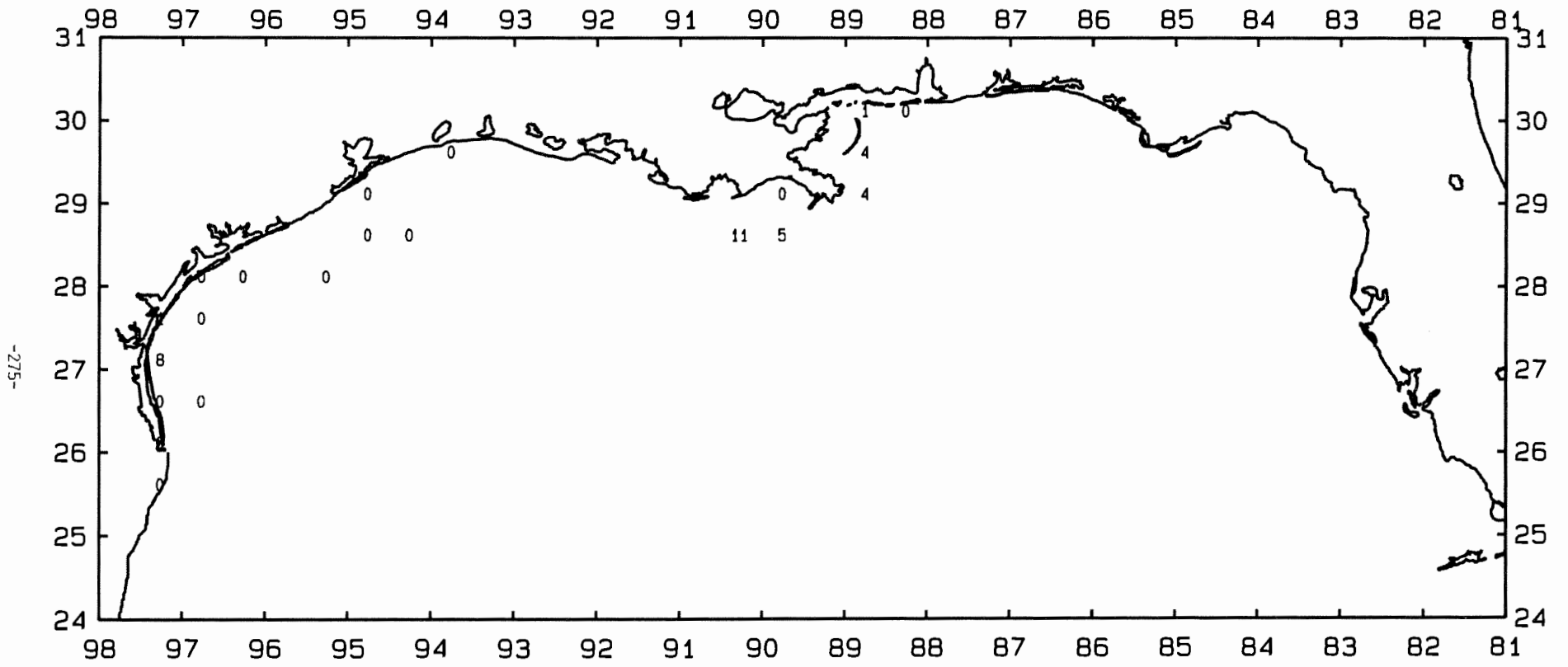


Figure 56. Roughback shrimp, *Trachypenaeus similis*, lb/hour for June-July 1991.

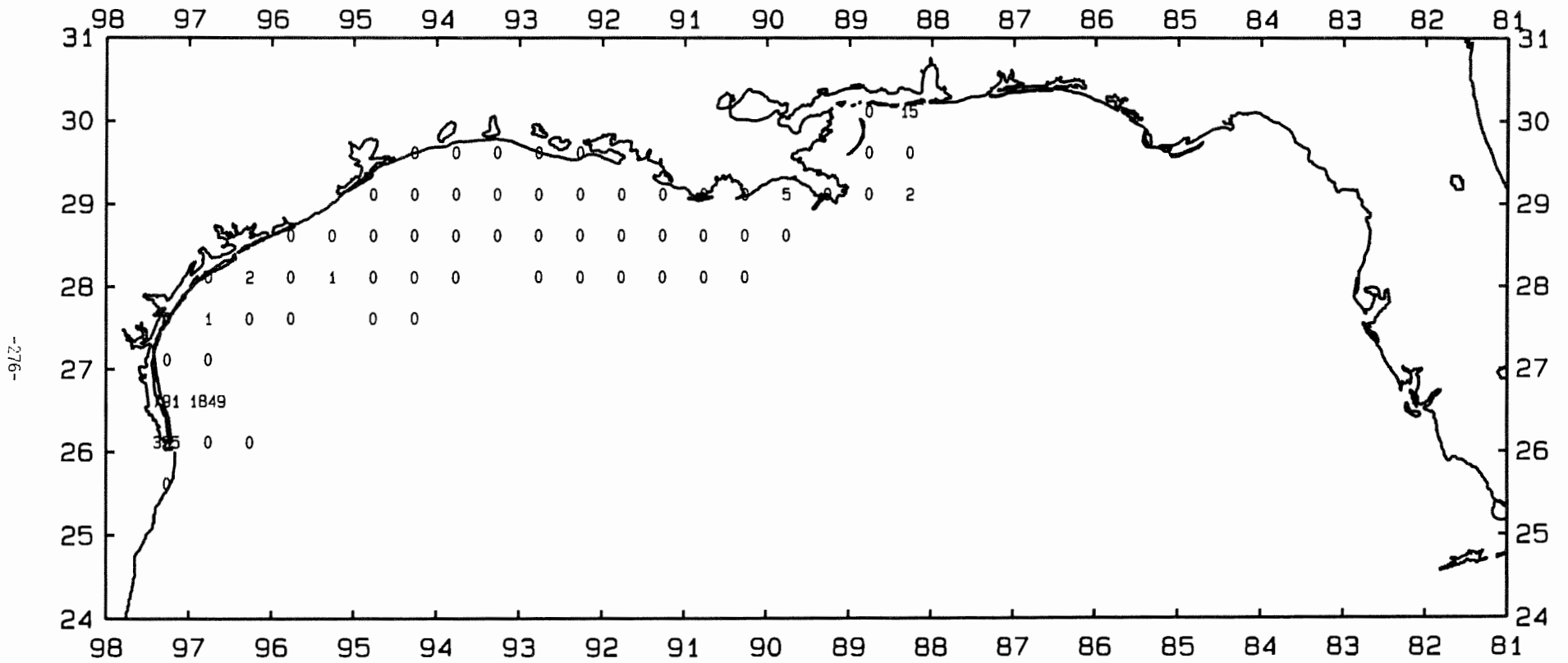


Figure 57. Roughneck shrimp, *Trachypenaeus constrictus*, number/hour for June-July 1991.

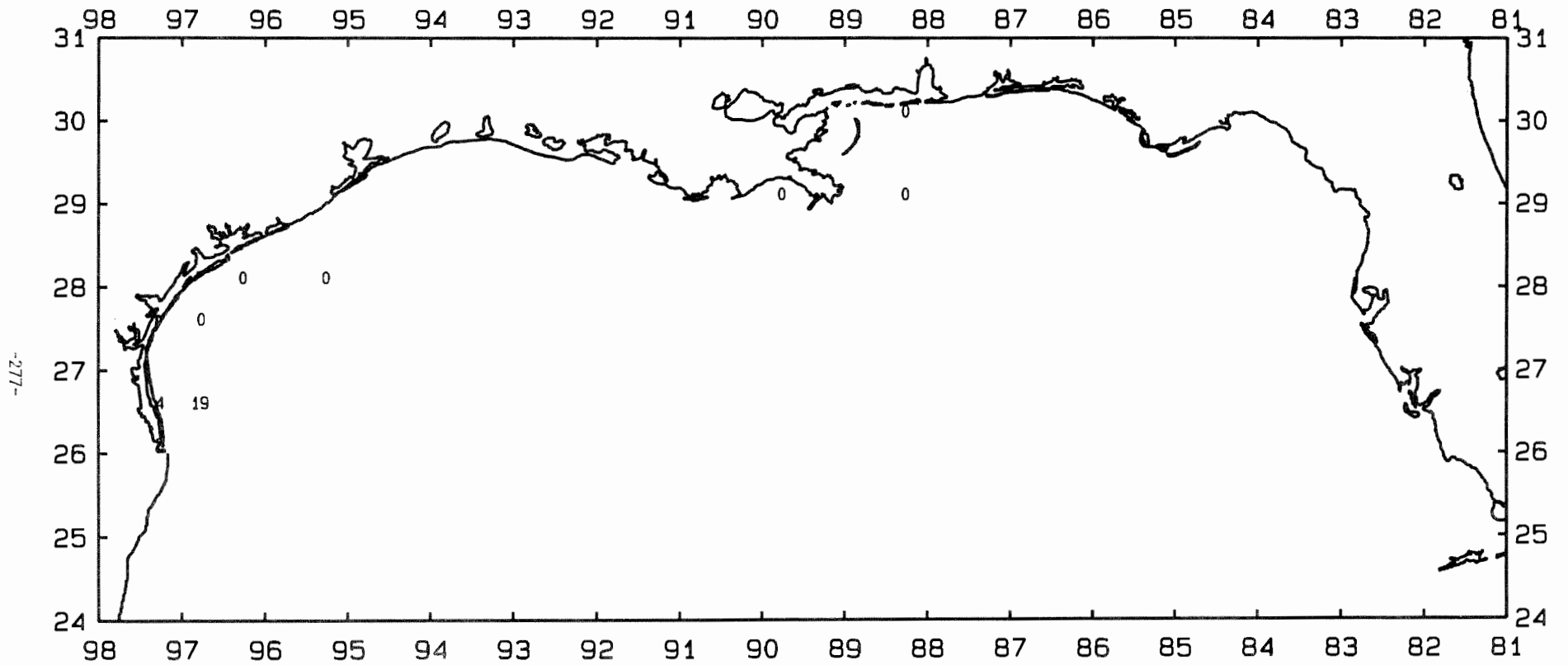


Figure 58. Roughneck shrimp, *Trachypenaeus constrictus*, lb/hour for June-July 1991.

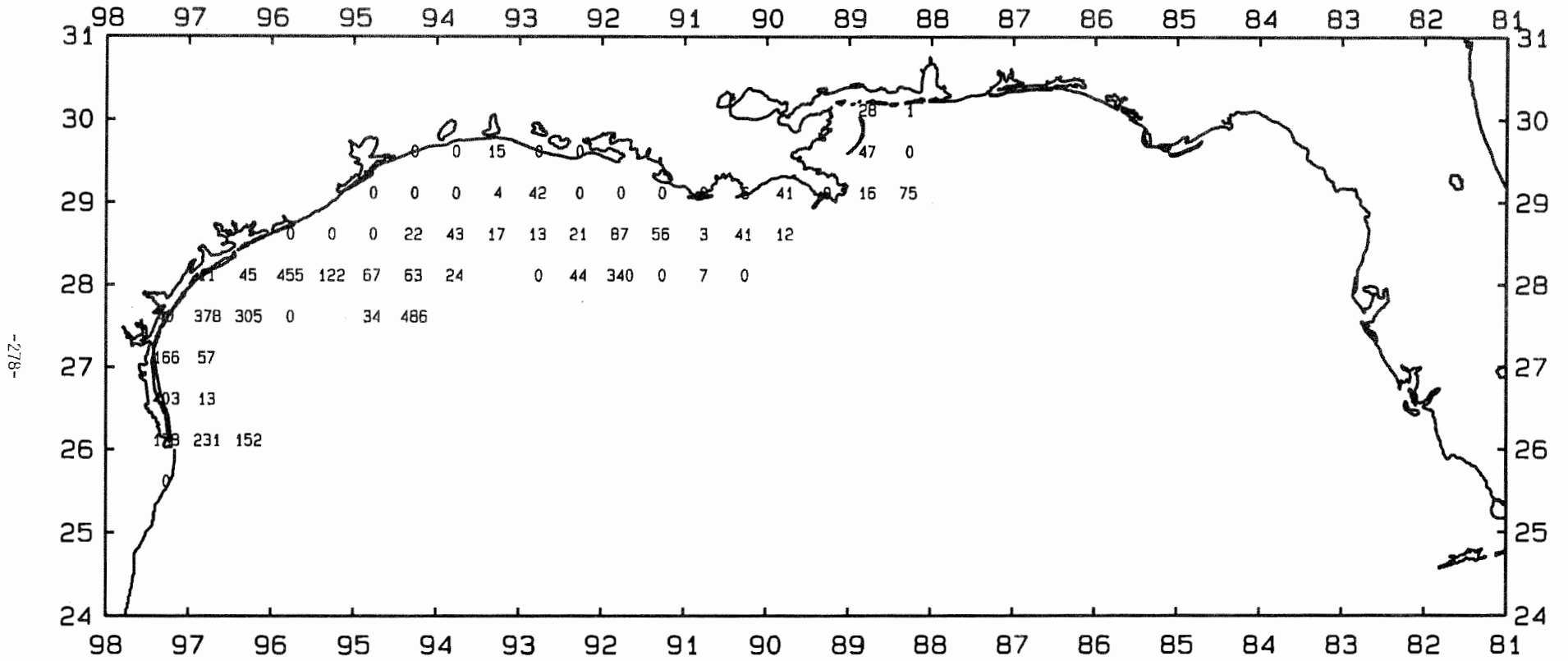


Figure 59. Longfin squid, *Loligo pealeii*, number/hour for June-July 1991.

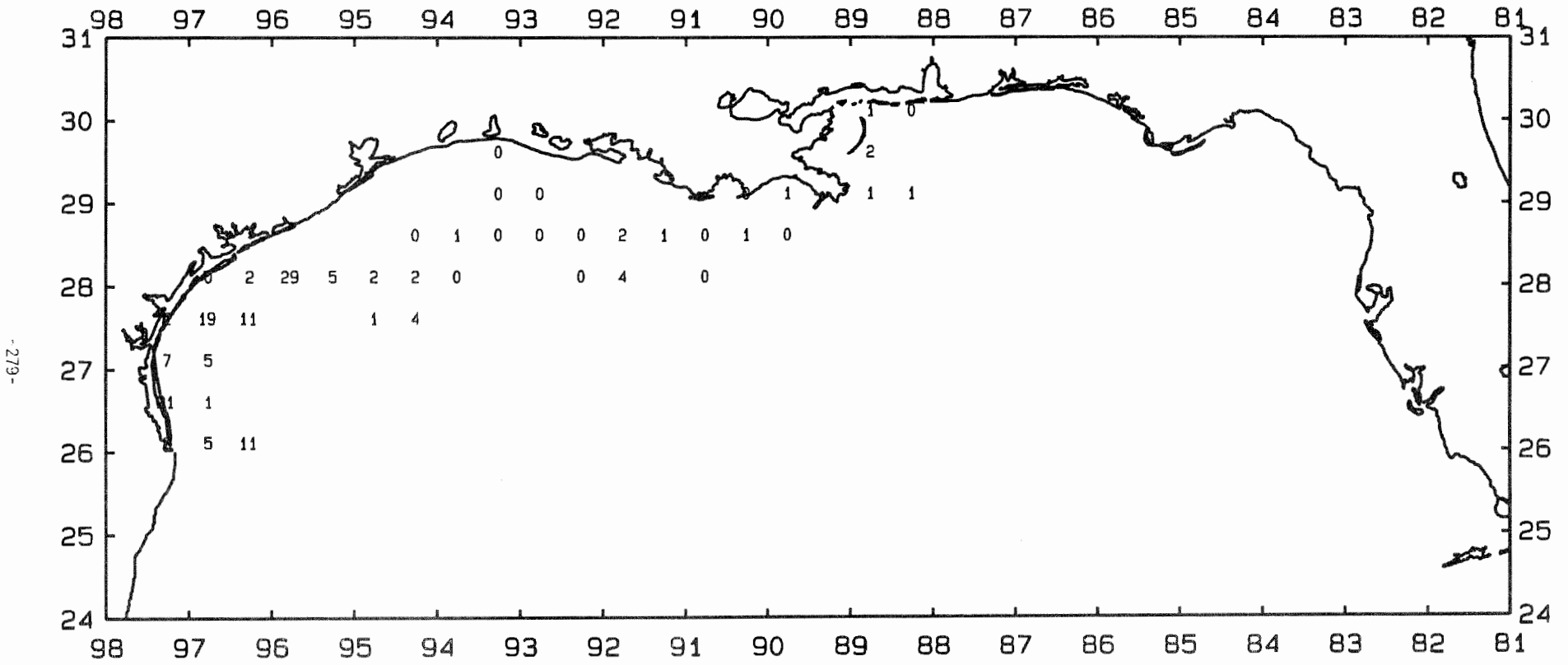


Figure 60. Longfin squid, *Loligo pealeii*, lb/hour for June-July 1991.

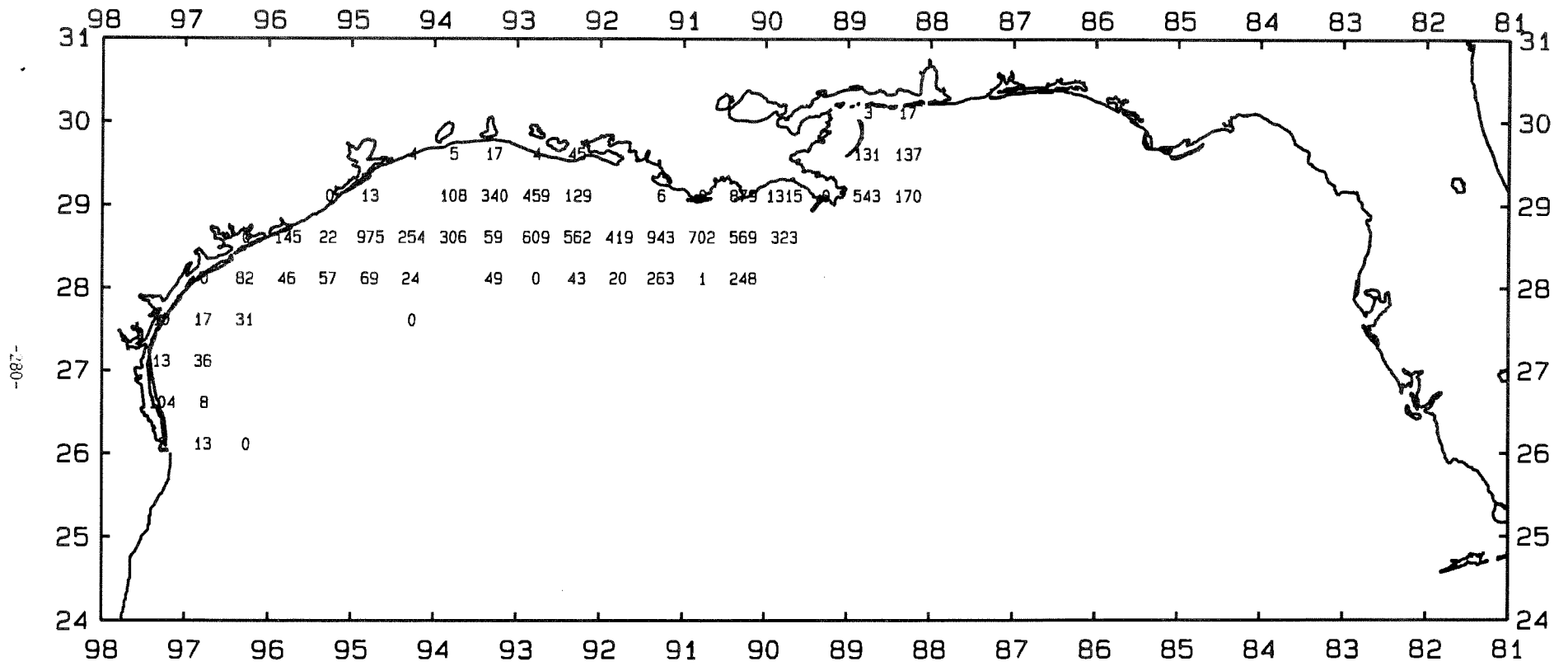


Figure 61. Atlantic croaker, *Microgogonias undulatus*, number/hour for October-December 1991.

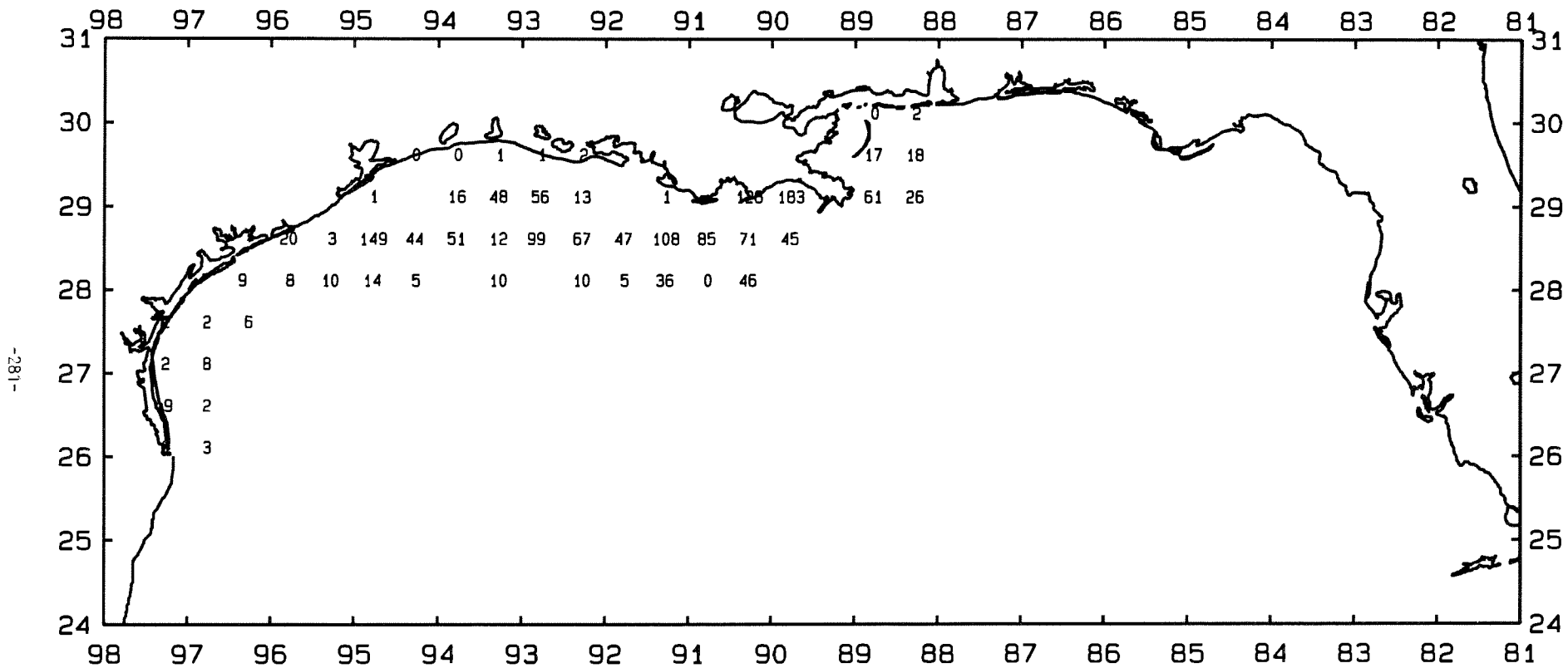


Figure 62. Atlantic croaker, *Micropogonias undulatus*, lb/hour for October-December 1991.

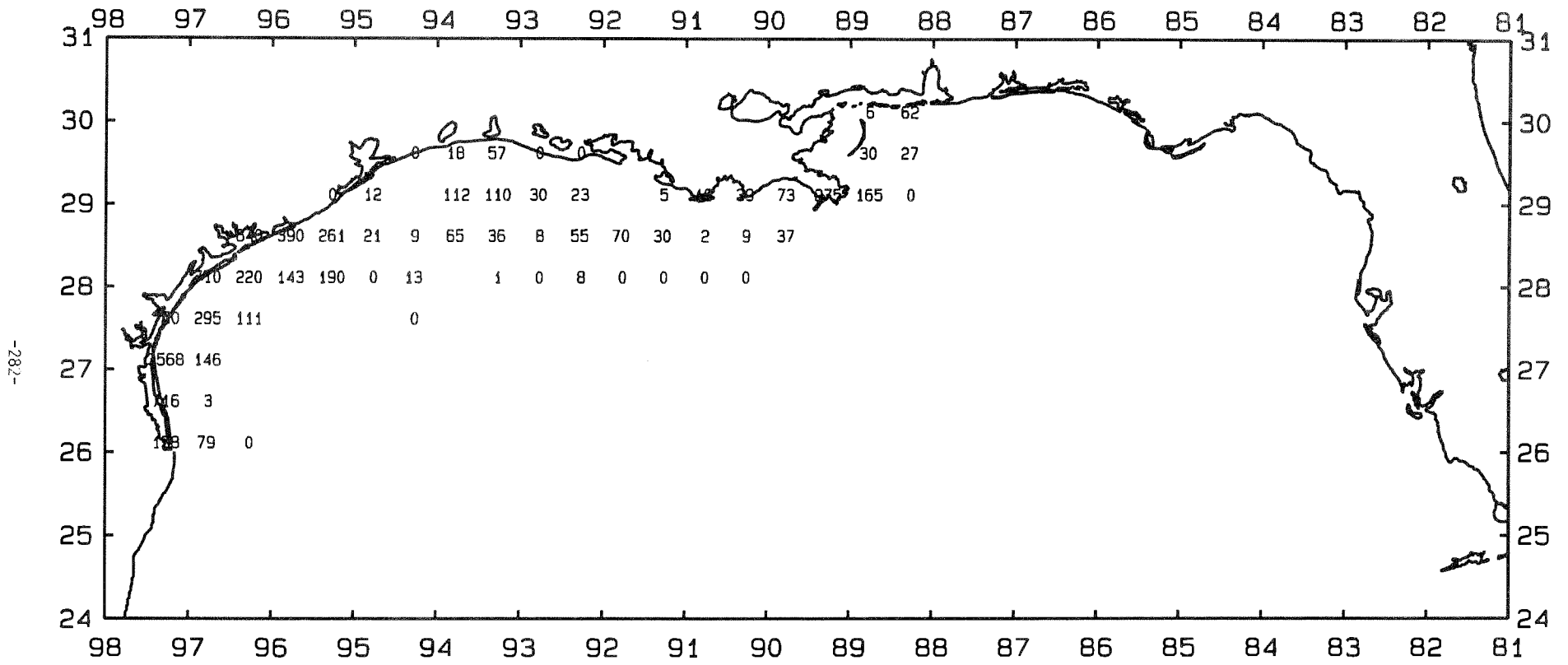


Figure 63. Atlantic bumper, *Chloroscombrus chrysurus*, number/hour for October-December 1991.



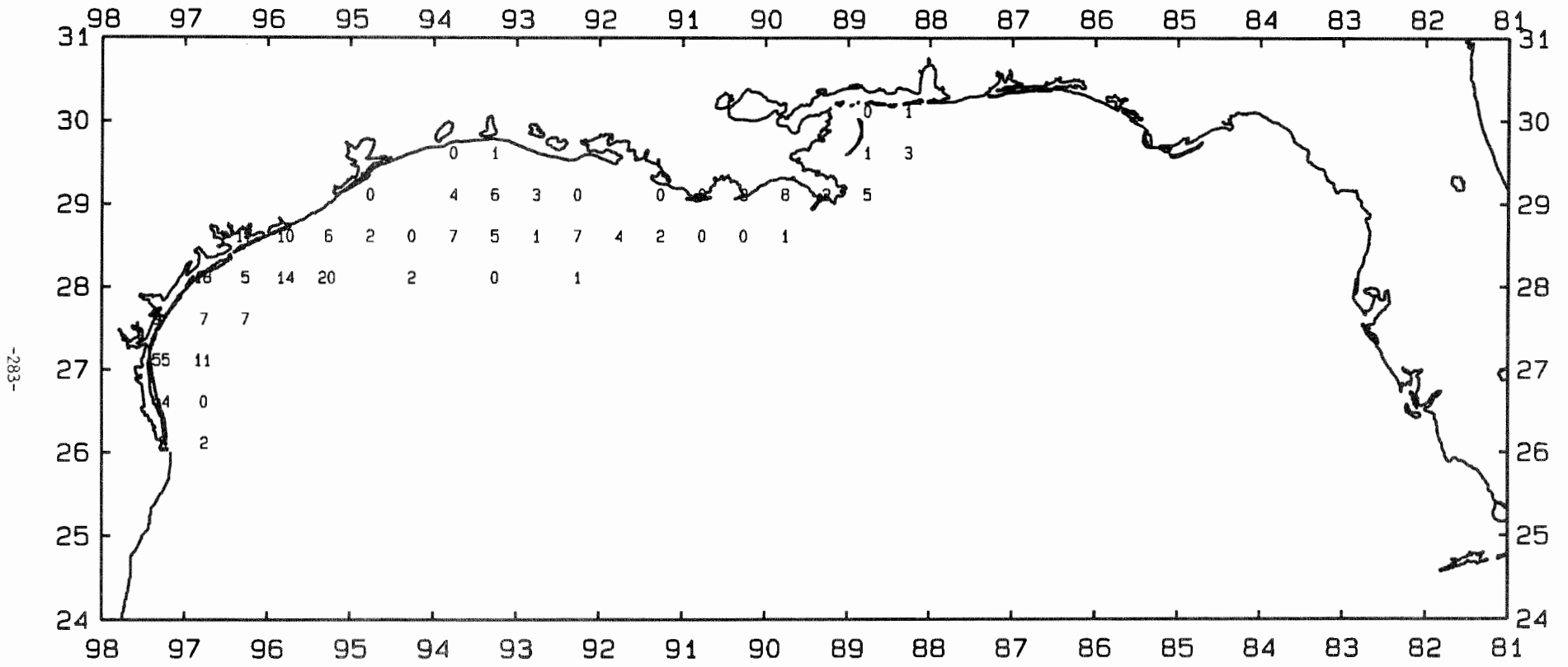


Figure 64. Atlantic bumper, *Chloroscombus chrysurus*, lb/hour for October-December 1991.

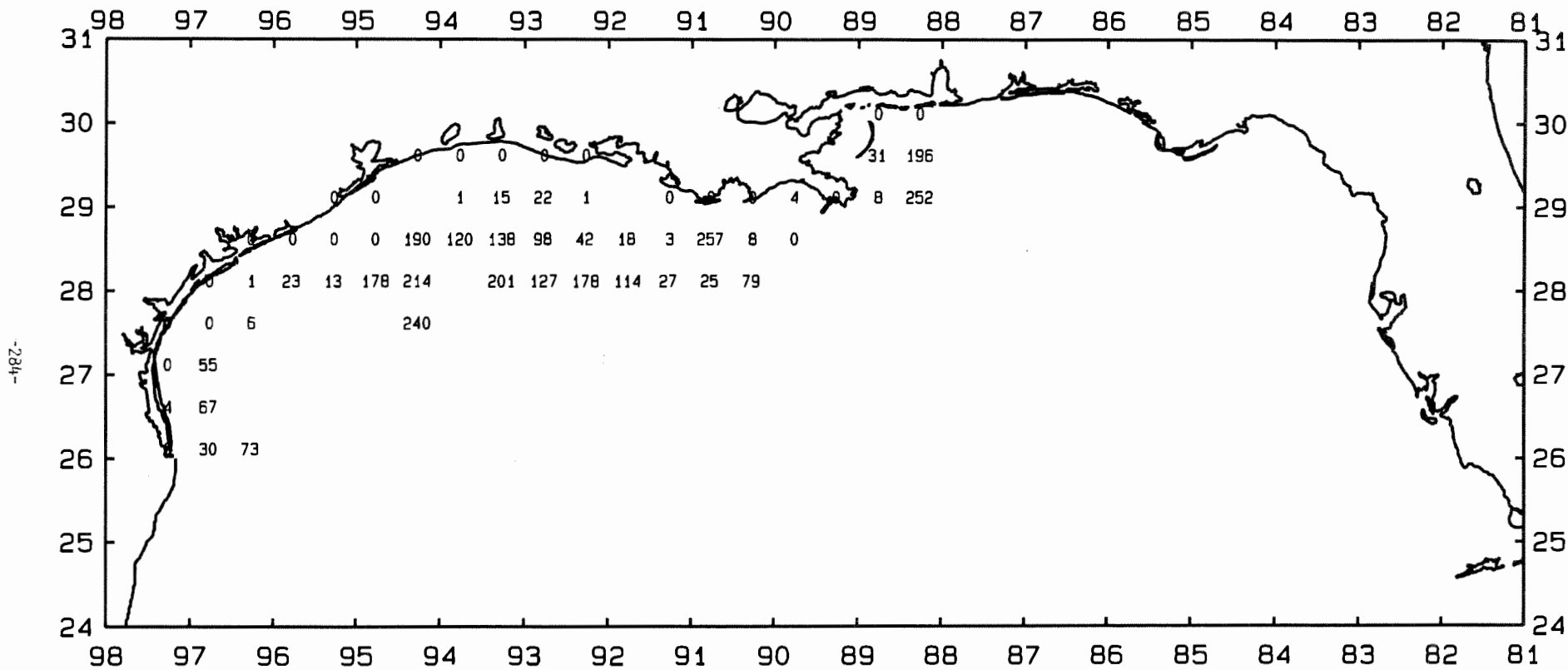


Figure 65. Longspine pogy, *Stenotomus caprinus*, number/hour for October-December 1991.

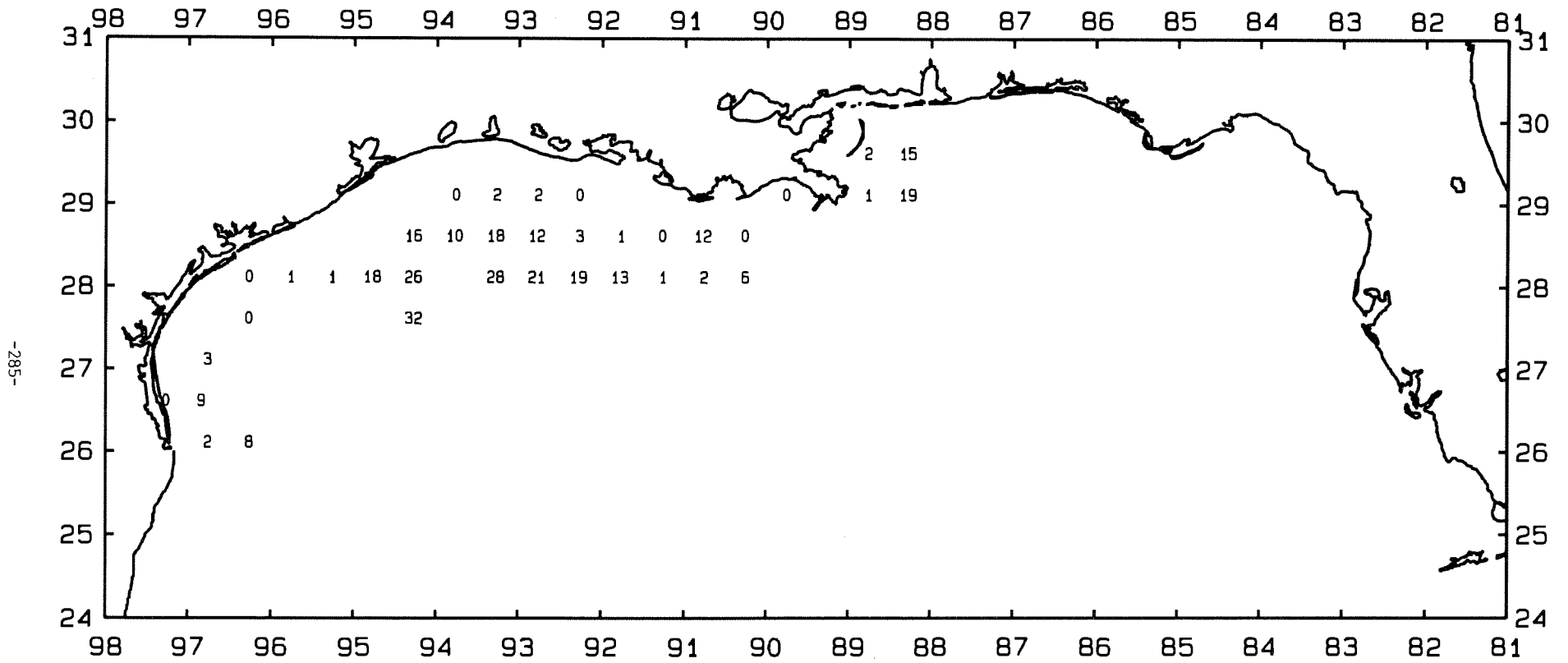


Figure 66. Longspine pogy, *Stenotomus caprinus*, lb/hour for October-December 1991.

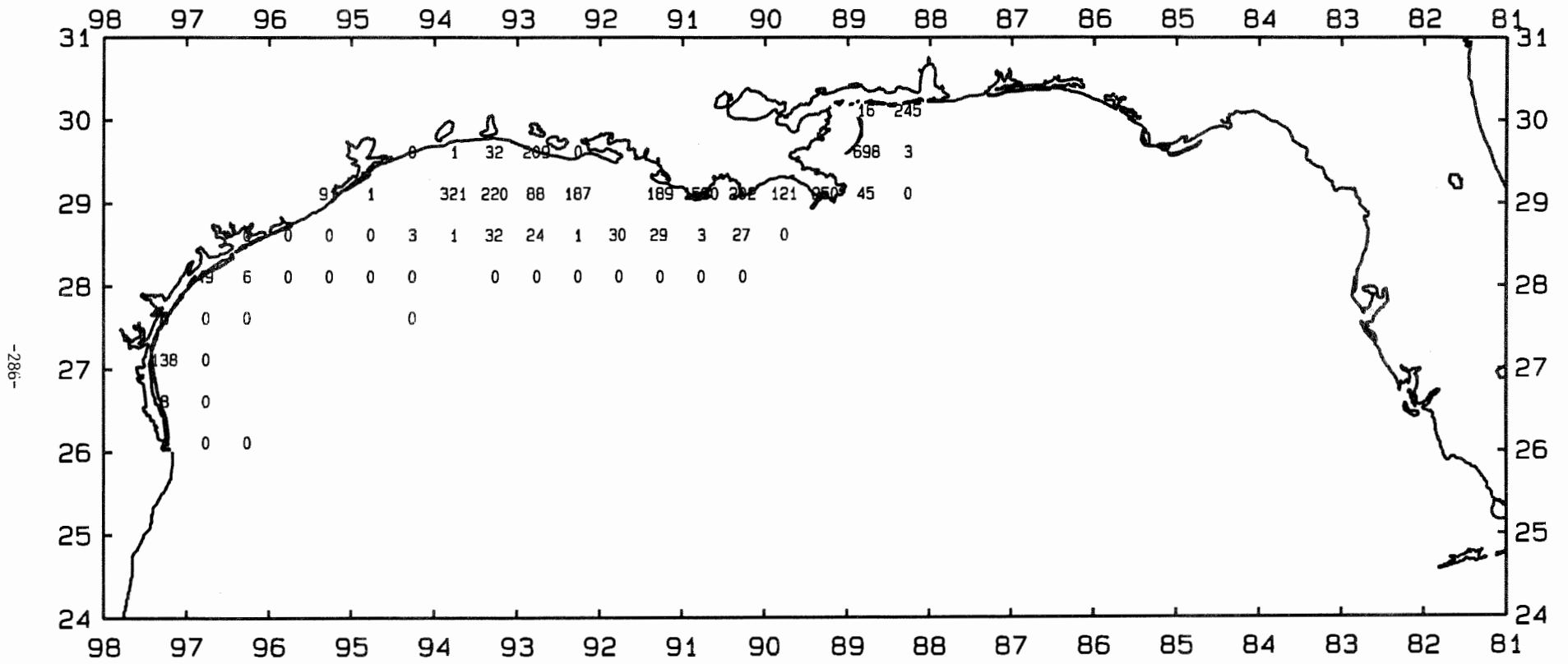


Figure 67. Hardhead catfish, *Arius felis*, number/hour for October-December 1991.

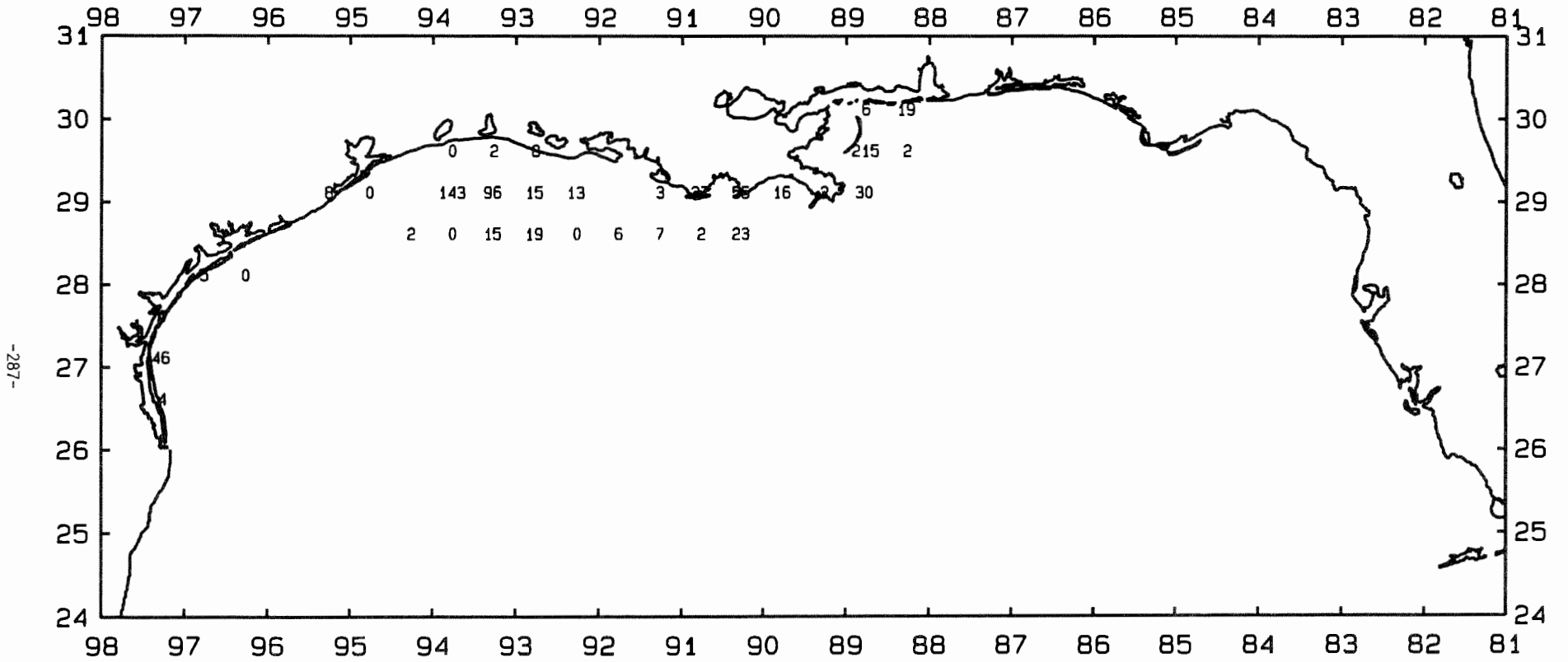


Figure 68. Hardhead catfish, *Arius felis*, lb/hour for October-December 1991.

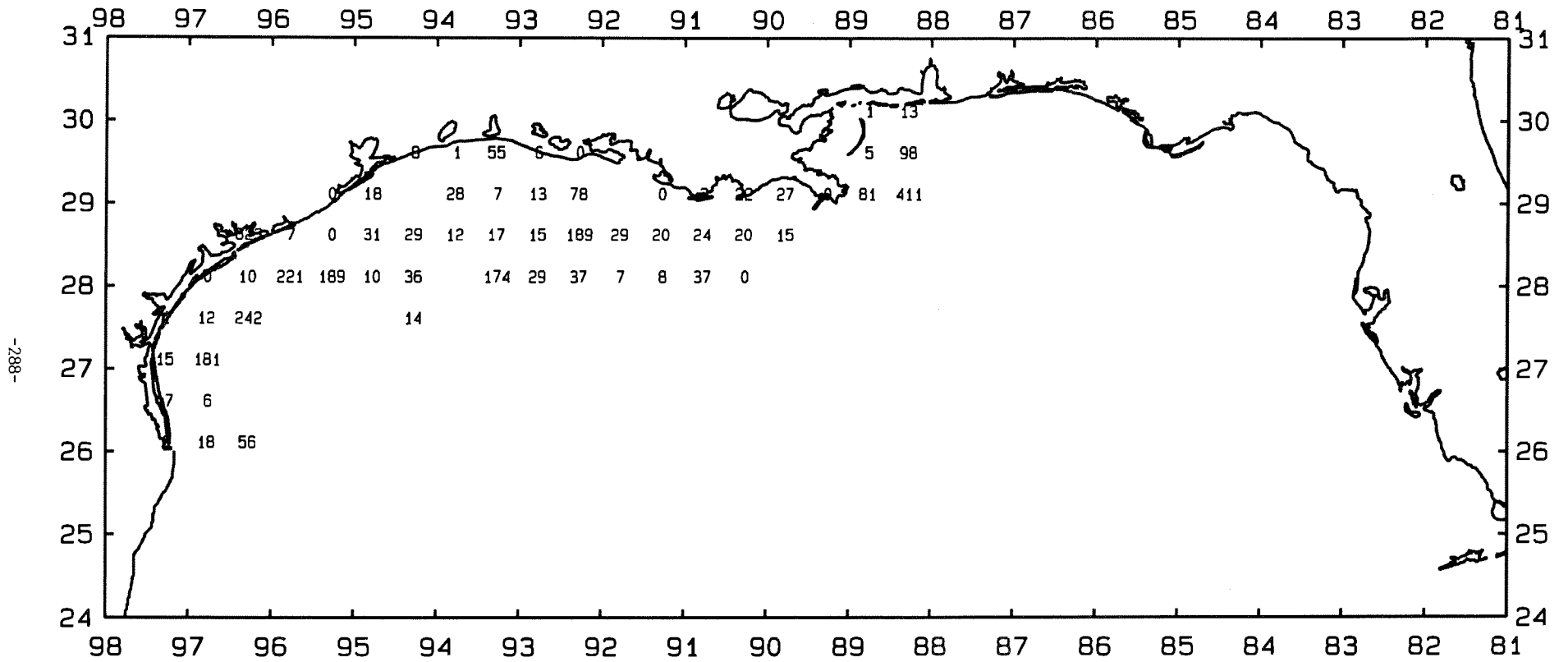


Figure 69. Gulf butterfish, *Peprilus burti*, number/hour for October-December 1991.

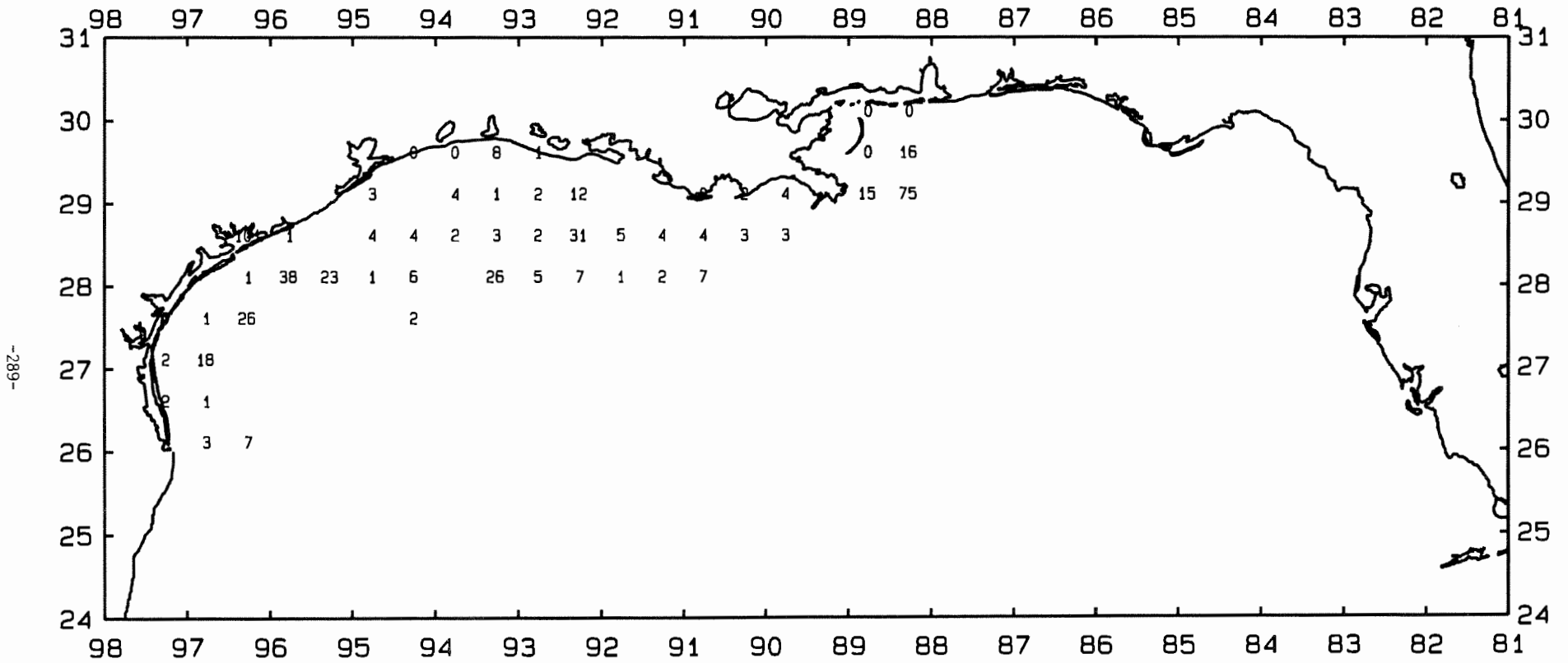


Figure 70. Gulf butterfish, *Peprilus burti*, lb/hour for October-December 1991.

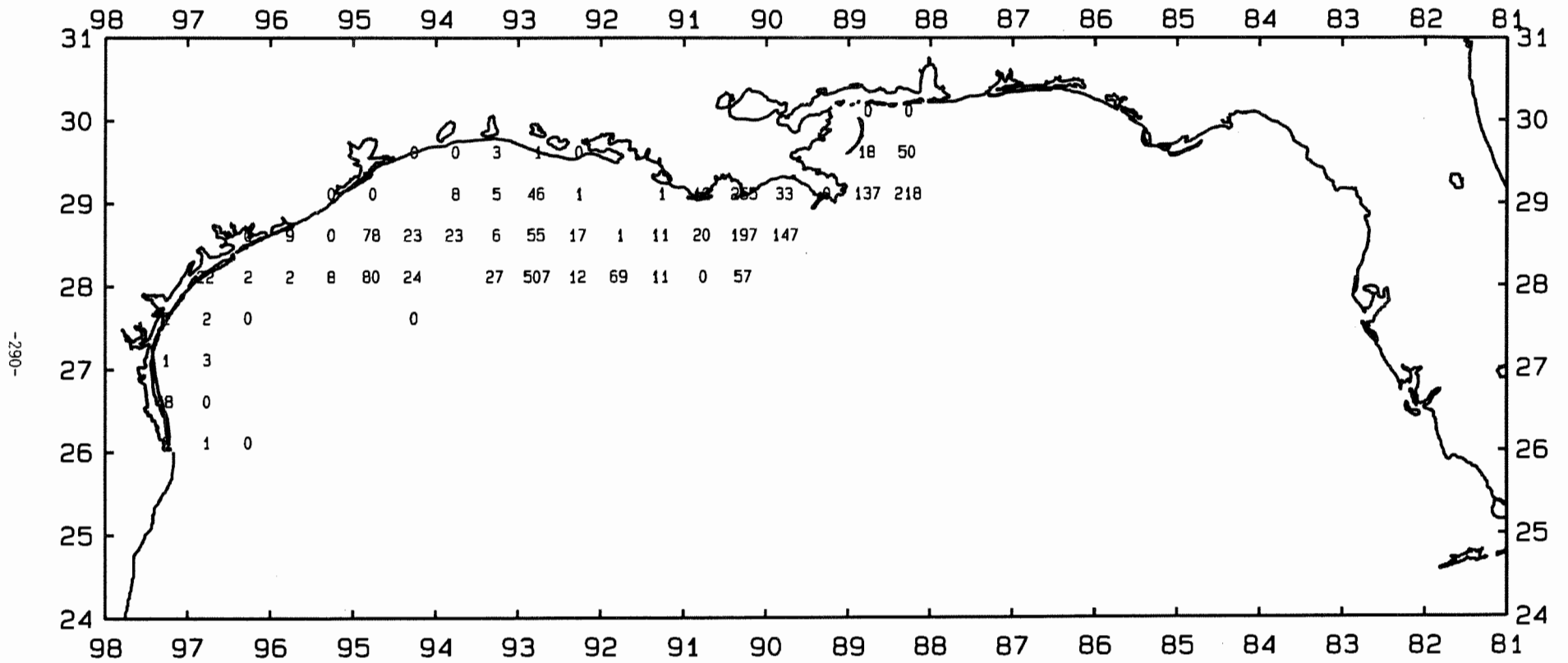


Figure 71. Spot, *Leiosomus xanthurus*, number/hour for October-December 1991.



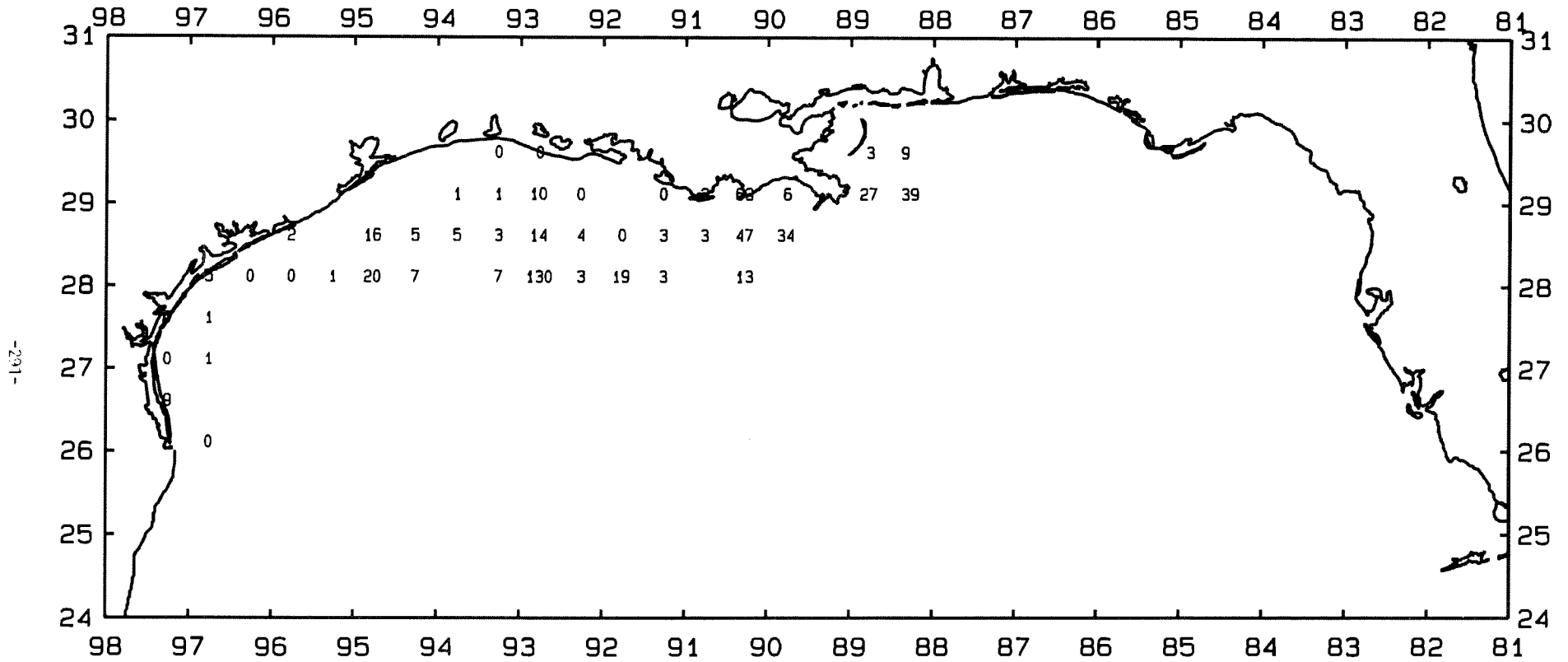


Figure 72. Spot, *Leiostomus xanthurus*, lb/hour for October-December 1991.

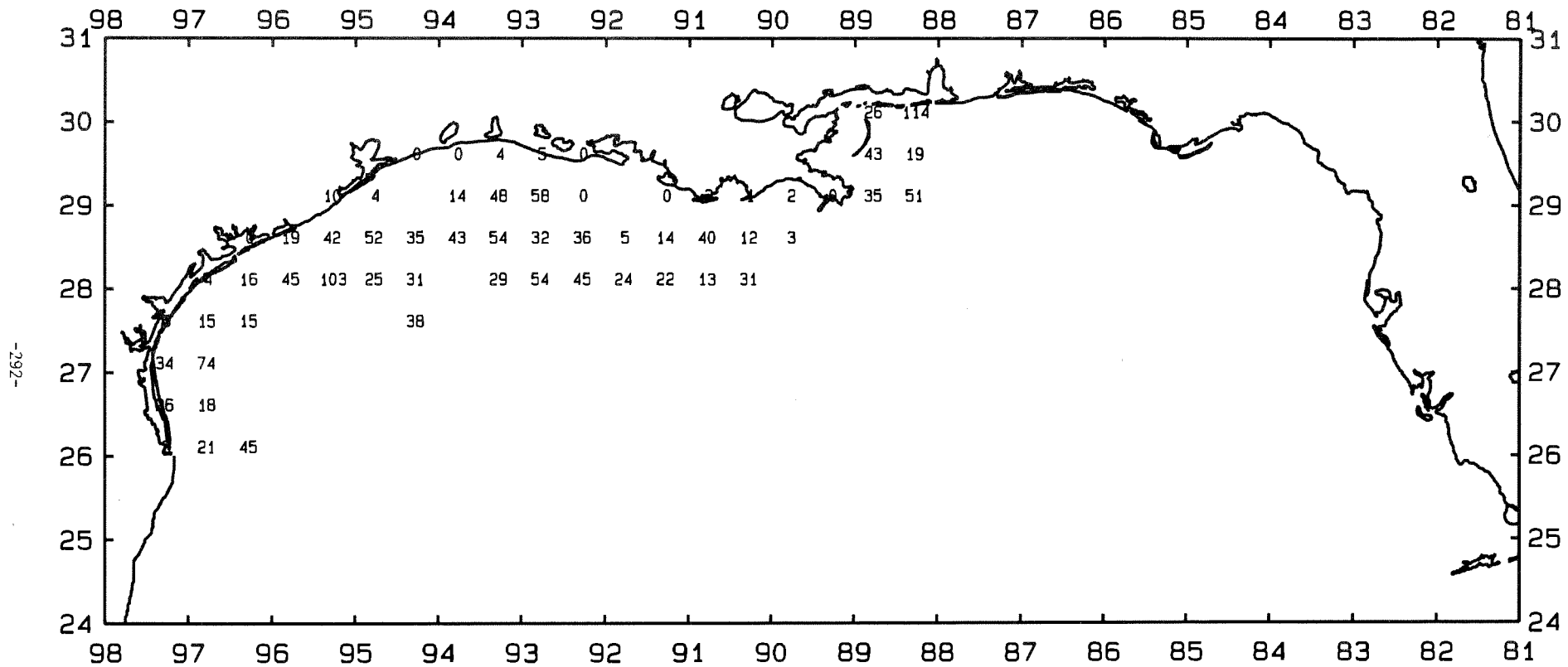


Figure 73. Inshore lizardfish, *Synodus foetens*, number/hour for October-December 1991.

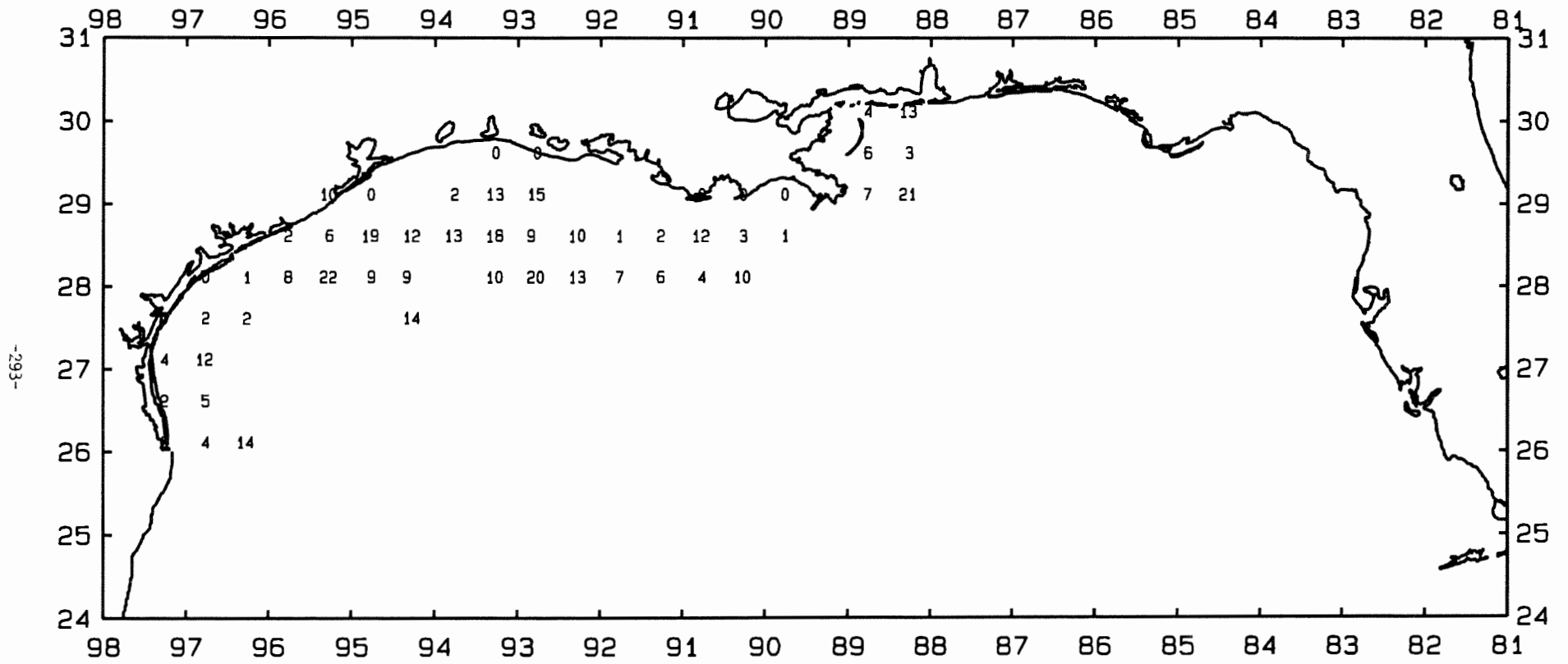


Figure 74. Inshore lizardfish, *Synodus foetens*, lb/hour for October-December 1991.

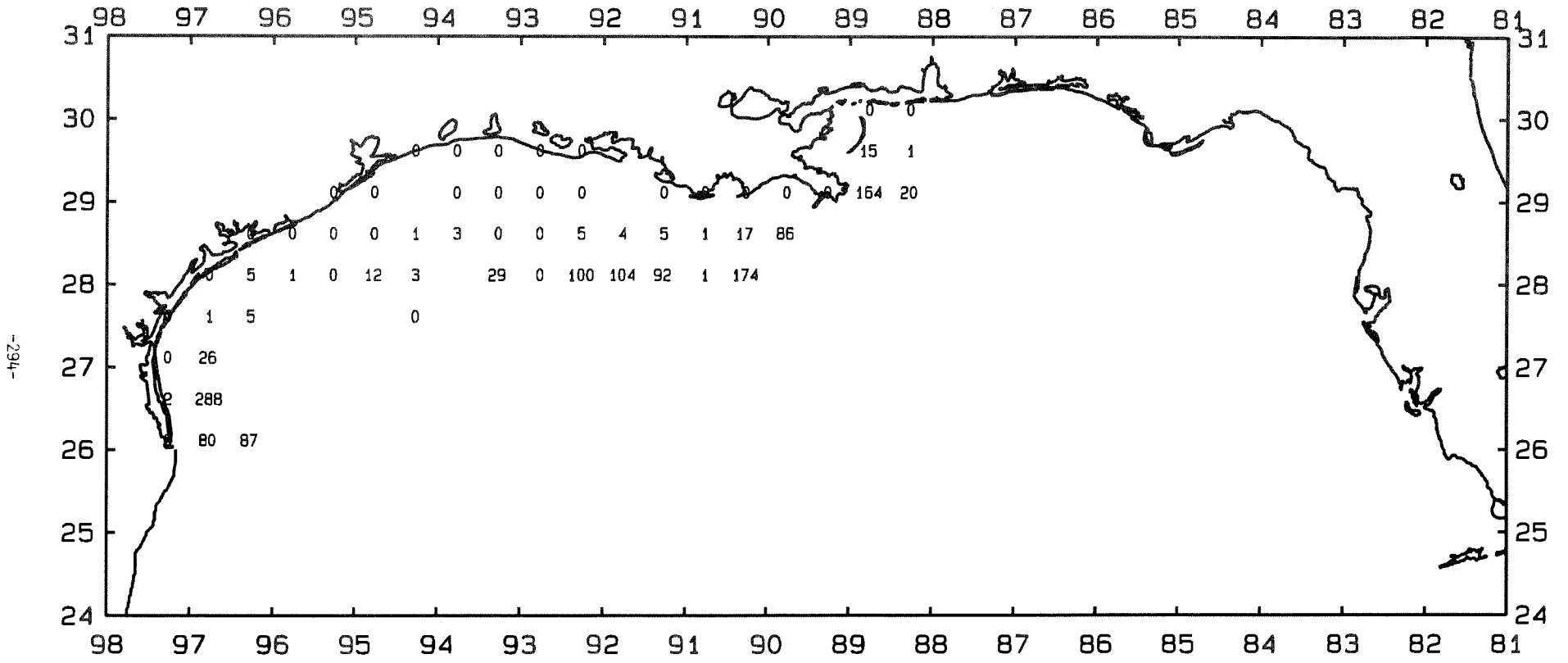


Figure 75. Blackear bass, *Serranus atrobranchus*, number/hour for October-December 1991.

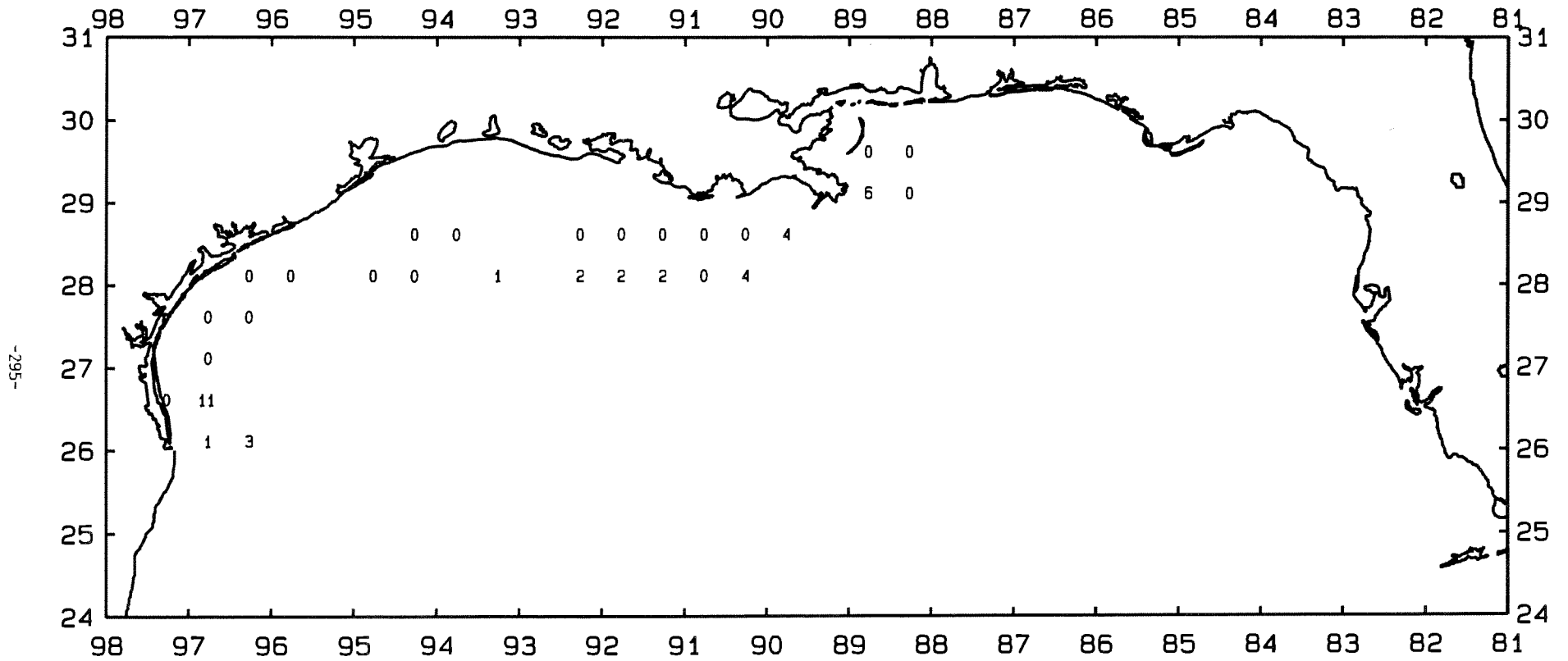


Figure 76. Blackear bass, *Serranus atrobranchus*, lb/hour for October-December 1991.

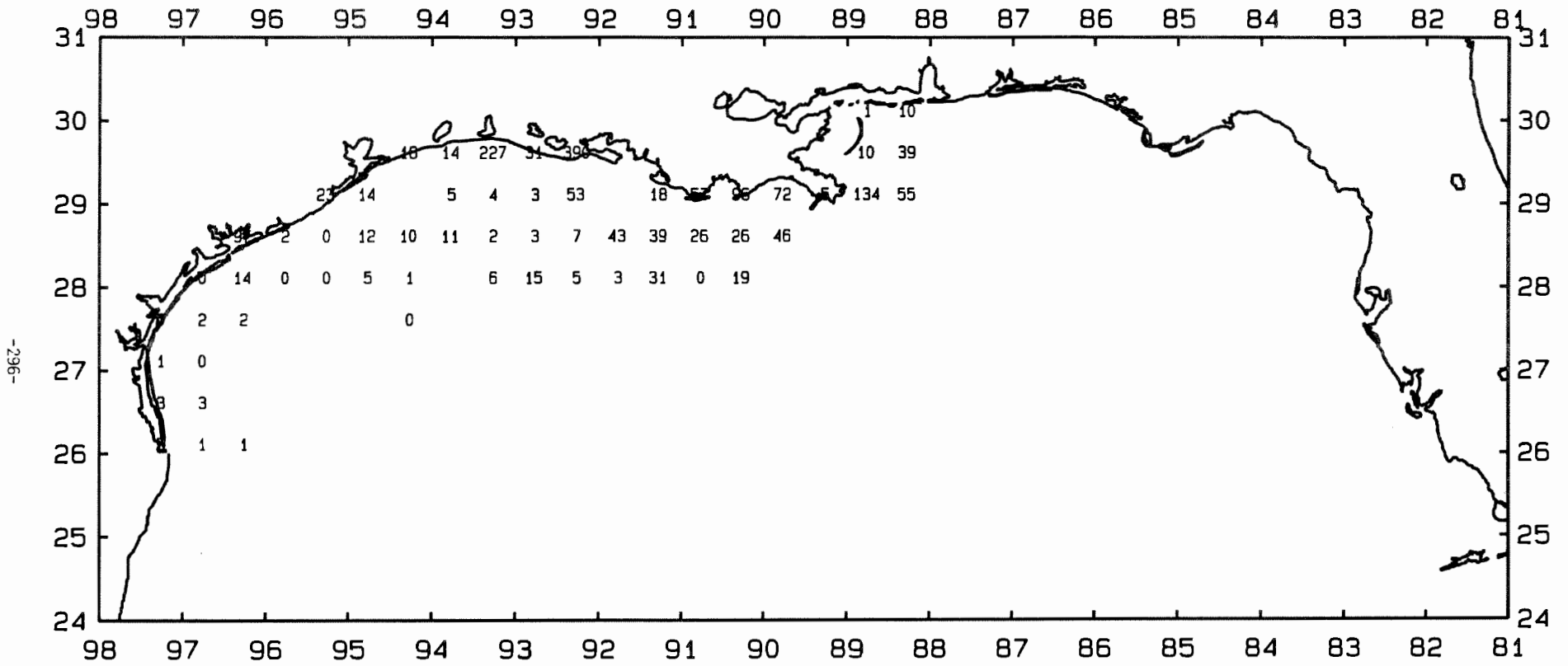


Figure 77. Sand seatrout, *Cynoscion arenarius*, number/hour for October-December 1991.

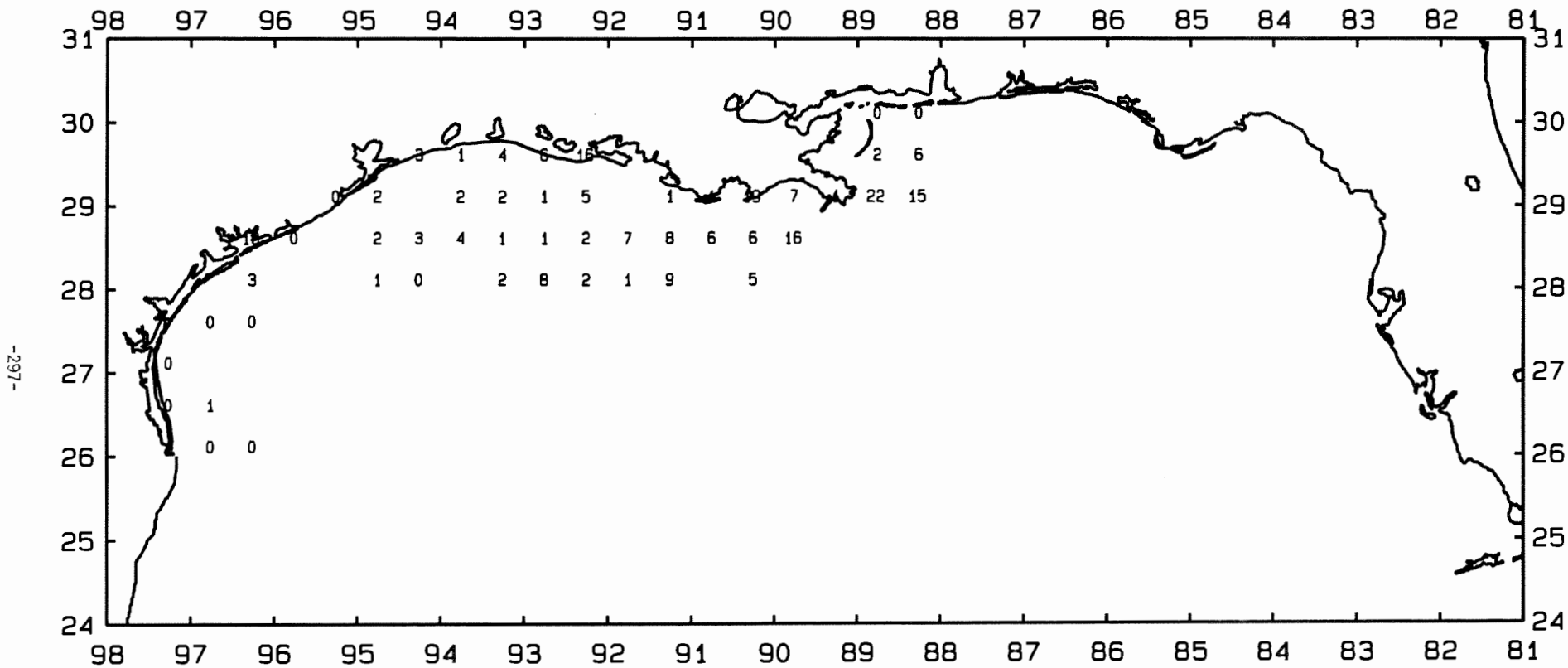


Figure 78. Sand seatrout, *Cynoscion arenarius*, number/hour for October-December 1991.

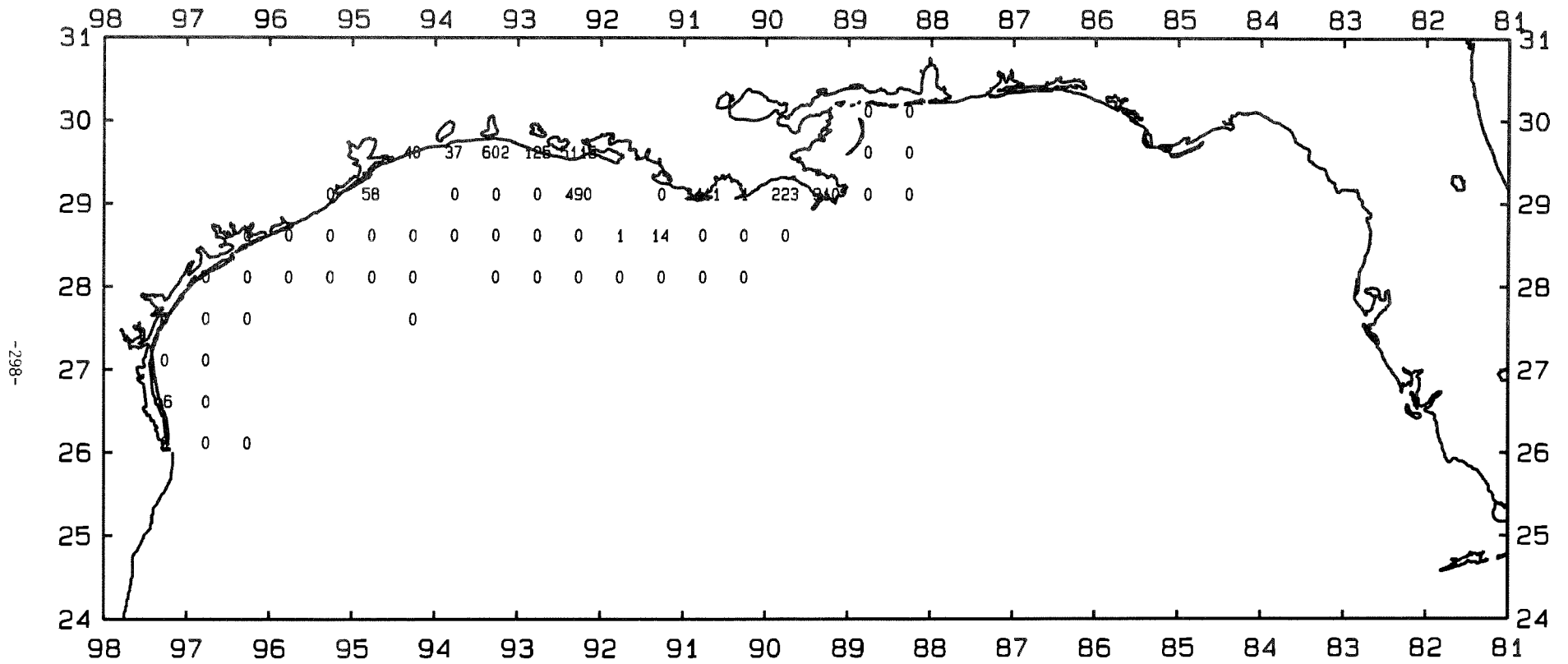


Figure 79. Bay anchovy, *Anchoa mitchilli*, number/hour for October-December 1991.



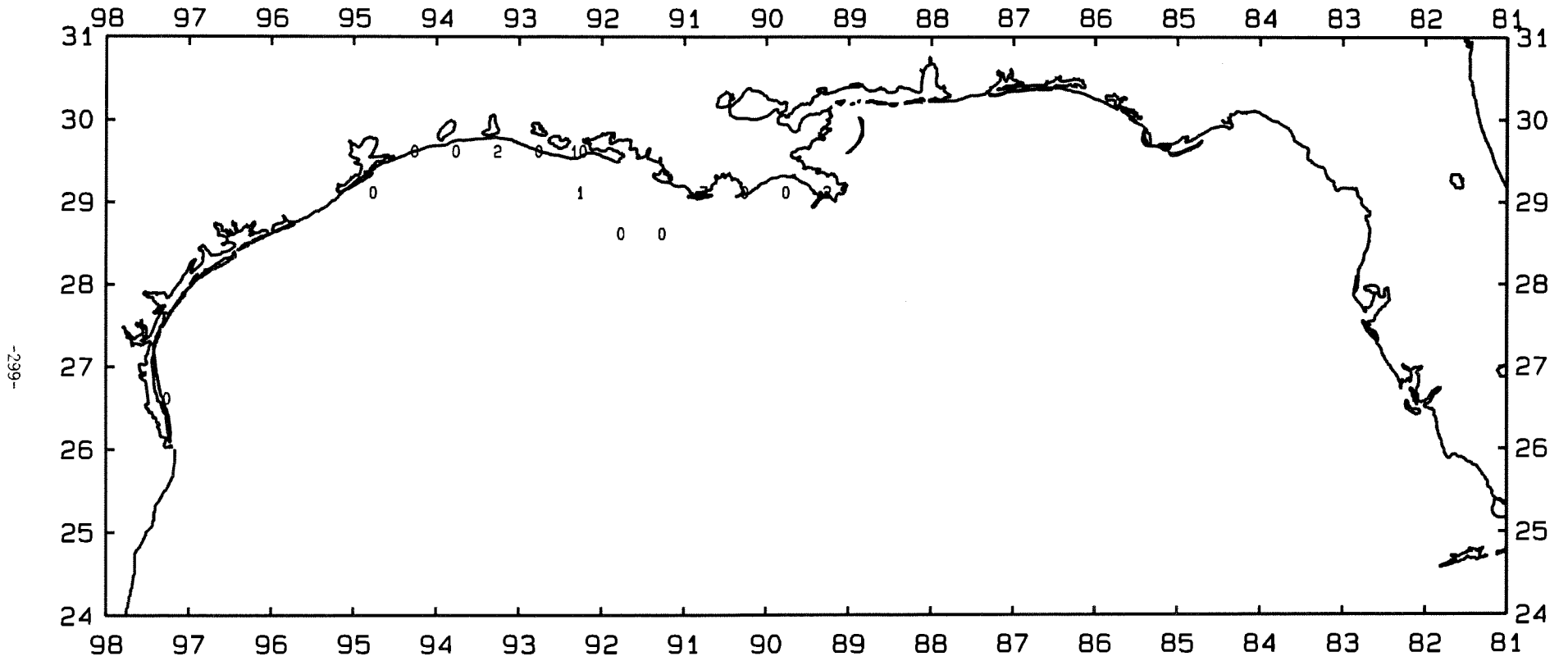


Figure 80. Bay anchovy, *Anchoa mitchilli*, lb/hour for October-December 1991.

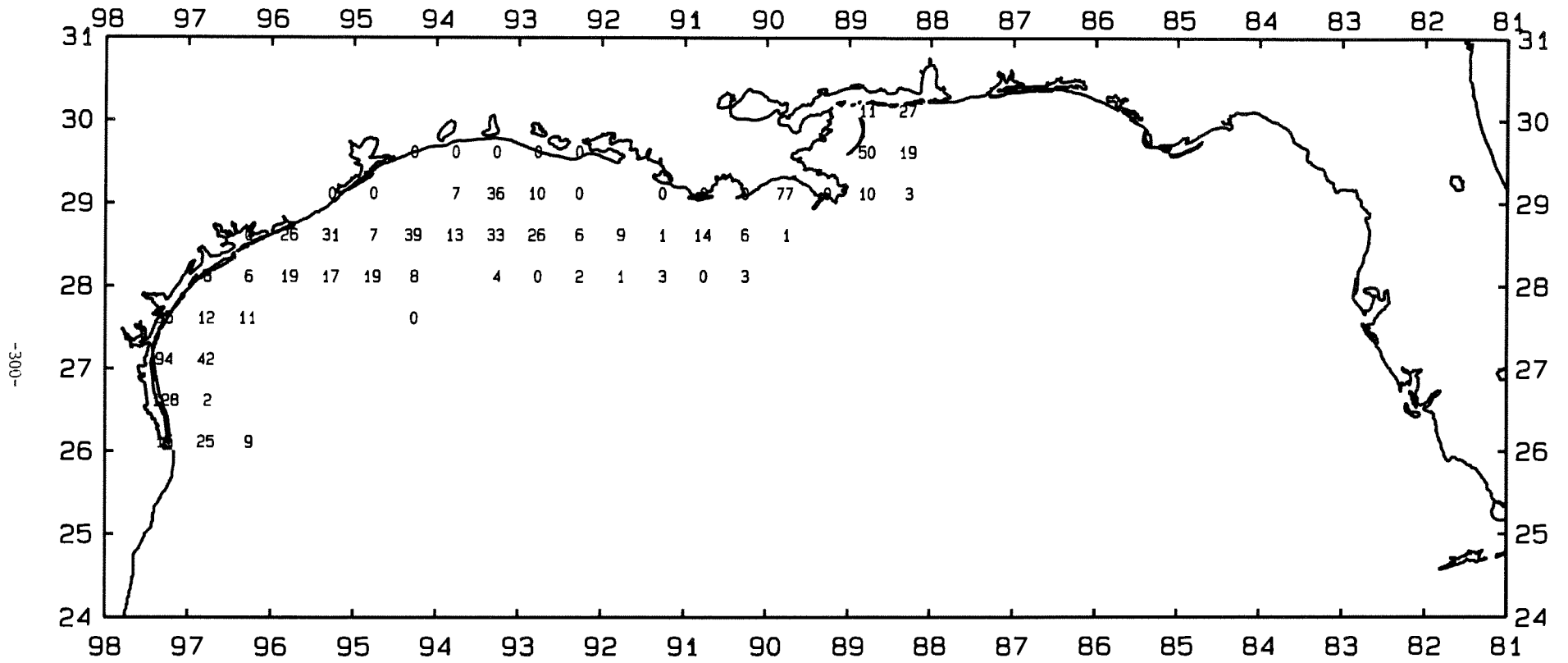


Figure 81. Red snapper, *Lutjanus campechanus*, number/hour for October-December 1991.

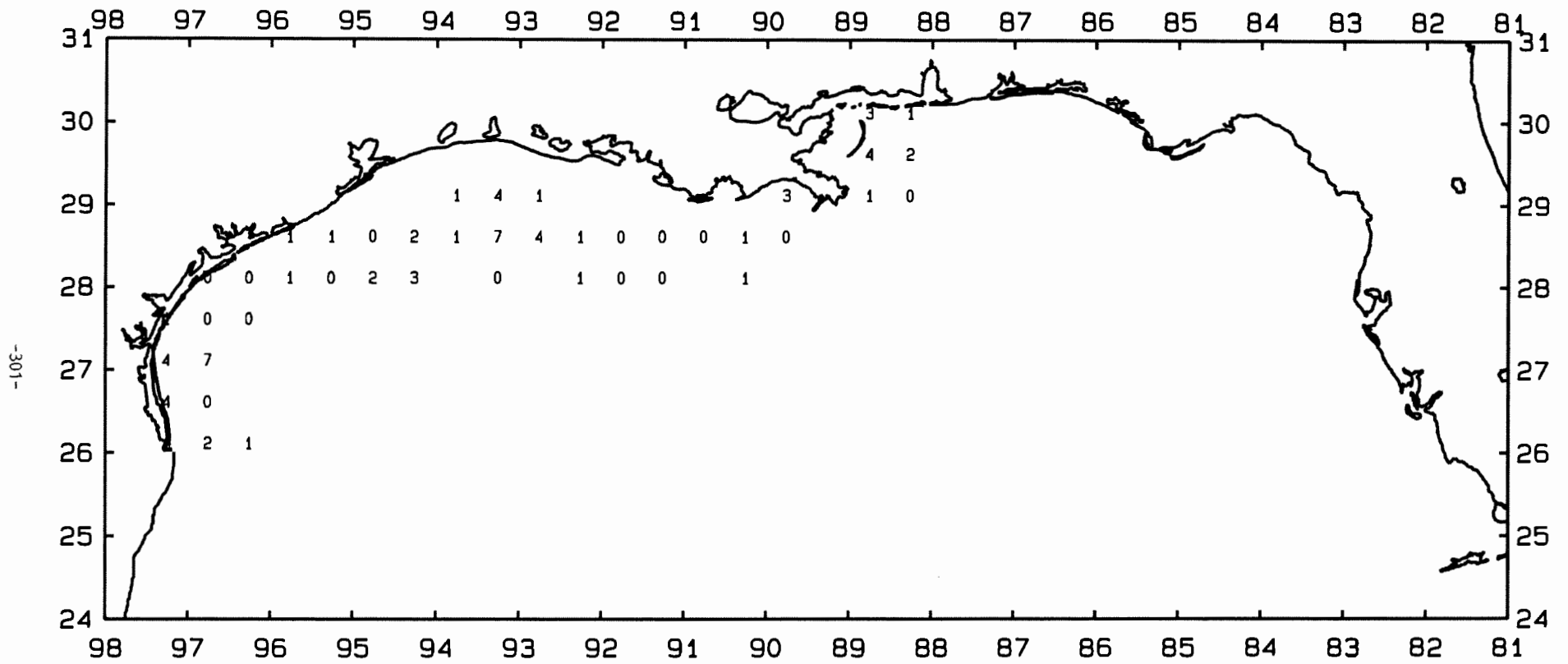


Figure 82. Red snapper, *Lutjanus campechanus*, lb/hour for October-December 1991.

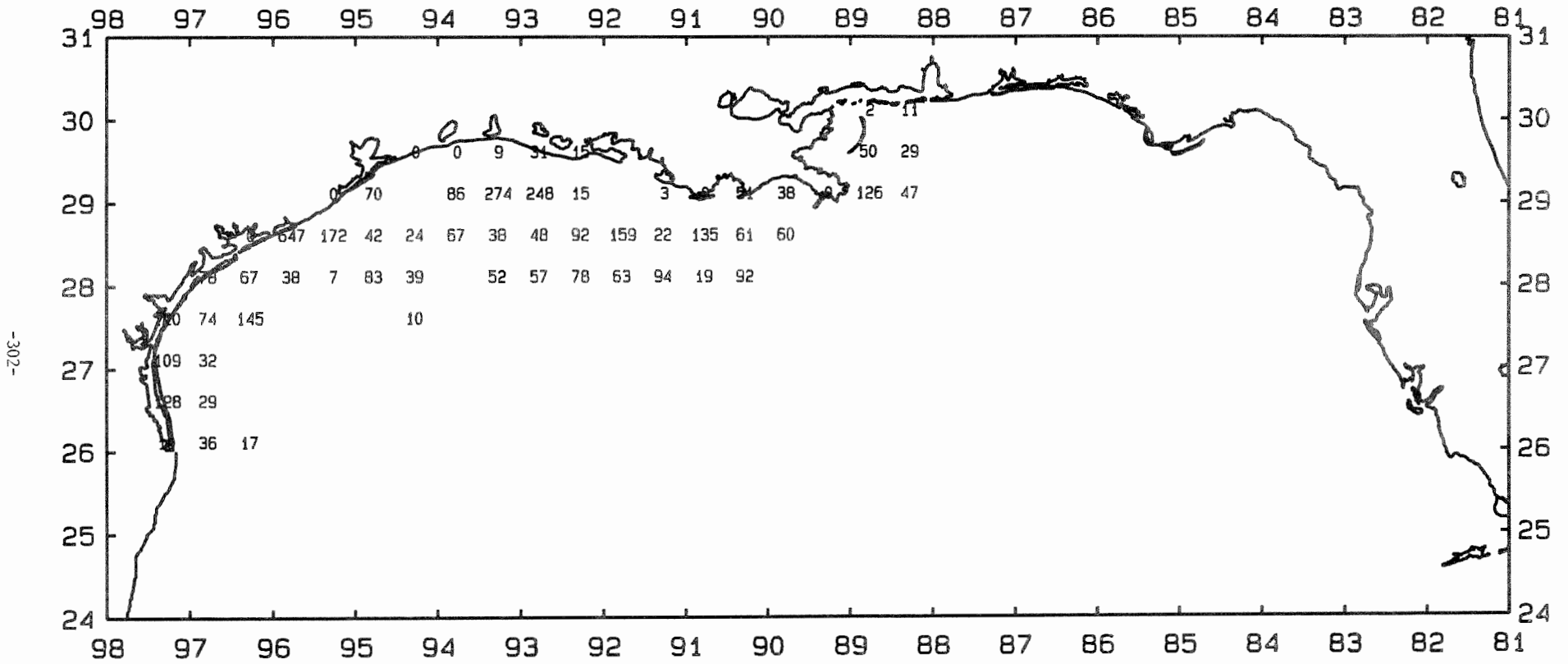
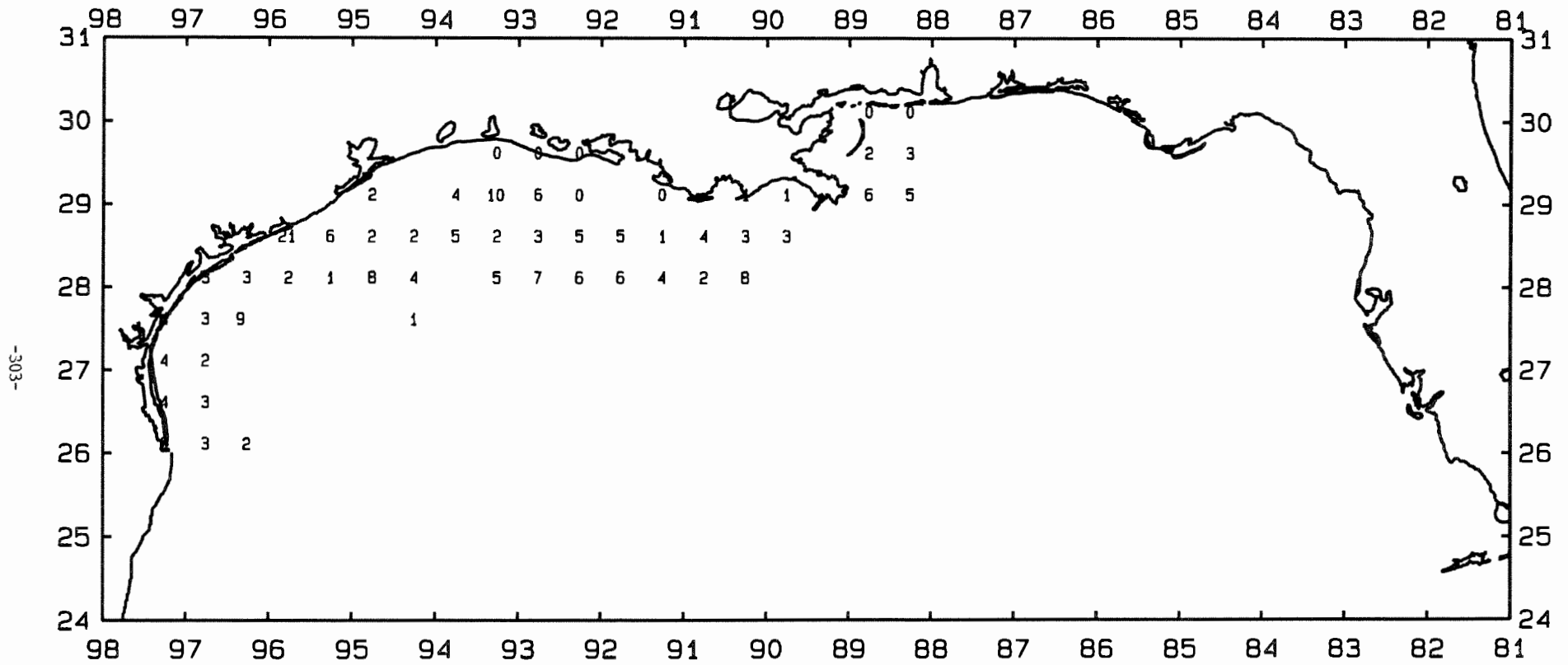


Figure 83. Brown shrimp, *Penaeus aztecus*, number/hour for October-December 1991.



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Figure 84. Brown shrimp, *Penaeus aztecus*, lb/hour for October-December 1991.

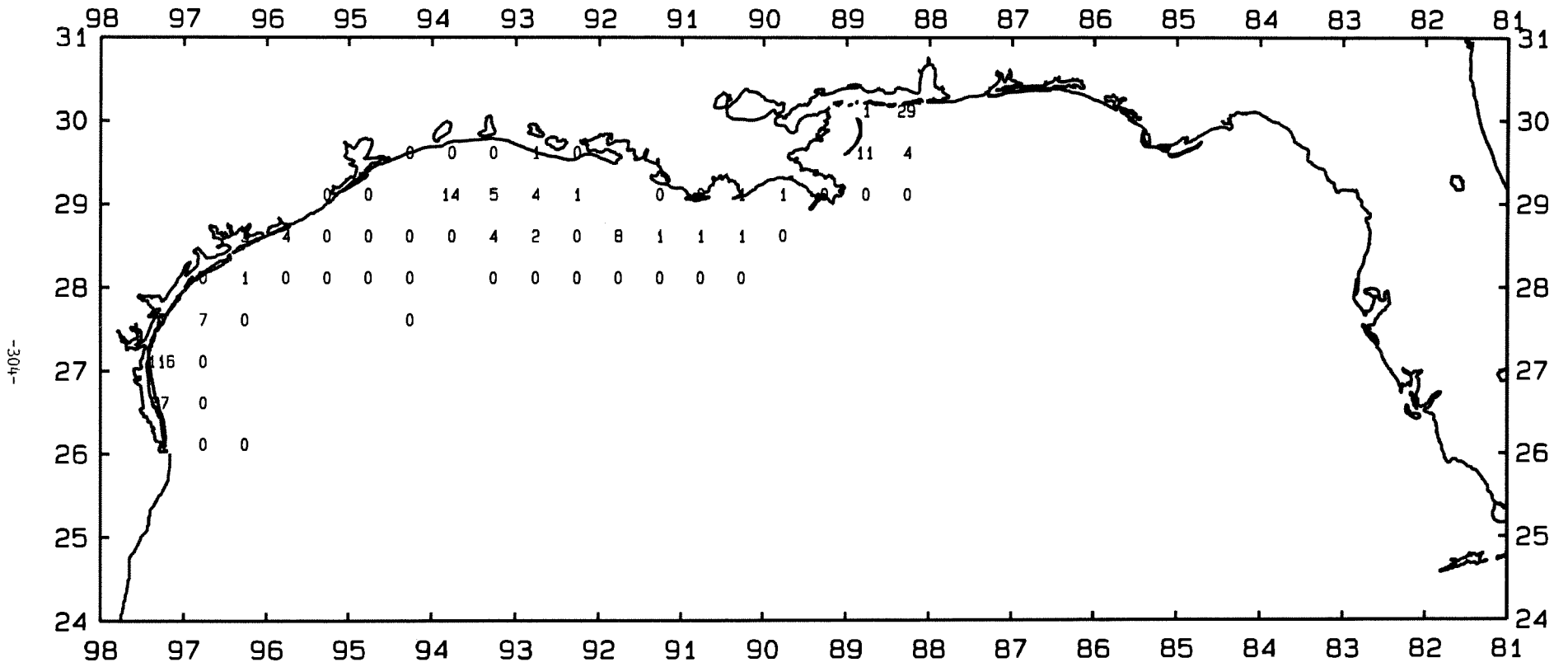


Figure 85. Pink shrimp, *Penaeus duorarum*, number/hour for October-December 1991.

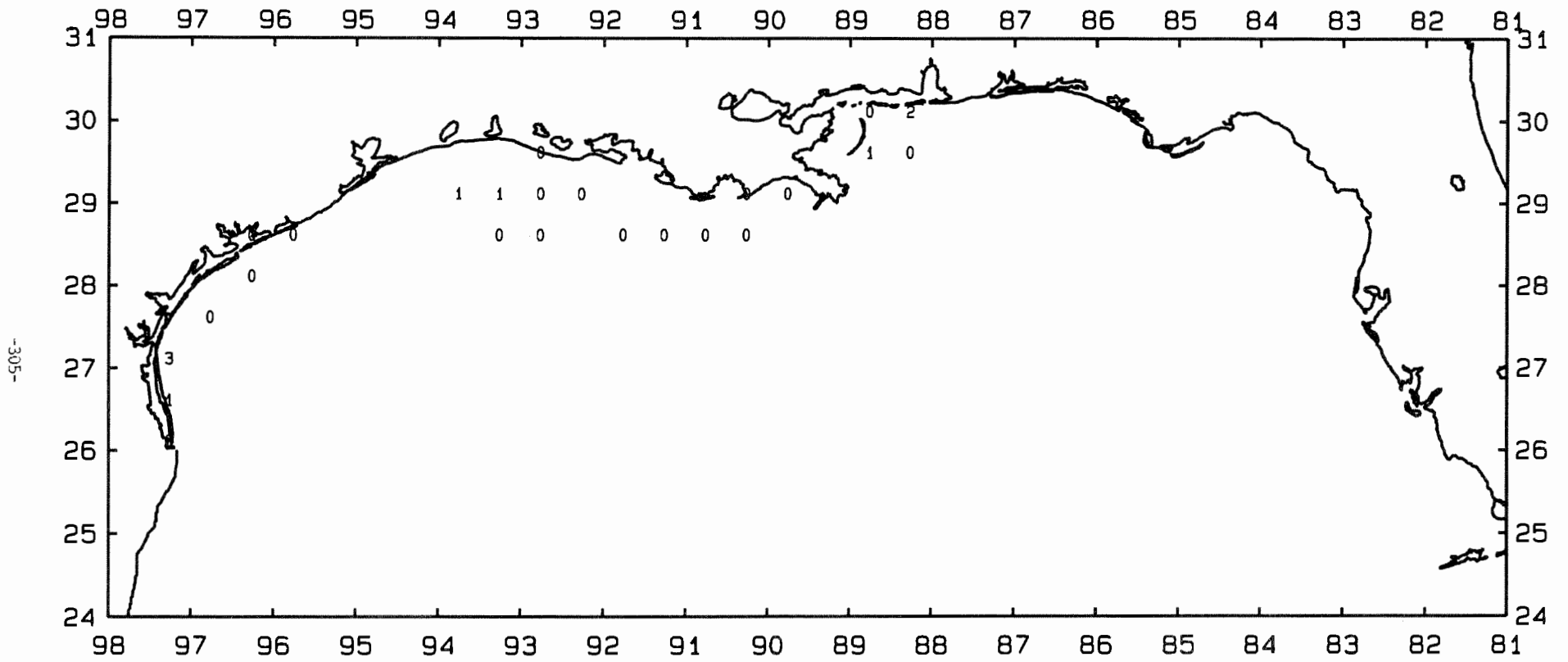


Figure 86. Pink shrimp, *Penaeus duorarum*, lb/hour for October-December 1991.

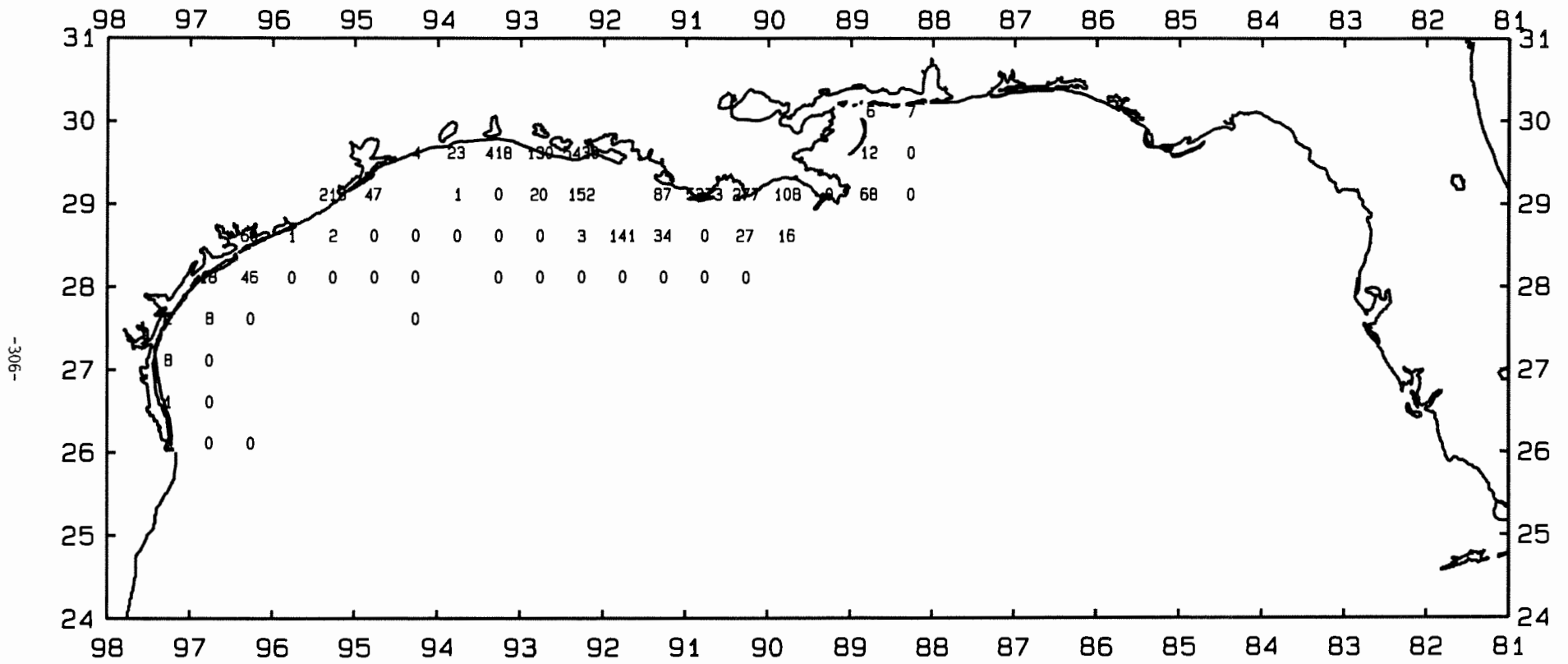


Figure 87. White shrimp, *Penaeus setiferus*, number/hour for October-December 1991.



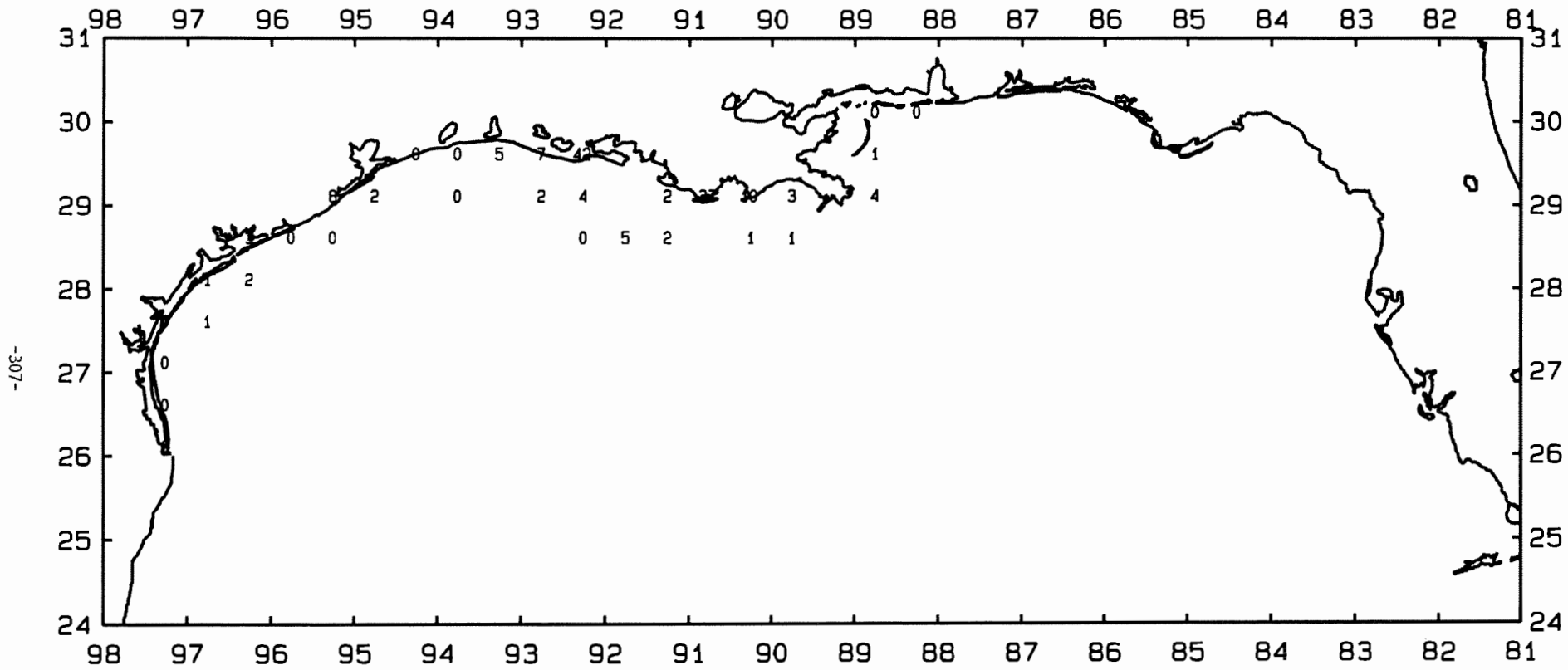


Figure 88. White shrimp, *Penaeus setiferus*, lb/hour for October-December 1991.

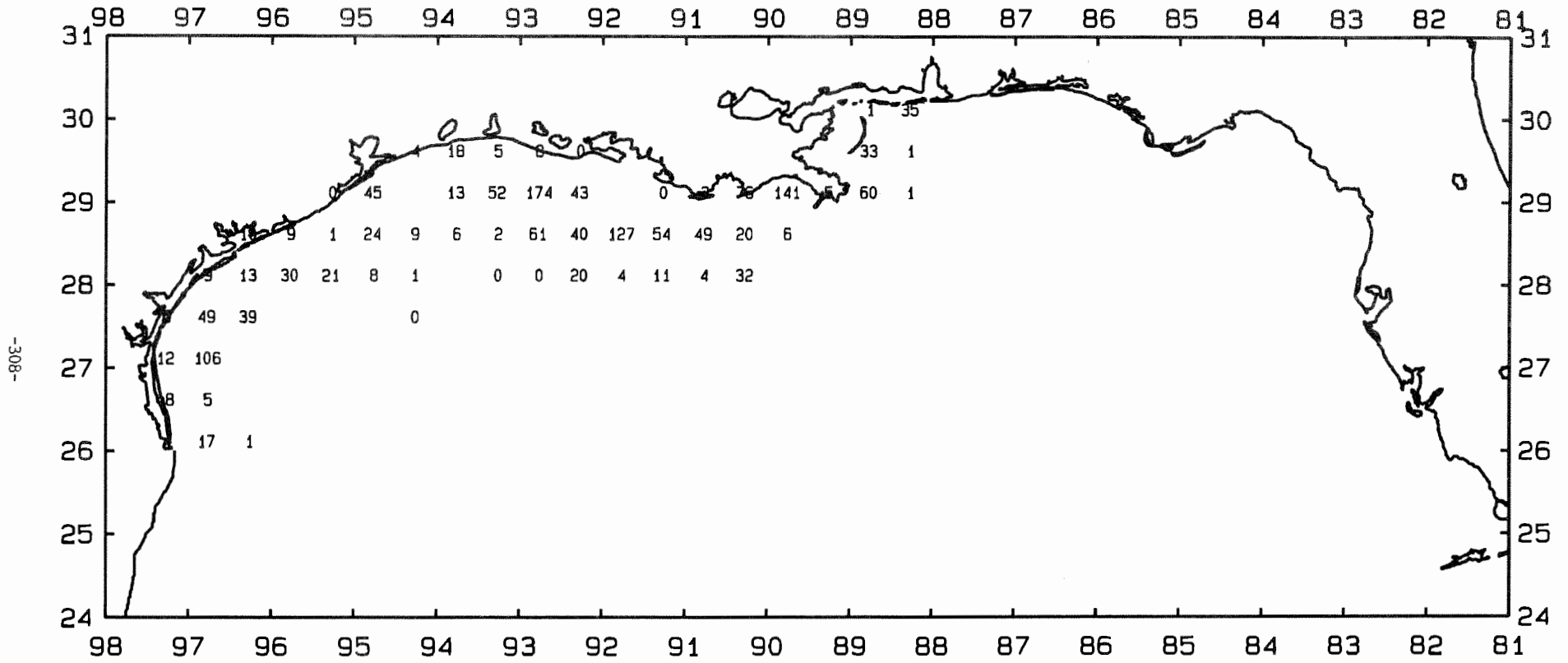


Figure 89. Lesser blue crab, *Callinectes similis*, number/hour for October-December 1991.

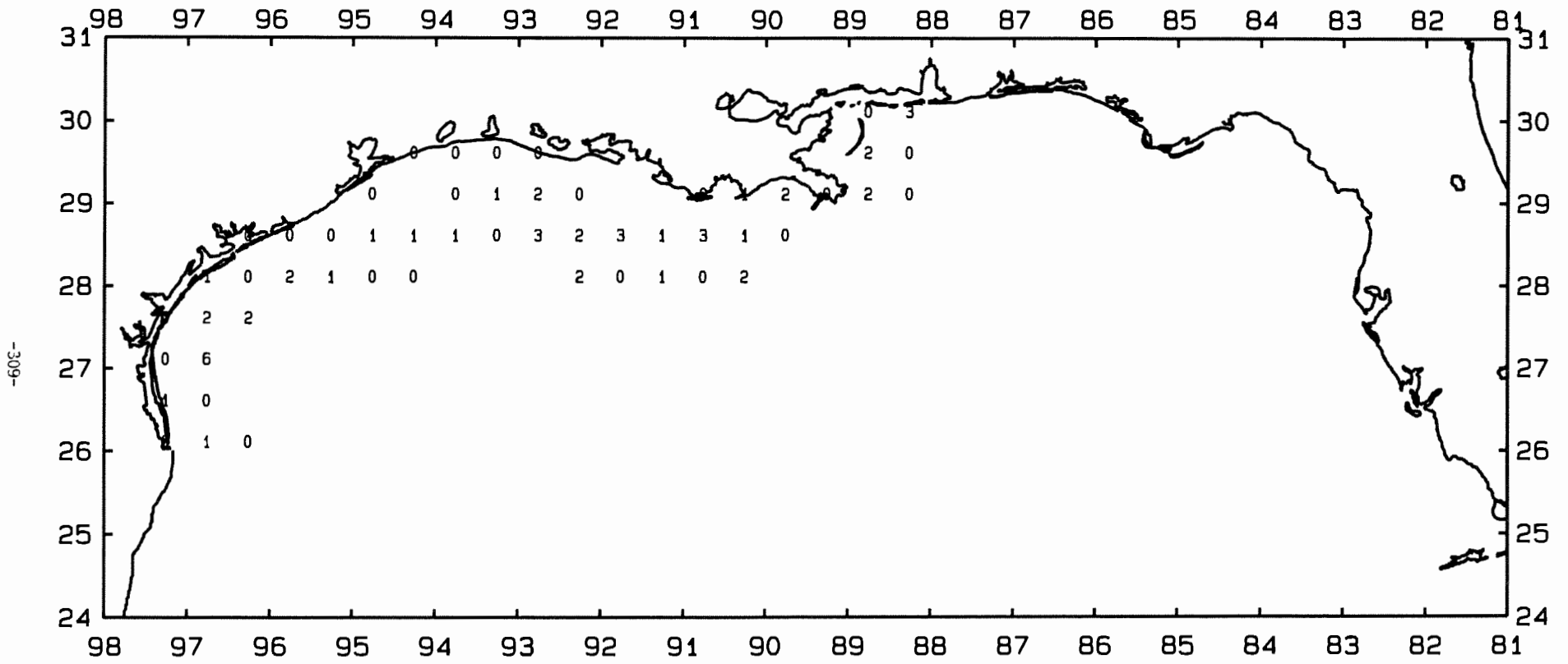


Figure 90. Lesser blue crab, *Callinectes similis*, lb/hour for October-December 1991.

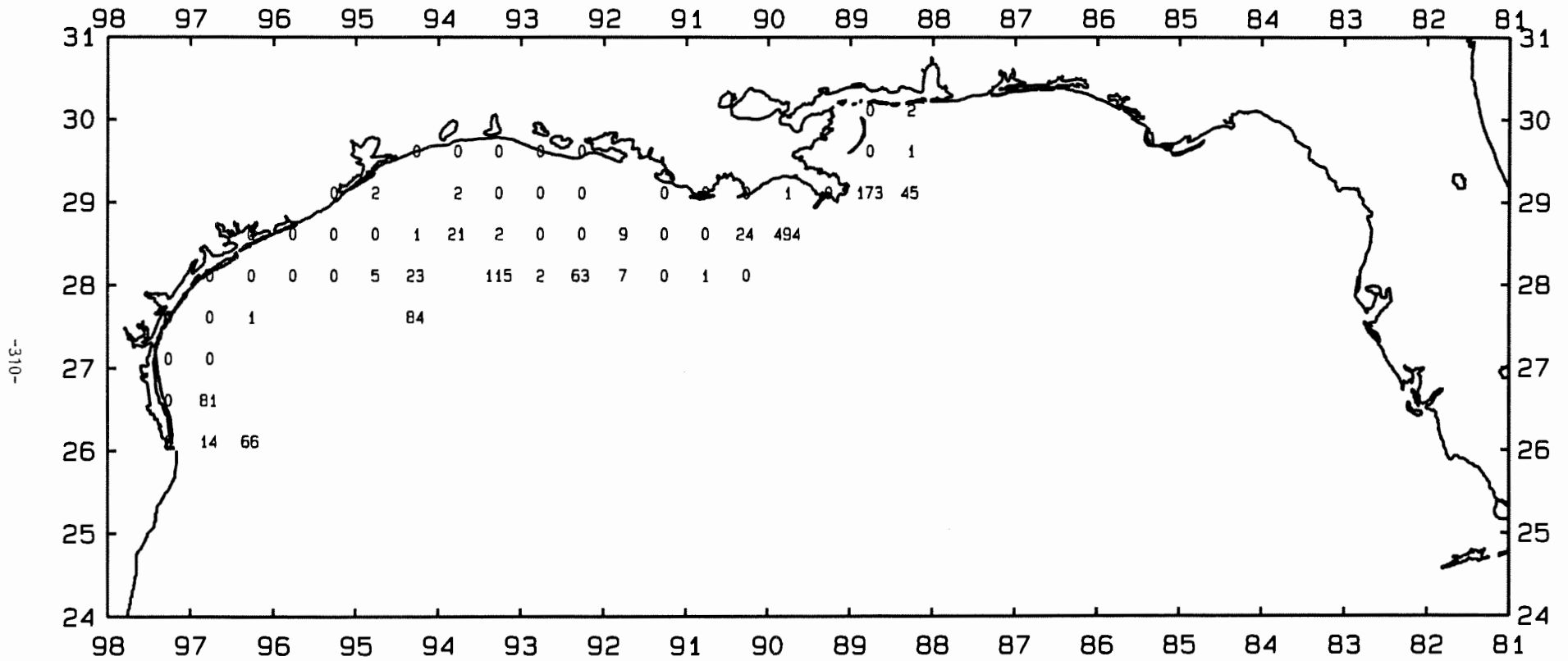


Figure 91. Longspine swimming crab, *Portunus spinicarpus*, number/hour for October-December 1991.

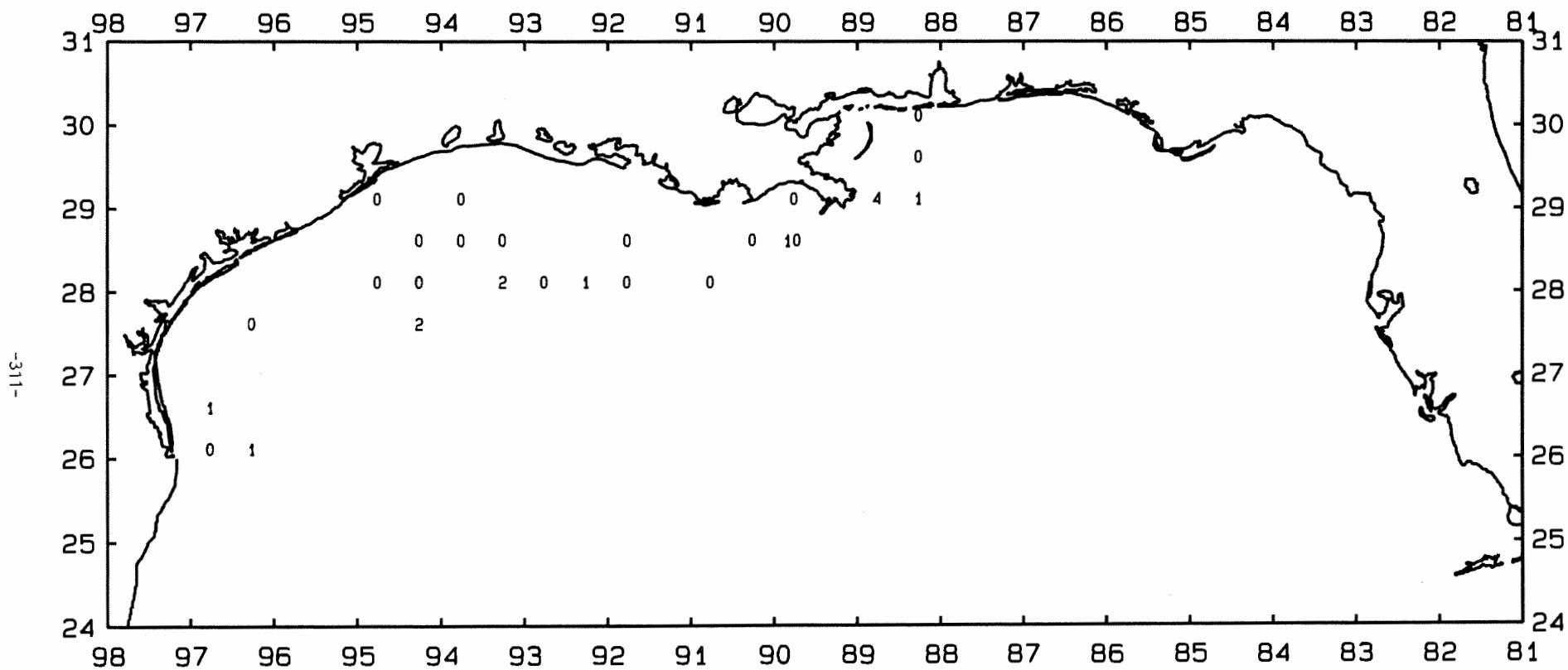


Figure 92. Longspine swimming crab, *Portunus spinicarpus*, number/hour for October-December 1991.

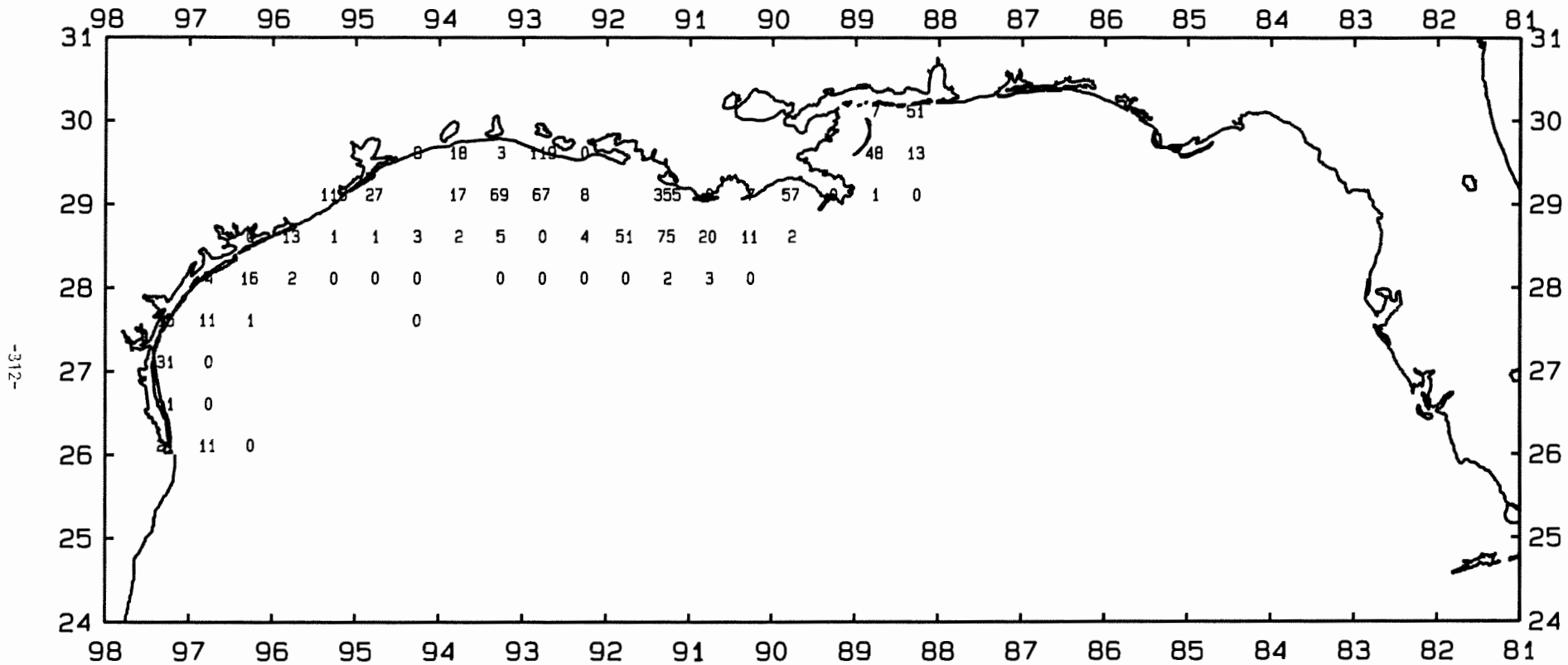


Figure 93. Iridescent swimming crab, *Portunus gibbesii*, number/hour for October-December 1991.

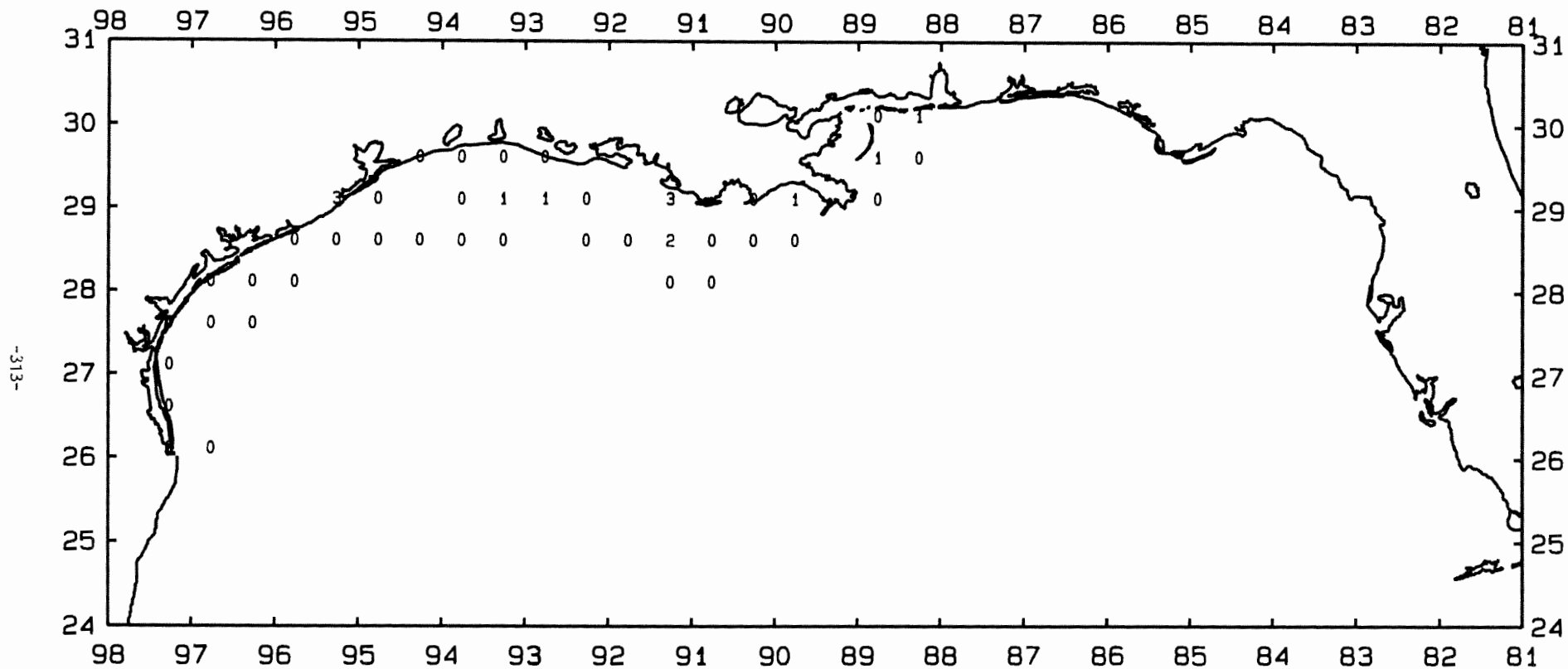


Figure 94. Iridescent swimming crab, *Portunus gibbesii*, lb/hour for October-December 1991.

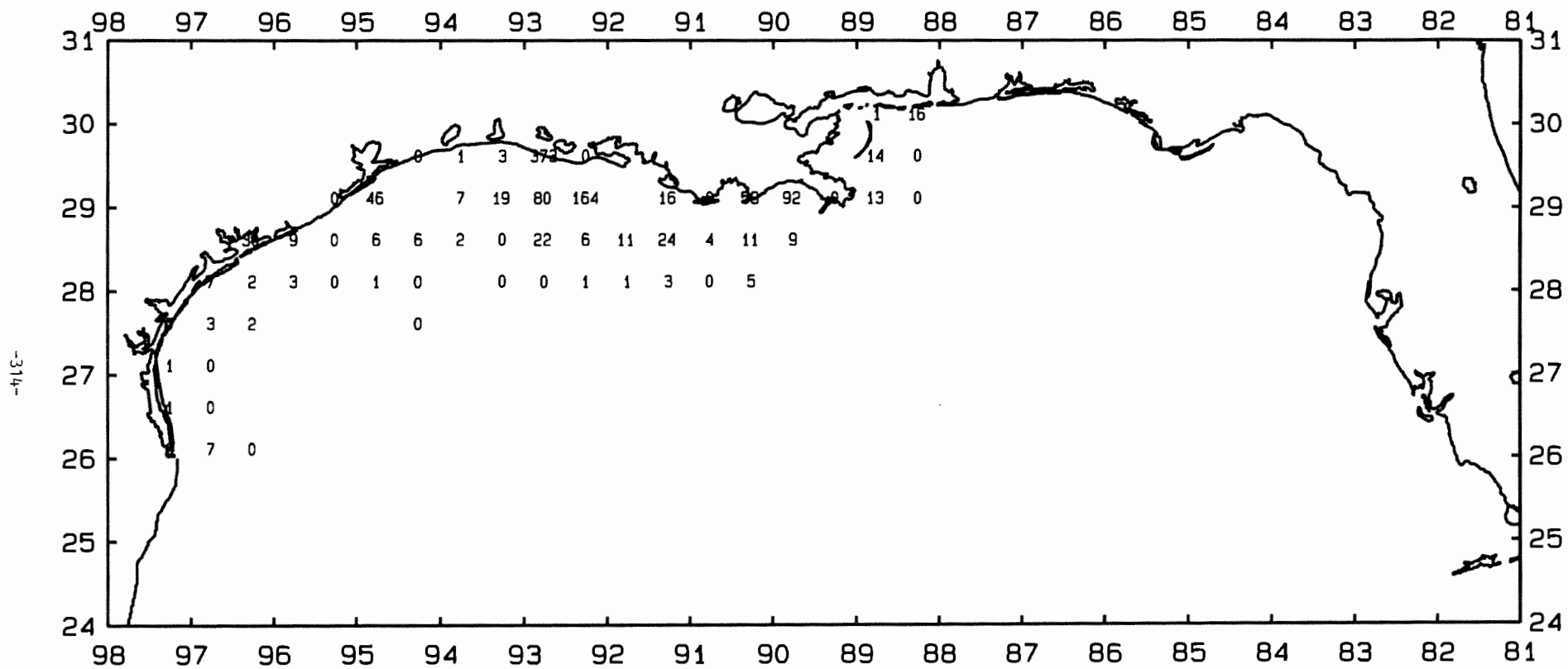


Figure 95. Mantis shrimp, *Squilla empusa*, number/hour for October-December 1991.



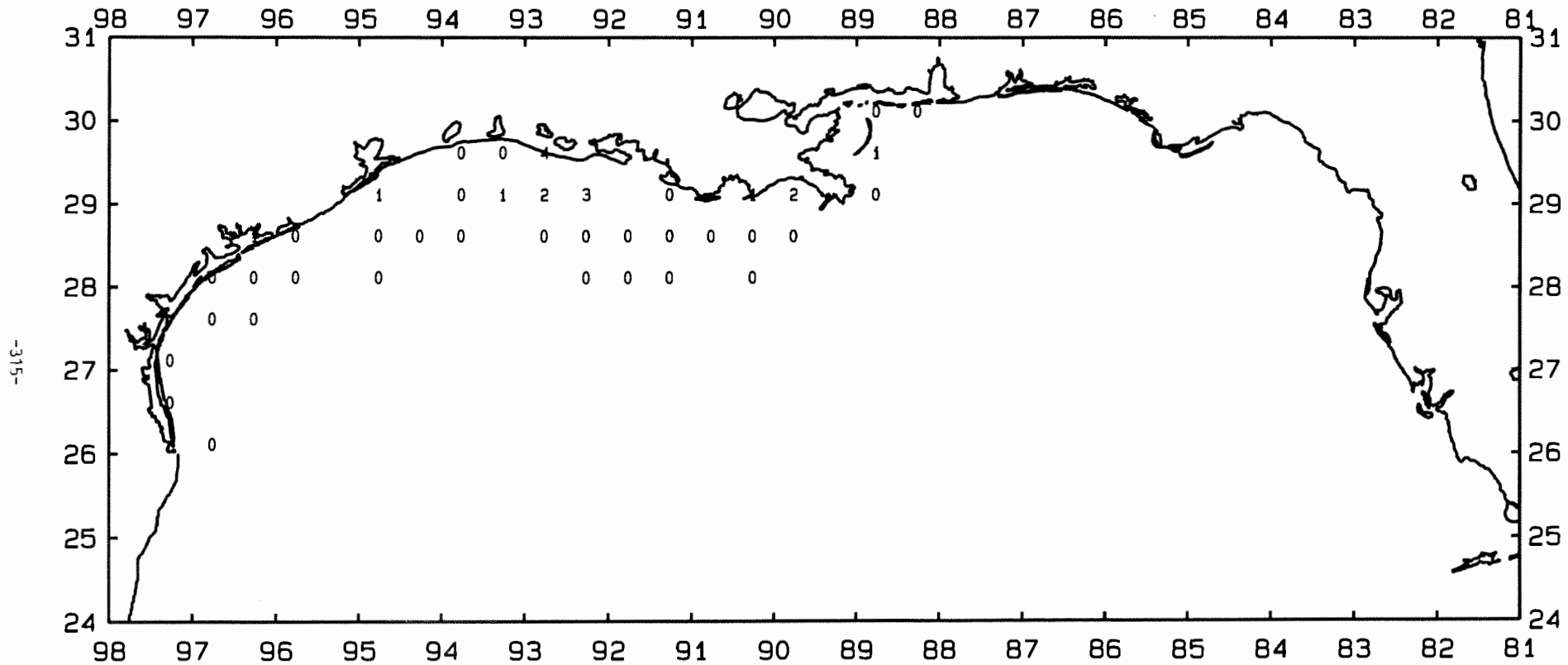


Figure 96. Mantis shrimp, *Squilla empusa*, lb/hour for October-December 1991.

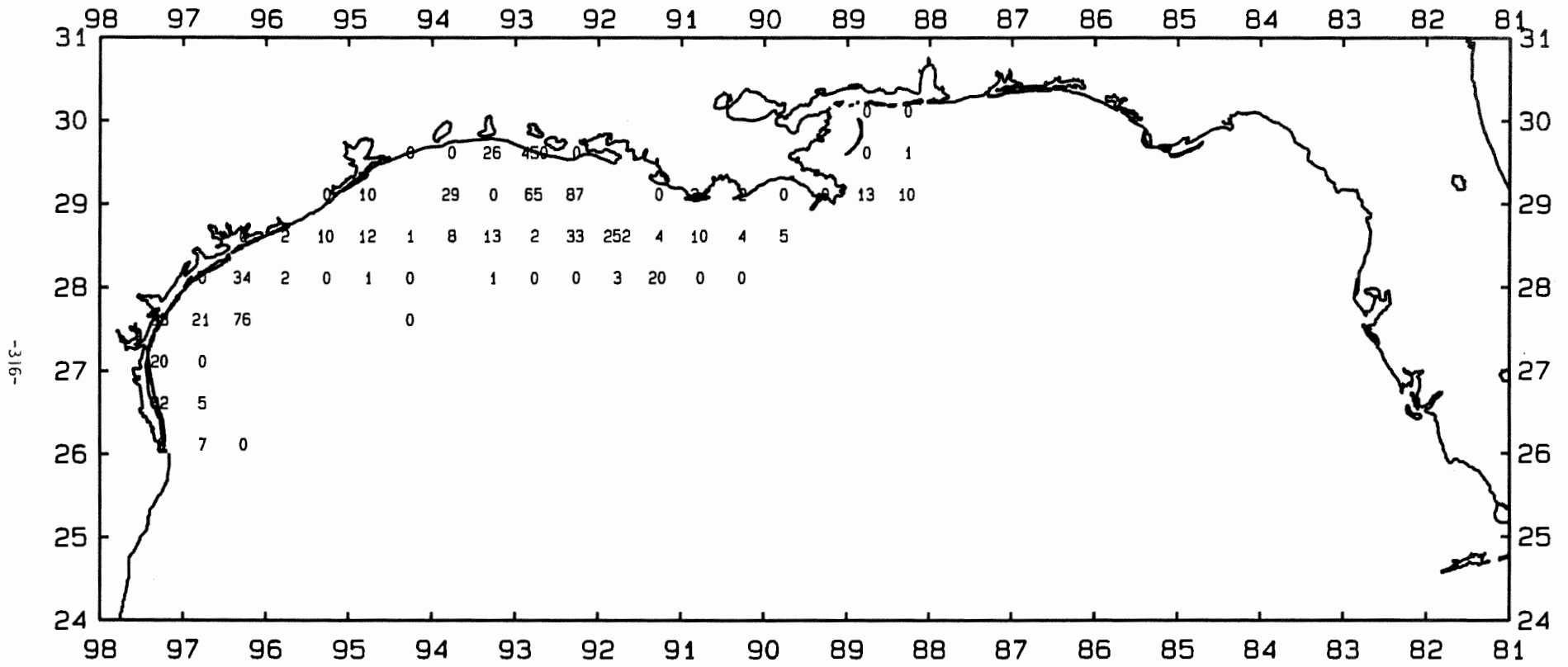


Figure 97. Roughback shrimp, *Trachypenaeus* spp., number/hour for October-December 1991.

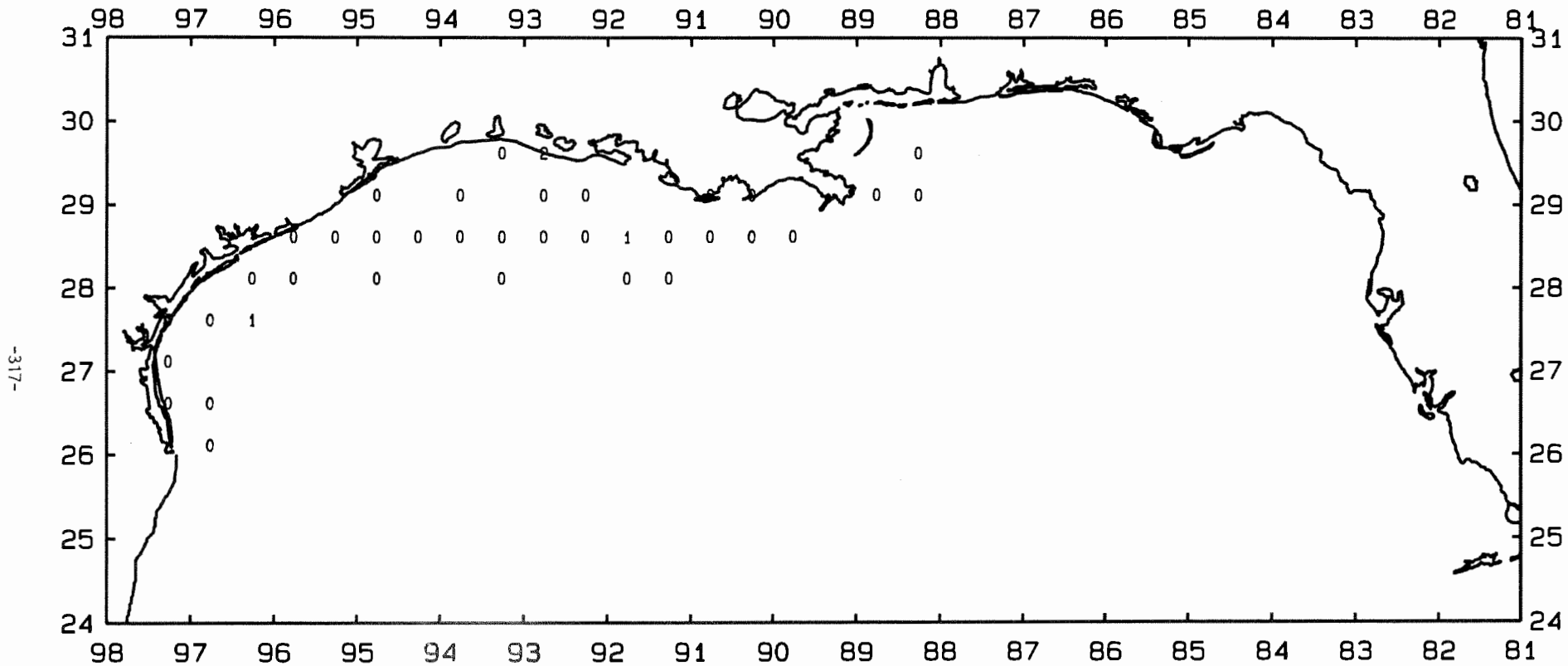


Figure 98. Roughneck shrimp, *Trachypenaeus spp.*, lb/hour for October-December 1991.

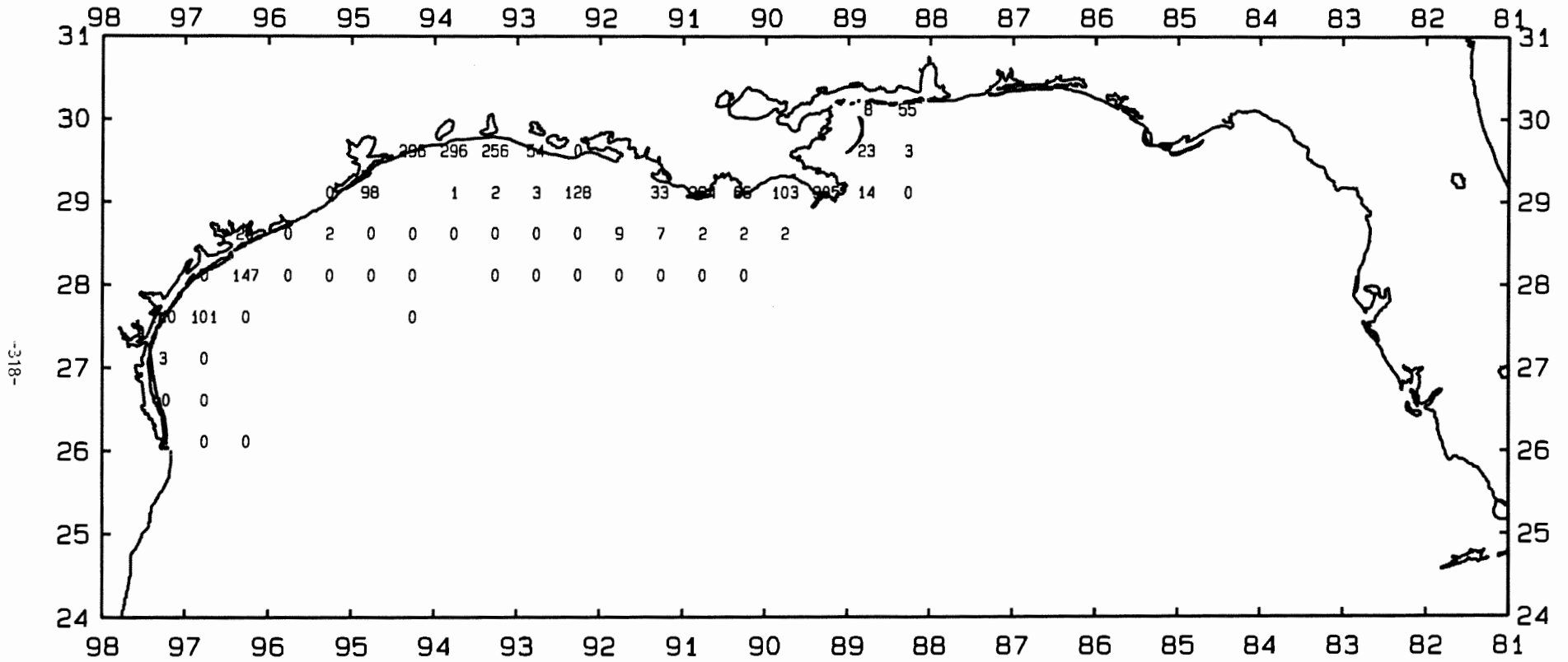


Figure 99. Atlantic brief squid, *Lolliguncula brevis*, number/hour for October-December 1991.

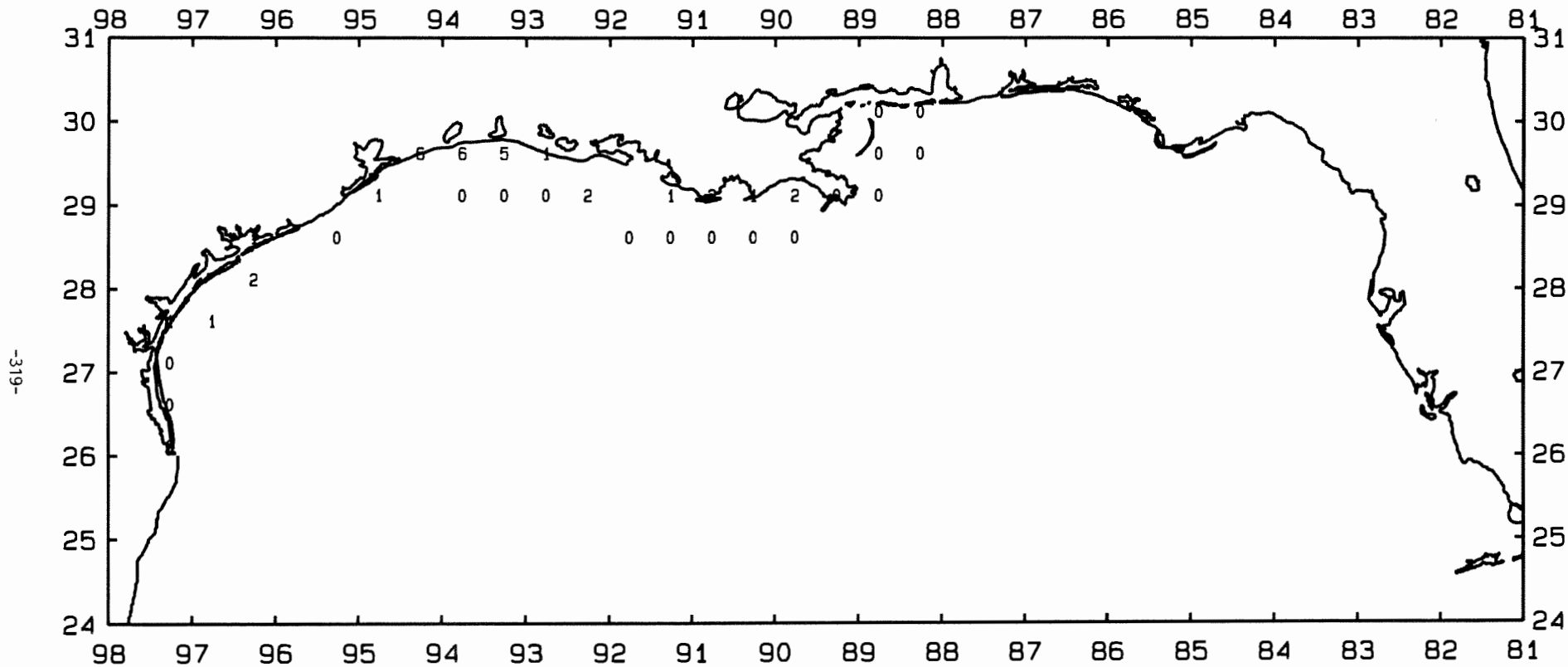


Figure 100. Atlantic brief squid, *Lolliguncula brevis*, lb/hour for October-December 1991.

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