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**Juvenile Finfish and Blue Crab Stock Assessment Program
Bottom Trawl Survey Annual Data Summary Report Series Volume
1993**

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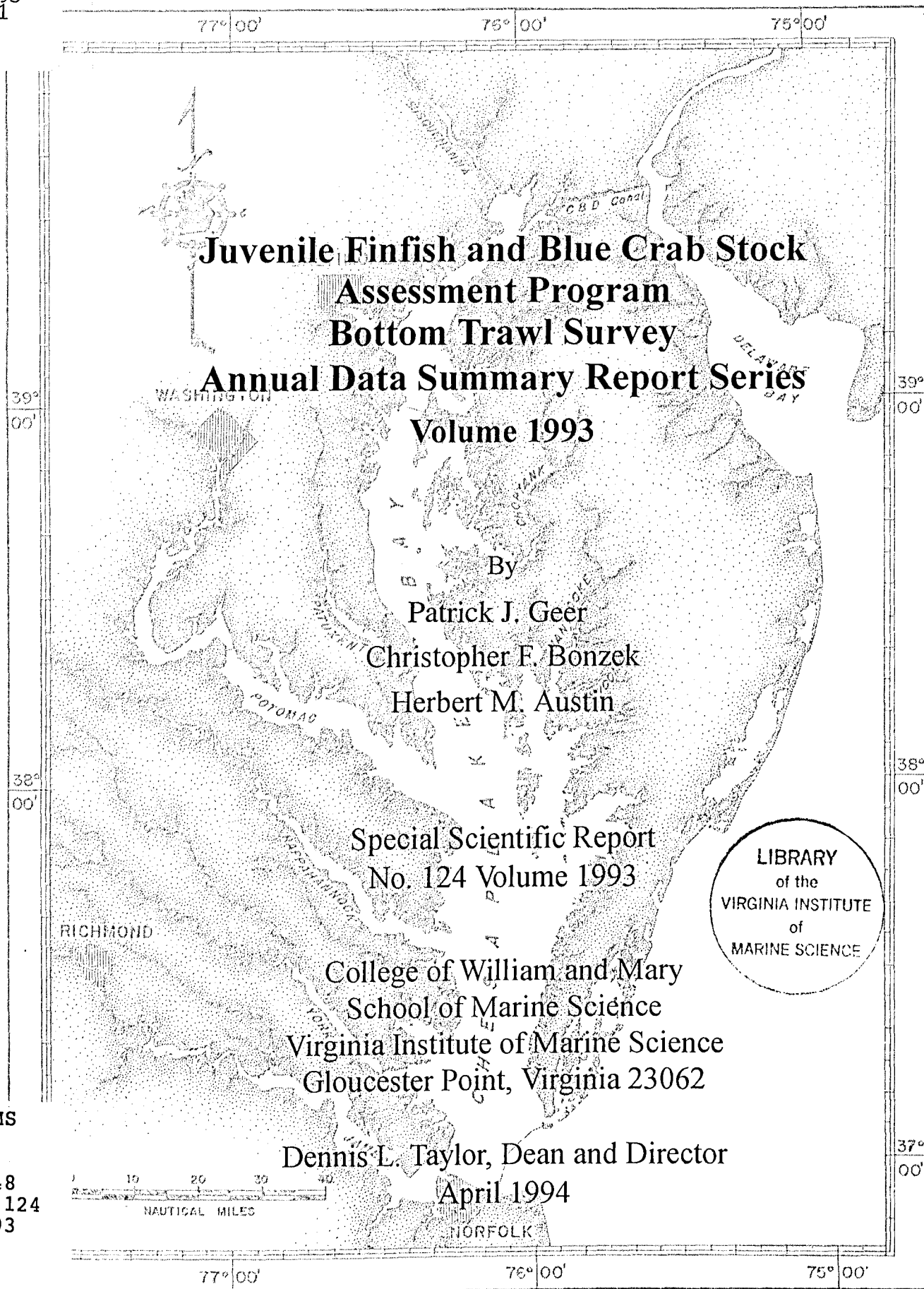


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**Juvenile Finfish and Blue Crab Stock
Assessment Program
Bottom Trawl Survey
Annual Data Summary Report Series
Volume 1993**

By
**Patrick J. Geer
Christopher F. Bonzek
Herbert M. Austin**

**Special Scientific Report
No. 124 Volume 1993**

**College of William and Mary
School of Marine Science
Virginia Institute of Marine Science
Gloucester Point, Virginia 23062**

**Dennis L. Taylor, Dean and Director
April 1994**

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no. 124
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JUVENILE FINFISH AND BLUE CRAB STOCK ASSESSMENT PROGRAM

BOTTOM TRAWL SURVEY

ANNUAL DATA SUMMARY REPORT SERIES

VOLUME 1993

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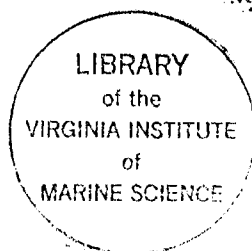


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EXECUTIVE SUMMARY

The Virginia Institute of Marine Science (VIMS) has conducted a trawl survey dating back to 1955. Over these forty years methods and objectives have varied according to funding sources and state and/or federal mandates. The present thrust of the program is to provide juvenile indices of relative abundance for recreationally, commercially, and ecologically important finfish and invertebrates. These measures of juvenile abundance are widely used as a key element in the management of the Atlantic States' coastal fishery resources. Estimates of juveniles (age-0) have been found to provide a reliable and early indicator of future year class strength. A review of previously available indices of juvenile abundance for important fishery resource species of the Chesapeake Bay by the Chesapeake Bay Stock Assessment Committee (CBSAC), a federal/state committee sponsored and funded by the National Oceanic and Atmospheric Administration (NOAA), resulted in the recommendation that, "a unified, consistent trawl program should be one of the primary monitoring tools for finfish and crab stock assessment." (Chesapeake Bay Program Stock Assessment Plan, Chesapeake Executive Council 1988).

There were several notable results in the survey this year. Two groups of invertebrates were officially added to the collection list. The penaeid shrimp are only of minor significance in Chesapeake Bay, but in certain years (1991) their abundance has been high enough to rank in the top twenty species caught. The squid species of the family Loliginidae have been included due to their overall abundance in the main stem bay (ranked 11th overall), Atlantic coast commercial value, and ecological factors. Both these groups of species were collected in past years but on an inconsistent basis. Other results worth mentioning include a large increase in the scup abundance, over six times that of the previous year. Although older summer flounder appeared abundant, there was a substantial decrease in juvenile abundance near the historic low of 1988. The blue crab population continues to be depressed, although catch rates were slightly higher than in recent years. In the tributaries, there has been a marked increase in young-of-the-year (YOY) striped bass and white perch which began in November and continued into the early months of 1994. Atmospherically, 1993 included a mild winter followed by an unusually cool, wet spring. The summer was one of drought conditions and record highs, making it the second hottest summer in recorded history.

The purpose of this summary is to provide an accurate account of trawl survey sampling performed during the calendar year 1993. Previous volumes of this series have served as excellent reference guides to resource managers, scientists, academics, as well as the general public. Since there are other venues which presently detail specific results of these data (Geer et al, 1993), conclusions are kept at a minimum in order to provide the most information in the available space.

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INTRODUCTION

This report summarizes data collected by the Virginia Institute of Marine Science (VIMS) monthly trawl survey cruises for January-December 1993. The trawl survey is a long term, broad scope monitoring program. Its primary goal is to produce annual indices of juvenile (mostly young-of-year) abundance of commercially, recreationally and ecologically important marine and estuarine finfish and invertebrates. The objective is to provide indices of sufficient accuracy and precision for both immediate resource management needs and long-term understanding of environmental influences on fishery resources. A second important product of this effort is the documentation and monitoring of habitat utilization by juveniles and smaller adults of these species. The program also provides a sound framework for the procurement of biological samples for life history studies and other concurrent scientific investigations relevant to fisheries resource management.

In order to facilitate the implementation of such a program, CBSAC has subsequently encouraged and directly supported pilot studies to develop a comprehensive Bay-wide trawl survey. In the Virginia portion of Chesapeake Bay the primary focus of this support was the initiation of a monthly trawl survey of the lower bay beginning January 1988. This greatly expanded the program and directly complimented the monthly trawl surveys of the major Virginia tributaries (James, York and Rappahannock rivers), which began in 1964, 1955 and 1962 respectively. These programs have continued with only slight modifications, mainly the addition of a solely dedicated research platform, the R/V Fish Hawk, in September 1990.

At present the program consists of a monthly random stratified design survey of the lower Chesapeake Bay initiated in 1988 (Chittenden, 1989) and fixed station mid-channel transects in each of the three major Virginia tributaries: the York, James, and Rappahannock rivers (Wojcik and Van Engel, 1988a, 1988b, 1989). The river survey is based upon a sampling program initiated in 1955. Changes in gear type and sampling methods used over the history of the survey are summarized in Figure 1.

The following tables and figures include data for all finfish and selected invertebrates (blue crabs, penaeid shrimp, and squid species) caught during 1993. The shrimp and squid species have been examined inconsistently in the past, with 1993 being the first year specimens have routinely been processed. The squid species include those of the family Lologinidae and consist mainly of long-finned squid, *Loligo pealei*, with a few brief squid, *Lolliguncula brevis*. Data are also presented showing station locations, atmospheric and hydrographic data collected at each station.

METHODS

All sampling was performed aboard the research vessel FISH HAWK. The sampling gear was a 30' semi-balloon otter trawl (Marinovich Gulf Shrimp Trawl) with 1½" stretch mesh body, a ¼" mesh cod end liner, attached tickler chain, 60' bridle length, and a 3:1 warp, using steel china-v doors (28" x 19"). The tow duration was five minutes bottom time at a speed of approximately 2½ knots. A sample day was defined as the period between sunrise and sunset.

At each station, station identification, beginning and ending latitude and longitude, depth, tidal stage, secchi depth, tow direction (upstream vs. downstream and relative to current), beginning and ending time, tow duration, air temperature, wind direction, wind speed, weather conditions, and sea state were recorded. Surface and bottom hydrographic data (temperature, salinity, and dissolved oxygen), were recorded immediately following the tow at a depth consistent with that of the trawling depth. Onboard processing of catches involved separating them according to species, and measuring individual lengths (to the nearest millimeter). For fish species, all lengths were taken as fork lengths unless no fork was present for a given species, in which case total length was measured. For blue crabs, point-to-point carapace width was measured (called long carapace width), the penaeid shrimp were measured for total length while the squid species were measured for mantle length. These data were entered directly into computer files using electronic measuring boards. Subsampling was performed when large homogeneous catches of a species were made. On these occasions, a subsampling protocol was followed with enumeration of the discarded sample taking priority over subsampling by volume. When subsampling was performed by volume the total weights of the discarded sample and of the subsample were taken and the individual fish in the subsample were enumerated and measured. Average weight per fish was then estimated from the subsample (total subsample weight ÷ total subsample number). Number of fish in the discarded catch was estimated by dividing total discarded weight by calculated average weight. Station and environmental data were recorded first on paper and later transferred to the computer database. A sample data sheet appears in Appendix A.

Chesapeake Bay Survey

The sampling design in the main stem bay was based on stratification by latitude and water depth. The bay was latitudinally divided into four 15 minute blocks (segments) labeled bottom (below 37°10'N), lower (37°10'-37°25'N), upper (37°25'-37°40'N), and top (above 37°40'N). Within each segment, depth strata were defined as eastern shore shoal areas (12-30 ft), western shore shoal areas (12-30 ft), plain areas (30-42 ft), and deep areas (>42 ft), resulting in a total of 16 strata. A map of the strata appears in Appendix B. The northern most portion of Virginia's waters (i.e. Top Bay) has not been sampled since 1988 because of funding constraints.

Station selection for each cruise was made randomly through use of the National Ocean Survey's Chesapeake Bay bathymetric grid system computerized files. This system contains position and depth records at ¼ mile intervals, the same distance as the average tow length.

Four stations were selected monthly for sampling in each plain stratum and three stations for each deep strata. During warm months (May through November) three stations were sampled in each shoal strata; during cold months (January through April, and December) only two shoal stations were sampled per strata.

Previous cruises have indicated few species occupy the main stem Chesapeake Bay during winter months. With this in mind a combined January/February cruise was conducted for the Bay in 1992 to better allocate our sampling resources. Further investigation indicated no significant difference in abundance for several key species during the months of January through March (Geer, unpublished). As a result a single Bay cruise in February was conducted in 1993 to represent the period from January through March.

River Survey

The fixed mid-channel river stations were defined at approximate 5-mile intervals from the river mouths to approximately the freshwater interface. Generally one tow was made at each station each month. A second tow, opposite in direction, was made at selected *blue crab index stations* during the warm months (May through November). During the cold months additional stations were occupied upstream to extend the range of the survey, enabling better monitoring of some anadromous species.

RESULTS

Catch data in this report represent total numbers caught. Average weight is given for some fish but not for blue crabs. Generally weights were not taken in the field except for subsampling purposes. As weights were only taken on specimens returned to the lab and those specimens tended to be smaller individuals (larger individuals were generally released) the average weights presented in this report (Tables 46-142) are probably biased downward. For some species, representative samples were brought back to the laboratory in order to establish accurate weight estimates and length-weight relationships. The effort to establish length-weight relationships will be expanded in the future so that biomass estimates of the trawl catch can be presented along with abundance estimates.

Figures 2-13 show the locations of the stations occupied each month in 1993. Table 1 shows the codes used for the various hydrographic and atmospheric parameters. The corresponding station information is located in Tables 2-13 (river survey) and Tables 14-23 (bay survey). The hydrographic and atmospheric data for the river survey is found in Tables 24-35, and for the bay in Tables 36-45.

Figures 14-44 geographically illustrate catch by month and station for the predominant species (the 18 most abundant finfish species - historically, three categories of blue crabs, plus other species of interest, arranged alphabetically) over the entire sampling area. These figures provide a helpful synopsis for showing temporal and geographic distribution of these species.

Figures 45-75 provide monthly length-frequency summaries for the above selected species. These graphs and accompanying statistics are useful in separating young of the year from older fish since the age of each fish is not taken. Calendar year is not the optimal way to present such data for species that spawn late in the year, however the figures are presented this way for convenience and consistency.

Catch, catch per unit effort (CPUE), and length statistics for the data pooled from both surveys for the entire year are in Table 46. Similar data for the river survey only, by river, pooled over months is presented in Tables 47-50. Likewise, data for the Chesapeake Bay survey only, by segment, pooled by months is shown in Tables 51-54. Tables 55-102 contain analogous data summaries by month and river for the river trawl survey and Tables 103-142 by month and segment for the Chesapeake Bay survey.

There were several notable results in the survey this year. Reasons for including the squid species in these summaries involved their potential as food source for larger fish species, their predation on larval and small juvenile finfish, and their minor commercial value to the Atlantic coast. Inclusion seems justified since they were the eleventh most abundant species overall, and fourth abundant in the bottom bay segment. Other results worth mentioning include a large increase in the scup abundance, over six times that of the previous year. Although older summer flounder appeared abundant, there was a substantial decrease in juvenile abundance as compared with recent years. Preliminary calculations indicate the juvenile

abundance to be near the historical low set in 1988. The blue crab population continues to be depressed, although catch rates were slightly higher than in recent years. In the tributaries, there has been a marked increase in YOY striped bass and white perch which began in November and continued into the early months of 1994. This observed increase in juvenile abundance is supported by other monitoring programs (Austin et al, 1994).

DISCUSSION

The purpose of this report is to present a quick visual summary of the data collected during the 1993 VIMS trawl survey. A more analytical review of these data for seven target species for 1988-1992 is presented by Geer et al, 1993.

Atmospheric conditions in 1993 included a relatively mild winter, followed by an unusually cool, wet spring. The summer temperatures reached record highs, making it the second hottest summer in over one hundred years. The only major change to sampling methodology involved the single bay cruise in February to represent the period from January to March. There were no changes in the sampling gear. A random stratified experimental survey was continued in the York River, the purpose being to provide comparisons between fixed and random surveys when an eventual switch to all random stations is made. The data for this experimental survey are not presented in this report. More experimental work was conducted comparing catches in present gear configurations to those in gears used in earlier survey years. These data will be used to try to standardize catch rates among gear types and provide a longer reliable time series of juvenile abundances. These comparisons are not presented in this report.

NOTICE

No portion of this report may be used without consent or citation on the Virginia Institute of Marine Science, Trawl Survey Project. For further information contact Chris Bonzek or Patrick Geer at the Virginia Institute of Marine Science, Gloucester Point, Virginia, 23062, Telephone (804) 642-7000, FAX (804) 642-7327.

Figure 1. Sampling system, design, and gear changes for the VIMS trawl survey. 1955-1994.

VIMS Juvenile Fish Trawl Survey

Sampling Changes 1955 - 1994

Tow Type

- D = Duration
- C = Duration and/or Distance

Gear Type

- 10 = 30' Unlined/No Tickler
- 33 = 30' Lined/No Tickler
- 35 = 16' Lined/No Tickler
- 70 = 30' Lined/Tickler

Sampling System

- F = Fixed
- R = Random
- C = Combination

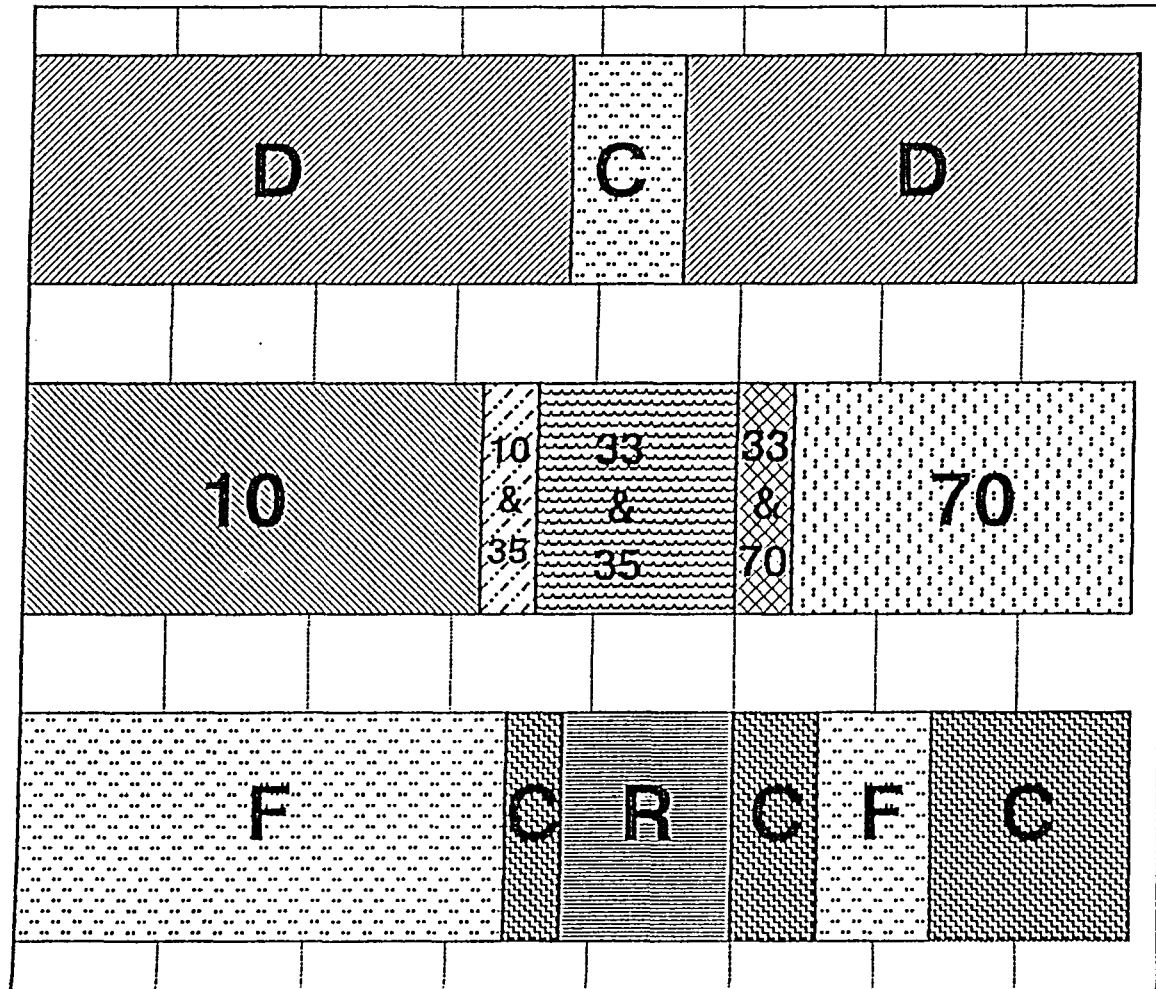


Figure 1.

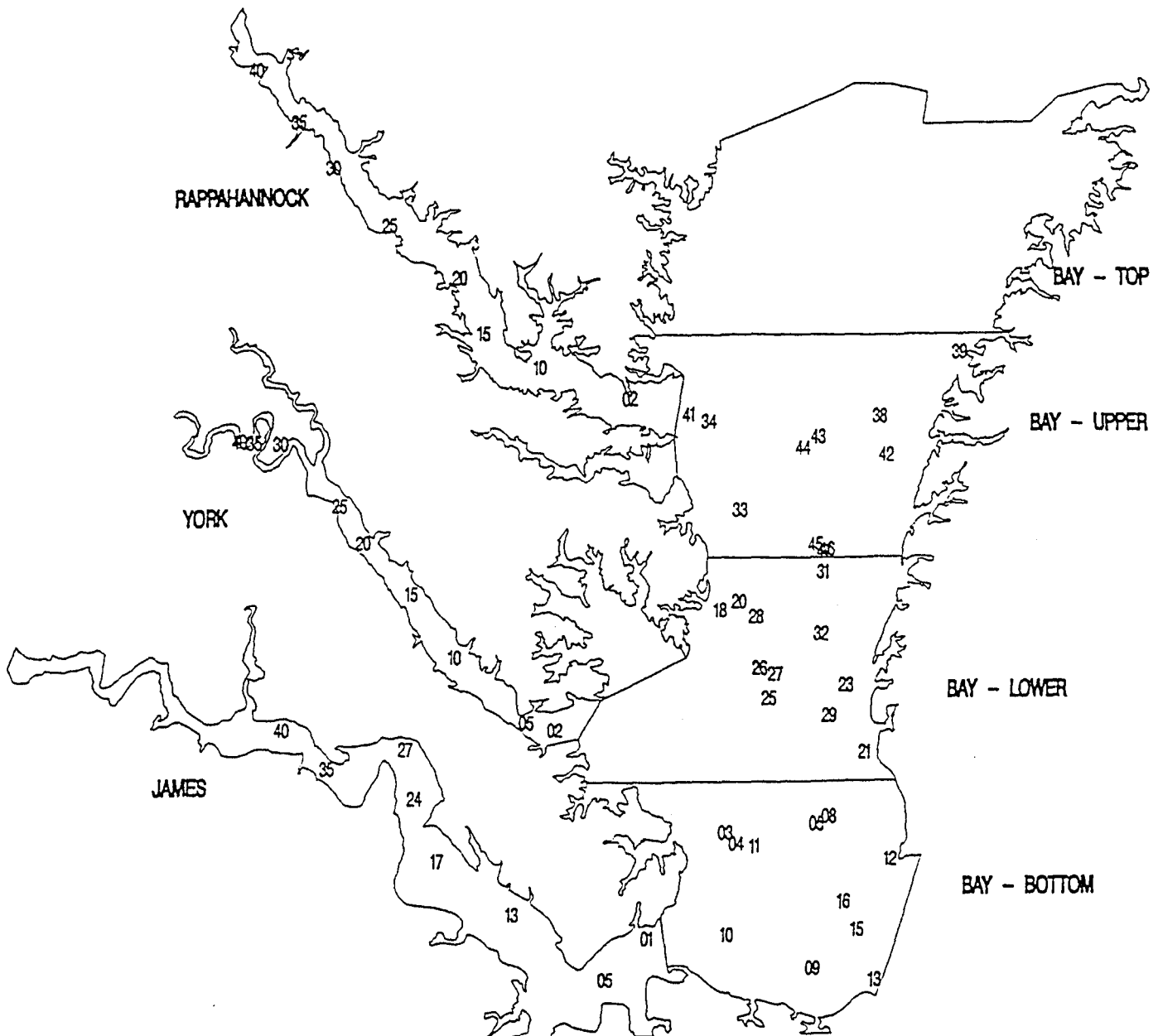
Figures 2-13. Stations sampled in 1993 by month.

Notes:

- A. Due to LORAN distortion at upriver stations and to computer software control of the placement of figures on these maps, the locations shown might vary slightly from the actual stations occupied. For exact coordinates refer to Tables 2-13 (rivers) and 14-23(bay).
- B. A single winter cruise was conducted in February for the Chesapeake Bay during the period from January through March 1993.
- C. Please note there are two stations at both mile 25 and 30 on the Rappahannock in December. This is due to sampling gear damage which forced cancellation of that day's work. It was decided to resample these stations the next day along with the other upriver stations. This was done for purposes of consistency in the juvenile index calculations.

Figure 2.

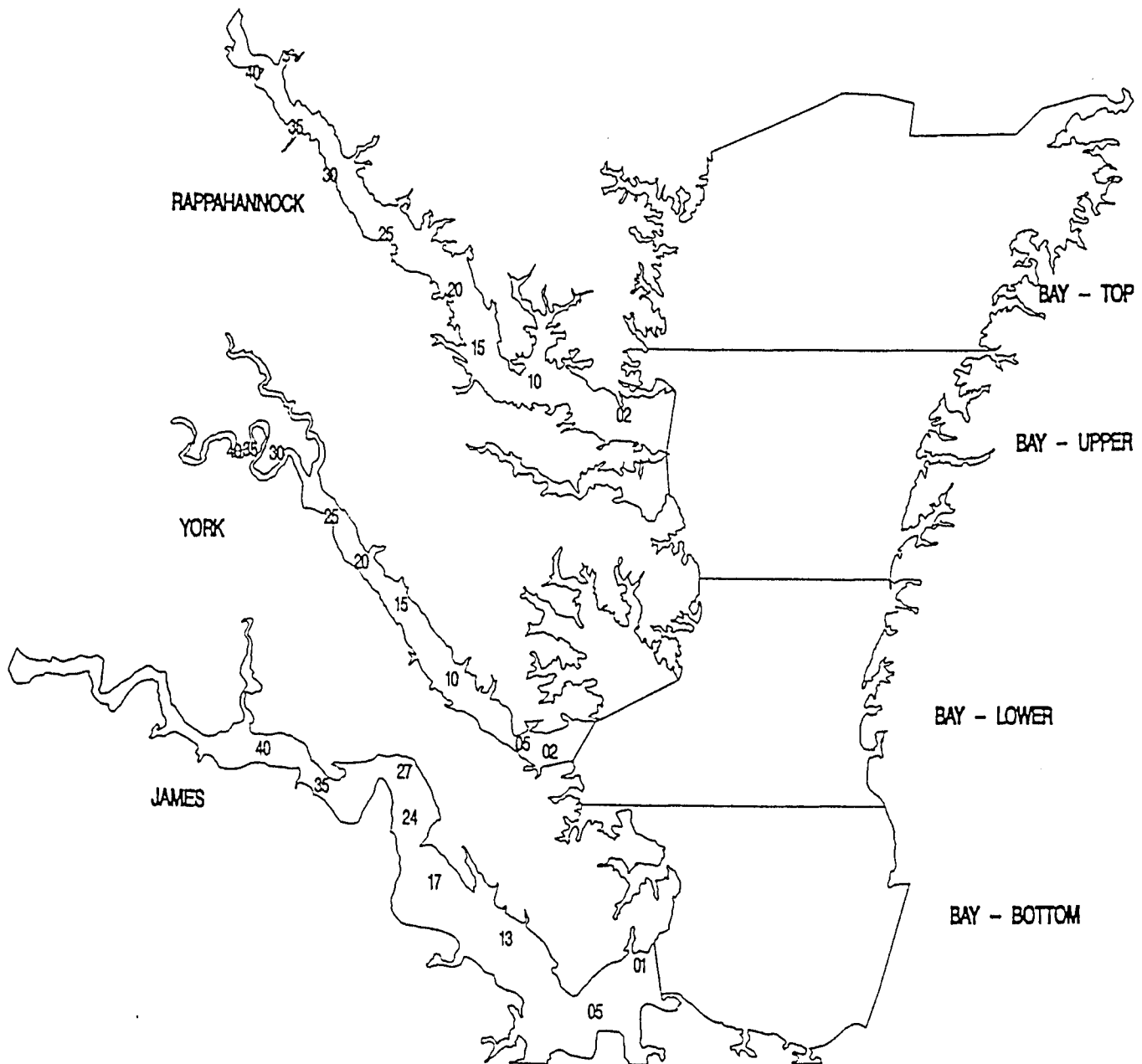
FEBRUARY, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 3.

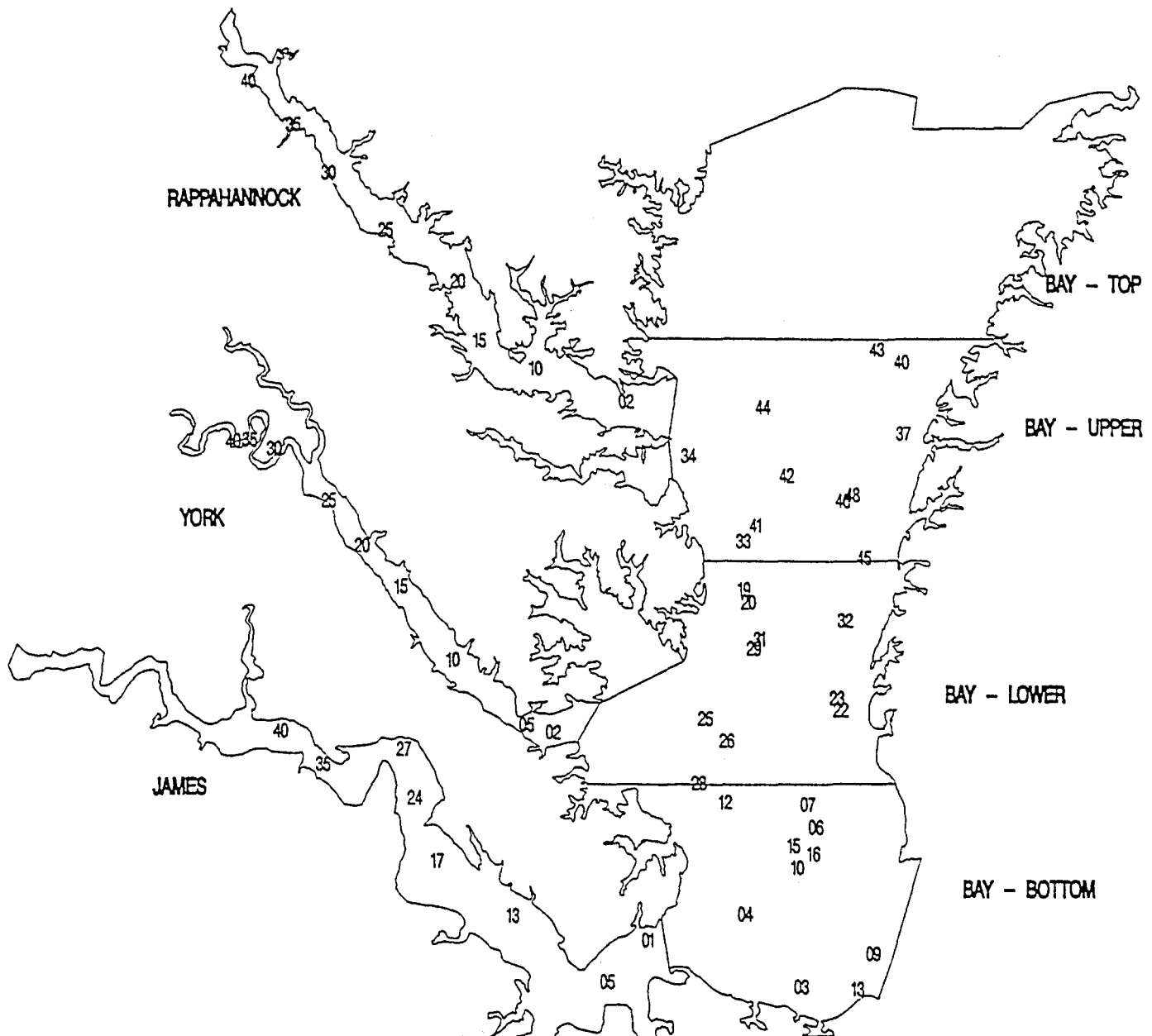
JANUARY, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 4.

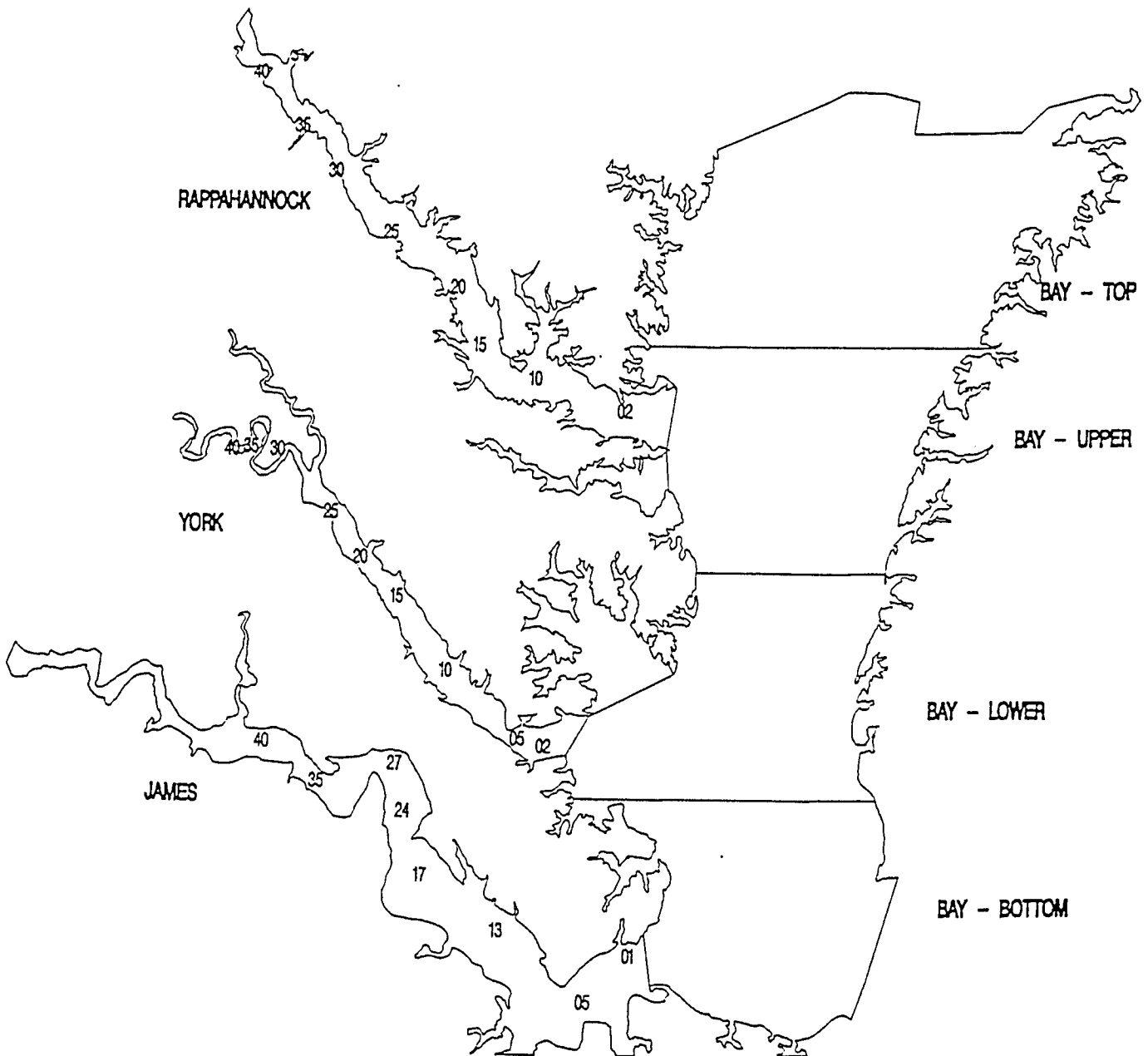
APRIL, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 5.

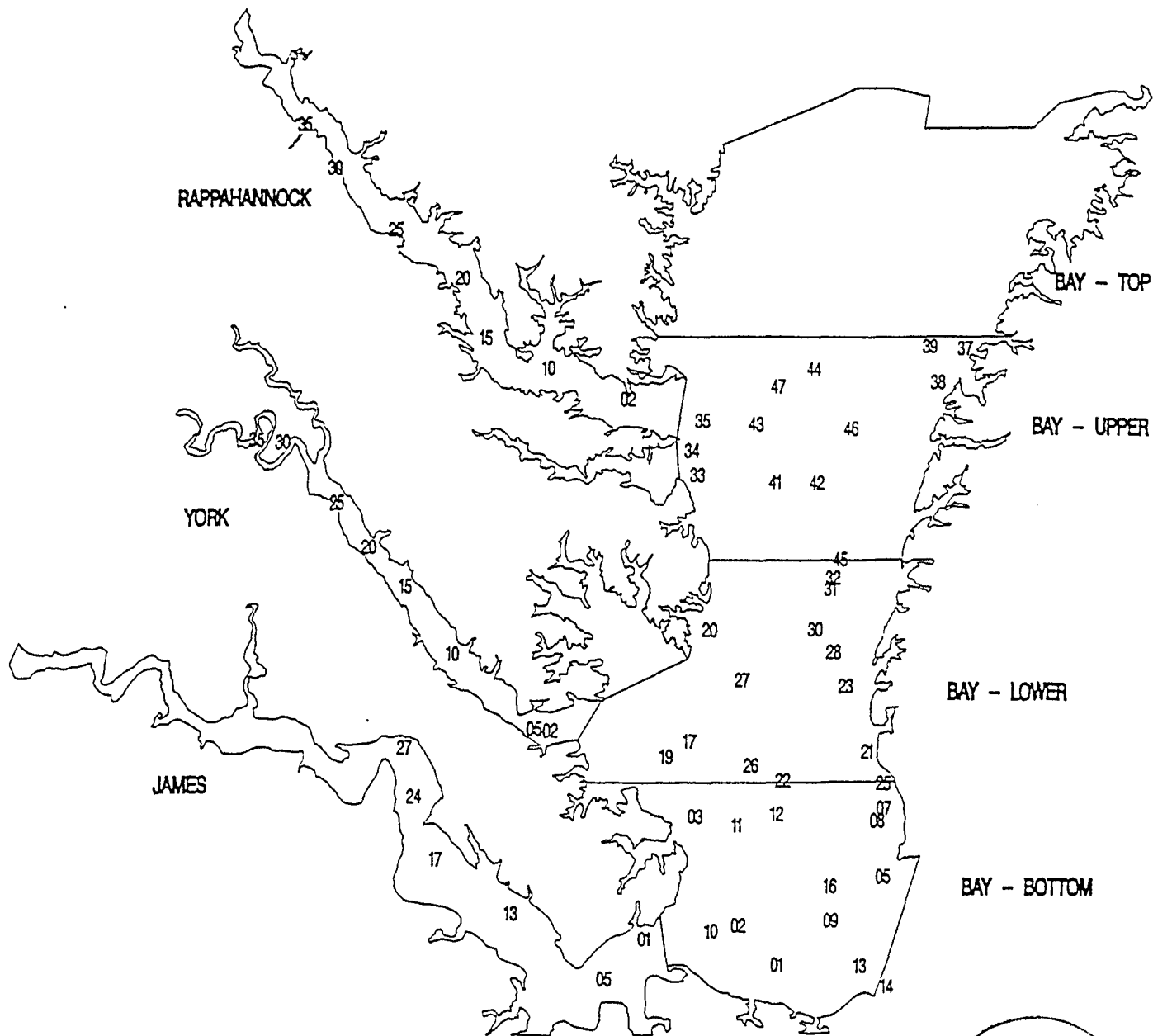
MARCH, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 6.

JUNE, 1993 TRAWL SURVEY STATION LOCATIONS

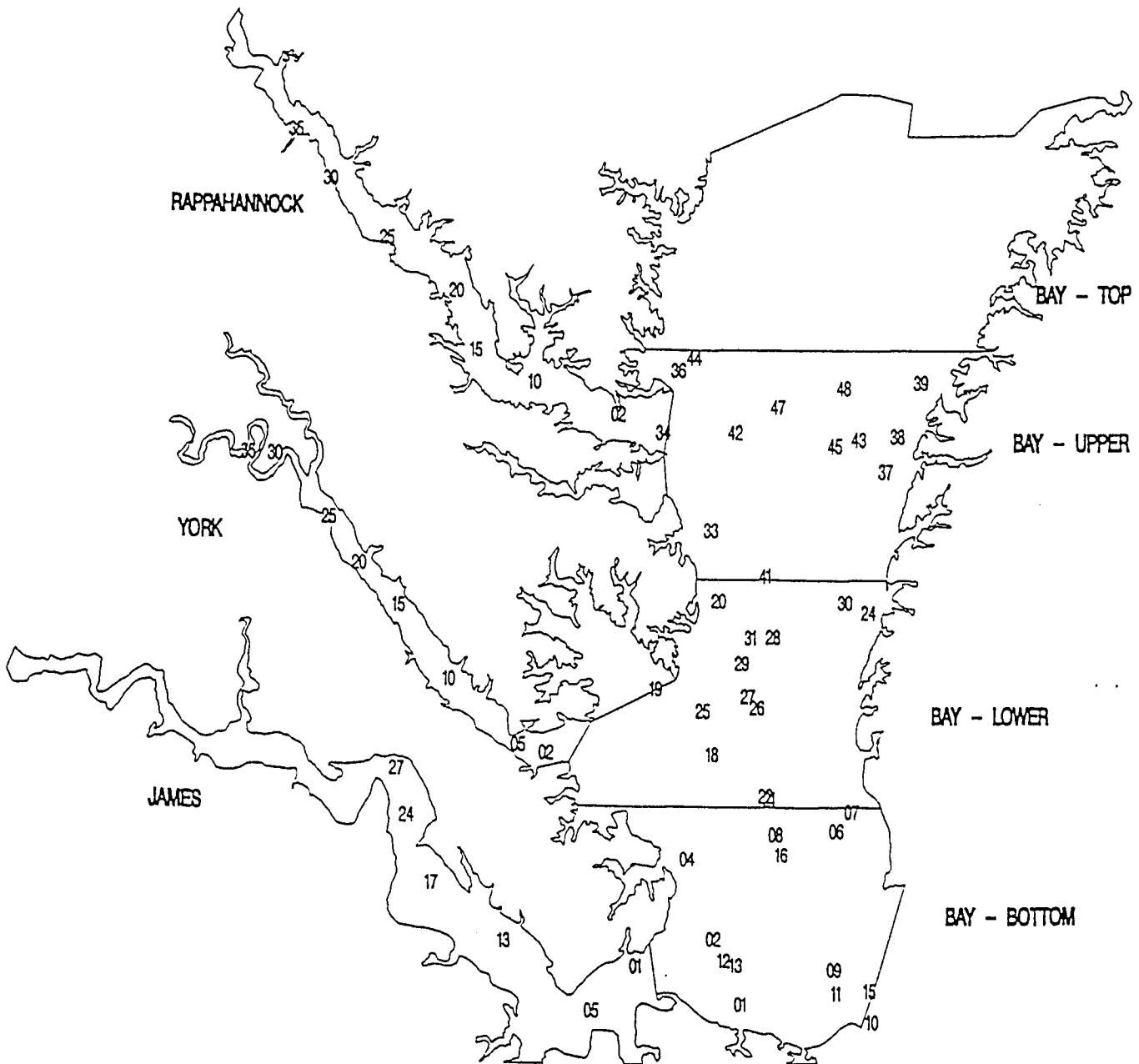


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NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 7.

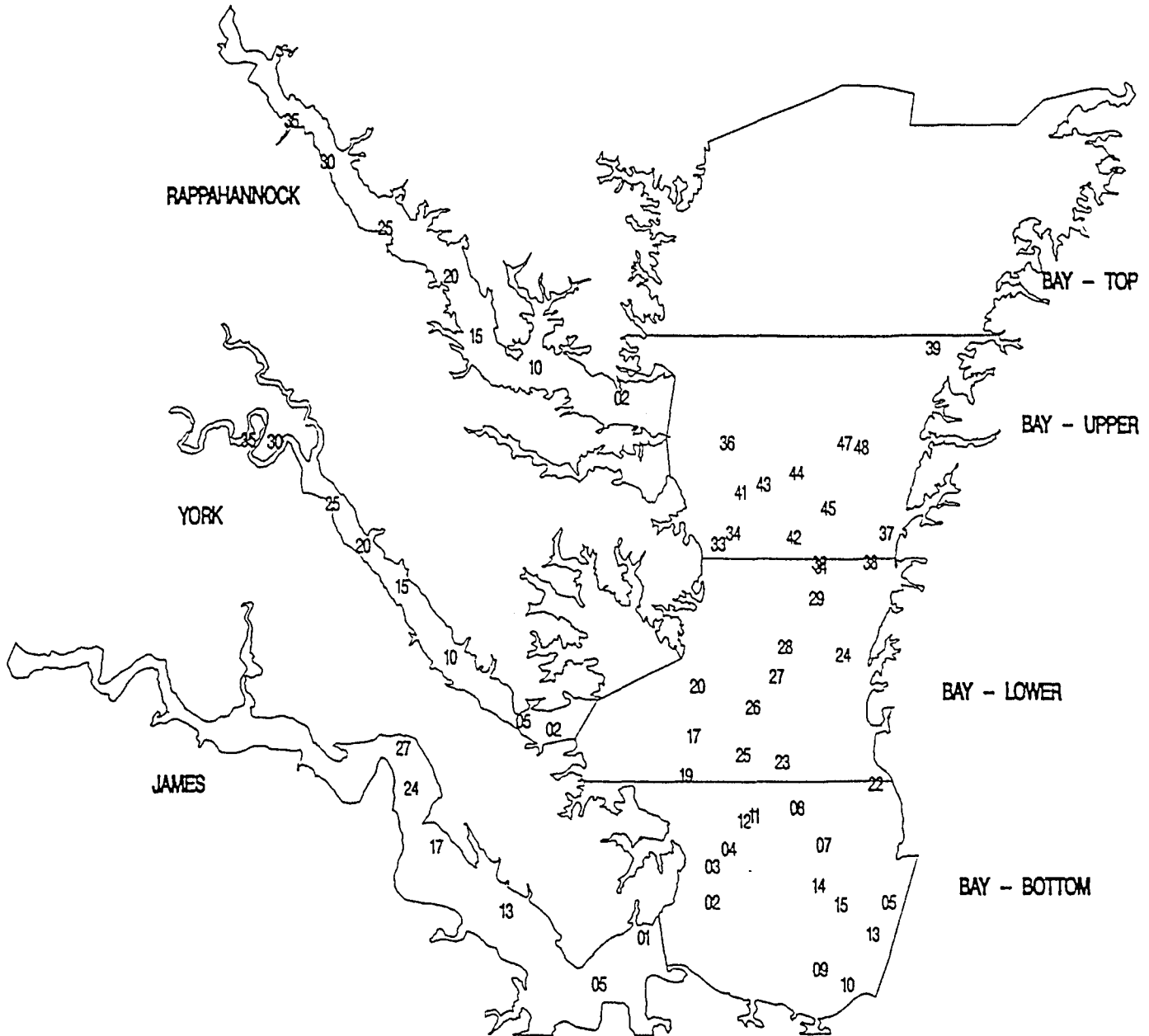
MAY, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 8.

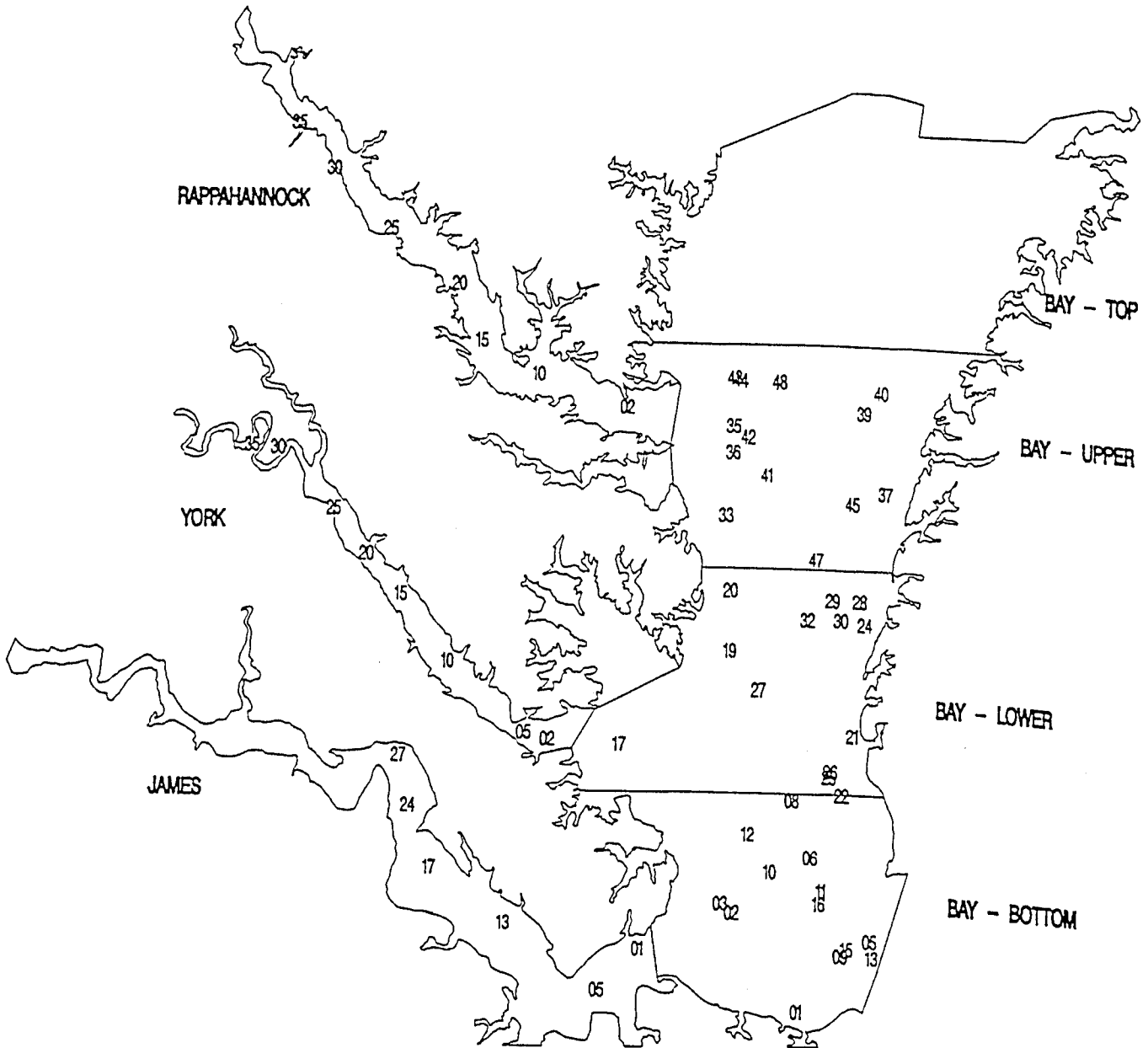
AUGUST, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 9.

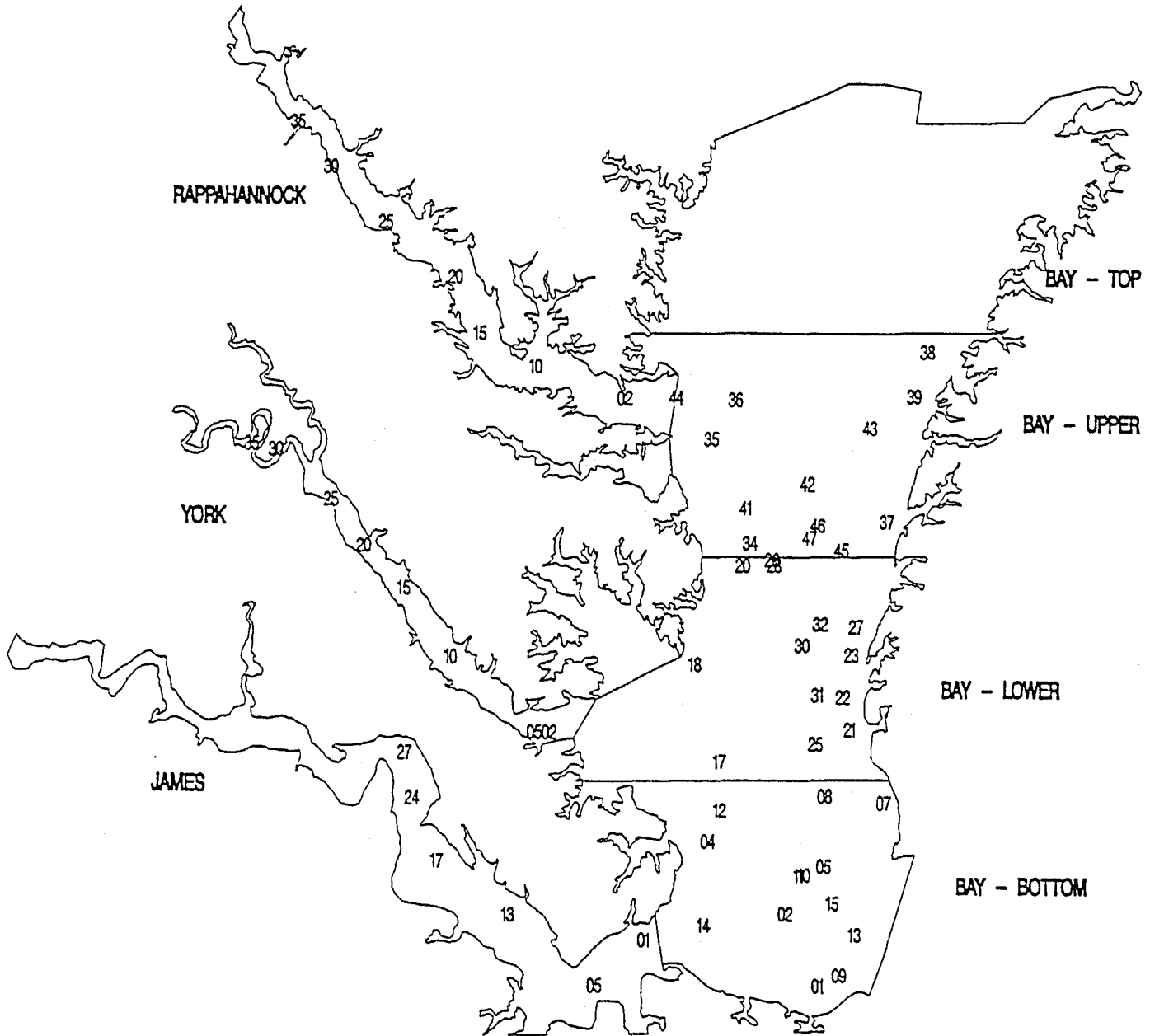
JULY, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 10.

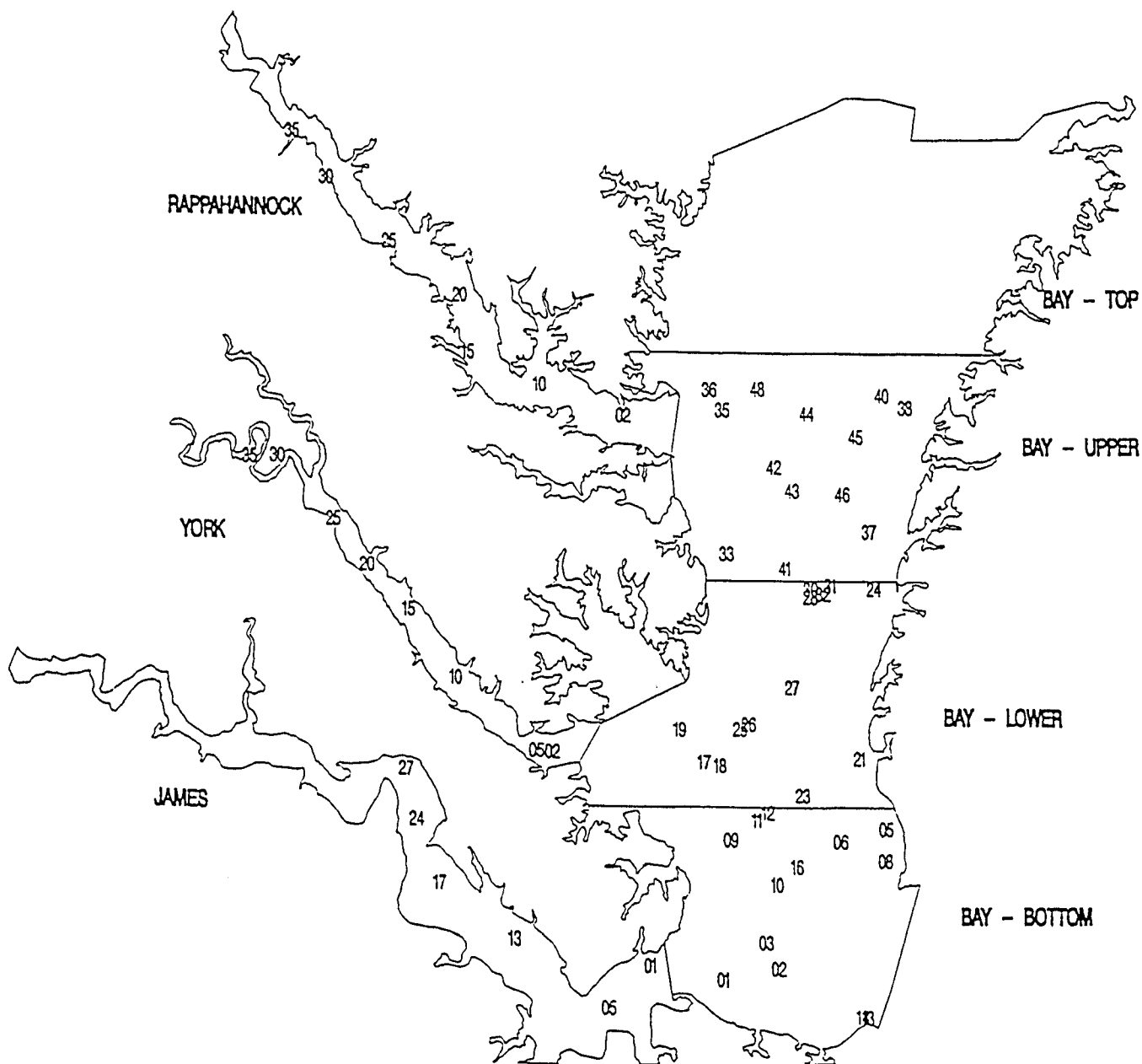
OCTOBER, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 11.

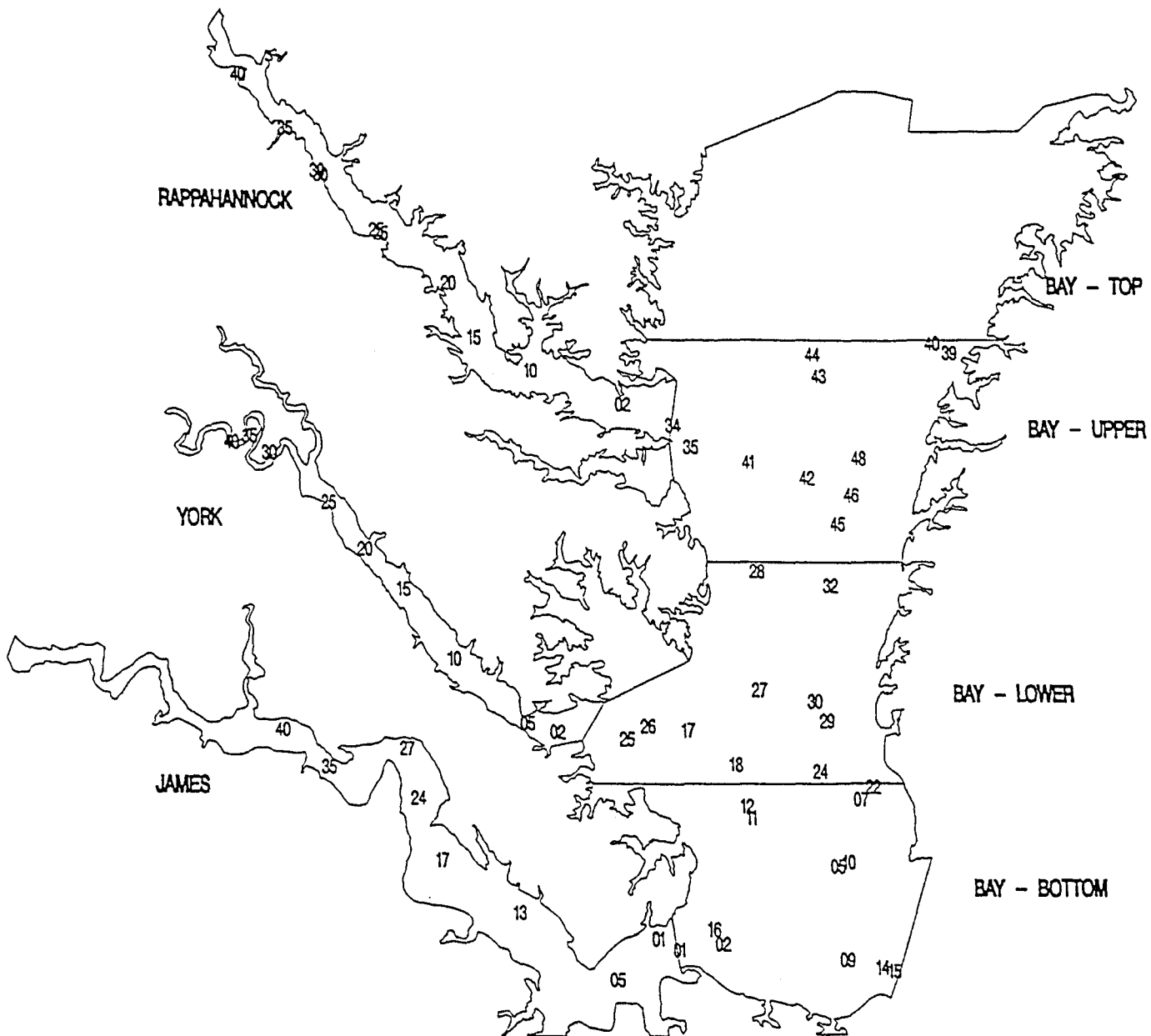
SEPTEMBER, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 12.

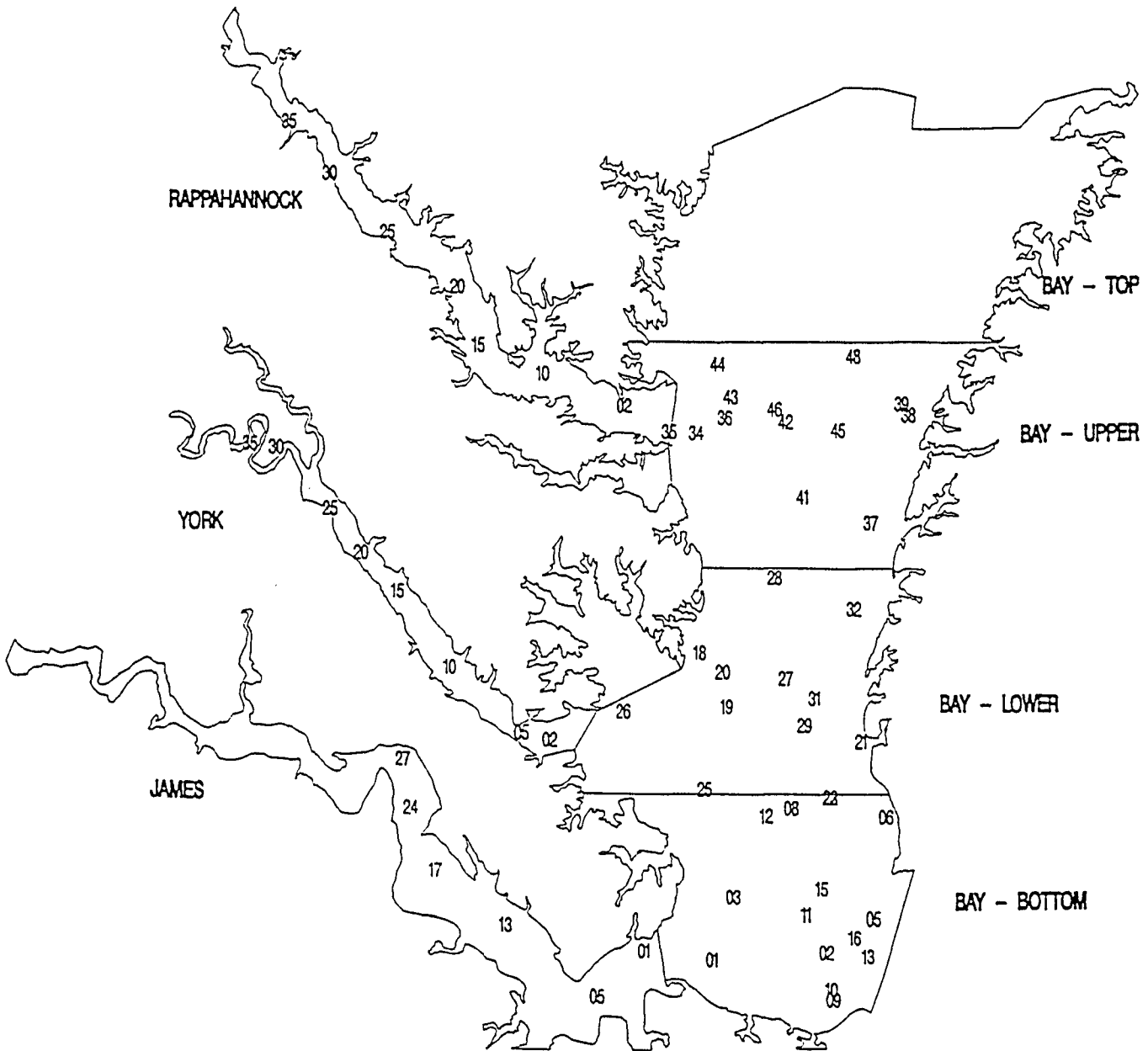
DECEMBER, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figure 13.

NOVEMBER, 1993 TRAWL SURVEY STATION LOCATIONS



NOTE: FIGURES IN RIVERS INDICATE RIVER MILES,
FIGURES IN BAY INDICATE STATION NUMBERS

Figures 14-44.

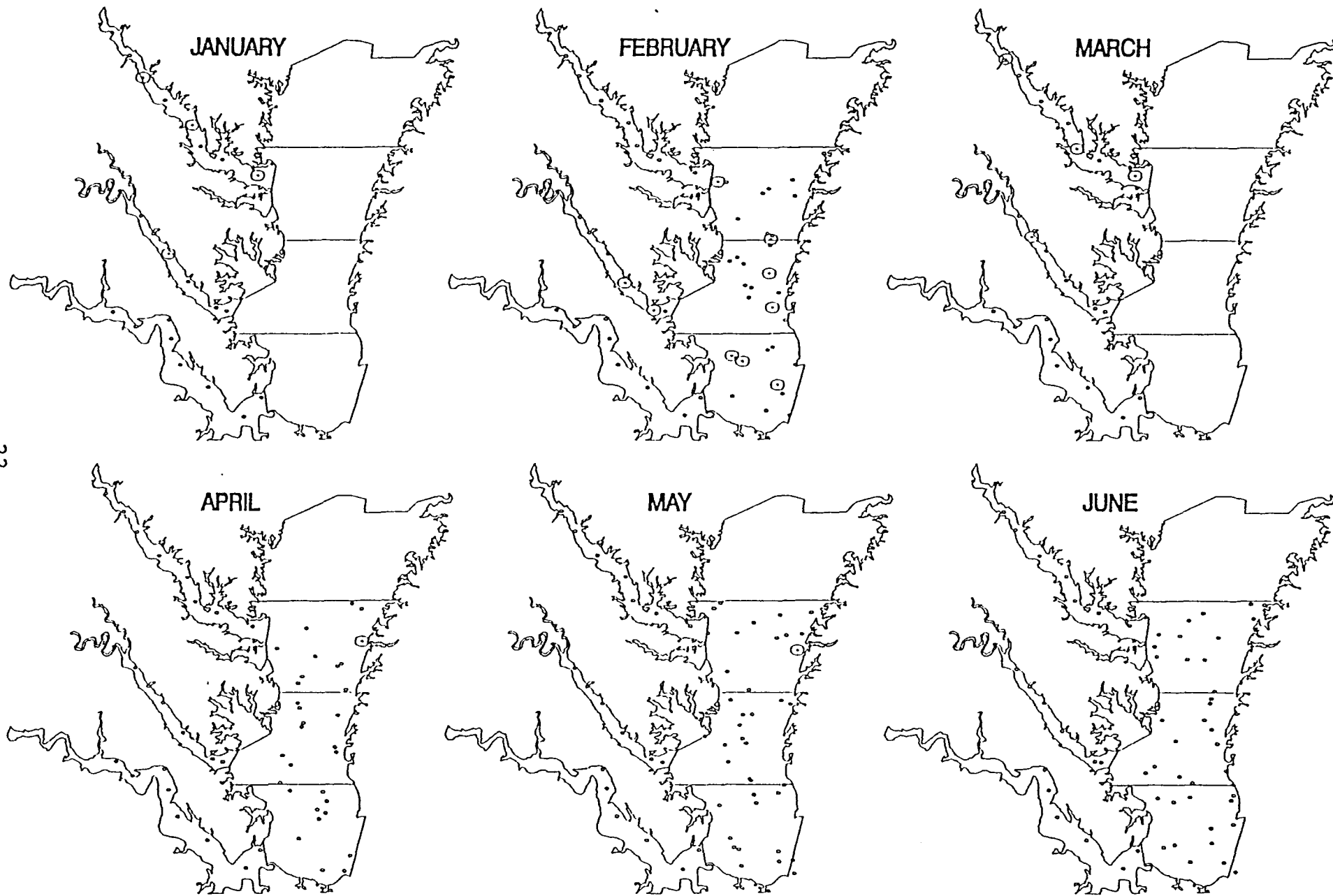
Geographic distribution, by month, of predominant species. Density values represent total number of specimens caught.

Notes:

- A. Due to LORAN distortion at upriver stations and to computer software control of the placement of figures on these maps, the locations shown may vary slightly from the actual stations occupied. For exact latitude and longitude refer to Tables 2-13.
- B. A single winter cruise was conducted in February for the Chesapeake Bay during the period from January through March 1993.
- C. For purposes of clarity, if a second tow was performed at a given station, the second tow will be offset two minutes north and two minutes east from the original coordinates.

Figure 14

Alewife



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

Figure 14

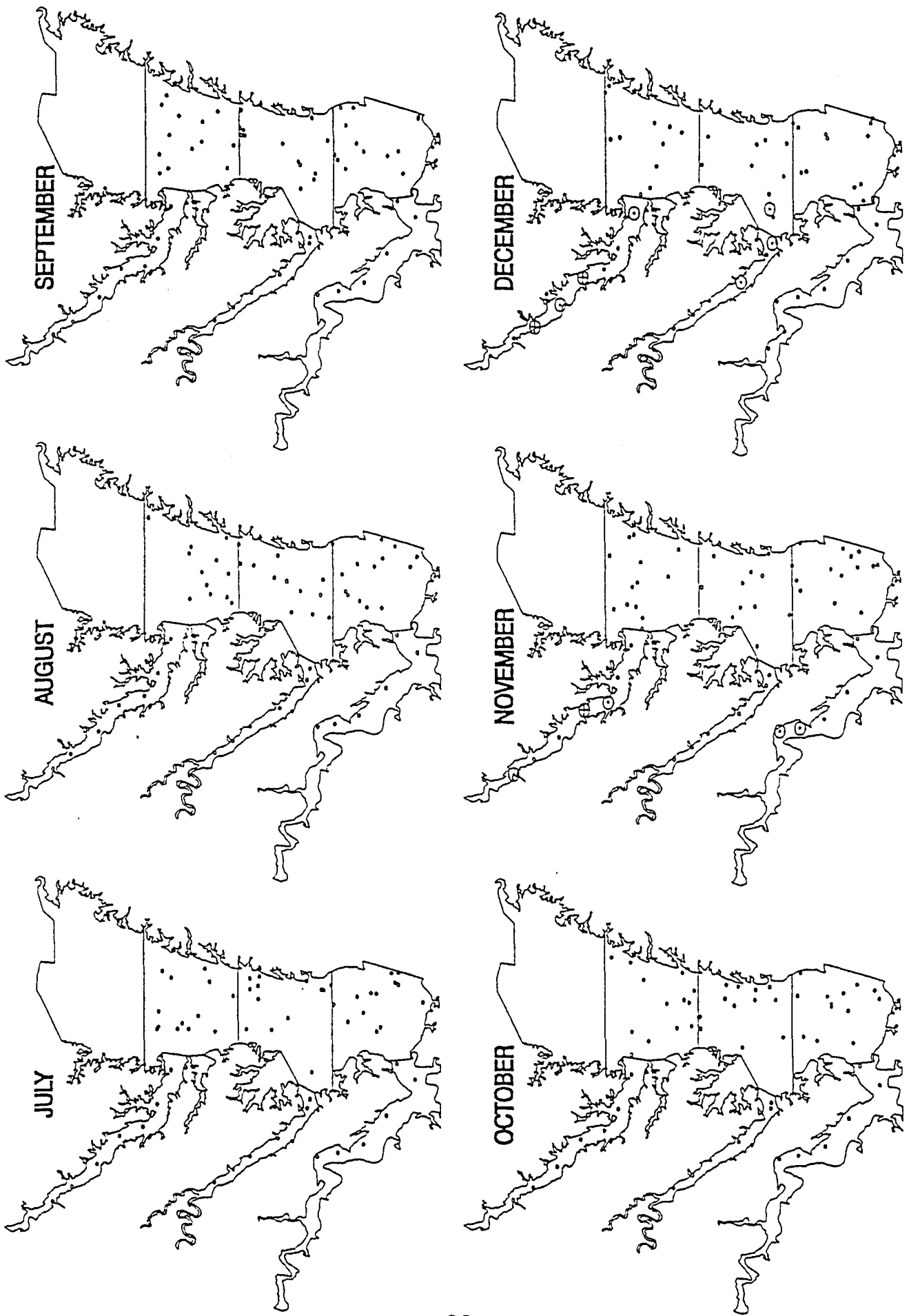
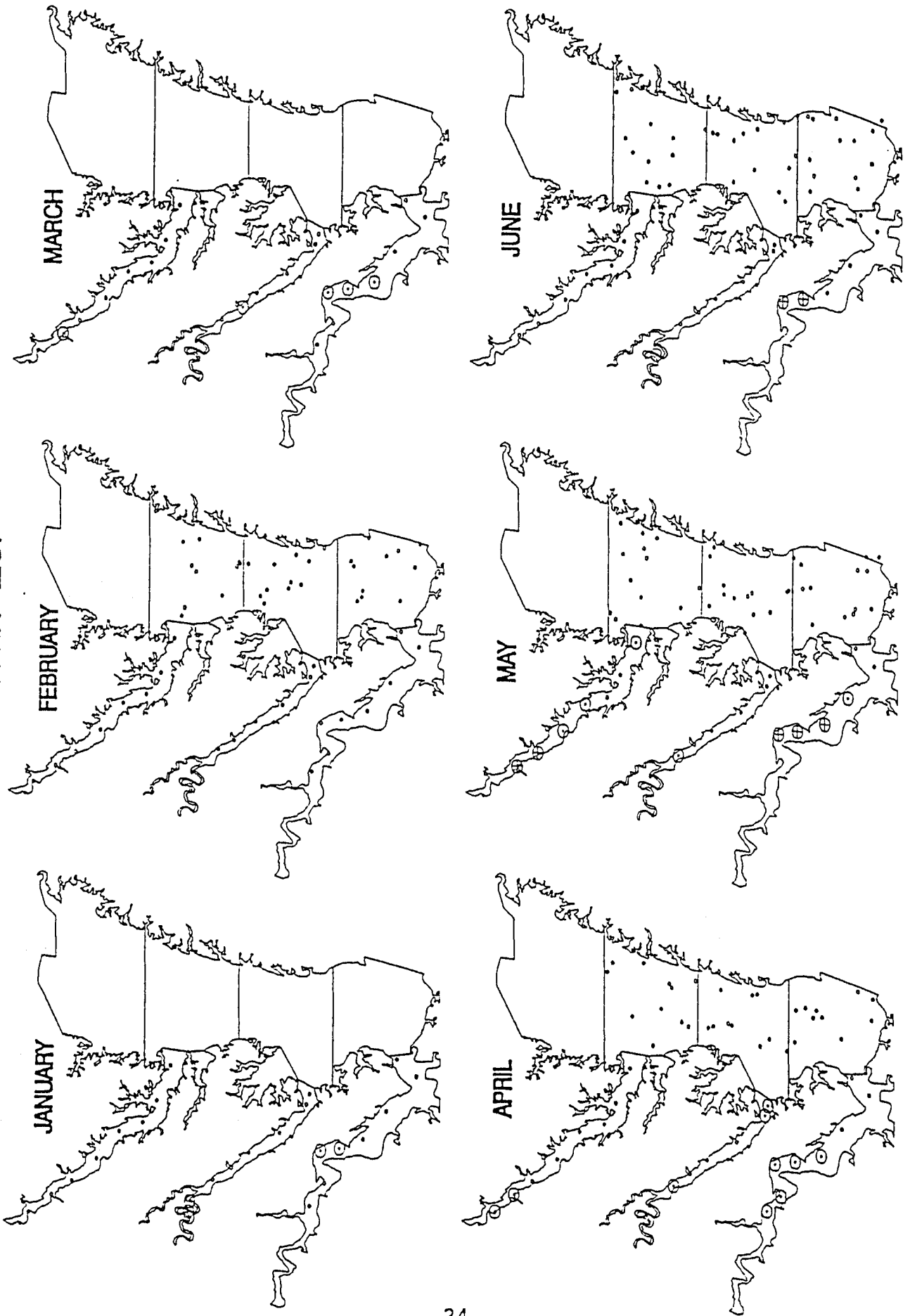


Figure 15

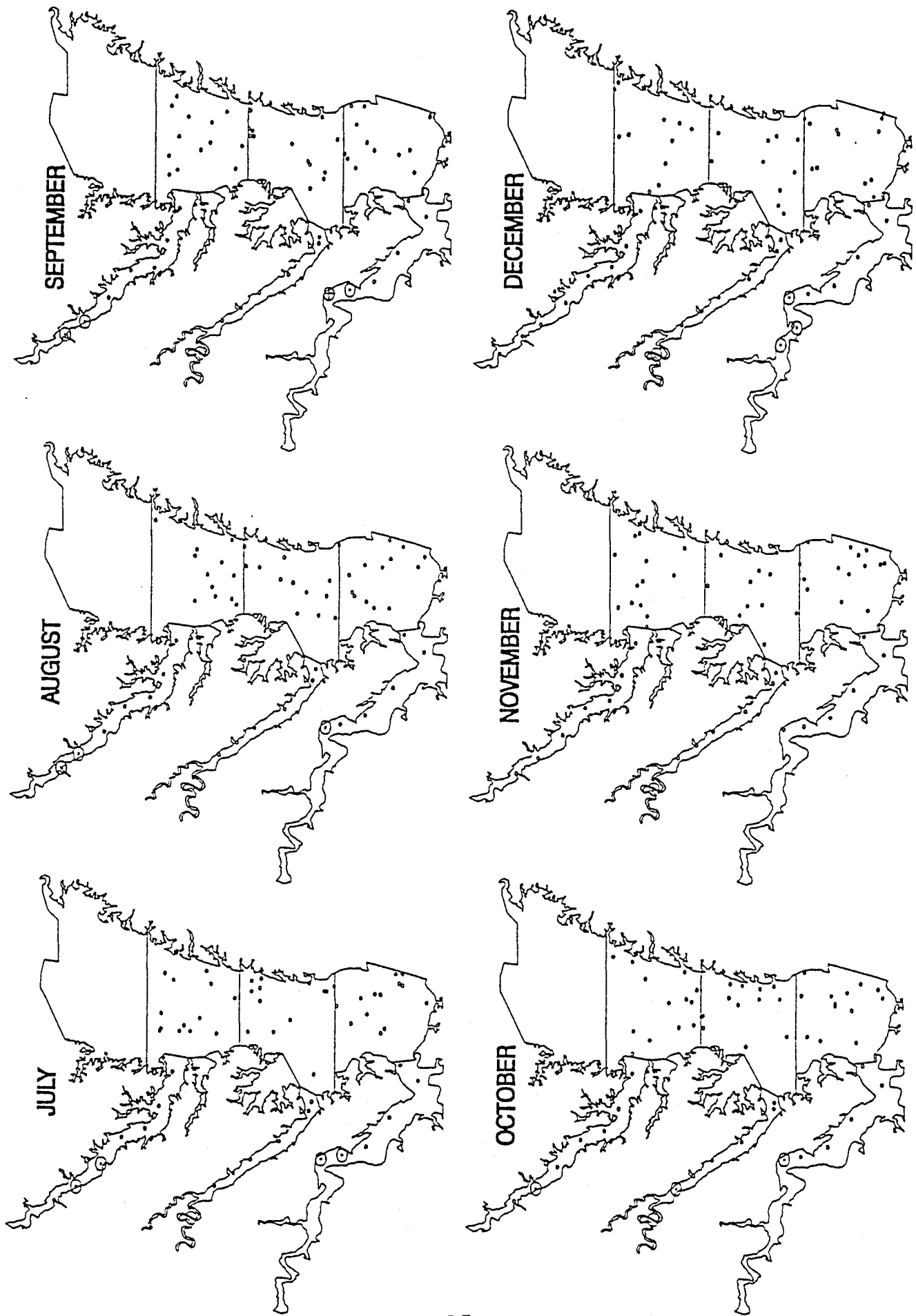
American Eel



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = > 1,000



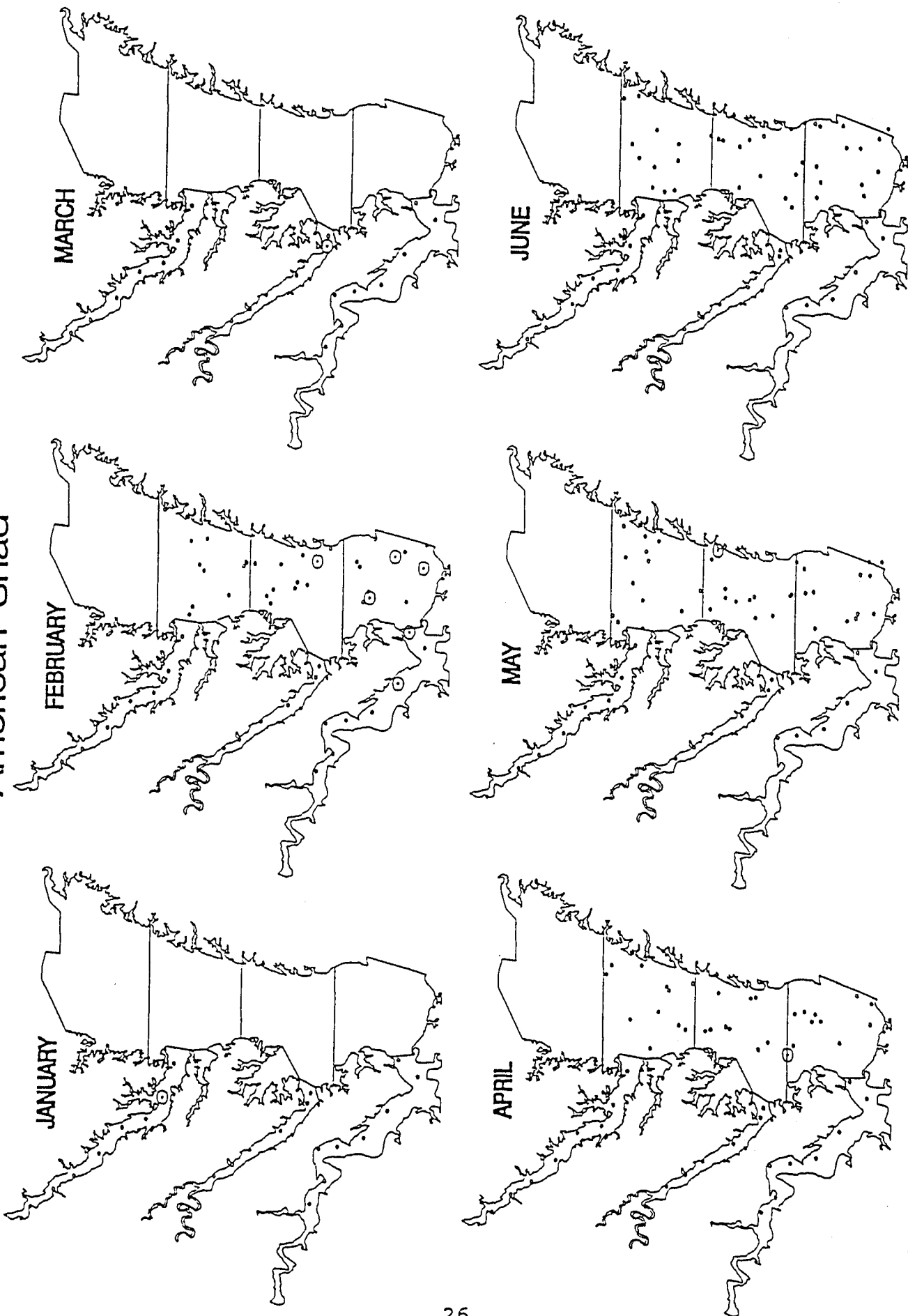
Figure 15



NUMBER CAUGHT: \cdot = ZERO \odot = 1 to 9 \ominus = 10 to 99 \oplus = 100 to 999 \bullet = \geq 1,000

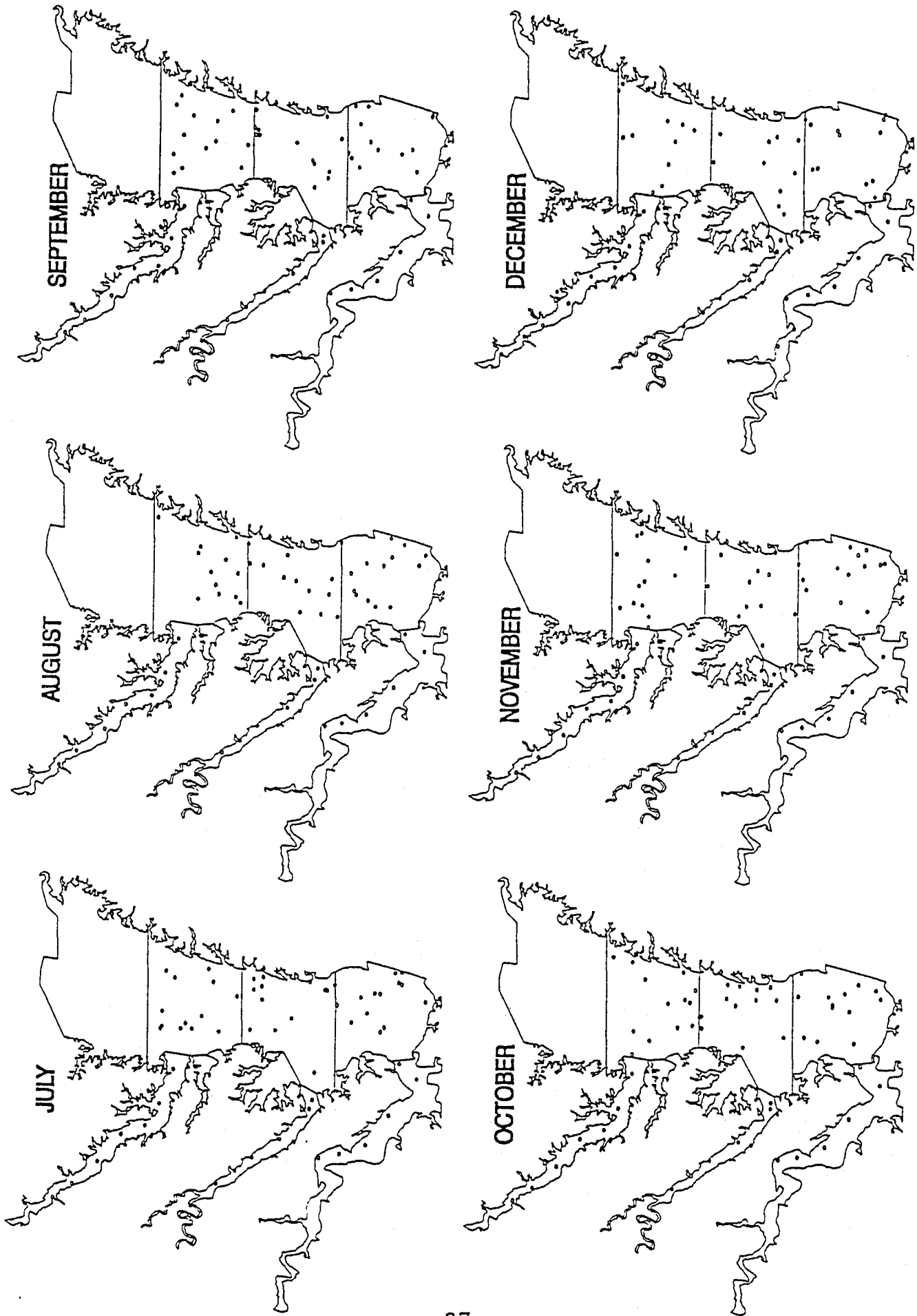
Figure 16

American Shad



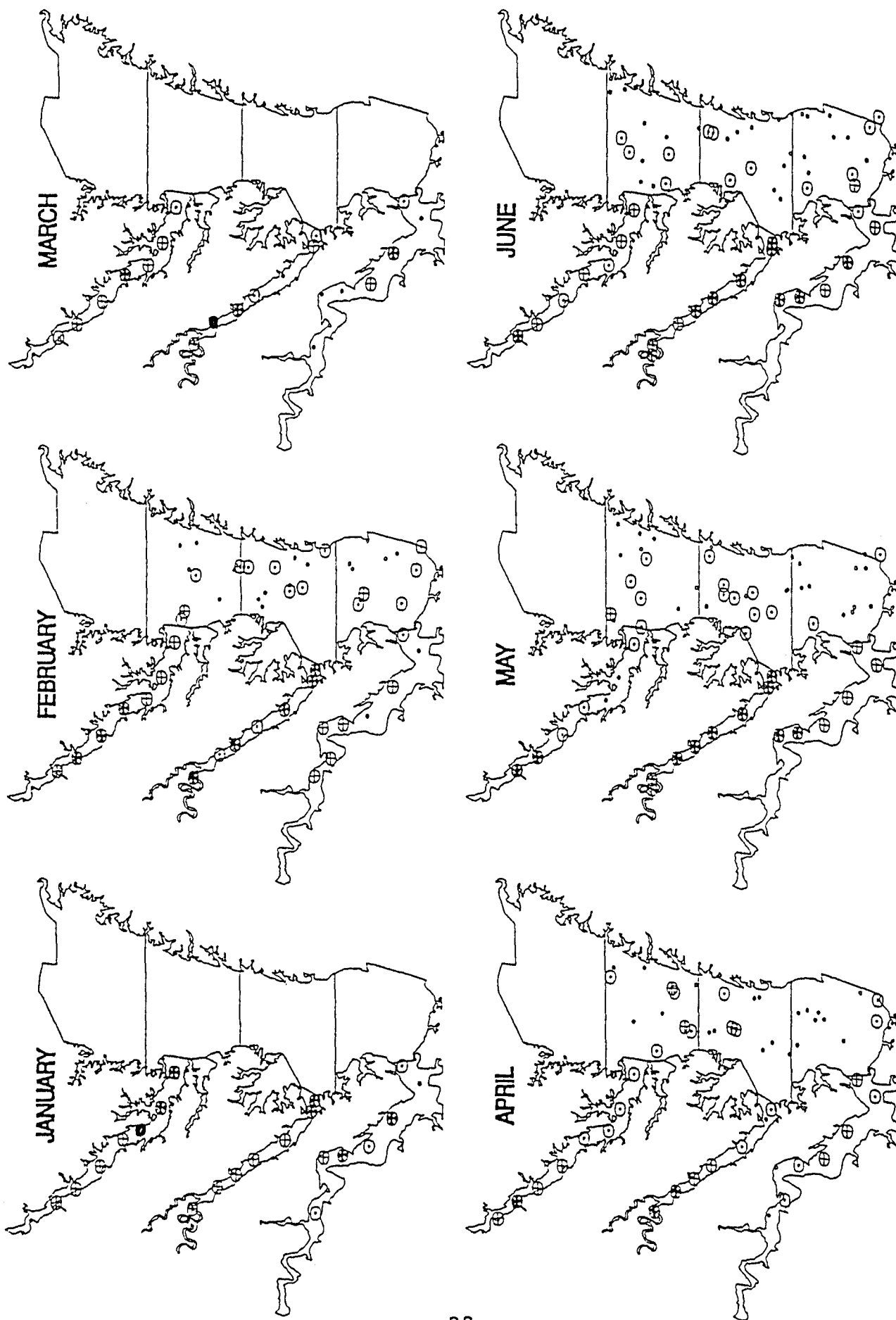
NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

Figure 16



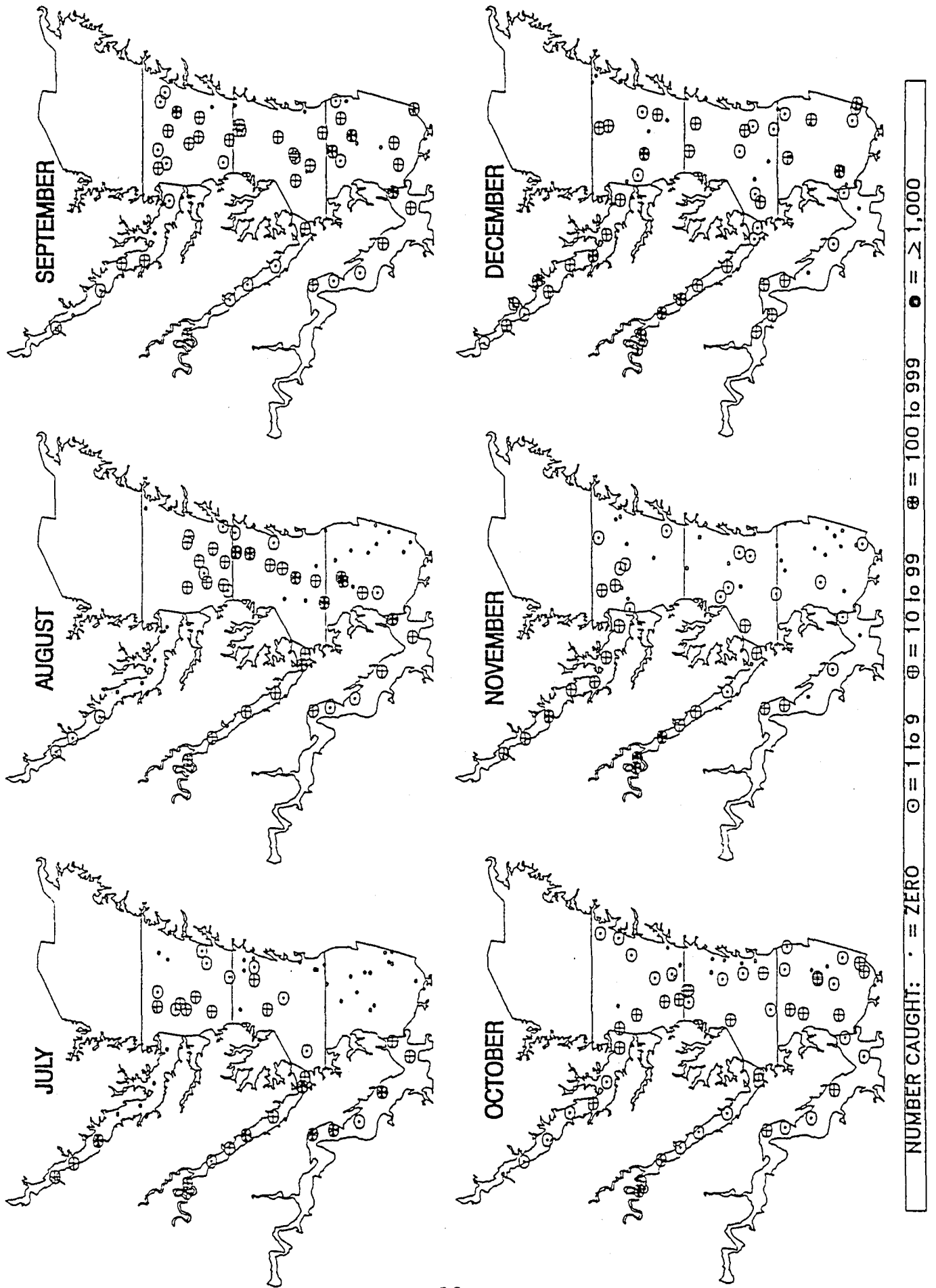
Atlantic Croaker

Figure 17



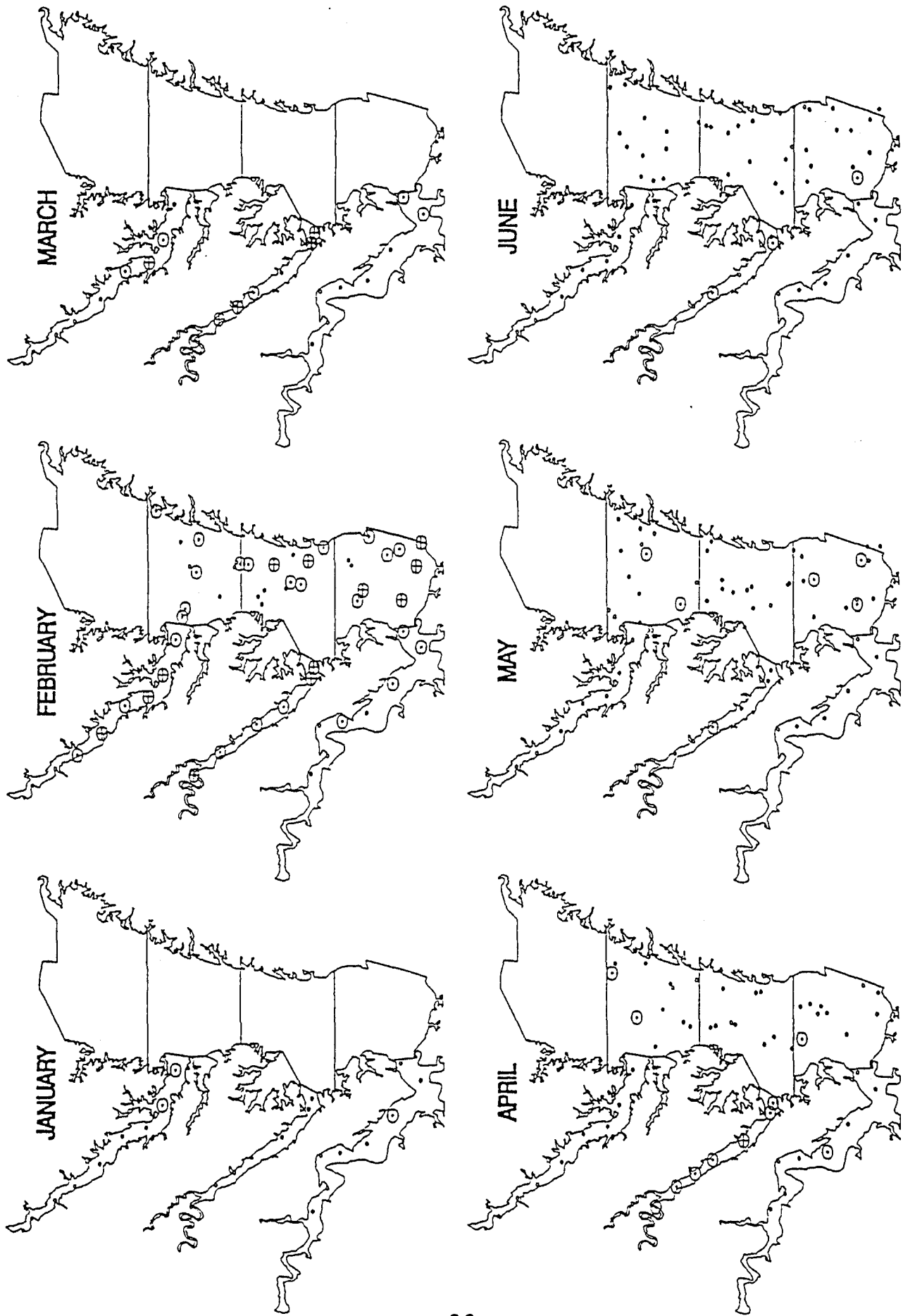
NUMBER CAUGHT: • = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = > 1,000

Figure 17



Atlantic Menhaden

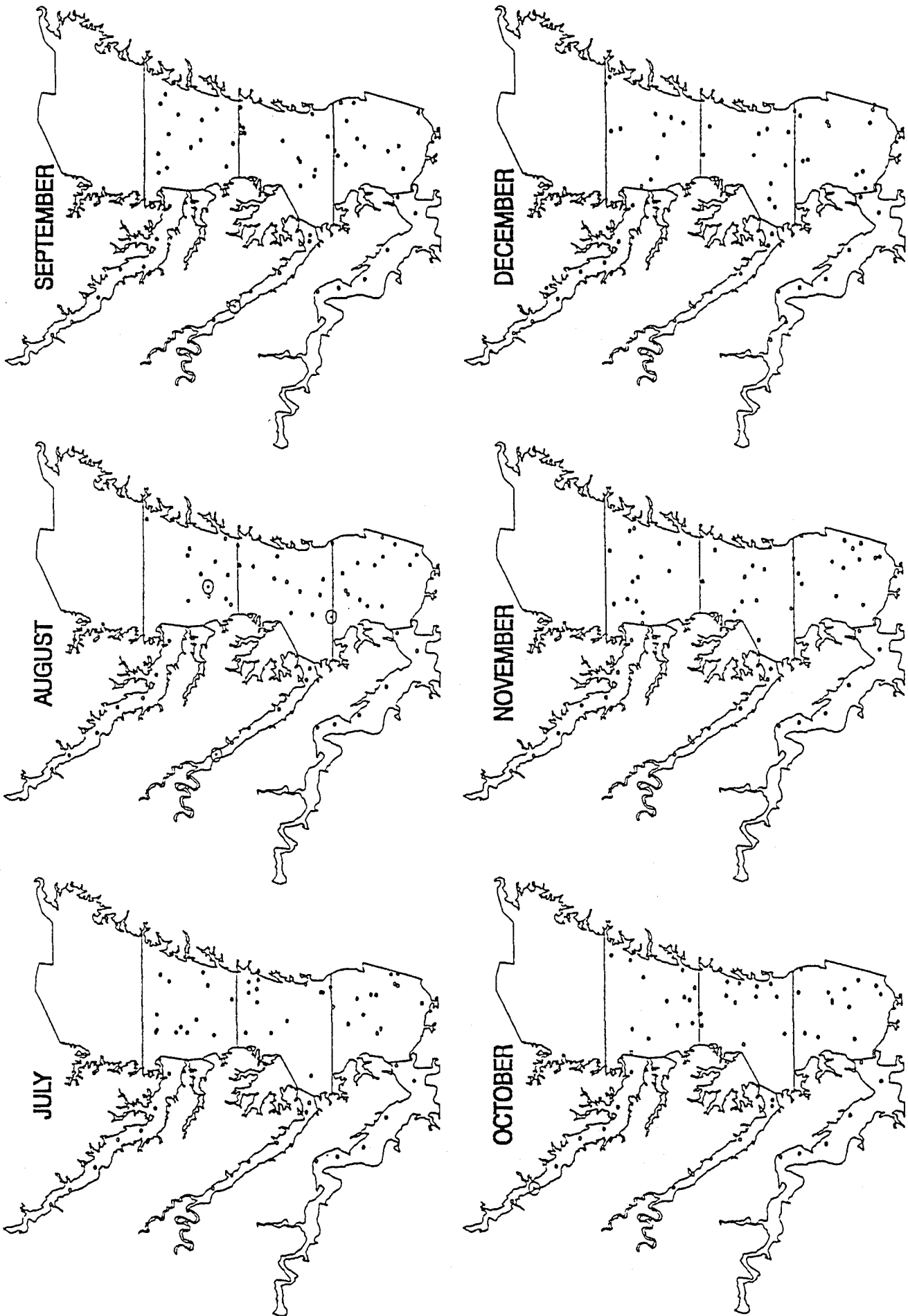
Figure 18



NUMBER CAUGHT: • = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = ≥ 1,000



Figure 18



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊖ = 100 to 999 ● = ≥ 1,000

Figure 19

Atlantic Silverside

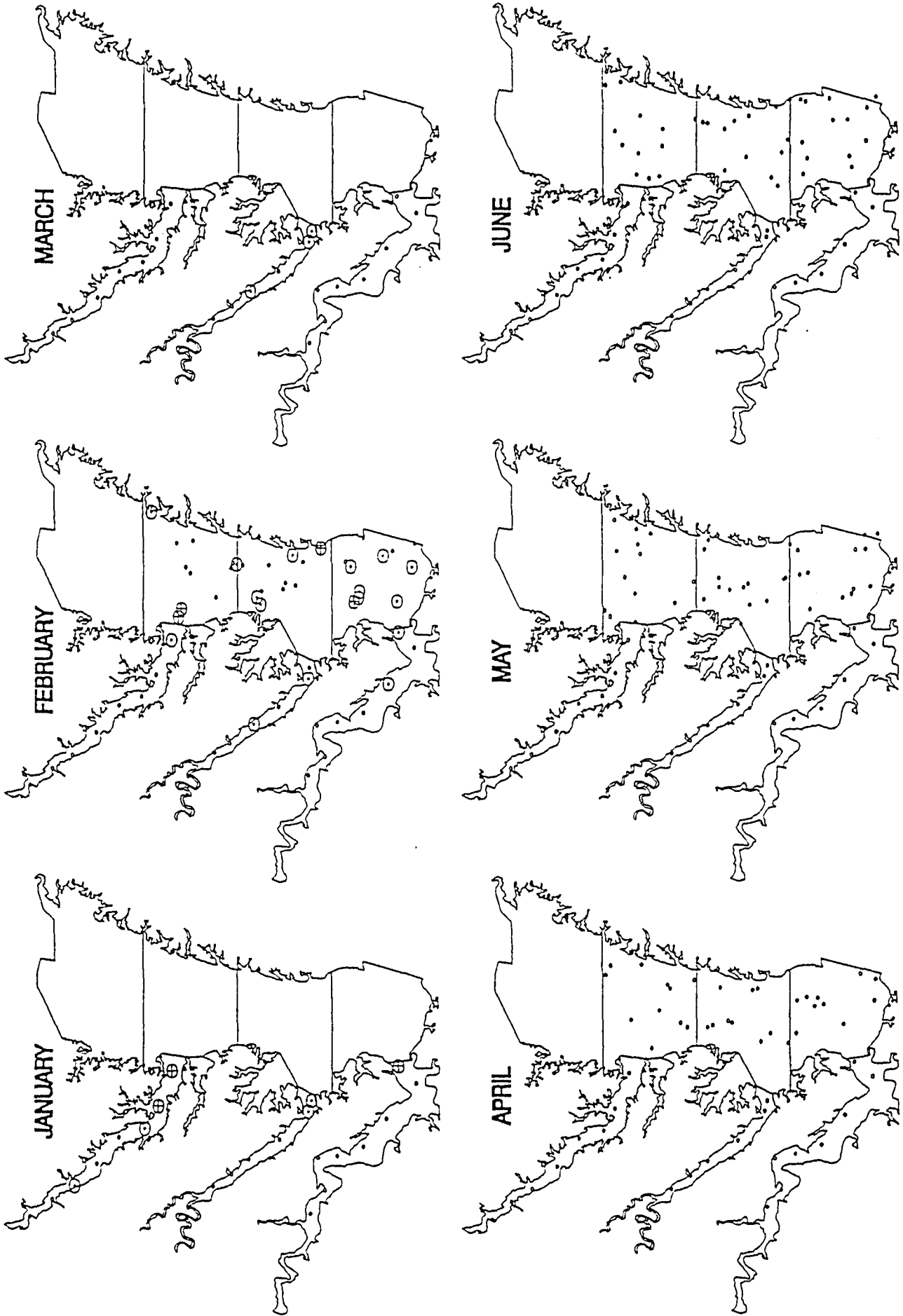
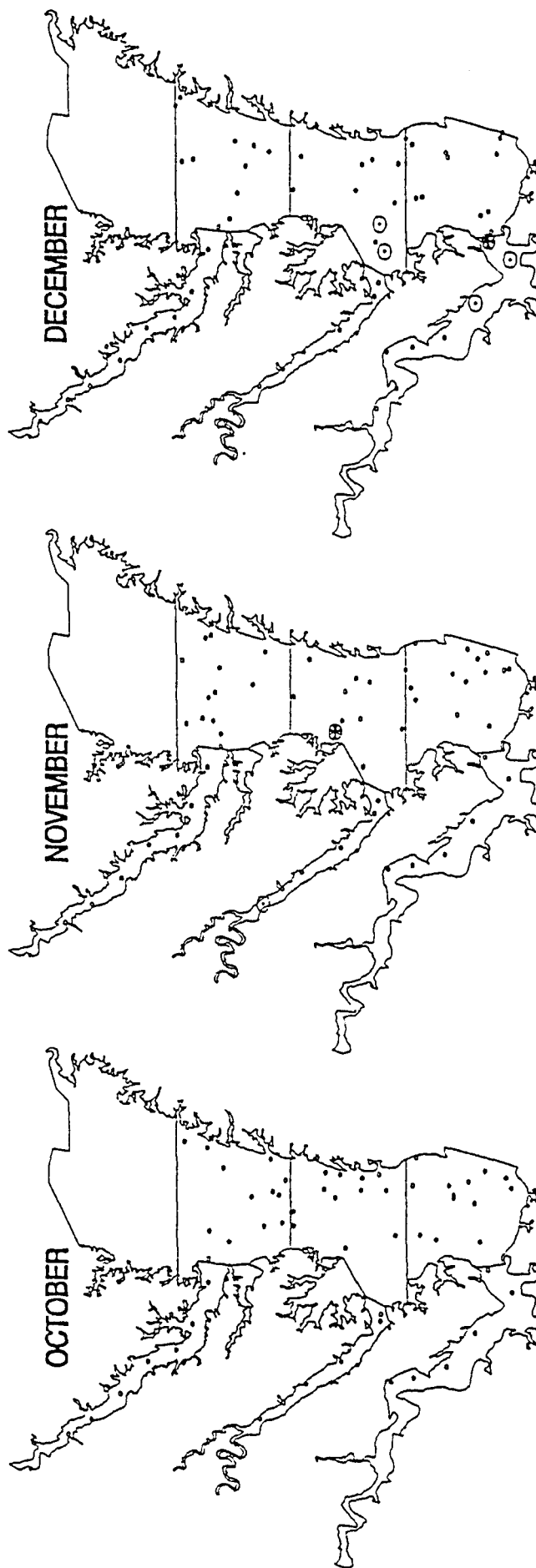
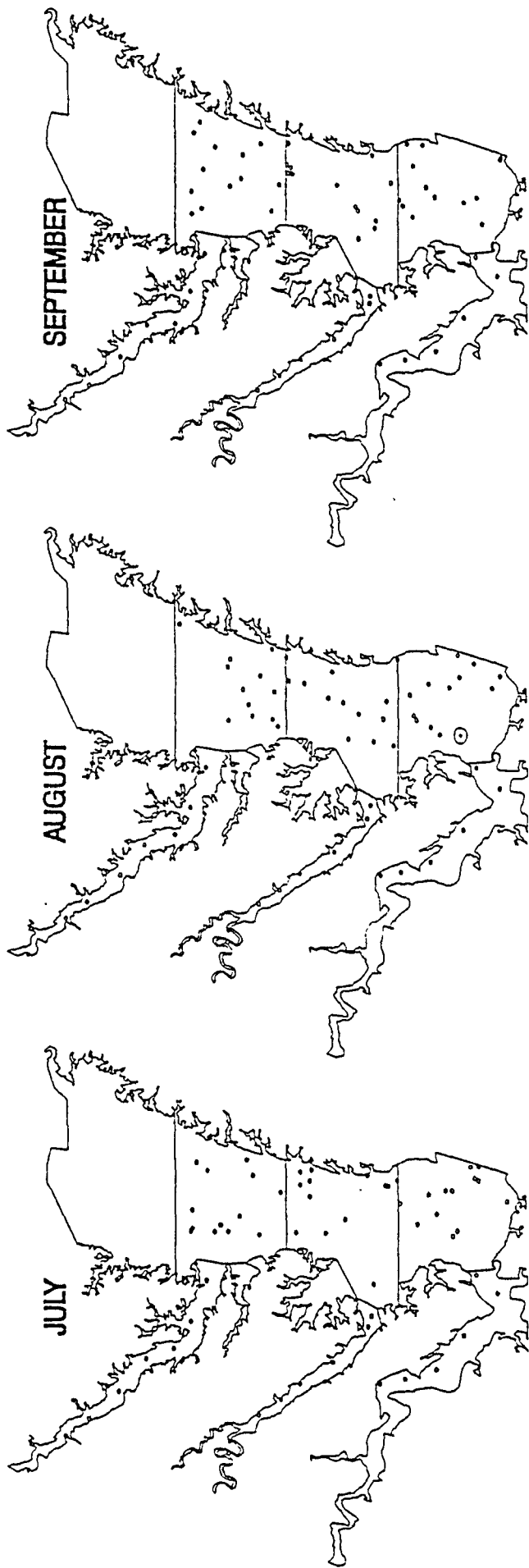


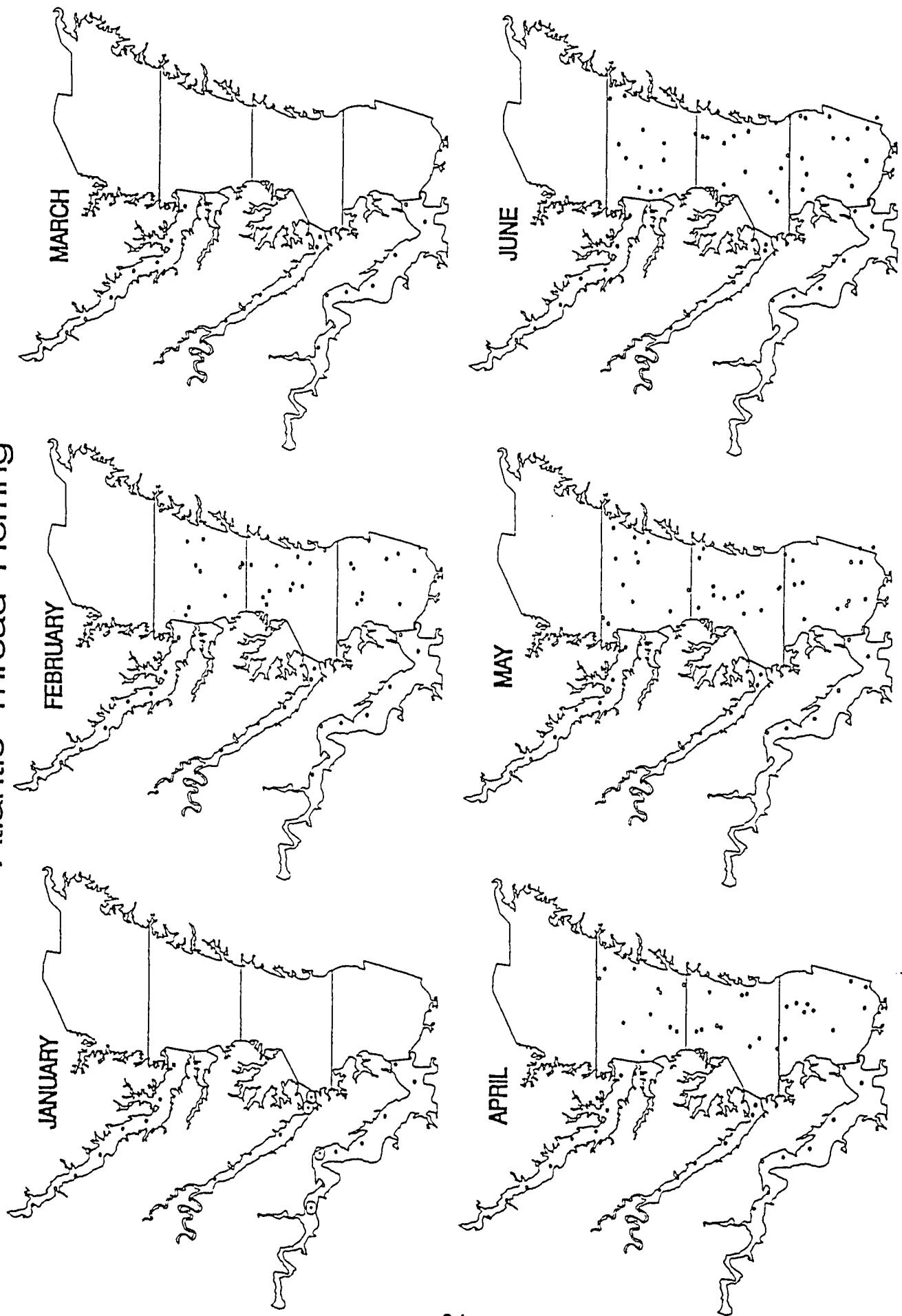
Figure 19



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

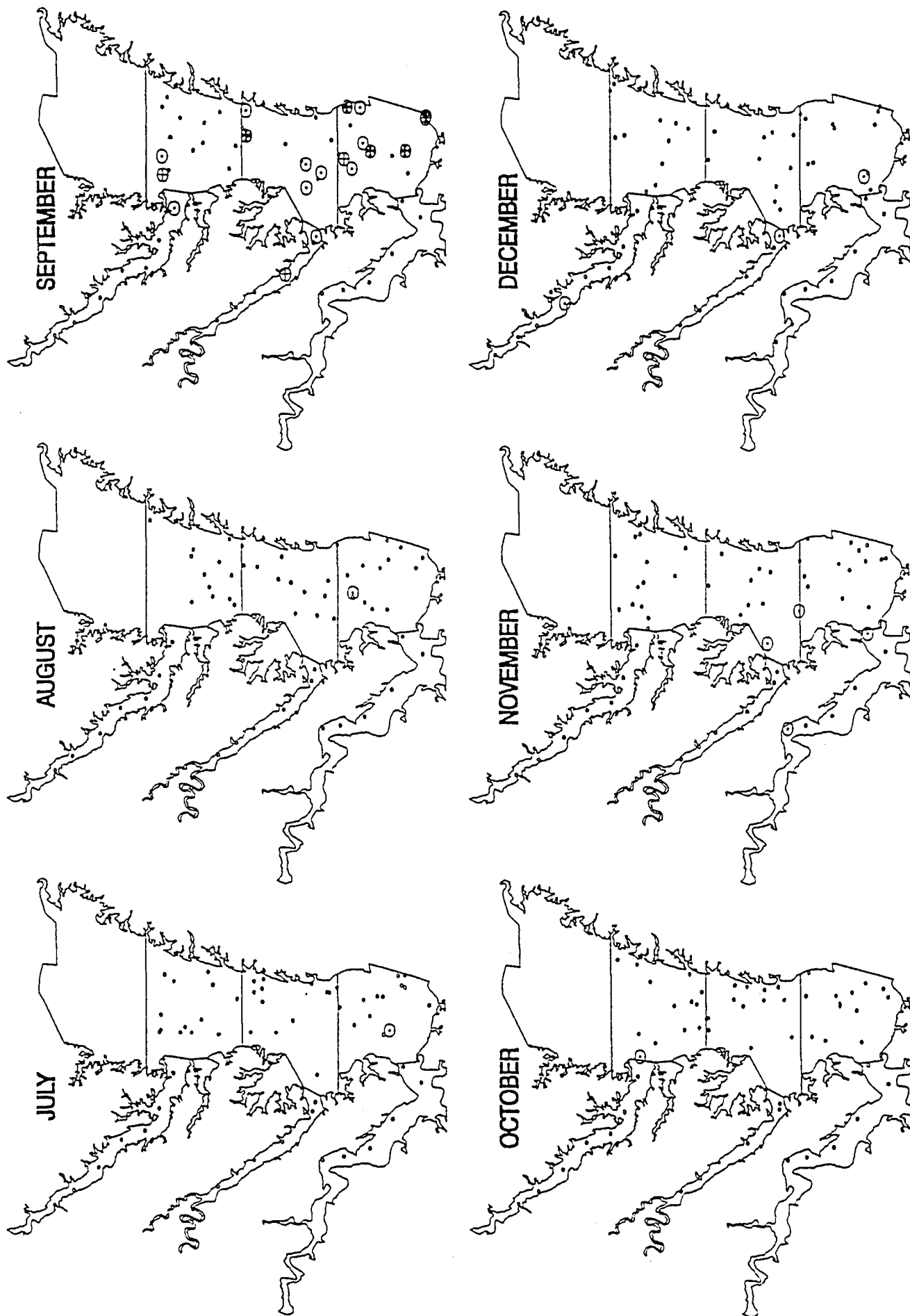
Atlantic Thread Herring

Figure 20



NUMBER CAUGHT: • = ZERO ○ = 1 to 9 ◻ = 10 to 99 ◉ = 100 to 999 ● = > 1,000

Figure 20



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

Bay Anchovy

Figure 21

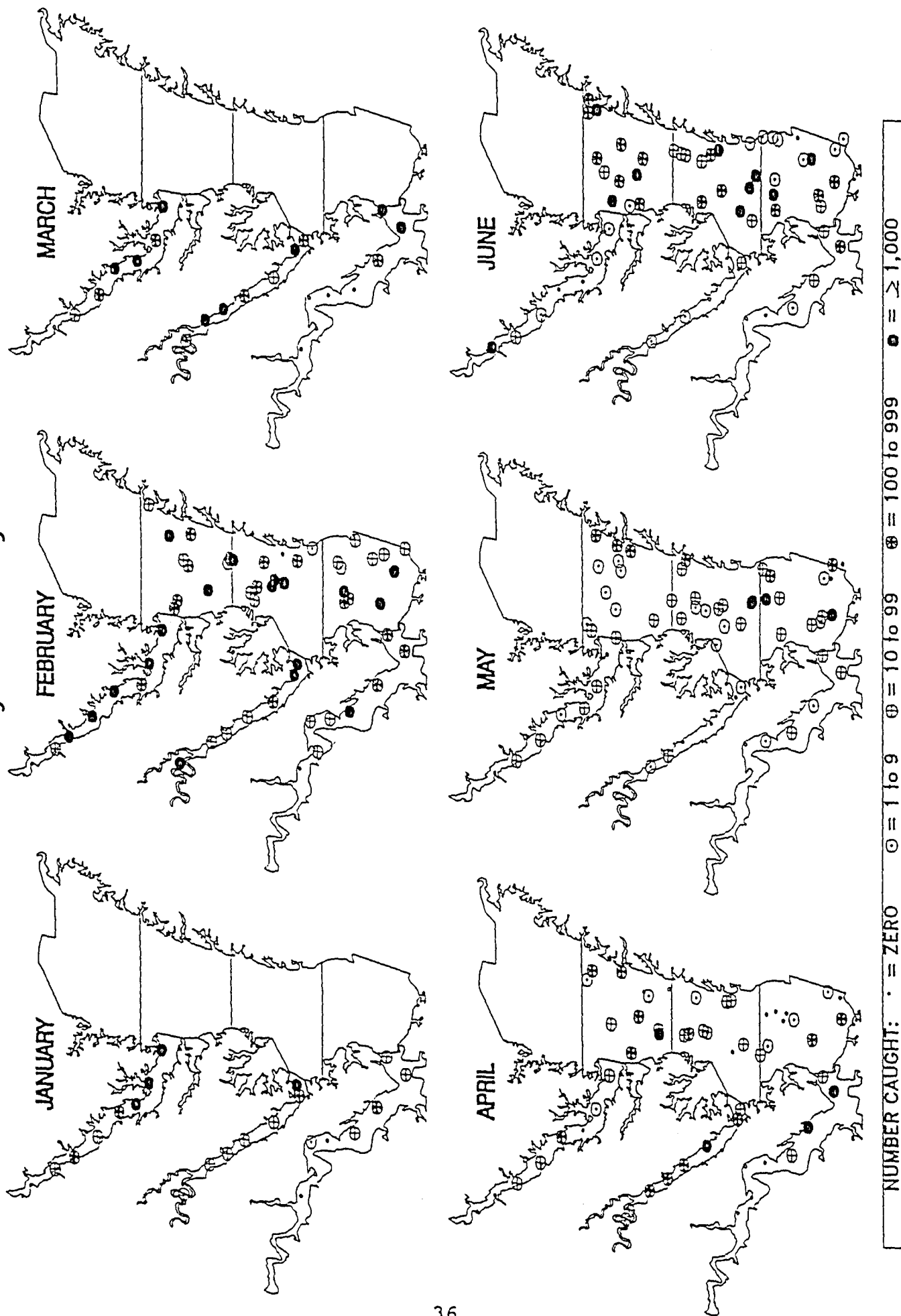


Figure 21

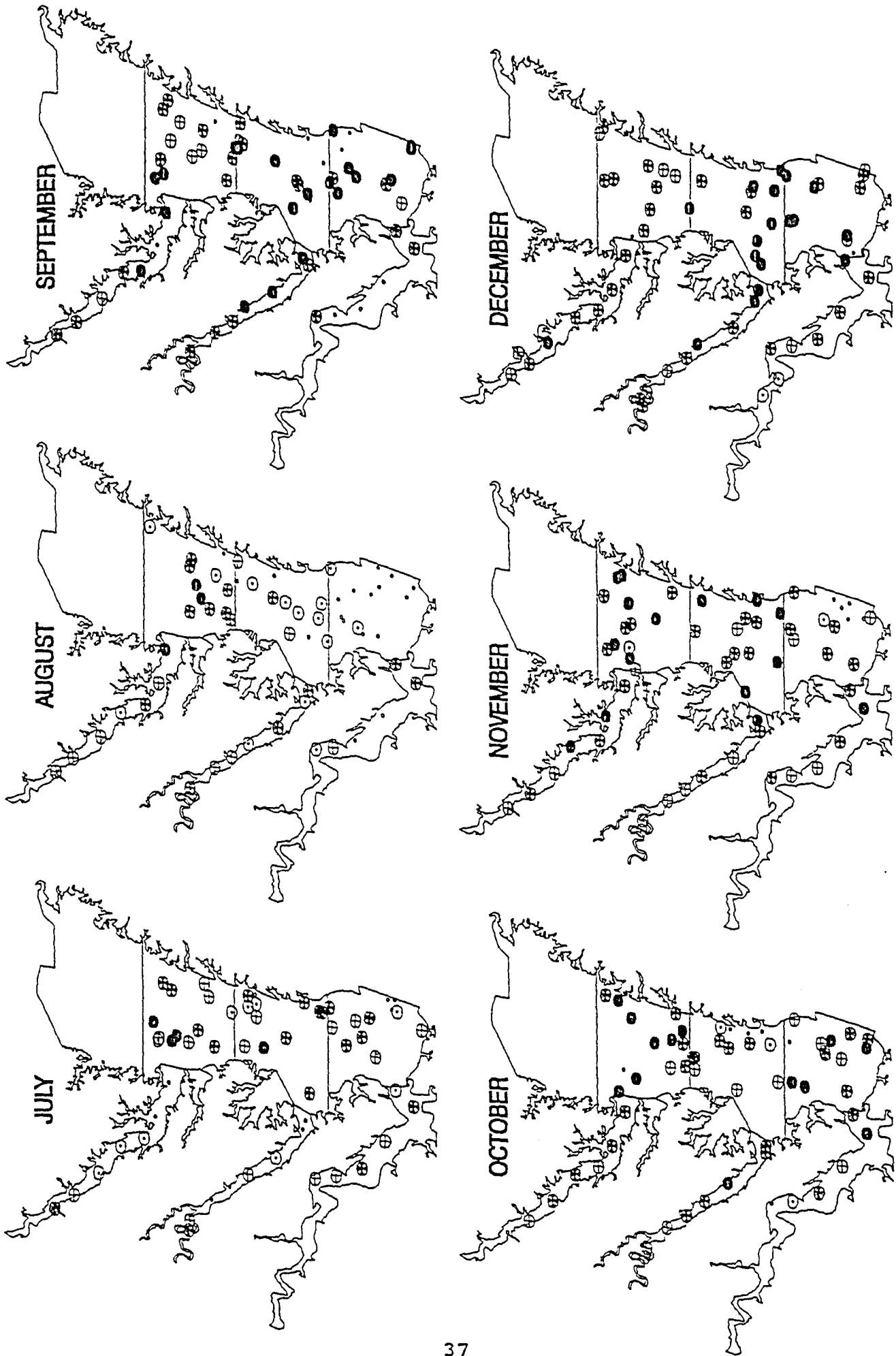
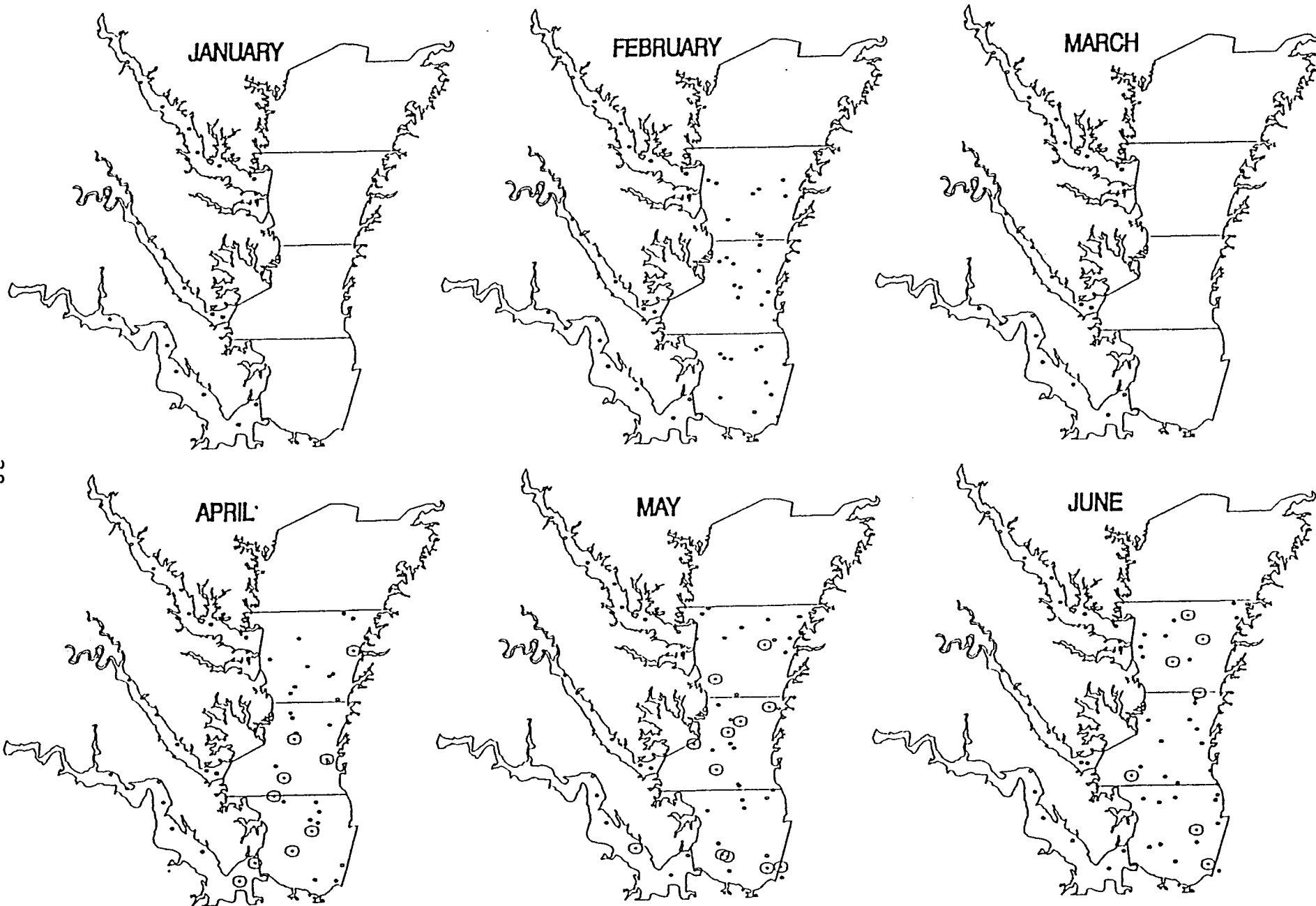


Figure 22

Black Seabass



38

NUMBER CAUGHT: • = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000



Figure 22

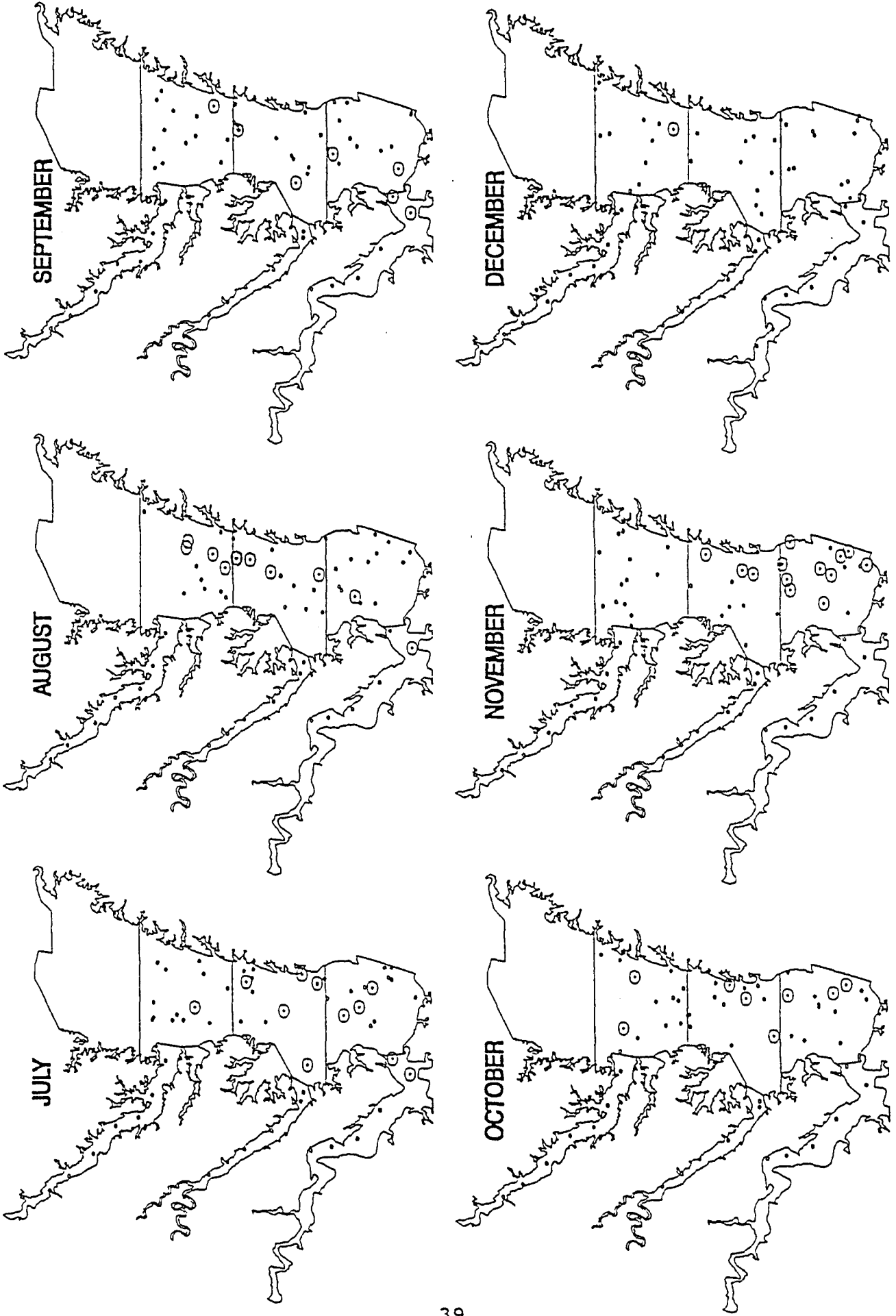


Figure 23

Blackcheek Tonguefish

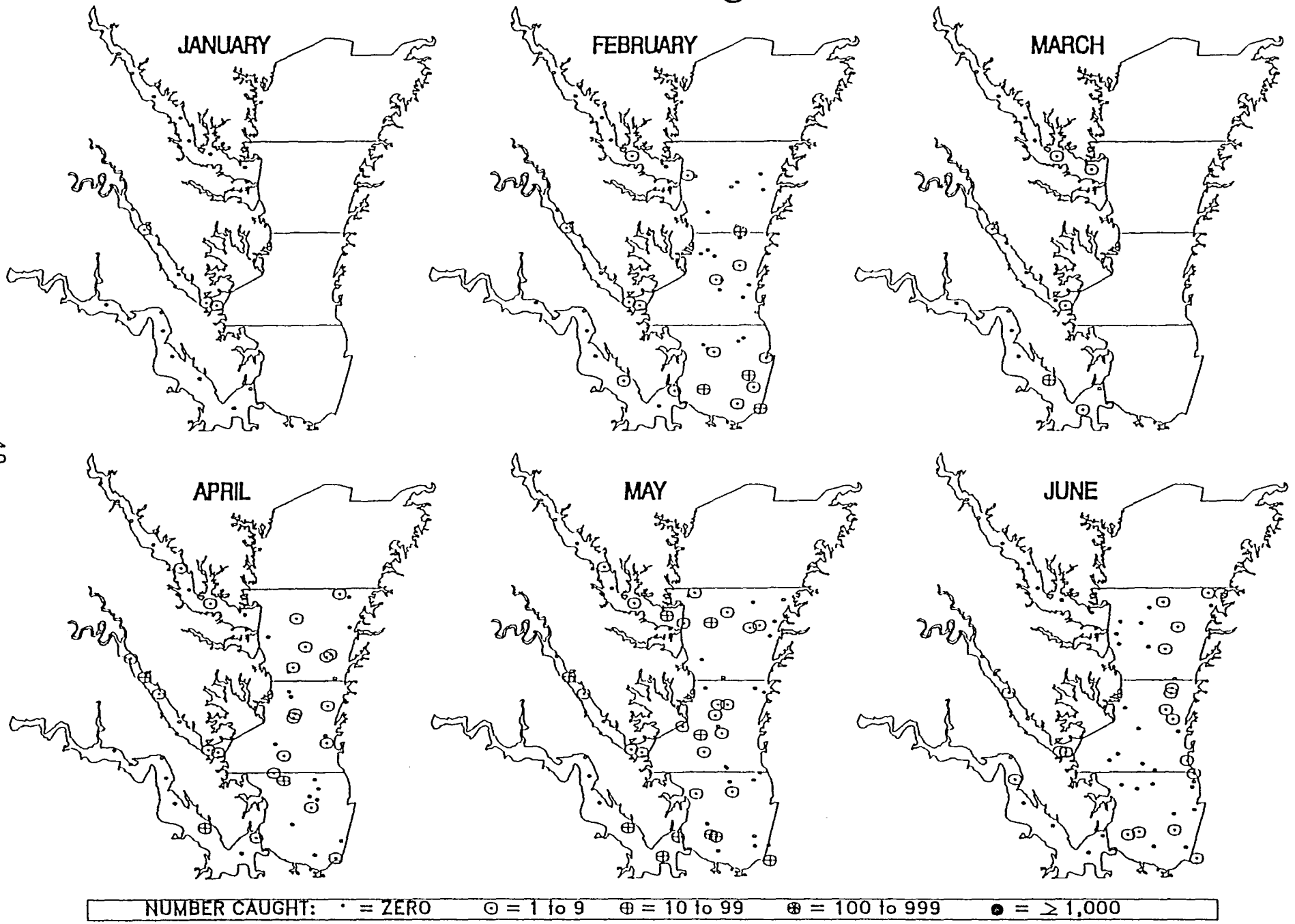


Figure 23

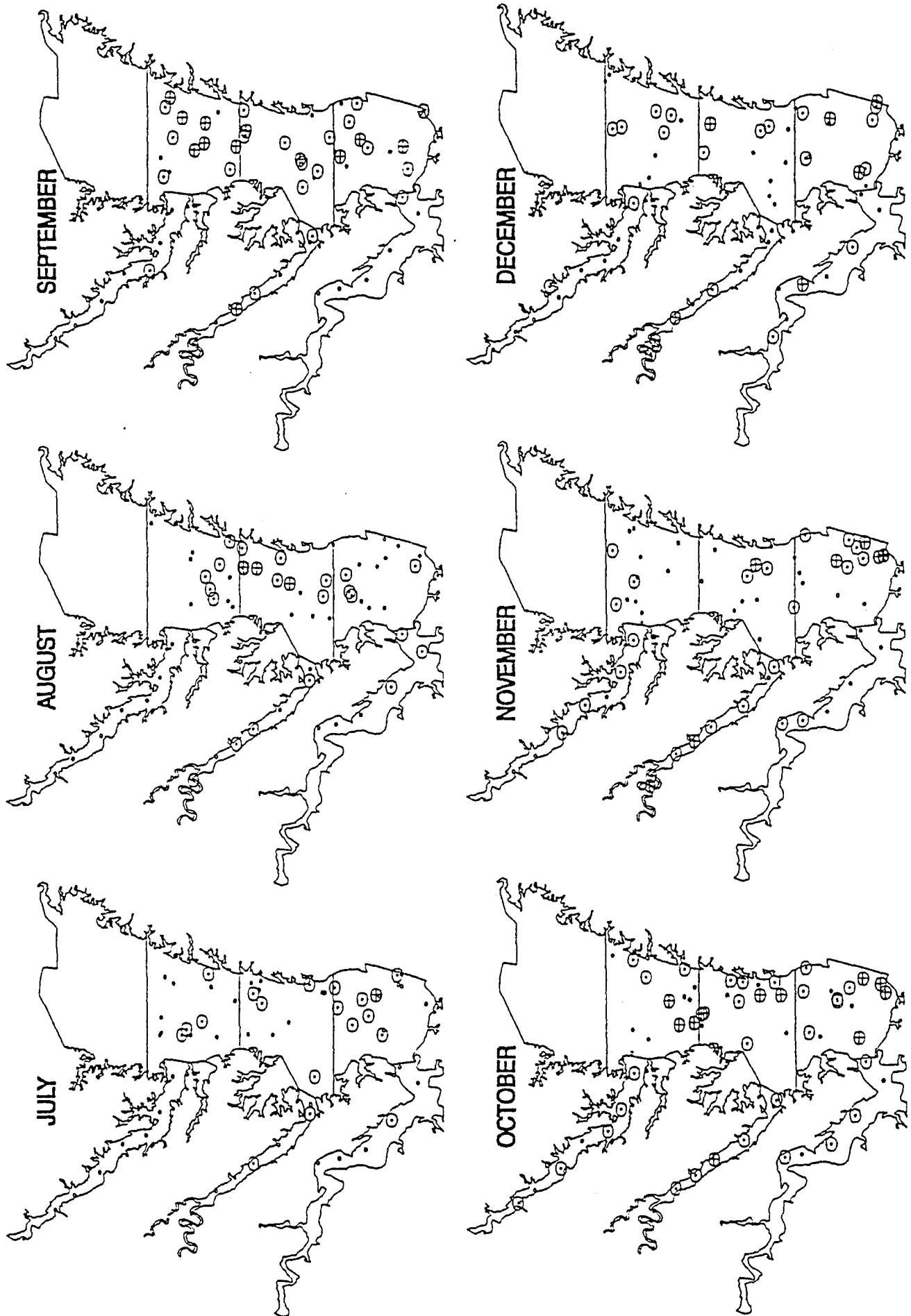
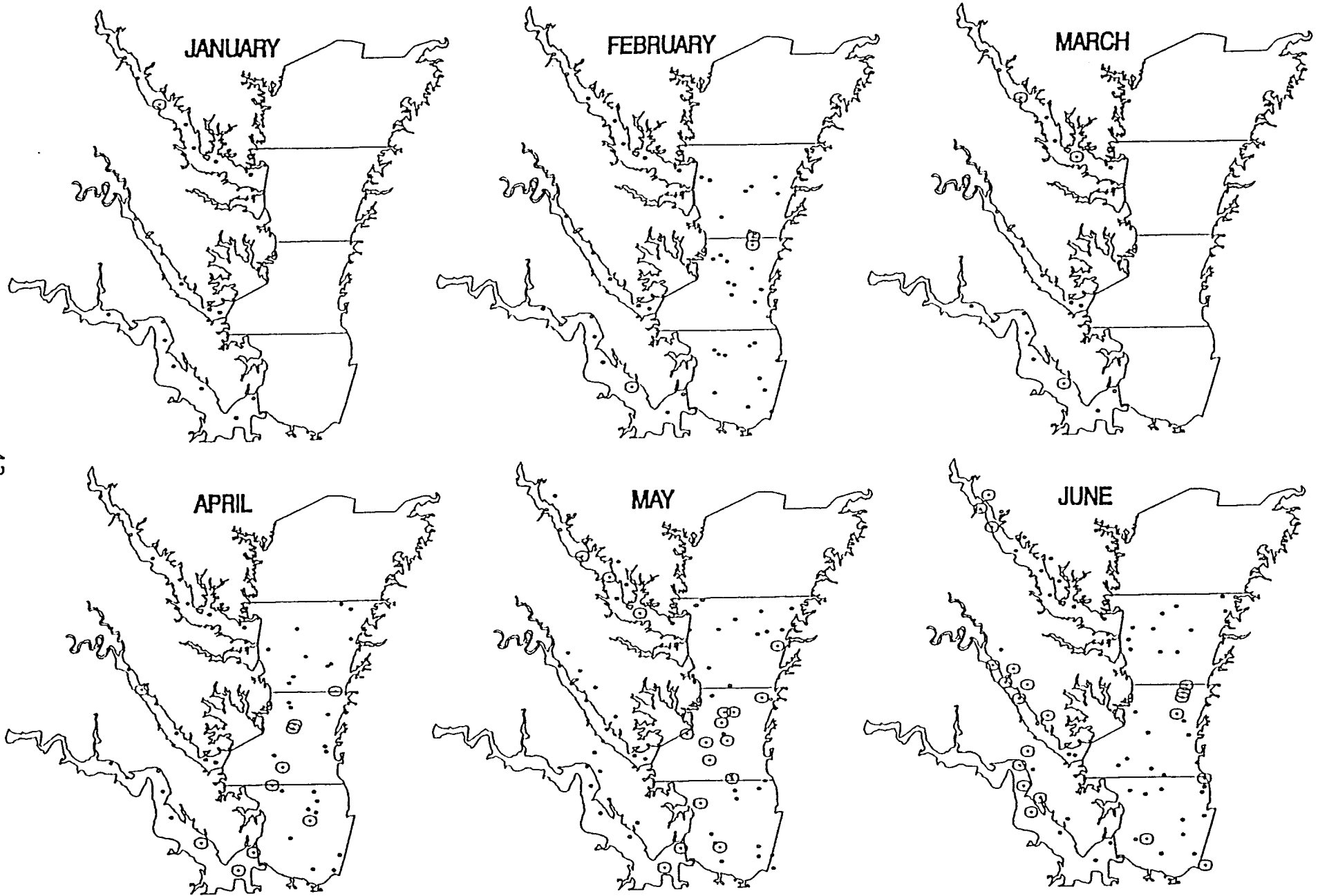


Figure 24

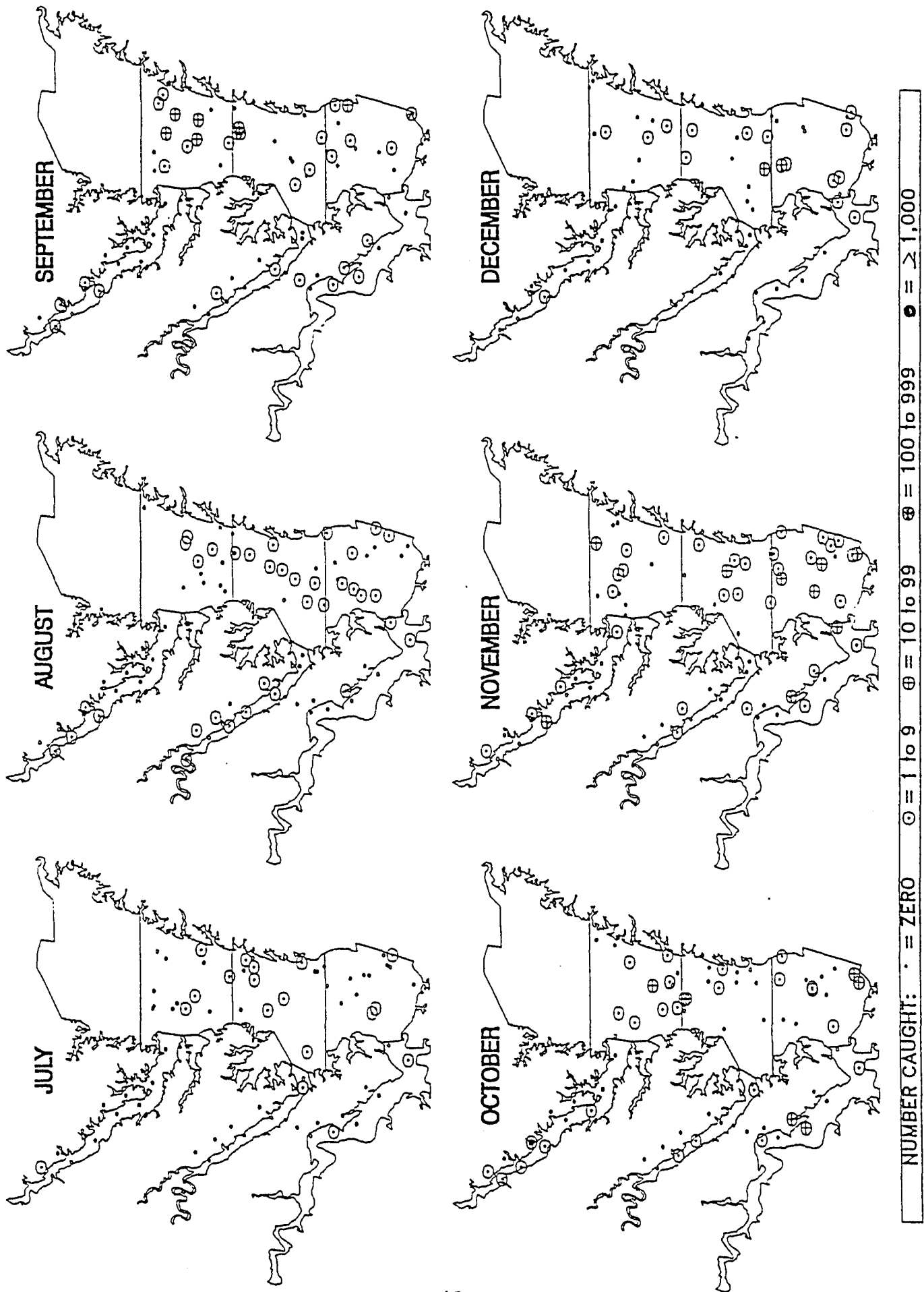
Blue Crab – Adult Female



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ◻ = 10 to 99 ◻ ⊙ = 100 to 999 ● = ≥ 1,000

RESEARCH

Figure 24



Blue Crab -- Juvenile Female

Figure 25

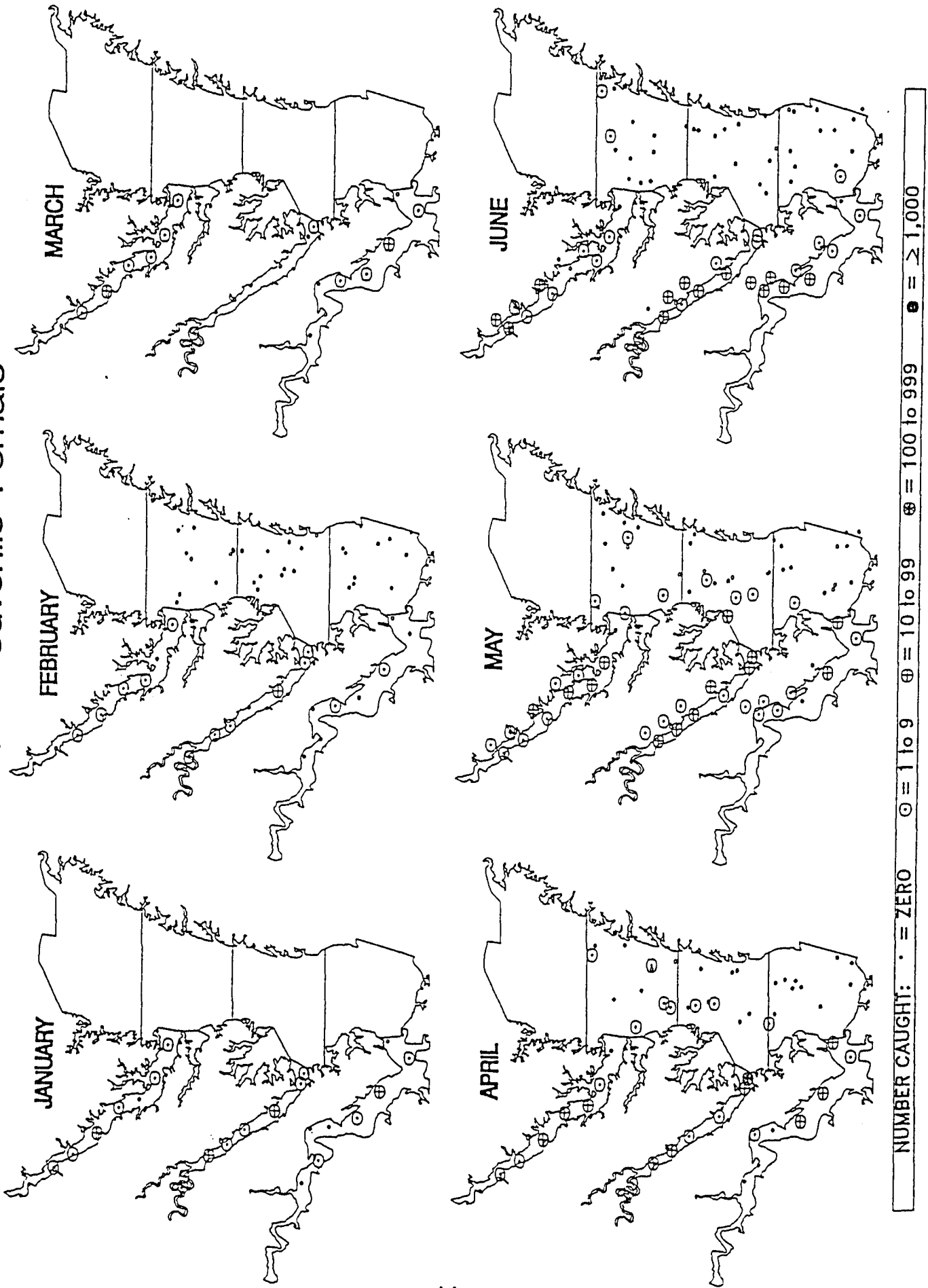
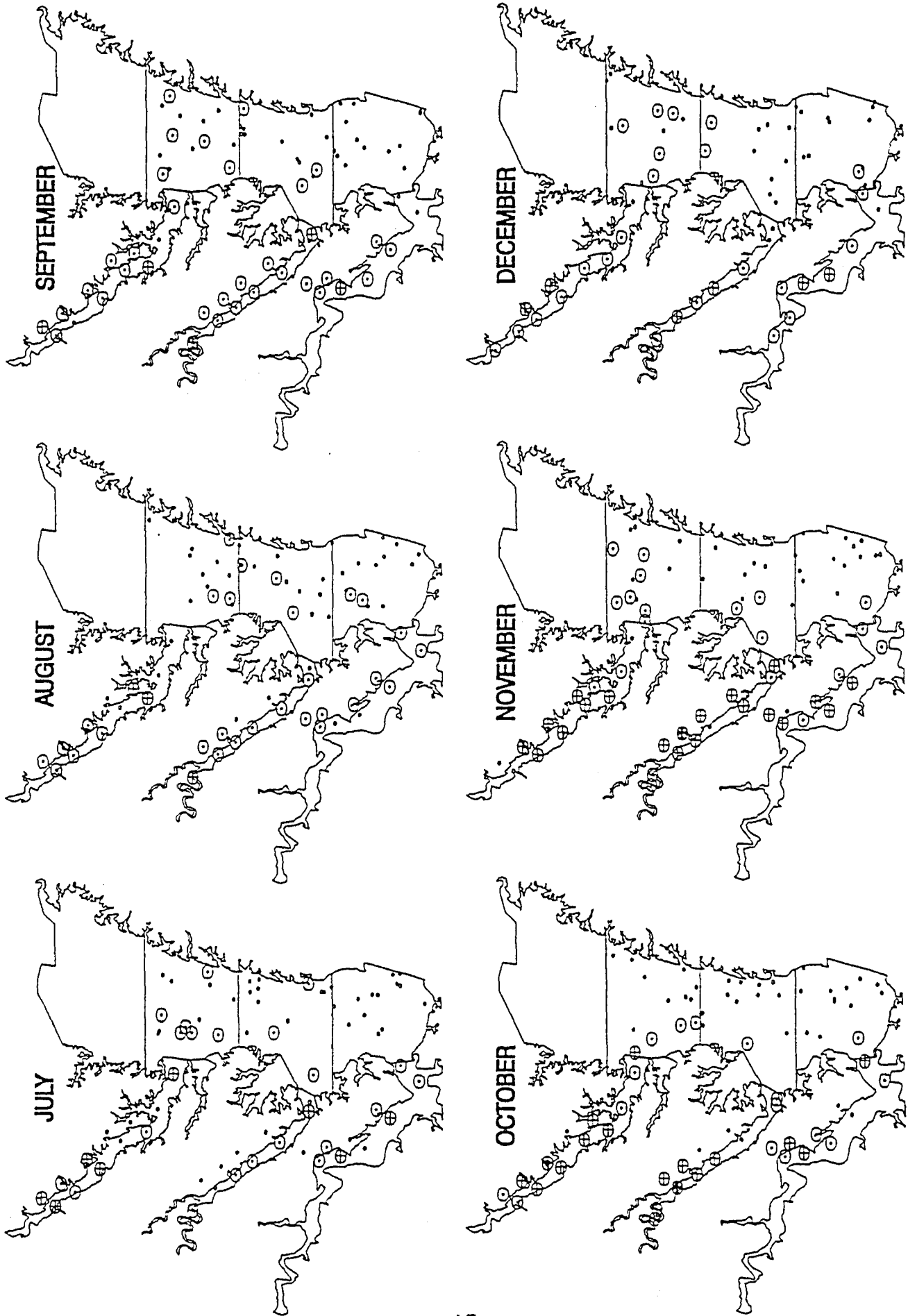
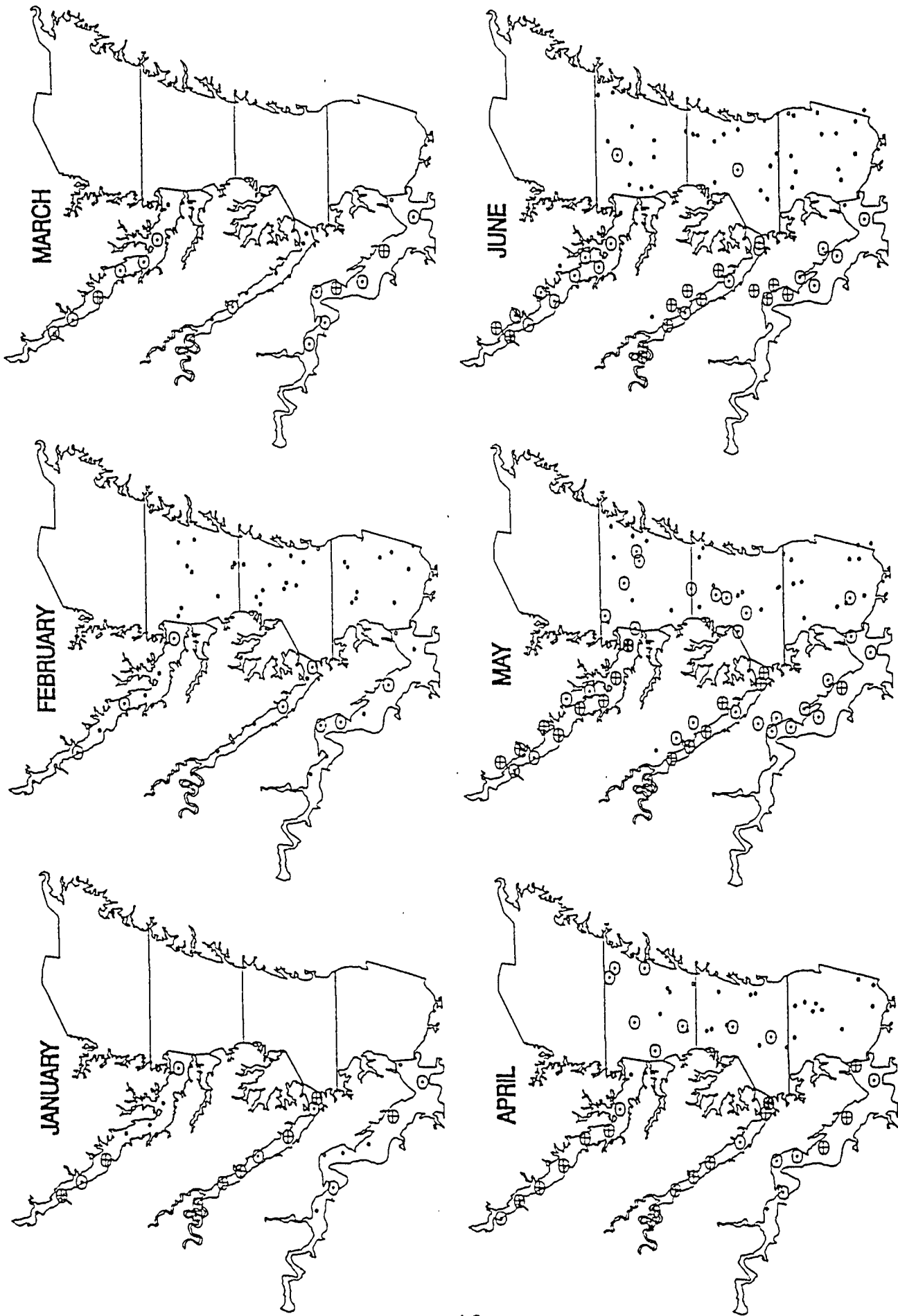


Figure 25



Blue Crab -- Male

Figure 26



RESEARCH

Figure 26

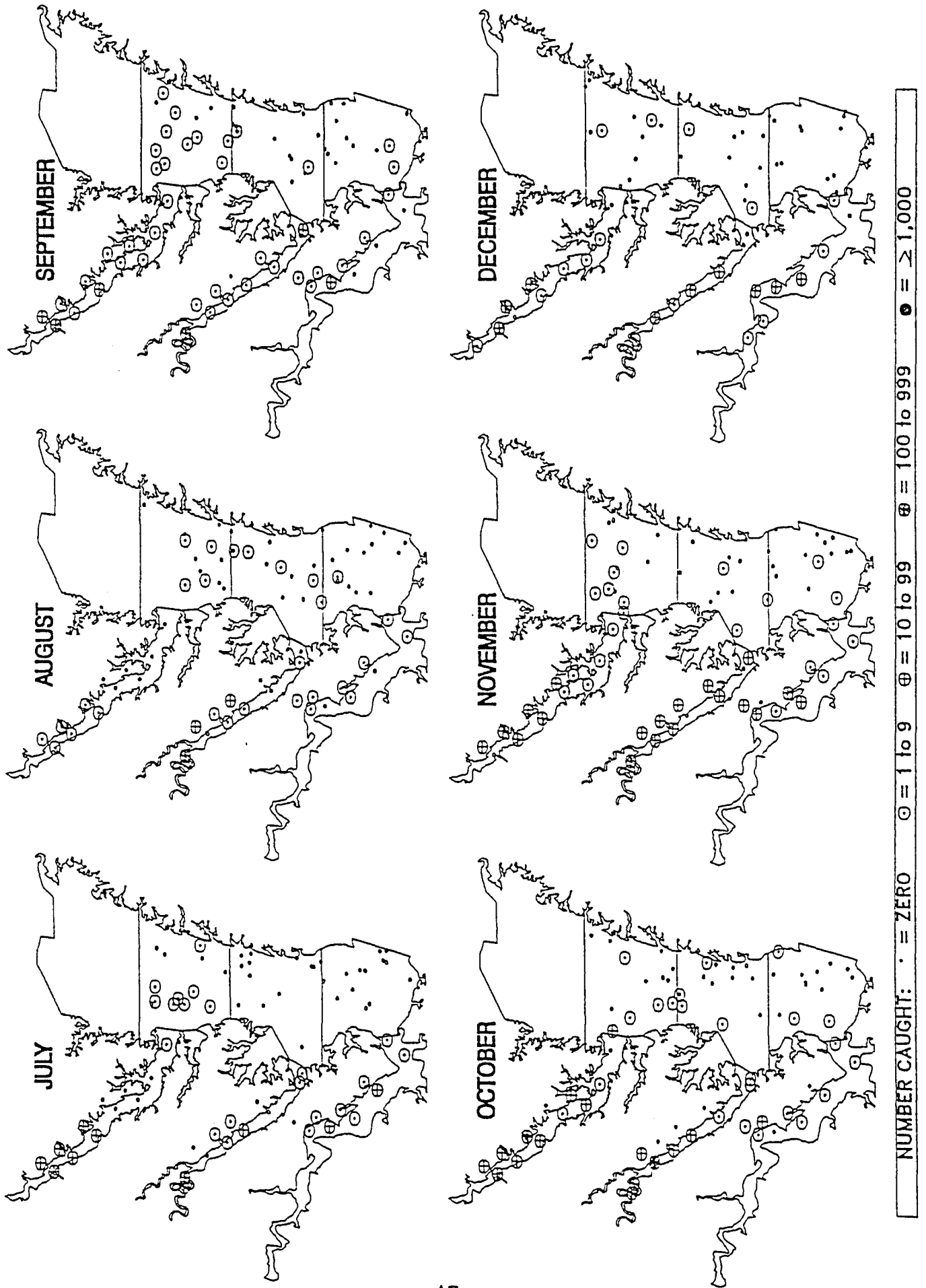
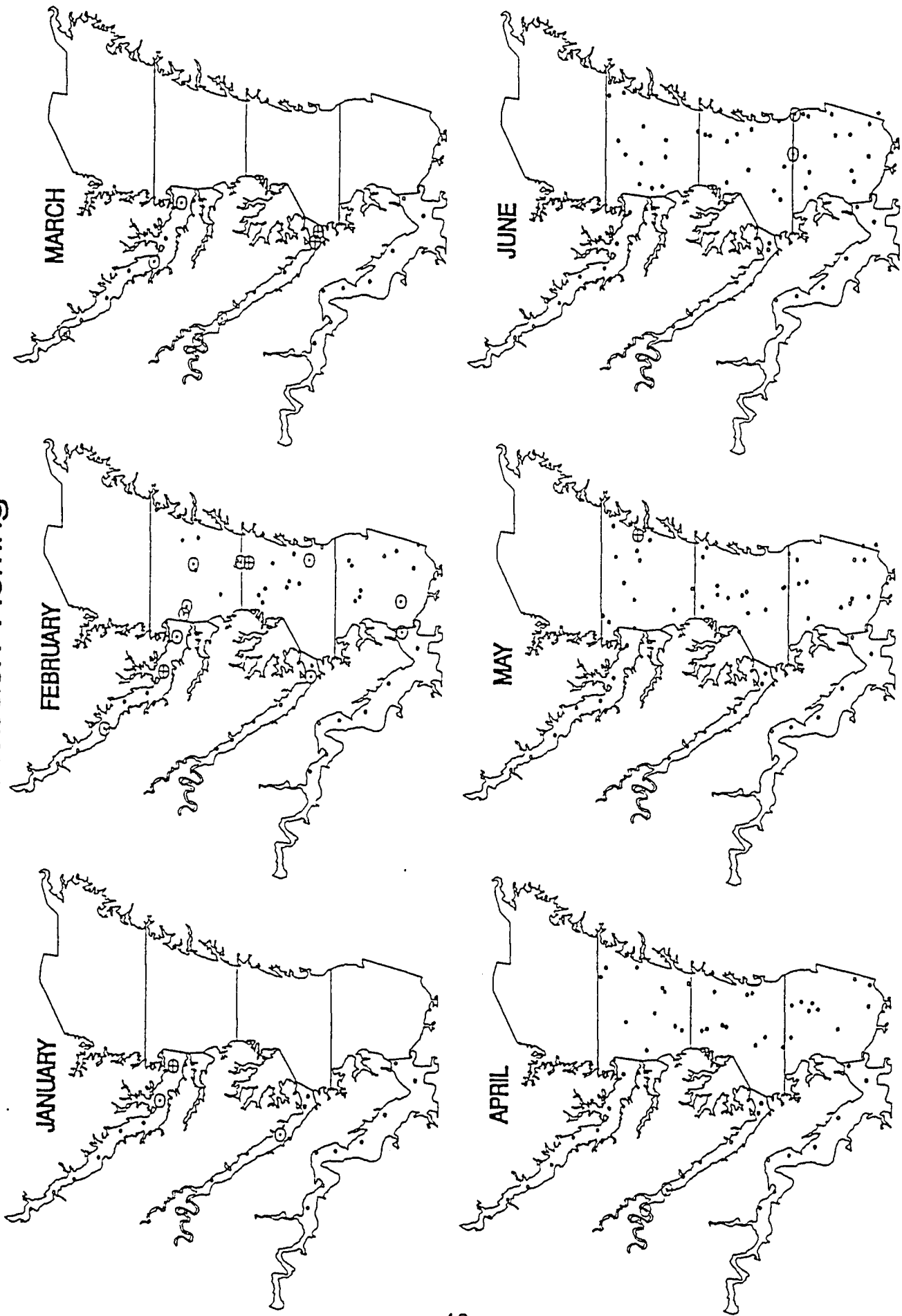


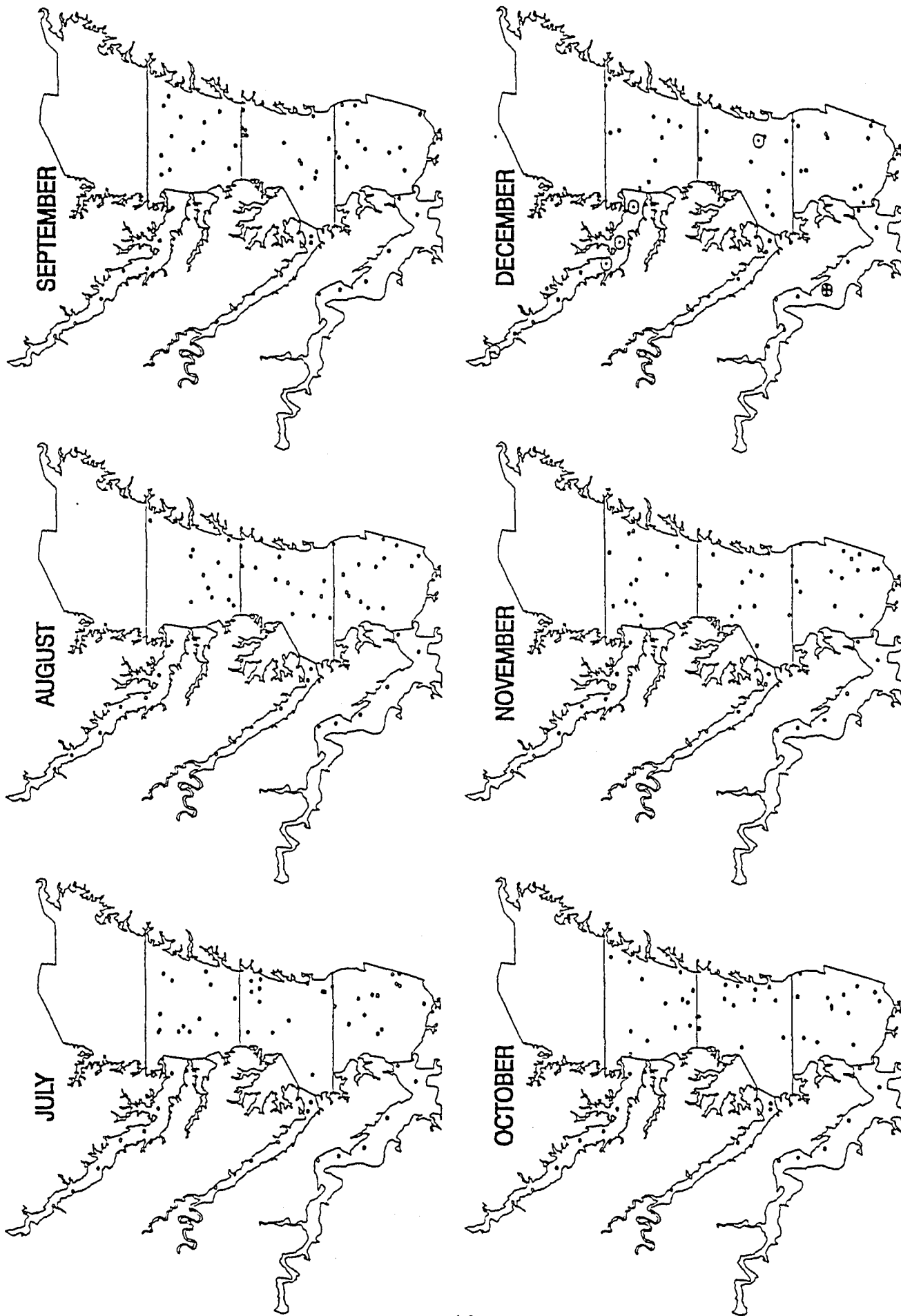
Figure 27

Blueback Herring



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕⊙ = 100 to 999 ● = ≥ 1,000

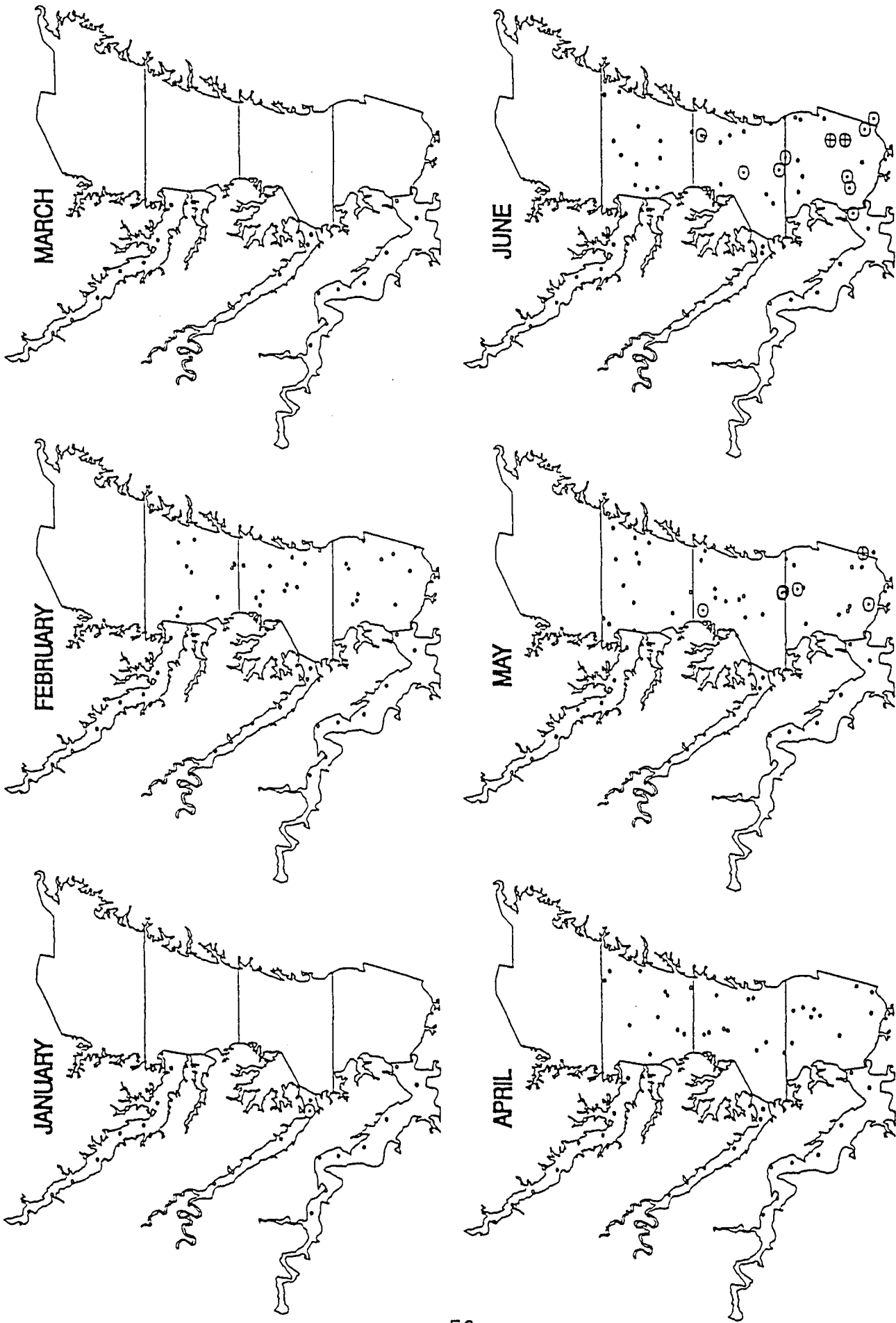
Figure 27



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = ≥ 1,000

Figure 28

Butterfish



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ⊕ = ≥ 1,000

RESEARCH

Figure 28

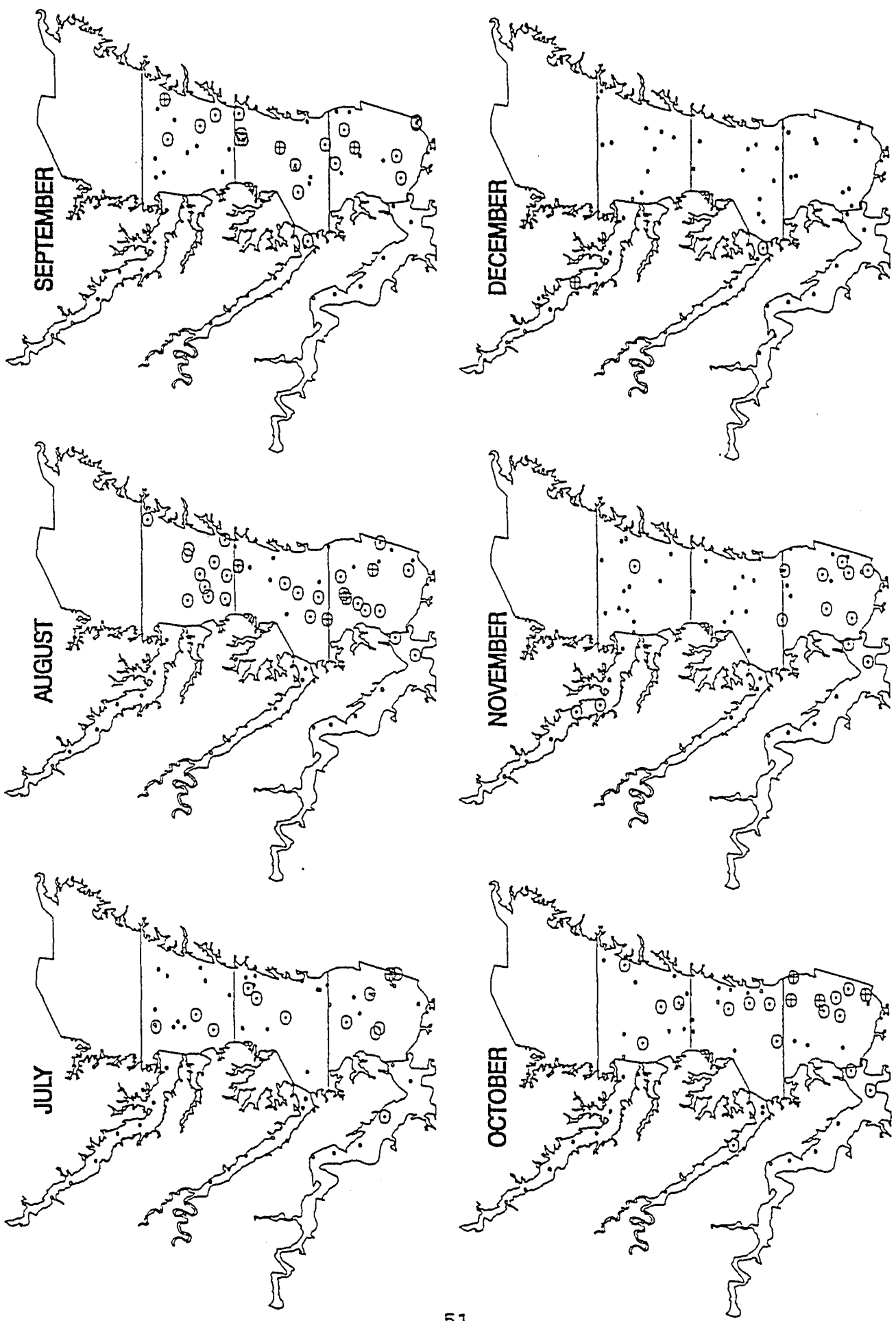
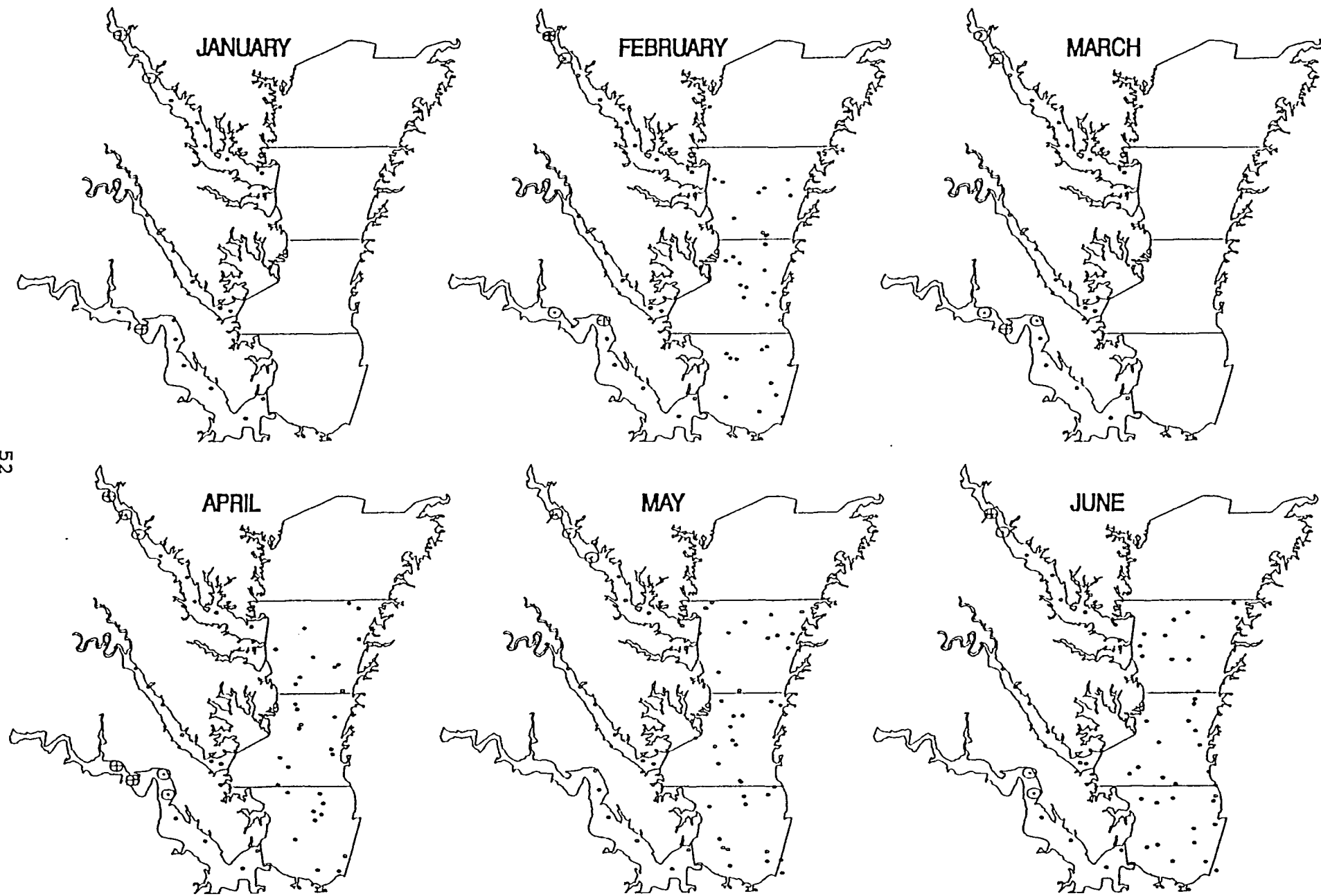


Figure 29

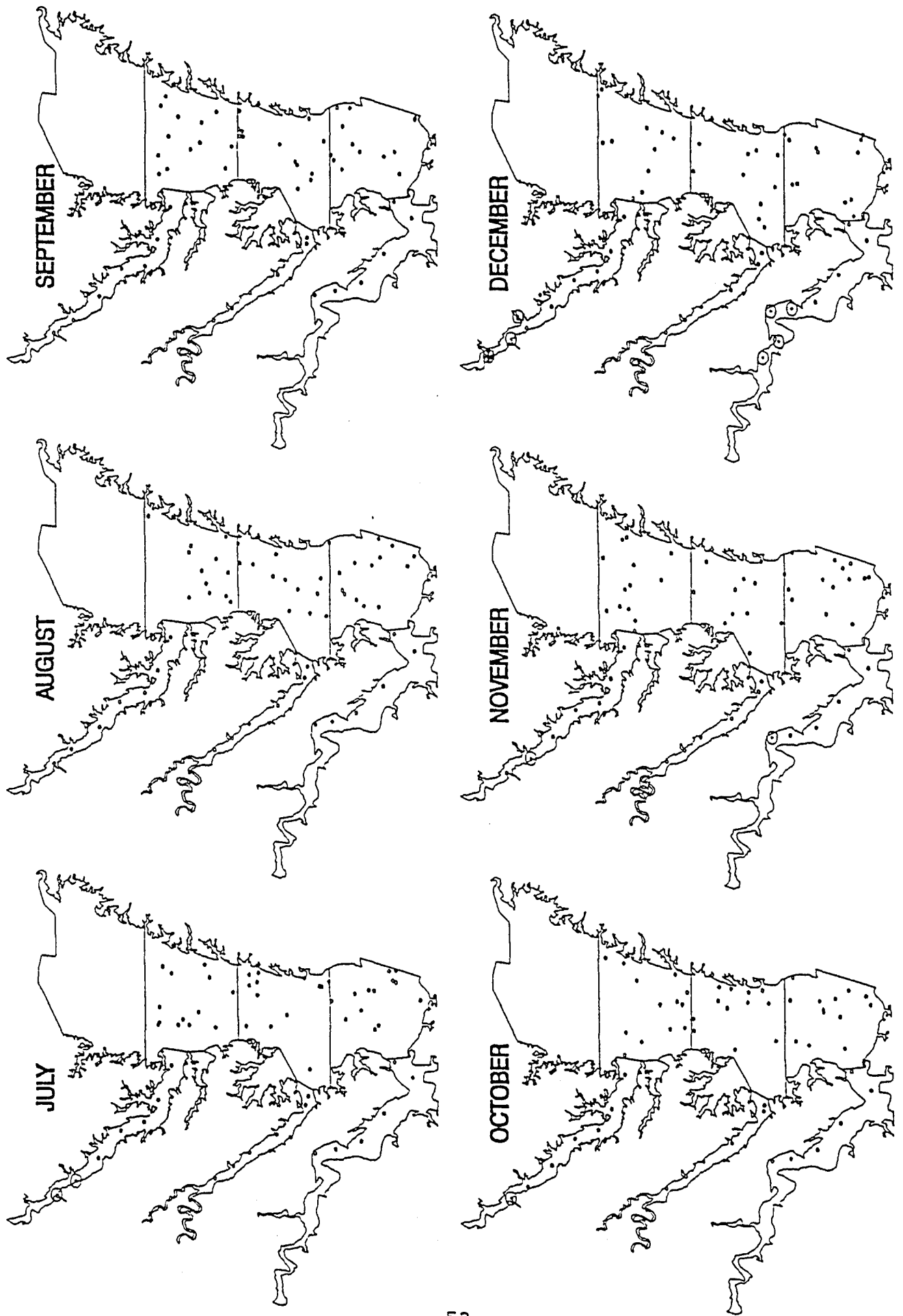
Channel Catfish



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000



Figure 29



Hogchoker

Figure 30

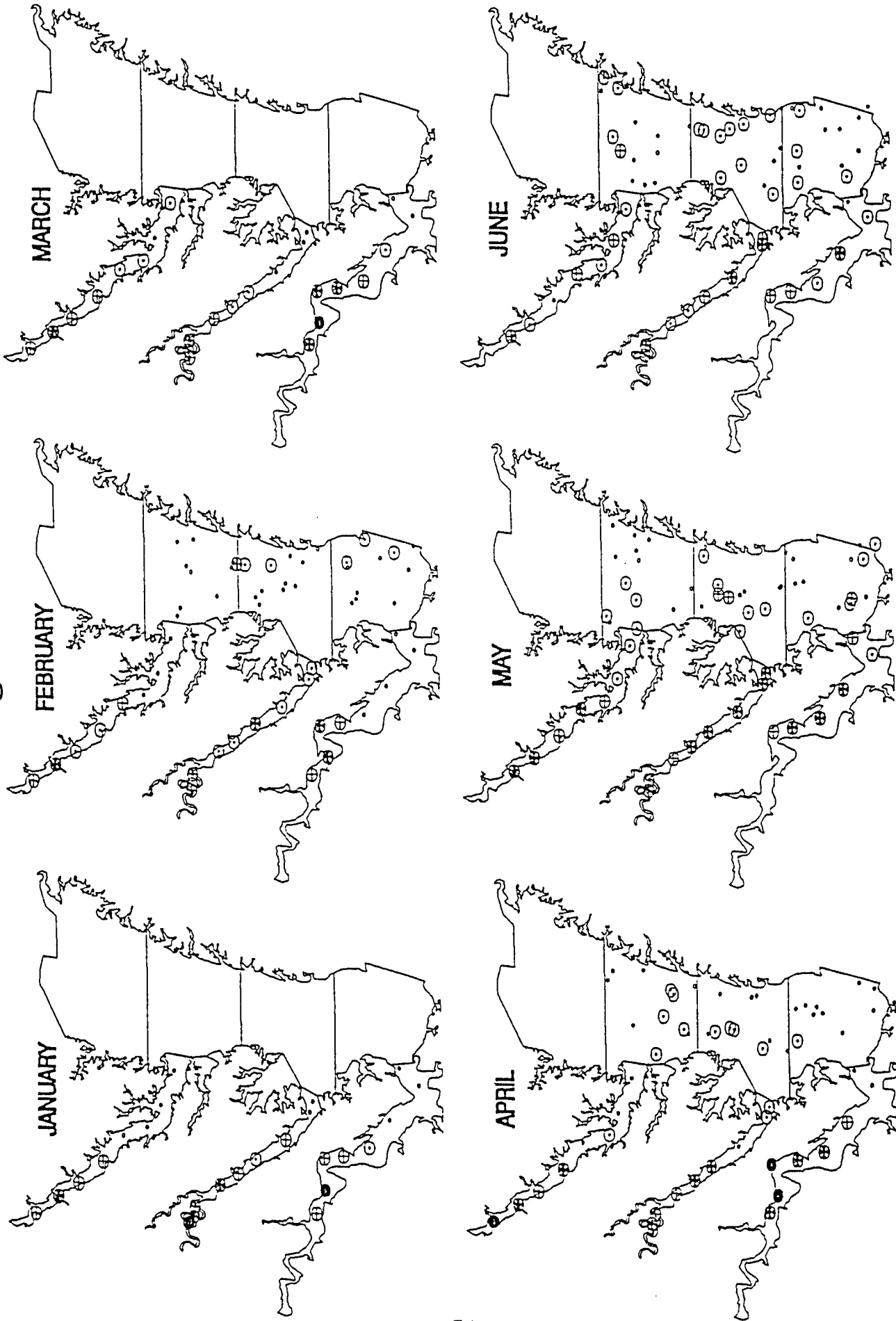




Figure 30

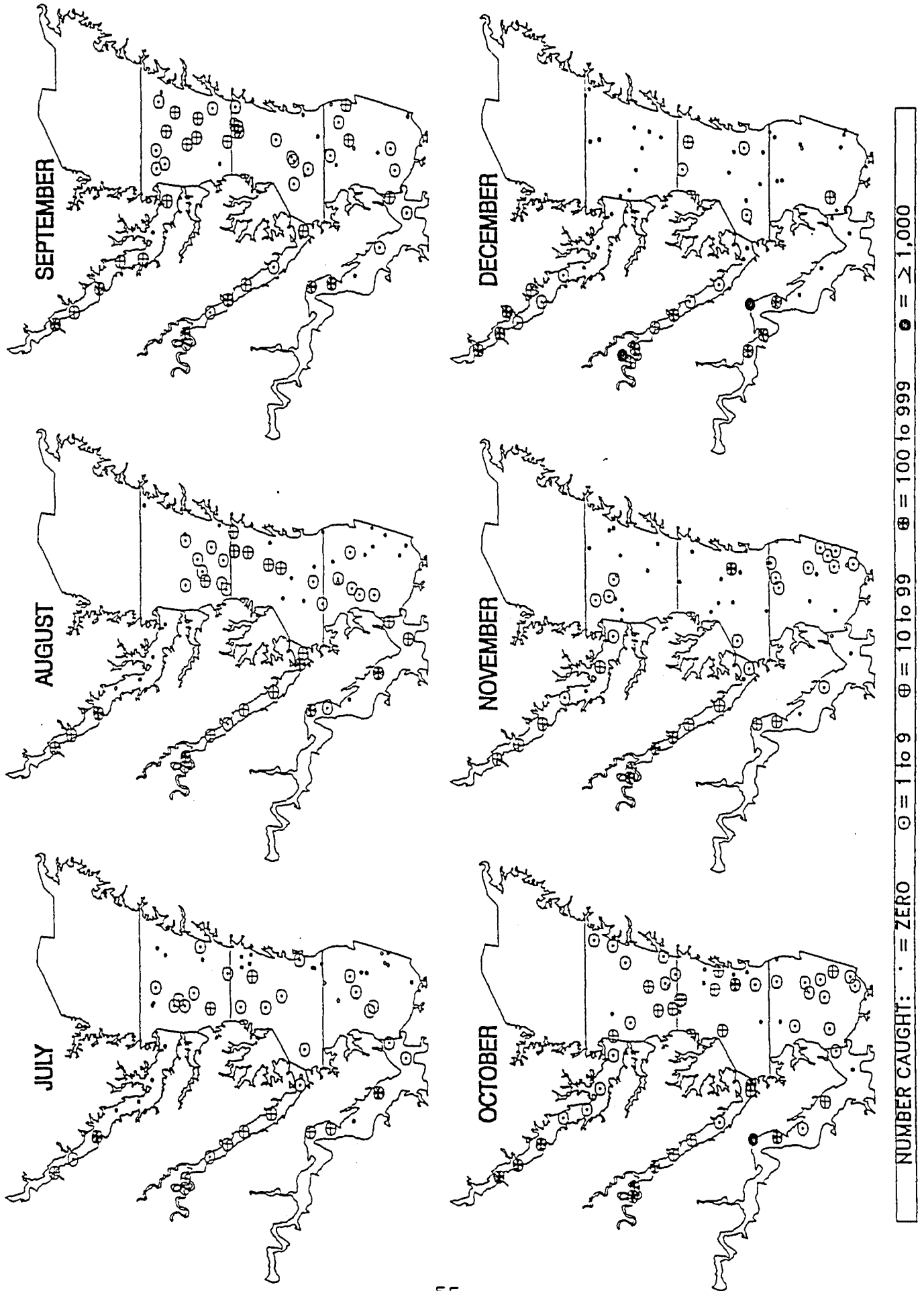
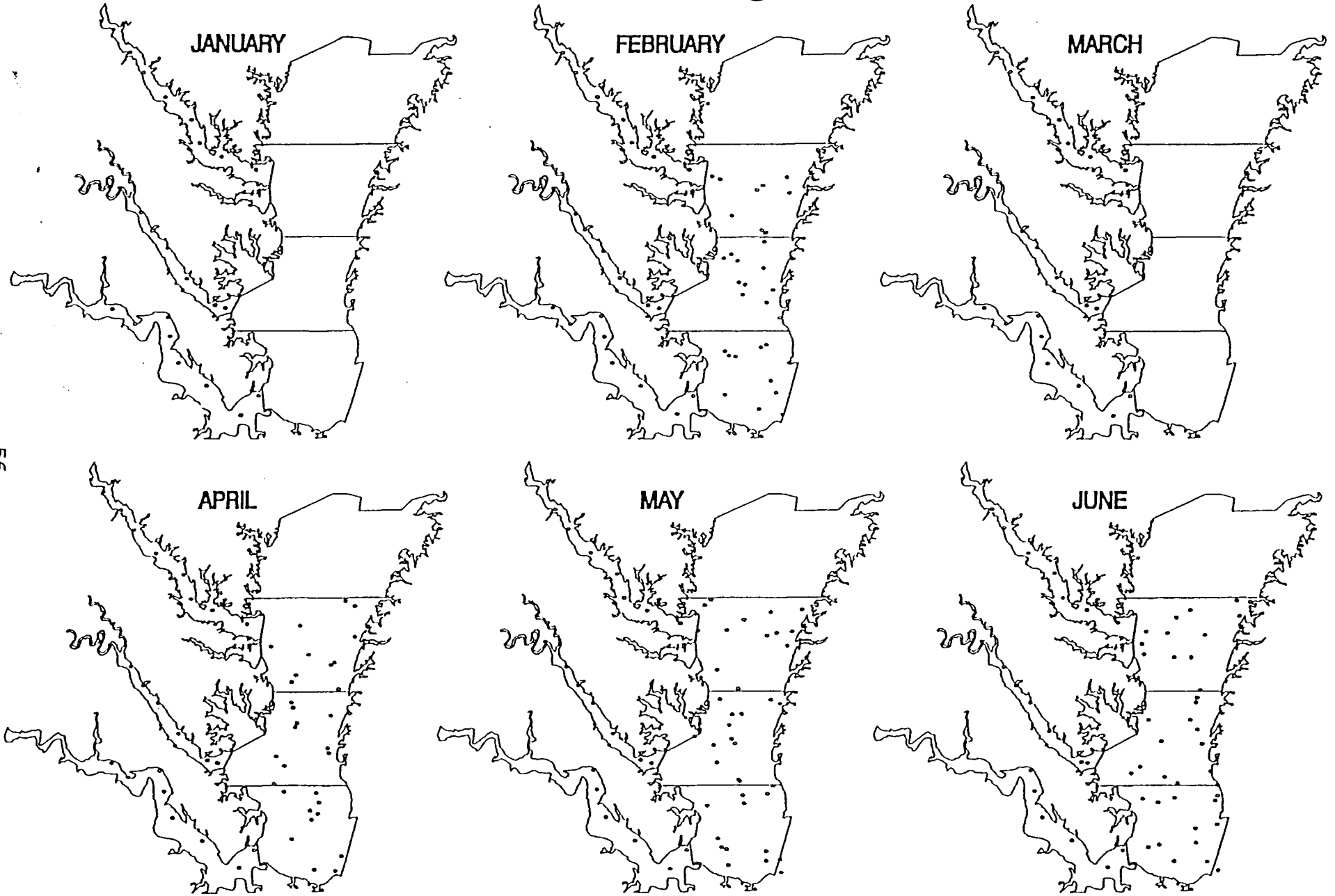


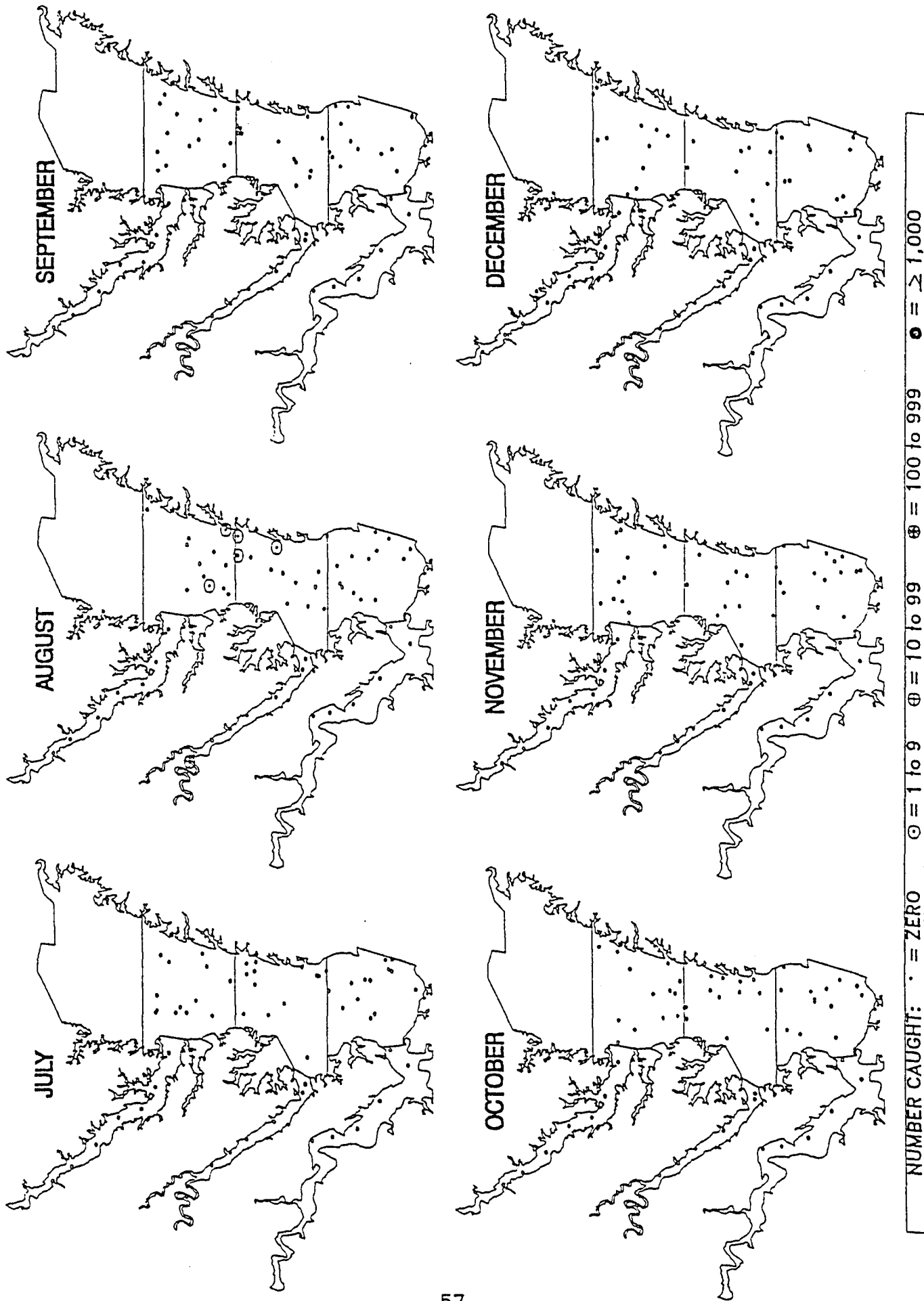
Figure 31

Northern Kingfish



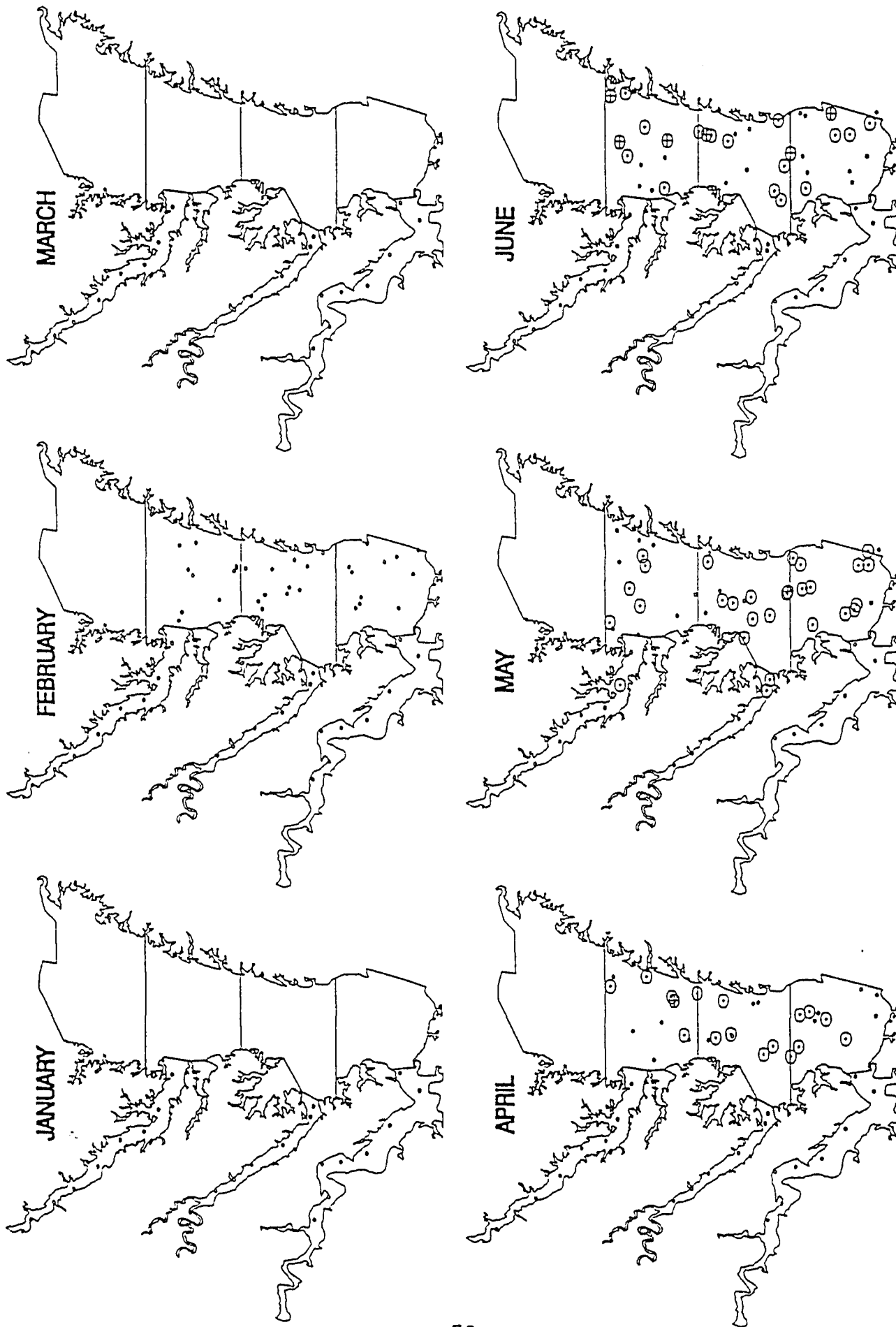
NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊖ = 100 to 999 ● = ≥ 1,000

Figure 31



Northern Searobin

Figure 32



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = > 1,000

Figure 32

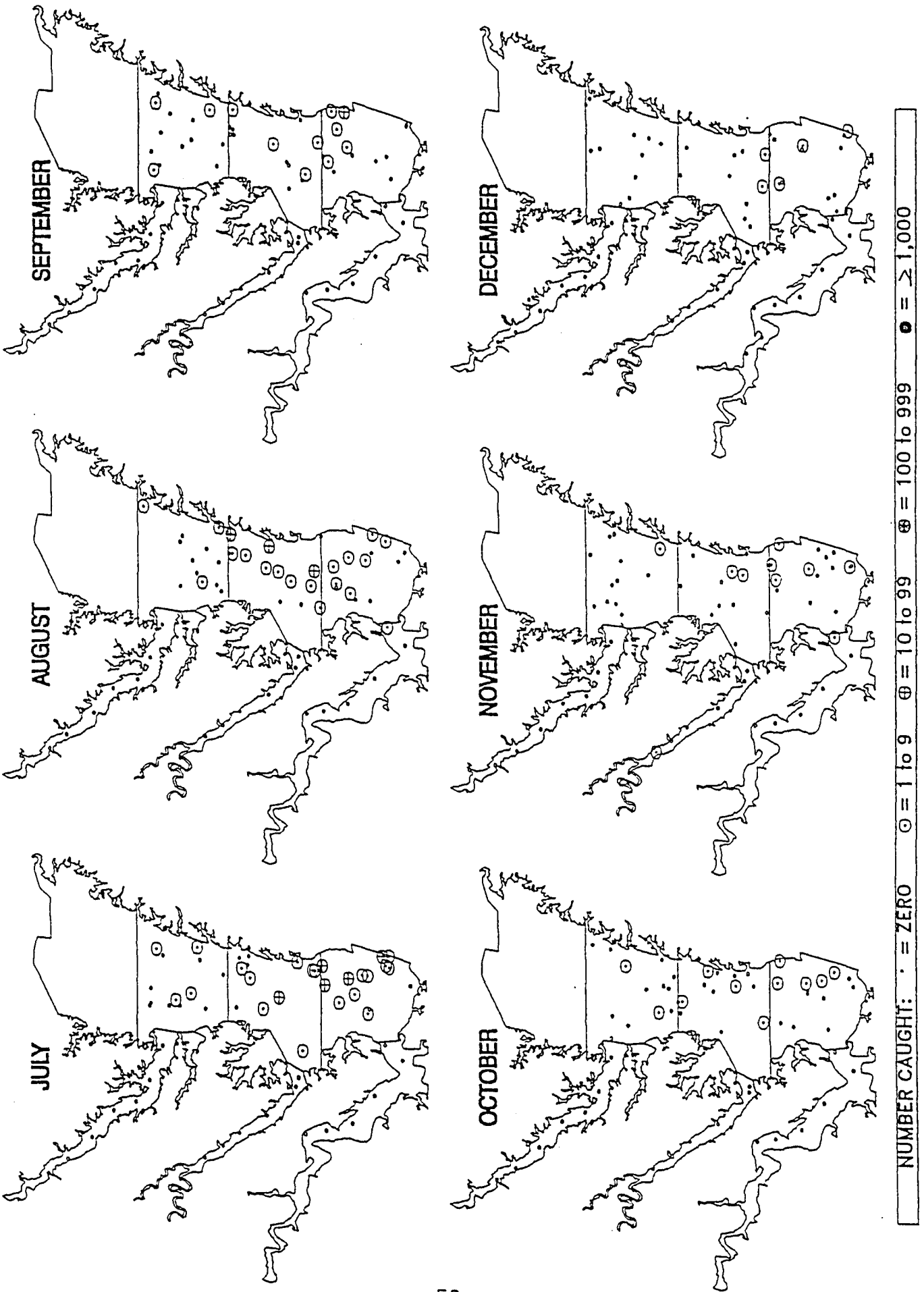


Figure 33

Scup

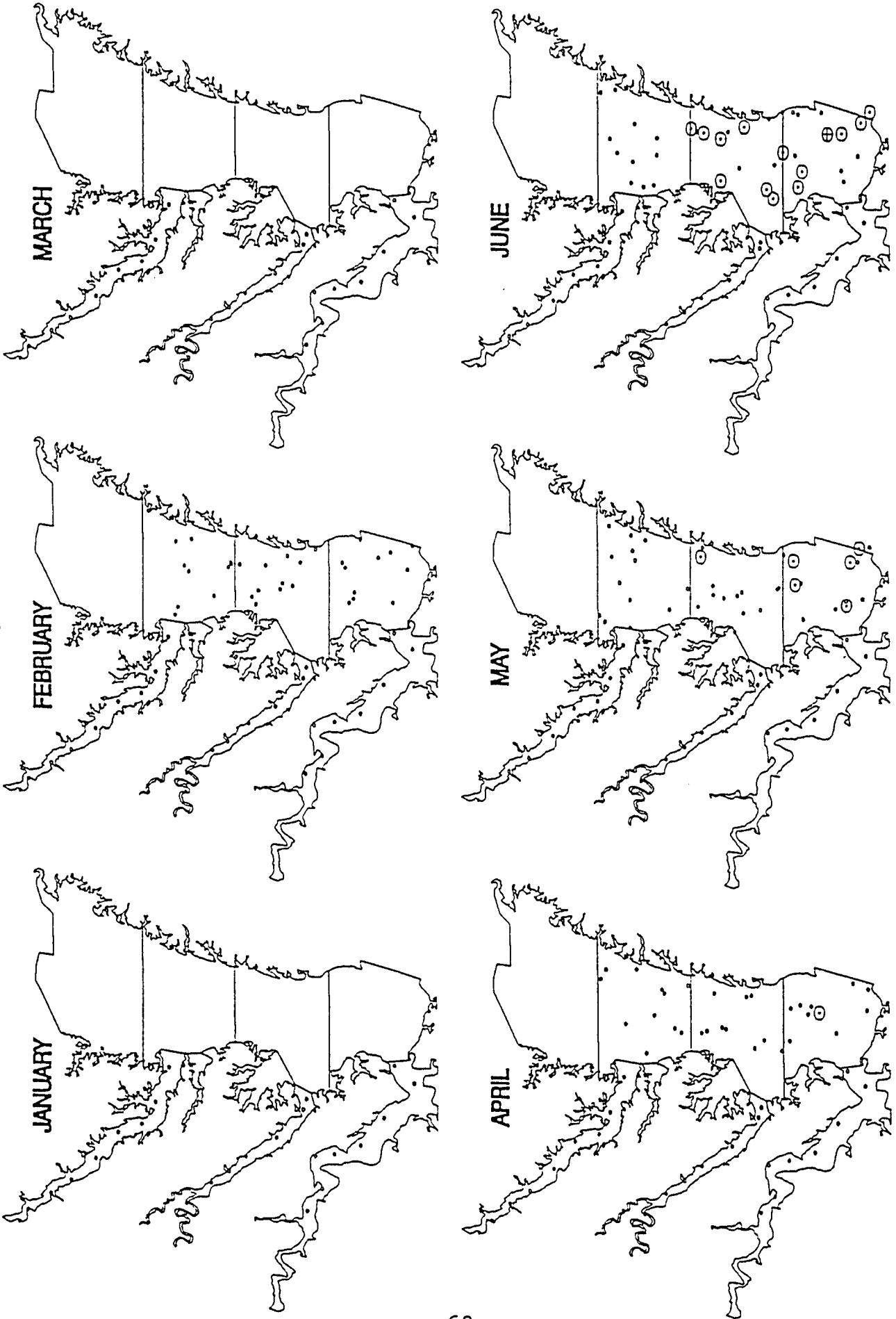


Figure 33

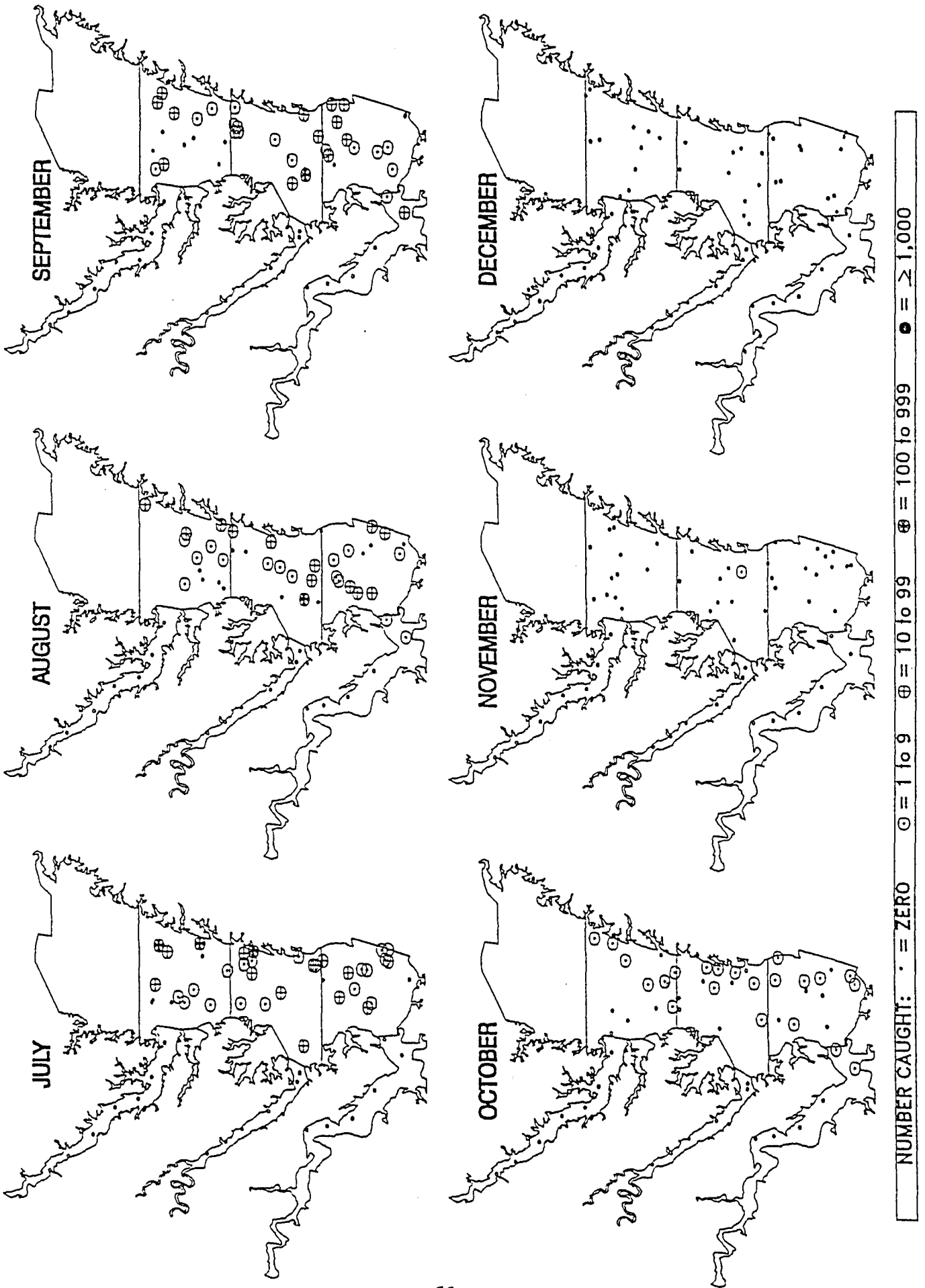
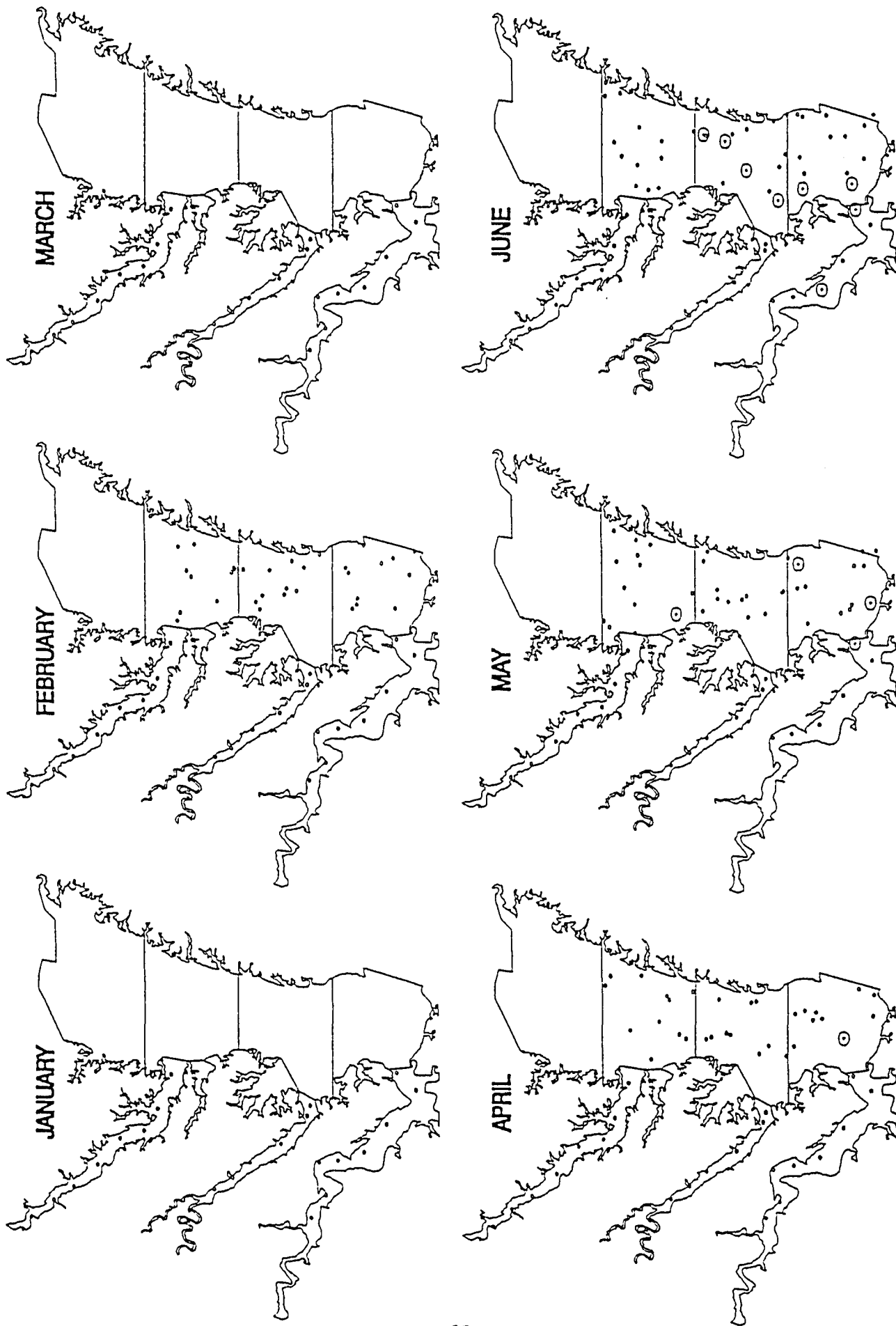


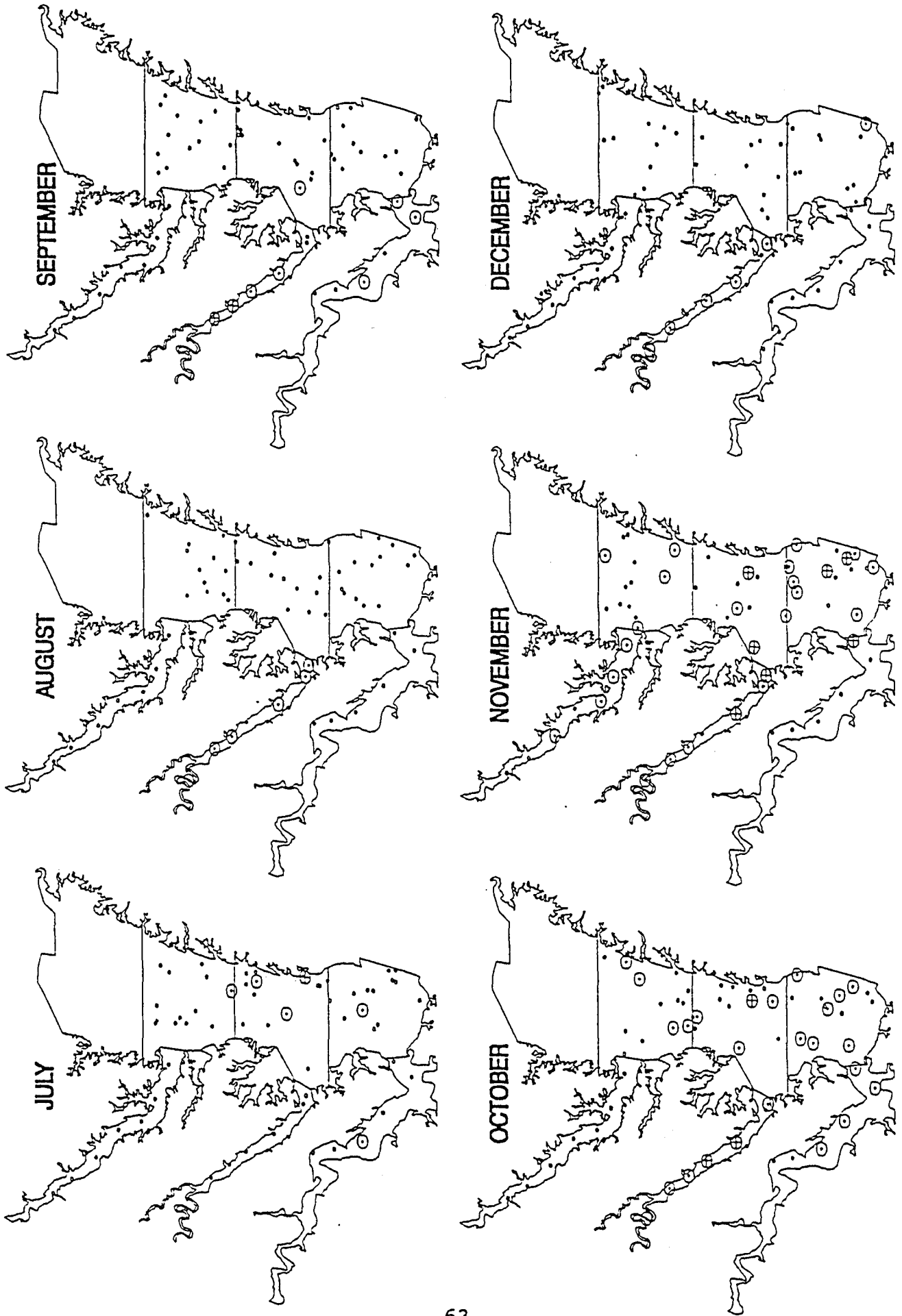
Figure 34

Silver Perch



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊖ = 100 to 999 ● = ≥ 1,000

Figure 34



Smallmouth Flounder

Figure 35

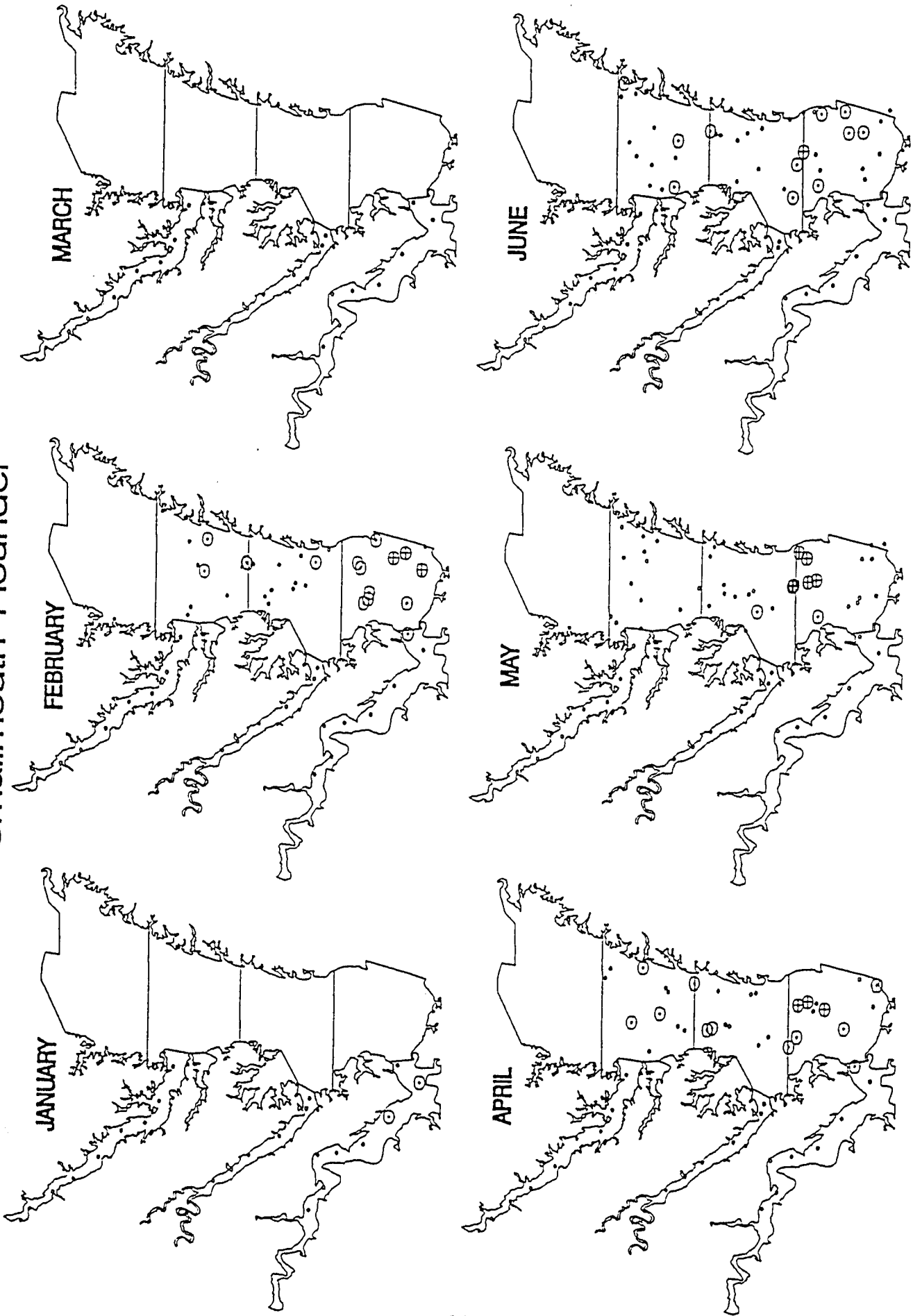
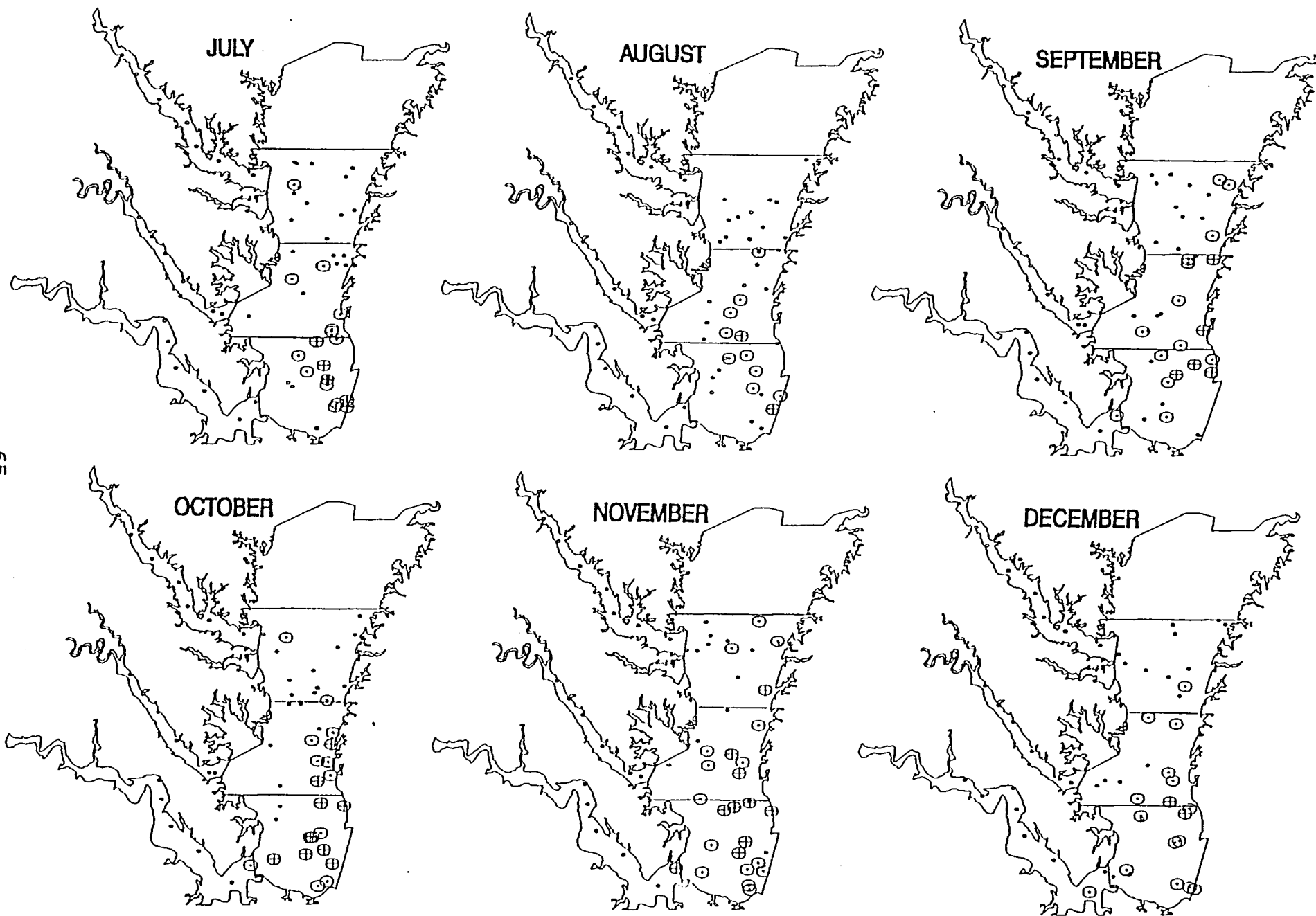


Figure 35



NUMBER CAUGHT: • = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = ≥ 1,000

Southern Kingfish

Figure 38

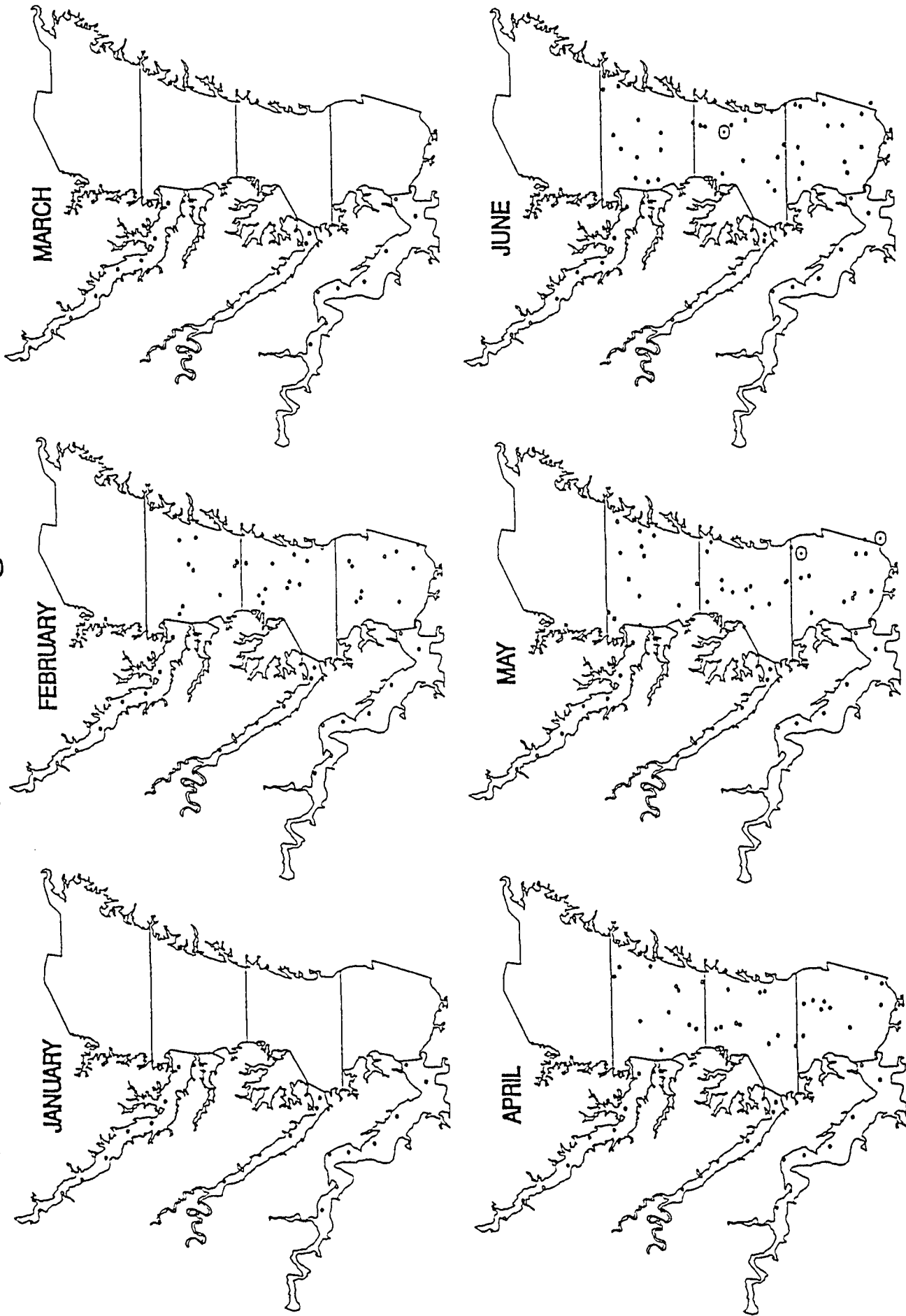


Figure 36

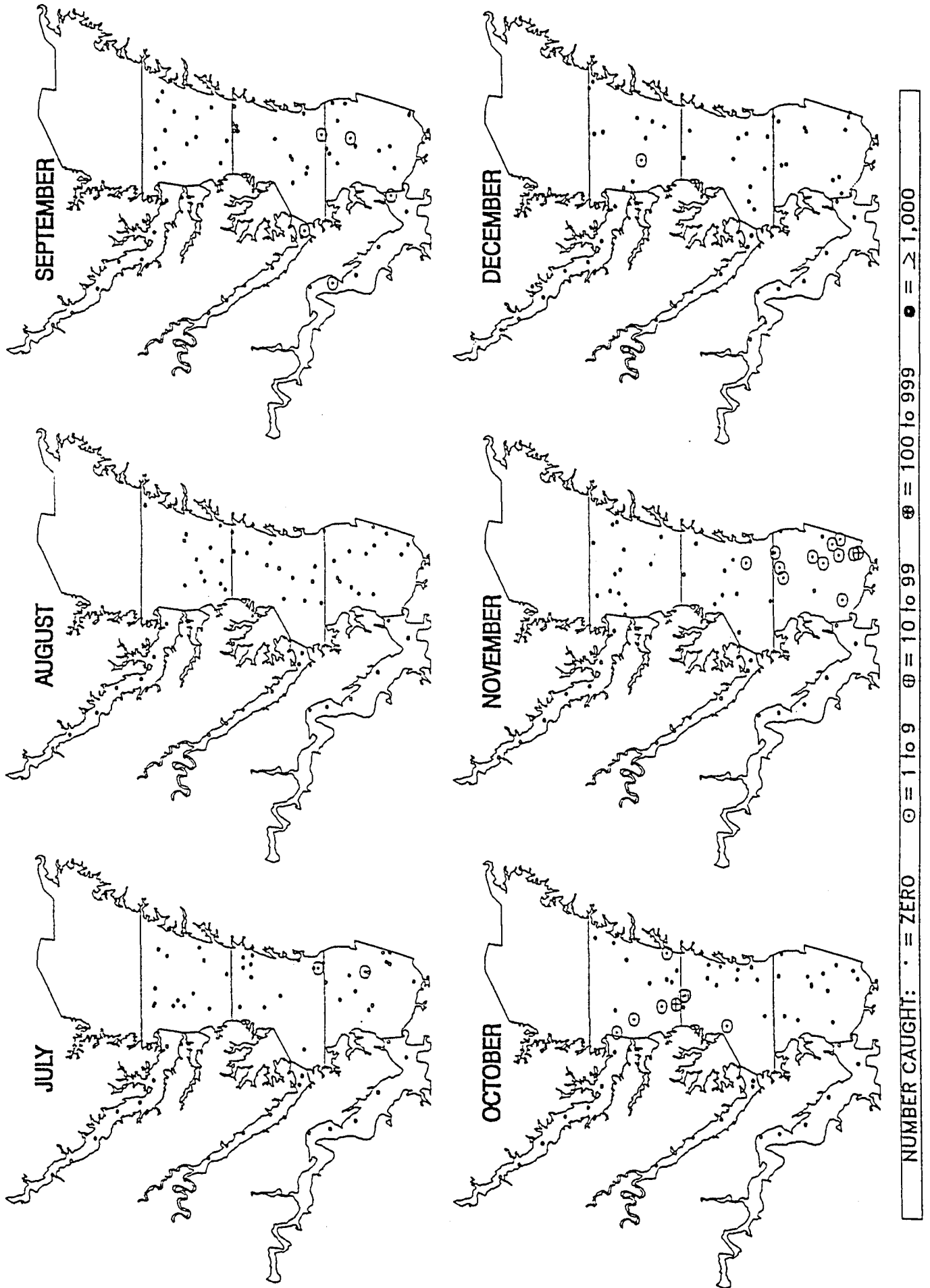


Figure 37

Spot

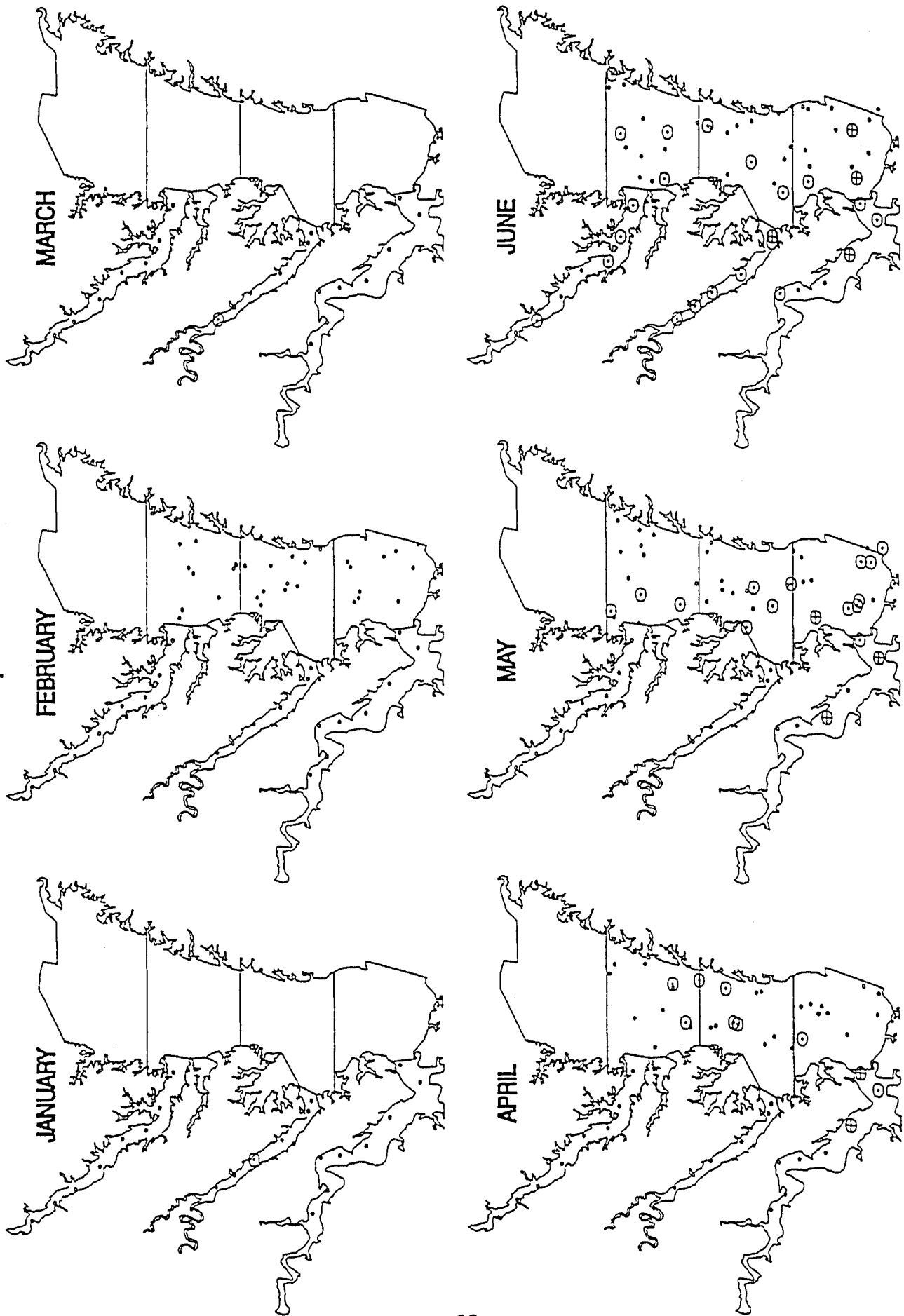
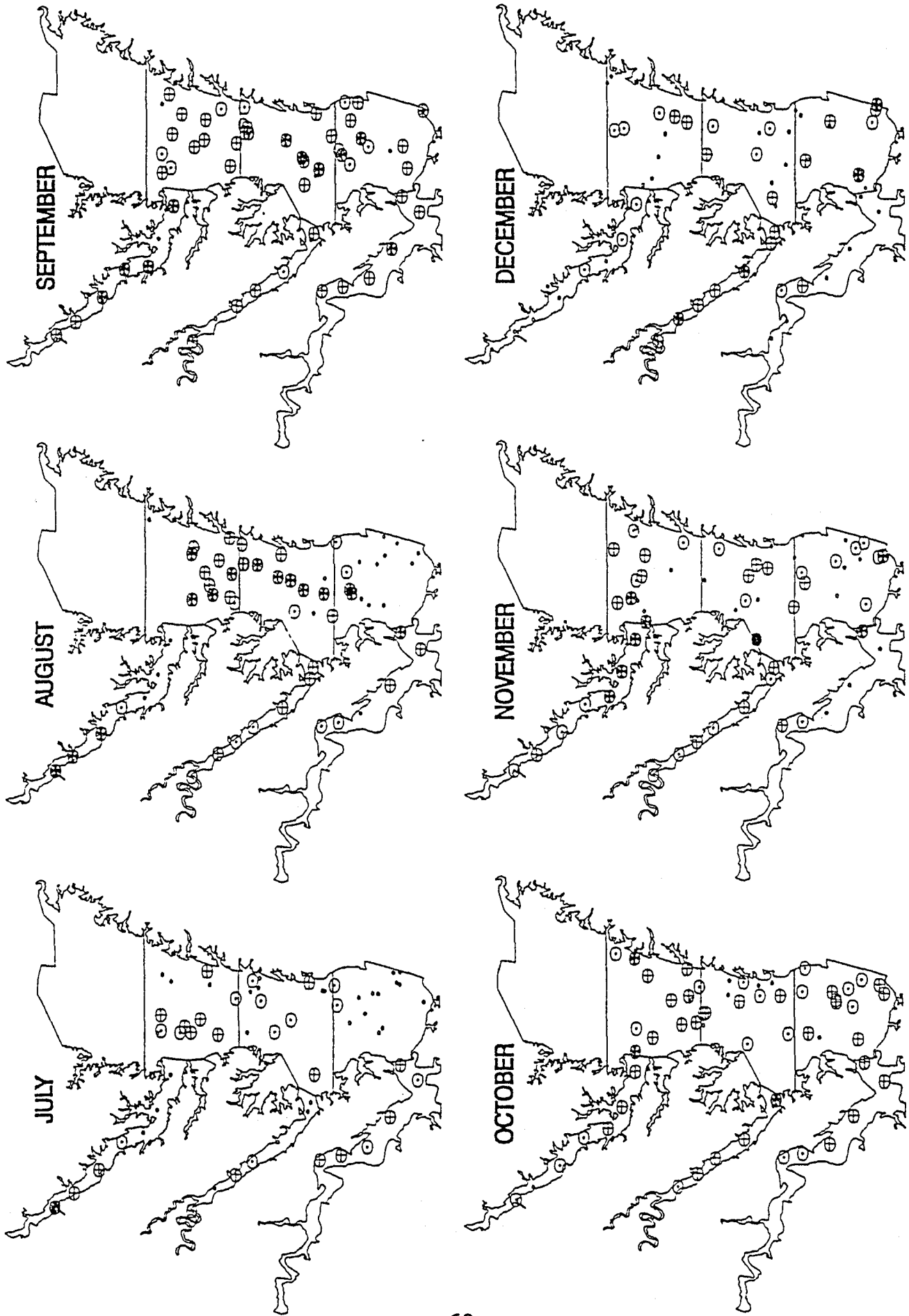


Figure 37



Spotted Hake

Figure 38

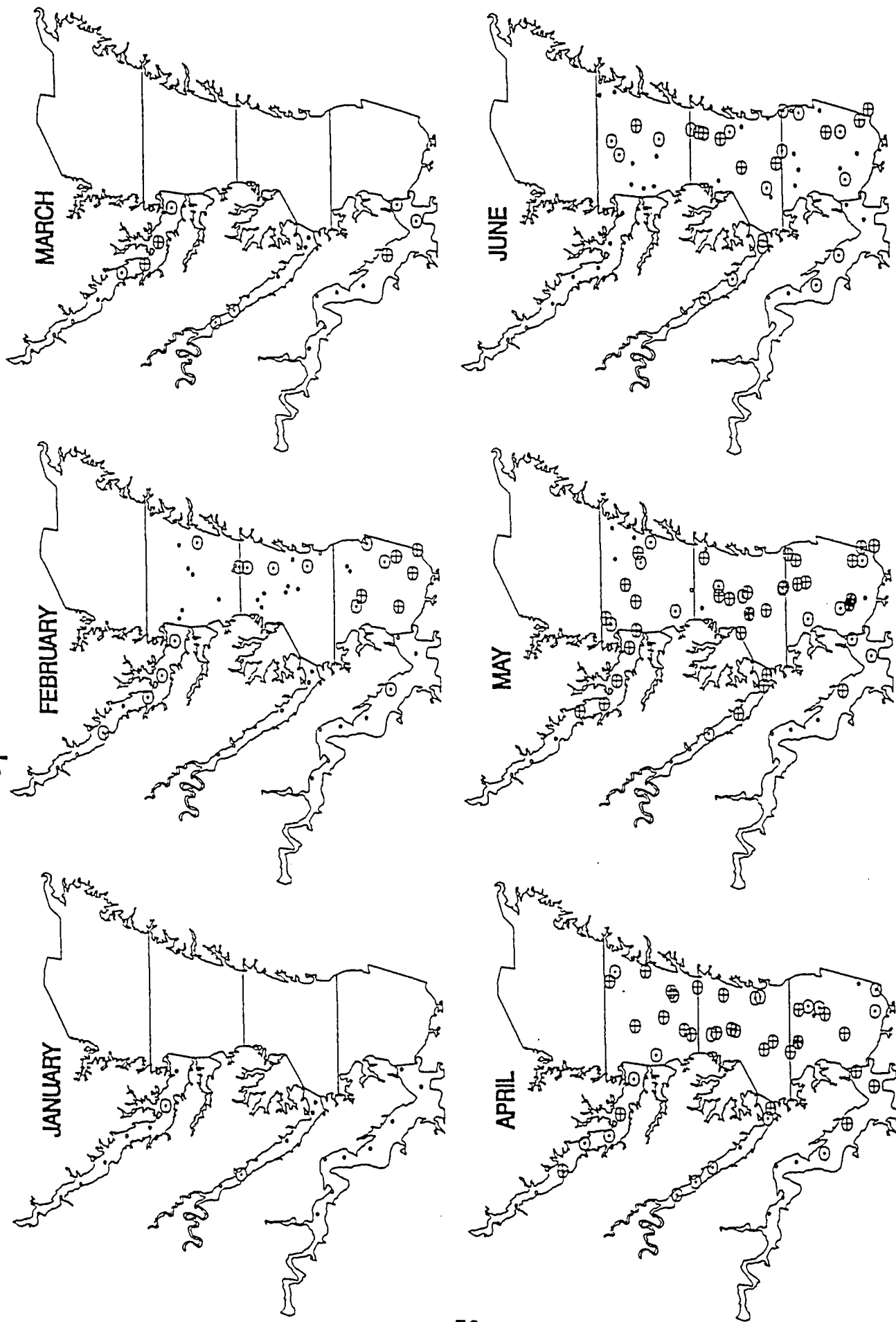


Figure 38

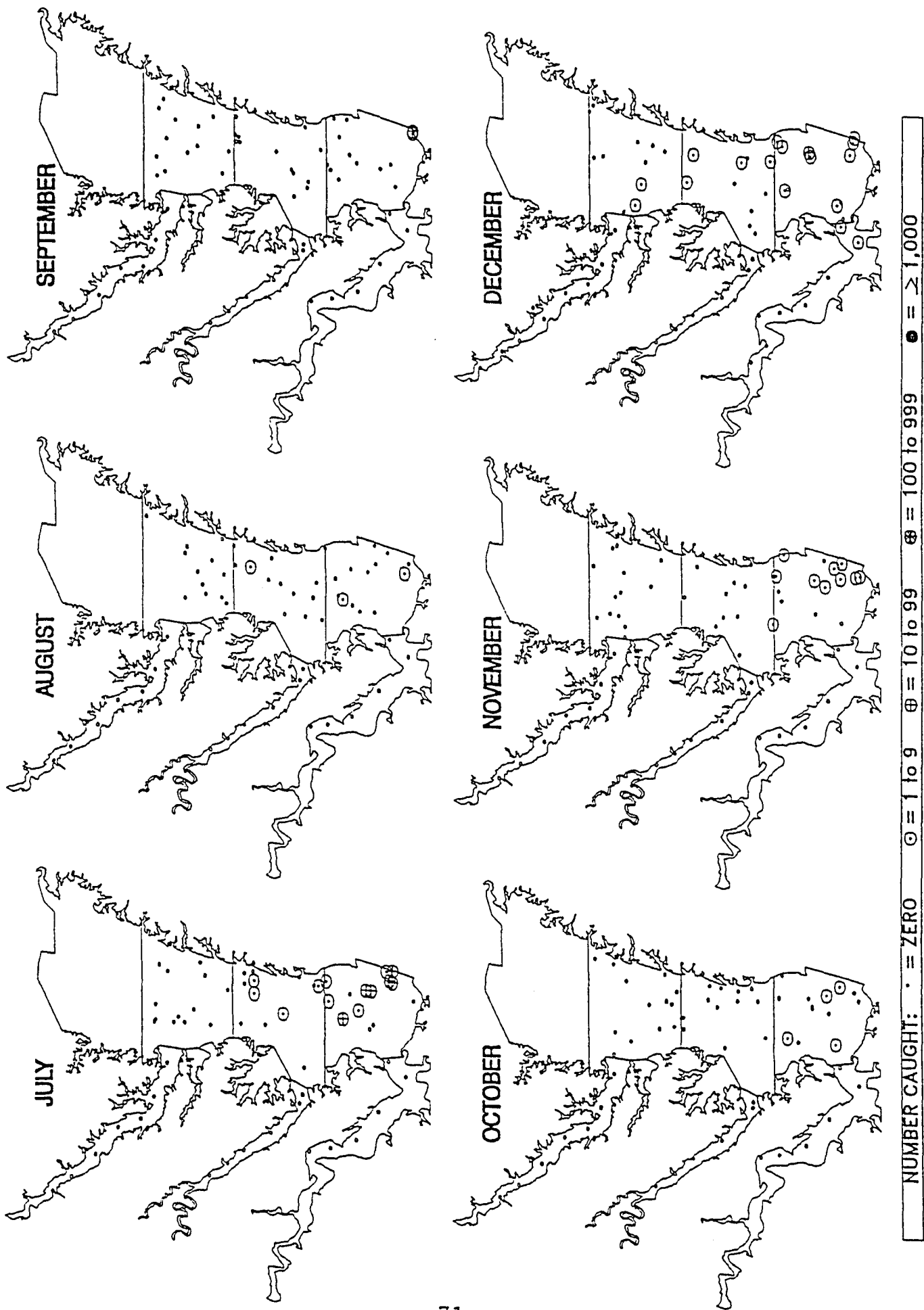


Figure 39

Striped Anchovy

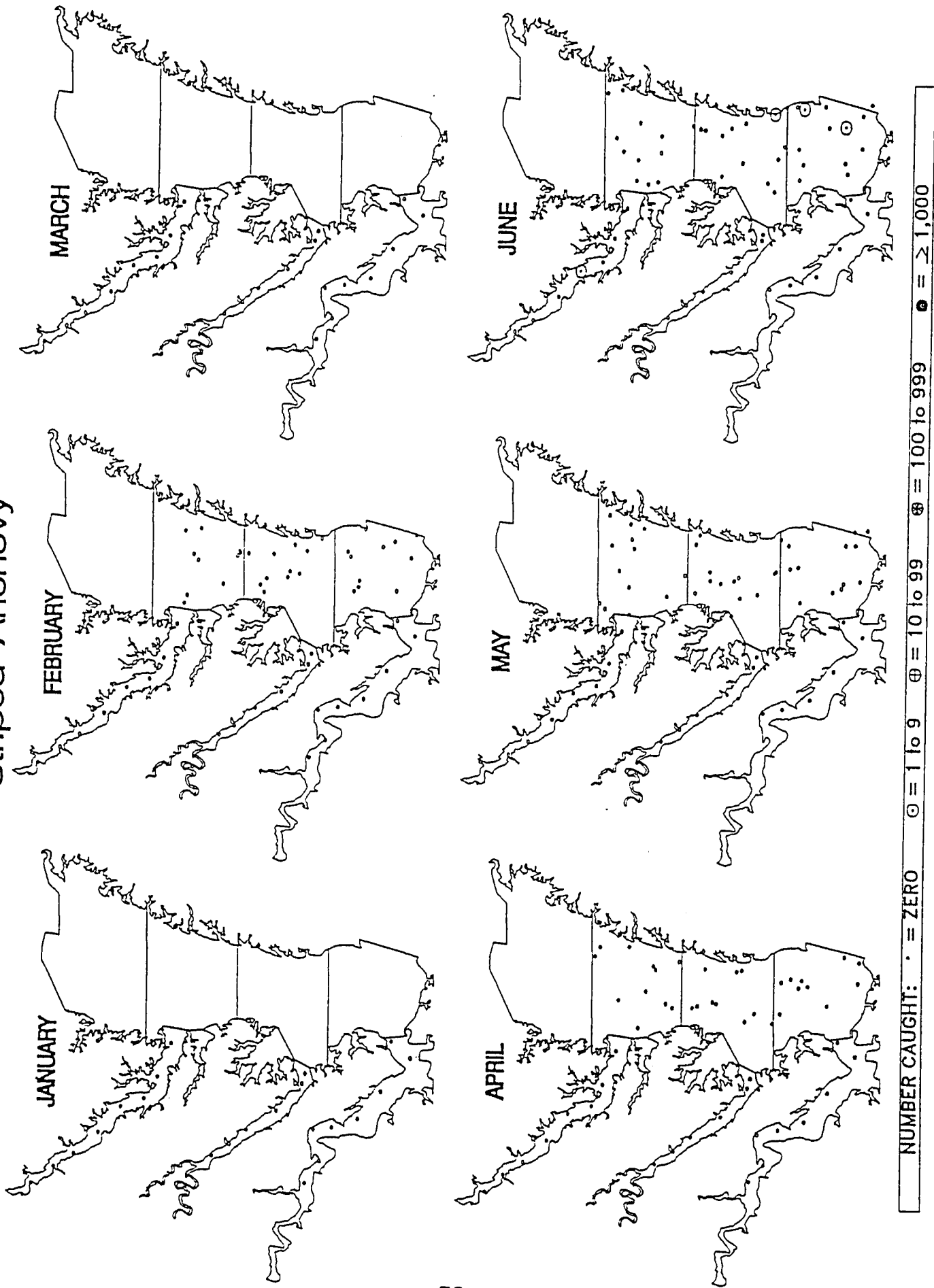


Figure 39

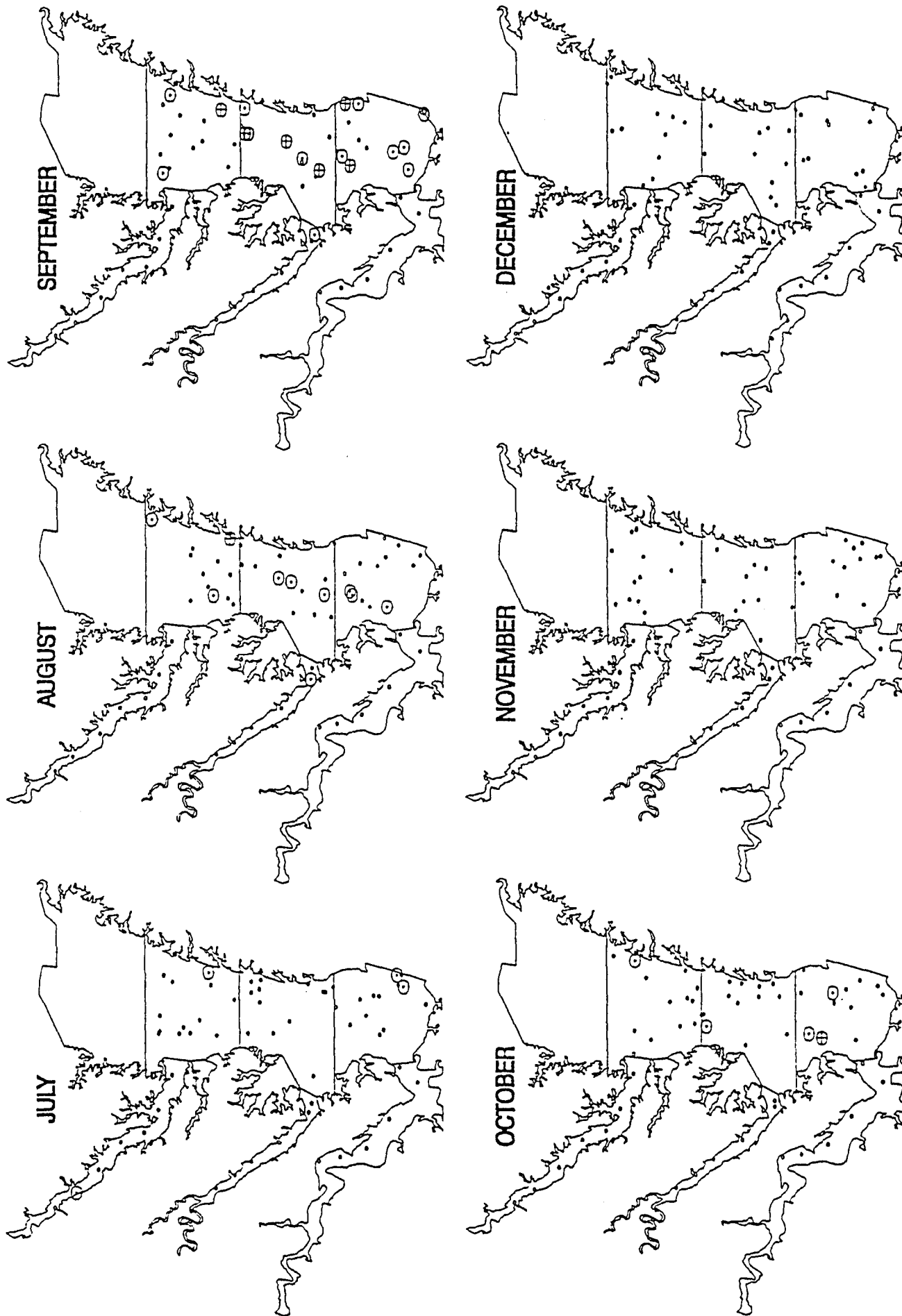


Figure 40

Striped Bass

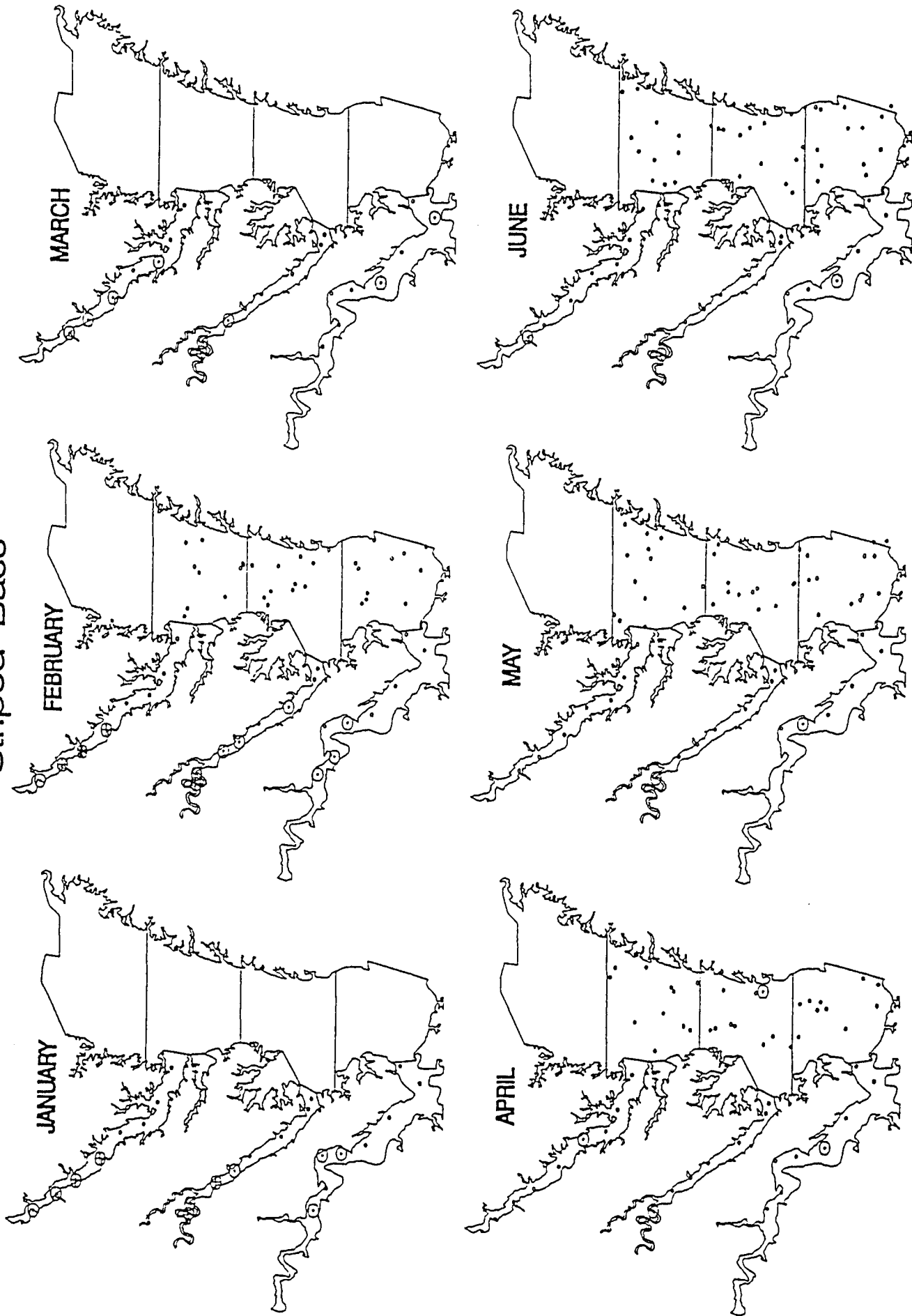


Figure 40

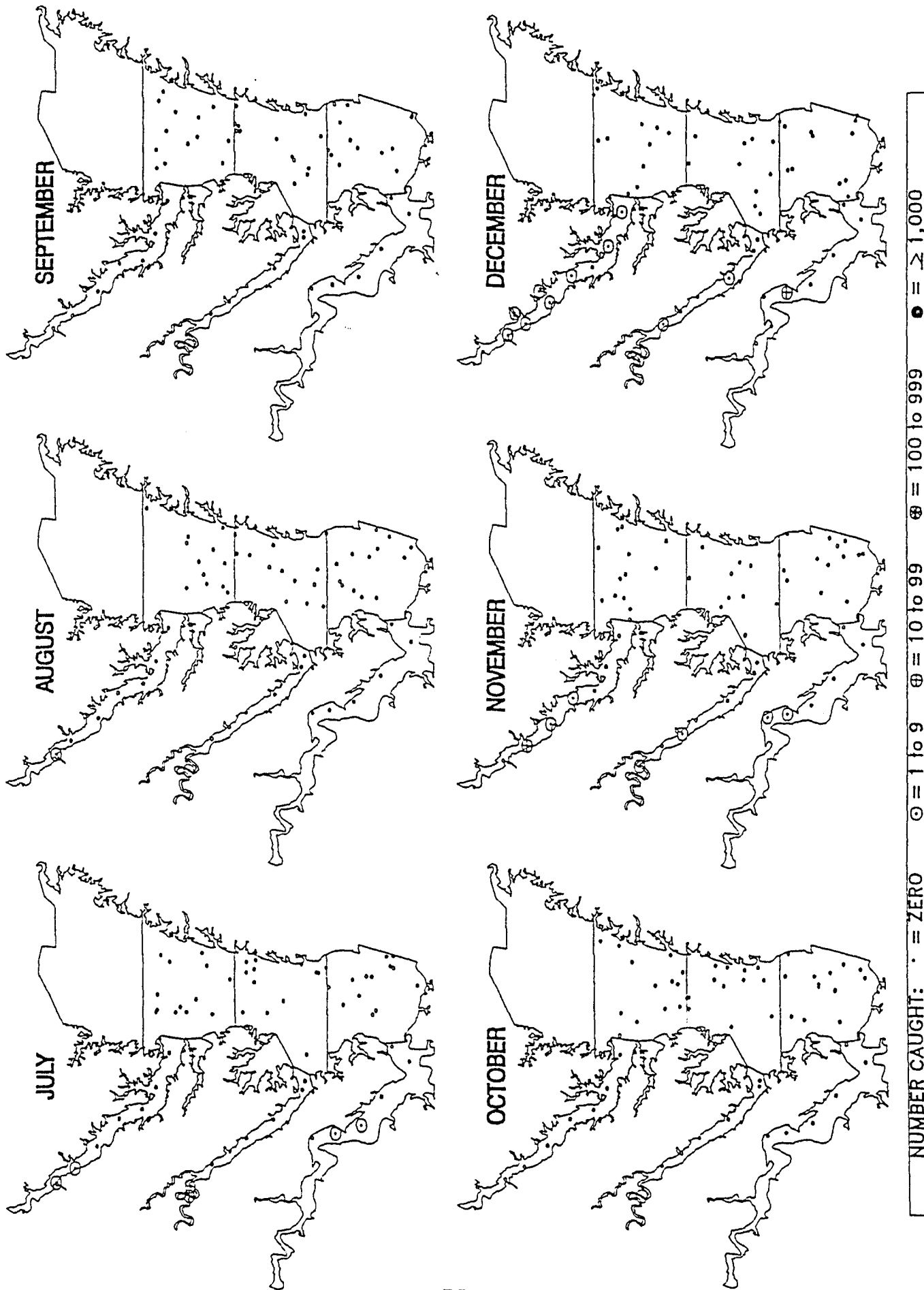
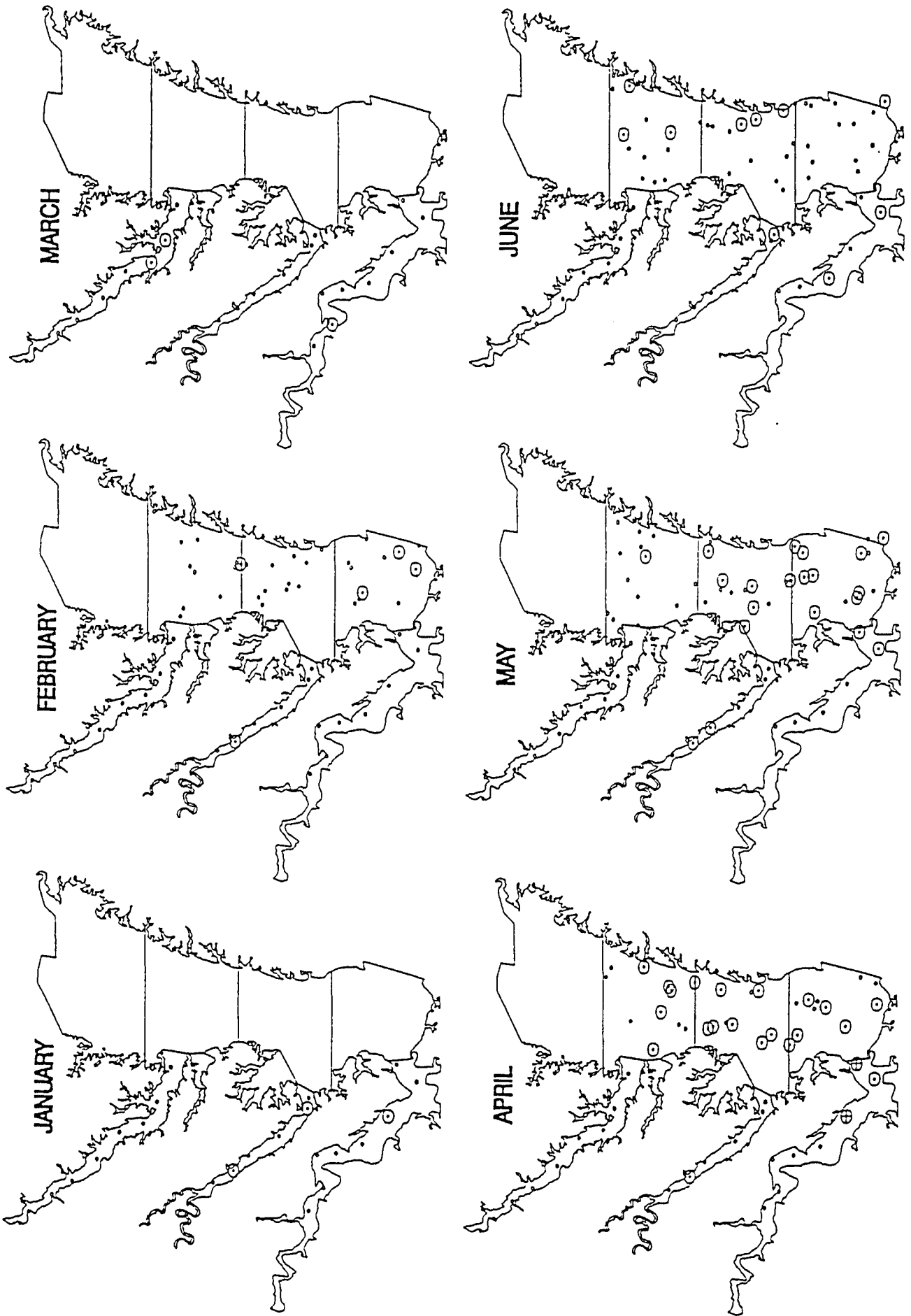


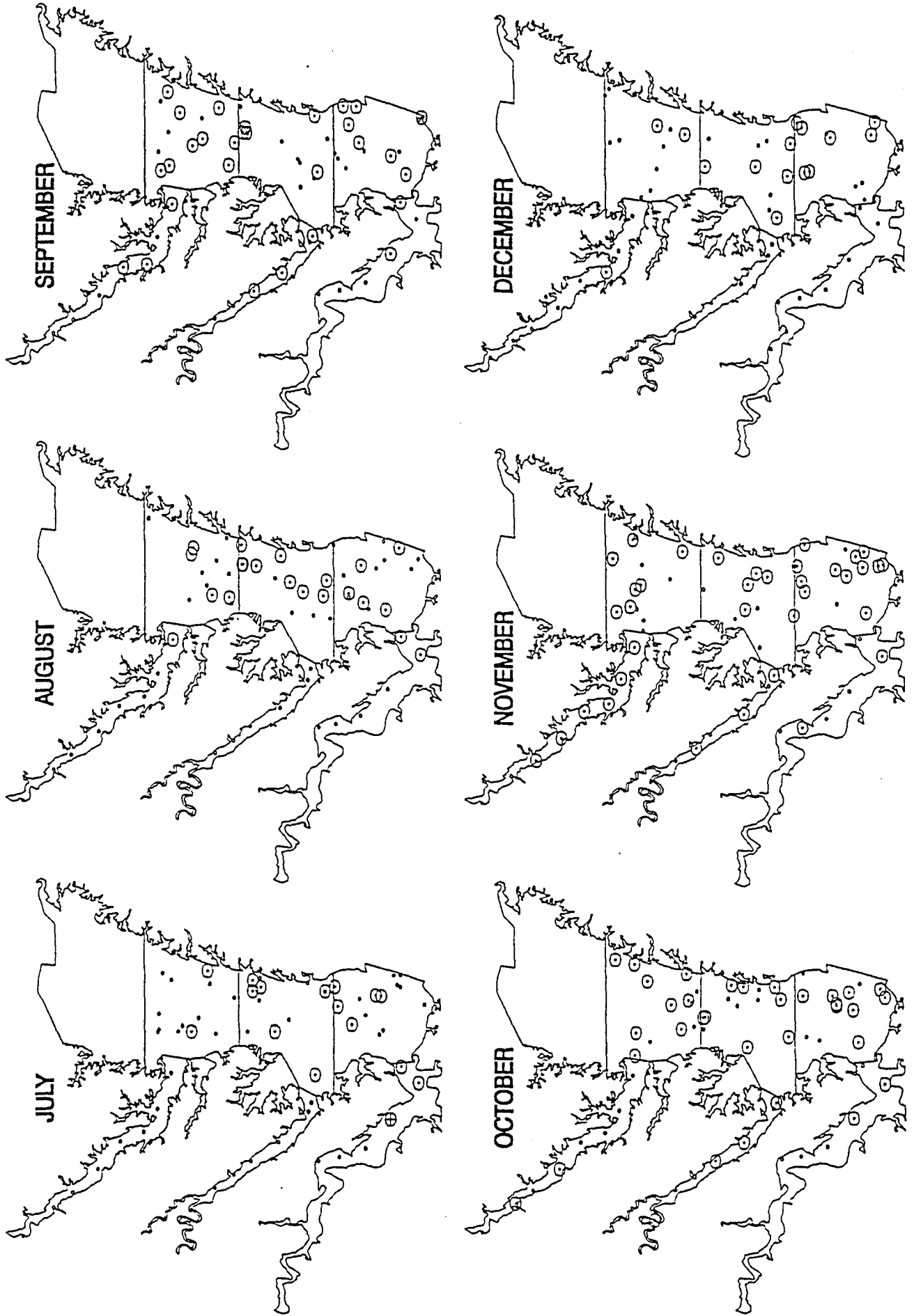
Figure 41

Summer Flounder



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = ≥ 1,000

Figure 41



NUMBER CAUGHT: · = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊕ = 100 to 999 ● = ≥ 1,000

Figure 42

Weakfish

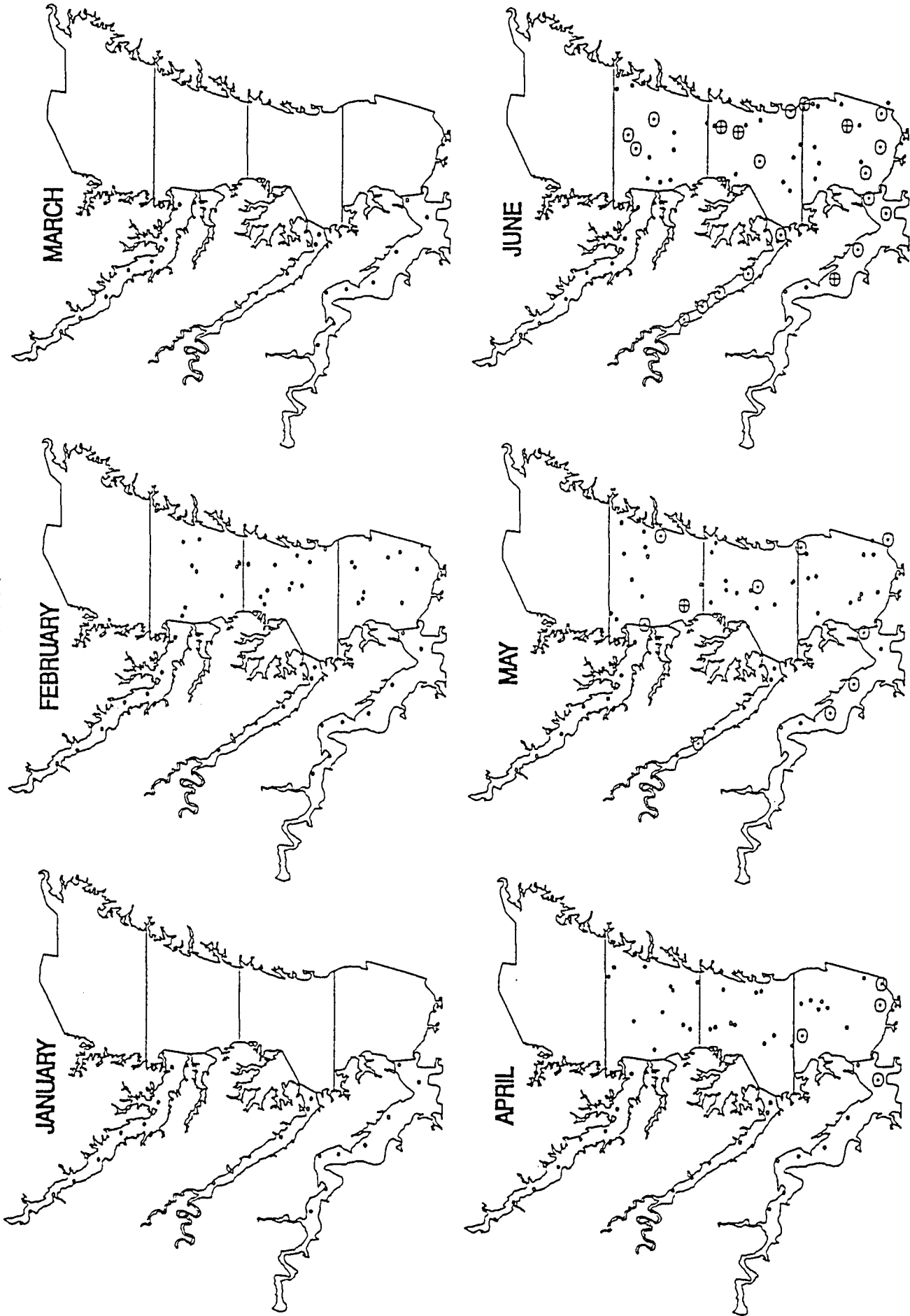
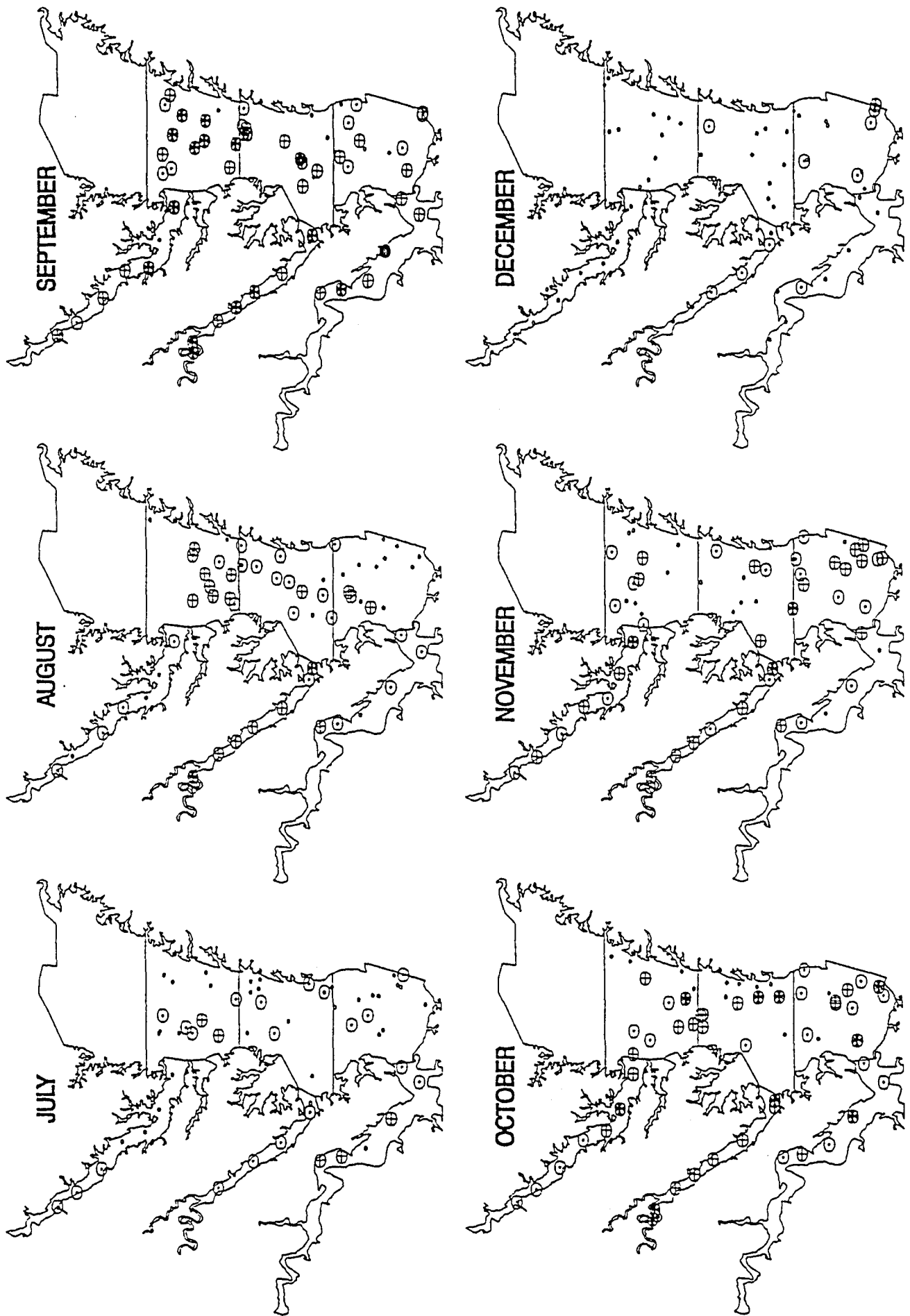


Figure 42



White Catfish

Figure 43

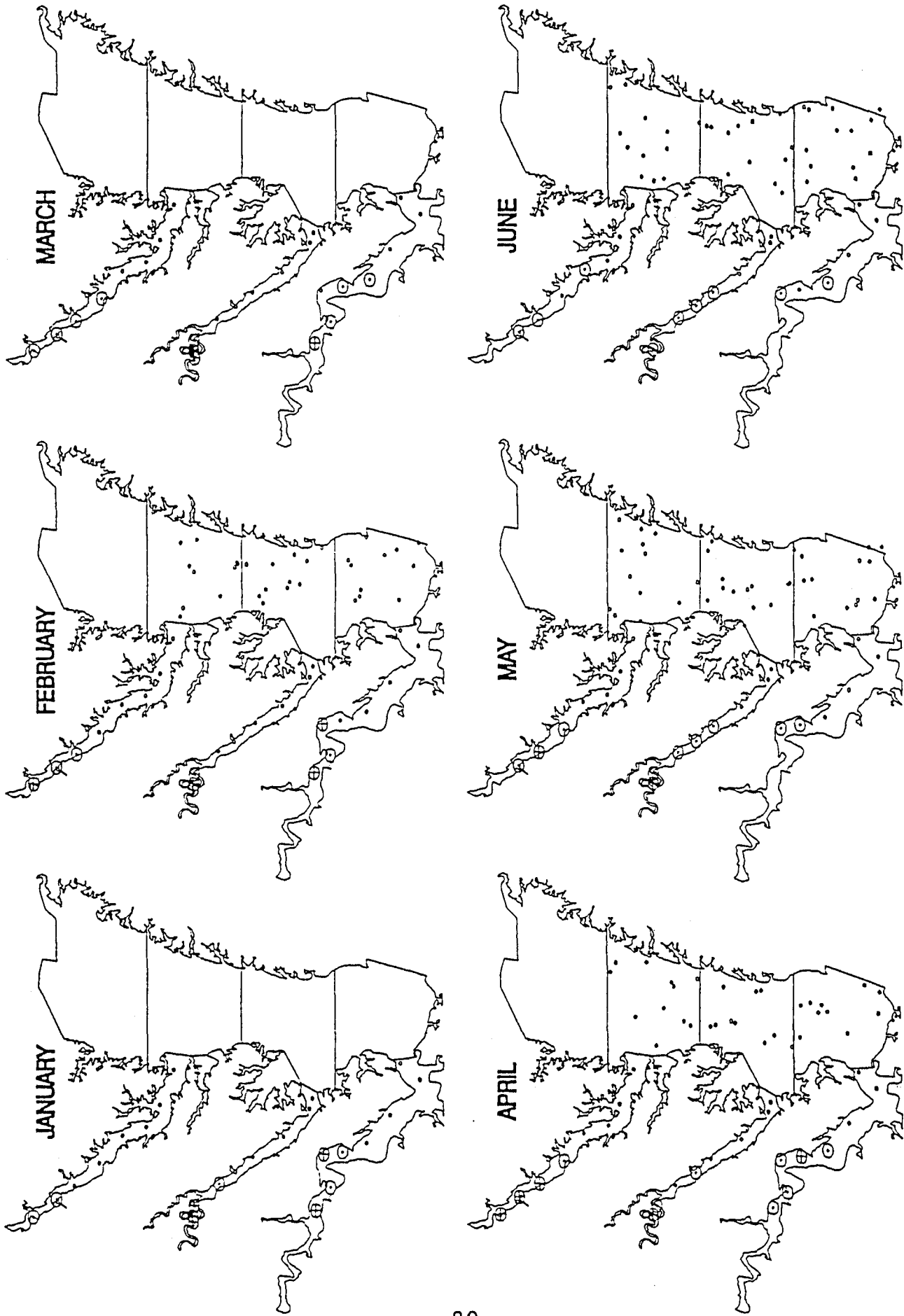
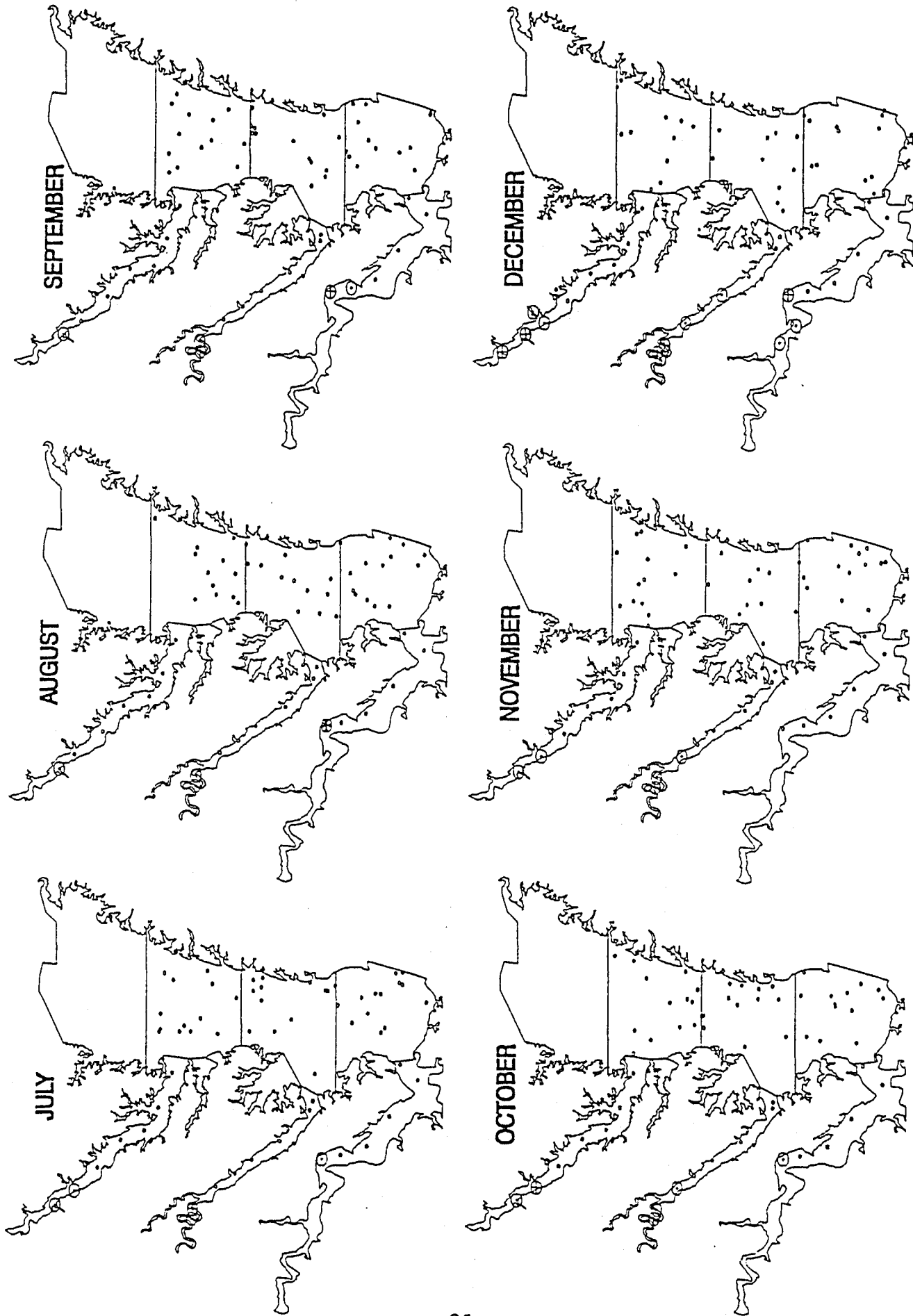


Figure 43



White Perch

Figure 44

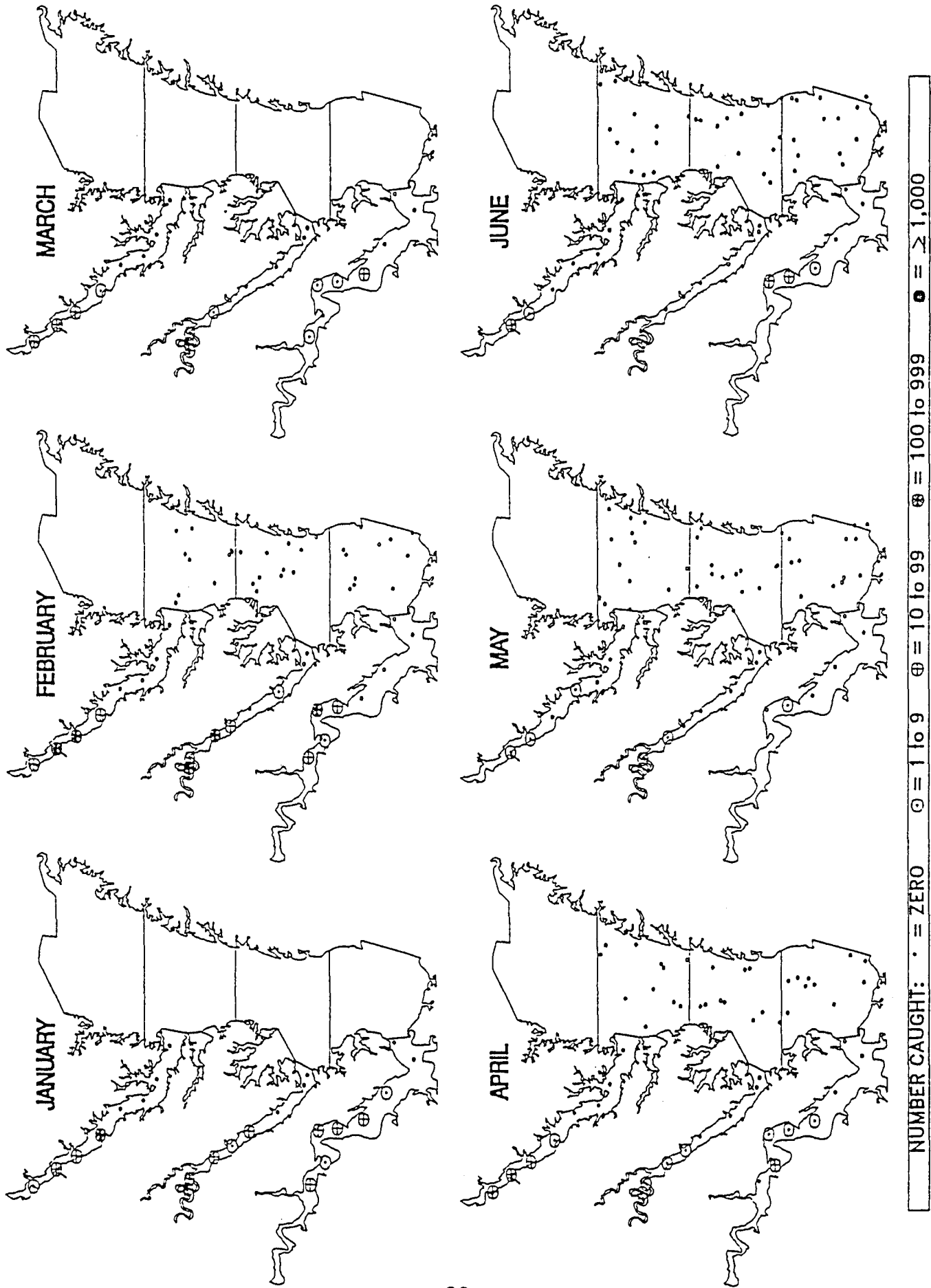
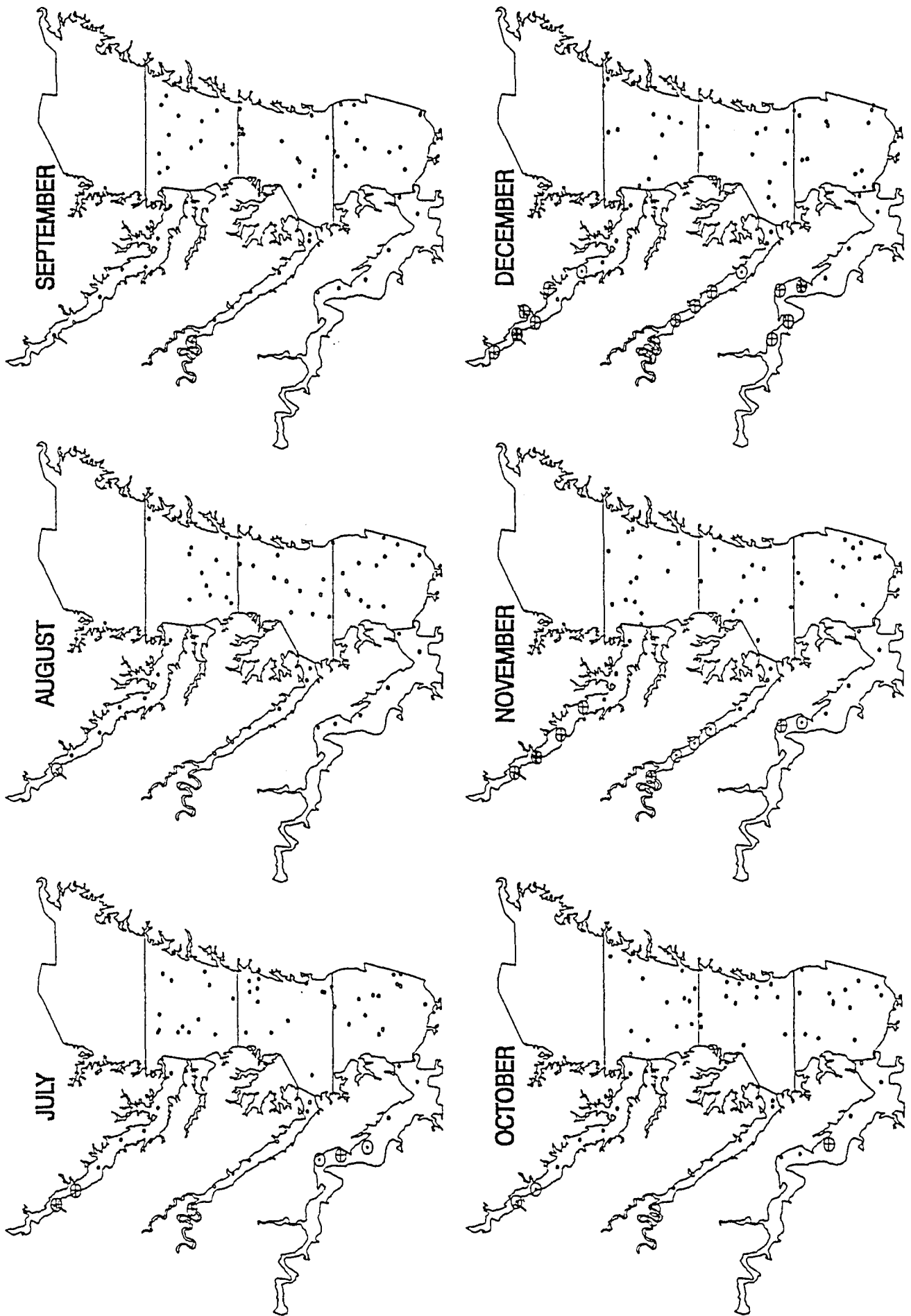


Figure 44



NUMBER CAUGHT: · = ZERO ⊙ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

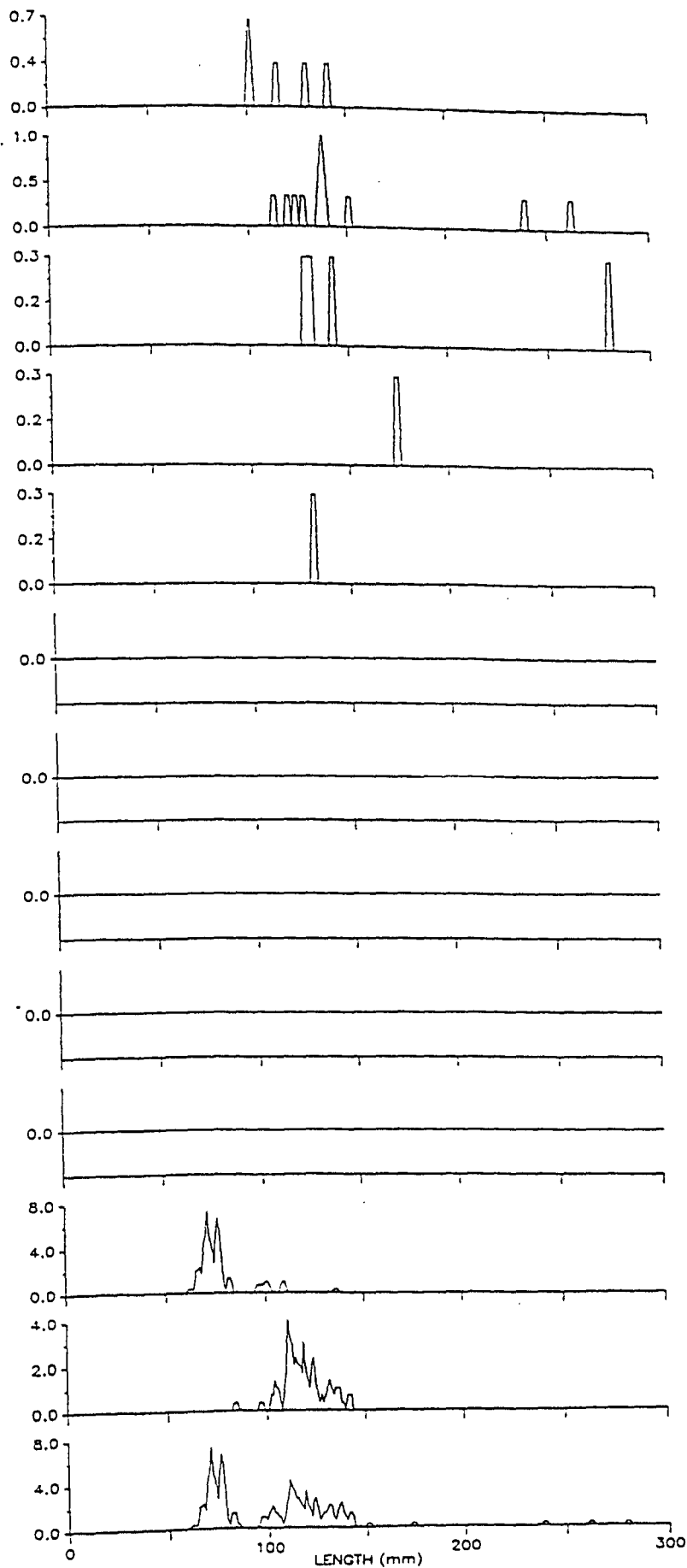
Figures 45-75. Monthly length frequency summaries for the predominant species.

Explanations:

- A. These figures represent all fish of each species presented from both the river and bay surveys.
- B. For curve smoothing, the values plotted are a moving average of three of the number of fish caught at each millimeter length group; therefore fractional values can occur.
- C. The bottom plot on each page is a summary of all fish for the entire year.
- D. The values to the right of the month name on each plot represent the inclusive dates of the cruises during the month, in format year-month-day.
- E. The catch per haul data presented here should not be used as a young-of-year (YOY) index. No distinction has been made in these calculations between YOY and older fish.

Figure 45.

Alewife



JANUARY 930106 - 930114
 NO. CGHT. - 5 MEAN SIZE - 115.8
 NO. MEAS. - 5 S.E. SIZE - 7.8
 NO. HAULS - 25 MIN. SIZE - 99
 CAT./HAUL - 0.2 MAX. SIZE - 139

FEBRUARY 930203 - 930223
 NO. CGHT. - 11 MEAN SIZE - 151.4
 NO. MEAS. - 11 S.E. SIZE - 14.9
 NO. HAULS - 58 MIN. SIZE - 111
 CAT./HAUL - 0.2 MAX. SIZE - 260

MARCH 930301 - 930311
 NO. CGHT. - 4 MEAN SIZE - 168.3
 NO. MEAS. - 4 S.E. SIZE - 36.7
 NO. HAULS - 25 MIN. SIZE - 126
 CAT./HAUL - 0.2 MAX. SIZE - 278

APRIL 930405 - 930429
 NO. CGHT. - 1 MEAN SIZE - 172
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 56 MIN. SIZE - 172
 CAT./HAUL - 0 MAX. SIZE - 172

MAY 930506 - 930513
 NO. CGHT. - 1 MEAN SIZE - 129
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 129
 CAT./HAUL - 0 MAX. SIZE - 129

JUNE 930602 - 930615
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

JULY 930701 - 930715
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

AUGUST 930803 - 930817
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

SEPTEMBER 930907 - 930920
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

OCTOBER 931004 - 931019
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

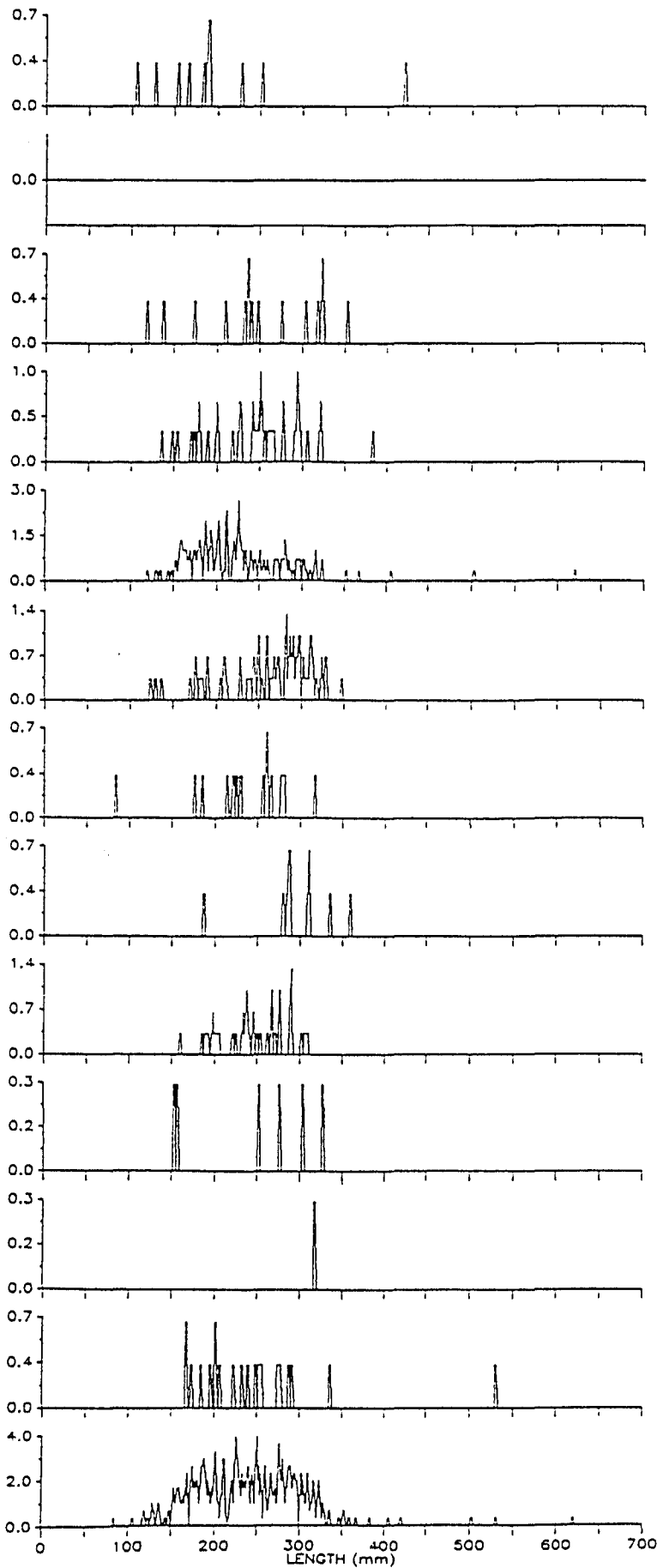
NOVEMBER 931102 - 931111
 NO. CGHT. - 73 MEAN SIZE - 75.4
 NO. MEAS. - 73 S.E. SIZE - 1.5
 NO. HAULS - 60 MIN. SIZE - 60
 CAT./HAUL - 1.2 MAX. SIZE - 134

DECEMBER 931201 - 931213
 NO. CGHT. - 55 MEAN SIZE - 116.3
 NO. MEAS. - 55 S.E. SIZE - 1.5
 NO. HAULS - 60 MIN. SIZE - 82
 CAT./HAUL - 0.9 MAX. SIZE - 140

JAN - DEC 930106 - 931213
 NO. CGHT. - 150 MEAN SIZE - 100.8
 NO. MEAS. - 150 S.E. SIZE - 2.8
 NO. HAULS - 644 MIN. SIZE - 60
 CAT./HAUL - 0.2 MAX. SIZE - 278

Figure 46.

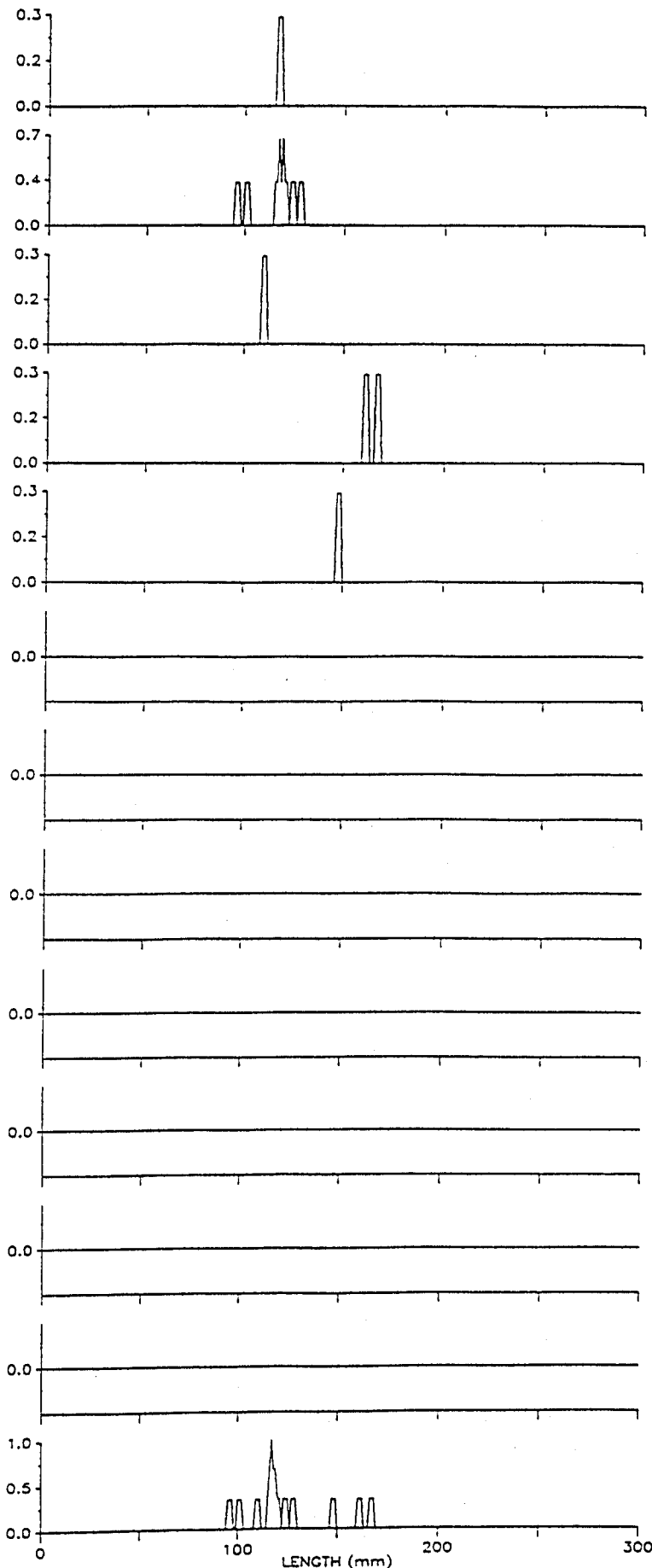
American Eel



JANUARY	930106 - 930114		
NO. CGHT.	11	MEAN SIZE	198.4
NO. MEAS.	11	S.E. SIZE	25.3
NO. HAULS	25	MIN. SIZE	104
CAT./HAUL	0.4	MAX. SIZE	419
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	58	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
MARCH	930301 - 930311		
NO. CGHT.	15	MEAN SIZE	246.7
NO. MEAS.	15	S.E. SIZE	17.9
NO. HAULS	25	MIN. SIZE	117
CAT./HAUL	0.6	MAX. SIZE	351
APRIL	930405 - 930429		
NO. CGHT.	36	MEAN SIZE	241.3
NO. MEAS.	36	S.E. SIZE	9.2
NO. HAULS	56	MIN. SIZE	134
CAT./HAUL	0.6	MAX. SIZE	381
MAY	930506 - 930513		
NO. CGHT.	127	MEAN SIZE	226.6
NO. MEAS.	127	S.E. SIZE	6.1
NO. HAULS	50	MIN. SIZE	118
CAT./HAUL	2.1	MAX. SIZE	618
JUNE	930602 - 930615		
NO. CGHT.	62	MEAN SIZE	257.9
NO. MEAS.	62	S.E. SIZE	6.7
NO. HAULS	60	MIN. SIZE	122
CAT./HAUL	1	MAX. SIZE	345
JULY	930701 - 930715		
NO. CGHT.	14	MEAN SIZE	230.4
NO. MEAS.	14	S.E. SIZE	15.3
NO. HAULS	60	MIN. SIZE	82
CAT./HAUL	0.2	MAX. SIZE	315
AUGUST	930803 - 930817		
NO. CGHT.	9	MEAN SIZE	291.4
NO. MEAS.	9	S.E. SIZE	15.9
NO. HAULS	60	MIN. SIZE	185
CAT./HAUL	0.2	MAX. SIZE	357
SEPTEMBER	930907 - 930920		
NO. CGHT.	35	MEAN SIZE	244.5
NO. MEAS.	35	S.E. SIZE	6.5
NO. HAULS	60	MIN. SIZE	158
CAT./HAUL	0.6	MAX. SIZE	307
OCTOBER	931004 - 931019		
NO. CGHT.	6	MEAN SIZE	243
NO. MEAS.	6	S.E. SIZE	30.3
NO. HAULS	60	MIN. SIZE	151
CAT./HAUL	0.1	MAX. SIZE	325
NOVEMBER	931102 - 931111		
NO. CGHT.	1	MEAN SIZE	316
NO. MEAS.	1	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	316
CAT./HAUL	0	MAX. SIZE	316
DECEMBER	931201 - 931213		
NO. CGHT.	20	MEAN SIZE	245.8
NO. MEAS.	20	S.E. SIZE	18.1
NO. HAULS	60	MIN. SIZE	166
CAT./HAUL	0.3	MAX. SIZE	529
JAN - DEC	930106 - 931213		
NO. CGHT.	336	MEAN SIZE	239.4
NO. MEAS.	336	S.E. SIZE	3.5
NO. HAULS	644	MIN. SIZE	82
CAT./HAUL	0.5	MAX. SIZE	618

Figure 47.

American Shad



JANUARY	930106 - 930114		
NO. CGHT.	1	MEAN SIZE	115
NO. MEAS.	1	S.E. SIZE	
NO. HAULS	25	MIN. SIZE	115
CAT./HAUL	0	MAX. SIZE	115

FEBRUARY	930203 - 930223		
NO. CGHT.	7	MEAN SIZE	112.7
NO. MEAS.	7	S.E. SIZE	4.5
NO. HAULS	58	MIN. SIZE	94
CAT./HAUL	0.1	MAX. SIZE	126

MARCH	930301 - 930311		
NO. CGHT.	1	MEAN SIZE	108
NO. MEAS.	1	S.E. SIZE	
NO. HAULS	25	MIN. SIZE	108
CAT./HAUL	0	MAX. SIZE	108

APRIL	930405 - 930429		
NO. CGHT.	2	MEAN SIZE	162
NO. MEAS.	2	S.E. SIZE	3
NO. HAULS	56	MIN. SIZE	159
CAT./HAUL	0	MAX. SIZE	165

MAY	930506 - 930513		
NO. CGHT.	1	MEAN SIZE	146
NO. MEAS.	1	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	146
CAT./HAUL	0	MAX. SIZE	146

JUNE	930602 - 930615		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

JULY	930701 - 930715		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

AUGUST	930803 - 930817		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

SEPTEMBER	930907 - 930920		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

OCTOBER	931004 - 931019		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

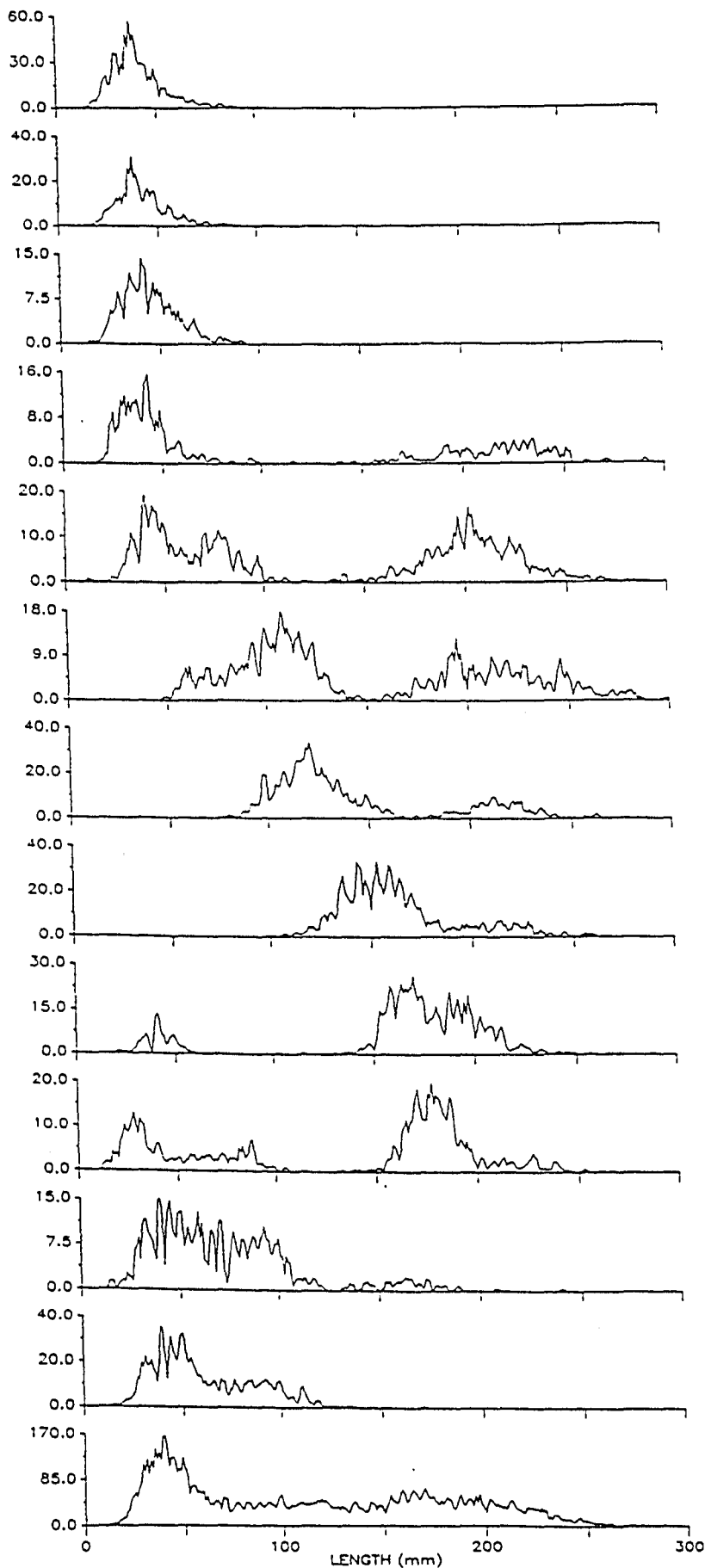
NOVEMBER	931102 - 931111		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

DECEMBER	931201 - 931213		
NO. CGHT.	0	MEAN SIZE	
NO. MEAS.	0	S.E. SIZE	
NO. HAULS	60	MIN. SIZE	
CAT./HAUL	0	MAX. SIZE	

JAN - DEC	930106 - 931213		
NO. CGHT.	12	MEAN SIZE	123.5
NO. MEAS.	12	S.E. SIZE	6.4
NO. HAULS	644	MIN. SIZE	94
CAT./HAUL	0	MAX. SIZE	165

Figure 48.

Atlantic Croaker



JANUARY 930106 - 930114
 NO. CGHT. - 3634 MEAN SIZE - 39
 NO. MEAS. - 1053 S.E. SIZE - 0.4
 NO. HAULS - 25 MIN. SIZE - 13
 CAT./HAUL - 145.4 MAX. SIZE - 101

FEBRUARY 930203 - 930223
 NO. CGHT. - 3010 MEAN SIZE - 40.6
 NO. MEAS. - 528 S.E. SIZE - 0.6
 NO. HAULS - 58 MIN. SIZE - 13
 CAT./HAUL - 51.9 MAX. SIZE - 150

MARCH 930301 - 930311
 NO. CGHT. - 3093 MEAN SIZE - 42.8
 NO. MEAS. - 336 S.E. SIZE - 0.8
 NO. HAULS - 25 MIN. SIZE - 13
 CAT./HAUL - 123.7 MAX. SIZE - 90

APRIL 930405 - 930429
 NO. CGHT. - 1385 MEAN SIZE - 102.5
 NO. MEAS. - 495 S.E. SIZE - 3.9
 NO. HAULS - 56 MIN. SIZE - 16
 CAT./HAUL - 24.7 MAX. SIZE - 289

MAY 930506 - 930513
 NO. CGHT. - 1929 MEAN SIZE - 128.7
 NO. MEAS. - 1131 S.E. SIZE - 2.3
 NO. HAULS - 60 MIN. SIZE - 21
 CAT./HAUL - 32.2 MAX. SIZE - 270

JUNE 930602 - 930615
 NO. CGHT. - 2926 MEAN SIZE - 148.6
 NO. MEAS. - 1111 S.E. SIZE - 1.9
 NO. HAULS - 60 MIN. SIZE - 46
 CAT./HAUL - 48.8 MAX. SIZE - 305

JULY 930701 - 930715
 NO. CGHT. - 2812 MEAN SIZE - 140.4
 NO. MEAS. - 1287 S.E. SIZE - 1.2
 NO. HAULS - 60 MIN. SIZE - 30
 CAT./HAUL - 46.9 MAX. SIZE - 284

AUGUST 930803 - 930817
 NO. CGHT. - 2492 MEAN SIZE - 161
 NO. MEAS. - 1336 S.E. SIZE - 0.8
 NO. HAULS - 60 MIN. SIZE - 88
 CAT./HAUL - 41.5 MAX. SIZE - 270

SEPTEMBER 930907 - 930920
 NO. CGHT. - 1461 MEAN SIZE - 161.3
 NO. MEAS. - 1136 S.E. SIZE - 1.5
 NO. HAULS - 60 MIN. SIZE - 19
 CAT./HAUL - 24.4 MAX. SIZE - 286

OCTOBER 931004 - 931019
 NO. CGHT. - 1164 MEAN SIZE - 128.7
 NO. MEAS. - 922 S.E. SIZE - 2.3
 NO. HAULS - 60 MIN. SIZE - 11
 CAT./HAUL - 19.4 MAX. SIZE - 264

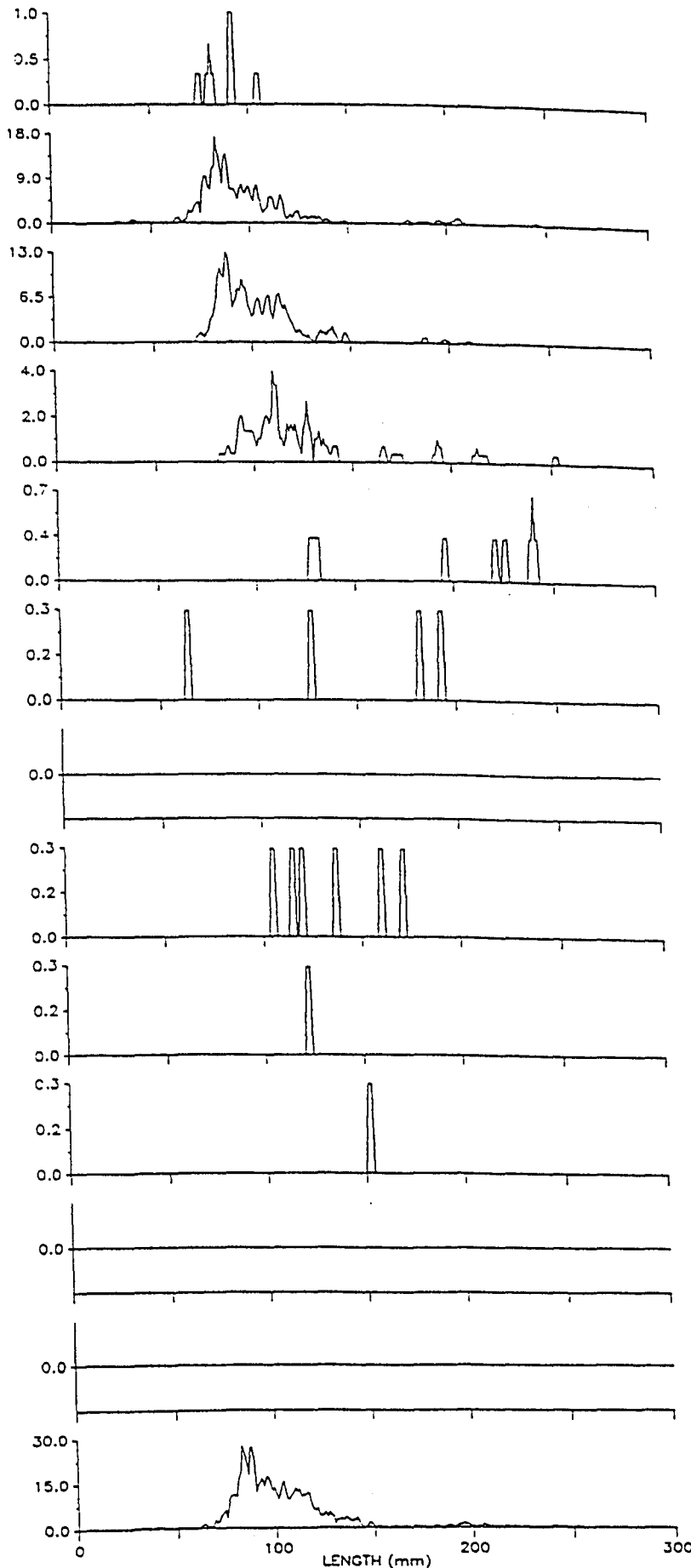
NOVEMBER 931102 - 931111
 NO. CGHT. - 1820 MEAN SIZE - 69.8
 NO. MEAS. - 759 S.E. SIZE - 1.3
 NO. HAULS - 60 MIN. SIZE - 13
 CAT./HAUL - 30.3 MAX. SIZE - 238

DECEMBER 931201 - 931213
 NO. CGHT. - 2828 MEAN SIZE - 58.5
 NO. MEAS. - 1237 S.E. SIZE - 0.7
 NO. HAULS - 60 MIN. SIZE - 13
 CAT./HAUL - 47.1 MAX. SIZE - 245

JAN - DEC 930106 - 931213
 NO. CGHT. - 28554 MEAN SIZE - 111.3
 NO. MEAS. - 11331 S.E. SIZE - 0.6
 NO. HAULS - 644 MIN. SIZE - 11
 CAT./HAUL - 44.3 MAX. SIZE - 305

Figure 49.

Atlantic Menhaden



JANUARY 930106 - 930114
 NO. CGHT. - 7 MEAN SIZE - 86.3
 NO. MEAS. - 7 S.E. SIZE - 3.8
 NO. HAULS - 25 MIN. SIZE - 73
 CAT./HAUL - 0.3 MAX. SIZE - 103

FEBRUARY 930203 - 930223
 NO. CGHT. - 370 MEAN SIZE - 95.3
 NO. MEAS. - 370 S.E. SIZE - 1.4
 NO. HAULS - 58 MIN. SIZE - 31
 CAT./HAUL - 6.4 MAX. SIZE - 243

MARCH 930301 - 930311
 NO. CGHT. - 572 MEAN SIZE - 100.2
 NO. MEAS. - 310 S.E. SIZE - 1.2
 NO. HAULS - 25 MIN. SIZE - 71
 CAT./HAUL - 22.9 MAX. SIZE - 208

APRIL 930405 - 930429
 NO. CGHT. - 84 MEAN SIZE - 120.9
 NO. MEAS. - 84 S.E. SIZE - 3.6
 NO. HAULS - 56 MIN. SIZE - 81
 CAT./HAUL - 1.5 MAX. SIZE - 250

MAY 930506 - 930513
 NO. CGHT. - 7 MEAN SIZE - 195.4
 NO. MEAS. - 7 S.E. SIZE - 18.4
 NO. HAULS - 60 MIN. SIZE - 126
 CAT./HAUL - 0.1 MAX. SIZE - 239

JUNE 930602 - 930615
 NO. CGHT. - 4 MEAN SIZE - 139.5
 NO. MEAS. - 4 S.E. SIZE - 29.6
 NO. HAULS - 60 MIN. SIZE - 62
 CAT./HAUL - 0.1 MAX. SIZE - 191

JULY 930701 - 930715
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

AUGUST 930803 - 930817
 NO. CGHT. - 6 MEAN SIZE - 132.7
 NO. MEAS. - 6 S.E. SIZE - 10.7
 NO. HAULS - 60 MIN. SIZE - 103
 CAT./HAUL - 0.1 MAX. SIZE - 169

SEPTEMBER 930907 - 930920
 NO. CGHT. - 1 MEAN SIZE - 120
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 120
 CAT./HAUL - 0 MAX. SIZE - 120

OCTOBER 931004 - 931019
 NO. CGHT. - 1 MEAN SIZE - 150
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 150
 CAT./HAUL - 0 MAX. SIZE - 150

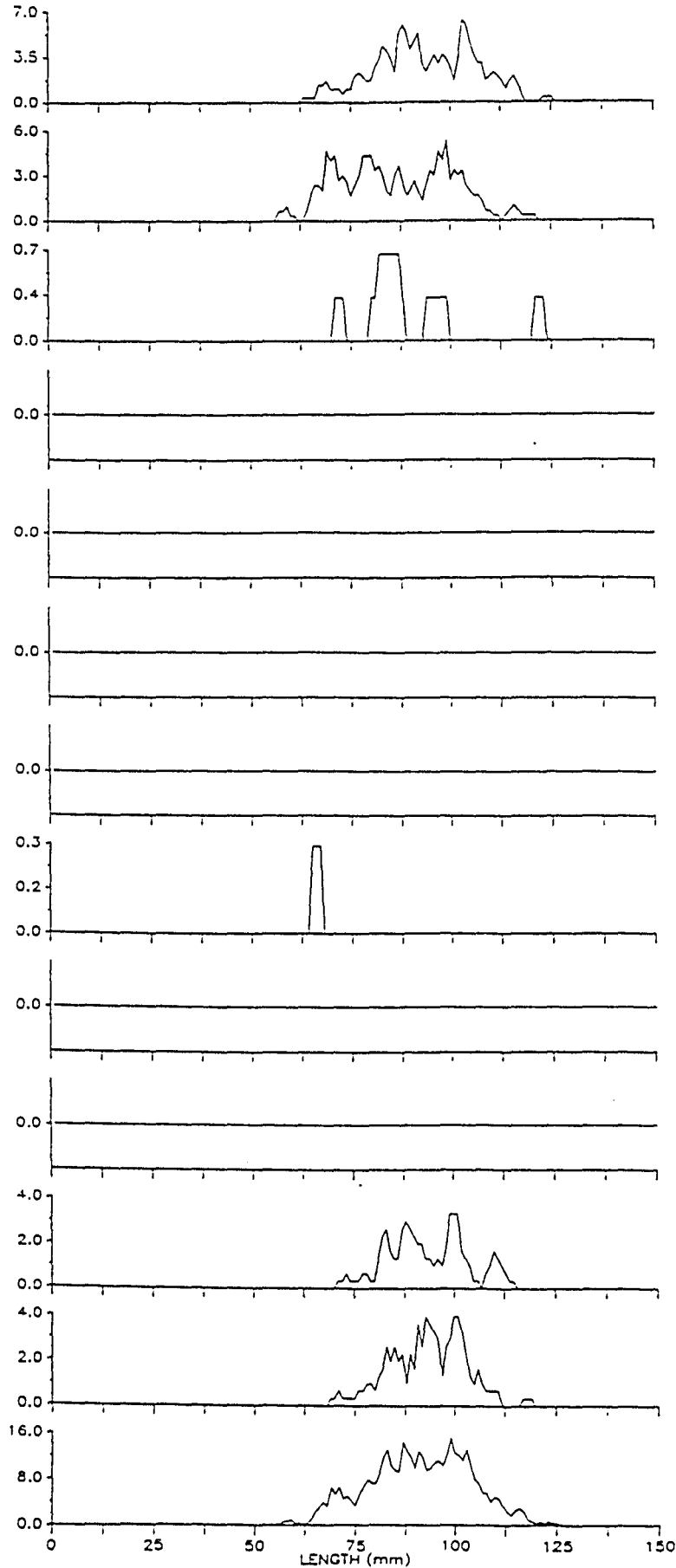
NOVEMBER 931102 - 931111
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

DECEMBER 931201 - 931213
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

JAN - DEC 930106 - 931213
 NO. CGHT. - 1052 MEAN SIZE - 101.4
 NO. MEAS. - 790 S.E. SIZE - 1
 NO. HAULS - 644 MIN. SIZE - 31
 CAT./HAUL - 1.6 MAX. SIZE - 250

Figure 50.

Atlantic Silverside



JANUARY	930106 - 930114		
NO. CGHT.	- 145	MEAN SIZE	- 91.6
NO. MEAS.	- 145	S.E. SIZE	- 1
NO. HAULS	- 25	MIN. SIZE	- 62
CAT./HAUL	- 5.8	MAX. SIZE	- 122

FEBRUARY	930203 - 930223		
NO. CGHT.	- 136	MEAN SIZE	- 84.5
NO. MEAS.	- 136	S.E. SIZE	- 1.2
NO. HAULS	- 58	MIN. SIZE	- 56
CAT./HAUL	- 2.3	MAX. SIZE	- 118

MARCH	930301 - 930311		
NO. CGHT.	- 9	MEAN SIZE	- 87.8
NO. MEAS.	- 9	S.E. SIZE	- 4.8
NO. HAULS	- 25	MIN. SIZE	- 70
CAT./HAUL	- 0.4	MAX. SIZE	- 120

APRIL	930405 - 930429		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 56	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

MAY	930506 - 930513		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

JUNE	930602 - 930615		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

JULY	930701 - 930715		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

AUGUST	930803 - 930817		
NO. CGHT.	- 1	MEAN SIZE	- 64
NO. MEAS.	- 1	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- 64
CAT./HAUL	- 0	MAX. SIZE	- 64

SEPTEMBER	930907 - 930920		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

OCTOBER	931004 - 931019		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 60	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

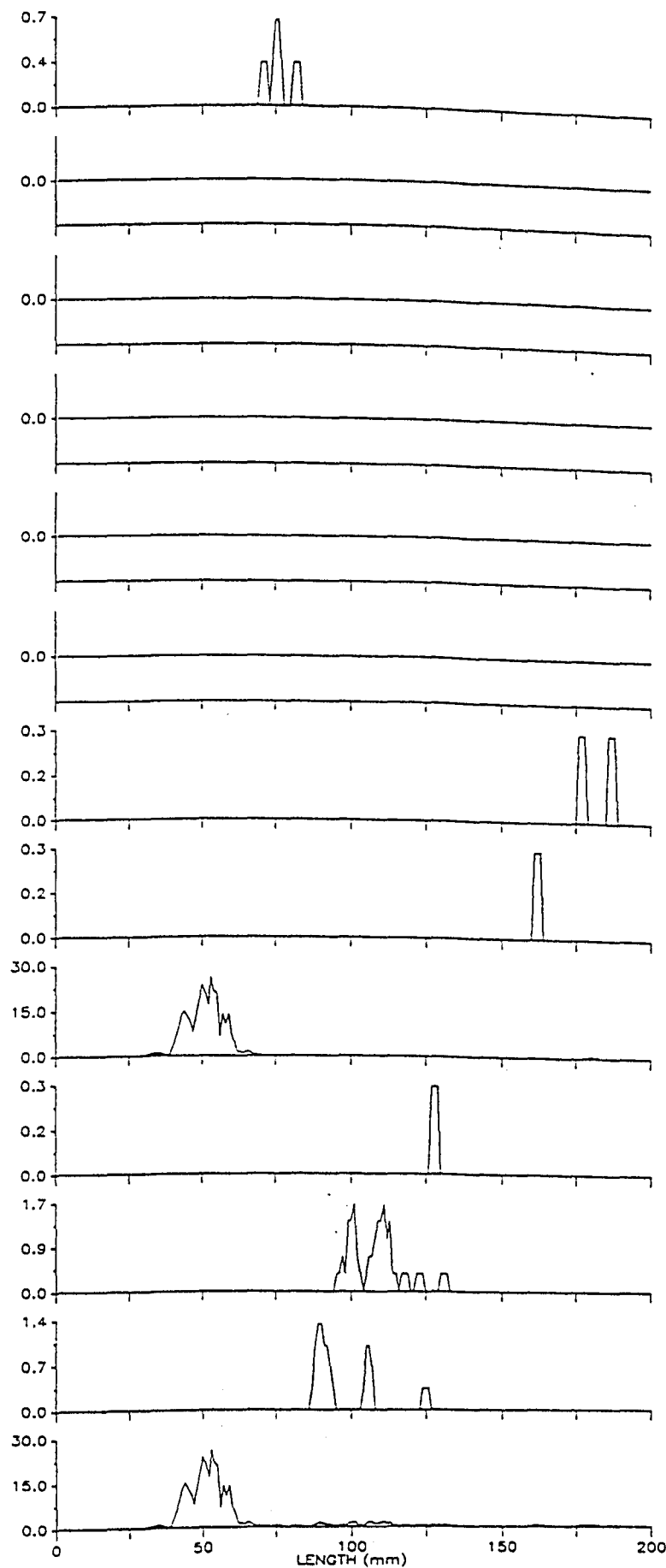
NOVEMBER	931102 - 931111		
NO. CGHT.	- 151	MEAN SIZE	- 91.5
NO. MEAS.	- 59	S.E. SIZE	- 1.3
NO. HAULS	- 60	MIN. SIZE	- 70
CAT./HAUL	- 2.5	MAX. SIZE	- 112

DECEMBER	931201 - 931213		
NO. CGHT.	- 141	MEAN SIZE	- 91.4
NO. MEAS.	- 76	S.E. SIZE	- 1.1
NO. HAULS	- 60	MIN. SIZE	- 68
CAT./HAUL	- 2.4	MAX. SIZE	- 116

JAN - DEC	930106 - 931213		
NO. CGHT.	- 583	MEAN SIZE	- 89.1
NO. MEAS.	- 426	S.E. SIZE	- 0.6
NO. HAULS	- 644	MIN. SIZE	- 56
CAT./HAUL	- 0.9	MAX. SIZE	- 122

Figure 51.

Atlantic Thread Herring



JANUARY 930106 - 930114
 NO. CGHT. - 4 MEAN SIZE - 74
 NO. MEAS. - 4 S.E. SIZE - 2.3
 NO. HAULS - 25 MIN. SIZE - 69
 CAT./HAUL - 0.2 MAX. SIZE - 90

FEBRUARY 930203 - 930223
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 58 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

MARCH 930301 - 930311
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 25 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

APRIL 930405 - 930429
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 56 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

MAY 930506 - 930513
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

JUNE 930602 - 930615
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

JULY 930701 - 930715
 NO. CGHT. - 2 MEAN SIZE - 180
 NO. MEAS. - 2 S.E. SIZE - 5
 NO. HAULS - 60 MIN. SIZE - 175
 CAT./HAUL - 0 MAX. SIZE - 185

AUGUST 930803 - 930817
 NO. CGHT. - 1 MEAN SIZE - 160
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 160
 CAT./HAUL - 0 MAX. SIZE - 160

SEPTEMBER 930907 - 930920
 NO. CGHT. - 1218 MEAN SIZE - 49.9
 NO. MEAS. - 313 S.E. SIZE - 0.7
 NO. HAULS - 60 MIN. SIZE - 30
 CAT./HAUL - 20.3 MAX. SIZE - 179

OCTOBER 931004 - 931019
 NO. CGHT. - 1 MEAN SIZE - 126
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 126
 CAT./HAUL - 0 MAX. SIZE - 126

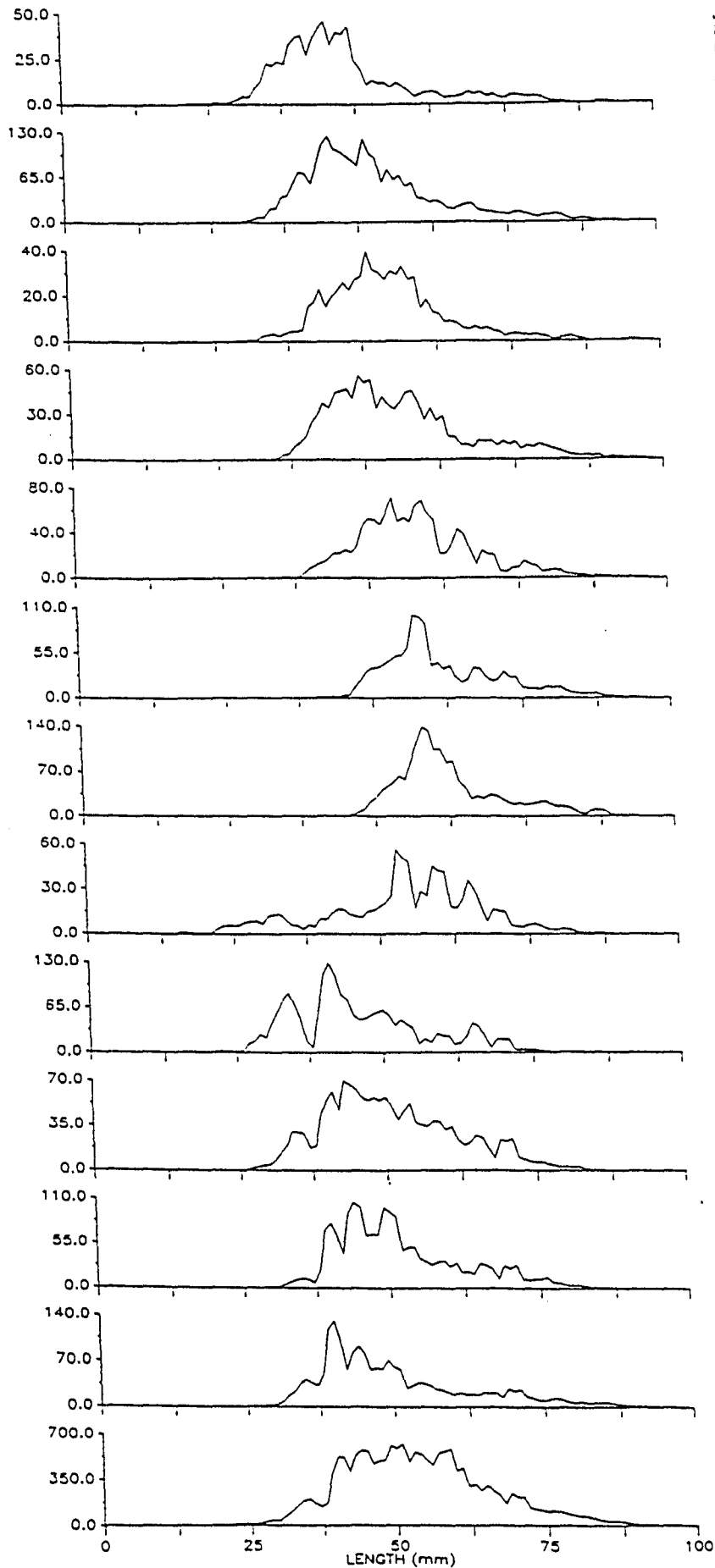
NOVEMBER 931102 - 931111
 NO. CGHT. - 20 MEAN SIZE - 106.5
 NO. MEAS. - 20 S.E. SIZE - 2
 NO. HAULS - 60 MIN. SIZE - 94
 CAT./HAUL - 0.3 MAX. SIZE - 129

DECEMBER 931201 - 931213
 NO. CGHT. - 11 MEAN SIZE - 95.6
 NO. MEAS. - 11 S.E. SIZE - 3.5
 NO. HAULS - 60 MIN. SIZE - 86
 CAT./HAUL - 0.2 MAX. SIZE - 123

JAN - DEC 930106 - 931213
 NO. CGHT. - 1257 MEAN SIZE - 56.1
 NO. MEAS. - 352 S.E. SIZE - 1.2
 NO. HAULS - 644 MIN. SIZE - 30
 CAT./HAUL - 2 MAX. SIZE - 185

Figure 52.

Bay Anchovy



JANUARY		930106 - 930114	
NO. CGHT.	- 9760	MEAN SIZE	- 46
NO. MEAS.	- 784	S.E. SIZE	- 0.4
NO. HAULS	- 25	MIN. SIZE	- 21
CAT./HAUL	- 390.4	MAX. SIZE	- 89

FEBRUARY		930203 - 930223	
NO. CGHT.	- 98785	MEAN SIZE	- 50.3
NO. MEAS.	- 2359	S.E. SIZE	- 0.2
NO. HAULS	- 58	MIN. SIZE	- 19
CAT./HAUL	- 3427.3	MAX. SIZE	- 94

MARCH		930301 - 930311	
NO. CGHT.	- 54318	MEAN SIZE	- 52.1
NO. MEAS.	- 674	S.E. SIZE	- 0.4
NO. HAULS	- 25	MIN. SIZE	- 28
CAT./HAUL	- 2172.7	MAX. SIZE	- 93

APRIL		930405 - 930429	
NO. CGHT.	- 12213	MEAN SIZE	- 53.4
NO. MEAS.	- 1161	S.E. SIZE	- 0.3
NO. HAULS	- 56	MIN. SIZE	- 34
CAT./HAUL	- 218.1	MAX. SIZE	- 94

MAY		930506 - 930513	
NO. CGHT.	- 11155	MEAN SIZE	- 56
NO. MEAS.	- 1257	S.E. SIZE	- 0.3
NO. HAULS	- 60	MIN. SIZE	- 33
CAT./HAUL	- 185.9	MAX. SIZE	- 93

JUNE		930602 - 930615	
NO. CGHT.	- 24940	MEAN SIZE	- 59.5
NO. MEAS.	- 1269	S.E. SIZE	- 0.3
NO. HAULS	- 60	MIN. SIZE	- 38
CAT./HAUL	- 415.7	MAX. SIZE	- 91

JULY		930701 - 930715	
NO. CGHT.	- 17751	MEAN SIZE	- 60.4
NO. MEAS.	- 1763	S.E. SIZE	- 0.2
NO. HAULS	- 60	MIN. SIZE	- 39
CAT./HAUL	- 295.9	MAX. SIZE	- 94

AUGUST		930803 - 930817	
NO. CGHT.	- 16469	MEAN SIZE	- 52
NO. MEAS.	- 948	S.E. SIZE	- 0.4
NO. HAULS	- 60	MIN. SIZE	- 14
CAT./HAUL	- 274.5	MAX. SIZE	- 84

SEPTEMBER		930907 - 930920	
NO. CGHT.	- 79380	MEAN SIZE	- 43.9
NO. MEAS.	- 1958	S.E. SIZE	- 0.3
NO. HAULS	- 60	MIN. SIZE	- 15
CAT./HAUL	- 1323	MAX. SIZE	- 83

OCTOBER		931004 - 931019	
NO. CGHT.	- 51406	MEAN SIZE	- 48.7
NO. MEAS.	- 1585	S.E. SIZE	- 0.3
NO. HAULS	- 60	MIN. SIZE	- 26
CAT./HAUL	- 856.8	MAX. SIZE	- 81

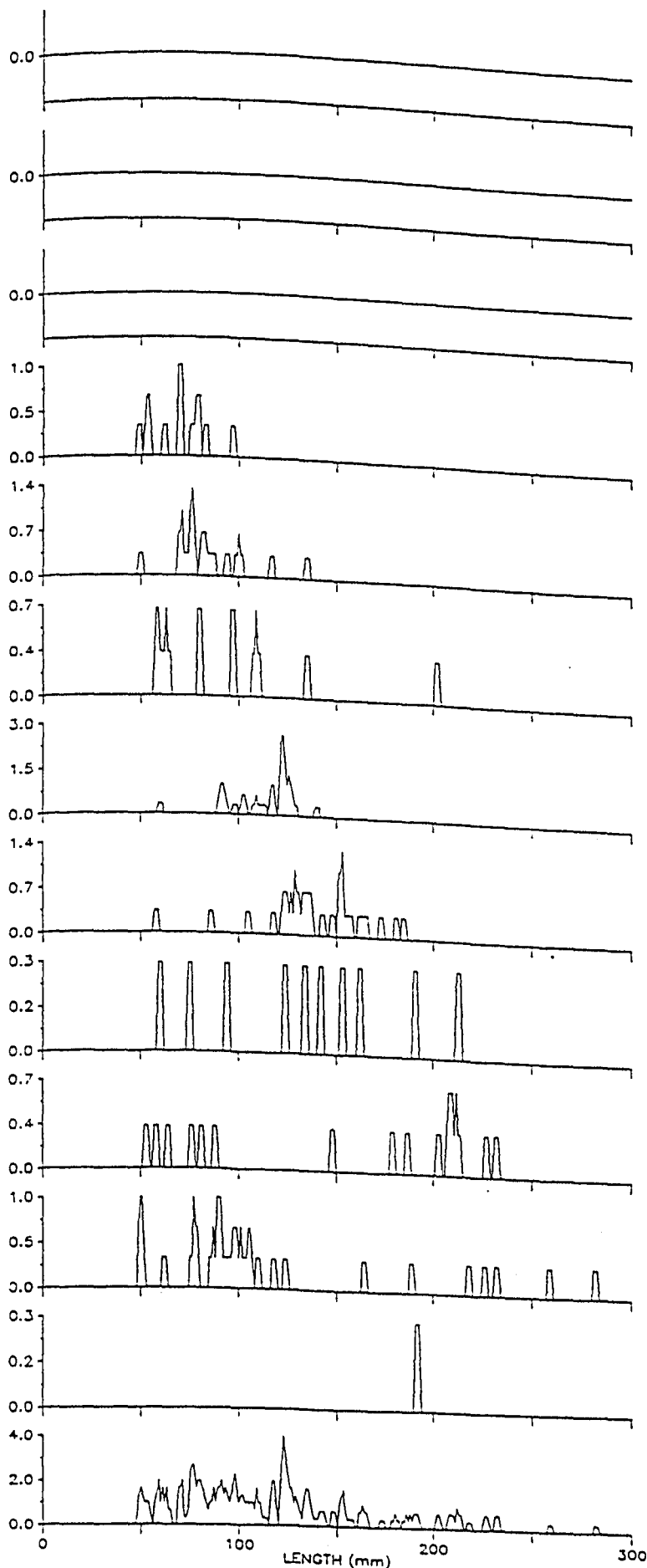
NOVEMBER		931102 - 931111	
NO. CGHT.	- 70897	MEAN SIZE	- 49.3
NO. MEAS.	- 1812	S.E. SIZE	- 0.2
NO. HAULS	- 60	MIN. SIZE	- 26
CAT./HAUL	- 1181.6	MAX. SIZE	- 85

DECEMBER		931201 - 931213	
NO. CGHT.	- 65345	MEAN SIZE	- 48
NO. MEAS.	- 1935	S.E. SIZE	- 0.3
NO. HAULS	- 60	MIN. SIZE	- 25
CAT./HAUL	- 1089.1	MAX. SIZE	- 94

JAN - DEC		930106 - 931213	
NO. CGHT.	- 512419	MEAN SIZE	- 51.3
NO. MEAS.	- 17505	S.E. SIZE	- 0.1
NO. HAULS	- 644	MIN. SIZE	- 14
CAT./HAUL	- 951	MAX. SIZE	- 94

Figure 53.

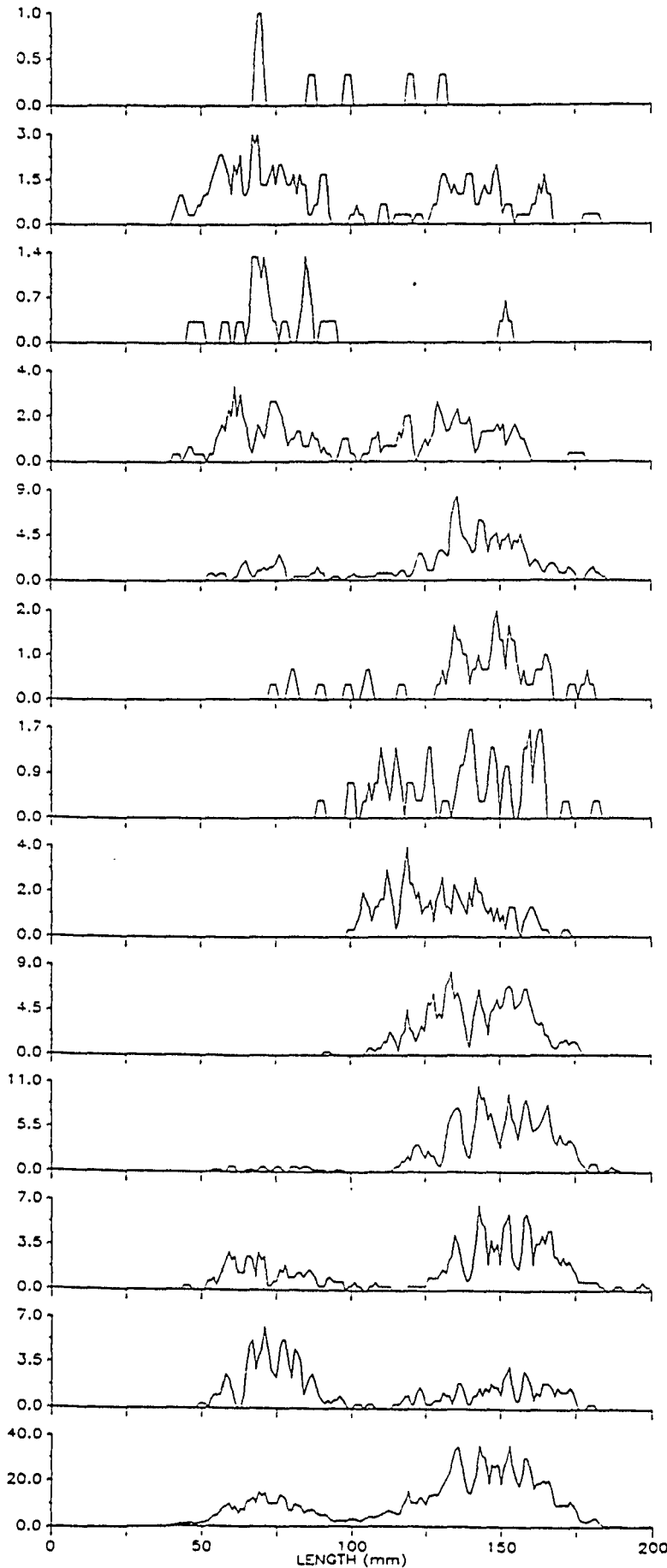
Black Seabass



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	930405 - 930429		
NO. CGHT.	12	MEAN SIZE	- 68.2
NO. MEAS.	12	S.E. SIZE	- 4
NO. HAULS	56	MIN. SIZE	- 47
CAT./HAUL	0.2	MAX. SIZE	- 95
MAY	930506 - 930513		
NO. CGHT.	17	MEAN SIZE	- 83.1
NO. MEAS.	17	S.E. SIZE	- 4.8
NO. HAULS	60	MIN. SIZE	- 48
CAT./HAUL	0.3	MAX. SIZE	- 133
JUNE	930602 - 930615		
NO. CGHT.	12	MEAN SIZE	- 94
NO. MEAS.	12	S.E. SIZE	- 11.9
NO. HAULS	60	MIN. SIZE	- 56
CAT./HAUL	0.2	MAX. SIZE	- 200
JULY	930701 - 930715		
NO. CGHT.	28	MEAN SIZE	- 111
NO. MEAS.	28	S.E. SIZE	- 3.2
NO. HAULS	60	MIN. SIZE	- 58
CAT./HAUL	0.5	MAX. SIZE	- 138
AUGUST	930803 - 930817		
NO. CGHT.	26	MEAN SIZE	- 136.2
NO. MEAS.	26	S.E. SIZE	- 5.5
NO. HAULS	60	MIN. SIZE	- 56
CAT./HAUL	0.4	MAX. SIZE	- 183
SEPTEMBER	930907 - 930920		
NO. CGHT.	10	MEAN SIZE	- 132.8
NO. MEAS.	10	S.E. SIZE	- 15.4
NO. HAULS	60	MIN. SIZE	- 58
CAT./HAUL	0.2	MAX. SIZE	- 211
OCTOBER	931004 - 931019		
NO. CGHT.	16	MEAN SIZE	- 150.3
NO. MEAS.	16	S.E. SIZE	- 17.3
NO. HAULS	60	MIN. SIZE	- 51
CAT./HAUL	0.3	MAX. SIZE	- 230
NOVEMBER	931102 - 931111		
NO. CGHT.	29	MEAN SIZE	- 119.2
NO. MEAS.	29	S.E. SIZE	- 12
NO. HAULS	60	MIN. SIZE	- 48
CAT./HAUL	0.5	MAX. SIZE	- 280
DECEMBER	931201 - 931213		
NO. CGHT.	1	MEAN SIZE	- 190
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	- 190
CAT./HAUL	0	MAX. SIZE	- 190
JAN - DEC	930106 - 931213		
NO. CGHT.	151	MEAN SIZE	- 115.1
NO. MEAS.	151	S.E. SIZE	- 4
NO. HAULS	644	MIN. SIZE	- 47
CAT./HAUL	0.2	MAX. SIZE	- 280

Figure 54.

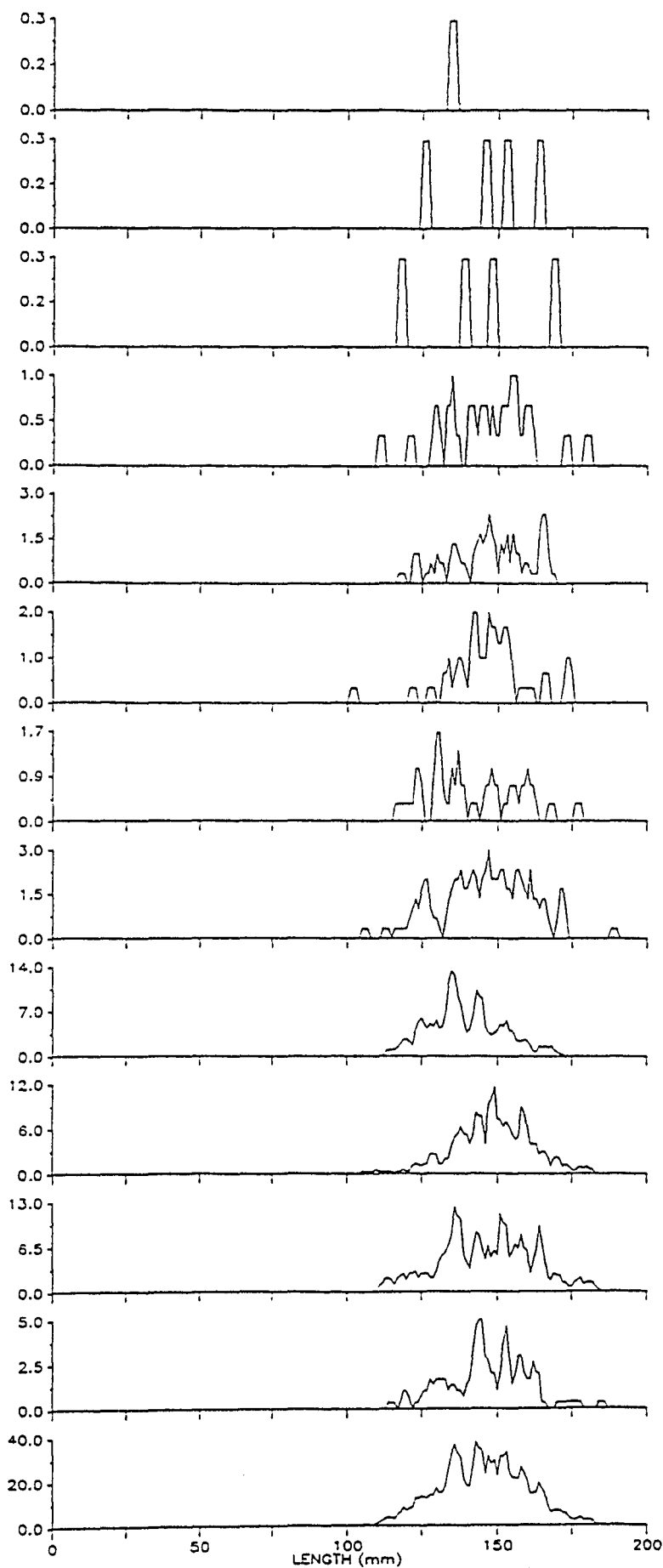
Blackcheek Tonguefish



JANUARY	930106 - 930114		
NO. CGHT.	7	MEAN SIZE	90.1
NO. MEAS.	7	S.E. SIZE	9.7
NO. HAULS	25	MIN. SIZE	67
CAT./HAUL	0.3	MAX. SIZE	129
FEBRUARY	930203 - 930223		
NO. CGHT.	121	MEAN SIZE	96.1
NO. MEAS.	121	S.E. SIZE	3.6
NO. HAULS	58	MIN. SIZE	40
CAT./HAUL	2.1	MAX. SIZE	180
MARCH	930301 - 930311		
NO. CGHT.	22	MEAN SIZE	77.8
NO. MEAS.	22	S.E. SIZE	5.6
NO. HAULS	25	MIN. SIZE	45
CAT./HAUL	0.9	MAX. SIZE	151
APRIL	930405 - 930429		
NO. CGHT.	133	MEAN SIZE	102.2
NO. MEAS.	133	S.E. SIZE	3.1
NO. HAULS	56	MIN. SIZE	40
CAT./HAUL	2.4	MAX. SIZE	175
MAY	930506 - 930513		
NO. CGHT.	210	MEAN SIZE	130.6
NO. MEAS.	210	S.E. SIZE	2.1
NO. HAULS	60	MIN. SIZE	51
CAT./HAUL	3.5	MAX. SIZE	182
JUNE	930602 - 930615		
NO. CGHT.	45	MEAN SIZE	138.2
NO. MEAS.	45	S.E. SIZE	3.8
NO. HAULS	60	MIN. SIZE	72
CAT./HAUL	0.8	MAX. SIZE	178
JULY	930701 - 930715		
NO. CGHT.	51	MEAN SIZE	134.9
NO. MEAS.	51	S.E. SIZE	3.1
NO. HAULS	60	MIN. SIZE	88
CAT./HAUL	0.9	MAX. SIZE	180
AUGUST	930803 - 930817		
NO. CGHT.	94	MEAN SIZE	128.1
NO. MEAS.	94	S.E. SIZE	1.8
NO. HAULS	60	MIN. SIZE	98
CAT./HAUL	1.6	MAX. SIZE	170
SEPTEMBER	930907 - 930920		
NO. CGHT.	274	MEAN SIZE	140.3
NO. MEAS.	244	S.E. SIZE	1
NO. HAULS	60	MIN. SIZE	90
CAT./HAUL	4.6	MAX. SIZE	174
OCTOBER	931004 - 931019		
NO. CGHT.	405	MEAN SIZE	144.6
NO. MEAS.	309	S.E. SIZE	1.3
NO. HAULS	60	MIN. SIZE	53
CAT./HAUL	6.8	MAX. SIZE	186
NOVEMBER	931102 - 931111		
NO. CGHT.	430	MEAN SIZE	128.1
NO. MEAS.	228	S.E. SIZE	2.6
NO. HAULS	60	MIN. SIZE	43
CAT./HAUL	7.2	MAX. SIZE	196
DECEMBER	931201 - 931213		
NO. CGHT.	190	MEAN SIZE	103.7
NO. MEAS.	190	S.E. SIZE	2.9
NO. HAULS	60	MIN. SIZE	48
CAT./HAUL	3.2	MAX. SIZE	178
JAN - DEC	930106 - 931213		
NO. CGHT.	1982	MEAN SIZE	125.7
NO. MEAS.	1654	S.E. SIZE	0.9
NO. HAULS	644	MIN. SIZE	40
CAT./HAUL	3.1	MAX. SIZE	196

Figure 55.

Blue Crab - Adult Female



JANUARY	930106	-	930114	
NO. CGHT.	-	1	MEAN SIZE	- 133
NO. MEAS.	-	1	S.E. SIZE	-
NO. HAULS	-	25	MIN. SIZE	- 133
CAT./HAUL	-	0	MAX. SIZE	- 133

FEBRUARY	930203	-	930223	
NO. CGHT.	-	4	MEAN SIZE	- 145.3
NO. MEAS.	-	4	S.E. SIZE	- 8
NO. HAULS	-	58	MIN. SIZE	- 124
CAT./HAUL	-	0.1	MAX. SIZE	- 162

MARCH	930301	-	930311	
NO. CGHT.	-	4	MEAN SIZE	- 141.5
NO. MEAS.	-	4	S.E. SIZE	- 10.6
NO. HAULS	-	25	MIN. SIZE	- 116
CAT./HAUL	-	0.2	MAX. SIZE	- 167

APRIL	930405	-	930429	
NO. CGHT.	-	23	MEAN SIZE	- 144.2
NO. MEAS.	-	23	S.E. SIZE	- 3.3
NO. HAULS	-	56	MIN. SIZE	- 109
CAT./HAUL	-	0.4	MAX. SIZE	- 178

MAY	930506	-	930513	
NO. CGHT.	-	46	MEAN SIZE	- 145
NO. MEAS.	-	46	S.E. SIZE	- 2
NO. HAULS	-	60	MIN. SIZE	- 116
CAT./HAUL	-	0.8	MAX. SIZE	- 166

JUNE	930602	-	930615	
NO. CGHT.	-	39	MEAN SIZE	- 145
NO. MEAS.	-	38	S.E. SIZE	- 2.3
NO. HAULS	-	60	MIN. SIZE	- 100
CAT./HAUL	-	0.7	MAX. SIZE	- 172

JULY	930701	-	930715	
NO. CGHT.	-	29	MEAN SIZE	- 140.2
NO. MEAS.	-	29	S.E. SIZE	- 2.9
NO. HAULS	-	60	MIN. SIZE	- 115
CAT./HAUL	-	0.5	MAX. SIZE	- 175

AUGUST	930803	-	930817	
NO. CGHT.	-	85	MEAN SIZE	- 144.2
NO. MEAS.	-	85	S.E. SIZE	- 1.7
NO. HAULS	-	60	MIN. SIZE	- 104
CAT./HAUL	-	1.4	MAX. SIZE	- 187

SEPTEMBER	930907	-	930920	
NO. CGHT.	-	243	MEAN SIZE	- 137.6
NO. MEAS.	-	243	S.E. SIZE	- 0.8
NO. HAULS	-	60	MIN. SIZE	- 112
CAT./HAUL	-	4.1	MAX. SIZE	- 169

OCTOBER	931004	-	931019	
NO. CGHT.	-	239	MEAN SIZE	- 146.7
NO. MEAS.	-	239	S.E. SIZE	- 0.8
NO. HAULS	-	60	MIN. SIZE	- 104
CAT./HAUL	-	4	MAX. SIZE	- 179

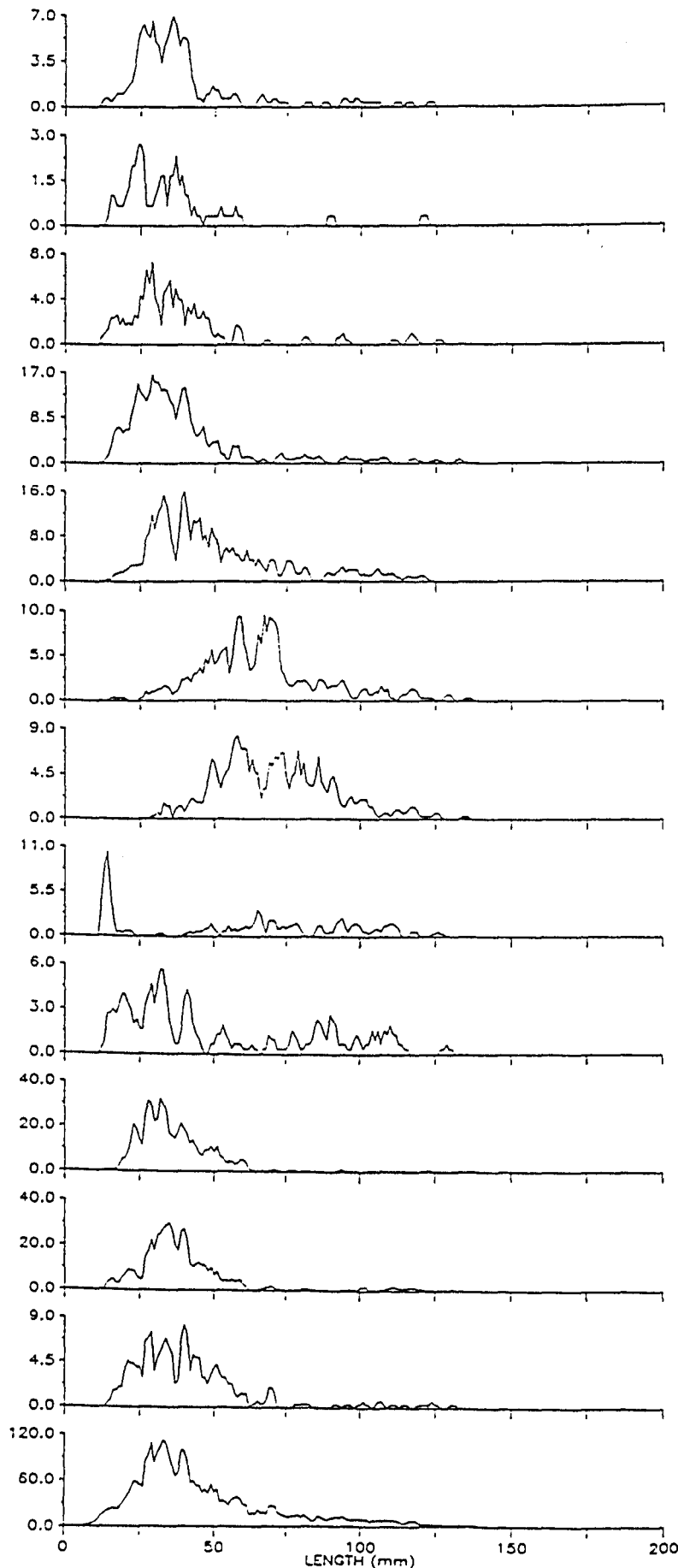
NOVEMBER	931102	-	931111	
NO. CGHT.	-	397	MEAN SIZE	- 144.6
NO. MEAS.	-	314	S.E. SIZE	- 0.9
NO. HAULS	-	60	MIN. SIZE	- 109
CAT./HAUL	-	6.6	MAX. SIZE	- 181

DECEMBER	931201	-	931213	
NO. CGHT.	-	94	MEAN SIZE	- 144.9
NO. MEAS.	-	94	S.E. SIZE	- 1.4
NO. HAULS	-	60	MIN. SIZE	- 113
CAT./HAUL	-	1.6	MAX. SIZE	- 183

JAN - DEC	930106	-	931213	
NO. CGHT.	-	1204	MEAN SIZE	- 143.4
NO. MEAS.	-	1120	S.E. SIZE	- 0.4
NO. HAULS	-	644	MIN. SIZE	- 100
CAT./HAUL	-	1.9	MAX. SIZE	- 187

Figure 56.

Blue Crab — Juvenile Female



JANUARY	930106	—	930114	
NO. CGHT.	146	—	MEAN SIZE	37.9
NO. MEAS.	146	—	S.E. SIZE	1.7
NO. HAULS	25	—	MIN. SIZE	11
CAT./HAUL	5.8	—	MAX. SIZE	121

FEBRUARY	930203	—	930223	
NO. CGHT.	49	—	MEAN SIZE	31.6
NO. MEAS.	49	—	S.E. SIZE	2.7
NO. HAULS	58	—	MIN. SIZE	9
CAT./HAUL	0.8	—	MAX. SIZE	119

MARCH	930301	—	930311	
NO. CGHT.	137	—	MEAN SIZE	36.5
NO. MEAS.	137	—	S.E. SIZE	1.8
NO. HAULS	25	—	MIN. SIZE	11
CAT./HAUL	5.5	—	MAX. SIZE	124

APRIL	930405	—	930429	
NO. CGHT.	492	—	MEAN SIZE	36.8
NO. MEAS.	413	—	S.E. SIZE	1
NO. HAULS	56	—	MIN. SIZE	8
CAT./HAUL	8.8	—	MAX. SIZE	131

MAY	930506	—	930513	
NO. CGHT.	427	—	MEAN SIZE	48.8
NO. MEAS.	427	—	S.E. SIZE	1.1
NO. HAULS	60	—	MIN. SIZE	13
CAT./HAUL	7.1	—	MAX. SIZE	120

JUNE	930602	—	930615	
NO. CGHT.	271	—	MEAN SIZE	64
NO. MEAS.	271	—	S.E. SIZE	1.3
NO. HAULS	50	—	MIN. SIZE	14
CAT./HAUL	4.5	—	MAX. SIZE	134

JULY	930701	—	930715	
NO. CGHT.	281	—	MEAN SIZE	69.2
NO. MEAS.	281	—	S.E. SIZE	1.2
NO. HAULS	60	—	MIN. SIZE	28
CAT./HAUL	4.7	—	MAX. SIZE	133

AUGUST	930803	—	930817	
NO. CGHT.	146	—	MEAN SIZE	49.9
NO. MEAS.	146	—	S.E. SIZE	3.1
NO. HAULS	60	—	MIN. SIZE	5
CAT./HAUL	2.4	—	MAX. SIZE	125

SEPTEMBER	930907	—	930920	
NO. CGHT.	164	—	MEAN SIZE	49.6
NO. MEAS.	164	—	S.E. SIZE	2.5
NO. HAULS	60	—	MIN. SIZE	9
CAT./HAUL	2.7	—	MAX. SIZE	128

OCTOBER	931004	—	931019	
NO. CGHT.	642	—	MEAN SIZE	36.9
NO. MEAS.	642	—	S.E. SIZE	0.7
NO. HAULS	60	—	MIN. SIZE	2
CAT./HAUL	10.7	—	MAX. SIZE	146

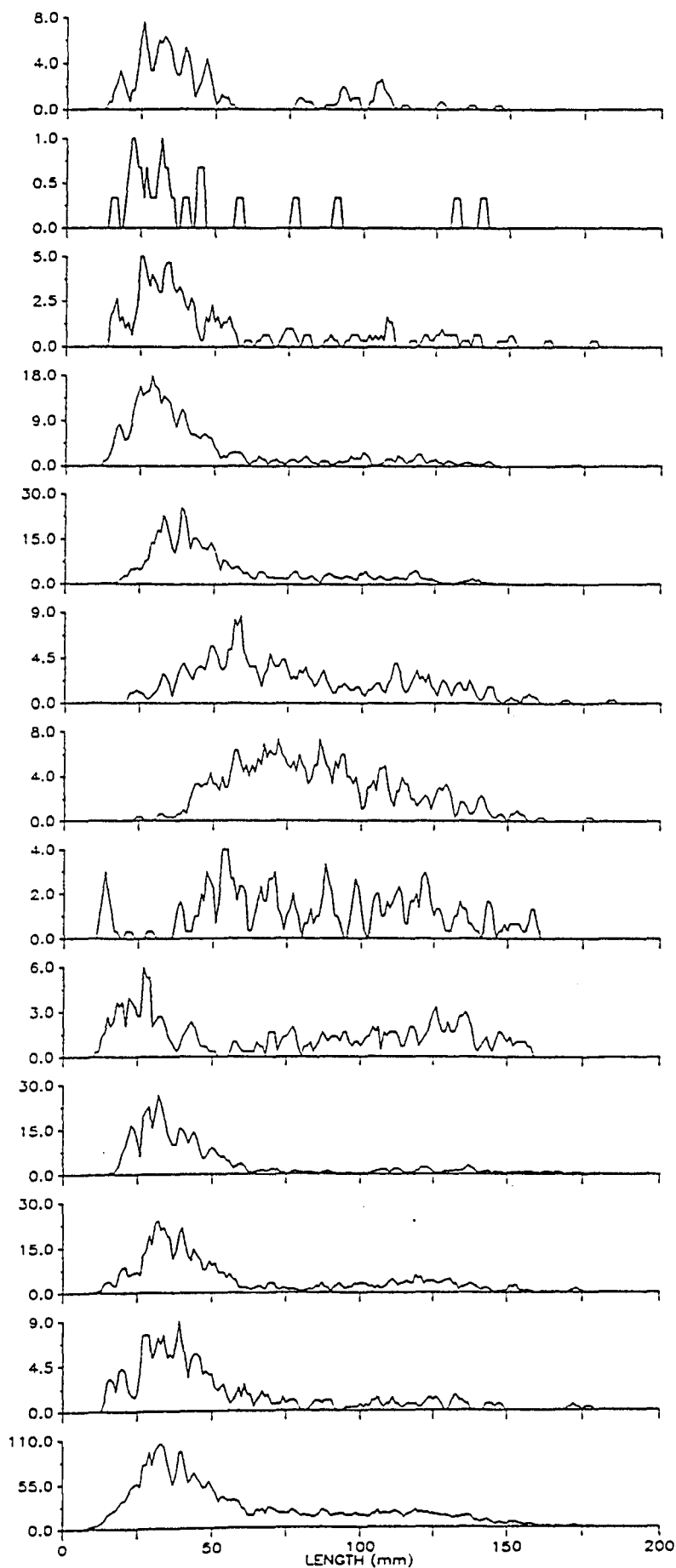
NOVEMBER	931102	—	931111	
NO. CGHT.	667	—	MEAN SIZE	39.2
NO. MEAS.	620	—	S.E. SIZE	0.8
NO. HAULS	60	—	MIN. SIZE	7
CAT./HAUL	11.1	—	MAX. SIZE	130

DECEMBER	931201	—	931213	
NO. CGHT.	228	—	MEAN SIZE	40.3
NO. MEAS.	207	—	S.E. SIZE	1.5
NO. HAULS	60	—	MIN. SIZE	10
CAT./HAUL	3.8	—	MAX. SIZE	129

JAN — DEC	930106	—	931213	
NO. CGHT.	3650	—	MEAN SIZE	44.7
NO. MEAS.	3503	—	S.E. SIZE	0.4
NO. HAULS	644	—	MIN. SIZE	2
CAT./HAUL	5.7	—	MAX. SIZE	146

Figure 57.

Blue Crab - Male



JANUARY	930106	-	930114		
NO. CGHT.	-	165	MEAN SIZE	-	45.4
NO. MEAS.	-	165	S.E. SIZE	-	2.3
NO. HAULS	-	25	MIN. SIZE	-	13
CAT./HAUL	-	6.6	MAX. SIZE	-	144

FEBRUARY	930203	-	930223		
NO. CGHT.	-	21	MEAN SIZE	-	42.9
NO. MEAS.	-	21	S.E. SIZE	-	8
NO. HAULS	-	58	MIN. SIZE	-	8
CAT./HAUL	-	0.4	MAX. SIZE	-	139

MARCH	930301	-	930311		
NO. CGHT.	-	141	MEAN SIZE	-	53.5
NO. MEAS.	-	141	S.E. SIZE	-	3.2
NO. HAULS	-	25	MIN. SIZE	-	14
CAT./HAUL	-	5.6	MAX. SIZE	-	176

APRIL	930405	-	930429		
NO. CGHT.	-	527	MEAN SIZE	-	43.4
NO. MEAS.	-	454	S.E. SIZE	-	1.4
NO. HAULS	-	56	MIN. SIZE	-	10
CAT./HAUL	-	9.4	MAX. SIZE	-	170

MAY	930506	-	930513		
NO. CGHT.	-	638	MEAN SIZE	-	52.8
NO. MEAS.	-	638	S.E. SIZE	-	1.1
NO. HAULS	-	60	MIN. SIZE	-	12
CAT./HAUL	-	10.6	MAX. SIZE	-	161

JUNE	930602	-	930615		
NO. CGHT.	-	322	MEAN SIZE	-	76.6
NO. MEAS.	-	322	S.E. SIZE	-	1.9
NO. HAULS	-	60	MIN. SIZE	-	20
CAT./HAUL	-	5.4	MAX. SIZE	-	182

JULY	930701	-	930715		
NO. CGHT.	-	385	MEAN SIZE	-	83.3
NO. MEAS.	-	385	S.E. SIZE	-	1.4
NO. HAULS	-	60	MIN. SIZE	-	23
CAT./HAUL	-	6.4	MAX. SIZE	-	175

AUGUST	930803	-	930817		
NO. CGHT.	-	186	MEAN SIZE	-	80
NO. MEAS.	-	186	S.E. SIZE	-	2.9
NO. HAULS	-	60	MIN. SIZE	-	6
CAT./HAUL	-	3.1	MAX. SIZE	-	157

SEPTEMBER	930907	-	930920		
NO. CGHT.	-	216	MEAN SIZE	-	76
NO. MEAS.	-	216	S.E. SIZE	-	3.2
NO. HAULS	-	60	MIN. SIZE	-	8
CAT./HAUL	-	3.6	MAX. SIZE	-	155

OCTOBER	931004	-	931019		
NO. CGHT.	-	591	MEAN SIZE	-	49.6
NO. MEAS.	-	591	S.E. SIZE	-	1.5
NO. HAULS	-	60	MIN. SIZE	-	10
CAT./HAUL	-	9.9	MAX. SIZE	-	201

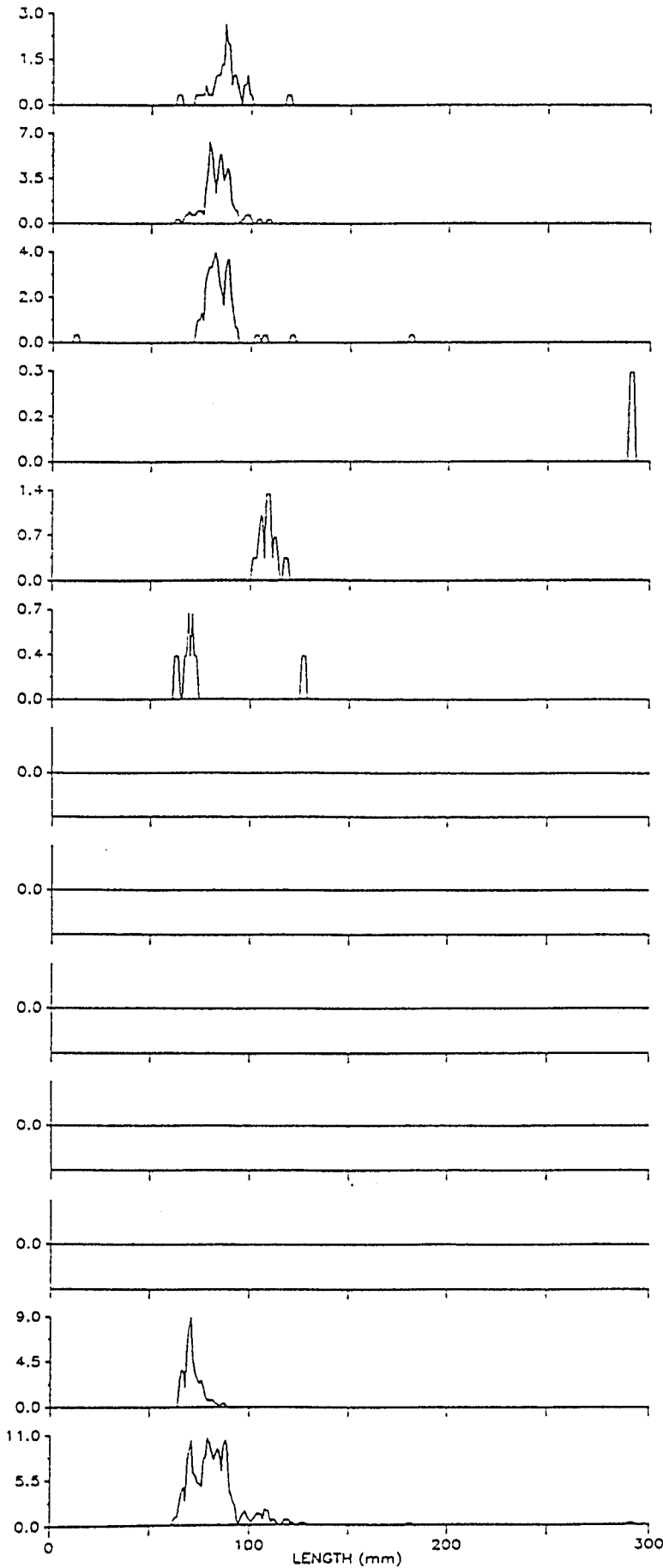
NOVEMBER	931102	-	931111		
NO. CGHT.	-	740	MEAN SIZE	-	58
NO. MEAS.	-	715	S.E. SIZE	-	1.5
NO. HAULS	-	60	MIN. SIZE	-	8
CAT./HAUL	-	12.3	MAX. SIZE	-	172

DECEMBER	931201	-	931213		
NO. CGHT.	-	299	MEAN SIZE	-	50.7
NO. MEAS.	-	260	S.E. SIZE	-	2.1
NO. HAULS	-	60	MIN. SIZE	-	13
CAT./HAUL	-	5	MAX. SIZE	-	175

JAN - DEC	930106	-	931213		
NO. CGHT.	-	4231	MEAN SIZE	-	59
NO. MEAS.	-	4094	S.E. SIZE	-	0.6
NO. HAULS	-	644	MIN. SIZE	-	6
CAT./HAUL	-	6.6	MAX. SIZE	-	201

Figure 58.

Blueback Herring



JANUARY	930106 - 930114		
NO. CGHT.	25	MEAN SIZE	85.3
NO. MEAS.	25	S.E. SIZE	2
NO. HAULS	25	MIN. SIZE	62
CAT./HAUL	1	MAX. SIZE	117

FEBRUARY	930203 - 930223		
NO. CGHT.	74	MEAN SIZE	81.2
NO. MEAS.	74	S.E. SIZE	0.9
NO. HAULS	58	MIN. SIZE	61
CAT./HAUL	1.3	MAX. SIZE	107

MARCH	930301 - 930311		
NO. CGHT.	54	MEAN SIZE	84.3
NO. MEAS.	54	S.E. SIZE	2.1
NO. HAULS	25	MIN. SIZE	71
CAT./HAUL	2.2	MAX. SIZE	179

APRIL	930405 - 930429		
NO. CGHT.	2	MEAN SIZE	294.5
NO. MEAS.	2	S.E. SIZE	5.5
NO. HAULS	56	MIN. SIZE	289
CAT./HAUL	0	MAX. SIZE	300

MAY	930506 - 930513		
NO. CGHT.	11	MEAN SIZE	106.8
NO. MEAS.	11	S.E. SIZE	1.3
NO. HAULS	60	MIN. SIZE	100
CAT./HAUL	0.2	MAX. SIZE	116

JUNE	930602 - 930615		
NO. CGHT.	5	MEAN SIZE	78
NO. MEAS.	5	S.E. SIZE	11.8
NO. HAULS	60	MIN. SIZE	61
CAT./HAUL	0.1	MAX. SIZE	125

JULY	930701 - 930715		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

AUGUST	930803 - 930817		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

SEPTEMBER	930907 - 930920		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

OCTOBER	931004 - 931019		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

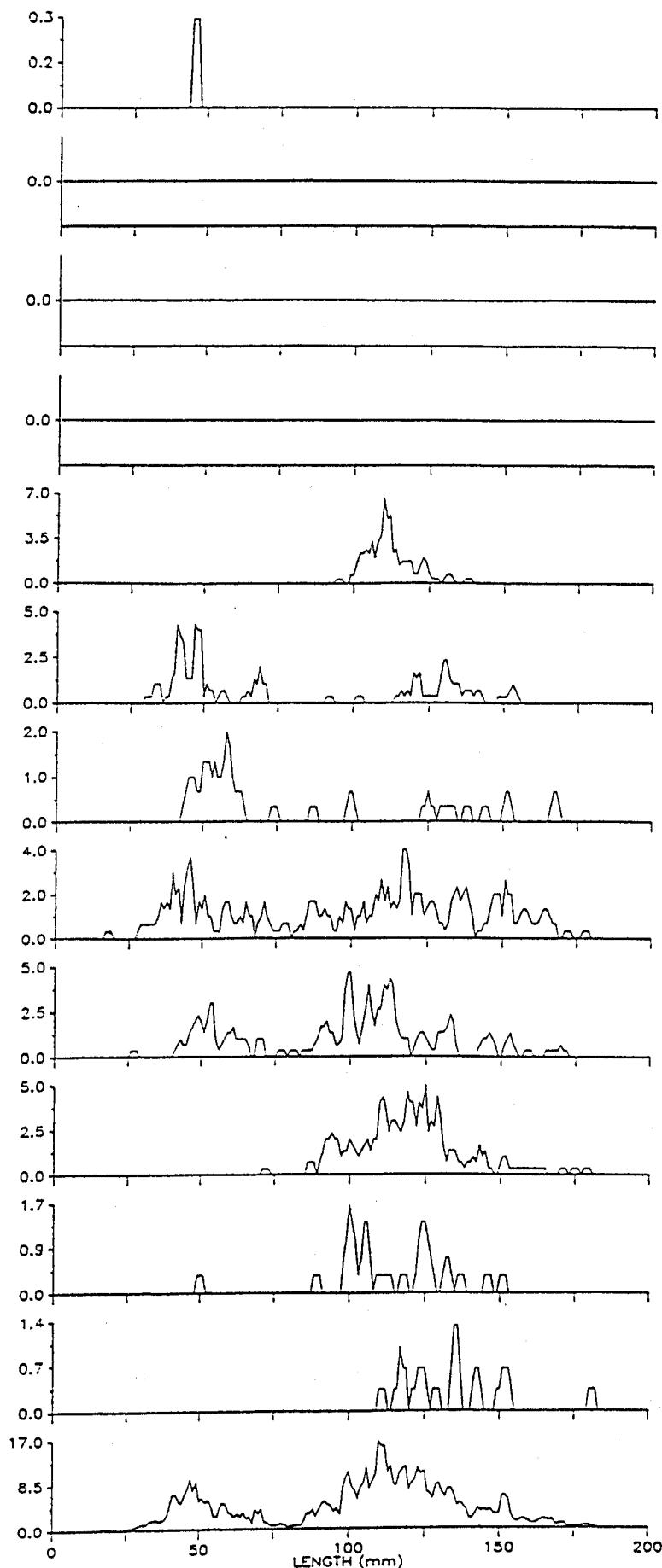
NOVEMBER	931102 - 931111		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	60	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

DECEMBER	931201 - 931213		
NO. CGHT.	108	MEAN SIZE	69.6
NO. MEAS.	58	S.E. SIZE	0.6
NO. HAULS	60	MIN. SIZE	64
CAT./HAUL	1.8	MAX. SIZE	85

JAN - DEC	930106 - 931213		
NO. CGHT.	279	MEAN SIZE	82.5
NO. MEAS.	229	S.E. SIZE	1.6
NO. HAULS	644	MIN. SIZE	61
CAT./HAUL	0.4	MAX. SIZE	300

Figure 59.

Butterfish



JANUARY 930106 - 930114
 NO. CGHT. - 1 MEAN SIZE - 44
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 25 MIN. SIZE - 44
 CAT./HAUL - 0 MAX. SIZE - 44

FEBRUARY 930203 - 930223
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 58 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

MARCH 930301 - 930311
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 25 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

APRIL 930405 - 930429
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 56 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

MAY 930506 - 930513
 NO. CGHT. - 67 MEAN SIZE - 110
 NO. MEAS. - 67 S.E. SIZE - 1
 NO. HAULS - 60 MIN. SIZE - 93
 CAT./HAUL - 1.1 MAX. SIZE - 136

JUNE 930602 - 930615
 NO. CGHT. - 78 MEAN SIZE - 77.6
 NO. MEAS. - 78 S.E. SIZE - 4.7
 NO. HAULS - 60 MIN. SIZE - 29
 CAT./HAUL - 1.3 MAX. SIZE - 152

JULY 930701 - 930715
 NO. CGHT. - 36 MEAN SIZE - 80.6
 NO. MEAS. - 36 S.E. SIZE - 6.8
 NO. HAULS - 60 MIN. SIZE - 42
 CAT./HAUL - 0.6 MAX. SIZE - 166

AUGUST 930803 - 930817
 NO. CGHT. - 179 MEAN SIZE - 97.9
 NO. MEAS. - 179 S.E. SIZE - 3.1
 NO. HAULS - 60 MIN. SIZE - 16
 CAT./HAUL - 3 MAX. SIZE - 176

SEPTEMBER 930907 - 930920
 NO. CGHT. - 142 MEAN SIZE - 96.4
 NO. MEAS. - 142 S.E. SIZE - 2.7
 NO. HAULS - 60 MIN. SIZE - 25
 CAT./HAUL - 2.4 MAX. SIZE - 169

OCTOBER 931004 - 931019
 NO. CGHT. - 140 MEAN SIZE - 117.5
 NO. MEAS. - 133 S.E. SIZE - 1.6
 NO. HAULS - 60 MIN. SIZE - 70
 CAT./HAUL - 2.3 MAX. SIZE - 177

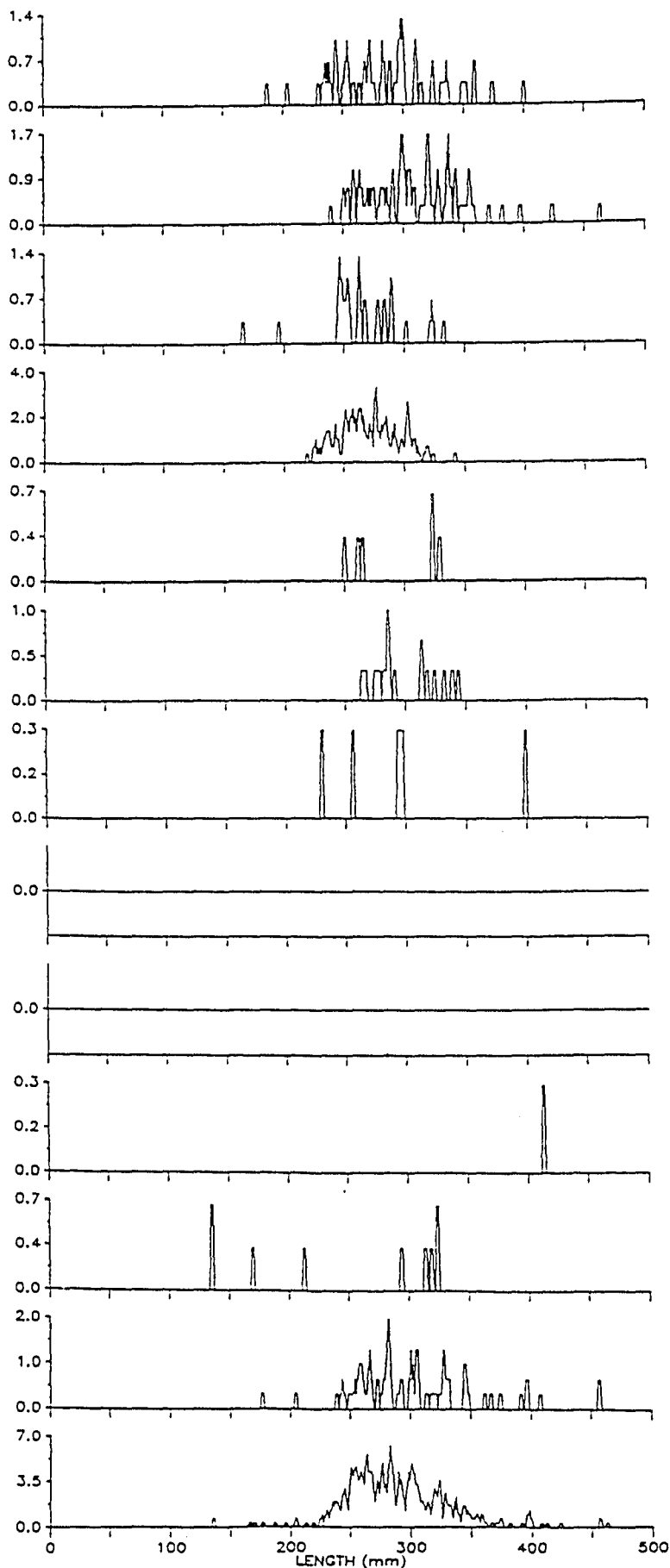
NOVEMBER 931102 - 931111
 NO. CGHT. - 26 MEAN SIZE - 111.5
 NO. MEAS. - 26 S.E. SIZE - 4
 NO. HAULS - 60 MIN. SIZE - 48
 CAT./HAUL - 0.4 MAX. SIZE - 149

DECEMBER 931201 - 931213
 NO. CGHT. - 18 MEAN SIZE - 132.8
 NO. MEAS. - 18 S.E. SIZE - 4
 NO. HAULS - 60 MIN. SIZE - 109
 CAT./HAUL - 0.3 MAX. SIZE - 179

JAN - DEC 930106 - 931213
 NO. CGHT. - 687 MEAN SIZE - 100.7
 NO. MEAS. - 680 S.E. SIZE - 1.3
 NO. HAULS - 644 MIN. SIZE - 16
 CAT./HAUL - 1.1 MAX. SIZE - 179

Figure 60.

Channel Catfish



JANUARY 930106 - 930114
 NO. CGHT. - 50 MEAN SIZE - 285.5
 NO. MEAS. - 50 S.E. SIZE - 6.2
 NO. HAULS - 25 MIN. SIZE - 185
 CAT./HAUL - 2 MAX. SIZE - 398

FEBRUARY 930203 - 930223
 NO. CGHT. - 143 MEAN SIZE - 308.4
 NO. MEAS. - 70 S.E. SIZE - 5
 NO. HAULS - 58 MIN. SIZE - 238
 CAT./HAUL - 2.5 MAX. SIZE - 461

MARCH 930301 - 930311
 NO. CGHT. - 29 MEAN SIZE - 264.4
 NO. MEAS. - 29 S.E. SIZE - 6.3
 NO. HAULS - 25 MIN. SIZE - 164
 CAT./HAUL - 1.2 MAX. SIZE - 331

APRIL 930405 - 930429
 NO. CGHT. - 138 MEAN SIZE - 269.2
 NO. MEAS. - 119 S.E. SIZE - 2.3
 NO. HAULS - 56 MIN. SIZE - 217
 CAT./HAUL - 2.5 MAX. SIZE - 340

MAY 930506 - 930513
 NO. CGHT. - 6 MEAN SIZE - 289.8
 NO. MEAS. - 6 S.E. SIZE - 15
 NO. HAULS - 60 MIN. SIZE - 248
 CAT./HAUL - 0.1 MAX. SIZE - 327

JUNE 930602 - 930615
 NO. CGHT. - 16 MEAN SIZE - 297.9
 NO. MEAS. - 16 S.E. SIZE - 6.5
 NO. HAULS - 60 MIN. SIZE - 262
 CAT./HAUL - 0.3 MAX. SIZE - 342

JULY 930701 - 930715
 NO. CGHT. - 5 MEAN SIZE - 293.2
 NO. MEAS. - 5 S.E. SIZE - 28.8
 NO. HAULS - 60 MIN. SIZE - 228
 CAT./HAUL - 0.1 MAX. SIZE - 397

AUGUST 930803 - 930817
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

SEPTEMBER 930907 - 930920
 NO. CGHT. - 0 MEAN SIZE - .
 NO. MEAS. - 0 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - .
 CAT./HAUL - 0 MAX. SIZE - .

OCTOBER 931004 - 931019
 NO. CGHT. - 1 MEAN SIZE - 411
 NO. MEAS. - 1 S.E. SIZE - .
 NO. HAULS - 60 MIN. SIZE - 411
 CAT./HAUL - 0 MAX. SIZE - 411

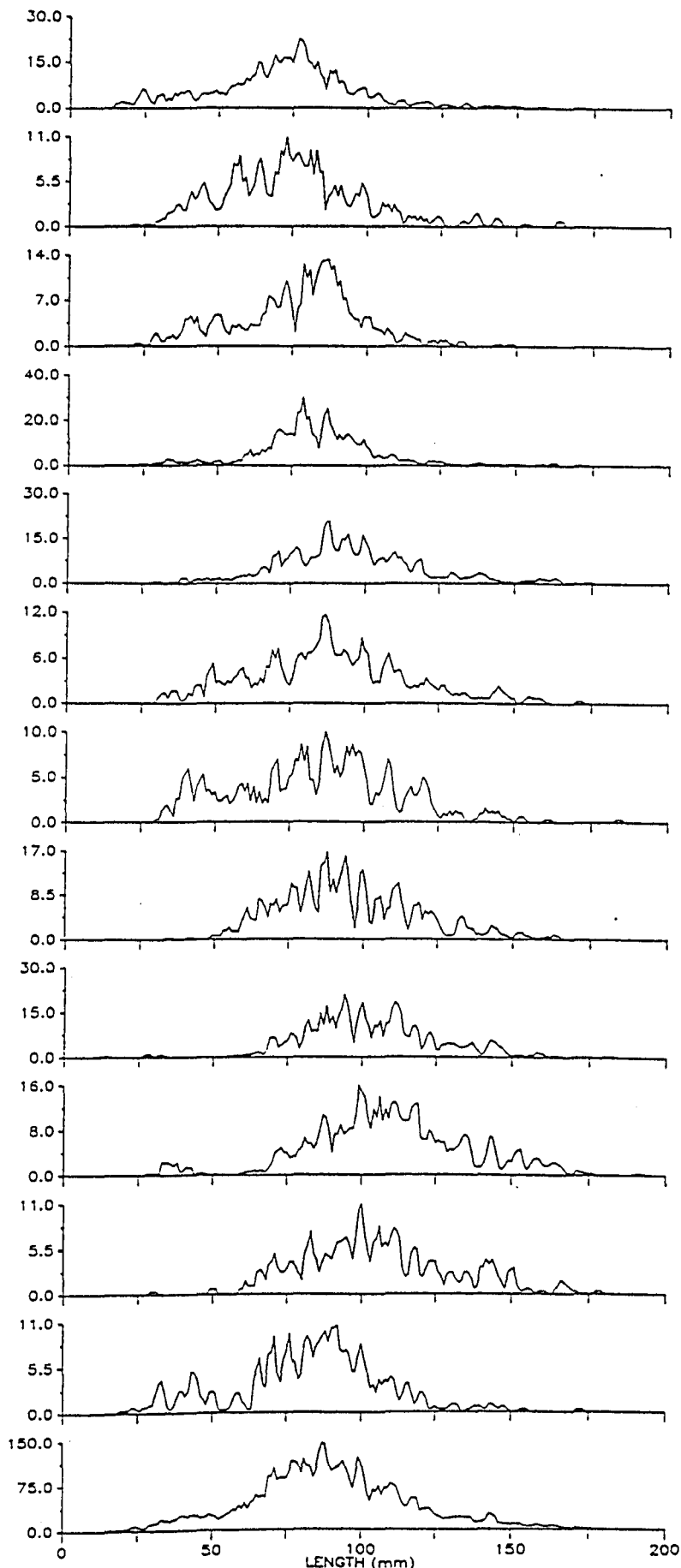
NOVEMBER 931102 - 931111
 NO. CGHT. - 9 MEAN SIZE - 245.8
 NO. MEAS. - 9 S.E. SIZE - 27.8
 NO. HAULS - 60 MIN. SIZE - 134
 CAT./HAUL - 0.2 MAX. SIZE - 322

DECEMBER 931201 - 931213
 NO. CGHT. - 127 MEAN SIZE - 304.6
 NO. MEAS. - 66 S.E. SIZE - 7.2
 NO. HAULS - 60 MIN. SIZE - 175
 CAT./HAUL - 2.1 MAX. SIZE - 516

JAN - DEC 930106 - 931213
 NO. CGHT. - 524 MEAN SIZE - 286.4
 NO. MEAS. - 371 S.E. SIZE - 2.4
 NO. HAULS - 644 MIN. SIZE - 134
 CAT./HAUL - 0.8 MAX. SIZE - 516

Figure 61.

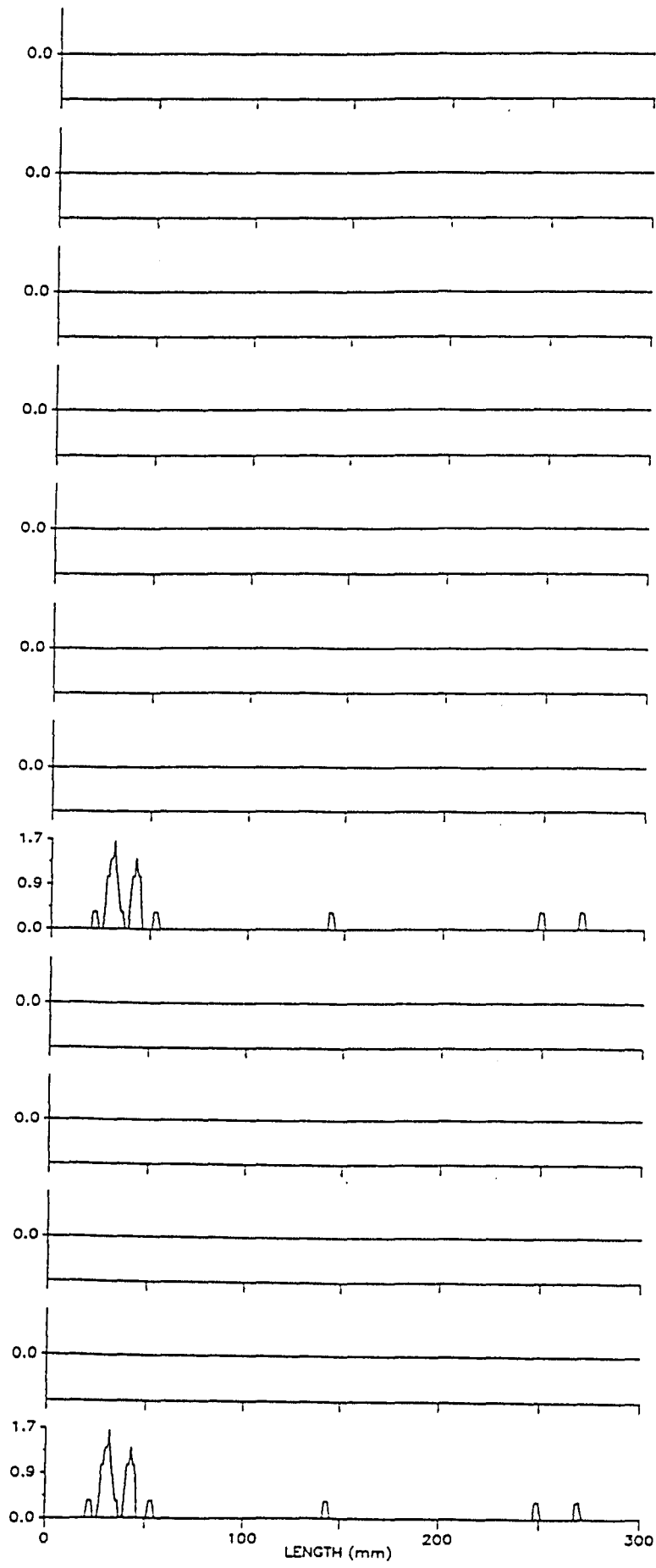
Hogchoker



JANUARY	930106 - 930114		
NO. CGHT.	- 5273	MEAN SIZE	- 69.7
NO. MEAS.	- 746	S.E. SIZE	- 0.9
NO. HAULS	- 25	MIN. SIZE	- 14
CAT./HAUL	- 210.9	MAX. SIZE	- 168
FEBRUARY	930203 - 930223		
NO. CGHT.	- 1716	MEAN SIZE	- 72.8
NO. MEAS.	- 397	S.E. SIZE	- 1.2
NO. HAULS	- 58	MIN. SIZE	- 20
CAT./HAUL	- 29.6	MAX. SIZE	- 162
MARCH	930301 - 930311		
NO. CGHT.	- 2785	MEAN SIZE	- 75.3
NO. MEAS.	- 422	S.E. SIZE	- 1
NO. HAULS	- 25	MIN. SIZE	- 21
CAT./HAUL	- 111.4	MAX. SIZE	- 146
APRIL	930405 - 930429		
NO. CGHT.	- 6367	MEAN SIZE	- 81.2
NO. MEAS.	- 671	S.E. SIZE	- 0.8
NO. HAULS	- 56	MIN. SIZE	- 23
CAT./HAUL	- 113.7	MAX. SIZE	- 193
MAY	930506 - 930513		
NO. CGHT.	- 4572	MEAN SIZE	- 92.3
NO. MEAS.	- 658	S.E. SIZE	- 0.9
NO. HAULS	- 60	MIN. SIZE	- 28
CAT./HAUL	- 76.2	MAX. SIZE	- 172
JUNE	930602 - 930615		
NO. CGHT.	- 1018	MEAN SIZE	- 86
NO. MEAS.	- 427	S.E. SIZE	- 1.3
NO. HAULS	- 60	MIN. SIZE	- 29
CAT./HAUL	- 17	MAX. SIZE	- 169
JULY	930701 - 930715		
NO. CGHT.	- 781	MEAN SIZE	- 82
NO. MEAS.	- 423	S.E. SIZE	- 1.3
NO. HAULS	- 60	MIN. SIZE	- 29
CAT./HAUL	- 13	MAX. SIZE	- 182
AUGUST	930803 - 930817		
NO. CGHT.	- 2095	MEAN SIZE	- 92.8
NO. MEAS.	- 561	S.E. SIZE	- 1
NO. HAULS	- 60	MIN. SIZE	- 33
CAT./HAUL	- 34.9	MAX. SIZE	- 162
SEPTEMBER	930907 - 930920		
NO. CGHT.	- 2393	MEAN SIZE	- 100.6
NO. MEAS.	- 673	S.E. SIZE	- 0.8
NO. HAULS	- 60	MIN. SIZE	- 11
CAT./HAUL	- 39.9	MAX. SIZE	- 179
OCTOBER	931004 - 931019		
NO. CGHT.	- 5597	MEAN SIZE	- 106.6
NO. MEAS.	- 642	S.E. SIZE	- 1
NO. HAULS	- 60	MIN. SIZE	- 27
CAT./HAUL	- 93.3	MAX. SIZE	- 189
NOVEMBER	931102 - 931111		
NO. CGHT.	- 1399	MEAN SIZE	- 103.1
NO. MEAS.	- 380	S.E. SIZE	- 1.3
NO. HAULS	- 60	MIN. SIZE	- 28
CAT./HAUL	- 23.3	MAX. SIZE	- 176
DECEMBER	931201 - 931213		
NO. CGHT.	- 7618	MEAN SIZE	- 80.9
NO. MEAS.	- 416	S.E. SIZE	- 1.2
NO. HAULS	- 60	MIN. SIZE	- 18
CAT./HAUL	- 127	MAX. SIZE	- 170
JAN - DEC	930106 - 931213		
NO. CGHT.	- 41614	MEAN SIZE	- 87.3
NO. MEAS.	- 6416	S.E. SIZE	- 0.3
NO. HAULS	- 644	MIN. SIZE	- 11
CAT./HAUL	- 64.6	MAX. SIZE	- 193

Figure 62.

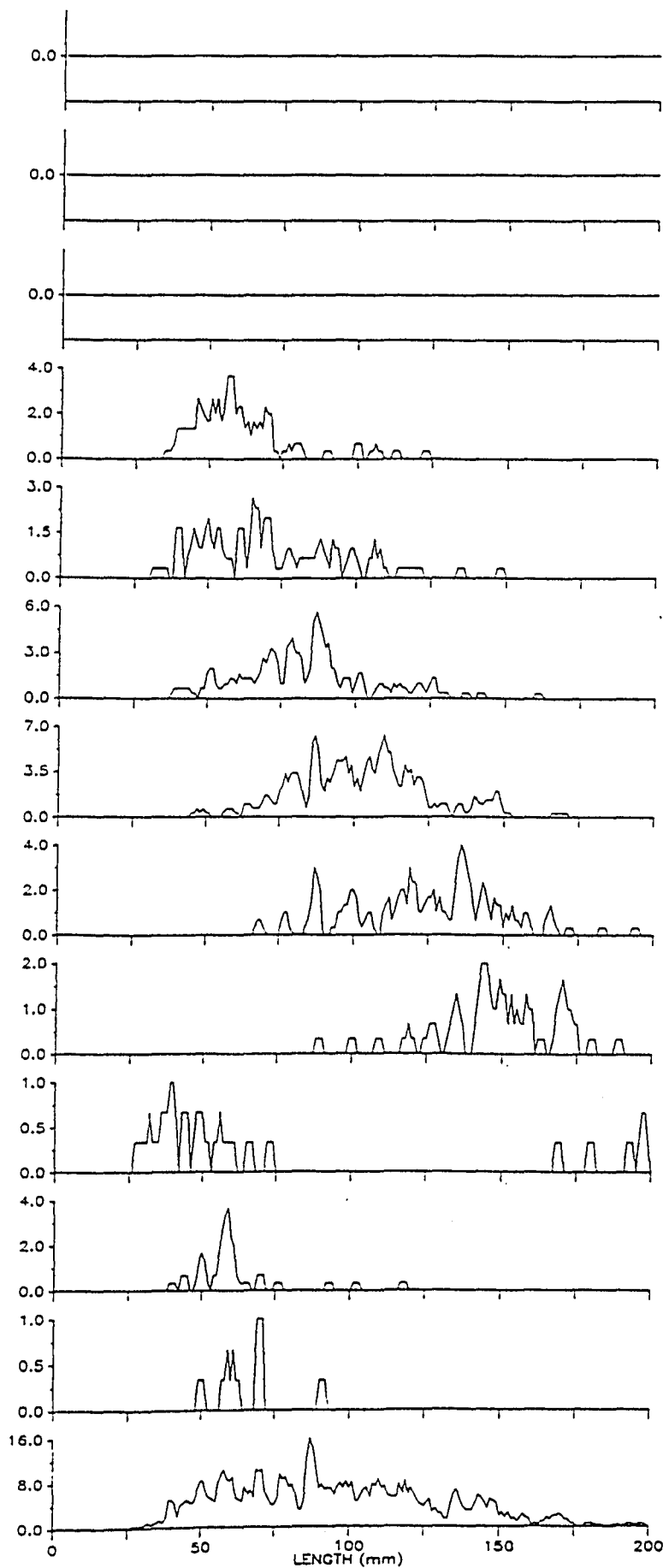
Northern Kingfish



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	930405 - 930429		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	56	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	930506 - 930513		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	930602 - 930615		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JULY	930701 - 930715		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
AUGUST	930803 - 930817		
NO. CGHT.	20	MEAN SIZE	61.6
NO. MEAS.	20	S.E. SIZE	16
NO. HAULS	60	MIN. SIZE	20
CAT./HAUL	0.3	MAX. SIZE	267
SEPTEMBER	930907 - 930920		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
OCTOBER	931004 - 931019		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
NOVEMBER	931102 - 931111		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
DECEMBER	931201 - 931213		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	930106 - 931213		
NO. CGHT.	20	MEAN SIZE	61.6
NO. MEAS.	20	S.E. SIZE	16
NO. HAULS	644	MIN. SIZE	20
CAT./HAUL	0	MAX. SIZE	267

Figure 63.

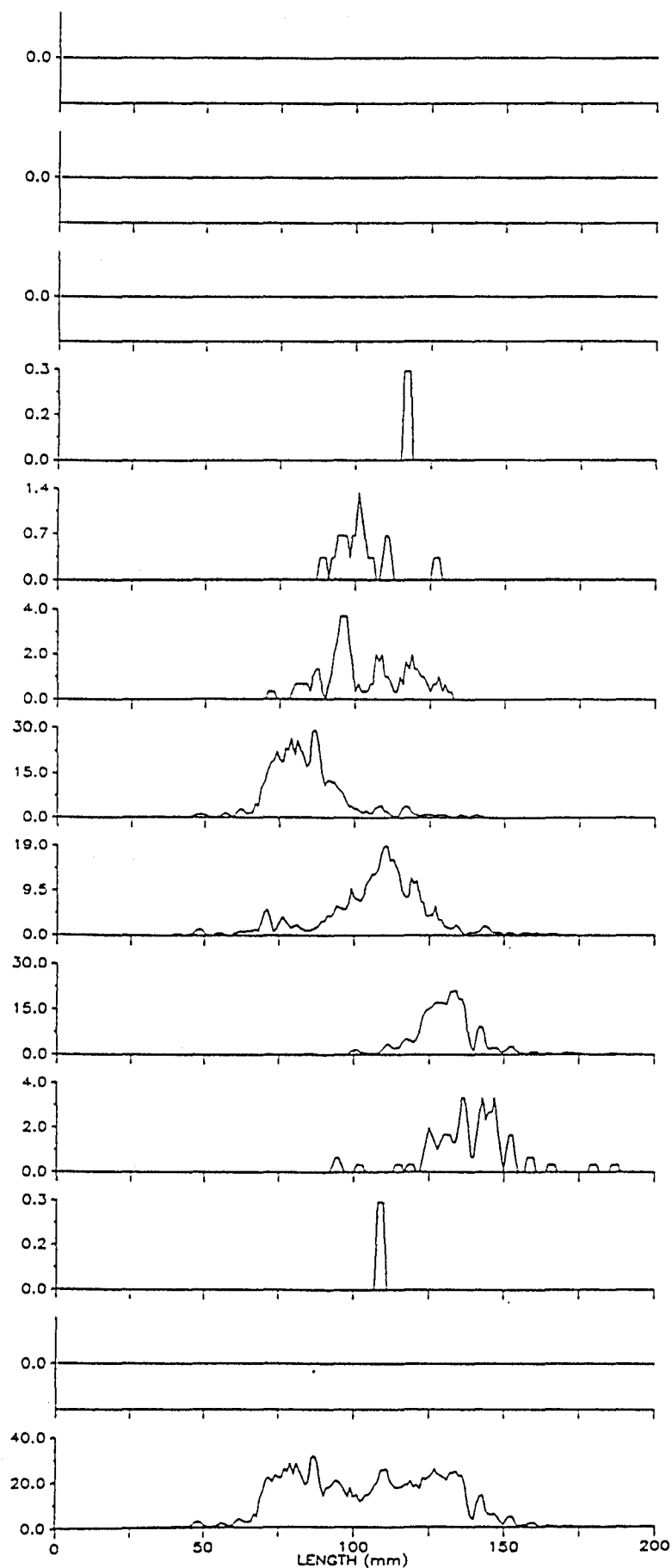
Northern Searobin



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	930405 - 930429		
NO. CGHT.	78	MEAN SIZE	58.9
NO. MEAS.	78	S.E. SIZE	2
NO. HAULS	56	MIN. SIZE	34
CAT./HAUL	1.4	MAX. SIZE	121
MAY	930506 - 930513		
NO. CGHT.	78	MEAN SIZE	69.8
NO. MEAS.	78	S.E. SIZE	2.8
NO. HAULS	60	MIN. SIZE	30
CAT./HAUL	1.3	MAX. SIZE	146
JUNE	930602 - 930615		
NO. CGHT.	141	MEAN SIZE	81.5
NO. MEAS.	137	S.E. SIZE	1.9
NO. HAULS	60	MIN. SIZE	37
CAT./HAUL	2.4	MAX. SIZE	159
JULY	930701 - 930715		
NO. CGHT.	217	MEAN SIZE	100.2
NO. MEAS.	217	S.E. SIZE	1.5
NO. HAULS	60	MIN. SIZE	44
CAT./HAUL	3.6	MAX. SIZE	168
AUGUST	930803 - 930817		
NO. CGHT.	112	MEAN SIZE	122.1
NO. MEAS.	112	S.E. SIZE	2.4
NO. HAULS	60	MIN. SIZE	66
CAT./HAUL	1.9	MAX. SIZE	192
SEPTEMBER	930907 - 930920		
NO. CGHT.	50	MEAN SIZE	145.9
NO. MEAS.	49	S.E. SIZE	2.9
NO. HAULS	60	MIN. SIZE	87
CAT./HAUL	0.8	MAX. SIZE	187
OCTOBER	931004 - 931019		
NO. CGHT.	23	MEAN SIZE	74.9
NO. MEAS.	23	S.E. SIZE	12.7
NO. HAULS	60	MIN. SIZE	26
CAT./HAUL	0.4	MAX. SIZE	196
NOVEMBER	931102 - 931111		
NO. CGHT.	33	MEAN SIZE	59.3
NO. MEAS.	33	S.E. SIZE	2.8
NO. HAULS	60	MIN. SIZE	38
CAT./HAUL	0.6	MAX. SIZE	116
DECEMBER	931201 - 931213		
NO. CGHT.	8	MEAN SIZE	64.4
NO. MEAS.	8	S.E. SIZE	4.3
NO. HAULS	60	MIN. SIZE	48
CAT./HAUL	0.1	MAX. SIZE	89
JAN - DEC	930106 - 931213		
NO. CGHT.	740	MEAN SIZE	92.5
NO. MEAS.	735	S.E. SIZE	1.3
NO. HAULS	644	MIN. SIZE	26
CAT./HAUL	1.1	MAX. SIZE	196

Figure 64.

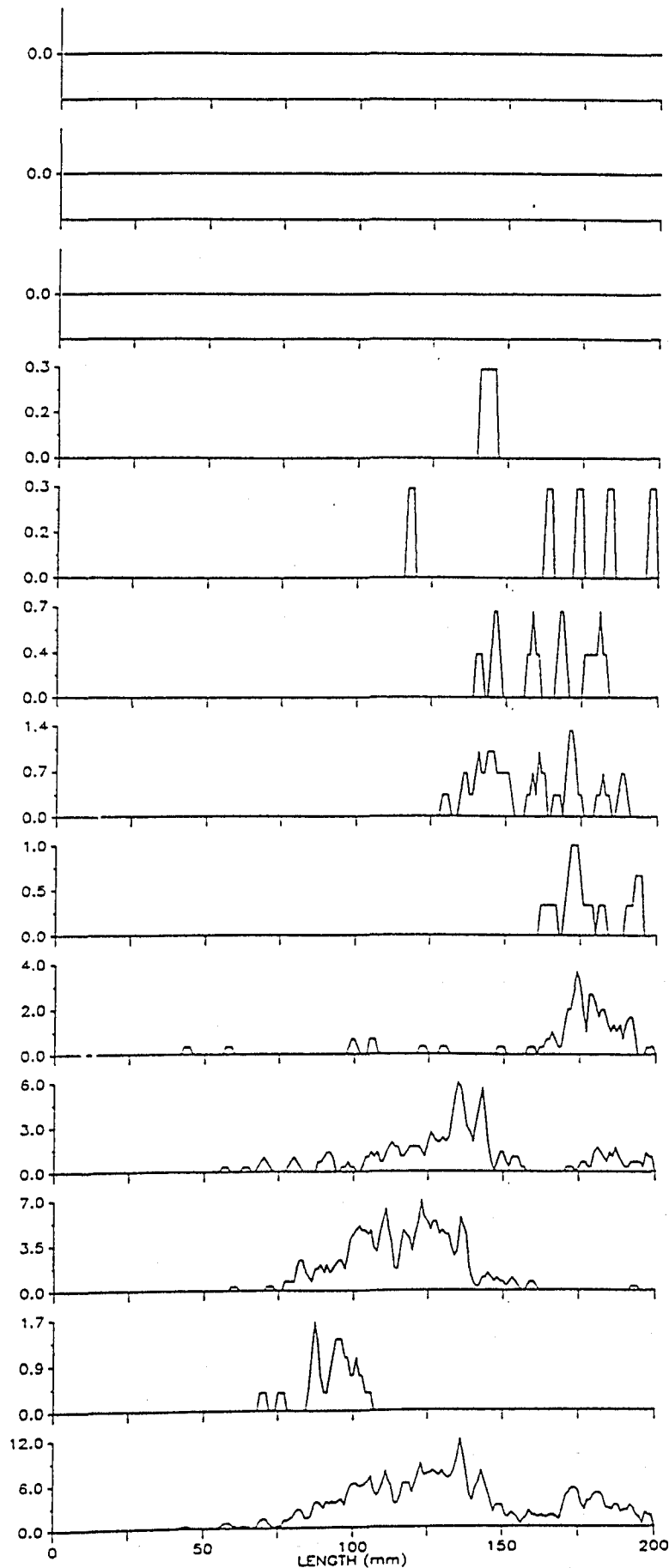
Scup



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	930405 - 930429		
NO. CGHT.	1	MEAN SIZE	- 115
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	56	MIN. SIZE	- 115
CAT./HAUL	0	MAX. SIZE	- 115
MAY	930506 - 930513		
NO. CGHT.	13	MEAN SIZE	- 100.2
NO. MEAS.	13	S.E. SIZE	- 2.7
NO. HAULS	60	MIN. SIZE	- 87
CAT./HAUL	0.2	MAX. SIZE	- 125
JUNE	930602 - 930615		
NO. CGHT.	62	MEAN SIZE	- 101.4
NO. MEAS.	59	S.E. SIZE	- 1.8
NO. HAULS	60	MIN. SIZE	- 70
CAT./HAUL	1	MAX. SIZE	- 129
JULY	930701 - 930715		
NO. CGHT.	1102	MEAN SIZE	- 82.3
NO. MEAS.	625	S.E. SIZE	- 0.6
NO. HAULS	60	MIN. SIZE	- 32
CAT./HAUL	18.4	MAX. SIZE	- 140
AUGUST	930803 - 930817		
NO. CGHT.	513	MEAN SIZE	- 104.7
NO. MEAS.	463	S.E. SIZE	- 0.9
NO. HAULS	60	MIN. SIZE	- 39
CAT./HAUL	8.6	MAX. SIZE	- 164
SEPTEMBER	930907 - 930920		
NO. CGHT.	476	MEAN SIZE	- 128.8
NO. MEAS.	386	S.E. SIZE	- 0.6
NO. HAULS	60	MIN. SIZE	- 83
CAT./HAUL	7.9	MAX. SIZE	- 184
OCTOBER	931004 - 931019		
NO. CGHT.	66	MEAN SIZE	- 136.7
NO. MEAS.	66	S.E. SIZE	- 1.9
NO. HAULS	60	MIN. SIZE	- 92
CAT./HAUL	1.1	MAX. SIZE	- 185
NOVEMBER	931102 - 931111		
NO. CGHT.	1	MEAN SIZE	- 107
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	- 107
CAT./HAUL	0	MAX. SIZE	- 107
DECEMBER	931201 - 931213		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	930106 - 931213		
NO. CGHT.	2234	MEAN SIZE	- 103
NO. MEAS.	1614	S.E. SIZE	- 0.6
NO. HAULS	644	MIN. SIZE	- 32
CAT./HAUL	3.5	MAX. SIZE	- 185

Figure 65.

Silver Perch



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-

FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-

MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-

APRIL	930405 - 930429		
NO. CGHT.	2	MEAN SIZE	- 141.5
NO. MEAS.	2	S.E. SIZE	- 1.5
NO. HAULS	56	MIN. SIZE	- 140
CAT./HAUL	0	MAX. SIZE	- 143

MAY	930506 - 930513		
NO. CGHT.	5	MEAN SIZE	- 165.6
NO. MEAS.	5	S.E. SIZE	- 13.6
NO. HAULS	60	MIN. SIZE	- 116
CAT./HAUL	0.1	MAX. SIZE	- 196

JUNE	930602 - 930615		
NO. CGHT.	11	MEAN SIZE	- 164.7
NO. MEAS.	11	S.E. SIZE	- 5.8
NO. HAULS	60	MIN. SIZE	- 139
CAT./HAUL	0.2	MAX. SIZE	- 204

JULY	930701 - 930715		
NO. CGHT.	28	MEAN SIZE	- 157.8
NO. MEAS.	28	S.E. SIZE	- 3.6
NO. HAULS	60	MIN. SIZE	- 128
CAT./HAUL	0.5	MAX. SIZE	- 206

AUGUST	930803 - 930817		
NO. CGHT.	14	MEAN SIZE	- 179.6
NO. MEAS.	14	S.E. SIZE	- 3.7
NO. HAULS	60	MIN. SIZE	- 161
CAT./HAUL	0.2	MAX. SIZE	- 205

SEPTEMBER	930907 - 930920		
NO. CGHT.	62	MEAN SIZE	- 166.7
NO. MEAS.	62	S.E. SIZE	- 4
NO. HAULS	60	MIN. SIZE	- 42
CAT./HAUL	1	MAX. SIZE	- 203

OCTOBER	931004 - 931019		
NO. CGHT.	151	MEAN SIZE	- 135.7
NO. MEAS.	151	S.E. SIZE	- 2.6
NO. HAULS	60	MIN. SIZE	- 55
CAT./HAUL	2.5	MAX. SIZE	- 212

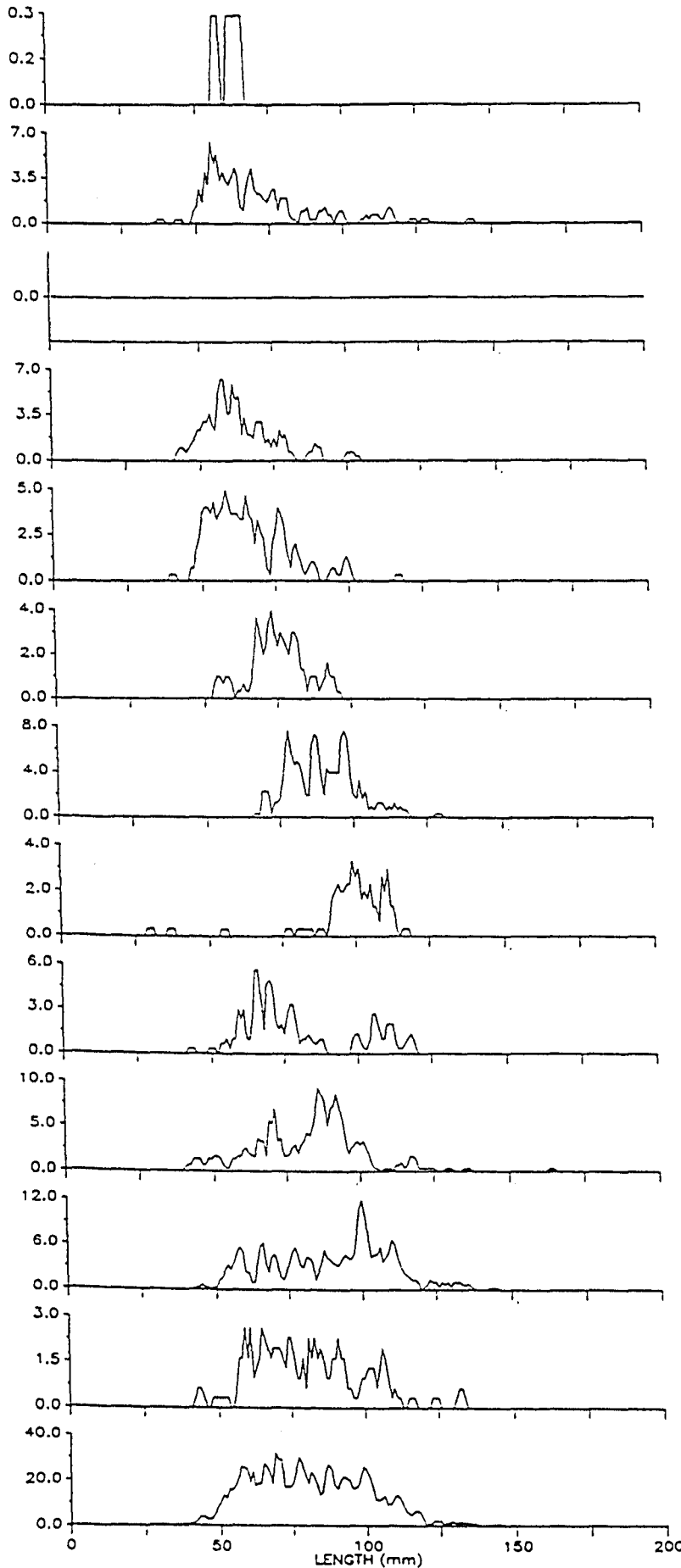
NOVEMBER	931102 - 931111		
NO. CGHT.	228	MEAN SIZE	- 114.3
NO. MEAS.	228	S.E. SIZE	- 1.3
NO. HAULS	60	MIN. SIZE	- 58
CAT./HAUL	3.8	MAX. SIZE	- 202

DECEMBER	931201 - 931213		
NO. CGHT.	20	MEAN SIZE	- 90.4
NO. MEAS.	20	S.E. SIZE	- 1.9
NO. HAULS	60	MIN. SIZE	- 68
CAT./HAUL	0.3	MAX. SIZE	- 103

JAN - DEC	930106 - 931213		
NO. CGHT.	521	MEAN SIZE	- 131.6
NO. MEAS.	521	S.E. SIZE	- 1.5
NO. HAULS	644	MIN. SIZE	- 42
CAT./HAUL	0.8	MAX. SIZE	- 212

Figure 66.

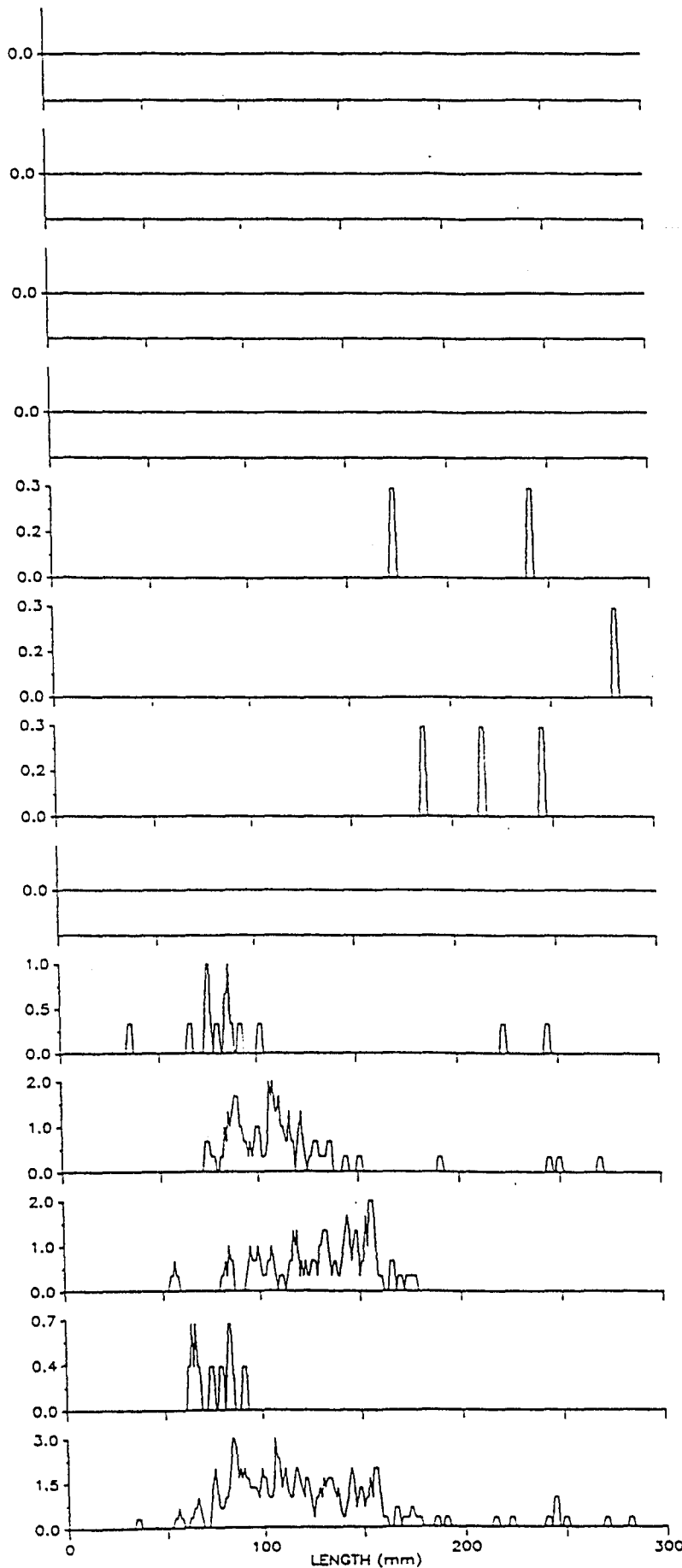
Smallmouth Flounder



JANUARY	930106 - 930114		
NO. CGHT.	3	MEAN SIZE	59.3
NO. MEAS.	3	S.E. SIZE	2.3
NO. HAULS	25	MIN. SIZE	55
CAT./HAUL	0.1	MAX. SIZE	63
FEBRUARY	930203 - 930223		
NO. CGHT.	120	MEAN SIZE	69.4
NO. MEAS.	120	S.E. SIZE	1.8
NO. HAULS	58	MIN. SIZE	36
CAT./HAUL	2.1	MAX. SIZE	141
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	25	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
APRIL	930405 - 930429		
NO. CGHT.	110	MEAN SIZE	61.4
NO. MEAS.	110	S.E. SIZE	1.2
NO. HAULS	56	MIN. SIZE	41
CAT./HAUL	2	MAX. SIZE	101
MAY	930506 - 930513		
NO. CGHT.	121	MEAN SIZE	63.9
NO. MEAS.	121	S.E. SIZE	1.2
NO. HAULS	60	MIN. SIZE	38
CAT./HAUL	2	MAX. SIZE	115
JUNE	930602 - 930615		
NO. CGHT.	66	MEAN SIZE	73
NO. MEAS.	66	S.E. SIZE	1.2
NO. HAULS	60	MIN. SIZE	52
CAT./HAUL	1.1	MAX. SIZE	93
JULY	930701 - 930715		
NO. CGHT.	298	MEAN SIZE	87.6
NO. MEAS.	155	S.E. SIZE	0.9
NO. HAULS	60	MIN. SIZE	65
CAT./HAUL	5	MAX. SIZE	127
AUGUST	930803 - 930817		
NO. CGHT.	54	MEAN SIZE	95.4
NO. MEAS.	54	S.E. SIZE	2.2
NO. HAULS	60	MIN. SIZE	28
CAT./HAUL	0.9	MAX. SIZE	115
SEPTEMBER	930907 - 930920		
NO. CGHT.	105	MEAN SIZE	77.3
NO. MEAS.	105	S.E. SIZE	1.9
NO. HAULS	60	MIN. SIZE	41
CAT./HAUL	1.8	MAX. SIZE	117
OCTOBER	931004 - 931019		
NO. CGHT.	251	MEAN SIZE	80.6
NO. MEAS.	216	S.E. SIZE	1.2
NO. HAULS	60	MIN. SIZE	39
CAT./HAUL	4.2	MAX. SIZE	162
NOVEMBER	931102 - 931111		
NO. CGHT.	293	MEAN SIZE	86.8
NO. MEAS.	293	S.E. SIZE	1.2
NO. HAULS	60	MIN. SIZE	42
CAT./HAUL	4.9	MAX. SIZE	142
DECEMBER	931201 - 931213		
NO. CGHT.	91	MEAN SIZE	78.7
NO. MEAS.	91	S.E. SIZE	2
NO. HAULS	60	MIN. SIZE	41
CAT./HAUL	1.5	MAX. SIZE	131
JAN - DEC	930106 - 931213		
NO. CGHT.	1512	MEAN SIZE	78.5
NO. MEAS.	1334	S.E. SIZE	0.5
NO. HAULS	644	MIN. SIZE	28
CAT./HAUL	2.3	MAX. SIZE	162

Figure 67.

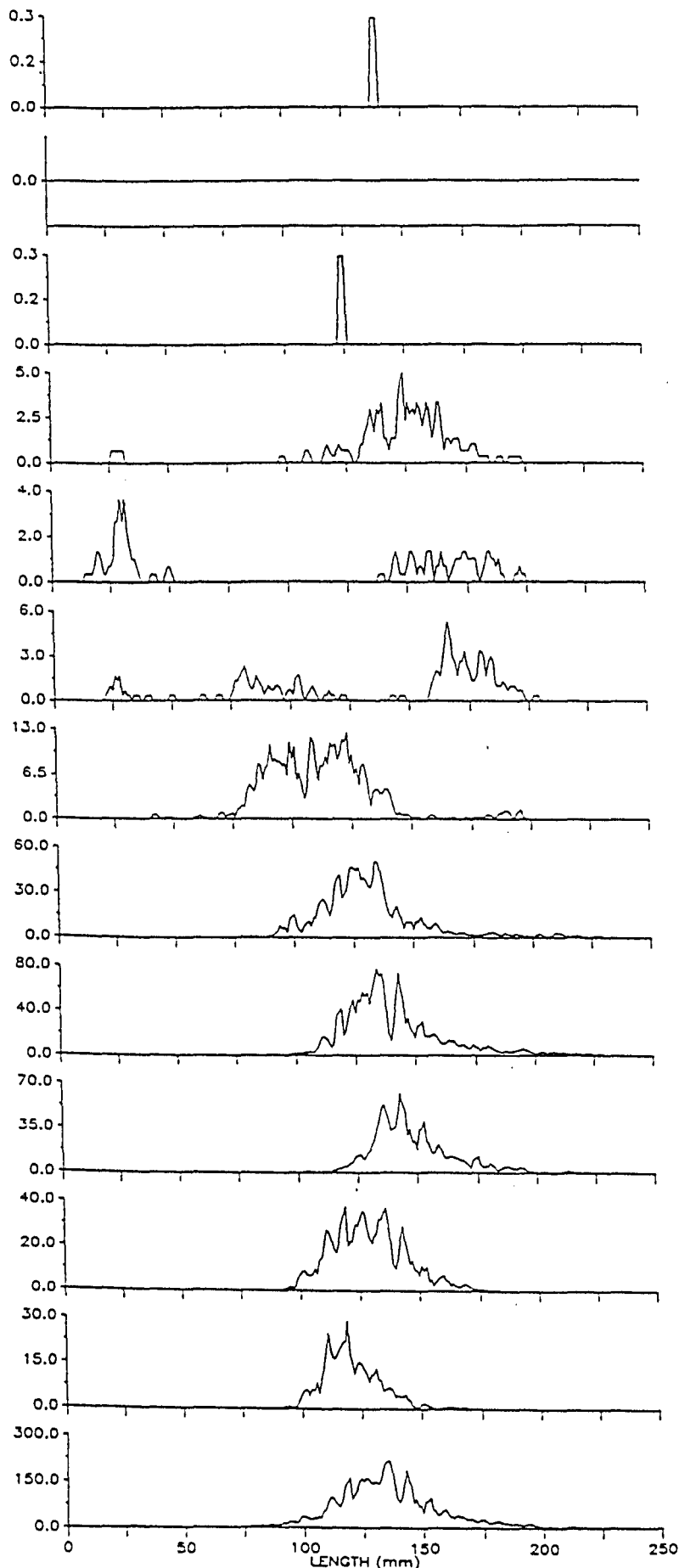
Southern Kingfish



JANUARY		930106 - 930114	
NO. CGHT.	-	0	MEAN SIZE - .
NO. MEAS.	-	0	S.E. SIZE - .
NO. HAULS	-	25	MIN. SIZE - .
CAT./HAUL	-	0	MAX. SIZE - .
FEBRUARY		930203 - 930223	
NO. CGHT.	-	0	MEAN SIZE - .
NO. MEAS.	-	0	S.E. SIZE - .
NO. HAULS	-	58	MIN. SIZE - .
CAT./HAUL	-	0	MAX. SIZE - .
MARCH		930301 - 930311	
NO. CGHT.	-	0	MEAN SIZE - .
NO. MEAS.	-	0	S.E. SIZE - .
NO. HAULS	-	25	MIN. SIZE - .
CAT./HAUL	-	0	MAX. SIZE - .
APRIL		930405 - 930429	
NO. CGHT.	-	0	MEAN SIZE - .
NO. MEAS.	-	0	S.E. SIZE - .
NO. HAULS	-	56	MIN. SIZE - .
CAT./HAUL	-	0	MAX. SIZE - .
MAY		930506 - 930513	
NO. CGHT.	-	2	MEAN SIZE - 205
NO. MEAS.	-	2	S.E. SIZE - 34
NO. HAULS	-	60	MIN. SIZE - 171
CAT./HAUL	-	0	MAX. SIZE - 239
JUNE		930602 - 930615	
NO. CGHT.	-	1	MEAN SIZE - 280
NO. MEAS.	-	1	S.E. SIZE - .
NO. HAULS	-	60	MIN. SIZE - 280
CAT./HAUL	-	0	MAX. SIZE - 280
JULY		930701 - 930715	
NO. CGHT.	-	3	MEAN SIZE - 213.3
NO. MEAS.	-	3	S.E. SIZE - 17
NO. HAULS	-	60	MIN. SIZE - 184
CAT./HAUL	-	0.1	MAX. SIZE - 243
AUGUST		930803 - 930817	
NO. CGHT.	-	0	MEAN SIZE - .
NO. MEAS.	-	0	S.E. SIZE - .
NO. HAULS	-	60	MIN. SIZE - .
CAT./HAUL	-	0	MAX. SIZE - .
SEPTEMBER		930907 - 930920	
NO. CGHT.	-	13	MEAN SIZE - 100
NO. MEAS.	-	13	S.E. SIZE - 16.9
NO. HAULS	-	60	MIN. SIZE - 33
CAT./HAUL	-	0.2	MAX. SIZE - 243
OCTOBER		931004 - 931019	
NO. CGHT.	-	56	MEAN SIZE - 113.3
NO. MEAS.	-	56	S.E. SIZE - 5.3
NO. HAULS	-	60	MIN. SIZE - 72
CAT./HAUL	-	0.9	MAX. SIZE - 268
NOVEMBER		931102 - 931111	
NO. CGHT.	-	64	MEAN SIZE - 127.4
NO. MEAS.	-	64	S.E. SIZE - 3.5
NO. HAULS	-	60	MIN. SIZE - 53
CAT./HAUL	-	1.1	MAX. SIZE - 175
DECEMBER		931201 - 931213	
NO. CGHT.	-	8	MEAN SIZE - 73.8
NO. MEAS.	-	8	S.E. SIZE - 3.6
NO. HAULS	-	60	MIN. SIZE - 61
CAT./HAUL	-	0.1	MAX. SIZE - 89
JAN - DEC		930106 - 931213	
NO. CGHT.	-	147	MEAN SIZE - 120.5
NO. MEAS.	-	147	S.E. SIZE - 3.6
NO. HAULS	-	644	MIN. SIZE - 33
CAT./HAUL	-	0.2	MAX. SIZE - 280

Figure 68.

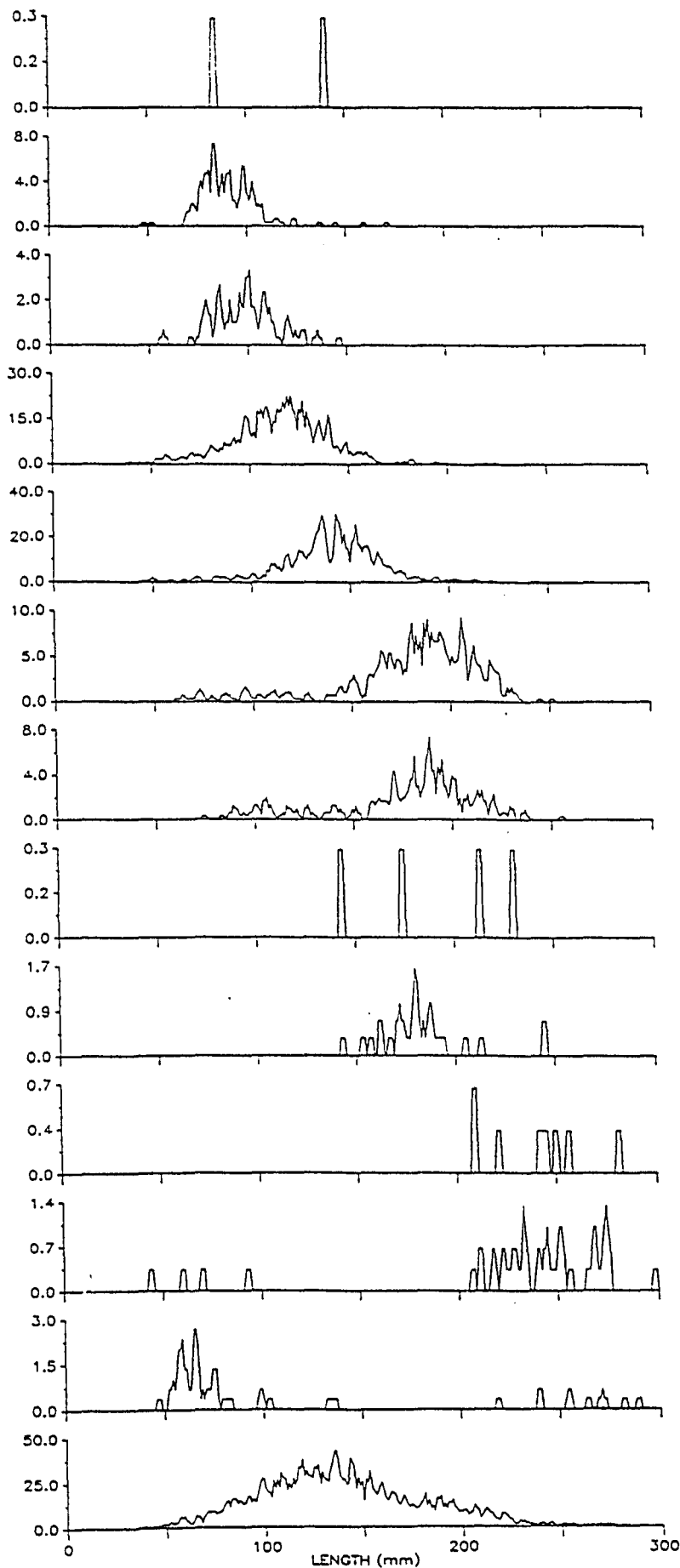
Spot



JANUARY	930106 - 930114		
NO. CGHT.	- 1	MEAN SIZE	- 137
NO. MEAS.	- 1	S.E. SIZE	-
NO. HAULS	- 25	MIN. SIZE	- 137
CAT./HAUL	- 0	MAX. SIZE	- 137
FEBRUARY	930203 - 930223		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 58	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	- 1	MEAN SIZE	- 122
NO. MEAS.	- 1	S.E. SIZE	-
NO. HAULS	- 25	MIN. SIZE	- 122
CAT./HAUL	- 0	MAX. SIZE	- 122
APRIL	930405 - 930429		
NO. CGHT.	- 119	MEAN SIZE	- 144.5
NO. MEAS.	- 119	S.E. SIZE	- 2.6
NO. HAULS	- 56	MIN. SIZE	- 25
CAT./HAUL	- 2.1	MAX. SIZE	- 195
MAY	930506 - 930513		
NO. CGHT.	- 75	MEAN SIZE	- 102.9
NO. MEAS.	- 75	S.E. SIZE	- 8.1
NO. HAULS	- 60	MIN. SIZE	- 13
CAT./HAUL	- 1.3	MAX. SIZE	- 196
JUNE	930602 - 930615		
NO. CGHT.	- 135	MEAN SIZE	- 135.6
NO. MEAS.	- 135	S.E. SIZE	- 4.4
NO. HAULS	- 60	MIN. SIZE	- 21
CAT./HAUL	- 2.3	MAX. SIZE	- 201
JULY	930701 - 930715		
NO. CGHT.	- 811	MEAN SIZE	- 109.8
NO. MEAS.	- 484	S.E. SIZE	- 1.1
NO. HAULS	- 60	MIN. SIZE	- 10
CAT./HAUL	- 13.5	MAX. SIZE	- 194
AUGUST	930803 - 930817		
NO. CGHT.	- 3198	MEAN SIZE	- 129.8
NO. MEAS.	- 1548	S.E. SIZE	- 0.6
NO. HAULS	- 60	MIN. SIZE	- 75
CAT./HAUL	- 53.3	MAX. SIZE	- 226
SEPTEMBER	930907 - 930920		
NO. CGHT.	- 3515	MEAN SIZE	- 138.7
NO. MEAS.	- 2121	S.E. SIZE	- 0.5
NO. HAULS	- 60	MIN. SIZE	- 87
CAT./HAUL	- 58.6	MAX. SIZE	- 226
OCTOBER	931004 - 931019		
NO. CGHT.	- 2061	MEAN SIZE	- 145.9
NO. MEAS.	- 1424	S.E. SIZE	- 0.5
NO. HAULS	- 60	MIN. SIZE	- 101
CAT./HAUL	- 34.4	MAX. SIZE	- 240
NOVEMBER	931102 - 931111		
NO. CGHT.	- 3847	MEAN SIZE	- 126.8
NO. MEAS.	- 1175	S.E. SIZE	- 0.4
NO. HAULS	- 60	MIN. SIZE	- 92
CAT./HAUL	- 64.1	MAX. SIZE	- 186
DECEMBER	931201 - 931213		
NO. CGHT.	- 991	MEAN SIZE	- 118.6
NO. MEAS.	- 541	S.E. SIZE	- 0.5
NO. HAULS	- 60	MIN. SIZE	- 91
CAT./HAUL	- 16.5	MAX. SIZE	- 166
JAN - DEC	930106 - 931213		
NO. CGHT.	- 14754	MEAN SIZE	- 132.8
NO. MEAS.	- 7624	S.E. SIZE	- 0.3
NO. HAULS	- 644	MIN. SIZE	- 10
CAT./HAUL	- 22.9	MAX. SIZE	- 240

Figure 69

Spotted Hake



JANUARY 930106 - 930114
 NO. CGHT. - 2 MEAN SIZE - 110
 NO. MEAS. - 2 S.E. SIZE - 28
 NO. HAULS - 25 MIN. SIZE - 82
 CAT./HAUL - 0.1 MAX. SIZE - 138

FEBRUARY 930203 - 930223
 NO. CGHT. - 145 MEAN SIZE - 89.1
 NO. MEAS. - 145 S.E. SIZE - 1.3
 NO. HAULS - 58 MIN. SIZE - 46
 CAT./HAUL - 2.5 MAX. SIZE - 169

MARCH 930301 - 930311
 NO. CGHT. - 75 MEAN SIZE - 96.7
 NO. MEAS. - 75 S.E. SIZE - 2
 NO. HAULS - 25 MIN. SIZE - 54
 CAT./HAUL - 3 MAX. SIZE - 144

APRIL 930405 - 930429
 NO. CGHT. - 1038 MEAN SIZE - 113.8
 NO. MEAS. - 950 S.E. SIZE - 0.8
 NO. HAULS - 56 MIN. SIZE - 36
 CAT./HAUL - 18.5 MAX. SIZE - 238

MAY 930506 - 930513
 NO. CGHT. - 1486 MEAN SIZE - 138.1
 NO. MEAS. - 1025 S.E. SIZE - 0.8
 NO. HAULS - 60 MIN. SIZE - 44
 CAT./HAUL - 24.8 MAX. SIZE - 259

JUNE 930602 - 930615
 NO. CGHT. - 528 MEAN SIZE - 178.1
 NO. MEAS. - 420 S.E. SIZE - 1.7
 NO. HAULS - 60 MIN. SIZE - 59
 CAT./HAUL - 8.8 MAX. SIZE - 249

JULY 930701 - 930715
 NO. CGHT. - 233 MEAN SIZE - 173
 NO. MEAS. - 233 S.E. SIZE - 2.4
 NO. HAULS - 60 MIN. SIZE - 72
 CAT./HAUL - 3.9 MAX. SIZE - 253

AUGUST 930803 - 930817
 NO. CGHT. - 4 MEAN SIZE - 188
 NO. MEAS. - 4 S.E. SIZE - 19.6
 NO. HAULS - 60 MIN. SIZE - 141
 CAT./HAUL - 0.1 MAX. SIZE - 228

SEPTEMBER 930907 - 930920
 NO. CGHT. - 27 MEAN SIZE - 180.7
 NO. MEAS. - 27 S.E. SIZE - 4.5
 NO. HAULS - 60 MIN. SIZE - 141
 CAT./HAUL - 0.5 MAX. SIZE - 243

OCTOBER 931004 - 931019
 NO. CGHT. - 8 MEAN SIZE - 237.1
 NO. MEAS. - 8 S.E. SIZE - 8.8
 NO. HAULS - 60 MIN. SIZE - 207
 CAT./HAUL - 0.1 MAX. SIZE - 279

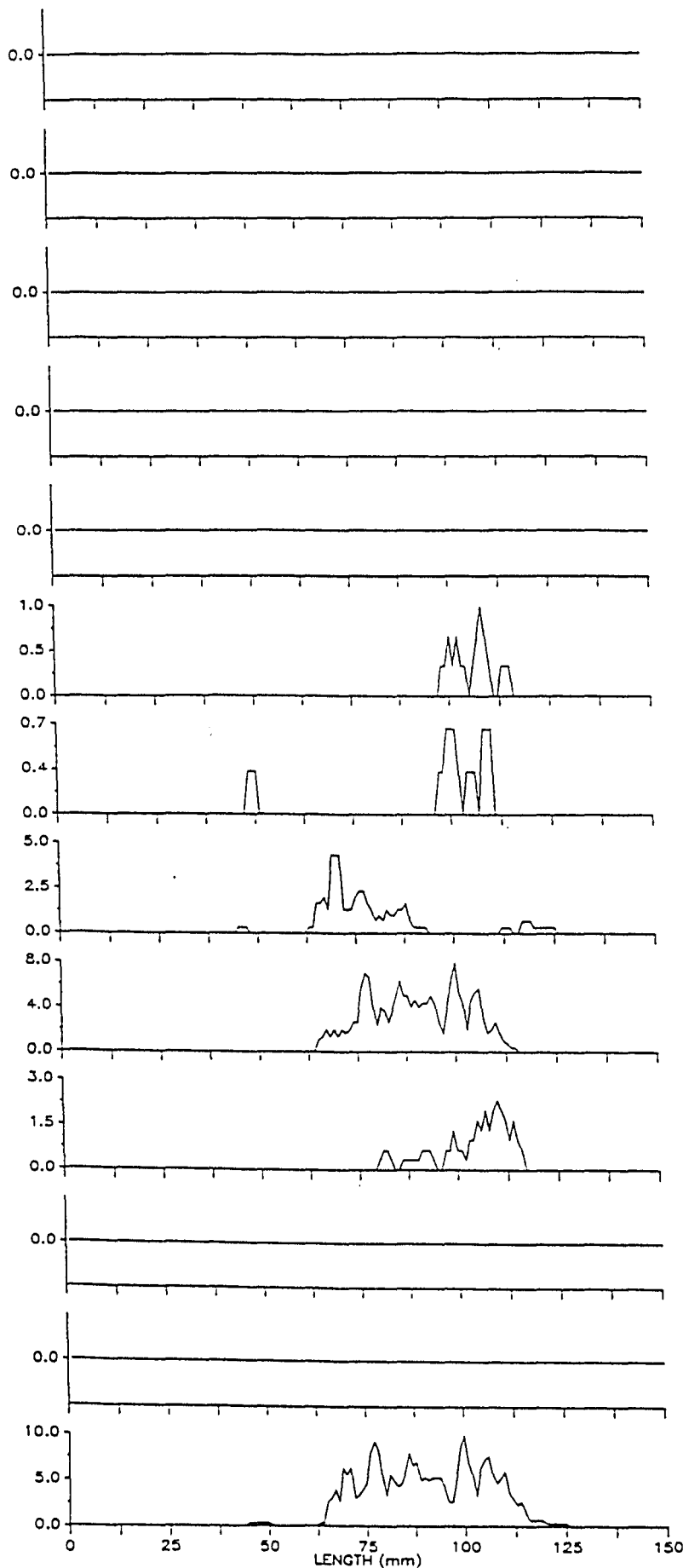
NOVEMBER 931102 - 931111
 NO. CGHT. - 38 MEAN SIZE - 224.4
 NO. MEAS. - 38 S.E. SIZE - 9.7
 NO. HAULS - 60 MIN. SIZE - 42
 CAT./HAUL - 0.6 MAX. SIZE - 296

DECEMBER 931201 - 931213
 NO. CGHT. - 51 MEAN SIZE - 115.2
 NO. MEAS. - 51 S.E. SIZE - 12.3
 NO. HAULS - 60 MIN. SIZE - 45
 CAT./HAUL - 0.9 MAX. SIZE - 326

JAN - DEC 930106 - 931213
 NO. CGHT. - 3635 MEAN SIZE - 136.7
 NO. MEAS. - 2978 S.E. SIZE - 0.8
 NO. HAULS - 644 MIN. SIZE - 36
 CAT./HAUL - 5.6 MAX. SIZE - 326

Figure 70.

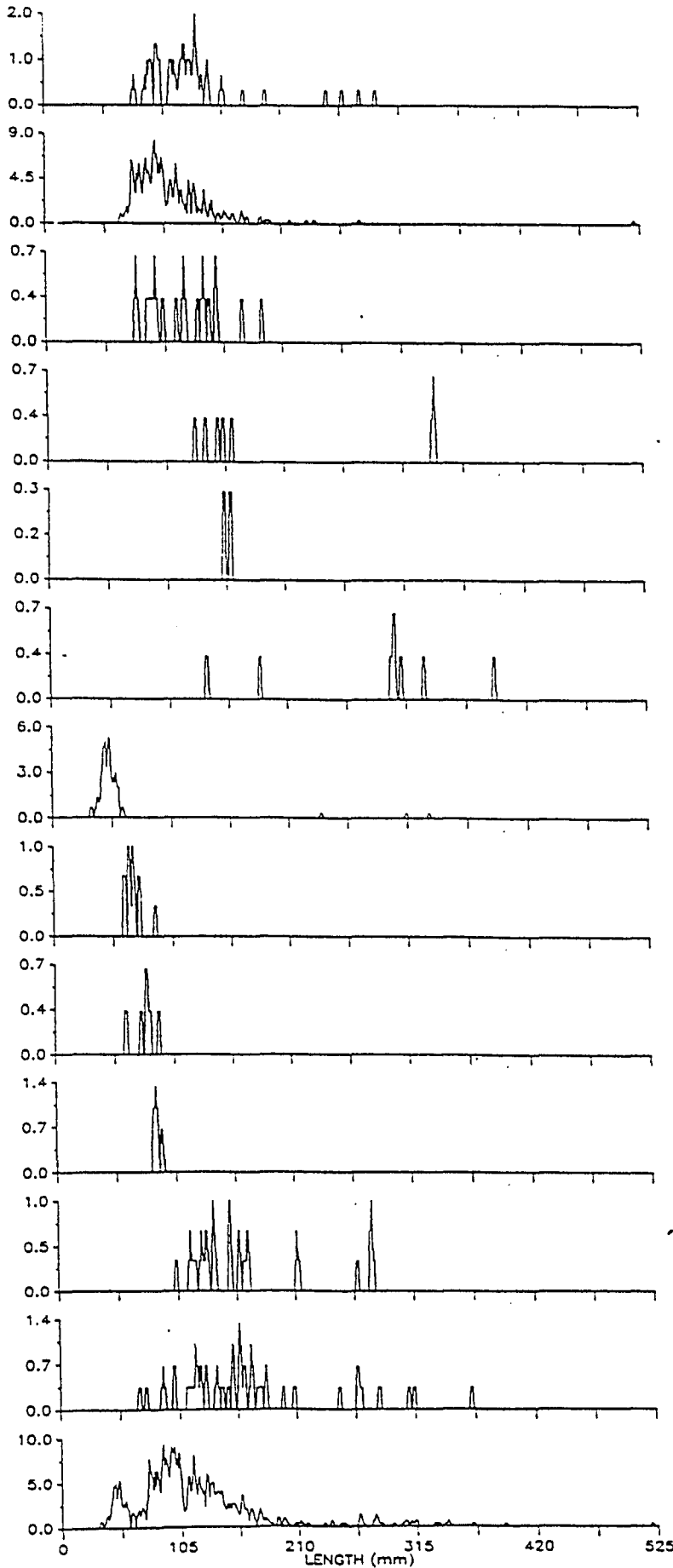
Striped Anchovy



JANUARY	930106 - 930114		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	930203 - 930223		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	58	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	930301 - 930311		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	25	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	930405 - 930429		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	56	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	930506 - 930513		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	930602 - 930615		
NO. CGHT.	7	MEAN SIZE	103.9
NO. MEAS.	7	S.E. SIZE	2
NO. HAULS	60	MIN. SIZE	97
CAT./HAUL	0.1	MAX. SIZE	112
JULY	930701 - 930715		
NO. CGHT.	7	MEAN SIZE	93.9
NO. MEAS.	7	S.E. SIZE	8
NO. HAULS	60	MIN. SIZE	47
CAT./HAUL	0.1	MAX. SIZE	107
AUGUST	930803 - 930817		
NO. CGHT.	52	MEAN SIZE	76.8
NO. MEAS.	52	S.E. SIZE	2.1
NO. HAULS	60	MIN. SIZE	44
CAT./HAUL	0.9	MAX. SIZE	122
SEPTEMBER	930907 - 930920		
NO. CGHT.	175	MEAN SIZE	88.1
NO. MEAS.	175	S.E. SIZE	0.9
NO. HAULS	60	MIN. SIZE	64
CAT./HAUL	2.9	MAX. SIZE	112
OCTOBER	931004 - 931019		
NO. CGHT.	31	MEAN SIZE	101.7
NO. MEAS.	31	S.E. SIZE	1.7
NO. HAULS	60	MIN. SIZE	79
CAT./HAUL	0.5	MAX. SIZE	113
NOVEMBER	931102 - 931111		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
DECEMBER	931201 - 931213		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	60	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	930106 - 931213		
NO. CGHT.	272	MEAN SIZE	88
NO. MEAS.	272	S.E. SIZE	0.9
NO. HAULS	644	MIN. SIZE	44
CAT./HAUL	0.4	MAX. SIZE	122

Figure 71.

Striped Bass



JANUARY 930106 - 930114
 NO. CGHT. - 55 MEAN SIZE - 129.8
 NO. MEAS. - 55 S.E. SIZE - 6.2
 NO. HAULS - 25 MIN. SIZE - 76
 CAT./HAUL - 2.2 MAX. SIZE - 292

FEBRUARY 930203 - 930223
 NO. CGHT. - 313 MEAN SIZE - 109.7
 NO. MEAS. - 313 S.E. SIZE - 2.2
 NO. HAULS - 58 MIN. SIZE - 64
 CAT./HAUL - 5.4 MAX. SIZE - 518

MARCH 930301 - 930311
 NO. CGHT. - 19 MEAN SIZE - 147.9
 NO. MEAS. - 19 S.E. SIZE - 27.7
 NO. HAULS - 25 MIN. SIZE - 76
 CAT./HAUL - 0.8 MAX. SIZE - 630

APRIL 930405 - 930429
 NO. CGHT. - 7 MEAN SIZE - 201
 NO. MEAS. - 7 S.E. SIZE - 36.1
 NO. HAULS - 56 MIN. SIZE - 128
 CAT./HAUL - 0.1 MAX. SIZE - 341

MAY 930506 - 930513
 NO. CGHT. - 2 MEAN SIZE - 156
 NO. MEAS. - 2 S.E. SIZE - 3
 NO. HAULS - 60 MIN. SIZE - 153
 CAT./HAUL - 0 MAX. SIZE - 159

JUNE 930602 - 930615
 NO. CGHT. - 8 MEAN SIZE - 281.8
 NO. MEAS. - 8 S.E. SIZE - 28.9
 NO. HAULS - 60 MIN. SIZE - 136
 CAT./HAUL - 0.1 MAX. SIZE - 390

JULY 930701 - 930715
 NO. CGHT. - 69 MEAN SIZE - 64.7
 NO. MEAS. - 69 S.E. SIZE - 9.5
 NO. HAULS - 60 MIN. SIZE - 32
 CAT./HAUL - 1.2 MAX. SIZE - 552

AUGUST 930803 - 930817
 NO. CGHT. - 11 MEAN SIZE - 68
 NO. MEAS. - 11 S.E. SIZE - 2.3
 NO. HAULS - 60 MIN. SIZE - 60
 CAT./HAUL - 0.2 MAX. SIZE - 87

SEPTEMBER 930907 - 930920
 NO. CGHT. - 6 MEAN SIZE - 76.5
 NO. MEAS. - 6 S.E. SIZE - 3.9
 NO. HAULS - 60 MIN. SIZE - 60
 CAT./HAUL - 0.1 MAX. SIZE - 89

OCTOBER 931004 - 931019
 NO. CGHT. - 8 MEAN SIZE - 86.1
 NO. MEAS. - 8 S.E. SIZE - 1.1
 NO. HAULS - 60 MIN. SIZE - 83
 CAT./HAUL - 0.1 MAX. SIZE - 91

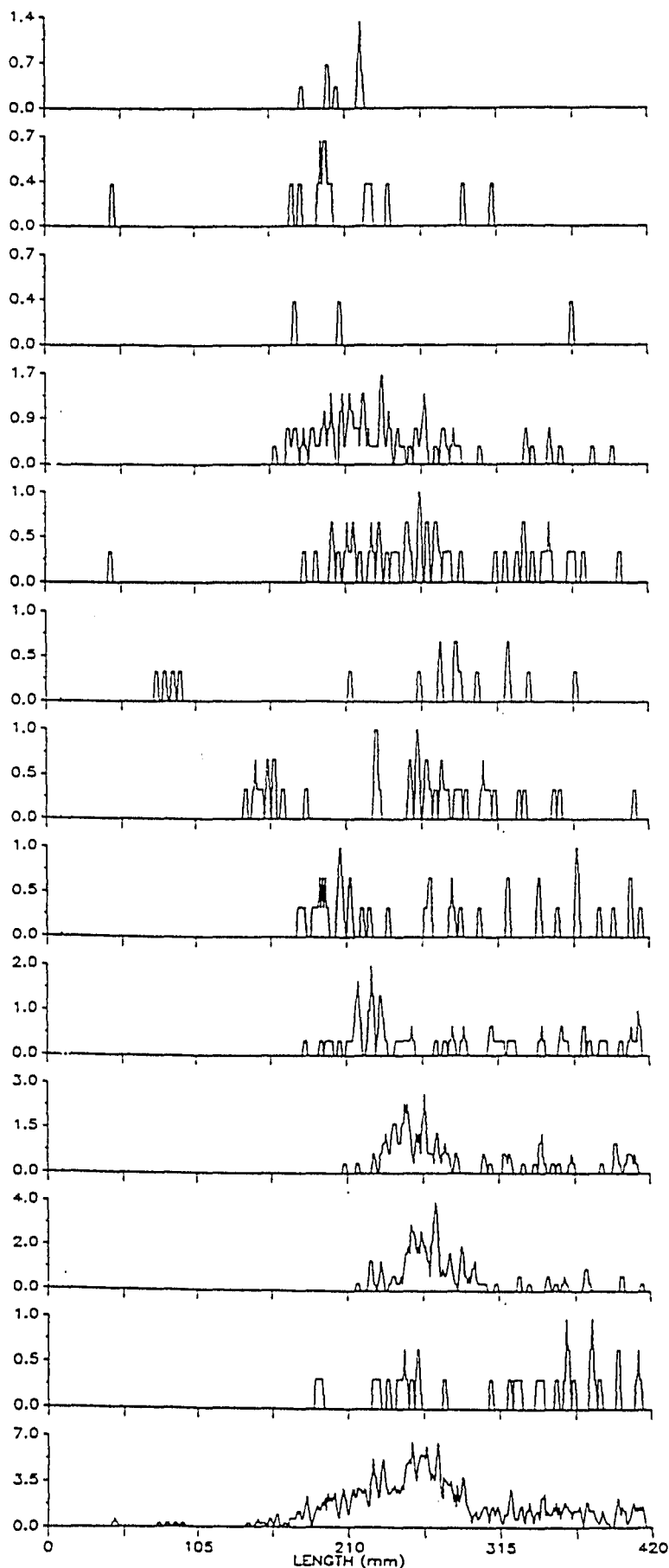
NOVEMBER 931102 - 931111
 NO. CGHT. - 25 MEAN SIZE - 164.9
 NO. MEAS. - 25 S.E. SIZE - 10.9
 NO. HAULS - 60 MIN. SIZE - 101
 CAT./HAUL - 0.4 MAX. SIZE - 277

DECEMBER 931201 - 931213
 NO. CGHT. - 45 MEAN SIZE - 165.6
 NO. MEAS. - 45 S.E. SIZE - 9.9
 NO. HAULS - 60 MIN. SIZE - 67
 CAT./HAUL - 0.8 MAX. SIZE - 362

JAN - DEC 930106 - 931213
 NO. CGHT. - 568 MEAN SIZE - 116.5
 NO. MEAS. - 568 S.E. SIZE - 2.7
 NO. HAULS - 644 MIN. SIZE - 32
 CAT./HAUL - 0.9 MAX. SIZE - 630

Figure 72.

Summer Flounder



JANUARY 930106 - 930114
 NO. CGHT. - 8 MEAN SIZE - 205.9
 NO. MEAS. - 8 S.E. SIZE - 5.4
 NO. HAULS - 25 MIN. SIZE - 178
 CAT./HAUL - 0.3 MAX. SIZE - 220

FEBRUARY 930203 - 930223
 NO. CGHT. - 13 MEAN SIZE - 203.8
 NO. MEAS. - 13 S.E. SIZE - 17.6
 NO. HAULS - 58 MIN. SIZE - 45
 CAT./HAUL - 0.2 MAX. SIZE - 310

MARCH 930301 - 930311
 NO. CGHT. - 3 MEAN SIZE - 247.3
 NO. MEAS. - 3 S.E. SIZE - 59.5
 NO. HAULS - 25 MIN. SIZE - 173
 CAT./HAUL - 0.1 MAX. SIZE - 365

APRIL 930405 - 930429
 NO. CGHT. - 76 MEAN SIZE - 244.2
 NO. MEAS. - 76 S.E. SIZE - 7.5
 NO. HAULS - 56 MIN. SIZE - 159
 CAT./HAUL - 1.4 MAX. SIZE - 497

MAY 930506 - 930513
 NO. CGHT. - 50 MEAN SIZE - 283.9
 NO. MEAS. - 50 S.E. SIZE - 12
 NO. HAULS - 60 MIN. SIZE - 43
 CAT./HAUL - 0.8 MAX. SIZE - 492

JUNE 930602 - 930615
 NO. CGHT. - 16 MEAN SIZE - 240.6
 NO. MEAS. - 16 S.E. SIZE - 24.9
 NO. HAULS - 60 MIN. SIZE - 75
 CAT./HAUL - 0.3 MAX. SIZE - 367

JULY 930701 - 930715
 NO. CGHT. - 41 MEAN SIZE - 267.2
 NO. MEAS. - 41 S.E. SIZE - 14.2
 NO. HAULS - 60 MIN. SIZE - 138
 CAT./HAUL - 0.7 MAX. SIZE - 502

AUGUST 930803 - 930817
 NO. CGHT. - 39 MEAN SIZE - 289.9
 NO. MEAS. - 39 S.E. SIZE - 14.5
 NO. HAULS - 60 MIN. SIZE - 175
 CAT./HAUL - 0.7 MAX. SIZE - 518

SEPTEMBER 930907 - 930920
 NO. CGHT. - 65 MEAN SIZE - 297.6
 NO. MEAS. - 65 S.E. SIZE - 11.2
 NO. HAULS - 60 MIN. SIZE - 179
 CAT./HAUL - 1.1 MAX. SIZE - 581

OCTOBER 931004 - 931019
 NO. CGHT. - 91 MEAN SIZE - 289.4
 NO. MEAS. - 91 S.E. SIZE - 6.3
 NO. HAULS - 60 MIN. SIZE - 206
 CAT./HAUL - 1.5 MAX. SIZE - 454

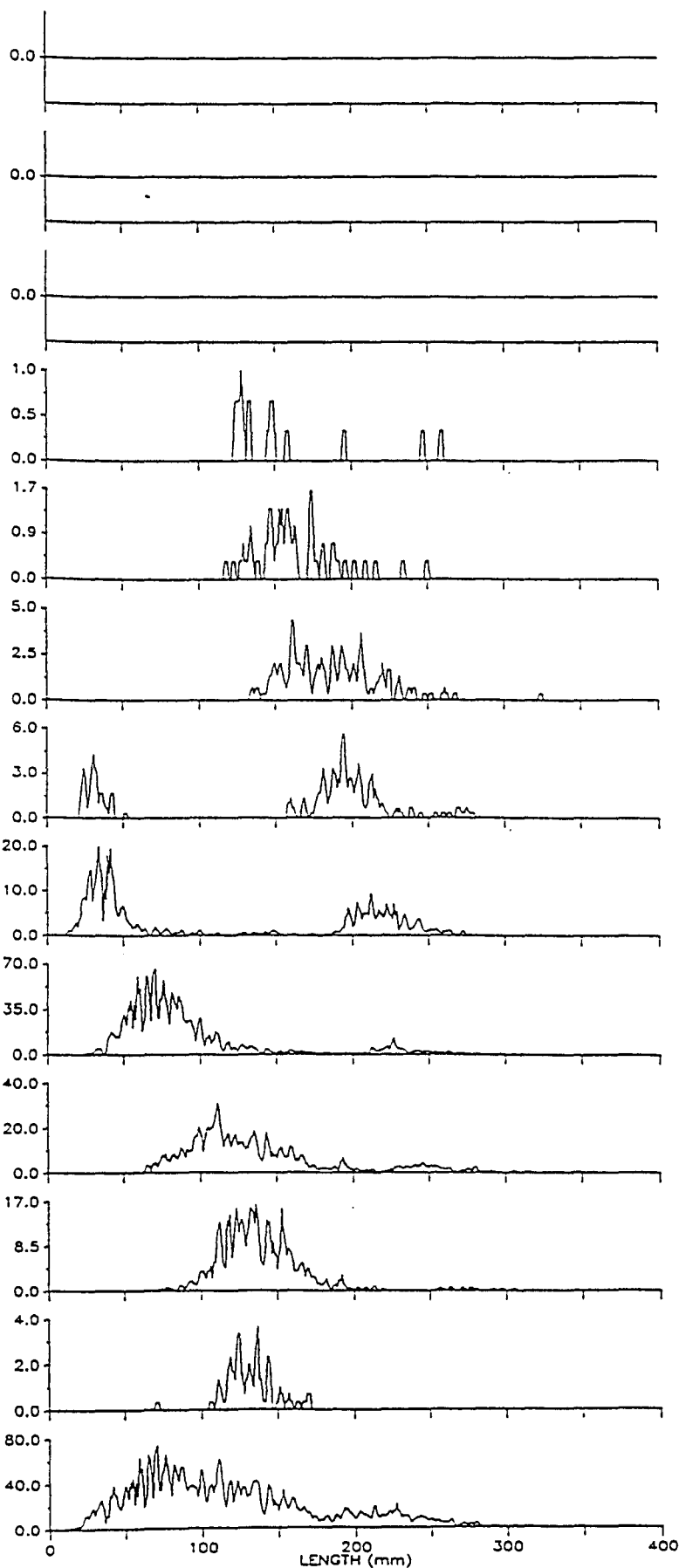
NOVEMBER 931102 - 931111
 NO. CGHT. - 118 MEAN SIZE - 288.2
 NO. MEAS. - 118 S.E. SIZE - 5.4
 NO. HAULS - 60 MIN. SIZE - 215
 CAT./HAUL - 2 MAX. SIZE - 477

DECEMBER 931201 - 931213
 NO. CGHT. - 33 MEAN SIZE - 320.7
 NO. MEAS. - 33 S.E. SIZE - 12.5
 NO. HAULS - 60 MIN. SIZE - 186
 CAT./HAUL - 0.6 MAX. SIZE - 442

JAN - DEC 930106 - 931213
 NO. CGHT. - 553 MEAN SIZE - 278.8
 NO. MEAS. - 553 S.E. SIZE - 3.3
 NO. HAULS - 644 MIN. SIZE - 43
 CAT./HAUL - 0.9 MAX. SIZE - 581

Figure 73.

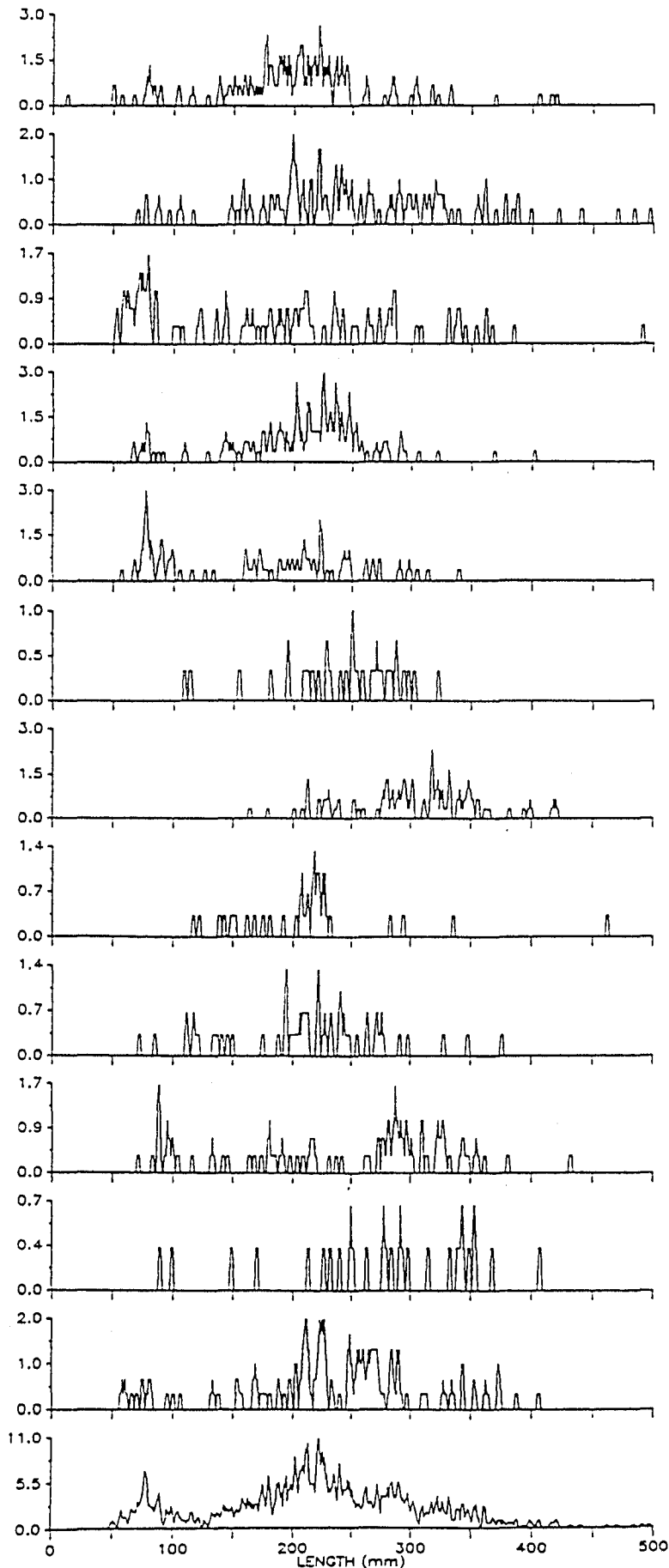
Weakfish



JANUARY	930106 - 930114		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 25	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .
FEBRUARY	930203 - 930223		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 58	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .
MARCH	930301 - 930311		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 25	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .
APRIL	930405 - 930429		
NO. CGHT.	- 14	MEAN SIZE	- 155.2
NO. MEAS.	- 14	S.E. SIZE	- 12
NO. HAULS	- 56	MIN. SIZE	- 122
CAT./HAUL	- 0.3	MAX. SIZE	- 257
MAY	930506 - 930513		
NO. CGHT.	- 45	MEAN SIZE	- 162.6
NO. MEAS.	- 45	S.E. SIZE	- 4.2
NO. HAULS	- 60	MIN. SIZE	- 116
CAT./HAUL	- 0.8	MAX. SIZE	- 248
JUNE	930602 - 930615		
NO. CGHT.	- 154	MEAN SIZE	- 184.9
NO. MEAS.	- 154	S.E. SIZE	- 2.5
NO. HAULS	- 60	MIN. SIZE	- 132
CAT./HAUL	- 2.6	MAX. SIZE	- 322
JULY	930701 - 930715		
NO. CGHT.	- 172	MEAN SIZE	- 155
NO. MEAS.	- 172	S.E. SIZE	- 5.9
NO. HAULS	- 60	MIN. SIZE	- 21
CAT./HAUL	- 2.9	MAX. SIZE	- 277
AUGUST	930803 - 930817		
NO. CGHT.	- 1514	MEAN SIZE	- 109.9
NO. MEAS.	- 661	S.E. SIZE	- 3.4
NO. HAULS	- 60	MIN. SIZE	- 9
CAT./HAUL	- 25.2	MAX. SIZE	- 276
SEPTEMBER	930907 - 930920		
NO. CGHT.	- 7484	MEAN SIZE	- 87.9
NO. MEAS.	- 2610	S.E. SIZE	- 0.9
NO. HAULS	- 60	MIN. SIZE	- 24
CAT./HAUL	- 124.7	MAX. SIZE	- 309
OCTOBER	931004 - 931019		
NO. CGHT.	- 2372	MEAN SIZE	- 134.4
NO. MEAS.	- 1429	S.E. SIZE	- 1.3
NO. HAULS	- 60	MIN. SIZE	- 48
CAT./HAUL	- 39.5	MAX. SIZE	- 354
NOVEMBER	931102 - 931111		
NO. CGHT.	- 1127	MEAN SIZE	- 136.9
NO. MEAS.	- 683	S.E. SIZE	- 1.1
NO. HAULS	- 60	MIN. SIZE	- 72
CAT./HAUL	- 18.8	MAX. SIZE	- 303
DECEMBER	931201 - 931213		
NO. CGHT.	- 69	MEAN SIZE	- 129.4
NO. MEAS.	- 69	S.E. SIZE	- 2
NO. HAULS	- 60	MIN. SIZE	- 69
CAT./HAUL	- 1.2	MAX. SIZE	- 168
JAN - DEC	930106 - 931213		
NO. CGHT.	- 12951	MEAN SIZE	- 113.3
NO. MEAS.	- 5837	S.E. SIZE	- 0.8
NO. HAULS	- 644	MIN. SIZE	- 9
CAT./HAUL	- 20.1	MAX. SIZE	- 354

Figure 74.

White Catfish



JANUARY 930106 - 930114
 NO. CGHT. - 148 MEAN SIZE - 199.6
 NO. MEAS. - 148 S.E. SIZE - 5.5
 NO. HAULS - 25 MIN. SIZE - 48
 CAT./HAUL - 5.9 MAX. SIZE - 418

FEBRUARY 930203 - 930223
 NO. CGHT. - 188 MEAN SIZE - 252.5
 NO. MEAS. - 117 S.E. SIZE - 8.5
 NO. HAULS - 58 MIN. SIZE - 68
 CAT./HAUL - 3.2 MAX. SIZE - 533

MARCH 930301 - 930311
 NO. CGHT. - 242 MEAN SIZE - 183.8
 NO. MEAS. - 99 S.E. SIZE - 10
 NO. HAULS - 25 MIN. SIZE - 50
 CAT./HAUL - 9.7 MAX. SIZE - 489

APRIL 930405 - 930429
 NO. CGHT. - 138 MEAN SIZE - 204.8
 NO. MEAS. - 138 S.E. SIZE - 4.9
 NO. HAULS - 56 MIN. SIZE - 64
 CAT./HAUL - 2.5 MAX. SIZE - 400

MAY 930506 - 930513
 NO. CGHT. - 93 MEAN SIZE - 169.3
 NO. MEAS. - 93 S.E. SIZE - 7.8
 NO. HAULS - 60 MIN. SIZE - 55
 CAT./HAUL - 1.6 MAX. SIZE - 338

JUNE 930602 - 930615
 NO. CGHT. - 32 MEAN SIZE - 238.1
 NO. MEAS. - 32 S.E. SIZE - 9
 NO. HAULS - 60 MIN. SIZE - 107
 CAT./HAUL - 0.5 MAX. SIZE - 321

JULY 930701 - 930715
 NO. CGHT. - 90 MEAN SIZE - 298
 NO. MEAS. - 90 S.E. SIZE - 5.8
 NO. HAULS - 60 MIN. SIZE - 162
 CAT./HAUL - 1.5 MAX. SIZE - 419

AUGUST 930803 - 930817
 NO. CGHT. - 125 MEAN SIZE - 210
 NO. MEAS. - 33 S.E. SIZE - 11.2
 NO. HAULS - 60 MIN. SIZE - 115
 CAT./HAUL - 2.1 MAX. SIZE - 460

SEPTEMBER 930907 - 930920
 NO. CGHT. - 52 MEAN SIZE - 209.9
 NO. MEAS. - 52 S.E. SIZE - 9
 NO. HAULS - 60 MIN. SIZE - 70
 CAT./HAUL - 0.9 MAX. SIZE - 374

OCTOBER 931004 - 931019
 NO. CGHT. - 82 MEAN SIZE - 237.3
 NO. MEAS. - 82 S.E. SIZE - 10
 NO. HAULS - 60 MIN. SIZE - 69
 CAT./HAUL - 1.4 MAX. SIZE - 430

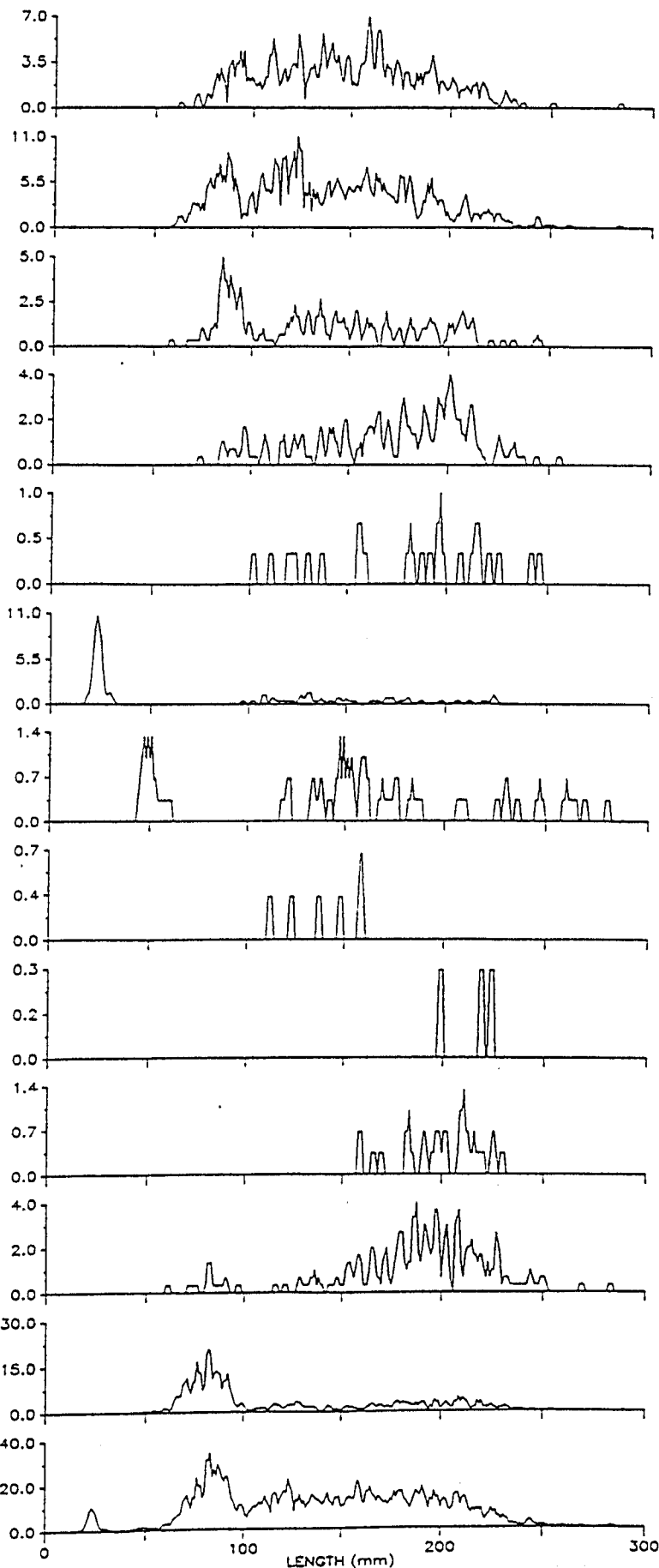
NOVEMBER 931102 - 931111
 NO. CGHT. - 27 MEAN SIZE - 272.4
 NO. MEAS. - 27 S.E. SIZE - 15.4
 NO. HAULS - 60 MIN. SIZE - 87
 CAT./HAUL - 0.5 MAX. SIZE - 405

DECEMBER 931201 - 931213
 NO. CGHT. - 126 MEAN SIZE - 230.8
 NO. MEAS. - 126 S.E. SIZE - 6.8
 NO. HAULS - 60 MIN. SIZE - 55
 CAT./HAUL - 2.1 MAX. SIZE - 404

JAN - DEC 930106 - 931213
 NO. CGHT. - 1343 MEAN SIZE - 221.3
 NO. MEAS. - 1037 S.E. SIZE - 2.6
 NO. HAULS - 644 MIN. SIZE - 48
 CAT./HAUL - 2.1 MAX. SIZE - 533

Figure 75.

White Perch



JANUARY 930106 - 930114
 NO. CGHT. - 529 MEAN SIZE - 143.7
 NO. MEAS. - 400 S.E. SIZE - 2
 NO. HAULS - 25 MIN. SIZE - 61
 CAT./HAUL - 21.2 MAX. SIZE - 282

FEBRUARY 930203 - 930223
 NO. CGHT. - 1882 MEAN SIZE - 136
 NO. MEAS. - 679 S.E. SIZE - 1.7
 NO. HAULS - 58 MIN. SIZE - 58
 CAT./HAUL - 32.4 MAX. SIZE - 282

MARCH 930301 - 930311
 NO. CGHT. - 177 MEAN SIZE - 134.8
 NO. MEAS. - 177 S.E. SIZE - 3.4
 NO. HAULS - 25 MIN. SIZE - 57
 CAT./HAUL - 7.1 MAX. SIZE - 243

APRIL 930405 - 930429
 NO. CGHT. - 172 MEAN SIZE - 168.2
 NO. MEAS. - 172 S.E. SIZE - 3
 NO. HAULS - 56 MIN. SIZE - 72
 CAT./HAUL - 3.1 MAX. SIZE - 253

MAY 930506 - 930513
 NO. CGHT. - 24 MEAN SIZE - 177.8
 NO. MEAS. - 24 S.E. SIZE - 8.6
 NO. HAULS - 60 MIN. SIZE - 100
 CAT./HAUL - 0.4 MAX. SIZE - 244

JUNE 930602 - 930615
 NO. CGHT. - 103 MEAN SIZE - 75.4
 NO. MEAS. - 103 S.E. SIZE - 6.7
 NO. HAULS - 60 MIN. SIZE - 16
 CAT./HAUL - 1.7 MAX. SIZE - 223

JULY 930701 - 930715
 NO. CGHT. - 55 MEAN SIZE - 150.4
 NO. MEAS. - 55 S.E. SIZE - 9.2
 NO. HAULS - 60 MIN. SIZE - 43
 CAT./HAUL - 0.9 MAX. SIZE - 278

AUGUST 930803 - 930817
 NO. CGHT. - 6 MEAN SIZE - 137.5
 NO. MEAS. - 6 S.E. SIZE - 7.8
 NO. HAULS - 60 MIN. SIZE - 110
 CAT./HAUL - 0.1 MAX. SIZE - 157

SEPTEMBER 930907 - 930920
 NO. CGHT. - 3 MEAN SIZE - 212
 NO. MEAS. - 3 S.E. SIZE - 7.6
 NO. HAULS - 60 MIN. SIZE - 197
 CAT./HAUL - 0.1 MAX. SIZE - 222

OCTOBER 931004 - 931019
 NO. CGHT. - 25 MEAN SIZE - 196.8
 NO. MEAS. - 25 S.E. SIZE - 4.1
 NO. HAULS - 60 MIN. SIZE - 157
 CAT./HAUL - 0.4 MAX. SIZE - 228

NOVEMBER 931102 - 931111
 NO. CGHT. - 348 MEAN SIZE - 183
 NO. MEAS. - 168 S.E. SIZE - 3.1
 NO. HAULS - 60 MIN. SIZE - 59
 CAT./HAUL - 5.8 MAX. SIZE - 281

DECEMBER 931201 - 931213
 NO. CGHT. - 722 MEAN SIZE - 116.6
 NO. MEAS. - 585 S.E. SIZE - 2.2
 NO. HAULS - 60 MIN. SIZE - 48
 CAT./HAUL - 12 MAX. SIZE - 252

JAN - DEC 930106 - 931213
 NO. CGHT. - 4046 MEAN SIZE - 136.9
 NO. MEAS. - 2397 S.E. SIZE - 1.1
 NO. HAULS - 644 MIN. SIZE - 16
 CAT./HAUL - 6.3 MAX. SIZE - 282

Table 1. VIMS codes for selected parameters as used in the trawl survey database. These same codes appear in several of the included tables and figures.

Table 1.

TOWDIR 1: up or down stream

- 1: Upstream
- 2: Downstream
- 3: Slack

TOWDIR2: Tow Direction, relative to current

- 1: With
- 2: Against
- 3: Perpendicular
- 4: Oblique with
- 5: Oblique against
- 6: Slack

TIDE: Tidal stage

- 1: Early flood
- 2: Maximum flood
- 3: Late flood
- 4: Slack before ebb
- 5: Early ebb
- 6: Maximum ebb
- 7: Late ebb
- 8: Slack before flood

SEASTATE

- 0: Calm-glassy 0m
- 1: Calm-rippled 0-0.1m
- 2: Smooth-wavelets 0.1-0.5m
- 3: Slight 0.5-1.25m
- 4: Moderate 1.25-2.5m
- 5: Rough 2.5-4m
- 6: Very rough 4-6m
- 7: High 6-9m
- 8: Very high 9-14m
- 9: Phenomenal > 14m

WEATHER: Observed weather

- 1: Clear-no cloud at any level
- 2: Partly cloudy-scattered or broken
- 3: Overcast
- 4: Sand, dust storm, or blowing snow
- 5: Fog-thick, dust, or haze
- 5: Drizzle
- 6: Rain
- 7: Snow,rain or sleet
- 8: Showers
- 9: Thunderstorms

Tables 2-13.

Station data for the river trawl survey by month.

Explanation.

To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p. 117).

Table 5.

April

Cruise Number	River	River Mile	Station Date	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Tow Dist. (m)	Depth (m)	Tow Direct. Up or Down Stream	Tow Direct. Rel. to Current	Sea State	Tidal Stage
930401	YK	15	19930405	3723.32	7639.48	3723.07	7639.30	537.91	9.1	2	1	3	5
930401	YK	20	19930405	3726.06	7642.58	3725.82	7642.40	522.03	6.4	2	1	3	5
930401	YK	25	19930405	3729.11	7645.32	3728.97	7645.06	472.49	7.6	2	1	3	5
930401	YK	30	19930405	3732.55	7649.76	3732.72	7649.71	324.04	7.6	2	1	3	5
930401	YK	35	19930405	3733.14	7651.75	3733.41	7651.61	543.62	5.8	1	1	3	5
930401	YK	40	19930405	3733.05	7653.10	3732.93	7653.41	520.71	4.0	1	1	3	5
930402	YK	2	19930407	3713.64	7627.04	3713.62	7627.38	517.74	12.2	1	1	3	3
930402	YK	5	19930407	3714.11	7629.15	3714.19	7629.49	537.27	13.7	1	1	3	3
930402	YK	10	19930407	3718.42	7635.25	3718.25	7635.12	371.78	9.4	2	2	3	3
930403	RA	2	19930408	3735.80	7620.98	3735.88	7621.27	464.74	18.6	1	2	1	6
930403	RA	10	19930408	3738.01	7628.37	3738.06	7628.66	450.11	16.2	1	2	1	6
930403	RA	15	19930408	3739.85	7632.91	3740.05	7633.09	460.53	13.4	1	2	1	6
930403	RA	20	19930408	3743.77	7634.59	3743.96	7634.86	540.49	15.2	1	2	1	7
930403	RA	25	19930408	3747.25	7640.44	3747.40	7640.67	446.42	9.4	1	2	1	7
930403	RA	30	19930408	3751.08	7645.16	3751.31	7645.34	506.34	6.4	1	2	1	7
930403	RA	35	19930408	3754.30	7648.03	3754.57	7648.31	656.64	5.8	1	6	1	7
930403	RA	40	19930408	3757.21	7651.69	3757.45	7651.71	445.76	4.3	1	1	0	8
930404	JA	1	19930420	3659.70	7619.46	3659.63	7619.72	415.66	9.4	1	1	3	3
930404	JA	5	19930420	3656.93	7622.73	3656.96	7623.01	428.90	6.1	1	1	3	3
930404	JA	13	19930420	3701.26	7630.44	3701.40	7630.65	411.14	8.8	1	1	2	3
930404	JA	17	19930420	3704.95	7636.61	3705.18	7636.74	469.71	6.7	1	1	3	3
930404	JA	24	19930420	3709.16	7638.35	3709.41	7638.33	464.25	11.3	1	1	2	3
930404	JA	27	19930420	3712.45	7639.23	3712.61	7639.48	481.75	8.8	1	1	3	3
930404	JA	35	19930420	3711.46	7645.90	3711.30	7645.68	446.72	7.9	2	2	3	3
930404	JA	40	19930420	3713.75	7649.34	3713.81	7649.64	469.02	5.5	1	1	3	3

Table 6.

May

Cruise Number	River	River Mile	Station Date	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Tow Dist. (m)	Depth (m)	Tow Direct. Up or Down Stream	Tow Direct. Rel. to Current	Sea State	Tidal Stage
930501	RA	2	19930507	3735.83	7621.27	3735.88	7621.44	274.32	17.1	1	2	0	7
930501	RA	10	19930507	3737.89	7628.23	3737.94	7628.57	524.66	20.4	1	2	0	7
930501	RA	15	19930507	3739.95	7633.07	3740.17	7633.17	435.04	13.1	1	2	1	7
930501	RA	15	19930507	3740.21	7633.12	3740.04	7633.07	324.04	15.2	2	1	1	7
930501	RA	20	19930507	3743.83	7634.68	3744.04	7634.76	407.66	15.2	1	1	1	8
930501	RA	20	19930507	3743.97	7634.84	3743.78	7634.79	360.17	14.6	1	6	1	8
930501	RA	25	19930507	3747.28	7640.46	3747.44	7640.64	403.29	8.8	1	6	1	8
930501	RA	25	19930507	3747.53	7640.78	3747.40	7640.64	321.32	7.3	2	6	1	8
930501	RA	30	19930507	3751.17	7645.21	3751.37	7645.40	469.71	6.7	2	6	1	8
930501	RA	30	19930507	3751.42	7645.47				5.5	2	1	1	1
930501	RA	35	19930507	3754.34	7648.11	3754.50	7648.37	493.81	5.2	2	1	1	1
930501	RA	35	19930507	3754.50	7648.37				5.2	2	1	1	1
930502	JA	1	19930511	3659.70	7619.52	3659.55	7619.68	369.21	9.1	1	1	1	1
930502	JA	5	19930511	3656.68	7623.05	3656.73	7623.29	376.12	5.2	1	1	1	2
930502	JA	13	19930511	3701.24	7630.35	3701.33	7630.62	442.70	11.9	1	1	1	2
930502	JA	13	19930511	3701.40	7630.66	3701.28	7630.47	364.31	10.7	2	2	1	3
930502	JA	17	19930511	3704.96	7636.43	3705.12	7636.55	348.02	5.5	2	1	1	3
930502	JA	17	19930511	3705.15	7636.61	3704.98	7636.45	397.86	6.1	2	2	1	3
930502	JA	24	19930511	3709.39	7638.45	3709.59	7638.46	370.91	6.7	1	2	0	3
930502	JA	24	19930511	3709.66	7638.51	3709.45	7638.48	391.79	6.1	2	2	1	3
930502	JA	27	19930511	3712.44	7639.28	3712.60	7639.46	403.29	8.2	2	1	0	3
930502	JA	27	19930511	3712.66	7639.62				9.1	2	2	0	3
930503	YK	2	19930512	3713.60	7626.93				11.0	1	2	2	3
930503	YK	5	19930512	3714.10	7629.21	3714.12	7629.49	426.89	12.8	1	2	1	6
930503	YK	10	19930512	3718.33	7635.11	3718.57	7635.30	530.15	8.2	2	2	1	7
930503	YK	10	19930512	3718.44	7635.24	3718.28	7635.10	364.85	8.8	2	1	1	1
930504	YK	15	19930513	3723.19	7639.32	3723.33	7639.49	366.02	7.6	1	2	2	1
930504	YK	15	19930513	3723.30	7639.46	3723.06	7639.22	575.03	8.5	1	2	2	5
930504	YK	20	19930513	3725.95	7642.52	3726.05	7642.67	293.67	6.1	1	2	2	5
930504	YK	20	19930513	3726.14	7642.74	3725.91	7642.43	635.08	6.1	2	1	2	6
930504	YK	25	19930513	3728.95	7645.06	3729.04	7645.21	282.34	9.1	2	1	2	7
930504	YK	25	19930513	3729.11	7645.33	3728.91	7645.04	575.64	7.3	2	2	2	7
930504	YK	30	19930513	3732.97	7649.62	3732.81	7649.67	306.05	6.1	1	1	2	7
930504	YK	35	19930513	3733.02	7651.82	3733.14	7651.77	234.97	6.1	1	2	2	7

Table 9.

Cruise Number	River	River Mile	Station Date	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Tow Dist. (m)	Depth (m)	Tow Direct. Up or Down Stream	Tow Direct. Rel. to Current	Sea State	Tidal Stage
930801	JA	1	19930803	3659.71	7619.59	3659.59	7619.83	426.99	6.7	1	1	4	2
930801	JA	5	19930803	3656.61	7623.22	3656.75	7623.43	411.14	5.5	1	1	4	2
930801	JA	13	19930803	3701.40	7630.71	3701.56	7630.92	435.47	11.3	1	1	3	2
930801	JA	13	19930803	3701.53	7630.99	3701.42	7630.88	263.55	12.2	2	2	2	2
930801	JA	17	19930803	3705.70	7636.51				6.4	1	1	3	3
930801	JA	17	19930803	3705.03	7636.38	3705.28	7636.54	523.12	6.7	2	2	2	3
930801	JA	24	19930803	3709.63	7638.46	3709.91	7638.52	526.78	6.1	1	1	2	3
930801	JA	24	19930803	3709.95	7638.53	3709.80	7638.51	279.61	5.8	2	2	1	3
930801	JA	27	19930803	3712.33	7639.13	3712.50	7639.38	493.37	8.2	1	1	1	3
930801	JA	27	19930803	3712.57	7639.45	3712.44	7639.30	331.56	8.2	1	1	1	3
930802	RA	2	19930811	3735.87	7621.12	3735.95	7621.33	351.72	16.2	1	1	2	6
930802	RA	10	19930811	3737.87	7628.18	3737.88	7628.43	380.17	20.1	1	1	0	6
930802	RA	15	19930811	3739.97	7632.97	3740.14	7633.08	356.57	13.4	1	1	1	6
930802	RA	15	19930811	3740.17	7633.09	3739.95	7633.03	417.72	14.6	2	2	1	6
930802	RA	20	19930811	3743.98	7634.94	3744.16	7635.07	387.60	15.5	1	1	1	6
930802	RA	20	19930811	3744.03	7635.05	3743.83	7634.91	427.27	16.2	2	2	1	6
930802	RA	25	19930811	3747.22	7640.35	3747.35	7640.56	399.70	8.8	1	1	1	6
930802	RA	25	19930811	3747.41	7640.67	3747.25	7640.46	435.47	7.6	2	2	1	6
930802	RA	30	19930811	3751.65	7645.13	3751.49	7645.35	446.72	6.1	2	2	2	7
930802	RA	30	19930811	3751.36	7645.45	3751.53	7645.56	356.57	6.1	1	1	2	7
930802	RA	35	19930811	3754.36	7648.09	3754.48	7648.28	364.31	4.9	2	2	2	6
930802	RA	35	19930811	3754.42	7648.24	3754.25	7648.00	481.78	4.9	1	1	1	6
930803	YK	15	19930816	3723.15	7639.25	3723.37	7639.49	546.87	7.0	1	1	0	2
930803	YK	15	19930816	3723.39	7639.50	3723.27	7639.36	307.67	7.0	2	2	2	2
930803	YK	20	19930816	3725.86	7642.33	3725.96	7642.43	239.59	6.7	1	1	2	6
930803	YK	20	19930816	3726.08	7642.55	3725.90	7642.34	461.50	6.7	2	2	1	6
930803	YK	25	19930816	3728.72	7644.87	3728.84	7644.99	287.51	7.3	1	1	2	5
930803	YK	25	19930816	3729.14	7645.34	3728.97	7645.11	470.39	7.6	2	2	1	5
930803	YK	30	19930816	3732.83	7649.67	3732.62	7649.74	403.39	6.4	1	1	1	3
930803	YK	35	19930816	3732.95	7651.82	3733.21	7651.70	515.10	6.4	1	1	0	3
930804	YK	2	19930817	3713.63	7626.80	3713.64	7627.16	547.10	13.7	1	1	2	3
930804	YK	5	19930817	3714.13	7629.20	3714.27	7629.47	485.26	13.1	1	1	2	3
930804	YK	10	19930817	3718.43	7635.26	3718.24	7635.11	419.36	9.1	2	2	2	3
930804	YK	10	19930817	3718.13	7635.00	3718.32	7635.12	396.45	8.8	1	1	1	3

Table 10.

Cruise Number	River	River Mile	Station Date	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Tow Dist. (m)	Depth (m)	Tow Direct. Up or Down Stream	Tow Direct. Rel. to Current	Sea State	Tidal Stage
930901	YK	15	19930908	3722.97	7639.02	3723.11	7639.19	366.02	5.5	1	2	1	7
930901	YK	15	19930908	3723.13	7639.24	3722.95	7639.04	451.14	6.7	2	1	1	7
930901	YK	20	19930908	3725.88	7642.27	3726.00	7642.43	329.40	7.0	1	2	1	7
930901	YK	20	19930908	3725.96	7642.48	3725.81	7642.27	423.07	6.4	1	1	1	7
930901	YK	25	19930908	3728.88	7645.02	3729.10	7645.27	557.11	7.6	1	1	1	1
930901	YK	25	19930908	3729.16	7645.41	3729.09	7645.25	275.47	7.6	2	2	2	1
930901	YK	30	19930908	3732.97	7649.61	3732.77	7649.69	390.01	6.4	1	1	1	8
930901	YK	35	19930908	3732.87	7651.87	3733.04	7651.77	349.72	4.9	1	2	1	7
930902	YK	5	19930909	3713.70	7627.24	3713.65	7627.08	260.08	10.7	2	2	0	1
930902	YK	5	19930909	3713.77	7628.50	3713.74	7628.21	443.96	15.5	2	2	0	1
930902	YK	10	19930909	3718.52	7635.19	3718.64	7635.32	297.37	7.0	1	2	0	7
930902	YK	10	19930909	3718.64	7635.26	3718.42	7635.15	440.57	7.0	2	1	2	3
930903	RA	2	19930913	3735.96	7621.34	3736.03	7621.61	430.12	15.5	1	1	2	7
930903	RA	10	19930913	3737.92	7628.17	3737.93	7628.45	425.68	20.1	1	1	2	7
930903	RA	15	19930913	3739.97	7633.98	3740.17	7634.11	419.92	13.7	1	1	1	7
930903	RA	15	19930913	3740.22	7633.09	3740.08	7632.99	300.61	15.2	2	2	2	7
930903	RA	20	19930913	3743.74	7634.56	3743.93	7634.69	403.66	14.6	1	1	2	7
930903	RA	25	19930913	3747.22	7640.33	3747.36	7640.58	375.55	14.6	2	2	7	7
930903	RA	25	19930913	3747.58	7640.73	3747.44	7640.58	345.26	9.1	2	2	2	7
930903	RA	30	19930913	3751.39	7645.49	3751.56	7645.61	363.94	5.5	1	2	1	4
930903	RA	30	19930913	3751.62	7645.60	3751.44	7645.48	380.09	6.7	2	1	1	4
930903	RA	35	19930913	3754.45	7648.24	3754.60	7648.47	446.42	4.9	1	1	1	7
930904	JA	1	19930916	3659.71	7619.45	3659.56	7619.77	399.47	4.9	2	2	1	7
930904	JA	5	19930916	3656.92	7622.78	3656.84	7623.14	559.90	8.5	2	1	1	2
930904	JA	13	19930916	3701.33	7630.44	3701.50	7630.76	566.53	6.1	1	1	1	2
930904	JA	13	19930916	3701.55	7630.80	3701.45	7630.66	579.19	8.5	1	1	0	2
930904	JA	17	19930916	3704.94	7636.59	3705.17	7636.77	282.05	8.5	2	2	2	3
930904	JA	17	19930916	3705.25	7636.75	3705.11	7636.70	506.34	5.2	1	1	0	2
930904	JA	24	19930916	3709.12	7638.36	3709.44	7638.36	270.31	6.7	2	2	0	3
930904	JA	24	19930916	3709.38	7638.36	3709.27	7638.29	592.96	11.6	1	1	0	3
930904	JA	27	19930916	3712.44	7639.19	3712.62	7639.47	229.89	9.8	2	2	1	3
930904	JA	27	19930916	3712.59	7639.52	3712.46	7639.35	540.47	8.8	1	1	1	3
								353.13	8.2	2	2	1	3

Table 13.

December

Cruise Number	River	River Mile	Station Date	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Tow Dist. (m)	Depth (m)	Tow Direct. Up or Down Stream	Tow Direct. Rel. to Current	Sea State	Tidal Stage
931201	YK	15	19931201	3723.23	7639.30	3723.45	7639.57	578.24	7.6	1	1	2	1
931201	YK	20	19931201	3725.91	7642.33	3726.23	7642.67	786.31	7.9	1	1	2	1
931201	YK	25	19931201	3729.06	7645.19	3728.89	7644.99	437.62	7.3	2	1	1	5
931201	YK	30	19931201	3732.35	7649.90	3732.52	7649.76	380.06	6.7	2	2	2	3
931201	YK	35	19931201	3733.44	7651.49	3733.23	7651.60	423.48	5.5	2	2	2	3
931201	YK	40	19931201	3733.03	7652.97	3732.96	7653.28	488.38	4.0	1	1	1	3
931202	YK	2	19931202	3713.59	7627.03	3713.69	7627.39	577.33	13.1	1	1	2	1
931202	YK	5	19931202	3714.15	7629.44	3714.26	7629.54	254.20	13.1	1	1	1	1
931202	YK	10	19931202	3718.51	7635.34	3718.36	7635.19	359.39	8.5	2	2	2	1
931203	JA	1	19931207	3659.70	7619.47	3659.62	7619.73	421.81	9.1	1	2	2	7
931203	JA	5	19931207	3656.96	7622.72	3656.86	7622.95	395.44	6.1	1	2	3	7
931203	JA	13	19931207	3701.40	7630.49	3701.51	7630.71	391.41	8.5	1	2	3	7
931203	JA	17	19931207	3704.98	7636.66	3705.14	7636.80	364.85	6.1	1	2	2	7
931203	JA	24	19931207	3709.15	7638.44	3709.37	7638.41	410.20	12.2	1	2	2	7
931203	JA	27	19931207	3712.51	7639.26	3712.65	7639.42	355.47	8.8	1	2	2	7
931203	JA	35	19931207	3711.26	7645.67	3711.37	7645.80	283.78	7.6	1	2	2	7
931203	JA	40	19931207	3713.78	7649.35	3713.84	7649.55	323.48	5.5	1	2	1	7
931204	RA	2	19931209	3735.74	7621.19	3735.80	7621.42	366.60	18.3	1	2	0	5
931204	RA	10	19931209	3737.94	7628.58	3737.87	7628.84	415.66	19.2	1	2	0	5
931204	RA	15	19931209	3740.16	7633.05	3740.41	7633.09	467.22	15.5	1	2	0	5
931204	RA	20	19931209	3743.88	7634.94	3744.04	7635.09	373.91	18.6	1	2	0	5
931204	RA	25	19931209	3747.44	7640.69	3747.55	7640.91	391.41	8.2	1	2	0	7
931204	RA	25	19931213	3747.23	7640.33	3747.39	7640.54	435.47	9.1	1	1	4	3
931204	RA	30	19931209	3751.40	7645.41	3751.55	7645.53	332.38	5.8	1	2	0	7
931204	RA	30	19931213	3751.14	7645.12	3751.37	7645.30	506.34	7.0	1	1	4	3
931204	RA	35	19931213	3754.25	7647.89	3754.44	7648.18	563.88	6.4	1	1	4	3
931204	RA	40	19931213	3757.82	7651.62	3758.09	7651.67	506.04	4.6	1	1	4	3

Tables 14-23. Station data for the Chesapeake Bay trawl survey by month.

Explanation: To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p. 117).

Tables 24-35. Atmospheric and hydrographic data for the river trawl survey by month.

Explanation: A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p. 117).

B. Due to measurement error (calibration differences and instrument drift) associated with the hydrographic equipment used to measure temperature, salinity, and dissolved oxygen, some calculated saturation values presented here are greater than 100%.

Tables 36-45.

Atmospheric and hydrographic data for the Chesapeake Bay trawl survey by month.

Explanation:

A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p. 117).

B. Due to measurement error (calibration differences and instrument drift) associated with the hydrographic equipment used to measure temperature, salinity, and dissolved oxygen, some calculated saturation values presented here are greater than 100%.

Table 46. Species composition, number caught, catch per trawl, and length statistics for all months, all areas, Chesapeake bay and river trawl surveys combined.

- Notes:
- A. The "Number of Species" notation at the top of the table includes each of the three categories of blue crabs (male, juvenile female, adult female) as a different "species".
 - B. Catch per trawl for fish species is based on the figure 'Number of Fish Trawls Made' while catch per trawl for blue crabs is based on the sum of 'Number of Fish Trawls Made' and 'Number of Additional Crab Trawls Made'.

Table 46.

Month - All - Pooled
 River - All - Pooled
 No. of Fish Trawls Made - 644
 No. of Add'l Crab Trawls Made - 91
 No. of Species - 98

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	612,419	81.8	81.8	950.96	51	0.1	14	94	1.0
hogchoker	41,614	5.6	87.4	64.62	87	0.3	11	193	15.1
Atlantic croaker	28,554	3.8	91.2	44.34	111	0.6	11	305	1.2
spot	14,754	2.0	93.2	22.91	133	0.3	10	240	29.0
weakfish	12,951	1.7	94.9	20.11	113	0.8	9	354	6.4
blue crab, male	4,231	0.6	95.4	5.76	59	0.6	6	201	
white perch	4,046	0.5	96.0	6.28	137	1.1	16	282	313.9
blue crab, juvenile female	3,650	0.5	96.5	4.97	45	0.4	2	146	
spotted hake	3,635	0.5	97.0	5.64	137	0.8	36	326	
scup	2,234	0.3	97.3	3.47	103	0.6	32	185	
squid	2,039	0.3	97.5	3.17	38	0.6	6	136	8.9
blackcheek tonguefish	1,982	0.3	97.8	3.08	126	0.9	40	196	
smallmouth flounder	1,512	0.2	98.0	2.35	78	0.5	28	162	
white catfish	1,343	0.2	98.2	2.09	221	2.6	48	533	74.0
Atlantic thread herring	1,257	0.2	98.3	1.95	56	1.2	30	185	1.6
blue crab, adult female	1,204	0.2	98.5	1.64	143	0.4	100	187	
Atlantic menhaden	1,052	0.1	98.6	1.63	101	1.0	31	250	
kingfish	841	0.1	98.8	1.31	93	1.3	25	316	12.3
Atlantic herring	786	0.1	98.9	1.22	83	3.9	38	331	
northern searobin	740	0.1	99.0	1.15	92	1.3	26	196	0.1
butterfish	687	0.1	99.1	1.07	101	1.3	16	179	
Atlantic silverside	583	0.1	99.1	0.91	89	0.6	56	122	
striped bass	568	0.1	99.2	0.88	117	2.7	32	630	1085.0
summer flounder	553	0.1	99.3	0.86	279	3.3	43	581	465.0
channel catfish	524	0.1	99.4	0.81	286	2.4	134	516	
silver perch	521	0.1	99.4	0.81	132	1.5	42	212	23.9
gizzard shad	425	0.1	99.5	0.66	156	2.8	62	339	
oyster toadfish	359	0.0	99.5	0.56	188	4.2	32	367	
American eel	336	0.0	99.6	0.52	239	3.5	82	618	
blue catfish	284	0.0	99.6	0.44	219	3.0	82	365	126.0
blueback herring	279	0.0	99.6	0.43	82	1.6	61	300	
striped anchovy	272	0.0	99.7	0.42	88	0.9	44	122	
inshore lizardfish	233	0.0	99.7	0.36	174	3.3	17	327	
red hake	183	0.0	99.7	0.28	152	3.2	56	248	
northern pipefish	180	0.0	99.8	0.28	135	2.7	37	264	
silver hake	168	0.0	99.8	0.26	137	2.4	40	222	60.0
harvestfish	166	0.0	99.8	0.26	61	2.4	12	178	
black seabass	151	0.0	99.8	0.23	115	4.0	47	280	
alewife	150	0.0	99.8	0.23	101	2.8	60	278	430.0
southern kingfish	147	0.0	99.9	0.23	121	3.6	33	280	
naked goby	122	0.0	99.9	0.19	40	0.9	21	71	
windowpane	119	0.0	99.9	0.18	139	6.6	30	295	
clearnose skate	114	0.0	99.9	0.18	383	6.4	141	483	
Atlantic spadefish	74	0.0	99.9	0.11	89	3.2	28	255	
northern puffer	73	0.0	99.9	0.11	112	5.4	41	223	
lined seahorse	60	0.0	99.9	0.09	83	3.3	26	134	
skilletfish	44	0.0	99.9	0.07	43	1.8	16	70	
striped searobin	42	0.0	100.0	0.07	155	11.7	34	301	
brown shrimp	37	0.0	100.0	0.06	122	4.1	86	183	40.6
fringed flounder	33	0.0	100.0	0.05	120	2.9	94	159	
feather blenny	28	0.0	100.0	0.04	64	3.0	32	98	
conger eel	27	0.0	100.0	0.04	338	13.4	241	493	
northern kingfish	20	0.0	100.0	0.03	62	16.0	20	267	
bluefish	18	0.0	100.0	0.03	183	9.7	135	291	181.0
tautog	15	0.0	100.0	0.02	272	27.3	136	497	320.0
green goby	13	0.0	100.0	0.02	38	2.0	27	45	
spiny dogfish	13	0.0	100.0	0.02	772	23.7	616	918	
American shad	12	0.0	100.0	0.02	124	6.4	94	165	
pigfish	11	0.0	100.0	0.02	175	3.8	159	193	124.0
northern stargazer	10	0.0	100.0	0.02	44	-8.2	13	107	
spotted seatrout	9	0.0	100.0	0.01	166	7.9	128	211	
red drum	8	0.0	100.0	0.01	90	16.4	26	169	14.9
longnose gar	8	0.0	100.0	0.01	696	47.6	384	820	1400.0
spiny butterfly ray	6	0.0	100.0	0.01	516	28.0	430	640	
lookdown	6	0.0	100.0	0.01	72	10.1	50	105	5.2
white shrimp	6	0.0	100.0	0.01	109	7.0	75	121	
inland silverside	5	0.0	100.0	0.01	56	1.5	53	62	
Atlantic cutlassfish	5	0.0	100.0	0.01	453	74.6	202	624	77.1
sea lamprey	4	0.0	100.0	0.01	166	4.5	155	177	
brown bullhead	4	0.0	100.0	0.01	235	11.6	211	261	221.0
seaboard goby	4	0.0	100.0	0.01	37	0.8	35	38	
smooth dogfish	4	0.0	100.0	0.01	608	62.9	427	705	
bluntnose stingray	4	0.0	100.0	0.01	215	4.4	206	225	340.3
banded drum	4	0.0	100.0	0.01	161	11.3	131	186	27.3
striped cusk-eel	4	0.0	100.0	0.01	142	31.1	54	187	
common carp	2	0.0	100.0	0.00	545	5.0	540	550	
blue runner	2	0.0	100.0	0.00	145	10.5	134	155	
rough scad	2	0.0	100.0	0.00	68	15.0	53	83	1.0
northern sennet	2	0.0	100.0	0.00	66	1.0	65	67	1.1
threadfin shad	2	0.0	100.0	0.00	76	4.5	71	80	
dwarf goatfish	2	0.0	100.0	0.00	53	4.0	49	57	
Spanish mackerel	1	0.0	100.0	0.00	164		164	164	
Florida pompano	1	0.0	100.0	0.00	214		214	214	245.0
bluespotted cornetfish	1	0.0	100.0	0.00	380		380	380	15.5
spottail shiner	1	0.0	100.0	0.00	83		83	83	
bluegill	1	0.0	100.0	0.00	185		185	185	112.0
rough silverside	1	0.0	100.0	0.00	84		84	84	
sandbar shark	1	0.0	100.0	0.00	545		545	545	
southern stingray	1	0.0	100.0	0.00	173		173	173	

Table 46 continued.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
rougntail stingray	1	0.0	100.0	0.00	417	.	417	417	.
Atlantic stingray	1	0.0	100.0	0.00	495	.	495	495	.
spotfin butterflyfish	1	0.0	100.0	0.00	63	.	63	63	.
northern sand lance	1	0.0	100.0	0.00	162	.	162	162	.
orange filefish	1	0.0	100.0	0.00	39	.	39	39	.
striped burrfish	1	0.0	100.0	0.00	181	.	181	181	.
chain pipefish	1	0.0	100.0	0.00	267	.	267	267	.
mottled mojarra	1	0.0	100.0	0.00	108	.	108	108	26.0
seaweed blenny	1	0.0	100.0	0.00	58	.	58	58	.
All Species Combined	748.608								

Tables 47-50.

Species composition, number caught, catch per trawl ,and length statistics for all months, by river, for the river trawl survey.

Notes:

A. The "Number of Species" notation at the top of each table includes each of the three categories of blue crabs (male, juvenile female, adult female) as a different " species".

Table 47.

Month - All - Pooled

River - James

No. of Fish Trawls Made - 82

No. of Add'l Crab Trawls Made - 28

No. of Species - 64

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	67,660	67.2	67.2	825.12	54	0.3	14	94	1.0
hogchoker	18,498	18.4	85.5	225.59	75	0.5	14	176	9.8
Atlantic croaker	5,264	5.2	90.8	64.20	116	1.4	13	305	1.4
weakfish	2,391	2.4	93.1	29.16	98	1.9	21	303	8.4
spot	2,129	2.1	95.2	25.96	129	0.7	22	226	46.1
blue crab, juvenile female	796	0.8	96.0	7.24	48	0.9	7	146	.
white perch	767	0.8	96.8	9.35	115	2.2	16	249	.
blue crab, male	739	0.7	97.5	6.72	66	1.5	8	182	.
white catfish	337	0.3	97.9	4.11	199	3.3	56	533	410.0
spotted hake	239	0.2	98.1	2.91	131	1.8	68	222	.
American eel	224	0.2	98.3	2.73	239	3.6	118	529	.
blue crab, adult female	210	0.2	98.5	1.91	146	0.9	100	178	.
Atlantic silverside	168	0.2	98.7	2.05	92	1.1	68	122	.
blue catfish	166	0.2	98.9	2.02	223	4.7	82	365	.
gizzard shad	164	0.2	99.0	2.00	191	5.4	80	339	.
blackcheek tonguefish	149	0.1	99.2	1.82	103	2.7	48	168	.
channel catfish	121	0.1	99.3	1.48	282	3.8	164	516	.
blueback herring	104	0.1	99.4	1.27	70	0.6	64	85	.
summer flounder	86	0.1	99.5	1.05	243	6.8	153	476	204.2
squid	79	0.1	99.6	0.96	34	1.0	15	75	.
oyster toadfish	62	0.1	99.6	0.76	163	10.6	32	367	.
striped bass	45	0.0	99.7	0.55	194	15.6	38	630	383.3
naked goby	35	0.0	99.7	0.43	39	1.5	26	71	.
butterfish	31	0.0	99.7	0.38	97	9.0	16	177	.
scup	28	0.0	99.8	0.34	135	4.2	82	184	.
silver perch	27	0.0	99.8	0.33	128	9.3	56	194	.
smallmouth flounder	26	0.0	99.8	0.32	77	3.6	40	99	.
kingfish	17	0.0	99.8	0.21	93	6.1	40	124	.
Atlantic herring	16	0.0	99.9	0.20	299	4.6	239	320	.
Atlantic menhaden	16	0.0	99.9	0.20	109	9.2	75	195	.
northern pipefish	12	0.0	99.9	0.15	147	12.7	58	250	.
southern kingfish	10	0.0	99.9	0.12	80	3.2	64	100	.
inshore lizardfish	10	0.0	99.9	0.12	183	15.9	139	308	.
harvestfish	9	0.0	99.9	0.11	81	6.9	38	109	.
Atlantic thread herring	9	0.0	99.9	0.11	96	4.9	69	112	.
skilletfish	9	0.0	99.9	0.11	48	5.1	16	62	.
black seabass	8	0.0	99.9	0.10	114	15.4	60	183	.
Atlantic spadefish	8	0.0	99.9	0.10	87	4.9	68	110	.
northern searobin	6	0.0	99.9	0.07	130	12.2	74	155	.
alewife	5	0.0	100.0	0.06	106	7.4	94	134	.
pigfish	5	0.0	100.0	0.06	172	5.2	159	189	.
inland silverside	5	0.0	100.0	0.06	56	1.5	53	62	.
feather blenny	4	0.0	100.0	0.05	71	9.9	45	93	.
American shad	3	0.0	100.0	0.04	116	8.4	99	126	.
green goby	3	0.0	100.0	0.04	37	3.7	32	44	.
red drum	2	0.0	100.0	0.02	64	37.5	26	101	.
northern puffer	2	0.0	100.0	0.02	158	65.0	93	223	.
common carp	2	0.0	100.0	0.02	545	5.0	540	550	.
tautog	2	0.0	100.0	0.02	289	42.5	246	331	.
windowpane	2	0.0	100.0	0.02	198	21.5	176	219	.
sea lamprey	2	0.0	100.0	0.02	172	5.5	166	177	.
lined seahorse	2	0.0	100.0	0.02	58	10.0	48	68	.
clearnose skate	2	0.0	100.0	0.02	445	38.0	407	483	.
bluefish	1	0.0	100.0	0.01	160	.	160	160	.
spotted seatrout	1	0.0	100.0	0.01	148	.	148	148	.
striped searobin	1	0.0	100.0	0.01	34	.	34	34	.
brown bullhead	1	0.0	100.0	0.01	248	.	248	248	221.0
southern stingray	1	0.0	100.0	0.01	173	.	173	173	.
conger eel	1	0.0	100.0	0.01	385	.	385	385	.
lookdown	1	0.0	100.0	0.01	51	.	51	51	.
northern stargazer	1	0.0	100.0	0.01	28	.	28	28	.
fringed flounder	1	0.0	100.0	0.01	95	.	95	95	.
threadfin shad	1	0.0	100.0	0.01	80	.	80	80	.
white shrimp	1	0.0	100.0	0.01	75	.	75	75	.
All Species Combined	100.727								

Table 48.

Month - All - Pooled
 River - Rappahannock
 No. of Fish Trawls Made - 91
 No. of Add'l Crab Trawls Made - 35
 No. of Species - 46

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	60,365	67.6	67.6	663.35	51	0.3	22	91	1.1
hogchoker	8,361	9.4	77.0	91.88	86	0.6	21	169	17.6
Atlantic croaker	8,159	9.1	86.1	89.66	63	1.0	13	270	1.1
spot	3,421	3.8	90.0	37.59	117	0.6	10	178	11.1
white perch	2,034	2.3	92.2	22.35	128	1.2	57	282	.
blue crab, male	1,571	1.8	94.0	12.47	62	0.9	10	201	.
weakfish	1,348	1.5	95.5	14.81	97	2.4	25	354	.
blue crab, juvenile female	1,180	1.3	96.8	9.37	45	0.8	2	135	.
channel catfish	399	0.4	97.3	4.38	291	2.8	175	461	.
striped bass	346	0.4	97.7	3.80	111	2.5	32	552	2025.0
white catfish	312	0.3	98.0	3.43	250	3.5	77	495	310.0
Atlantic menhaden	268	0.3	98.3	2.95	93	1.0	61	150	.
gizzard shad	243	0.3	98.6	2.67	130	1.4	62	243	.
kingfish	204	0.2	98.8	2.24	86	1.9	31	148	.
spotted hake	199	0.2	99.0	2.19	118	1.9	54	194	.
alewife	126	0.1	99.2	1.38	94	2.6	60	278	430.0
blue catfish	118	0.1	99.3	1.30	214	3.8	125	343	126.0
Atlantic silverside	112	0.1	99.4	1.23	91	1.1	62	114	.
American eel	78	0.1	99.5	0.86	250	8.7	151	618	.
blue crab, adult female	76	0.1	99.6	0.60	148	1.7	104	175	.
naked goby	53	0.1	99.7	0.58	44	1.2	27	60	.
blackcheck tonguefish	53	0.1	99.7	0.58	95	5.4	40	154	.
blueback herring	49	0.1	99.8	0.54	81	1.4	61	117	.
oyster toadfish	38	0.0	99.8	0.42	180	12.9	41	337	.
summer flounder	25	0.0	99.9	0.27	270	9.5	173	398	.
skilletfish	23	0.0	99.9	0.25	40	1.7	25	56	.
butterfish	22	0.0	99.9	0.24	135	3.2	114	179	.
harvestfish	22	0.0	99.9	0.24	42	3.2	26	73	.
silver perch	15	0.0	99.9	0.16	105	3.5	82	124	.
northern pipefish	12	0.0	100.0	0.13	118	5.7	94	166	.
green goby	6	0.0	100.0	0.07	38	2.7	27	44	.
Atlantic thread herring	5	0.0	100.0	0.05	85	12.0	39	104	.
inshore lizardfish	5	0.0	100.0	0.05	192	12.6	167	235	.
Atlantic herring	3	0.0	100.0	0.03	292	10.7	273	310	.
brown bullhead	3	0.0	100.0	0.03	231	15.3	211	261	.
striped anchovy	2	0.0	100.0	0.02	74	27.0	47	101	.
feather blenny	2	0.0	100.0	0.02	41	8.5	32	49	.
bluefish	1	0.0	100.0	0.01	155	.	155	155	.
American shad	1	0.0	100.0	0.01	115	.	115	115	.
Atlantic spadefish	1	0.0	100.0	0.01	48	.	48	48	.
northern searobin	1	0.0	100.0	0.01	47	.	47	47	.
bluegill	1	0.0	100.0	0.01	185	.	185	185	112.0
rough silverside	1	0.0	100.0	0.01	84	.	84	84	.
conger eel	1	0.0	100.0	0.01	253	.	253	253	.
spotfin butterflyfish	1	0.0	100.0	0.01	63	.	63	63	.
Atlantic cutlassfish	1	0.0	100.0	0.01	378	.	378	378	30.5
All Species Combined	89,267								

Table 49.

Month - All - Pooled River - York No. of Fish Trawls Made - 101 No. of Add'l Crab Trawls Made - 28 No. of Species - 53									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	107,763	74.9	74.9	1066.96	52	0.2	15	94	1.0
hogchoker	12,147	8.4	83.3	120.27	84	0.6	11	193	20.4
Atlantic croaker	10,352	7.2	90.5	102.50	105	1.1	13	286	1.3
weakfish	5,019	3.5	94.0	49.69	106	1.6	14	337	5.2
blue crab, male	1,721	1.2	95.2	13.34	50	0.8	6	193	.
blue crab, juvenile female	1,502	1.0	96.3	11.64	41	0.6	6	130	.
white perch	1,245	0.9	97.1	12.33	183	1.6	63	282	313.9
spot	1,033	0.7	97.9	10.23	140	1.0	38	226	60.0
white catfish	694	0.5	98.3	6.87	214	4.6	48	489	17.9
Atlantic menhaden	633	0.4	98.8	6.27	103	1.4	66	250	.
blackcheek tonguefish	263	0.2	99.0	2.60	97	1.9	43	157	.
silver perch	247	0.2	99.1	2.45	137	2.4	42	212	23.9
oyster toadfish	208	0.1	99.3	2.06	206	4.9	47	360	.
spotted hake	206	0.1	99.4	2.04	129	2.2	56	212	.
kingfish	198	0.1	99.6	1.96	93	2.4	30	152	12.3
striped bass	176	0.1	99.7	1.74	107	5.0	32	518	2250.0
Atlantic thread herring	71	0.0	99.7	0.70	55	1.2	46	123	.
summer flounder	57	0.0	99.8	0.56	224	9.0	43	387	.
blueback herring	55	0.0	99.8	0.54	93	5.7	72	300	.
blue crab, adult female	40	0.0	99.8	0.31	146	2.2	115	187	.
American eel	34	0.0	99.9	0.34	218	14.3	82	419	.
squid	24	0.0	99.9	0.24	45	2.9	26	62	.
Atlantic silverside	21	0.0	99.9	0.21	84	3.0	65	120	.
naked goby	19	0.0	99.9	0.19	36	2.4	21	55	.
harvestfish	18	0.0	99.9	0.18	47	4.6	13	75	.
gizzard shad	16	0.0	99.9	0.16	204	23.5	85	336	.
northern pipefish	16	0.0	99.9	0.16	123	6.6	61	180	.
Atlantic spadefish	12	0.0	99.9	0.12	85	4.6	42	102	.
northern kingfish	11	0.0	100.0	0.11	33	2.6	20	51	.
longnose gar	8	0.0	100.0	0.08	696	47.6	384	820	1400.0
alewife	7	0.0	100.0	0.07	141	20.2	108	260	.
butterfish	4	0.0	100.0	0.04	97	22.9	44	153	.
Atlantic herring	4	0.0	100.0	0.04	232	62.1	47	306	.
channel catfish	4	0.0	100.0	0.04	162	18.3	134	211	.
white shrimp	4	0.0	100.0	0.04	117	2.6	109	121	.
brown shrimp	4	0.0	100.0	0.04	142	22.8	86	183	40.6
northern scarobin	3	0.0	100.0	0.03	54	4.8	44	59	.
skilletfish	3	0.0	100.0	0.03	50	10.1	38	70	.
inshore lizardfish	3	0.0	100.0	0.03	196	24.5	167	245	.
northern stargazer	3	0.0	100.0	0.03	53	1.8	50	56	.
red drum	2	0.0	100.0	0.02	157	12.0	145	169	34.6
sea lamprey	2	0.0	100.0	0.02	160	4.5	155	164	.
striped anchovy	2	0.0	100.0	0.02	86	0.5	85	86	.
seaboard goby	2	0.0	100.0	0.02	36	0.3	35	36	.
conger eel	2	0.0	100.0	0.02	401	92.0	309	493	.
American shad	1	0.0	100.0	0.01	108	.	108	108	.
southern kingfish	1	0.0	100.0	0.01	33	.	33	33	.
spotted seatrout	1	0.0	100.0	0.01	150	.	150	150	.
spottail shiner	1	0.0	100.0	0.01	83	.	83	83	.
feather blenny	1	0.0	100.0	0.01	87	.	87	87	.
lookdown	1	0.0	100.0	0.01	60	.	60	60	5.2
Atlantic cutlassfish	1	0.0	100.0	0.01	506	.	506	506	.
threadfin shad	1	0.0	100.0	0.01	71	.	71	71	.
All Species Combined	143,866								

Table 50.

Month - All - Pooled
 River - All - Pooled
 No. of Fish Trawls Made - 274
 No. of Add'l Crab Trawls Made - 91
 No. of Species - 74

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	235,788	70.6	70.6	860.54	52	0.2	14	94	1.0
hogchoker	39,006	11.7	82.3	142.36	82	0.3	11	193	14.1
Atlantic croaker	23,775	7.1	89.4	86.77	96	0.7	13	305	1.2
weakfish	8,758	2.6	92.1	31.96	102	1.1	14	354	6.4
spot	6,583	2.0	94.0	24.03	128	0.5	10	226	36.0
white perch	4,046	1.2	95.2	14.77	137	1.1	16	282	313.9
blue crab, male	4,031	1.2	96.4	11.04	58	0.6	6	201	.
blue crab, juvenile female	3,478	1.0	97.5	9.53	44	0.4	2	146	.
white catfish	1,343	0.4	97.9	4.90	221	2.6	48	533	74.0
Atlantic menhaden	917	0.3	98.2	3.35	99	0.9	61	250	.
spotted hake	644	0.2	98.4	2.35	127	1.2	54	222	.
striped bass	567	0.2	98.5	2.07	116	2.7	32	630	1085.0
channel catfish	524	0.2	98.7	1.91	286	2.4	134	516	.
blackcheek tonguefish	465	0.1	98.8	1.70	99	1.5	40	168	.
gizzard shad	423	0.1	98.9	1.54	156	2.8	62	339	.
kingfish	419	0.1	99.1	1.53	89	1.5	30	152	12.3
American eel	336	0.1	99.2	1.23	239	3.5	82	618	.
blue crab, adult female	326	0.1	99.3	0.89	147	0.7	100	187	.
oyster toadfish	308	0.1	99.4	1.12	194	4.4	32	367	.
Atlantic silverside	301	0.1	99.5	1.10	91	0.8	62	122	.
silver perch	289	0.1	99.5	1.05	134	2.3	42	212	23.9
blue catfish	284	0.1	99.6	1.04	219	3.0	82	365	126.0
blueback herring	208	0.1	99.7	0.76	81	2.2	61	300	.
summer flounder	168	0.1	99.7	0.61	240	5.0	43	476	204.2
alewife	138	0.0	99.8	0.50	97	2.7	60	278	430.0
naked goby	107	0.0	99.8	0.39	41	0.9	21	71	.
squid	103	0.0	99.8	0.38	36	1.1	15	75	.
Atlantic thread herring	85	0.0	99.9	0.31	61	2.0	39	123	.
butterfish	57	0.0	99.9	0.21	112	5.8	16	179	.
harvestfish	49	0.0	99.9	0.18	51	3.2	13	109	.
northern pipefish	40	0.0	99.9	0.15	129	5.2	58	250	.
skilletfish	35	0.0	99.9	0.13	43	1.9	16	70	.
scup	28	0.0	99.9	0.10	135	4.2	82	184	.
smallmouth flounder	26	0.0	99.9	0.09	77	3.6	40	99	.
Atlantic herring	23	0.0	99.9	0.08	287	11.5	47	320	.
Atlantic spadefish	21	0.0	100.0	0.08	84	3.6	42	110	.
inshore lizardfish	18	0.0	100.0	0.07	188	9.9	139	308	.
northern kingfish	11	0.0	100.0	0.04	33	2.6	20	51	.
southern kingfish	11	0.0	100.0	0.04	76	5.2	33	100	.
northern searobin	10	0.0	100.0	0.04	99	14.5	44	155	.
green goby	9	0.0	100.0	0.03	37	2.0	27	44	.
black seabass	8	0.0	100.0	0.03	114	15.4	60	183	.
longnose gar	8	0.0	100.0	0.03	696	47.6	384	820	1400.0
feather blenny	7	0.0	100.0	0.03	65	8.7	32	93	.
American shad	5	0.0	100.0	0.02	114	4.8	99	126	.
pigfish	5	0.0	100.0	0.02	172	5.2	159	189	.
inland silverside	5	0.0	100.0	0.02	56	1.5	53	62	.
white shrimp	5	0.0	100.0	0.02	108	8.5	75	121	.
red drum	4	0.0	100.0	0.01	110	31.4	26	169	34.6
sea lamprey	4	0.0	100.0	0.01	166	4.5	155	177	.
striped anchovy	4	0.0	100.0	0.01	80	11.5	47	101	.
brown bullhead	4	0.0	100.0	0.01	235	11.6	211	261	221.0
conger eel	4	0.0	100.0	0.01	360	51.9	253	493	.
northern stargazer	4	0.0	100.0	0.01	47	6.3	28	56	.
brown shrimp	4	0.0	100.0	0.01	142	22.8	86	183	40.6
bluefish	2	0.0	100.0	0.01	158	2.5	155	160	.
northern puffer	2	0.0	100.0	0.01	158	65.0	93	223	.
common carp	2	0.0	100.0	0.01	545	5.0	540	550	.
tautog	2	0.0	100.0	0.01	289	42.5	246	331	.
spotted seatrout	2	0.0	100.0	0.01	149	1.0	148	150	.
windowpane	2	0.0	100.0	0.01	198	21.5	176	219	.
lined seahorse	2	0.0	100.0	0.01	58	10.0	48	68	.
seaboard goby	2	0.0	100.0	0.01	36	0.5	35	36	.
clearnose skate	2	0.0	100.0	0.01	445	38.0	407	483	.
lookdown	2	0.0	100.0	0.01	56	4.5	51	60	5.2
Atlantic cutlassfish	2	0.0	100.0	0.01	442	64.0	378	506	30.5
threadfin shad	2	0.0	100.0	0.01	76	4.5	71	80	.
striped searobin	1	0.0	100.0	0.00	34	.	34	34	.
spottail shiner	1	0.0	100.0	0.00	83	.	83	83	.
bluegill	1	0.0	100.0	0.00	185	.	185	185	112.0
rough silverside	1	0.0	100.0	0.00	84	.	84	84	.
southern stingray	1	0.0	100.0	0.00	173	.	173	173	.
spotfin butterflyfish	1	0.0	100.0	0.00	63	.	63	63	.
fringed flounder	1	0.0	100.0	0.00	95	.	95	95	.
All Species Combined	333,860								

Tables 51-54.

Species composition, number caught, catch per trawl, and length statistics for all months, by segment, for the Chesapeake Bay trawl survey.

Notes:

A. The "Number of Species" notation at the top of each table includes each of the three categories of blue crabs (male, juvenile female, adult female) as a different "species".

B. Table pooled for all segments, all months appears in Table 54, page 154.

C. Catch per trawl for fish species is based on the figure 'Number of Fish Trawls Made' while catch per trawl for blue crabs is based on the sum of 'Number of Fish Trawls Made' and 'Number of Additional Crab Trawls Made'.

Table 51.

Month - All - Pooled
 Segment - Ches. Bay - Bottom
 No. of Trawls Made - 123
 No. of Species - 68

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	83,211	85.9	85.9	676.51	33	0.2	30	94	
spot	1,800	1.9	87.7	14.63	136	0.7	13	240	0.8
Atlantic croaker	1,611	1.7	89.4	13.10	149	1.5	25	259	
squid	1,526	1.6	91.0	12.41	41	0.9	9	136	
spotted hake	1,493	1.5	92.5	8.80	79	1.5	36	326	8.9
smallmouth flounder	1,082	1.1	93.6	8.18	138	2.1	28	162	
weakfish	1,006	1.0	94.6	6.74	140	1.3	40	309	
blackcheek tonguefish	829	0.9	95.5	6.38	53	2.0	30	196	
Atlantic thread herring	785	0.8	96.3	4.38	102	1.2	39	178	1.6
scup	539	0.6	96.9	3.29	97	1.8	25	176	
butterfish	405	0.4	97.3	2.98	144	0.9	107	176	
blue crab, adult female	366	0.4	97.7	2.85	92	1.8	26	183	
northern searobin	350	0.4	98.0	2.65	126	1.5	66	189	
hogchoker	326	0.3	98.4	1.34	138	2.4	71	222	37.2
silver hake	165	0.2	98.5	1.23	295	5.7	171	492	60.0
summer flounder	151	0.2	98.7	1.15	96	2.8	27	255	1550.0
kingfish	142	0.1	98.8	1.03	89	1.3	62	122	
striped anchovy	127	0.1	99.0	0.98	158	4.3	56	248	
red hake	121	0.1	99.1	0.79	376	7.2	141	477	
clearnose skate	97	0.1	99.2	0.68	102	9.6	47	331	
Atlantic herring	84	0.1	99.3	0.67	127	2.6	55	180	
silver perch	82	0.1	99.4	0.59	188	8.6	30	292	
windowpane	73	0.1	99.5	0.52	133	4.5	53	243	
southern kingfish	64	0.1	99.6	0.50	111	5.6	62	239	
Atlantic menhaden	62	0.1	99.6	0.49	113	7.0	48	280	
black seabass	60	0.1	99.6	0.48	141	4.9	78	244	
northern pipefish	59	0.1	99.7	0.34	191	6.6	107	308	
inshore lizardfish	42	0.0	99.8	0.22	91	2.8	64	118	
Atlantic silverside	27	0.0	99.8	0.21	136	8.9	52	200	
northern puffer	26	0.0	99.8	0.21	167	14.9	57	301	
striped searobin	26	0.0	99.8	0.16	81	5.6	35	123	
lined seahorse	20	0.0	99.8	0.15	207	17.8	47	324	
oyster toadfish	18	0.0	99.9	0.11	92	3.3	70	109	
Atlantic spadefish	14	0.0	99.9	0.09	119	6.4	94	159	
fringed flounder	11	0.0	99.9	0.09	83	14.1	18	161	
blue crab, male	11	0.0	99.9	0.09	60	8.1	33	110	
blue crab, juvenile female	11	0.0	99.9	0.08	788	23.8	660	918	
spiny dogfish	10	0.0	99.9	0.07	134	6.9	105	172	
brown shrimp	9	0.0	99.9	0.07	183	15.1	135	275	181.0
bluefish	8	0.0	99.9	0.06	35	2.9	26	45	
naked goby	7	0.0	99.9	0.04	86	3.6	76	95	
harvestfish	5	0.0	100.0	0.04	62	6.7	44	85	
feather blenny	5	0.0	100.0	0.03	179	11.1	161	211	
spotted seatrout	4	0.0	100.0	0.03	369	42.3	267	473	
conger eel	4	0.0	100.0	0.02	125	4.8	118	134	
alewife	3	0.0	100.0	0.02	116	1.2	114	118	
American shad	3	0.0	100.0	0.02	40	1.2	38	42	
green goby	3	0.0	100.0	0.02	211	3.9	206	219	
skilletfish	3	0.0	100.0	0.02	545	47.7	495	640	340.3
bluntnose stingray	3	0.0	100.0	0.02	170	7.9	161	186	
spiny butterfly ray	3	0.0	100.0	0.02	57	7.0	50	64	25.0
banded drum	3	0.0	100.0	0.02	68	15.0	53	83	
lookdown	2	0.0	100.0	0.02	66	1.0	65	67	1.0
rough scad	2	0.0	100.0	0.01	71		71	71	1.1
northern sennet	1	0.0	100.0	0.01	142		142	142	
blueback herring	1	0.0	100.0	0.01	192		192	192	
gizzard shad	1	0.0	100.0	0.01	214		214	214	
pigfish	1	0.0	100.0	0.01	380		380	380	245.0
Florida pompano	1	0.0	100.0	0.01	38		38	38	15.5
bluespotted cornetfish	1	0.0	100.0	0.01	545		545	545	
seaboard goby	1	0.0	100.0	0.01	619		619	619	
sandbar snark	1	0.0	100.0	0.01	495		495	495	
smooth dogfish	1	0.0	100.0	0.01	556		556	556	
Atlantic stingray	1	0.0	100.0	0.01	108		108	108	112.0
Atlantic cutlassfish	1	0.0	100.0	0.01	57		57	57	26.0
mottled mojarra	1	0.0	100.0	0.01	57		57	57	
dwarf goatfish	1	0.0	100.0	0.01	110		110	110	
white shrimp	1	0.0	100.0	0.01	110		110	110	
All Species Combined	96,914								

Table 52.

Month - All - Pooled
 Segment - Ches. Bay - Lower
 No. of Trawls Made - 123
 No. of Species - 68

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	143,700	91.2	91.2	1168.29	50	0.2	15	94	1.2
spot	3,209	2.0	93.3	26.09	136	0.6	16	209	21.2
hogchoker	1,661	1.1	94.3	13.50	110	0.8	67	182	38.6
Atlantic croaker	1,653	1.0	95.4	13.44	148	1.3	11	259	.
weakfish	1,359	0.9	96.2	11.05	129	1.7	9	322	.
spotted hake	1,090	0.7	96.9	8.86	143	1.3	46	270	.
scup	795	0.5	97.4	6.46	105	0.9	32	172	.
Atlantic herring	644	0.4	97.8	5.24	56	1.8	38	302	.
blackcheek tonguefish	408	0.3	98.1	3.32	134	1.5	53	180	.
smallmouth flounder	360	0.2	98.3	2.93	78	1.0	41	130	.
Atlantic thread herring	319	0.2	98.5	2.59	66	4.3	39	129	1.7
squid	312	0.2	98.7	2.54	36	1.1	9	115	.
blue crab, adult female	282	0.2	98.9	2.29	144	0.9	104	179	.
northern searobin	239	0.2	99.0	1.94	94	2.3	29	195	0.1
Atlantic silverside	184	0.1	99.2	1.50	87	1.4	56	112	.
butterfish	158	0.1	99.3	1.28	102	2.6	31	170	.
silver perch	127	0.1	99.3	1.03	130	2.1	79	206	.
summer flounder	122	0.1	99.4	0.99	304	7.4	92	516	825.0
kingfish	116	0.1	99.5	0.94	113	4.3	47	301	.
inshore lizardfish	84	0.1	99.5	0.68	161	5.3	52	298	.
striped anchovy	81	0.1	99.6	0.66	92	1.2	66	112	.
black seabass	55	0.0	99.6	0.45	118	5.6	51	230	.
northern pipefish	53	0.0	99.7	0.43	137	4.6	69	264	.
blueback herring	51	0.0	99.7	0.41	82	1.3	61	125	.
red hake	48	0.0	99.7	0.39	142	4.2	78	212	.
blue crab, juvenile female	48	0.0	99.8	0.39	57	4.0	21	129	.
blue crab, male	39	0.0	99.8	0.32	85	7.5	20	172	.
Atlantic menhaden	37	0.0	99.8	0.30	110	5.9	38	203	.
windowpane	32	0.0	99.8	0.26	193	12.1	48	295	.
northern puffer	31	0.0	99.9	0.25	95	6.2	41	178	.
harvestfish	30	0.0	99.9	0.24	82	8.3	12	178	.
lined seahorse	28	0.0	99.9	0.23	88	4.6	42	134	.
fringed flounder	19	0.0	99.9	0.15	123	3.2	97	149	.
Atlantic spadefish	18	0.0	99.9	0.15	93	10.3	28	255	.
brown shrimp	14	0.0	99.9	0.11	119	5.1	94	150	.
southern kingfish	13	0.0	99.9	0.11	159	18.2	98	280	.
oyster toadfish	13	0.0	99.9	0.11	116	23.6	42	301	.
clearnose skate	13	0.0	99.9	0.11	414	8.1	360	469	.
conger eel	10	0.0	100.0	0.08	347	21.6	241	443	.
feather blenny	8	0.0	100.0	0.07	68	4.9	52	98	.
bluefish	7	0.0	100.0	0.06	175	7.9	151	196	.
tautog	6	0.0	100.0	0.05	291	37.5	208	466	320.0
striped searobin	6	0.0	100.0	0.05	148	36.3	60	238	.
alewife	4	0.0	100.0	0.03	126	6.9	111	140	.
American shad	4	0.0	100.0	0.03	141	16.2	94	165	.
northern kingfish	4	0.0	100.0	0.03	32	2.9	27	40	.
silver hake	3	0.0	100.0	0.02	98	29.9	40	140	.
spotted seatrout	3	0.0	100.0	0.02	159	16.6	128	185	.
naked goby	3	0.0	100.0	0.02	39	6.7	30	52	.
smooth dogfish	3	0.0	100.0	0.02	604	88.8	427	705	.
northern stargazer	3	0.0	100.0	0.02	61	23.1	33	107	.
striped cusk-eel	3	0.0	100.0	0.02	171	15.3	140	187	.
pigfish	2	0.0	100.0	0.02	187	6.5	180	193	124.0
skilletfish	2	0.0	100.0	0.02	35	14.0	21	49	.
spiny dogfish	2	0.0	100.0	0.02	729	112.5	616	841	.
spiny butterfly ray	2	0.0	100.0	0.02	516	2.0	514	518	.
blue runner	2	0.0	100.0	0.02	145	10.5	134	155	.
striped bass	1	0.0	100.0	0.01	341	.	341	341	.
red drum	1	0.0	100.0	0.01	68	.	68	68	.
gizzard shad	1	0.0	100.0	0.01	130	.	130	130	.
seaboard goby	1	0.0	100.0	0.01	38	.	38	38	.
rougetail stingray	1	0.0	100.0	0.01	417	.	417	417	.
banded drum	1	0.0	100.0	0.01	131	.	131	131	34.0
northern sand lance	1	0.0	100.0	0.01	162	.	162	162	.
orange filefish	1	0.0	100.0	0.01	39	.	39	39	.
striped burrfish	1	0.0	100.0	0.01	181	.	181	181	.
seaweed blenny	1	0.0	100.0	0.01	58	.	58	58	.
dwarf goatfish	1	0.0	100.0	0.01	49	.	49	49	.
All Species Combined	157,533								

Table 53.

Month - All - Pooled
 Segment - Ches. Bay - Upper
 No. of Trawls Made - 124
 No. of Species - 59

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	149,720	93.4	93.4	1207.42	50	0.2	15	93	
spot	3,162	2.0	95.4	25.50	135	0.5	17	226	1.0
weakfish	1,828	1.1	96.5	14.74	111	1.7	12	329	
Atlantic croaker	1,515	0.9	97.5	12.22	140	2.0	11	288	
scup	872	0.5	98.0	7.03	98	1.2	56	185	
hogchoker	621	0.4	98.4	5.01	109	0.8	73	163	
spotted hake	408	0.3	98.6	3.29	117	1.6	38	216	
blackcheek tonguefish	280	0.2	98.8	2.26	132	1.6	45	174	
blue crab, adult female	230	0.1	99.0	1.85	137	0.8	109	179	
kingfish	164	0.1	99.1	1.32	84	3.6	25	316	
blue crab, male	150	0.1	99.2	1.21	83	3.5	15	171	
northern searobin	141	0.1	99.2	1.14	91	2.8	40	187	
blue crab, juvenile female	113	0.1	99.3	0.91	53	2.4	9	123	
summer flounder	112	0.1	99.4	0.90	286	7.3	175	581	225.0
squid	98	0.1	99.4	0.79	27	1.2	6	58	
inshore lizardfish	89	0.1	99.5	0.72	176	5.6	17	327	
harvestfish	82	0.1	99.6	0.66	57	2.9	12	150	
Atlantic silverside	71	0.0	99.6	0.57	85	1.6	56	114	
Atlantic thread herring	68	0.0	99.6	0.55	49	1.3	39	126	
butterfish	67	0.0	99.7	0.54	109	3.2	48	165	
striped anchovy	60	0.0	99.7	0.48	82	2.0	44	109	
southern kingfish	59	0.0	99.8	0.48	106	4.8	61	268	
smallmouth flounder	44	0.0	99.8	0.35	74	2.9	42	126	
Atlantic menhaden	36	0.0	99.8	0.29	116	7.7	31	219	
Atlantic herring	35	0.0	99.8	0.28	83	11.4	40	327	
black seabass	28	0.0	99.8	0.23	116	9.7	47	211	
northern pipefish	28	0.0	99.9	0.23	128	7.4	37	222	
silver perch	23	0.0	99.9	0.19	123	6.7	82	196	
Atlantic spadefish	21	0.0	99.9	0.17	88	6.0	52	157	
oyster toadfish	20	0.0	99.9	0.16	120	14.8	35	297	
blueback herring	19	0.0	99.9	0.15	97	3.3	65	116	
red hake	14	0.0	99.9	0.11	134	6.1	86	179	
northern puffer	14	0.0	99.9	0.11	99	12.2	45	175	
windowpane	12	0.0	99.9	0.10	178	21.8	35	253	
lined seahorse	10	0.0	99.9	0.08	76	10.1	26	117	
brown shrimp	10	0.0	100.0	0.08	108	5.6	91	141	
striped searobin	9	0.0	100.0	0.07	141	20.5	58	231	
conger eel	9	0.0	100.0	0.07	305	13.8	248	388	
feather blenny	8	0.0	100.0	0.06	60	4.1	48	83	
tautog	7	0.0	100.0	0.06	251	50.1	136	497	
alewife	5	0.0	100.0	0.04	165	19.5	129	237	
northern kingfish	5	0.0	100.0	0.04	148	48.2	42	267	
naked goby	5	0.0	100.0	0.04	36	2.2	29	42	
skilletfish	4	0.0	100.0	0.03	53	6.7	35	64	
red drum	3	0.0	100.0	0.02	71	2.1	67	74	1.9
pigfish	3	0.0	100.0	0.02	165	3.5	160	172	
northern stargazer	3	0.0	100.0	0.02	23	5.3	13	31	
clearnose skate	2	0.0	100.0	0.02	454	16.5	437	470	
lookdown	2	0.0	100.0	0.02	103	2.0	101	105	
Atlantic cutlassfish	2	0.0	100.0	0.02	413	211.0	202	624	83.0
fringed flounder	2	0.0	100.0	0.02	118	7.5	110	125	
bluefish	1	0.0	100.0	0.01	291		291	291	
Spanish mackerel	1	0.0	100.0	0.01	164		164	164	
green goby	1	0.0	100.0	0.01	45		45	45	
spiny dogfish	1	0.0	100.0	0.01	702		702	702	
bluntnose stingray	1	0.0	100.0	0.01	225		225	225	
spiny butterfly ray	1	0.0	100.0	0.01	430		430	430	
striped cusk-eel	1	0.0	100.0	0.01	54		54	54	
chain pipefish	1	0.0	100.0	0.01	267		267	267	
All Species Combined	160,301								

Table 54.

Month - All - Pooled
 Segment - All - Pooled
 No. of Trawls Made - 370
 No. of Species - 82

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	376,631	90.8	90.8	1017.92	51	0.1	15	94	1.0
spot	8,171	2.0	92.8	22.08	136	0.3	13	240	21.2
Atlantic croaker	4,779	1.2	93.9	12.92	145	1.1	11	288	.
weakfish	4,193	1.0	94.9	11.33	122	1.1	9	329	.
spotted hake	2,991	0.7	95.7	8.08	140	0.9	36	326	.
hogchoker	2,608	0.6	96.3	7.05	113	0.6	66	189	38.5
scup	2,206	0.5	96.8	5.96	102	0.6	32	185	.
squid	1,936	0.5	97.3	5.23	38	0.6	6	136	8.9
blackcheek tonguefish	1,517	0.4	97.7	4.10	136	0.9	40	196	.
smallmouth flounder	1,486	0.4	98.0	4.02	78	0.5	28	162	.
Atlantic thread herring	1,172	0.3	98.3	3.17	54	1.4	30	185	1.6
blue crab, adult female	878	0.2	98.5	2.37	142	0.5	104	183	.
Atlantic herring	763	0.2	98.7	2.06	70	3.0	38	331	.
northern searobin	730	0.2	98.9	1.97	92	1.3	26	196	0.1
butterfish	630	0.2	99.0	1.70	100	1.4	25	176	.
kingfish	422	0.1	99.1	1.14	96	2.1	25	316	.
summer flounder	385	0.1	99.2	1.04	296	3.9	92	581	856.3
Atlantic silverside	282	0.1	99.3	0.76	87	1.0	56	118	.
striped anchovy	268	0.1	99.3	0.72	88	0.9	44	122	.
silver perch	232	0.1	99.4	0.63	128	1.6	55	206	.
inshore lizardfish	215	0.1	99.5	0.58	173	3.4	17	327	.
blue crab, male	200	0.0	99.5	0.54	84	3.1	15	172	.
red hake	183	0.0	99.5	0.49	152	3.2	56	248	.
blue crab, juvenile female	172	0.0	99.6	0.46	55	2.0	9	129	.
silver hake	168	0.0	99.6	0.45	137	2.4	40	222	60.0
black seabass	143	0.0	99.7	0.39	115	4.1	47	280	.
northern pipefish	140	0.0	99.7	0.38	137	3.1	37	264	.
southern kingfish	136	0.0	99.7	0.37	124	3.7	53	280	.
Atlantic menhaden	135	0.0	99.8	0.36	112	3.6	31	239	.
harvestfish	117	0.0	99.8	0.32	65	3.1	12	178	.
windowpane	117	0.0	99.8	0.32	188	6.7	30	295	.
clearnose skate	112	0.0	99.8	0.30	382	6.5	141	477	.
blueback herring	71	0.0	99.9	0.19	86	1.5	61	125	.
northern puffer	71	0.0	99.9	0.19	111	5.3	41	200	.
lined seahorse	58	0.0	99.9	0.16	83	3.4	26	134	.
Atlantic spadefish	53	0.0	99.9	0.14	91	4.2	28	255	.
oyster toadfish	51	0.0	99.9	0.14	150	11.9	35	324	.
striped searobin	41	0.0	99.9	0.11	158	11.6	57	301	.
brown shrimp	33	0.0	99.9	0.09	120	3.7	91	172	.
fringed flounder	32	0.0	99.9	0.09	121	2.9	94	159	.
conger eel	23	0.0	100.0	0.06	335	13.4	241	473	.
feather blenny	21	0.0	100.0	0.06	64	2.9	44	98	.
bluefish	16	0.0	100.0	0.04	186	10.7	135	291	181.0
naked goby	15	0.0	100.0	0.04	36	1.9	26	52	.
tautog	13	0.0	100.0	0.04	270	31.3	136	497	320.0
spiny dogfish	13	0.0	100.0	0.04	772	23.7	616	918	.
alewife	12	0.0	100.0	0.03	142	9.8	111	237	.
northern kingfish	9	0.0	100.0	0.02	96	32.6	27	267	.
skilletfish	9	0.0	100.0	0.02	45	4.5	21	64	.
American shad	7	0.0	100.0	0.02	130	10.0	94	165	.
spotted seatrout	7	0.0	100.0	0.02	170	9.5	128	211	.
pigfish	6	0.0	100.0	0.02	177	5.7	160	193	124.0
spiny butterfly ray	6	0.0	100.0	0.02	516	28.0	430	640	.
northern stargazer	6	0.0	100.0	0.02	42	13.6	13	107	.
red drum	4	0.0	100.0	0.01	70	1.7	67	74	1.9
green goby	4	0.0	100.0	0.01	45	.	45	45	.
smooth dogfish	4	0.0	100.0	0.01	608	62.9	427	705	.
bluntnose stingray	4	0.0	100.0	0.01	215	4.4	206	225	340.3
lookdown	4	0.0	100.0	0.01	80	13.6	50	105	.
banded drum	4	0.0	100.0	0.01	161	11.3	131	186	27.3
striped cusk-eel	4	0.0	100.0	0.01	142	31.1	54	187	.
Atlantic cutlassfish	3	0.0	100.0	0.01	461	130.8	202	624	92.7
gizzard shad	3	0.0	100.0	0.01	136	6.0	130	142	.
seaboard goby	2	0.0	100.0	0.01	38	0.0	38	38	.
blue runner	2	0.0	100.0	0.01	145	10.5	134	155	.
rough scad	2	0.0	100.0	0.01	68	15.0	53	83	1.0
northern sennet	2	0.0	100.0	0.01	66	1.0	65	67	1.1
dwarf goatfish	2	0.0	100.0	0.01	53	4.0	49	57	.
striped bass	1	0.0	100.0	0.00	341	.	341	341	.
Spanish mackerel	1	0.0	100.0	0.00	164	.	164	164	.
Florida pompano	1	0.0	100.0	0.00	214	.	214	214	245.0
bluespotted cornetfish	1	0.0	100.0	0.00	380	.	380	380	15.5
sandbar shark	1	0.0	100.0	0.00	545	.	545	545	.
rougtail stingray	1	0.0	100.0	0.00	417	.	417	417	.
Atlantic stingray	1	0.0	100.0	0.00	495	.	495	495	.
northern sand lance	1	0.0	100.0	0.00	162	.	162	162	.
orange filefish	1	0.0	100.0	0.00	39	.	39	39	.
striped burrfish	1	0.0	100.0	0.00	181	.	181	181	.
chain pipefish	1	0.0	100.0	0.00	267	.	267	267	.
mottled mojarra	1	0.0	100.0	0.00	108	.	108	108	26.0
seaweed blenny	1	0.0	100.0	0.00	58	.	58	58	.
white shrimp	1	0.0	100.0	0.00	110	.	110	110	.
All Species Combined	414,748								

Tables 55-102. Species composition, number caught, catch per trawl, and length statistics by month and river for the river trawl survey.

Notes: A. The "Number of Species" notation at the top of each table includes each of the three categories of blue crabs (male, juvenile female, adult female) as a different "species".

B. Tables pooled for all rivers, for each month appear as follows:

January	Table 58	Page 157
February	Table 62	Page 159
March	Table 66	Page 161
April	Table 70	Page 163
May	Table 74	Page 165
June	Table 78	Page 167
July	Table 82	Page 169
August	Table 86	Page 171
September	Table 90	Page 173
October	Table 94	Page 175
November	Table 98	Page 177
December	Table 102	Page 179

C. Catch per trawl for fish species is based on the figure 'Number of Fish Trawls Made' while catch per trawl for blue crabs is based on the sum of 'Number of Fish Trawls Made' and 'Number of Additional Crab Trawls Made'.

Table 55.

Month - January									
River - James									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 21									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	2,174	55.8	55.8	271.75	64	1.2	14	118	5.9
Atlantic croaker	1,123	28.8	84.6	140.38	46	0.9	18	101	.
bay anchovy	259	6.6	91.2	32.38	59	1.2	39	89	.
white perch	74	1.9	93.1	9.25	156	4.7	61	249	.
white catfish	70	1.8	94.9	8.75	191	4.2	78	258	.
blue catfish	35	0.9	95.8	4.38	244	6.4	191	333	.
blue crab, juvenile female	35	0.9	96.7	4.38	35	3.0	18	114	.
Atlantic silverside	32	0.8	97.5	4.00	94	2.4	71	122	.
gizzard shad	29	0.7	98.3	3.63	155	9.9	80	274	.
blue crab, male	21	0.5	98.8	2.63	47	6.9	16	135	.
naked goby	15	0.4	99.2	1.88	38	2.5	30	71	.
channel catfish	10	0.3	99.5	1.25	269	7.0	242	309	.
striped bass	8	0.2	99.7	1.00	201	26.6	122	292	.
smallmouth flounder	3	0.1	99.7	0.38	59	2.3	55	63	.
Atlantic herring	2	0.1	99.8	0.25	309	4.5	304	313	.
Atlantic thread herring	2	0.1	99.8	0.25	72	2.5	69	74	.
American eel	2	0.1	99.9	0.25	175	10.5	164	185	.
summer flounder	1	0.0	99.9	0.13	196	.	196	196	.
Atlantic menhaden	1	0.0	99.9	0.13	103	.	103	103	.
feather blenny	1	0.0	100.0	0.13	45	.	45	45	.
skilletfish	1	0.0	100.0	0.13	52	.	52	52	.
All Species Combined	3,898								

Table 56.

Month - January									
River - Rappahannock									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 20									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	7,406	67.5	67.5	925.75	43	0.3	24	77	0.5
Atlantic croaker	1,857	16.9	84.4	232.13	36	0.5	13	97	0.4
hogchoker	1,065	9.7	94.1	133.13	80	2.7	37	168	7.3
white perch	323	2.9	97.1	40.38	123	2.5	78	282	.
Atlantic silverside	106	1.0	98.0	13.25	91	1.2	62	114	.
channel catfish	40	0.4	98.4	5.00	290	7.5	185	398	.
blue crab, male	39	0.4	98.8	4.88	65	5.8	22	144	.
blue crab, juvenile female	27	0.2	99.0	3.38	52	5.5	25	110	.
striped bass	26	0.2	99.2	3.25	107	3.5	76	155	.
blueback herring	24	0.2	99.5	3.00	85	2.1	62	117	.
gizzard shad	22	0.2	99.7	2.75	128	2.6	103	144	.
white catfish	10	0.1	99.8	1.25	207	12.2	157	282	.
skilletfish	9	0.1	99.8	1.13	40	1.6	34	46	.
Atlantic menhaden	6	0.1	99.9	0.75	84	3.1	73	90	.
alewife	4	0.0	99.9	0.50	117	10.1	99	139	.
naked goby	4	0.0	100.0	0.50	33	3.9	28	45	.
American shad	1	0.0	100.0	0.13	115	.	115	115	.
spotted hake	1	0.0	100.0	0.13	82	.	82	82	.
feather blenny	1	0.0	100.0	0.13	49	.	49	49	.
blue crab, adult female	1	0.0	100.0	0.13	133	.	133	133	.
All Species Combined	10,972								

Table 57.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - January									
River - York									
No. of Fish Trawls Made - 9									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 23									
bay anchovy	2,095	39.9	39.9	232.78	45	0.6	21	81	0.4
hogchoker	2,034	38.7	78.6	226.00	72	1.3	14	156	4.4
Atlantic croaker	654	12.5	91.1	72.67	37	0.7	14	87	.
white perch	132	2.5	93.6	14.67	167	2.7	70	234	.
blue crab, male	105	2.0	95.6	11.67	38	2.2	13	125	.
blue crab, juvenile female	84	1.6	97.2	9.33	34	1.9	11	121	.
white catfish	68	1.3	98.5	7.56	207	11.1	48	418	.
striped bass	21	0.4	98.9	2.33	131	5.4	86	195	.
American eel	9	0.2	99.1	1.00	204	30.9	104	419	.
summer flounder	7	0.1	99.2	0.78	207	6.1	178	220	.
northern pipefish	7	0.1	99.4	0.78	121	11.1	95	180	.
naked goby	7	0.1	99.5	0.78	34	3.3	24	48	.
Atlantic silverside	7	0.1	99.6	0.78	86	6.0	65	115	.
blackcheck tonguefish	7	0.1	99.8	0.78	90	9.7	67	129	.
oyster toadfish	3	0.1	99.8	0.33	126	10.2	107	142	.
Atlantic thread herring	2	0.0	99.8	0.22	77	3.5	73	80	.
skilletfish	2	0.0	99.9	0.22	54	16.0	38	70	.
butterfish	1	0.0	99.9	0.11	44	.	44	44	.
alewife	1	0.0	99.9	0.11	113	.	113	113	.
blueback herring	1	0.0	99.9	0.11	91	.	91	91	.
spot	1	0.0	100.0	0.11	137	.	137	137	.
spotted hake	1	0.0	100.0	0.11	138	.	138	138	.
northern stargazer	1	0.0	100.0	0.11	56	.	56	56	.
All Species Combined	5,250								

Table 58.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - January									
River - All - Pooled									
No. of Fish Trawls Made - 25									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 32									
bay anchovy	9,760	48.5	48.5	390.40	46	0.4	21	89	0.5
hogchoker	5,273	26.2	74.7	210.92	70	0.9	14	168	5.8
Atlantic croaker	3,634	18.1	92.8	145.36	39	0.4	13	101	0.4
white perch	529	2.6	95.4	21.16	144	2.0	61	282	.
blue crab, male	165	0.8	96.2	6.60	45	2.3	13	144	.
white catfish	148	0.7	97.0	5.92	200	5.5	48	418	.
blue crab, juvenile female	146	0.7	97.7	5.84	38	1.7	11	121	.
Atlantic silverside	145	0.7	98.4	5.80	92	1.0	62	122	.
striped bass	55	0.3	98.7	2.20	130	6.2	76	292	.
gizzard shad	51	0.3	98.9	2.04	144	6.0	80	274	.
channel catfish	50	0.2	99.2	2.00	286	6.2	185	398	.
blue catfish	35	0.2	99.4	1.40	244	6.4	191	333	.
naked goby	26	0.1	99.5	1.04	36	1.8	24	71	.
blueback herring	25	0.1	99.6	1.00	85	2.0	62	117	.
skilletfish	12	0.1	99.7	0.48	43	2.9	34	70	.
American eel	11	0.1	99.7	0.44	198	25.3	104	419	.
summer flounder	8	0.0	99.8	0.32	206	5.4	178	220	.
Atlantic menhaden	7	0.0	99.8	0.28	86	3.8	73	103	.
northern pipefish	7	0.0	99.8	0.28	121	11.1	95	180	.
blackcheck tonguefish	7	0.0	99.9	0.28	90	9.7	67	129	.
alewife	5	0.0	99.9	0.20	116	7.8	99	139	.
Atlantic thread herring	4	0.0	99.9	0.16	74	2.3	69	80	.
oyster toadfish	3	0.0	99.9	0.12	126	10.2	107	142	.
smallmouth flounder	3	0.0	99.9	0.12	59	2.3	55	63	.
Atlantic herring	2	0.0	100.0	0.08	309	4.5	304	313	.
spotted hake	2	0.0	100.0	0.08	110	28.0	82	138	.
feather blenny	1	0.0	100.0	0.04	47	2.0	45	49	.
butterfish	1	0.0	100.0	0.04	44	.	44	44	.
American shad	1	0.0	100.0	0.04	115	.	115	115	.
spot	1	0.0	100.0	0.04	137	.	137	137	.
northern stargazer	1	0.0	100.0	0.04	56	.	56	56	.
blue crab, adult female	1	0.0	100.0	0.04	133	.	133	133	.
All Species Combined	20,120								

Table 59.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - February									
River - James									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 23									
bay anchovy	25,831	94.7	94.7	3228.38	49	0.5	31	82	1.0
hogchoker	769	2.8	97.6	96.13	65	1.5	20	136	9.3
white perch	296	1.1	98.6	37.00	132	3.0	58	232	1.8
Atlantic croaker	176	0.6	99.3	22.00	40	1.6	13	150	410.0
gizzard shad	83	0.3	99.6	10.38	157	4.6	85	278	
white catfish	32	0.1	99.7	4.00	205	16.3	75	533	
channel catfish	22	0.1	99.8	2.75	301	6.6	238	380	
blackcheek tonguefish	9	0.0	99.8	1.13	83	8.3	53	137	
blue crab, male	8	0.0	99.8	1.00	59	18.7	8	139	
Atlantic menhaden	7	0.0	99.9	0.88	88	4.9	75	114	
striped bass	6	0.0	99.9	0.75	116	6.3	96	143	
Atlantic herring	5	0.0	99.9	0.63	303	5.3	287	320	
spotted hake	5	0.0	99.9	0.63	83	4.7	68	97	
blue crab, juvenile female	4	0.0	99.9	0.50	69	21.1	27	119	
American shad	3	0.0	100.0	0.38	116	8.4	99	126	
green goby	2	0.0	100.0	0.25	33	1.0	32	34	
naked goby	2	0.0	100.0	0.25	27	1.0	26	28	
Atlantic silverside	2	0.0	100.0	0.25	85	13.5	71	98	
blueback herring	1	0.0	100.0	0.13	78	.	78	78	
red drum	1	0.0	100.0	0.13	101	.	101	101	
northern pipefish	1	0.0	100.0	0.13	58	.	58	58	
smallmouth flounder	1	0.0	100.0	0.13	42	.	42	42	
blue crab, adult female	1	0.0	100.0	0.13	124	.	124	124	
All Species Combined	27,267								

Table 60.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - February									
River - Rappahannock									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 24									
bay anchovy	19,984	85.6	85.6	2498.00	42	0.4	22	76	0.7
Atlantic croaker	1,580	6.8	92.4	197.50	34	0.8	16	57	0.8
white perch	747	3.2	95.6	93.38	120	1.7	66	224	
striped bass	256	1.1	96.6	32.00	102	1.6	64	277	
hogchoker	213	0.9	97.6	26.63	71	2.2	24	122	
Atlantic menhaden	181	0.8	98.3	22.63	89	1.1	61	138	6.1
gizzard shad	152	0.7	99.0	19.00	135	1.3	104	243	
channel catfish	121	0.5	99.5	15.13	312	6.6	248	461	
white catfish	49	0.2	99.7	6.13	303	9.4	196	495	
blueback herring	18	0.1	99.8	2.25	78	1.7	61	90	
blue crab, juvenile female	14	0.1	99.9	1.75	31	3.0	13	56	
Atlantic silverside	6	0.0	99.9	0.75	85	3.5	75	99	
blue crab, male	6	0.0	99.9	0.75	35	9.1	14	75	
skilletfish	5	0.0	99.9	0.63	44	4.8	34	56	
spotted hake	4	0.0	99.9	0.50	82	4.0	75	93	
northern pipefish	4	0.0	100.0	0.50	121	5.2	112	130	
brown bullhead	3	0.0	100.0	0.38	231	15.3	211	261	
Atlantic herring	1	0.0	100.0	0.13	310	.	310	310	
bluegill	1	0.0	100.0	0.13	185	.	185	185	
naked goby	1	0.0	100.0	0.13	27	.	27	27	112.0
feather blenny	1	0.0	100.0	0.13	32	.	32	32	
blackcheek tonguefish	1	0.0	100.0	0.13	132	.	132	132	
oyster toadfish	1	0.0	100.0	0.13	114	.	114	114	
blue catfish	1	0.0	100.0	0.13	225	.	225	225	
All Species Combined	23,350								

Table 61.

Month - February River - York No. of Fish Trawls Made - 9 No. of Add'l Crab Trawls Made - 0 No. of Species - 21									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	48,175	94.1	94.1	5352.78	44	0.4	19	86	0.6
Atlantic croaker	1,162	2.3	96.4	129.11	40	0.7	22	78	0.9
white perch	839	1.6	98.1	93.22	183	3.2	63	282	.
hogchoker	691	1.4	99.4	76.78	69	1.9	28	162	.
white catfish	107	0.2	99.6	11.89	226	14.9	68	438	.
Atlantic menhaden	68	0.1	99.7	7.56	97	3.0	66	243	.
striped bass	51	0.1	99.8	5.67	150	8.8	73	518	2250.0
blue crab, juvenile female	31	0.1	99.9	3.44	27	2.1	9	54	.
gizzard shad	11	0.0	99.9	1.22	184	25.6	85	328	.
blue crab, male	7	0.0	99.9	0.78	32	5.7	10	56	.
blackcheek tonguefish	6	0.0	100.0	0.67	79	12.6	55	126	.
summer flounder	4	0.0	100.0	0.44	157	37.3	45	198	.
naked goby	4	0.0	100.0	0.44	24	1.5	21	27	.
Atlantic silverside	4	0.0	100.0	0.44	76	3.3	70	85	.
alewife	3	0.0	100.0	0.33	174	43.1	126	260	.
northern pipefish	2	0.0	100.0	0.22	138	4.0	134	142	.
oyster toadfish	2	0.0	100.0	0.22	235	65.5	169	300	.
blueback herring	1	0.0	100.0	0.11	107	.	107	107	.
Atlantic herring	1	0.0	100.0	0.11	273	.	273	273	.
sea lamprey	1	0.0	100.0	0.11	155	.	155	155	.
threadfin shad	1	0.0	100.0	0.11	71	.	71	71	.
All Species Combined	51,171								

Table 62.

Month - February River - All - Pooled No. of Fish Trawls Made - 25 No. of Add'l Crab Trawls Made - 0 No. of Species - 33									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	93,990	92.3	92.3	3759.60	45	0.3	19	86	0.8
Atlantic croaker	2,918	2.9	95.2	116.72	38	0.6	13	150	0.9
white perch	1,882	1.8	97.1	75.28	136	1.7	58	282	.
hogchoker	1,673	1.6	98.7	66.92	68	1.1	20	162	.
striped bass	313	0.3	99.0	12.52	110	2.2	64	518	2250.0
Atlantic menhaden	256	0.3	99.3	10.24	91	1.1	61	243	.
gizzard shad	246	0.2	99.5	9.84	145	2.2	85	328	.
white catfish	188	0.2	99.7	7.52	253	8.5	68	533	410.0
channel catfish	143	0.1	99.8	5.72	308	5.0	238	461	.
blue crab, juvenile female	49	0.0	99.9	1.96	32	2.7	9	119	.
blue crab, male	21	0.0	99.9	0.84	43	8.0	8	139	.
blueback herring	20	0.0	99.9	0.80	79	2.1	61	107	.
blackcheek tonguefish	16	0.0	99.9	0.64	84	7.1	53	137	.
Atlantic silverside	12	0.0	99.9	0.48	82	2.9	70	99	.
spotted hake	9	0.0	99.9	0.36	82	3.0	68	97	.
Atlantic herring	7	0.0	100.0	0.28	300	5.9	273	320	.
northern pipefish	7	0.0	100.0	0.28	117	10.7	58	142	.
naked goby	7	0.0	100.0	0.28	25	1.0	21	28	.
skilletfish	5	0.0	100.0	0.20	44	4.8	34	56	.
summer flounder	4	0.0	100.0	0.16	157	37.3	45	198	.
alewife	3	0.0	100.0	0.12	174	43.1	126	260	.
American shad	3	0.0	100.0	0.12	116	8.4	99	126	.
brown bullhead	3	0.0	100.0	0.12	231	15.3	211	261	.
oyster toadfish	3	0.0	100.0	0.12	194	55.2	114	300	.
green goby	2	0.0	100.0	0.08	33	1.0	32	34	.
red drum	1	0.0	100.0	0.04	101	.	101	101	.
sea lamprey	1	0.0	100.0	0.04	155	.	155	155	.
bluegill	1	0.0	100.0	0.04	185	.	185	185	112.0
feather blenny	1	0.0	100.0	0.04	32	.	32	32	.
smallmouth flounder	1	0.0	100.0	0.04	42	.	42	42	.
threadfin shad	1	0.0	100.0	0.04	71	.	71	71	.
blue catfish	1	0.0	100.0	0.04	225	.	225	225	.
blue crab, adult female	1	0.0	100.0	0.04	124	.	124	124	.
All Species Combined	101,788								

Table 63.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - March									
River - James									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 23									
bay anchovy	25,792	88.3	88.3	3224.00	36	0.7	40	83	1.0
hogchoker	2,413	8.3	96.6	301.63	74	1.4	27	113	9.1
Atlantic croaker	603	2.1	98.7	75.38	61	1.6	28	90	1.4
blue crab, juvenile female	96	0.3	99.0	12.00	39	2.1	21	124	.
blue crab, male	89	0.3	99.3	11.13	55	4.2	14	176	.
spotted hake	35	0.1	99.4	4.38	104	2.6	73	144	.
white perch	34	0.1	99.5	4.25	140	6.1	82	207	.
white catfish	27	0.1	99.6	3.38	171	10.4	56	277	.
channel catfish	21	0.1	99.7	2.63	260	7.7	164	331	.
blackcheek tonguefish	17	0.1	99.8	2.13	74	2.3	61	92	.
American eel	13	0.0	99.8	1.63	258	17.7	136	351	.
naked goby	13	0.0	99.8	1.63	41	1.8	30	50	.
blue catfish	9	0.0	99.9	1.13	210	15.4	129	257	.
Atlantic herring	8	0.0	99.9	1.00	302	3.1	287	314	.
Atlantic menhaden	7	0.0	99.9	0.88	120	14.0	82	195	.
skilletfish	6	0.0	100.0	0.75	55	2.4	45	62	.
gizzard shad	4	0.0	100.0	0.50	160	14.3	134	198	.
striped bass	3	0.0	100.0	0.38	299	165.3	132	630	.
sea lamprey	2	0.0	100.0	0.25	172	5.5	166	177	.
blue crab, adult female	2	0.0	100.0	0.25	157	10.5	146	167	.
summer flounder	1	0.0	100.0	0.13	365	.	365	365	.
green goby	1	0.0	100.0	0.13	44	.	44	44	.
oyster toadfish	1	0.0	100.0	0.13	45	.	45	45	.
All Species Combined	29,197								

Table 64.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - March									
River - Rappahannock									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 26									
bay anchovy	8,304	89.4	89.4	1038.00	44	0.4	28	68	0.7
Atlantic croaker	338	3.6	93.1	42.25	36	0.9	13	65	0.8
hogchoker	278	3.0	96.0	34.75	77	1.7	21	146	.
Atlantic menhaden	80	0.9	96.9	10.00	101	1.8	77	145	.
white perch	64	0.7	97.6	8.00	99	4.0	57	209	.
blue crab, male	49	0.5	98.1	6.13	51	5.4	14	161	.
blue crab, juvenile female	39	0.4	98.5	4.88	31	3.7	11	93	.
gizzard shad	33	0.4	98.9	4.13	134	1.5	115	149	.
spotted hake	29	0.3	99.2	3.63	85	2.5	54	106	.
white catfish	16	0.2	99.4	2.00	238	10.2	159	306	.
striped bass	8	0.1	99.5	1.00	124	12.2	90	190	.
channel catfish	8	0.1	99.6	1.00	275	10.9	245	322	.
blue catfish	7	0.1	99.6	0.88	215	15.9	154	276	.
green goby	5	0.1	99.7	0.63	37	3.0	27	44	.
skilletfish	5	0.1	99.7	0.63	34	3.5	25	46	.
northern pipefish	4	0.0	99.8	0.50	131	13.1	105	166	.
alewife	3	0.0	99.8	0.38	182	47.9	129	278	430.0
blueback herring	3	0.0	99.8	0.38	77	3.3	71	82	.
blackcheek tonguefish	3	0.0	99.9	0.38	83	33.0	45	149	.
summer flounder	2	0.0	99.9	0.25	189	15.5	173	204	.
Atlantic herring	2	0.0	99.9	0.25	284	10.5	273	294	.
oyster toadfish	2	0.0	99.9	0.25	44	2.5	41	46	.
blue crab, adult female	2	0.0	100.0	0.25	127	10.5	116	137	.
American eel	1	0.0	100.0	0.13	234	.	234	234	.
naked goby	1	0.0	100.0	0.13	39	.	39	39	.
conger eel	1	0.0	100.0	0.13	253	.	253	253	.
All Species Combined	9,287								

Table 65.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - March									
River - York									
No. of Fish Trawls Made - 9									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 25									
bay anchovy	20,222	86.7	86.7	2246.89	55	0.5	33	93	1.3
Atlantic croaker	2,152	9.2	95.9	239.11	41	0.8	19	67	0.7
Atlantic menhaden	485	2.1	98.0	53.89	99	1.4	71	208	
white catfish	199	0.9	98.8	22.11	175	16.2	50	489	
hogchoker	94	0.4	99.2	10.44	75	2.6	31	142	
white perch	79	0.3	99.6	8.78	161	4.4	73	243	
blueback herring	51	0.2	99.8	5.67	85	2.2	72	179	
spotted hake	11	0.0	99.8	1.22	104	4.5	76	126	
Atlantic silverside	9	0.0	99.9	1.00	88	4.8	70	120	
striped bass	8	0.0	99.9	0.89	115	12.6	76	172	
northern pipefish	4	0.0	99.9	0.44	116	18.8	61	141	
blue crab, male	3	0.0	99.9	0.33	39	1.5	36	41	
Atlantic herring	2	0.0	99.9	0.22	304	2.0	302	306	
gizzard shad	2	0.0	99.9	0.22	133	5.5	127	138	
blackcheck tonguefish	2	0.0	100.0	0.22	100	51.5	48	151	
blue crab, juvenile female	2	0.0	100.0	0.22	32	13.5	18	45	
alewife	1	0.0	100.0	0.11	126		126	126	
American shad	1	0.0	100.0	0.11	108		108	108	
spot	1	0.0	100.0	0.11	122		122	122	
American eel	1	0.0	100.0	0.11	117		117	117	
sea lamprey	1	0.0	100.0	0.11	164		164	164	
longnose gar	1	0.0	100.0	0.11	384		384	384	
spottail shiner	1	0.0	100.0	0.11	83		83	83	
feather blenny	1	0.0	100.0	0.11	87		87	87	
skilletfish	1	0.0	100.0	0.11	42		42	42	
All Species Combined	23,334								

Table 66.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - March									
River - All - Pooled									
No. of Fish Trawls Made - 25									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 33									
bay anchovy	54,318	87.9	87.9	2172.72	52	0.4	28	93	1.1
Atlantic croaker	3,093	5.0	92.9	123.72	43	0.8	13	90	0.9
hogchoker	2,785	4.5	97.4	111.40	75	1.0	21	146	9.1
Atlantic menhaden	572	0.9	98.3	22.88	100	1.2	71	208	
white catfish	242	0.4	98.7	9.68	184	10.0	50	489	
white perch	177	0.3	99.0	7.08	135	3.4	57	243	
blue crab, male	141	0.2	99.2	5.64	54	3.2	14	176	
blue crab, juvenile female	137	0.2	99.4	5.48	36	1.8	11	124	
spotted hake	75	0.1	99.6	3.00	97	2.0	54	144	
blueback herring	54	0.1	99.6	2.16	84	2.1	71	179	
gizzard shad	39	0.1	99.7	1.56	137	2.2	115	198	
channel catfish	29	0.0	99.7	1.16	264	6.3	164	331	
blackcheck tonguefish	22	0.0	99.8	0.88	78	5.6	45	151	
striped bass	19	0.0	99.8	0.76	148	27.7	76	630	
blue catfish	16	0.0	99.8	0.64	212	10.7	129	276	
American eel	15	0.0	99.9	0.60	247	17.9	117	351	
naked goby	14	0.0	99.9	0.56	40	1.7	30	50	
Atlantic herring	12	0.0	99.9	0.48	300	3.2	273	314	
skilletfish	12	0.0	99.9	0.48	45	3.5	25	62	
Atlantic silverside	9	0.0	99.9	0.36	88	4.8	70	120	
northern pipefish	8	0.0	100.0	0.32	124	11.0	61	166	
green goby	6	0.0	100.0	0.24	38	2.7	27	44	
alewife	4	0.0	100.0	0.16	168	36.7	126	278	430.0
blue crab, adult female	4	0.0	100.0	0.16	142	10.6	116	167	
summer flounder	3	0.0	100.0	0.12	247	59.5	173	365	
sea lamprey	3	0.0	100.0	0.12	169	4.0	164	177	
oyster toadfish	3	0.0	100.0	0.12	44	1.5	41	46	
American shad	1	0.0	100.0	0.04	108		108	108	
spot	1	0.0	100.0	0.04	122		122	122	
longnose gar	1	0.0	100.0	0.04	384		384	384	
spottail shiner	1	0.0	100.0	0.04	83		83	83	
feather blenny	1	0.0	100.0	0.04	87		87	87	
conger eel	1	0.0	100.0	0.04	253		253	253	
All Species Combined	61,818								

Table 67.

Month - April River - James No. of Fish Trawls Made - 8 No. of Add'l Crab Trawls Made - 0 No. of Species - 27									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	5,365	50.4	50.4	670.63	55	0.7	38	84	0.7
hogchoker	4,345	40.8	91.2	543.13	78	1.3	23	120	8.9
spotted hake	131	1.2	92.5	16.38	128	1.9	79	222	.
blue crab, juvenile female	131	1.2	93.7	16.38	41	1.6	8	130	.
Atlantic croaker	113	1.1	94.8	14.13	161	6.8	34	289	.
blue crab, male	103	1.0	95.7	12.88	49	2.8	14	140	.
spot	94	0.9	96.6	11.75	145	1.7	96	192	.
blue catfish	94	0.9	97.5	11.75	220	7.6	103	365	.
channel catfish	55	0.5	98.0	6.88	273	3.0	231	318	.
blackcheek tonguefish	39	0.4	98.4	4.88	93	4.7	52	156	.
summer flounder	37	0.3	98.7	4.63	227	7.4	159	334	.
white catfish	32	0.3	99.0	4.00	205	7.7	106	289	.
gizzard shad	28	0.3	99.3	3.50	273	6.0	210	330	.
white perch	24	0.2	99.5	3.00	162	8.3	83	242	.
American eel	20	0.2	99.7	2.50	233	10.8	134	304	.
blue crab, adult female	12	0.1	99.8	1.50	153	3.8	132	178	.
oyster toadfish	4	0.0	99.8	0.50	79	12.7	48	108	.
striped bass	3	0.0	99.9	0.38	154	3.8	148	161	.
naked goby	3	0.0	99.9	0.38	44	5.0	35	52	.
black seabass	2	0.0	99.9	0.25	64	4.0	60	68	.
northern pipefish	2	0.0	99.9	0.25	157	4.0	153	161	.
weakfish	1	0.0	100.0	0.13	156	.	156	156	.
Atlantic menhaden	1	0.0	100.0	0.13	192	.	192	192	.
brown bullhead	1	0.0	100.0	0.13	248	.	248	248	.
lined seahorse	1	0.0	100.0	0.13	48	.	48	48	221.0
feather blenny	1	0.0	100.0	0.13	74	.	74	74	.
smallmouth flounder	1	0.0	100.0	0.13	56	.	56	56	.
All Species Combined	10,643								

Table 68.

Month - April River - Rappahannock No. of Fish Trawls Made - 8 No. of Add'l Crab Trawls Made - 0 No. of Species - 19									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	1,507	44.3	44.3	188.38	77	1.3	23	136	8.9
Atlantic croaker	676	19.9	64.2	84.50	37	0.6	19	69	0.9
bay anchovy	456	13.4	77.6	57.00	46	0.7	35	83	.
blue crab, juvenile female	144	4.2	81.9	18.00	33	1.9	10	131	.
blue crab, male	143	4.2	86.1	17.88	43	2.7	10	134	.
white perch	135	4.0	90.1	16.88	167	3.3	83	235	.
white catfish	88	2.6	92.6	11.00	219	4.3	89	367	.
channel catfish	83	2.4	95.1	10.38	266	3.4	217	340	.
blue catfish	79	2.3	97.4	9.88	224	4.1	140	343	.
spotted hake	37	1.1	98.5	4.63	98	2.4	66	124	.
gizzard shad	22	0.6	99.1	2.75	83	1.7	62	94	.
American eel	10	0.3	99.4	1.25	233	14.6	176	292	.
northern pipefish	4	0.1	99.6	0.50	102	3.3	94	108	.
naked goby	4	0.1	99.7	0.50	42	7.4	28	56	.
blackcheek tonguefish	4	0.1	99.8	0.50	88	23.0	40	128	.
skilletfish	4	0.1	99.9	0.50	45	4.5	34	55	.
striped bass	1	0.0	99.9	0.13	339	.	339	339	.
green goby	1	0.0	100.0	0.13	43	.	43	43	.
oyster toadfish	1	0.0	100.0	0.13	95	.	95	95	.
All Species Combined	3,399								

Table 69.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - April									
River - York									
No. of Fish Trawls Made - 9									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 21									
bay anchovy	2,576	60.0	60.0	286.22	51	0.5	34	90	0.7
hogchoker	496	11.5	71.5	55.11	84	1.3	34	193	
Atlantic croaker	488	11.4	82.9	54.22	35	1.2	16	72	0.8
blue crab, male	264	6.1	89.0	29.33	40	1.9	12	170	
blue crab, juvenile female	201	4.7	93.7	22.33	36	1.9	12	124	
spotted hake	104	2.4	96.1	11.56	106	2.0	56	193	
Atlantic menhaden	73	1.7	97.8	8.11	118	3.7	81	250	
blackcheek tonguefish	29	0.7	98.5	3.22	78	5.2	44	155	
white catfish	18	0.4	98.9	2.00	137	23.1	64	400	
white perch	13	0.3	99.2	1.44	191	12.2	72	253	
oyster toadfish	8	0.2	99.4	0.89	170	35.0	47	282	
summer flounder	7	0.2	99.6	0.78	190	3.8	174	199	
American eel	6	0.1	99.7	0.67	282	33.0	152	381	
blueback herring	2	0.0	99.8	0.22	295	5.5	289	300	
striped bass	2	0.0	99.8	0.22	133	4.5	128	137	
northern pipefish	2	0.0	99.9	0.22	133	10.0	123	143	
seaboard goby	2	0.0	99.9	0.22	36	0.5	35	36	
Atlantic herring	1	0.0	99.9	0.11	47		47	47	
longnose gar	1	0.0	100.0	0.11	698		698	698	
naked goby	1	0.0	100.0	0.11	50		50	50	
blue crab, adult female	1	0.0	100.0	0.11	134		134	134	
All Species Combined	4,295								

Table 70.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - April									
River - All - Pooled									
No. of Fish Trawls Made - 25									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 33									
bay anchovy	8,397	45.8	45.8	335.88	51	0.4	34	90	0.7
hogchoker	6,348	34.6	80.4	253.92	81	0.8	23	193	8.9
Atlantic croaker	1,277	7.0	87.4	51.08	72	3.5	16	289	0.8
blue crab, male	510	2.8	90.2	20.40	43	1.4	10	170	
blue crab, juvenile female	476	2.6	92.8	19.04	37	1.0	8	131	
spotted hake	272	1.5	94.2	10.88	116	1.4	56	222	
blue catfish	173	0.9	95.2	6.92	223	3.9	103	365	
white perch	172	0.9	96.1	6.88	168	3.0	72	253	
white catfish	138	0.8	96.9	5.52	205	4.9	64	400	
channel catfish	138	0.8	97.6	5.52	269	2.3	217	340	
spot	94	0.5	98.1	3.76	145	1.7	96	192	
Atlantic menhaden	74	0.4	98.5	2.96	119	3.8	81	250	
blackcheek tonguefish	72	0.4	98.9	2.88	87	3.6	40	156	
gizzard shad	50	0.3	99.2	2.00	189	13.9	62	330	
summer flounder	44	0.2	99.4	1.76	221	6.6	159	334	
American eel	36	0.2	99.6	1.44	241	9.2	134	381	
oyster toadfish	13	0.1	99.7	0.52	136	24.6	47	282	
blue crab, adult female	13	0.1	99.8	0.52	152	3.8	132	178	
northern pipefish	8	0.0	99.8	0.32	123	9.2	94	161	
naked goby	8	0.0	99.9	0.32	44	3.9	28	56	
striped bass	6	0.0	99.9	0.24	178	32.6	128	339	
skilletfish	4	0.0	99.9	0.16	45	4.5	34	55	
black seabass	2	0.0	99.9	0.08	64	4.0	60	68	
blueback herring	2	0.0	99.9	0.08	295	5.5	289	300	
seaboard goby	2	0.0	100.0	0.08	36	0.5	35	36	
weakfish	1	0.0	100.0	0.04	156		156	156	
Atlantic herring	1	0.0	100.0	0.04	47		47	47	
longnose gar	1	0.0	100.0	0.04	698		698	698	
brown bullhead	1	0.0	100.0	0.04	248		248	248	221.0
lined seahorse	1	0.0	100.0	0.04	48		48	48	
green goby	1	0.0	100.0	0.04	43		43	43	
feather blenny	1	0.0	100.0	0.04	74		74	74	
smallmouth flounder	1	0.0	100.0	0.04	56		56	56	
All Species Combined	18,337								

Table 71.

Month - May River - James No. of Fish Trawls Made - 6 No. of Add'l Crab Trawls Made - 4 No. of Species - 22									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	1,569	60.2	60.2	261.50	80	2.0	28	137	10.9
Atlantic croaker	522	20.0	80.2	87.00	125	4.0	22	264	.
bay anchovy	130	5.0	85.2	21.67	50	1.0	38	78	.
American eel	81	3.1	88.3	13.50	211	5.0	118	314	.
blue crab, male	66	2.5	90.8	6.60	59	4.2	21	146	.
spotted hake	57	2.2	93.0	9.50	154	2.6	79	212	.
blue crab, juvenile female	53	2.0	95.0	5.30	51	3.5	13	114	.
blackcheek tonguefish	41	1.6	96.6	6.83	132	4.5	51	168	.
spot	23	0.9	97.5	3.83	130	12.0	22	183	.
weakfish	18	0.7	98.2	3.00	152	3.6	116	180	.
oyster toadfish	18	0.7	98.8	3.00	188	14.3	76	299	.
summer flounder	9	0.3	99.2	1.50	213	6.9	187	253	.
blue crab, adult female	8	0.3	99.5	0.80	135	4.2	116	150	.
gizzard shad	4	0.2	99.7	0.67	304	13.9	280	336	.
white catfish	2	0.1	99.7	0.33	216	22.5	193	238	.
black seabass	1	0.0	99.8	0.17	99	.	99	99	.
Atlantic herring	1	0.0	99.8	0.17	239	.	239	239	.
striped bass	1	0.0	99.8	0.17	159	.	159	159	.
white perch	1	0.0	99.9	0.17	154	.	154	154	.
naked goby	1	0.0	99.9	0.17	48	.	48	48	.
silver perch	1	0.0	100.0	0.17	162	.	162	162	.
blue catfish	1	0.0	100.0	0.17	175	.	175	175	.
All Species Combined	2,608								

Table 72.

Month - May River - Rappahannock No. of Fish Trawls Made - 7 No. of Add'l Crab Trawls Made - 5 No. of Species - 16									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	986	39.5	39.5	140.86	93	1.3	37	162	.
Atlantic croaker	482	19.3	58.7	68.86	51	4.2	21	259	.
blue crab, male	354	14.2	72.9	29.50	53	1.5	12	161	.
blue crab, juvenile female	214	8.6	81.5	17.83	48	1.6	15	110	.
bay anchovy	168	6.7	88.2	24.00	50	0.5	38	68	.
spotted hake	128	5.1	93.3	18.29	133	1.7	80	194	.
American eel	44	1.8	95.1	6.29	256	13.9	151	618	.
white catfish	39	1.6	96.6	5.57	214	7.0	124	312	.
naked goby	27	1.1	97.7	3.86	46	1.4	34	60	.
white perch	18	0.7	98.4	2.57	171	10.4	100	244	.
blackcheek tonguefish	12	0.5	98.9	1.71	78	9.0	52	154	.
oyster toadfish	7	0.3	99.2	1.00	186	32.6	128	324	.
blue crab, adult female	7	0.3	99.5	0.58	155	3.5	141	163	.
channel catfish	6	0.2	99.7	0.86	290	15.0	248	327	.
blue catfish	6	0.2	100.0	0.86	225	12.7	181	252	.
northern scarabin	1	0.0	100.0	0.14	47	.	47	47	.
All Species Combined	2,499								

Table 73.

Month - May River - York No. of Fish Trawls Made - 8 No. of Add'l Crab Trawls Made - 4 No. of Species - 16									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	1,931	57.0	57.0	241.38	90	1.7	37	166	21.9
Atlantic croaker	879	25.9	82.9	109.88	138	2.9	28	270	.
blue crab, male	200	5.9	88.8	16.67	50	1.9	18	139	.
blue crab, juvenile female	136	4.0	92.9	11.33	50	1.8	19	120	.
spotted hake	79	2.3	95.2	9.88	157	1.8	103	212	.
white catfish	52	1.5	96.7	6.50	134	10.8	55	338	.
blackcheek tonguefish	37	1.1	97.8	4.63	123	4.3	62	154	.
oyster toadfish	33	1.0	98.8	4.13	199	13.1	86	329	.
bay anchovy	26	0.8	99.6	3.25	49	0.8	37	55	.
white perch	5	0.1	99.7	0.63	206	10.9	179	240	.
summer flounder	2	0.1	99.8	0.25	154	111.0	43	265	.
weakfish	2	0.1	99.8	0.25	156	19.0	137	175	.
American eel	2	0.1	99.9	0.25	195	37.0	158	232	.
northern searobin	2	0.1	99.9	0.25	52	7.5	44	59	.
striped bass	1	0.0	100.0	0.13	153	.	153	153	.
Atlantic menhaden	1	0.0	100.0	0.13	126	.	126	126	.
All Species Combined	3,388								

Table 74.

Month - May River - All - Pooled No. of Fish Trawls Made - 21 No. of Add'l Crab Trawls Made - 13 No. of Species - 25									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	4,486	52.8	52.8	213.62	89	1.0	28	166	17.1
Atlantic croaker	1,883	22.2	75.0	89.67	125	2.3	21	270	.
blue crab, male	620	7.3	82.3	18.24	53	1.1	12	161	.
blue crab, juvenile female	403	4.7	87.0	11.85	49	1.1	13	120	.
bay anchovy	324	3.8	90.8	15.43	50	0.4	37	78	.
spotted hake	264	3.1	93.9	12.57	145	1.3	79	212	.
American eel	127	1.5	95.4	6.05	227	6.1	118	618	.
white catfish	93	1.1	96.5	4.43	169	7.8	55	338	.
blackcheek tonguefish	90	1.1	97.6	4.29	121	3.5	51	168	.
oyster toadfish	58	0.7	98.3	2.76	194	9.4	76	329	.
naked goby	28	0.3	98.6	1.33	46	1.3	34	60	.
white perch	24	0.3	98.9	1.14	178	8.6	100	244	.
spot	23	0.3	99.2	1.10	130	12.0	22	183	.
weakfish	20	0.2	99.4	0.95	152	3.6	116	180	.
blue crab, adult female	15	0.2	99.6	0.44	145	3.8	116	163	.
summer flounder	11	0.1	99.7	0.52	202	17.5	43	265	.
blue catfish	7	0.1	99.8	0.33	217	12.8	175	252	.
channel catfish	6	0.1	99.8	0.29	290	15.0	248	327	.
gizzard shad	4	0.0	99.9	0.19	304	13.9	280	336	.
northern searobin	3	0.0	99.9	0.14	50	4.6	44	59	.
striped bass	2	0.0	100.0	0.10	156	3.0	153	159	.
black seabass	1	0.0	100.0	0.05	99	.	99	99	.
Atlantic herring	1	0.0	100.0	0.05	239	.	239	239	.
Atlantic menhaden	1	0.0	100.0	0.05	126	.	126	126	.
silver perch	1	0.0	100.0	0.05	162	.	162	162	.
All Species Combined	8,495								

Table 75.

Month - June									
River - James									
No. of Fish Trawls Made - 6									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 22									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Atlantic croaker	1,078	52.3	52.3	179.67	149	3.3	60	305	.
bay anchovy	280	13.6	65.9	46.67	63	1.0	46	85	.
hogchoker	261	12.7	78.5	43.50	72	2.1	30	152	.
blue crab, juvenile female	94	4.6	83.1	9.40	65	2.4	14	134	.
blue crab, male	93	4.5	87.6	9.30	79	4.0	23	182	.
white perch	67	3.2	90.8	11.17	40	6.7	16	222	.
American eel	54	2.6	93.5	9.00	266	6.2	168	345	.
weakfish	43	2.1	95.5	7.17	165	3.0	132	215	.
spot	31	1.5	97.0	5.17	156	7.1	33	195	.
blue crab, adult female	12	0.6	97.6	1.20	147	5.7	100	171	.
spotted hake	9	0.4	98.1	1.50	184	4.8	164	212	.
white catfish	8	0.4	98.4	1.33	237	10.2	194	281	.
oyster toadfish	7	0.3	98.8	1.17	148	29.5	55	264	.
striped bass	6	0.3	99.1	1.00	322	14.2	300	390	.
gizzard shad	4	0.2	99.3	0.67	300	9.9	280	323	.
channel catfish	3	0.1	99.4	0.50	302	17.7	280	337	.
blackcheek tonguefish	3	0.1	99.6	0.50	76	2.2	72	79	.
silver perch	3	0.1	99.7	0.50	163	9.7	145	178	.
summer flounder	2	0.1	99.8	0.33	243	31.5	211	274	.
common carp	2	0.1	99.9	0.33	545	5.0	540	550	.
butterfish	1	0.0	100.0	0.17	45	.	45	45	.
feather blenny	1	0.0	100.0	0.17	73	.	73	73	.
All Species Combined	2,062								

Table 76.

Month - June									
River - Rappahannock									
No. of Fish Trawls Made - 7									
No. of Add'l Crab Trawls Made - 5									
No. of Species - 13									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	1,627	65.7	65.7	232.43	69	0.8	47	88	3.5
Atlantic croaker	498	20.1	85.9	71.14	153	4.8	83	263	.
hogchoker	109	4.4	90.3	15.57	92	2.2	32	169	.
blue crab, male	82	3.3	93.6	6.83	71	2.9	24	154	.
blue crab, juvenile female	58	2.3	95.9	4.83	62	2.3	26	108	.
white perch	34	1.4	97.3	4.86	136	4.4	95	196	.
spot	17	0.7	98.0	2.43	68	13.1	21	178	.
blue catfish	16	0.6	98.6	2.29	185	10.3	128	263	.
channel catfish	13	0.5	99.2	1.86	297	7.3	262	342	.
white catfish	12	0.5	99.6	1.71	238	21.2	107	321	.
blue crab, adult female	7	0.3	99.9	0.58	139	4.1	120	152	.
striped bass	1	0.0	100.0	0.14	184	.	184	184	.
striped anchovy	1	0.0	100.0	0.14	101	.	101	101	.
All Species Combined	2,475								

Table 77.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - June									
River - York									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 19									
Atlantic croaker	1,222	55.2	55.2	174.57	142	2.8	46	284	2.6
hogchoker	598	27.0	82.2	85.43	85	2.2	29	157	61.6
blue crab, male	145	6.5	88.7	12.08	79	2.8	20	156	.
blue crab, juvenile female	115	5.2	93.9	9.58	64	1.9	17	121	.
spot	27	1.2	95.1	3.86	131	9.5	38	201	.
weakfish	26	1.2	96.3	3.71	170	4.3	133	229	.
bay anchovy	14	0.6	96.9	2.00	64	3.3	38	85	.
white catfish	12	0.5	97.5	1.71	239	10.9	179	296	.
blue crab, adult female	12	0.5	98.0	1.00	149	3.4	136	172	.
spotted hake	11	0.5	98.5	1.57	168	5.2	135	196	.
American eel	8	0.4	98.9	1.14	205	25.5	122	285	.
blackcheek tonguefish	7	0.3	99.2	1.00	123	7.9	97	146	.
oyster toadfish	6	0.3	99.5	0.86	163	24.2	98	257	.
summer flounder	3	0.1	99.6	0.43	81	3.5	75	87	.
Atlantic menhaden	3	0.1	99.7	0.43	165	20.4	125	191	.
white perch	2	0.1	99.8	0.29	220	3.0	217	223	.
naked goby	2	0.1	99.9	0.29	49	6.0	43	55	.
striped bass	1	0.0	100.0	0.14	136	.	136	136	.
conger eel	1	0.0	100.0	0.14	309	.	309	309	.
All Species Combined	2,215								

Table 78 .

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - June									
River - All - Pooled									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 13									
No. of Species - 27									
Atlantic croaker	2,798	41.4	41.4	139.90	146	2.0	46	305	2.6
bay anchovy	1,921	28.5	69.9	96.05	66	0.6	38	88	3.5
hogchoker	968	14.3	84.2	48.40	83	1.3	29	169	61.6
blue crab, male	320	4.7	89.0	9.41	77	1.9	20	182	.
blue crab, juvenile female	267	4.0	92.9	7.85	64	1.3	14	134	.
white perch	103	1.5	94.4	5.15	75	6.7	16	223	.
spot	75	1.1	95.6	3.75	127	6.6	21	201	.
weakfish	69	1.0	96.6	3.45	167	2.4	132	229	.
American eel	62	0.9	97.5	3.10	258	6.7	122	345	.
white catfish	32	0.5	98.0	1.60	238	9.0	107	321	.
blue crab, adult female	31	0.5	98.4	0.91	146	2.7	100	172	.
spotted hake	20	0.3	98.7	1.00	175	3.9	135	212	.
channel catfish	16	0.2	99.0	0.80	298	6.5	262	342	.
blue catfish	16	0.2	99.2	0.80	185	10.3	128	263	.
oyster toadfish	13	0.2	99.4	0.65	155	18.7	55	264	.
blackcheek tonguefish	10	0.1	99.5	0.50	109	9.0	72	146	.
striped bass	8	0.1	99.7	0.40	282	28.9	136	390	.
summer flounder	5	0.1	99.7	0.25	146	40.8	75	274	.
gizzard shad	4	0.1	99.8	0.20	300	9.9	280	323	.
Atlantic menhaden	3	0.0	99.8	0.15	165	20.4	125	191	.
silver perch	3	0.0	99.9	0.15	163	9.7	145	178	.
common carp	2	0.0	99.9	0.10	545	5.0	540	550	.
naked goby	2	0.0	99.9	0.10	49	6.0	43	55	.
butterfish	1	0.0	100.0	0.05	45	.	45	45	.
striped anchovy	1	0.0	100.0	0.05	101	.	101	101	.
feather blenny	1	0.0	100.0	0.05	73	.	73	73	.
conger eel	1	0.0	100.0	0.05	309	.	309	309	.
All Species Combined	6,752								

Table 79.

Month - July									
River - James									
No. of Fish Trawls Made - 6									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 22									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Atlantic croaker	882	35.6	35.6	147.00	130	1.7	77	284	.
bay anchovy	852	34.3	69.9	142.00	69	0.7	48	94	.
hogchoker	238	9.6	79.5	39.67	79	2.0	41	142	.
spot	187	7.5	87.0	31.17	109	1.2	68	181	.
blue crab, male	101	4.1	91.1	10.10	91	3.3	37	175	.
blue crab, juvenile female	73	2.9	94.0	7.30	69	2.2	28	123	.
weakfish	71	2.9	96.9	11.83	89	9.4	21	243	.
summer flounder	19	0.8	97.7	3.17	257	20.3	153	476	204.2
white perch	15	0.6	98.3	2.50	77	15.7	43	228	.
oyster toadfish	10	0.4	98.7	1.67	144	9.9	106	185	.
American eel	7	0.3	99.0	1.17	251	8.6	212	279	.
striped bass	4	0.2	99.1	0.67	230	67.1	38	332	383.3
northern pipefish	4	0.2	99.3	0.67	171	26.3	141	250	.
blackcheck tonguefish	4	0.2	99.4	0.67	115	4.4	103	124	.
silver perch	4	0.2	99.6	0.67	159	5.5	145	172	.
blue crab, adult female	3	0.1	99.7	0.30	128	0.3	128	129	.
black seabass	2	0.1	99.8	0.33	125	13.5	111	138	.
butterfish	1	0.0	99.8	0.17	122	.	122	122	.
white catfish	1	0.0	99.9	0.17	258	.	258	258	.
gizzard shad	1	0.0	99.9	0.17	339	.	339	339	.
feather blenny	1	0.0	100.0	0.17	93	.	93	93	.
clearnose skate	1	0.0	100.0	0.17	483	.	483	483	.
All Species Combined	2.481								

Table 80.

Month - July									
River - Rappahannock									
No. of Fish Trawls Made - 7									
No. of Add'l Crab Trawls Made - 5									
No. of Species - 15									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	669	34.2	34.2	95.57	76	0.7	55	91	3.8
spot	421	21.5	55.7	60.14	98	2.3	10	150	11.1
Atlantic croaker	293	15.0	70.6	41.86	138	2.7	91	265	22.4
hogchoker	208	10.6	81.3	29.71	86	2.4	40	140	8.8
blue crab, male	181	9.2	90.5	15.08	79	1.7	23	152	.
blue crab, juvenile female	126	6.4	96.9	10.50	71	1.8	32	133	.
white perch	29	1.5	98.4	4.14	152	3.8	116	205	.
weakfish	6	0.3	98.7	0.86	211	5.7	185	228	.
white catfish	6	0.3	99.0	0.86	281	30.5	211	398	.
channel catfish	5	0.3	99.3	0.71	293	28.8	228	397	.
striped bass	4	0.2	99.5	0.57	169	127.6	32	552	2025.0
American eel	4	0.2	99.7	0.57	258	22.9	219	315	.
blue catfish	3	0.2	99.8	0.43	153	3.7	146	157	.
blue crab, adult female	2	0.1	99.9	0.17	145	0.5	144	145	.
striped anchovy	1	0.1	100.0	0.14	47	.	47	47	.
All Species Combined	1.958								

Table 81.

Month - July River - York No. of Fish Trawls Made - 8 No. of Add'l Crab Trawls Made - 4 No. of Species - 16									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Atlantic croaker	1,348	63.8	63.8	168.50	125	1.8	30	274	45.2
bay anchovy	247	11.7	75.5	30.88	63	0.9	45	94	.
hogchoker	178	8.4	83.9	22.25	68	2.6	29	151	.
white catfish	83	3.9	87.9	10.38	300	5.9	162	419	17.9
blue crab, male	78	3.7	91.6	6.50	85	3.2	30	153	.
striped bass	61	2.9	94.5	7.63	47	0.7	32	60	.
blue crab, juvenile female	52	2.5	96.9	4.33	69	2.8	30	117	.
spot	23	1.1	98.0	2.88	117	4.7	58	139	.
white perch	11	0.5	98.5	1.38	246	6.3	208	278	313.9
oyster toadfish	10	0.5	99.0	1.25	131	11.9	95	224	.
weakfish	7	0.3	99.3	0.88	221	15.0	179	270	.
blackcheck tonguefish	6	0.3	99.6	0.75	108	2.2	98	113	.
American eel	3	0.1	99.8	0.38	146	32.3	82	183	.
longnose gar	2	0.1	99.9	0.25	738	38.5	699	776	1400.0
blue crab, adult female	2	0.1	100.0	0.17	119	3.5	115	122	.
gizzard shad	1	0.0	100.0	0.13	323	.	323	323	.
All Species Combined	2,112								

Table 82.

Month - July River - All - Pooled No. of Fish Trawls Made - 21 No. of Add'l Crab Trawls Made - 13 No. of Species - 26									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Atlantic croaker	2,523	38.5	38.5	120.14	128	1.2	30	284	31.8
bay anchovy	1,768	27.0	65.5	84.19	69	0.5	45	94	3.8
spot	631	9.6	75.1	30.05	106	1.1	10	181	11.1
hogchoker	624	9.5	84.7	29.71	76	1.4	29	151	8.8
blue crab, male	360	5.5	90.2	10.59	84	1.5	23	175	.
blue crab, juvenile female	251	3.8	94.0	7.38	70	1.2	28	133	.
white catfish	90	1.4	95.4	4.29	298	5.8	162	419	17.9
weakfish	84	1.3	96.6	4.00	109	9.5	21	270	.
striped bass	69	1.1	97.7	3.29	65	9.5	32	552	793.8
white perch	55	0.8	98.5	2.62	150	9.2	43	278	313.9
oyster toadfish	20	0.3	98.8	0.95	137	7.7	95	224	.
summer flounder	19	0.3	99.1	0.90	257	20.3	153	476	204.2
American eel	14	0.2	99.3	0.67	230	15.3	82	315	.
blackcheck tonguefish	10	0.2	99.5	0.48	111	2.3	98	124	.
blue crab, adult female	7	0.1	99.6	0.21	130	4.1	115	145	.
channel catfish	5	0.1	99.7	0.24	293	28.8	228	397	.
northern pipefish	4	0.1	99.7	0.19	171	26.3	141	250	.
silver perch	4	0.1	99.8	0.19	159	5.5	145	172	.
blue catfish	3	0.0	99.8	0.14	153	3.7	146	157	.
black seabass	2	0.0	99.9	0.10	125	13.5	111	138	.
gizzard shad	2	0.0	99.9	0.10	331	8.0	323	339	.
longnose gar	2	0.0	99.9	0.10	738	38.5	699	776	1400.0
butterfish	1	0.0	100.0	0.05	122	.	122	122	.
striped anchovy	1	0.0	100.0	0.05	47	.	47	47	.
feather blenny	1	0.0	100.0	0.05	93	.	93	93	.
clearnose skate	1	0.0	100.0	0.05	483	.	483	483	.
All Species Combined	6,551								

Table 83.

Month - August River - James No. of Fish Trawls Made - 6 No. of Add'l Crab Trawls Made - 4 No. of Species - 26									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	511	29.6	29.6	85.17	45	1.4	14	74	0.3
spot	365	21.1	50.7	60.83	119	1.8	88	196	.
hogchoker	315	18.2	68.9	52.50	83	2.4	40	162	.
Atlantic croaker	279	16.1	85.0	46.50	139	1.8	100	265	.
white catfish	117	6.8	91.8	19.50	193	8.1	115	281	.
weakfish	38	2.2	94.0	6.33	87	9.2	36	220	.
blue crab, male	26	1.5	95.5	2.60	82	6.6	37	156	.
blue crab, juvenile female	14	0.8	96.3	1.40	76	7.5	30	109	.
butterfish	9	0.5	96.8	1.50	33	3.3	16	51	.
blue crab, adult female	8	0.5	97.3	0.80	142	4.2	124	159	.
blackcheek tonguefish	7	0.4	97.7	1.17	109	2.7	103	124	.
summer flounder	6	0.3	98.0	1.00	258	38.2	178	412	.
scup	5	0.3	98.3	0.83	95	5.4	82	111	.
northern searobin	5	0.3	98.6	0.83	141	6.1	121	155	.
inland silverside	5	0.3	98.9	0.83	56	1.5	53	62	.
inshore lizardfish	5	0.3	99.2	0.83	157	5.0	139	167	.
American eel	3	0.2	99.4	0.50	300	7.7	285	309	.
northern pipefish	2	0.1	99.5	0.33	157	15.0	142	172	.
oyster toadfish	2	0.1	99.6	0.33	96	15.5	80	111	.
black seabass	1	0.1	99.7	0.17	183	.	183	183	.
pigfish	1	0.1	99.7	0.17	169	.	169	169	.
windowpane	1	0.1	99.8	0.17	176	.	176	176	.
southern stingray	1	0.1	99.8	0.17	173	.	173	173	.
conger eel	1	0.1	99.9	0.17	385	.	385	385	.
lookdown	1	0.1	99.9	0.17	51	.	51	51	.
northern stargazer	1	0.1	100.0	0.17	28	.	28	28	.
All Species Combined	1.729								

Table 84.

Month - August River - Rappahannock No. of Fish Trawls Made - 7 No. of Add'l Crab Trawls Made - 5 No. of Species - 16									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	2,110	65.9	65.9	301.43	61	1.1	35	84	2.3
spot	598	18.7	84.6	85.43	109	1.0	75	169	.
hogchoker	340	10.6	95.2	48.57	87	2.1	51	131	11.7
blue crab, juvenile female	63	2.0	97.2	5.25	35	5.1	5	125	.
blue crab, male	31	1.0	98.1	2.58	98	5.5	27	151	.
Atlantic croaker	12	0.4	98.5	1.71	172	12.6	142	270	.
blue crab, adult female	12	0.4	98.9	1.00	158	2.4	144	170	247.5
weakfish	7	0.2	99.1	1.00	59	9.5	25	97	.
striped bass	7	0.2	99.3	1.00	65	1.8	60	73	.
white perch	6	0.2	99.5	0.86	138	7.8	110	157	.
American eel	6	0.2	99.7	0.86	287	24.2	185	357	.
white catfish	5	0.2	99.8	0.71	276	48.7	201	460	.
blue catfish	2	0.1	99.9	0.29	210	32.5	177	242	310.0
summer flounder	1	0.0	99.9	0.14	224	.	224	224	126.0
oyster toadfish	1	0.0	100.0	0.14	132	.	132	132	.
Atlantic cutlassfish	1	0.0	100.0	0.14	378	.	378	378	30.5
All Species Combined	3.202								

Table 85.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	1,241	31.6	31.6	155.13	84	1.4	33	154	40.0
weakfish	1,166	29.7	61.3	145.75	77	4.3	14	276	1.8
bay anchovy	658	16.8	78.1	82.25	50	1.1	15	84	2.5
Atlantic croaker	520	13.2	91.3	65.00	148	1.6	97	257	.
blue crab, male	111	2.8	94.2	9.25	70	3.8	6	157	.
spot	100	2.5	96.7	12.50	163	3.2	116	226	.
blue crab, juvenile female	56	1.4	98.1	4.67	53	4.0	6	110	.
blue crab, adult female	15	0.4	98.5	1.25	151	3.6	124	187	.
silver perch	14	0.4	98.9	1.75	180	3.7	161	205	.
northern kingfish	11	0.3	99.2	1.38	33	2.6	20	51	.
blackcheek tonguefish	9	0.2	99.4	1.13	118	2.3	110	130	.
oyster toadfish	8	0.2	99.6	1.00	217	29.3	111	300	.
harvestfish	4	0.1	99.7	0.50	22	3.8	13	28	.
striped bass	4	0.1	99.8	0.50	73	5.0	64	87	.
white catfish	3	0.1	99.9	0.38	242	49.2	166	334	.
Atlantic menhaden	2	0.1	99.9	0.25	164	5.5	158	169	.
longnose gar	1	0.0	99.9	0.13	740	.	740	740	.
striped anchovy	1	0.0	100.0	0.13	86	.	86	86	.
Atlantic cutlassfish	1	0.0	100.0	0.13	506	.	506	506	.
All Species Combined	3,925								

Table 86.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	3,279	37.0	37.0	156.14	52	0.8	14	84	2.1
hogchoker	1,896	21.4	58.4	90.29	84	1.1	33	162	34.5
weakfish	1,211	13.7	72.1	57.67	78	3.9	14	276	1.8
spot	1,063	12.0	84.1	50.62	124	1.5	75	226	.
Atlantic croaker	811	9.2	93.3	38.62	145	1.3	97	270	247.5
blue crab, male	168	1.9	95.2	4.94	77	3.0	6	157	.
blue crab, juvenile female	133	1.5	96.7	3.91	47	3.2	5	125	.
white catfish	125	1.4	98.1	5.95	210	11.2	115	460	310.0
blue crab, adult female	35	0.4	98.5	1.03	151	2.2	124	187	.
blackcheek tonguefish	16	0.2	98.7	0.76	114	2.0	103	130	.
silver perch	14	0.2	98.8	0.67	180	3.7	161	205	.
striped bass	11	0.1	98.9	0.52	68	2.3	60	87	.
northern kingfish	11	0.1	99.1	0.52	33	2.6	20	51	.
oyster toadfish	11	0.1	99.2	0.52	187	26.2	80	300	.
butterfish	9	0.1	99.3	0.43	33	3.3	16	51	.
American eel	9	0.1	99.4	0.43	291	15.9	185	357	.
summer flounder	7	0.1	99.5	0.33	253	32.6	178	412	.
white perch	6	0.1	99.5	0.29	138	7.8	110	157	.
scup	5	0.1	99.6	0.24	95	5.4	82	111	.
northern scarobin	5	0.1	99.6	0.24	141	6.1	121	155	.
inland silverside	5	0.1	99.7	0.24	56	1.5	53	62	.
inshore lizardfish	5	0.1	99.8	0.24	157	5.0	139	167	.
harvestfish	4	0.0	99.8	0.19	22	3.8	13	28	.
Atlantic menhaden	2	0.0	99.8	0.10	164	5.5	158	169	.
northern pipefish	2	0.0	99.9	0.10	157	15.0	142	172	.
Atlantic cutlassfish	2	0.0	99.9	0.10	442	64.0	378	506	30.5
blue catfish	2	0.0	99.9	0.10	210	32.5	177	242	126.0
black scabass	1	0.0	99.9	0.05	183	.	183	183	.
pigfish	1	0.0	99.9	0.05	169	.	169	169	.
windowpane	1	0.0	99.9	0.05	176	.	176	176	.
longnose gar	1	0.0	99.9	0.05	740	.	740	740	.
striped anchovy	1	0.0	100.0	0.05	86	.	86	86	.
southern stingray	1	0.0	100.0	0.05	173	.	173	173	.
conger eel	1	0.0	100.0	0.05	385	.	385	385	.
lookdown	1	0.0	100.0	0.05	51	.	51	51	.
northern stargazer	1	0.0	100.0	0.05	28	.	28	28	.
All Species Combined	8,856								

Table 87.

Month - September									
River - James									
No. of Fish Trawls Made - 6									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 28									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
weakfish	1,994	41.9	41.9	332.33	89	2.0	39	303	8.4
bay anchovy	1,050	22.0	63.9	175.00	37	0.7	21	68	
hogchoker	884	18.6	82.5	147.33	92	1.5	60	172	
spot	426	8.9	91.4	71.00	140	1.7	101	226	
Atlantic croaker	241	5.1	96.5	40.17	176	1.4	145	269	
blue crab, male	28	0.6	97.1	2.80	76	8.6	26	152	
blue crab, juvenile female	27	0.6	97.6	2.70	48	4.3	25	113	
American eel	24	0.5	98.2	4.00	253	7.2	183	307	
white catfish	17	0.4	98.5	2.83	219	5.4	193	273	
scup	16	0.3	98.8	2.67	143	3.5	126	184	
southern kingfish	10	0.2	99.1	1.67	80	3.2	64	100	
oyster toadfish	7	0.1	99.2	1.17	130	18.5	50	214	
blue crab, adult female	7	0.1	99.3	0.70	144	7.1	120	169	
blackcheek tonguefish	4	0.1	99.4	0.67	130	2.4	125	136	
summer flounder	3	0.1	99.5	0.50	283	15.5	254	307	
harvestfish	3	0.1	99.6	0.50	58	9.8	38	68	
squid	3	0.1	99.6	0.50	63	6.2	56	75	
silver perch	3	0.1	99.7	0.50	144	43.9	56	190	
black seabass	2	0.0	99.7	0.33	126	34.0	92	160	
pigfish	2	0.0	99.8	0.33	183	6.0	177	189	
Atlantic spadefish	2	0.0	99.8	0.33	89	21.0	68	110	
skilletfish	2	0.0	99.9	0.33	23	7.0	16	30	
smallmouth flounder	2	0.0	99.9	0.33	81	5.0	76	86	
red drum	1	0.0	99.9	0.17	26	.	26	26	
northern puffer	1	0.0	99.9	0.17	223	.	223	223	
gizzard shad	1	0.0	100.0	0.17	246	.	246	246	
windowpane	1	0.0	100.0	0.17	219	.	219	219	
naked goby	1	0.0	100.0	0.17	28	.	28	28	
All Species Combined	4,762								

Table 88.

Month - September									
River - Rappahannock									
No. of Fish Trawls Made - 7									
No. of Add'l Crab Trawls Made - 5									
No. of Species - 20									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	4,008	55.2	55.2	572.57	51	0.9	25	82	0.6
spot	1,301	17.9	73.1	185.86	123	0.5	92	175	
weakfish	939	12.9	86.0	134.14	75	2.3	29	267	
hogchoker	524	7.2	93.2	74.86	97	1.4	60	153	
Atlantic croaker	148	2.0	95.3	21.14	82	5.6	19	212	
kingfish	127	1.7	97.0	18.14	73	1.8	31	122	
blue crab, male	83	1.1	98.1	6.92	71	5.0	12	155	
blue crab, juvenile female	73	1.0	99.1	6.08	43	3.8	10	111	
harvestfish	19	0.3	99.4	2.71	38	2.8	26	64	
American eel	10	0.1	99.5	1.43	233	11.3	190	289	
oyster toadfish	10	0.1	99.7	1.43	152	9.0	115	216	
blue crab, adult female	6	0.1	99.8	0.50	148	5.8	131	166	
inshore lizardfish	5	0.1	99.8	0.71	192	12.6	167	235	
summer flounder	4	0.1	99.9	0.57	263	27.4	226	344	
blackcheek tonguefish	3	0.0	99.9	0.43	143	1.5	141	146	
bluefish	1	0.0	99.9	0.14	155	.	155	155	
Atlantic thread herring	1	0.0	100.0	0.14	39	.	39	39	
white catfish	1	0.0	100.0	0.14	374	.	374	374	
Atlantic spadefish	1	0.0	100.0	0.14	48	.	48	48	
naked goby	1	0.0	100.0	0.14	30	.	30	30	
All Species Combined	7,265								

Table 89.

Month - September
 River - York
 No. of Fish Trawls Made - 8
 No. of Add'l Crab Trawls Made - 4
 No. of Species - 28

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	11,824	75.0	75.0	1478.00	52	0.8	19	83	1.0
weakfish	2,606	16.5	91.5	325.75	94	3.0	30	308	3.2
hogchoker	608	3.9	95.4	76.00	92	2.4	11	179	25.9
spot	158	1.0	96.4	19.75	141	2.5	87	217	.
kingfish	119	0.8	97.1	14.88	66	2.1	30	98	.
Atlantic croaker	80	0.5	97.6	10.00	122	7.3	19	286	.
Atlantic thread herring	68	0.4	98.1	8.50	54	0.5	46	66	.
blue crab, male	67	0.4	98.5	5.58	63	5.8	8	155	.
silver perch	58	0.4	98.9	7.25	168	3.8	42	203	.
blue crab, juvenile female	43	0.3	99.1	3.58	57	5.4	13	128	.
oyster toadfish	36	0.2	99.4	4.50	209	10.4	104	326	.
white catfish	34	0.2	99.6	4.25	200	12.4	70	346	.
blackcheek tonguefish	17	0.1	99.7	2.13	124	1.5	116	135	.
summer flounder	12	0.1	99.8	1.50	244	18.5	190	387	.
harvestfish	12	0.1	99.8	1.50	51	4.0	31	73	.
striped bass	6	0.0	99.9	0.75	77	3.9	60	89	.
blue crab, adult female	5	0.0	99.9	0.42	142	4.2	129	155	.
white perch	3	0.0	99.9	0.38	212	7.6	197	222	.
inshore lizardfish	2	0.0	99.9	0.25	172	5.0	167	177	.
brown shrimp	2	0.0	99.9	0.25	179	4.0	175	183	40.6
butterfish	1	0.0	100.0	0.13	83	.	83	83	.
squid	1	0.0	100.0	0.13	45	.	45	45	.
Atlantic menhaden	1	0.0	100.0	0.13	120	.	120	120	.
southern kingfish	1	0.0	100.0	0.13	33	.	33	33	.
American eel	1	0.0	100.0	0.13	158	.	158	158	.
Atlantic spadefish	1	0.0	100.0	0.13	42	.	42	42	.
longnose gar	1	0.0	100.0	0.13	820	.	820	820	.
striped anchovy	1	0.0	100.0	0.13	85	.	85	85	.
All Species Combined	15,768								

Table 90.

Month - September
 River - All - Pooled
 No. of Fish Trawls Made - 21
 No. of Add'l Crab Trawls Made - 13
 No. of Species - 39

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	16,882	60.7	60.7	803.90	49	0.5	19	83	0.9
weakfish	5,539	19.9	80.7	263.76	87	1.4	29	308	5.5
hogchoker	2,016	7.3	87.9	96.00	93	1.0	11	179	25.9
spot	1,885	6.8	94.7	89.76	131	0.8	87	226	.
Atlantic croaker	469	1.7	96.4	22.33	130	3.4	19	286	.
kingfish	246	0.9	97.3	11.71	71	1.5	30	122	.
blue crab, male	178	0.6	97.9	5.24	69	3.5	8	155	.
blue crab, juvenile female	143	0.5	98.4	4.21	48	2.7	10	128	.
Atlantic thread herring	69	0.2	98.7	3.29	54	0.6	39	66	.
silver perch	61	0.2	98.9	2.90	167	4.1	42	203	.
oyster toadfish	53	0.2	99.1	2.52	188	8.7	50	326	.
white catfish	52	0.2	99.3	2.48	210	9.0	70	374	.
American eel	35	0.1	99.4	1.67	244	6.5	158	307	.
harvestfish	34	0.1	99.5	1.62	45	2.5	26	73	.
blackcheek tonguefish	24	0.1	99.6	1.14	128	1.7	116	146	.
summer flounder	19	0.1	99.7	0.90	254	13.2	190	387	.
blue crab, adult female	18	0.1	99.7	0.53	145	3.4	120	169	.
scup	16	0.1	99.8	0.76	143	3.5	126	184	.
southern kingfish	11	0.0	99.8	0.52	76	5.2	33	100	.
inshore lizardfish	7	0.0	99.9	0.33	186	9.3	167	235	.
striped bass	6	0.0	99.9	0.29	77	3.9	60	89	.
squid	4	0.0	99.9	0.19	58	6.2	45	75	.
Atlantic spadefish	4	0.0	99.9	0.19	67	15.4	42	110	.
white perch	3	0.0	99.9	0.14	212	7.6	197	222	.
black seabass	2	0.0	99.9	0.10	126	34.0	92	160	.
pigfish	2	0.0	99.9	0.10	183	6.0	177	189	.
naked goby	2	0.0	99.9	0.10	29	1.0	28	30	.
skilletfish	2	0.0	100.0	0.10	23	7.0	16	30	.
smallmouth flounder	2	0.0	100.0	0.10	81	5.0	76	86	.
brown shrimp	2	0.0	100.0	0.10	179	4.0	175	183	40.6
butterfish	1	0.0	100.0	0.05	83	.	83	83	.
bluefish	1	0.0	100.0	0.05	155	.	155	155	.
red drum	1	0.0	100.0	0.05	26	.	26	26	.
Atlantic menhaden	1	0.0	100.0	0.05	120	.	120	120	.
northern puffer	1	0.0	100.0	0.05	223	.	223	223	.
gizzard shad	1	0.0	100.0	0.05	246	.	246	246	.
windowpane	1	0.0	100.0	0.05	219	.	219	219	.
longnose gar	1	0.0	100.0	0.05	820	.	820	820	.
striped anchovy	1	0.0	100.0	0.05	85	.	85	85	.
All Species Combined	27,795								

Table 91.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - October									
River - James									
No. of Fish Trawls Made - 6									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 29									
bay anchovy	2,269	45.8	45.8	378.17	51	1.1	27	81	
hogchoker	1,796	36.3	82.1	299.33	88	1.6	32	123	20.5
spot	196	4.0	86.0	32.67	131	1.2	101	212	
weakfish	194	3.9	90.0	32.33	99	4.7	48	271	
blue crab, juvenile female	114	2.3	92.3	11.40	48	2.1	17	146	
blue crab, adult female	105	2.1	94.4	10.50	150	1.0	127	177	
Atlantic croaker	101	2.0	96.4	16.83	167	2.9	14	250	
squid	36	0.7	97.2	6.00	31	1.3	15	47	
blue crab, male	30	0.6	97.8	3.00	67	6.9	21	156	
kingfish	16	0.3	98.1	2.67	91	6.2	40	123	
butterfish	14	0.3	98.4	2.33	139	7.3	85	177	
white perch	10	0.2	98.6	1.67	212	4.2	183	228	
blackcheek tonguefish	10	0.2	98.8	1.67	126	2.8	116	142	
oyster toadfish	8	0.2	98.9	1.33	160	38.1	32	337	
smallmouth flounder	8	0.2	99.1	1.33	72	7.2	40	93	
scup	7	0.1	99.2	1.17	143	2.2	134	151	
summer flounder	6	0.1	99.4	1.00	274	18.2	215	320	
harvestfish	6	0.1	99.5	1.00	93	3.6	85	109	
Atlantic spadefish	6	0.1	99.6	1.00	86	3.8	74	99	
inshore lizardfish	5	0.1	99.7	0.83	209	27.8	153	308	
silver perch	5	0.1	99.8	0.83	173	9.6	138	194	
white catfish	2	0.0	99.8	0.33	240	49.5	190	289	
pigfish	2	0.0	99.9	0.33	162	3.0	159	165	
bluefish	1	0.0	99.9	0.17	160		160	160	
northern puffer	1	0.0	99.9	0.17	93		93	93	
American eel	1	0.0	99.9	0.17	275		275	275	
striped searobin	1	0.0	100.0	0.17	34		34	34	
clearnose skate	1	0.0	100.0	0.17	407		407	407	
fringed flounder	1	0.0	100.0	0.17	95		95	95	
All Species Combined	4,952								

Table 92.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - October									
River - Rappahannock									
No. of Fish Trawls Made - 7									
No. of Add'l Crab Trawls Made - 5									
No. of Species - 20									
hogchoker	1,070	40.8	40.8	152.86	105	3.0	27	155	64.7
bay anchovy	627	23.9	64.7	89.57	53	1.2	26	79	
blue crab, male	270	10.3	75.0	22.50	52	2.4	10	201	
weakfish	227	8.7	83.7	32.43	135	7.0	64	354	
blue crab, juvenile female	195	7.4	91.1	16.25	38	1.3	2	135	
kingfish	52	2.0	93.1	7.43	103	3.1	59	146	
spot	48	1.8	95.0	6.86	139	1.7	113	177	
Atlantic croaker	47	1.8	96.8	6.71	35	2.5	14	90	
white catfish	25	1.0	97.7	3.57	302	5.2	271	360	
blue crab, adult female	18	0.7	98.4	1.50	147	4.2	104	175	
white perch	12	0.5	98.9	1.71	185	4.5	157	208	
blackcheek tonguefish	11	0.4	99.3	1.57	102	12.4	53	151	
oyster toadfish	8	0.3	99.6	1.14	247	29.8	111	337	
American eel	3	0.1	99.7	0.43	203	49.7	151	302	
summer flounder	2	0.1	99.8	0.29	262	0.5	261	262	
harvestfish	2	0.1	99.8	0.29	64	0.5	63	64	
Atlantic menhaden	1	0.0	99.9	0.14	150		150	150	
channel catfish	1	0.0	99.9	0.14	411		411	411	
naked goby	1	0.0	100.0	0.14	48		48	48	
rough silverside	1	0.0	100.0	0.14	84		84	84	
All Species Combined	2,621								

Table 93.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - October									
River - York									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 4									
No. of Species - 26									
bay anchovy	11,509	76.6	76.6	1438.63	36	0.8	27	81	1.2
hogchoker	1,434	9.5	86.2	179.25	92	2.4	30	162	26.5
weakfish	680	4.5	90.7	85.00	117	2.2	59	337	.
Atlantic croaker	327	2.2	92.9	40.88	120	3.8	24	264	.
blue crab, juvenile female	309	2.1	95.0	25.75	32	0.8	15	122	.
blue crab, male	256	1.7	96.7	21.33	41	1.8	15	193	.
spot	244	1.6	98.3	30.50	153	1.3	124	225	.
silver perch	56	0.4	98.7	7.00	144	5.9	67	212	.
white catfish	55	0.4	99.0	6.88	208	12.8	69	430	.
oyster toadfish	46	0.3	99.3	5.75	219	9.8	106	360	.
kingfish	23	0.2	99.5	2.88	98	4.1	62	134	.
blackcheek tonguefish	21	0.1	99.6	2.63	128	4.1	58	153	.
summer flounder	12	0.1	99.7	1.50	260	8.3	232	330	.
Atlantic spadefish	11	0.1	99.8	1.38	89	2.5	77	102	.
squid	8	0.1	99.8	1.00	49	4.3	28	62	.
striped bass	8	0.1	99.9	1.00	86	1.1	83	91	.
white perch	3	0.0	99.9	0.38	193	18.3	157	215	.
blue crab, adult female	3	0.0	99.9	0.25	136	6.1	128	148	.
harvestfish	2	0.0	99.9	0.25	72	3.0	69	75	.
American eel	2	0.0	100.0	0.25	288	37.5	250	325	.
longnose gar	2	0.0	100.0	0.25	725	45.0	680	770	.
butterfish	1	0.0	100.0	0.13	153	.	153	153	.
naked goby	1	0.0	100.0	0.13	35	.	35	35	.
inshore lizardfish	1	0.0	100.0	0.13	245	.	245	245	.
conger eel	1	0.0	100.0	0.13	493	.	493	493	.
northern stargazer	1	0.0	100.0	0.13	52	.	52	52	.
All Species Combined	15,016								

Table 94.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - October									
River - All - Pooled									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 13									
No. of Species - 37									
bay anchovy	14,405	63.8	63.8	685.95	54	0.6	26	81	1.2
hogchoker	4,300	19.0	82.8	204.76	94	1.5	27	162	30.1
weakfish	1,101	4.9	87.7	52.43	117	2.0	48	354	.
blue crab, juvenile female	618	2.7	90.4	18.18	37	0.7	2	146	.
blue crab, male	556	2.5	92.9	16.35	48	1.5	10	201	.
spot	488	2.2	95.0	23.24	142	0.9	101	225	.
Atlantic croaker	475	2.1	97.1	22.62	122	3.2	14	264	.
blue crab, adult female	126	0.6	97.7	3.71	149	1.0	104	177	.
kingfish	91	0.4	98.1	4.33	100	2.3	40	146	.
white catfish	82	0.4	98.5	3.90	237	10.0	69	430	.
oyster toadfish	62	0.3	98.7	2.95	215	9.8	32	360	.
silver perch	61	0.3	99.0	2.90	146	5.5	67	212	.
squid	44	0.2	99.2	2.10	34	1.7	15	62	.
blackcheek tonguefish	42	0.2	99.4	2.00	121	4.2	53	153	.
white perch	25	0.1	99.5	1.19	197	4.1	157	228	.
summer flounder	20	0.1	99.6	0.95	264	7.2	215	330	.
Atlantic spadefish	17	0.1	99.7	0.81	88	2.1	74	102	.
butterfish	15	0.1	99.7	0.71	140	6.9	85	177	.
harvestfish	10	0.0	99.8	0.48	83	4.6	63	109	.
striped bass	8	0.0	99.8	0.38	86	1.1	83	91	.
smallmouth flounder	8	0.0	99.8	0.38	72	7.2	40	93	.
scup	7	0.0	99.9	0.33	143	2.2	134	151	.
American eel	6	0.0	99.9	0.29	243	30.3	151	325	.
inshore lizardfish	6	0.0	99.9	0.29	215	23.5	153	308	.
pigfish	2	0.0	99.9	0.10	162	3.0	159	165	.
longnose gar	2	0.0	99.9	0.10	725	45.0	680	770	.
naked goby	2	0.0	100.0	0.10	42	6.5	35	48	.
bluefish	1	0.0	100.0	0.05	160	.	160	160	.
Atlantic menhaden	1	0.0	100.0	0.05	150	.	150	150	.
channel catfish	1	0.0	100.0	0.05	411	.	411	411	.
northern puffer	1	0.0	100.0	0.05	93	.	93	93	.
striped searobin	1	0.0	100.0	0.05	34	.	34	34	.
rough silverside	1	0.0	100.0	0.05	84	.	84	84	.
clearnose skate	1	0.0	100.0	0.05	407	.	407	407	.
conger eel	1	0.0	100.0	0.05	493	.	493	493	.
northern stargazer	1	0.0	100.0	0.05	52	.	52	52	.
fringed flounder	1	0.0	100.0	0.05	95	.	95	95	.
All Species Combined	22,589								

Table 95.

Month - November River - James No. of Fish Trawls Made - 6 No. of Add'l Crab Trawls Made - 4 No. of Species - 25									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	2,396	64.8	64.8	399.33	56	0.9	31	80	1.5
spot	779	21.1	85.8	129.83	130	1.0	104	172	46.1
blue crab, male	97	2.6	88.5	9.70	65	4.7	8	170	.
blue crab, juvenile female	94	2.5	91.0	9.40	34	2.9	7	128	.
hogchoker	88	2.4	93.4	14.67	75	2.7	58	176	.
blue crab, adult female	48	1.3	94.7	4.80	143	1.9	116	172	.
Atlantic croaker	46	1.2	95.9	7.67	57	3.5	27	116	.
squid	40	1.1	97.0	6.67	34	1.0	25	58	.
weakfish	31	0.8	97.8	5.17	118	3.0	85	146	.
white perch	17	0.5	98.3	2.83	152	12.9	59	217	.
silver perch	11	0.3	98.6	1.83	79	3.0	58	96	.
smallmouth flounder	10	0.3	98.9	1.67	90	2.8	76	99	.
Atlantic thread herring	7	0.2	99.1	1.17	102	2.4	96	112	.
butterfish	6	0.2	99.2	1.00	99	2.6	87	104	.
alewife	5	0.1	99.4	0.83	106	7.4	94	134	.
oyster toadfish	5	0.1	99.5	0.83	301	50.4	101	367	.
striped bass	4	0.1	99.6	0.67	129	14.3	101	166	.
channel catfish	3	0.1	99.7	0.50	320	1.7	317	322	.
blackcheek tonguefish	3	0.1	99.8	0.50	78	11.1	60	98	.
summer flounder	2	0.1	99.8	0.33	306	53.0	253	359	.
gizzard shad	2	0.1	99.9	0.33	158	5.5	152	163	.
tautog	2	0.1	99.9	0.33	289	42.5	246	331	.
kingfish	1	0.0	99.9	0.17	124	.	124	124	.
northern searobin	1	0.0	100.0	0.17	74	.	74	74	.
lined seahorse	1	0.0	100.0	0.17	68	.	68	68	.
All Species Combined	3,699								

Table 96.

Month - November River - Rappahannock No. of Fish Trawls Made - 7 No. of Add'l Crab Trawls Made - 5 No. of Species - 23									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	10,464	78.4	78.4	1494.86	59	0.8	30	82	2.1
spot	1,032	7.7	86.2	147.43	124	0.8	101	169	.
Atlantic croaker	785	5.9	92.1	112.14	73	1.3	19	163	.
white perch	262	2.0	94.0	37.43	176	4.7	70	248	.
blue crab, male	193	1.4	95.5	16.08	84	2.8	13	172	.
weakfish	169	1.3	96.7	24.14	124	3.3	72	278	.
blue crab, juvenile female	130	1.0	97.7	10.83	48	1.9	20	118	.
hogchoker	108	0.8	98.5	15.43	98	1.9	48	143	.
alewife	68	0.5	99.0	9.71	73	1.1	60	107	.
kingfish	25	0.2	99.2	3.57	117	3.9	70	148	.
blue crab, adult female	20	0.1	99.4	1.67	147	3.2	113	168	.
striped bass	19	0.1	99.5	2.71	167	12.3	115	277	.
silver perch	15	0.1	99.6	2.14	105	3.5	82	124	.
summer flounder	14	0.1	99.7	2.00	283	11.3	224	398	.
blackcheek tonguefish	12	0.1	99.8	1.71	112	11.6	55	152	.
oyster toadfish	8	0.1	99.9	1.14	202	23.8	140	287	.
butterfish	5	0.0	99.9	0.71	137	4.3	125	149	.
white catfish	5	0.0	100.0	0.71	324	24.0	275	405	.
channel catfish	2	0.0	100.0	0.29	302	10.0	292	312	.
harvestfish	1	0.0	100.0	0.14	73	.	73	73	.
gizzard shad	1	0.0	100.0	0.14	139	.	139	139	.
naked goby	1	0.0	100.0	0.14	164
spotfin butterflyfish	1	0.0	100.0	0.14	63	.	63	63	.
All Species Combined	13,340								

Table 97.

Month - November
 River - York
 No. of Fish Trawls Made - 8
 No. of Add'l Crab Trawls Made - 4
 No. of Species - 27

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	3,423	48.6	48.6	427.88	58	0.9	30	85	1.3
hogchoker	943	13.4	61.9	117.88	108	1.8	28	168	26.3
Atlantic croaker	787	11.2	73.1	98.38	83	3.3	13	206	
weakfish	524	7.4	80.5	65.50	129	1.7	85	303	20.6
blue crab, juvenile female	419	5.9	86.5	34.92	37	0.7	16	130	
blue crab, male	413	5.9	92.3	34.42	40	1.1	13	170	
spot	130	1.8	94.2	16.25	138	1.4	117	170	60.0
silver perch	100	1.4	95.6	12.50	117	1.7	80	191	23.9
blackcheek tonguefish	71	1.0	96.6	8.88	89	3.9	43	157	
white perch	69	1.0	97.6	8.63	199	3.1	130	281	
kingfish	56	0.8	98.4	7.00	113	2.4	49	152	12.3
oyster toadfish	48	0.7	99.1	6.00	233	8.4	103	340	
white catfish	22	0.3	99.4	2.75	261	17.4	87	366	
squid	15	0.2	99.6	1.88	41	4.3	26	58	
summer flounder	10	0.1	99.7	1.25	275	12.6	226	346	
channel catfish	4	0.1	99.8	0.50	162	18.3	134	211	
striped bass	2	0.0	99.8	0.25	216	59.0	157	275	
red drum	2	0.0	99.8	0.25	157	12.0	145	169	34.6
brown shrimp	2	0.0	99.9	0.25	105	19.0	86	124	
blue crab, adult female	2	0.0	99.9	0.17	151	2.5	148	153	
American eel	1	0.0	99.9	0.13	316		316	316	
northern searobin	1	0.0	99.9	0.13	58		58	58	
northern pipefish	1	0.0	99.9	0.13	121		121	121	
Atlantic silverside	1	0.0	100.0	0.13	72		72	72	
lookdown	1	0.0	100.0	0.13	60		60	60	5.2
northern stargazer	1	0.0	100.0	0.13	50		50	50	
white shrimp	1	0.0	100.0	0.13	118		118	118	
All Species Combined	7,049								

Table 98.

Month - November
 River - All - Pooled
 No. of Fish Trawls Made - 21
 No. of Add'l Crab Trawls Made - 13
 No. of Species - 37

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	16,283	67.6	67.6	775.38	58	0.3	30	85	1.9
spot	1,941	8.1	75.7	92.43	129	0.6	101	172	47.4
Atlantic croaker	1,618	6.7	82.4	77.05	76	1.6	13	206	
hogchoker	1,139	4.7	87.1	54.24	101	1.4	28	176	26.3
weakfish	724	3.0	90.1	34.48	127	1.5	72	303	20.6
blue crab, male	703	2.9	93.0	20.68	56	1.4	8	172	
blue crab, juvenile female	643	2.7	95.7	18.91	39	0.8	7	130	
white perch	348	1.4	97.1	16.57	183	3.1	59	281	
silver perch	126	0.5	97.7	6.00	113	1.7	58	191	23.9
blackcheek tonguefish	86	0.4	98.0	4.10	91	3.7	43	157	
kingfish	82	0.3	98.4	3.90	115	2.0	49	152	12.3
alewife	73	0.3	98.7	3.48	75	1.5	60	134	
blue crab, adult female	70	0.3	99.0	2.06	144	1.6	113	172	
oyster toadfish	61	0.3	99.2	2.90	234	8.6	101	367	
squid	55	0.2	99.4	2.62	35	1.1	25	58	
white catfish	27	0.1	99.5	1.29	272	15.4	87	405	
summer flounder	26	0.1	99.7	1.24	282	8.3	224	398	
striped bass	25	0.1	99.8	1.19	165	10.9	101	277	
butterfish	11	0.0	99.8	0.52	116	6.4	87	149	
smallmouth flounder	10	0.0	99.8	0.48	90	2.8	76	99	
channel catfish	9	0.0	99.9	0.43	246	27.8	134	322	
Atlantic thread herring	7	0.0	99.9	0.33	102	2.4	96	112	
gizzard shad	3	0.0	99.9	0.14	151	6.9	139	163	
red drum	2	0.0	99.9	0.10	157	12.0	145	169	34.6
tautog	2	0.0	99.9	0.10	289	42.5	246	331	
northern searobin	2	0.0	100.0	0.10	66	8.0	58	74	
brown shrimp	2	0.0	100.0	0.10	105	19.0	86	124	
harvestfish	1	0.0	100.0	0.05	73		73	73	
American eel	1	0.0	100.0	0.05	316		316	316	
lined seahorse	1	0.0	100.0	0.05	68		68	68	
northern pipefish	1	0.0	100.0	0.05	121		121	121	
naked goby	1	0.0	100.0	0.05	164		164	164	
Atlantic silverside	1	0.0	100.0	0.05	72		72	72	
lookdown	1	0.0	100.0	0.05	60		60	60	5.2
spotfin butterflyfish	1	0.0	100.0	0.05	63		63	63	
northern stargazer	1	0.0	100.0	0.05	50		50	50	
white shrimp	1	0.0	100.0	0.05	118		118	118	
All Species Combined	24,088								

Table 99.

Month - December									
River - James									
No. of Fish Trawls Made - 8									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 24									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
hogchoker	3,046	49.1	49.1	455.75	63	2.1	18	113	8.3
bay anchovy	2,925	39.4	88.5	365.63	44	0.7	26	71	1.4
white perch	229	3.1	91.5	28.63	91	2.7	48	224	.
Atlantic silverside	134	1.8	93.3	16.75	91	1.1	68	116	.
blueback herring	103	1.4	94.7	12.88	69	0.6	64	85	.
Atlantic croaker	100	1.3	96.1	12.50	49	1.7	13	93	.
blue crab, male	77	1.0	97.1	9.63	56	4.7	13	169	.
blue crab, juvenile female	61	0.8	97.9	7.63	40	3.6	10	123	.
white catfish	29	0.4	98.3	3.63	206	8.1	104	283	.
spot	28	0.4	98.7	3.50	117	1.7	91	133	.
blue catfish	27	0.4	99.1	3.38	208	11.4	82	296	.
American eel	19	0.3	99.3	2.38	245	19.1	166	529	.
blackcheek tonguefish	12	0.2	99.5	1.50	69	4.3	48	104	.
striped bass	10	0.1	99.6	1.25	153	3.6	135	173	.
gizzard shad	8	0.1	99.7	1.00	273	24.3	120	337	.
channel catfish	7	0.1	99.8	0.88	356	39.9	203	516	.
blue crab, adult female	4	0.1	99.9	0.50	132	4.1	125	142	.
northern pipefish	3	0.0	99.9	0.38	132	13.0	110	155	.
spotted hake	2	0.0	99.9	0.25	72	1.5	70	73	.
weakfish	1	0.0	99.9	0.13	134	.	134	134	.
spotted seatrout	1	0.0	100.0	0.13	148	.	148	148	.
smallmouth flounder	1	0.0	100.0	0.13	70	.	70	70	.
threadfin shad	1	0.0	100.0	0.13	80	.	80	80	.
white shrimp	1	0.0	100.0	0.13	75	.	75	75	.
All Species Combined	7,429								

Table 100.

Month - December									
River - Rappahannock									
No. of Fish Trawls Made - 10									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 20									
Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	4,542	51.0	51.0	454.20	46	0.7	29	91	0.7
hogchoker	1,953	21.9	73.0	195.30	80	2.0	30	152	14.8
Atlantic croaker	1,443	16.2	89.2	144.30	50	1.0	21	245	.
white perch	404	4.5	93.7	40.40	109	2.4	64	236	.
blue crab, male	140	1.6	95.3	14.00	54	3.3	13	175	.
channel catfish	120	1.3	96.7	12.00	298	6.3	175	455	.
blue crab, juvenile female	97	1.1	97.8	9.70	41	2.0	15	109	.
white catfish	56	0.6	98.4	5.60	255	6.4	77	372	.
alewife	51	0.6	99.0	5.10	116	1.6	82	140	.
striped bass	24	0.3	99.2	2.40	154	13.7	67	312	.
butterfish	17	0.2	99.4	1.70	134	4.0	114	179	.
gizzard shad	13	0.1	99.6	1.30	143	5.6	93	164	.
naked goby	13	0.1	99.7	1.30	47	1.9	32	58	.
blackcheek tonguefish	7	0.1	99.8	0.70	68	2.6	55	75	.
blueback herring	4	0.0	99.8	0.40	70	3.0	64	78	.
spot	4	0.0	99.9	0.40	124	8.9	110	149	.
Atlantic thread herring	4	0.0	99.9	0.40	97	4.2	88	104	.
blue catfish	4	0.0	100.0	0.40	158	12.5	125	185	.
summer flounder	2	0.0	100.0	0.20	300	24.5	275	324	.
blue crab, adult female	1	0.0	100.0	0.10	144	.	144	144	.
All Species Combined	8,899								

Table 101.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - December									
River - York									
No. of Fish Trawls Made - 9									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 21									
bay anchovy	6,994	67.6	67.6	777.11	61	0.9	25	94	2.4
hogchoker	1,899	18.4	86.0	211.00	87	1.5	30	141	9.1
Atlantic croaker	733	7.1	93.1	81.44	62	1.5	20	133	.
spot	348	3.4	96.5	38.67	116	0.7	92	143	.
white perch	89	0.9	97.3	9.89	199	2.6	98	252	.
blue crab, male	70	0.7	98.0	7.78	41	3.0	14	171	.
blue crab, juvenile female	54	0.5	98.5	6.00	36	1.7	19	68	.
blackcheek tonguefish	51	0.5	99.0	5.67	75	1.3	52	95	.
white catfish	41	0.4	99.4	4.56	215	17.4	55	404	.
silver perch	19	0.2	99.6	2.11	90	2.0	68	103	.
striped bass	11	0.1	99.7	1.22	203	25.0	73	362	.
weakfish	8	0.1	99.8	0.89	128	4.0	116	142	.
oyster toadfish	8	0.1	99.9	0.89	171	32.0	56	313	.
naked goby	4	0.0	99.9	0.44	44	1.5	41	48	.
white shrimp	3	0.0	99.9	0.33	116	3.6	109	121	.
alewife	2	0.0	99.9	0.22	112	4.0	108	116	.
gizzard shad	2	0.0	100.0	0.22	329	7.5	321	336	.
butterfish	1	0.0	100.0	0.11	109	.	109	109	.
Atlantic thread herring	1	0.0	100.0	0.11	123	.	123	123	.
spotted seatrout	1	0.0	100.0	0.11	150	.	150	150	.
American eel	1	0.0	100.0	0.11	254	.	254	254	.
All Species Combined	10,340								

Table 102.

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Month - December									
River - All - Pooled									
No. of Fish Trawls Made - 27									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 31									
bay anchovy	14,461	54.2	54.2	535.59	51	0.6	25	94	1.8
hogchoker	7,498	28.1	82.3	277.70	78	1.2	18	152	10.1
Atlantic croaker	2,276	8.5	90.9	84.30	55	0.8	13	245	.
white perch	722	2.7	93.6	26.74	117	2.2	48	252	.
spot	380	1.4	95.0	14.07	117	0.6	91	149	.
blue crab, male	287	1.1	96.1	10.63	51	2.2	13	175	.
blue crab, juvenile female	212	0.8	96.9	7.85	39	1.5	10	123	.
Atlantic silverside	134	0.5	97.4	4.96	91	1.1	68	116	.
channel catfish	127	0.5	97.9	4.70	305	7.2	175	516	.
white catfish	126	0.5	98.3	4.67	231	6.8	55	404	.
blueback herring	107	0.4	98.7	3.96	69	0.5	64	85	.
blackcheek tonguefish	70	0.3	99.0	2.59	73	1.3	48	104	.
alewife	53	0.2	99.2	1.96	116	1.5	82	140	.
striped bass	45	0.2	99.4	1.67	166	9.9	67	362	.
blue catfish	31	0.1	99.5	1.15	202	10.5	82	296	.
gizzard shad	23	0.1	99.6	0.85	204	17.5	93	337	.
American eel	20	0.1	99.6	0.74	246	18.1	166	529	.
silver perch	19	0.1	99.7	0.70	90	2.0	68	103	.
butterfish	18	0.1	99.8	0.67	133	4.0	109	179	.
naked goby	17	0.1	99.8	0.63	46	1.5	32	58	.
weakfish	9	0.0	99.9	0.33	128	3.6	116	142	.
oyster toadfish	8	0.0	99.9	0.30	171	32.0	56	313	.
Atlantic thread herring	5	0.0	99.9	0.19	102	6.2	88	123	.
blue crab, adult female	5	0.0	99.9	0.19	134	4.0	125	144	.
white shrimp	4	0.0	100.0	0.15	106	10.6	75	121	.
northern pipefish	3	0.0	100.0	0.11	132	13.0	110	155	.
summer flounder	2	0.0	100.0	0.07	300	24.5	275	324	.
spotted seatrout	2	0.0	100.0	0.07	149	1.0	148	150	.
spotted hake	2	0.0	100.0	0.07	72	1.5	70	73	.
smallmouth flounder	1	0.0	100.0	0.04	70	.	70	70	.
threadfin shad	1	0.0	100.0	0.04	80	.	80	80	.
All Species Combined	26,668								

Tables 103-142. Species composition, number caught, catch per trawl, and length statistics by month and segment for the Chesapeake bay trawl survey.

Notes:

- A. The "Number of Species" notation at the top of each table includes each of the three categories of blue crabs (male, juvenile female, adult female) as a different "species".
- B. Tables pooled for all segments, for each month appear as follows:

February	Table 106	Page 182
April	Table 110	Page 184
May	Table 114	Page 186
June	Table 118	Page 188
July	Table 122	Page 190
August	Table 126	Page 192
September	Table 130	Page 195
October	Table 134	Page 199
November	Table 138	Page 201
December	Table 142	Page 203

- C. Catch per trawl for fish species is based on the figure 'Number of Fish Trawls Made' while catch per trawl for blue crabs is based on the sum of 'Number of Fish Trawls Made' and 'Number of Additional Crab Trawls Made'.

Table 103

Month - February
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 11
 No. of Species - 21

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	7,196	92.2	92.2	654.18	59	0.6	30	94	1.3
spotted hake	124	1.6	93.8	11.27	89	1.4	46	169	.
smallmouth flounder	111	1.4	95.2	10.09	70	1.9	36	141	.
blackcheek tonguefish	84	1.1	96.2	7.64	98	4.5	40	180	.
Atlantic croaker	58	0.7	97.0	5.27	56	1.7	30	101	.
Atlantic menhaden	56	0.7	97.7	5.09	102	3.9	72	204	.
red hake	43	0.6	98.3	3.91	118	4.4	61	184	.
silver hake	29	0.4	98.6	2.64	102	3.3	71	158	.
northern pipefish	27	0.3	99.0	2.45	120	4.4	78	162	.
Atlantic silverside	26	0.3	99.3	2.36	92	2.7	64	118	.
Atlantic herring	13	0.2	99.5	1.18	298	4.3	274	331	.
windowpane	12	0.2	99.6	1.09	170	34.6	38	292	.
hogchoker	10	0.1	99.8	0.91	129	4.1	111	151	.
summer flounder	5	0.1	99.8	0.45	211	12.2	171	238	.
alewife	3	0.0	99.9	0.27	125	4.8	118	134	.
American shad	3	0.0	99.9	0.27	116	1.2	114	118	.
spiny dogfish	3	0.0	99.9	0.27	819	54.5	730	918	.
skilletfish	2	0.0	100.0	0.18	40	1.5	38	41	.
blueback herring	1	0.0	100.0	0.09	71	.	71	71	.
naked goby	1	0.0	100.0	0.09	35	.	35	35	.
oyster toadfish	1	0.0	100.0	0.09	47	.	47	47	.
All Species Combined	7,808								

Table 104.

Month - February
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 11
 No. of Species - 18

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	49,138	99.7	99.7	4467.09	55	0.5	34	83	0.8
blueback herring	45	0.1	99.7	4.09	82	0.9	66	97	.
Atlantic menhaden	36	0.1	99.8	3.27	109	6.0	38	203	.
Atlantic silverside	27	0.1	99.9	2.45	76	2.7	56	105	.
northern pipefish	11	0.0	99.9	1.00	128	6.1	96	156	.
Atlantic croaker	10	0.0	99.9	0.91	66	4.4	52	94	.
red hake	10	0.0	99.9	0.91	129	10.3	78	171	.
blackcheek tonguefish	10	0.0	100.0	0.91	85	10.9	53	147	.
spotted hake	6	0.0	100.0	0.55	98	12.3	72	157	.
hogchoker	4	0.0	100.0	0.36	119	11.3	97	142	.
Atlantic herring	3	0.0	100.0	0.27	299	2.4	294	302	.
alewife	2	0.0	100.0	0.18	123	12.0	111	135	.
blue crab, adult female	2	0.0	100.0	0.18	153	9.0	144	162	.
American shad	1	0.0	100.0	0.09	94	.	94	94	.
windowpane	1	0.0	100.0	0.09	48	.	48	48	.
skilletfish	1	0.0	100.0	0.09	21	.	21	21	.
northern sand lance	1	0.0	100.0	0.09	162	.	162	162	.
smallmouth flounder	1	0.0	100.0	0.09	97	.	97	97	.
All Species Combined	49,309								

Table 105

Month - February
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 11
 No. of Species - 22

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	48,461	99.5	99.5	4405.55	49	0.4	30	90	0.6
Atlantic silverside	71	0.1	99.7	6.45	85	1.6	56	114	.
hogchoker	29	0.1	99.7	2.64	106	2.6	87	162	.
Atlantic croaker	24	0.0	99.8	2.18	33	3.9	18	105	.
Atlantic menhaden	22	0.0	99.8	2.00	108	11.3	31	206	.
blackcheek tonguefish	11	0.0	99.9	1.00	105	12.3	58	164	.
blueback herring	8	0.0	99.9	0.73	83	3.9	65	102	.
northern pipefish	8	0.0	99.9	0.73	124	8.6	86	158	.
smallmouth flounder	7	0.0	99.9	0.64	62	3.5	50	78	.
tautog	6	0.0	99.9	0.55	263	57.5	136	497	.
spotted hake	6	0.0	99.9	0.55	94	2.3	86	101	.
oyster toadfish	5	0.0	99.9	0.45	45	4.0	35	55	.
summer flounder	4	0.0	100.0	0.36	242	33.7	177	310	.
red hake	4	0.0	100.0	0.36	124	19.8	86	179	.
feather blenny	4	0.0	100.0	0.36	55	2.1	49	59	.
alewife	3	0.0	100.0	0.27	174	31.5	137	237	.
Atlantic herring	3	0.0	100.0	0.27	296	17.4	267	327	.
windowpane	3	0.0	100.0	0.27	235	0.0	235	235	.
naked goby	2	0.0	100.0	0.18	34	4.5	29	38	.
green goby	1	0.0	100.0	0.09	45	.	45	45	.
conger eel	1	0.0	100.0	0.09	312	.	312	312	.
blue crab, adult female	1	0.0	100.0	0.09	151	.	151	151	.
All Species Combined	48,684								

Table 106

Month - February
 River - All - Pooled
 No. of Fish Trawls Made - 33
 No. of Species - 27

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	104,795	99.0	99.0	3175.61	54	0.3	30	94	0.8
spotted hake	136	0.1	99.2	4.12	90	1.4	46	169	.
Atlantic silverside	124	0.1	99.3	3.76	85	1.3	56	118	.
smallmouth flounder	119	0.1	99.4	3.61	70	1.8	36	141	.
Atlantic menhaden	114	0.1	99.5	3.45	105	3.4	31	206	.
blackcheek tonguefish	105	0.1	99.6	3.18	98	4.0	40	180	.
Atlantic croaker	92	0.1	99.7	2.79	51	1.9	18	105	.
red hake	57	0.1	99.8	1.73	121	4.0	61	184	.
blueback herring	54	0.1	99.8	1.64	82	0.9	65	102	.
northern pipefish	46	0.0	99.8	1.39	122	3.3	78	162	.
hogchoker	43	0.0	99.9	1.30	112	2.7	87	162	.
silver hake	29	0.0	99.9	0.88	102	3.3	71	158	.
Atlantic herring	19	0.0	99.9	0.58	298	3.7	267	331	.
windowpane	16	0.0	100.0	0.48	175	27.8	38	292	.
summer flounder	9	0.0	100.0	0.27	225	16.2	171	310	.
alewife	8	0.0	100.0	0.24	143	14.1	111	237	.
tautog	6	0.0	100.0	0.18	263	57.5	136	497	.
oyster toadfish	6	0.0	100.0	0.18	45	3.3	35	55	.
American shad	4	0.0	100.0	0.12	111	5.6	94	118	.
feather blenny	4	0.0	100.0	0.12	55	2.1	49	59	.
naked goby	3	0.0	100.0	0.09	34	2.6	29	38	.
skillefish	3	0.0	100.0	0.09	33	6.2	21	41	.
spiny dogfish	3	0.0	100.0	0.09	819	54.5	730	918	.
blue crab, adult female	3	0.0	100.0	0.09	152	5.2	144	162	.
green goby	1	0.0	100.0	0.03	45	.	45	45	.
conger eel	1	0.0	100.0	0.03	312	.	312	312	.
northern sand lance	1	0.0	100.0	0.03	162	.	162	162	.
All Species Combined	105,801								

Table 107

Month - April
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 10
 No. of Species - 25

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	700	60.6	60.6	70.00	55	0.7	42	80	.
spotted hake	204	17.6	78.2	20.40	121	2.8	36	238	.
smallmouth flounder	97	8.4	86.6	9.70	62	1.3	41	101	.
northern searobin	36	3.1	89.7	3.60	59	3.4	37	111	.
silver hake	26	2.2	92.0	2.60	151	6.7	95	222	.
blackcheek tonguefish	22	1.9	93.9	2.20	136	4.7	72	175	.
red hake	17	1.5	95.3	1.70	153	9.4	98	218	.
weakfish	13	1.1	96.5	1.30	155	12.9	122	257	.
clearnose skate	9	0.8	97.2	0.90	397	8.5	363	446	.
summer flounder	6	0.5	97.8	0.60	323	37.1	220	476	1550.0
spot	4	0.3	98.1	0.40	27	0.9	25	28	.
windowpane	4	0.3	98.4	0.40	160	49.7	58	247	.
black seabass	3	0.3	98.7	0.30	73	2.6	68	77	.
Atlantic croaker	3	0.3	99.0	0.30	200	17.9	168	230	.
silver perch	2	0.2	99.1	0.20	142	1.5	140	143	.
scup	1	0.1	99.2	0.10	115	.	115	115	.
squid	1	0.1	99.3	0.10	124	.	124	124	.
Atlantic menhaden	1	0.1	99.4	0.10	215	.	215	215	.
northern puffer	1	0.1	99.5	0.10	196	.	196	196	.
lined seahorse	1	0.1	99.6	0.10	88	.	88	88	.
feather blenny	1	0.1	99.7	0.10	64	.	64	64	.
hogchoker	1	0.1	99.7	0.10	99	.	99	99	.
oyster toadfish	1	0.1	99.8	0.10	148	.	148	148	.
conger eel	1	0.1	99.9	0.10	357	.	357	357	.
blue crab, adult female	1	0.1	100.0	0.10	119	.	119	119	.
All Species Combined	1,156								

Table 108

Month - April
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 10
 No. of Species - 24

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	655	55.2	55.2	65.50	57	0.8	37	94	1.2
spotted hake	333	28.1	83.3	33.30	118	1.2	46	192	.
Atlantic croaker	56	4.7	88.0	5.60	211	4.1	32	247	.
northern searobin	20	1.7	89.7	2.00	62	4.6	34	121	.
blackcheek tonguefish	19	1.6	91.3	1.90	121	6.5	68	157	.
spot	15	1.3	92.6	1.50	164	3.1	147	195	.
summer flounder	12	1.0	93.6	1.20	255	15.3	205	379	.
hogchoker	11	0.9	94.5	1.10	102	3.2	85	120	.
red hake	10	0.8	95.4	1.00	128	7.0	103	167	.
Atlantic herring	10	0.8	96.2	1.00	56	5.4	39	77	.
blue crab, adult female	8	0.7	96.9	0.80	140	3.3	127	150	.
smallmouth flounder	7	0.6	97.5	0.70	54	2.3	44	64	.
black seabass	6	0.5	98.0	0.60	71	7.0	51	95	.
windowpane	5	0.4	98.4	0.50	181	44.9	76	295	.
lined seahorse	3	0.3	98.7	0.30	77	13.5	56	102	.
northern pipefish	3	0.3	98.9	0.30	159	20.6	131	199	.
blue crab, juvenile female	3	0.3	99.2	0.30	39	16.7	22	72	.
silver hake	2	0.2	99.3	0.20	90	50.0	40	140	.
American shad	2	0.2	99.5	0.20	162	3.0	159	165	.
blue crab, male	2	0.2	99.7	0.20	135	6.5	128	141	.
striped bass	1	0.1	99.7	0.10	341	.	341	341	.
seaboard goby	1	0.1	99.8	0.10	38	.	38	38	.
feather blenny	1	0.1	99.9	0.10	73	.	73	73	.
oyster toadfish	1	0.1	100.0	0.10	146	.	146	146	.
All Species Combined	1,186								

Table 109.

Month - April
River - Ches. Bay - Upper
No. of Fish Trawls Made - 11
No. of Species - 22

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	2,461	85.7	85.7	223.73	56	0.9	35	93	1.3
spotted hake	229	8.0	93.6	20.82	101	1.4	38	180	.
Atlantic croaker	49	1.7	95.3	4.45	210	7.7	40	288	.
northern searobin	22	0.8	96.1	2.00	56	1.5	44	68	.
blackcheek tonguefish	20	0.7	96.8	1.82	103	8.4	45	153	.
blue crab, male	15	0.5	97.3	1.36	51	8.7	15	124	.
summer flounder	14	0.5	97.8	1.27	275	22.6	211	497	225.0
blue crab, juvenile female	13	0.5	98.3	1.18	44	6.8	15	94	.
Atlantic menhaden	9	0.3	98.6	0.82	124	6.9	102	172	.
northern pipefish	7	0.2	98.8	0.64	143	17.1	91	222	.
hogchoker	7	0.2	99.1	0.64	104	3.8	96	124	.
spot	6	0.2	99.3	0.55	168	5.0	150	181	.
smallmouth flounder	5	0.2	99.4	0.45	61	5.3	42	70	.
red hake	3	0.1	99.5	0.27	138	12.5	120	162	.
Atlantic herring	3	0.1	99.7	0.27	42	1.2	40	44	.
skilletfish	3	0.1	99.8	0.27	49	7.8	35	62	.
oyster toadfish	2	0.1	99.8	0.18	229	68.5	160	297	.
black seabass	1	0.0	99.9	0.09	47	.	47	47	.
alewife	1	0.0	99.9	0.09	172	.	172	172	.
windowpane	1	0.0	99.9	0.09	85	.	85	85	.
striped cusk-eel	1	0.0	100.0	0.09	54	.	54	54	.
blue crab, adult female	1	0.0	100.0	0.09	109	.	109	109	.
All Species Combined	2,873								

Table 110.

Month - April
River - All - Pooled
No. of Fish Trawls Made - 31
No. of Species - 35

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	3,816	73.2	73.2	123.10	56	0.5	35	94	1.3
spotted hake	766	14.7	87.9	24.71	113	1.0	36	238	.
smallmouth flounder	109	2.1	90.0	3.52	61	1.2	41	101	.
Atlantic croaker	108	2.1	92.0	3.48	210	4.1	32	288	.
northern searobin	78	1.5	93.5	2.52	59	2.0	34	121	.
blackcheek tonguefish	61	1.2	94.7	1.97	121	4.2	45	175	.
summer flounder	32	0.6	95.3	1.03	276	13.6	205	497	887.5
red hake	30	0.6	95.9	0.97	143	6.2	98	218	.
silver hake	28	0.5	96.4	0.90	147	7.4	40	222	.
spot	25	0.5	96.9	0.81	143	10.6	25	195	.
hogchoker	19	0.4	97.3	0.61	103	2.2	85	124	.
blue crab, male	17	0.3	97.6	0.55	60	10.2	15	141	.
blue crab, juvenile female	16	0.3	97.9	0.52	43	6.1	15	94	.
weakfish	13	0.2	98.1	0.42	155	12.9	122	257	.
Atlantic herring	13	0.2	98.4	0.42	53	4.4	39	77	.
black seabass	10	0.2	98.6	0.32	69	4.8	47	95	.
Atlantic menhaden	10	0.2	98.8	0.32	133	11.0	102	215	.
windowpane	10	0.2	99.0	0.32	163	29.4	58	295	.
northern pipefish	10	0.2	99.2	0.32	148	13.1	91	222	.
blue crab, adult female	10	0.2	99.3	0.32	135	4.4	109	150	.
clearnose skate	9	0.2	99.5	0.29	397	8.5	363	446	.
lined seahorse	4	0.1	99.6	0.13	80	9.9	56	102	.
oyster toadfish	4	0.1	99.7	0.13	188	36.5	146	297	.
skilletfish	3	0.1	99.7	0.10	49	7.8	35	62	.
American shad	2	0.0	99.8	0.06	162	3.0	159	165	.
feather blenny	2	0.0	99.8	0.06	69	4.5	64	73	.
silver perch	2	0.0	99.8	0.06	142	1.5	140	143	.
scup	1	0.0	99.9	0.03	115	.	115	115	.
squid	1	0.0	99.9	0.03	124	.	124	124	.
alewife	1	0.0	99.9	0.03	172	.	172	172	.
striped bass	1	0.0	99.9	0.03	341	.	341	341	.
northern puffer	1	0.0	99.9	0.03	196	.	196	196	.
seaboard goby	1	0.0	100.0	0.03	38	.	38	38	.
conger eel	1	0.0	100.0	0.03	357	.	357	357	.
striped cusk-eel	1	0.0	100.0	0.03	54	.	54	54	.
All Species Combined	5,215								

Table 111.

Month - May
River - Ches. Bay - Bottom
No. of Fish Trawls Made - 13
No. of Species - 27

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	4,388	78.0	78.0	337.54	55	0.4	38	89	1.4
spotted hake	651	11.6	89.6	50.08	143	1.5	44	259	
silver hake	86	1.5	91.1	6.62	143	2.7	98	217	
smallmouth flounder	73	1.3	92.4	5.62	66	1.7	38	115	
blackcheek tonguefish	65	1.2	93.6	5.00	146	2.1	108	182	
butterfish	62	1.1	94.7	4.77	110	1.0	93	136	
red hake	54	1.0	95.6	4.15	196	4.1	115	248	
Atlantic herring	43	0.8	96.4	3.31	63	5.2	47	279	
spot	30	0.5	96.9	2.31	62	11.3	13	196	
northern searobin	29	0.5	97.4	2.23	72	5.0	30	119	
clearnose skate	26	0.5	97.9	2.00	328	15.8	201	472	
summer flounder	25	0.4	98.3	1.92	332	15.4	213	492	
hogchoker	21	0.4	98.7	1.62	132	4.3	97	172	
scup	12	0.2	98.9	0.92	100	2.8	87	125	
striped searobin	12	0.2	99.1	0.92	229	12.2	186	301	
Atlantic croaker	10	0.2	99.3	0.77	222	4.4	200	246	
weakfish	8	0.1	99.5	0.62	174	14.2	128	232	
windowpane	7	0.1	99.6	0.54	221	21.7	99	276	
black scabass	6	0.1	99.7	0.46	78	3.4	68	92	
blue crab, adult female	5	0.1	99.8	0.38	154	3.9	145	164	
Atlantic menhaden	4	0.1	99.9	0.31	224	10.4	194	239	
southern kingfish	2	0.0	99.9	0.15	205	34.0	171	239	
silver perch	2	0.0	99.9	0.15	144	28.0	116	172	
seaboard goby	1	0.0	99.9	0.08	38		38	38	
feather blenny	1	0.0	100.0	0.08	44		44	44	
blue crab, male	1	0.0	100.0	0.08	42		42	42	
blue crab, juvenile female	1	0.0	100.0	0.08	37		37	37	

All Species Combined 5.625

Table 112.

Month - May
River - Ches. Bay - Lower
No. of Fish Trawls Made - 13
No. of Species - 28

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	4,790	77.4	77.4	368.46	58	0.5	33	93	1.4
Atlantic herring	626	10.1	87.5	48.15	53	0.5	38	76	
spotted hake	441	7.1	94.7	33.92	131	1.5	49	209	
hogchoker	58	0.9	95.6	4.46	106	2.1	82	161	
smallmouth flounder	48	0.8	96.4	3.69	60	1.5	45	97	
northern searobin	37	0.6	97.0	2.85	69	3.8	38	146	
blackcheek tonguefish	32	0.5	97.5	2.46	127	6.0	60	172	
red hake	27	0.4	97.9	2.08	152	5.1	114	212	
blue crab, adult female	25	0.4	98.3	1.92	143	2.7	121	166	
spot	18	0.3	98.6	1.38	137	15.1	16	185	
blue crab, juvenile female	17	0.3	98.9	1.31	37	3.0	21	63	
Atlantic croaker	16	0.3	99.1	1.23	208	12.0	59	259	
summer flounder	13	0.2	99.4	1.00	264	15.9	179	373	
blue crab, male	8	0.1	99.5	0.62	49	12.7	26	135	
black scabass	6	0.1	99.6	0.46	86	9.7	70	133	
butterfish	5	0.1	99.7	0.38	113	5.8	100	129	
windowpane	3	0.0	99.7	0.23	148	50.2	83	247	
northern pipefish	3	0.0	99.8	0.23	182	22.7	151	226	
conger eel	3	0.0	99.8	0.23	323	16.5	301	355	
striped searobin	2	0.0	99.8	0.15	229	9.5	219	238	
lined seahorse	2	0.0	99.9	0.15	60	4.0	56	64	
oyster toadfish	2	0.0	99.9	0.15	95	39.0	56	134	
scup	1	0.0	99.9	0.08	108		108	108	
silver hake	1	0.0	99.9	0.08	113		113	113	
weakfish	1	0.0	100.0	0.08	121		121	121	
American shad	1	0.0	100.0	0.08	146		146	146	
feather blenny	1	0.0	100.0	0.08	73		73	73	
fringed flounder	1	0.0	100.0	0.08	97		97	97	

All Species Combined 6.188

Table 113.

Month - May
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 13
 No. of Species - 24

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	1,653	85.6	85.6	127.15	63	0.7	41	91	..
spotted hake	130	6.7	92.4	10.00	130	2.4	47	182	..
blackcheck tonguefish	23	1.2	93.6	1.77	132	5.5	62	166	..
Atlantic croaker	20	1.0	94.6	1.54	213	6.8	110	243	..
weakfish	16	0.8	95.4	1.23	173	7.1	133	248	..
blueback herring	11	0.6	96.0	0.85	107	1.3	100	116	..
Atlantic herring	9	0.5	96.5	0.69	58	2.4	51	74	..
northern scarobin	9	0.5	96.9	0.69	75	8.8	47	133	..
blue crab, male	9	0.5	97.4	0.69	67	14.0	32	142	..
red hake	7	0.4	97.8	0.54	138	3.4	126	152	..
hogchoker	7	0.4	98.1	0.54	105	4.9	93	125	..
oyster toadfish	7	0.4	98.5	0.54	145	18.6	96	246	..
blue crab, juvenile female	6	0.3	98.8	0.46	68	14.3	32	113	..
conger eel	5	0.3	99.1	0.38	300	14.5	248	331	..
black seabass	4	0.2	99.3	0.31	82	14.9	48	115	..
spot	4	0.2	99.5	0.31	106	43.1	17	194	..
Atlantic menhaden	2	0.1	99.6	0.15	174	45.0	129	219	..
silver perch	2	0.1	99.7	0.15	189	7.0	182	196	..
summer flounder	1	0.1	99.7	0.08	250	.	250	250	..
alewife	1	0.1	99.8	0.08	129	.	129	129	..
northern pipefish	1	0.1	99.8	0.08	113	.	113	113	..
feather blenny	1	0.1	99.9	0.08	57	.	57	57	..
skilletfish	1	0.1	99.9	0.08	64	.	64	64	..
blue crab, adult female	1	0.1	100.0	0.08	157	.	157	157	..
All Species Combined	1,930								

Table 114.

Month - May
 River - All - Pooled
 No. of Fish Trawls Made - 39
 No. of Species - 36

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	10,831	78.8	78.8	277.72	57	0.3	33	93	1.4
spotted hake	1,222	8.9	87.7	31.33	136	1.0	44	259	..
Atlantic herring	678	4.9	92.6	17.38	55	0.9	38	279	..
smallmouth flounder	121	0.9	93.5	3.10	64	1.2	38	115	..
blackcheck tonguefish	120	0.9	94.4	3.08	138	2.3	60	182	..
red hake	88	0.6	95.0	2.26	178	3.9	114	248	..
silver hake	87	0.6	95.7	2.23	143	2.7	98	217	..
hogchoker	86	0.6	96.3	2.21	112	2.2	82	172	..
northern scarobin	75	0.5	96.8	1.92	71	2.9	30	146	..
butterfish	67	0.5	97.3	1.72	110	1.0	93	136	..
spot	52	0.4	97.7	1.33	91	10.1	13	196	..
Atlantic croaker	46	0.3	98.0	1.18	213	5.2	59	259	..
summer flounder	39	0.3	98.3	1.00	307	12.3	179	492	..
blue crab, adult female	31	0.2	98.5	0.79	145	2.4	121	166	..
clearnose skate	26	0.2	98.7	0.67	328	15.8	201	472	..
weakfish	25	0.2	98.9	0.64	171	6.6	121	248	..
blue crab, juvenile female	24	0.2	99.1	0.62	45	4.8	21	113	..
blue crab, male	18	0.1	99.2	0.46	58	9.0	26	142	..
black seabass	16	0.1	99.3	0.41	82	5.0	48	133	..
striped scarobin	14	0.1	99.4	0.36	229	10.4	186	301	..
scup	13	0.1	99.5	0.33	100	2.7	87	125	..
blueback herring	11	0.1	99.6	0.28	107	1.3	100	116	..
windowpane	10	0.1	99.7	0.26	199	22.6	83	276	..
oyster toadfish	9	0.1	99.8	0.23	134	17.2	56	246	..
conger eel	8	0.1	99.8	0.21	309	11.0	248	355	..
Atlantic menhaden	6	0.0	99.9	0.15	207	16.9	129	239	..
northern pipefish	4	0.0	99.9	0.10	165	23.5	113	226	..
silver perch	4	0.0	99.9	0.10	167	17.5	116	196	..
feather blenny	3	0.0	99.9	0.08	58	8.4	44	73	..
southern kingfish	2	0.0	99.9	0.05	205	34.0	171	239	..
lined seahorse	2	0.0	100.0	0.05	60	4.0	56	64	..
alewife	1	0.0	100.0	0.03	129	.	129	129	..
American shad	1	0.0	100.0	0.03	146	.	146	146	..
seaboard goby	1	0.0	100.0	0.03	38	.	38	38	..
skilletfish	1	0.0	100.0	0.03	64	.	64	64	..
fringed flounder	1	0.0	100.0	0.03	97	.	97	97	..
All Species Combined	13,743								

Table 115.

Month - June
River - Ches. Bay - Bottom
No. of Fish Trawls Made - 13
No. of Species - 30

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	5,692	90.2	90.2	437.85	60	0.4	44	84	2.0
spotted hake	196	3.1	93.4	15.08	151	5.2	62	243	.
Atlantic croaker	102	1.6	95.0	7.85	198	4.1	88	248	.
butterfish	67	1.1	96.0	5.15	78	5.3	29	152	.
spot	44	0.7	96.7	3.38	164	4.0	80	194	.
northern searobin	44	0.7	97.4	3.38	81	3.8	38	159	.
scup	37	0.6	98.0	2.85	98	1.9	70	119	.
Atlantic herring	27	0.4	98.4	2.08	70	0.5	63	76	.
weakfish	22	0.3	98.8	1.69	203	7.5	136	266	.
silver hake	17	0.3	99.1	1.31	155	5.9	107	196	.
smallmouth flounder	11	0.2	99.2	0.85	76	3.4	56	91	.
hogchoker	9	0.1	99.4	0.69	105	7.3	66	144	.
clearnose skate	8	0.1	99.5	0.62	387	33.3	235	477	.
blackcheek tonguefish	7	0.1	99.6	0.54	150	6.4	128	178	.
striped anchovy	5	0.1	99.7	0.38	104	2.7	97	112	.
silver perch	3	0.0	99.7	0.23	158	9.0	144	175	.
black seabass	2	0.0	99.8	0.15	130	70.0	60	200	.
blue crab, adult female	2	0.0	99.8	0.15	147	2.5	144	149	.
summer flounder	1	0.0	99.8	0.08	287	.	287	287	.
harvestfish	1	0.0	99.8	0.08	92	.	92	92	.
red hake	1	0.0	99.9	0.08	161	.	161	161	.
Atlantic menhaden	1	0.0	99.9	0.08	62	.	62	62	.
northern puffer	1	0.0	99.9	0.08	160	.	160	160	.
windowpane	1	0.0	99.9	0.08	238	.	238	238	.
lined seahorse	1	0.0	99.9	0.08	93	.	93	93	.
sandbar shark	1	0.0	99.9	0.08	545	.	545	545	.
Atlantic stingray	1	0.0	100.0	0.08	495	.	495	495	.
rough scad	1	0.0	100.0	0.08	83	.	83	83	.
dwarf goatfish	1	0.0	100.0	0.08	57	.	57	57	.
blue crab, juvenile female	1	0.0	100.0	0.08	48	.	48	48	.
All Species Combined	6,307								

Table 116.

Month - June
River - Ches. Bay - Lower
No. of Fish Trawls Made - 13
No. of Species - 32

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	9,975	94.4	94.4	767.31	58	0.5	44	91	1.3
spotted hake	271	2.6	97.0	20.85	188	1.5	96	249	.
weakfish	50	0.5	97.4	3.85	199	4.2	147	322	.
smallmouth flounder	47	0.4	97.9	3.62	72	1.4	52	93	.
northern searobin	41	0.4	98.3	3.15	78	3.8	37	140	0.1
hogchoker	25	0.2	98.5	1.92	115	3.7	82	147	.
blackcheek tonguefish	23	0.2	98.7	1.77	148	2.9	115	176	.
scup	19	0.2	98.9	1.46	107	4.1	79	129	.
Atlantic croaker	17	0.2	99.1	1.31	145	11.2	94	222	.
squid	12	0.1	99.2	0.92	45	4.8	23	81	.
butterfish	10	0.1	99.3	0.77	79	10.3	38	132	.
spot	10	0.1	99.4	0.77	83	6.1	48	101	.
lined seahorse	8	0.1	99.4	0.62	80	3.5	66	98	.
kingfish	7	0.1	99.5	0.54	236	16.6	174	282	.
northern pipefish	7	0.1	99.6	0.54	175	16.5	141	264	.
harvestfish	5	0.0	99.6	0.38	163	5.8	147	178	.
blueback herring	5	0.0	99.7	0.38	78	11.8	61	125	.
Atlantic herring	5	0.0	99.7	0.38	67	1.1	65	70	.
silver perch	5	0.0	99.8	0.38	169	10.9	139	204	.
blue crab, adult female	5	0.0	99.8	0.38	139	4.3	131	147	.
summer flounder	4	0.0	99.8	0.31	266	60.4	92	367	.
tautog	3	0.0	99.9	0.23	264	28.3	208	298	.
windowpane	3	0.0	99.9	0.23	177	37.9	137	253	.
feather blenny	2	0.0	99.9	0.15	65	1.5	63	66	.
black seabass	1	0.0	99.9	0.08	133	.	133	133	.
southern kingfish	1	0.0	99.9	0.08	280	.	280	280	.
striped anchovy	1	0.0	100.0	0.08	106	.	106	106	.
naked goby	1	0.0	100.0	0.08	52	.	52	52	.
rougthead stingray	1	0.0	100.0	0.08	417	.	417	417	.
seaweed blenny	1	0.0	100.0	0.08	58	.	58	58	.
dwarf goatfish	1	0.0	100.0	0.08	49	.	49	49	.
blue crab, male	1	0.0	100.0	0.08	84	.	84	84	.
All Species Combined	10,567								

Table 117.

Month - June
River - Ches. Bay - Upper
No. of Fish Trawls Made - 13
No. of Species - 24

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	7,352	97.3	97.3	565.54	57	0.4	40	88	1.0
northern searobin	56	0.7	98.0	4.31	84	2.6	40	135	.
spotted hake	41	0.5	98.6	3.15	170	4.5	59	216	.
Atlantic herring	16	0.2	98.8	1.23	65	1.1	56	70	.
hogchoker	16	0.2	99.0	1.23	108	3.9	88	153	.
weakfish	13	0.2	99.2	1.00	194	6.8	166	258	.
black seabass	9	0.1	99.3	0.69	82	6.8	56	108	.
Atlantic croaker	9	0.1	99.4	0.69	225	2.6	211	235	.
smallmouth flounder	8	0.1	99.5	0.62	76	2.9	65	91	.
scup	6	0.1	99.6	0.46	106	6.6	82	121	.
summer flounder	6	0.1	99.7	0.46	295	11.8	259	335	.
spot	6	0.1	99.7	0.46	117	14.4	76	182	.
blackcheek tonguefish	5	0.1	99.8	0.38	136	12.9	88	163	.
blue crab, juvenile female	3	0.0	99.8	0.23	64	17.6	32	93	.
windowpane	2	0.0	99.9	0.15	106	1.0	105	107	.
northern pipefish	2	0.0	99.9	0.15	166	29.5	136	195	.
harvestfish	1	0.0	99.9	0.08	61	.	61	61	.
squid	1	0.0	99.9	0.08	47	.	47	47	.
northern puffer	1	0.0	99.9	0.08	175	.	175	175	.
tautog	1	0.0	99.9	0.08	179	.	179	179	.
lined seahorse	1	0.0	100.0	0.08	80	.	80	80	.
Atlantic cutlassfish	1	0.0	100.0	0.08	202	.	202	202	4.0
blue crab, male	1	0.0	100.0	0.08	56	.	56	56	.
blue crab, adult female	1	0.0	100.0	0.08	144	.	144	144	.
All Species Combined	7,558								

Table 118.

Month - June
River - All - Pooled
No. of Fish Trawls Made - 39
No. of Species - 42

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	23,019	94.2	94.2	590.23	58	0.3	40	91	1.4
spotted hake	508	2.1	96.3	13.03	178	1.8	59	249	.
northern searobin	141	0.6	96.9	3.62	81	1.9	37	159	0.1
Atlantic croaker	128	0.5	97.4	3.28	188	4.8	88	248	.
weakfish	85	0.3	97.7	2.18	199	3.3	136	322	.
butterfish	77	0.3	98.1	1.97	78	4.7	29	152	.
smallmouth flounder	66	0.3	98.3	1.69	73	1.2	52	93	.
scup	62	0.3	98.6	1.59	101	1.8	70	129	.
spot	60	0.2	98.8	1.54	146	5.3	48	194	.
hogchoker	50	0.2	99.0	1.28	111	2.6	66	153	.
Atlantic herring	48	0.2	99.2	1.23	68	0.6	56	76	.
blackcheek tonguefish	35	0.1	99.4	0.90	147	2.9	88	178	.
silver hake	17	0.1	99.4	0.44	155	5.9	107	196	.
squid	13	0.1	99.5	0.33	45	4.4	23	81	.
black seabass	12	0.0	99.5	0.31	94	11.9	56	200	.
summer flounder	11	0.0	99.6	0.28	284	21.3	92	367	.
lined seahorse	10	0.0	99.6	0.26	81	3.0	66	98	.
northern pipefish	9	0.0	99.7	0.23	173	13.6	136	264	.
clearnose skate	8	0.0	99.7	0.21	387	33.3	235	477	.
silver perch	8	0.0	99.7	0.21	165	7.4	139	204	.
blue crab, adult female	8	0.0	99.8	0.21	142	2.8	131	149	.
harvestfish	7	0.0	99.8	0.18	138	16.7	61	178	.
kingfish	7	0.0	99.8	0.18	236	16.6	174	282	.
windowpane	6	0.0	99.8	0.15	164	26.7	105	253	.
striped anchovy	6	0.0	99.9	0.15	104	2.2	97	112	.
blueback herring	5	0.0	99.9	0.13	78	11.8	61	125	.
tautog	4	0.0	99.9	0.10	243	29.3	179	298	.
blue crab, juvenile female	4	0.0	99.9	0.10	60	13.1	32	93	.
northern puffer	2	0.0	99.9	0.05	168	7.5	160	175	.
feather blenny	2	0.0	99.9	0.05	65	1.5	63	66	.
dwarf goatfish	2	0.0	100.0	0.05	53	4.0	49	57	.
blue crab, male	2	0.0	100.0	0.05	70	14.0	56	84	.
red hake	1	0.0	100.0	0.03	161	.	161	161	.
Atlantic menhaden	1	0.0	100.0	0.03	62	.	62	62	.
southern kingfish	1	0.0	100.0	0.03	280	.	280	280	.
naked goby	1	0.0	100.0	0.03	52	.	52	52	.
sandbar shark	1	0.0	100.0	0.03	545	.	545	545	.
rougthead stingray	1	0.0	100.0	0.03	417	.	417	417	.
Atlantic stingray	1	0.0	100.0	0.03	495	.	495	495	.
rough scad	1	0.0	100.0	0.03	83	.	83	83	.
Atlantic cutlassfish	1	0.0	100.0	0.03	202	.	202	202	4.0
seaweed blenny	1	0.0	100.0	0.03	58	.	58	58	.
All Species Combined	24,432								

Table 119.

Month - July
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 13
 No. of Species - 27

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	893	42.8	42.8	68.69	59	0.3	48	75	1.7
smallmouth flounder	285	13.7	56.5	21.92	87	1.0	65	127	.
squid	252	12.1	68.6	19.38	47	1.6	12	136	.
spotted hake	219	10.5	79.1	16.85	172	2.5	72	253	.
scup	159	7.6	86.7	12.23	78	1.0	39	134	.
northern scarobin	147	7.1	93.8	11.31	101	1.9	44	168	.
butterfish	23	1.1	94.9	1.77	57	4.3	42	142	.
blackcheek tonguefish	17	0.8	95.7	1.31	150	3.1	118	170	.
black seabass	14	0.7	96.4	1.08	106	4.9	58	124	.
clearnose skate	14	0.7	97.0	1.08	377	11.5	292	467	.
weakfish	11	0.5	97.6	0.85	201	5.9	175	237	.
hogchoker	8	0.4	97.9	0.62	111	9.3	77	159	.
summer flounder	7	0.3	98.3	0.54	258	5.5	229	275	.
windowpane	5	0.2	98.5	0.38	80	25.3	30	146	.
striped anchovy	5	0.2	98.8	0.38	102	2.2	96	107	.
northern pipefish	5	0.2	99.0	0.38	182	16.2	123	210	.
silver perch	3	0.1	99.1	0.23	162	9.1	148	179	.
blue crab, adult female	3	0.1	99.3	0.23	133	2.4	128	136	.
silver hake	2	0.1	99.4	0.15	173	27.0	146	200	60.0
Atlantic thread herring	2	0.1	99.5	0.15	180	5.0	175	185	91.0
southern kingfish	2	0.1	99.6	0.15	199	14.5	184	213	.
spiny butterfly ray	2	0.1	99.7	0.15	497	2.0	495	499	.
conger eel	2	0.1	99.8	0.15	323	56.0	267	379	.
northern sennet	2	0.1	99.9	0.15	66	1.0	65	67	1.1
spot	1	0.0	99.9	0.08	88	.	88	88	.
lined seahorse	1	0.0	100.0	0.08	94	.	94	94	.
rough scad	1	0.0	100.0	0.08	53	.	53	53	1.0
All Species Combined	2,085								

Table 120.

Month - July
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 13
 No. of Species - 26

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	1,140	92.3	92.3	595.38	57	0.3	42	81	8.0
scup	277	3.3	95.6	21.31	87	0.9	32	140	.
Atlantic croaker	70	0.8	96.4	5.38	185	4.7	98	241	.
northern scarobin	54	0.6	97.0	4.15	102	2.6	62	146	.
spot	53	0.6	97.7	4.08	103	2.7	60	143	.
squid	26	0.3	98.0	2.00	52	4.4	29	115	.
hogchoker	26	0.3	98.3	2.00	110	4.7	78	182	.
silver perch	20	0.2	98.5	1.54	156	4.7	128	206	.
blackcheek tonguefish	19	0.2	98.7	1.46	139	4.9	88	180	.
weakfish	14	0.2	98.9	1.08	196	5.9	157	258	.
spotted hake	14	0.2	99.1	1.08	193	5.7	157	220	.
summer flounder	12	0.1	99.2	0.92	255	30.4	138	502	.
smallmouth flounder	12	0.1	99.4	0.92	94	3.5	75	113	.
blue crab, adult female	12	0.1	99.5	0.92	149	4.5	118	175	.
black seabass	10	0.1	99.6	0.77	114	4.3	89	127	.
butterfish	9	0.1	99.7	0.69	131	10.3	72	166	.
blue crab, juvenile female	9	0.1	99.8	0.69	74	5.5	46	90	.
lined seahorse	4	0.0	99.9	0.31	109	6.8	90	120	.
inshore lizardfish	2	0.0	99.9	0.15	53	1.0	52	54	.
tautog	1	0.0	99.9	0.08	249	.	249	249	320.0
southern kingfish	1	0.0	99.9	0.08	243	.	243	243	.
windowpane	1	0.0	100.0	0.08	144	.	144	144	.
Atlantic spadefish	1	0.0	100.0	0.08	255	.	255	255	.
smooth dogfish	1	0.0	100.0	0.08	680	.	680	680	.
spiny butterfly ray	1	0.0	100.0	0.08	514	.	514	514	.
orange filefish	1	0.0	100.0	0.08	39	.	39	39	.
All Species Combined	8,390								

Table 121.

Month - July
River - Ches. Bay - Upper
No. of Fish Trawls Made - 13
No. of Species - 22

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	7,350	85.1	85.1	565.38	57	0.3	39	78	1.0
scup	666	7.7	92.8	51.23	79	0.8	56	130	.
Atlantic croaker	219	2.5	95.3	16.85	181	2.5	118	248	.
spot	126	1.5	96.8	9.69	121	2.6	80	194	.
hogchoker	123	1.4	98.2	9.46	98	1.5	73	121	.
weakfish	63	0.7	98.9	4.85	199	3.3	157	277	.
blue crab, male	25	0.3	99.2	1.92	78	5.4	34	132	.
blue crab, juvenile female	21	0.2	99.5	1.62	59	4.3	32	101	.
northern scarobin	16	0.2	99.7	1.23	91	5.1	56	129	.
blue crab, adult female	7	0.1	99.7	0.54	139	6.3	121	166	.
blackcheek tonguefish	5	0.1	99.8	0.38	116	6.2	98	134	.
summer flounder	3	0.0	99.8	0.23	398	44.3	352	487	.
butterfish	3	0.0	99.9	0.23	97	22.8	57	136	.
black seabass	2	0.0	99.9	0.15	123	2.5	120	125	.
Atlantic spadefish	2	0.0	99.9	0.15	157	0.0	157	157	.
northern puffer	1	0.0	99.9	0.08	118	.	118	118	.
striped anchovy	1	0.0	99.9	0.08	98	.	98	98	.
lined seahorse	1	0.0	100.0	0.08	91	.	91	91	.
northern pipefish	1	0.0	100.0	0.08	164	.	164	164	.
conger eel	1	0.0	100.0	0.08	286	.	286	286	.
silver perch	1	0.0	100.0	0.08	181	.	181	181	.
smallmouth flounder	1	0.0	100.0	0.08	96	.	96	96	.
All Species Combined	8,638								

Table 122.

Month - July
River - All - Pooled
No. of Fish Trawls Made - 39
No. of Species - 36

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	15,983	83.6	83.6	409.82	57	0.2	39	81	4.9
scup	1,102	5.8	89.4	28.26	82	0.6	32	140	.
smallmouth flounder	298	1.6	90.9	7.64	88	0.9	65	127	.
Atlantic croaker	289	1.5	92.5	7.41	182	2.2	98	248	.
squid	278	1.5	93.9	7.13	47	1.5	12	136	.
spotted hake	233	1.2	95.1	5.97	173	2.4	72	253	.
northern searobin	217	1.1	96.3	5.56	100	1.5	44	168	.
spot	180	0.9	97.2	4.62	116	2.1	60	194	.
hogchoker	157	0.8	98.0	4.03	103	1.9	73	182	.
weakfish	88	0.5	98.5	2.26	199	2.6	157	277	.
blackcheek tonguefish	41	0.2	98.7	1.05	141	3.1	88	180	.
butterfish	35	0.2	98.9	0.90	79	6.9	42	166	.
blue crab, juvenile female	30	0.2	99.0	0.77	64	3.6	32	101	.
black seabass	26	0.1	99.2	0.67	110	3.2	58	127	.
blue crab, male	25	0.1	99.3	0.64	78	5.4	34	132	.
silver perch	24	0.1	99.4	0.62	158	4.2	128	206	.
summer flounder	22	0.1	99.6	0.56	276	20.1	138	502	.
blue crab, adult female	22	0.1	99.7	0.56	143	3.3	118	175	.
clearnose skate	14	0.1	99.7	0.36	377	11.5	292	467	.
windowpane	6	0.0	99.8	0.15	91	23.2	30	146	.
striped anchovy	6	0.0	99.8	0.15	102	1.9	96	107	.
lined seahorse	6	0.0	99.8	0.15	103	5.5	90	120	.
northern pipefish	6	0.0	99.9	0.15	179	13.6	123	210	.
southern kingfish	3	0.0	99.9	0.08	213	17.0	184	243	.
Atlantic spadefish	3	0.0	99.9	0.08	190	32.7	157	255	.
spiny butterfly ray	3	0.0	99.9	0.08	503	5.8	495	514	.
conger eel	3	0.0	99.9	0.08	311	34.6	267	379	.
silver hake	2	0.0	99.9	0.05	173	27.0	146	200	60.0
Atlantic thread herring	2	0.0	100.0	0.05	180	5.0	175	185	91.0
inshore lizardfish	2	0.0	100.0	0.05	53	1.0	52	54	.
northern sennet	2	0.0	100.0	0.05	66	1.0	65	67	1.1
northern puffer	1	0.0	100.0	0.03	118	.	118	118	.
tautog	1	0.0	100.0	0.03	249	.	249	249	320.0
smooth dogfish	1	0.0	100.0	0.03	680	.	680	680	.
rough scad	1	0.0	100.0	0.03	53	.	53	53	1.0
orange filefish	1	0.0	100.0	0.03	39	.	39	39	.
All Species Combined	19,113								

Table 123.

Month - August
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 13
 No. of Species - 28

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
Atlantic croaker	426	38.3	38.3	32.77	167	2.8	88	252	.
spot	225	20.2	58.5	17.31	134	1.0	111	161	.
scup	171	15.4	73.9	13.15	101	2.1	39	164	.
butterfish	73	6.6	80.4	5.62	106	4.8	34	176	.
squid	45	4.0	84.5	3.46	43	3.6	19	121	.
weakfish	37	3.3	87.8	2.85	222	2.8	188	254	.
smallmouth flounder	34	3.1	90.8	2.62	94	3.3	28	115	.
northern searobin	24	2.2	93.0	1.85	118	5.9	66	170	.
blue crab, adult female	13	1.2	94.2	1.00	135	4.5	111	165	.
blackcheek tonguefish	12	1.1	95.2	0.92	150	3.0	137	170	.
hogchoker	8	0.7	96.0	0.62	125	6.8	106	162	.
striped anchovy	7	0.6	96.6	0.54	102	9.7	62	122	.
summer flounder	6	0.5	97.1	0.46	264	29.0	190	383	.
northern pipefish	4	0.4	97.5	0.31	140	14.9	113	178	.
windowpane	3	0.3	97.8	0.23	120	37.0	46	163	.
spotted hake	3	0.3	98.0	0.23	180	25.5	141	228	.
clearnose skate	3	0.3	98.3	0.23	414	4.3	407	422	.
inshore lizardfish	3	0.3	98.6	0.23	162	13.1	141	186	.
banded drum	3	0.3	98.8	0.23	170	7.9	161	186	25.0
blue crab, juvenile female	3	0.3	99.1	0.23	75	5.9	64	84	.
black seabass	2	0.2	99.3	0.15	136	10.0	126	146	.
lined seahorse	2	0.2	99.5	0.15	113	2.0	111	115	.
Atlantic herring	1	0.1	99.6	0.08	95	.	95	95	.
Atlantic threac herring	1	0.1	99.6	0.08	160	.	160	160	.
bay anchovy	1	0.1	99.7	0.08	66	.	66	66	.
naked goby	1	0.1	99.8	0.08	27	.	27	27	.
Atlantic silverside	1	0.1	99.9	0.08	64	.	64	64	.
blue crab, male	1	0.1	100.0	0.08	107	.	107	107	.
All Species Combined	1,113								

Table 124.

Month - August
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 13
 No. of Species - 32

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
spot	1,017	36.2	36.2	78.23	137	1.0	105	209	.
Atlantic croaker	885	31.5	67.7	68.08	167	1.3	123	248	.
scup	236	8.4	76.1	18.15	109	0.7	83	143	.
bay anchovy	137	4.9	80.9	10.54	51	1.0	33	68	.
hogchoker	133	4.7	85.7	10.23	108	1.4	80	158	.
butterfish	58	2.1	87.7	4.46	91	5.5	31	170	.
northern searobin	55	2.0	89.7	4.23	119	3.5	75	192	.
weakfish	54	1.9	91.6	4.15	181	9.8	9	261	.
blackcheek tonguefish	54	1.9	93.5	4.15	128	2.1	101	158	.
blue crab, adult female	33	1.2	94.7	2.54	141	2.8	104	170	.
squid	26	0.9	95.6	2.00	28	3.2	9	76	.
smallmouth flounder	20	0.7	96.3	1.54	98	1.9	79	108	.
black seabass	17	0.6	96.9	1.31	133	7.3	56	179	.
summer flounder	15	0.5	97.5	1.15	327	19.3	188	424	.
inshore lizardfish	13	0.5	97.9	1.00	164	10.0	93	215	.
northern puffer	11	0.4	98.3	0.85	79	3.3	60	99	.
windowpane	10	0.4	98.7	0.77	195	15.1	144	254	.
striped anchovy	7	0.2	98.9	0.54	78	3.1	67	87	.
blue crab, male	6	0.2	99.1	0.46	96	14.7	52	142	.
northern kingfish	4	0.1	99.3	0.31	32	2.9	27	40	.
harvestfish	3	0.1	99.4	0.23	21	4.9	12	29	.
blue crab, juvenile female	3	0.1	99.5	0.23	81	8.7	64	91	.
lined seahorse	2	0.1	99.6	0.15	78	35.5	42	113	.
smooth dogfish	2	0.1	99.6	0.15	566	139.0	427	705	.
clearnose skate	2	0.1	99.7	0.15	395	3.0	392	398	.
brown shrimp	2	0.1	99.8	0.15	139	5.5	133	144	.
Atlantic menhaden	1	0.0	99.8	0.08	135	.	135	135	.
spotted hake	1	0.0	99.9	0.08	211	.	211	211	.
striped searobin	1	0.0	99.9	0.08	230	.	230	230	.
spiny butterfly ray	1	0.0	99.9	0.08	518	.	518	518	.
striped cusk-eel	1	0.0	100.0	0.08	187	.	187	187	.
striped burrfish	1	0.0	100.0	0.08	181	.	181	181	.
All Species Combined	2,811								

Table 125.

Month - August
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 13
 No. of Species - 26

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	13,052	87.5	87.5	1004.00	52	0.4	15	76	3.6
spot	892	6.0	93.5	68.62	128	0.6	92	226	.
Atlantic croaker	370	2.5	96.0	28.46	174	1.3	135	260	.
weakfish	212	1.4	97.4	16.31	126	6.4	12	246	.
scup	101	0.7	98.1	7.77	104	1.2	66	140	.
hogchoker	58	0.4	98.5	4.46	106	2.0	76	151	.
butterfish	39	0.3	98.7	3.00	108	4.7	48	165	.
striped anchovy	37	0.2	99.0	2.85	71	1.3	44	90	.
squid	32	0.2	99.2	2.46	21	2.0	6	52	.
northern searobin	28	0.2	99.4	2.15	129	3.6	67	165	.
inshore lizardfish	14	0.1	99.5	1.08	131	16.4	17	205	.
blackcheek tonguefish	12	0.1	99.6	0.92	125	5.7	98	160	.
summer flounder	11	0.1	99.6	0.85	277	34.0	175	518	.
blue crab, male	11	0.1	99.7	0.85	120	7.1	68	157	.
harvestfish	9	0.1	99.8	0.69	46	19.1	12	150	.
blue crab, juvenile female	7	0.0	99.8	0.54	82	8.0	64	123	.
black seabass	6	0.0	99.9	0.46	137	8.5	116	171	.
northern kingfish	5	0.0	99.9	0.38	148	48.2	42	267	.
blue crab, adult female	4	0.0	99.9	0.31	141	5.3	128	150	.
Atlantic menhaden	3	0.0	99.9	0.23	111	4.4	103	118	.
striped searobin	2	0.0	100.0	0.15	161	15.0	146	176	.
oyster toadfish	2	0.0	100.0	0.15	113	10.0	103	123	.
lined seahorse	1	0.0	100.0	0.08	26	.	26	26	.
spiny butterfly ray	1	0.0	100.0	0.08	430	.	430	430	.
conger eel	1	0.0	100.0	0.08	388	.	388	388	.
lookdown	1	0.0	100.0	0.08	101	.	101	101	.
All Species Combined	14,911								

Table 126.

Month - August
 River - All - Pooled
 No. of Fish Trawls Made - 39
 No. of Species - 41

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	13,190	70.0	70.0	338.21	52	0.4	15	76	3.6
spot	2,134	11.3	81.4	54.72	132	0.5	92	226	.
Atlantic croaker	1,681	8.9	90.3	43.10	169	0.9	88	260	.
scup	508	2.7	93.0	13.03	105	0.9	39	164	.
weakfish	303	1.6	94.6	7.77	148	5.2	9	261	.
hogchoker	199	1.1	95.6	5.10	108	1.2	76	162	.
butterfish	170	0.9	96.5	4.36	101	3.0	31	176	.
northern searobin	107	0.6	97.1	2.74	121	2.4	66	192	.
squid	103	0.5	97.7	2.64	32	2.1	6	121	.
blackcheek tonguefish	78	0.4	98.1	2.00	131	2.0	98	170	.
smallmouth flounder	54	0.3	98.4	1.38	95	2.2	28	115	.
striped anchovy	51	0.3	98.6	1.31	77	2.2	44	122	.
blue crab, adult female	50	0.3	98.9	1.28	139	2.2	104	170	.
summer flounder	32	0.2	99.1	0.82	298	16.0	175	518	.
inshore lizardfish	30	0.2	99.2	0.77	149	9.2	17	215	.
black seabass	25	0.1	99.4	0.64	134	5.3	56	179	.
blue crab, male	18	0.1	99.5	0.46	111	6.9	52	157	.
windowpane	13	0.1	99.5	0.33	177	16.4	46	254	.
blue crab, juvenile female	13	0.1	99.6	0.33	80	4.7	64	123	.
harvestfish	12	0.1	99.7	0.31	40	14.5	12	150	.
northern puffer	11	0.1	99.7	0.28	79	3.3	60	99	.
northern kingfish	9	0.0	99.8	0.23	96	32.6	27	267	.
lined seahorse	5	0.0	99.8	0.13	81	19.5	26	115	.
clearnose skate	5	0.0	99.8	0.13	407	5.4	392	422	.
Atlantic menhaden	4	0.0	99.8	0.10	117	6.7	103	135	.
spotted hake	4	0.0	99.9	0.10	188	19.6	141	228	.
northern pipefish	4	0.0	99.9	0.10	140	14.9	113	178	.
striped searobin	3	0.0	99.9	0.08	184	24.6	146	230	.
banded drum	3	0.0	99.9	0.08	170	7.9	161	186	25.0
oyster toadfish	2	0.0	99.9	0.05	113	10.0	103	123	.
smooth dogfish	2	0.0	99.9	0.05	566	139.0	427	705	.
spiny butterfly ray	2	0.0	99.9	0.05	474	44.0	430	518	.
brown shrimp	2	0.0	100.0	0.05	139	5.5	133	144	.
Atlantic herring	1	0.0	100.0	0.03	95	.	95	95	.
Atlantic thread herring	1	0.0	100.0	0.03	160	.	160	160	.
naked goby	1	0.0	100.0	0.03	27	.	27	27	.
Atlantic silverside	1	0.0	100.0	0.03	64	.	64	64	.
conger eel	1	0.0	100.0	0.03	388	.	388	388	.
lookdown	1	0.0	100.0	0.03	101	.	101	101	.
striped cusk-eel	1	0.0	100.0	0.03	187	.	187	187	.
striped burrfish	1	0.0	100.0	0.03	181	.	181	181	.
All Species Combined	18,835								

Table 127.

Month - September
River - Ches. Bay - Bottom
No. of Fish Trawls Made - 13
No. of Species - 32

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	39,802	93.7	93.7	3061.69	47	0.3	30	78	0.6
Atlantic thread herring	776	1.8	95.5	59.69	49	1.4	30	179	1.1
spot	433	1.0	96.6	33.31	141	0.7	109	209	.
Atlantic croaker	378	0.9	97.4	29.08	161	0.9	100	243	.
squid	229	0.5	98.0	17.62	30	1.1	14	83	.
weakfish	142	0.3	98.3	10.92	81	4.9	27	309	.
scup	140	0.3	98.6	10.77	128	1.0	83	169	.
blackcheek tonguefish	102	0.2	98.9	7.85	150	1.5	104	174	.
striped anchovy	82	0.2	99.1	6.31	81	1.1	64	110	.
butterfish	70	0.2	99.2	5.38	83	4.6	25	169	.
hogchoker	68	0.2	99.4	5.23	120	2.2	84	168	.
smallmouth flounder	60	0.1	99.5	4.62	79	2.6	48	116	.
blue crab, adult female	35	0.1	99.6	2.69	138	2.1	117	165	.
northern searobin	34	0.1	99.7	2.62	139	3.1	87	169	.
kingfish	29	0.1	99.8	2.23	62	5.3	27	145	.
spotted hake	27	0.1	99.8	2.08	181	4.5	141	243	.
summer flounder	14	0.0	99.9	1.08	298	22.2	194	411	.
inshore lizardfish	14	0.0	99.9	1.08	181	7.4	107	217	.
brown shrimp	6	0.0	99.9	0.46	143	7.0	120	172	.
windowpane	5	0.0	99.9	0.38	135	20.8	93	191	.
lined seahorse	5	0.0	99.9	0.38	77	14.7	35	111	.
clearnose skate	5	0.0	100.0	0.38	411	15.0	386	462	.
black seabass	4	0.0	100.0	0.31	120	16.6	73	151	.
northern pipefish	4	0.0	100.0	0.31	187	34.8	91	244	.
bluntnose stingray	3	0.0	100.0	0.23	211	3.9	206	219	340.3
northern puffer	2	0.0	100.0	0.15	101	2.5	98	103	.
blue crab, male	2	0.0	100.0	0.15	103	0.0	103	103	.
southern kingfish	1	0.0	100.0	0.08	243	.	243	243	.
Florida pompano	1	0.0	100.0	0.08	214	.	214	214	245.0
naked goby	1	0.0	100.0	0.08	31	.	31	31	.
oyster toadfish	1	0.0	100.0	0.08	146	.	146	146	.
Atlantic cutlassfish	1	0.0	100.0	0.08	556	.	556	556	112.0
All Species Combined	42,476								

Table 128.

Month - September
River - Ches. Bay - Lower
No. of Fish Trawls Made - 13
No. of Species - 34

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	13,396	83.2	83.2	1030.46	41	0.4	15	75	0.9
spot	694	4.3	87.5	53.38	141	0.7	107	208	.
weakfish	619	3.8	91.4	47.62	99	2.1	38	260	.
Atlantic thread herring	306	1.9	93.3	23.54	49	0.7	39	56	1.7
Atlantic croaker	279	1.7	95.0	21.46	177	1.1	129	245	.
scup	245	1.5	96.6	18.85	130	0.8	98	172	.
striped anchovy	72	0.4	97.0	5.54	93	1.3	66	112	.
squid	70	0.4	97.4	5.38	35	2.1	13	103	.
hogchoker	70	0.4	97.9	5.38	107	2.1	67	157	.
blue crab, adult female	56	0.3	98.2	4.31	140	1.7	112	167	.
butterfish	55	0.3	98.6	4.23	111	2.3	88	164	.
blackcheek tonguefish	46	0.3	98.8	3.54	143	1.9	121	173	.
smallmouth flounder	39	0.2	99.1	3.00	74	2.7	41	117	.
inshore lizardfish	33	0.2	99.3	2.54	155	7.9	64	220	.
kingfish	28	0.2	99.5	2.15	89	4.2	47	160	.
harvestfish	20	0.1	99.6	1.54	69	5.4	14	96	.
northern puffer	13	0.1	99.7	1.00	95	8.8	41	140	.
northern searobin	13	0.1	99.8	1.00	159	5.0	116	178	.
summer flounder	9	0.1	99.8	0.69	378	30.0	203	516	825.0
blue crab, juvenile female	7	0.0	99.9	0.54	71	10.2	31	101	.
Atlantic spadefish	3	0.0	99.9	0.23	59	15.3	28	75	.
brown shrimp	3	0.0	99.9	0.23	144	3.0	140	150	.
blue crab, male	3	0.0	99.9	0.23	129	3.2	123	133	.
black seabass	2	0.0	99.9	0.15	176	35.5	140	211	.
oyster toadfish	2	0.0	99.9	0.15	88	46.0	42	134	.
conger eel	2	0.0	99.9	0.15	412	31.5	380	443	.
fringed flounder	2	0.0	100.0	0.15	120	6.0	114	126	.
southern kingfish	1	0.0	100.0	0.08	221	.	221	221	.
windowpane	1	0.0	100.0	0.08	181	.	181	181	.
lined seahorse	1	0.0	100.0	0.08	107	.	107	107	.
northern pipefish	1	0.0	100.0	0.08	180	.	180	180	.
feather blenny	1	0.0	100.0	0.08	98	.	98	98	.
clearnose skate	1	0.0	100.0	0.08	469	.	469	469	.
silver perch	1	0.0	100.0	0.08	147	.	147	147	.
All Species Combined	16,094								

Table 129.

Month - September
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 13
 No. of Species - 35

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	9,300	75.6	75.6	715.38	37	0.4	19	69	0.5
weakfish	1,184	9.6	85.2	91.08	83	1.5	24	269	.
spot	503	4.1	89.3	38.69	147	1.0	111	226	.
Atlantic croaker	335	2.7	92.0	25.77	195	1.7	21	255	.
hogchoker	239	1.9	94.0	18.38	110	1.6	76	163	.
blue crab, adult female	134	1.1	95.1	10.31	136	0.9	112	166	.
kingfish	116	0.9	96.0	8.92	72	4.3	25	316	.
blackcheek tonguefish	102	0.8	96.8	7.85	135	1.7	90	173	.
scup	75	0.6	97.4	5.77	124	1.0	98	140	.
Atlantic thread herring	67	0.5	98.0	5.15	48	0.6	39	58	.
harvestfish	58	0.5	98.4	4.46	51	1.9	20	87	.
blue crab, male	33	0.3	98.7	2.54	106	6.4	17	150	.
summer flounder	23	0.2	98.9	1.77	301	20.4	179	581	.
inshore lizardfish	23	0.2	99.1	1.77	168	10.0	101	239	.
striped anchovy	20	0.2	99.3	1.54	99	1.8	77	109	.
squid	18	0.1	99.4	1.38	38	2.6	13	58	.
butterfish	16	0.1	99.5	1.23	104	3.6	68	132	.
blue crab, juvenile female	14	0.1	99.6	1.08	54	8.8	9	105	.
northern puffer	8	0.1	99.7	0.62	73	9.7	45	137	.
Atlantic spadefish	6	0.0	99.8	0.46	79	9.5	52	119	.
smallmouth flounder	4	0.0	99.8	0.31	82	11.3	69	116	.
northern searobin	3	0.0	99.8	0.23	165	13.3	141	187	.
striped searobin	3	0.0	99.8	0.23	161	52.6	58	231	.
lined seahorse	3	0.0	99.9	0.23	69	19.0	48	107	.
brown shrimp	3	0.0	99.9	0.23	109	16.0	91	141	.
black seabass	2	0.0	99.9	0.15	124	65.5	58	189	.
pigfish	2	0.0	99.9	0.15	162	2.0	160	164	.
windowpane	2	0.0	99.9	0.15	210	43.5	166	253	.
northern stargazer	2	0.0	100.0	0.15	19	6.0	13	25	.
bluefish	1	0.0	100.0	0.08	291	.	291	291	.
Spanish mackerel	1	0.0	100.0	0.08	164	.	164	164	.
northern pipefish	1	0.0	100.0	0.08	84	.	84	84	.
oyster toadfish	1	0.0	100.0	0.08	127	.	127	127	.
bluntnose stingray	1	0.0	100.0	0.08	225	.	225	225	.
lookdown	1	0.0	100.0	0.08	105	.	105	105	.
All Species Combined	12,304								

Table 130.

Month - September
 River - All - Pooled
 No. of Fish Trawls Made - 39
 No. of Species - 45

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	62,498	88.2	88.2	1602.51	42	0.3	15	78	0.7
weakfish	1,945	2.7	90.9	49.87	89	1.2	24	309	.
spot	1,630	2.3	93.2	41.79	143	0.5	107	226	.
Atlantic thread herring	1,149	1.6	94.8	29.46	49	0.8	30	179	1.4
Atlantic croaker	992	1.4	96.2	25.44	178	0.9	21	255	.
scup	460	0.6	96.9	11.79	128	0.5	83	172	.
hogchoker	377	0.5	97.4	9.67	112	1.1	67	168	.
squid	317	0.4	97.9	8.13	33	1.0	13	103	.
blackcheek tonguefish	250	0.4	98.2	6.41	142	1.1	90	174	.
blue crab, adult female	225	0.3	98.5	5.77	137	0.8	112	167	.
striped anchovy	174	0.2	98.8	4.46	88	0.9	64	112	.
kingfish	173	0.2	99.0	4.44	73	3.1	25	316	.
butterfish	141	0.2	99.2	3.62	96	2.7	25	169	.
smallmouth flounder	103	0.1	99.4	2.64	77	1.9	41	117	.
harvestfish	78	0.1	99.5	2.00	56	2.2	14	96	.
inshore lizardfish	70	0.1	99.6	1.79	164	5.3	64	239	.
northern scarobin	50	0.1	99.7	1.28	146	2.9	87	187	.
summer flounder	46	0.1	99.7	1.18	315	14.1	179	581	825.0
blue crab, male	38	0.1	99.8	0.97	108	5.6	17	150	.
spotted hake	27	0.0	99.8	0.69	181	4.5	141	243	.
northern puffer	23	0.0	99.8	0.59	88	6.3	41	140	.
blue crab, juvenile female	21	0.0	99.9	0.54	60	6.9	9	105	.
brown shrimp	12	0.0	99.9	0.31	135	6.6	91	172	.
Atlantic spadefish	9	0.0	99.9	0.23	72	8.3	28	119	.
lined seahorse	9	0.0	99.9	0.23	78	10.2	35	111	.
black seabass	8	0.0	99.9	0.21	135	18.4	58	211	.
windowpane	8	0.0	99.9	0.21	159	19.4	93	253	.
northern pipefish	6	0.0	100.0	0.15	169	27.8	84	244	.
clearnose skate	6	0.0	100.0	0.15	420	15.7	386	469	.
oyster toadfish	4	0.0	100.0	0.10	112	23.7	42	146	.
bluntnose stingray	4	0.0	100.0	0.10	215	4.4	206	225	340.3
striped searobin	3	0.0	100.0	0.08	161	52.6	58	231	.
southern kingfish	2	0.0	100.0	0.05	232	11.0	221	243	.
pigfish	2	0.0	100.0	0.05	162	2.0	160	164	.
conger eel	2	0.0	100.0	0.05	412	31.5	380	443	.
northern stargazer	2	0.0	100.0	0.05	19	6.0	13	25	.
fringed flounder	2	0.0	100.0	0.05	120	6.0	114	126	.
bluefish	1	0.0	100.0	0.03	291	.	291	291	.
Spanish mackerel	1	0.0	100.0	0.03	164	.	164	164	.
Florida pompano	1	0.0	100.0	0.03	214	.	214	214	245.0
naked goby	1	0.0	100.0	0.03	31	.	31	31	.
feather blenny	1	0.0	100.0	0.03	98	.	98	98	.
lookdown	1	0.0	100.0	0.03	105	.	105	105	.
silver perch	1	0.0	100.0	0.03	147	.	147	147	.
Atlantic cutlassfish	1	0.0	100.0	0.03	556	.	556	556	112.0
All Species Combined	70,874								

Table 131.

Month - October
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 13
 No. of Species - 40

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	5,178	66.7	66.7	444.46	50	0.5	30	79	1.9
squid	687	7.9	74.6	52.85	32	1.2	9	77	8.9
weakfish	536	6.2	80.8	41.23	138	3.0	62	256	.
spot	385	4.4	85.3	29.62	148	1.0	102	240	.
Atlantic croaker	376	4.3	89.6	28.92	178	1.2	25	259	.
smallmouth flounder	202	2.3	91.9	15.54	81	1.4	39	162	.
blackcheek tonguefish	153	1.8	93.7	11.77	153	2.0	83	186	.
butterfish	99	1.1	94.8	7.62	115	1.6	70	156	.
kingfish	93	1.1	95.9	7.15	102	3.0	45	255	.
hogchoker	78	0.9	96.8	6.00	137	3.1	90	189	.
blue crab, adult female	39	0.5	97.3	3.00	138	2.3	107	169	.
silver perch	30	0.3	97.6	2.31	124	5.2	55	180	.
striped anchovy	28	0.3	97.9	2.15	102	1.8	79	113	.
northern puffer	21	0.2	98.2	1.62	136	10.4	52	200	.
summer flounder	20	0.2	98.4	1.54	330	17.8	206	454	.
scup	19	0.2	98.6	1.46	137	4.2	93	178	.
northern searobin	16	0.2	98.8	1.23	64	13.0	26	196	.
inshore lizardfish	16	0.2	99.0	1.23	207	12.7	128	308	.
Atlantic spadefish	12	0.1	99.1	0.92	94	3.6	70	109	.
clearnose skate	12	0.1	99.3	0.92	386	26.0	141	465	.
black seabass	9	0.1	99.4	0.69	140	24.3	51	230	.
fringed flounder	9	0.1	99.5	0.69	114	6.9	94	159	.
spotted hake	8	0.1	99.6	0.62	237	8.8	207	279	.
blue crab, male	5	0.1	99.6	0.38	71	22.7	18	123	.
lined seahorse	4	0.0	99.7	0.31	88	14.2	59	123	.
northern pipefish	4	0.0	99.7	0.31	174	10.4	143	187	.
oyster toadfish	4	0.0	99.8	0.31	175	34.1	122	267	.
green goby	3	0.0	99.8	0.23
bluefish	2	0.0	99.8	0.15	235	40.0	195	275	181.0
windowpane	2	0.0	99.8	0.15	194	8.0	186	202	.
striped searobin	2	0.0	99.9	0.15	141	33.5	107	174	.
naked goby	2	0.0	99.9	0.15	30	4.0	26	34	.
blue crab, juvenile female	2	0.0	99.9	0.15	40	7.0	33	47	.
harvestfish	1	0.0	99.9	0.08	95	.	95	95	.
pigfish	1	0.0	99.9	0.08	192	.	192	192	.
bluespotted cornetfish	1	0.0	100.0	0.08	380	.	380	380	.
spiny butterfly ray	1	0.0	100.0	0.08	640	.	640	640	15.5
lookdown	1	0.0	100.0	0.08	64	.	64	64	.
mottled mojarra	1	0.0	100.0	0.08	108	.	108	108	.
white shrimp	1	0.0	100.0	0.08	110	.	110	110	26.0
All Species Combined	8,663								

Table 132.

Month - October
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 13
 No. of Species - 40

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	1,300	34.6	34.6	100.00	48	0.6	31	80	
hogchoker	1,085	28.9	63.5	83.46	116	1.4	83	170	35.5
weakfish	433	11.5	75.1	33.31	151	2.3	73	279	
spot	222	5.9	81.0	17.08	150	1.2	122	197	
Atlantic croaker	146	3.9	84.9	11.23	120	7.3	11	241	
blackcheck tonguefish	116	3.1	88.0	8.92	149	1.7	74	172	
squid	78	2.1	90.0	6.00	27	2.0	11	64	
kingfish	54	1.4	91.5	4.15	106	5.6	48	301	
silver perch	53	1.4	92.9	4.08	130	1.7	90	151	
smallmouth flounder	39	1.0	93.9	3.00	80	3.1	42	122	
blue crab, adult female	38	1.0	94.9	2.92	151	2.3	116	179	
inshore lizardfish	31	0.8	95.8	2.38	170	8.2	113	298	
northern pipefish	22	0.6	96.4	1.69	126	3.7	99	165	
summer flounder	19	0.5	96.9	1.46	312	15.1	232	448	
butterfish	18	0.5	97.3	1.38	106	2.2	90	124	
scup	16	0.4	97.8	1.23	133	2.6	122	164	
Atlantic spadefish	14	0.4	98.1	1.08	89	2.2	79	107	
fringed flounder	10	0.3	98.4	0.77	123	4.3	100	137	
northern puffer	7	0.2	98.6	0.54	121	18.9	55	178	
oyster toadfish	6	0.2	98.7	0.46	89	34.4	49	260	
southern kingfish	5	0.1	98.9	0.38	131	29.2	98	248	
windowpane	5	0.1	99.0	0.38	264	6.6	245	279	
northern searobin	5	0.1	99.1	0.38	69	31.6	29	195	
blue crab, male	5	0.1	99.3	0.38	83	26.9	20	159	
black seabass	4	0.1	99.4	0.31	130	36.3	62	225	
lined seahorse	4	0.1	99.5	0.31	109	9.1	86	128	
conger eel	3	0.1	99.6	0.23	361	60.5	241	432	
pigfish	2	0.1	99.6	0.15	187	6.5	180	193	124.0
northern stargazer	2	0.1	99.7	0.15	76	31.5	44	107	
blue crab, juvenile female	2	0.1	99.7	0.15	49	26.5	22	75	
harvestfish	1	0.0	99.8	0.08	104		104	104	
striped anchovy	1	0.0	99.8	0.08	85		85	85	
naked goby	1	0.0	99.8	0.08	35		35	35	
feather blenny	1	0.0	99.8	0.08	60		60	60	
skilletfish	1	0.0	99.9	0.08	49		49	49	
clearnose skate	1	0.0	99.9	0.08	440		440	440	
blue runner	1	0.0	99.9	0.08	134		134	134	
banded drum	1	0.0	99.9	0.08	131		131	131	34.0
striped cusk-eel	1	0.0	100.0	0.08	185		185	185	
brown shrimp	1	0.0	100.0	0.08	113		113	113	
All Species Combined	3,754								

Table 133.

Month - October
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 13
 No. of Species - 39

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	29,923	93.6	93.6	2301.77	43	0.4	26	79	0.6
spot	966	3.0	96.6	74.31	147	0.7	110	202	.
weakfish	302	0.9	97.6	23.23	152	3.0	76	329	.
Atlantic croaker	167	0.5	98.1	12.85	70	5.3	11	251	.
hogchoker	134	0.4	98.5	10.31	113	1.3	80	155	.
blackcheek tonguefish	94	0.3	98.8	7.23	143	2.1	69	174	.
southern kingfish	51	0.2	99.0	3.92	111	5.1	72	268	.
inshore lizardfish	47	0.1	99.1	3.62	196	6.3	118	327	.
squid	46	0.1	99.3	3.54	25	1.3	12	49	.
blue crab, adult female	36	0.1	99.4	2.77	145	2.1	122	179	.
summer flounder	32	0.1	99.5	2.46	266	6.1	226	364	.
kingfish	28	0.1	99.6	2.15	109	5.9	63	212	.
scup	24	0.1	99.6	1.85	137	3.6	92	185	.
blue crab, male	23	0.1	99.7	1.77	79	10.0	37	171	.
blue crab, juvenile female	20	0.1	99.8	1.54	45	1.4	33	58	.
harvestfish	14	0.0	99.8	1.08	89	1.1	82	97	.
Atlantic spadefish	11	0.0	99.8	0.85	79	2.3	68	93	.
butterfish	8	0.0	99.9	0.62	125	4.8	107	144	.
silver perch	7	0.0	99.9	0.54	136	5.4	110	152	.
northern puffer	4	0.0	99.9	0.31	127	24.2	73	168	.
black seabass	3	0.0	99.9	0.23	209	1.2	207	211	.
striped searobin	3	0.0	99.9	0.23	135	28.5	78	166	.
lined seahorse	3	0.0	99.9	0.23	80	21.7	42	117	.
windowpane	2	0.0	99.9	0.15	229	22.5	206	251	.
northern searobin	2	0.0	99.9	0.15	173	5.5	167	178	.
striped anchovy	2	0.0	99.9	0.15	105	0.5	104	105	.
oyster toadfish	2	0.0	100.0	0.15	135	14.0	121	149	.
fringed flounder	2	0.0	100.0	0.15	118	7.5	110	125	.
smallmouth flounder	2	0.0	100.0	0.15	57	2.0	55	59	.
Atlantic thread herring	1	0.0	100.0	0.08	126	.	126	126	.
pigfish	1	0.0	100.0	0.08	172	.	172	172	.
northern pipefish	1	0.0	100.0	0.08	150	.	150	150	.
feather blenny	1	0.0	100.0	0.08	83	.	83	83	.
clearnose skate	1	0.0	100.0	0.08	470	.	470	470	.
conger eel	1	0.0	100.0	0.08	259	.	259	259	.
Atlantic cutlassfish	1	0.0	100.0	0.08	624	.	624	624	162.0
northern stargazer	1	0.0	100.0	0.08	31	.	31	31	.
chain pipefish	1	0.0	100.0	0.08	267	.	267	267	.
brown shrimp	1	0.0	100.0	0.08	99	.	99	99	.
All Species Combined	31,968								

Table 134.

Month - October
 River - All - Pooled
 No. of Fish Trawls Made - 39
 No. of Species - 52

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	37,001	83.4	83.4	948.74	46	0.3	26	80	0.7
spot	1,573	3.5	86.9	40.33	148	0.5	102	240	
hogchoker	1,297	2.9	89.8	33.26	119	1.1	80	189	35.5
weakfish	1,271	2.9	92.7	32.59	148	1.6	62	329	
squid	811	1.8	94.5	20.79	29	0.9	9	77	8.9
Atlantic croaker	689	1.6	96.1	17.67	132	3.1	11	259	
blackcheek tonguefish	363	0.8	96.9	9.31	148	1.1	69	186	
smallmouth flounder	243	0.5	97.4	6.23	81	1.3	39	162	
kingfish	175	0.4	97.8	4.49	105	2.5	45	301	
butterfish	125	0.3	98.1	3.21	115	1.4	70	156	
blue crab, adult female	113	0.3	98.4	2.90	144	1.4	107	179	
inshore lizardfish	94	0.2	98.6	2.41	189	4.9	113	327	
silver perch	90	0.2	98.8	2.31	128	2.0	55	180	
summer flounder	71	0.2	98.9	1.82	296	7.7	206	454	
scup	59	0.1	99.1	1.51	136	2.1	92	185	
southern kingfish	56	0.1	99.2	1.44	113	5.3	72	268	
Atlantic spadefish	37	0.1	99.3	0.95	87	1.8	68	109	
blue crab, male	33	0.1	99.4	0.85	79	8.5	18	171	
northern puffer	32	0.1	99.4	0.82	131	8.3	52	200	
striped anchovy	31	0.1	99.5	0.79	102	1.7	79	113	
northern pipefish	27	0.1	99.6	0.69	134	4.7	99	187	
blue crab, juvenile female	24	0.1	99.6	0.62	45	2.1	22	75	
northern searobin	23	0.1	99.7	0.59	75	12.7	26	196	
fringed flounder	21	0.0	99.7	0.54	119	3.7	94	159	
black seabass	16	0.0	99.8	0.41	150	17.3	51	230	
harvestfish	16	0.0	99.8	0.41	90	1.4	82	104	
clearnose skate	14	0.0	99.8	0.36	396	23.2	141	470	
oyster toadfish	12	0.0	99.8	0.31	125	22.7	49	267	
lined seahorse	11	0.0	99.9	0.28	93	8.4	42	128	
windowpane	9	0.0	99.9	0.23	240	11.4	186	279	
spotted hake	8	0.0	99.9	0.21	237	8.8	207	279	
striped searobin	5	0.0	99.9	0.13	137	18.9	78	174	
pigfish	4	0.0	99.9	0.10	184	5.0	172	193	124.0
conger eel	4	0.0	99.9	0.10	336	49.8	241	432	
green goby	3	0.0	99.9	0.08					
naked goby	3	0.0	100.0	0.08	32	2.8	26	35	
northern stargazer	3	0.0	100.0	0.08	61	23.5	31	107	
bluefish	2	0.0	100.0	0.05	235	40.0	195	275	181.0
feather blenny	2	0.0	100.0	0.05	72	11.5	60	83	
brown shrimp	2	0.0	100.0	0.05	106	7.0	99	113	
Atlantic thread herring	1	0.0	100.0	0.03	126		126	126	
bluespotted cornetfish	1	0.0	100.0	0.03	380		380	380	15.5
skilletfish	1	0.0	100.0	0.03	49		49	49	
spiny butterfly ray	1	0.0	100.0	0.03	640		640	640	
blue runner	1	0.0	100.0	0.03	134		134	134	
lookdown	1	0.0	100.0	0.03	64		64	64	
banded drum	1	0.0	100.0	0.03	131		131	131	34.0
Atlantic cutlassfish	1	0.0	100.0	0.03	624		624	624	162.0
striped cusk-eel	1	0.0	100.0	0.03	185		185	185	
chain pipefish	1	0.0	100.0	0.03	267		267	267	
mottled mojarra	1	0.0	100.0	0.03	108		108	108	26.0
white shrimp	1	0.0	100.0	0.03	110		110	110	
All Species Combined	44,385								

Table 135.

Month - November
 River - Ches. Bay - Bottom
 No. of Fish Trawls Made - 13
 No. of Species - 37

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	1,980	54.1	54.1	152.31	52	0.5	38	79	.
squid	312	8.5	62.6	24.00	52	1.3	23	94	.
blackcheek tonguefish	280	7.6	70.2	21.54	155	1.6	60	196	.
blue crab, adult female	205	5.6	75.8	15.77	147	1.4	111	181	.
weakfish	179	4.9	80.7	13.77	154	1.7	110	289	.
spot	171	4.7	85.4	13.15	144	1.2	111	186	.
smallmouth flounder	171	4.7	90.1	13.15	87	1.7	42	142	.
southern kingfish	59	1.6	91.7	4.54	127	3.7	53	175	.
summer flounder	54	1.5	93.1	4.15	284	7.4	215	477	.
silver perch	41	1.1	94.3	3.15	123	2.7	85	158	.
spotted hake	34	0.9	95.2	2.62	228	9.5	42	296	.
hogchoker	25	0.7	95.9	1.92	134	3.1	104	163	.
windowpane	23	0.6	96.5	1.77	219	5.5	166	264	.
black seabass	20	0.5	97.1	1.54	117	15.6	48	280	.
northern searobin	15	0.4	97.5	1.15	59	5.1	38	116	.
clearnose skate	13	0.4	97.8	1.00	398	11.6	320	469	.
butterfish	11	0.3	98.1	0.85	105	6.6	48	124	.
kingfish	10	0.3	98.4	0.77	129	8.0	80	164	.
inshore lizardfish	9	0.2	98.6	0.69	189	15.4	141	295	.
striped searobin	7	0.2	98.8	0.54	100	9.4	82	141	.
northern pipefish	7	0.2	99.0	0.54	147	8.5	118	179	.
bluefish	6	0.2	99.2	0.46	166	8.8	135	202	.
lined seahorse	6	0.2	99.3	0.46	64	5.2	48	86	.
Atlantic croaker	3	0.1	99.4	0.23	135	29.7	76	172	.
harvestfish	3	0.1	99.5	0.23	80	2.6	76	85	.
blue crab, juvenile female	3	0.1	99.6	0.23	60	25.2	33	110	.
Atlantic spadefish	2	0.1	99.6	0.15	83	5.5	77	88	.
feather blenny	2	0.1	99.7	0.15	60	4.5	55	64	.
fringed flounder	2	0.1	99.8	0.15	139	1.5	137	140	.
blue crab, male	2	0.1	99.8	0.15	101	60.0	41	161	.
northern puffer	1	0.0	99.8	0.08	143	.	143	143	.
naked goby	1	0.0	99.9	0.08	45	.	45	45	.
smooth dogfish	1	0.0	99.9	0.08	619	.	619	619	.
spiny dogfish	1	0.0	99.9	0.08	660	.	660	660	.
conger eel	1	0.0	99.9	0.08	473	.	473	473	.
lookdown	1	0.0	100.0	0.08	50	.	50	50	.
brown shrimp	1	0.0	100.0	0.08	105	.	105	105	.
All Species Combined	3,662								

Table 136.

Month - November
 River - Ches. Bay - Lower
 No. of Fish Trawls Made - 13
 No. of Species - 37

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	25,177	91.7	91.7	1936.69	47	0.3	32	76	0.9
spot	1,142	4.2	95.9	87.85	124	1.1	93	179	21.2
hogchoker	227	0.8	96.7	17.46	104	2.0	82	134	52.2
weakfish	186	0.7	97.4	14.31	147	3.1	95	275	.
Atlantic silverside	150	0.5	97.9	11.54	92	1.3	70	112	.
squid	100	0.4	98.3	7.69	36	1.4	20	80	.
smallmouth flounder	96	0.3	98.6	7.38	88	1.8	53	130	.
blue crab, adult female	82	0.3	98.9	6.31	146	1.8	110	179	.
blackcheek tonguefish	61	0.2	99.2	4.69	132	5.5	60	164	.
silver perch	48	0.2	99.3	3.69	115	3.0	79	202	.
Atlantic croaker	37	0.1	99.5	2.85	69	6.4	13	238	.
kingfish	24	0.1	99.5	1.85	122	4.3	70	157	.
summer flounder	22	0.1	99.6	1.69	301	15.6	224	465	.
Atlantic thread herring	13	0.0	99.7	1.00	109	2.6	94	129	.
northern searobin	11	0.0	99.7	0.85	60	4.7	42	100	.
blue crab, male	11	0.0	99.8	0.85	90	15.0	27	172	.
black seabass	9	0.0	99.8	0.69	125	18.1	76	230	.
bluefish	7	0.0	99.8	0.54	175	7.9	151	196	.
southern kingfish	5	0.0	99.8	0.38	134	9.6	101	154	.
clearnose skate	5	0.0	99.9	0.38	424	9.9	404	449	.
inshore lizardfish	5	0.0	99.9	0.38	172	31.6	79	259	.
fringed flounder	5	0.0	99.9	0.38	132	5.2	121	149	.
blue crab, juvenile female	5	0.0	99.9	0.38	62	16.4	32	112	.
spotted hake	4	0.0	99.9	0.31	197	47.6	58	270	.
brown shrimp	4	0.0	99.9	0.31	104	4.0	94	113	.
butterfish	3	0.0	99.9	0.23	111	5.5	104	122	.
windowpane	3	0.0	100.0	0.23	219	21.3	191	261	.
lined seahorse	2	0.0	100.0	0.15	101	33.0	68	134	.
oyster toadfish	2	0.0	100.0	0.15	231	70.5	160	301	.
scup	1	0.0	100.0	0.08	107	.	107	107	.
harvestfish	1	0.0	100.0	0.08	80	.	80	80	.
spotted seatrout	1	0.0	100.0	0.08	185	.	185	185	.
striped searobin	1	0.0	100.0	0.08	79	.	79	79	.
northern pipefish	1	0.0	100.0	0.08	130	.	130	130	.
naked goby	1	0.0	100.0	0.08	30	.	30	30	.
feather blenny	1	0.0	100.0	0.08	52	.	52	52	.
blue runner	1	0.0	100.0	0.08	155	.	155	155	.
All Species Combined	27,454								

Table 137.

Month - November
 River - Ches. Bay - Upper
 No. of Fish Trawls Made - 13
 No. of Species - 26

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	27,457	96.6	96.6	2112.08	43	0.3	26	75	0.8
spot	593	2.1	98.6	45.62	123	0.7	92	167	.
Atlantic croaker	162	0.6	99.2	12.46	49	1.5	17	134	.
blue crab, adult female	40	0.1	99.4	3.08	135	2.0	109	163	.
weakfish	38	0.1	99.5	2.92	126	3.3	79	168	.
blue crab, male	24	0.1	99.6	1.85	91	10.3	17	170	.
kingfish	20	0.1	99.6	1.54	120	4.6	64	161	.
summer flounder	16	0.1	99.7	1.23	297	17.8	238	456	.
smallmouth flounder	16	0.1	99.8	1.23	82	6.1	51	126	.
blue crab, juvenile female	16	0.1	99.8	1.23	50	7.5	18	115	.
silver perch	13	0.0	99.9	1.00	101	3.4	82	124	.
hogchoker	8	0.0	99.9	0.62	103	2.1	93	111	.
northern searobin	5	0.0	99.9	0.38	56	0.5	55	58	.
inshore lizardfish	5	0.0	99.9	0.38	151	15.5	119	200	.
northern pipefish	4	0.0	99.9	0.31	109	24.5	37	141	.
red drum	3	0.0	100.0	0.23	71	2.1	67	74	1.9
blackcheek tonguefish	3	0.0	100.0	0.23	133	5.9	121	140	.
Atlantic spadefish	2	0.0	100.0	0.15	98	17.5	80	115	.
feather blenny	2	0.0	100.0	0.15	59	11.0	48	70	.
butterfish	1	0.0	100.0	0.08	130	.	130	130	.
squid	1	0.0	100.0	0.08	44	.	44	44	.
windowpane	1	0.0	100.0	0.08	217	.	217	217	.
striped searobin	1	0.0	100.0	0.08	63	.	63	63	.
lined seahorse	1	0.0	100.0	0.08	111	.	111	111	.
oyster toadfish	1	0.0	100.0	0.08	86	.	86	86	.
brown shrimp	1	0.0	100.0	0.08	93	.	93	93	.
All Species Combined	28,434								

Table 138.

Month - November
 River - All - Pooled
 No. of Fish Trawls Made - 39
 No. of Species - 44

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	54,614	91.7	91.7	1400.36	46	0.2	26	79	0.8
spot	1,906	3.2	94.9	48.87	125	0.6	92	186	21.2
squid	413	0.7	95.6	10.59	45	1.1	20	94	.
weakfish	403	0.7	96.3	10.33	148	1.5	79	289	.
blackcheek tonguefish	344	0.6	96.9	8.82	150	1.8	60	196	.
blue crab, adult female	327	0.5	97.4	8.38	145	1.0	109	181	.
smallmouth flounder	283	0.5	97.9	7.26	87	1.2	42	142	.
hogchoker	260	0.4	98.3	6.67	116	2.5	82	163	52.2
Atlantic croaker	202	0.3	98.7	5.18	54	2.0	13	238	.
Atlantic silverside	150	0.3	98.9	3.85	92	1.3	70	112	.
silver perch	102	0.2	99.1	2.62	116	1.9	79	202	.
summer flounder	92	0.2	99.2	2.36	290	6.5	215	477	.
southern kingfish	64	0.1	99.3	1.64	127	3.5	53	175	.
kingfish	54	0.1	99.4	1.38	122	2.9	64	164	.
spotted hake	38	0.1	99.5	0.97	224	9.7	42	296	.
blue crab, male	37	0.1	99.6	0.95	91	8.3	17	172	.
northern searobin	31	0.1	99.6	0.79	59	2.9	38	116	.
black seabass	29	0.0	99.7	0.74	119	12.0	48	230	.
windowpane	27	0.0	99.7	0.69	219	5.1	166	264	.
blue crab, juvenile female	24	0.0	99.7	0.62	54	6.5	18	115	.
inshore lizardfish	19	0.0	99.8	0.49	175	11.7	79	295	.
clearnose skate	18	0.0	99.8	0.46	405	9.1	320	469	.
butterfish	15	0.0	99.8	0.38	108	5.2	48	130	.
bluefish	13	0.0	99.9	0.33	171	5.8	135	202	.
Atlantic thread herring	13	0.0	99.9	0.33	109	2.6	94	129	.
northern pipefish	12	0.0	99.9	0.31	133	10.3	37	179	.
striped searobin	9	0.0	99.9	0.23	94	8.5	63	141	.
lined seahorse	9	0.0	99.9	0.23	77	9.4	48	134	.
fringed flounder	7	0.0	99.9	0.18	134	3.8	121	149	.
brown shrimp	6	0.0	100.0	0.15	103	3.2	93	113	.
feather blenny	5	0.0	100.0	0.13	58	4.0	48	70	.
harvestfish	4	0.0	100.0	0.10	80	1.8	76	85	.
Atlantic spadefish	4	0.0	100.0	0.10	90	8.7	77	115	.
red drum	3	0.0	100.0	0.08	71	2.1	67	74	1.9
oyster toadfish	3	0.0	100.0	0.08	182	63.1	86	301	.
naked goby	2	0.0	100.0	0.05	38	7.5	30	45	.
scup	1	0.0	100.0	0.03	107	.	107	107	.
northern puffer	1	0.0	100.0	0.03	143	.	143	143	.
spotted seatrout	1	0.0	100.0	0.03	185	.	185	185	.
smooth dogfish	1	0.0	100.0	0.03	619	.	619	619	.
spiny dogfish	1	0.0	100.0	0.03	660	.	660	660	.
conger eel	1	0.0	100.0	0.03	473	.	473	473	.
blue runner	1	0.0	100.0	0.03	155	.	155	155	.
lookdown	1	0.0	100.0	0.03	50	.	50	50	.
All Species Combined	59,550								

Table 139.

Month - December
River - Ches. Bay - Bottom
No. of Fish Trawls Made - 11
No. of Species - 29

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	16,781	93.1	93.1	1525.55	47	0.5	30	83	0.6
spot	507	2.8	95.9	46.09	119	0.8	95	166	.
Atlantic croaker	255	1.4	97.4	23.18	87	1.5	25	168	.
hogchoker	98	0.5	97.9	8.91	115	5.8	92	146	37.2
blackcheek tonguefish	87	0.5	98.4	7.91	130	3.8	57	178	.
blue crab, adult female	63	0.3	98.7	5.73	147	1.7	113	183	.
weakfish	58	0.3	99.1	5.27	129	2.2	69	168	.
smallmouth flounder	38	0.2	99.3	3.45	85	3.4	55	131	.
spotted hake	27	0.1	99.4	2.45	141	18.9	45	326	.
summer flounder	13	0.1	99.5	1.18	274	16.5	186	382	.
windowpane	11	0.1	99.6	1.00	219	4.4	201	245	.
oyster toadfish	11	0.1	99.6	1.00	244	16.8	146	324	.
kingfish	10	0.1	99.7	0.91	105	6.2	69	134	.
northern pipefish	8	0.0	99.7	0.73	145	12.8	96	214	.
clearnose skate	7	0.0	99.8	0.64	419	17.9	332	470	.
red hake	6	0.0	99.8	0.55	114	11.9	56	135	.
Atlantic thread herring	6	0.0	99.8	0.55	90	2.6	86	103	.
spiny dogfish	6	0.0	99.9	0.55	793	21.4	750	890	.
silver hake	5	0.0	99.9	0.45	114	2.5	110	124	.
northern searobin	5	0.0	99.9	0.45	68	5.7	56	89	.
striped searobin	5	0.0	99.9	0.45	121	39.0	57	265	.
spotted seatrout	4	0.0	100.0	0.36	179	11.1	161	211	.
brown shrimp	2	0.0	100.0	0.18	121	10.5	110	131	.
gizzard shad	1	0.0	100.0	0.09	142	.	142	142	.
naked goby	1	0.0	100.0	0.09	45	.	45	45	.
feather blenny	1	0.0	100.0	0.09	85	.	85	85	.
skilletfish	1	0.0	100.0	0.09	42	.	42	42	.
silver perch	1	0.0	100.0	0.09	98	.	98	98	.
blue crab, juvenile female	1	0.0	100.0	0.09	90	.	90	90	.
All Species Combined	18,019								

Table 140.

Month - December
River - Ches. Bay - Lower
No. of Fish Trawls Made - 11
No. of Species - 33

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	31,392	98.8	98.8	2853.82	41	0.4	27	78	0.7
Atlantic croaker	137	0.4	99.2	12.45	50	2.0	18	114	.
smallmouth flounder	51	0.2	99.4	4.64	74	2.3	41	114	.
spot	38	0.1	99.5	3.45	116	1.7	98	142	.
blackcheek tonguefish	28	0.1	99.6	2.55	102	7.9	53	171	.
hogchoker	22	0.1	99.6	2.00	115	3.5	94	170	.
blue crab, adult female	21	0.1	99.7	1.91	142	3.0	117	175	.
spotted hake	20	0.1	99.8	1.82	91	15.7	51	268	.
summer flounder	16	0.1	99.8	1.45	352	16.4	189	442	.
Atlantic silverside	7	0.0	99.8	0.64	95	3.3	77	103	.
northern pipefish	5	0.0	99.9	0.45	105	10.5	69	126	.
clearnose skate	4	0.0	99.9	0.36	393	11.6	360	413	.
brown shrimp	4	0.0	99.9	0.36	108	4.8	97	118	.
kingfish	3	0.0	99.9	0.27	95	9.7	76	107	.
northern searobin	3	0.0	99.9	0.27	58	5.8	48	68	.
blue crab, male	3	0.0	99.9	0.27	64	29.1	29	122	.
weakfish	2	0.0	99.9	0.18	140	21.5	118	161	.
alewife	2	0.0	99.9	0.18	129	11.0	118	140	.
tautog	2	0.0	99.9	0.18	352	114.0	238	466	.
spotted seatrout	2	0.0	99.9	0.18	146	18.0	128	164	.
striped searobin	2	0.0	99.9	0.18	62	1.5	60	63	.
lined seahorse	2	0.0	100.0	0.18	71	14.0	57	85	.
spiny dogfish	2	0.0	100.0	0.18	729	112.5	616	841	.
conger eel	2	0.0	100.0	0.18	299	23.0	276	322	.
blue crab, juvenile female	2	0.0	100.0	0.18	91	38.5	52	129	.
red hake	1	0.0	100.0	0.09	113	.	113	113	.
blueback herring	1	0.0	100.0	0.09	81	.	81	81	.
red drum	1	0.0	100.0	0.09	68	.	68	68	.
gizzard shad	1	0.0	100.0	0.09	130	.	130	130	.
feather blenny	1	0.0	100.0	0.09	61	.	61	61	.
northern stargazer	1	0.0	100.0	0.09	33	.	33	33	.
striped cusk-eel	1	0.0	100.0	0.09	140	.	140	140	.
fringed flounder	1	0.0	100.0	0.09	116	.	116	116	.
All Species Combined	31,780								

Table 141.

Month - December
River - Ches. Bay - Upper
No. of Fish Trawls Made - 11
No. of Species - 19

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	2,711	90.3	90.3	246.45	54	0.7	31	82	.
Atlantic croaker	160	5.3	95.7	14.55	47	1.7	16	101	.
spot	66	2.2	97.9	6.00	126	1.8	100	164	.
blue crab, juvenile female	13	0.4	98.3	1.18	43	6.3	23	113	.
blue crab, male	9	0.3	98.6	0.82	36	2.3	26	46	.
southern kingfish	8	0.3	98.9	0.73	74	3.6	61	89	.
blackcheek tonguefish	5	0.2	99.0	0.45	85	16.0	63	148	.
brown shrimp	5	0.2	99.2	0.45	111	6.7	95	135	.
blue crab, adult female	5	0.2	99.4	0.45	142	4.0	130	155	.
Atlantic herring	4	0.1	99.5	0.36	85	3.8	74	91	.
northern pipefish	3	0.1	99.6	0.27	106	27.8	68	160	.
naked goby	3	0.1	99.7	0.27	37	2.4	34	42	.
summer flounder	2	0.1	99.8	0.18	391	33.0	358	424	.
spotted hake	2	0.1	99.8	0.18	60	6.0	54	66	.
black seabass	1	0.0	99.9	0.09	190	.	190	190	.
windowpane	1	0.0	99.9	0.09	35	.	35	35	.
spiny dogfish	1	0.0	99.9	0.09	702	.	702	702	.
clearnose skate	1	0.0	100.0	0.09	437	.	437	437	.
smallmouth flounder	1	0.0	100.0	0.09	66	.	66	66	.
All Species Combined	3,001								

Table 142.

Month - December
River - All - Pooled
No. of Fish Trawls Made - 33
No. of Species - 43

Species	Number of Fish	Percent Within River	Cumulative Percent	Catch Per Trawl	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)	Average Weight (g)
bay anchovy	50,884	96.4	96.4	1541.94	46	0.3	27	83	0.6
spot	611	1.2	97.5	18.52	120	0.7	95	166	.
Atlantic croaker	552	1.0	98.6	16.73	65	1.3	16	168	.
hogchoker	120	0.2	98.8	3.64	115	3.0	92	170	37.2
blackcheek tonguefish	120	0.2	99.0	3.64	122	3.6	53	178	.
smallmouth flounder	90	0.2	99.2	2.73	79	2.0	41	131	.
blue crab, adult female	89	0.2	99.4	2.70	145	1.4	113	183	.
weakfish	60	0.1	99.5	1.82	130	2.2	69	168	.
spotted hake	49	0.1	99.6	1.48	117	12.7	45	326	.
summer flounder	31	0.1	99.6	0.94	322	13.3	186	442	.
northern pipefish	16	0.0	99.7	0.48	125	9.7	68	214	.
blue crab, juvenile female	16	0.0	99.7	0.48	52	7.8	23	129	.
kingfish	13	0.0	99.7	0.39	102	5.2	69	134	.
windowpane	12	0.0	99.7	0.36	204	15.9	35	245	.
clearnose skate	12	0.0	99.8	0.36	412	11.5	332	470	.
blue crab, male	12	0.0	99.8	0.36	43	7.4	26	122	.
oyster toadfish	11	0.0	99.8	0.33	244	16.8	146	324	.
brown shrimp	11	0.0	99.8	0.33	112	3.8	95	135	.
spiny dogfish	9	0.0	99.8	0.27	769	26.4	616	890	.
southern kingfish	8	0.0	99.9	0.24	74	3.6	61	89	.
northern scarobin	8	0.0	99.9	0.24	64	4.3	48	89	.
red hake	7	0.0	99.9	0.21	114	10.1	56	135	.
striped scarobin	7	0.0	99.9	0.21	104	29.1	57	265	.
Atlantic silverside	7	0.0	99.9	0.21	95	3.3	77	103	.
Atlantic thread herring	6	0.0	99.9	0.18	90	2.6	86	103	.
spotted seatrout	6	0.0	99.9	0.18	168	10.9	128	211	.
silver hake	5	0.0	99.9	0.15	114	2.5	110	124	.
Atlantic herring	4	0.0	100.0	0.12	85	3.8	74	91	.
naked goby	4	0.0	100.0	0.12	39	2.6	34	45	.
alewife	2	0.0	100.0	0.06	129	11.0	118	140	.
gizzard shad	2	0.0	100.0	0.06	136	6.0	130	142	.
tautog	2	0.0	100.0	0.06	352	114.0	238	466	.
lined seahorse	2	0.0	100.0	0.06	71	14.0	57	85	.
feather blenny	2	0.0	100.0	0.06	73	12.0	61	85	.
conger eel	2	0.0	100.0	0.06	299	23.0	276	322	.
black seabass	1	0.0	100.0	0.03	190	.	190	190	.
blueback herring	1	0.0	100.0	0.03	81	.	81	81	.
red drum	1	0.0	100.0	0.03	68	.	68	68	.
skilletfish	1	0.0	100.0	0.03	42	.	42	42	.
silver perch	1	0.0	100.0	0.03	98	.	98	98	.
northern stargazer	1	0.0	100.0	0.03	33	.	33	33	.
striped cusk-eel	1	0.0	100.0	0.03	140	.	140	140	.
fringed flounder	1	0.0	100.0	0.03	116	.	116	116	.
All Species Combined	52,800								

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- Wojcik, F.J. and W.A. Van Engel. 1988a. A documentation of Virginia trawl surveys, 1955-1984, listing pertinent variables. Volume II - York River. Coll. of William and Mary, Va. Instit. Mar. Sci., Gloucester Point, Va. 127 p.
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APPENDIX A

Sample Data Sheet

FILE: STADATA.SHT
6-18-92

* Station Data Record *
* VIHS Trawl Survey *

Cruise: _____

STATION DATA

StaDate: _____
year / month / day
(LOCAL TIME)

(Tow #) Station#	River	RiverHile	Lat_beg	Long_beg	SetDepth feet meters	Tide	Towdir1	Towdir2	Time_beg	Time_end
[][][][]	[][][]	[][][][]	[][][][][]	[][][][][]	[][][][]	[]	[]	[]	[][][][]	[][][][]
Stratum	Compass	Gear	Lat_end	Long_end	Eng_rpm	Secchl	Tow Duration	Tow Distance	Remarks	
[][]	[][][][]	[][][]	[][][][][]	[][][][][]	[][][][]	[]	[][][]	[][][][]	[][][][]	

HYDRO DATA

WaterDepth	PCodeTemp	TempDegC	ParCodeDO	D.O.	ParCodeSal	Salinity	Chief Sci.
Surface:	[][]	[][][]	[][]	[][][]	[][]	[][][]	[][][][][]
Bottom :	[][]	[][][]	[][]	[][][]	[][]	[][][]	Captain [][][][][]
Other :	[][]	[][][]	[][]	[][][]	[][]	[][][]	Transcrib. [][][][][]

CREW

ATMOS DATA

ParCodeTemp	AirTempC	ParCodeWind	WindSpeed	WindDir	ParWeather	Weather	ParCodeSea	SeaState
[][]	[][][]	[][]	[][][]	[][]	[][]	[]	[][]	[]

CRUISE DATA

Cruise Number	Cruise Date Begin	Time Begin
[][][][]	1 9 [][][][]	[][][][]
Vessel	Cruise Date End	Time End
[][] _____	1 9 [][][][]	[][][][]

COMMENTS

CODES

TOWDIR1: UP OR DOWNSTREAM
 1: UP 6: Slack
 2: DOWN

TOWDIR2: RELATIVE TO CURRENT
 1: With 4: Oblique With
 2: Against 5: Oblique Against
 3: Perpendicular 6: Slack

TIDE: TIDAL STAGE
 1: Early flood 5: Early ebb
 2: Max flood 6: Max ebb
 3: Late flood 7: Late ebb
 4: Slack before ebb 8: Slack before flood

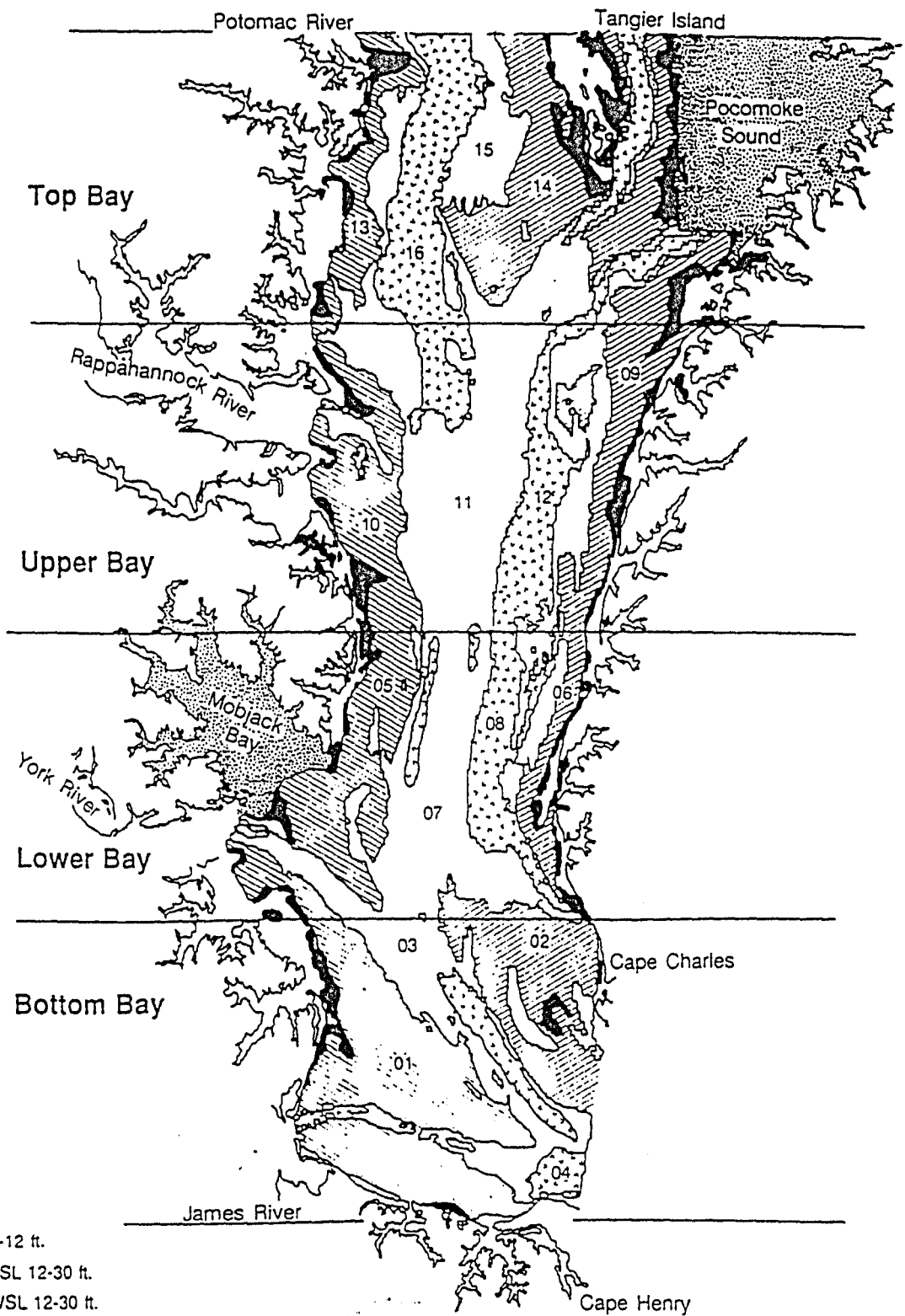
SEASTATE
 0: Calm-glassy 0m 5: Rough 2.5-4m
 1: Calm-rippled 0-.1m 6: Very rough 4-6m
 2: Smooth-wavelets 0.1-0.5m 7: High 6-9m
 3: Slight 0.5-1.25m 8: Very High 9-14m
 4: Moderate 1.25-2.5m 9: Phenomenal >14m







WEATHER: OBSERVED WEATHER
 0: Clear 5: Drizzle
 1: Partly cloudy 6: Rain
 2: Overcast 7: Snow, snow/rain
 3: Blowing snow 8: Showers
 4: Fog, dust, haze 9: Thunderstorms

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APPENDIX B

Chesapeake Bay Trawl Survey Strata , 1989 to present



-  6-12 ft.
-  ESL 12-30 ft.
-  WSL 12-30 ft.
-  C.P. 30-42 ft.
-  D.P. <42 ft.
-  Outside Chesapeake Bay Sampling Frame

APPENDIX C

Common and Scientific Names of Species Caught During 1993

Species Names - Common Name Order		Species Names - Latin Name Order	
Common Name	Latin Name	Latin Name	Common Name
American eel	<i>Anguilla rostrata</i>	<i>Alosa aestivalis</i>	blueback herring
American shad	<i>Alosa sapidissima</i>	<i>Alosa pseudoharengus</i>	alewife
Atlantic croaker	<i>Micropogonias undulatus</i>	<i>Alosa sapidissima</i>	American shad
Atlantic cutlassfish	<i>Trichiurus lepturus</i>	<i>Aluterus schoepfi</i>	orange filefish
Atlantic herring	<i>Clupea harengus</i>	<i>Ammodytes dubius</i>	northern sand lance
Atlantic menhaden	<i>Brevoortia tyrannus</i>	<i>Anchoa hepsetus</i>	striped anchovy
Atlantic silverside	<i>Menidia menidia</i>	<i>Anchoa mitchilli</i>	bay anchovy
Atlantic spadefish	<i>Chaetodipterus faber</i>	<i>Anguilla rostrata</i>	American eel
Atlantic stingray	<i>Dasyatis sabina</i>	<i>Astroscopus guttatus</i>	northern stargazer
Atlantic thread herring	<i>Opisthonema oglinum</i>	<i>Bairdiella chrysoura</i>	silver perch
Florida pompano	<i>Trachinotus carolinus</i>	<i>Brevoortia tyrannus</i>	Atlantic menhaden
Spanish mackerel	<i>Scomberomorus maculatus</i>	<i>Callinectes sapidus</i>	blue crab
alewife	<i>Alosa pseudoharengus</i>	<i>Caranx crysos</i>	blue runner
banded drum	<i>Larimus fasciatus</i>	<i>Carcharhinus plumbeus</i>	sandbar shark
bay anchovy	<i>Anchoa mitchilli</i>	<i>Centropristis striata</i>	black seabass
black seabass	<i>Centropristis striata</i>	<i>Chaetodipterus faber</i>	Atlantic spadefish
blackcheek tonguefish	<i>Symphurus plagiusa</i>	<i>Chaetodon ocellatus</i>	spotfin butterflyfish
blue catfish	<i>Ictalurus furcatus</i>	<i>Chilomycterus schoepfi</i>	striped burrfish
blue runner	<i>Caranx crysos</i>	<i>Clupea harengus</i>	Atlantic herring
blueback herring	<i>Alosa aestivalis</i>	<i>Conger oceanicus</i>	conger eel
blue crab	<i>Callinectes sapidus</i>	<i>Cynoscion nebulosus</i>	spotted seatrout
bluefish	<i>Pomatomus saltatrix</i>	<i>Cynoscion regalis</i>	weakfish
bluegill	<i>Lepomis macrochirus</i>	<i>Cyprinus carpio</i>	common carp
bluespotted cornetfish	<i>Fistularia tabacaria</i>	<i>Dasyatis americana</i>	southern stingray
bluntnose stingray	<i>Dasyatis sayi</i>	<i>Dasyatis centroura</i>	rougetail stingray
brown bullhead	<i>Ictalurus nebulosus</i>	<i>Dasyatis sabina</i>	Atlantic stingray
brown shrimp	<i>Penaeus aztecus</i>	<i>Dasyatis sayi</i>	bluntnose stingray
butterfish	<i>Pepilus triacanthus</i>	<i>Dorosoma cepedianum</i>	gizzard shad
chain pipefish	<i>Syngnathus louisianae</i>	<i>Dorosoma petenense</i>	threadfin shad
channel catfish	<i>Ictalurus punctatus</i>	<i>Etropus crossotus</i>	fringed flounder
clearnose skate	<i>Raja eglanteria</i>	<i>Etropus microstomus</i>	smallmouth flounder
common carp	<i>Cyprinus carpio</i>	<i>Eucinostomus lefroyi</i>	mottled mojarra
conger eel	<i>Conger oceanicus</i>	Family Loliiginidae	squid
dwarf goatfish	<i>Upeneus parvus</i>	<i>Fistularia tabacaria</i>	bluespotted cornetfish
feather blenny	<i>Hypsoblennius hentzi</i>	<i>Gobiesox strumosus</i>	skilletfish
fringed flounder	<i>Etropus crossotus</i>	<i>Gobiosoma bosci</i>	naked goby
gizzard shad	<i>Dorosoma cepedianum</i>	<i>Gobiosoma ginsburgi</i>	seaboard goby
green goby	<i>Microgobius thalassinus</i>	<i>Gymnura altavela</i>	spiny butterfly ray
harvestfish	<i>Pepilus alepidotus</i>	<i>Hippocampus erectus</i>	lined seahorse
hogchoker	<i>Trinectes maculatus</i>	<i>Hypsoblennius hentzi</i>	feather blenny
inland silverside	<i>Menidia beryllina</i>	<i>Ictalurus catus</i>	white catfish
inshore lizardfish	<i>Synodus foetens</i>	<i>Ictalurus furcatus</i>	blue catfish
kingfish	<i>Menticirrhus spp.</i>	<i>Ictalurus nebulosus</i>	brown bullhead
lined seahorse	<i>Hippocampus erectus</i>	<i>Ictalurus punctatus</i>	channel catfish
longnose gar	<i>Lepisosteus osseus</i>	<i>Larimus fasciatus</i>	banded drum

Species Names - Common Name Order		Species Names - Latin Name Order	
Common Name	Latin Name	Latin Name	Common Name
lookdown	<i>Selene vomer</i>	<i>Leiostomus xanthurus</i>	spot
mottled mojarra	<i>Eucinostomus lefroyi</i>	<i>Lepisosteus osseus</i>	longnose gar
naked goby	<i>Gobiosoma bosci</i>	<i>Lepomis macrochirus</i>	bluegill
northern kingfish	<i>Menticirrhus saxatilis</i>	<i>Membras martinica</i>	rough silverside
northern pipefish	<i>Syngnathus fuscus</i>	<i>Menidia beryllina</i>	inland silverside
northern puffer	<i>Sphoeroides maculatus</i>	<i>Menidia menidia</i>	Atlantic silverside
northern sand lance	<i>Ammodytes dubius</i>	<i>Menticirrhus americanus</i>	southern kingfish
northern searobin	<i>Prionotus carolinus</i>	<i>Menticirrhus saxatilis</i>	northern kingfish
northern sennet	<i>Sphyraena borealis</i>	<i>Menticirrhus spp.</i>	kingfish
northern stargazer	<i>Astroscopus guttatus</i>	<i>Merluccius bilinearis</i>	silver hake
orange filefish	<i>Aluterus schoepfi</i>	<i>Microgobius thalassinus</i>	green goby
oyster toadfish	<i>Opsanus tau</i>	<i>Micropogonias undulatus</i>	Atlantic croaker
pigfish	<i>Orthopristis chrysoptera</i>	<i>Morone americana</i>	white perch
red drum	<i>Sciaenops ocellatus</i>	<i>Morone saxatilis</i>	striped bass
red hake	<i>Urophycis chuss</i>	<i>Mustelus canis</i>	smooth dogfish
rough scad	<i>Trachurus lathami</i>	<i>Notropis hudsonius</i>	spottail shiner
rough silverside	<i>Membras martinica</i>	<i>Ophidion marginatum</i>	striped cusk-eel
rougtail stingray	<i>Dasyatis centroura</i>	<i>Opisthonema oglinum</i>	Atlantic thread herring
sandbar shark	<i>Carcharhinus plumbeus</i>	<i>Opsanus tau</i>	oyster toadfish
scup	<i>Stenotomus chrysops</i>	<i>Orthopristis chrysoptera</i>	pigfish
sea lamprey	<i>Petromyzon marinus</i>	<i>Parablennius marmoratus</i>	seaweed blenny
seaboard goby	<i>Gobiosoma ginsburgi</i>	<i>Paralichthys dentatus</i>	summer flounder
seaweed blenny	<i>Parablennius marmoratus</i>	<i>Penaeus aztecus</i>	brown shrimp
silver hake	<i>Merluccius bilinearis</i>	<i>Penaeus setiferus</i>	white shrimp
silver perch	<i>Bairdiella chrysoura</i>	<i>Peprilus alepidous</i>	harvestfish
skilletfish	<i>Gobiesox strumosus</i>	<i>Peprilus triacanthus</i>	butterfish
smallmouth flounder	<i>Etropus microstomus</i>	<i>Petromyzon marinus</i>	sea lamprey
smooth dogfish	<i>Mustelus canis</i>	<i>Pomatomus saltatrix</i>	bluefish
southern kingfish	<i>Menticirrhus americanus</i>	<i>Prionotus carolinus</i>	northern searobin
southern stingray	<i>Dasyatis americana</i>	<i>Prionotus evolans</i>	striped searobin
spiny butterfly ray	<i>Gymnura altavela</i>	<i>Raja eglanteria</i>	clearnose skate
spiny dogfish	<i>Squalus acanthias</i>	<i>Sciaenops ocellatus</i>	red drum
spot	<i>Leiostomus xanthurus</i>	<i>Scomberomorus maculatus</i>	Spanish mackerel
spotfin butterflyfish	<i>Chaetodon ocellatus</i>	<i>Scophthalmus aquosus</i>	windowpane
spottail shiner	<i>Notropis hudsonius</i>	<i>Selene vomer</i>	lookdown
spotted hake	<i>Urophycis regia</i>	<i>Sphoeroides maculatus</i>	northern puffer
spotted seatrout	<i>Cynoscion nebulosus</i>	<i>Sphyraena borealis</i>	northern sennet
squid	Family Lolidinidae	<i>Squalus acanthias</i>	spiny dogfish
striped anchovy	<i>Anchoa hepsetus</i>	<i>Stenotomus chrysops</i>	scup
striped bass	<i>Morone saxatilis</i>	<i>Symphurus plagiusa</i>	blackcheek tonguefish
striped burrfish	<i>Chilomycterus schoepfi</i>	<i>Syngnathus fuscus</i>	northern pipefish
striped cusk-eel	<i>Ophidion marginatum</i>	<i>Syngnathus louisianae</i>	chain pipefish
striped searobin	<i>Prionotus evolans</i>	<i>Synodus foetens</i>	inshore lizardfish
summer flounder	<i>Paralichthys dentatus</i>	<i>Tautoga onitis</i>	tautog
tautog	<i>Tautoga onitis</i>	<i>Trachinotus carolinus</i>	Florida pompano

Species Names - Common Name Order		Species Names - Latin Name Order	
Common Name	Latin Name	Latin Name	Common Name
threadfin shad	<i>Dorosoma petenense</i>	<i>Trachurus lathami</i>	rough scad
weakfish	<i>Cynoscion regalis</i>	<i>Trichiurus lepturus</i>	Atlantic cutlassfish
white catfish	<i>Ictalurus catus</i>	<i>Trinectes maculatus</i>	hogchoker
white perch	<i>Morone americana</i>	<i>Upeneus parvus</i>	dwarf goatfish
white shrimp	<i>Penaeus setiferus</i>	<i>Urophycis chuss</i>	red hake
windowpane	<i>Scophthalmus aquosus</i>	<i>Urophycis regia</i>	spotted hake