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**Juvenile Finfish and Blue Crab Stock Assessment Program York River Random Stratified Bottom Trawl Survey Data Summary Report Volume R1991-1994**

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*Juvenile Finfish and Blue Crab Stock Assessment Program*

*York River Random Stratified Bottom Trawl Survey*

*Data Summary Report*

*Volume R1991 - 1994*

*By*

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*Special Scientific Report No. 124 Volume R91-94  
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*August 1996*

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**JUVENILE FINFISH AND BLUE CRAB STOCK ASSESSMENT PROGRAM**

**YORK RIVER RANDOM STRATIFIED BOTTOM TRAWL SURVEY**

**DATA SUMMARY REPORT**

VOLUME R1991-1994

by

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August, 1996

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We gratefully acknowledge federal and state agencies who provided financial support: Wallop Breaux and U.S. Fish and Wildlife Service Sportfish Restoration Project F104 (through the Virginia Marine Resources Commission). This is a first in an attempt to summarize portions of the York River Random Stratified Survey. Future efforts will involve incorporation of these data into the yearly Bottom Trawl Survey Annual Data Report Series.

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## INTRODUCTION

The Virginia Institute of Marine Science (VIMS) has conducted a bottom trawl survey of some fashion since 1955. Historically, sampling has occurred as mid-channel transects at fixed locations spaced at approximately five mile intervals. During the 1970's, the need for a random stratified survey of the main stem Bay and tributaries was realized and subsequently implemented. This program had a very large spatial coverage in various depth strata, but was very limited in its temporal component. Sampling occurred on a semi-annual basis primarily in January and February, and again in July (Wojcik and Van Engel, 1988a.) Based on previous results from the fixed station sampling, effort was high to provide the desired margin of error (300-700 trawls per survey). This survey was discontinued after several years because of decreased funding. Subsequently, the program returned to a fixed station transect design. These river transects continued monthly until 1988, when Chesapeake Bay Stock Assessment Committee (CBSAC) funded a monthly random stratified survey of the main stem Bay (Chittenden, 1991) in hopes that this initiative would produce similar surveys of Virginia's major tributaries, the James, York, and Rappahannock Rivers. With this in mind, a pilot survey similar in design was established and implemented for the York River (for logistic reasons), beginning in October 1989. This work was performed independent of, and with a different vessel and smaller fishing gear than the primary sampling of the Bay and tributaries. With the purchase of the solely dedicated trawler R/V *Fish Hawk*, this random survey of the York was incorporated and sampled along with the historic fixed stations. This report shows the results of this random stratified survey of the York River for the period of June 1991, to December 1994.

## METHODS

The pilot survey of the York River was initiated in October 1989 using a 22 ft semi-balloon otter trawl (Marinovich Gulf Shrimp Trawl) with 1.5" stretched mesh body, a 0.25" mesh cod liner, attached tickler chain, 60' bridle length, 30"x15" otter board doors, (VIMS gear code 107), towed from the side of a 28' outboard Garvey. This survey was conducted independent of the mid-channel fixed station sampling which sampled with a 30 ft version of this same gear from the R/V *Captain John Smith*. This random sampling was discontinued in August 1990. With the purchase of the dedicated research trawler R/V *Fish Hawk*,

In June 1991 the random survey was re-established, with sampling occurring along with the mid-channel transect. The gear used in primary sampling included: a 30ft semi-balloon otter trawl (Marinovich) with 1.5" stretched mesh body, 0.25" mesh cod liner, attached tickler chain, 60' bridle, using steel V-doors (28"x19") (VIMS gear code 108). The cable scope was 3:1 with tow duration of 5 minutes bottom time at a speed of approximately 2.5 knots. A sampling day was defined as the period between sunrise and sunset.

Methods were identical to the primary survey. At each location, station identification, beginning and ending coordinates, depth, tidal current stage, secchi depth, tow direction (upstream vs. downstream and relative to the 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 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, with males, juvenile females, and adult females processed separately. For adult females, fecundity was assessed with individual egg stage determined beginning in 1994. Beginning in 1992, the penaeid shrimp were processed on a regular basis with total length being measured. The squid species, *Loligo pelei* and *Loliguncula brevis*, were measured for mantle length beginning consistently in 1993. All length data were entered directly into computer files using electronic measuring boards. Subsampling was performed when large homogeneous catches of a species were encountered. 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. An 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 a computer database. A sample data sheet appears in Appendix A. To distinguish the random stations from the fixed mid-channel transect stations, an "R" was designated in the cruise number for the random stations. This allowed for easy separation of these data into what has been designated as "RS" for random survey, or "TS" for trawl survey fixed stations.

## SAMPLING DESIGN

The random survey was stratified by water depth and longitude. The VIMS Chesapeake Bay geographic segmentation divides each river into approximate five mile segments. The main-stem York River comprised six of these segments up to West Point, Virginia, where the river forks into the Pamunkey and Mattaponi Rivers. The river was divided into three regions, bottom, lower, and upper consisting of two VIMS segments each. Within each region were three depth strata, 4-12 ft, 12-30ft and  $\geq 30$  ft, (inclusive of the lower value). If certain depths were limited in a given region, depth strata were combined, resulting in 16 strata total. Trawl sites within a strata were provided by the National Ocean Survey's Chesapeake Bay bathymetry map, a data base containing depth records measured or calculated at 15 cartographic second intervals. In areas where these data were missing or sparse, depth records were created by assigning coordinates and a depth to each quarter mile quadrant, using similar techniques as the NOS data base.

Each month stations were selected randomly from these files, providing one or two stations per strata. The number varied seasonally according to changes in distribution, with sampling intensity being highest in the most heavily used strata. Through May 1992, 21 stations were sampled monthly during the cold months (December to April), and 24 stations sampled during the warm months (May through November). In June 1992, the sampling was reduced to one station per strata, with two strata (27 and 28), being combined due to limited sampling sites in the deeper water strata. This resulted in 15 sites being sampled monthly from June 1992 through December 1995, with the premise strata would be collapsed into larger components for

analysis. The number of potential sites and approximate areas of each strata which are subsequently used as weighing factors in calculating abundance estimates are given in Appendix C. A map of the strata appears in Appendix D. Random sampling was not performed in the Pamunkey or Mattaponi Rivers.

## RESULTS

Catch data in this report represent total numbers caught. Due to the difficulty of taking weights at sea on a small vessel, weights are not typically recorded in the field except for subsampling purposes of unusually large catches. Although biomass is an important parameter, it is felt accurate length weight relationships gathered in the laboratory would provided better estimates than those collected onboard. For this reason, biomass is not included in this report.

Figures 2-5 show the locations of the stations occupied each month from January 1991 to December 1994. The blocks represent the fixed mid-channel stations, with the lines separating the bottom, lower and upper York River. Table 1 shows the codes used for the various hydrographic and atmospheric parameters. The corresponding station information is located in Tables 2-87.

Figures 6-49 geographically illustrate catch by month and station for the predominant species (the 28 most abundant finfish - historically, three categories of blue crabs, plus other species of interest, arranged alphabetically) over the York River sampling area. For those species which are targeted or highly abundant, (summer flounder, Atlantic croaker, weakfish, striped bass, white perch, spot, bay anchovy, silver perch, and three categories of blue crab) plots represent each month and year. For those less abundant or non-target species, all years (1991-94) are pooled by month with zero catches removed in Figures 50-69. Both types of figures provide a helpful synopsis for showing temporal and geographic distribution of these species.

Figures 70-98 provide monthly length frequency summaries for the above selected species for June 1991-December 1994. These graphs and accompanying statistics are useful in separating young-of-the-year from older fish since age of each fish is not taken. Calendar year is not the optimal way to present such data for species spawning 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 by year begins with Table 88. Similar data for each month begins with Table 92.

A few trends are evident in comparing the York River random survey with that of the fixed mid-channel station survey. An overall increase in diversity of species caught in the random survey is apparent (see Figure 99a.), despite limited sampling in low salinity upriver areas where most freshwater species are typically caught at fixed stations. This increase in diversity is likely due to several factors including the capture of species which primarily inhabit shallow waters and the sampling of a broad range of bottom types. Additionally, a slightly higher number of fish per trawl were observed in three years of the random survey (see Figure 99b.). This may be due to anoxic conditions that occur at deep mid-channel stations in the York River during the summer months in which few fish were caught. The increased coverage of the random survey also played a major role in these trends.

## DISCUSSION

The purpose of this report is to provide a quick visual summary of the data collected from the random stratified pilot survey of the York River for the period June 1991 to December 1994. A more analytical review of these data and how they related to the fixed station transects is warranted to insure continuence of the data base. It would be prudent to continue the historical fixed station sampling to provide a reference to historical fish stocks. These fixed stations should be incorporated into a random stratified design, to provide reference to the past, while providing a sampling scheme to meet future research and management goals. Inital analyses of these data support a relationship between the pilot random stratified and the fixed station sampling for many species. In most cases the coefficient of variation is lower for the random survey, while the correlation between surveys was highly significant (Geer unpublished).

## NOTICE

No portion of this report may be used without consent or citation of 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.

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- Chittenden, M.E., Jr. 1991. Evaluation of spatial/temporal sources of variation in nekton catch and the efficacy of stratified sampling in the Chesapeake Bay. Final report to Chesapeake Bay Stock Assessment Committee & NOAA/NMFS. Virginia Institute of Marine Science, Gloucester Point, Va. 254 p.
- 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. Inst. Mar. Sci., Gloucester Point, Va. 127 p.

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## **TABLES**

**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.**

### **TOWDIR 1: Tow Direction, 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 and snow mix
- 8: Showers
- 9: Thunderstorms



Tables 2-8. Station data for the 1991 random survey by month.

Explanation: To conserve space, some variables are presented as coded values.  
Code keys are presented in Table 1 (p.9).





Table 8.

December 1991

Cruise Number	River	Stat # River Mile	Stat. Type	Stratum Code	Station Date	Time	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Distance (m)	Tow Parameters		Direction One Two	Sea State	Tidal Stage	
												Duration (min)	Depth (m)				
9112R2	YK	2	R	17	19911206	1603	3715.56	7624.78	3715.46	7624.79	185.9	5.00	1.5	1	2	2	6
9112R2	YK	3	R	18	19911206	1540	3713.75	7624.82	3713.77	7624.58	366.4	5.00	6.4	1	2	1	6
9112R2	YK	4	R	18	19911206	1517	3713.79	7625.77	3713.79	7625.70	106.3	5.00	11.0	2	1	1	6
9112R2	YK	5	R	19	19911206	1547	3714.39	7623.84	3714.41	7623.58	396.6	5.00	12.8	2	1	1	6
9112R2	YK	6	R	19	19911206	1600	3714.58	7623.34	3714.64	7623.11	366.6	5.00	15.5	2	1	2	6
9112R2	YK	7	R	20	19911206	1421	3713.74	7629.54				5.00	4.0	2	1	2	6
9112R2	YK	10	R	21	19911206	1200	3716.63	7632.11	3716.47	7632.11	296.5	5.00	6.7	1	1	3	3
9112R2	YK	11	R	22	19911206	1432	3713.76	7628.50	3713.74	7628.45	84.5	5.00	14.9	2	1	2	6
9112R2	YK	14	R	23	19911206	1030	3720.62	7636.37	3720.56	7636.44	153.8	5.00	2.7	1	1	3	2
9112R2	YK	15	R	24	19911206	1153	3716.58	7633.74	3716.49	7633.49	414.7	5.00	5.5	1	1	0	3
9112R2	YK	16	R	24	19911206	1038	3720.20	7636.38	3720.04	7636.25	356.2	5.00	6.7	1	1	2	3
9112R2	YK	18	R	25	19911206	1120	3717.41	7634.17	3717.28	7633.98	375.9	5.00	9.1	1	1	3	3
9112R2	YK	20	R	26	19911206	900	3721.79	7638.90	3721.67	7638.81	261.0	5.00	2.1	1	1	3	1
9112R2	YK	22	R	27	19911206	948	3720.87	7638.12				5.00	3.7	1	1	3	2
9112R2	YK	23	R	28	19911206	812	3723.57	7639.71				5.00	8.8	2	2	3	2
9112R1	YK	24	R	28	19911205	1634	3724.09	7640.30	3724.28	7640.44	411.3	5.00	7.0	1	2	0	6
9112R1	YK	26	R	29	19911205	1410	3727.80	7644.57	3727.62	7644.40	421.8	5.00	1.8	2	1	1	5
9112R1	YK	27	R	30	19911205	1610	3725.30	7641.88	3725.41	7641.96	237.3	5.00	6.1	1	2	0	6
9112R1	YK	28	R	30	19911205	1450	3727.58	7644.37	3727.64	7644.59	352.2	5.00	6.1	2	1	1	5
9112R1	YK	29	R	31	19911205	1340	3730.37	7646.72	3730.22	7646.50	434.6	5.00	2.1	2	1	1	5
9112R1	YK	31	R	32	19911205	1305	3731.80	7647.43	3731.60	7647.39	375.5	5.00	11.3	1	2	1	5

Tables 9-20. Station data for the 1992 random survey by month.

Explanation: To conserve space, some variables are presented as coded values.  
Code keys are presented in Table 1 (p.9).









Table 19.

November 1992

Cruise Number	River	Stat # River Mile	Stat. Type	Stratum Code	Station Date	Time	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Distance (m)	Tow Parameters			Direction		Sea State	Tidal Stage
												Duration (min)	Depth (m)	One	Two			
9211R2	YK	2	R	17	19921104	1401	3715.60	7624.53	3715.67	7624.77	386.9	5.00	2.4	1	1	2	1	
9211R2	YK	4	R	18	19921104	1337	3715.38	7622.87	3715.39	7622.68	289.2	5.00	4.0	2	2	2	1	
9211R2	YK	6	R	19	19921104	1321	3714.57	7623.28	3714.61	7623.04	372.0	5.00	13.4	2	2	1	1	
9211R2	YK	7	R	20	19921104	1139	3714.70	7629.90	3714.80	7629.68	382.1	5.00	3.4	2	6	1	8	
9211R2	YK	9	R	21	19921104	1152	3714.72	7629.74				5.00	4.0	2	6	1	8	
9211R2	YK	12	R	22	19921104	1102	3716.21	7632.42	3716.06	7632.22	411.7	5.00	14.0	2	1	1	5	
9211R2	YK	13	R	23	19921104	855	3717.71	7635.60	3717.82	7635.74	294.6	5.00	2.1	1	2	1	5	
9211R1	YK	16	R	24	19921102	755	3719.83	7636.90	3719.95	7637.01	278.1	4.50	4.3	1	2	2	7	
9211R2	YK	17	R	25	19921104	1045	3717.11	7633.58	3716.98	7633.32	462.6	5.00	10.1	2	1	1	5	
9211R1	YK	19	R	26	19921102	825	3721.64	7638.78	3721.81	7638.91	371.8	5.00	2.1	1	2	2	7	
9211R1	YK	21	R	27	19921102	841	3722.77	7639.47	3722.92	7639.63	369.2	5.00	4.3	1	2	2	7	
9211R1	YK	26	R	29	19921102	911	3726.12	7643.22	3726.28	7643.37	373.9	5.00	2.1	1	2	2	7	
9211R1	YK	28	R	30	19921102	1327	3727.64	7644.13	3727.49	7644.08	288.1	5.00	8.2	2	2	3	1	
9211R1	YK	29	R	31	19921102	951	3730.06	7646.53	3730.20	7646.70	366.0	5.00	2.4	1	2	2	7	
9211R1	YK	32	R	32	19921102	1158	3731.14	7647.81	3730.90	7647.62	530.1	5.00	5.8	2	1	3	7	

Table 20.

December 1992

Cruise Number	River	Stat # River Mile	Stat. Type	Stratum Code	Station Date	Time	Beginning Latitude	Beginning Longitude	Ending Latitude	Ending Longitude	Distance (m)	Tow Parameters			Direction		Sea State	Tidal Stage
												Duration (min)	Depth (m)	One	Two			
9212R2	YK	2	R	17	19921202	1117	3714.90	7626.49	3714.91	7626.27	334.7	5.00	2.4	2	2	2	1	
9212R2	YK	4	R	18	19921202	1142	3714.99	7625.09	3715.09	7624.88	368.9	5.00	5.2	2	2	2	1	
9212R2	YK	5	R	19	19921202	1030	3713.62	7627.83	3713.64	7627.59	366.4	5.00	11.0	2	2	2	1	
9212R2	YK	7	R	20	19921202	836	3716.25	7631.52	3716.12	7631.32	387.7	5.00	2.1	2	1	1	7	
9212R2	YK	9	R	21	19921202	955	3714.66	7629.51	3714.69	7629.24	413.8	5.00	5.8	2	6	1	8	
9212R2	YK	11	R	22	19921202	922	3715.54	7631.40	3715.41	7631.19	399.7	5.00	13.1	2	1	1	6	
9212R2	YK	13	R	23	19921202	900	3716.42	7633.73	3716.50	7633.91	311.0	5.00	1.8	1	6	1	8	
9212R1	YK	16	R	24	19921201	1535	3720.05	7636.82	3719.91	7636.65	366.0	5.00	4.6	2	2	3	3	
9212R1	YK	17	R	25	19921201	755	3719.34	7635.85	3719.50	7635.92	315.0	5.00	11.0	1	2	1	7	
9212R1	YK	19	R	26	19921201	1510	3722.48	7638.35	3722.34	7638.16	388.0	5.00	2.1	2	2	2	3	
9212R1	YK	21	R	27	19921201	830	3720.82	7637.36	3720.99	7637.88	850.3	5.00	5.2	1	2	1	7	
9212R1	YK	26	R	29	19921201	1039	3728.34	7644.82	3728.52	7644.97	403.9	5.00	3.4	1	2	2	7	
9212R1	YK	27	R	30	19921201	1022	3728.02	7644.21	3728.19	7644.30	343.4	5.00	4.3	1	2	1	7	
9212R1	YK	29	R	31	19921201	1125	3730.38	7646.63	3730.56	7646.79	412.7	5.00	2.1	1	2	2	7	
9212R1	YK	31	R	32	19921201	1108	3729.21	7645.59	3729.32	7645.82	404.5	5.00	5.2	1	2	2	7	

Tables 21-32. Station data for the 1993 random survey by month.

Explanation: To conserve space, some variables are presented as coded values.  
Code keys are presented in Table 1 (p.9).







Tables 33-44. Station data for the 1994 random survey by month.

Explanation: To conserve space, some variables are presented as coded values.  
Code keys are presented in Table 1 (p.9).









Tables 45-51. Atmospheric and hydrographic data for the 1991 random survey by month.

- Explanation:
- A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p.9).
  - 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 percent.





Table 51.

December

Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9112R1	YK	24	15.0			1	0.4	10.08	17.4	9.80	97.2	10.56	17.7	8.90	89.4
9112R1	YK	26	14.0	5	360	1	0.5	9.68	16.2	9.10	88.8				
9112R1	YK	27	15.0	0		1	0.4	10.28	16.7	9.00	89.3	10.37	16.9	8.55	85.1
9112R1	YK	28	14.0	5	320	1	0.2	9.76	16.0	8.86	86.5	9.22	16.2	8.97	86.6
9112R1	YK	29	14.5	2	360	1	0.4	10.50	15.5	9.05	89.5	10.45	16.0	8.86	87.8
9112R1	YK	31	14.0	8	360	1	0.2	10.37	12.4	8.81	85.2	10.53	15.3	8.49	83.9
9112R2	YK	2	12.0	8	220	1	1.1	9.16	22.7	9.50	95.5	9.16	22.7	9.50	95.5
9112R2	YK	3	12.0	5	220	0	1.2	10.34	23.1	8.46	87.5	10.29	23.2	8.36	86.5
9112R2	YK	4	13.0	5	270	0		10.55	23.3	8.44	87.8	10.54	23.5	8.15	84.9
9112R2	YK	5	11.0	8	270	1	1.5	10.46	23.5	8.52	88.6	10.38	23.6	8.39	87.2
9112R2	YK	6	13.0	8	220	0	1.4	10.39	23.6	8.49	88.2	10.00	23.9	8.27	85.4
9112R2	YK	7	9.5	8	220	1		9.71	22.8	8.90	90.6	10.66	23.2	8.61	89.8
9112R2	YK	10	11.0	8	220	0	0.7	9.37	22.0	8.86	89.1	10.39	22.7	8.12	83.9
9112R2	YK	11	13.0	5	220	1	1.3	10.54	22.9	8.30	86.2	10.62	23.2	8.10	84.4
9112R2	YK	14	7.0	10	270	0	0.6	9.73	20.3	8.81	88.3	9.73	20.3	8.81	88.3
9112R2	YK	15	11.0	8	270	1	1.0	10.36	22.4	8.52	87.8	10.54	22.6	8.08	83.7
9112R2	YK	16	7.0	8	270	0	1.0	9.82	20.7	8.38	84.4	9.97	21.7	8.41	85.5
9112R2	YK	18	10.0	8	270	0	1.1	10.23	22.3	8.89	91.3	10.45	21.7	8.33	85.6
9112R2	YK	20	7.0	8	270	0	0.2	8.22	19.1	8.94	85.9	8.72	19.2	8.76	85.2
9112R2	YK	22	8.5	8	270	0	0.5	9.67	20.3	8.59	86.0	9.18	20.3	8.54	84.6
9112R2	YK	23	7.5	8	270	0	0.3	9.31	17.6	8.74	85.3	9.30	17.6	8.71	85.0

Tables 52-63. Atmospheric and hydrographic data for the 1992 random survey by month.

- Explanation:
- A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p.9).
  - 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 percent.







Table 58.

July															
Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9207R1	YK	14	24.0	5	220	2	1.0	24.61	17.2	6.22	82.4	24.65	17.6	5.94	79.0
9207R1	YK	16	25.0	5	220	2	0.8	24.87	16.3	6.04	80.0	24.51	17.4	5.56	73.6
9207R1	YK	18	30.0	5	220	2		25.45	18.8	7.78	105.6	24.07	18.8	5.33	70.6
9207R1	YK	19	25.0	5	220	2	0.5	24.91	16.5	6.61	87.7				
9207R1	YK	21	25.0	5	220	2	0.6	25.28	14.7	6.04	79.9	24.79	16.4	4.63	61.3
9207R1	YK	25	25.0	5	220	2	0.5	25.34	14.5	6.10	80.6				
9207R1	YK	28	25.0	5	220	2	0.4	25.60	12.8	6.11	80.4	25.39	13.6	4.93	64.9
9207R1	YK	29	28.0	5	220	2	0.4	25.80	12.0	6.90	90.7				
9207R1	YK	31	28.0	5	220	2	0.3	25.69	12.7	6.00	79.0	25.65	12.9	5.95	78.4
9207R2	YK	2		10	40	2	0.7	25.30	19.7	5.82	79.2	24.67	19.7	5.25	70.7
9207R2	YK	3	25.0	10	40	2	0.7	24.58	19.9	5.80	78.0	24.51	19.9	5.70	76.6
9207R2	YK	6	25.0	10	40	2	1.1	24.65	20.3	7.33	99.0	23.72	20.9	5.93	79.0
9207R2	YK	7	24.0	5	340	2	0.6	24.40	19.2	5.68	75.9	24.28	19.7	4.98	66.6
9207R2	YK	9	25.0	10	40	2	0.9	24.19	19.8	6.13	81.8	23.75		8.22	
9207R2	YK	12	24.0	5	340	2	0.6	24.40	19.5	6.03	80.7	23.81	17.9		

Table 59.

August															
Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9208R1	YK	2	26.0	5	220	1	0.6	26.73	21.4	5.97	84.1	26.73	21.4	5.97	84.1
9208R1	YK	3	26.0	5	220	1	0.8	26.97	21.3	6.84	96.7	26.92	21.3	6.50	91.8
9208R1	YK	5	26.0	8	220	0	0.8	27.28	20.5	6.79	96.0	26.85	21.1	4.19	59.0
9208R1	YK	8	28.0	5	220	0	0.6	27.56	20.2	6.72	95.4	26.92	20.9	4.34	61.2
9208R1	YK	9	27.0	8	220	0	1.0	27.22	20.9	6.05	85.7	26.98	21.0	5.02	70.8
9208R1	YK	11	27.0	8	220	0	0.9	27.39	20.2	6.37	90.1	27.00	20.8	4.47	63.0
9208R1	YK	14	21.0	8	180	2	0.6	27.53	17.3	6.68	93.2	27.53	17.3	6.68	93.2
9208R1	YK	15	27.0	5	140	1	0.5	27.78	19.4	6.96	98.7	27.29	20.3	5.45	77.0
9208R1	YK	17	26.5	5	220	0	0.7	27.63	20.4	6.91	98.3	26.88	20.7	4.50	63.3
9208R1	YK	23	21.0	7	180	5	0.9	27.78	17.0	7.58	106.0	27.48	18.1	5.49	76.9
9208R2	YK	20		5	20	1	0.2	26.90	15.5	5.70	77.9	26.90	15.5	5.70	77.9
9208R2	YK	25	23.5	5	20	1	0.2	26.65	13.6	5.96	80.2	26.67	13.9	6.05	81.6
9208R2	YK	27	22.5	5	20	1	0.7	26.80	14.5	5.85	79.4	26.56	17.2	4.51	61.9
9208R2	YK	30	26.8	5	340	1	0.3	27.63	10.1	6.00	80.6	27.51	11.5	5.26	71.0
9208R2	YK	31			20	1	0.7	27.36	11.5	6.27	84.5	27.44	13.0	5.21	70.9

Table 60.

September															
Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9209R2	YK	10	31.0	5	180	2	0.8	26.12	18.6	7.61	104.4	25.24	20.0	3.51	47.8
9209R2	YK	14	24.6	5	180	1	0.3	25.11	15.6	6.08	80.6	25.11	15.5	6.36	84.2
9209R2	YK	15	28.0	8	180	2	0.9	26.39	17.6	6.98	95.7	25.68	18.4	3.48	47.3
9209R2	YK	16	23.5	8	180	2	1.0	25.46	15.7	5.42	72.3	25.71	16.5	4.52	60.8
9209R2	YK	20		5	180	1	0.4	25.51	13.4	6.54	86.2	25.55	13.7	6.10	80.6
9209R2	YK	22	26.0	8	90	1	0.5	25.21	12.0	6.88	89.5	25.60	13.1	5.73	75.5
9209R2	YK	26	28.0	8	140	1	0.4	25.88	11.2	6.29	82.4	25.80	11.4	6.13	80.3
9209R2	YK	27	28.0	8	140	2	0.7	25.68	10.9	6.80	88.6	25.73	11.8	5.59	73.3
9209R2	YK	28	28.0	8	140	1	0.7	25.69	10.7	6.84	89.1	25.76	12.1	5.45	71.6
9209R2	YK	29	29.0	8	140	2	0.3	26.20	7.6	5.97	77.1	25.84	8.5	5.26	67.8
9209R2	YK	30	30.0	8	140	2	0.3	26.21	7.6	6.30	81.4				
9209R2	YK	31	29.0	8	180	1	0.4	26.01	9.0	6.90	89.5				
9209R3	YK	2	28.0	2	220	2	1.0	25.77	19.1	6.24	85.3	25.34	19.8	4.52	61.6
9209R3	YK	3	27.0	0	0	2	1.1	25.65	18.4	5.17	70.3	25.08	20.3	3.67	49.9
9209R3	YK	6	27.0	2	220	1	1.2	25.81	18.7	5.66	77.3	25.04	20.4	4.82	65.5
9209R3	YK	8	27.0	0	0	1	0.9	25.67	17.3	4.52	61.1	25.64	17.9	4.15	56.2
9209R3	YK	11	27.0	0	0	2	1.2	25.64	18.4	4.99	67.8	25.11	20.2	3.08	41.9
9209R3	YK	18		0	0	1	1.1	25.55	16.9	5.19	69.8	25.55	18.9	2.62	35.6

Table 61.

October

Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9210R1	YK	12		8	320	1	1.6	18.57	18.5	8.05	96.1	19.51	20.2	5.70	70.0
9210R1	YK	14	15.0	8	40	1	1.4	18.56	18.4	8.00	95.4	18.60	18.7	7.59	90.7
9210R1	YK	16	15.5	8	20	1	1.5	18.29	16.7	8.47	99.4	18.65	18.0	7.04	83.9
9210R1	YK	19	15.4	8	40	1	0.8	17.75	14.7	8.08	92.7	17.67	15.2	8.05	92.5
9210R1	YK	22	15.4	8	40	1	1.0	18.01	15.6	8.27	95.9	18.25	16.4	7.47	87.5
9210R1	YK	25	16.0	8	40	1	0.6	17.40	14.3	8.39	95.4	17.37	14.3	8.23	93.5
9210R1	YK	28	16.0	8	40	1	0.7	17.24	13.8	8.29	93.7	17.71	15.3	7.51	86.4
9210R1	YK	29	16.0	5	40	1	0.9	17.96	13.1	7.84	89.5	18.30	14.5	7.15	82.9
9210R1	YK	32	16.0	5	40	1	0.9	18.00	12.2	7.65	86.9	18.16	13.4	7.07	81.2
9210R2	YK	1	20.0	2	320	0	2.0	18.03	19.2	7.95	94.3	17.84	19.1	7.99	94.3
9210R2	YK	3		2	320	0	2.0	17.96	18.9	8.04	95.0	17.78	19.1	7.90	93.2
9210R2	YK	5	20.0	2	320	0	2.0	18.56	20.1	8.47	102.0	17.99	20.1	7.56	90.1
9210R2	YK	8	21.5	2	320	0	1.6	17.88	18.9	7.56	89.2	18.19	19.2	6.75	80.3
9210R2	YK	10		2	320	0	1.1	17.21	17.7	8.42	97.4	18.07	18.9	6.83	80.9
9210R2	YK	18	18.0	2	320	0	1.8	17.34	17.7	8.05	93.3	19.11	19.8	6.13	74.5

Table 62.

November

Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9211R1	YK	16	14.0	8	140	5	1.5	14.51	19.0	8.35	92.1	14.80	19.7	7.91	88.2
9211R1	YK	19	15.0	8	140	5	0.6	14.31	17.6	8.45	92.0				
9211R1	YK	21	15.0	8	140	2	1.0	14.25	17.3	8.46	91.8	14.51	18.0	8.02	87.9
9211R1	YK	26	16.0	8	140	2	0.5	14.19	15.8	8.38	90.0	14.19	15.7	8.39	90.1
9211R1	YK	28	16.0	8	140	5	0.7	14.52	15.1	8.60	92.6	14.41	15.9	7.90	85.3
9211R1	YK	29	16.0	8	140	2	0.3	14.45	13.8	8.80	93.9	14.39	13.8	8.35	89.0
9211R1	YK	32	15.5	8	140	2	0.3	14.59	12.1	8.45	89.5	14.42	12.8	8.00	84.8
9211R2	YK	2	20.0	8	220	1	1.9	15.92	21.1	9.84	113.1	15.92	21.1	9.84	113.1
9211R2	YK	4	20.0	8	220	1	2.5	15.52	22.0	9.73	111.6	15.38	9.7	9.74	103.4
9211R2	YK	6	20.0	8	220	1	2.5	15.07	21.6	9.16	103.9	15.18	22.1	8.76	99.9
9211R2	YK	7	22.0	5	220	1	2.1	15.82	21.4	8.44	97.0	15.37	21.8	8.37	95.6
9211R2	YK	9	22.0	5	220	1	2.3	15.65	21.3	8.66	99.2	15.62	21.5	8.89	101.9
9211R2	YK	12	18.0	5	220	1	2.3	15.52	20.0	9.18	104.0	15.19	21.1	8.61	97.6
9211R2	YK	13	16.0	5	220	1	2.1	14.97	18.5	8.45	93.8	15.08	19.4	8.21	91.9
9211R2	YK	17	18.0	5	220	1	2.0	15.33	19.6	9.05	101.9	15.13	21.1	7.98	90.3

Table 63.

December

Cruise Number	River	River Mile	Air Temp. (C)	Wind Speed m/sec	Wind Direct. (deg)	Obs. Weather	Secchi (m)	Surface				Bottom			
								Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.	Temp. (C)	Salin. (ppt)	DO (mg/L)	% Satur.
9212R1	YK	16	6.5	5	320	5	0.8	11.72	17.2	8.48	87.1	12.42	18.9	7.78	82.0
9212R1	YK	17	7.5	8	320	2	1.3	11.20	15.6	8.86	89.1	12.45	8.2	8.02	79.1
9212R1	YK	19	7.0	9	320	5	0.8	11.39	14.8	8.59	86.3	11.39	14.8	8.59	86.3
9212R1	YK	21	8.0	5	320	2	0.9	10.81	14.1	8.77	86.6	11.70	15.2	8.27	83.9
9212R1	YK	26	9.0	8	320	2	0.4	11.35	9.1	8.06	78.0	11.68	11.4	7.87	77.9
9212R1	YK	27	9.0	8	320	1	0.4	11.35	10.4	8.76	85.5	11.33	10.7	8.44	82.5
9212R1	YK	29	9.0	8	320	2	0.4	11.54	7.8	8.03	77.5	11.59	8.9	7.74	75.3
9212R1	YK	31	9.0	8	320	2	0.4	11.49	8.7	7.93	76.8	11.63	10.6	7.86	77.3
9212R2	YK	2	10.0	8	140	1	2.0	11.07	19.2	9.65	99.0	11.09	19.2	9.20	94.4
9212R2	YK	4	10.0	8	140	1	1.4	11.04	19.7	9.98	102.6	10.93	19.8	9.12	93.6
9212R2	YK	5	8.5	8	140	1	1.2	11.37	19.0	9.40	96.9	11.72	20.4	8.69	91.1
9212R2	YK	7	5.0	5	140	1	1.3	10.69	18.0	8.54	86.2	10.76	17.8	8.49	85.7
9212R2	YK	9	8.5	8	140	1	1.3	10.62	18.4	9.45	95.5	10.93	18.9	8.97	91.6
9212R2	YK	11	8.0	8	140	1	1.6	10.63	17.5	9.22	92.7	11.89	19.4	8.40	87.8
9212R2	YK	13	6.5	5	140	1	1.5	9.52	16.8	8.74	85.3	9.52	16.8	8.74	85.3

Tables 64-75. Atmospheric and hydrographic data for the 1993 random survey by month.

- Explanation:
- A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p.9).
  - 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 percent.







Tables 76-87. Atmospheric and hydrographic data for the 1994 random survey by month.

- Explanation:
- A. To conserve space, some variables are presented as coded values. Code keys are presented in Table 1 (p.9).
  - 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 percent.









Table 88. Species composition, number caught, catch per trawl, and length statistics for all months of the 1991 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 88.

Month - All - Pooled, 1991  
 Segment - All - Pooled  
 No. of Fish Trawls Made - 162  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 67

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	87,498	51.16	540.11	.	76,711	52	0.13	18	132
hogchoker	35,960	21.03	221.98	.	6,880	79	0.36	22	192
Atlantic croaker	15,577	9.11	96.15	32.75	15,029	97	0.84	12	234
spot	9,538	5.58	58.88	20.05	8,819	128	0.42	24	247
blackcheek tonguefish	5,211	3.05	32.17	10.96	2,730	99	0.48	33	170
blue crab, male	4,345	2.54	26.82	9.14	.	76	0.70	7	192
weakfish	3,786	2.21	23.37	7.96	3,564	94	1.03	14	376
blue crab, juvenile female	3,094	1.81	19.10	6.51	.	62	0.56	8	139
oyster toadfish	1,273	0.74	7.86	2.68	3	187	2.46	42	370
blue crab, adult female	1,240	0.73	7.65	2.61	.	144	0.68	82	200
summer flounder	796	0.47	4.91	1.67	714	159	2.73	56	508
silver perch	534	0.31	3.30	1.12	454	122	1.50	36	208
kingfish	295	0.17	1.82	0.62	.	90	2.38	19	290
Atlantic silverside	238	0.14	1.47	0.50	238	94	2.81	78	111
blueback herring	178	0.10	1.10	0.37	178	81	3.33	67	108
white perch	165	0.10	1.02	0.35	0	181	2.48	87	247
harvestfish	160	0.09	0.99	0.34	.	43	1.95	18	102
Atlantic spadefish	155	0.09	0.96	0.33	.	83	2.90	25	147
inshore lizardfish	137	0.08	0.85	0.29	.	148	3.78	68	320
striped anchovy	115	0.07	0.71	0.24	.	70	0.88	55	102
American eel	104	0.06	0.64	0.22	.	269	11.31	128	662
Atlantic thread herring	64	0.04	0.40	0.13	.	84	1.22	50	106
butterfish	41	0.02	0.25	0.09	.	74	4.63	24	119
striped searobin	38	0.02	0.23	0.08	.	66	5.93	28	186
striped bass	37	0.02	0.23	0.08	24	120	24.92	28	480
black seabass	35	0.02	0.22	0.07	20	108	5.18	46	189
striped cusk-eel	35	0.02	0.22	0.07	.	131	4.56	101	235
northern puffer	34	0.02	0.21	0.07	19	138	10.73	45	280
northern searobin	34	0.02	0.21	0.07	.	89	3.65	34	121
feather blenny	33	0.02	0.20	0.07	.	78	2.67	28	107
green goby	28	0.02	0.17	0.06	.	37	1.24	23	52
naked goby	27	0.02	0.17	0.06	.	45	1.96	25	62
northern pipefish	26	0.02	0.16	0.05	.	148	6.65	89	201
American shad	23	0.01	0.14	0.05	23	103	7.38	85	121
Atlantic cutlassfish	18	0.01	0.11	0.04	.	267	15.61	162	468
brown shrimp	16	0.01	0.10	0.03	.	99	6.01	51	127
conger eel	15	0.01	0.09	0.03	.	450	20.65	287	547
white catfish	13	0.01	0.08	0.03	0	293	24.80	165	409
gray snapper	13	0.01	0.08	0.03	.	91	4.35	61	110
spotted hake	12	0.01	0.07	0.03	.	194	4.26	173	225
Atlantic menhaden	11	0.01	0.07	0.02	.	159	7.60	126	208
smallmouth flounder	8	0.00	0.05	0.02	.	73	12.64	44	137
Spanish mackerel	7	0.00	0.04	0.01	.	147	19.98	71	209
scup	5	0.00	0.03	0.01	2	139	22.14	53	177
gag	5	0.00	0.03	0.01	.	186	7.17	164	203
fawn cusk-eel	5	0.00	0.03	0.01	.	127	8.49	106	158
gizzard shad	4	0.00	0.02	0.01	.	224	41.83	142	302
tautog	4	0.00	0.02	0.01	.	189	26.73	135	250
sheepshead	2	0.00	0.01	0.00	.	87	17.00	70	104
sheepshead minnow	2	0.00	0.01	0.00	.	37	3.50	33	40
lined seahorse	2	0.00	0.01	0.00	.	102	45.00	57	147
striped blenny	2	0.00	0.01	0.00	.	66	3.00	63	69
skiffletfish	2	0.00	0.01	0.00	.	62	2.50	59	64
spiny butterfly ray	2	0.00	0.01	0.00	.	.	.	.	.
fringed flounder	2	0.00	0.01	0.00	.	147	2.50	144	149
planehead filefish	2	0.00	0.01	0.00	.	130	5.50	124	135
chain pipefish	2	0.00	0.01	0.00	.	302	15.50	286	317
pink shrimp	2	0.00	0.01	0.00	.	83	5.00	78	88
bluefish	1	0.00	0.01	0.00	.	293	.	293	293
searobins	1	0.00	0.01	0.00	.	157	.	157	157
spotted seatrout	1	0.00	0.01	0.00	.	225	.	225	225
pigfish	1	0.00	0.01	0.00	.	167	.	167	167
lookdown	1	0.00	0.01	0.00	.	95	.	95	95
spotfin butterflyfish	1	0.00	0.01	0.00	.	71	.	71	71
northern stargazer	1	0.00	0.01	0.00	.	40	.	40	40
white mullet	1	0.00	0.01	0.00	.	158	.	158	158
threadfin shad	1	0.00	0.01	0.00	.	60	.	60	60
All Species Combined	171,019								

Tables 89-91. Species composition, number caught, catch per trawl, and length statistics for **all months, by segment** of the 1991 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 89.

Month - All - Pooled, 1991  
 Segment - York River - Upper  
 No. of Fish Trawls Made - 41  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 35  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	14,590	36.10	355.85		3,427	69	0.50	22	184
Atlantic croaker	9,363	23.17	228.37	50.03	9,213	81	1.21	17	234
bay anchovy	7,106	17.58	173.32		5,928	55	0.30	22	93
blue crab, male	2,044	5.06	49.85	10.92		75	1.17	10	192
spot	1,711	4.23	41.73	9.14	1,548	125	1.12	24	247
blackcheek tonguefish	1,534	3.80	37.41	8.20	1,098	92	0.76	43	170
blue crab, juvenile female	1,112	2.75	27.12	5.94		62	1.09	8	139
weakfish	1,103	2.73	26.90	5.89	1,067	82	1.71	24	298
blue crab, adult female	778	1.93	18.98	4.16		147	1.13	98	177
oyster toadfish	364	0.90	8.88	1.95		201	4.44	49	344
summer flounder	164	0.41	4.00	0.88	144	178	5.15	62	364
kingfish	135	0.33	3.29	0.72		77	2.60	19	163
white perch	95	0.24	2.32	0.51	0	174	3.63	87	245
silver perch	78	0.19	1.90	0.42	68	119	3.87	58	199
American eel	69	0.17	1.68	0.37		231	9.24	128	492
Atlantic spadefish	40	0.10	0.98	0.21		108	3.93	52	137
striped bass	28	0.07	0.68	0.15	23	92	22.93	28	480
striped cusk-eel	23	0.06	0.56	0.12		130	6.17	101	235
harvestfish	17	0.04	0.41	0.09		46	4.18	27	75
striped searobin	13	0.03	0.32	0.07		46	2.70	28	63
white catfish	12	0.03	0.29	0.06	0	287	26.10	165	409
striped anchovy	5	0.01	0.12	0.03		74	1.48	71	79
fawn cusk-eel	5	0.01	0.12	0.03		127	8.49	106	158
butterfish	3	0.01	0.07	0.02		42	6.12	32	53
gizzard shad	3	0.01	0.07	0.02		202	50.47	142	302
inshore lizardfish	3	0.01	0.07	0.02		186	9.21	175	204
Atlantic menhaden	2	0.00	0.05	0.01		175	15.50	159	190
sheepshead	2	0.00	0.05	0.01		87	17.00	70	104
naked goby	2	0.00	0.05	0.01		43	0.50	42	43
blueback herring	1	0.00	0.02	0.01	1	75		75	75
Spanish mackerel	1	0.00	0.02	0.01		104		104	104
green goby	1	0.00	0.02	0.01		47		47	47
conger eel	1	0.00	0.02	0.01		479		479	479
northern stargazer	1	0.00	0.02	0.01		40		40	40
white mullet	1	0.00	0.02	0.01		158		158	158
All Species Combined	40,410								

Table 90.

Month - All - Pooled, 1991

Segment - York River - Lower

No. of Fish Trawls Made - 59

No. of Add'l Crab Trawls Made - 0

No. of Species - 43

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	20,521	38.16	347.81	.	18,242	50	0.21	18	132
hogchoker	17,449	32.45	295.75	.	3,228	80	0.51	37	192
Atlantic croaker	4,674	8.69	79.22	29.57	4,380	101	1.35	12	234
spot	2,522	4.69	42.75	15.95	2,373	128	0.64	63	223
blue crab, male	1,675	3.11	28.39	10.60	.	72	1.05	7	189
blackcheck tonguefish	1,660	3.09	28.14	10.50	879	99	0.76	33	162
weakfish	1,515	2.82	25.68	9.58	1,435	93	1.64	17	376
blue crab, juvenile female	1,310	2.44	22.20	8.29	.	56	0.77	8	139
oyster toadfish	637	1.18	10.80	4.03	.	195	3.52	42	370
summer flounder	334	0.62	5.66	2.11	308	157	3.87	65	508
blue crab, adult female	299	0.56	5.07	1.89	.	144	1.20	82	200
silver perch	225	0.42	3.81	1.42	198	108	2.37	36	200
Atlantic silverside	221	0.41	3.75	1.40	221	94	2.99	78	111
blueback herring	160	0.30	2.71	1.01	160	79	2.56	67	90
kingfish	133	0.25	2.25	0.84	.	98	3.83	44	290
harvestfish	120	0.22	2.03	0.76	.	37	1.85	20	87
white perch	70	0.13	1.19	0.44	0	191	2.55	149	247
Atlantic spadefish	56	0.10	0.95	0.35	.	73	5.46	25	124
American eel	28	0.05	0.47	0.18	.	371	28.23	194	662
green goby	24	0.04	0.41	0.15	.	35	0.92	23	43
American shad	20	0.04	0.34	0.13	20	121	.	121	121
inshore lizardfish	19	0.04	0.32	0.12	.	166	5.73	117	213
striped searobin	16	0.03	0.27	0.10	.	58	3.75	45	108
striped anchovy	13	0.02	0.22	0.08	.	81	3.46	66	102
naked goby	11	0.02	0.19	0.07	.	42	2.43	28	55
striped cusk-eel	10	0.02	0.17	0.06	.	125	4.16	111	152
striped bass	9	0.02	0.15	0.06	1	297	60.58	137	401
Atlantic menhaden	8	0.01	0.14	0.05	.	149	6.22	126	184
northern searobin	8	0.01	0.14	0.05	.	69	7.37	34	100
brown shrimp	6	0.01	0.10	0.04	.	103	7.65	85	127
butterfish	4	0.01	0.07	0.03	.	48	20.03	24	108
northern pipefish	4	0.01	0.07	0.03	.	164	7.11	147	180
conger eel	4	0.01	0.07	0.03	.	475	12.39	446	499
smallmouth flounder	2	0.00	0.03	0.01	.	81	37.00	44	118
gray snapper	2	0.00	0.03	0.01	.	95	3.50	91	98
pink shrimp	2	0.00	0.03	0.01	.	83	5.00	78	88
searobins	1	0.00	0.02	0.01	.	157	.	157	157
white catfish	1	0.00	0.02	0.01	0	368	.	368	368
gizzard shad	1	0.00	0.02	0.01	.	289	.	289	289
tautog	1	0.00	0.02	0.01	.	135	.	135	135
feather blenny	1	0.00	0.02	0.01	.	51	.	51	51
Atlantic cutlassfish	1	0.00	0.02	0.01	.	468	.	468	468
threadfin shad	1	0.00	0.02	0.01	.	60	.	60	60
All Species Combined	53,778								

Table 91.

Month - All - Pooled, 1991

Segment - York River - Bottom

No. of Fish Trawls Made - 62

No. of Add'l Crab Trawls Made - 0

No. of Species - 56

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	59,871	77.93	965.66		52,541	52	0.19	22	92
spot	5,305	6.90	85.56	40.69	4,898	129	0.57	61	234
hogchoker	3,921	5.10	63.24		225	98	0.83	60	191
blackcheek tonguefish	2,017	2.63	32.53	15.47	753	111	0.84	47	163
Atlantic croaker	1,540	2.00	24.84	11.81	1,436	122	1.69	17	226
weakfish	1,168	1.52	18.84	8.96	1,062	106	1.93	14	293
blue crab, juvenile female	672	0.87	10.84	5.15	.	74	1.03	14	135
blue crab, male	626	0.81	10.10	4.80	.	90	1.48	14	171
summer flounder	298	0.39	4.81	2.29	262	153	4.96	56	473
oyster toadfish	272	0.35	4.39	2.09	3	158	4.74	42	355
silver perch	231	0.30	3.73	1.77	188	138	1.62	72	208
blue crab, adult female	163	0.21	2.63	1.25	.	139	1.10	100	173
inshore lizardfish	115	0.15	1.85	0.88	.	143	4.29	68	320
striped anchovy	97	0.13	1.56	0.74	.	69	0.83	55	91
Atlantic thread herring	64	0.08	1.03	0.49	.	84	1.22	50	106
Atlantic spadefish	59	0.08	0.95	0.45	.	82	3.84	37	147
black seabass	35	0.05	0.56	0.27	20	108	5.18	46	189
butterfish	34	0.04	0.55	0.26	.	80	4.52	28	119
northern puffer	34	0.04	0.55	0.26	19	138	10.73	45	280
feather blenny	32	0.04	0.52	0.25	.	79	2.61	28	107
kingfish	27	0.04	0.44	0.21	.	111	9.48	41	175
northern searobin	26	0.03	0.42	0.20	.	96	3.39	59	121
harvestfish	23	0.03	0.37	0.18	.	60	6.44	18	102
northern pipefish	22	0.03	0.35	0.17	.	145	7.63	89	201
blueback herring	17	0.02	0.27	0.13	17	91	17.50	73	108
Atlantic silverside	17	0.02	0.27	0.13	17	95	11.50	83	106
Atlantic cutlassfish	17	0.02	0.27	0.13	.	255	10.81	162	341
naked goby	14	0.02	0.23	0.11	.	47	3.23	25	62
spotted hake	12	0.02	0.19	0.09	.	194	4.26	173	225
gray snapper	11	0.01	0.18	0.08	.	90	5.13	61	110
conger eel	10	0.01	0.16	0.08	.	438	30.37	287	547
brown shrimp	10	0.01	0.16	0.08	.	96	8.64	51	122
striped searobin	9	0.01	0.15	0.07	.	109	17.26	60	186
American eel	7	0.01	0.11	0.05	.	374	48.23	227	564
Spanish mackerel	6	0.01	0.10	0.05	.	154	22.08	71	209
smallmouth flounder	6	0.01	0.10	0.05	.	70	14.17	47	137
scup	5	0.01	0.08	0.04	2	139	22.14	53	177
gag	5	0.01	0.08	0.04	.	186	7.17	164	203
American shad	3	0.00	0.05	0.02	3	97	5.90	85	104
tautog	3	0.00	0.05	0.02	.	207	27.85	155	250
green goby	3	0.00	0.05	0.02	.	49	2.08	45	52
sheepshead minnow	2	0.00	0.03	0.02	.	37	3.50	33	40
lined seahorse	2	0.00	0.03	0.02	.	102	45.00	57	147
striped blenny	2	0.00	0.03	0.02	.	66	3.00	63	69
skilletfish	2	0.00	0.03	0.02	.	62	2.50	59	64
spiny butterfly ray	2	0.00	0.03	0.02	.	.	.	.	.
striped cusk-eel	2	0.00	0.03	0.02	.	172	11.50	160	183
fringed flounder	2	0.00	0.03	0.02	.	147	2.50	144	149
planehead filefish	2	0.00	0.03	0.02	.	130	5.50	124	135
chain pipefish	2	0.00	0.03	0.02	.	302	15.50	286	317
bluefish	1	0.00	0.02	0.01	.	293	.	293	293
Atlantic menhaden	1	0.00	0.02	0.01	.	208	.	208	208
spotted seatrout	1	0.00	0.02	0.01	.	225	.	225	225
pigfish	1	0.00	0.02	0.01	.	167	.	167	167
lookdown	1	0.00	0.02	0.01	.	95	.	95	95
spotfin butterflyfish	1	0.00	0.02	0.01	.	71	.	71	71
All Species Combined	76,831								



Tables 92-98. Species composition, number caught, catch per trawl, and length statistics by **month** for the 1991 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 92.

Month - June 1991									
RIVER - York									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 30									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	17,077	47.79	813.19		16,973	59	0.34	39	93
Atlantic croaker	8,491	23.76	404.33	60.75	8,491	100	0.91	52	157
hogchoker	4,678	13.09	222.76		2,492	67	0.83	30	159
spot	2,389	6.69	113.76	17.09	1,899	109	1.41	24	221
blue crab, male	794	2.22	37.81	5.68		87	1.60	7	189
blackcheek tonguefish	733	2.05	34.90	5.24	727	90	0.88	47	132
blue crab, juvenile female	661	1.85	31.48	4.73		68	1.26	8	128
summer flounder	200	0.56	9.52	1.43	180	111	4.66	56	473
oyster toadfish	190	0.53	9.05	1.36		140	5.28	45	333
blue crab, adult female	184	0.51	8.76	1.32		138	1.29	100	173
weakfish	86	0.24	4.10	0.62	1	182	3.39	78	276
silver perch	60	0.17	2.86	0.43	49	161	2.43	135	198
American eel	39	0.11	1.86	0.28		230	20.05	128	662
striped cusk-eel	33	0.09	1.57	0.24		130	4.74	101	235
striped bass	22	0.06	1.05	0.16	21	41	9.96	28	220
northern searobin	18	0.05	0.86	0.13		93	3.72	59	121
black seabass	16	0.04	0.76	0.11	16	98	4.19	72	132
spotted hake	12	0.03	0.57	0.09		194	4.26	173	225
feather blenny	12	0.03	0.57	0.09		86	3.71	67	107
northern pipefish	11	0.03	0.52	0.08		170	3.47	147	185
naked goby	8	0.02	0.38	0.06		54	2.71	43	62
Atlantic menhaden	4	0.01	0.19	0.03		146	12.99	126	184
Atlantic spadefish	3	0.01	0.14	0.02		130	8.51	119	147
sheepshead	2	0.01	0.10	0.01		87	17.00	70	104
skilletfish	2	0.01	0.10	0.01		62	2.50	59	64
conger eel	2	0.01	0.10	0.01		393	44.50	348	437
scup	1	0.00	0.05	0.01	1	53		53	53
butterfish	1	0.00	0.05	0.01		91		91	91
green goby	1	0.00	0.05	0.01		50		50	50
striped blenny	1	0.00	0.05	0.01		69		69	69
All Species Combined	35,731								

Table 93.

Month - July 1991									
RIVER - York									
No. of Fish Trawls Made - 23									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 32									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	6,358	35.10	276.43		104	60	0.36	27	92
hogchoker	4,157	22.95	180.74		3,223	74	0.97	33	169
Atlantic croaker	2,952	16.29	128.35	38.84	2,922	125	0.73	12	212
spot	1,801	9.94	78.30	23.69	1,695	114	0.75	58	223
blackcheek tonguefish	840	4.64	36.52	11.05	840	95	0.88	68	122
blue crab, male	750	4.14	32.61	9.87		103	1.88	19	182
blue crab, juvenile female	439	2.42	19.09	5.78		81	1.52	30	139
blue crab, adult female	256	1.41	11.13	3.37		145	1.99	82	170
weakfish	151	0.83	6.57	1.99	117	80	5.98	23	282
oyster toadfish	126	0.70	5.48	1.66		204	6.59	74	348
summer flounder	112	0.62	4.87	1.47	91	155	8.52	65	421
striped searobin	32	0.18	1.39	0.42		56	4.31	28	176
inshore lizardfish	26	0.14	1.13	0.34		109	5.79	68	161
silver perch	24	0.13	1.04	0.32	0	165	1.76	147	187
American eel	18	0.10	0.78	0.24		287	21.39	170	547
butterfish	17	0.09	0.74	0.22		62	4.55	28	88
Atlantic cutlassfish	17	0.09	0.74	0.22		255	10.81	162	341
northern searobin	14	0.08	0.61	0.18		88	7.24	34	121
white catfish	4	0.02	0.17	0.05	0	297	56.33	191	409
Atlantic menhaden	3	0.02	0.13	0.04		185	14.93	157	208
northern puffer	3	0.02	0.13	0.04	2	119	39.73	75	198
northern pipefish	3	0.02	0.13	0.04		174	13.33	161	201
scup	2	0.01	0.09	0.03	0	160	5.50	154	165
striped bass	2	0.01	0.09	0.03	0	361	119.50	241	480
Spanish mackerel	2	0.01	0.09	0.03		109	38.00	71	147
bluefish	1	0.01	0.04	0.01		293		293	293
gizzard shad	1	0.01	0.04	0.01		302		302	302
green goby	1	0.01	0.04	0.01		47		47	47
feather blenny	1	0.01	0.04	0.01		87		87	87
fawn cusk-eel	1	0.01	0.04	0.01		106		106	106
striped cusk-eel	1	0.01	0.04	0.01		142		142	142
smallmouth flounder	1	0.01	0.04	0.01		44		44	44
All Species Combined	18,116								

Table 94.

Month - August 1991

RIVER - York

No. of Fish Trawls Made - 25

No. of Add'l Crab Trawls Made - 0

No. of Species - 35

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	10,781	46.94	431.24	.	1	82	0.87	39	172
bay anchovy	5,534	24.10	221.36	.	3,367	52	0.38	18	93
weakfish	1,559	6.79	62.36	23.44	1,544	58	1.00	14	312
spot	1,194	5.20	47.76	17.95	1,168	127	0.67	95	221
Atlantic croaker	790	3.44	31.60	11.88	789	153	1.03	57	234
blue crab, male	765	3.33	30.60	11.50	.	104	1.72	30	192
blue crab, adult female	556	2.42	22.24	8.36	.	155	1.06	124	183
blue crab, juvenile female	446	1.94	17.84	6.71	.	90	1.26	16	139
blackcheek tonguefish	347	1.51	13.88	5.22	11	107	0.99	74	163
oyster toadfish	237	1.03	9.48	3.56	.	176	6.63	42	355
summer flounder	161	0.70	6.44	2.42	141	164	6.98	85	502
kingfish	155	0.67	6.20	2.33	.	65	1.44	19	101
harvestfish	149	0.65	5.96	2.24	.	39	1.82	18	102
Atlantic spadefish	81	0.35	3.24	1.22	.	56	2.73	25	100
silver perch	68	0.30	2.72	1.02	46	103	6.07	36	200
inshore lizardfish	46	0.20	1.84	0.69	.	142	5.03	86	282
striped anchovy	23	0.10	0.92	0.35	.	76	1.33	66	91
American eel	16	0.07	0.64	0.24	.	331	38.84	227	529
northern puffer	13	0.06	0.52	0.20	4	166	14.63	112	280
butterfish	9	0.04	0.36	0.14	.	49	10.34	24	109
black seabass	6	0.03	0.24	0.09	0	116	6.15	101	138
feather blenny	6	0.03	0.24	0.09	.	82	5.48	57	95
fawn cusk-eel	4	0.02	0.16	0.06	.	133	8.57	121	158
striped searobin	3	0.01	0.12	0.05	.	127	32.50	74	186
naked goby	3	0.01	0.12	0.05	.	45	6.03	38	57
gag	3	0.01	0.12	0.05	.	175	5.78	164	183
Spanish mackerel	2	0.01	0.08	0.03	.	109	4.50	104	113
planehead filefish	2	0.01	0.08	0.03	.	130	5.50	124	135
scup	1	0.00	0.04	0.02	0	177	.	177	177
white catfish	1	0.00	0.04	0.02	0	377	.	377	377
tautog	1	0.00	0.04	0.02	.	217	.	217	217
northern searobin	1	0.00	0.04	0.02	.	78	.	78	78
Atlantic cutlassfish	1	0.00	0.04	0.02	.	468	.	468	468
striped cusk-eel	1	0.00	0.04	0.02	.	160	.	160	160
smallmouth flounder	1	0.00	0.04	0.02	.	78	.	78	78
All Species Combined	22,966								

Table 95.

Month - September 1991

RIVER - York

No. of Fish Trawls Made - 24

No. of Add'l Crab Trawls Made - 0

No. of Species - 37

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	10,227	51.09	426.13	.	8,662	46	0.32	22	132
hogchoker	4,583	22.89	190.96	.	88	84	0.87	37	192
spot	1,197	5.98	49.88	22.98	1,105	150	0.97	110	247
weakfish	864	4.32	36.00	16.59	833	93	1.65	27	289
blue crab, male	784	3.92	32.67	15.05	.	63	1.38	14	182
blue crab, juvenile female	558	2.79	23.25	10.71	.	50	1.10	14	120
blackcheek tonguefish	501	2.50	20.88	9.62	120	102	1.05	33	170
Atlantic croaker	359	1.79	14.96	6.89	1	179	0.95	31	234
oyster toadfish	281	1.40	11.71	5.39	.	195	5.49	42	355
silver perch	143	0.71	5.96	2.75	132	99	2.45	55	208
striped anchovy	89	0.44	3.71	1.71	.	68	0.87	55	97
blue crab, adult female	84	0.42	3.50	1.61	.	144	1.92	99	172
summer flounder	77	0.38	3.21	1.48	74	165	4.29	111	350
kingfish	73	0.36	3.04	1.40	.	102	4.69	44	290
Atlantic spadefish	50	0.25	2.08	0.96	.	103	2.61	69	137
inshore lizardfish	34	0.17	1.42	0.65	.	168	9.03	108	320
white perch	18	0.09	0.75	0.35	0	213	3.49	189	245
green goby	18	0.09	0.75	0.35	.	34	1.15	23	43
Atlantic thread herring	14	0.07	0.58	0.27	.	74	3.07	50	95
American eel	12	0.06	0.50	0.23	.	257	21.45	179	432
harvestfish	11	0.05	0.46	0.21	.	79	2.42	61	88
northern puffer	11	0.05	0.46	0.21	11	80	6.82	45	126
conger eel	9	0.04	0.38	0.17	.	446	31.69	287	547
smallmouth flounder	4	0.02	0.17	0.08	.	90	22.29	50	137
Spanish mackerel	3	0.01	0.13	0.06	.	198	6.96	185	209
naked goby	2	0.01	0.08	0.04	.	30	5.00	25	35
gag	2	0.01	0.08	0.04	.	202	1.50	200	203
chain pipefish	2	0.01	0.08	0.04	.	302	15.50	286	317
scup	1	0.00	0.04	0.02	1	147	.	147	147
black seabass	1	0.00	0.04	0.02	0	149	.	149	149
Atlantic menhaden	1	0.00	0.04	0.02	.	159	.	159	159
pigfish	1	0.00	0.04	0.02	.	167	.	167	167
striped searobin	1	0.00	0.04	0.02	.	159	.	159	159
northern pipefish	1	0.00	0.04	0.02	.	114	.	114	114
feather blenny	1	0.00	0.04	0.02	.	65	.	65	65
northern stargazer	1	0.00	0.04	0.02	.	40	.	40	40
threadfin shad	1	0.00	0.04	0.02	.	60	.	60	60
All Species Combined	20,019								

Table 96.

Month - October 1991									
RIVER - York									
No. of Fish Trawls Made - 24									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 36									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	3,012	34.90	208.83	.	335	82	0.86	22	177
bay anchovy	3,463	24.12	144.29	.	3,157	53	0.33	20	92
spot	1,354	9.43	56.42	23.01	1,349	141	0.64	110	211
weakfish	1,025	7.14	42.71	17.42	968	126	1.78	39	376
Atlantic croaker	905	6.30	37.71	15.38	768	68	2.59	17	222
blackcheek tonguefish	731	5.09	30.46	12.42	80	114	0.90	47	152
blue crab, male	678	4.72	28.25	11.52	.	55	1.03	24	174
blue crab, juvenile female	555	3.86	23.13	9.43	.	48	0.65	20	124
oyster toadfish	142	0.99	5.92	2.41	3	201	6.60	53	354
silver perch	142	0.99	5.92	2.41	130	133	1.57	93	194
summer flounder	131	0.91	5.46	2.23	119	196	5.94	121	508
kingfish	50	0.35	2.08	0.85	.	132	4.47	41	175
blue crab, adult female	37	0.26	1.54	0.63	.	138	2.21	114	165
inshore lizardfish	31	0.22	1.29	0.53	.	166	6.22	119	256
Atlantic spadefish	21	0.15	0.88	0.36	.	114	1.82	99	128
butterfish	13	0.09	0.54	0.22	.	104	2.12	90	119
gray snapper	13	0.09	0.54	0.22	.	91	4.35	61	110
green goby	7	0.05	0.29	0.12	.	39	2.32	33	52
American eel	6	0.04	0.25	0.10	.	343	44.59	275	564
naked goby	6	0.04	0.25	0.10	.	39	3.66	28	51
feather blenny	6	0.04	0.25	0.10	.	61	7.68	28	81
northern puffer	5	0.03	0.21	0.08	2	168	23.67	109	211
black seabass	4	0.03	0.17	0.07	0	137	10.49	110	161
conger eel	4	0.03	0.17	0.07	.	490	4.84	476	499
Atlantic menhaden	3	0.02	0.13	0.05	.	150	2.33	148	155
striped anchovy	3	0.02	0.13	0.05	.	96	5.84	84	102
white catfish	2	0.01	0.08	0.03	0	359	39.00	320	398
striped searobin	2	0.01	0.08	0.03	.	86	22.50	63	108
fringed flounder	2	0.01	0.08	0.03	.	147	2.50	144	149
searobins	1	0.01	0.04	0.02	.	157	.	157	157
tautog	1	0.01	0.04	0.02	.	135	.	135	135
spotted seatrout	1	0.01	0.04	0.02	.	225	.	225	225
northern pipefish	1	0.01	0.04	0.02	.	116	.	116	116
striped blenny	1	0.01	0.04	0.02	.	63	.	63	63
lookdown	1	0.01	0.04	0.02	.	95	.	95	95
spotfin butterflyfish	1	0.01	0.04	0.02	.	71	.	71	71
All Species Combined	14,360								

Table 97.

Month - November 1991									
RIVER - York									
No. of Fish Trawls Made - 24									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 28									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	13,803	59.95	575.13	.	13,435	54	0.28	28	91
hogchoker	3,795	16.48	158.13	.	148	84	1.02	33	178
blackcheek tonguefish	1,868	8.11	77.83	34.43	795	95	1.28	52	162
spot	1,353	5.88	56.38	24.94	1,353	130	0.56	90	197
Atlantic croaker	829	3.60	34.54	15.28	807	53	0.84	17	125
blue crab, male	351	1.52	14.63	6.47	.	66	2.23	8	175
blue crab, juvenile female	272	1.18	11.33	5.01	.	54	1.79	10	135
oyster toadfish	248	1.08	10.33	4.57	.	216	5.01	51	370
blue crab, adult female	119	0.52	4.96	2.19	.	141	1.40	106	200
weakfish	98	0.43	4.08	1.81	98	130	2.52	72	185
silver perch	97	0.42	4.04	1.79	97	127	1.45	87	158
summer flounder	88	0.38	3.67	1.62	82	192	5.72	134	396
white perch	48	0.21	2.00	0.88	0	163	4.97	87	230
kingfish	15	0.07	0.63	0.28	.	112	10.06	52	161
American eel	8	0.03	0.33	0.15	.	314	35.24	230	534
feather blenny	7	0.03	0.29	0.13	.	79	2.41	73	89
naked goby	6	0.03	0.25	0.11	.	42	1.80	36	48
black seabass	4	0.02	0.17	0.07	0	141	20.58	106	189
northern puffer	2	0.01	0.08	0.04	0	223	37.00	186	260
tautog	2	0.01	0.08	0.04	.	203	47.50	155	250
lined seahorse	2	0.01	0.08	0.04	.	102	45.00	57	147
spiny butterfly ray	2	0.01	0.08	0.04	.	.	.	.	.
butterfish	1	0.00	0.04	0.02	.	108	.	108	108
striped bass	1	0.00	0.04	0.02	0	288	.	288	288
white catfish	1	0.00	0.04	0.02	0	165	.	165	165
northern searobin	1	0.00	0.04	0.02	.	63	.	63	63
northern pipefish	1	0.00	0.04	0.02	.	124	.	124	124
smallmouth flounder	1	0.00	0.04	0.02	.	54	.	54	54
All Species Combined	23,023								

Table 98.

Month - December 1991  
 RIVER - York  
 No. of Fish Trawls Made - 21  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 30  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	31,036	84.33	1477.90	.	31,013	48	0.19	27	79
hogchoker	2,954	8.03	140.67	.	593	75	1.13	33	184
Atlantic croaker	1,251	3.40	59.57	44.46	1,251	47	0.60	19	100
spot	250	0.68	11.90	8.88	250	118	1.12	80	159
Atlantic silverside	238	0.65	11.33	8.46	238	94	2.81	78	111
blue crab, male	223	0.61	10.62	7.92	.	57	2.18	11	171
blackcheek tonguefish	191	0.52	9.10	6.79	157	81	1.64	43	152
blueback herring	178	0.48	8.48	6.33	178	81	3.33	67	108
blue crab, juvenile female	163	0.44	7.76	5.79	.	49	1.54	9	128
white perch	99	0.27	4.71	3.52	0	184	2.66	124	247
Atlantic thread herring	50	0.14	2.38	1.78	.	87	1.03	74	106
oyster toadfish	49	0.13	2.33	1.74	.	136	9.76	43	301
summer flounder	27	0.07	1.29	0.96	27	178	5.07	130	217
American shad	23	0.06	1.10	0.82	23	103	7.38	85	121
brown shrimp	16	0.04	0.76	0.57	.	99	6.01	51	127
striped bass	12	0.03	0.57	0.43	3	243	41.54	137	401
northern pipefish	9	0.02	0.43	0.32	.	121	11.56	89	180
white catfish	5	0.01	0.24	0.18	0	272	32.03	219	368
American eel	5	0.01	0.24	0.18	.	298	20.65	254	368
black seabass	4	0.01	0.19	0.14	4	66	11.38	46	89
blue crab, adult female	4	0.01	0.19	0.14	.	138	3.81	130	145
weakfish	3	0.01	0.14	0.11	3	117	15.50	87	138
gizzard shad	3	0.01	0.14	0.11	.	197	46.16	142	289
kingfish	2	0.01	0.10	0.07	.	127	25.50	101	152
sheepshead minnow	2	0.01	0.10	0.07	.	37	3.50	33	40
naked goby	2	0.01	0.10	0.07	.	51	4.00	47	55
pink shrimp	2	0.01	0.10	0.07	.	83	5.00	78	88
green goby	1	0.00	0.05	0.04	.	45	.	45	45
white mullet	1	0.00	0.05	0.04	.	158	.	158	158
smallmouth flounder	1	0.00	0.05	0.04	.	47	.	47	47
All Species Combined	36.804								

Table 99. Species composition, number caught, catch per trawl, and length statistics for all months of the 1992 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 99.

Month - All - Pooled, 1992

Segment - All - Pooled

No. of Fish Trawls Made - 217

No. of Add'l Crab Trawls Made - 0

No. of Species - 64

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	110,667	62.36	509.99	.	97,158	50	0.15	18	96
hogchoker	32,441	18.28	149.50	.	7,456	79	0.42	18	188
Atlantic croaker	15,129	8.52	69.72	44.03	10,571	101	0.97	15	311
spot	3,945	2.22	18.18	11.48	1,307	147	0.58	64	281
weakfish	3,226	1.82	14.87	9.39	3,017	97	1.59	19	326
blue crab, male	2,668	1.50	12.29	7.76	.	62	0.76	7	181
blue crab, juvenile female	2,283	1.29	10.52	6.64	.	54	0.62	6	143
blackcheek tonguefish	2,132	1.20	9.82	6.20	1,524	93	0.95	37	189
spotted hake	851	0.48	3.92	2.48	.	120	1.06	48	218
oyster toadfish	842	0.47	3.88	2.45	.	185	3.06	33	353
silver perch	572	0.32	2.64	1.66	451	128	1.73	38	196
white perch	469	0.26	2.16	1.36	3	179	1.91	72	373
summer flounder	416	0.23	1.92	1.21	306	172	4.05	38	519
blue crab, adult female	385	0.22	1.77	1.12	.	144	0.93	101	187
Atlantic silverside	173	0.10	0.80	0.50	173	92	0.83	67	112
Atlantic menhaden	145	0.08	0.67	0.42	.	123	2.37	75	332
naked goby	142	0.08	0.65	0.41	.	38	0.57	24	55
blueback herring	124	0.07	0.57	0.36	124	79	0.77	62	108
alewife	101	0.06	0.47	0.29	100	101	1.88	84	241
white catfish	98	0.06	0.45	0.29	0	280	6.45	146	451
kingfish	77	0.04	0.35	0.22	.	78	4.36	19	250
harvestfish	72	0.04	0.33	0.21	.	63	3.43	26	133
northern searobin	60	0.03	0.28	0.17	.	68	2.01	42	111
striped bass	55	0.03	0.25	0.16	42	163	11.83	72	487
American eel	49	0.03	0.23	0.14	.	296	16.69	140	790
inshore lizardfish	37	0.02	0.17	0.11	.	133	5.68	85	219
northern pipefish	36	0.02	0.17	0.10	.	121	8.71	48	243
striped anchovy	35	0.02	0.16	0.10	.	80	2.34	51	105
gizzard shad	29	0.02	0.13	0.08	.	179	12.62	124	351
black seabass	27	0.02	0.12	0.08	13	132	7.35	55	205
white shrimp	25	0.01	0.12	0.07	.	96	3.43	63	145
smallmouth flounder	21	0.01	0.10	0.06	.	56	2.59	42	92
butterfish	17	0.01	0.08	0.05	.	101	5.53	42	128
Atlantic spadefish	16	0.01	0.07	0.05	.	79	2.53	56	97
green goby	12	0.01	0.06	0.03	.	40	1.71	28	50
feather blenny	12	0.01	0.06	0.03	.	80	5.90	51	109
conger eel	9	0.01	0.04	0.03	.	438	24.28	262	496
northern puffer	8	0.00	0.04	0.02	6	159	13.64	106	232
squid	7	0.00	0.03	0.02	.	44	4.78	22	54
skilletfish	7	0.00	0.03	0.02	.	47	3.76	32	64
brown shrimp	7	0.00	0.03	0.02	.	109	7.97	80	140
scup	4	0.00	0.02	0.01	2	156	12.16	122	179
pinfish	4	0.00	0.02	0.01	.	183	2.78	178	189
striped mullet	4	0.00	0.02	0.01	.	171	4.26	159	178
Atlantic thread herring	3	0.00	0.01	0.01	.	156	15.96	124	175
tautog	3	0.00	0.01	0.01	.	148	12.25	124	163
striped searobin	3	0.00	0.01	0.01	.	128	38.83	56	189
least brook lamprey	3	0.00	0.01	0.01	.	137	7.45	123	148
Atlantic herring	2	0.00	0.01	0.01	.	110	56.00	54	166
American shad	2	0.00	0.01	0.01	1	140	43.50	96	183
red drum	2	0.00	0.01	0.01	.	120	13.00	107	133
channel catfish	2	0.00	0.01	0.01	0	240	86.50	153	326
windowpane	2	0.00	0.01	0.01	.	71	14.00	57	85
spotted seatrout	1	0.00	0.00	0.00	.	.	.	.	.
pigfish	1	0.00	0.00	0.00	.	170	.	170	170
longnose gar	1	0.00	0.00	0.00	.	898	.	898	898
mummichog	1	0.00	0.00	0.00	.	82	.	82	82
lined seahorse	1	0.00	0.00	0.00	.	69	.	69	69
striped blenny	1	0.00	0.00	0.00	.	65	.	65	65
Atlantic stingray	1	0.00	0.00	0.00	.	444	.	444	444
bluntnose stingray	1	0.00	0.00	0.00	.	566	.	566	566
striped cusk-eel	1	0.00	0.00	0.00	.	191	.	191	191
gray snapper	1	0.00	0.00	0.00	.	63	.	63	63
mottled mojarra	1	0.00	0.00	0.00	.	105	.	105	105
All Species Combined	177,472								



Tables 100-102. Species composition, number caught, catch per trawl, and length statistics for all months, by segment of the 1992 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 100.

Month - All - Pooled, 1992  
 Segment - York River - Upper  
 No. of Fish Trawls Made - 56  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 38  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	15,959	36.59	284.98	.	3,728	71	0.59	18	175
bay anchovy	14,376	32.96	256.71	.	12,177	51	0.33	20	87
Atlantic croaker	6,907	15.84	123.34	52.02	5,796	88	1.41	16	311
blue crab, male	1,248	2.86	22.29	9.40	.	65	1.17	7	181
blackcheck tonguefish	1,035	2.37	18.48	7.80	760	84	1.31	39	151
weakfish	972	2.23	17.36	7.32	869	102	2.92	26	312
blue crab, juvenile female	768	1.76	13.71	5.78	.	56	1.20	6	133
spot	455	1.04	8.13	3.43	249	152	0.95	91	232
oyster toadfish	384	0.88	6.86	2.89	.	181	4.28	46	347
white perch	341	0.78	6.09	2.57	3	168	2.15	72	373
spotted hake	297	0.68	5.30	2.24	.	122	1.75	60	218
blue crab, adult female	177	0.41	3.16	1.33	.	150	1.42	109	187
silver perch	162	0.37	2.89	1.22	153	114	2.42	48	195
summer flounder	119	0.27	2.13	0.90	96	175	6.97	38	519
white catfish	94	0.22	1.68	0.71	0	276	6.34	146	451
kingfish	54	0.12	0.96	0.41	.	69	3.25	19	119
striped bass	51	0.12	0.91	0.38	41	154	10.27	72	487
harvestfish	47	0.11	0.84	0.35	.	69	4.60	28	133
American eel	31	0.07	0.55	0.23	.	257	10.25	142	370
Atlantic menhaden	30	0.07	0.54	0.23	.	123	7.94	83	332
alewife	26	0.06	0.46	0.20	25	106	6.08	84	241
naked goby	21	0.05	0.38	0.16	.	40	1.52	28	51
gizzard shad	20	0.05	0.36	0.15	.	181	15.94	124	351
white shrimp	6	0.01	0.11	0.05	.	93	10.60	75	145
Atlantic silverside	5	0.01	0.09	0.04	5	97	5.12	81	108
conger eel	5	0.01	0.09	0.04	.	465	17.85	397	496
green goby	3	0.01	0.05	0.02	.	40	4.63	32	48
striped mullet	3	0.01	0.05	0.02	.	169	5.04	159	176
blueback herring	2	0.00	0.04	0.02	2	93	2.50	90	95
red drum	2	0.00	0.04	0.02	.	120	13.00	107	133
channel catfish	2	0.00	0.04	0.02	0	240	86.50	153	326
striped anchovy	2	0.00	0.04	0.02	.	80	3.00	77	83
least brook lamprey	2	0.00	0.04	0.02	.	132	9.00	123	141
brown shrimp	2	0.00	0.04	0.02	.	112	1.50	110	113
Atlantic herring	1	0.00	0.02	0.01	.	166	.	166	166
northern searobin	1	0.00	0.02	0.01	.	61	.	61	61
longnose gar	1	0.00	0.02	0.01	.	898	.	898	898
northern pipefish	1	0.00	0.02	0.01	.	147	.	147	147
All Species Combined	43,612								

Table 101.

Month - All - Pooled, 1992

Segment - York River - Lower

No. of Fish Trawls Made - 77

No. of Add'l Crab Trawls Made - 0

No. of Species - 46

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	23,766	48.22	308.65	.	21,733	49	0.28	18	96
hogchoker	14,070	28.55	182.73	.	3,448	82	0.67	30	177
Atlantic croaker	5,317	10.79	69.05	46.44	3,183	95	1.46	15	306
blue crab, juvenile female	1,020	2.07	13.25	8.91	.	49	0.85	7	143
blue crab, male	992	2.01	12.88	8.67	.	55	1.17	8	175
blackcheek tonguefish	947	1.92	12.30	8.27	718	93	1.42	37	189
weakfish	679	1.38	8.82	5.93	627	89	2.76	19	326
spot	598	1.21	7.77	5.22	177	151	1.02	77	225
spotted hake	444	0.90	5.77	3.88	.	115	1.44	48	208
oyster toadfish	318	0.65	4.13	2.78	.	195	5.56	33	347
summer flounder	180	0.37	2.34	1.57	133	161	5.43	46	488
silver perch	173	0.35	2.25	1.51	130	124	3.36	38	190
white perch	128	0.26	1.66	1.12	0	203	2.98	123	284
blueback herring	104	0.21	1.35	0.91	104	79	0.82	62	108
Atlantic silverside	100	0.20	1.30	0.87	100	92	1.11	67	112
Atlantic menhaden	98	0.20	1.27	0.86	.	123	2.26	75	220
naked goby	76	0.15	0.99	0.66	.	38	0.75	26	53
alewife	70	0.14	0.91	0.61	70	100	1.45	85	140
blue crab, adult female	54	0.11	0.70	0.47	.	142	1.67	113	169
kingfish	17	0.03	0.22	0.15	.	91	11.53	32	161
American eel	17	0.03	0.22	0.15	.	360	39.50	140	790
white shrimp	17	0.03	0.22	0.15	.	96	3.30	63	116
northern searobin	13	0.03	0.17	0.11	.	68	6.03	42	111
butterfish	11	0.02	0.14	0.10	.	97	7.07	42	114
northern pipefish	11	0.02	0.14	0.10	.	140	12.45	74	216
gizzard shad	8	0.02	0.10	0.07	.	175	24.02	129	339
harvestfish	6	0.01	0.08	0.05	.	76	7.44	40	89
striped anchovy	6	0.01	0.08	0.05	.	84	5.59	69	100
inshore lizardfish	6	0.01	0.08	0.05	.	172	18.98	109	211
Atlantic spadefish	5	0.01	0.06	0.04	.	79	5.03	67	97
green goby	5	0.01	0.06	0.04	.	40	3.53	28	50
striped bass	4	0.01	0.05	0.03	1	279	86.37	126	442
white catfish	4	0.01	0.05	0.03	0	381	13.47	352	415
feather blenny	4	0.01	0.05	0.03	.	59	4.44	51	70
brown shrimp	3	0.01	0.04	0.03	.	94	12.06	80	118
American shad	2	0.00	0.03	0.02	1	140	43.50	96	183
skilletfish	2	0.00	0.03	0.02	.	51	2.50	48	53
black seabass	1	0.00	0.01	0.01	1	81	.	81	81
Atlantic thread herring	1	0.00	0.01	0.01	.	124	.	124	124
windowpane	1	0.00	0.01	0.01	.	57	.	57	57
Atlantic stingray	1	0.00	0.01	0.01	.	444	.	444	444
bluntnose stingray	1	0.00	0.01	0.01	.	566	.	566	566
conger eel	1	0.00	0.01	0.01	.	430	.	430	430
striped mullet	1	0.00	0.01	0.01	.	178	.	178	178
smallmouth flounder	1	0.00	0.01	0.01	.	42	.	42	42
least brook lamprey	1	0.00	0.01	0.01	.	148	.	148	148
All Species Combined	49,284								

Table 102.

Month - All - Pooled, 1992

Segment - York River - Bottom

No. of Fish Trawls Made - 84

No. of Add'l Crab Trawls Made - 0

No. of Species - 53

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	72,525	85.75	863.39		63,248	50	0.18	25	86
Atlantic croaker	2,905	3.43	34.58	30.14	1,592	138	2.27	15	252
spot	2,892	3.42	34.43	30.00	881	144	0.87	64	281
hogchoker	2,412	2.85	28.71		280	92	0.90	44	188
weakfish	1,575	1.86	18.75	16.34	1,521	100	2.55	25	273
blue crab, juvenile female	495	0.59	5.89	5.14		60	1.22	8	129
blue crab, male	428	0.51	5.10	4.44		67	1.73	14	165
silver perch	237	0.28	2.82	2.46	168	146	2.51	57	196
blue crab, adult female	154	0.18	1.83	1.60		138	1.41	101	179
blackcheek tonguefish	150	0.18	1.79	1.56	46	115	2.03	45	160
oyster toadfish	140	0.17	1.67	1.45		177	6.95	53	353
summer flounder	117	0.14	1.39	1.21	77	187	9.22	43	453
spotted hake	110	0.13	1.31	1.14		131	3.06	48	208
Atlantic silverside	68	0.08	0.81	0.71	68	91	1.29	70	111
northern searobin	46	0.05	0.55	0.48		69	2.04	43	98
naked goby	45	0.05	0.54	0.47		38	1.05	24	55
inshore lizardfish	31	0.04	0.37	0.32		126	4.82	85	219
striped anchovy	27	0.03	0.32	0.28		79	2.78	51	105
black seabass	26	0.03	0.31	0.27	12	134	7.37	55	205
northern pipefish	24	0.03	0.29	0.25		112	11.44	48	243
smallmouth flounder	20	0.02	0.24	0.21		56	2.62	42	92
harvestfish	19	0.02	0.23	0.20		44	3.14	26	69
blueback herring	18	0.02	0.21	0.19	18	79	1.69	70	104
Atlantic menhaden	17	0.02	0.20	0.18		116	7.05	82	188
Atlantic spadefish	11	0.01	0.13	0.11		78	3.06	56	97
northern puffer	8	0.01	0.10	0.08	6	159	13.64	106	232
feather blenny	8	0.01	0.10	0.08		90	5.69	64	109
squid	7	0.01	0.08	0.07		44	4.78	22	54
butterfish	6	0.01	0.07	0.06		108	8.83	68	128
kingfish	6	0.01	0.07	0.06		121	30.15	46	250
alewife	5	0.01	0.06	0.05	5	98	5.62	87	119
skilletfish	5	0.01	0.06	0.05		45	5.21	32	64
scup	4	0.00	0.05	0.04	2	156	12.16	122	179
green goby	4	0.00	0.05	0.04		40	0.85	38	42
pinfish	4	0.00	0.05	0.04		183	2.78	178	189
tautog	3	0.00	0.04	0.03		148	12.25	124	163
striped searobin	3	0.00	0.04	0.03		128	38.83	56	189
conger eel	3	0.00	0.04	0.03		396	67.22	262	468
Atlantic thread herring	2	0.00	0.02	0.02		172	3.50	168	175
white shrimp	2	0.00	0.02	0.02		109	13.00	96	122
brown shrimp	2	0.00	0.02	0.02		131	9.50	121	140
Atlantic herring	1	0.00	0.01	0.01		54		54	54
gizzard shad	1	0.00	0.01	0.01		167		167	167
spotted seatrout	1	0.00	0.01	0.01					
pigfish	1	0.00	0.01	0.01		170		170	170
American eel	1	0.00	0.01	0.01		420		420	420
windowpane	1	0.00	0.01	0.01		85		85	85
mummichog	1	0.00	0.01	0.01		82		82	82
lined seahorse	1	0.00	0.01	0.01		69		69	69
striped blenny	1	0.00	0.01	0.01		65		65	65
striped cusk-eel	1	0.00	0.01	0.01		191		191	191
gray snapper	1	0.00	0.01	0.01		63		63	63
mottled mojarra	1	0.00	0.01	0.01		105		105	105
All Species Combined	84,576								

Tables 103-114. Species composition, number caught, catch per trawl, and length statistics by month for the 1992 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 103.

Month - January 1992									
RIVER - York									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 27									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	3,419	54.18	162.81		3,418	43	0.35	18	78
Atlantic croaker	1,285	20.36	61.19	71.63	1,283	51	0.68	18	102
hogchoker	1,097	17.39	52.24		154	77	1.28	26	157
white perch	239	3.79	11.38	13.32	2	180	3.03	72	373
blackcheek tonguefish	68	1.08	3.24	3.79	54	81	3.19	37	141
summer flounder	35	0.55	1.67	1.95	35	182	3.96	149	245
alewife	24	0.38	1.14	1.34	24	99	2.27	84	120
blueback herring	19	0.30	0.90	1.06	19	80	1.81	70	104
Atlantic silverside	19	0.30	0.90	1.06	19	93	2.47	77	110
striped bass	16	0.25	0.76	0.89	12	182	25.99	72	442
gizzard shad	16	0.25	0.76	0.89		181	17.13	126	339
blue crab, male	13	0.21	0.62	0.72		45	7.19	18	100
spot	11	0.17	0.52	0.61	11	117	4.20	101	148
blue crab, juvenile female	11	0.17	0.52	0.61		50	7.25	27	96
Atlantic menhaden	9	0.14	0.43	0.50		112	7.23	82	147
spotted hake	7	0.11	0.33	0.39		87	12.71	59	143
oyster toadfish	5	0.08	0.24	0.28		136	44.34	53	254
striped mullet	4	0.06	0.19	0.22		171	4.26	159	178
red drum	2	0.03	0.10	0.11		120	13.00	107	133
tautog	2	0.03	0.10	0.11		161	2.50	158	163
naked goby	2	0.03	0.10	0.11		29	5.00	24	34
blue crab, adult female	2	0.03	0.10	0.11		131	1.00	130	132
mummichog	1	0.02	0.05	0.06		82		82	82
northern pipefish	1	0.02	0.05	0.06		147		147	147
green goby	1	0.02	0.05	0.06		38		38	38
skilletfish	1	0.02	0.05	0.06		46		46	46
least brook lamprey	1	0.02	0.05	0.06		148		148	148
All Species Combined	6,310								

Table 104.

Month - February 1992									
RIVER - York									
No. of Fish Trawls Made - 22									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 26									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	6,211	75.06	282.32		6,210	44	0.24	25	86
Atlantic croaker	1,256	15.18	57.09	68.94	1,256	44	0.94	16	91
hogchoker	242	2.92	11.00		115	75	2.47	28	174
Atlantic silverside	153	1.85	6.95	8.40	153	91	0.89	67	112
blueback herring	105	1.27	4.77	5.76	105	79	0.83	62	108
white perch	99	1.20	4.50	5.43	0	182	3.78	87	272
alewife	71	0.86	3.23	3.90	71	100	1.61	84	140
blackcheek tonguefish	26	0.31	1.18	1.43	24	73	3.83	45	131
blue crab, male	21	0.25	0.95	1.15		61	9.38	14	138
blue crab, juvenile female	16	0.19	0.73	0.88		48	6.24	22	109
summer flounder	12	0.15	0.55	0.66	12	167	5.12	139	192
striped bass	12	0.15	0.55	0.66	11	154	24.88	87	414
gizzard shad	10	0.12	0.45	0.55		146	4.76	124	165
spot	7	0.08	0.32	0.38	7	119	4.47	102	135
Atlantic menhaden	7	0.08	0.32	0.38		98	3.56	85	113
oyster toadfish	7	0.08	0.32	0.38		76	11.30	33	125
spotted hake	5	0.06	0.23	0.27		70	8.91	54	101
northern pipefish	5	0.06	0.23	0.27		130	15.80	88	167
green goby	3	0.04	0.14	0.16		40	0.88	39	42
American shad	1	0.01	0.05	0.05	0	183		183	183
white catfish	1	0.01	0.05	0.05	0	336		336	336
tautog	1	0.01	0.05	0.05		124		124	124
American eel	1	0.01	0.05	0.05		275		275	275
naked goby	1	0.01	0.05	0.05		30		30	30
skilletfish	1	0.01	0.05	0.05		32		32	32
brown shrimp	1	0.01	0.05	0.05		118		118	118
All Species Combined	8,275								

Table 105.

Month - March 1992									
RIVER - York									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 22									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	46,325	95.70	2205.95	.	46,034	53	0.41	20	95
hogchoker	627	1.30	29.86	.	151	76	1.41	24	175
Atlantic croaker	584	1.21	27.81	40.08	584	47	1.04	21	89
blackcheek tonguefish	251	0.52	11.95	17.23	249	68	1.02	39	133
blue crab, male	210	0.43	10.00	14.41	.	43	1.86	7	165
blue crab, juvenile female	172	0.36	8.19	11.81	.	41	1.44	9	122
spotted hake	116	0.24	5.52	7.96	.	89	1.57	60	133
white perch	34	0.07	1.62	2.33	1	158	5.50	85	250
white catfish	19	0.04	0.90	1.30	0	311	13.82	203	451
summer flounder	16	0.03	0.76	1.10	0	194	12.79	145	326
oyster toadfish	16	0.03	0.76	1.10	.	117	20.99	48	303
Atlantic menhaden	10	0.02	0.48	0.69	.	108	4.60	92	133
striped bass	7	0.01	0.33	0.48	6	139	18.59	88	217
alewife	6	0.01	0.29	0.41	5	122	23.97	91	241
blue crab, adult female	5	0.01	0.24	0.34	.	149	5.53	133	167
northern pipefish	3	0.01	0.14	0.21	.	141	10.02	122	156
naked goby	2	0.00	0.10	0.14	.	52	1.50	50	53
least brook lamprey	2	0.00	0.10	0.14	.	132	9.00	123	141
American eel	1	0.00	0.05	0.07	.	790	.	790	790
Atlantic silverside	1	0.00	0.05	0.07	1	102	.	102	102
skilletfish	1	0.00	0.05	0.07	.	43	.	43	43
brown shrimp	1	0.00	0.05	0.07	.	80	.	80	80
All Species Combined	48,409								

Table 106.

Month - April 1992									
RIVER - York									
No. of Fish Trawls Made - 21									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 27									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	5,880	40.59	280.00	.	5,879	47	0.43	30	96
hogchoker	5,239	36.17	249.48	.	934	81	1.01	30	188
spot	1,044	7.21	49.71	31.01	0	142	0.79	118	186
Atlantic croaker	963	6.65	45.86	28.60	962	58	1.06	29	114
spotted hake	457	3.15	21.76	13.57	.	111	1.07	48	208
blackcheek tonguefish	342	2.36	16.29	10.16	273	89	2.25	45	189
blue crab, male	203	1.40	9.67	6.03	.	54	2.21	12	164
blue crab, juvenile female	152	1.05	7.24	4.51	.	50	1.86	8	130
oyster toadfish	88	0.61	4.19	2.61	.	203	8.88	58	346
white catfish	27	0.19	1.29	0.80	0	298	11.33	210	415
summer flounder	20	0.14	0.95	0.59	0	248	17.58	155	435
American eel	16	0.11	0.76	0.48	.	273	23.34	140	525
northern searobin	8	0.06	0.38	0.24	.	50	2.76	42	66
striped bass	7	0.05	0.33	0.21	2	190	14.64	110	229
northern pipefish	7	0.05	0.33	0.21	.	112	9.61	74	152
naked goby	7	0.05	0.33	0.21	.	38	2.22	30	45
blue crab, adult female	6	0.04	0.29	0.18	.	142	6.93	119	166
weakfish	5	0.03	0.24	0.15	5	175	6.90	158	196
white perch	3	0.02	0.14	0.09	0	177	22.75	134	211
Atlantic menhaden	3	0.02	0.14	0.09	.	167	26.34	140	220
Atlantic herring	2	0.01	0.10	0.06	.	110	56.00	54	166
windowpane	2	0.01	0.10	0.06	.	71	14.00	57	85
channel catfish	1	0.01	0.05	0.03	0	326	.	326	326
green goby	1	0.01	0.05	0.03	.	48	.	48	48
feather blenny	1	0.01	0.05	0.03	.	109	.	109	109
skilletfish	1	0.01	0.05	0.03	.	42	.	42	42
brown shrimp	1	0.01	0.05	0.03	.	84	.	84	84
All Species Combined	14,486								

Table 107.

Month - May 1992									
RIVER - York									
No. of Fish Trawls Made - 24									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 28									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	11,177	54.13	465.71	.	4,087	73	1.03	24	167
bay anchovy	3,087	14.95	128.63	.	3,087	49	0.38	25	79
Atlantic croaker	2,689	13.02	112.04	42.11	603	124	2.69	28	245
spot	1,057	5.12	44.04	16.55	0	147	0.56	110	256
blackcheek tonguefish	925	4.48	38.54	14.49	703	99	3.02	46	160
blue crab, male	471	2.28	19.63	7.38	.	58	1.74	9	167
blue crab, juvenile female	369	1.79	15.38	5.78	.	54	1.44	6	143
spotted hake	246	1.19	10.25	3.85	.	147	1.40	83	218
weakfish	215	1.04	8.96	3.37	212	175	2.70	128	312
oyster toadfish	162	0.78	6.75	2.54	.	146	6.80	50	347
silver perch	60	0.29	2.50	0.94	36	159	2.33	131	190
blue crab, adult female	45	0.22	1.88	0.70	.	137	2.95	101	179
naked goby	37	0.18	1.54	0.58	.	39	1.20	26	53
summer flounder	29	0.14	1.21	0.45	17	121	19.72	38	488
white catfish	16	0.08	0.67	0.25	0	274	11.54	193	360
American eel	14	0.07	0.58	0.22	.	286	31.22	142	599
northern searobin	14	0.07	0.58	0.22	.	61	3.12	43	86
Atlantic menhaden	10	0.05	0.42	0.16	.	149	9.53	116	217
northern puffer	6	0.03	0.25	0.09	6	146	11.73	106	182
black seabass	5	0.02	0.21	0.08	5	70	4.73	55	81
northern pipefish	4	0.02	0.17	0.06	.	164	23.57	114	216
white perch	2	0.01	0.08	0.03	0	224	18.50	205	242
green goby	2	0.01	0.08	0.03	.	36	3.50	32	39
feather blenny	2	0.01	0.08	0.03	.	79	15.50	63	94
conger eel	2	0.01	0.08	0.03	.	414	16.50	397	430
kingfish	1	0.00	0.04	0.02	.	250	.	250	250
striped bass	1	0.00	0.04	0.02	0	126	.	126	126
Atlantic stingray	1	0.00	0.04	0.02	.	444	.	444	444
All Species Combined	20,649								

Table 108.

Month - June 1992									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 23									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
Atlantic croaker	1,724	32.32	114.93	68.12	749	161	2.51	47	245
hogchoker	1,580	29.62	105.33	.	947	75	1.61	31	172
bay anchovy	1,223	22.93	81.53	.	1,186	58	0.62	39	93
spot	193	3.62	12.87	7.63	4	159	1.15	71	209
blackcheek tonguefish	142	2.66	9.47	5.61	136	94	2.27	61	150
blue crab, male	119	2.23	7.93	4.70	.	89	2.97	28	158
blue crab, juvenile female	76	1.42	5.07	3.00	.	74	2.44	32	121
summer flounder	74	1.39	4.93	2.92	56	125	9.04	63	405
oyster toadfish	61	1.14	4.07	2.41	.	158	8.30	60	323
weakfish	33	0.62	2.20	1.30	0	173	2.93	142	209
northern searobin	28	0.52	1.87	1.11	.	72	1.70	58	93
blue crab, adult female	21	0.39	1.40	0.83	.	147	2.46	116	169
spotted hake	19	0.36	1.27	0.75	.	173	4.22	147	208
white catfish	14	0.26	0.93	0.55	0	235	15.97	187	352
silver perch	7	0.13	0.47	0.28	5	162	5.79	150	192
Atlantic menhaden	5	0.09	0.33	0.20	.	154	8.66	140	188
brown shrimp	4	0.07	0.27	0.16	.	121	6.75	110	140
American eel	3	0.06	0.20	0.12	.	297	47.95	212	378
northern pipefish	2	0.04	0.13	0.08	.	179	20.50	158	199
naked goby	2	0.04	0.13	0.08	.	45	0.50	44	45
feather blenny	2	0.04	0.13	0.08	.	87	18.50	68	105
black seabass	1	0.02	0.07	0.04	1	124	.	124	124
smallmouth flounder	1	0.02	0.07	0.04	.	92	.	92	92
All Species Combined	5,334								



Table 109.

Month - July 1992  
RIVER - York  
No. of Fish Trawls Made - 15  
No. of Add'l Crab Trawls Made - 0  
No. of Species - 28  
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	7,995	66.34	533.00	.	32	55	0.43	43	80
Atlantic croaker	1,746	14.49	116.40	60.56	1,103	155	2.32	62	274
hogchoker	1,173	9.73	78.20	.	671	82	1.09	18	177
spot	466	3.87	31.07	16.16	254	138	1.83	64	214
blue crab, male	161	1.34	10.73	5.58	.	86	2.79	34	175
blue crab, juvenile female	138	1.15	9.20	4.79	.	67	1.83	24	116
summer flounder	97	0.80	6.47	3.36	76	155	8.44	86	453
weakfish	97	0.80	6.47	3.36	0	198	2.98	162	326
oyster toadfish	58	0.48	3.87	2.01	.	165	9.54	77	333
blue crab, adult female	38	0.32	2.53	1.32	.	140	2.18	116	170
blackcheek tonguefish	32	0.27	2.13	1.11	32	100	2.24	76	122
silver perch	15	0.12	1.00	0.52	0	163	2.05	150	177
American eel	8	0.07	0.53	0.28	.	312	22.52	222	420
black seabass	7	0.06	0.47	0.24	7	127	3.68	110	137
northern searobin	3	0.02	0.20	0.10	.	95	2.19	91	98
Atlantic thread herring	2	0.02	0.13	0.07	.	172	3.50	168	175
gizzard shad	2	0.02	0.13	0.07	.	237	70.00	167	307
striped searobin	2	0.02	0.13	0.07	.	165	24.50	140	189
feather blenny	2	0.02	0.13	0.07	.	93	0.50	92	93
scup	1	0.01	0.07	0.03	1	122	.	122	122
striped bass	1	0.01	0.07	0.03	0	487	.	487	487
white catfish	1	0.01	0.07	0.03	0	399	.	399	399
pigfish	1	0.01	0.07	0.03	.	170	.	170	170
spotted hake	1	0.01	0.07	0.03	.	188	.	188	188
longnose gar	1	0.01	0.07	0.03	.	898	.	898	898
northern pipefish	1	0.01	0.07	0.03	.	178	.	178	178
bluntnose stingray	1	0.01	0.07	0.03	.	566	.	566	566
striped cusk-eel	1	0.01	0.07	0.03	.	191	.	191	191
All Species Combined	12,051								

Table 110.

Month - August 1992  
RIVER - York  
No. of Fish Trawls Made - 15  
No. of Add'l Crab Trawls Made - 0  
No. of Species - 23  
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	6,981	56.12	465.40	.	6,627	47	1.01	26	79
hogchoker	2,986	24.01	199.07	.	0	83	1.23	52	169
Atlantic croaker	742	5.97	49.47	30.02	659	154	2.01	95	276
weakfish	577	4.64	38.47	23.34	571	56	2.02	22	232
spot	427	3.43	28.47	17.27	338	144	2.44	74	281
blue crab, juvenile female	197	1.58	13.13	7.97	.	71	1.76	26	133
blue crab, male	173	1.39	11.53	7.00	.	77	2.63	38	173
blackcheek tonguefish	103	0.83	6.87	4.17	0	112	1.07	81	136
oyster toadfish	70	0.56	4.67	2.83	.	213	8.36	88	342
silver perch	38	0.31	2.53	1.54	31	88	7.33	53	187
summer flounder	36	0.29	2.40	1.46	28	179	13.18	103	397
blue crab, adult female	27	0.22	1.80	1.09	.	146	2.07	124	168
inshore lizardfish	26	0.21	1.73	1.05	.	119	2.68	98	152
striped anchovy	20	0.16	1.33	0.81	.	72	2.40	51	93
kingfish	10	0.08	0.67	0.40	.	42	3.91	19	64
black seabass	7	0.06	0.47	0.28	0	140	8.58	105	167
Atlantic menhaden	6	0.05	0.40	0.24	.	103	6.08	83	124
butterfish	4	0.03	0.27	0.16	.	64	7.86	42	79
harvestfish	3	0.02	0.20	0.12	.	71	14.34	42	86
northern searobin	3	0.02	0.20	0.12	.	96	11.57	73	111
squid	1	0.01	0.07	0.04	.	22	.	22	22
white perch	1	0.01	0.07	0.04	0	220	.	220	220
spotted seatrout	1	0.01	0.07	0.04	.	.	.	.	.
All Species Combined	12,439								

Table 111.

Month - September 1992									
RIVER - York									
No. of Fish Trawls Made - 18									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 29									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	6,967	40.18	387.06	.	6,241	52	0.63	26	80
hogchoker	6,366	36.72	353.67	.	215	88	1.81	43	173
weakfish	1,738	10.02	96.56	43.40	1,702	65	1.64	19	321
spot	535	3.09	29.72	13.36	494	155	1.57	100	225
Atlantic croaker	408	2.35	22.67	10.19	0	155	1.39	116	311
blue crab, male	284	1.64	15.78	7.09	.	81	2.14	15	181
oyster toadfish	231	1.33	12.83	5.77	.	217	5.78	46	353
blue crab, juvenile female	190	1.10	10.56	4.74	.	76	1.63	15	127
silver perch	156	0.90	8.67	3.90	115	117	3.87	38	196
blackcheek tonguefish	137	0.79	7.61	3.42	2	121	1.81	48	144
blue crab, adult female	131	0.76	7.28	3.27	.	152	1.95	109	187
harvestfish	62	0.36	3.44	1.55	.	61	3.86	26	133
kingfish	53	0.31	2.94	1.32	.	70	3.17	31	119
summer flounder	20	0.12	1.11	0.50	16	196	13.18	132	337
striped anchovy	9	0.05	0.50	0.22	.	84	2.92	73	97
white catfish	8	0.05	0.44	0.20	0	230	26.44	146	378
squid	6	0.03	0.33	0.15	.	48	3.66	31	54
Atlantic menhaden	6	0.03	0.33	0.15	.	129	6.14	110	147
inshore lizardfish	5	0.03	0.28	0.12	.	138	23.51	85	202
conger eel	4	0.02	0.22	0.10	.	470	6.36	459	488
pinfish	4	0.02	0.22	0.10	.	183	2.78	178	189
scup	3	0.02	0.17	0.07	1	168	5.93	159	179
black seabass	3	0.02	0.17	0.07	0	168	10.97	149	187
American eel	3	0.02	0.17	0.07	.	327	72.27	195	444
northern searobin	3	0.02	0.17	0.07	.	70	8.89	53	83
Atlantic spadefish	2	0.01	0.11	0.05	.	77	20.50	56	97
naked goby	2	0.01	0.11	0.05	.	32	6.00	26	38
channel catfish	1	0.01	0.06	0.02	0	153	.	153	153
northern puffer	1	0.01	0.06	0.02	0	159	.	159	159
All Species Combined	17,338								

Table 112.

Month - October 1992									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 30									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	7,565	68.26	504.33	.	5,494	56	0.65	28	83
hogchoker	1,413	12.75	94.20	.	40	86	1.96	42	164
Atlantic croaker	525	4.74	35.00	24.95	215	124	6.12	15	223
weakfish	400	3.61	26.67	19.01	368	127	3.92	43	311
blue crab, juvenile female	267	2.41	17.80	12.69	.	50	2.04	8	129
silver perch	217	1.96	14.47	10.31	186	136	2.20	88	194
blue crab, male	209	1.89	13.93	9.93	.	68	2.71	21	178
spot	153	1.38	10.20	7.27	147	162	1.53	132	217
blue crab, adult female	95	0.86	6.33	4.52	.	140	1.85	113	179
oyster toadfish	81	0.73	5.40	3.85	.	204	10.43	74	347
summer flounder	45	0.41	3.00	2.14	40	214	8.89	164	519
blackcheek tonguefish	44	0.40	2.93	2.09	4	128	2.70	75	159
Atlantic spadefish	14	0.13	0.93	0.67	.	79	1.95	67	97
kingfish	9	0.08	0.60	0.43	.	128	7.97	92	161
striped anchovy	6	0.05	0.40	0.29	.	99	1.67	93	105
inshore lizardfish	6	0.05	0.40	0.29	.	189	10.36	162	219
harvestfish	5	0.05	0.33	0.24	.	77	3.81	64	87
black seabass	4	0.04	0.27	0.19	0	177	9.46	165	205
naked goby	4	0.04	0.27	0.19	.	44	2.12	38	47
butterfish	3	0.03	0.20	0.14	.	118	7.21	104	128
white catfish	3	0.03	0.20	0.14	0	261	13.62	239	286
feather blenny	3	0.03	0.20	0.14	.	73	12.50	53	96
American eel	2	0.02	0.13	0.10	.	251	24.50	226	275
northern pipefish	2	0.02	0.13	0.10	.	152	13.00	139	165
conger eel	2	0.02	0.13	0.10	.	379	117.00	262	496
white perch	1	0.01	0.07	0.05	0	234	.	234	234
northern puffer	1	0.01	0.07	0.05	0	232	.	232	232
gizzard shad	1	0.01	0.07	0.05	.	351	.	351	351
gray snapper	1	0.01	0.07	0.05	.	63	.	63	63
mottled mojarra	1	0.01	0.07	0.05	.	105	.	105	105
All Species Combined	11,082								

Table 113.

Month - November 1992									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 29									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	11,301	76.43	753.40		9,412	57	0.50	28	87
Atlantic croaker	1,699	11.49	113.27	53.04	1,651	41	1.16	15	201
blue crab, male	518	3.50	34.53	16.17	.	53	1.63	14	158
blue crab, juvenile female	466	3.15	31.07	14.55	.	49	1.51	11	136
hogchoker	282	1.91	18.80		56	80	1.76	38	156
weakfish	145	0.98	9.67	4.53	143	127	2.34	74	298
naked goby	71	0.48	4.73	2.22	.	37	0.71	26	52
silver perch	65	0.44	4.33	2.03	64	123	1.63	99	175
blackcheek tonguefish	50	0.34	3.33	1.56	37	86	3.74	48	143
spot	42	0.28	2.80	1.31	42	146	2.31	116	180
oyster toadfish	41	0.28	2.73	1.28	.	213	10.29	58	342
summer flounder	19	0.13	1.27	0.59	15	248	16.97	178	398
white shrimp	18	0.12	1.20	0.56	.	99	4.50	63	145
smallmouth flounder	17	0.11	1.13	0.53	.	53	2.03	42	80
blue crab, adult female	10	0.07	0.67	0.31	.	148	5.47	131	187
butterfish	9	0.06	0.60	0.28	.	110	1.46	106	119
white perch	9	0.06	0.60	0.28	0	212	11.61	171	284
kingfish	4	0.03	0.27	0.12	.	123	10.19	105	150
white catfish	4	0.03	0.27	0.12	0	279	24.97	229	323
green goby	4	0.03	0.27	0.12	.	43	2.60	38	50
harvestfish	2	0.01	0.13	0.06	.	86	3.00	83	89
Atlantic menhaden	2	0.01	0.13	0.06	.	233	99.50	133	332
feather blenny	2	0.01	0.13	0.06	.	58	6.50	51	64
northern searobin	1	0.01	0.07	0.03	.	48	.	48	48
striped searobin	1	0.01	0.07	0.03	.	56	.	56	56
lined seahorse	1	0.01	0.07	0.03	.	69	.	69	69
striped blenny	1	0.01	0.07	0.03	.	65	.	65	65
skilletfish	1	0.01	0.07	0.03	.	64	.	64	64
conger eel	1	0.01	0.07	0.03	.	481	.	481	481
All Species Combined	14,786								

Table 114.

Month - December 1992									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 26									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	3,713	58.82	247.53		3,538	52	0.63	28	86
Atlantic croaker	1,508	23.89	100.53	64.42	1,506	44	0.74	16	113
blue crab, male	286	4.53	19.07	12.22	.	38	1.91	8	139
hogchoker	259	4.10	17.27		86	78	2.81	32	178
blue crab, juvenile female	229	3.63	15.27	9.78	.	30	1.45	7	118
Atlantic menhaden	87	1.38	5.80	3.72	.	119	1.74	75	182
white perch	81	1.28	5.40	3.46	0	174	3.65	117	270
oyster toadfish	22	0.35	1.47	0.94	.	223	16.81	87	332
weakfish	16	0.25	1.07	0.68	16	130	6.46	92	167
naked goby	14	0.22	0.93	0.60	.	39	1.93	27	55
silver perch	14	0.22	0.93	0.60	14	94	4.83	70	121
summer flounder	13	0.21	0.87	0.56	11	215	21.63	159	429
blackcheek tonguefish	12	0.19	0.80	0.51	10	86	7.14	52	131
striped bass	11	0.17	0.73	0.47	11	121	7.76	85	156
northern pipefish	11	0.17	0.73	0.47	.	79	18.41	48	243
spot	10	0.16	0.67	0.43	10	131	4.43	115	154
white shrimp	7	0.11	0.47	0.30	.	90	3.41	82	103
white catfish	5	0.08	0.33	0.21	0	272	30.94	204	388
blue crab, adult female	5	0.08	0.33	0.21	.	138	9.40	108	160
smallmouth flounder	3	0.05	0.20	0.13	.	56	6.89	42	64
skilletfish	2	0.03	0.13	0.09	.	51	2.50	48	53
butterfish	1	0.02	0.07	0.04	.	107	.	107	107
American shad	1	0.02	0.07	0.04	1	96	.	96	96
Atlantic thread herring	1	0.02	0.07	0.04	.	124	.	124	124
American eel	1	0.02	0.07	0.04	.	200	.	200	200
green goby	1	0.02	0.07	0.04	.	28	.	28	28
All Species Combined	6,313								

Table 115. Species composition, number caught, catch per trawl, and length statistics for **all months** of the 1993 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 115.

Month - All - Pooled, 1993  
 Segment - All - Pooled  
 No. of Fish Trawls Made - 180  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 65  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	138,996	68.20	772.20		132,132	48	0.15	18	93
Atlantic croaker	28,724	14.09	159.58	58.98	24,740	109	0.84	10	337
hogchoker	16,120	7.91	89.56		2,388	88	0.45	19	185
weakfish	4,940	2.42	27.44	10.14	4,589	96	1.73	15	353
blue crab, male	4,064	1.99	22.58	8.34		56	0.68	8	179
spot	3,574	1.75	19.86	7.34	3,398	129	0.62	28	332
blue crab, juvenile female	3,335	1.64	18.53	6.85		49	0.58	7	148
Atlantic silverside	795	0.39	4.42	1.63	795	89	0.72	45	118
oyster toadfish	577	0.28	3.21	1.18		178	3.21	34	342
Atlantic menhaden	392	0.19	2.18	0.80	3	110	1.67	70	313
blue crab, adult female	304	0.15	1.69	0.62		139	0.73	82	172
spotted hake	297	0.15	1.65	0.61	297	143	1.81	57	211
blackcheek tonguefish	272	0.13	1.51	0.56	153	98	1.84	37	157
silver perch	215	0.11	1.19	0.44	128	130	2.70	51	207
white perch	151	0.07	0.84	0.31	5	186	2.65	68	266
summer flounder	127	0.06	0.71	0.26	72	239	8.06	79	459
kingfish	95	0.05	0.53	0.20	88	86	3.17	12	162
white catfish	92	0.05	0.51	0.19	3	234	7.45	81	424
striped anchovy	77	0.04	0.43	0.16		82	1.15	51	101
naked goby	72	0.04	0.40	0.15		38	0.98	23	57
Atlantic spadefish	71	0.03	0.39	0.15		83	2.40	21	122
striped bass	68	0.03	0.38	0.14	53	158	9.86	71	618
inshore lizardfish	49	0.02	0.27	0.10		180	5.83	83	278
harvestfish	39	0.02	0.22	0.08	32	94	13.26	18	306
Atlantic thread herring	37	0.02	0.21	0.08		111	2.78	48	139
American shad	34	0.02	0.19	0.07	34	108	2.69	85	149
gizzard shad	34	0.02	0.19	0.07	31	97	6.38	73	285
northern pipefish	27	0.01	0.15	0.06		129	5.39	86	178
blueback herring	22	0.01	0.12	0.05	20	96	10.31	63	237
American eel	20	0.01	0.11	0.04		255	18.72	139	463
scup	16	0.01	0.09	0.03	12	137	6.27	87	185
green goby	16	0.01	0.09	0.03		39	2.30	21	56
butterfish	15	0.01	0.08	0.03	10	116	12.71	51	185
feather blenny	14	0.01	0.08	0.03		76	5.01	39	116
northern puffer	13	0.01	0.07	0.03	9	107	9.00	63	161
sea lamprey	11	0.01	0.06	0.02		149	5.65	119	178
dusky pipefish	10	0.00	0.06	0.02		94	6.13	65	126
alewife	9	0.00	0.05	0.02	8	137	19.43	97	288
Atlantic herring	8	0.00	0.04	0.02		49	1.69	44	57
seaboard goby	8	0.00	0.04	0.02		36	2.35	29	45
northern searobin	7	0.00	0.04	0.01	6	100	15.27	59	169
white shrimp	7	0.00	0.04	0.01		94	7.95	68	135
black seabass	6	0.00	0.03	0.01	1	173	23.51	80	221
squid	6	0.00	0.03	0.01		47	3.25	37	55
windowpane	6	0.00	0.03	0.01		161	25.01	115	279
skilletfish	6	0.00	0.03	0.01		42	5.92	24	60
smallmouth flounder	6	0.00	0.03	0.01		73	7.29	52	91
brown shrimp	5	0.00	0.03	0.01		143	4.72	133	155
red drum	4	0.00	0.02	0.01		143	23.36	79	181
tautog	4	0.00	0.02	0.01		170	26.78	115	243
striped searobin	3	0.00	0.02	0.01		134	47.30	57	220
spotted seatrout	2	0.00	0.01	0.00		133	19.50	113	152
blue runner	2	0.00	0.01	0.00		137	4.00	133	141
spotfin mojarra	2	0.00	0.01	0.00		86	30.00	56	116
bluefish	1	0.00	0.01	0.00		169		169	169
black drum	1	0.00	0.01	0.00		218		218	218
cobia	1	0.00	0.01	0.00		158		158	158
Spanish mackerel	1	0.00	0.01	0.00		105		105	105
pigfish	1	0.00	0.01	0.00		174		174	174
longnose gar	1	0.00	0.01	0.00		850		850	850
lined seahorse	1	0.00	0.01	0.00		56		56	56
orange filefish	1	0.00	0.01	0.00		145		145	145
striped burrfish	1	0.00	0.01	0.00		92		92	92
chain pipefish	1	0.00	0.01	0.00		308		308	308
pink shrimp	1	0.00	0.01	0.00		146		146	146
All Species Combined	203,817								

Tables 116-118. Species composition, number caught, catch per trawl, and length statistics for all months, by segment of the 1993 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 116.

Month - All - Pooled, 1993

Segment - York River - Upper

No. of Fish Trawls Made - 48

No. of Add'l Crab Trawls Made - 0

No. of Species - 38

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	36,007	55.86	750.15		32,200	48	0.32	22	93
Atlantic croaker	11,454	17.77	238.63	61.53	11,035	77	1.14	14	337
hogchoker	9,832	15.25	204.83		1,228	79	0.68	21	185
weakfish	3,089	4.79	64.35	16.59	2,949	95	3.14	20	353
blue crab, male	1,688	2.62	35.17	9.07		59	1.06	9	179
blue crab, juvenile female	992	1.54	20.67	5.33		52	1.11	7	148
spot	456	0.71	9.50	2.45	450	126	0.93	71	194
white perch	131	0.20	2.73	0.70	5	183	2.78	68	259
oyster toadfish	130	0.20	2.71	0.70		183	6.69	57	323
Atlantic menhaden	125	0.19	2.60	0.67	0	125	6.17	70	219
blackcheek tonguefish	123	0.19	2.56	0.66	69	97	2.86	50	151
blue crab, adult female	111	0.17	2.31	0.60		148	0.89	109	172
white catfish	84	0.13	1.75	0.45	3	227	7.51	81	424
striped bass	48	0.07	1.00	0.26	39	139	5.36	71	270
kingfish	43	0.07	0.90	0.23	40	91	4.08	47	142
Atlantic silverside	25	0.04	0.52	0.13	25	83	2.57	55	102
spotted hake	20	0.03	0.42	0.11	20	107	5.61	66	150
naked goby	14	0.02	0.29	0.08		37	1.95	24	51
American eel	13	0.02	0.27	0.07		232	12.32	160	310
harvestfish	11	0.02	0.23	0.06	4	192	31.32	31	306
silver perch	11	0.02	0.23	0.06	2	167	6.82	120	190
sea lamprey	7	0.01	0.15	0.04		146	7.75	119	175
summer flounder	6	0.01	0.13	0.03	3	250	32.09	125	354
green goby	6	0.01	0.13	0.03		42	3.20	32	56
blueback herring	5	0.01	0.10	0.03	4	133	51.84	80	237
alewife	4	0.01	0.08	0.02	4	112	6.18	97	125
white shrimp	4	0.01	0.08	0.02		88	6.66	68	98
Atlantic spadefish	3	0.00	0.06	0.02		51	6.12	41	62
northern pipefish	3	0.00	0.06	0.02		120	26.50	93	146
gizzard shad	2	0.00	0.04	0.01	1	151	1.00	150	152
American shad	1	0.00	0.02	0.01	1	93		93	93
Atlantic thread herring	1	0.00	0.02	0.01		77		77	77
spotted seatrout	1	0.00	0.02	0.01		113		113	113
northern searobin	1	0.00	0.02	0.01	1	82		82	82
longnose gar	1	0.00	0.02	0.01		850		850	850
seaboard goby	1	0.00	0.02	0.01		44		44	44
skilletfish	1	0.00	0.02	0.01		47		47	47
brown shrimp	1	0.00	0.02	0.01		133		133	133
All Species Combined	64,455								

Table 117.

Month - All - Pooled, 1993

Segment - York River - Lower

No. of Fish Trawls Made - 59

No. of Add'l Crab Trawls Made - 0

No. of Species - 48

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	40,749	69.01	690.66		39,305	49	0.25	18	87
Atlantic croaker	7,502	12.71	127.15	51.47	6,640	109	1.36	10	321
hogchoker	3,721	6.30	63.07		844	89	0.74	37	172
blue crab, male	1,939	3.28	32.86	13.30		47	0.97	8	170
blue crab, juvenile female	1,818	3.08	30.81	12.47		43	0.75	9	132
weakfish	1,244	2.11	21.08	8.54	1,156	82	2.79	15	325
spot	858	1.45	14.54	5.89	821	127	0.88	54	228
oyster toadfish	298	0.50	5.05	2.04		181	4.71	42	342
Atlantic menhaden	177	0.30	3.00	1.21	3	109	2.11	72	313
Atlantic silverside	156	0.26	2.64	1.07	156	90	1.70	63	113
silver perch	94	0.16	1.59	0.64	35	144	4.49	51	207
blackcheek tonguefish	93	0.16	1.58	0.64	68	90	3.02	37	157
spotted hake	82	0.14	1.39	0.56	82	141	3.91	65	208
blue crab, adult female	63	0.11	1.07	0.43		135	1.60	82	164
summer flounder	50	0.08	0.85	0.34	40	197	9.74	79	380
naked goby	35	0.06	0.59	0.24		34	1.18	23	52
kingfish	25	0.04	0.42	0.17	23	97	6.44	39	162
white perch	20	0.03	0.34	0.14	0	209	6.41	178	266
striped bass	18	0.03	0.31	0.12	14	174	17.38	97	385
Atlantic spadefish	17	0.03	0.29	0.12		73	6.00	21	95
harvestfish	13	0.02	0.22	0.09	13	63	5.43	18	82
striped anchovy	9	0.02	0.15	0.06		85	4.56	54	97
white catfish	8	0.01	0.14	0.05	0	303	23.00	224	404
green goby	8	0.01	0.14	0.05		38	3.55	21	51
northern pipefish	6	0.01	0.10	0.04		115	8.93	86	137
American shad	5	0.01	0.08	0.03	5	118	10.14	87	141
American eel	5	0.01	0.08	0.03		330	54.37	194	463
sea lamprey	4	0.01	0.07	0.03		153	8.86	139	178
seaboard goby	3	0.01	0.05	0.02		34	3.71	29	41
white shrimp	3	0.01	0.05	0.02		104	16.70	78	135
scup	2	0.00	0.03	0.01	1	178	7.50	170	185
dusky pipefish	2	0.00	0.03	0.01		96	10.00	86	106
inshore lizardfish	2	0.00	0.03	0.01		187	14.50	172	201
brown shrimp	2	0.00	0.03	0.01		149	6.50	142	155
butterfish	1	0.00	0.02	0.01	0	185		185	185
bluefish	1	0.00	0.02	0.01		169		169	169
alewife	1	0.00	0.02	0.01	1	134		134	134
blueback herring	1	0.00	0.02	0.01	0	220		220	220
black drum	1	0.00	0.02	0.01		218		218	218
red drum	1	0.00	0.02	0.01		79		79	79
Atlantic thread herring	1	0.00	0.02	0.01		68		68	68
gizzard shad	1	0.00	0.02	0.01	0	285		285	285
spotted seatrout	1	0.00	0.02	0.01		152		152	152
northern searobin	1	0.00	0.02	0.01	1	64		64	64
striped searobin	1	0.00	0.02	0.01		57		57	57
skilletfish	1	0.00	0.02	0.01		42		42	42
smallmouth flounder	1	0.00	0.02	0.01		52		52	52
pink shrimp	1	0.00	0.02	0.01		146		146	146
All Species Combined	59,045								



Table 118.

Month - All - Pooled, 1993

Segment - York River - Bottom

No. of Fish Trawls Made - 72

No. of Add'l Crab Trawls Made - 0

No. of Species - 56

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	62,240	77.49	864.44		60,627	47	0.22	19	89
Atlantic croaker	9,768	12.16	135.67	62.98	7,065	144	1.46	17	271
hogchoker	2,567	3.20	35.65		316	97	0.86	19	180
spot	2,260	2.81	31.39	14.57	2,127	132	1.05	28	332
Atlantic silverside	614	0.76	8.53	3.96	614	90	0.83	45	118
weakfish	607	0.76	8.43	3.91	484	113	2.84	17	295
blue crab, juvenile female	525	0.65	7.29	3.38		55	1.31	7	125
blue crab, male	437	0.54	6.07	2.82		69	1.74	8	155
spotted hake	195	0.24	2.71	1.26	195	147	1.84	57	211
oyster toadfish	149	0.19	2.07	0.96		168	5.77	34	340
blue crab, adult female	130	0.16	1.81	0.84		134	1.04	109	167
silver perch	110	0.14	1.53	0.71	91	114	2.81	68	200
Atlantic menhaden	90	0.11	1.25	0.58	0	108	2.74	74	207
summer flounder	71	0.09	0.99	0.46	29	267	11.29	89	459
striped anchovy	68	0.08	0.94	0.44		82	1.16	51	101
blackcheek tonguefish	56	0.07	0.78	0.36	16	113	3.18	46	148
Atlantic spadefish	51	0.06	0.71	0.33		88	2.21	41	122
inshore lizardfish	47	0.06	0.65	0.30		179	6.06	83	278
Atlantic thread herring	35	0.04	0.49	0.23		113	2.45	48	139
gizzard shad	31	0.04	0.43	0.20	30	87	1.30	73	103
American shad	28	0.03	0.39	0.18	28	106	2.65	85	149
kingfish	27	0.03	0.38	0.17	25	69	5.64	12	142
naked goby	23	0.03	0.32	0.15		43	1.73	28	57
northern pipefish	18	0.02	0.25	0.12		135	6.55	97	178
blueback herring	16	0.02	0.22	0.10	16	81	1.94	63	93
harvestfish	15	0.02	0.21	0.10	15	50	2.73	33	75
scup	14	0.02	0.19	0.09	11	132	5.56	87	171
butterfish	14	0.02	0.19	0.09	10	112	12.60	51	185
feather blenny	14	0.02	0.19	0.09		76	5.01	39	116
northern puffer	13	0.02	0.18	0.08	9	107	9.00	63	161
Atlantic herring	8	0.01	0.11	0.05		49	1.69	44	57
dusky pipefish	8	0.01	0.11	0.05		93	7.52	65	126
black seabass	6	0.01	0.08	0.04	1	173	23.51	80	221
squid	6	0.01	0.08	0.04		47	3.25	37	55
windowpane	6	0.01	0.08	0.04		161	25.01	115	279
northern searobin	5	0.01	0.07	0.03	4	111	19.50	59	169
smallmouth flounder	5	0.01	0.07	0.03		77	7.26	56	91
alewife	4	0.00	0.06	0.03	3	163	42.43	100	288
tautog	4	0.00	0.06	0.03		170	26.78	115	243
seaboard goby	4	0.00	0.06	0.03		36	3.48	29	45
skilletfish	4	0.00	0.06	0.03		41	9.21	24	60
red drum	3	0.00	0.04	0.02		164	13.98	136	181
striped bass	2	0.00	0.03	0.01	0	444	174.00	270	618
American eel	2	0.00	0.03	0.01		218	79.00	139	297
striped searobin	2	0.00	0.03	0.01		172	48.00	124	220
green goby	2	0.00	0.03	0.01		33	7.00	26	40
blue runner	2	0.00	0.03	0.01		137	4.00	133	141
spotfin mojarra	2	0.00	0.03	0.01		86	30.00	56	116
brown shrimp	2	0.00	0.03	0.01		143	10.00	133	153
cobia	1	0.00	0.01	0.01		158		158	158
Spanish mackerel	1	0.00	0.01	0.01		105		105	105
pigfish	1	0.00	0.01	0.01		174		174	174
lined seahorse	1	0.00	0.01	0.01		56		56	56
orange filefish	1	0.00	0.01	0.01		145		145	145
striped burrfish	1	0.00	0.01	0.01		92		92	92
chain pipefish	1	0.00	0.01	0.01		308		308	308
All Species Combined	80,317								

Tables 119-130. Species composition, number caught, catch per trawl, and length statistics by month for the 1993 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 119.

Month - January 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 27									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	3,171	43.45	211.40		3,168	41	0.44	23	88
Atlantic croaker	2,333	31.97	155.53	60.96	2,333	39	0.56	11	91
blue crab, male	664	9.10	44.27	17.35		33	1.24	8	133
blue crab, juvenile female	517	7.08	34.47	13.51		33	1.54	7	132
hogchoker	300	4.11	20.00		64	81	1.68	25	172
Atlantic silverside	147	2.01	9.80	3.84	147	84	2.13	45	110
white perch	71	0.97	4.73	1.86	2	183	3.81	68	259
blackcheek tonguefish	14	0.19	0.93	0.37	12	73	8.35	37	135
naked goby	13	0.18	0.87	0.34		32	1.56	23	41
striped bass	12	0.16	0.80	0.31	12	138	5.83	99	158
sea lamprey	9	0.12	0.60	0.24		150	6.01	119	178
white catfish	6	0.08	0.40	0.16	1	269	44.89	81	424
American shad	5	0.07	0.33	0.13	5	118	10.14	87	141
Atlantic menhaden	5	0.07	0.33	0.13	0	97	7.40	72	109
summer flounder	4	0.05	0.27	0.10	3	255	41.41	195	373
green goby	4	0.05	0.27	0.10		39	5.12	26	51
blue crab, adult female	4	0.05	0.27	0.10		148	6.34	132	161
alewife	3	0.04	0.20	0.08	3	122	7.62	108	134
dusky pipefish	3	0.04	0.20	0.08		106	11.55	86	126
northern pipefish	3	0.04	0.20	0.08		107	9.50	97	126
skilletfish	3	0.04	0.20	0.08		53	3.76	47	60
Atlantic thread herring	2	0.03	0.13	0.05		73	4.50	68	77
gizzard shad	1	0.01	0.07	0.03	0	285		285	285
tautog	1	0.01	0.07	0.03		165		165	165
American eel	1	0.01	0.07	0.03		139		139	139
spotted hake	1	0.01	0.07	0.03	1	66		66	66
oyster toadfish	1	0.01	0.07	0.03		120		120	120
All Species Combined	7,298								

Table 120.

Month - February 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 23									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	38,177	87.97	2545.13		38,177	43	0.25	18	80
Atlantic croaker	4,594	10.59	306.27	89.20	4,594	36	0.51	16	75
Atlantic silverside	297	0.68	19.80	5.77	297	84	1.56	54	111
blue crab, juvenile female	80	0.18	5.33	1.55		34	1.17	14	95
hogchoker	73	0.17	4.87		14	84	3.14	45	166
blue crab, male	65	0.15	4.33	1.26		38	2.25	12	110
Atlantic menhaden	36	0.08	2.40	0.70	0	94	2.34	70	125
white perch	17	0.04	1.13	0.33	0	184	9.31	122	266
oyster toadfish	13	0.03	0.87	0.25		154	19.46	68	303
striped bass	9	0.02	0.60	0.17	6	221	61.69	71	618
blackcheek tonguefish	8	0.02	0.53	0.16	7	75	8.11	46	113
blueback herring	5	0.01	0.33	0.10	5	72	2.56	63	77
naked goby	5	0.01	0.33	0.10		38	4.51	23	51
summer flounder	4	0.01	0.27	0.08	4	202	12.28	174	226
American shad	3	0.01	0.20	0.06	3	96	7.37	85	110
dusky pipefish	3	0.01	0.20	0.06		88	0.88	87	90
spot	2	0.00	0.13	0.04	2	114	4.00	110	118
spotted hake	2	0.00	0.13	0.04	2	88	5.00	83	93
green goby	2	0.00	0.13	0.04		44	2.00	42	46
skilletfish	2	0.00	0.13	0.04		33	9.00	24	42
sea lamprey	1	0.00	0.07	0.02		133		133	133
feather blenny	1	0.00	0.07	0.02		39		39	39
smallmouth flounder	1	0.00	0.07	0.02		52		52	52
All Species Combined	43,400								

Table 121.

Month - March 1993 RIVER - York No. of Fish Trawls Made - 15 No. of Add'l Crab Trawls Made - 0 No. of Species - 21 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	33,282	84.06	2218.80		33,213	53	0.43	30	88
Atlantic croaker	5,750	14.52	383.33	92.13	5,750	46	1.34	25	72
Atlantic silverside	241	0.61	16.07	3.86	241	93	1.09	47	118
Atlantic menhaden	143	0.36	9.53	2.29	0	95	2.22	73	144
hogchoker	68	0.17	4.53		2	89	4.48	50	169
spotted hake	18	0.05	1.20	0.29	18	99	4.93	65	131
blue crab, male	17	0.04	1.13	0.27		61	10.25	20	169
blueback herring	15	0.04	1.00	0.24	15	84	1.33	76	93
blue crab, juvenile female	15	0.04	1.00	0.24		44	6.47	23	125
striped bass	11	0.03	0.73	0.18	11	117	11.87	73	154
American shad	9	0.02	0.60	0.14	9	108	2.69	97	121
blackcheek tonguefish	6	0.02	0.40	0.10	5	77	12.33	56	137
white perch	3	0.01	0.20	0.05	3	78		78	78
dusky pipefish	3	0.01	0.20	0.05		82	15.04	65	112
oyster toadfish	3	0.01	0.20	0.05		125	27.22	92	179
northern pipefish	2	0.01	0.13	0.03		114		114	114
alewife	1	0.00	0.07	0.02	1	135		135	135
spot	1	0.00	0.07	0.02					
sea lamprey	1	0.00	0.07	0.02					
green goby	1	0.00	0.07	0.02		40		40	40
seaboard goby	1	0.00	0.07	0.02		32		32	32
<b>All Species Combined</b>	<b>39,591</b>								

Table 122.

Month - April 1993 RIVER - York No. of Fish Trawls Made - 15 No. of Add'l Crab Trawls Made - 0 No. of Species - 27 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	11,132	69.04	742.13		11,107	49	0.35	29	85
Atlantic croaker	3,016	18.71	201.07	62.98	3,016	38	0.77	15	85
blue crab, male	719	4.46	47.93	15.01		32	1.08	10	120
blue crab, juvenile female	689	4.27	45.93	14.39		33	1.26	9	130
hogchoker	203	1.26	13.53		32	82	2.20	36	184
Atlantic menhaden	200	1.24	13.33	4.18	0	115	1.90	72	224
Atlantic silverside	43	0.27	2.87	0.90	43	87	2.06	59	115
spotted hake	38	0.24	2.53	0.79	38	108	3.61	57	162
blackcheek tonguefish	15	0.09	1.00	0.31	14	76	5.24	53	138
American shad	10	0.06	0.67	0.21	10	117	4.30	100	149
northern pipefish	9	0.06	0.60	0.19		121	9.88	86	178
Atlantic herring	8	0.05	0.53	0.17		49	1.69	44	57
white catfish	8	0.05	0.53	0.17	0	291	23.24	210	404
American eel	8	0.05	0.53	0.17		237	17.86	160	310
oyster toadfish	5	0.03	0.33	0.10		105	19.26	34	150
seaboard goby	4	0.02	0.27	0.08		38	3.45	29	45
alewife	3	0.02	0.20	0.06	2	178	54.89	119	288
white perch	3	0.02	0.20	0.06	0	207	23.38	166	247
blueback herring	2	0.01	0.13	0.04	0	229	8.50	220	237
northern searobin	2	0.01	0.13	0.04	2	73	9.00	64	82
summer flounder	1	0.01	0.07	0.02	0	402		402	402
spot	1	0.01	0.07	0.02	0	148		148	148
lined seahorse	1	0.01	0.07	0.02		56		56	56
dusky pipefish	1	0.01	0.07	0.02		110		110	110
naked goby	1	0.01	0.07	0.02		28		28	28
feather blenny	1	0.01	0.07	0.02		66		66	66
smallmouth flounder	1	0.01	0.07	0.02		56		56	56
<b>All Species Combined</b>	<b>16,124</b>								

Table 123.

Month - May 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 27									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	4,223	46.80	281.53		1,421	81	0.94	28	169
Atlantic croaker	2,932	32.49	195.47	69.36	1,529	141	2.00	25	282
bay anchovy	574	6.36	38.27		573	53	0.75	33	83
blue crab, male	439	4.86	29.27	10.39		52	1.39	10	150
blue crab, juvenile female	363	4.02	24.20	8.59		46	1.39	11	126
spotted hake	186	2.06	12.40	4.40	186	146	1.34	101	211
oyster toadfish	104	1.15	6.93	2.46		169	7.82	42	337
white catfish	48	0.53	3.20	1.14	2	214	9.80	103	406
spot	29	0.32	1.93	0.69	0	161	2.75	141	201
blackcheek tonguefish	28	0.31	1.87	0.66	17	98	5.36	55	140
white perch	18	0.20	1.20	0.43	0	183	6.53	128	228
weakfish	16	0.18	1.07	0.38	13	179	10.41	131	257
naked goby	14	0.16	0.93	0.33		46	2.03	33	57
summer flounder	10	0.11	0.67	0.24	0	236	7.48	200	265
striped bass	7	0.08	0.47	0.17	0	150	9.73	121	188
blue crab, adult female	5	0.06	0.33	0.12		138	4.01	130	150
American eel	4	0.04	0.27	0.09		265	25.15	194	304
northern pipefish	4	0.04	0.27	0.09		156	7.34	137	172
feather blenny	4	0.04	0.27	0.09		89	9.60	73	116
northern searobin	3	0.03	0.20	0.07	3	83	14.80	59	110
seaboard goby	3	0.03	0.20	0.07		35	4.70	29	44
Atlantic menhaden	2	0.02	0.13	0.05	0	192	10.50	181	202
tautog	2	0.02	0.13	0.05		135	20.00	115	155
green goby	2	0.02	0.13	0.05		51	5.50	45	56
silver perch	2	0.02	0.13	0.05	2	137	0.50	136	137
black seabass	1	0.01	0.07	0.02	1	80		80	80
northern puffer	1	0.01	0.07	0.02	1	157		157	157
All Species Combined	9,024								

Table 124.

Month - June 1993									
RIVER - York									
No. of Fish Trawls Made - 16									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 21									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	3,430	38.67	214.38		3,426	56	0.60	37	89
Atlantic croaker	2,820	31.79	176.25	72.20	1,872	135	2.03	41	312
hogchoker	1,534	17.29	95.88		370	84	0.94	39	185
blue crab, male	269	3.03	16.81	6.89		69	1.79	14	155
blue crab, juvenile female	254	2.86	15.88	6.50		62	1.38	24	127
spot	208	2.34	13.00	5.33	157	101	3.97	28	211
oyster toadfish	171	1.93	10.69	4.38		188	6.44	68	342
spotted hake	51	0.57	3.19	1.31	51	174	2.43	131	210
weakfish	35	0.39	2.19	0.90	0	181	3.22	147	214
summer flounder	25	0.28	1.56	0.64	8	230	22.05	79	452
white catfish	21	0.24	1.31	0.54	0	229	9.30	163	323
blackcheek tonguefish	17	0.19	1.06	0.44	12	101	6.86	53	148
blue crab, adult female	14	0.16	0.88	0.36		139	4.05	110	160
northern puffer	4	0.05	0.25	0.10	0	136	8.86	122	161
windowpane	4	0.05	0.25	0.10		128	5.32	115	141
northern pipefish	4	0.05	0.25	0.10		140	10.96	124	172
American eel	3	0.03	0.19	0.08		360	95.75	169	463
white perch	2	0.02	0.13	0.05	0	206	35.50	170	241
feather blenny	2	0.02	0.13	0.05		86	5.00	81	91
northern searobin	1	0.01	0.06	0.03	1	135		135	135
smallmouth flounder	1	0.01	0.06	0.03		86		86	86
All Species Combined	8,870								

Table 125.

Month - July 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 20									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
Atlantic croaker	3,138	52.52	209.20	77.77	2,233	127	1.30	80	283
hogchoker	1,606	26.88	107.07		434	89	1.26	37	173
spot	369	6.18	24.60	9.14	315	129	1.77	74	332
bay anchovy	334	5.59	22.27		0	61	0.66	46	93
blue crab, male	160	2.68	10.67	3.97		82	2.55	34	166
blue crab, juvenile female	156	2.61	10.40	3.87		72	1.57	32	121
oyster toadfish	95	1.59	6.33	2.35		154	6.62	71	332
weakfish	28	0.47	1.87	0.69	0	197	6.04	166	295
blue crab, adult female	26	0.44	1.73	0.64		134	2.56	106	160
silver perch	24	0.40	1.60	0.59	0	153	2.36	139	189
summer flounder	13	0.22	0.87	0.32	8	213	34.32	108	459
blackcheek tonguefish	11	0.18	0.73	0.27	11	102	2.46	93	117
white catfish	3	0.05	0.20	0.07	0	193	25.44	142	222
striped anchovy	3	0.05	0.20	0.07		54	2.19	51	58
Atlantic silverside	3	0.05	0.20	0.07	3	56	0.88	55	58
scup	2	0.03	0.13	0.05	1	124	37.00	87	161
striped bass	1	0.02	0.07	0.02	0	223		223	223
white perch	1	0.02	0.07	0.02	0	220		220	220
northern pipefish	1	0.02	0.07	0.02		119		119	119
inshore lizardfish	1	0.02	0.07	0.02		98		98	98
All Species Combined	5,975								

Table 126.

Month - August 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 31									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	3,869	33.05	257.93		2,451	48	0.68	22	80
hogchoker	3,791	32.39	252.73		6	87	1.35	37	180
weakfish	2,110	18.02	140.67	52.15	2,013	71	3.27	15	290
Atlantic croaker	819	7.00	54.60	20.24	699	155	1.66	97	337
spot	542	4.63	36.13	13.40	525	128	1.50	54	228
blue crab, male	167	1.43	11.13	4.13		85	2.53	13	164
blue crab, juvenile female	145	1.24	9.67	3.58		80	1.84	33	143
striped anchovy	47	0.40	3.13	1.16		83	0.71	69	96
oyster toadfish	36	0.31	2.40	0.89		171	11.02	88	321
gizzard shad	31	0.26	2.07	0.77	30	87	1.30	73	103
blue crab, adult female	31	0.26	2.07	0.77		144	2.07	120	170
silver perch	28	0.24	1.87	0.69	4	165	7.45	67	200
summer flounder	27	0.23	1.80	0.67	23	203	12.45	161	419
blackcheek tonguefish	14	0.12	0.93	0.35	0	116	2.67	97	131
scup	11	0.09	0.73	0.27	10	129	3.25	116	158
inshore lizardfish	9	0.08	0.60	0.22		144	3.19	128	157
kingfish	8	0.07	0.53	0.20	2	47	8.68	12	89
butterfish	4	0.03	0.27	0.10	3	73	19.12	51	130
harvestfish	4	0.03	0.27	0.10	4	30	4.11	18	37
Atlantic menhaden	2	0.02	0.13	0.05	0	223	90.00	133	313
cobia	1	0.01	0.07	0.02		158		158	158
Atlantic thread herring	1	0.01	0.07	0.02		48		48	48
Spanish mackerel	1	0.01	0.07	0.02		105		105	105
northern puffer	1	0.01	0.07	0.02	1	118		118	118
American eel	1	0.01	0.07	0.02		240		240	240
striped searobin	1	0.01	0.07	0.02		57		57	57
longnose gar	1	0.01	0.07	0.02		850		850	850
northern pipefish	1	0.01	0.07	0.02		163		163	163
orange filefish	1	0.01	0.07	0.02		145		145	145
pink shrimp	1	0.01	0.07	0.02		146		146	146
brown shrimp	1	0.01	0.07	0.02		155		155	155
All Species Combined	11,706								

Table 127.

Month - September 1993

RIVER - York

No. of Fish Trawls Made - 15

No. of Add'l Crab Trawls Made - 0

No. of Species - 32

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	8,204	52.89	546.93	.	6,716	44	0.41	20	84
hogchoker	3,265	21.05	217.67	.	33	95	1.40	43	177
weakfish	2,409	15.53	160.60	59.58	2,244	89	2.37	16	353
spot	557	3.59	37.13	13.78	537	141	1.00	105	225
Atlantic croaker	396	2.55	26.40	9.79	4	164	1.49	28	330
blue crab, male	196	1.26	13.07	4.85	.	88	3.02	12	164
blue crab, juvenile female	114	0.73	7.60	2.82	.	55	2.97	7	121
blue crab, adult female	103	0.66	6.87	2.55	.	144	1.27	82	172
silver perch	48	0.31	3.20	1.19	12	162	5.03	51	207
oyster toadfish	46	0.30	3.07	1.14	.	210	10.41	118	338
kingfish	38	0.24	2.53	0.94	37	71	3.70	41	162
harvestfish	34	0.22	2.27	0.84	27	102	14.66	28	306
blackcheek tonguefish	30	0.19	2.00	0.74	0	124	1.56	107	137
Atlantic spadefish	18	0.12	1.20	0.45	.	59	5.22	21	112
striped anchovy	16	0.10	1.07	0.40	.	86	3.31	54	101
summer flounder	9	0.06	0.60	0.22	5	263	27.87	173	380
inshore lizardfish	9	0.06	0.60	0.22	.	179	6.87	137	201
butterfish	3	0.02	0.20	0.07	2	120	32.34	87	185
green goby	3	0.02	0.20	0.07	.	27	3.06	21	31
scup	2	0.01	0.13	0.05	0	178	7.00	171	185
black seabass	1	0.01	0.07	0.02	0	210	.	210	210
squid	1	0.01	0.07	0.02	.	49	.	49	49
Atlantic menhaden	1	0.01	0.07	0.02	0	197	.	197	197
Atlantic thread herring	1	0.01	0.07	0.02	.	84	.	84	84
northern puffer	1	0.01	0.07	0.02	1	63	.	63	63
pigfish	1	0.01	0.07	0.02	.	174	.	174	174
American eel	1	0.01	0.07	0.02	.	248	.	248	248
northern searobin	1	0.01	0.07	0.02	0	169	.	169	169
striped searobin	1	0.01	0.07	0.02	.	124	.	124	124
naked goby	1	0.01	0.07	0.02	.	39	.	39	39
smallmouth flounder	1	0.01	0.07	0.02	.	64	.	64	64
brown shrimp	1	0.01	0.07	0.02	.	142	.	142	142
All Species Combined	15,512								

Table 128.

Month - October 1993

RIVER - York

No. of Fish Trawls Made - 15

No. of Add'l Crab Trawls Made - 0

No. of Species - 33

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	10,963	79.75	730.87	.	7,766	46	0.64	21	80
hogchoker	692	5.03	46.13	.	8	99	1.80	19	168
spot	496	3.61	33.07	23.71	493	147	0.98	115	203
blue crab, male	354	2.58	23.60	16.92	.	62	2.32	15	165
Atlantic croaker	297	2.16	19.80	14.20	182	128	4.90	18	260
weakfish	283	2.06	18.87	13.53	261	115	3.00	51	325
blue crab, juvenile female	275	2.00	18.33	13.15	.	52	2.01	18	119
oyster toadfish	75	0.55	5.00	3.59	.	195	7.85	62	340
blue crab, adult female	60	0.44	4.00	2.87	.	136	1.19	119	156
Atlantic spadefish	53	0.39	3.53	2.53	.	91	1.54	62	122
blackcheek tonguefish	45	0.33	3.00	2.15	2	130	2.69	56	151
kingfish	28	0.20	1.87	1.34	28	100	4.08	57	141
inshore lizardfish	28	0.20	1.87	1.34	.	193	8.09	83	278
silver perch	27	0.20	1.80	1.29	24	105	7.10	66	198
summer flounder	21	0.15	1.40	1.00	15	260	19.47	125	450
striped anchovy	10	0.07	0.67	0.48	.	78	2.75	61	90
northern puffer	6	0.04	0.40	0.29	6	85	5.40	70	105
squid	5	0.04	0.33	0.24	.	46	3.94	37	55
naked goby	5	0.04	0.33	0.24	.	39	3.87	24	47
green goby	4	0.03	0.27	0.19	.	38	2.53	32	44
black seabass	3	0.02	0.20	0.14	0	209	6.33	200	221
butterfish	3	0.02	0.20	0.14	1	140	42.04	56	185
brown shrimp	3	0.02	0.20	0.14	.	140	6.67	133	153
blue runner	2	0.01	0.13	0.10	.	137	4.00	133	141
scup	1	0.01	0.07	0.05	1	170	.	170	170
bluefish	1	0.01	0.07	0.05	.	169	.	169	169
harvestfish	1	0.01	0.07	0.05	1	82	.	82	82
striped bass	1	0.01	0.07	0.05	0	270	.	270	270
black drum	1	0.01	0.07	0.05	.	218	.	218	218
windowpane	1	0.01	0.07	0.05	.	173	.	173	173
striped searobin	1	0.01	0.07	0.05	.	220	.	220	220
feather blenny	1	0.01	0.07	0.05	.	76	.	76	76
chain pipefish	1	0.01	0.07	0.05	.	308	.	308	308
All Species Combined	13,747								

Table 129.

Month - November 1993									
RIVER - York									
No. of Fish Trawls Made - 14									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 29									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	16,571	84.67	1183.64		16,427	52	0.39	30	82
spot	1,054	5.39	75.29	37.32	1,054	128	0.85	98	171
Atlantic croaker	616	3.15	44.00	21.81	580	54	2.26	14	180
blue crab, male	498	2.54	35.57	17.63	.	62	2.09	17	179
blue crab, juvenile female	360	1.84	25.71	12.75	.	46	1.70	15	148
hogchoker	177	0.90	12.64		2	98	2.22	42	171
silver perch	85	0.43	6.07	3.01	85	101	1.32	68	132
weakfish	53	0.27	3.79	1.88	52	130	3.88	96	278
blue crab, adult female	53	0.27	3.79	1.88	.	134	1.69	113	167
blackcheek tonguefish	22	0.11	1.57	0.78	13	101	7.02	51	146
kingfish	18	0.09	1.29	0.64	18	118	5.23	74	142
oyster toadfish	18	0.09	1.29	0.64	.	208	17.04	68	327
summer flounder	11	0.06	0.79	0.39	5	310	21.56	196	411
naked goby	7	0.04	0.50	0.25	.	43	3.10	28	52
butterfish	4	0.02	0.29	0.14	3	143	4.82	133	156
feather blenny	4	0.02	0.29	0.14	.	64	4.49	58	77
Atlantic silverside	4	0.02	0.29	0.14	4	88	4.65	75	97
red drum	3	0.02	0.21	0.11	.	164	13.98	136	181
white perch	2	0.01	0.14	0.07	0	224	6.50	217	230
northern pipefish	2	0.01	0.14	0.07	.	131	33.00	98	164
inshore lizardfish	2	0.01	0.14	0.07	.	193	34.50	158	227
black seabass	1	0.01	0.07	0.04	0	123	.	123	123
striped bass	1	0.01	0.07	0.04	1	149	.	149	149
white catfish	1	0.01	0.07	0.04	0	256	.	256	256
gizzard shad	1	0.01	0.07	0.04	0	152	.	152	152
tautog	1	0.01	0.07	0.04	.	243	.	243	243
spotted seatrout	1	0.01	0.07	0.04	.	152	.	152	152
striped anchovy	1	0.01	0.07	0.04	.	100	.	100	100
spotfin mojarra	1	0.01	0.07	0.04	.	56	.	56	56
All Species Combined	19,572								

Table 130.

Month - December 1993									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 36									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	9,289	71.46	619.27		9,108	50	0.45	29	80
Atlantic croaker	2,013	15.49	134.20	57.17	1,948	59	1.21	10	122
blue crab, male	516	3.97	34.40	14.65	.	34	0.99	10	121
blue crab, juvenile female	367	2.82	24.47	10.42	.	33	0.91	9	109
spot	315	2.42	21.00	8.95	315	113	0.52	91	150
hogchoker	188	1.45	12.53		2	97	2.24	48	172
blackcheek tonguefish	62	0.48	4.13	1.76	60	73	1.88	52	157
Atlantic silverside	60	0.46	4.00	1.70	60	98	1.07	83	116
white perch	34	0.26	2.27	0.97	0	193	4.20	155	259
Atlantic thread herring	33	0.25	2.20	0.94	.	116	1.30	101	139
striped bass	26	0.20	1.73	0.74	23	152	7.19	111	270
naked goby	26	0.20	1.73	0.74	.	35	1.17	25	52
oyster toadfish	10	0.08	0.67	0.28	.	173	37.24	57	327
blue crab, adult female	8	0.06	0.53	0.23	.	131	3.98	109	149
American shad	7	0.05	0.47	0.20	7	92	0.46	90	94
white shrimp	7	0.05	0.47	0.20	.	94	7.95	68	135
weakfish	6	0.05	0.40	0.17	6	129	6.32	108	151
white catfish	5	0.04	0.33	0.14	0	336	17.76	280	390
kingfish	3	0.02	0.20	0.09	3	83	10.02	72	103
Atlantic menhaden	3	0.02	0.20	0.09	3	111	1.00	110	113
summer flounder	2	0.02	0.13	0.06	.	258	79.50	178	337
alewife	2	0.02	0.13	0.06	2	99	1.50	97	100
American eel	2	0.02	0.13	0.06	.	220	8.50	211	228
smallmouth flounder	2	0.02	0.13	0.06	.	91	0.50	90	91
butterfish	1	0.01	0.07	0.03	1	101	.	101	101
red drum	1	0.01	0.07	0.03	.	79	.	79	79
gizzard shad	1	0.01	0.07	0.03	1	150	.	150	150
spotted seatrout	1	0.01	0.07	0.03	.	113	.	113	113
windowpane	1	0.01	0.07	0.03	.	279	.	279	279
spotted hake	1	0.01	0.07	0.03	1	86	.	86	86
northern pipefish	1	0.01	0.07	0.03	.	116	.	116	116
feather blenny	1	0.01	0.07	0.03	.	92	.	92	92
skilletfish	1	0.01	0.07	0.03	.	26	.	26	26
silver perch	1	0.01	0.07	0.03	1	73	.	73	73
striped burrfish	1	0.01	0.07	0.03	.	92	.	92	92
spotfin mojarra	1	0.01	0.07	0.03	.	116	.	116	116
All Species Combined	12,998								



Table 131. Species composition, number caught, catch per trawl, and length statistics for all months of the 1994 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 131.

Month - All - Pooled, 1994  
 Segment - All - Pooled  
 No. of Fish Trawls Made - 180  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 73  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	54,754	54.01	304.19	.	47,599	54	0.26	19	93
hogchoker	14,481	14.28	80.45	.	2,276	90	0.43	13	190
spot	11,298	11.14	62.77	35.15	8,296	125	0.57	11	231
Atlantic croaker	8,827	8.71	49.04	27.46	4,817	135	1.29	6	302
weakfish	3,399	3.35	18.88	10.57	2,856	114	1.77	14	376
blue crab, male	2,770	2.73	15.39	8.62	.	58	0.65	13	166
blue crab, juvenile female	2,341	2.31	13.01	7.28	.	52	0.60	10	133
oyster toadfish	424	0.42	2.36	1.32	.	183	3.40	33	342
blue crab, adult female	376	0.37	2.09	1.17	.	138	0.88	91	168
white perch	319	0.31	1.77	0.99	126	130	3.28	56	278
Atlantic silverside	297	0.29	1.65	0.92	297	92	0.71	64	122
summer flounder	277	0.27	1.54	0.86	218	198	5.32	68	587
striped bass	249	0.25	1.38	0.77	179	134	4.13	68	613
white catfish	184	0.18	1.02	0.57	60	175	6.63	56	451
spotted hake	163	0.16	0.91	0.51	163	116	2.68	64	214
silver perch	158	0.16	0.88	0.49	115	135	2.90	83	262
inshore lizardfish	108	0.11	0.60	0.34	103	136	3.57	59	299
blackcheek tonguefish	104	0.10	0.58	0.32	77	94	2.92	44	177
threadfin shad	101	0.10	0.56	0.31	.	91	0.53	77	106
pigfish	95	0.09	0.53	0.30	.	131	2.28	73	174
gizzard shad	89	0.09	0.49	0.28	79	158	6.57	100	404
striped anchovy	70	0.07	0.39	0.22	70	74	1.31	54	104
blueback herring	68	0.07	0.38	0.21	67	77	1.44	62	133
naked goby	52	0.05	0.29	0.16	.	41	1.20	20	58
American eel	47	0.05	0.26	0.15	.	294	12.58	149	550
brown shrimp	38	0.04	0.21	0.12	.	125	2.99	96	161
alewife	33	0.03	0.18	0.10	33	101	5.01	66	156
kingfish	31	0.03	0.17	0.10	30	93	6.35	32	203
American shad	25	0.02	0.14	0.08	25	92	1.94	77	121
striped searobin	16	0.02	0.09	0.05	.	130	10.62	50	214
harvestfish	15	0.01	0.08	0.05	15	52	7.34	25	103
butterfish	14	0.01	0.08	0.04	11	102	11.00	39	164
northern pipefish	14	0.01	0.08	0.04	.	170	16.09	86	281
Atlantic menhaden	12	0.01	0.07	0.04	1	179	17.61	113	291
white shrimp	12	0.01	0.07	0.04	.	109	6.76	83	170
black seabass	10	0.01	0.06	0.03	7	116	10.05	63	153
scup	8	0.01	0.04	0.02	2	151	14.02	77	203
Atlantic herring	8	0.01	0.04	0.02	.	240	43.02	37	322
northern searobin	7	0.01	0.04	0.02	6	114	16.58	71	195
spottail shiner	6	0.01	0.03	0.02	.	74	3.49	59	84
skilletfish	6	0.01	0.03	0.02	.	38	2.93	27	46
smallmouth flounder	6	0.01	0.03	0.02	6	72	5.23	52	86
Atlantic spadefish	5	0.00	0.03	0.02	.	74	10.28	44	104
lined seahorse	4	0.00	0.02	0.01	.	85	27.51	46	166
Atlantic cutlassfish	4	0.00	0.02	0.01	.	345	79.53	175	508
fringed flounder	4	0.00	0.02	0.01	.	114	8.58	97	137
bluefish	3	0.00	0.02	0.01	.	140	5.55	131	150
Atlantic thread herring	3	0.00	0.02	0.01	.	80	1.00	78	81
windowpane	3	0.00	0.02	0.01	2	146	41.48	87	226
bighead searobin	3	0.00	0.02	0.01	.	66	6.39	56	78
sea lamprey	3	0.00	0.02	0.01	.	144	7.21	134	158
feather blenny	3	0.00	0.02	0.01	.	63	3.18	58	69
pinfish	3	0.00	0.02	0.01	.	151	1.53	149	154
blue crab	3	0.00	0.02	0.01	.	59	4.04	54	67
tautog	2	0.00	0.01	0.01	.	141	3.00	138	144
longnose gar	2	0.00	0.01	0.01	.	797	13.00	784	810
seaboard goby	2	0.00	0.01	0.01	.	40	2.50	37	42
southern stingray	2	0.00	0.01	0.01	.	699	60.50	638	759
conger eel	2	0.00	0.01	0.01	.	461	97.00	364	558
red hake	1	0.00	0.01	0.00	.	96	.	96	96
squid	1	0.00	0.01	0.00	.	15	.	15	15
sheepshead	1	0.00	0.01	0.00	.	125	.	125	125
spotted seatrout	1	0.00	0.01	0.00	.	131	.	131	131
striped killifish	1	0.00	0.01	0.00	.	110	.	110	110
fourspine stickleback	1	0.00	0.01	0.00	.	53	.	53	53
threespine stickleback	1	0.00	0.01	0.00	.	48	.	48	48
pumpkinseed	1	0.00	0.01	0.00	.	34	.	34	34
green goby	1	0.00	0.01	0.00	.	33	.	33	33
striped blenny	1	0.00	0.01	0.00	.	63	.	63	63
Atlantic stingray	1	0.00	0.01	0.00	.	170	.	170	170
Atlantic needlefish	1	0.00	0.01	0.00	.	98	.	98	98
lookdown	1	0.00	0.01	0.00	.	91	.	91	91
crested blenny	1	0.00	0.01	0.00	.	65	.	65	65
All Species Combined	101,377								

Tables 132-134. Species composition, number caught, catch per trawl, and length statistics for all months, by segment of the 1994 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 132.

Month - All - Pooled, 1994  
 Segment - York River - Upper  
 No. of Fish Trawls Made - 45  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 36  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	7,537	31.07	167.49	.	899	84	0.64	13	181
bay anchovy	7,233	29.82	160.73	.	6,089	53	0.47	23	93
Atlantic croaker	2,746	11.32	61.02	28.94	2,146	114	2.12	12	296
weakfish	2,117	8.73	47.04	22.31	1,914	91	2.25	16	371
blue crab, male	1,294	5.33	28.76	13.64	.	63	0.97	13	166
spot	971	4.00	21.58	10.24	930	106	1.60	17	213
blue crab, juvenile female	882	3.64	19.60	9.30	.	56	1.05	15	133
white perch	301	1.24	6.69	3.17	125	126	3.30	56	278
blue crab, adult female	297	1.22	6.60	3.13	.	141	1.09	91	168
striped bass	196	0.81	4.36	2.07	153	123	4.03	68	613
white catfish	155	0.64	3.44	1.63	58	160	6.65	56	418
oyster toadfish	134	0.55	2.98	1.41	.	197	5.54	42	333
silver perch	103	0.42	2.29	1.09	87	126	2.92	87	204
gizzard shad	83	0.34	1.84	0.87	74	159	6.94	100	404
summer flounder	44	0.18	0.98	0.46	41	179	7.68	103	362
American eel	25	0.10	0.56	0.26	.	267	15.03	149	474
kingfish	18	0.07	0.40	0.19	18	94	5.02	65	144
naked goby	17	0.07	0.38	0.18	.	40	1.64	27	50
American shad	15	0.06	0.33	0.16	15	91	2.13	77	108
brown shrimp	15	0.06	0.33	0.16	.	118	4.73	96	150
Atlantic silverside	11	0.05	0.24	0.12	11	87	2.20	77	104
blueback herring	10	0.04	0.22	0.11	10	86	3.70	66	104
alewife	8	0.03	0.18	0.08	8	120	5.75	95	142
blackcheek tonguefish	8	0.03	0.18	0.08	4	117	8.07	80	151
harvestfish	6	0.02	0.13	0.06	6	53	13.39	30	103
spotted hake	6	0.02	0.13	0.06	6	124	10.91	73	145
spottail shiner	6	0.02	0.13	0.06	.	74	3.49	59	84
Atlantic menhaden	4	0.02	0.09	0.04	1	126	6.66	113	135
white shrimp	4	0.02	0.09	0.04	.	93	6.30	83	111
butterfish	2	0.01	0.04	0.02	.	.	.	.	.
sea lamprey	2	0.01	0.04	0.02	.	146	12.00	134	158
longnose gar	2	0.01	0.04	0.02	.	797	13.00	784	810
striped anchovy	2	0.01	0.04	0.02	2	83	2.50	80	85
red hake	1	0.00	0.02	0.01	.	96	.	96	96
Atlantic spadefish	1	0.00	0.02	0.01	.	60	.	60	60
threespine stickleback	1	0.00	0.02	0.01	.	48	.	48	48
All Species Combined	24,257								

Table 133.

Month - All - Pooled, 1994  
 Segment - York River - Lower  
 No. of Fish Trawls Made - 55  
 No. of Add'l Crab Trawls Made - 0  
 No. of Species - 53  
 Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	8,471	47.52	154.02	.	6,729	54	0.46	19	86
hogchoker	2,941	16.50	53.47	.	271	92	0.80	41	190
Atlantic croaker	1,773	9.95	32.24	27.63	946	126	2.44	9	302
spot	1,241	6.96	22.56	19.34	1,127	130	0.85	27	220
blue crab, juvenile female	928	5.21	16.87	14.46	.	46	0.86	11	131
weakfish	911	5.11	16.56	14.20	758	111	3.02	14	321
blue crab, male	863	4.84	15.69	13.45	.	48	1.02	13	155
Atlantic silverside	143	0.80	2.60	2.23	143	93	1.37	75	122
oyster toadfish	134	0.75	2.44	2.09	.	188	6.51	55	342
summer flounder	53	0.30	0.96	0.83	50	206	4.55	130	347
striped bass	43	0.24	0.78	0.67	22	171	12.96	70	464
blackcheek tonguefish	38	0.21	0.69	0.59	30	86	4.94	46	156
spotted hake	35	0.20	0.64	0.55	35	115	3.56	80	172
blue crab, adult female	31	0.17	0.56	0.48	.	137	2.39	116	163
silver perch	29	0.16	0.53	0.45	16	151	7.30	84	205
white catfish	25	0.14	0.45	0.39	2	239	17.65	92	451
naked goby	17	0.10	0.31	0.26	.	40	2.39	20	58
inshore lizardfish	17	0.10	0.31	0.26	15	145	8.12	103	213
white perch	14	0.08	0.25	0.22	0	197	11.10	109	246
alewife	13	0.07	0.24	0.20	13	94	8.76	66	146
American eel	12	0.07	0.22	0.19	.	325	24.04	220	476
striped anchovy	12	0.07	0.22	0.19	12	75	4.75	54	104
harvestfish	9	0.05	0.16	0.14	9	51	9.06	25	101
blueback herring	9	0.05	0.16	0.14	8	82	6.71	68	133
Atlantic menhaden	7	0.04	0.13	0.11	0	189	20.03	130	291
kingfish	6	0.03	0.11	0.09	6	76	12.70	34	104
white shrimp	6	0.03	0.11	0.09	.	123	9.87	104	170
brown shrimp	5	0.03	0.09	0.08	.	138	10.09	104	161
butterfish	4	0.02	0.07	0.06	3	127	15.99	86	164
American shad	4	0.02	0.07	0.06	4	98	8.11	84	121
gizzard shad	4	0.02	0.07	0.06	4	124	2.53	118	130
blue crab	3	0.02	0.05	0.05	.	59	4.04	54	67
bluefish	2	0.01	0.04	0.03	.	135	3.50	131	138
Atlantic herring	2	0.01	0.04	0.03	.	308	3.00	305	311
pigfish	2	0.01	0.04	0.03	.	147	16.50	130	163
striped searobin	2	0.01	0.04	0.03	.	69	19.00	50	88
lined seahorse	2	0.01	0.04	0.03	.	63	4.00	59	67
Atlantic cutlassfish	2	0.01	0.04	0.03	.	212	36.50	175	248
scup	1	0.01	0.02	0.02	0	203	.	203	203
tautog	1	0.01	0.02	0.02	.	144	.	144	144
spotted seatrout	1	0.01	0.02	0.02	.	131	.	131	131
Atlantic spadefish	1	0.01	0.02	0.02	.	104	.	104	104
bighead searobin	1	0.01	0.02	0.02	.	65	.	65	65
sea lamprey	1	0.01	0.02	0.02	.	140	.	140	140
striped killifish	1	0.01	0.02	0.02	.	110	.	110	110
northern pipefish	1	0.01	0.02	0.02	.	215	.	215	215
pumpkinseed	1	0.01	0.02	0.02	.	34	.	34	34
striped blenny	1	0.01	0.02	0.02	.	63	.	63	63
Atlantic stingray	1	0.01	0.02	0.02	.	170	.	170	170
lookdown	1	0.01	0.02	0.02	.	91	.	91	91
fringed flounder	1	0.01	0.02	0.02	.	115	.	115	115
threadfin shad	1	0.01	0.02	0.02	.	95	.	95	95
crested blenny	1	0.01	0.02	0.02	.	65	.	65	65
All Species Combined	17,828								

Table 134.

Month - All - Pooled, 1994

Segment - York River - Bottom

No. of Fish Trawls Made - 62

No. of Add'l Crab Trawls Made - 0

No. of Species - 56

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	37,375	72.50	602.82		33,298	53	0.50	21	85
spot	8,467	16.42	136.56	66.55	5,751	130	0.71	21	231
Atlantic croaker	2,305	4.47	37.18	18.12	386	174	2.15	6	287
hogchoker	1,457	2.83	23.50		118	99	0.91	52	184
weakfish	323	0.63	5.21	2.54	165	166	3.70	15	376
blue crab, juvenile female	247	0.48	3.98	1.94	.	61	1.70	10	123
blue crab, male	212	0.41	3.42	1.67	.	63	2.16	14	146
summer flounder	147	0.29	2.37	1.16	106	199	8.05	88	545
Atlantic silverside	143	0.28	2.31	1.12	143	92	0.87	64	116
oyster toadfish	113	0.22	1.82	0.89	.	161	6.25	33	318
spotted hake	102	0.20	1.65	0.80	102	103	2.20	64	214
threadfin shad	100	0.19	1.61	0.79	.	90	0.54	77	106
pigfish	93	0.18	1.50	0.73	.	131	2.30	73	174
inshore lizardfish	91	0.18	1.47	0.72	88	134	3.95	59	299
striped anchovy	56	0.11	0.90	0.44	56	74	1.30	55	99
blueback herring	49	0.10	0.79	0.39	49	74	1.21	62	92
blackcheek tonguefish	47	0.09	0.76	0.37	34	96	4.55	44	177
blue crab, adult female	42	0.08	0.68	0.33	.	130	1.61	100	149
silver perch	25	0.05	0.40	0.20	11	152	9.12	83	262
brown shrimp	15	0.03	0.24	0.12	.	126	4.18	102	155
striped searobin	14	0.03	0.23	0.11	.	139	9.89	77	214
naked goby	13	0.03	0.21	0.10	.	39	2.53	21	53
alewife	11	0.02	0.18	0.09	11	95	8.94	70	156
northern pipefish	11	0.02	0.18	0.09	.	175	18.92	86	281
black seabass	8	0.02	0.13	0.06	5	126	9.49	63	153
striped bass	8	0.02	0.13	0.06	4	174	21.29	96	257
scup	7	0.01	0.11	0.06	2	143	13.67	77	173
butterfish	6	0.01	0.10	0.05	6	86	16.26	39	135
kingfish	6	0.01	0.10	0.05	5	113	25.75	32	203
Atlantic herring	6	0.01	0.10	0.05	.	217	55.11	37	322
American shad	6	0.01	0.10	0.05	6	91	3.43	84	106
skilletfish	5	0.01	0.08	0.04	.	40	2.50	31	46
northern searobin	4	0.01	0.06	0.03	4	111	13.99	71	136
smallmouth flounder	4	0.01	0.06	0.03	4	67	6.32	52	80
Atlantic thread herring	3	0.01	0.05	0.02	.	80	1.00	78	81
American eel	3	0.01	0.05	0.02	.	446	56.22	357	550
Atlantic spadefish	3	0.01	0.05	0.02	.	69	12.45	44	84
pinfish	3	0.01	0.05	0.02	.	151	1.53	149	154
white catfish	2	0.00	0.03	0.02	0	334	26.00	308	360
gizzard shad	2	0.00	0.03	0.02	1	153	48.50	104	201
windowpane	2	0.00	0.03	0.02	1	157	69.50	87	226
lined seahorse	2	0.00	0.03	0.02	.	106	60.00	46	166
Atlantic cutlassfish	2	0.00	0.03	0.02	.	479	29.00	450	508
fringed flounder	2	0.00	0.03	0.02	.	122	15.50	106	137
bluefish	1	0.00	0.02	0.01	.	150	.	150	150
squid	1	0.00	0.02	0.01	.	15	.	15	15
white perch	1	0.00	0.02	0.01	1	73	.	73	73
Atlantic menhaden	1	0.00	0.02	0.01	0	268	.	268	268
sheepshead	1	0.00	0.02	0.01	.	125	.	125	125
tautog	1	0.00	0.02	0.01	.	138	.	138	138
fourspine stickleback	1	0.00	0.02	0.01	.	53	.	53	53
green goby	1	0.00	0.02	0.01	.	33	.	33	33
feather blenny	1	0.00	0.02	0.01	.	69	.	69	69
southern stingray	1	0.00	0.02	0.01	.	759	.	759	759
conger eel	1	0.00	0.02	0.01	.	364	.	364	364
Atlantic needlefish	1	0.00	0.02	0.01	.	98	.	98	98
All Species Combined	51,554								

Tables 135-146. Species composition, number caught, catch per trawl, and length statistics by month for the 1994 random trawl survey.

- 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. 'Adjusted Percent of Catch' excludes bay anchovy and hogchoker due to low biomass estimates in relation to number of fish caught.

Table 135.

Month - January 1994

RIVER - York

No. of Fish Trawls Made - 15

No. of Add'l Crab Trawls Made - 0

No. of Species - 20

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	2,501	68.18	166.73		2,496	42	0.52	27	82
Atlantic croaker	338	9.21	22.53	37.10	335	41	1.28	13	151
hogchoker	256	6.98	17.07		51	80	2.48	32	161
Atlantic silverside	174	4.74	11.60	19.10	174	91	1.13	75	122
white perch	123	3.35	8.20	13.50	72	105	4.29	64	246
striped bass	89	2.43	5.93	9.77	88	106	2.64	68	255
blue crab, male	62	1.69	4.13	6.81		43	3.04	21	155
gizzard shad	46	1.25	3.07	5.05	44	142	7.72	103	404
blue crab, juvenile female	43	1.17	2.87	4.72		36	2.25	16	115
blackcheek tonguefish	15	0.41	1.00	1.65	15	69	3.82	44	108
naked goby	6	0.16	0.40	0.66		35	3.65	21	45
skilletfish	5	0.14	0.33	0.55		40	2.50	31	46
white catfish	2	0.05	0.13	0.22	0	322	5.50	316	327
sea lamprey	2	0.05	0.13	0.22		146	12.00	134	158
alewife	1	0.03	0.07	0.11	1	70		70	70
blueback herring	1	0.03	0.07	0.11	1	66		66	66
Atlantic herring	1	0.03	0.07	0.11		305		305	305
spot	1	0.03	0.07	0.11	1	113		113	113
striped killifish	1	0.03	0.07	0.11		110		110	110
oyster toadfish	1	0.03	0.07	0.11		109		109	109
All Species Combined	3,668								

Table 136.

Month - February 1994

RIVER - York

No. of Fish Trawls Made - 15

No. of Add'l Crab Trawls Made - 0

No. of Species - 21

Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker

Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	129	17.65	8.60		129	46	0.87	31	75
Atlantic silverside	120	16.42	8.00	22.68	120	93	0.93	64	116
blue crab, male	81	11.08	5.40	15.31		55	3.11	14	130
hogchoker	73	9.99	4.87		1	98	3.14	37	163
white perch	70	9.58	4.67	13.23	24	136	6.95	69	220
blue crab, juvenile female	52	7.11	3.47	9.83		47	2.79	24	109
blueback herring	41	5.61	2.73	7.75	41	71	1.05	62	91
gizzard shad	34	4.65	2.27	6.43	27	183	12.47	100	341
striped bass	32	4.38	2.13	6.05	29	116	13.02	68	464
Atlantic croaker	27	3.69	1.80	5.10	27	33	2.20	9	52
oyster toadfish	26	3.56	1.73	4.91		159	18.97	42	303
alewife	14	1.92	0.93	2.65	14	73	1.46	66	87
naked goby	12	1.64	0.80	2.27		39	2.10	27	50
blackcheek tonguefish	11	1.50	0.73	2.08	8	95	13.24	57	177
Atlantic herring	2	0.27	0.13	0.38		307	4.00	303	311
white catfish	2	0.27	0.13	0.38	0	230	22.00	208	252
summer flounder	1	0.14	0.07	0.19	1	238		238	238
sea lamprey	1	0.14	0.07	0.19		140		140	140
threespine stickleback	1	0.14	0.07	0.19		48		48	48
northern pipefish	1	0.14	0.07	0.19		86		86	86
blue crab, adult female	1	0.14	0.07	0.19		149		149	149
All Species Combined	731								



Table 137.

Month - March 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 20									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	602	53.56	40.13	.	602	42	0.69	30	66
hogchoker	114	10.14	7.60	.	6	87	2.34	46	167
blue crab, male	101	8.99	6.73	24.75	.	40	2.15	14	122
blue crab, juvenile female	86	7.65	5.73	21.08	.	33	1.25	13	107
striped bass	50	4.45	3.33	12.25	48	106	5.25	70	262
white perch	49	4.36	3.27	12.01	16	115	6.77	56	242
white catfish	31	2.76	2.07	7.60	19	127	14.38	56	384
spotted hake	22	1.96	1.47	5.39	22	98	2.62	67	124
blueback herring	19	1.69	1.27	4.66	18	83	3.24	68	133
blackcheek tonguefish	18	1.60	1.20	4.41	17	75	3.85	46	121
alewife	10	0.89	0.67	2.45	10	124	5.16	95	146
gizzard shad	6	0.53	0.40	1.47	6	137	3.82	122	146
naked goby	6	0.53	0.40	1.47	.	34	3.69	20	47
Atlantic herring	3	0.27	0.20	0.74	.	304	9.70	289	322
American eel	2	0.18	0.13	0.49	.	196	16.50	179	212
spottail shiner	1	0.09	0.07	0.25	.	78	.	78	78
fourspine stickleback	1	0.09	0.07	0.25	.	53	.	53	53
lined seahorse	1	0.09	0.07	0.25	.	59	.	59	59
northern pipefish	1	0.09	0.07	0.25	.	103	.	103	103
oyster toadfish	1	0.09	0.07	0.25	.	64	.	64	64
All Species Combined		1.124							

Table 138.

Month - April 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 25									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	2,123	31.28	141.53	.	79	94	1.38	43	190
bay anchovy	1,945	28.66	129.67	.	1,928	61	0.59	29	93
Atlantic croaker	1,055	15.54	70.33	38.80	1	222	1.55	97	302
blue crab, male	538	7.93	35.87	19.79	.	50	1.43	13	154
spot	394	5.81	26.27	14.49	0	144	1.12	105	192
blue crab, juvenile female	392	5.78	26.13	14.42	.	44	1.44	11	128
spotted hake	103	1.52	6.87	3.79	103	104	2.12	64	214
white catfish	97	1.43	6.47	3.57	41	159	8.43	62	395
oyster toadfish	27	0.40	1.80	0.99	.	147	14.79	33	332
American eel	25	0.37	1.67	0.92	.	283	17.16	149	476
white perch	22	0.32	1.47	0.81	12	125	13.99	62	278
blue crab, adult female	12	0.18	0.80	0.44	.	138	3.99	119	163
blackcheek tonguefish	10	0.15	0.67	0.37	6	99	12.99	60	156
alewife	7	0.10	0.47	0.26	7	129	5.70	109	156
blueback herring	7	0.10	0.47	0.26	7	92	2.36	86	104
striped bass	7	0.10	0.47	0.26	6	118	15.30	84	206
naked goby	6	0.09	0.40	0.22	.	44	1.72	38	48
spottail shiner	5	0.07	0.33	0.18	.	73	4.14	59	84
summer flounder	4	0.06	0.27	0.15	0	287	38.85	220	393
Atlantic menhaden	2	0.03	0.13	0.07	0	159	24.00	135	183
northern pipefish	2	0.03	0.13	0.07	.	165	29.50	135	194
Atlantic herring	1	0.01	0.07	0.04	.	49	.	49	49
pumpkinseed	1	0.01	0.07	0.04	.	34	.	34	34
green goby	1	0.01	0.07	0.04	.	33	.	33	33
smallmouth flounder	1	0.01	0.07	0.04	1	61	.	61	61
All Species Combined		6.787							

Table 139.

Month - May 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 22									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	1,934	35.36	128.93		151	89	0.92	24	179
Atlantic croaker	1,109	20.28	73.93	38.84	4	199	1.43	106	295
spot	974	17.81	64.93	34.12	105	115	3.23	17	196
bay anchovy	680	12.43	45.33		678	56	0.85	32	85
blue crab, male	320	5.85	21.33	11.21		60	1.50	18	134
blue crab, juvenile female	268	4.90	17.87	9.39		52	1.17	16	117
oyster toadfish	68	1.24	4.53	2.38		179	9.23	55	337
weakfish	30	0.55	2.00	1.05	22	211	7.17	134	276
spotted hake	15	0.27	1.00	0.53	15	140	3.67	118	172
summer flounder	14	0.26	0.93	0.49	0	328	25.39	255	545
striped bass	9	0.16	0.60	0.32	0	135	8.32	106	174
white catfish	9	0.16	0.60	0.32	0	271	22.65	151	347
white perch	8	0.15	0.53	0.28	0	180	14.81	93	222
American eel	8	0.15	0.53	0.28		351	38.37	236	550
blackcheek tonguefish	6	0.11	0.40	0.21	3	104	12.46	74	141
blue crab, adult female	5	0.09	0.33	0.18		137	6.69	117	158
Atlantic menhaden	4	0.07	0.27	0.14	0	207	42.43	130	291
silver perch	3	0.05	0.20	0.11	0	179	0.67	178	180
windowpane	2	0.04	0.13	0.07	1	157	69.50	87	226
black seabass	1	0.02	0.07	0.04	1	63		63	63
northern searobin	1	0.02	0.07	0.04	1	71		71	71
northern pipefish	1	0.02	0.07	0.04		139		139	139
All Species Combined	5,469								

Table 140.

Month - June 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 21									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	3,043	61.74	202.87		1,031	85	1.39	31	179
Atlantic croaker	610	12.38	40.67	40.86	26	200	1.64	24	281
bay anchovy	393	7.97	26.20		386	57	0.88	36	88
spot	246	4.99	16.40	16.48	92	125	3.39	11	211
blue crab, male	237	4.81	15.80	15.87		63	1.91	23	166
blue crab, juvenile female	218	4.42	14.53	14.60		55	1.34	23	128
oyster toadfish	66	1.34	4.40	4.42		193	7.84	53	325
weakfish	35	0.71	2.33	2.34	0	176	2.90	149	239
summer flounder	26	0.53	1.73	1.74	14	212	29.40	68	587
spotted hake	20	0.41	1.33	1.34	20	186	3.62	150	209
white catfish	9	0.18	0.60	0.60	0	246	15.83	161	319
American eel	7	0.14	0.47	0.47		294	27.57	191	436
striped bass	4	0.08	0.27	0.27	0	215	27.42	164	284
blue crab, adult female	4	0.08	0.27	0.27		149	5.79	136	164
northern searobin	3	0.06	0.20	0.20	2	117	39.00	77	195
black seabass	2	0.04	0.13	0.13	2	76	5.00	71	81
blackcheek tonguefish	2	0.04	0.13	0.13	2	92	8.50	83	100
white perch	1	0.02	0.07	0.07	0	225		225	225
Atlantic menhaden	1	0.02	0.07	0.07	0	130		130	130
windowpane	1	0.02	0.07	0.07	1	125		125	125
southern stingray	1	0.02	0.07	0.07		638		638	638
All Species Combined	4,929								

Table 141.

Month - July 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 28									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
spot	3,280	32.60	218.67	59.96	1,781	122	1.37	71	213
bay anchovy	2,915	28.98	194.33	.	523	57	0.79	25	92
hogchoker	1,675	16.65	111.67	.	931	85	1.02	28	168
Atlantic croaker	1,204	11.97	80.27	22.01	894	165	2.59	62	290
weakfish	487	4.84	32.47	8.90	247	132	4.06	16	305
blue crab, male	150	1.49	10.00	2.74	.	75	2.22	32	140
blue crab, juvenile female	142	1.41	9.47	2.60	.	75	1.76	30	116
summer flounder	66	0.66	4.40	1.21	57	152	7.92	88	374
oyster toadfish	35	0.35	2.33	0.64	.	166	10.29	86	319
blue crab, adult female	20	0.20	1.33	0.37	.	128	3.17	100	149
inshore lizardfish	16	0.16	1.07	0.29	16	88	5.91	59	151
brown shrimp	14	0.14	0.93	0.26	.	109	2.27	100	126
silver perch	10	0.10	0.67	0.18	0	194	9.41	155	262
pigfish	9	0.09	0.60	0.16	.	83	2.35	73	93
blackcheek tonguefish	7	0.07	0.47	0.13	6	118	5.63	104	144
striped searobin	6	0.06	0.40	0.11	.	123	19.71	77	214
black seabass	4	0.04	0.27	0.07	4	137	5.50	131	153
butterfish	3	0.03	0.20	0.05	3	52	7.26	39	64
white perch	3	0.03	0.20	0.05	0	182	6.36	175	195
blue crab	3	0.03	0.20	0.05	.	59	4.04	54	67
scup	2	0.02	0.13	0.04	1	115	37.50	77	152
northern searobin	2	0.02	0.13	0.04	2	119	2.50	116	121
Atlantic cutlassfish	2	0.02	0.13	0.04	.	212	36.50	175	248
striped bass	1	0.01	0.07	0.02	0	231	.	231	231
white catfish	1	0.01	0.07	0.02	0	291	.	291	291
American eel	1	0.01	0.07	0.02	.	262	.	262	262
longnose gar	1	0.01	0.07	0.02	.	810	.	810	810
Atlantic needlefish	1	0.01	0.07	0.02	.	98	.	98	98
All Species Combined	10,060								

Table 142.

Month - August 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 31									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
hogchoker	2,000	28.69	133.33	.	0	93	1.37	52	180
spot	1,411	20.24	94.07	33.24	1,355	128	1.52	91	222
weakfish	1,119	16.05	74.60	26.36	978	95	3.31	14	314
Atlantic croaker	994	14.26	66.27	23.42	922	143	2.08	33	273
bay anchovy	727	10.43	48.47	.	459	52	1.30	21	92
blue crab, male	225	3.23	15.00	5.30	.	86	1.97	29	150
blue crab, juvenile female	192	2.75	12.80	4.52	.	81	1.66	17	133
blue crab, adult female	60	0.86	4.00	1.41	.	140	1.79	114	162
inshore lizardfish	46	0.66	3.07	1.08	45	126	2.08	103	193
summer flounder	44	0.63	2.93	1.04	35	198	13.87	102	451
pigfish	30	0.43	2.00	0.71	.	119	1.14	108	130
striped anchovy	29	0.42	1.93	0.68	29	72	1.51	55	87
oyster toadfish	21	0.30	1.40	0.49	.	196	12.59	97	318
striped bass	14	0.20	0.93	0.33	0	224	31.20	148	613
brown shrimp	11	0.16	0.73	0.26	.	131	5.27	96	152
silver perch	7	0.10	0.47	0.16	0	183	6.16	169	204
striped searobin	6	0.09	0.40	0.14	.	129	9.90	88	152
scup	5	0.07	0.33	0.12	1	154	11.76	108	173
Atlantic menhaden	5	0.07	0.33	0.12	1	173	20.43	113	204
blackcheek tonguefish	5	0.07	0.33	0.12	0	125	2.91	117	133
northern pipefish	4	0.06	0.27	0.09	.	235	26.16	172	281
black seabass	3	0.04	0.20	0.07	0	133	4.62	125	141
Atlantic thread herring	3	0.04	0.20	0.07	.	80	1.00	78	81
smallmouth flounder	3	0.04	0.20	0.07	3	69	8.51	52	80
butterfish	2	0.03	0.13	0.05	.	.	.	.	.
harvestfish	1	0.01	0.07	0.02	1	57	.	57	57
kingfish	1	0.01	0.07	0.02	1	34	.	34	34
Atlantic spadefish	1	0.01	0.07	0.02	.	60	.	60	60
northern searobin	1	0.01	0.07	0.02	1	136	.	136	136
naked goby	1	0.01	0.07	0.02	.	31	.	31	31
lookdown	1	0.01	0.07	0.02	.	91	.	91	91
All Species Combined	6,972								

Table 143.

Month - September 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 29									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	7,061	55.82	470.73	.	4,396	50	0.95	19	80
hogchoker	2,269	17.94	151.27	.	19	92	1.46	42	184
weakfish	1,495	11.82	99.67	45.04	1,404	97	2.60	18	302
spot	726	5.74	48.40	21.87	708	126	0.89	86	231
Atlantic croaker	317	2.51	21.13	9.55	0	147	1.86	110	296
blue crab, adult female	221	1.75	14.73	6.66	.	140	1.46	104	168
oyster toadfish	109	0.86	7.27	3.28	.	189	6.02	77	342
blue crab, male	104	0.82	6.93	3.13	.	83	2.99	19	159
blue crab, juvenile female	68	0.54	4.53	2.05	.	71	3.39	10	123
silver perch	67	0.53	4.47	2.02	64	111	2.14	87	189
summer flounder	48	0.38	3.20	1.45	42	205	11.28	127	517
pigfish	46	0.36	3.07	1.39	.	142	1.57	118	162
striped anchovy	36	0.28	2.40	1.08	36	75	1.96	54	99
inshore lizardfish	31	0.25	2.07	0.93	31	145	3.11	88	195
striped bass	12	0.09	0.80	0.36	0	207	7.48	160	257
harvestfish	10	0.08	0.67	0.30	10	34	1.78	25	41
brown shrimp	5	0.04	0.33	0.15	.	145	3.28	136	155
kingfish	4	0.03	0.27	0.12	4	52	7.79	32	65
Atlantic spadefish	4	0.03	0.27	0.12	.	78	12.47	44	104
striped searobin	3	0.02	0.20	0.09	.	174	2.85	168	177
blackcheek tonguefish	3	0.02	0.20	0.09	1	106	16.00	74	122
white perch	2	0.02	0.13	0.06	0	227	13.50	213	240
Atlantic cutlassfish	2	0.02	0.13	0.06	.	479	29.00	450	508
squid	1	0.01	0.07	0.03	.	15	.	15	15
Atlantic herring	1	0.01	0.07	0.03	.	37	.	37	37
naked goby	1	0.01	0.07	0.03	.	30	.	30	30
southern stingray	1	0.01	0.07	0.03	.	759	.	759	759
conger eel	1	0.01	0.07	0.03	.	364	.	364	364
white shrimp	1	0.01	0.07	0.03	.	91	.	91	91
All Species Combined	12,649								

Table 144.

Month - October 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 35									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
spot	1,104	24.50	73.60	36.89	1,092	132	0.97	111	220
bay anchovy	971	21.55	64.73	.	767	53	0.74	29	84
Atlantic croaker	642	14.25	42.80	21.45	281	93	4.02	6	283
hogchoker	542	12.03	36.13	.	4	88	1.09	13	163
blue crab, juvenile female	431	9.57	28.73	14.40	.	43	1.37	15	117
blue crab, male	383	8.50	25.53	12.80	.	46	1.77	13	155
weakfish	183	4.06	12.20	6.11	170	107	4.18	15	371
blue crab, adult female	48	1.07	3.20	1.60	.	136	1.68	91	155
silver perch	42	0.93	2.80	1.40	30	151	3.97	115	200
summer flounder	37	0.82	2.47	1.24	33	216	6.67	166	362
oyster toadfish	32	0.71	2.13	1.07	.	206	11.34	96	326
kingfish	20	0.44	1.33	0.67	19	106	7.60	71	203
inshore lizardfish	15	0.33	1.00	0.50	11	198	9.91	163	299
pigfish	10	0.22	0.67	0.33	.	158	3.67	136	174
blackcheek tonguefish	8	0.18	0.53	0.27	5	114	8.57	93	156
striped anchovy	5	0.11	0.33	0.17	5	88	5.36	77	104
harvestfish	4	0.09	0.27	0.13	4	95	4.05	86	103
white shrimp	4	0.09	0.27	0.13	.	131	13.39	111	170
brown shrimp	4	0.09	0.27	0.13	.	136	8.43	125	161
pinfish	3	0.07	0.20	0.10	.	151	1.53	149	154
white catfish	2	0.04	0.13	0.07	0	376	42.00	334	418
American eel	2	0.04	0.13	0.07	.	307	11.00	296	318
lined seahorse	2	0.04	0.13	0.07	.	106	60.00	46	166
scup	1	0.02	0.07	0.03	0	203	.	203	203
butterfish	1	0.02	0.07	0.03	1	128	.	128	128
bluefish	1	0.02	0.07	0.03	.	138	.	138	138
red hake	1	0.02	0.07	0.03	.	96	.	96	96
striped bass	1	0.02	0.07	0.03	0	238	.	238	238
tautog	1	0.02	0.07	0.03	.	138	.	138	138
striped searobin	1	0.02	0.07	0.03	.	50	.	50	50
longnose gar	1	0.02	0.07	0.03	.	784	.	784	784
northern pipefish	1	0.02	0.07	0.03	.	215	.	215	215
naked goby	1	0.02	0.07	0.03	.	40	.	40	40
Atlantic stingray	1	0.02	0.07	0.03	.	170	.	170	170
fringed flounder	1	0.02	0.07	0.03	.	137	.	137	137
All Species Combined	4,506								

Table 145.

Month - November 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 35									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	6,239	61.84	415.93		5,082	61	0.70	27	89
Atlantic croaker	1,758	17.42	117.20	50.23	1,565	62	2.31	10	211
spot	864	8.56	57.60	24.69	864	127	0.60	100	177
blue crab, male	386	3.83	25.73	11.03		44	1.67	14	155
hogchoker	350	3.47	23.33		0	100	1.84	63	162
blue crab, juvenile female	269	2.67	17.93	7.69		40	1.89	14	121
weakfish	48	0.48	3.20	1.37	33	185	9.13	113	376
oyster toadfish	29	0.29	1.93	0.83		196	11.89	70	341
silver perch	26	0.26	1.73	0.74	18	140	7.74	84	205
white perch	22	0.22	1.47	0.63	0	216	4.08	179	247
summer flounder	14	0.14	0.93	0.40	14	193	4.59	164	228
striped bass	13	0.13	0.87	0.37	0	220	3.23	207	241
blackcheek tonguefish	13	0.13	0.87	0.37	8	103	6.10	63	151
naked goby	8	0.08	0.53	0.23		48	2.43	37	53
butterfish	7	0.07	0.47	0.20	6	121	10.85	82	164
kingfish	6	0.06	0.40	0.17	6	87	6.16	65	104
brown shrimp	4	0.04	0.27	0.11		128	8.58	104	143
white catfish	3	0.03	0.20	0.09	0	365	58.62	253	451
bighead searobin	3	0.03	0.20	0.09		66	6.39	56	78
blue crab, adult female	3	0.03	0.20	0.09		129	9.29	112	144
bluefish	2	0.02	0.13	0.06		141	9.50	131	150
American shad	2	0.02	0.13	0.06	2	106	15.50	90	121
American eel	2	0.02	0.13	0.06		313	10.50	302	323
northern pipefish	2	0.02	0.13	0.06		122	19.50	102	141
seaboard goby	2	0.02	0.13	0.06		40	2.50	37	42
feather blenny	2	0.02	0.13	0.06		61	2.50	58	63
fringed flounder	2	0.02	0.13	0.06		106	9.00	97	115
smallmouth flounder	2	0.02	0.13	0.06	2	82	4.00	78	86
white shrimp	2	0.02	0.13	0.06		98	6.50	91	104
alewife	1	0.01	0.07	0.03	1	114		114	114
tautog	1	0.01	0.07	0.03		144		144	144
striped blenny	1	0.01	0.07	0.03		63		63	63
skilletfish	1	0.01	0.07	0.03		27		27	27
conger eel	1	0.01	0.07	0.03		558		558	558
crested blenny	1	0.01	0.07	0.03		65		65	65
All Species Combined	10,089								

Table 146.

Month - December 1994									
RIVER - York									
No. of Fish Trawls Made - 15									
No. of Add'l Crab Trawls Made - 0									
No. of Species - 29									
Adjusted Percent of Catch Excludes Bay Anchovy and Hogchoker									
Species	Number of Fish (All)	Percent of Catch	Catch Per Trawl	Adjusted Percent of Catch	Number of Fish (Index Age)	Average Length (mm)	Standard Error (length)	Minimum Length (mm)	Maximum Length (mm)
bay anchovy	30,591	88.95	2039.40		30,153	55	0.62	32	91
spot	2,298	6.68	153.20	62.11	2,298	118	0.45	99	145
Atlantic croaker	773	2.25	51.53	20.89	762	56	1.24	22	113
blue crab, male	183	0.53	12.20	4.95		49	2.35	16	150
blue crab, juvenile female	180	0.52	12.00	4.86		47	2.90	14	131
hogchoker	102	0.30	6.80		3	91	2.67	25	181
threadfin shad	101	0.29	6.73	2.73		91	0.53	77	106
white catfish	28	0.08	1.87	0.76	0	174	9.62	117	297
summer flounder	23	0.07	1.53	0.62	22	179	9.10	130	347
American shad	23	0.07	1.53	0.62	23	91	1.66	77	108
white perch	19	0.06	1.27	0.51	2	166	9.47	72	220
striped bass	17	0.05	1.13	0.46	8	181	16.71	82	290
naked goby	11	0.03	0.73	0.30		46	2.37	32	58
oyster toadfish	9	0.03	0.60	0.24		179	27.43	59	304
blackcheek tonguefish	6	0.02	0.40	0.16	6	82	5.64	57	95
white shrimp	5	0.01	0.33	0.14		99	6.55	83	118
gizzard shad	3	0.01	0.20	0.08	2	152	28.01	104	201
spotted hake	3	0.01	0.20	0.08	3	89	8.76	73	103
Atlantic silverside	3	0.01	0.20	0.08	3	89	2.03	86	93
silver perch	3	0.01	0.20	0.08	3	92	6.33	83	104
weakfish	2	0.01	0.13	0.05	2	122	37.50	84	159
northern pipefish	2	0.01	0.13	0.05		163	6.50	156	169
blue crab, adult female	2	0.01	0.13	0.05		143	8.00	135	151
butterfish	1	0.00	0.07	0.03	1	93		93	93
sheepshead	1	0.00	0.07	0.03		125		125	125
spotted seatrout	1	0.00	0.07	0.03		131		131	131
lined seahorse	1	0.00	0.07	0.03		67		67	67
feather blenny	1	0.00	0.07	0.03		69		69	69
fringed flounder	1	0.00	0.07	0.03		106		106	106
All Species Combined	34,393								

## **FIGURES**

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Figure 1. Sampling system, design, and gear changes for the VIMS trawl survey, 1955-1995.

# VIMS Juvenile Fish Trawl Survey

## Sampling Changes 1955 - 1995

Figure 1.

### Tow Type

D = Duration

C = Duration and/or  
Distance

### Gear Type

10 = 30' Unlined/No Tickler

33 = 30' Lined/No Tickler

43 = 30' Unlined/Tickler

OT = 16' Nets L/No Tickler

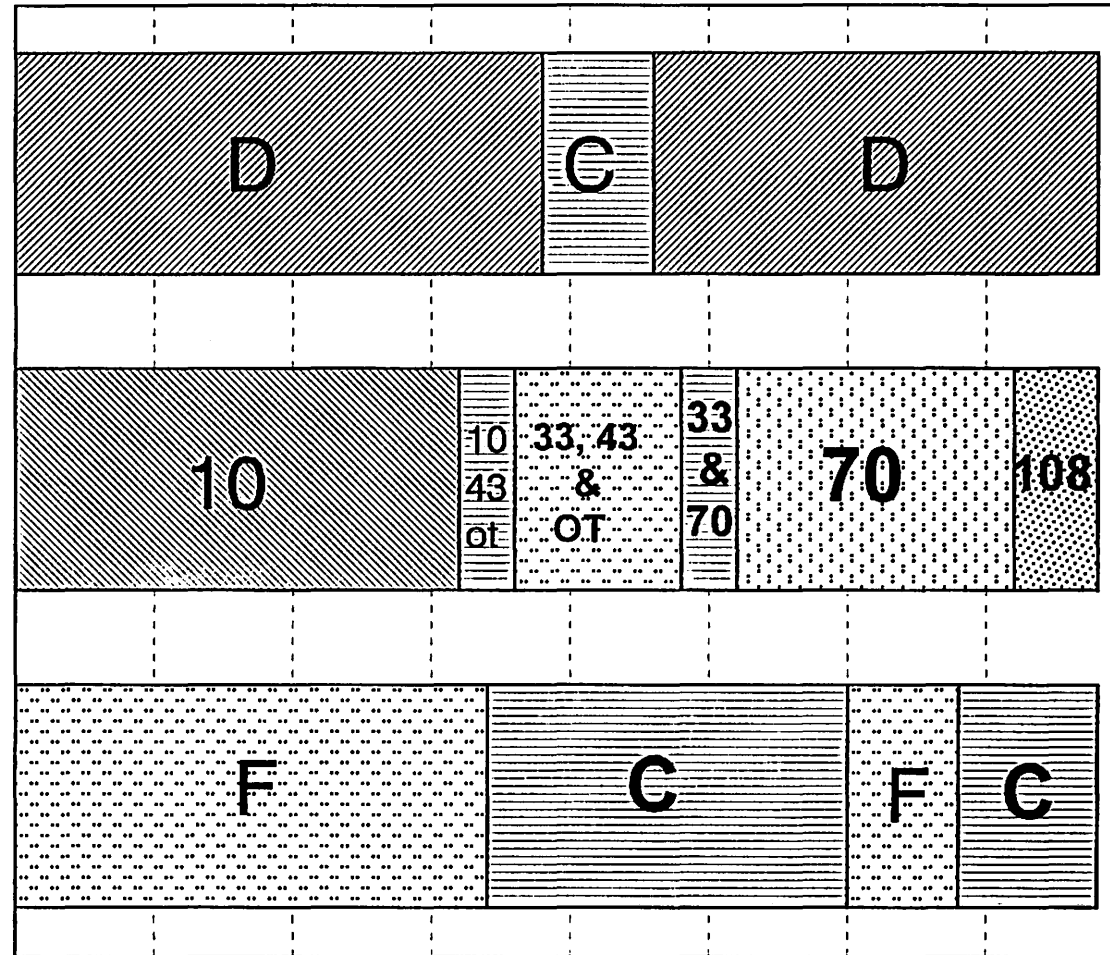
70 = 30' Lined/Tickler

### Sampling System

F = Fixed

R = Random

C = Combination



1955 1960 1965 1970 1975 1980 1985 1990 1995



Figures 2-5. Stations sampled in 1991-1994 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 may vary slightly from the actual stations occupied. For exact coordinates refer to Tables 2-44.

# York River Random Station Locations

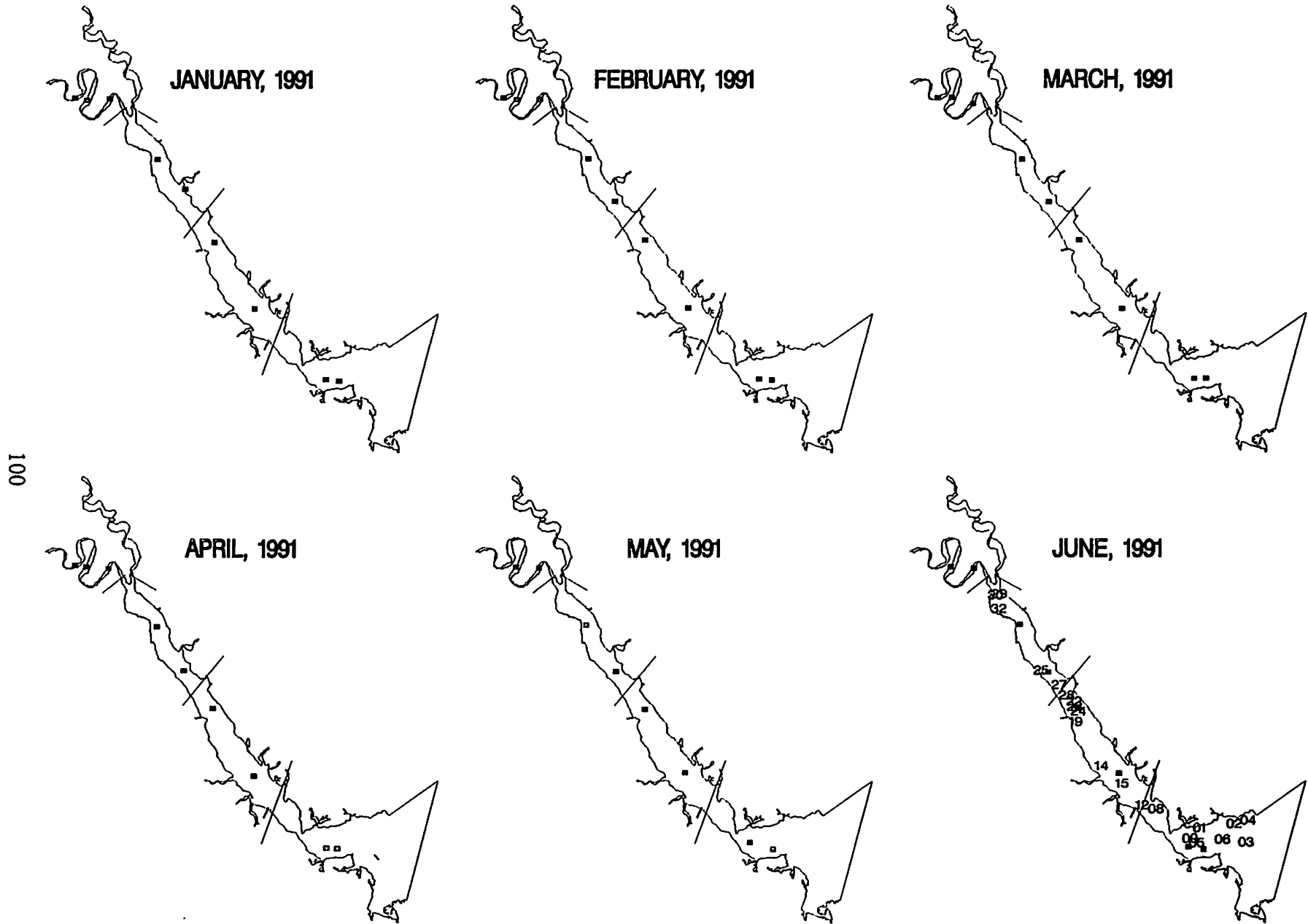
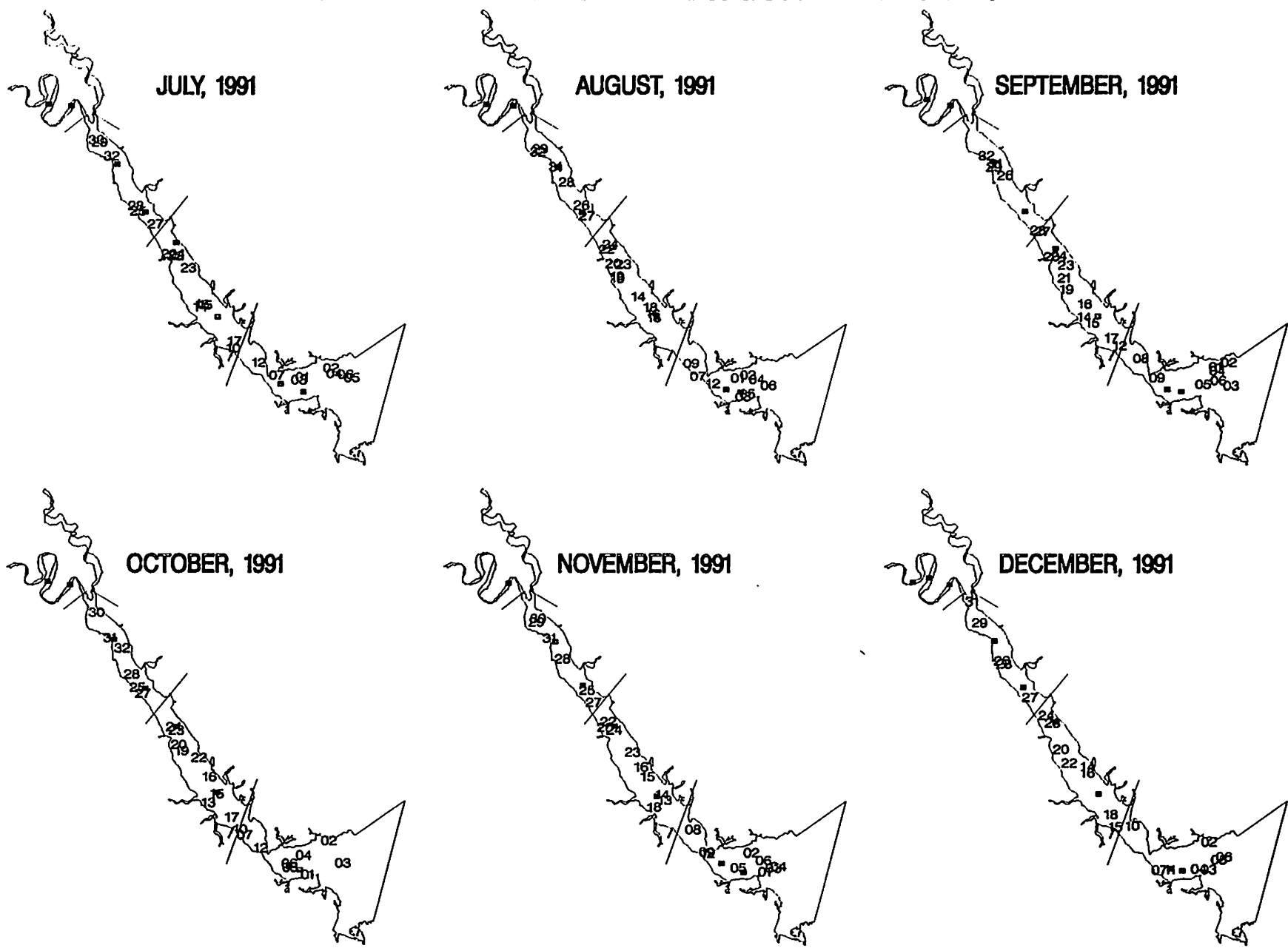


Figure 2.

# York River Random Station Locations

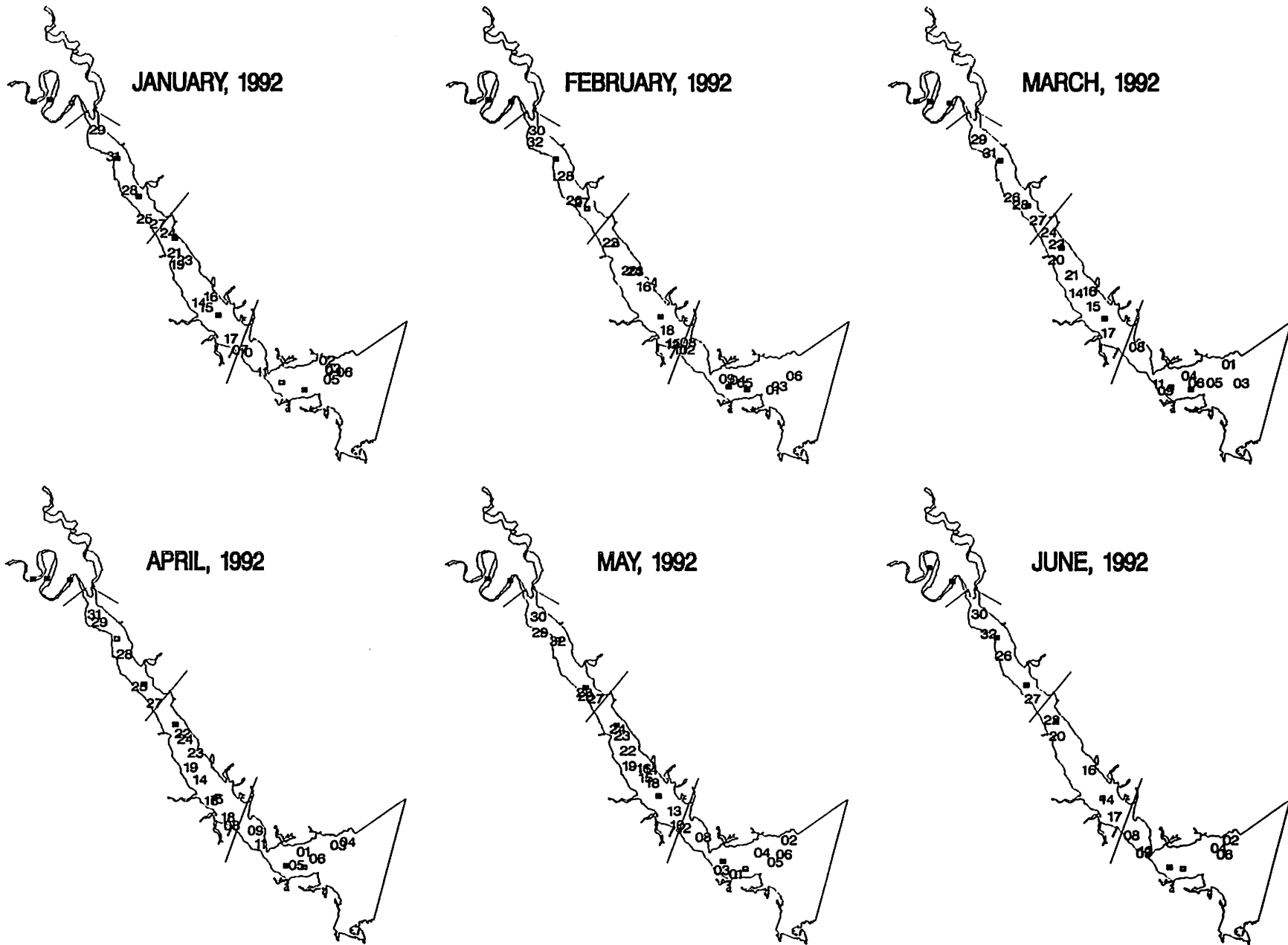


101

Note: Squares Represent Fixed Station Locations

Figure 2. (cont.)

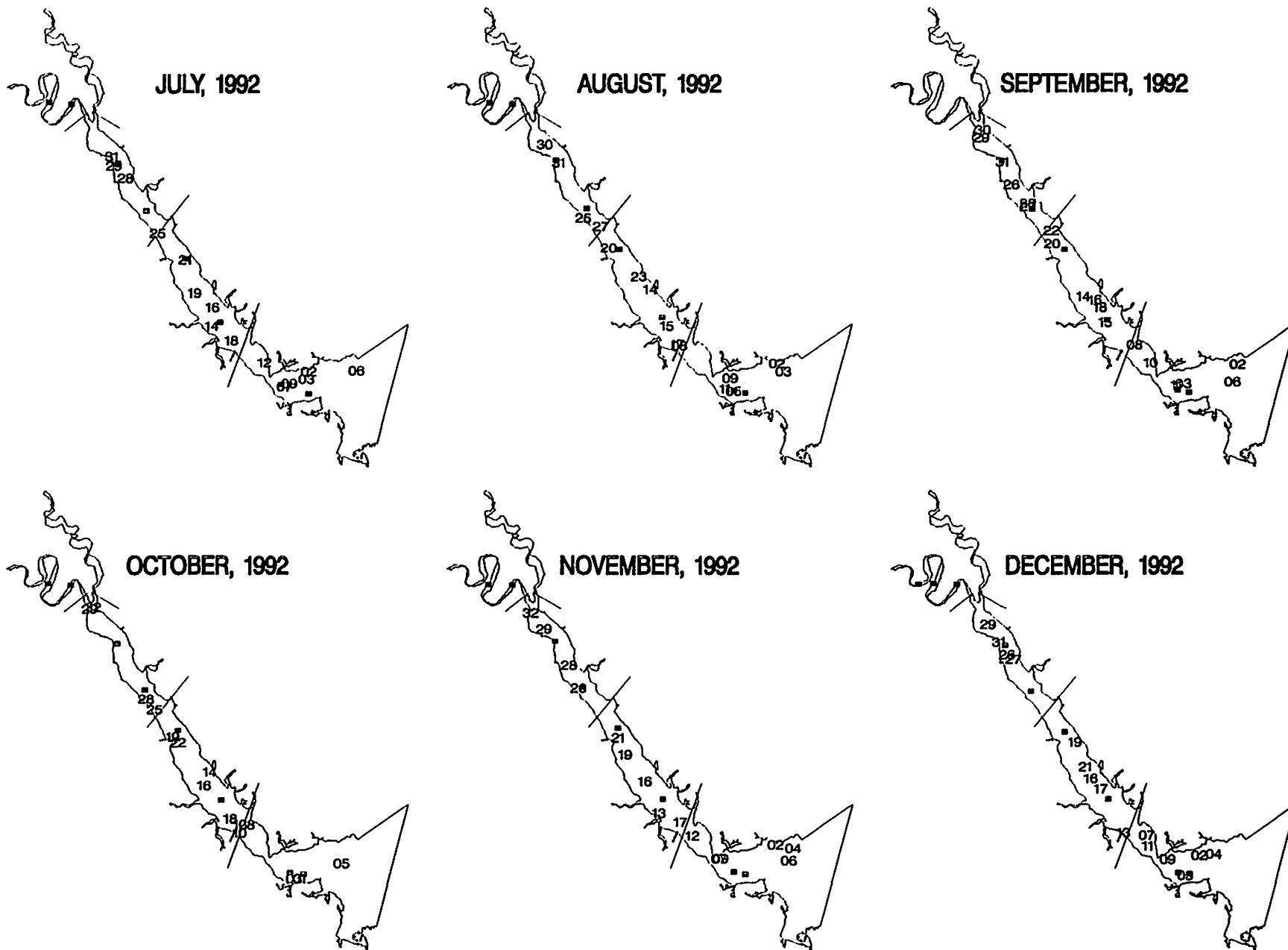
# York River Random Station Locations



Note: Squares Represent Fixed Station Locations

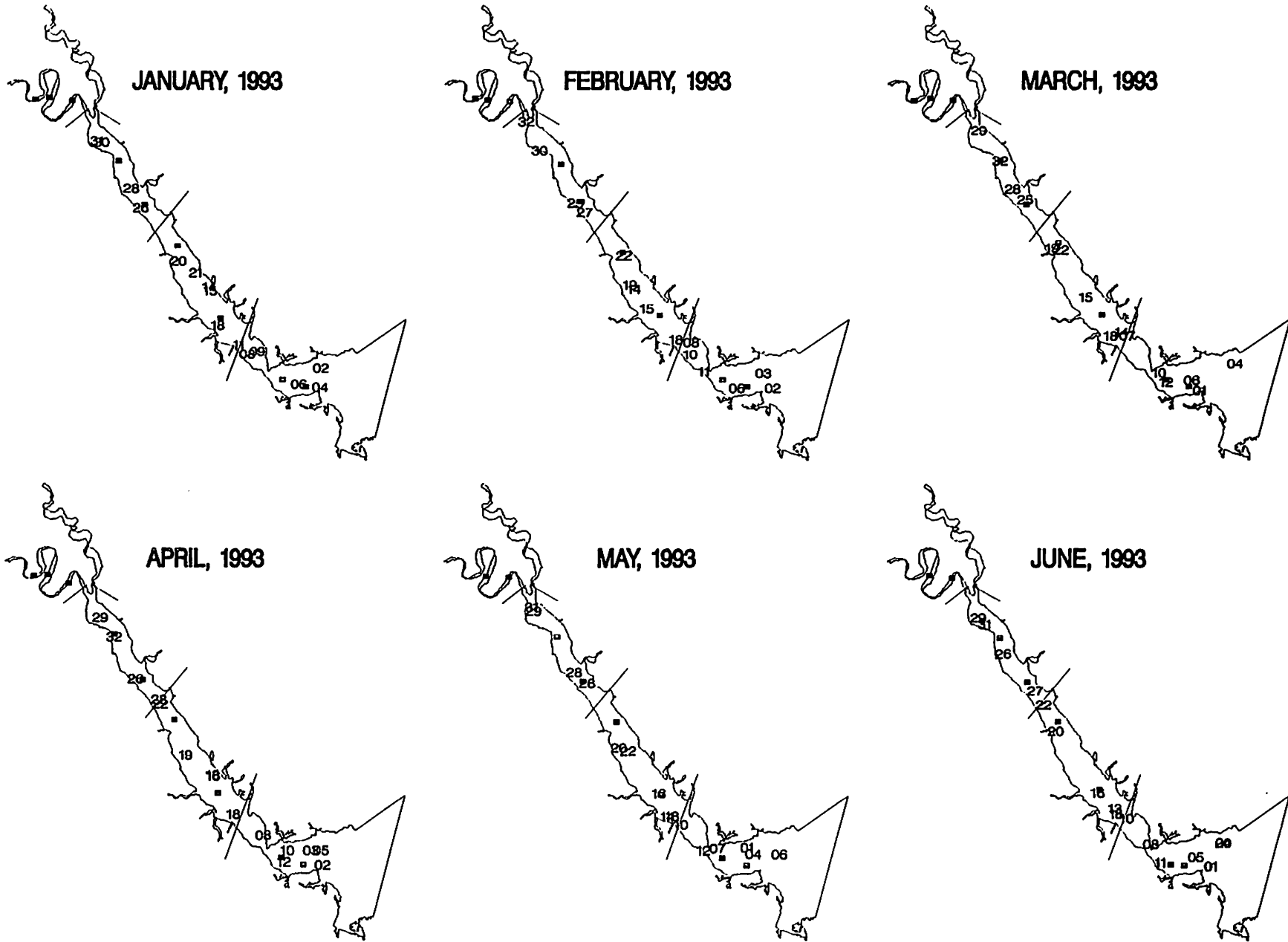
Figure 3.

# York River Random Station Locations



Note: Squares Represent Fixed Station Locations

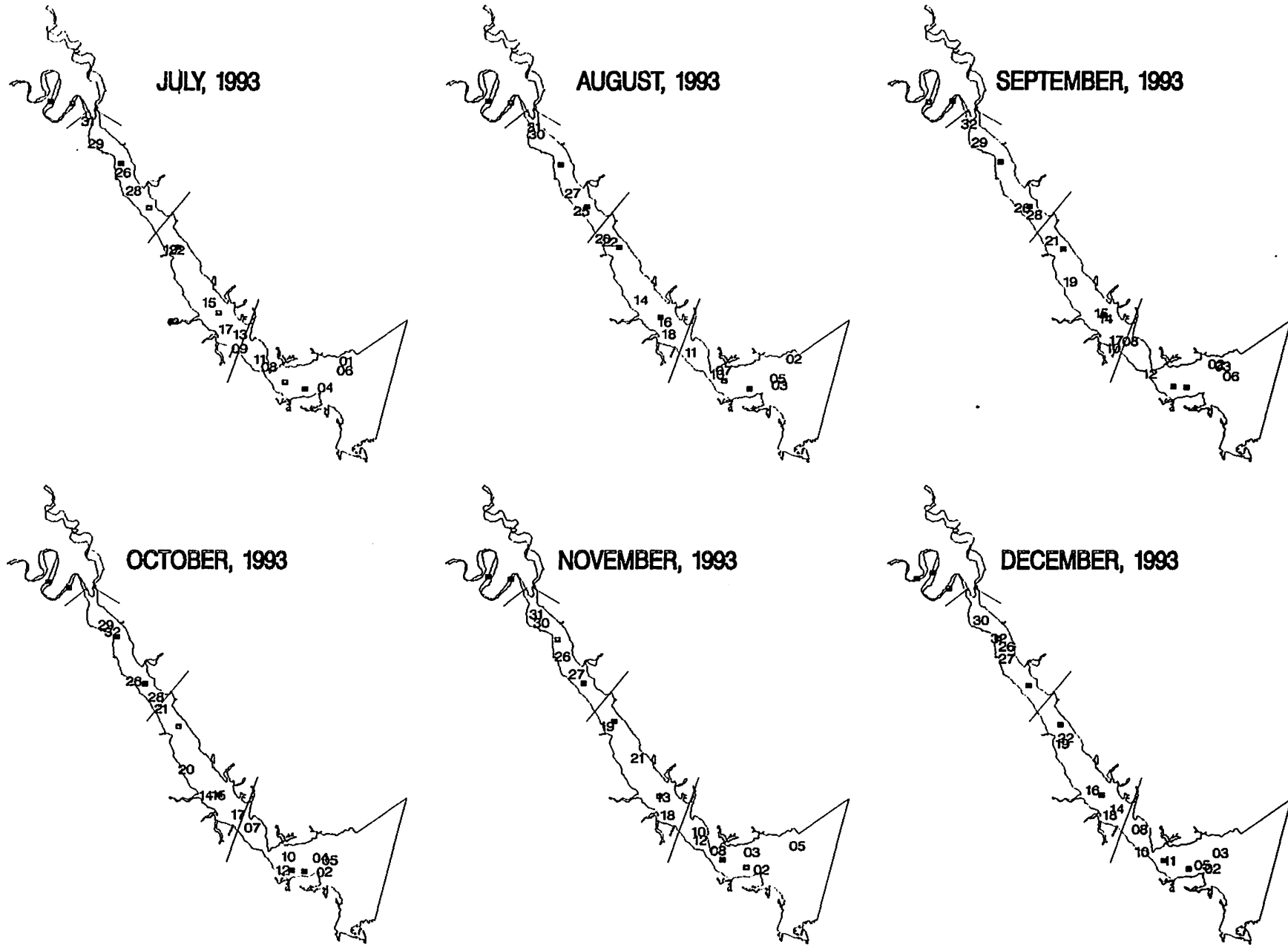
# York River Random Station Locations



Note: Squares Represent Fixed Station Locations

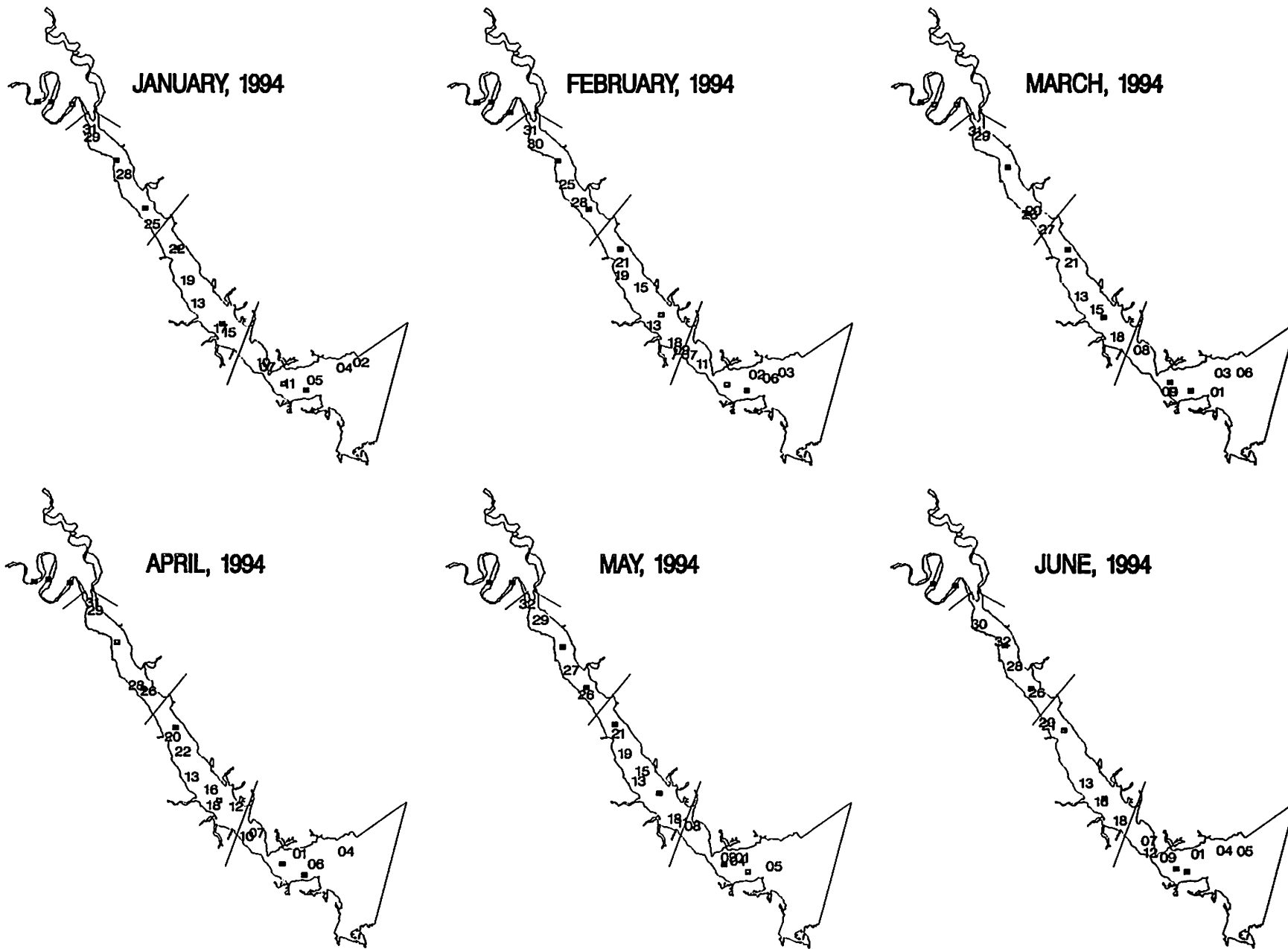
Figure 4.

# York River Random Station Locations



Note: Squares Represent Fixed Station Locations

# York River Random Station Locations

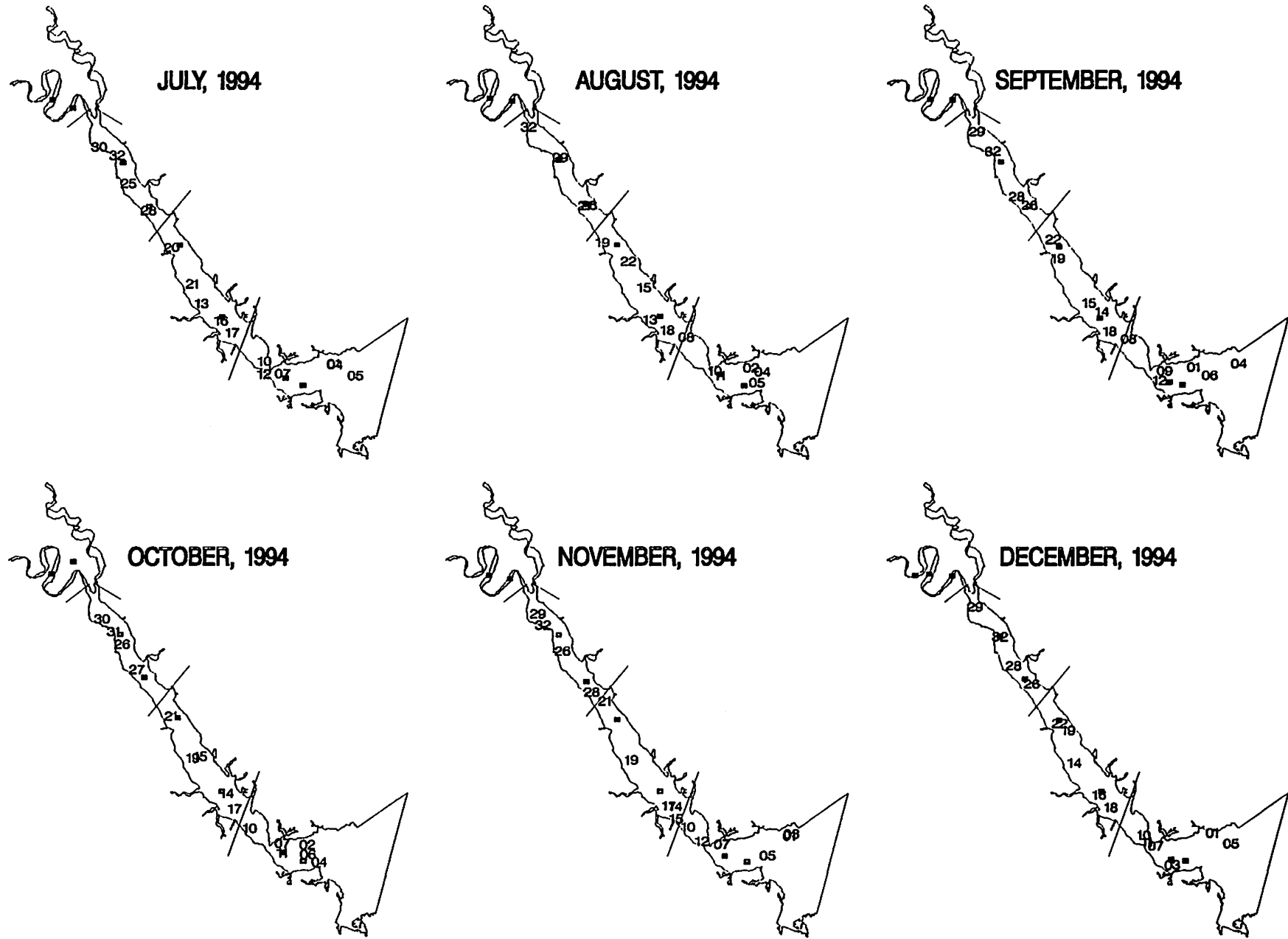


Note: Squares Represent Fixed Station Locations

Figure 5.



# York River Random Station Locations



Note: Squares Represent Fixed Station Locations

Figure 5. (cont.)

Figures 6-49. Geographic distribution, by month, of predominant species for 1991-1994 individually. 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 coordinates, refer to Tables 2-44.

# Atlantic Croaker, 1991

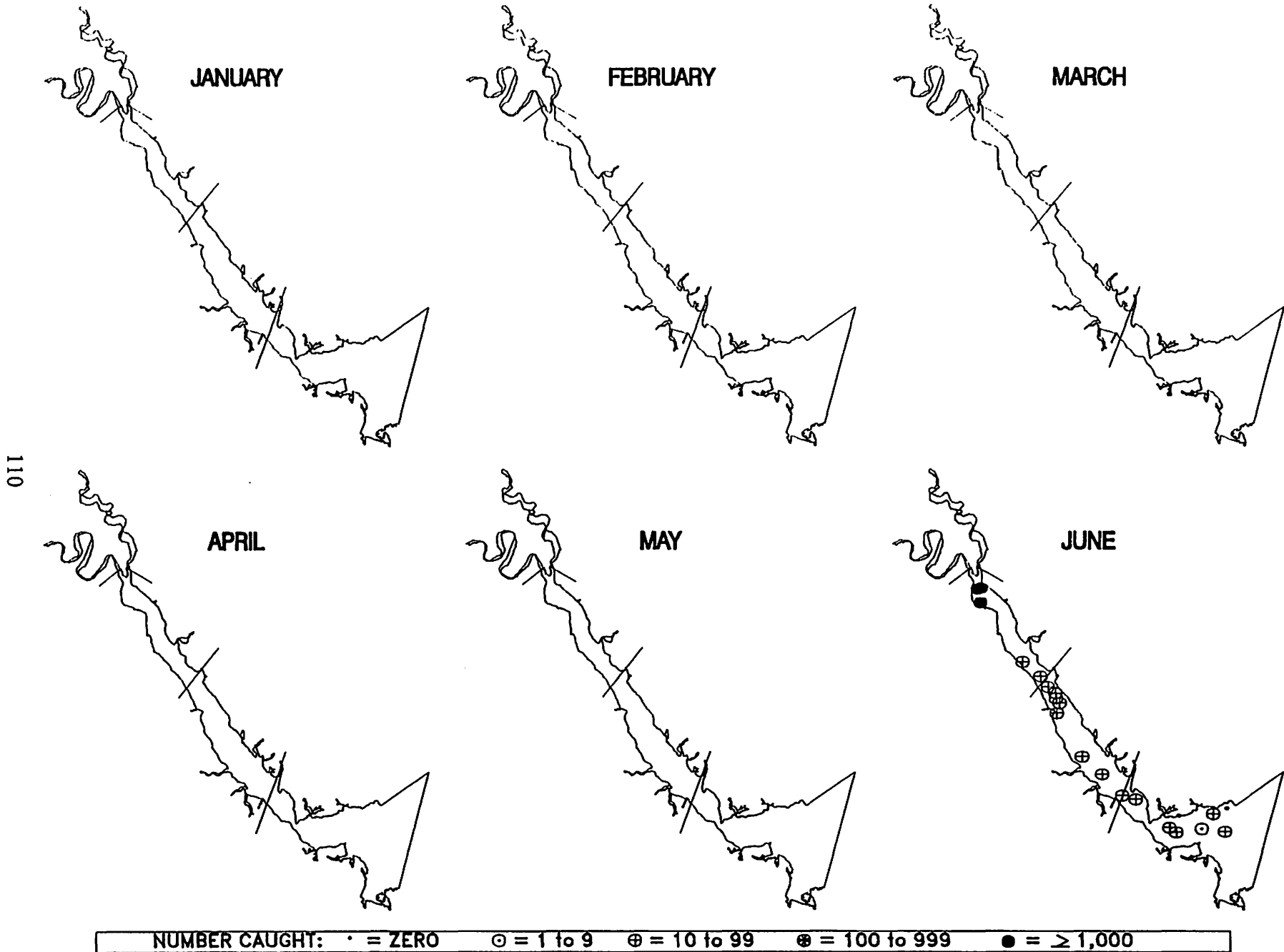
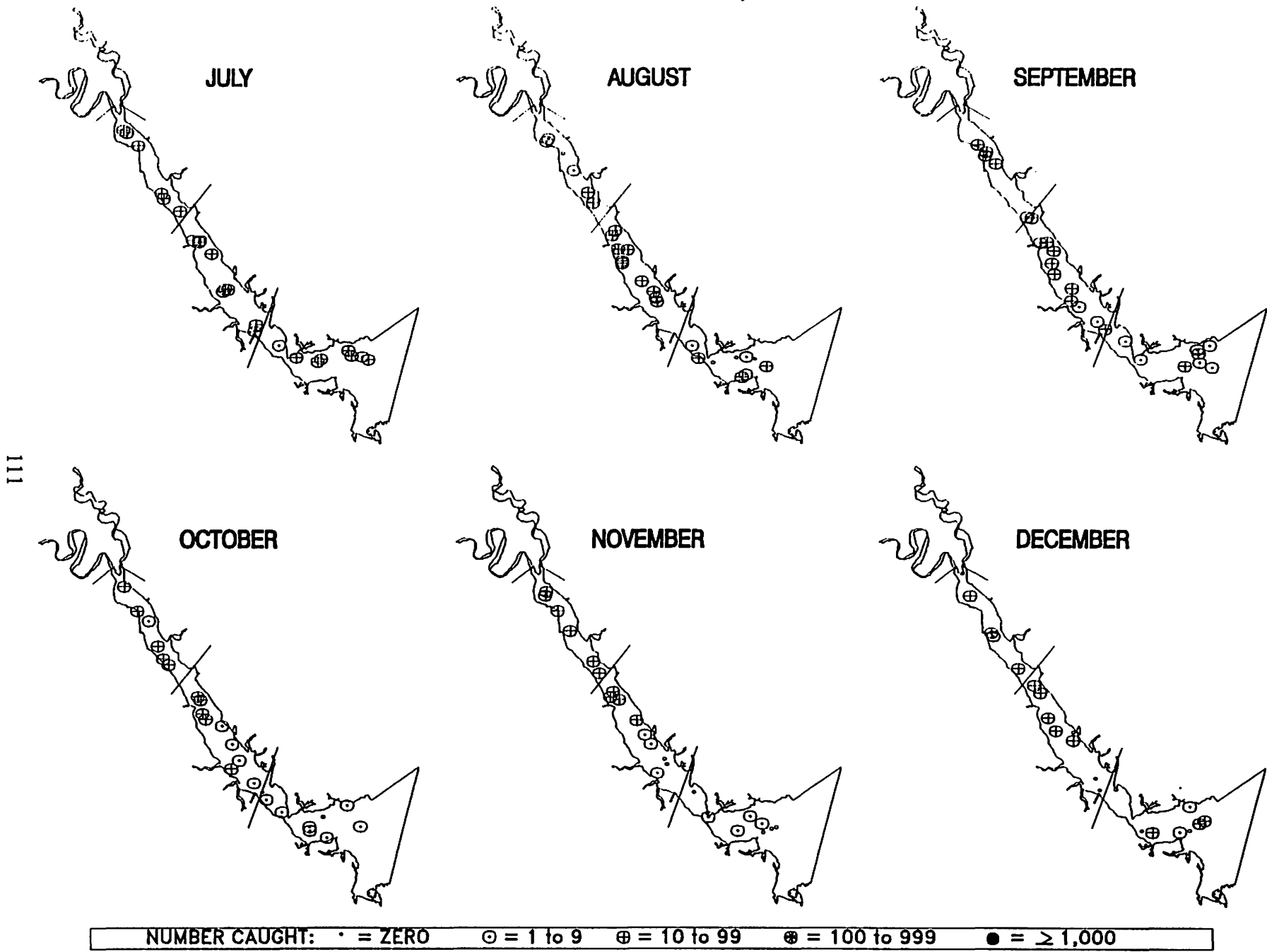


Figure 6.

# Atlantic Croaker, 1991

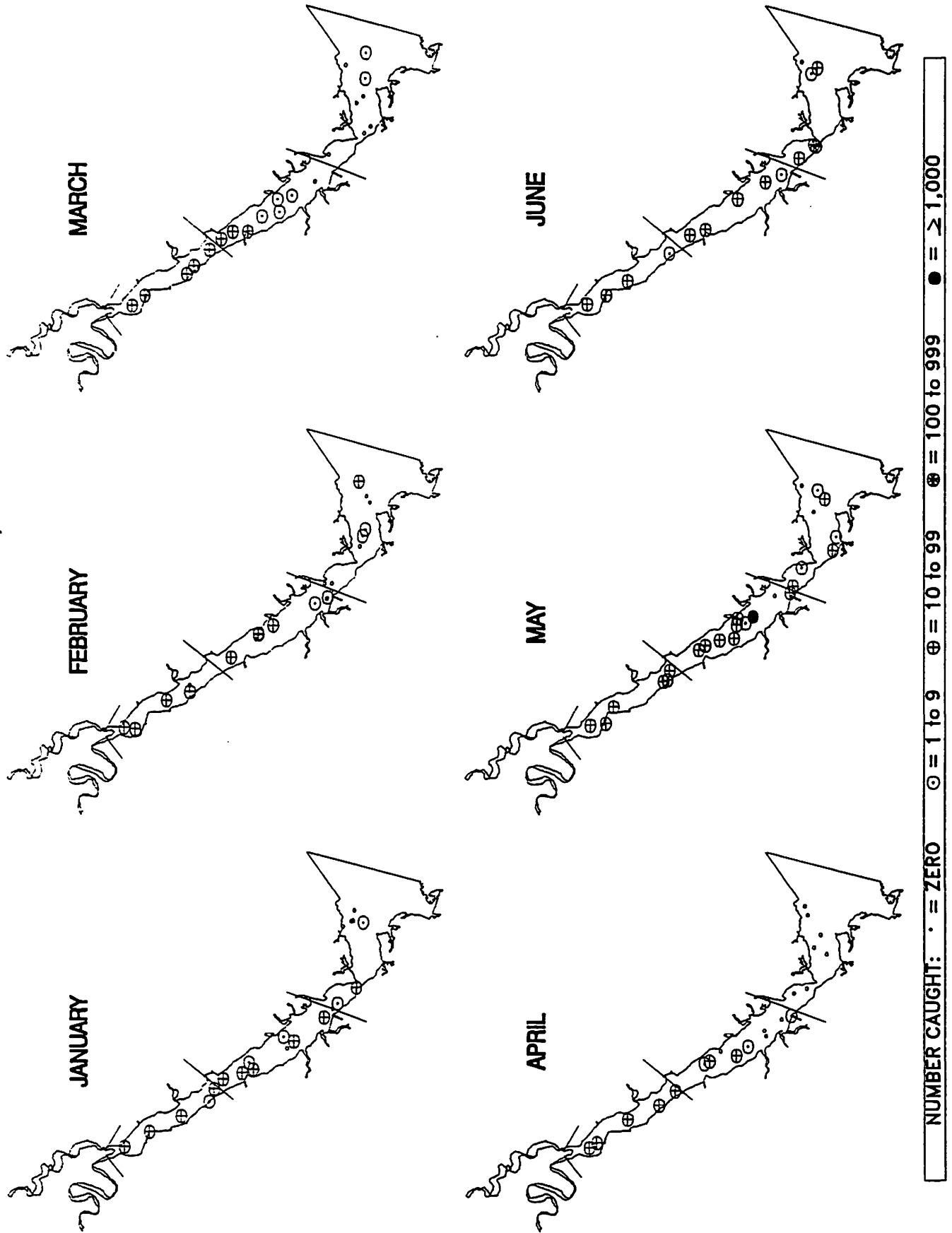


111

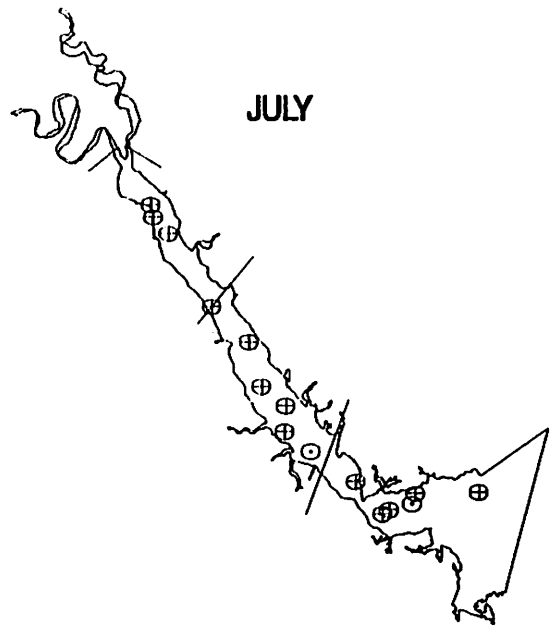
Figure 6.(cont.)

Figure 7.

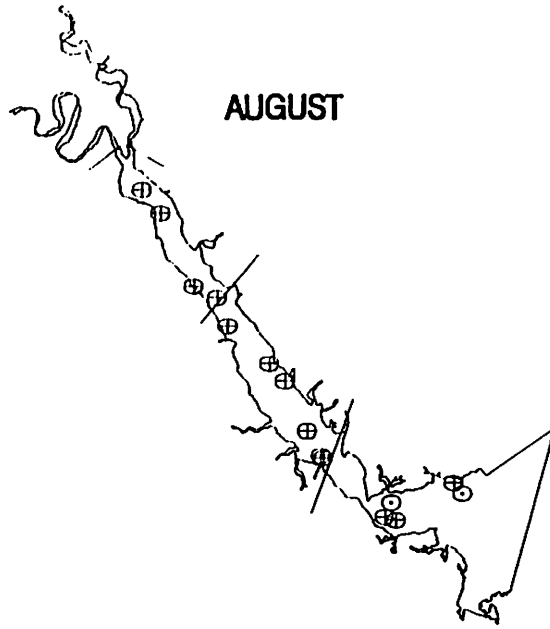
Atlantic Croaker, 1992



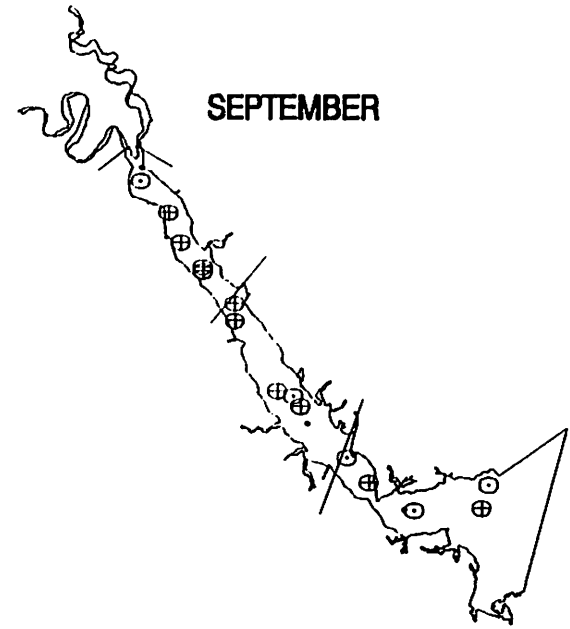
# Atlantic Croaker, 1992



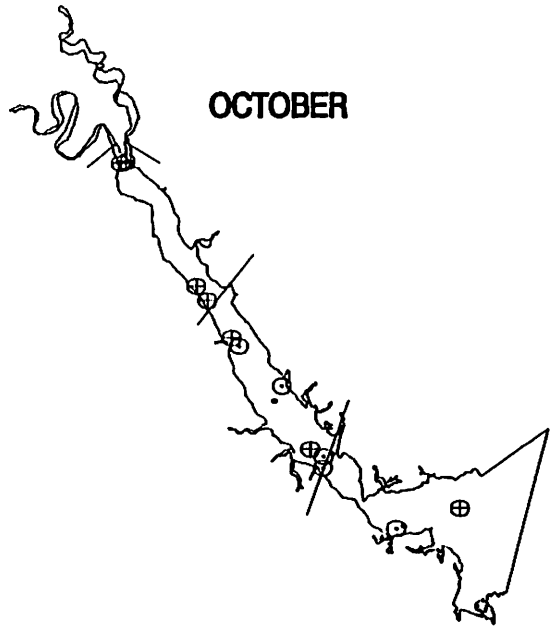
JULY



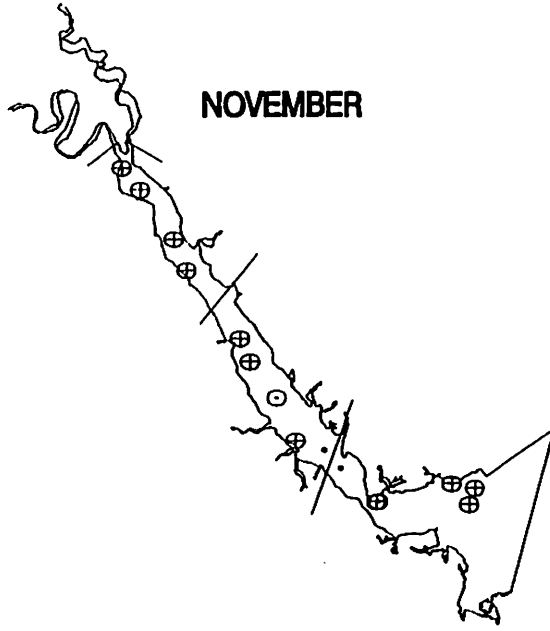
AUGUST



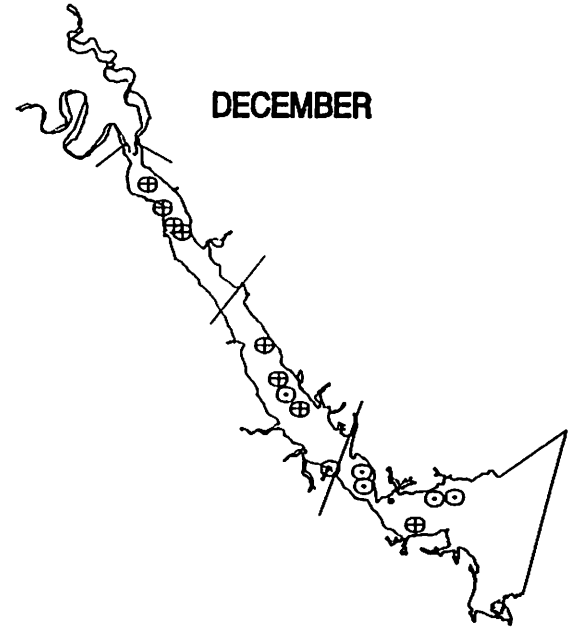
SEPTEMBER



OCTOBER



NOVEMBER



DECEMBER

113

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

Figure 7.(cont.)

# Atlantic Croaker, 1993

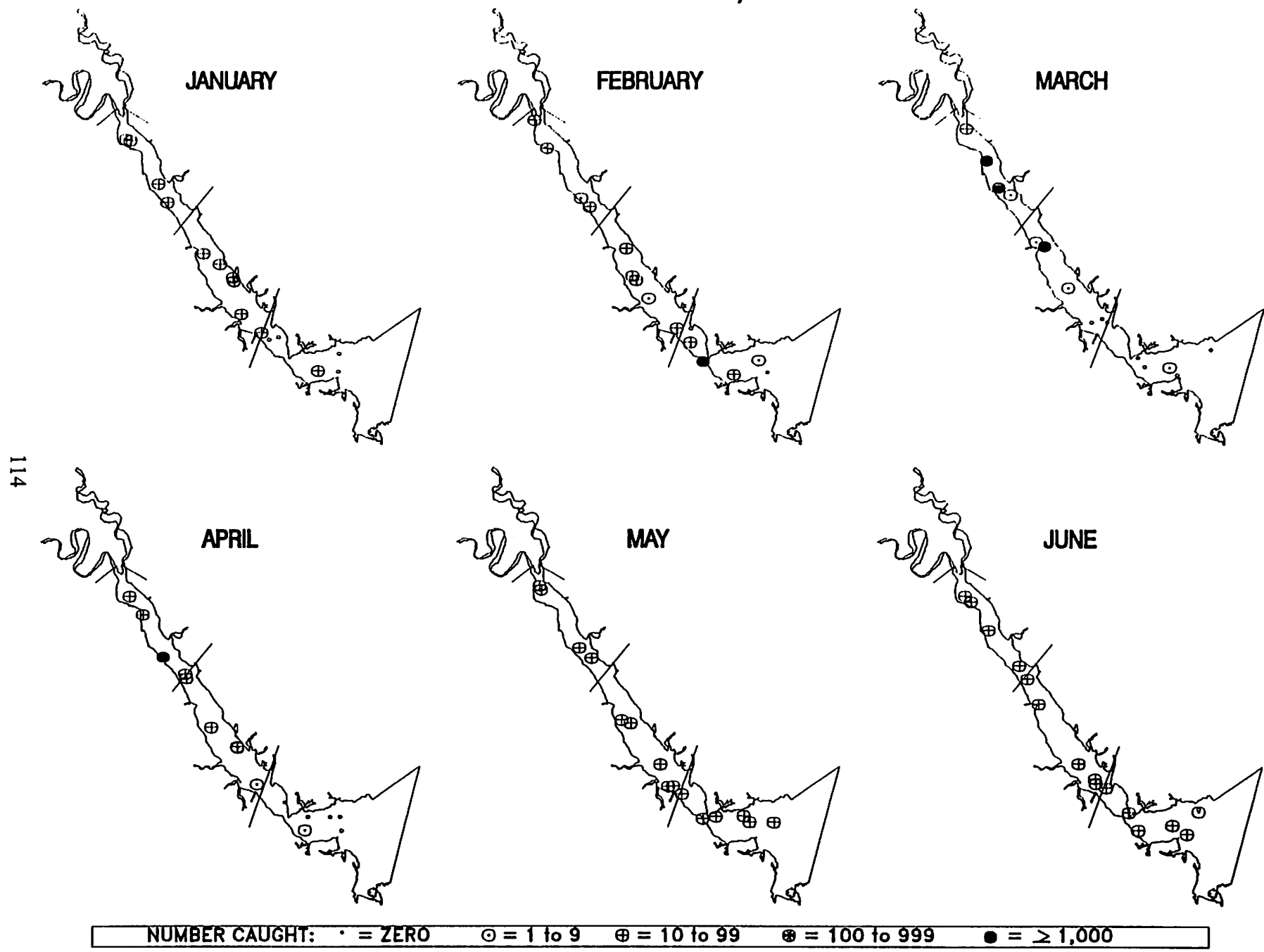
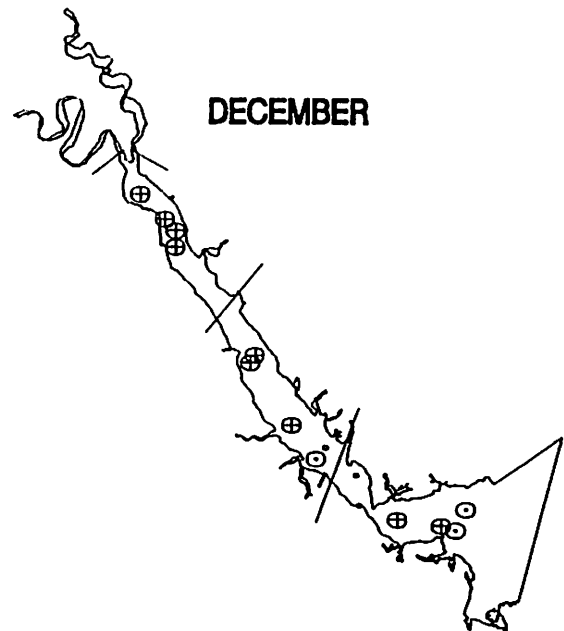
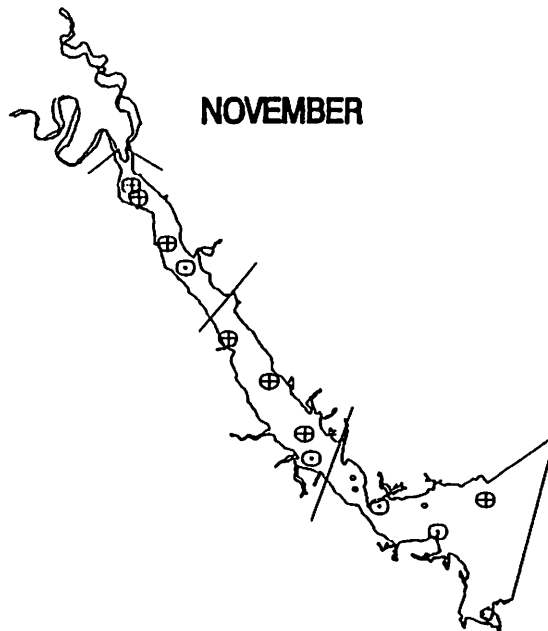
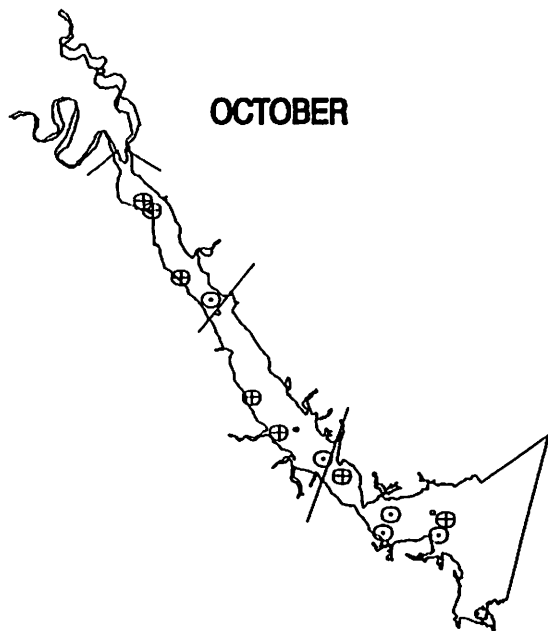
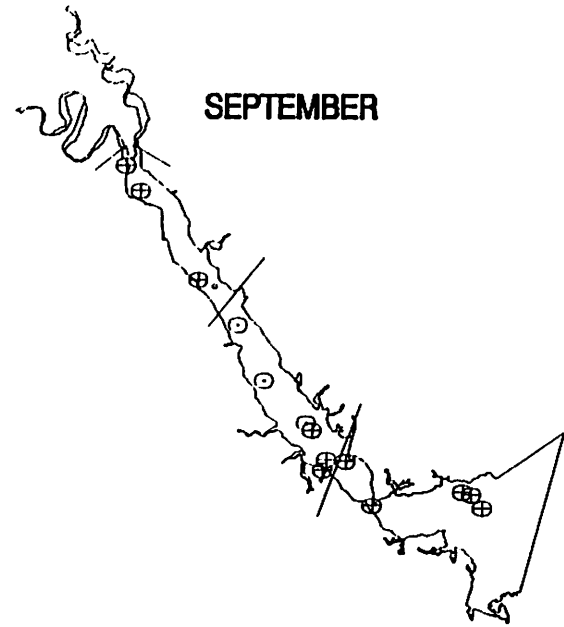
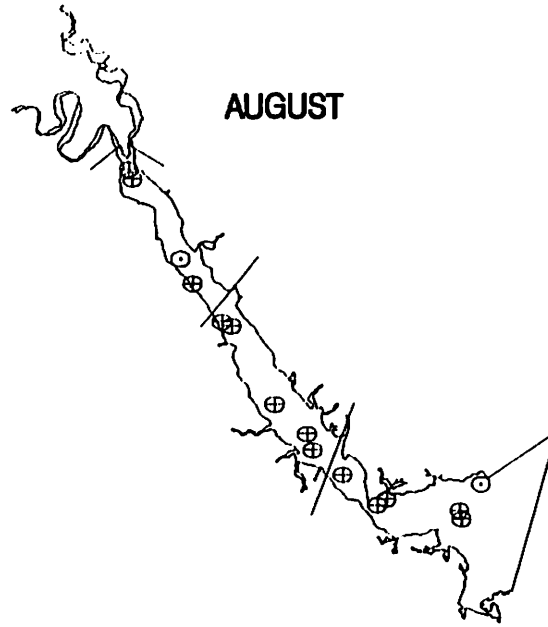
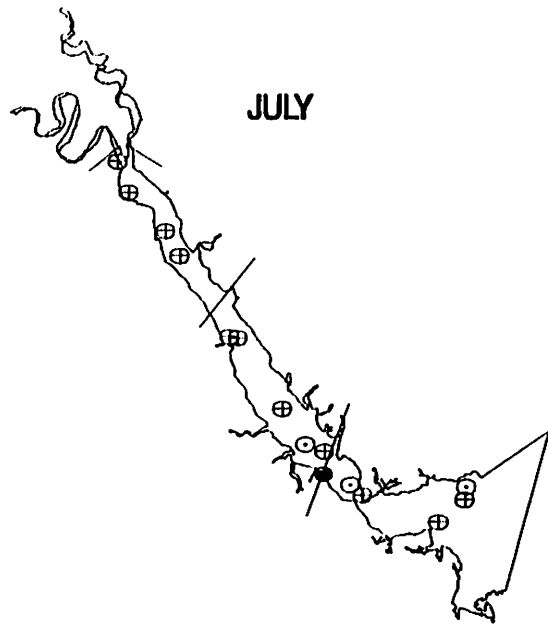


Figure 8.

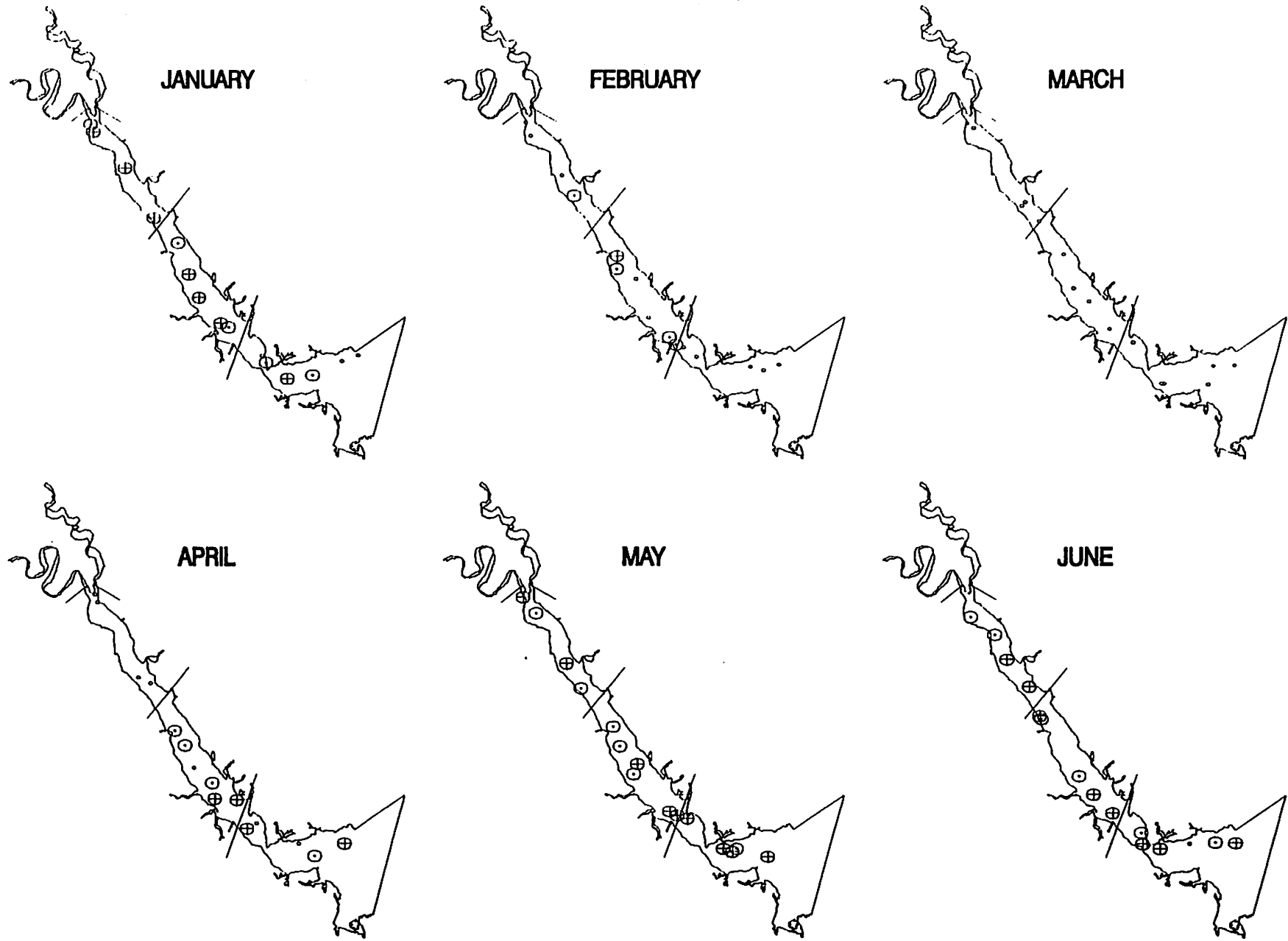
# Atlantic Croaker, 1993



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

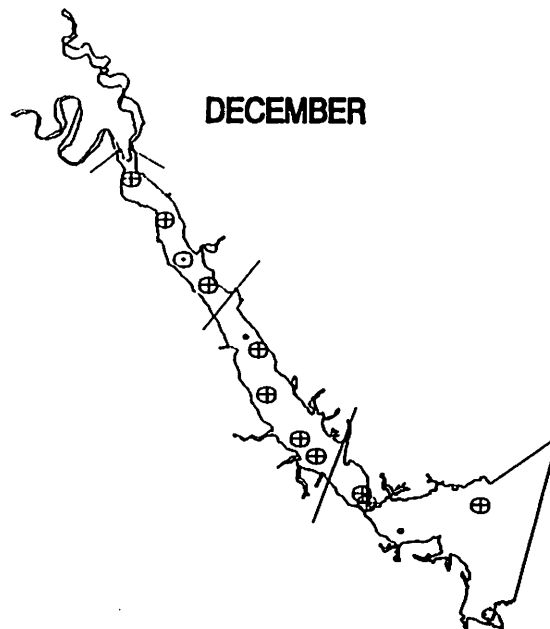
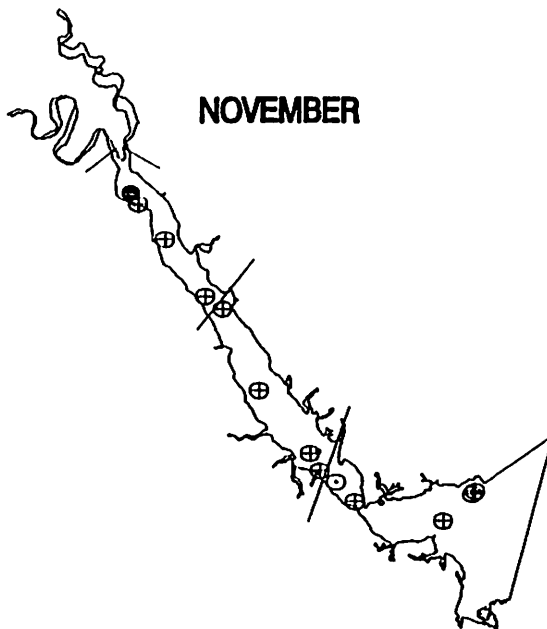
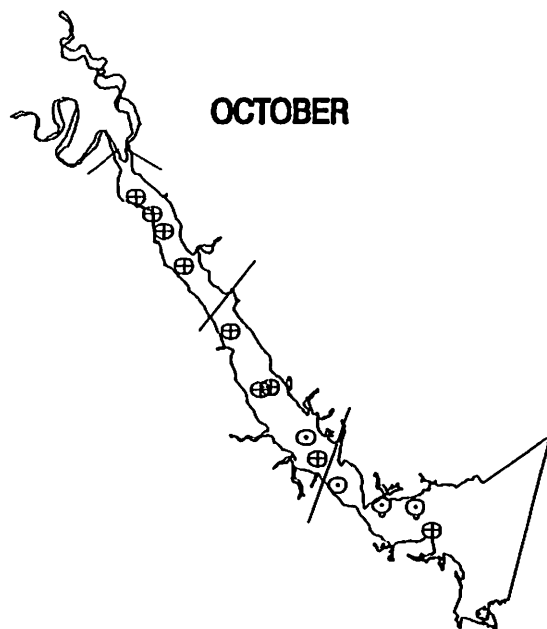
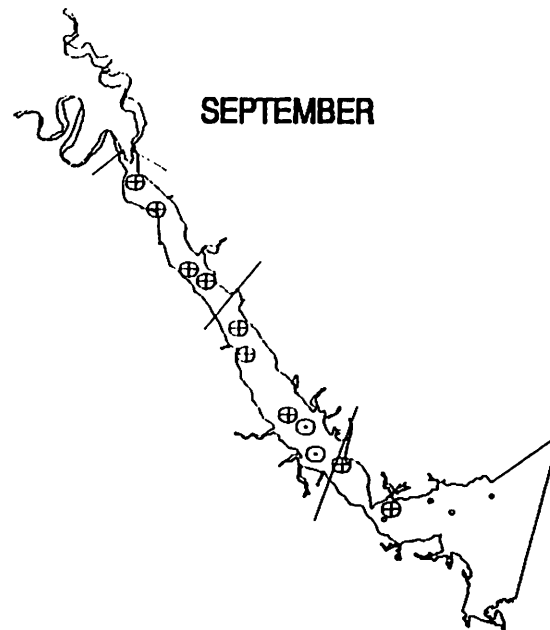
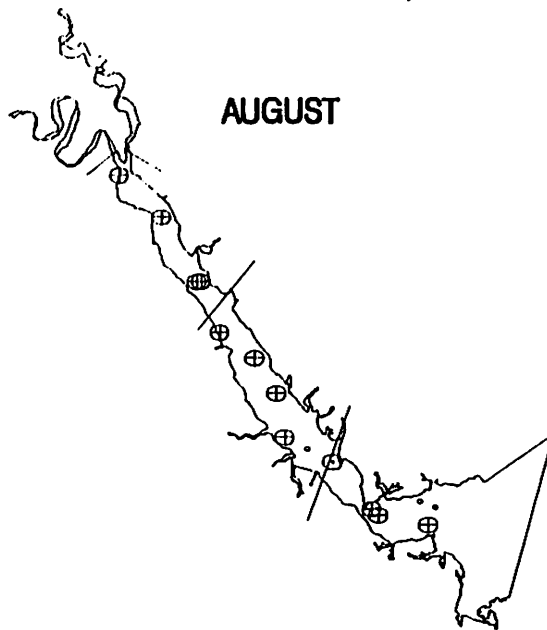
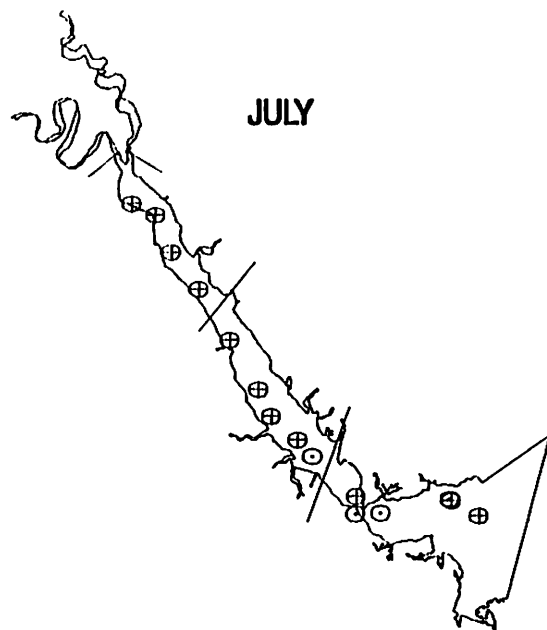


# Atlantic Croaker, 1994



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

# Atlantic Croaker, 1994



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

# Bay Anchovy, 1991

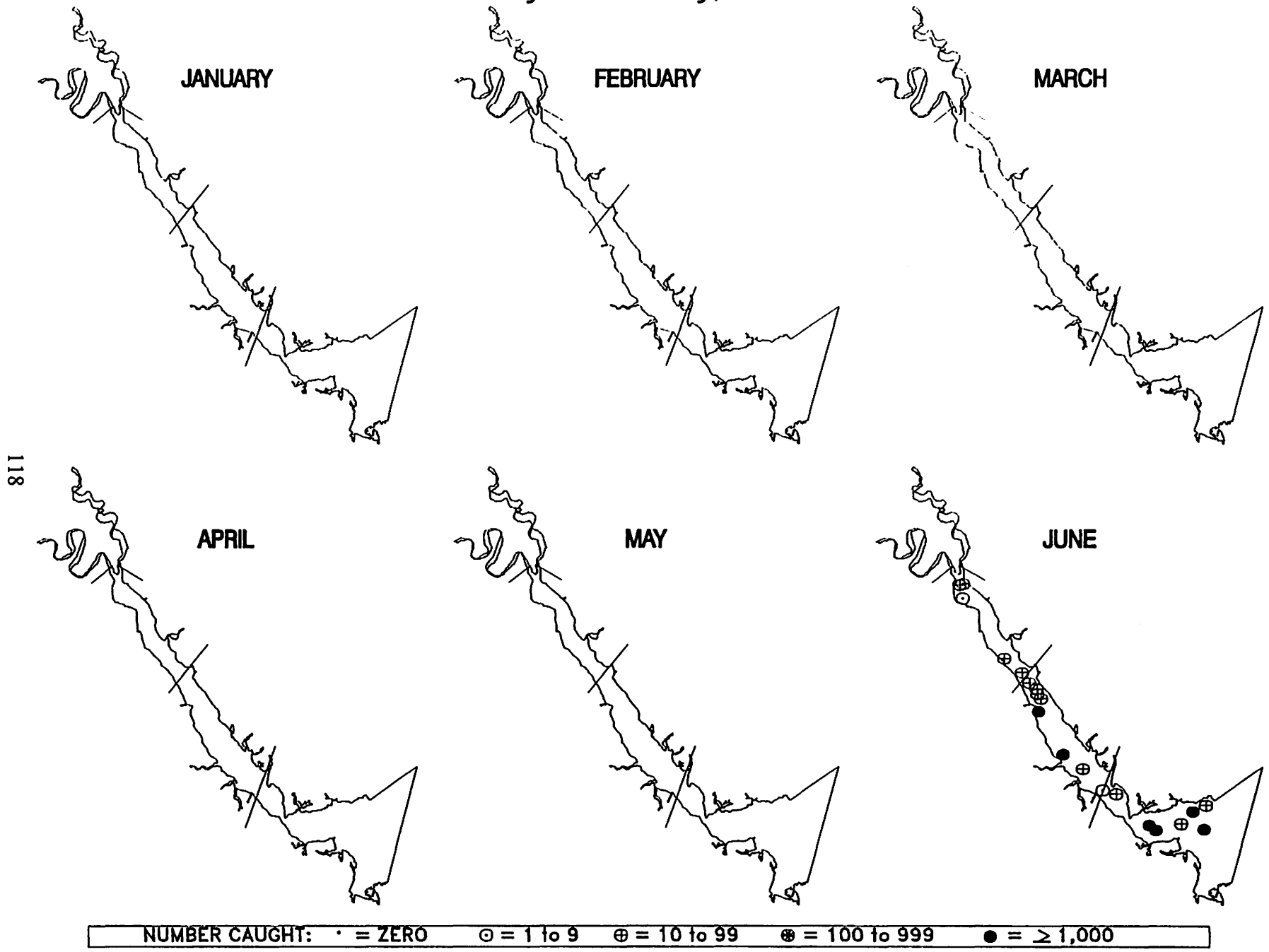


Figure 10.

118

# Bay Anchovy, 1991

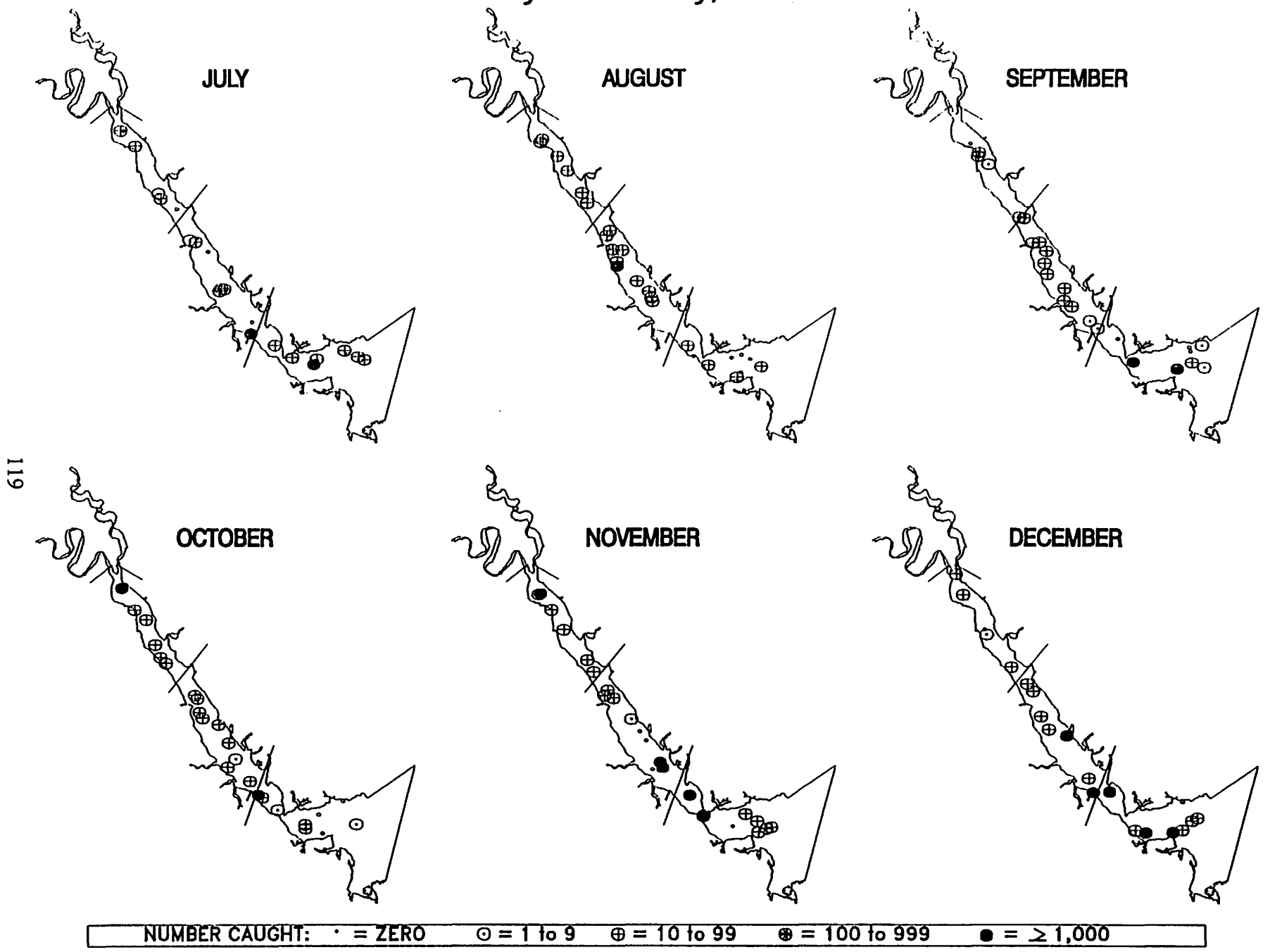


Figure 10.(cont.)

# Bay Anchovy, 1992

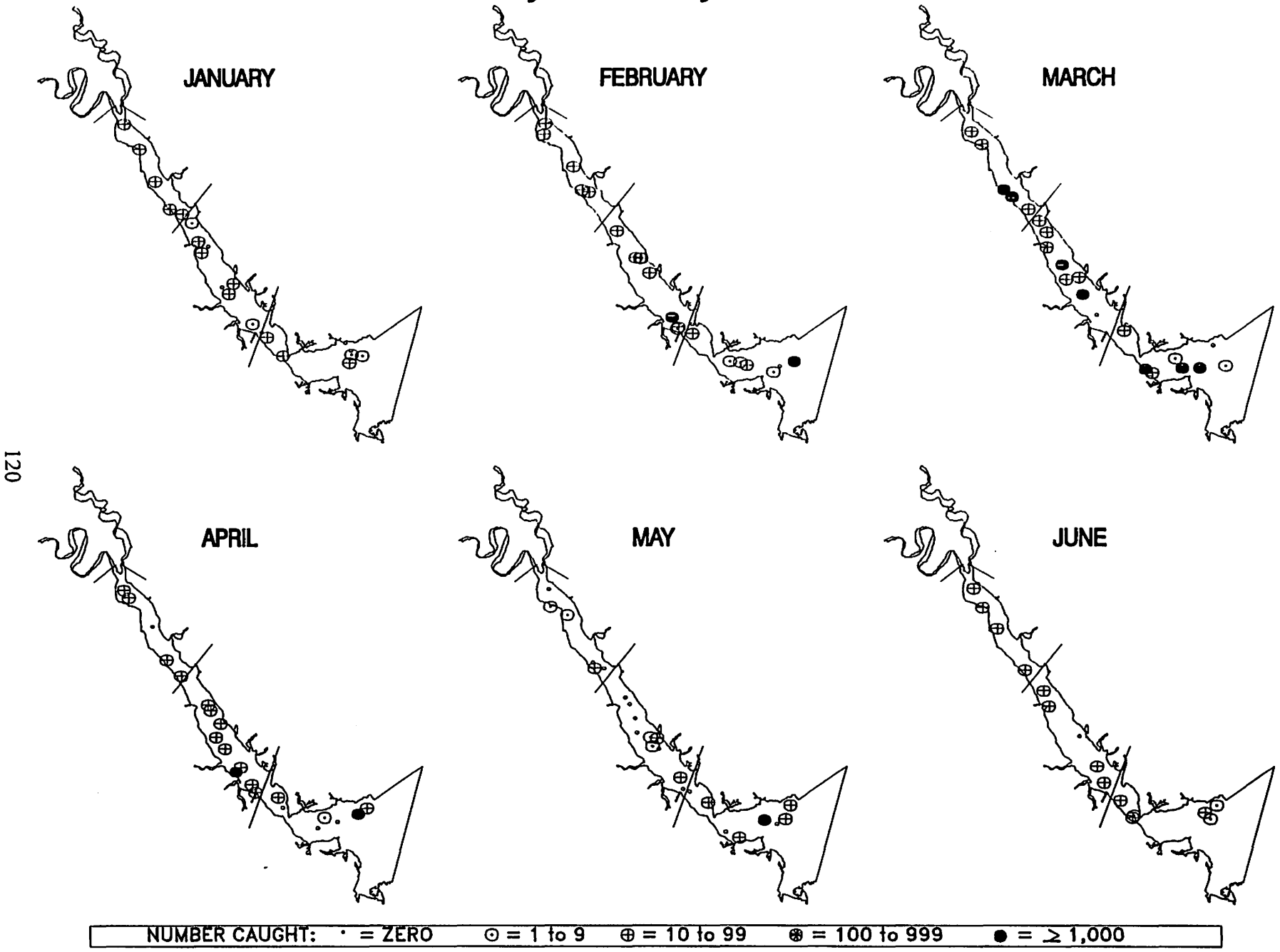
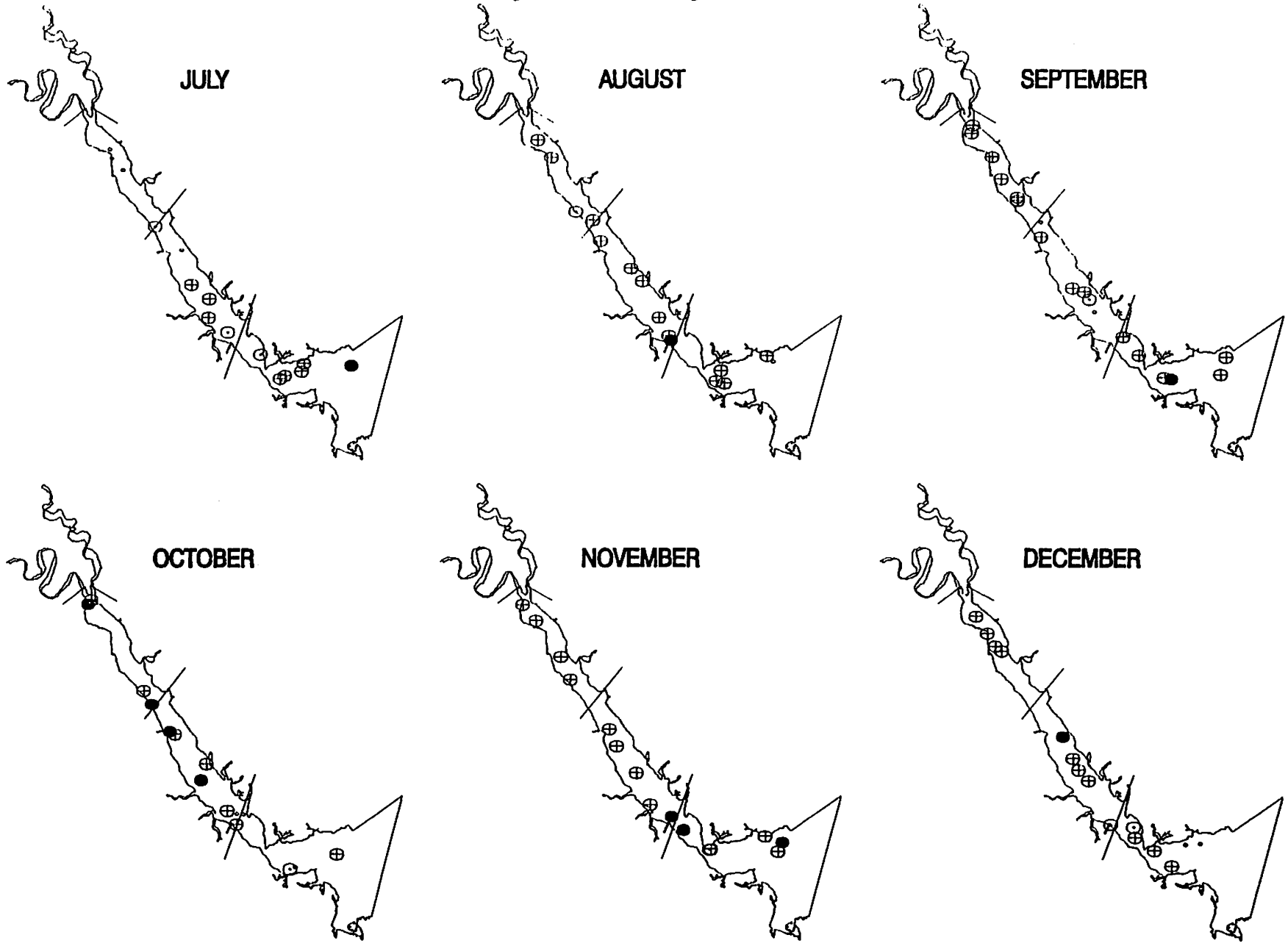


Figure 11.

# Bay Anchovy, 1992

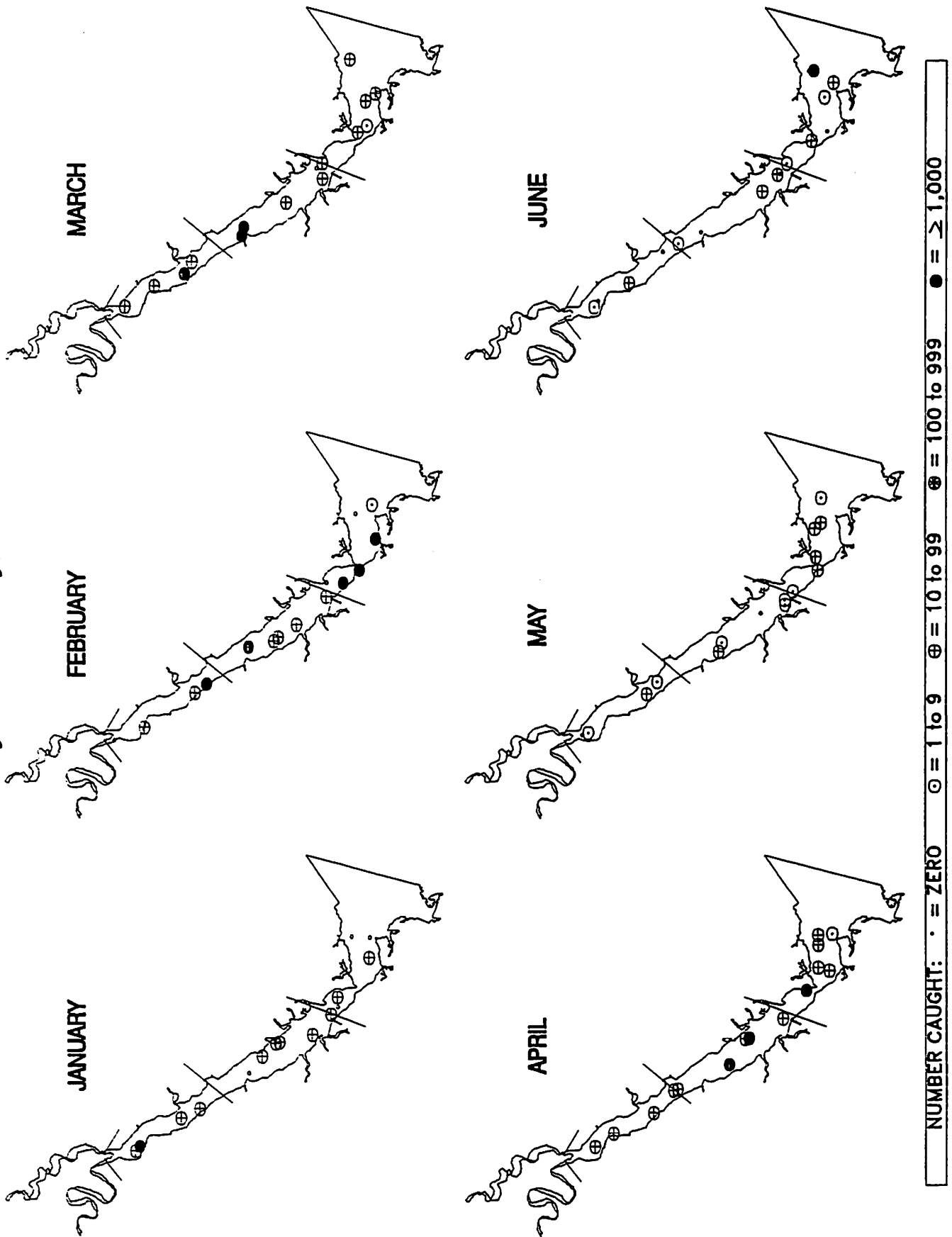


121

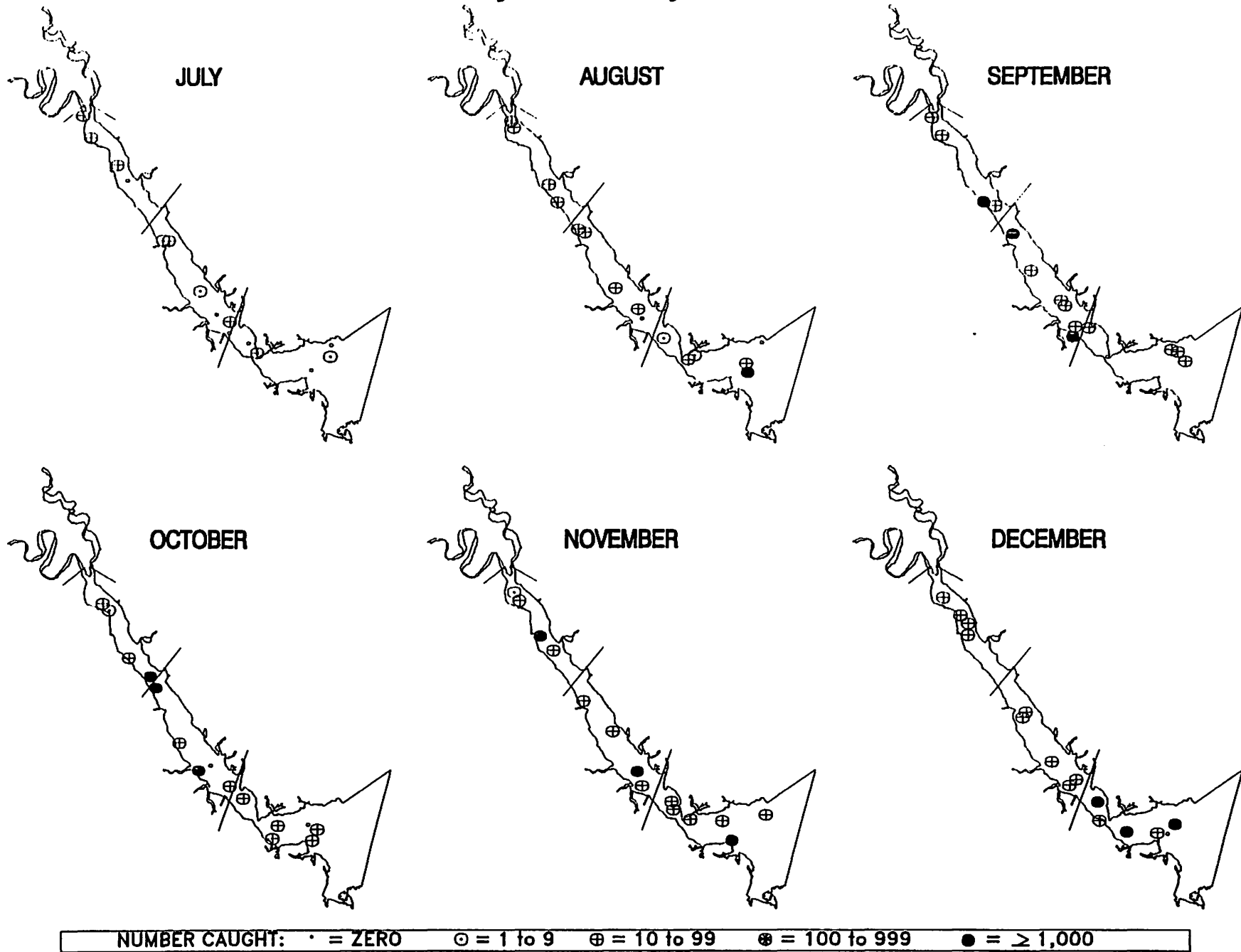
Figure 11.(cont.)

Figure 12.

Bay Anchovy, 1993



# Bay Anchovy, 1993

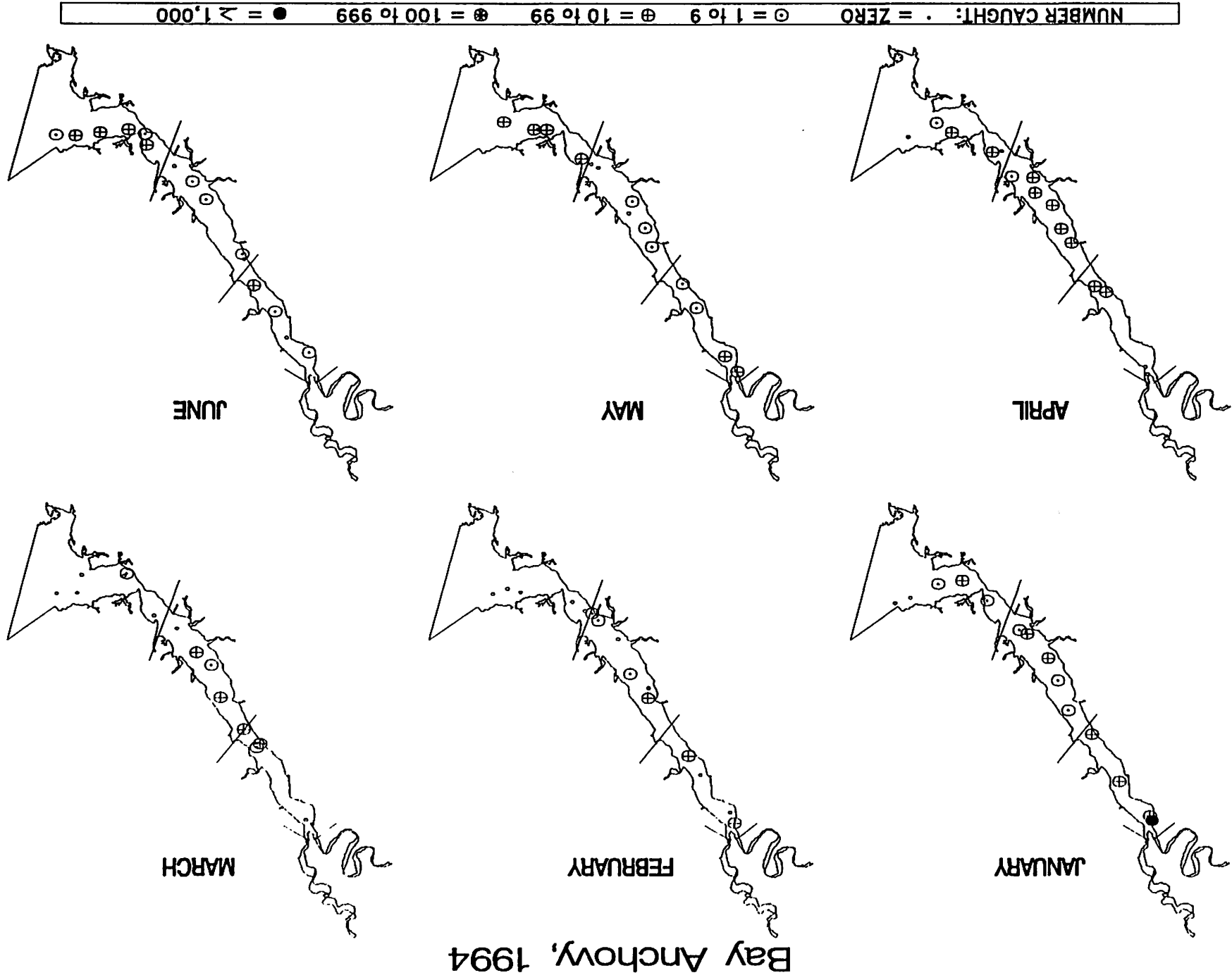


123

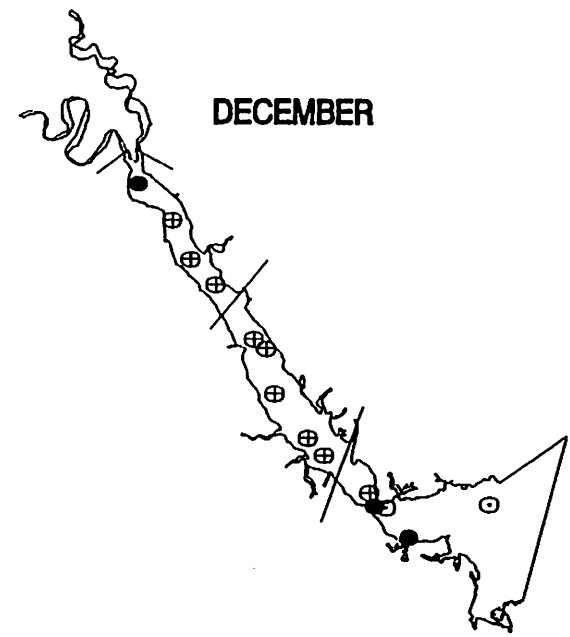
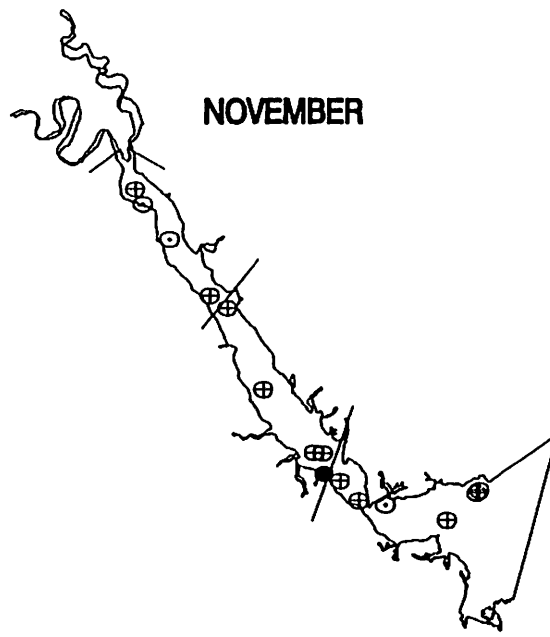
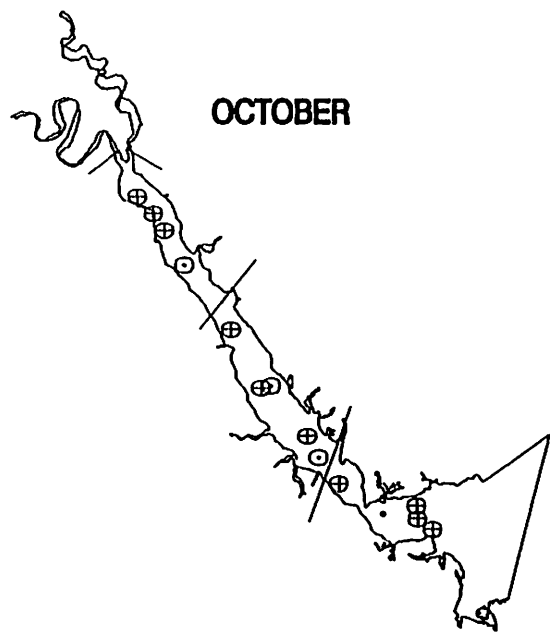
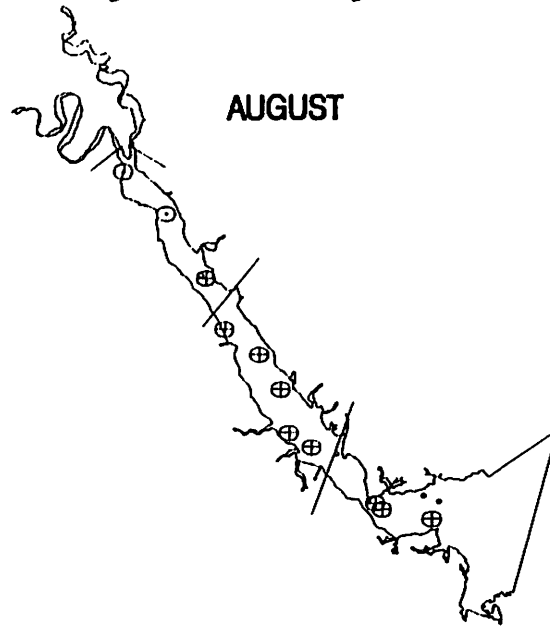
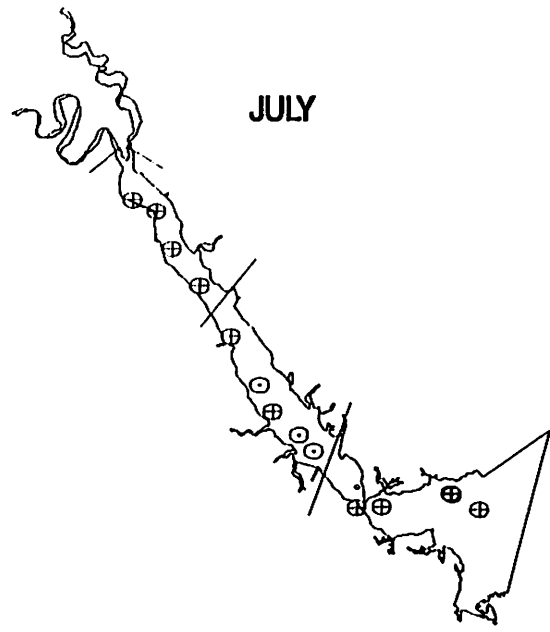
Figure 12.(cont.)



Figure 13.



# Bay Anchovy, 1994

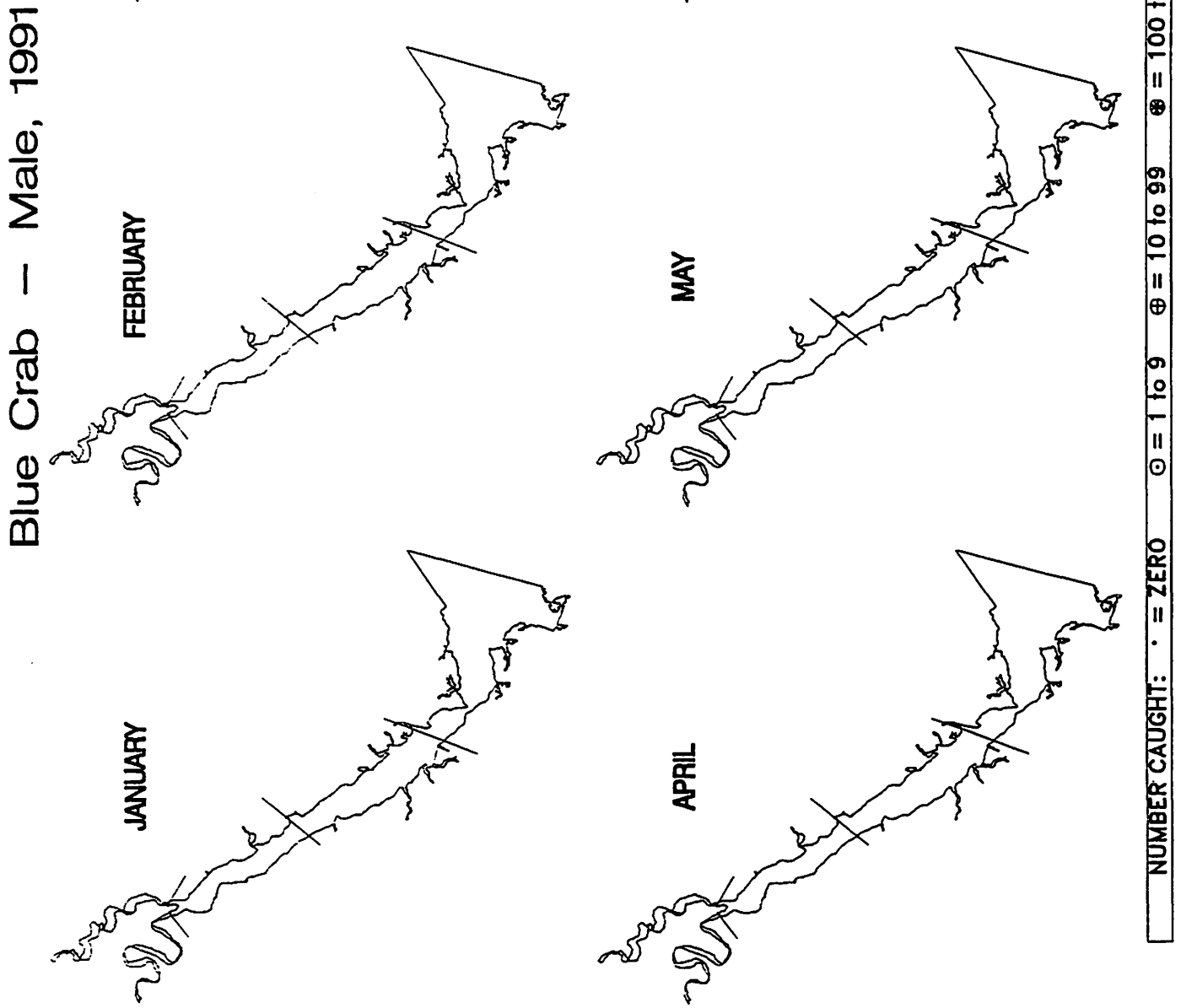


NUMBER CAUGHT: · = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

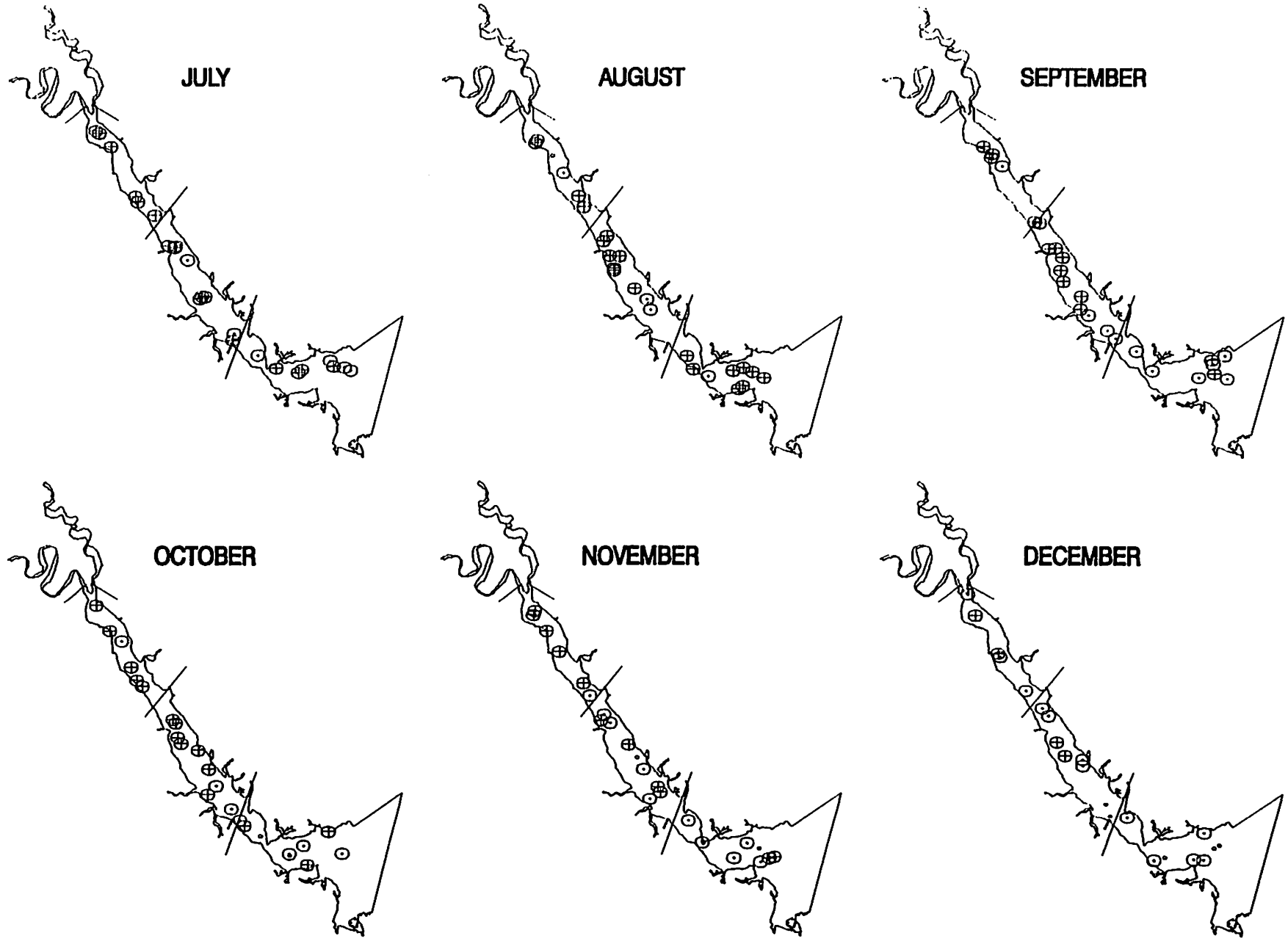
125

Figure 13.(cont.)

Figure 14.



# Blue Crab — Male, 1991



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

Figure 14.(cont.)

# Blue Crab — Male, 1992

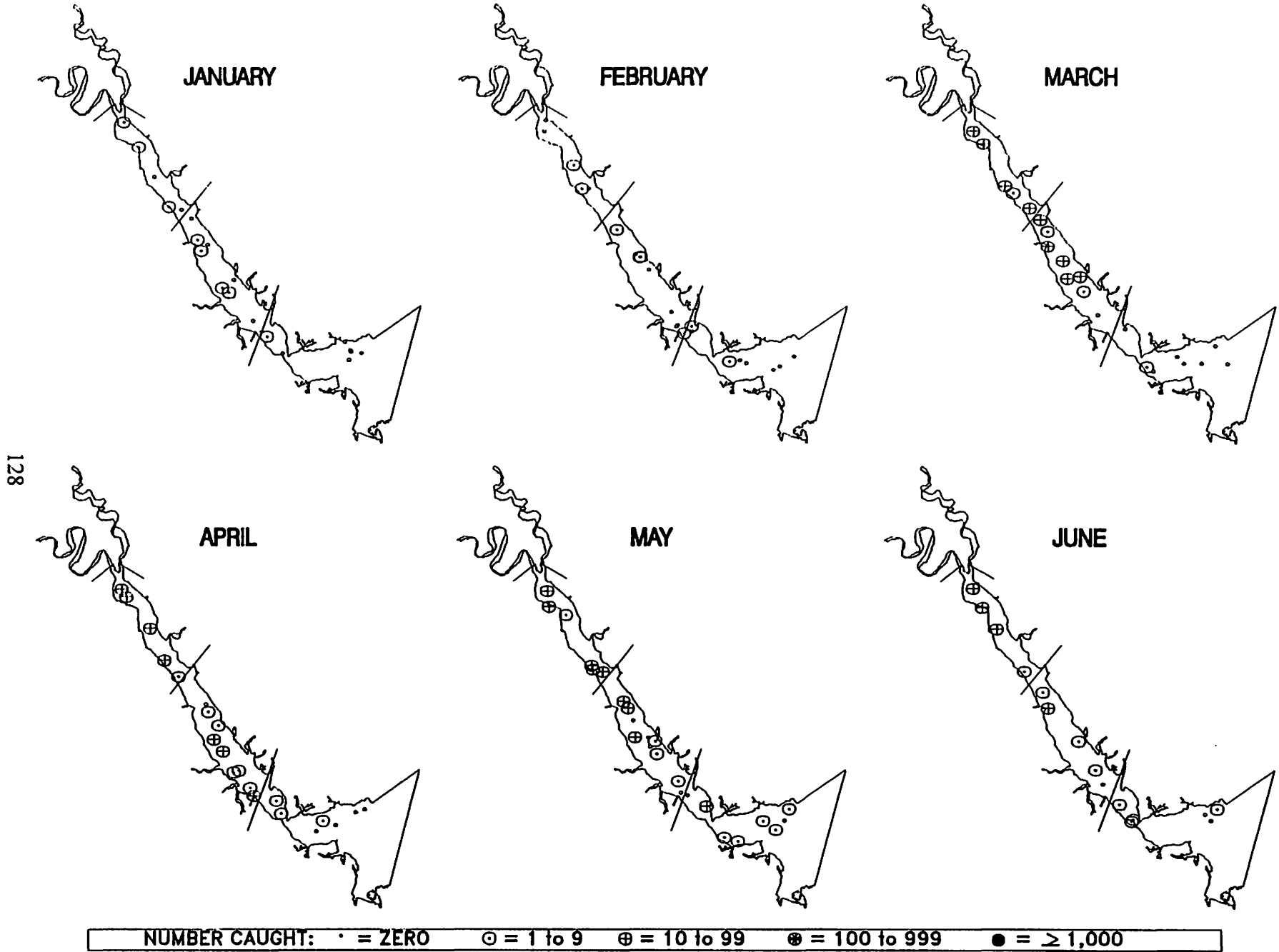


Figure 15.

# Blue Crab — Male, 1992

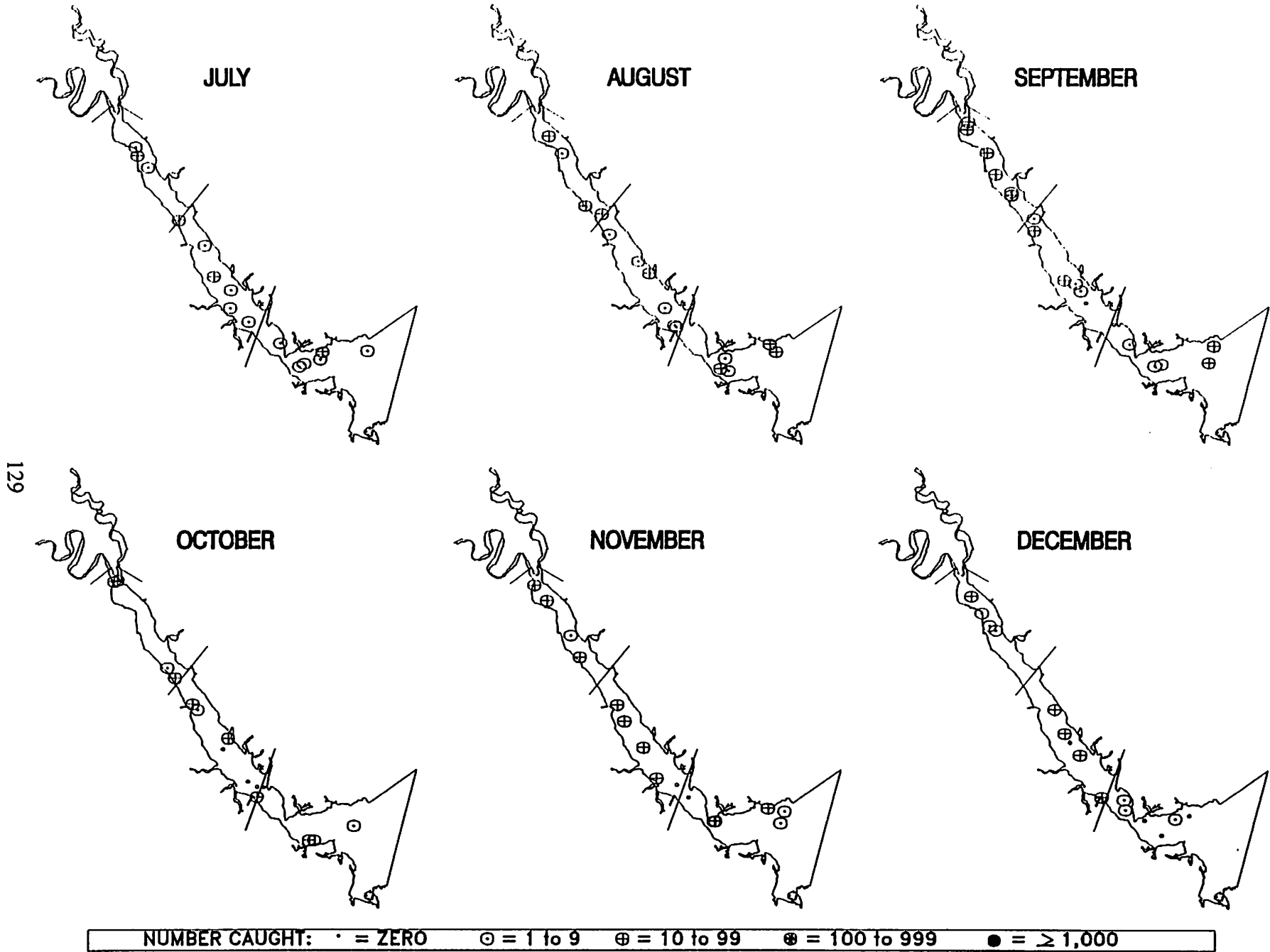


Figure 15.(cont.)

# Blue Crab — Male, 1993

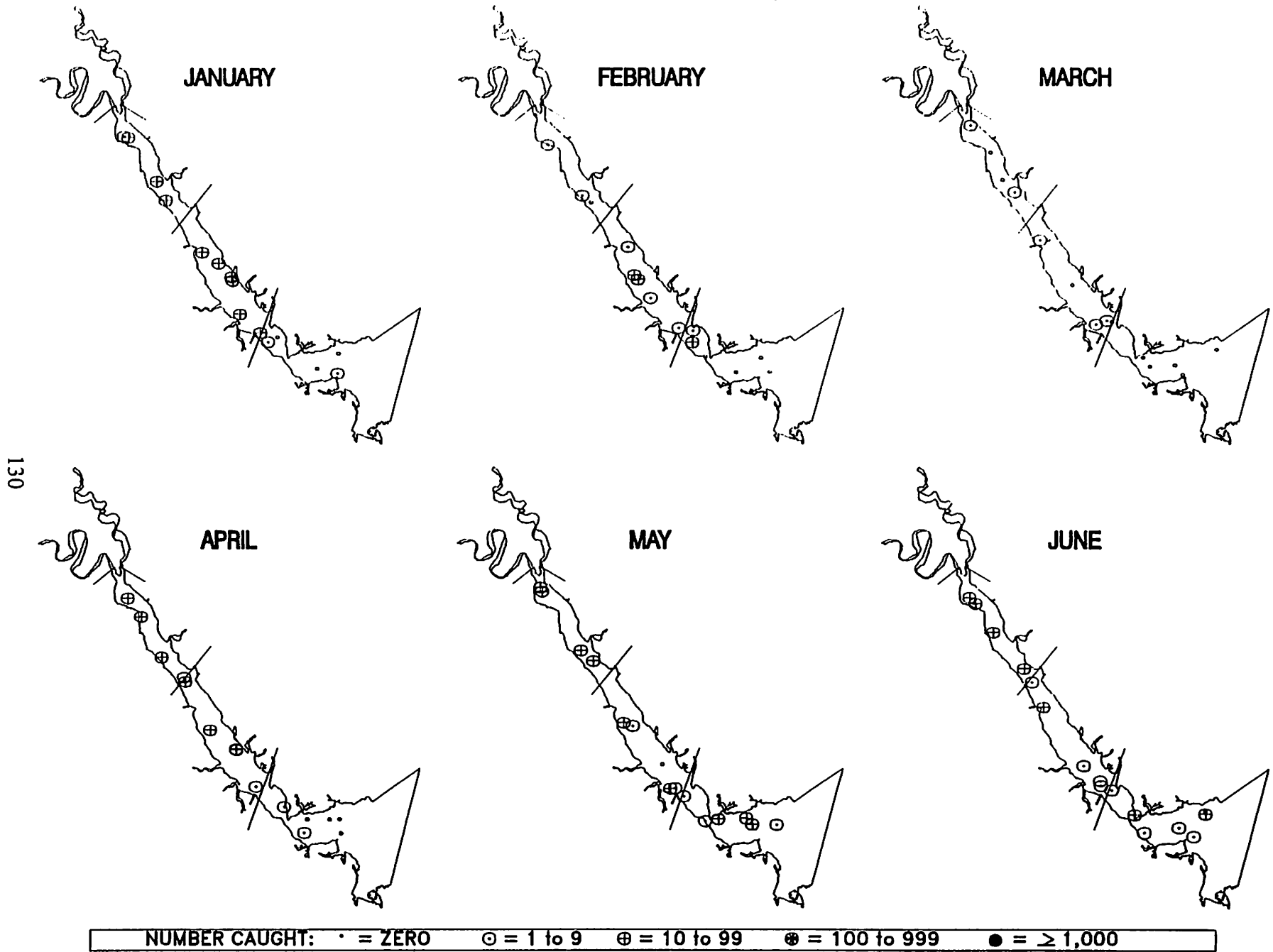
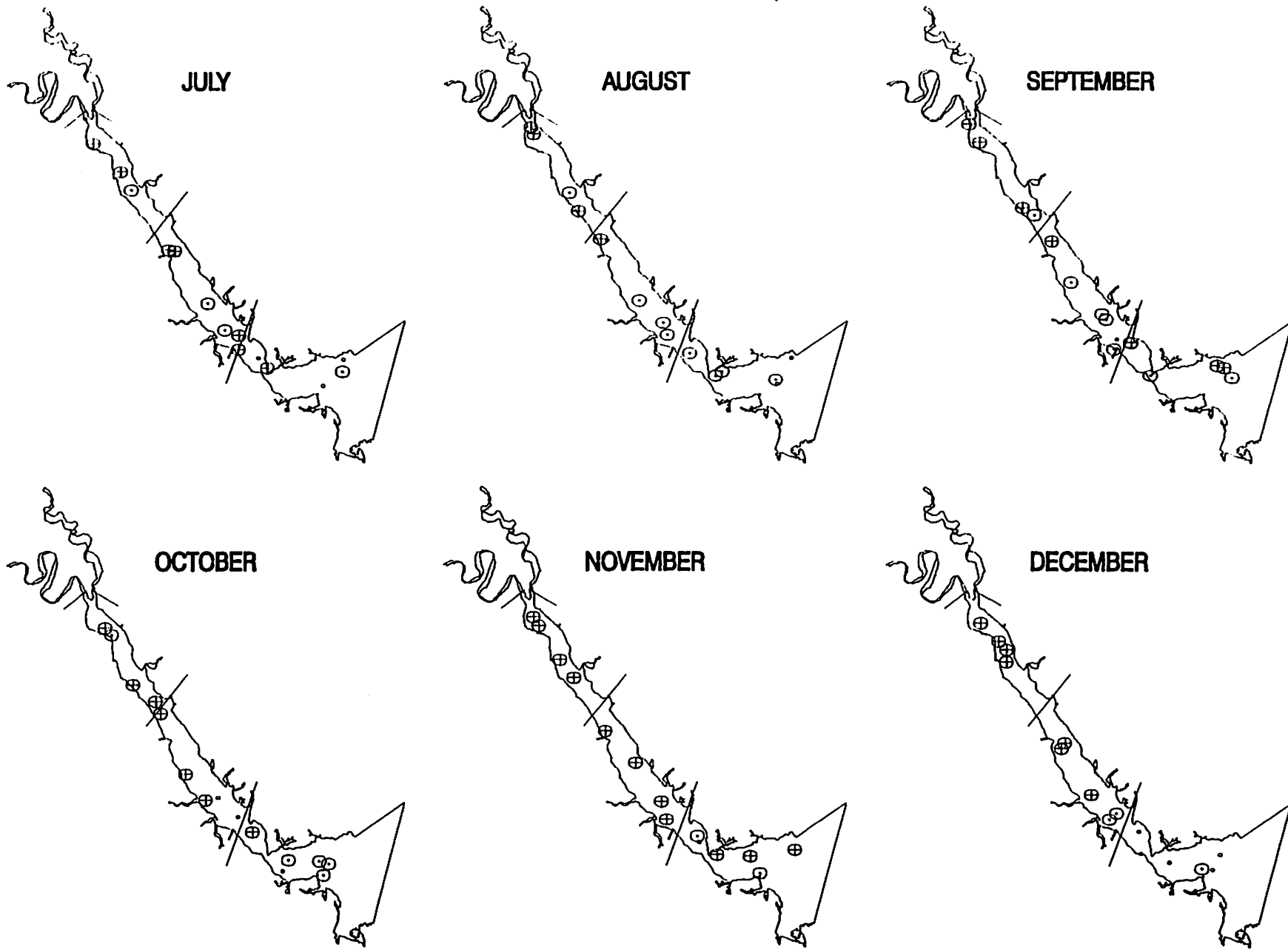


Figure 16.

# Blue Crab — Male, 1993



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



# Blue Crab — Male, 1994

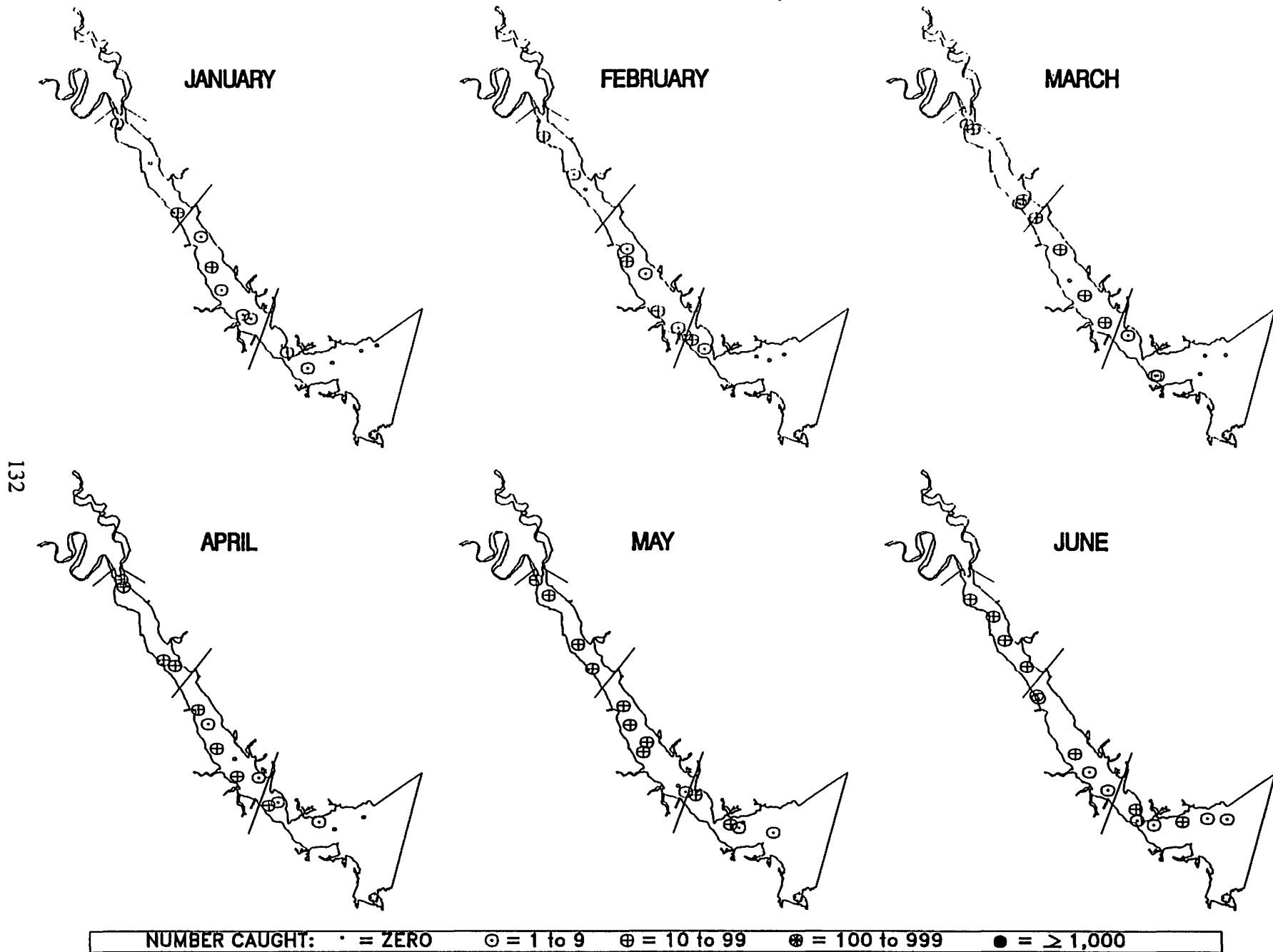
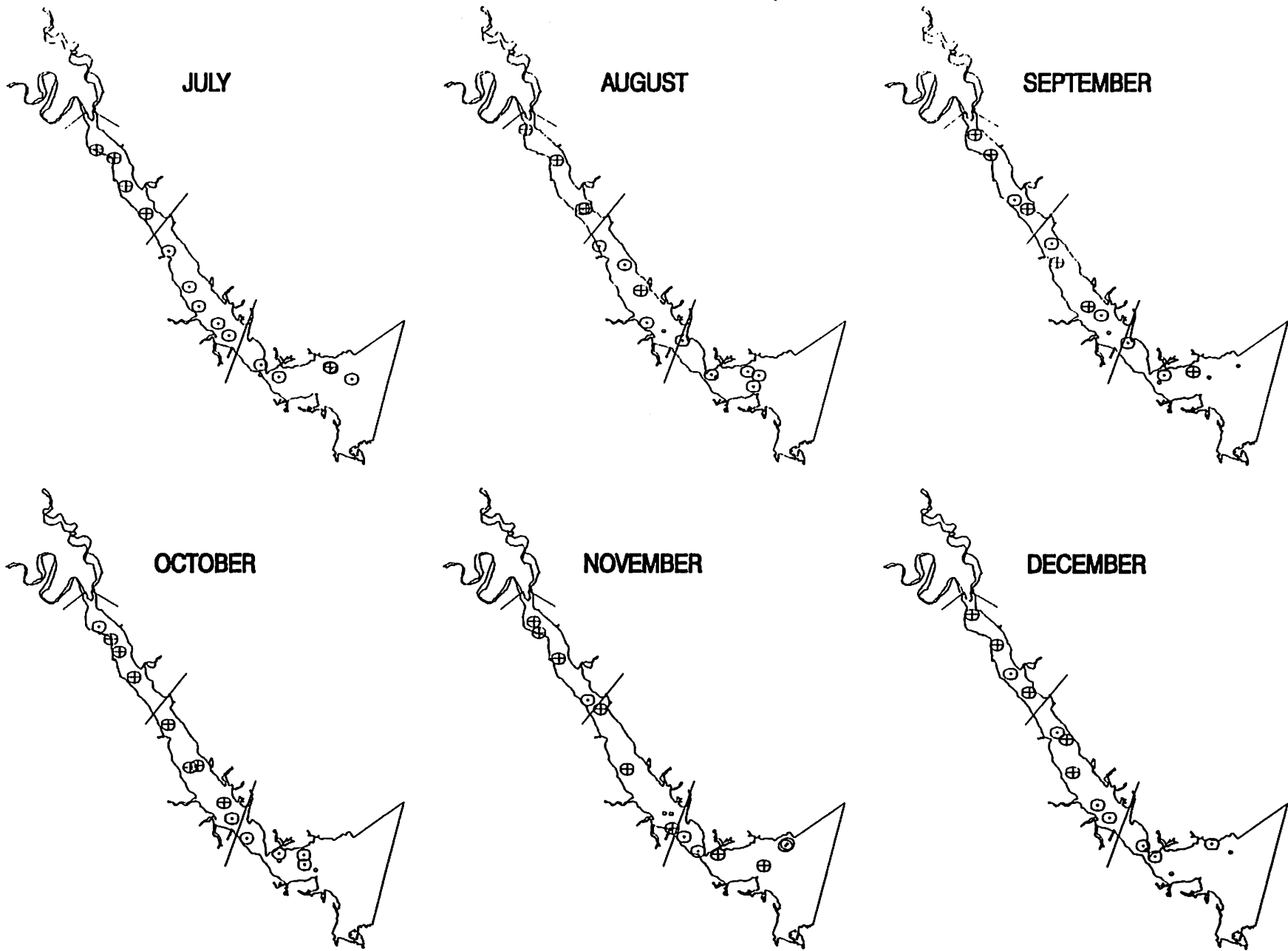


Figure 17.

# Blue Crab — Male, 1994



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

Figure 17.(cont.)

# Blue Crab — Juvenile Female, 1991

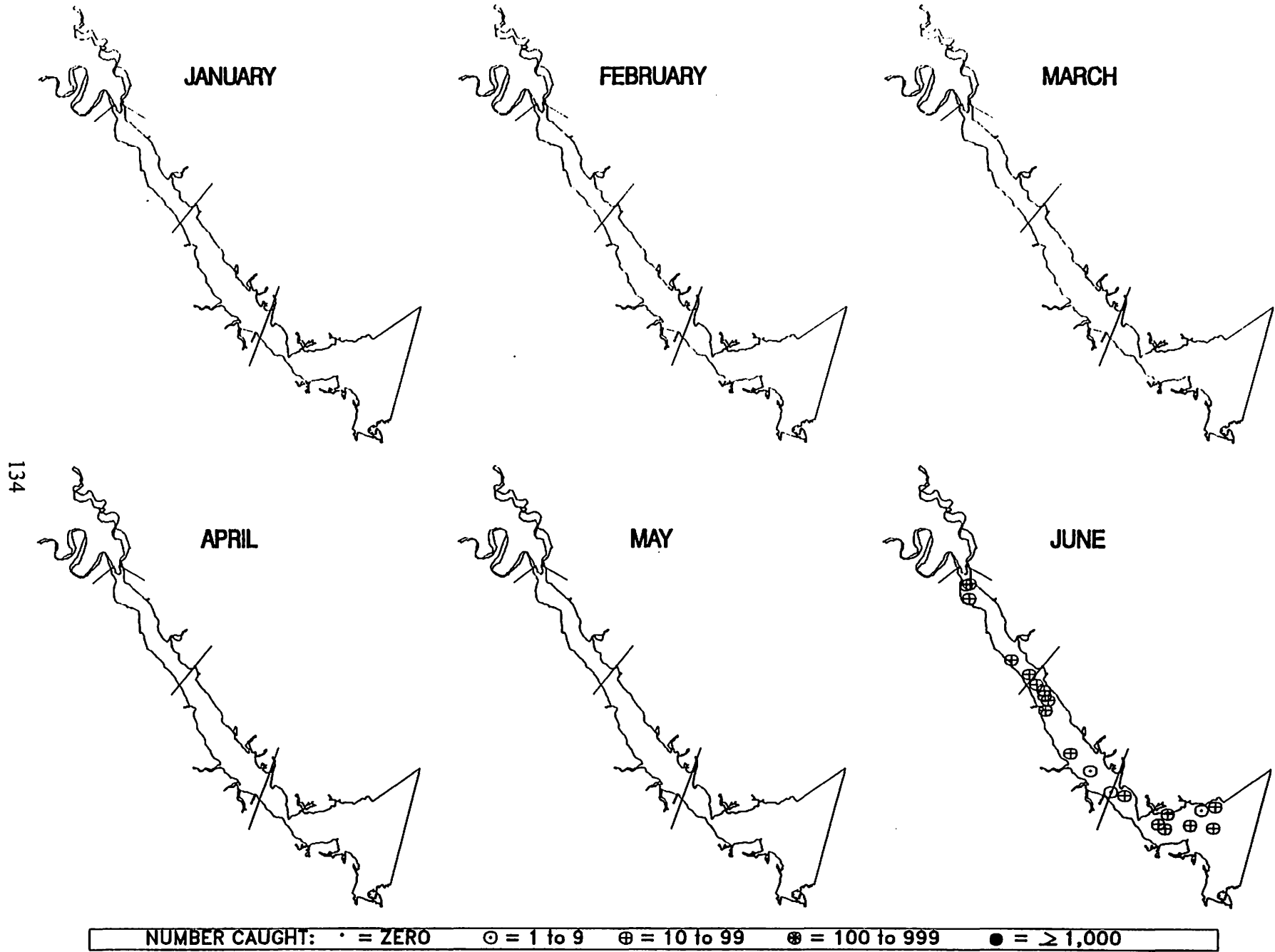


Figure 18.

# Blue Crab — Juvenile Female, 1991

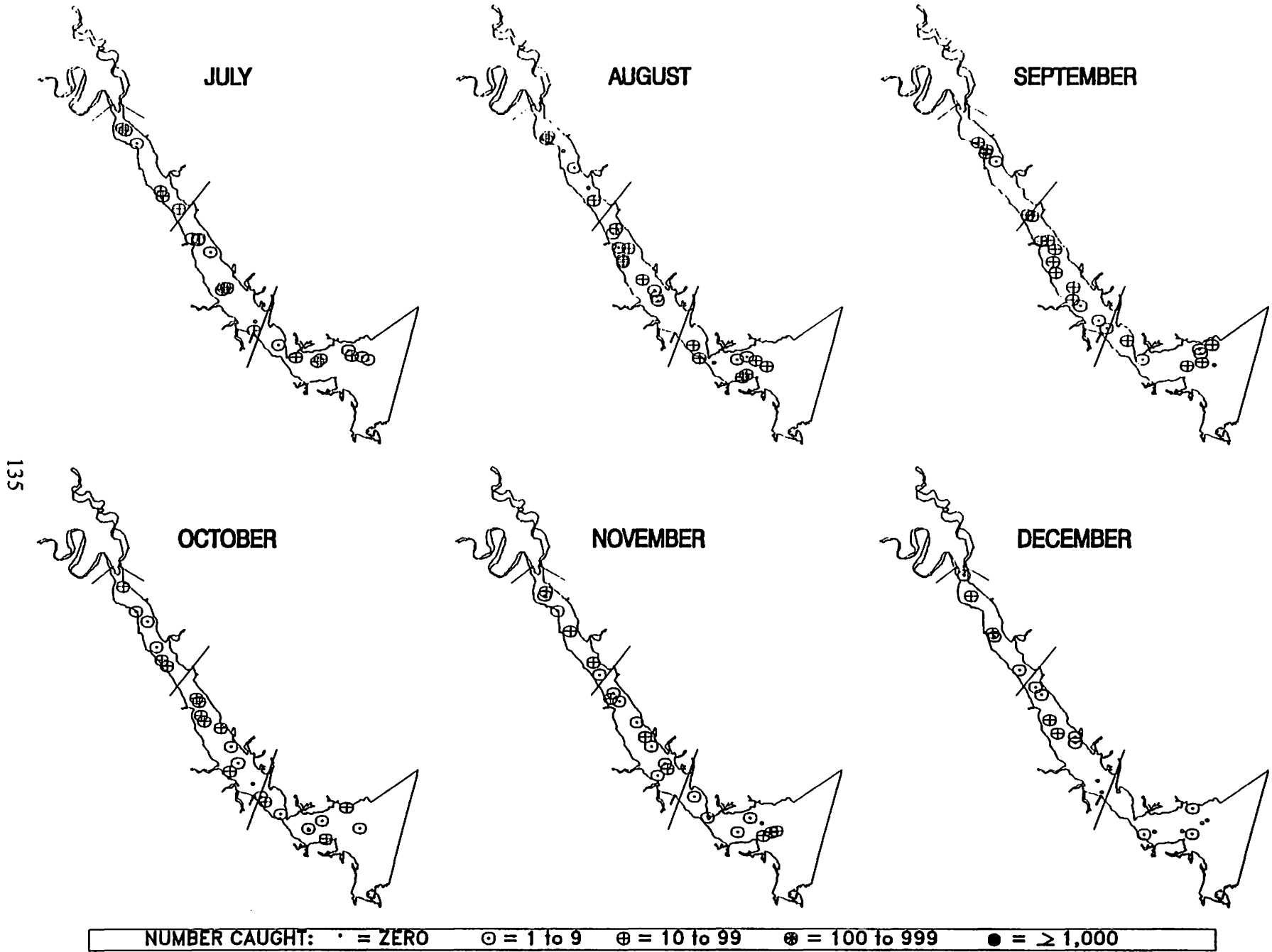
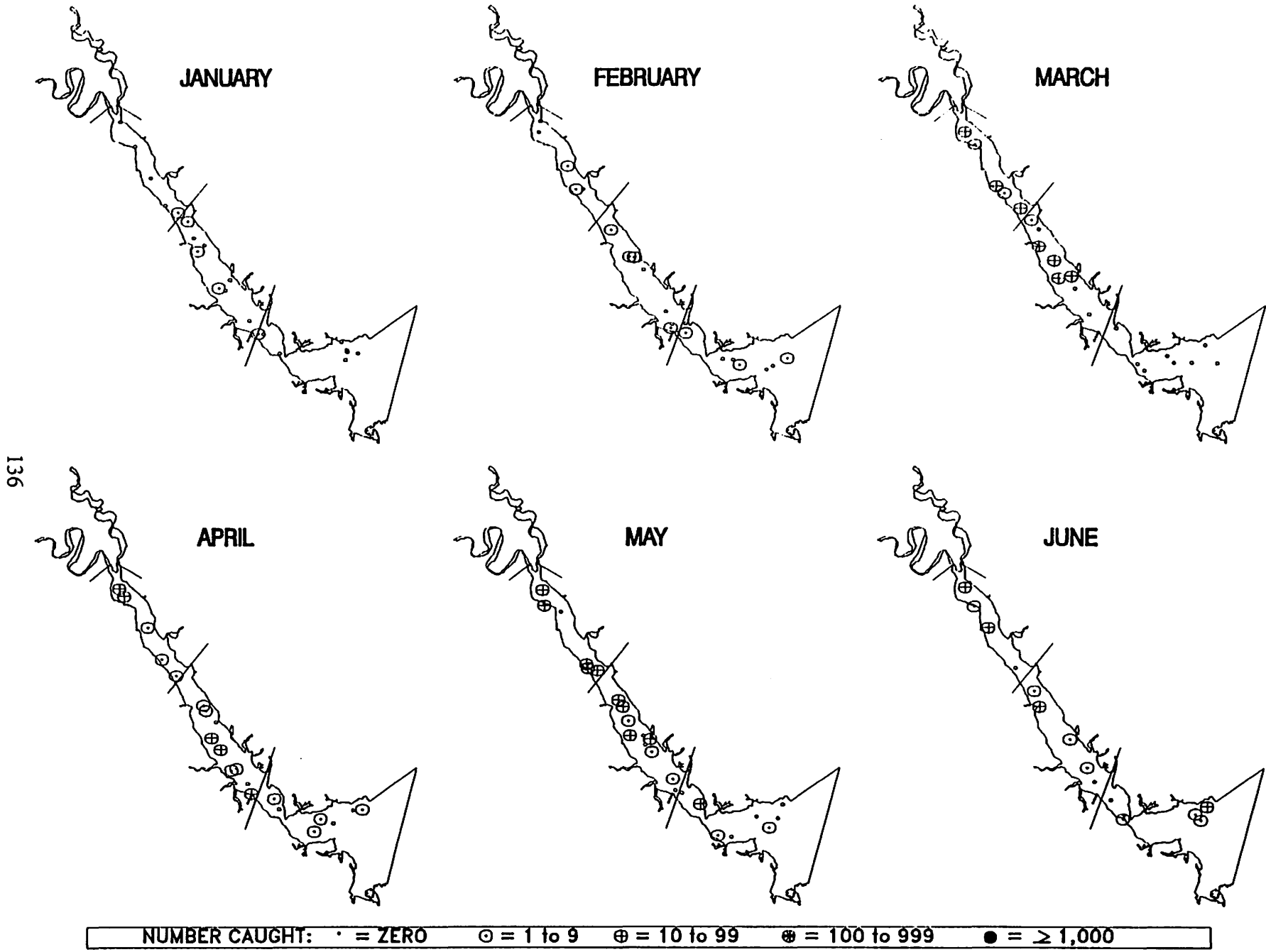


Figure 18.(cont.)

# Blue Crab — Juvenile Female, 1992

Figure 19.



# Blue Crab – Juvenile Female, 1992

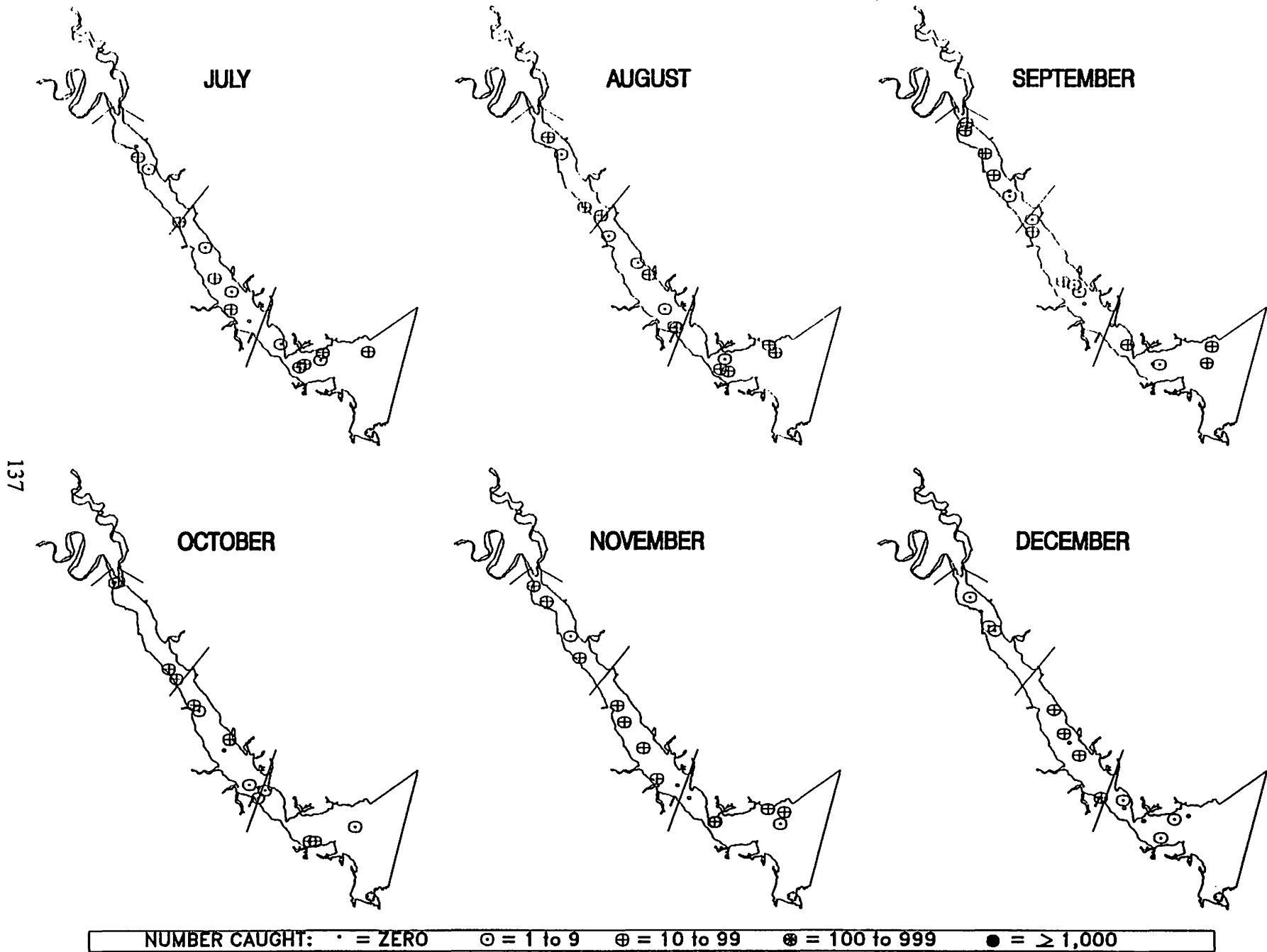
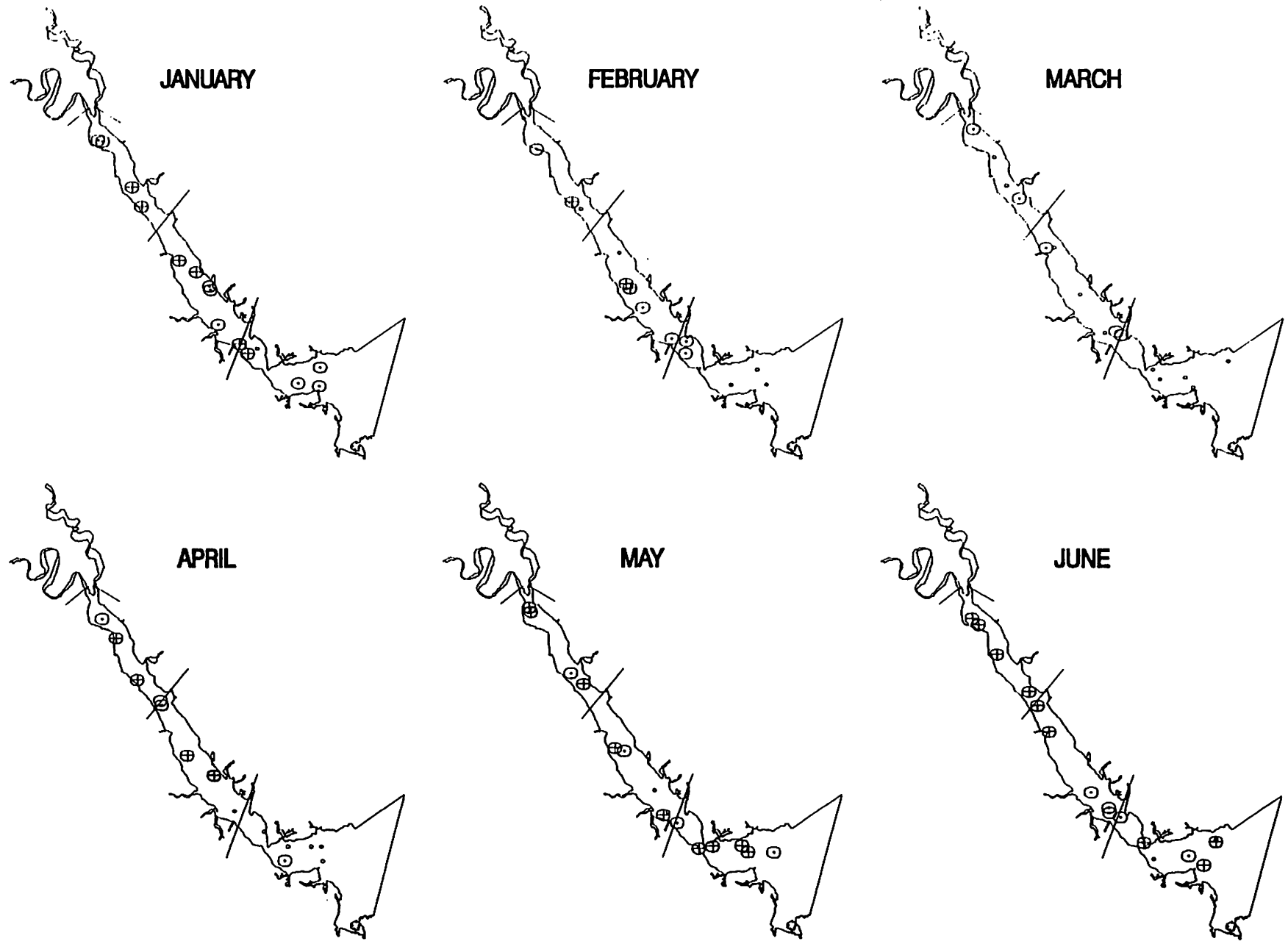


Figure 19.(cont.)

# Blue Crab — Juvenile Female, 1993

Figure 20.



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

# Blue Crab — Juvenile Female, 1993

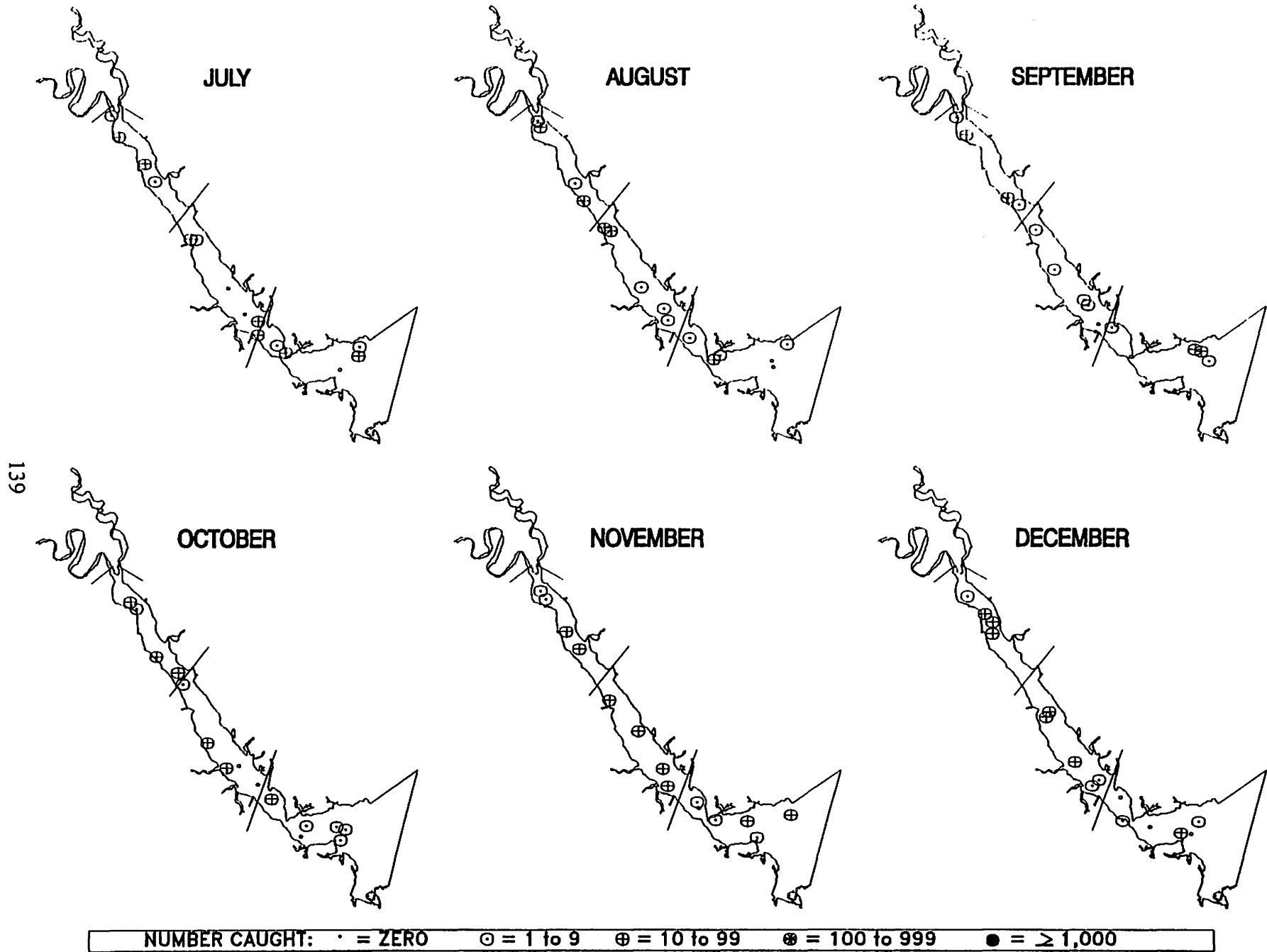


Figure 20.(cont.)



# Blue Crab — Juvenile Female, 1994

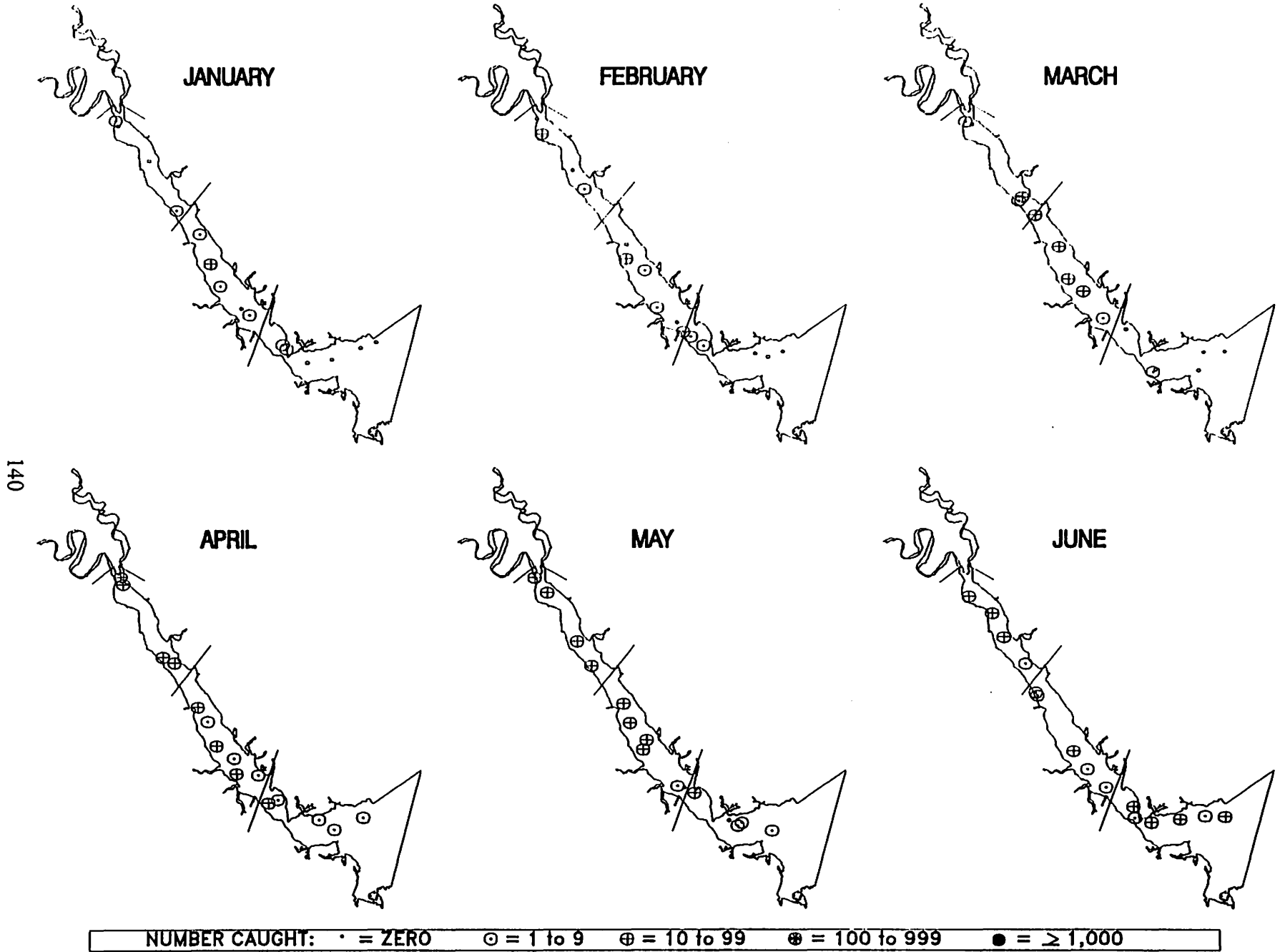
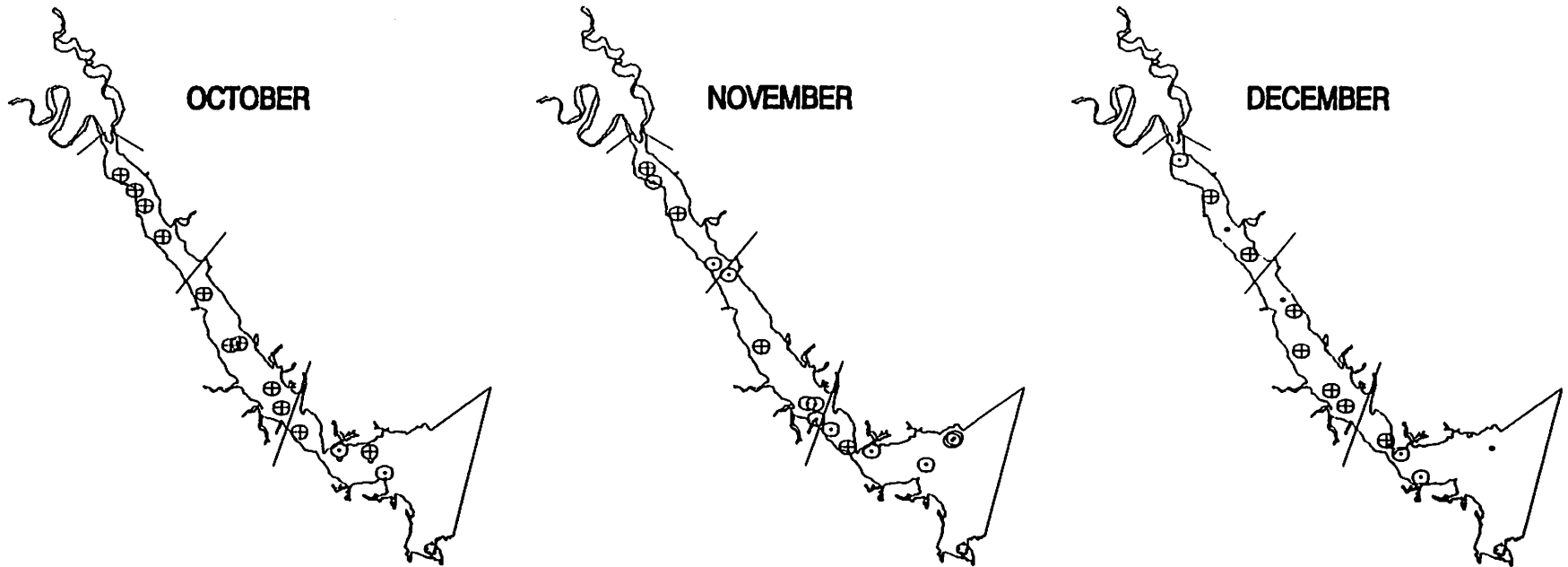
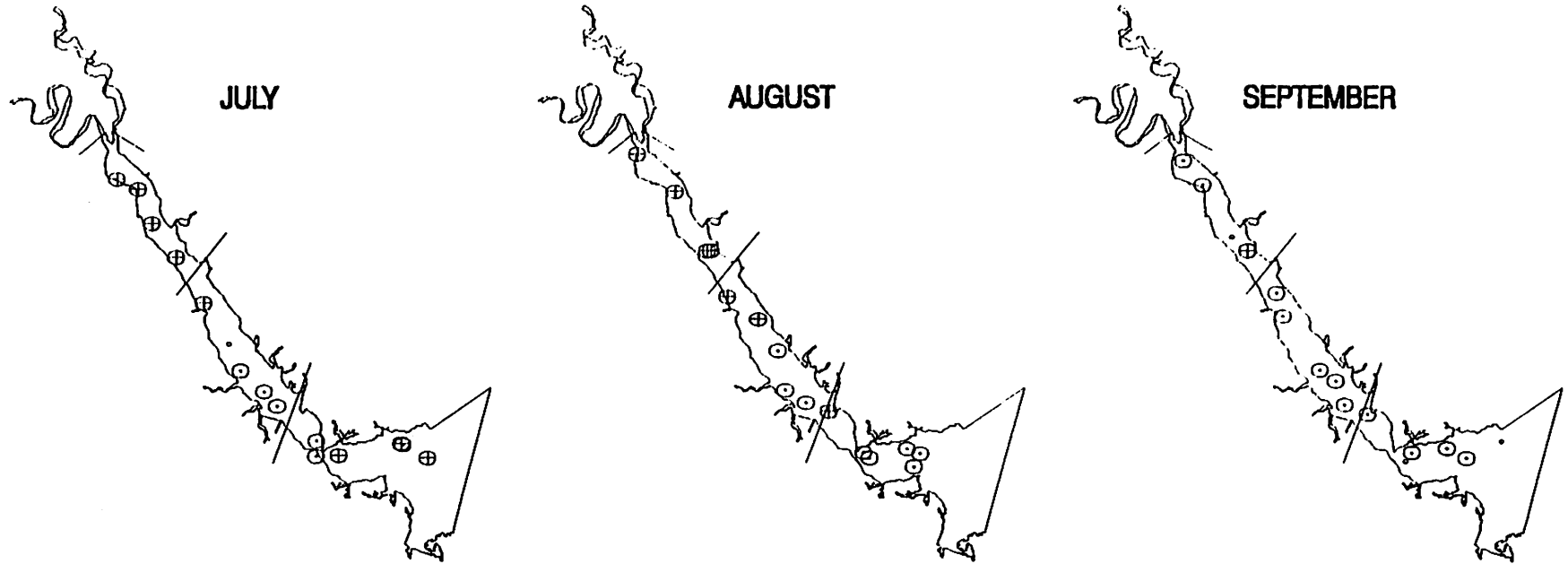


Figure 21.

# Blue Crab — Juvenile Female, 1994



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

# Blue Crab — Adult Female, 1991

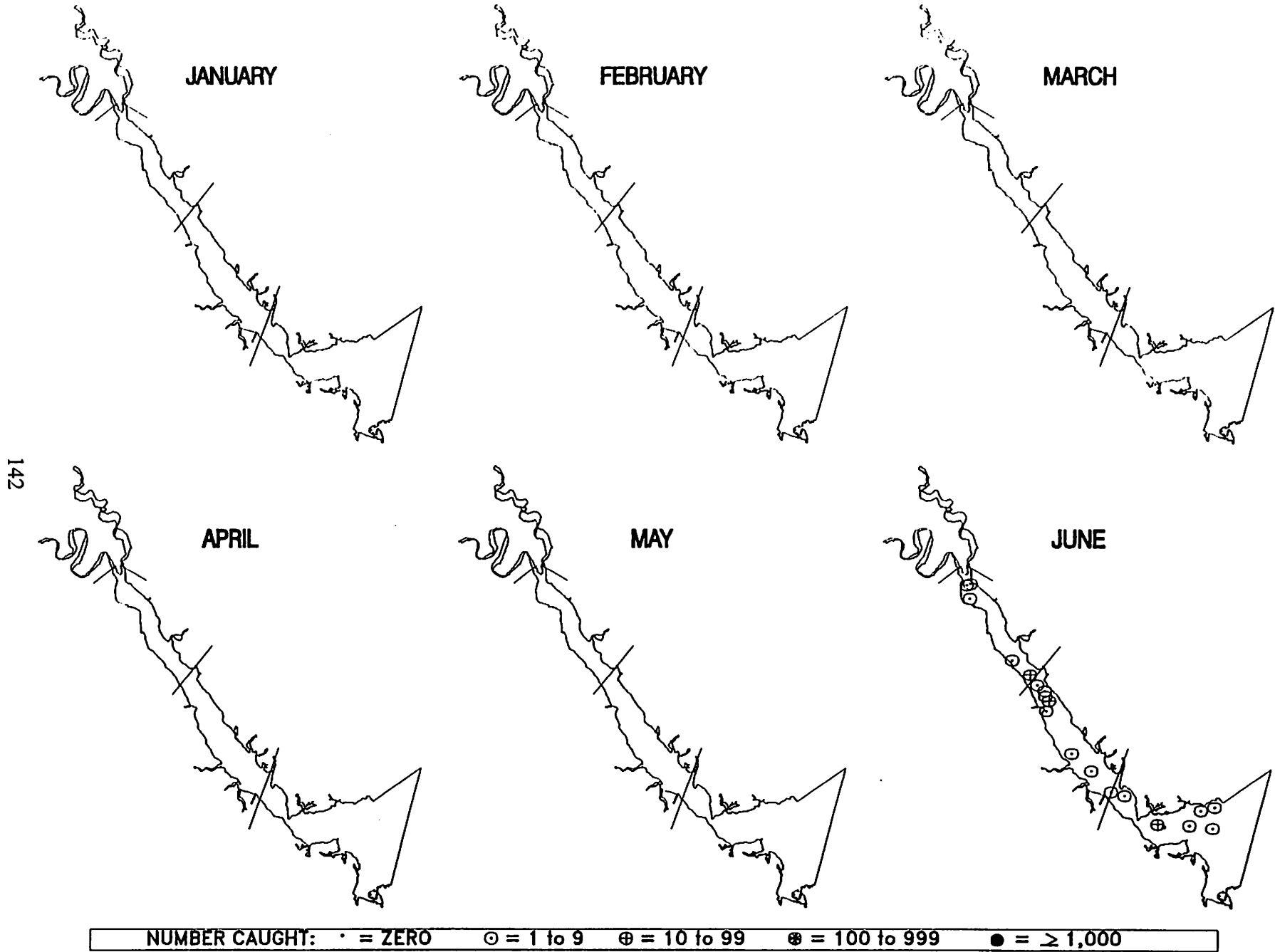
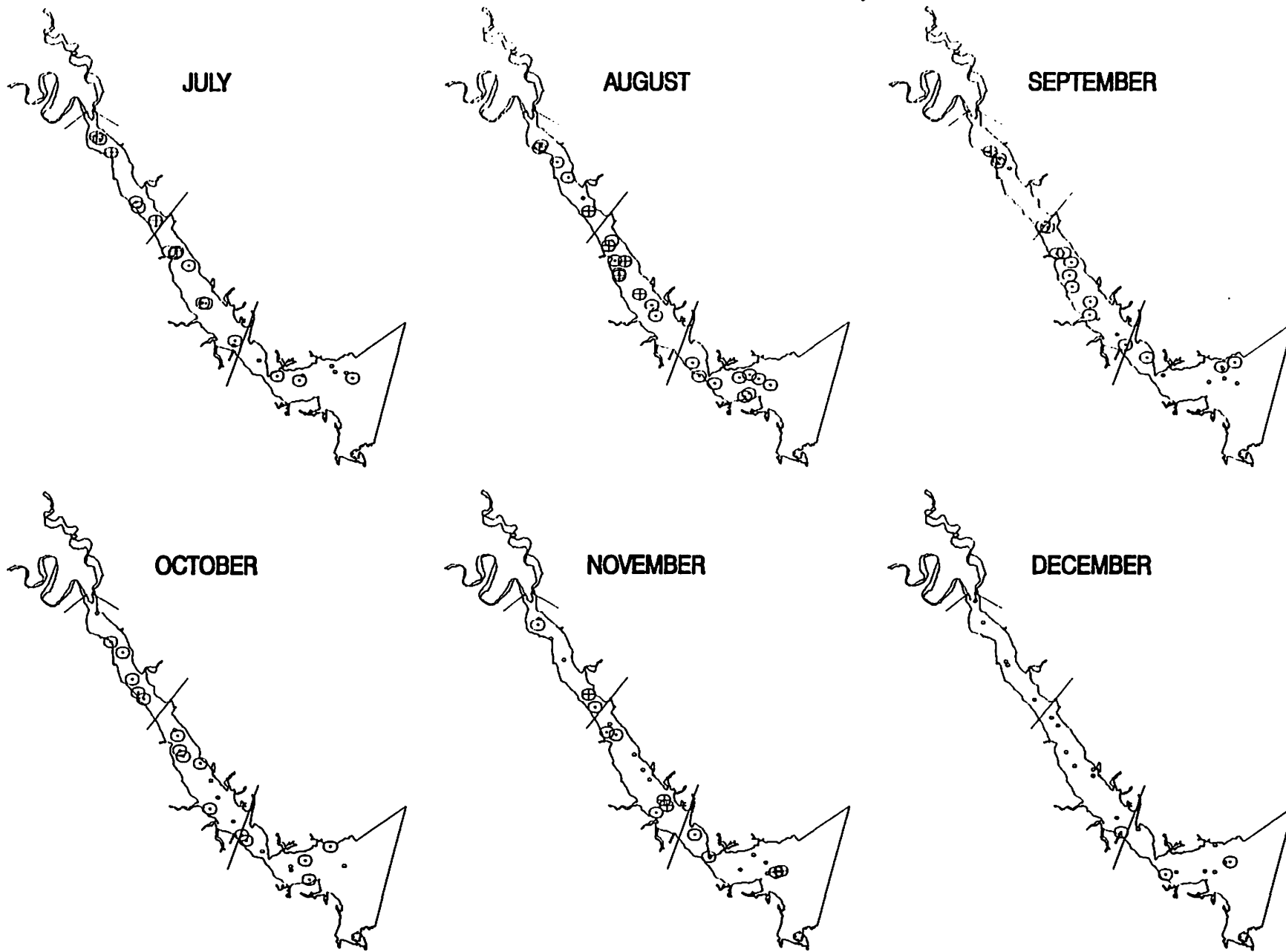


Figure 22.

# Blue Crab — Adult Female, 1991

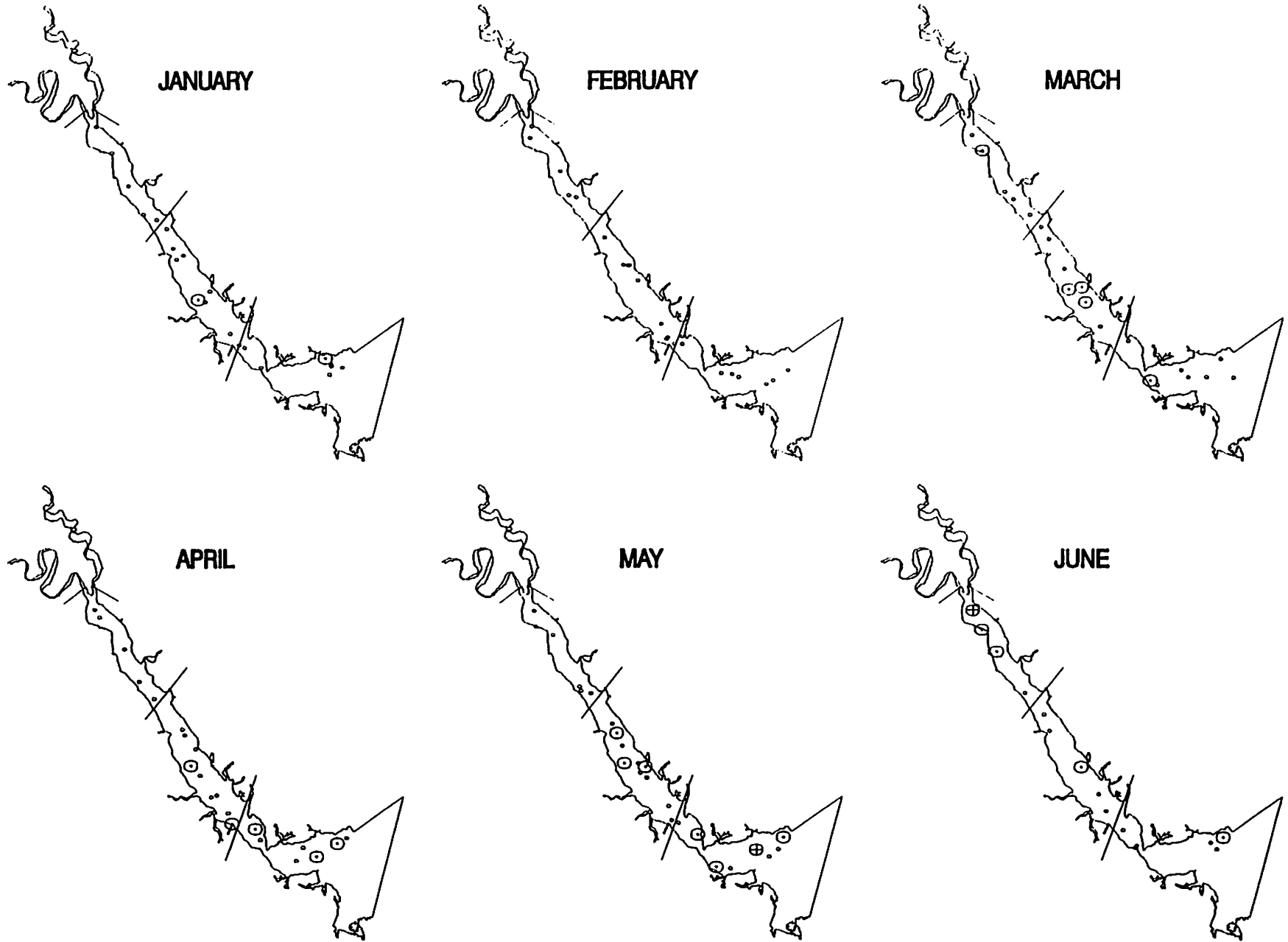


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NUMBER CAUGHT: · = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

Figure 22.(cont.)

# Blue Crab — Adult Female, 1992



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

# Blue Crab — Adult Female, 1992

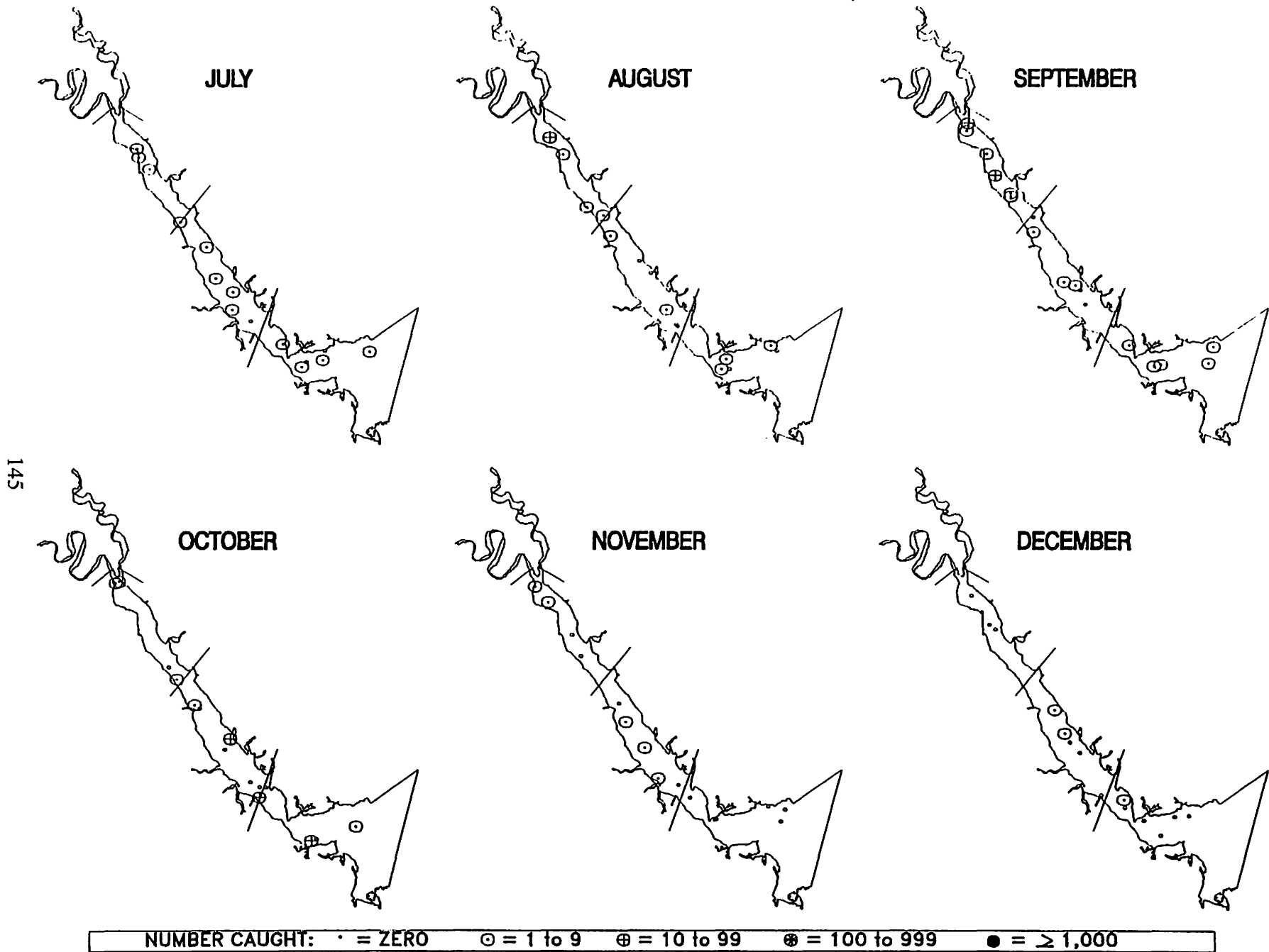


Figure 23.(cont.)

# Blue Crab — Adult Female, 1993

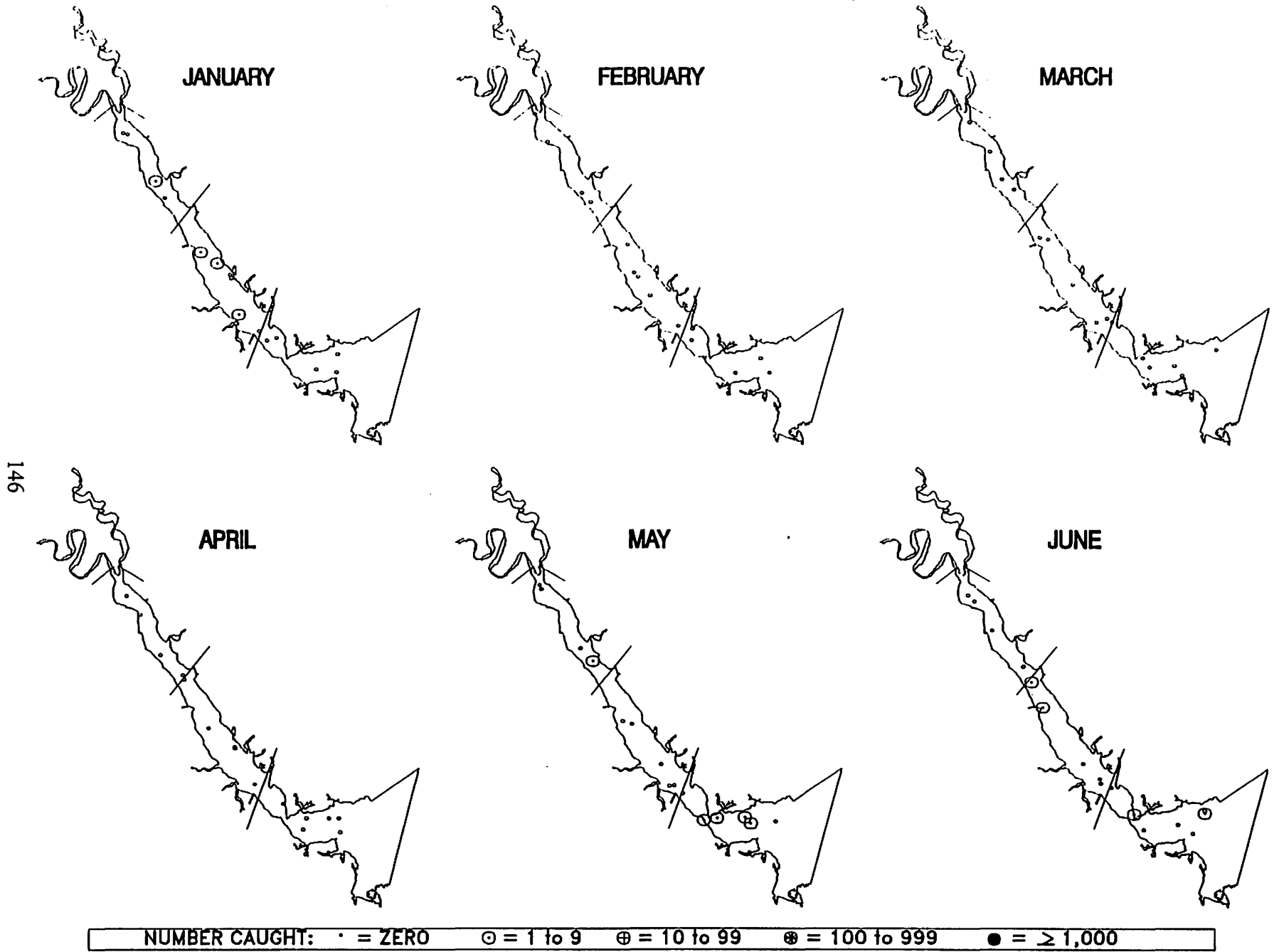


Figure 24.

# Blue Crab — Adult Female, 1993

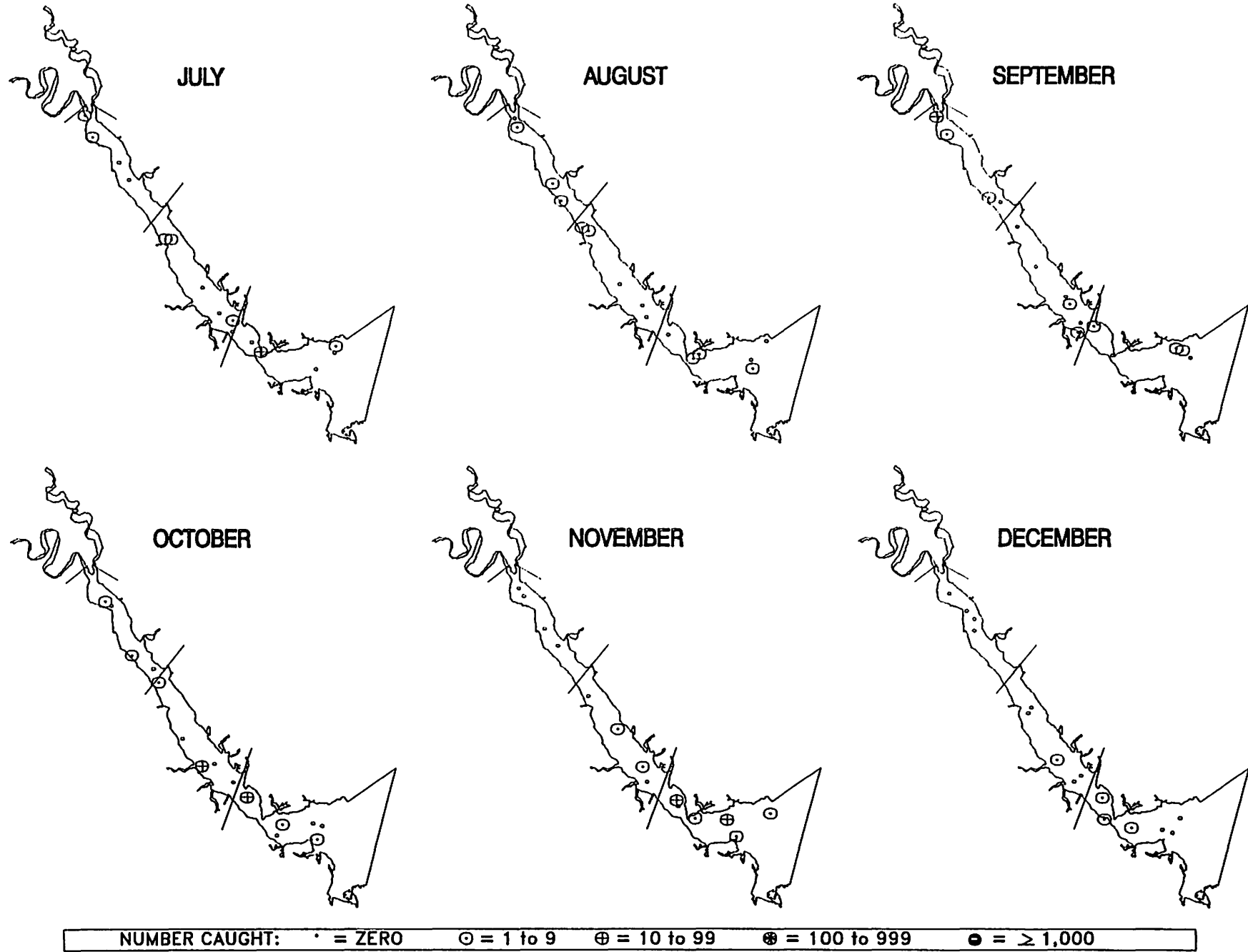


Figure 24.(cont.)



# Blue Crab – Adult Female, 1994

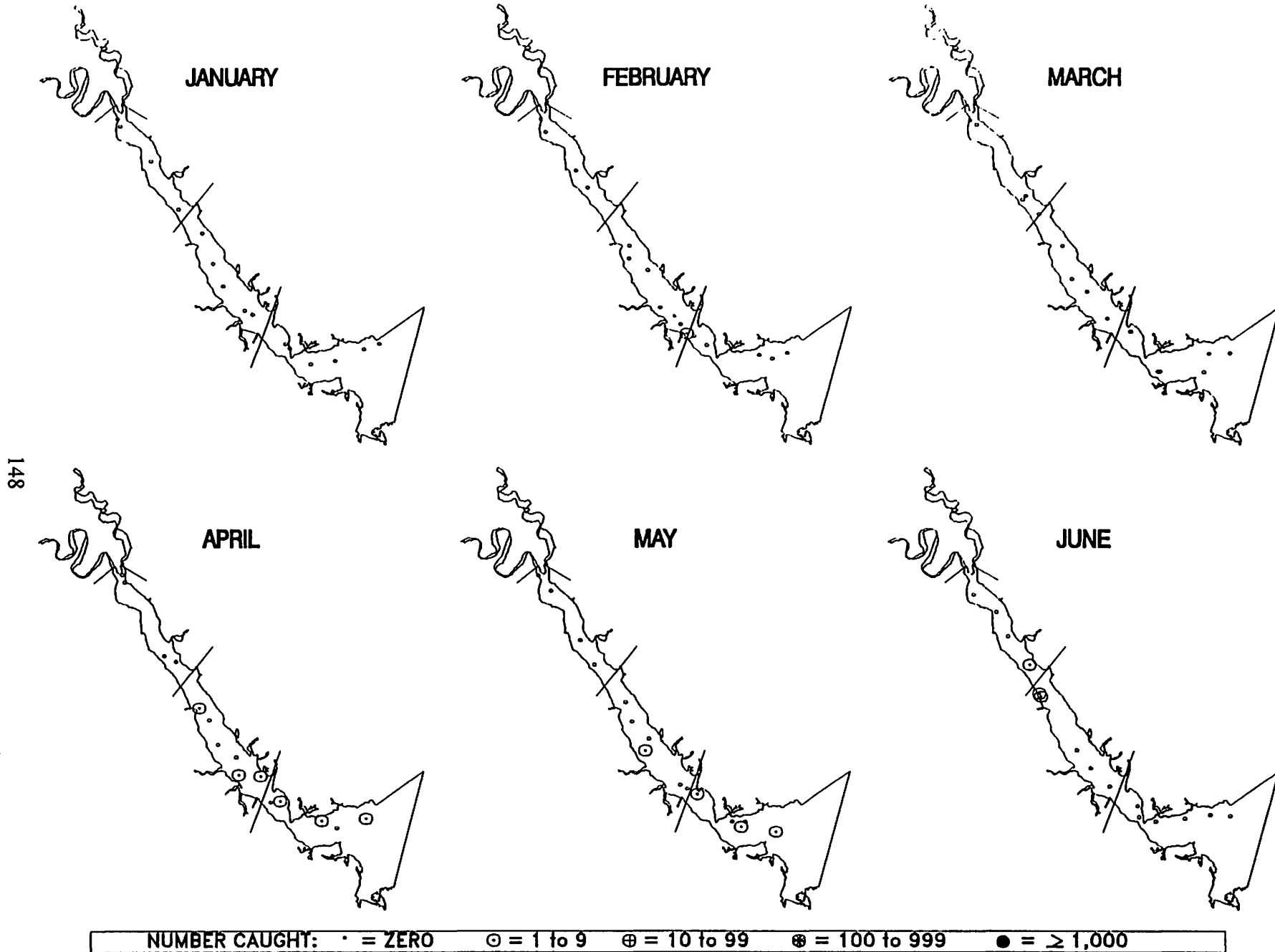


Figure 25.

# Blue Crab — Adult Female, 1994

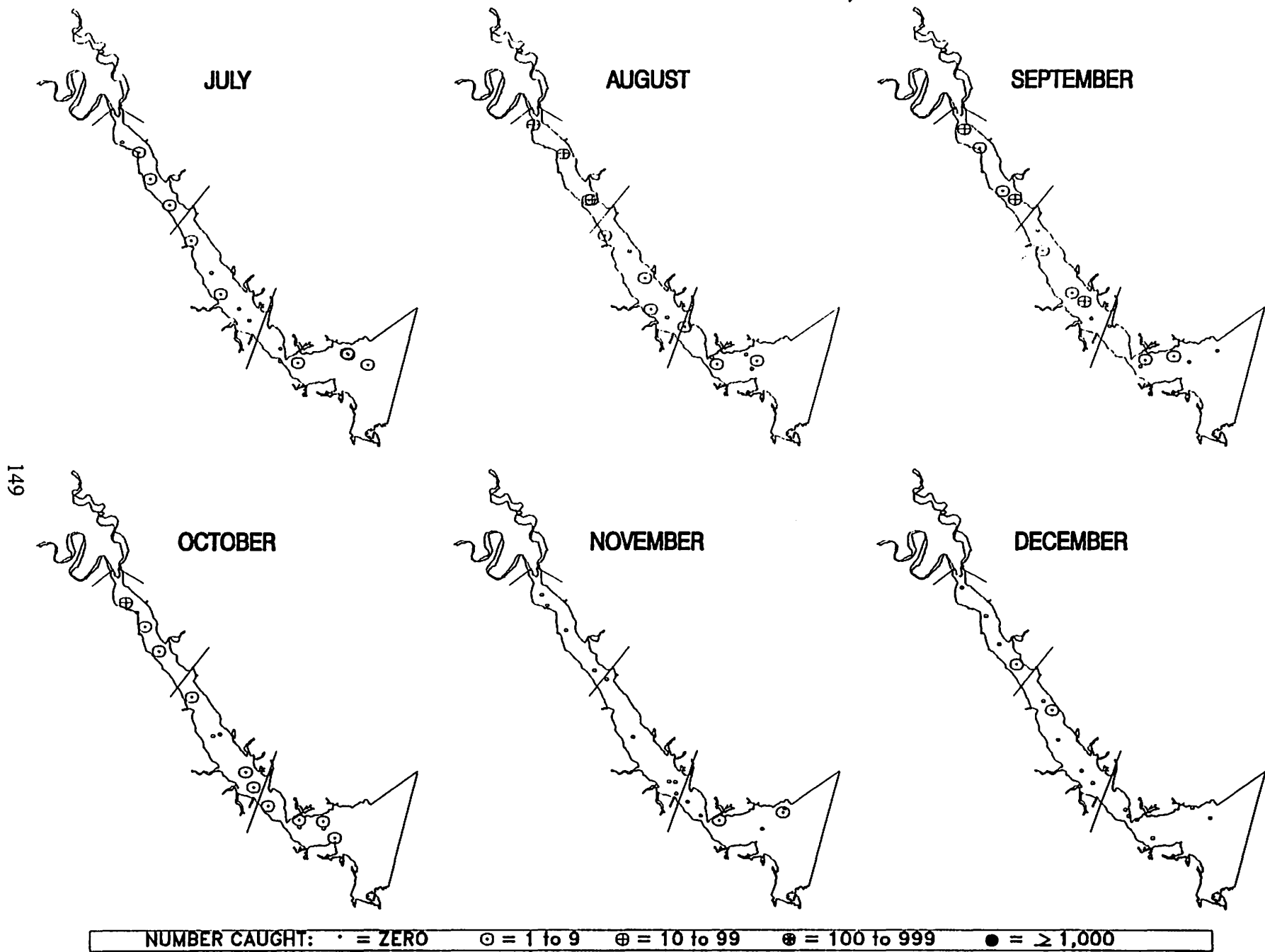
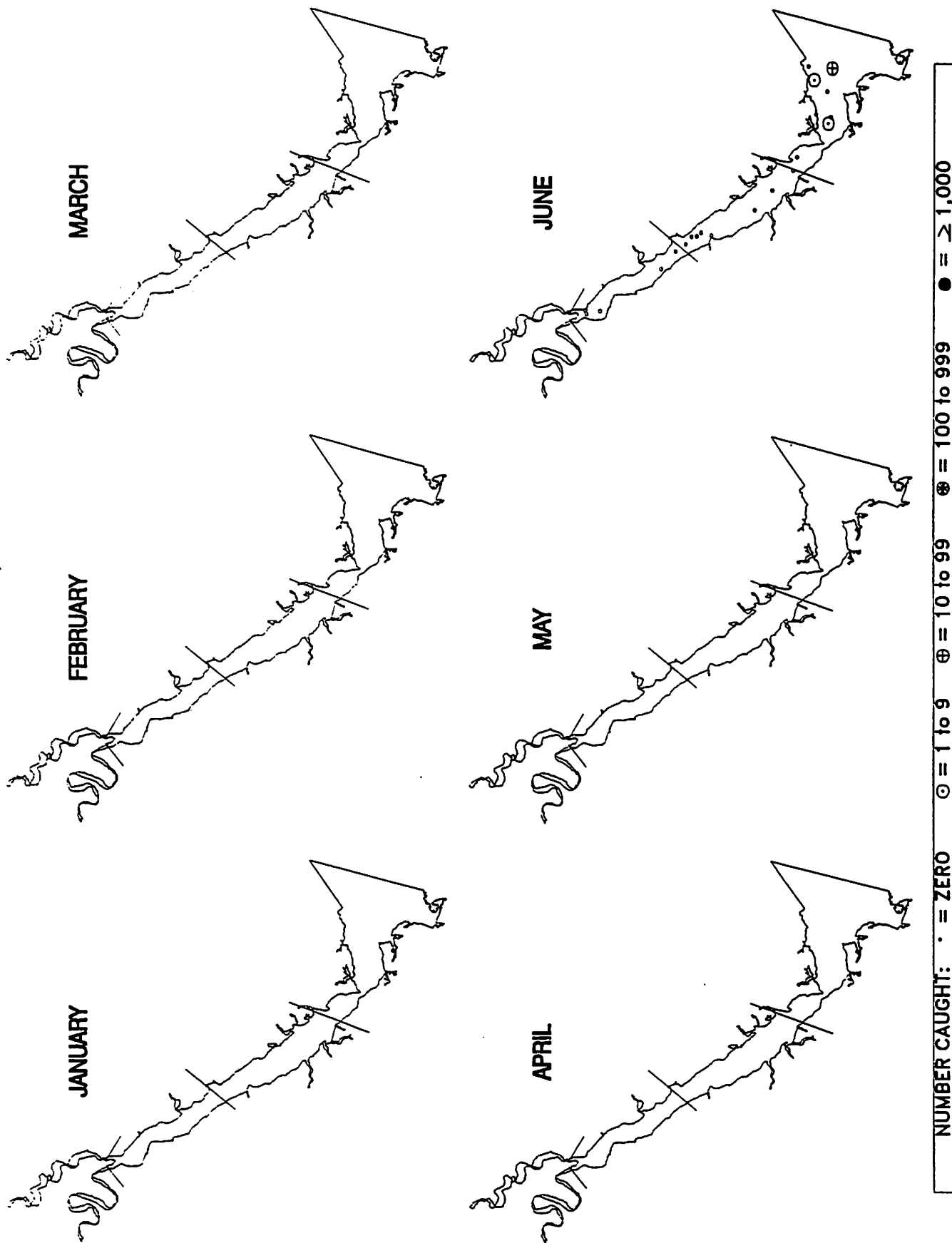


Figure 25.(cont.)

Figure 26.

Silver Perch, 1991



# Silver Perch, 1991

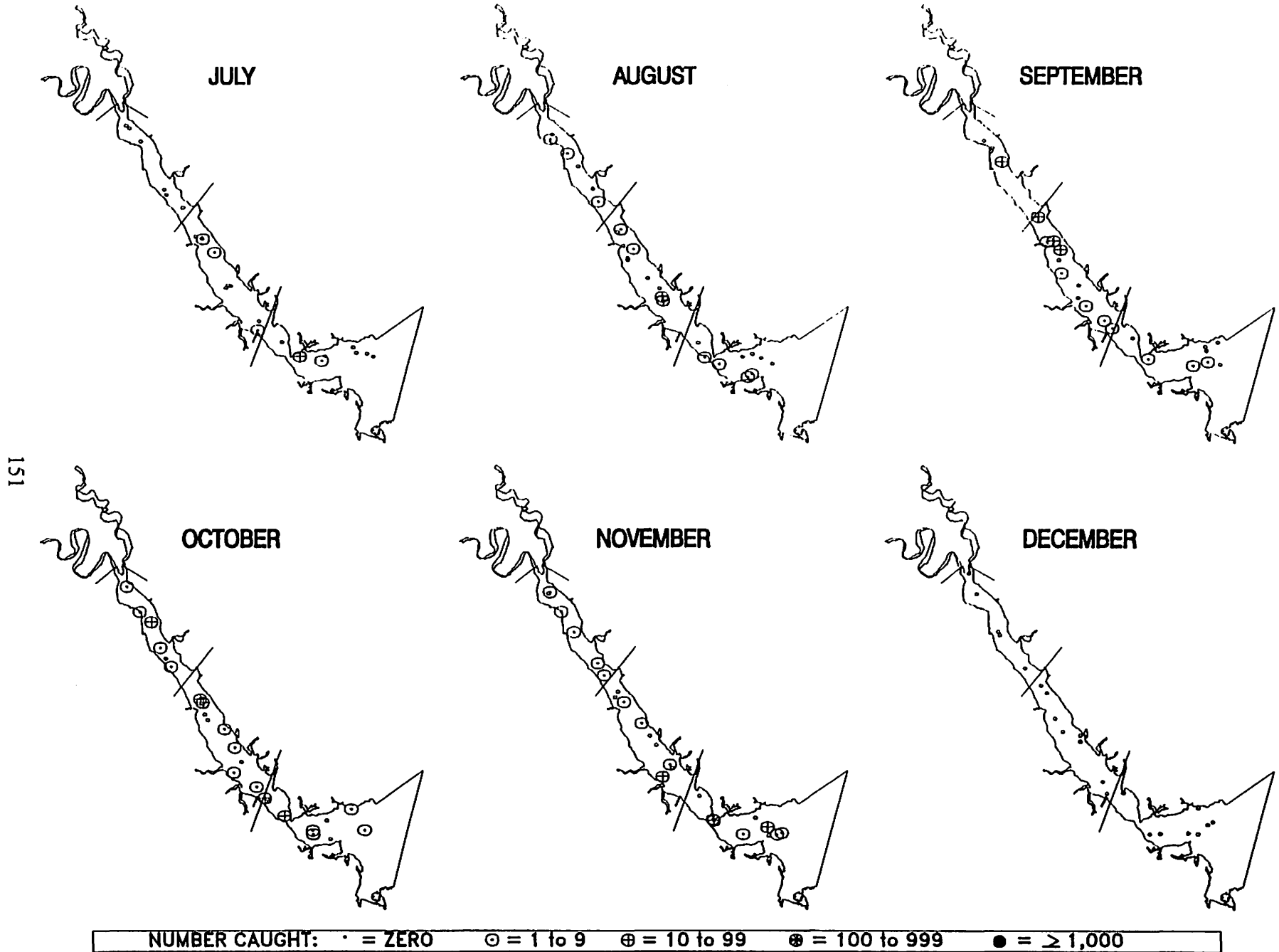
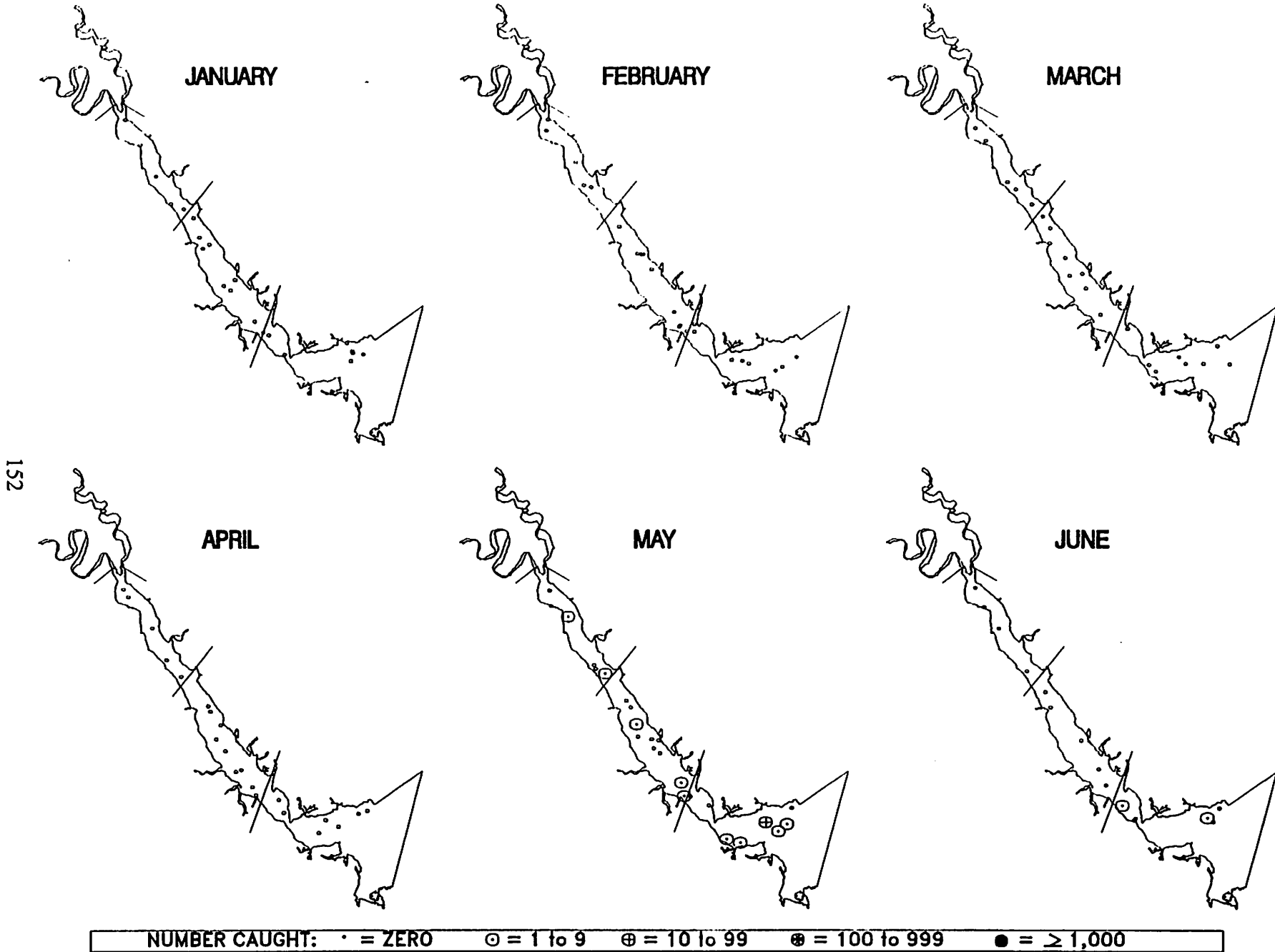


Figure 26.(cont.)

# Silver Perch, 1992

Figure 27.



# Silver Perch, 1992

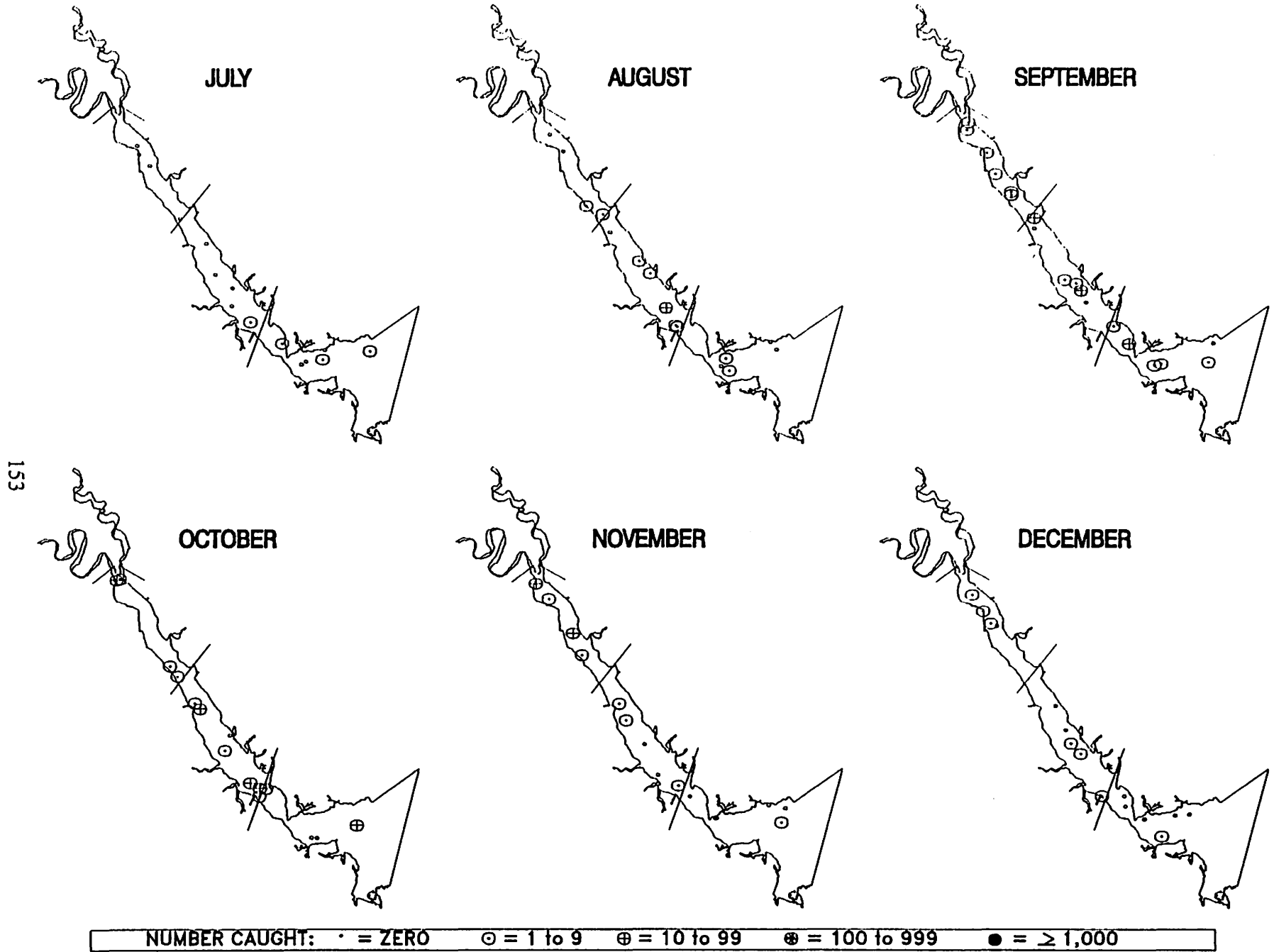


Figure 27.(cont.)

# Silver Perch, 1993

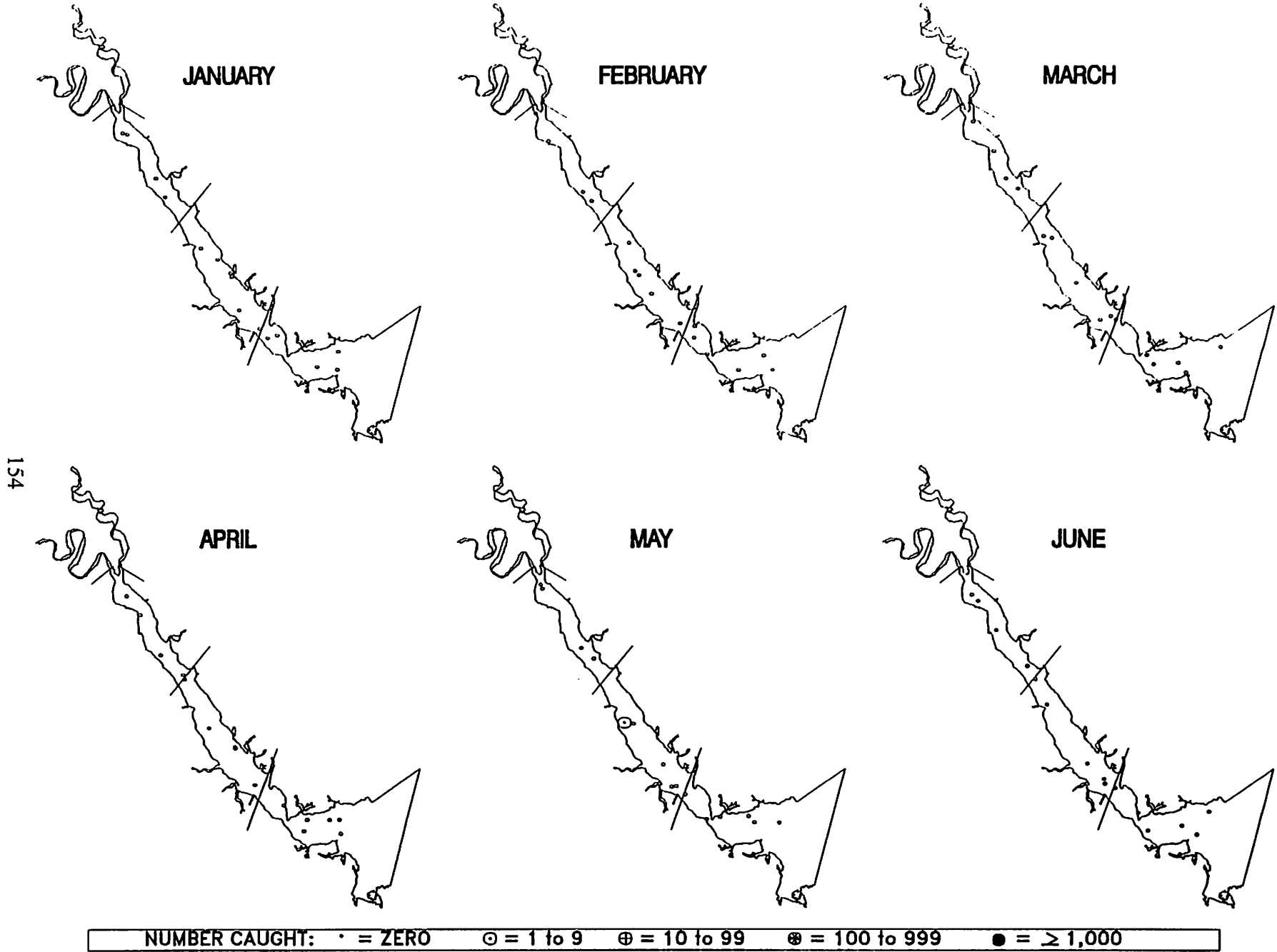


Figure 28.

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# Silver Perch, 1993

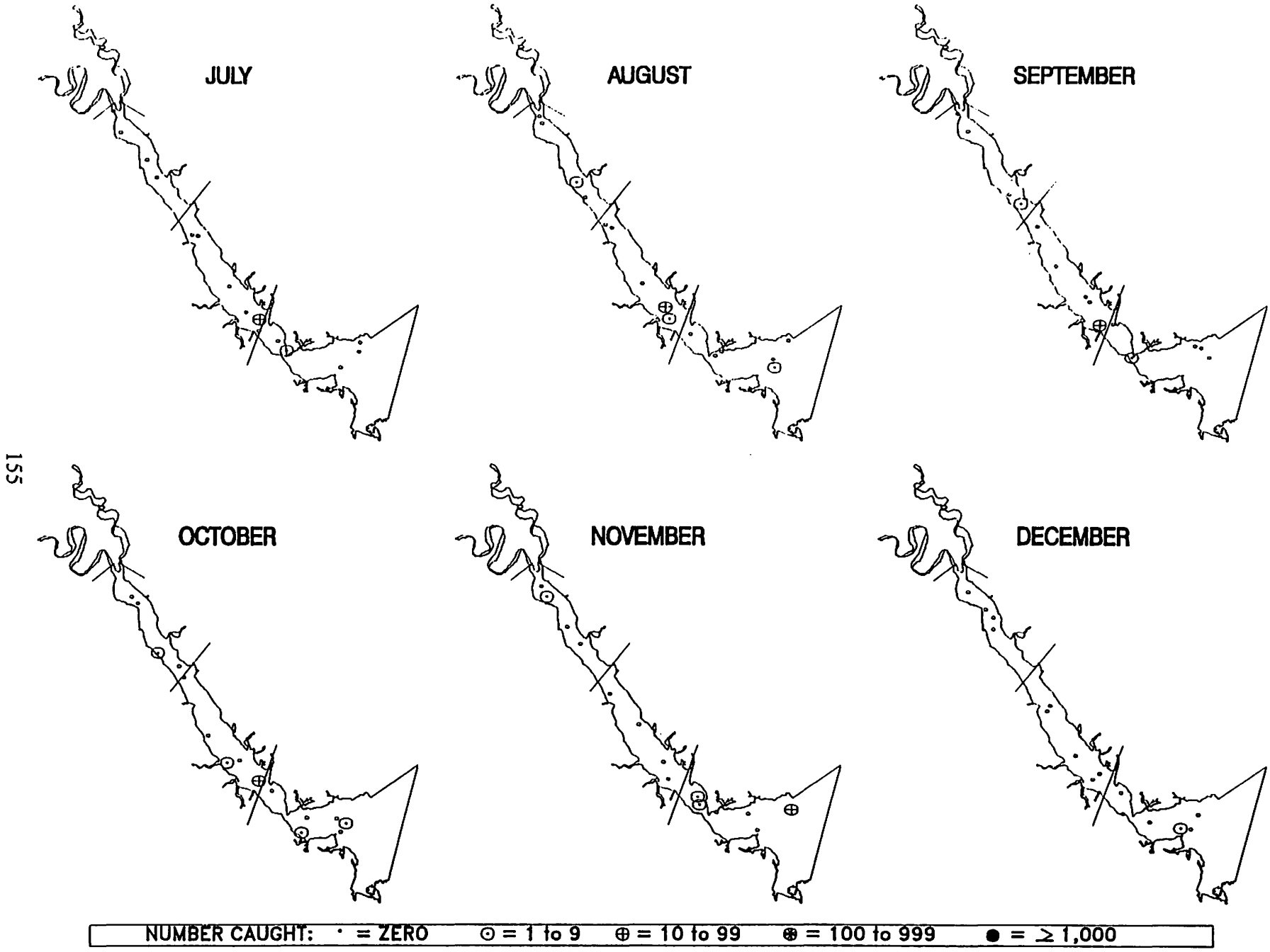
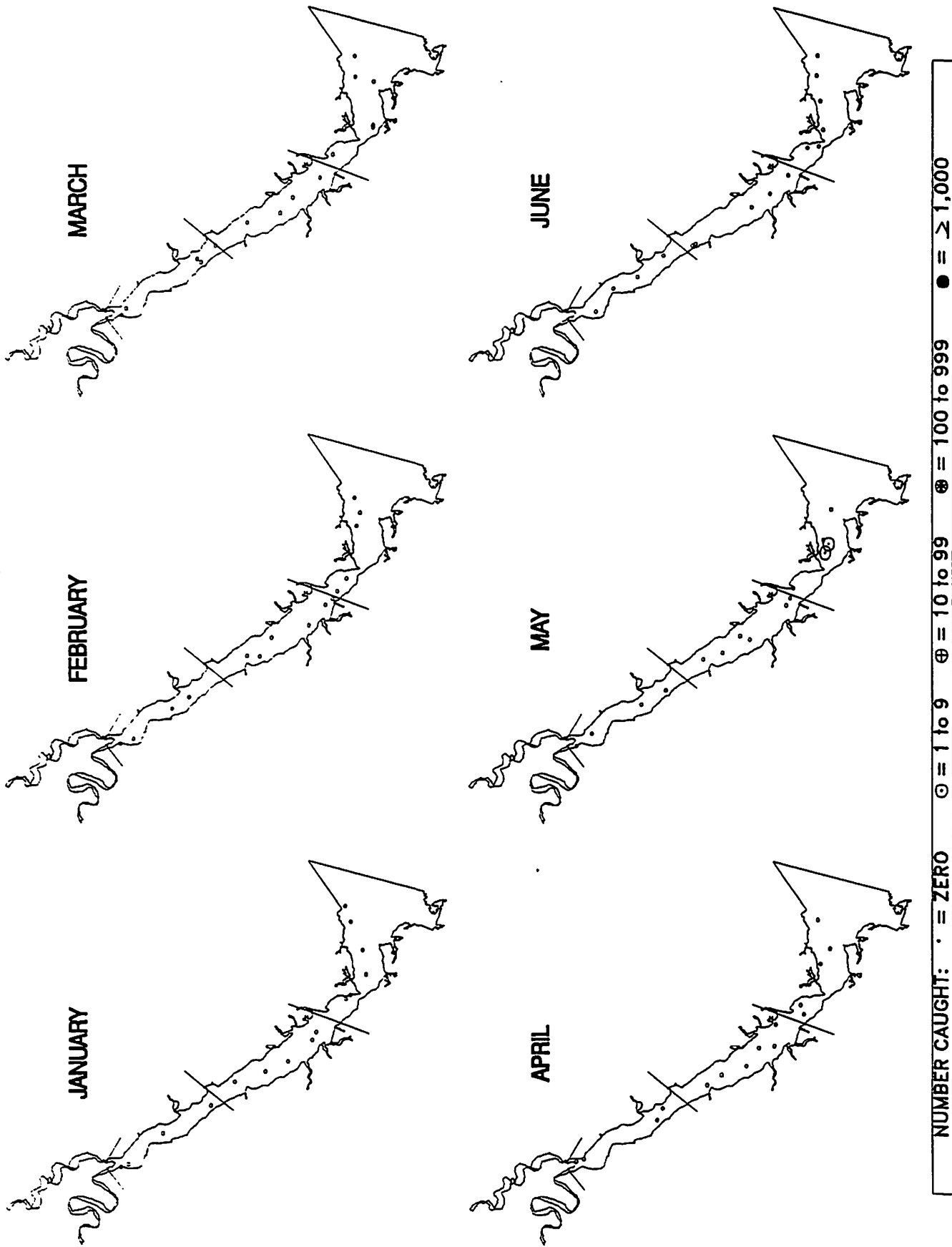


Figure 28.(cont.)

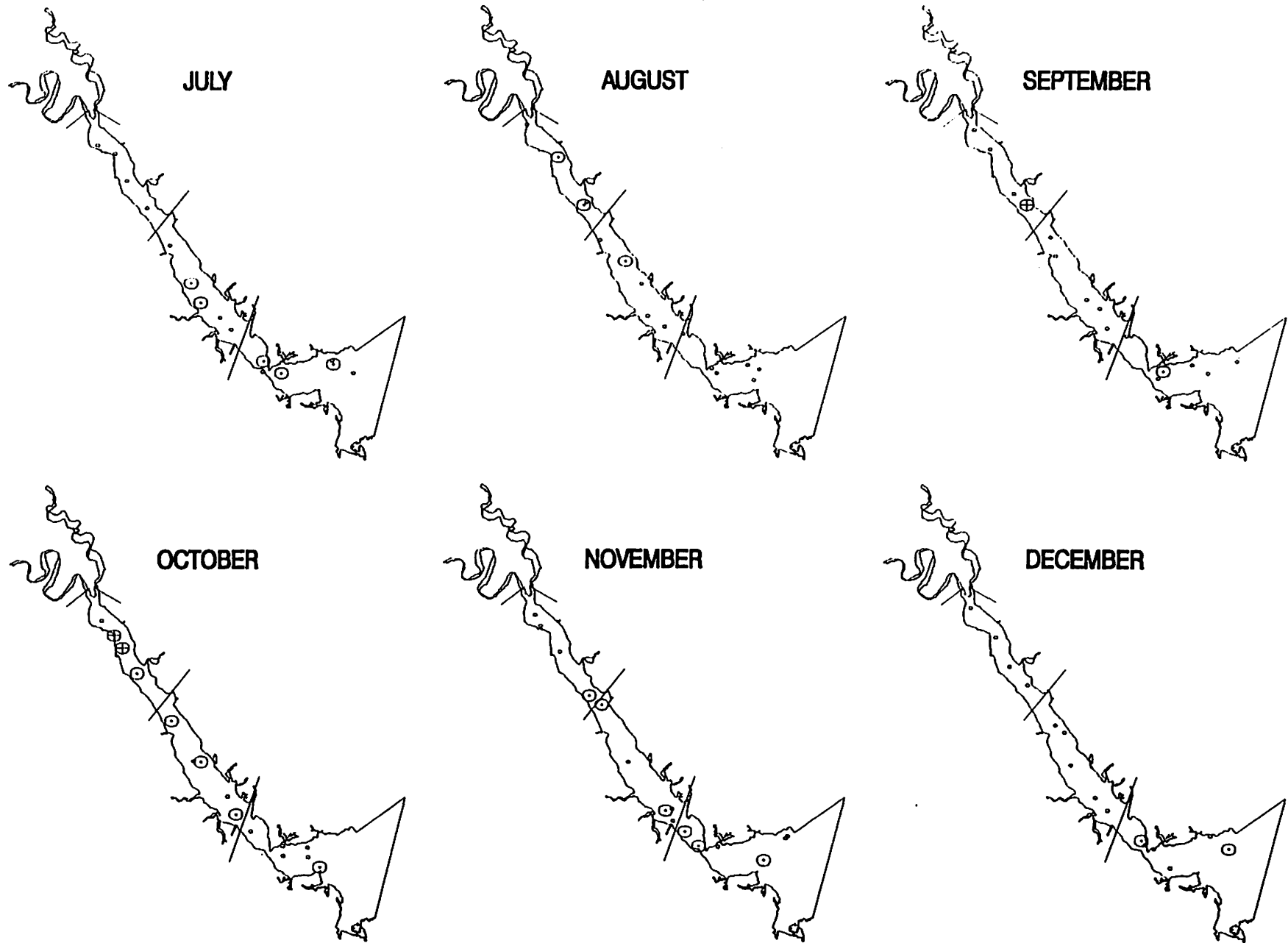


Figure 29.

Silver Perch, 1954



# Silver Perch, 1994

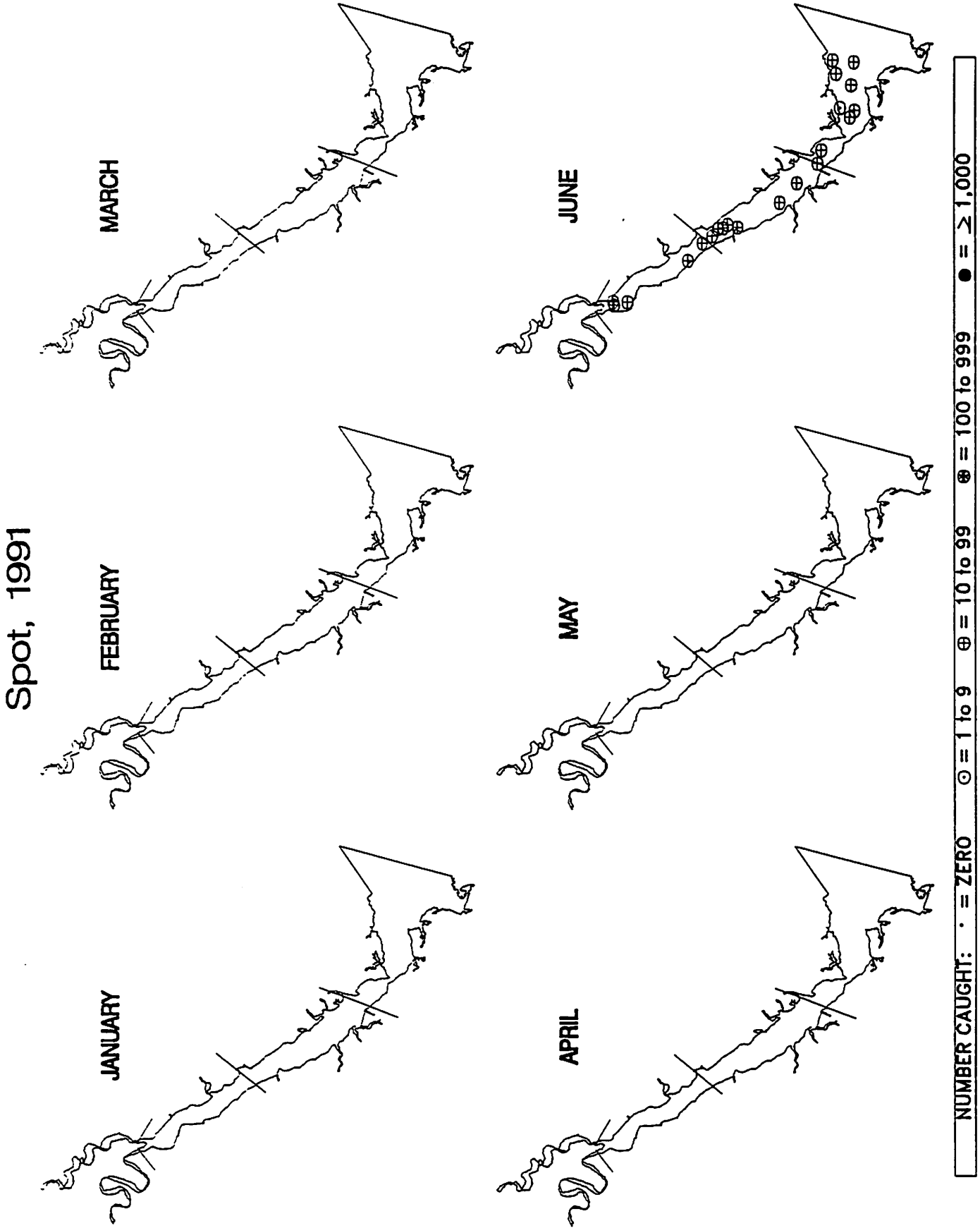


NUMBER CAUGHT: · = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊕ = 100 to 999    ● = ≥ 1,000

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Figure 29.(cont.)

Figure 30.



# Spot, 1991

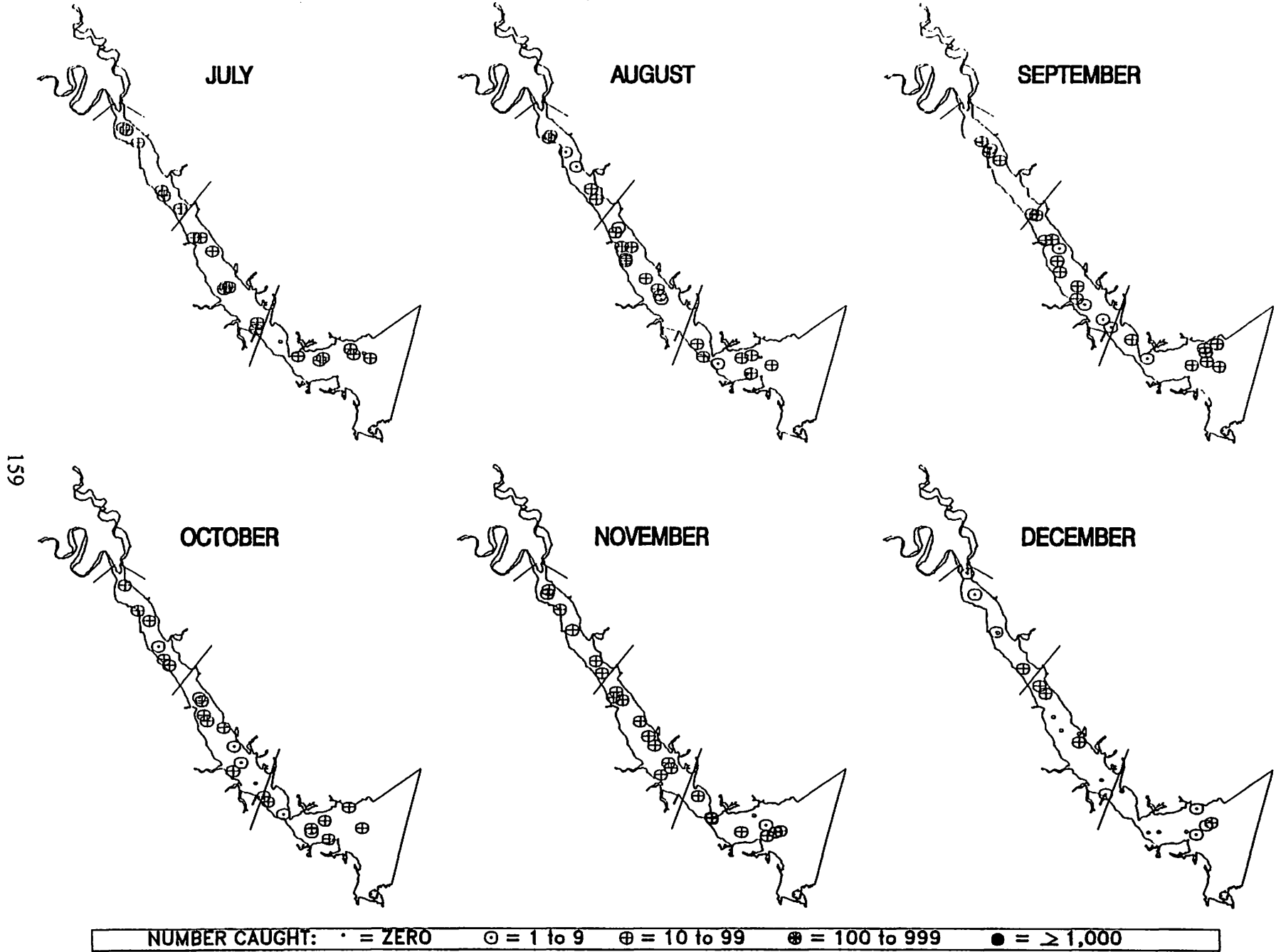
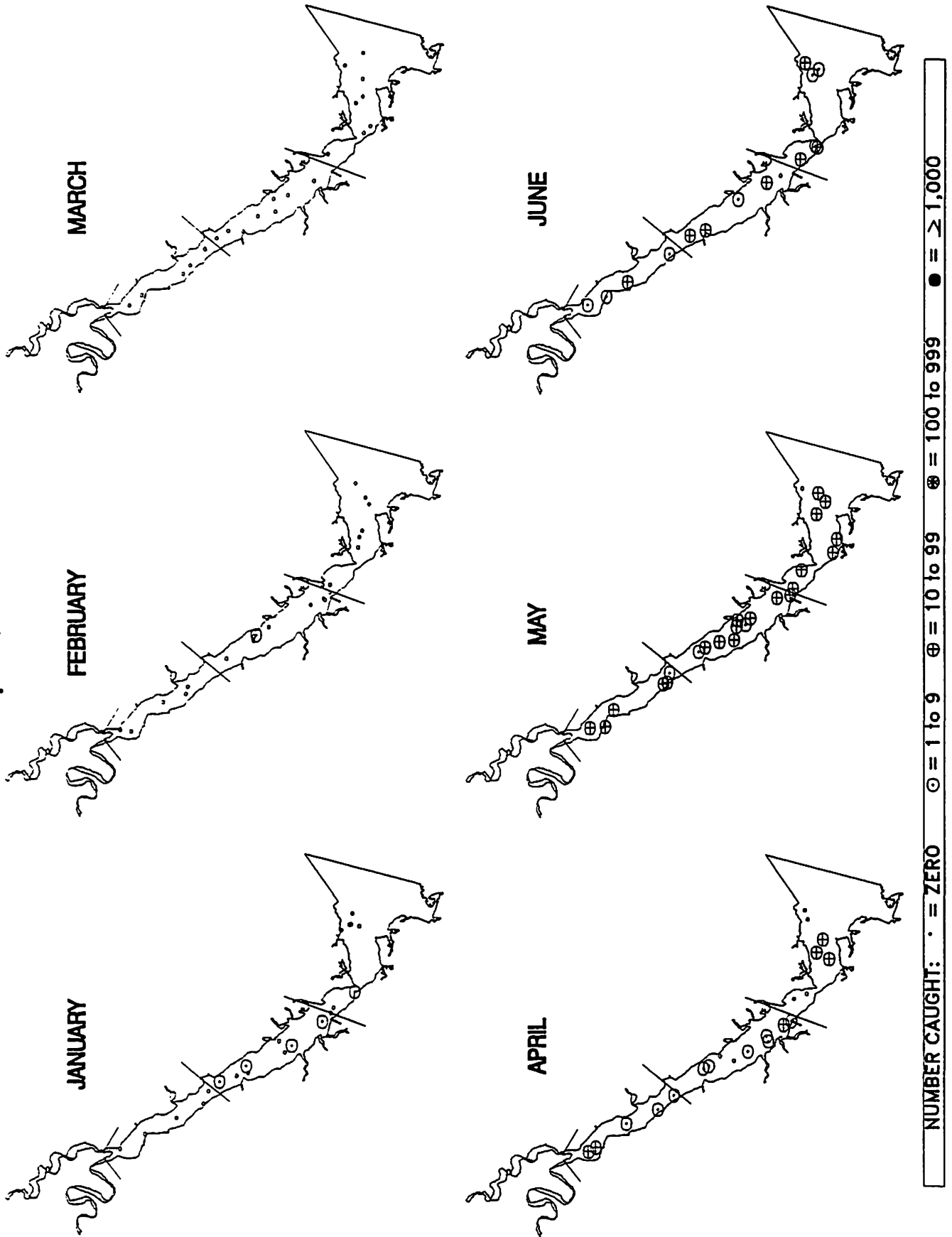


Figure 30.(cont.)

Figure 31.

Spot, 1992



# Spot, 1992

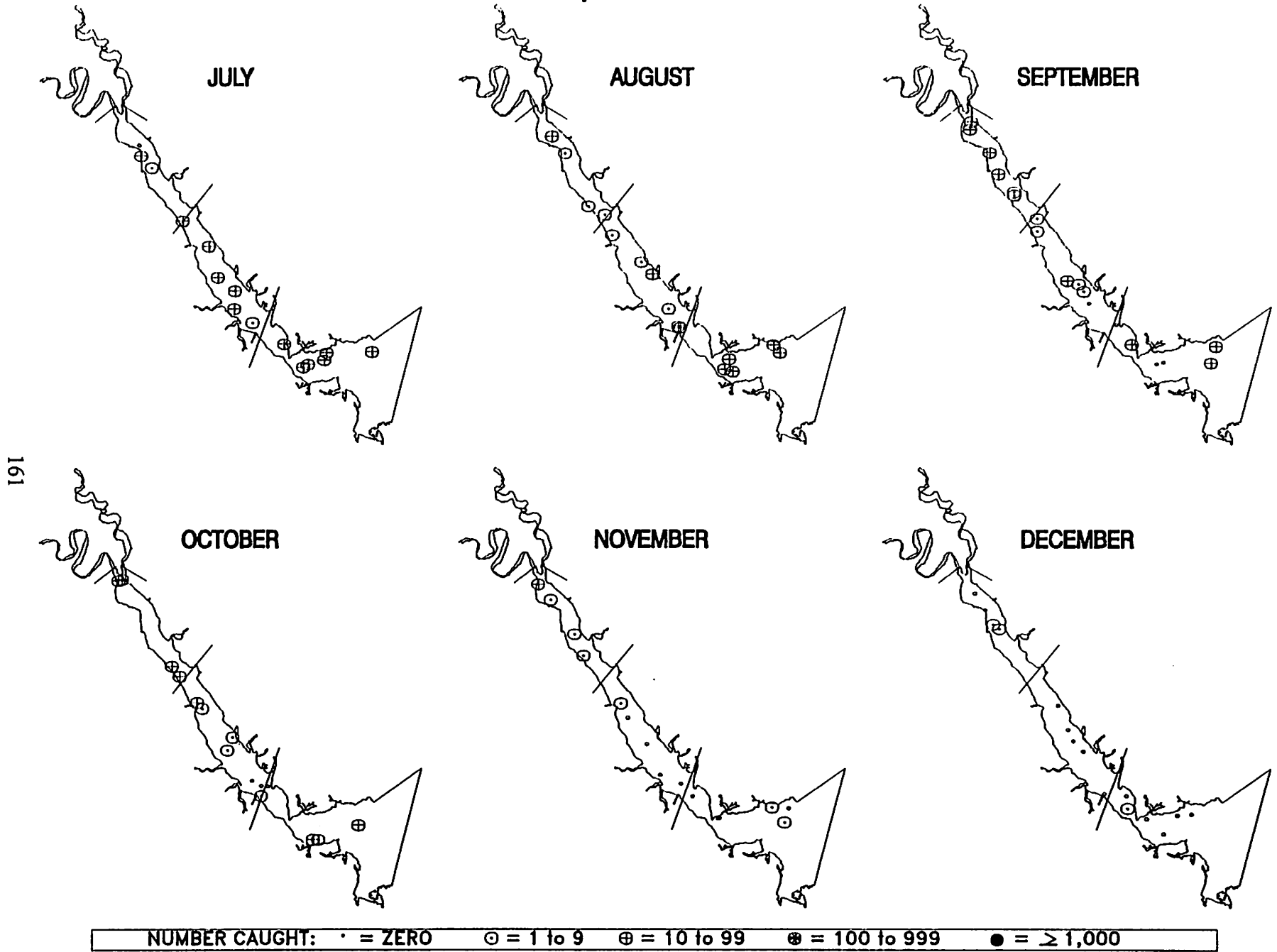
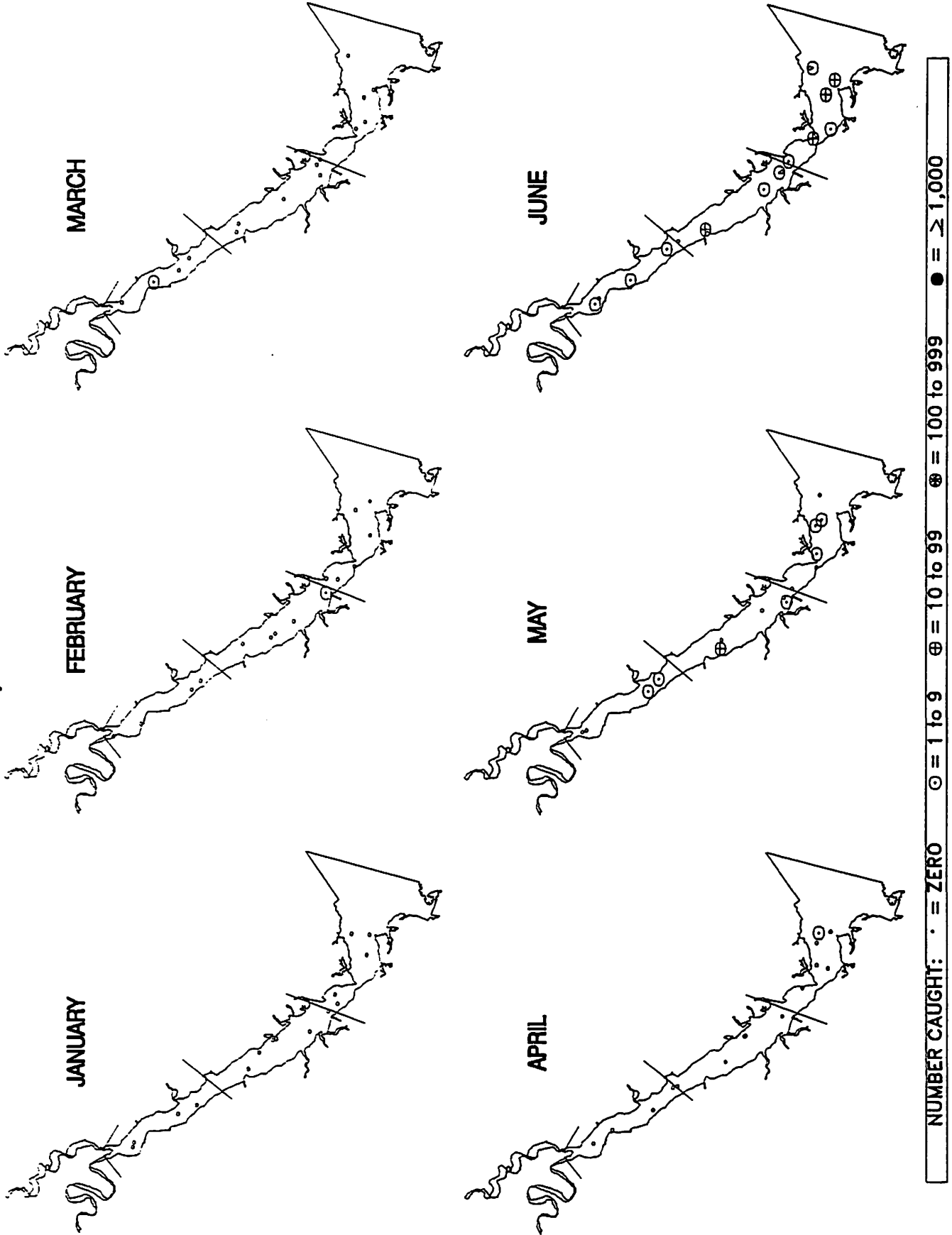


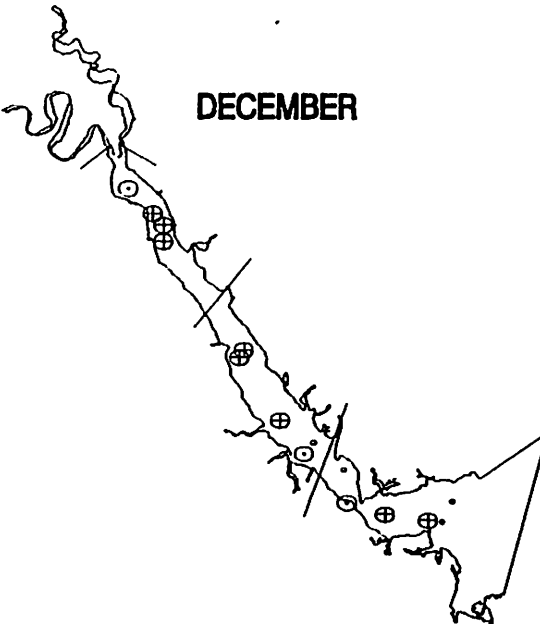
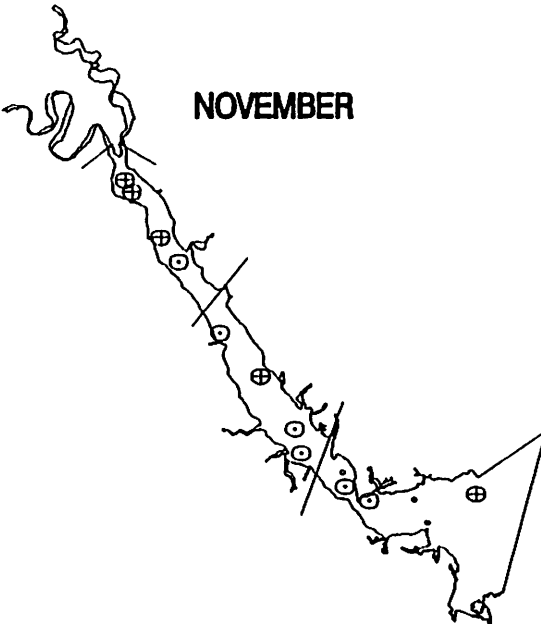
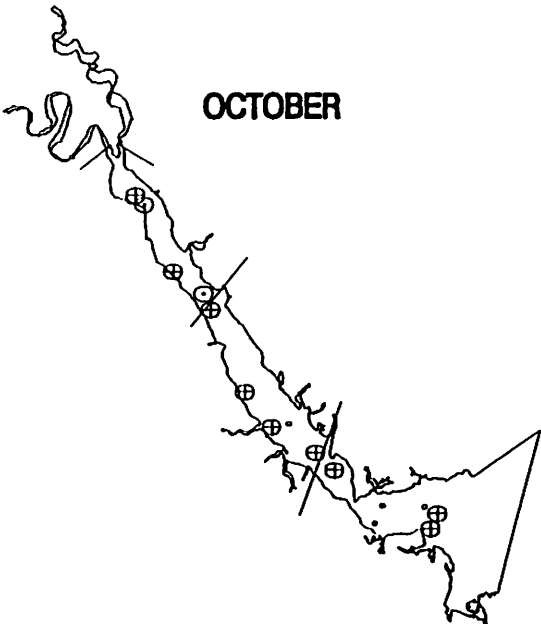
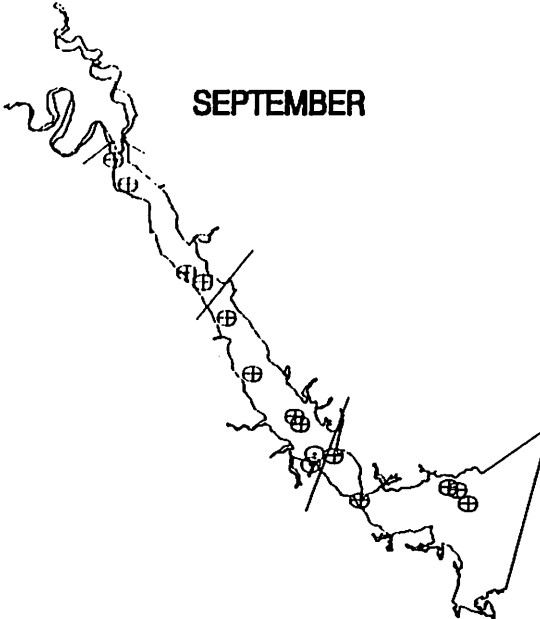
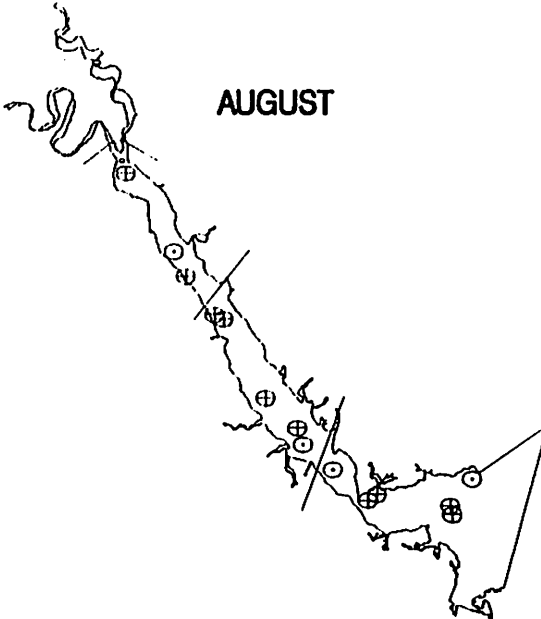
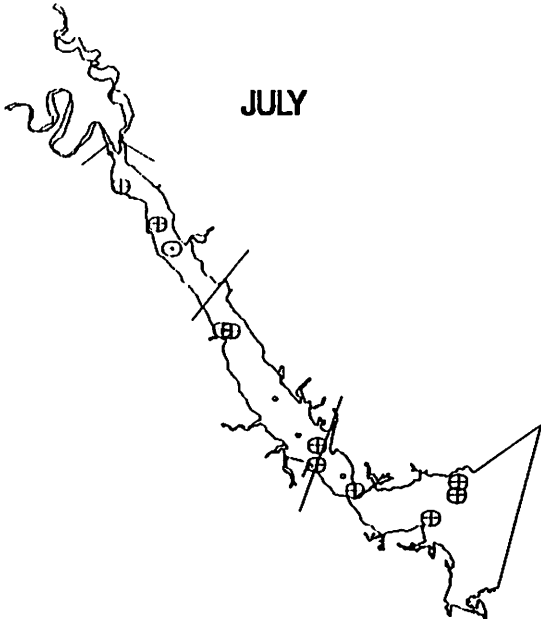
Figure 31.(cont.)

Figure 32.

Spot, 1993



# Spot, 1993



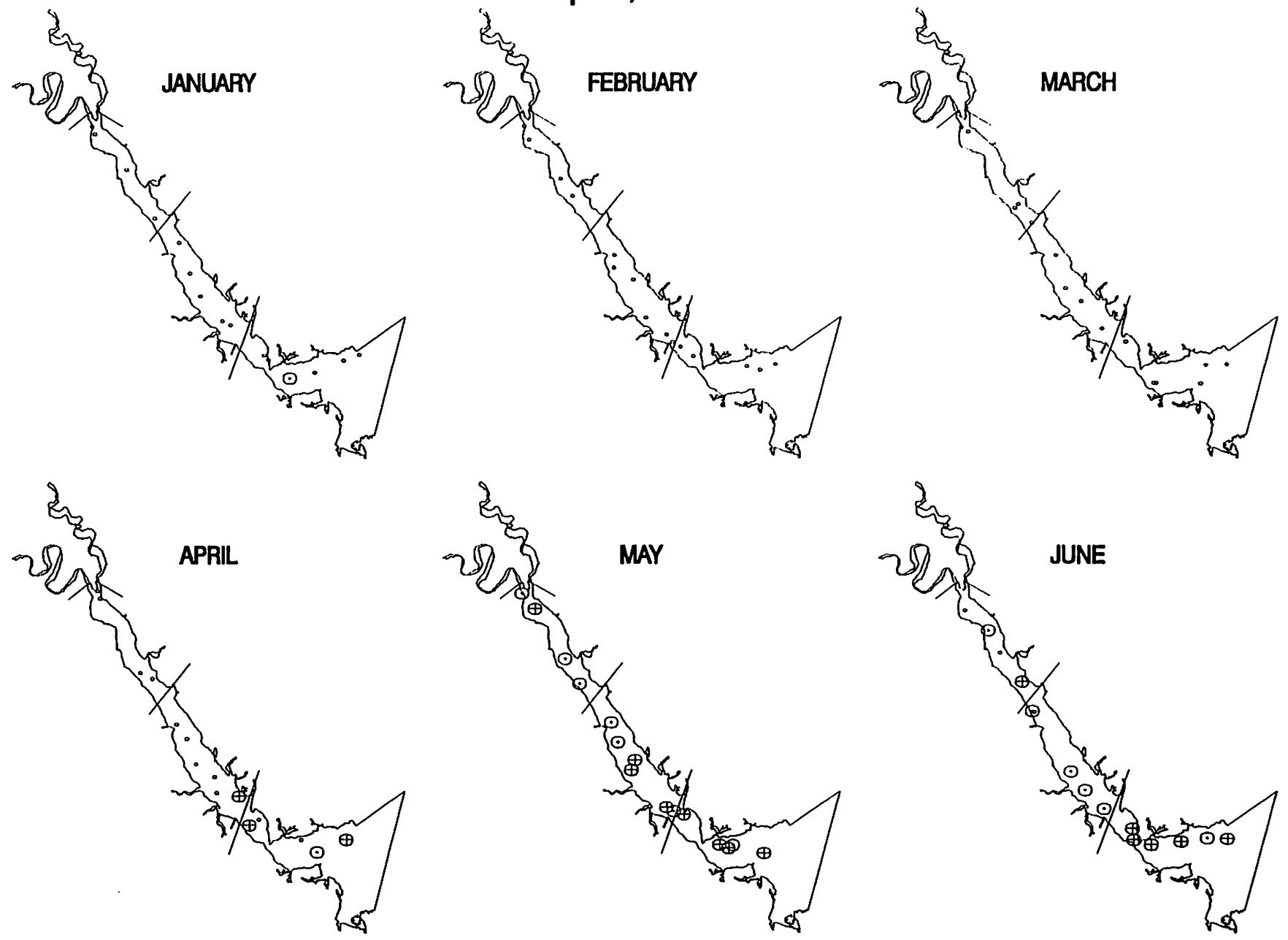
163

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

Figure 32.(cont.)



# Spot, 1994

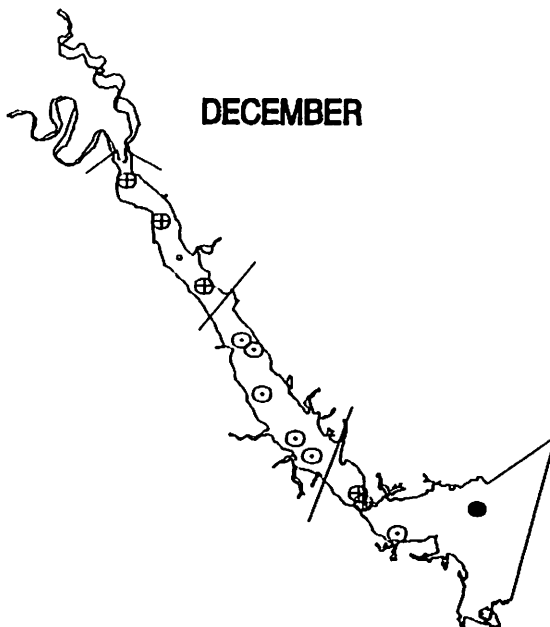
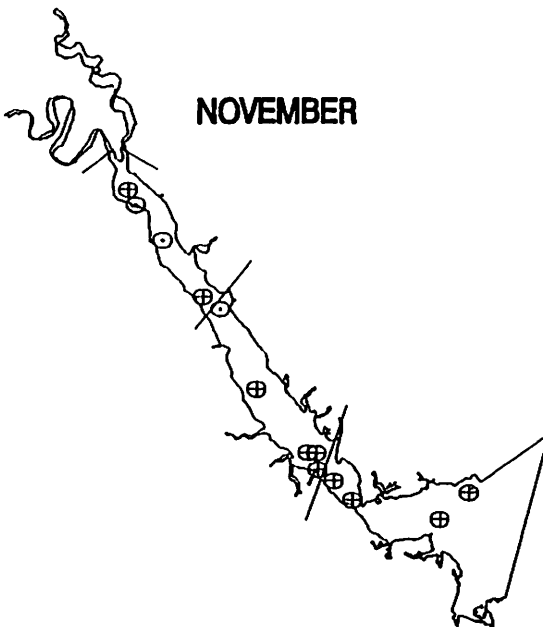
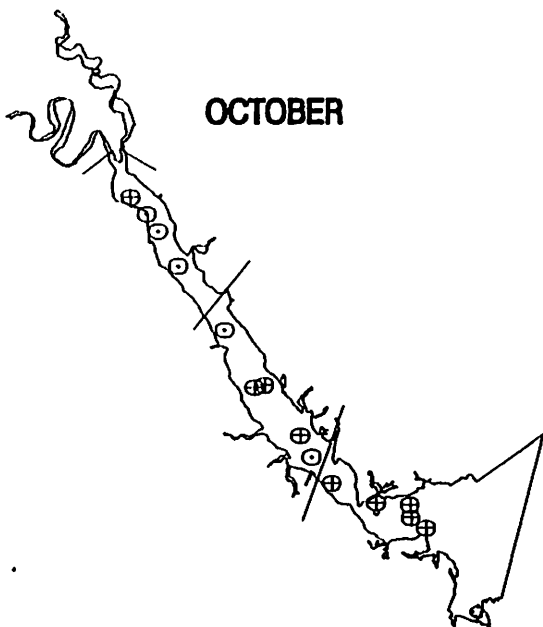
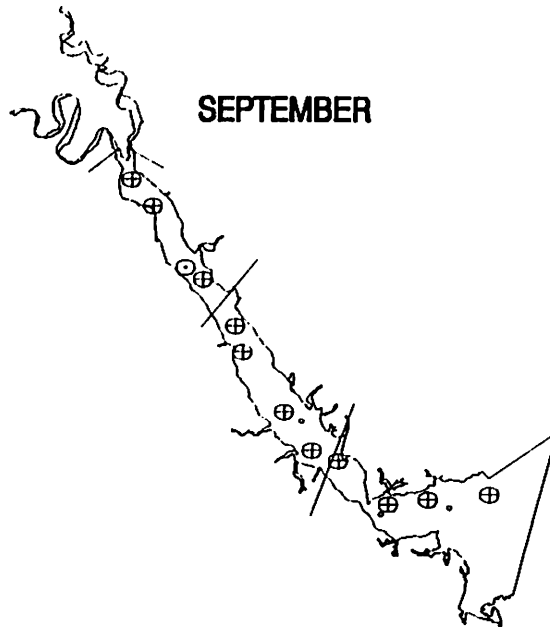
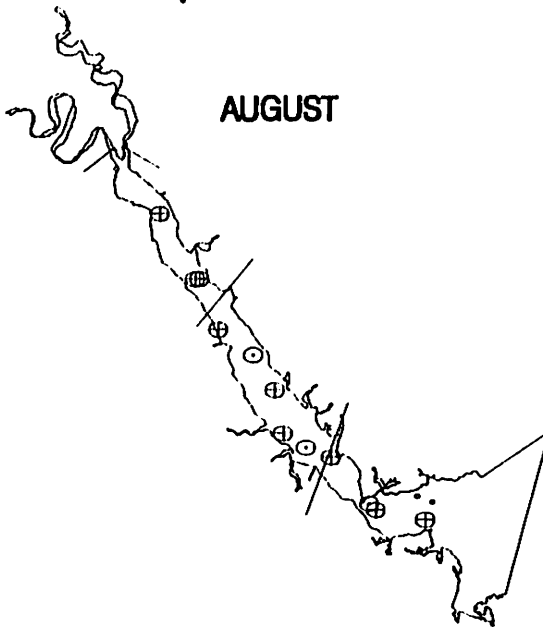
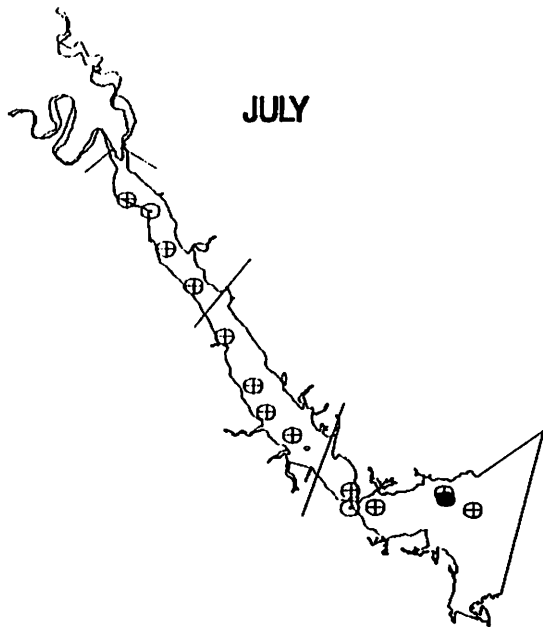


NUMBER CAUGHT: · = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

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Figure 33.

# Spot, 1994



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

# Striped Bass, 1991

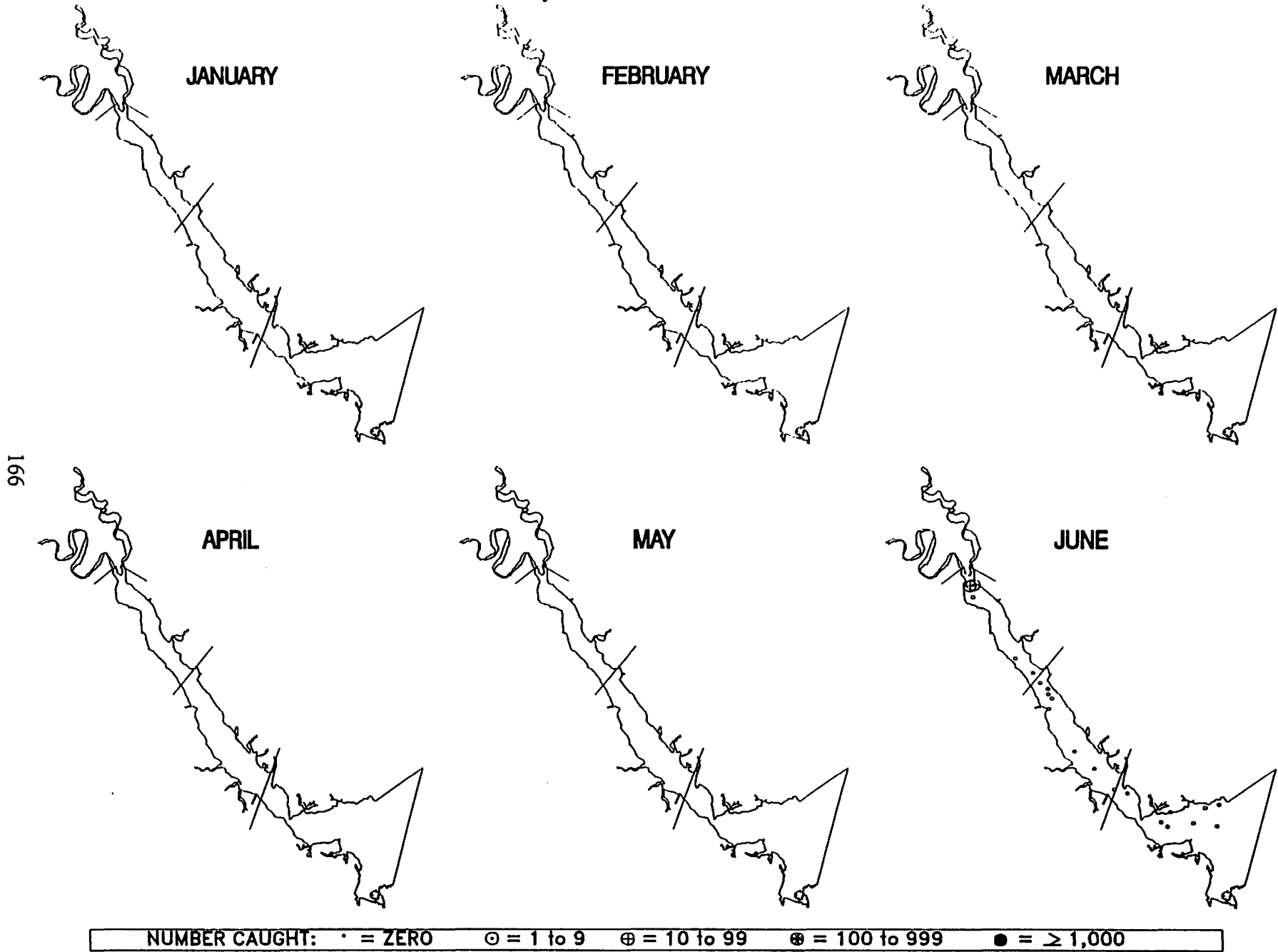
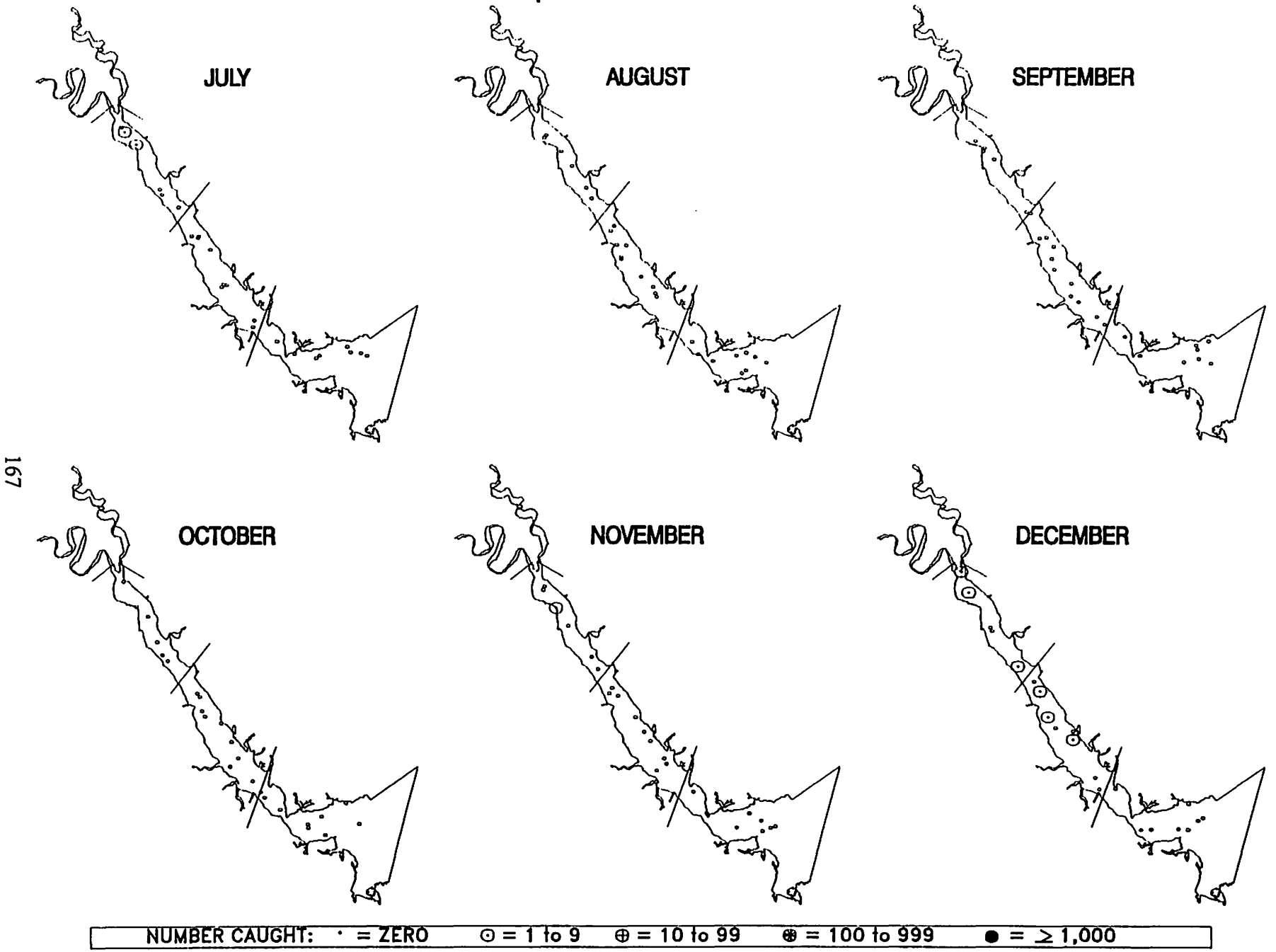


Figure 34.

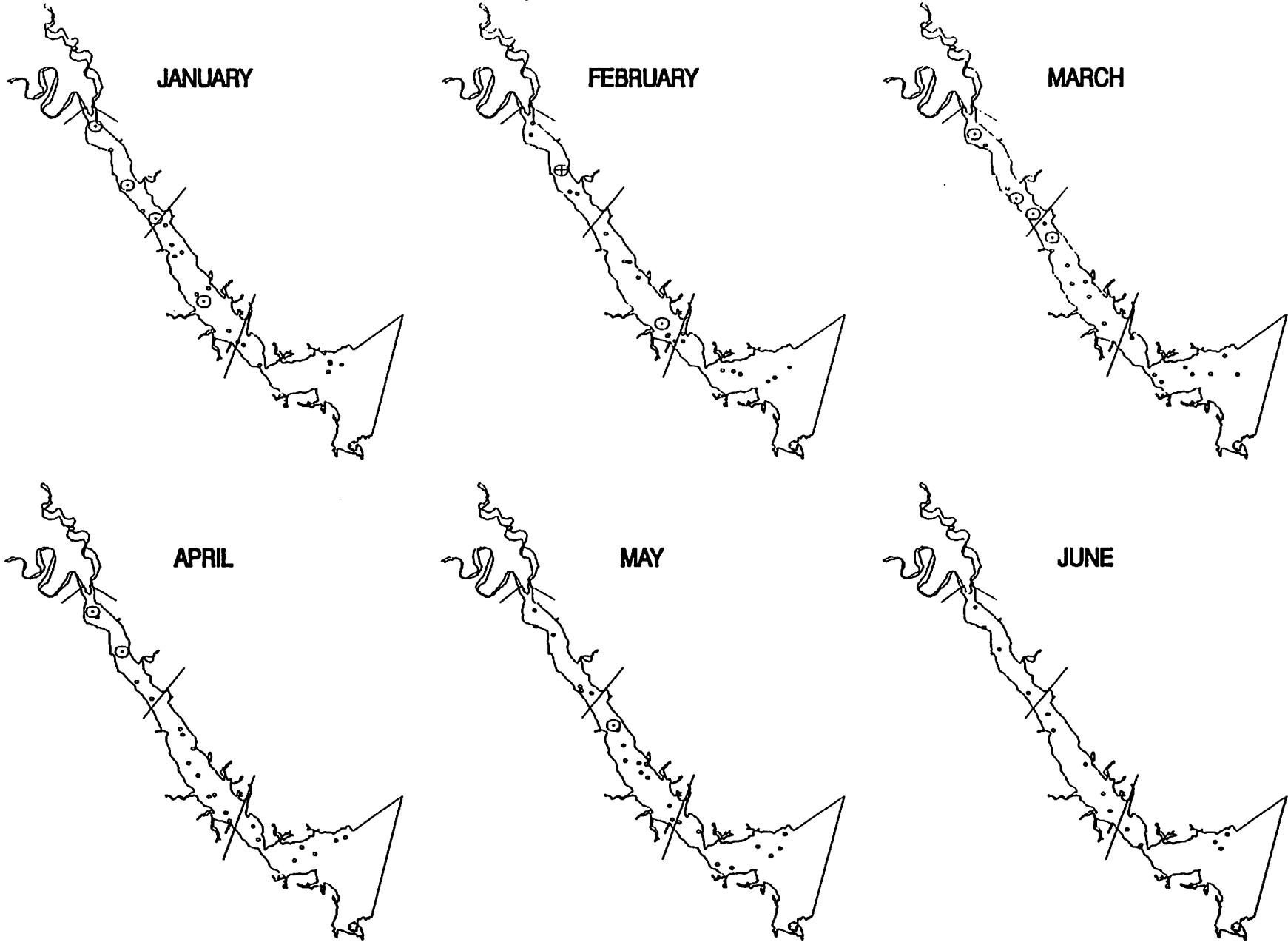
# Striped Bass, 1991



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Figure 34.(cont.)

# Striped Bass, 1992



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

Figure 35.

# Striped Bass, 1992

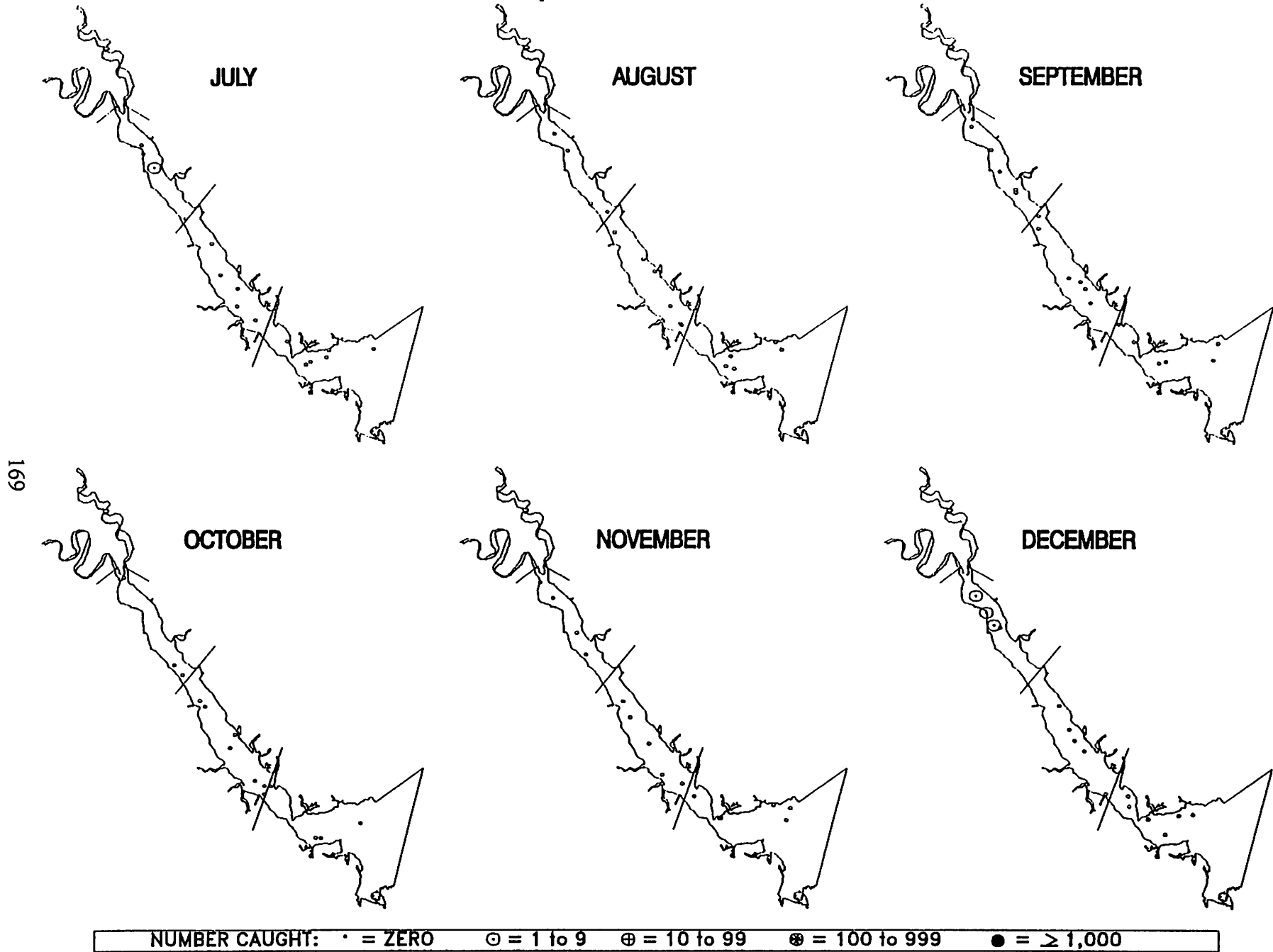


Figure 35.(cont.)

# Striped Bass, 1993

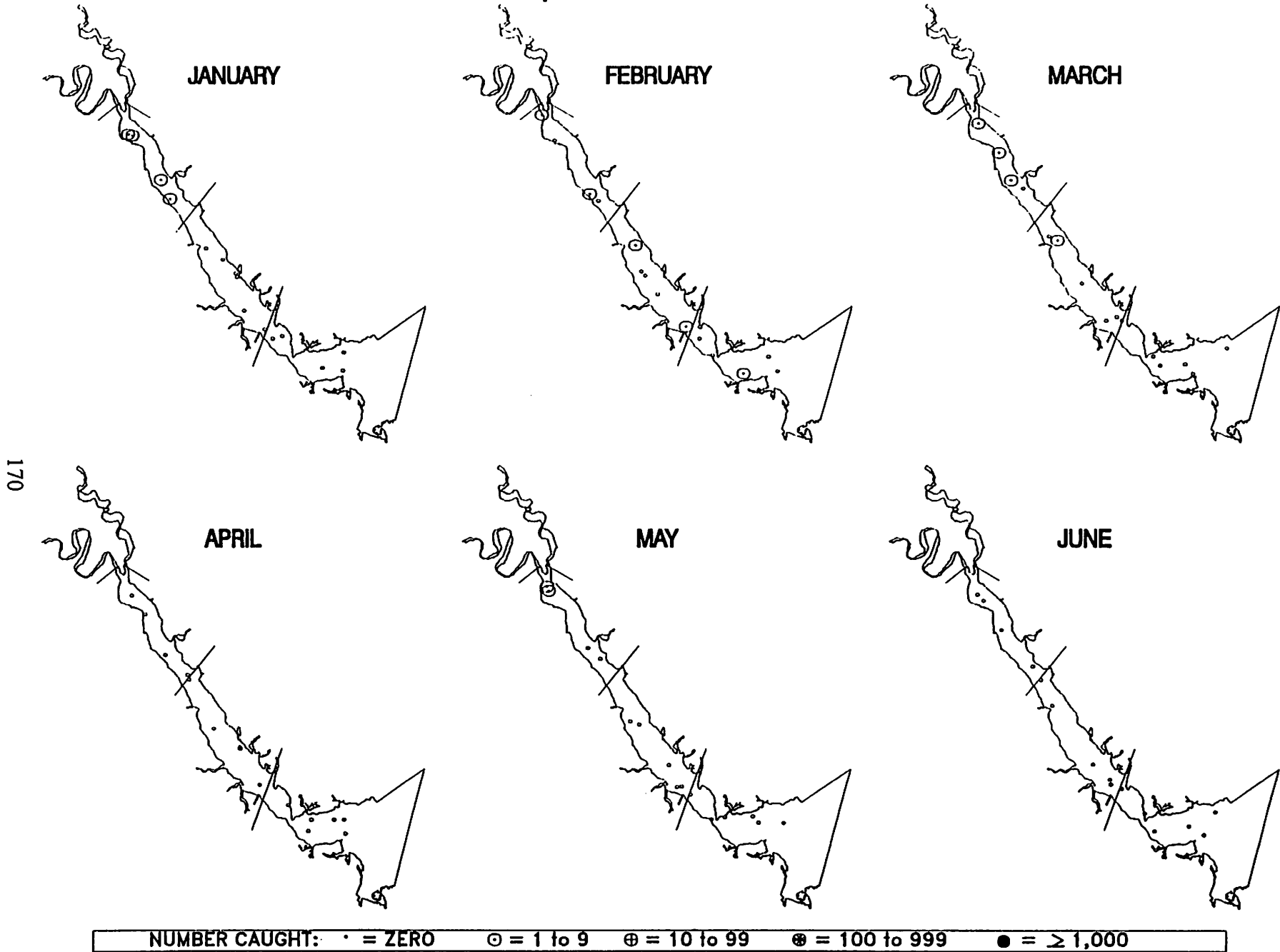


Figure 36.

# Striped Bass, 1993

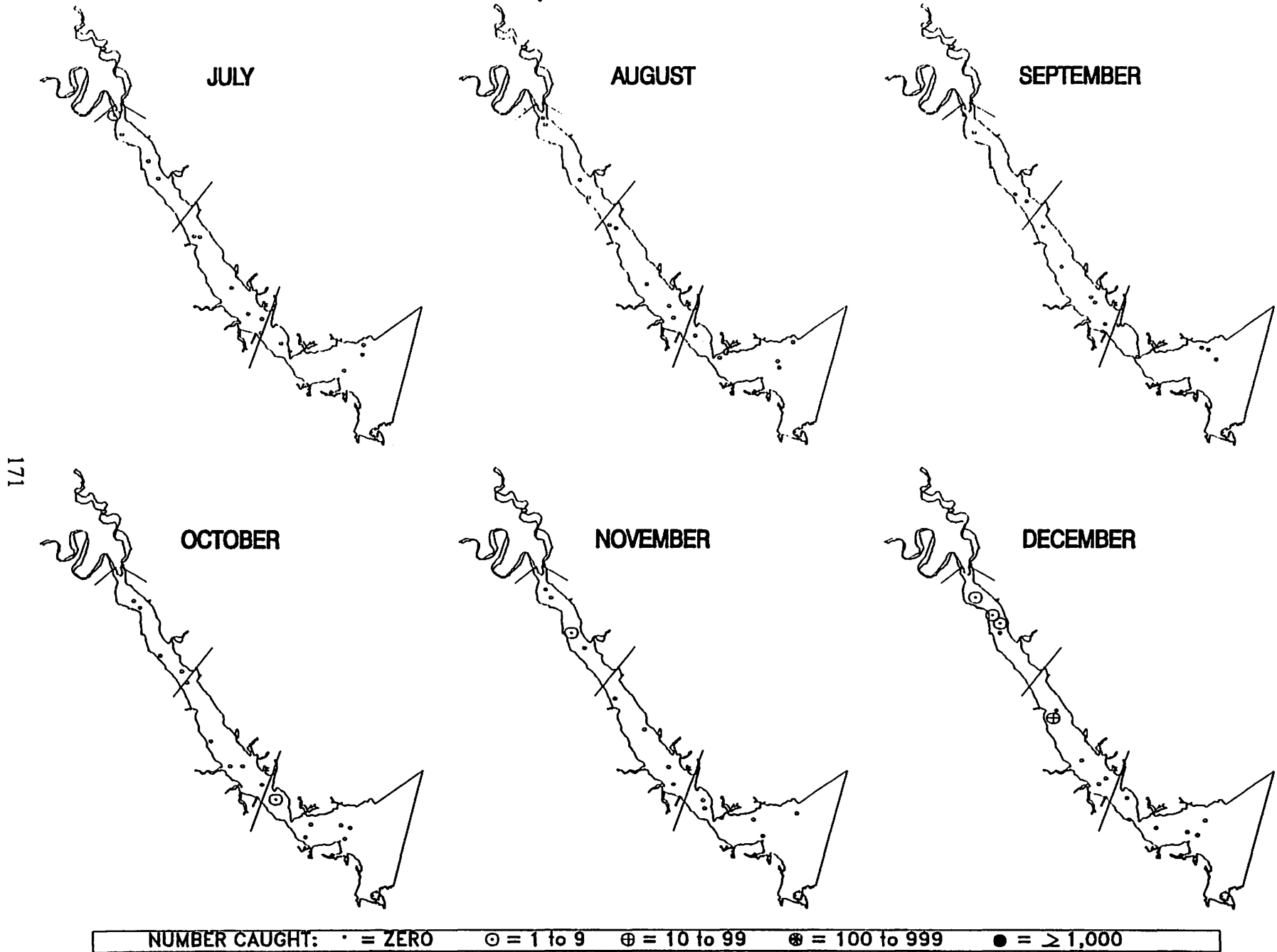
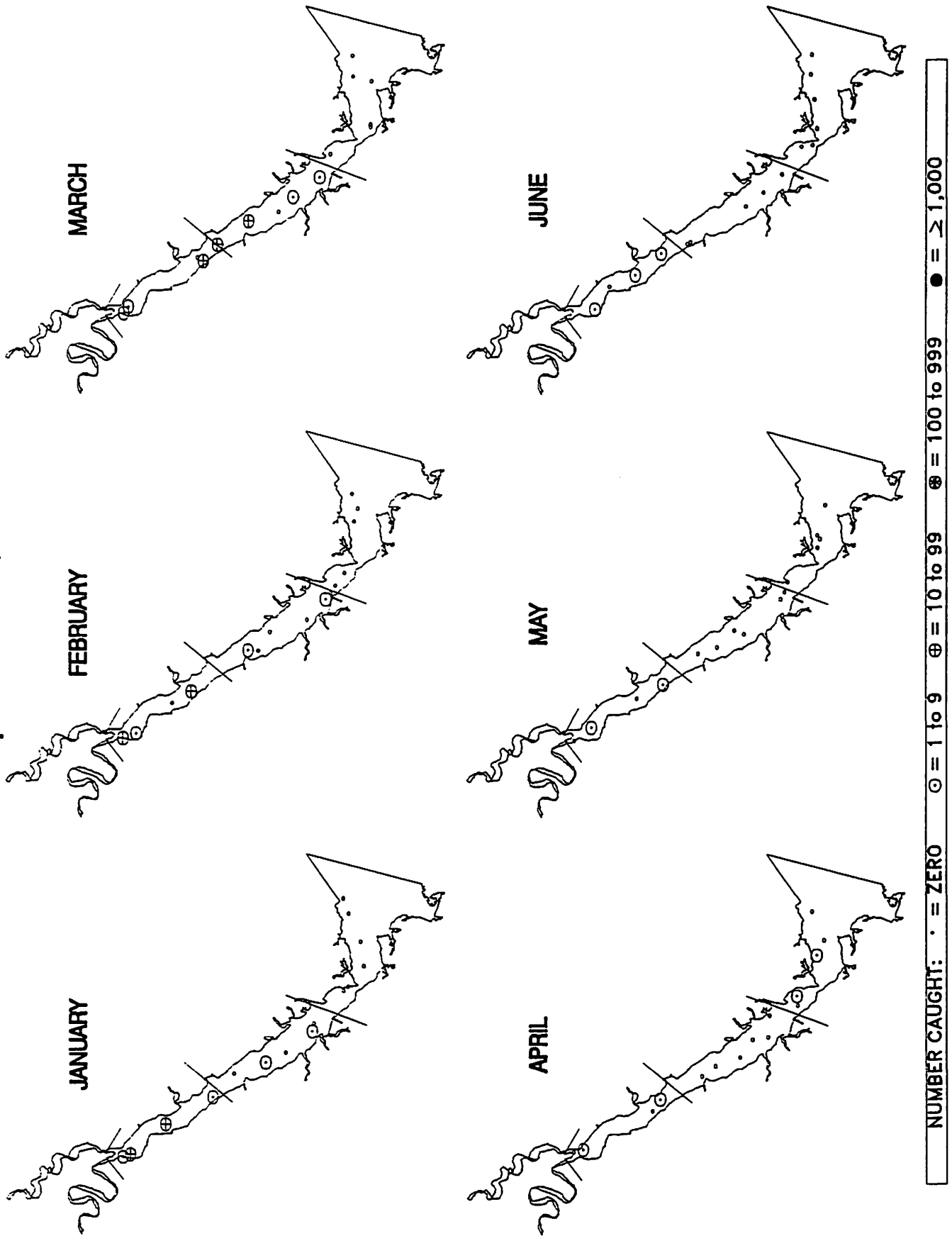


Figure 36.(cont.)



Figure 37.

Striped Bass, 1994



# Striped Bass, 1994

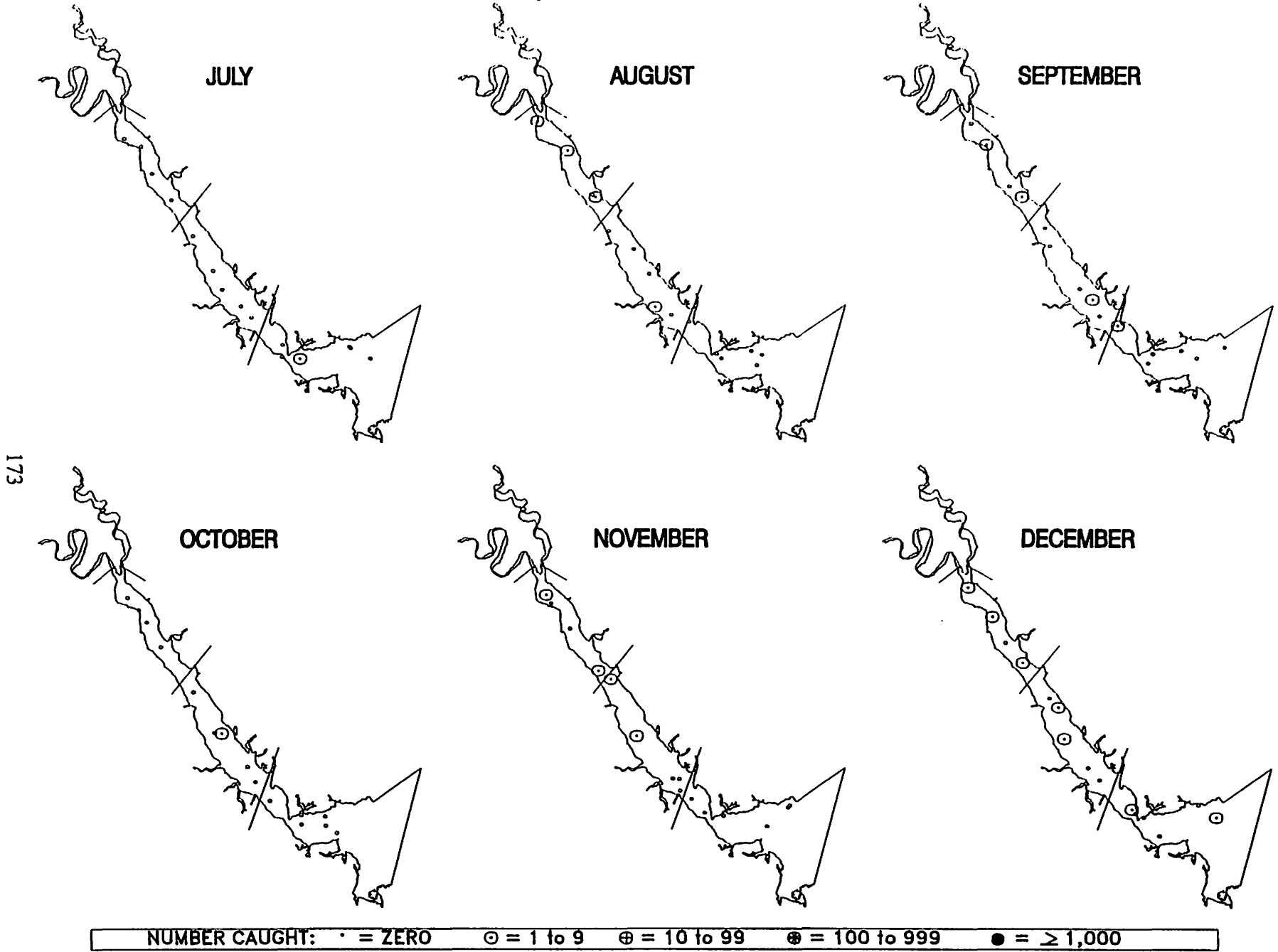


Figure 37.(cont.)

# Summer Flounder, 1991

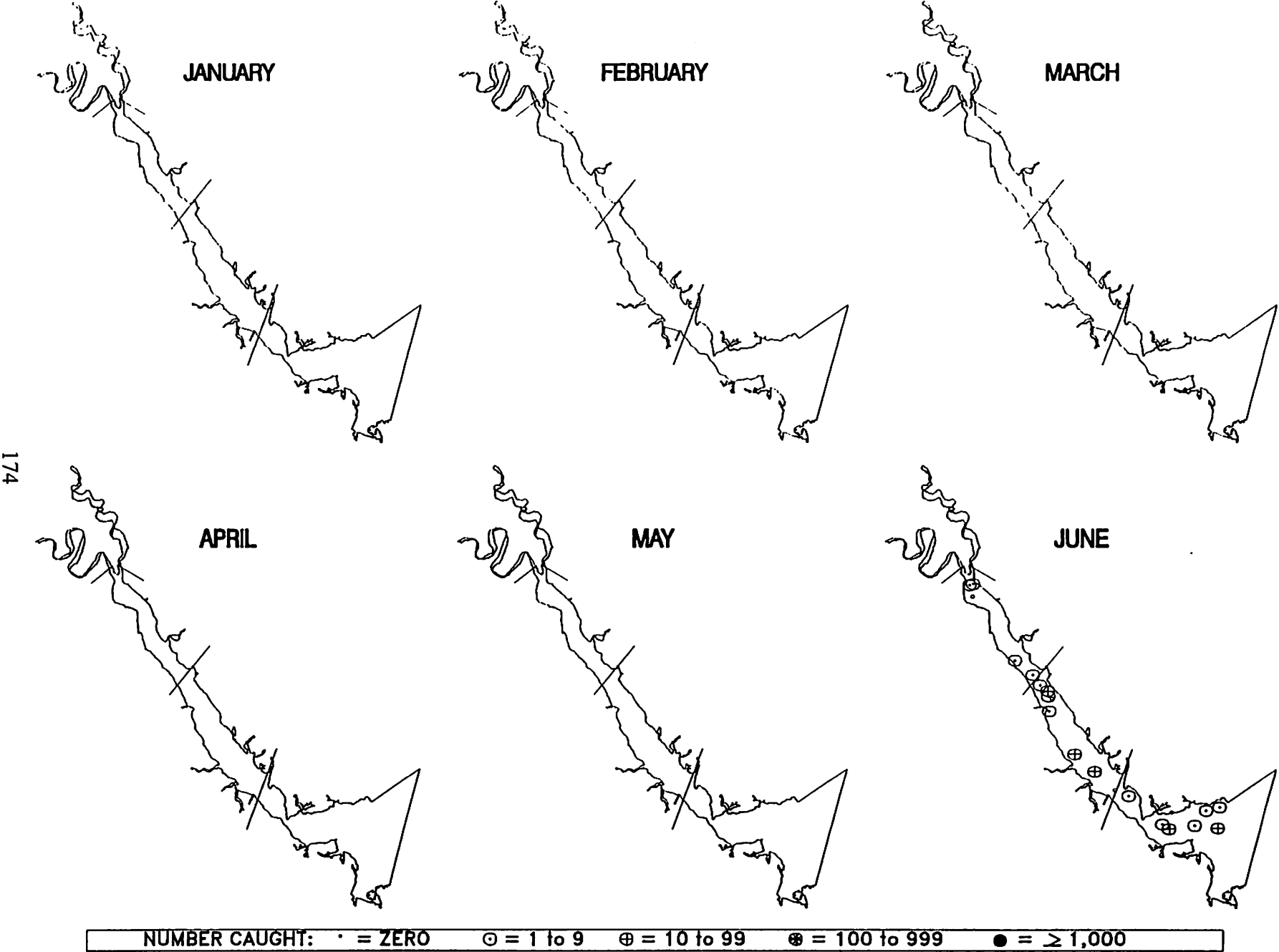


Figure 38.

# Summer Flounder, 1991

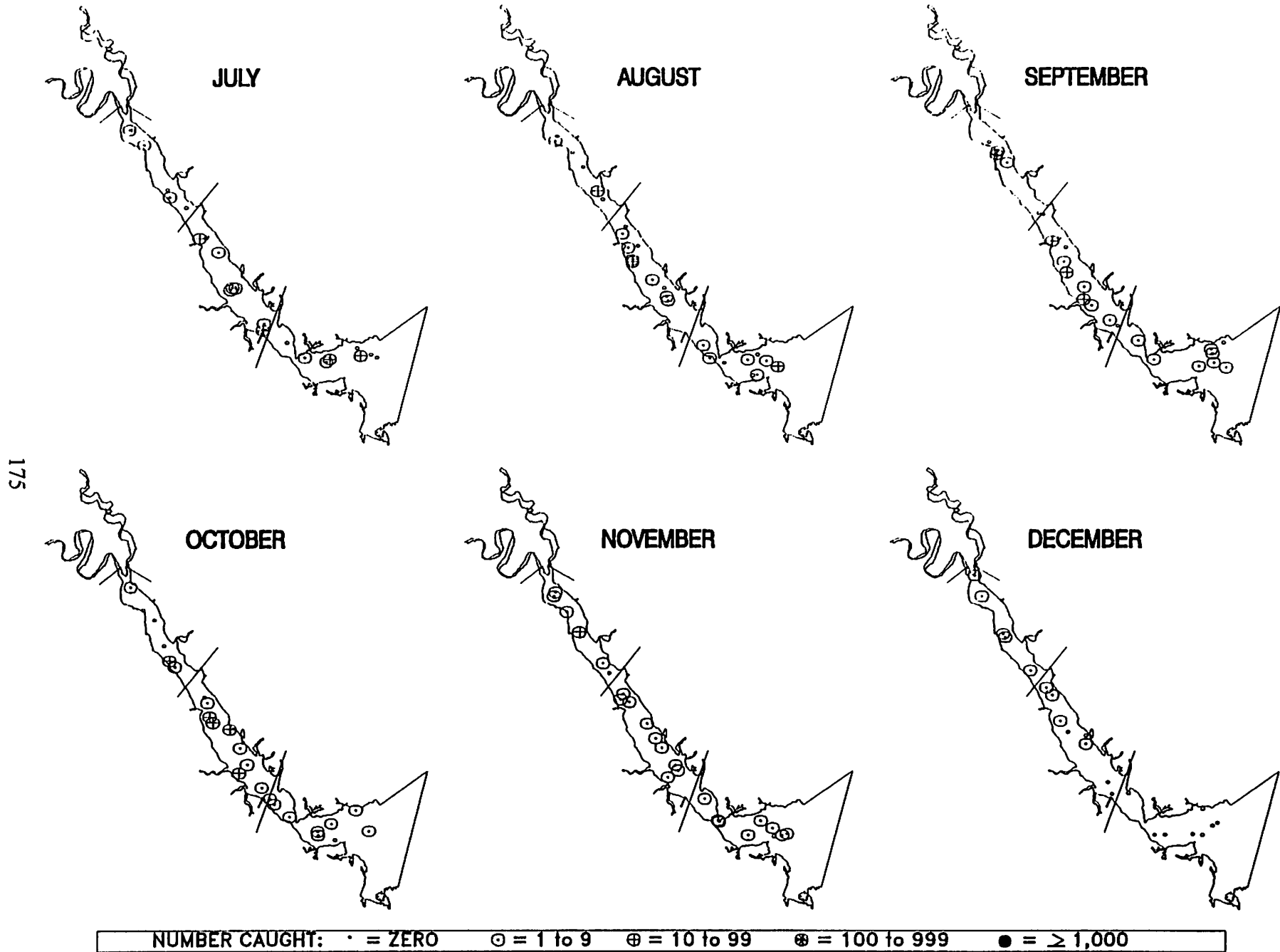
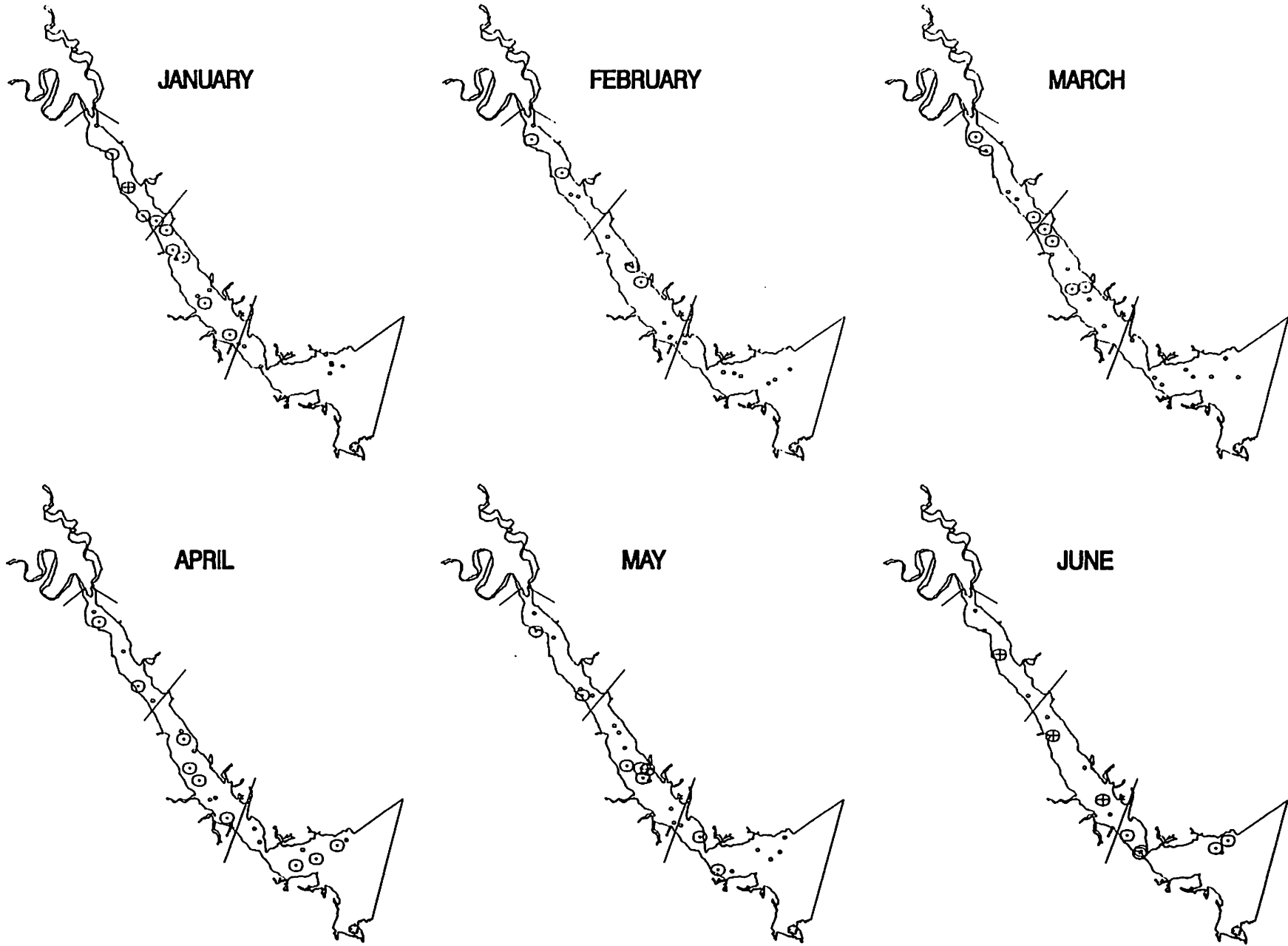


Figure 38.(cont.)

# Summer Flounder, 1992



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

Figure 39.

# Summer Flounder, 1992

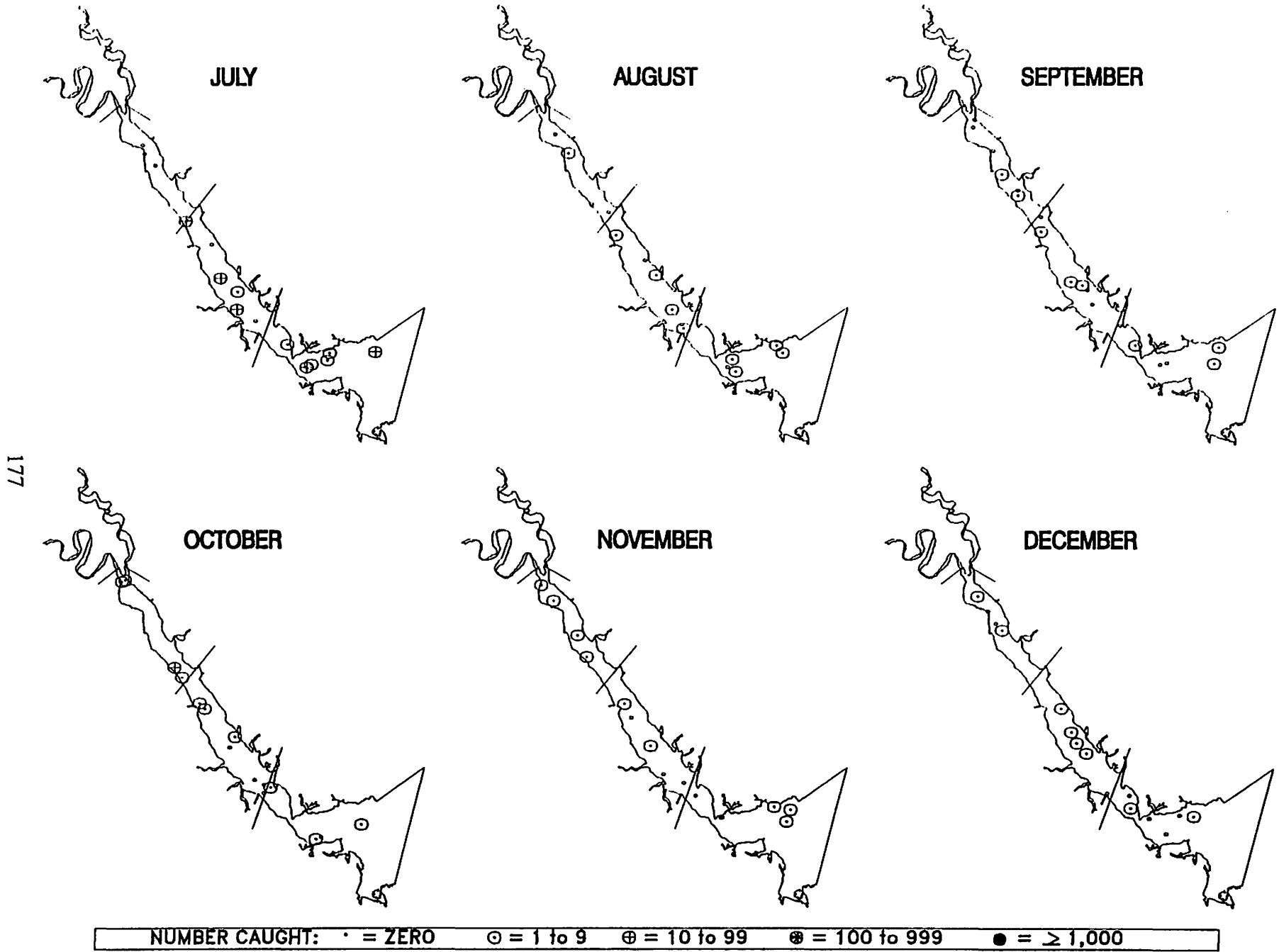


Figure 39.(cont.)

# Summer Flounder, 1993

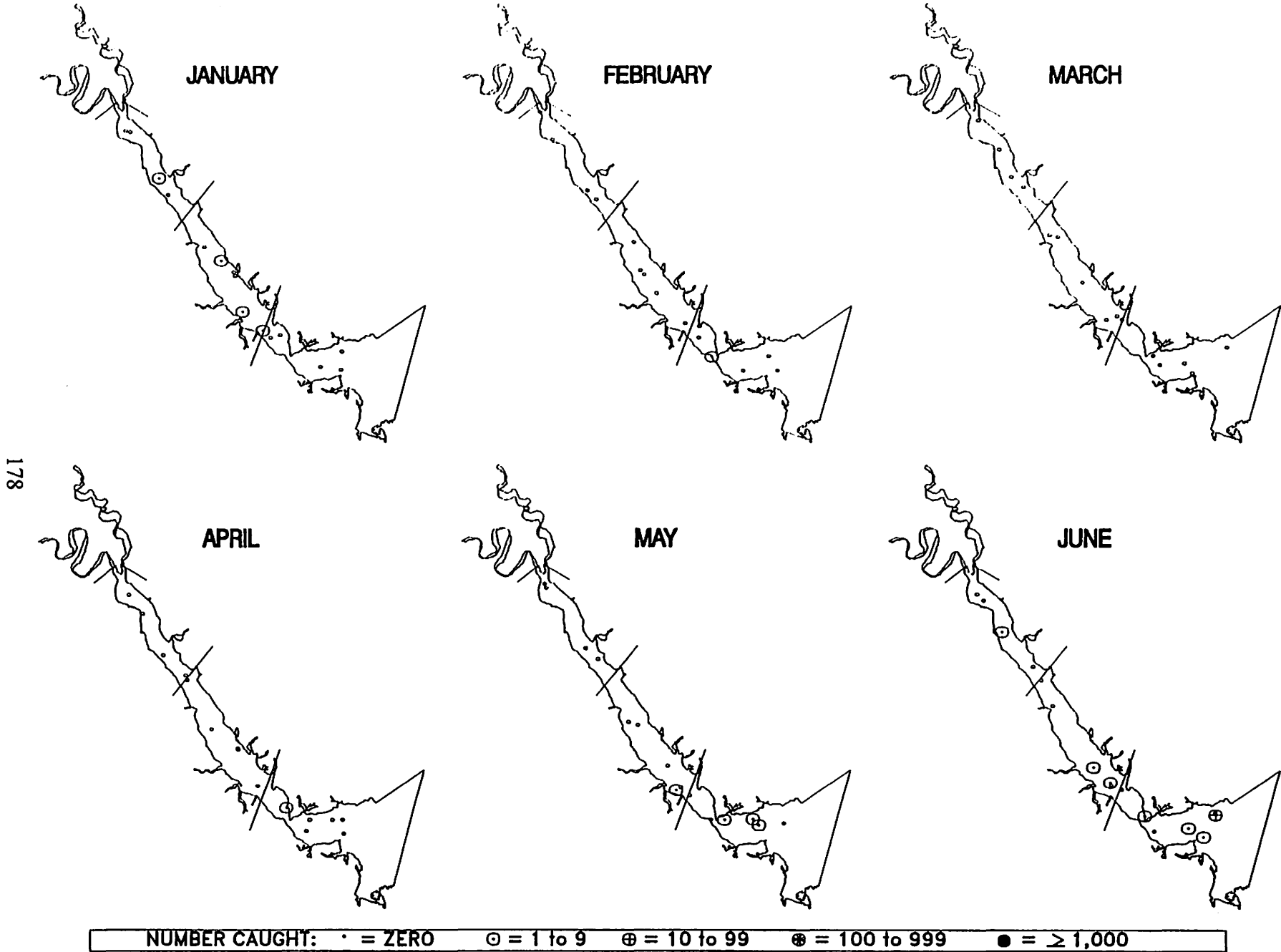


Figure 40.

# Summer Flounder, 1993

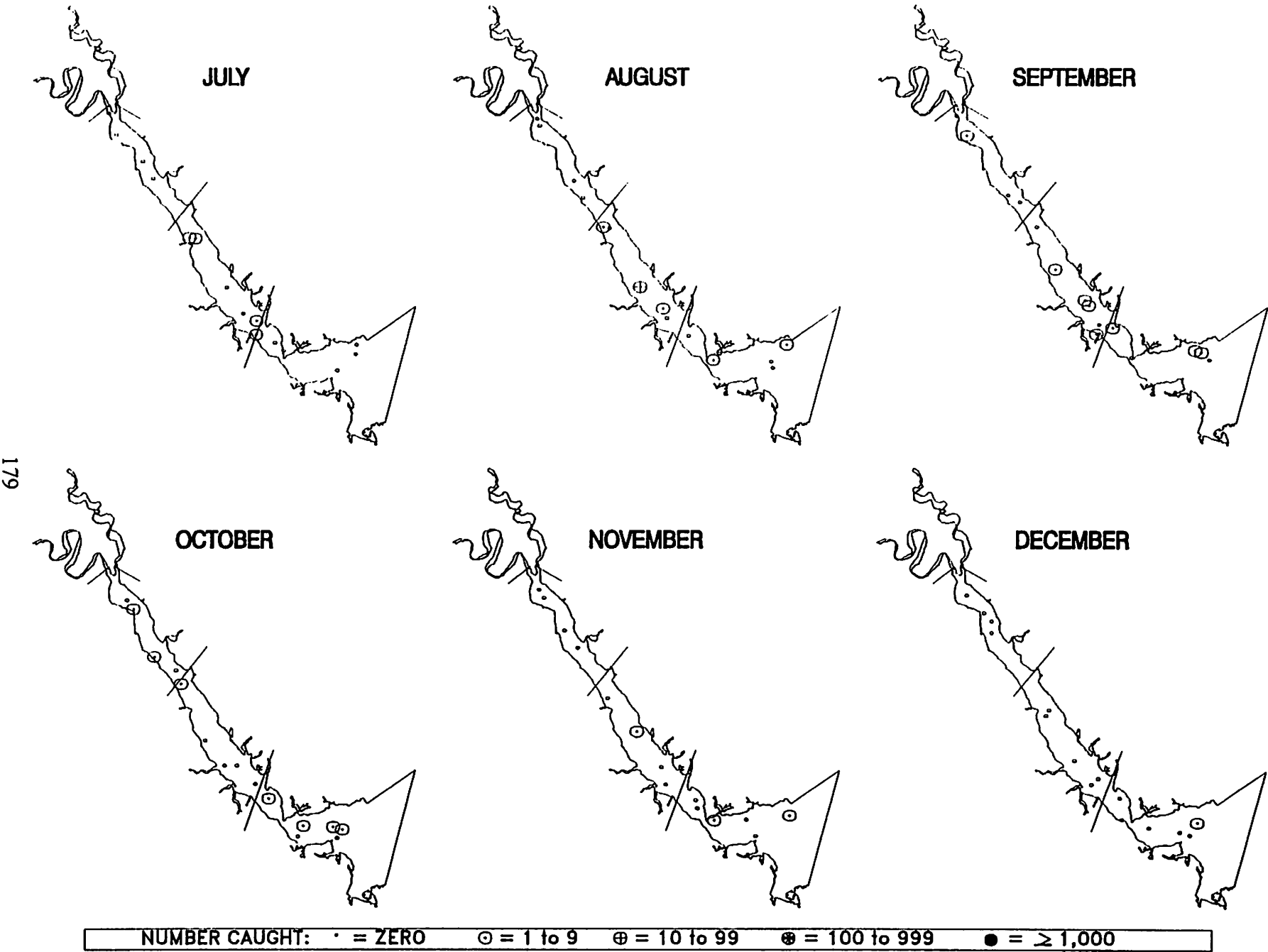


Figure 40.(cont.)



# Summer Flounder, 1994

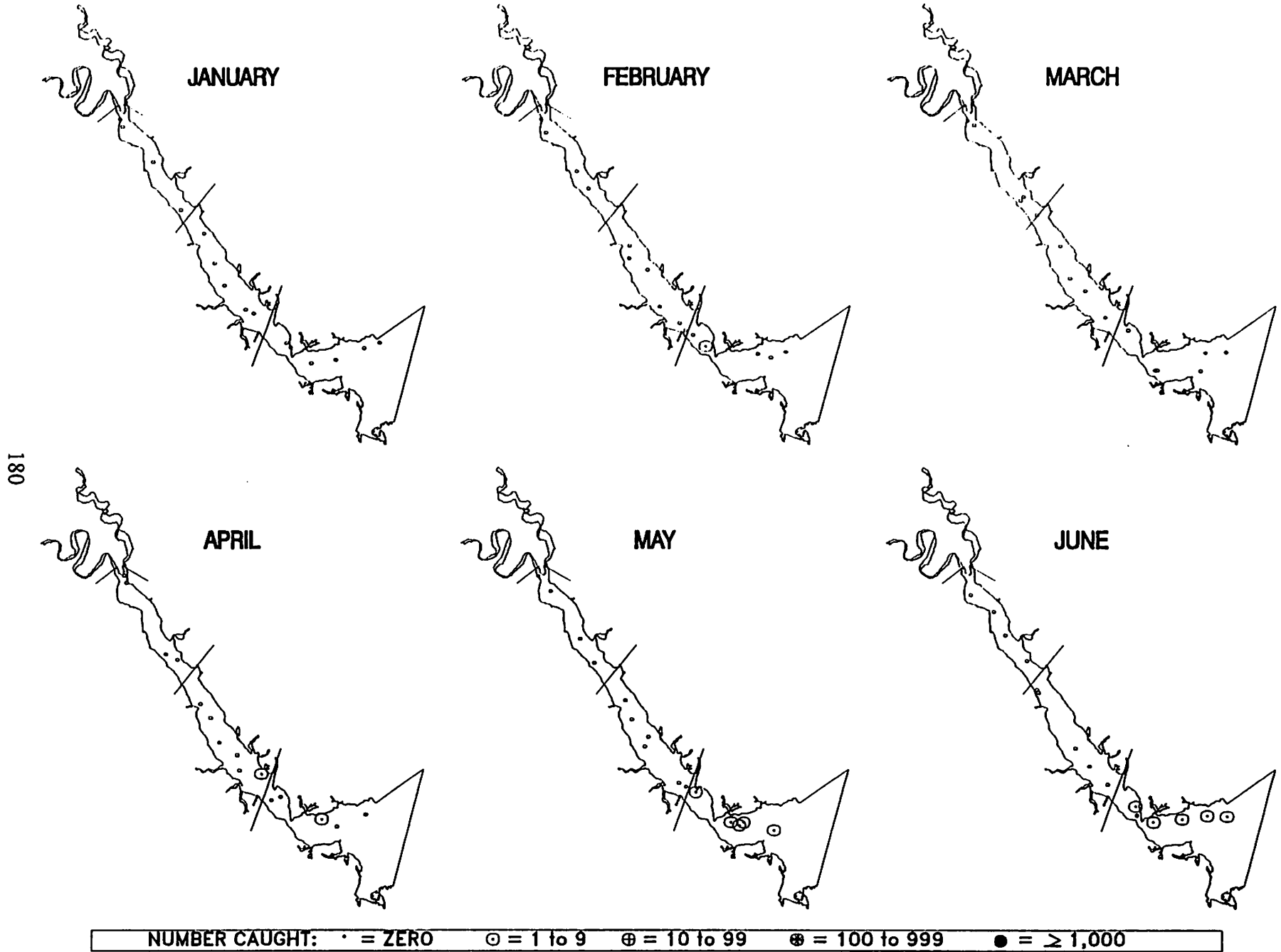


Figure 41.

# Summer Flounder, 1994

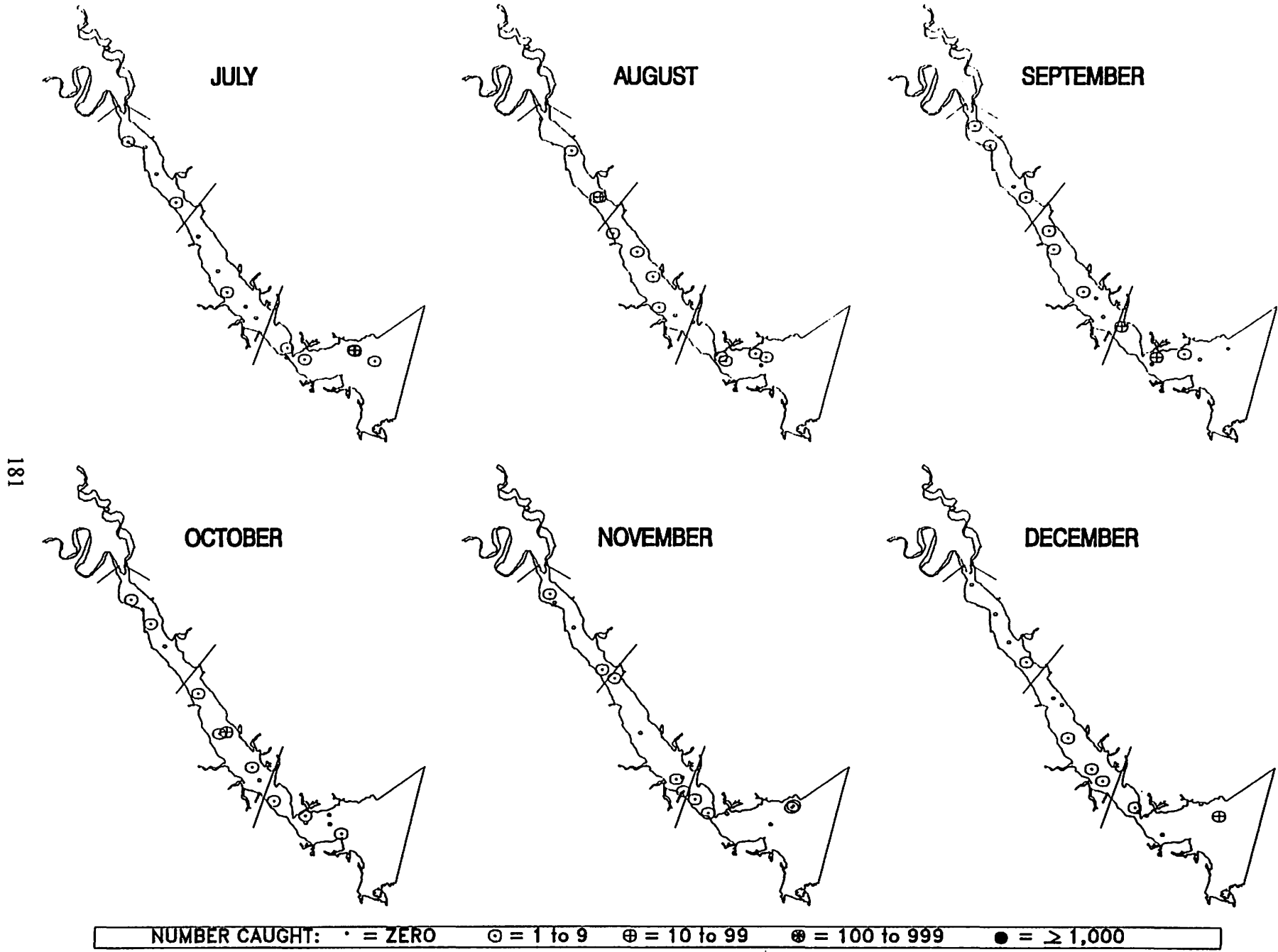
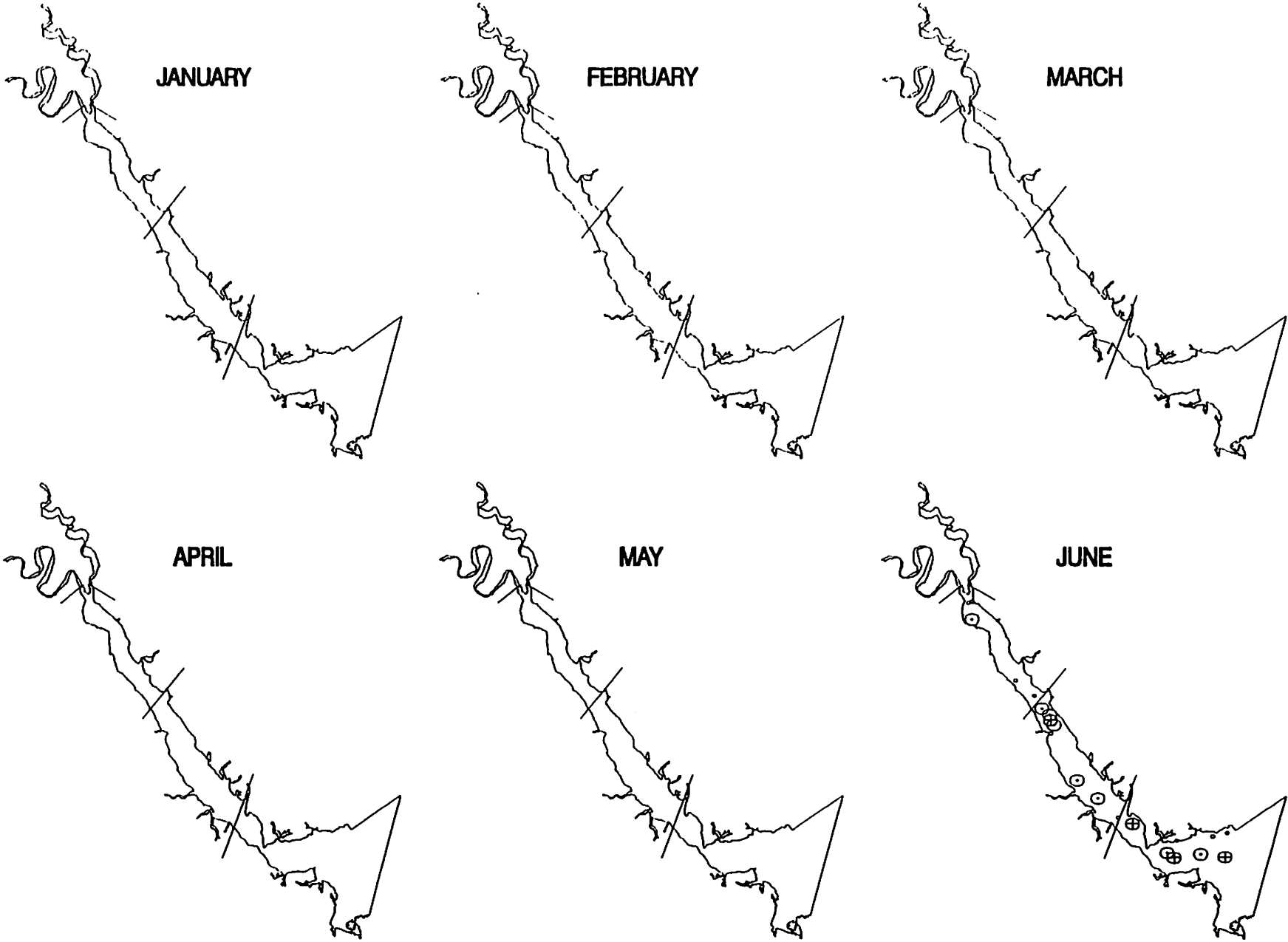


Figure 41.(cont.)

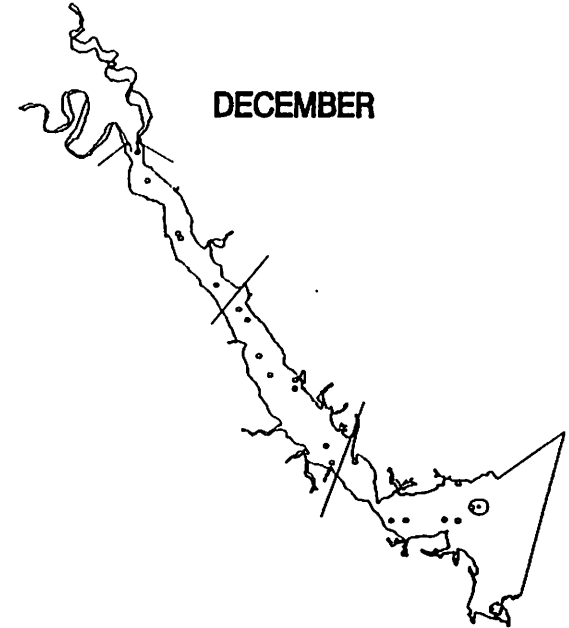
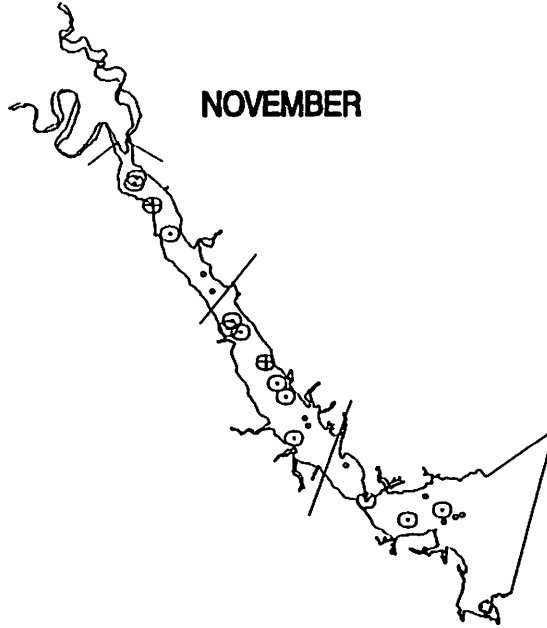
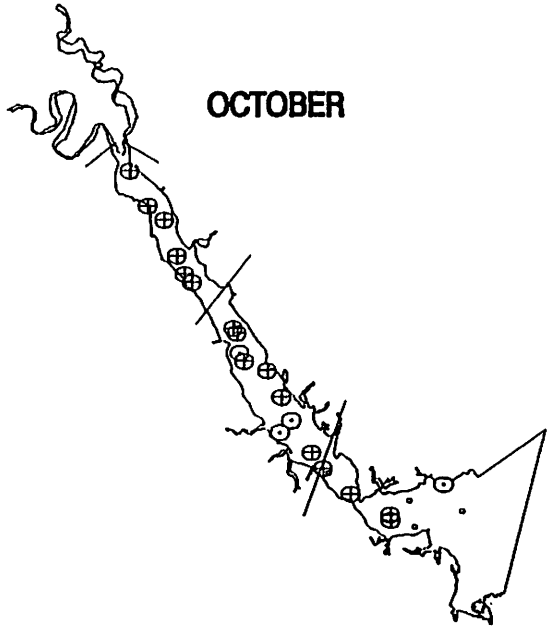
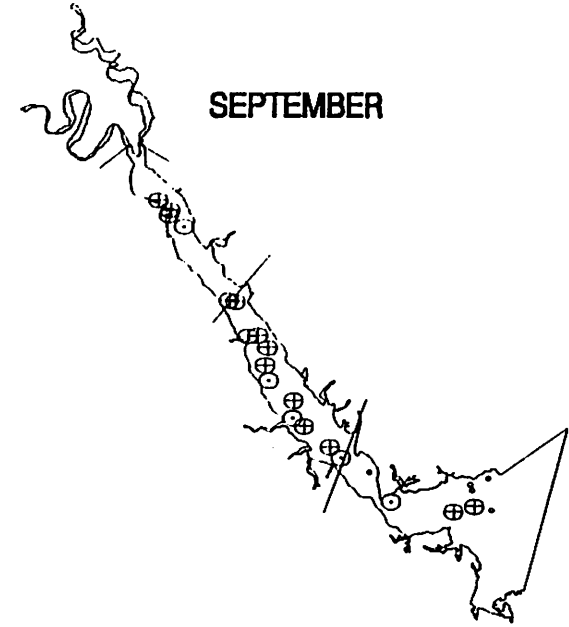
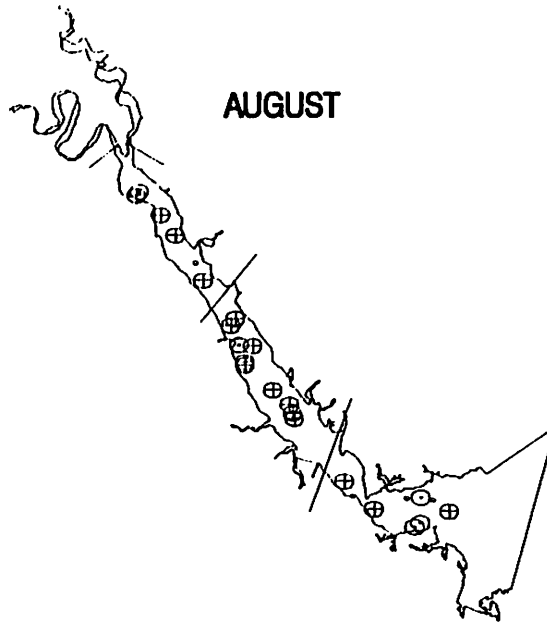
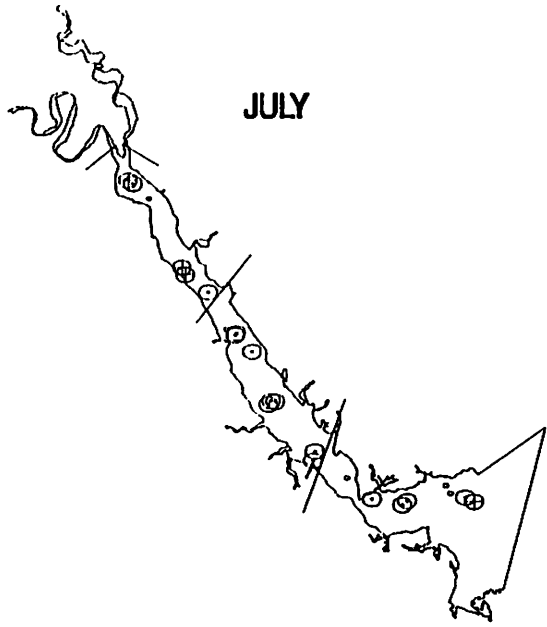
# Weakfish, 1991



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

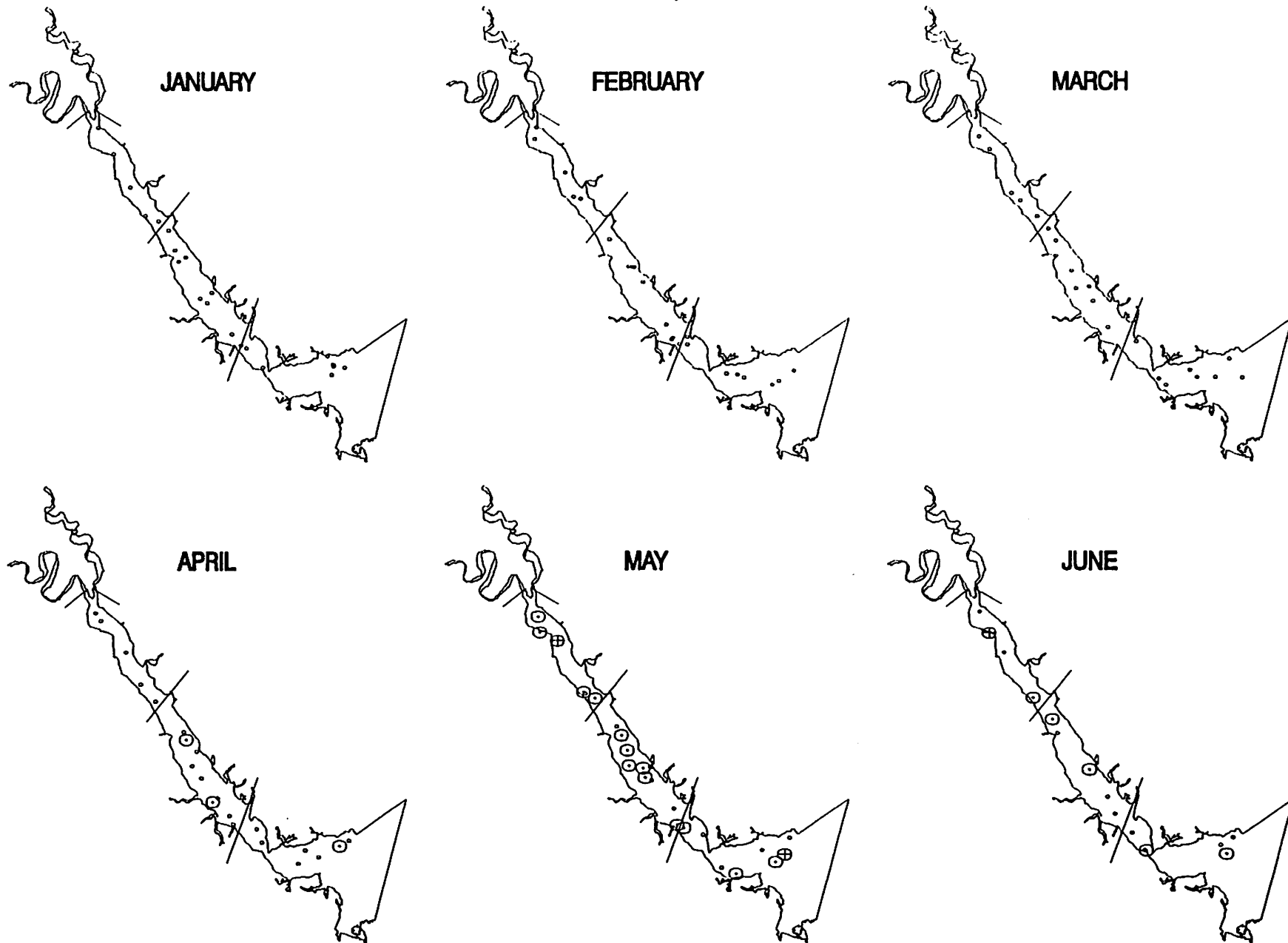
Figure 42.

# Weakfish, 1991



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

# Weakfish, 1992



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

Figure 43.

# Weakfish, 1992

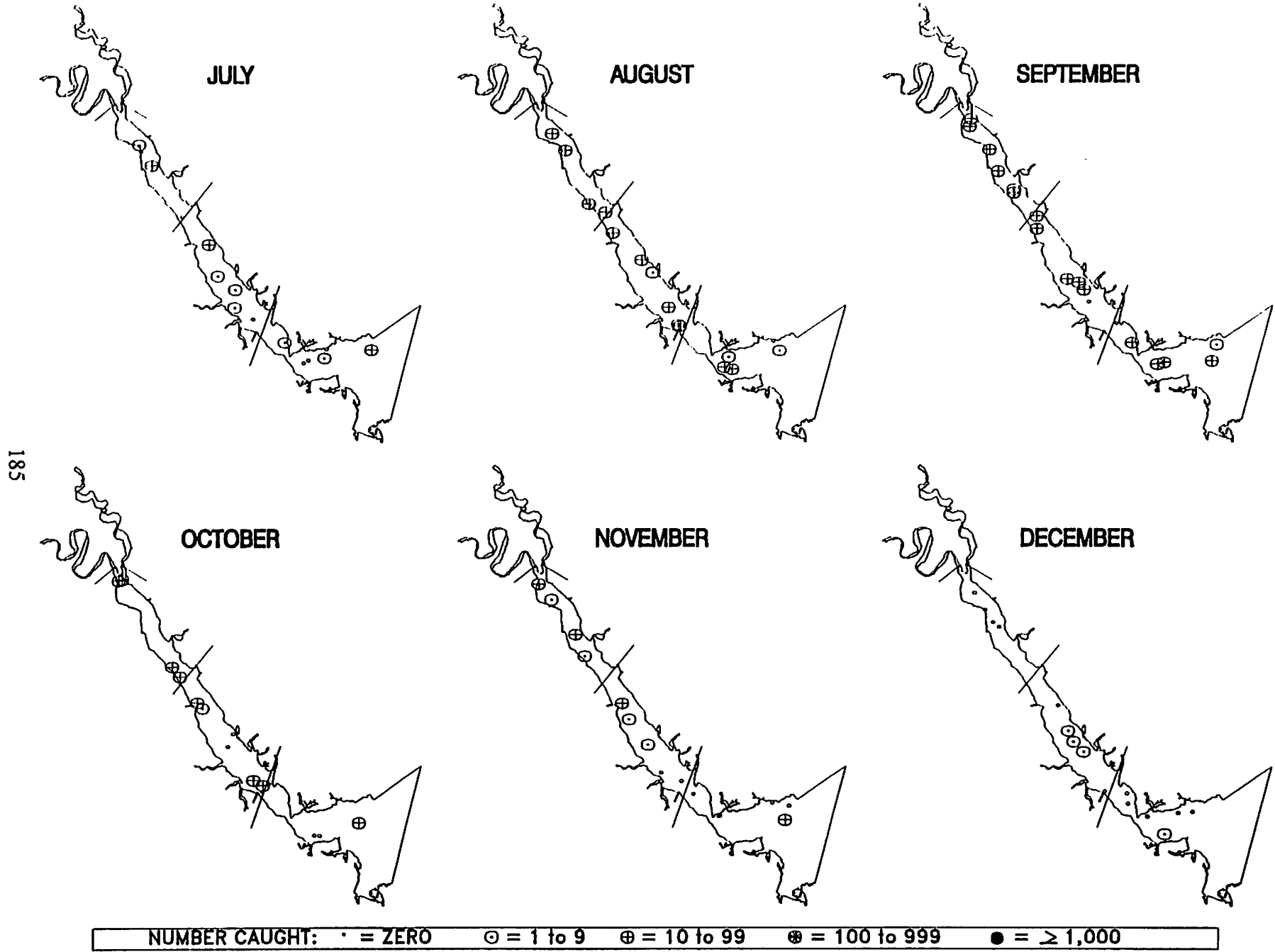
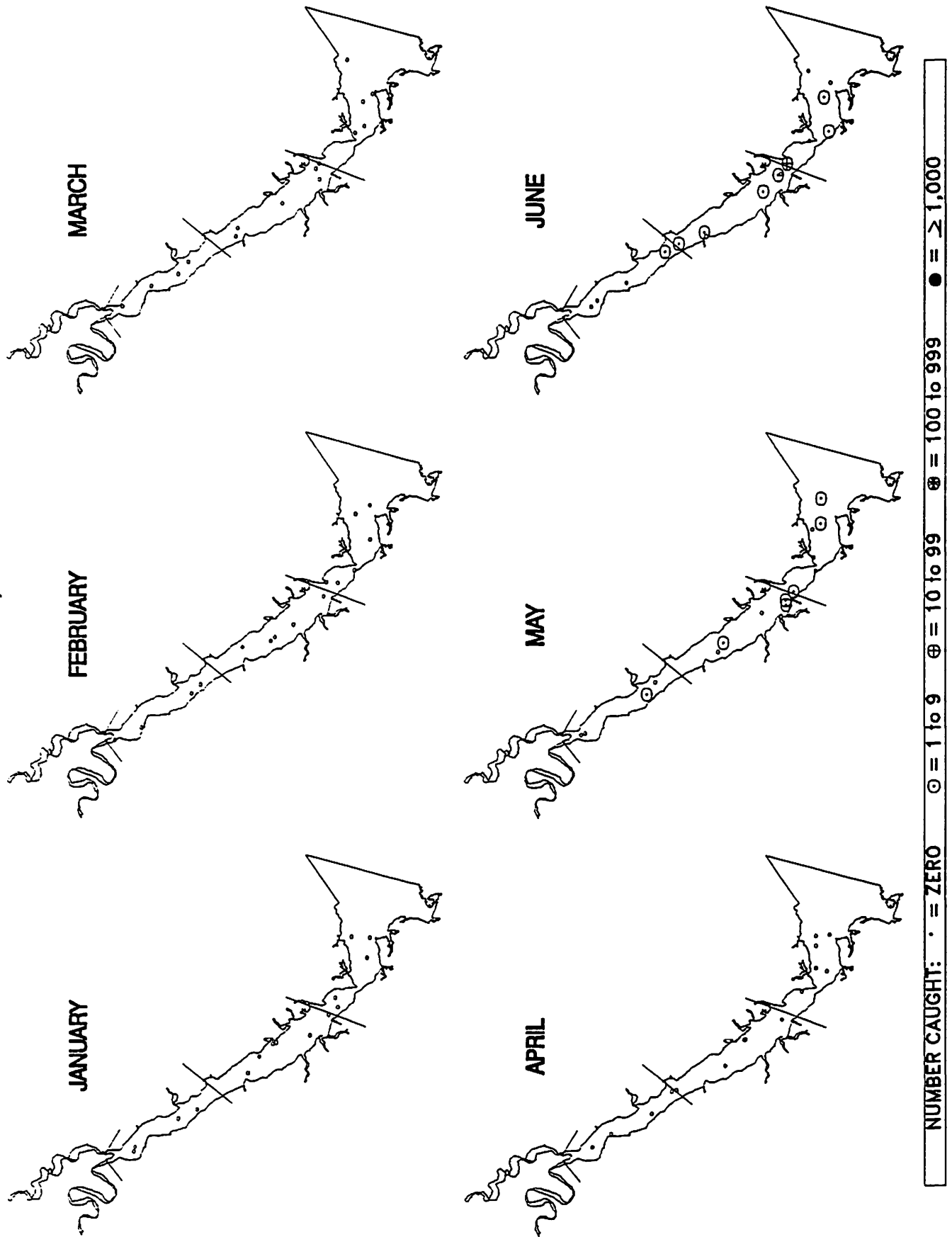


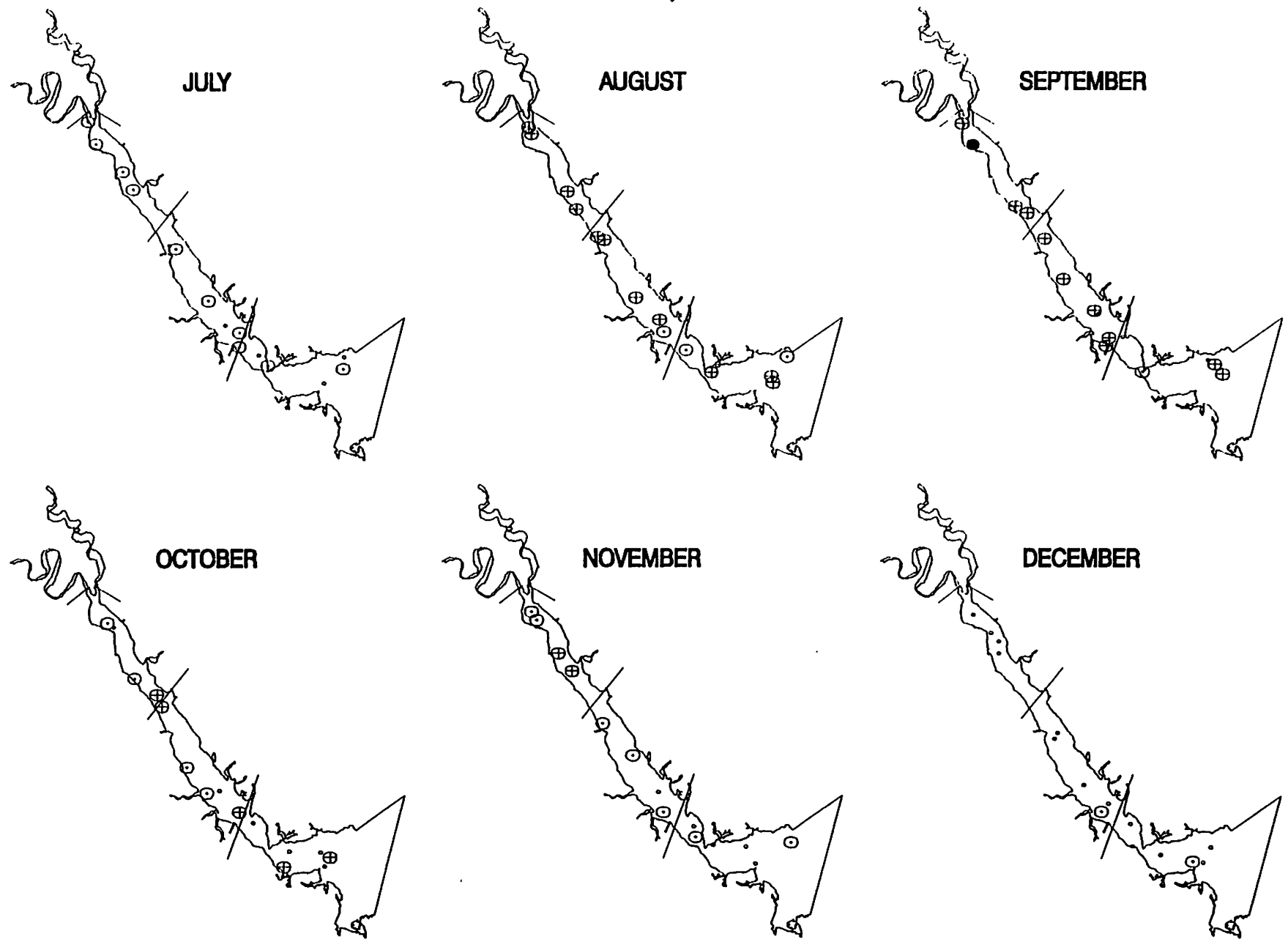
Figure 43.(cont.)

Figure 44.

Weakfish, 1993



# Weakfish, 1993



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

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Figure 44.(cont.)



# Weakfish, 1994

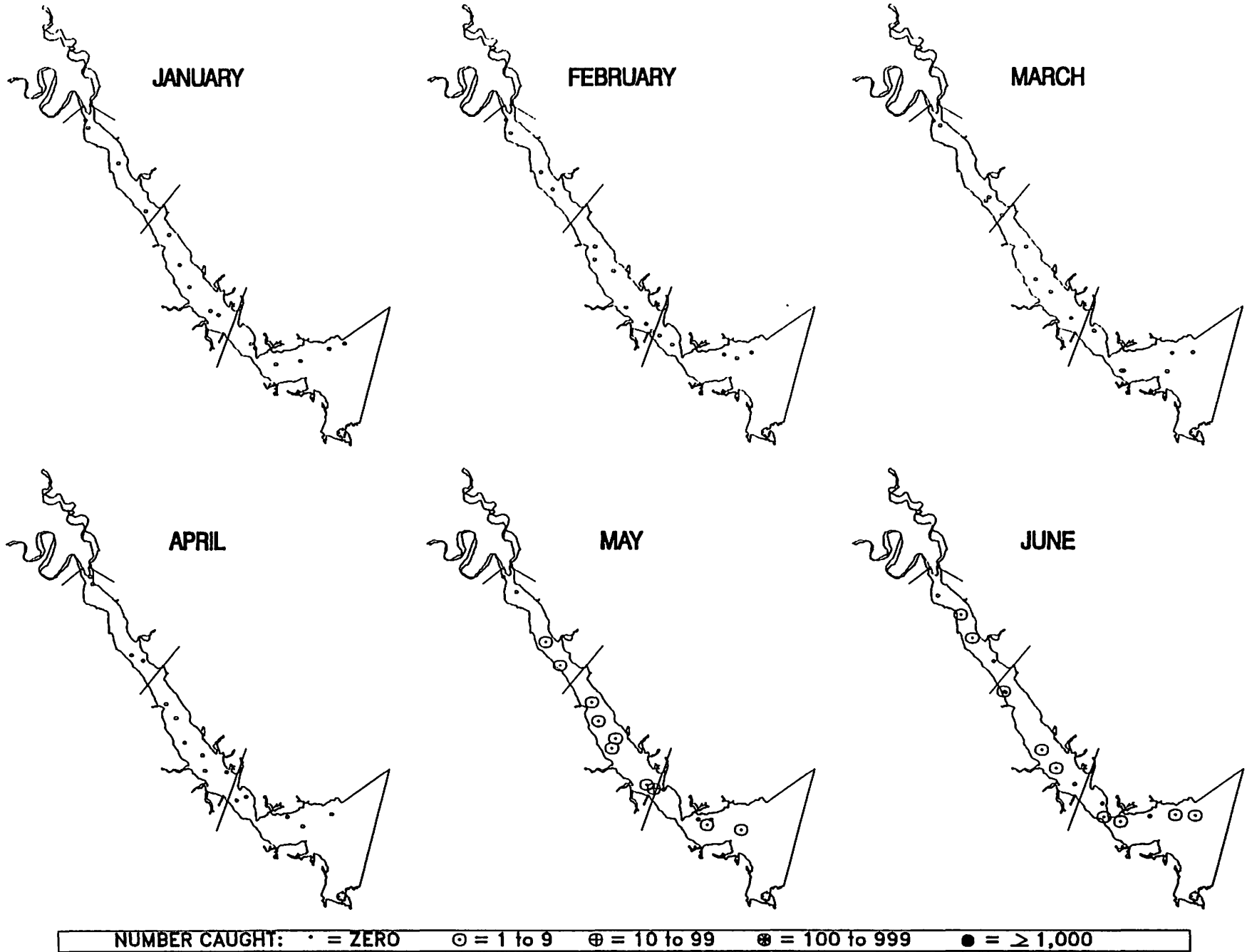


Figure 45.

# Weakfish, 1994

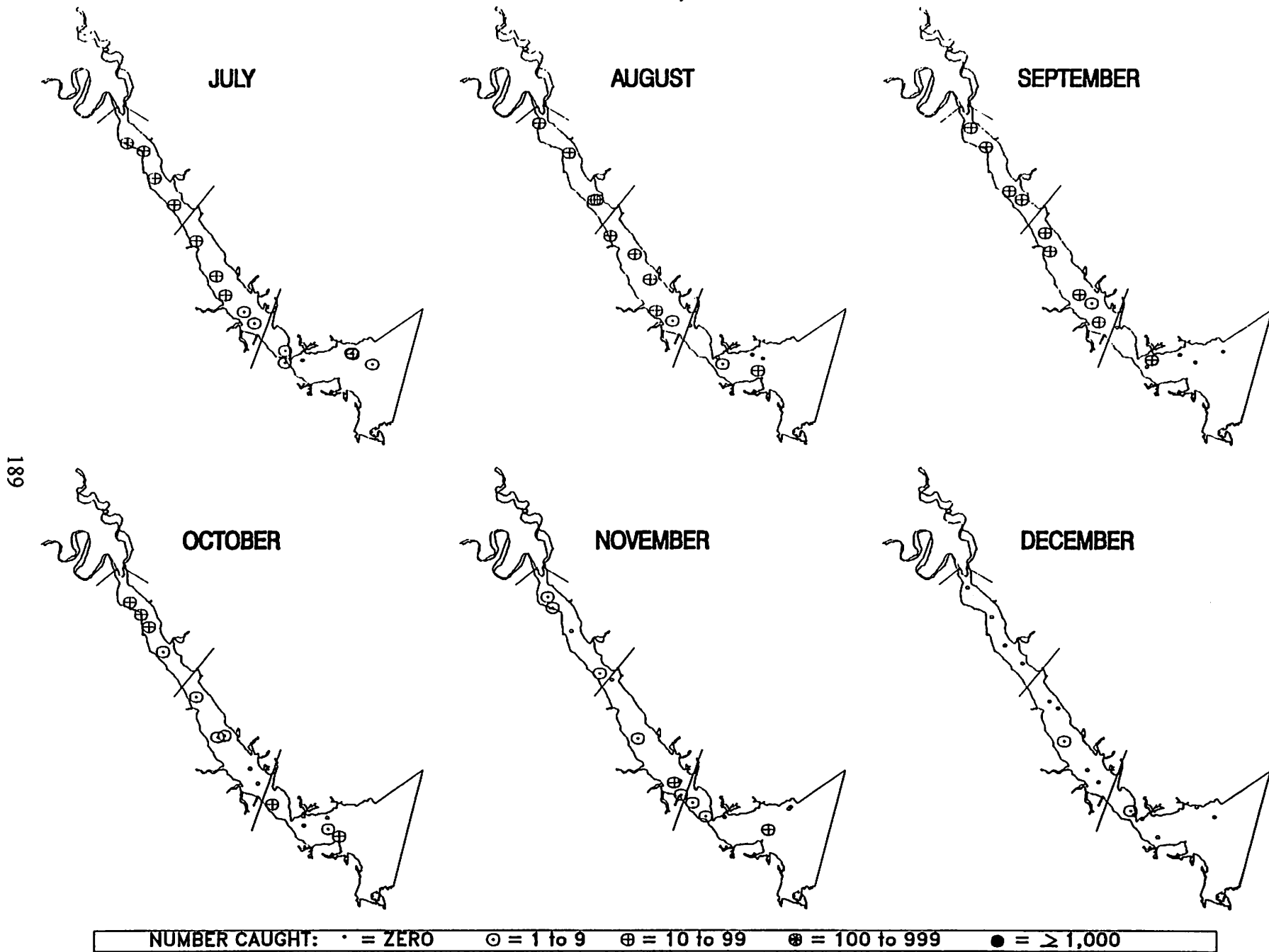


Figure 45.(cont.)

# White Perch, 1991

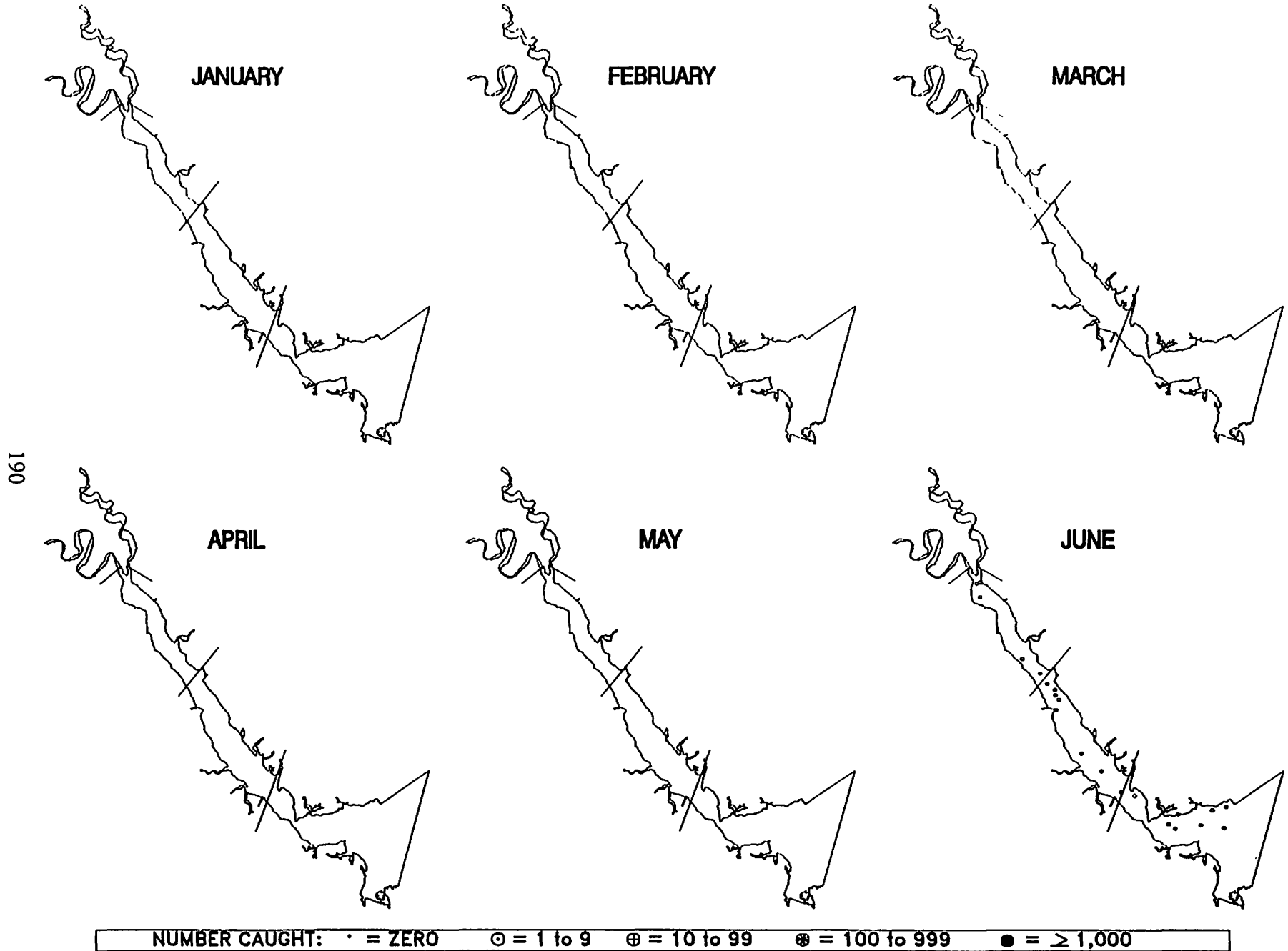


Figure 46.

# White Perch, 1991

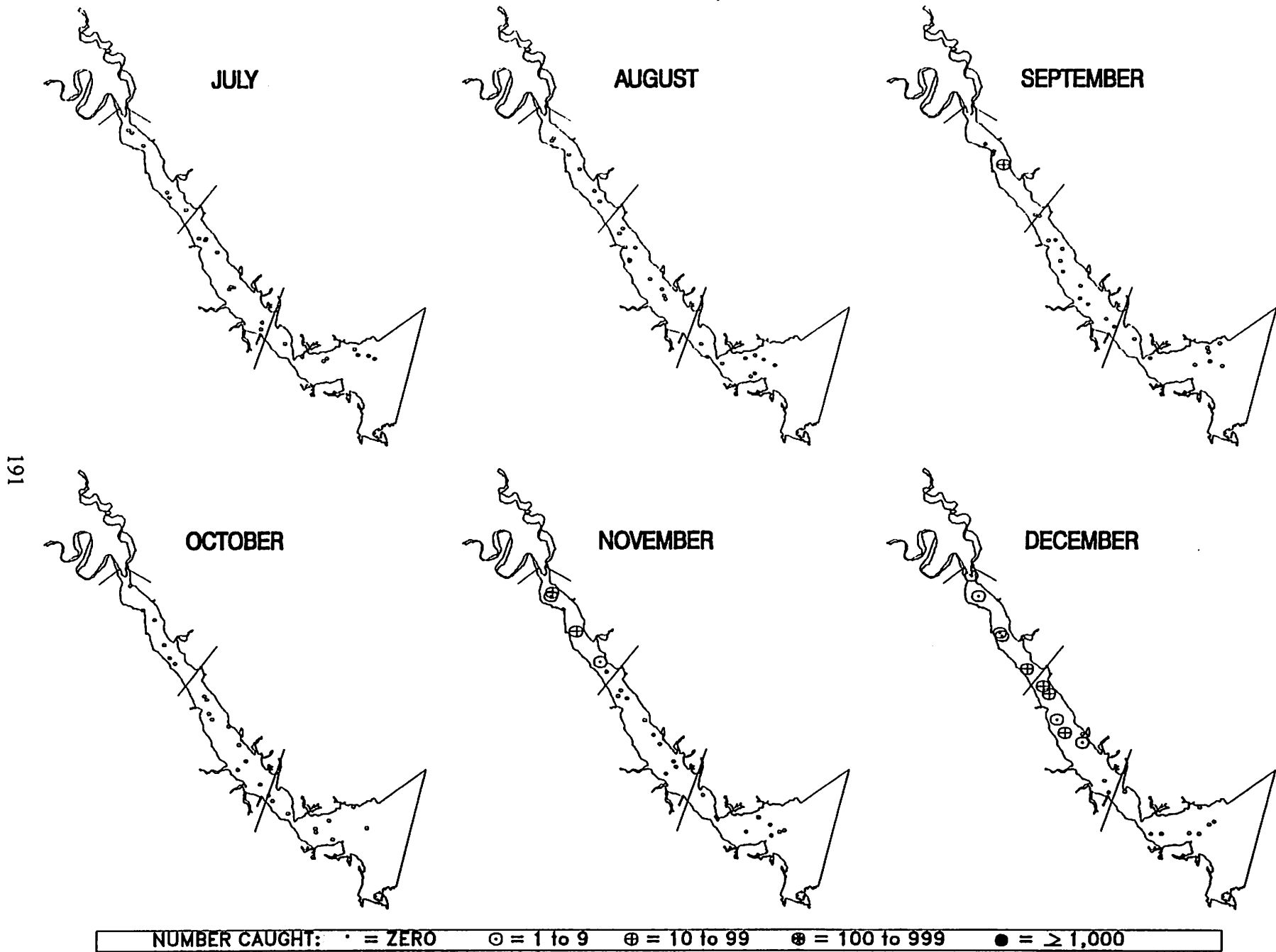
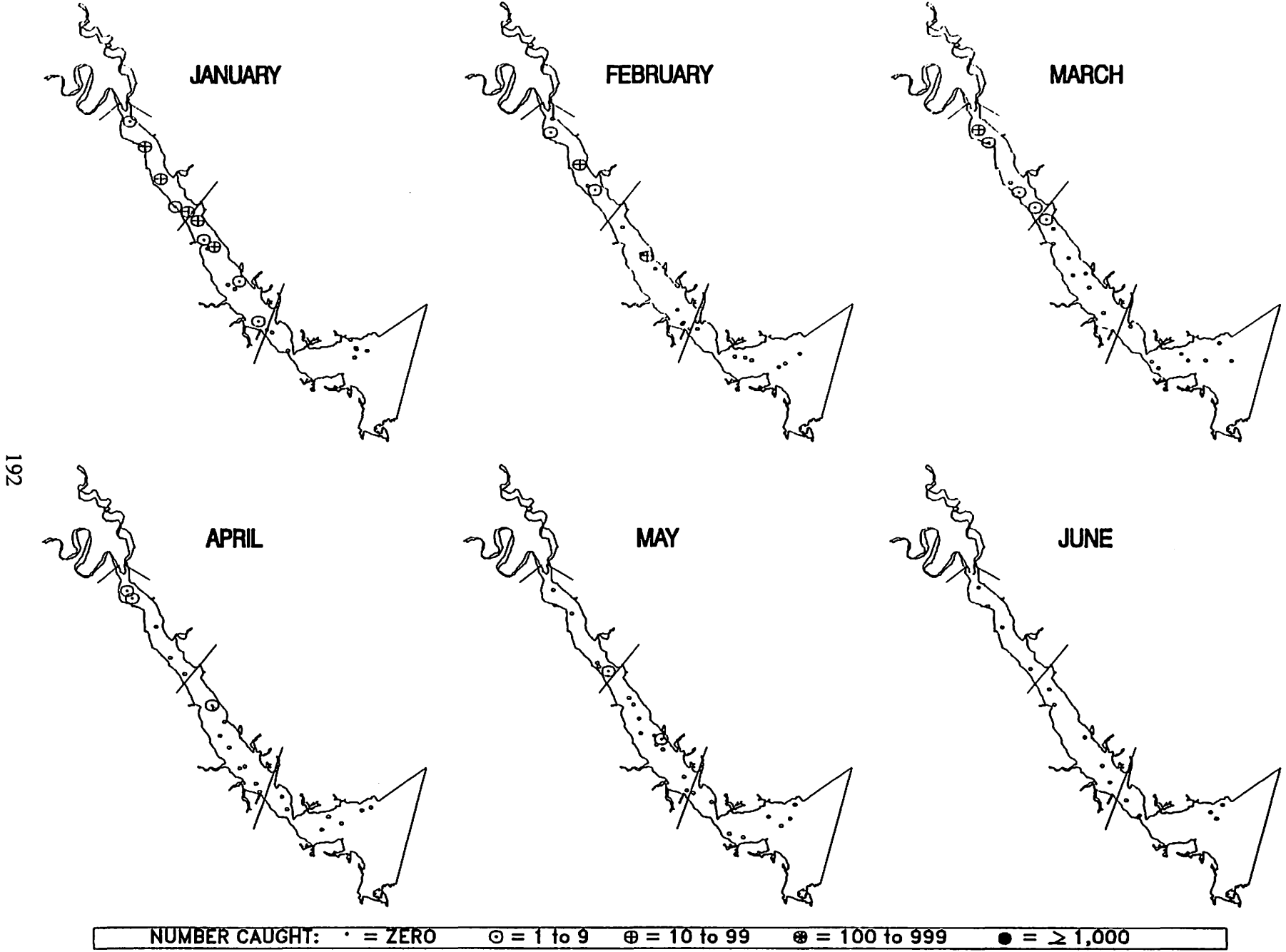


Figure 46.(cont.)

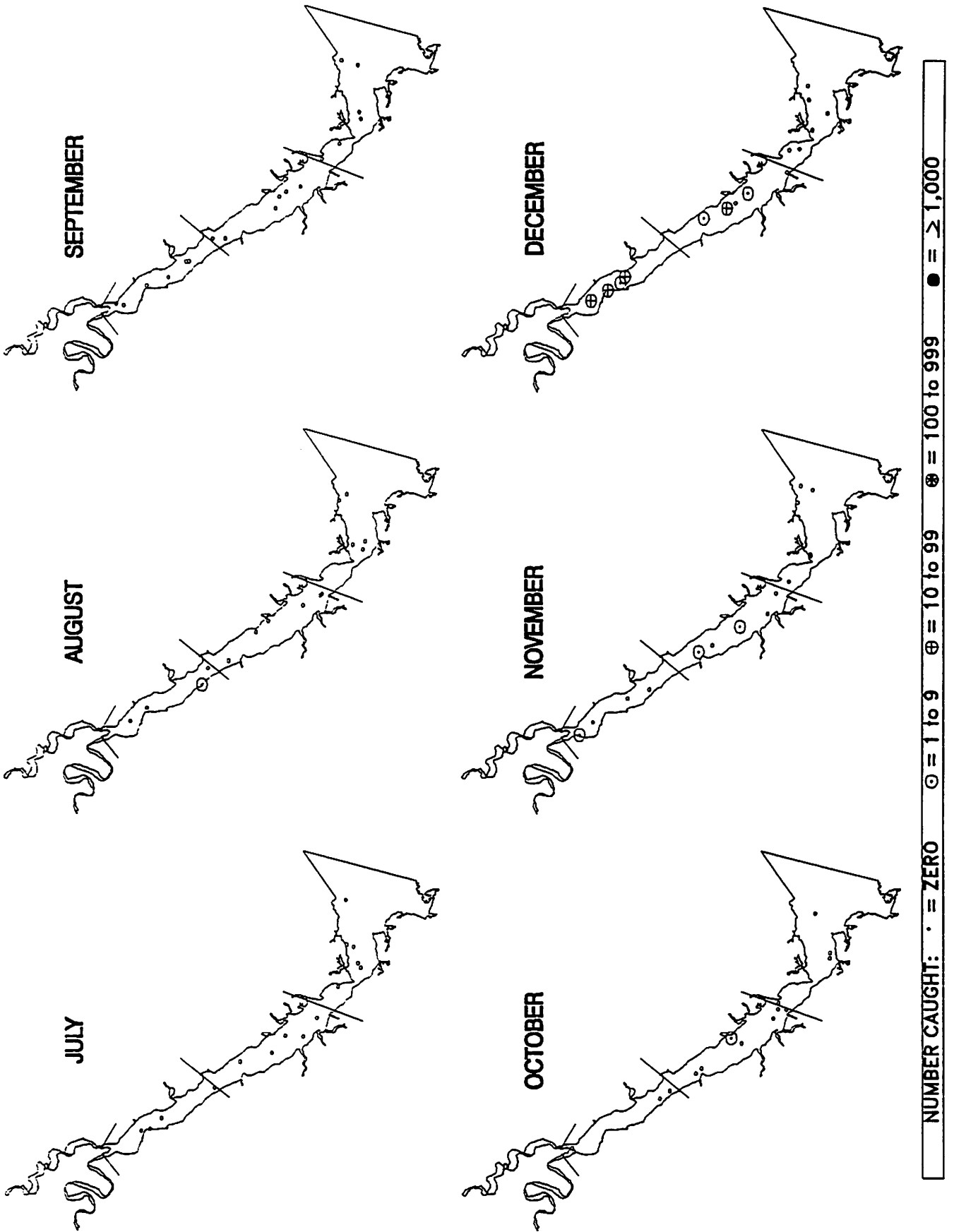
# White Perch, 1992



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Figure 47.

White Perch, 1992



# White Perch, 1993

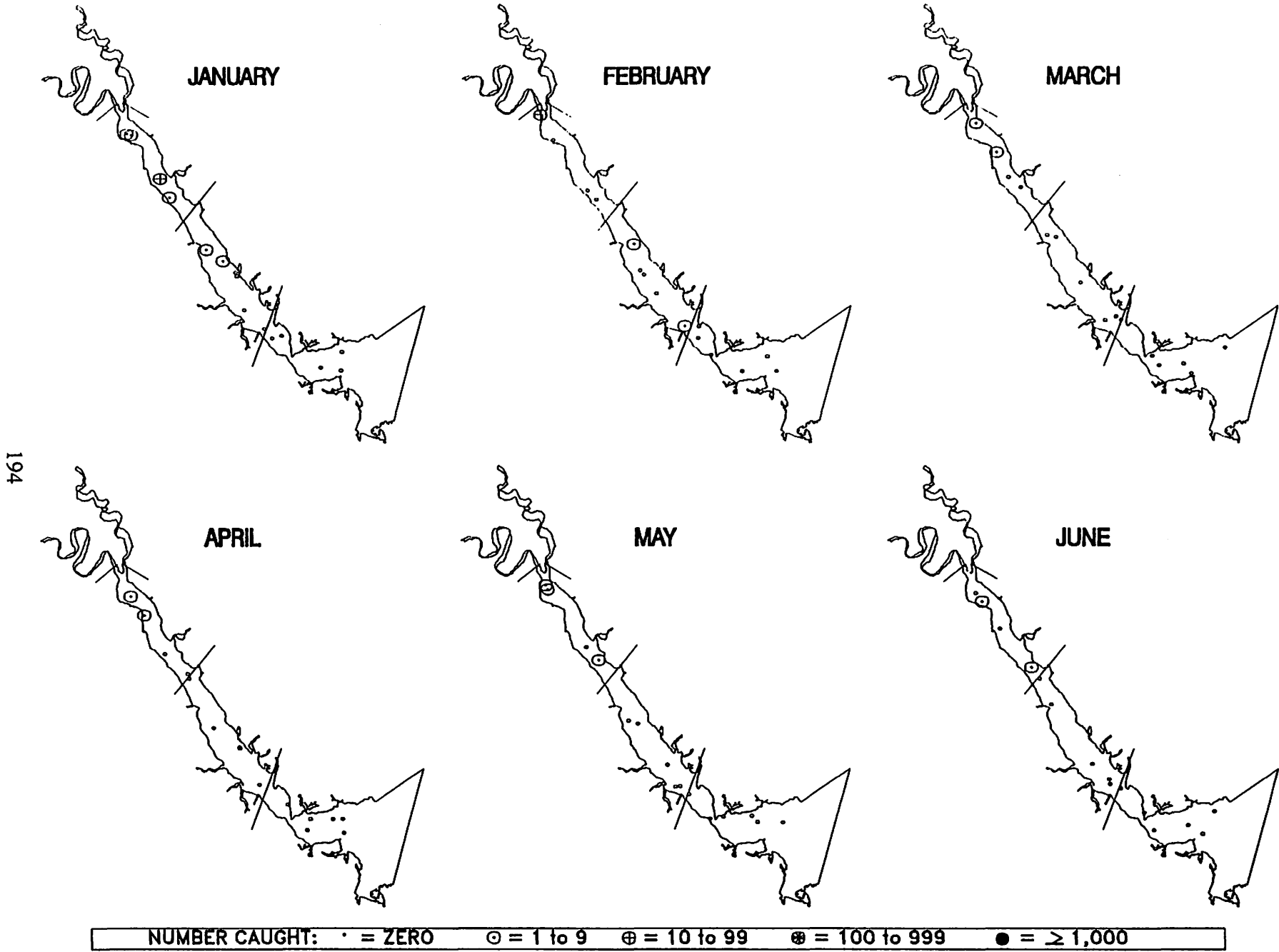
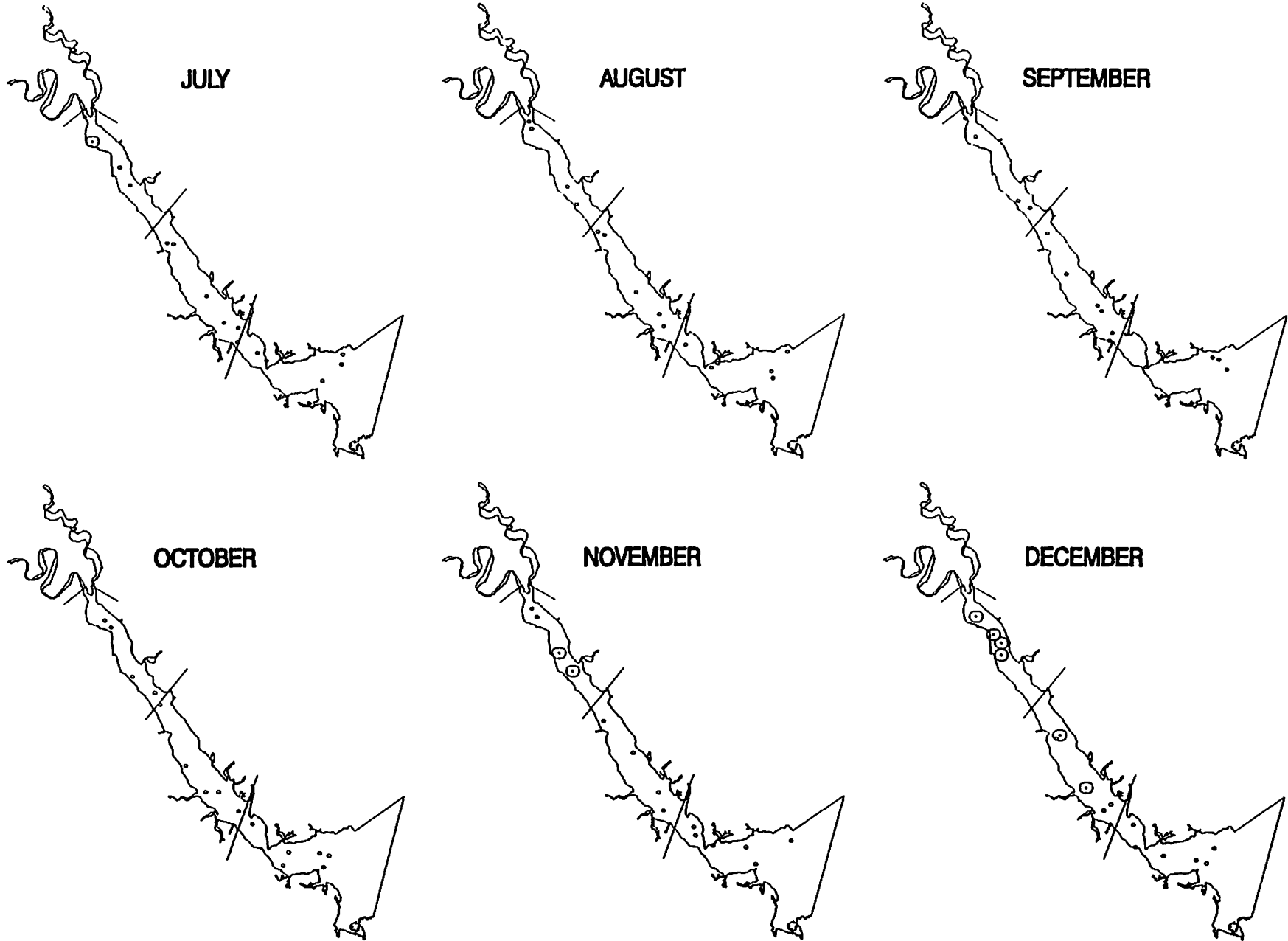


Figure 48.

# White Perch, 1993



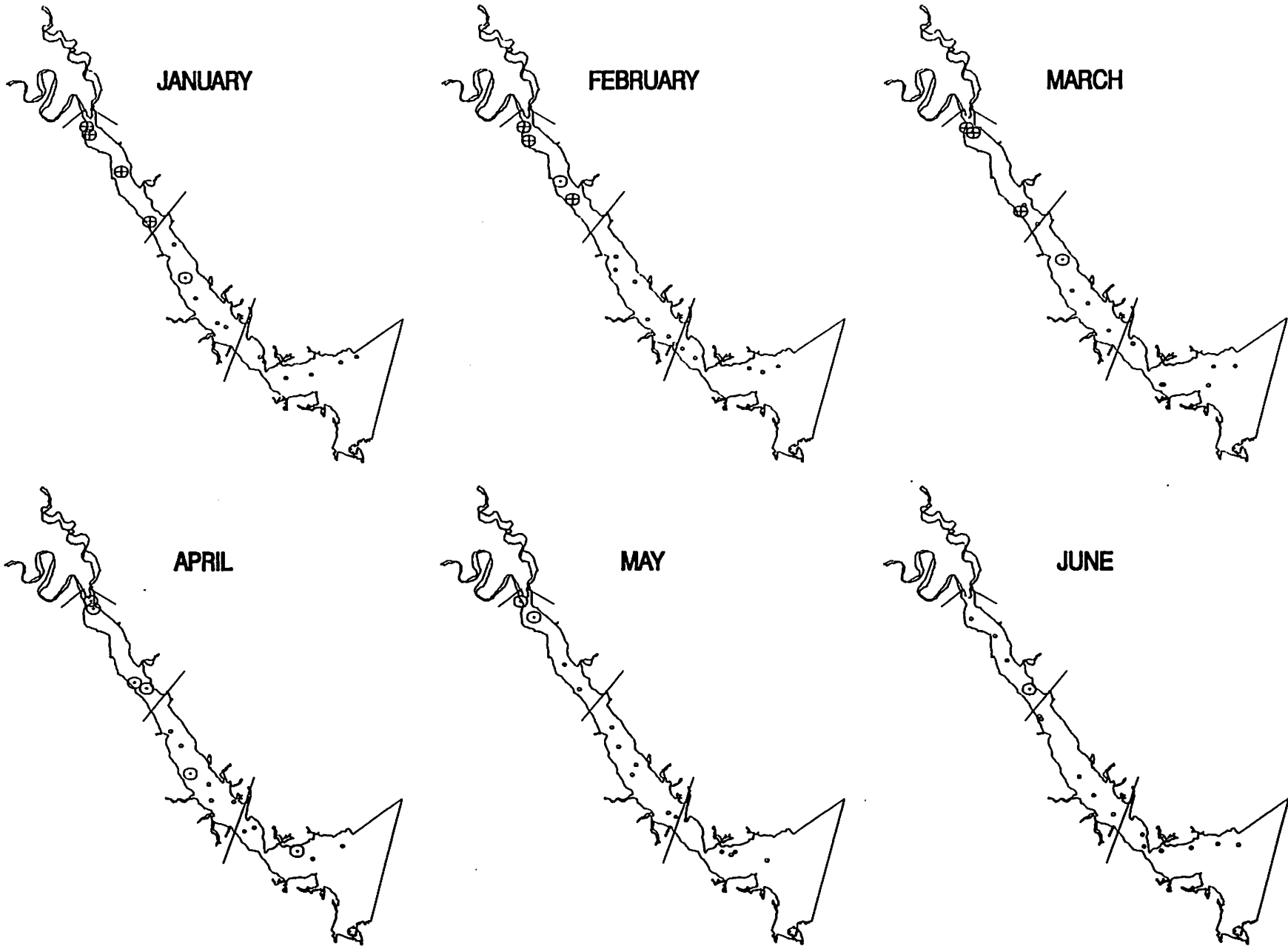
195

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

Figure 48.(cont.)



# White Perch, 1994



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

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Figure 49.

# White Perch, 1994

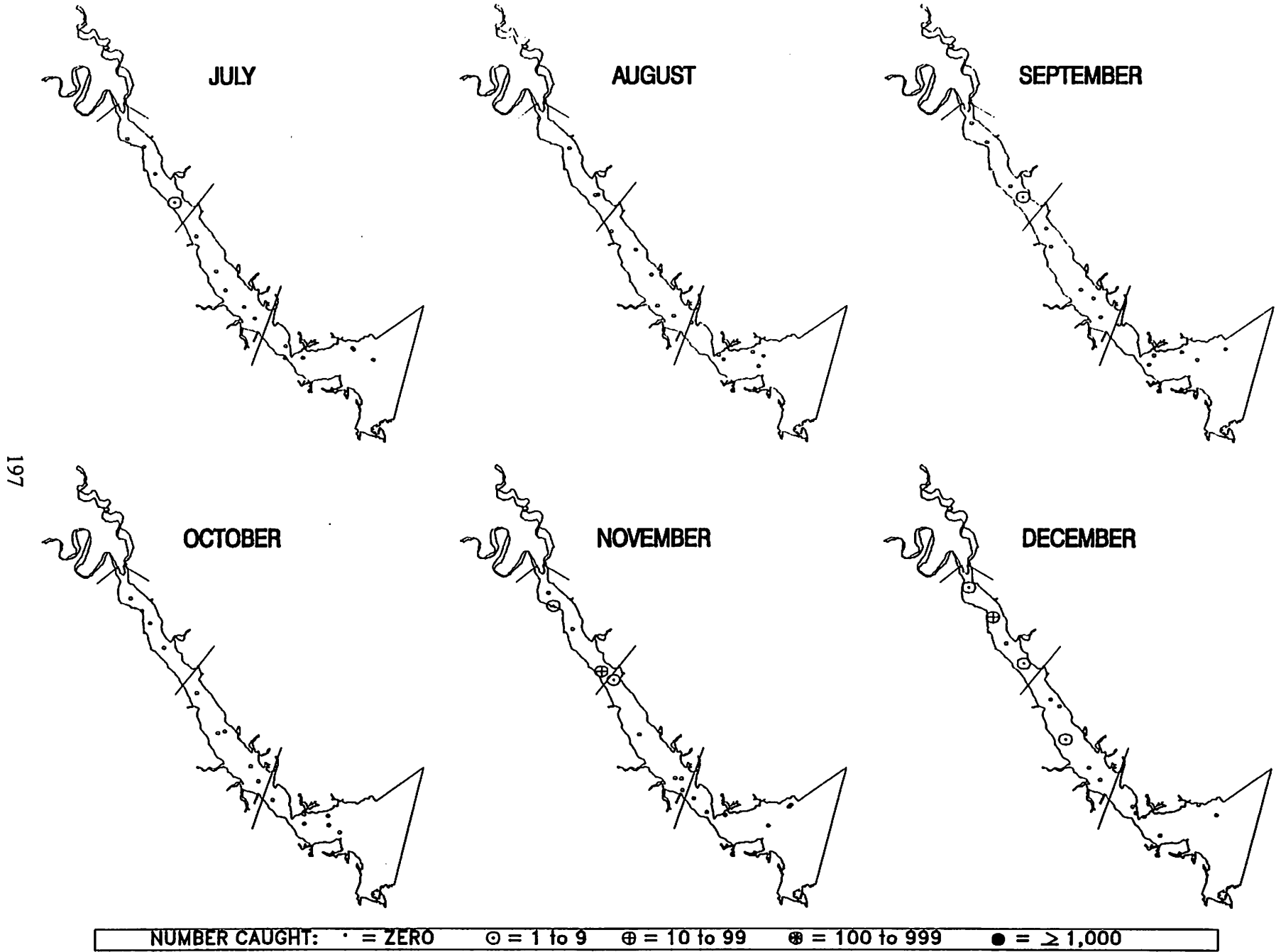


Figure 49.(cont.)

Figures 50-69. Geographic distribution, by month, of predominant species for 1991-1994 combined.  
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 coordinates, refer to Tables 2-44.

# Alewife, 1991 – 1994

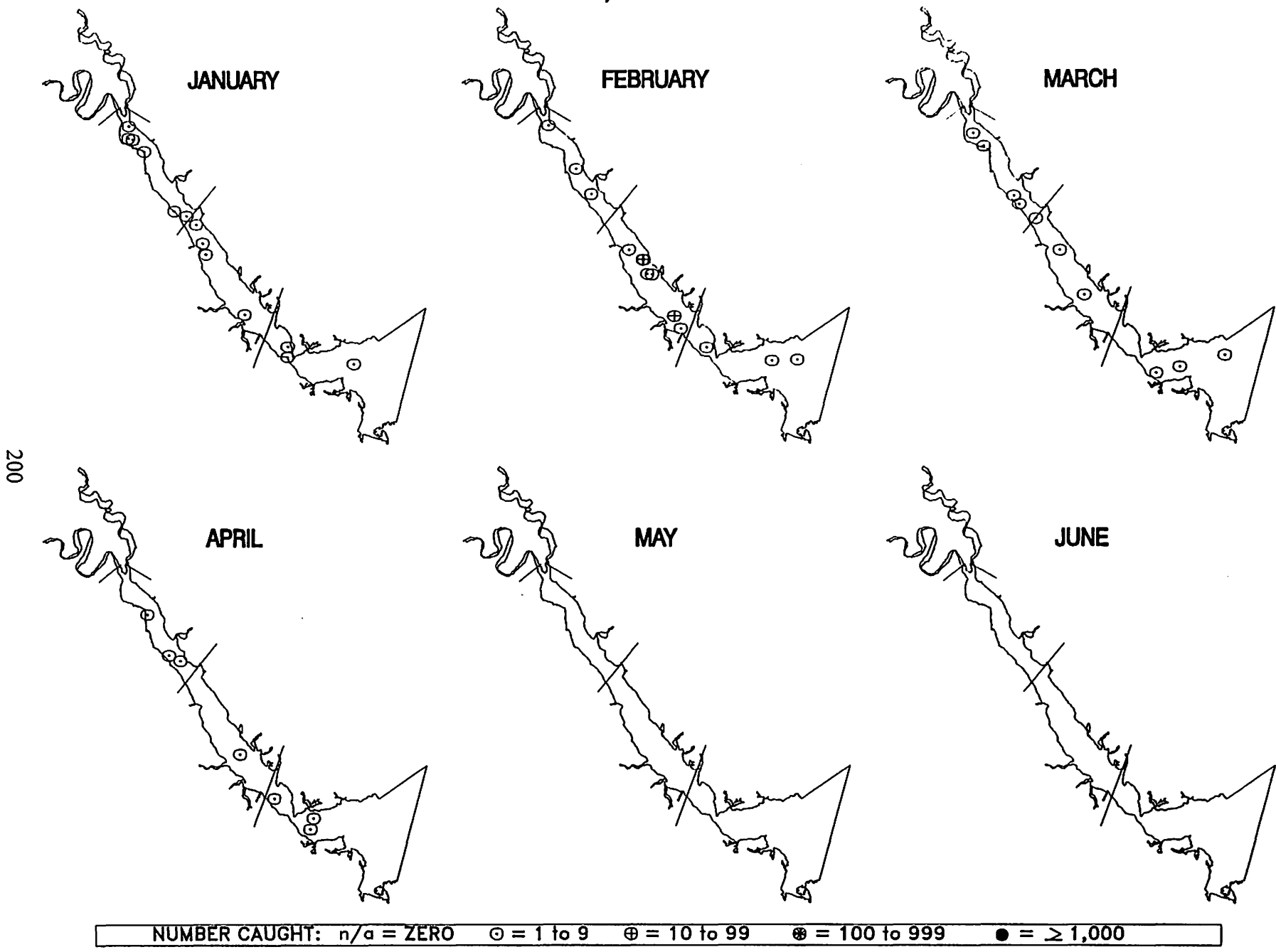
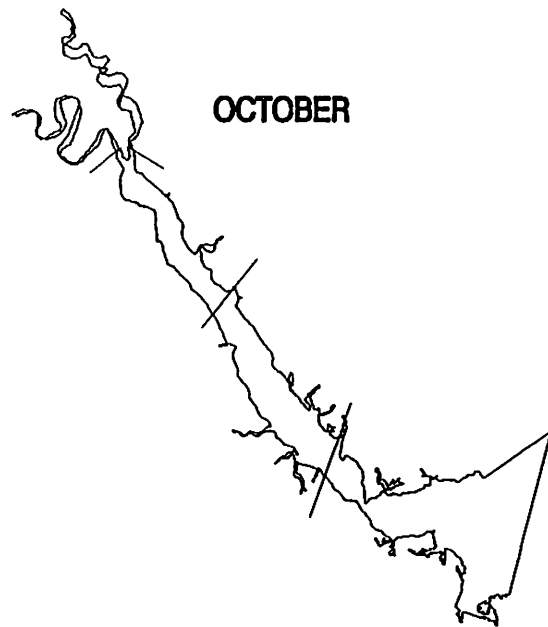
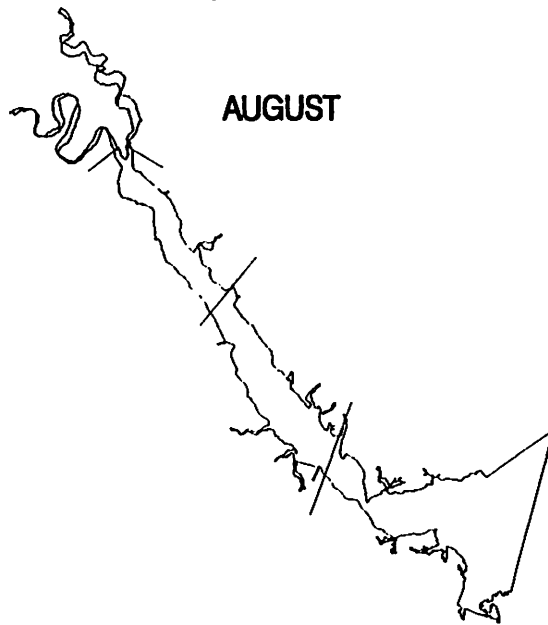


Figure 50.

# Alewife, 1991 – 1994

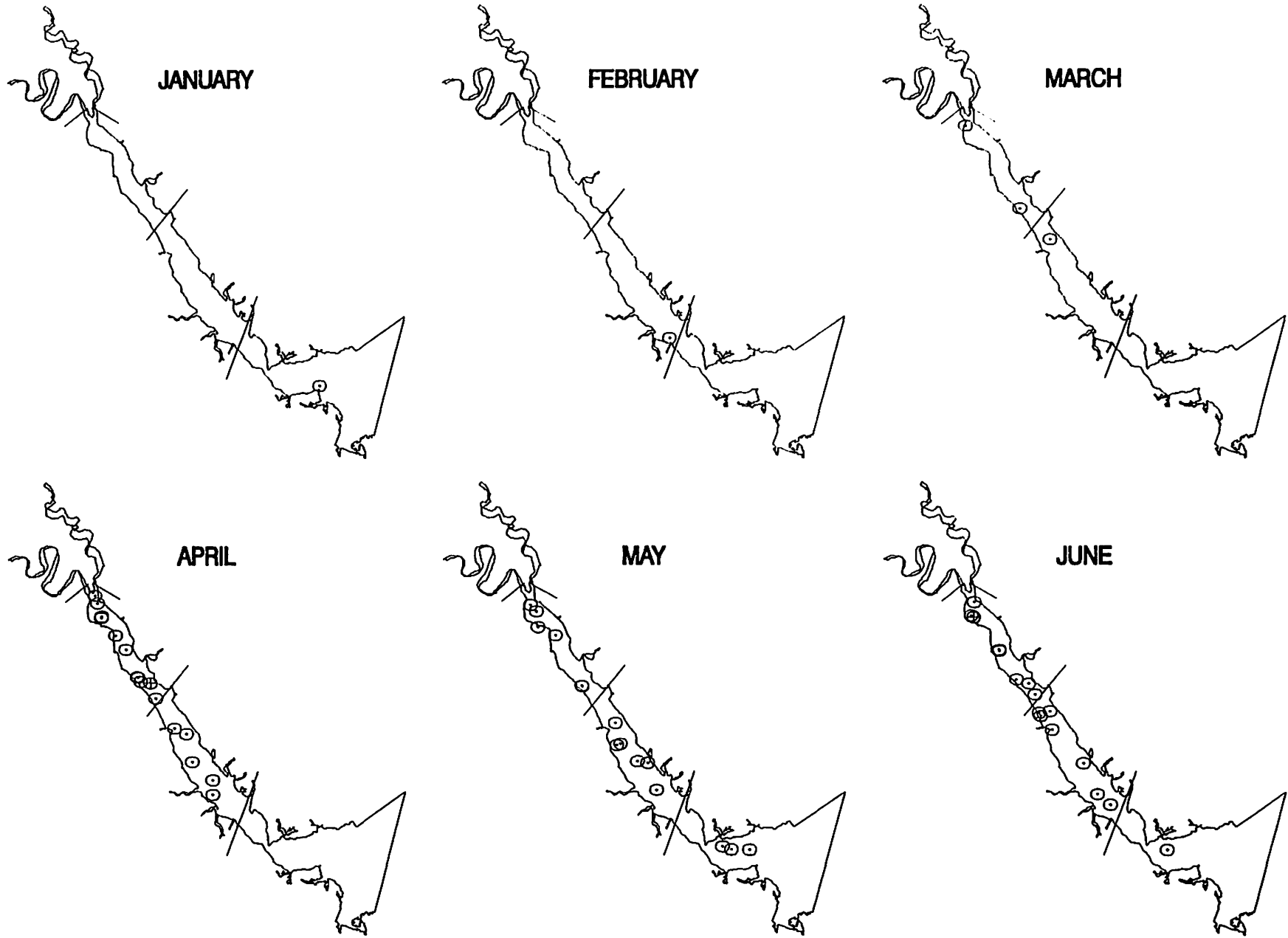
201



NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

Figure 50.(cont.)

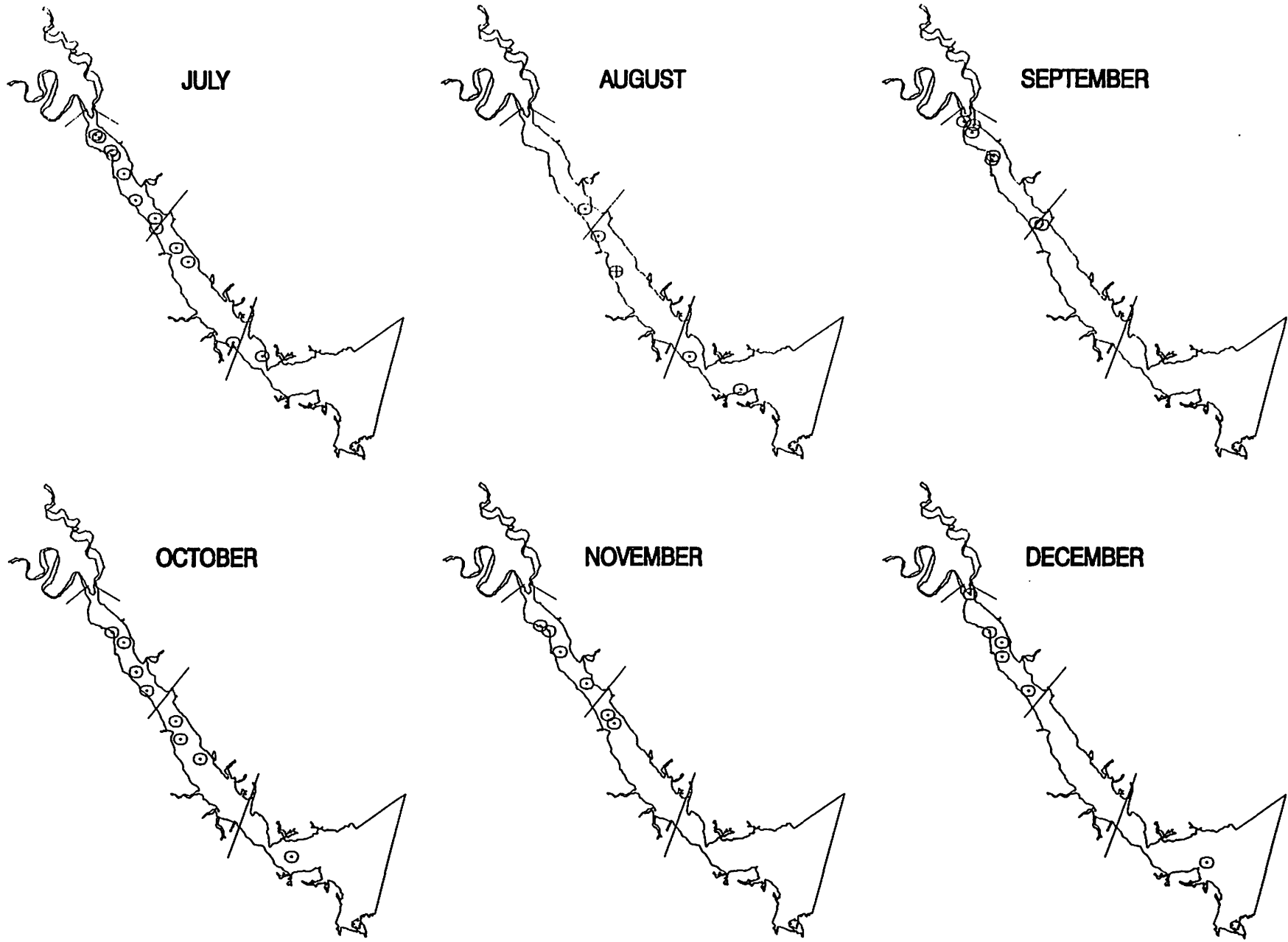
# American Eel, 1991 – 1994



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

Figure 51.

# American Eel, 1991 – 1994



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NUMBER CAUGHT:  $n/a$  = ZERO     $\odot$  = 1 to 9     $\oplus$  = 10 to 99     $\otimes$  = 100 to 999     $\bullet$  =  $\geq 1,000$

Figure 51.(cont.)

# American Shad, 1991 – 1994

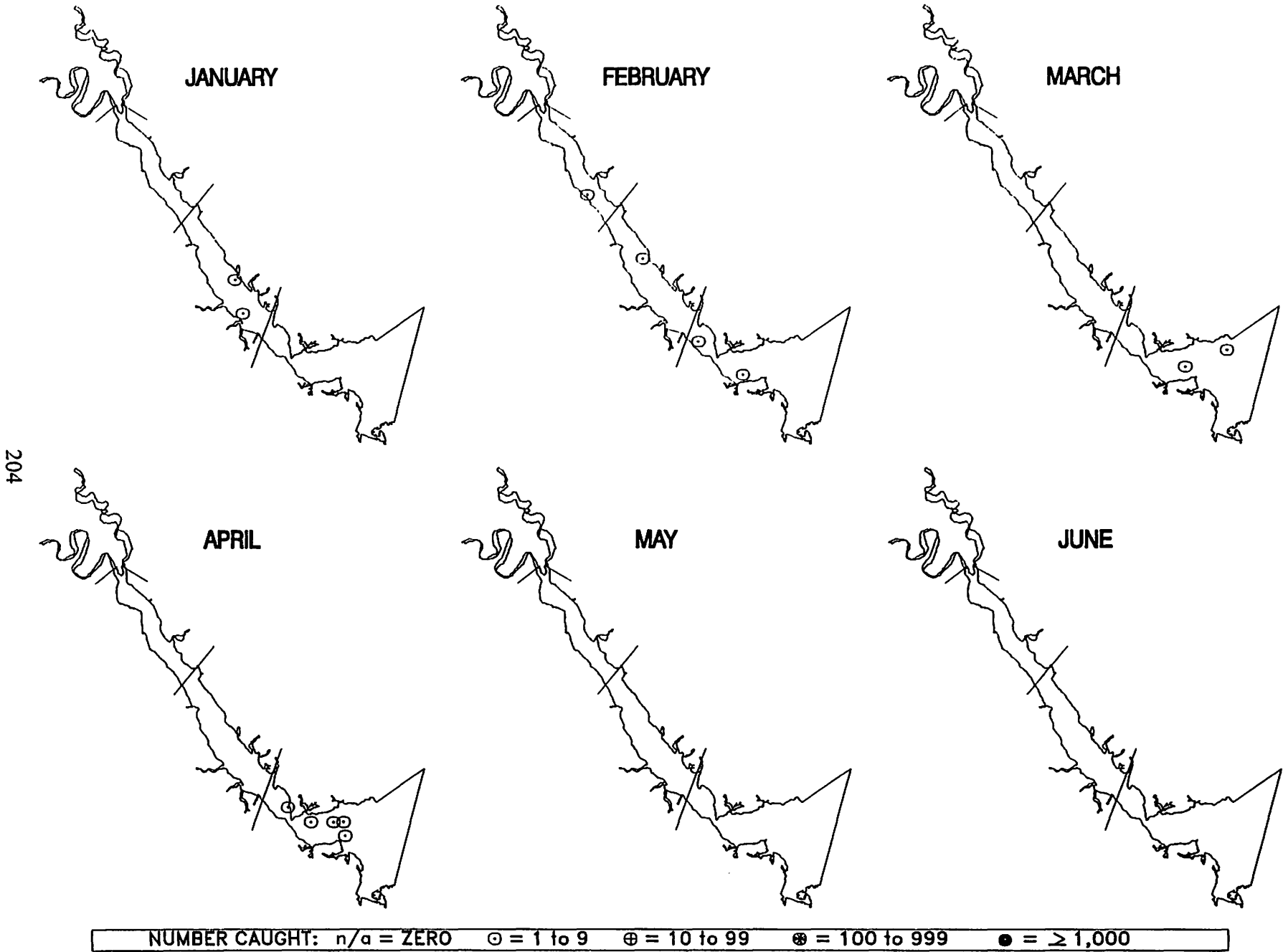


Figure 52.



# American Shad, 1991 – 1994

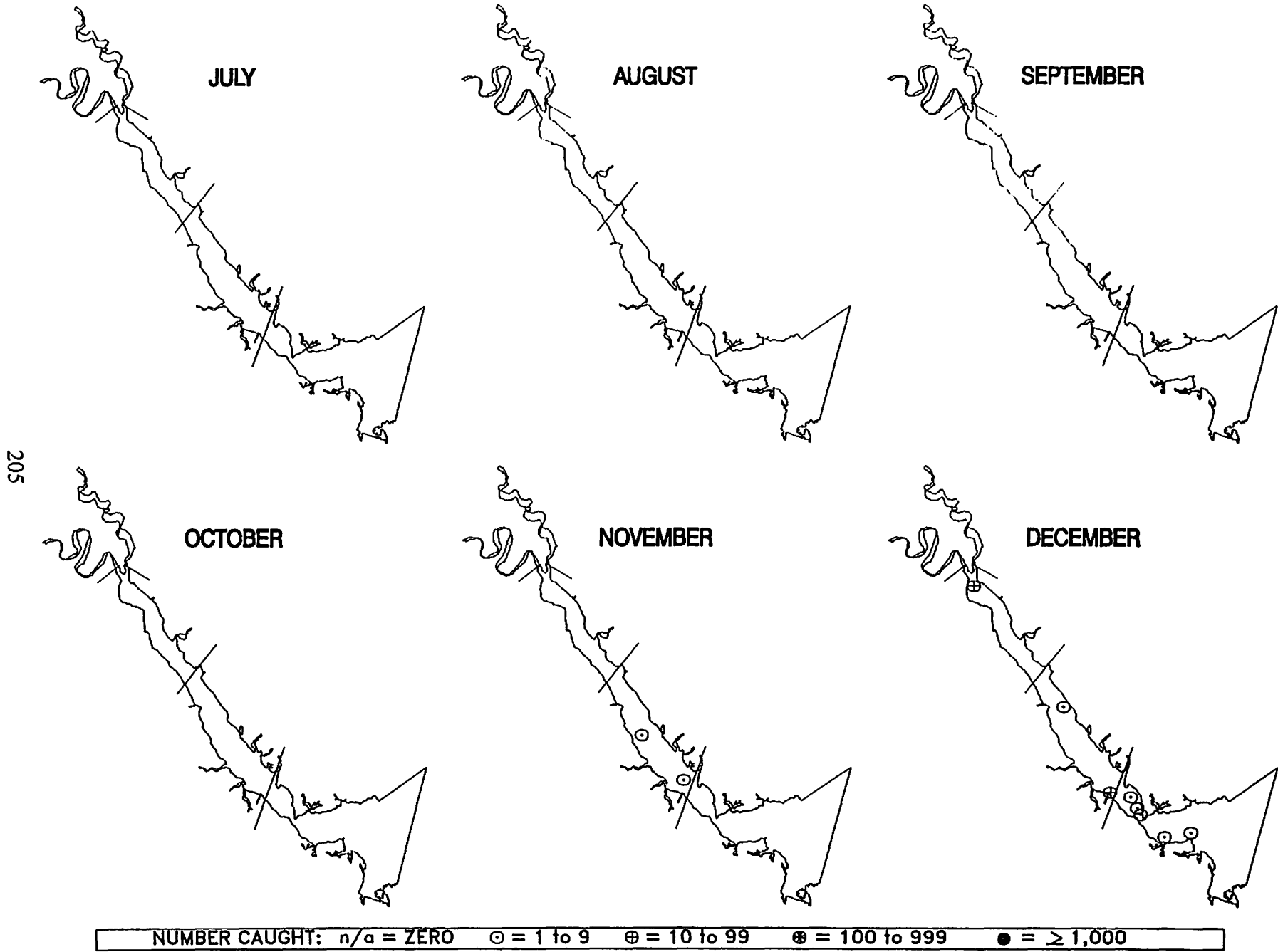


Figure 52.(cont.)

# Atlantic Menhaden, 1991 – 1994

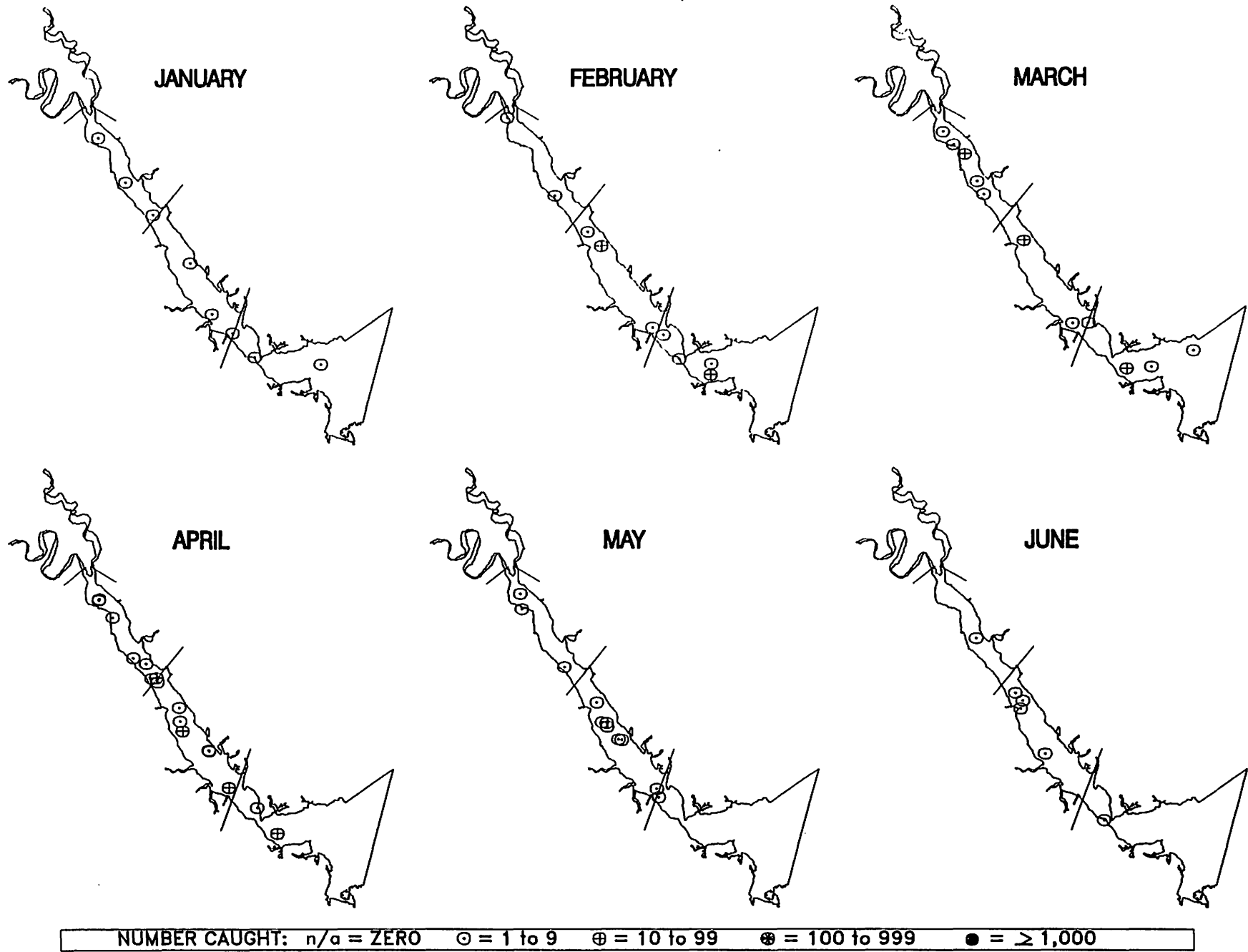
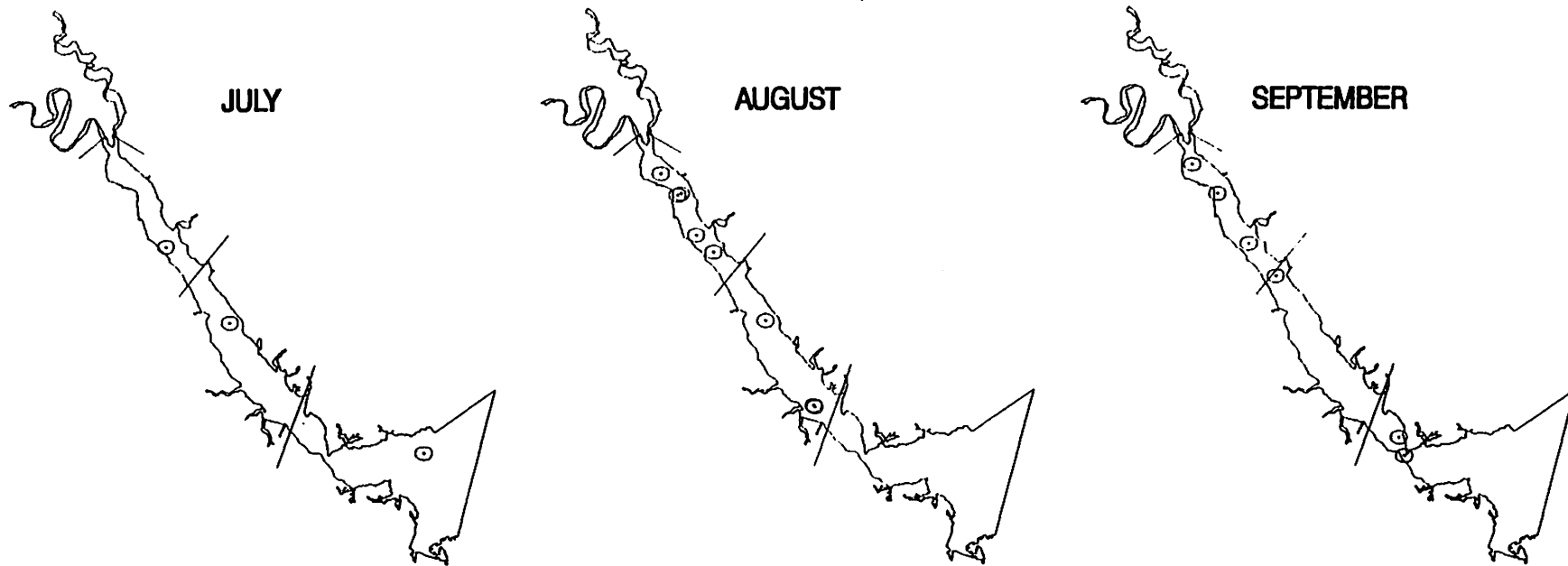


Figure 53.

# Atlantic Menhaden, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

# Atlantic Thread Herring, 1991 – 1994

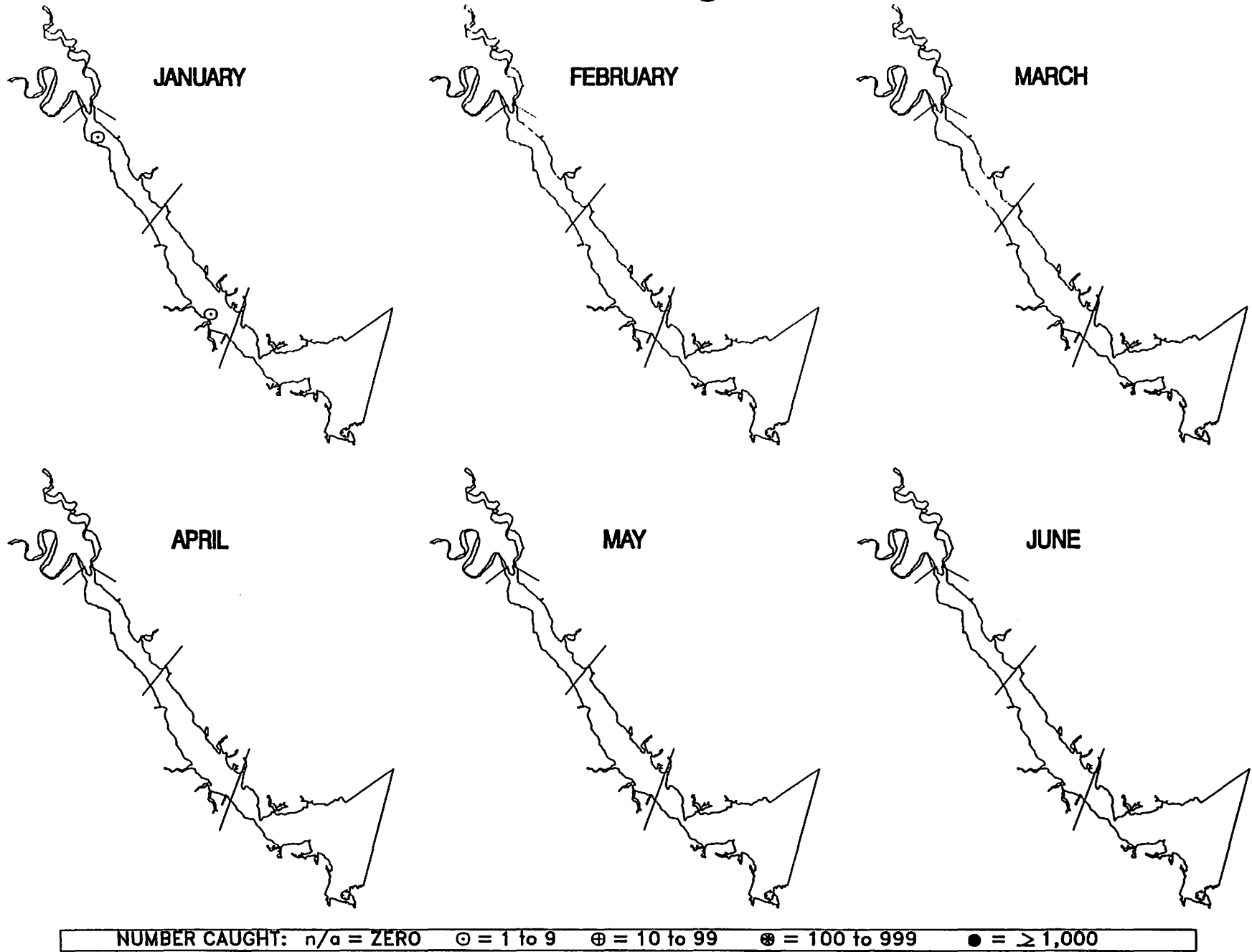


Figure 54.

# Atlantic Thread Herring, 1991 – 1994

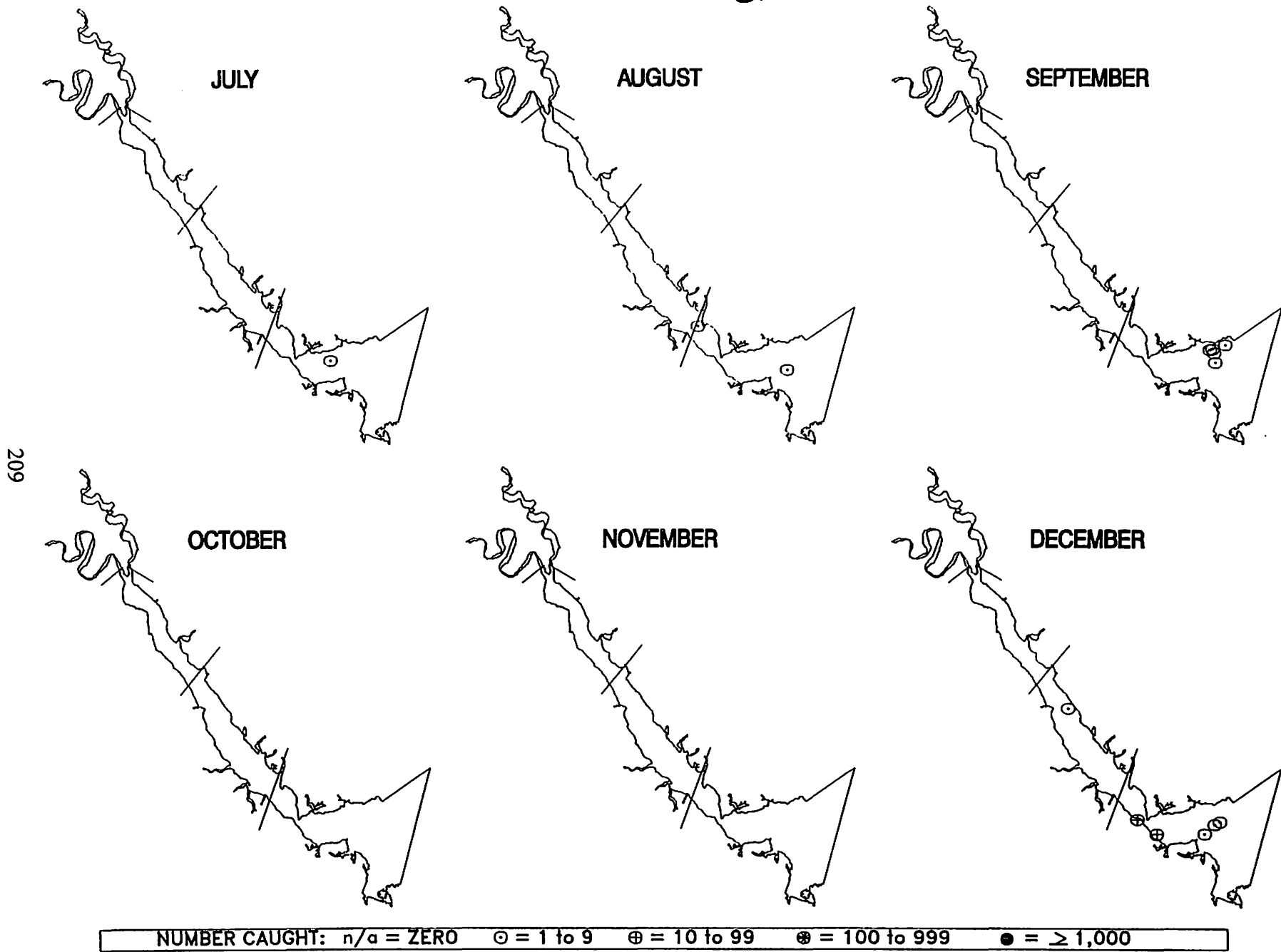


Figure 54.(cont.)

# Atlantic Silverside, 1991 – 1994

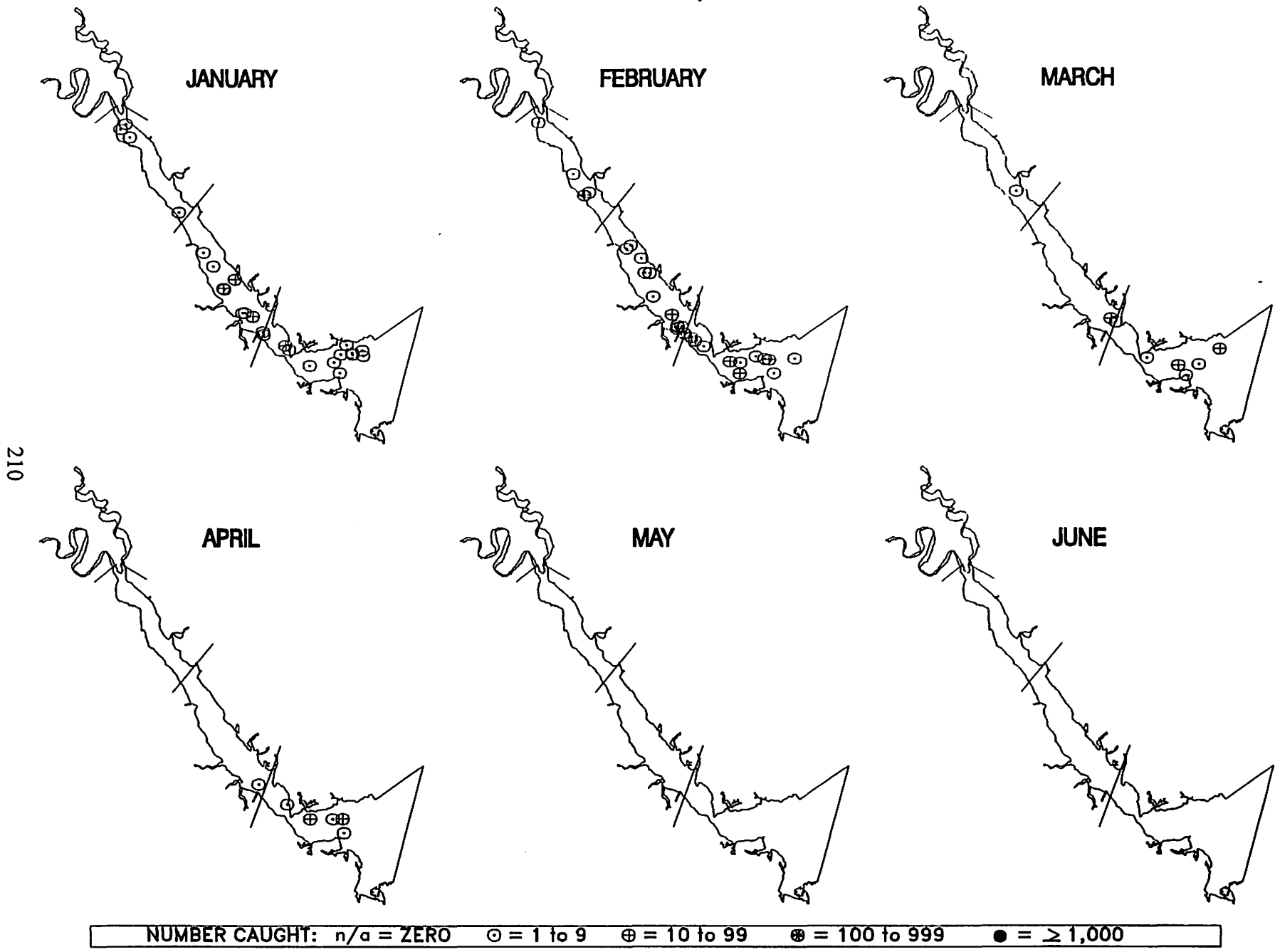
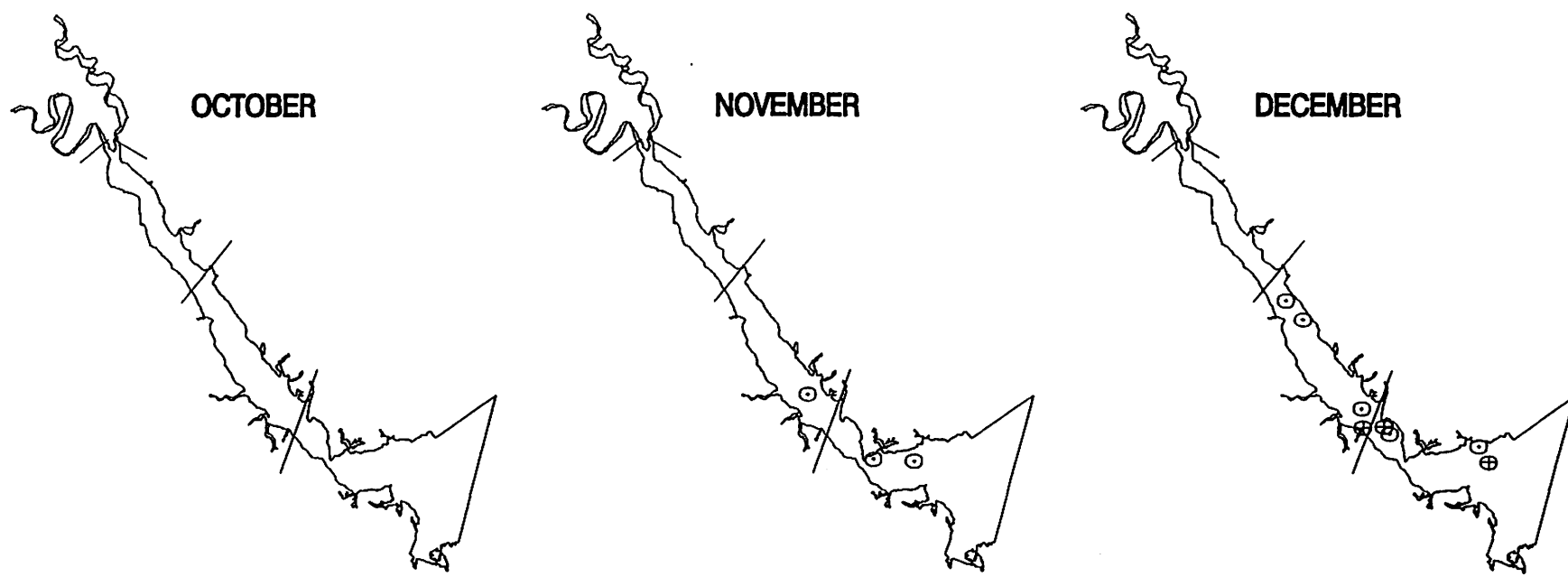
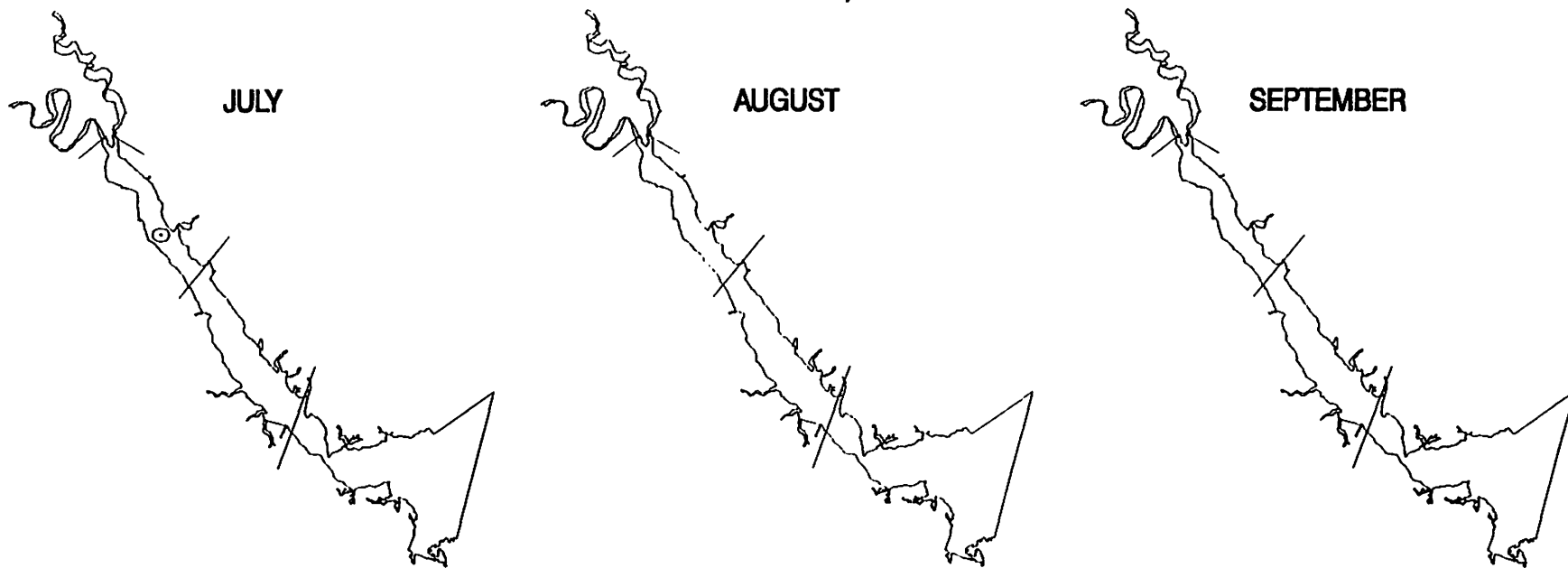


Figure 55.

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NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

# Atlantic Silverside, 1991 – 1994

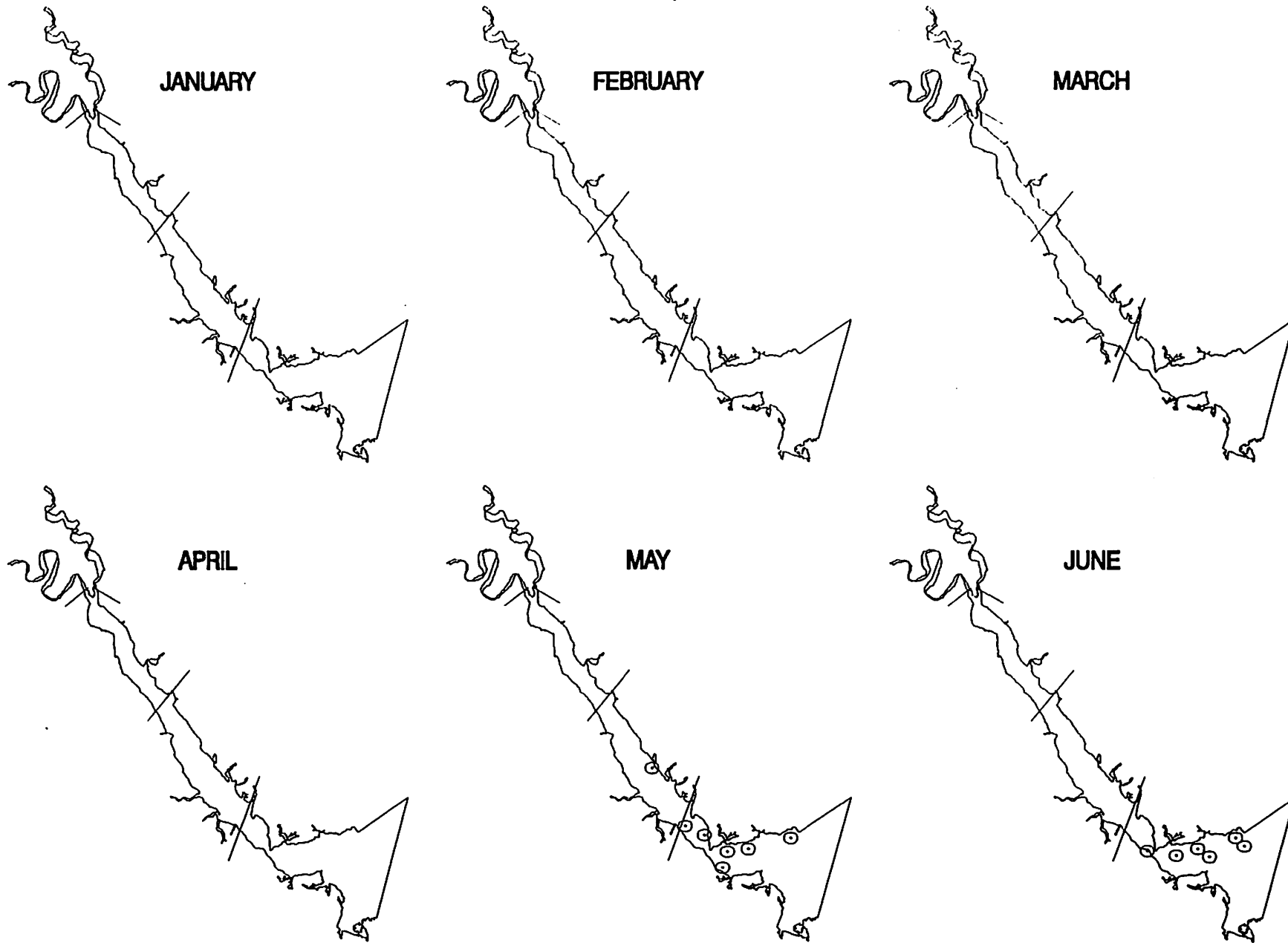


NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊕ = 100 to 999    ● = ≥ 1,000

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Figure 55. (cont.)

# Black Seabass, 1991 – 1994

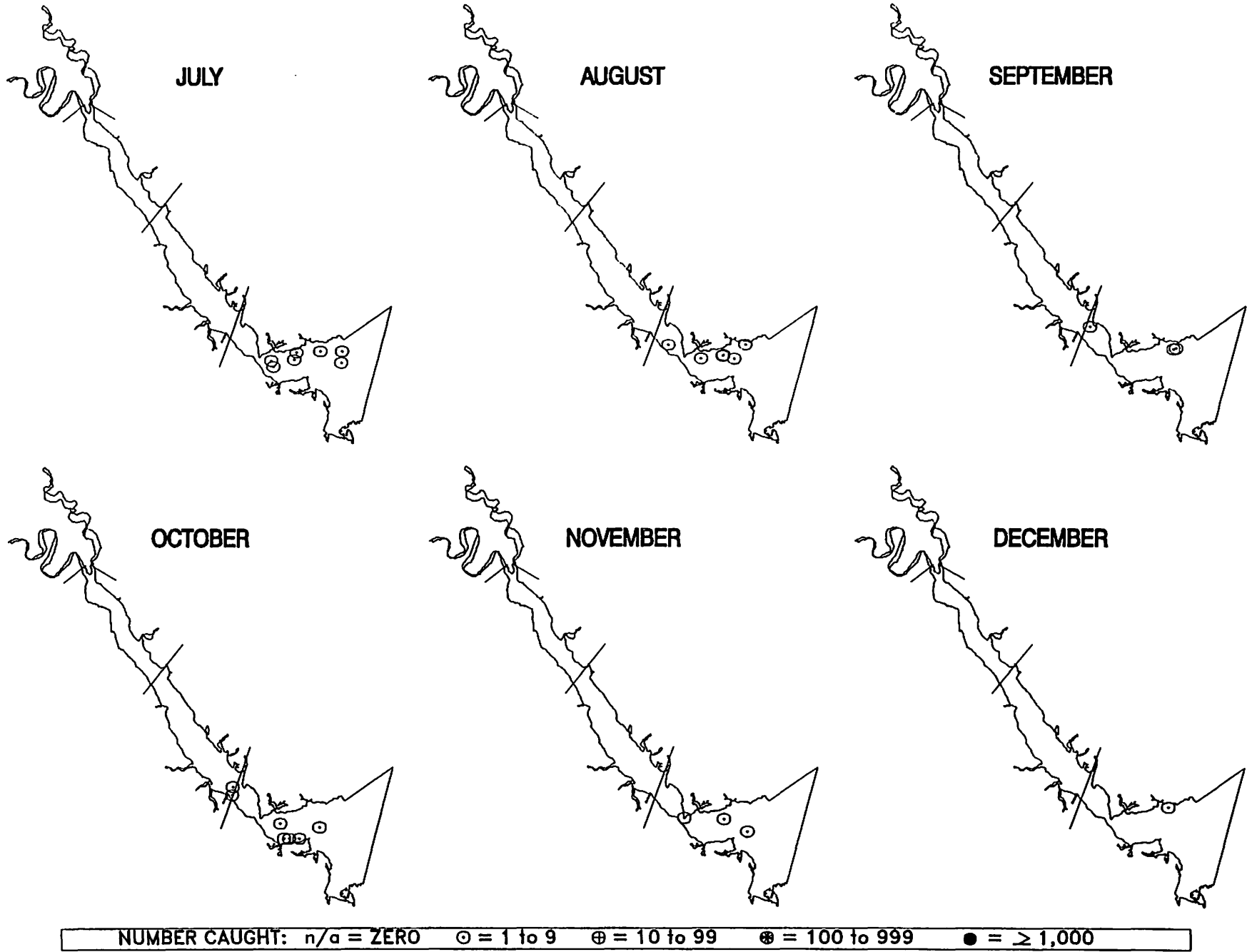


NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

Figure 56.



# Black Seabass, 1991 – 1994



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Figure 56.(cont.)

# Blackcheek Tonguefish, 1991 – 1994

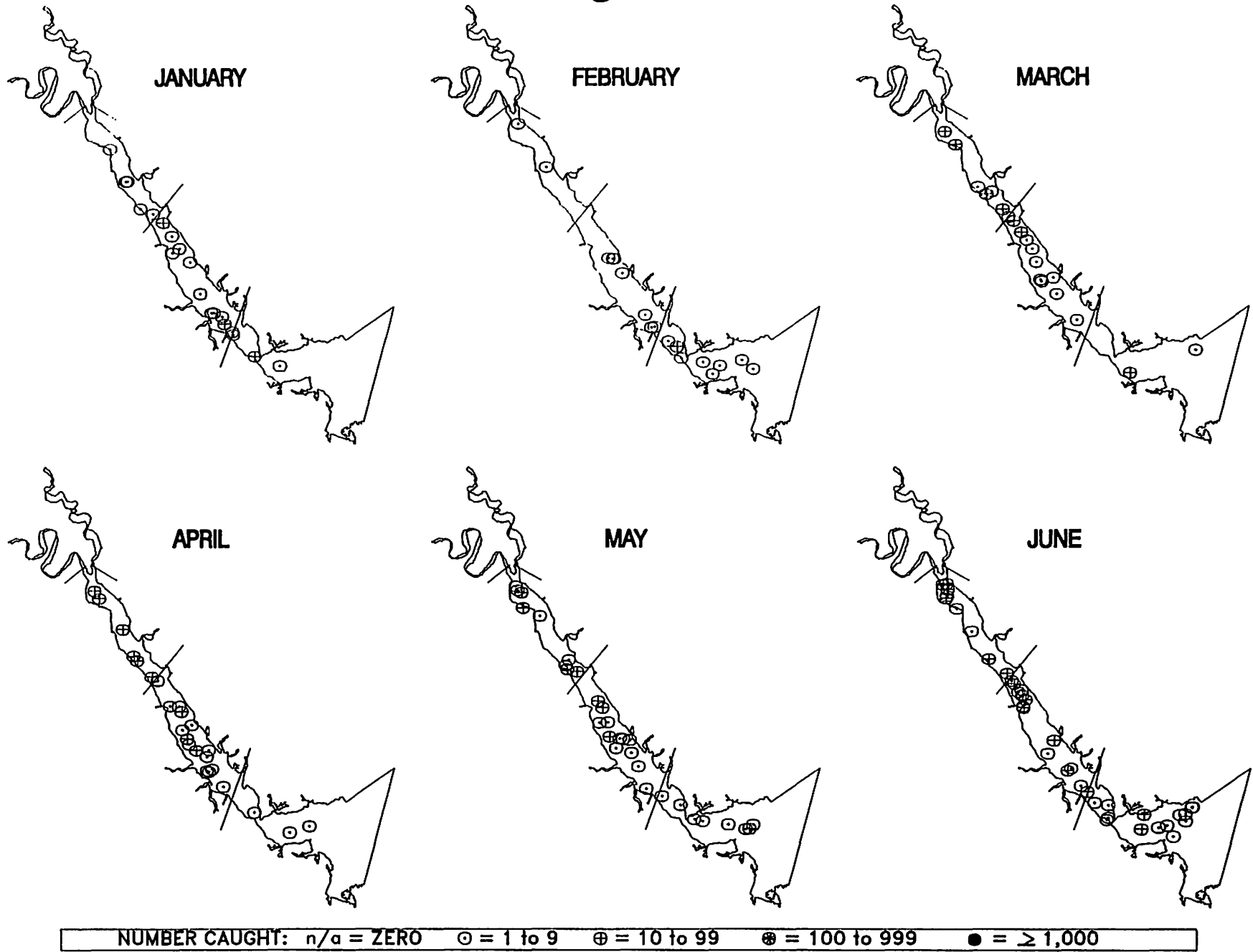
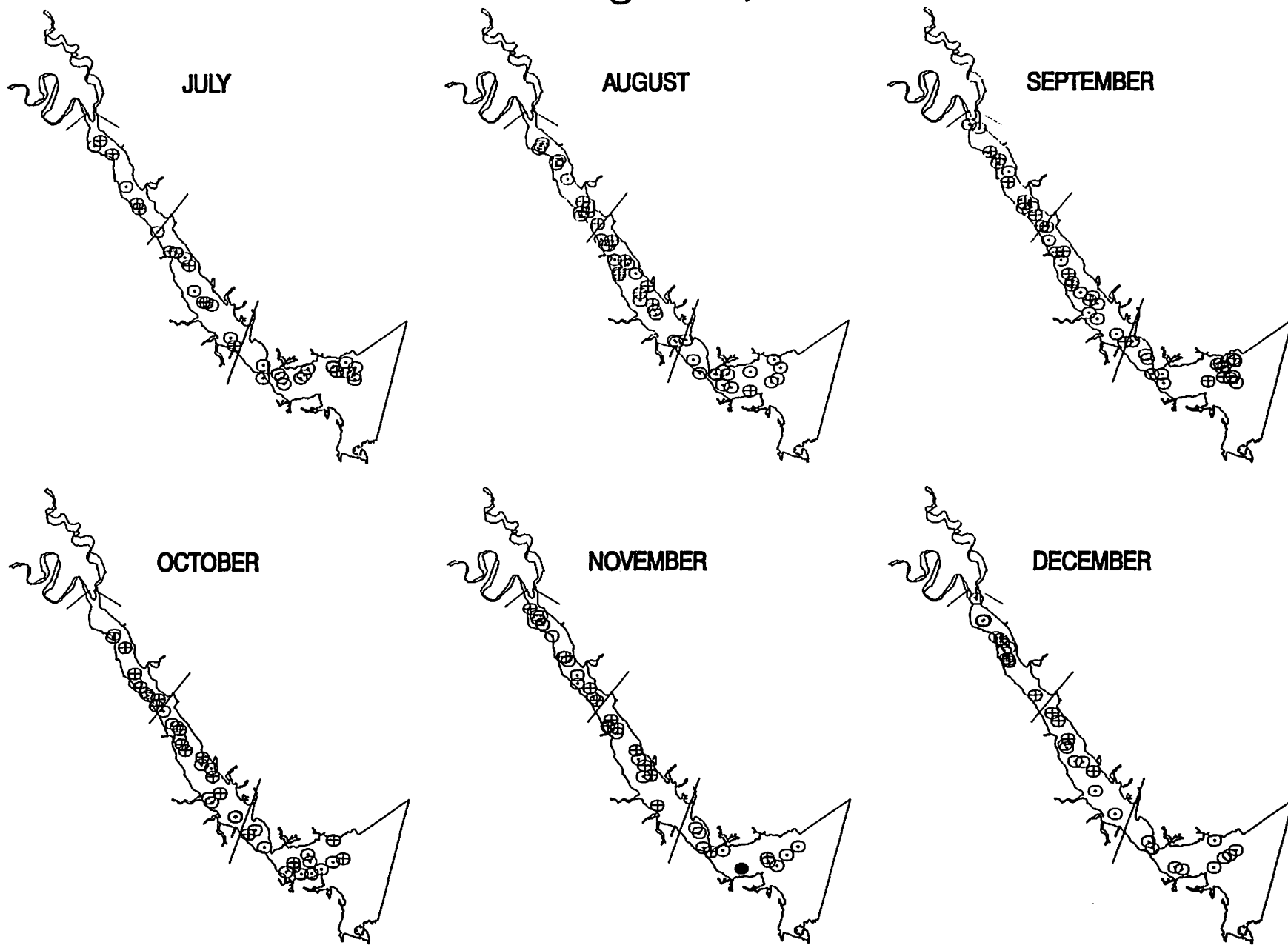


Figure 57.

# Blackcheek Tonguefish, 1991 – 1994



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NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

Figure 57.(cont.)

# Butterfish, 1991 – 1994

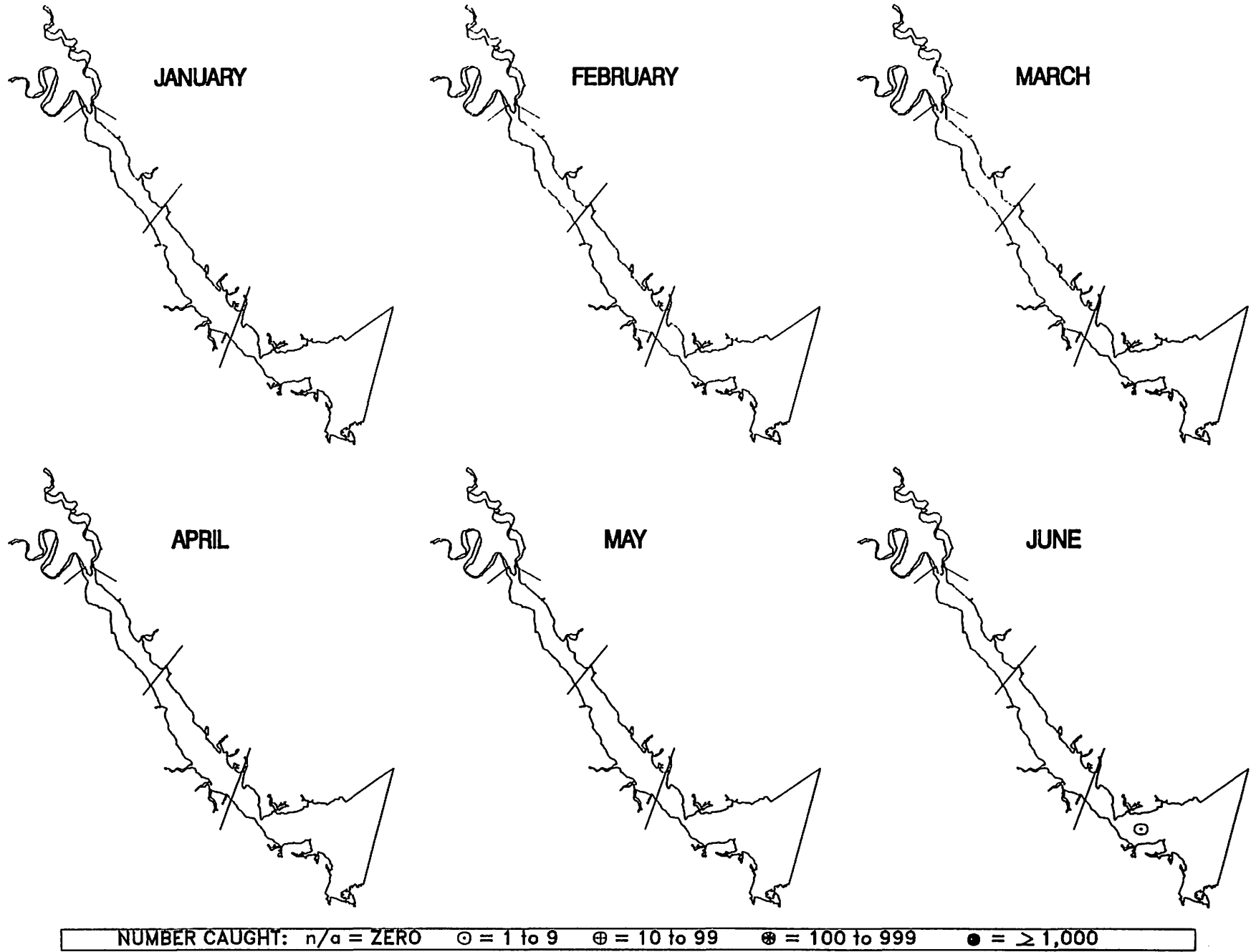
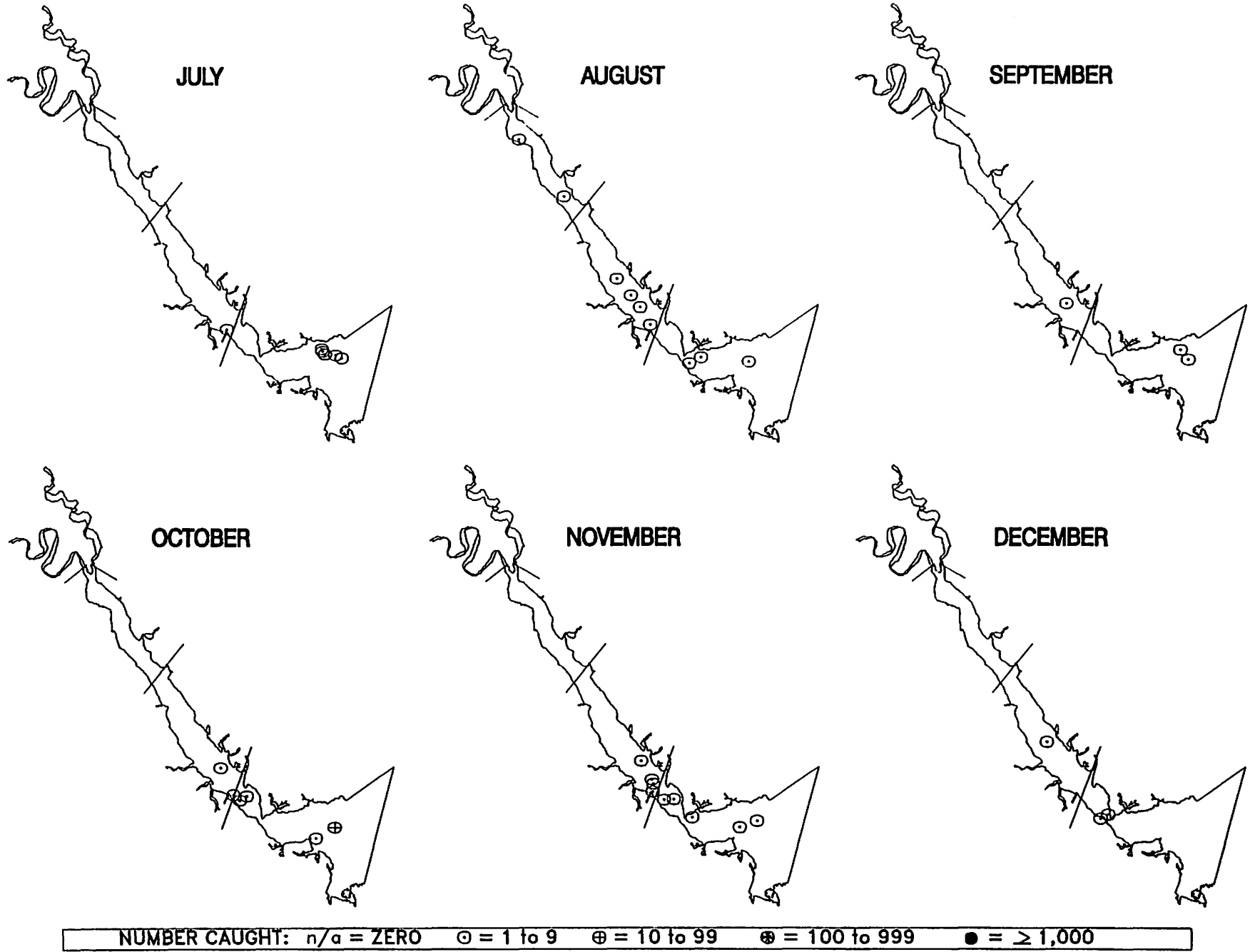


Figure 58.

# Butterfish, 1991 – 1994



# Blueback Herring, 1991 – 1994

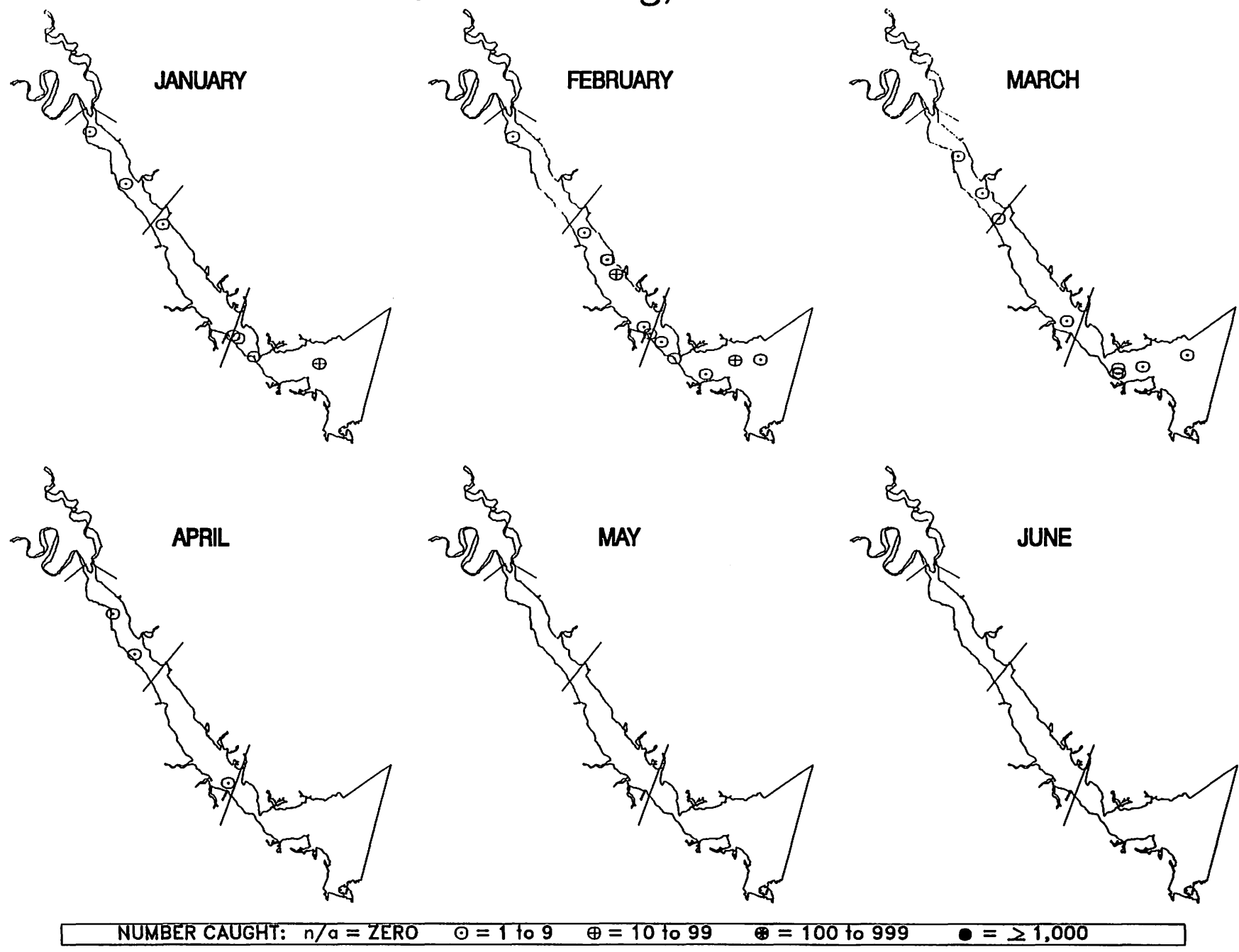
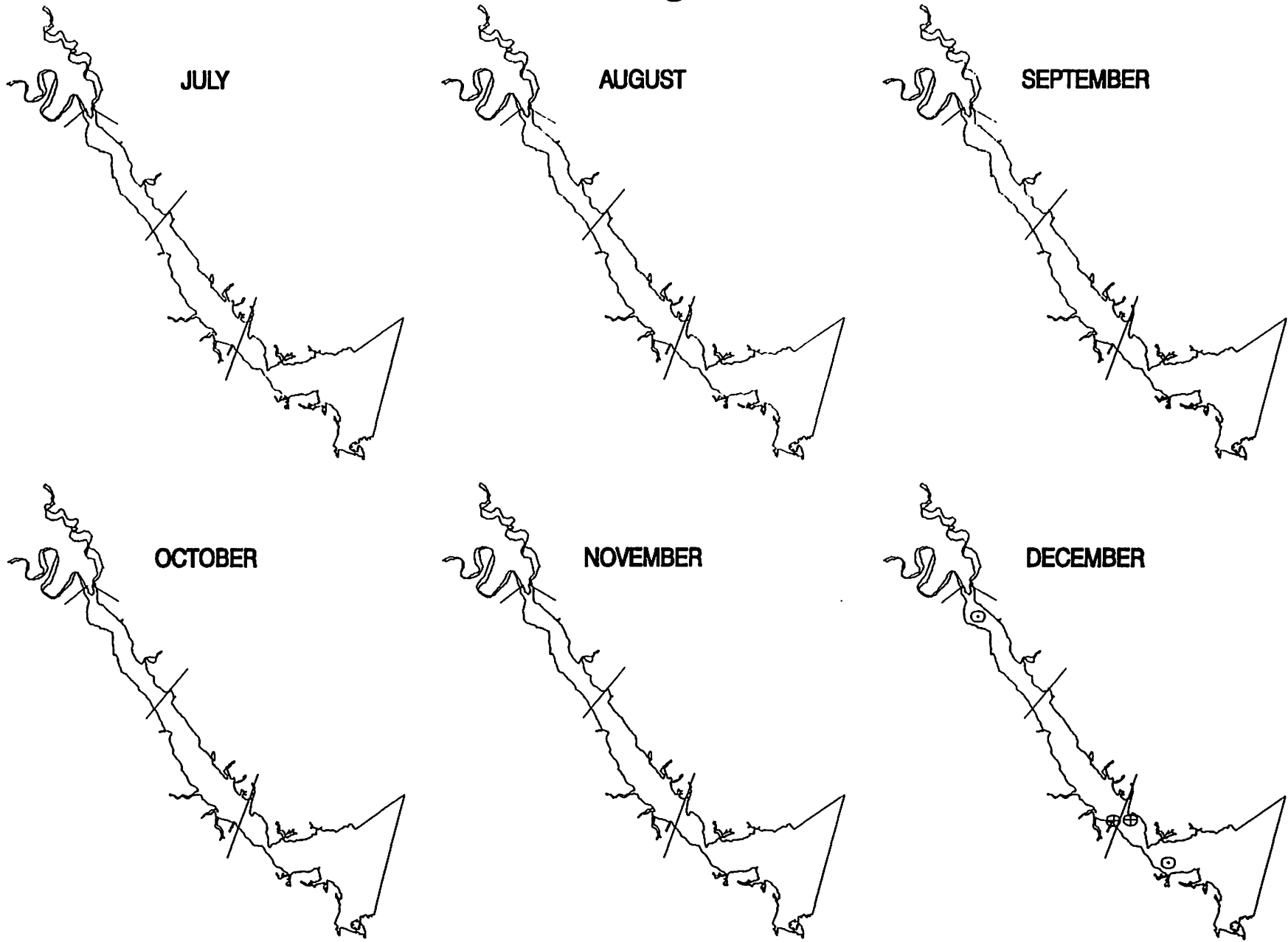


Figure 59.

# Blueback Herring, 1991 – 1994



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

# Channel Catfish, 1991 – 1994

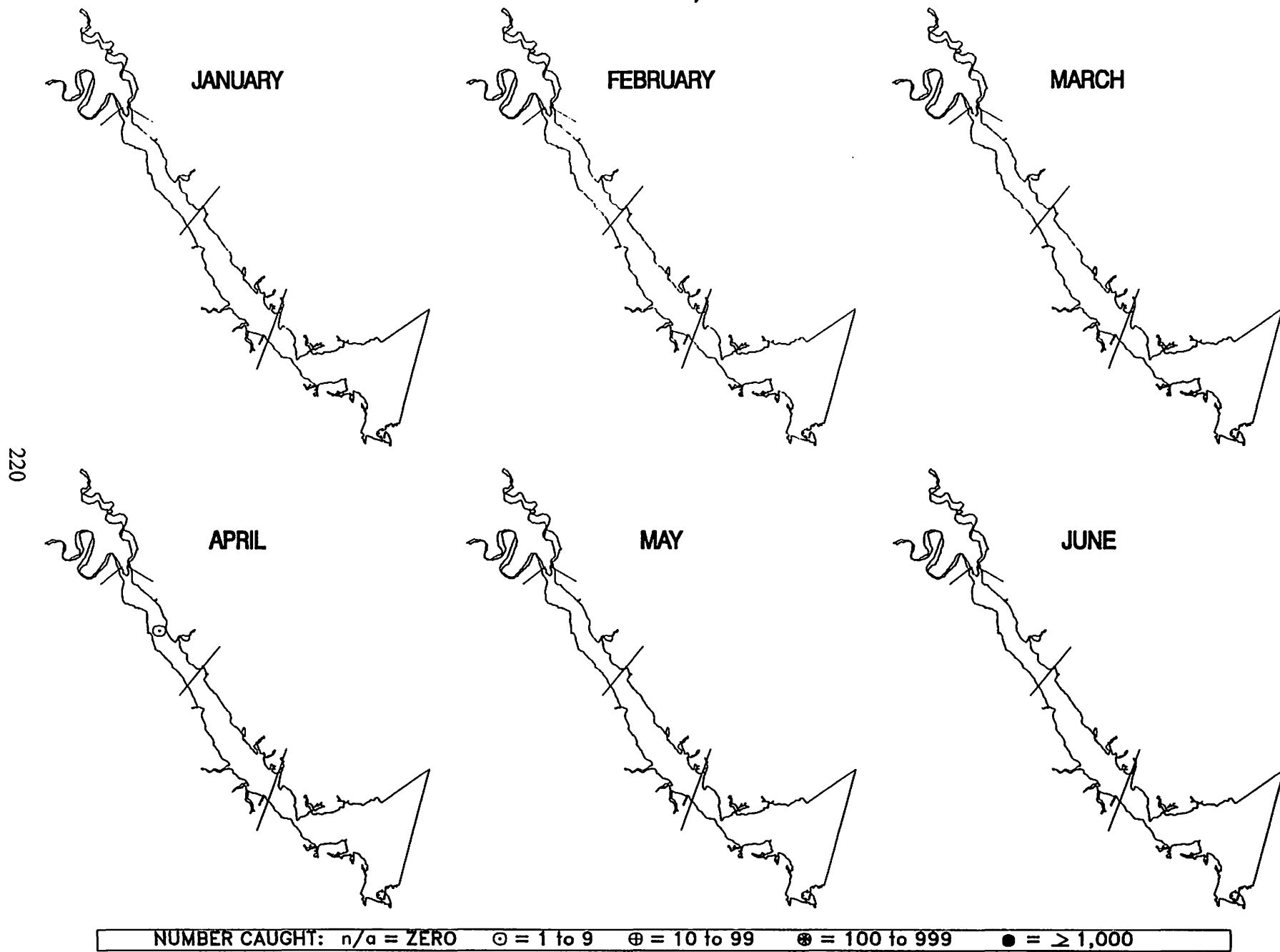
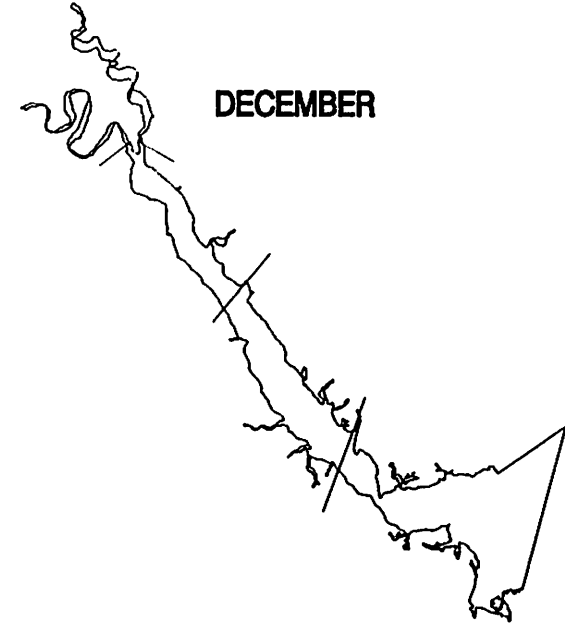
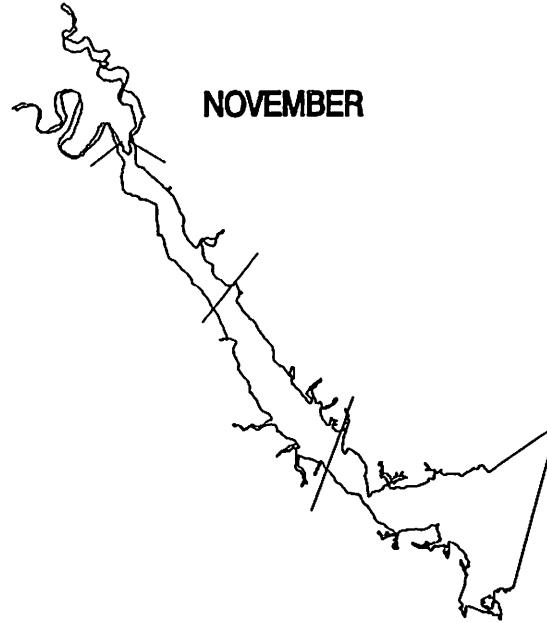
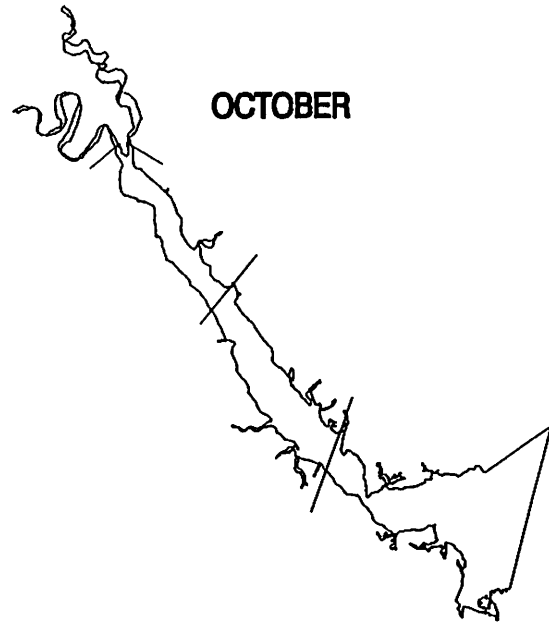
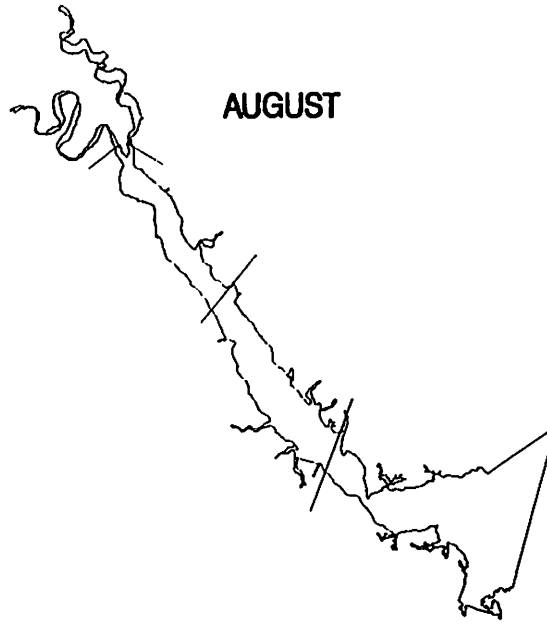
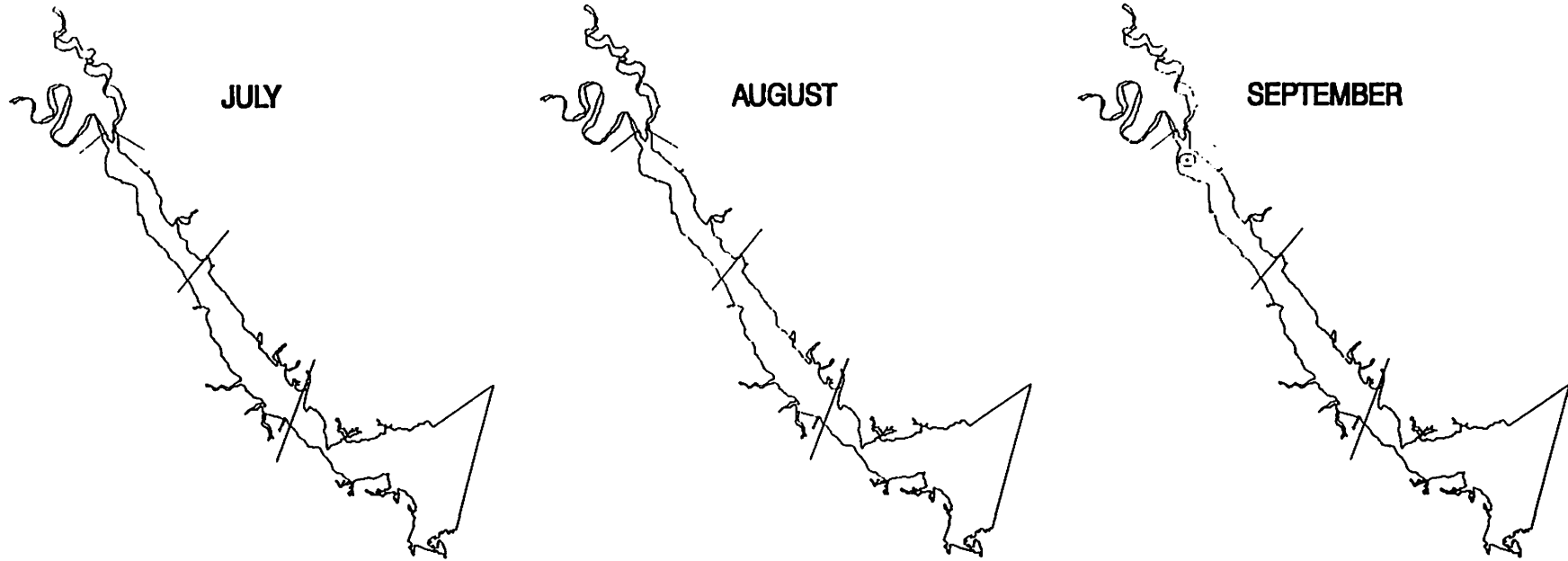


Figure 60.

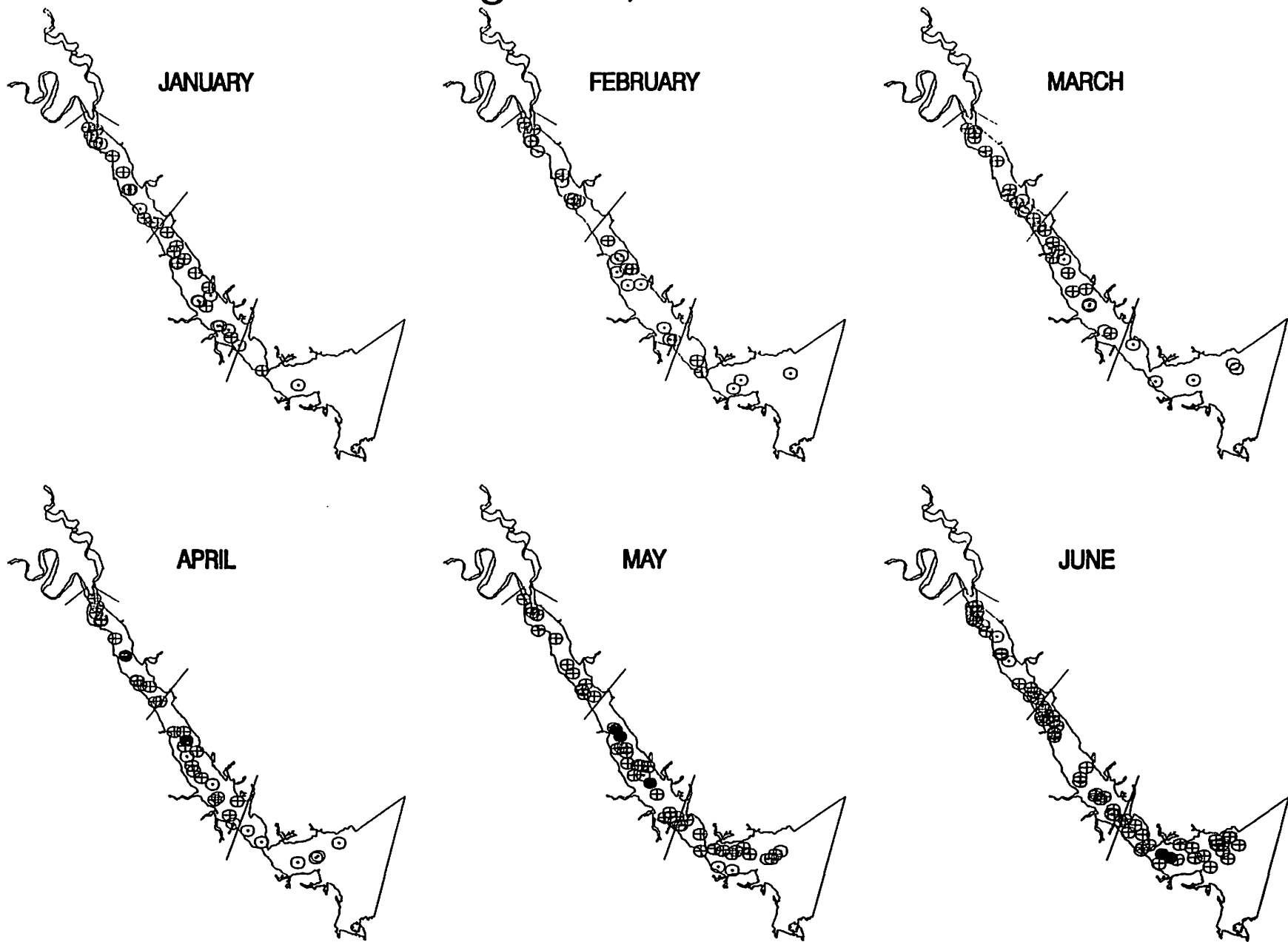


# Channel Catfish, 1991 – 1994



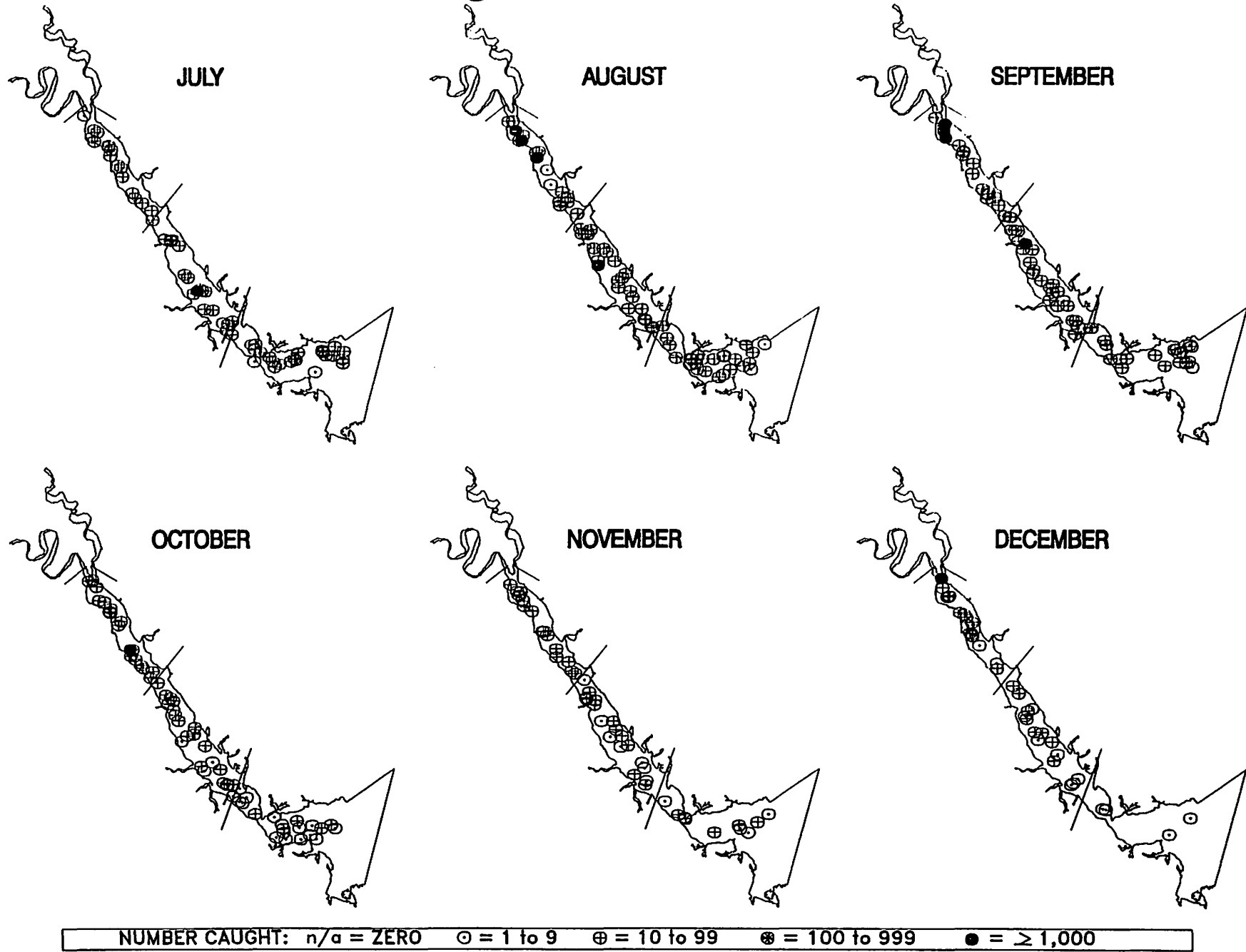
NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

# Hogchoker, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

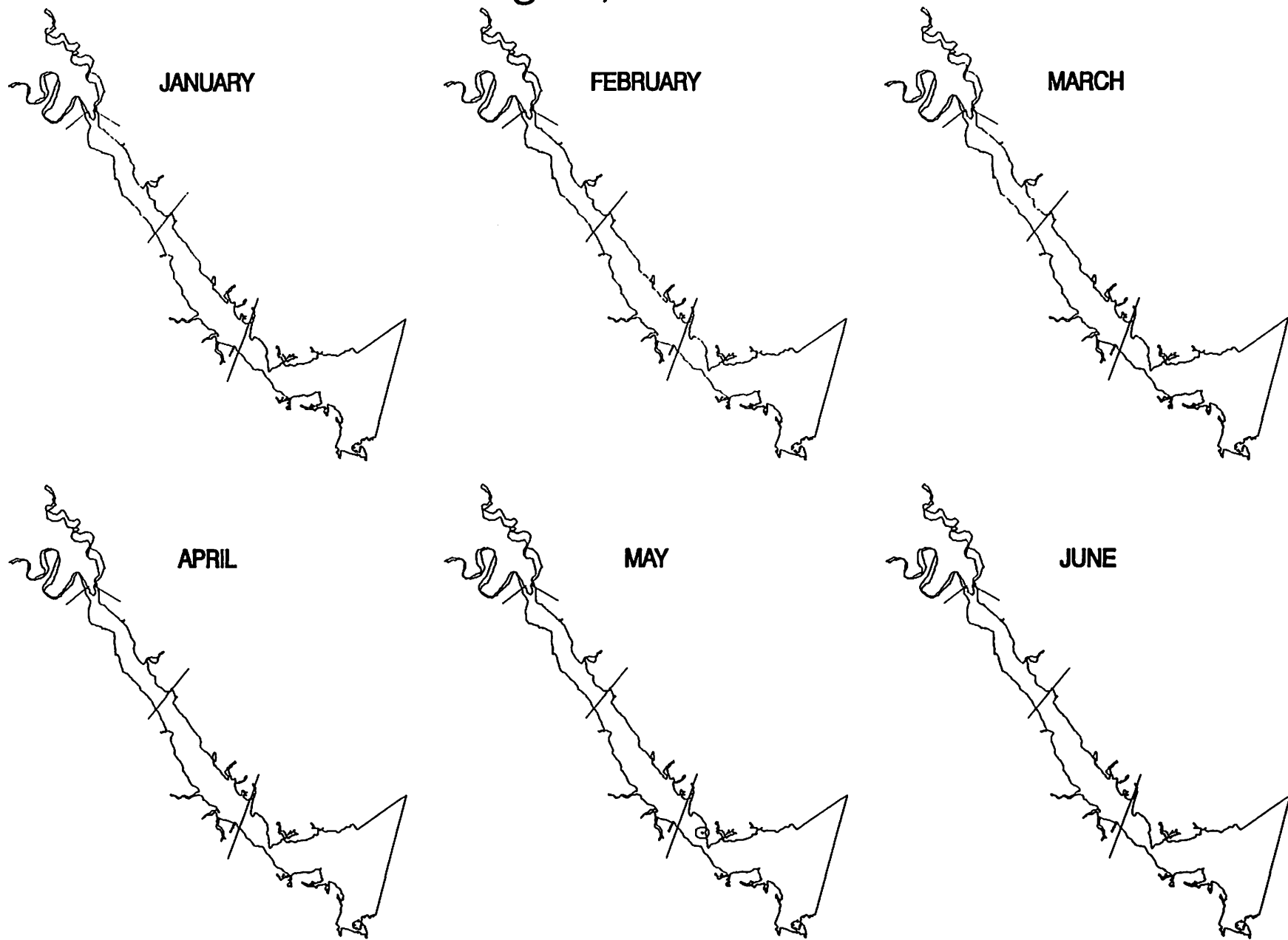
# Hogchoker, 1991 – 1994



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Figure 61.(cont.)

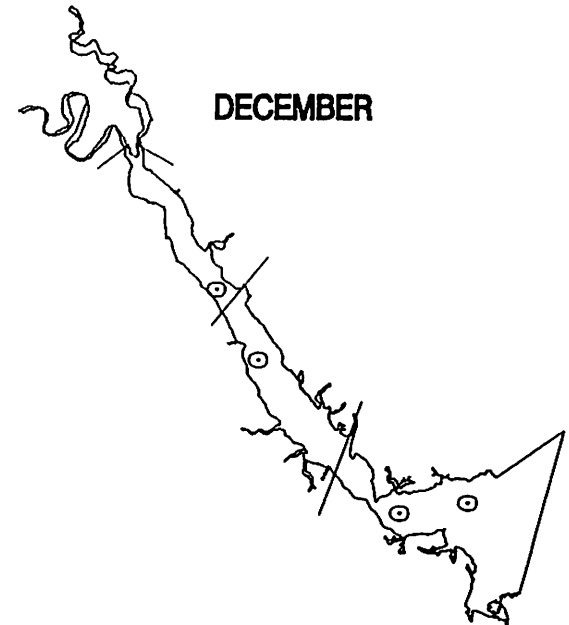
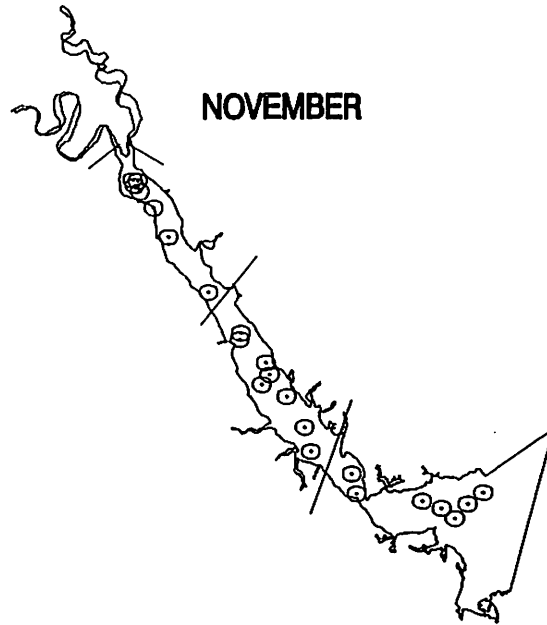
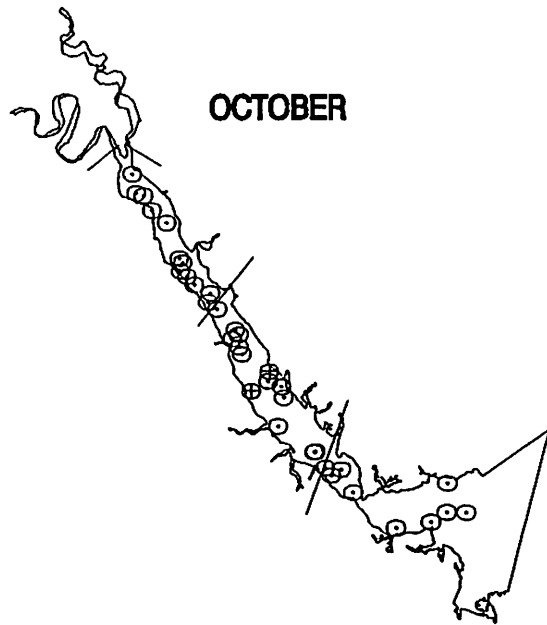
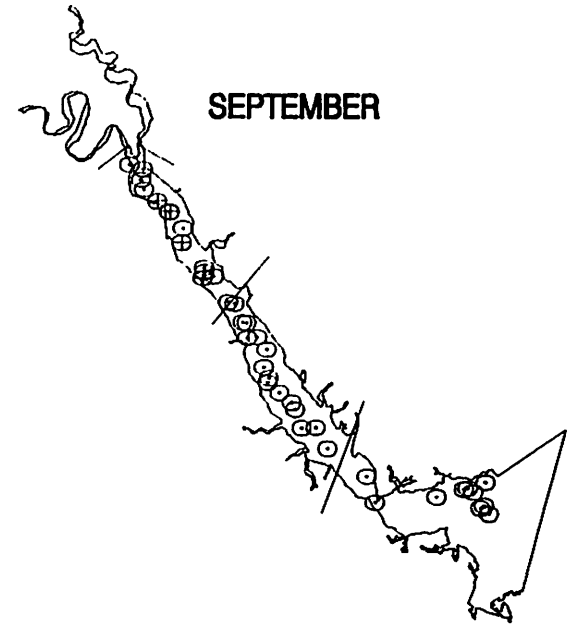
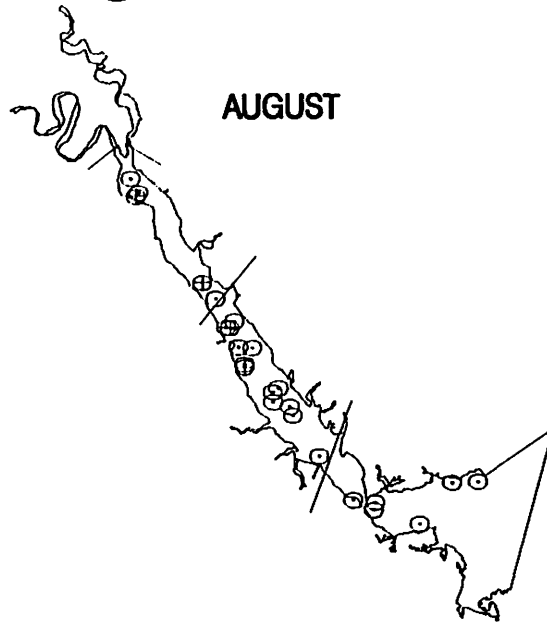
# Kingfish, 1991 – 1994



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

Figure 62.

# Kingfish, 1991 – 1994

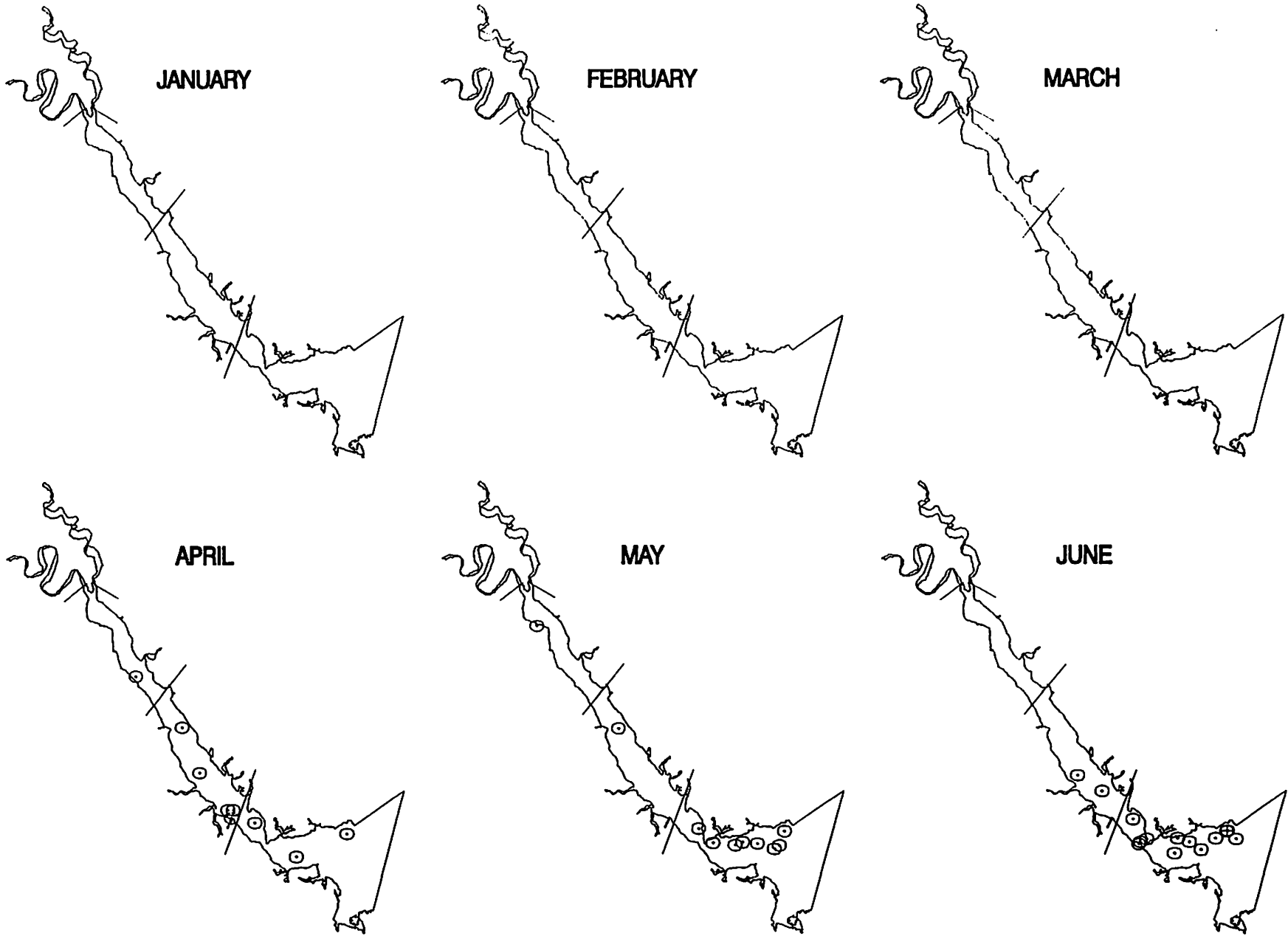


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NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

Figure 62.(cont.)

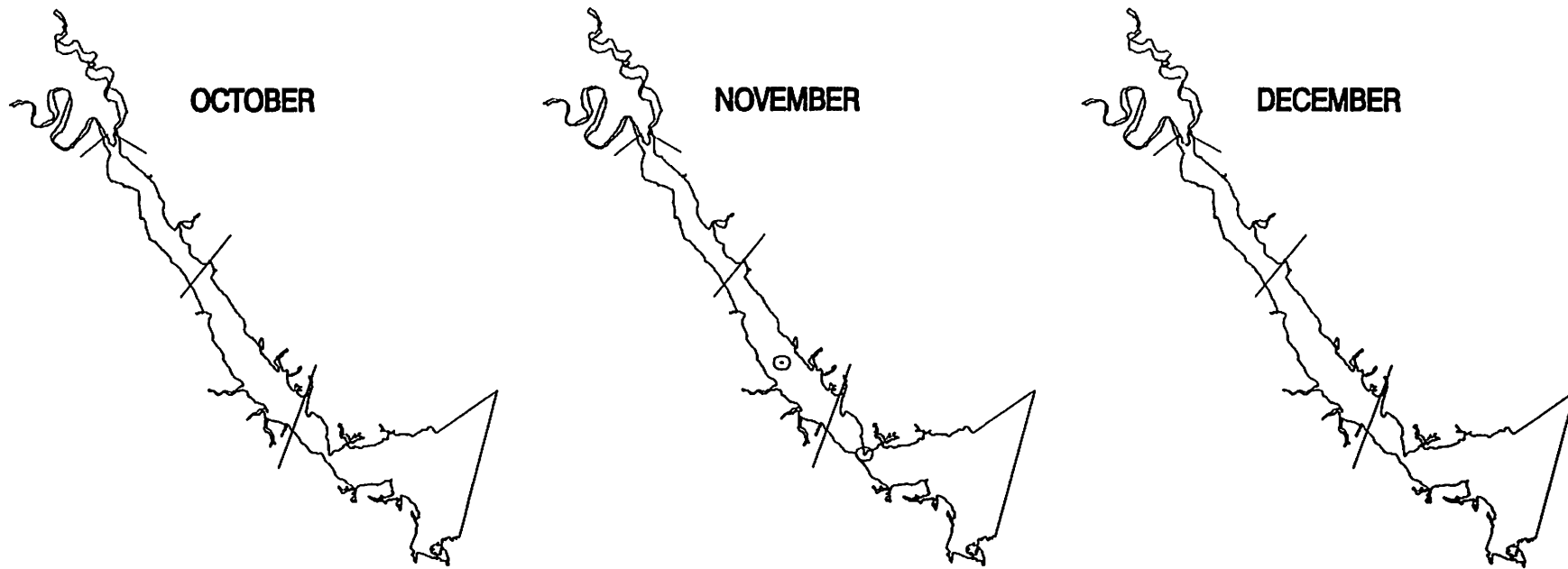
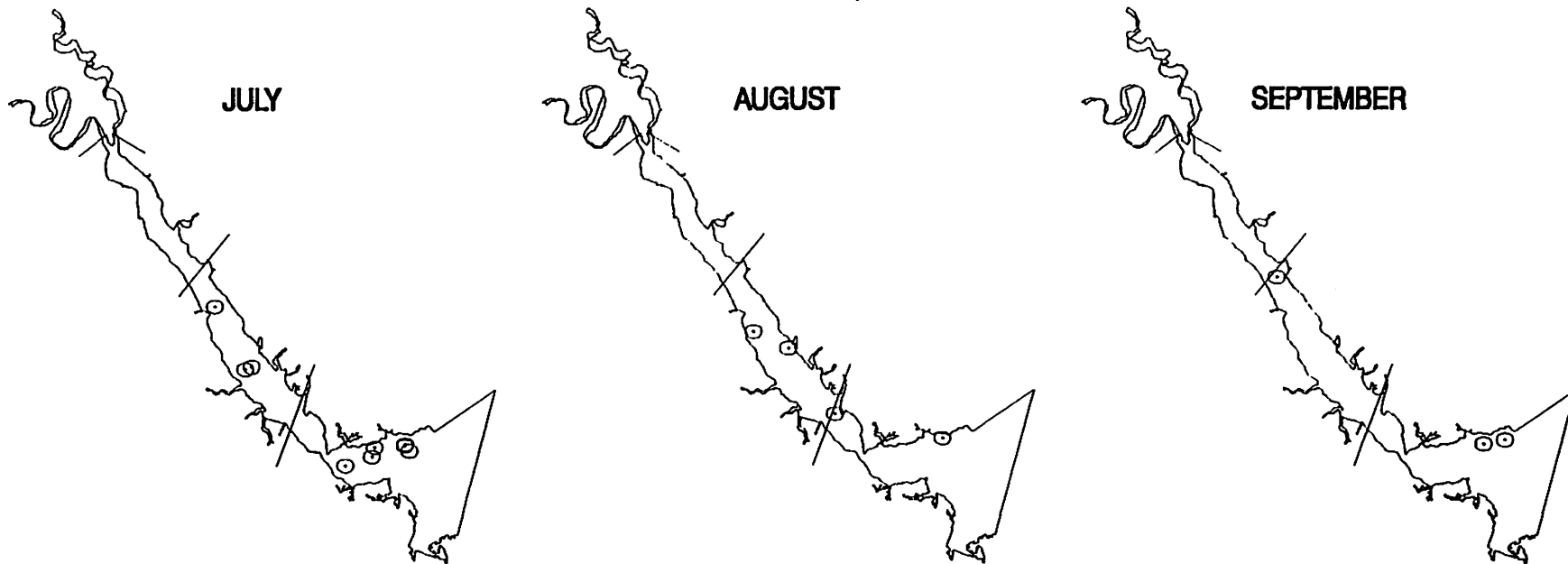
# Northern Searobin, 1991 – 1994



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

Figure 63.

# Northern Searobin, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

# Penaeid Shrimp, 1991 – 1994

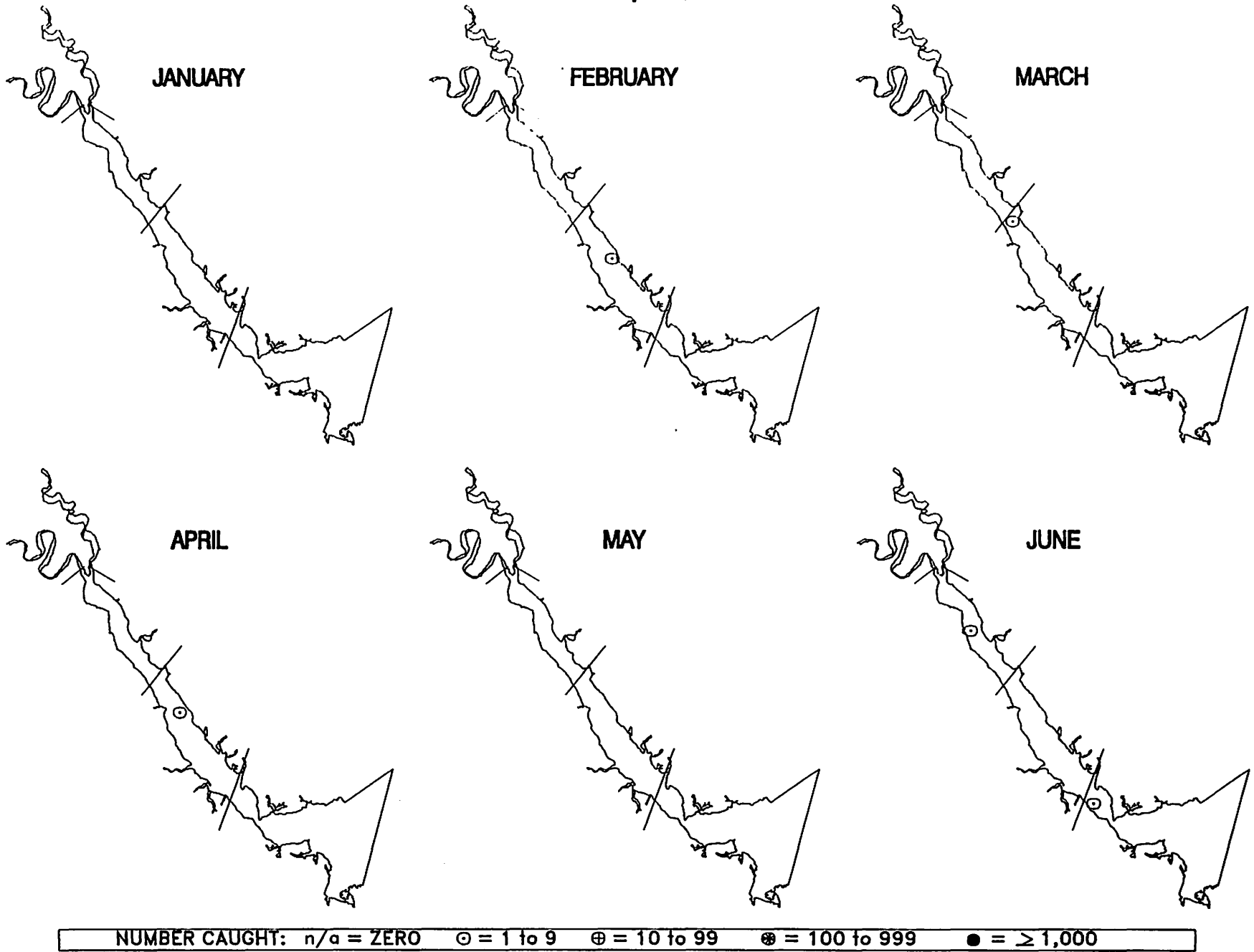
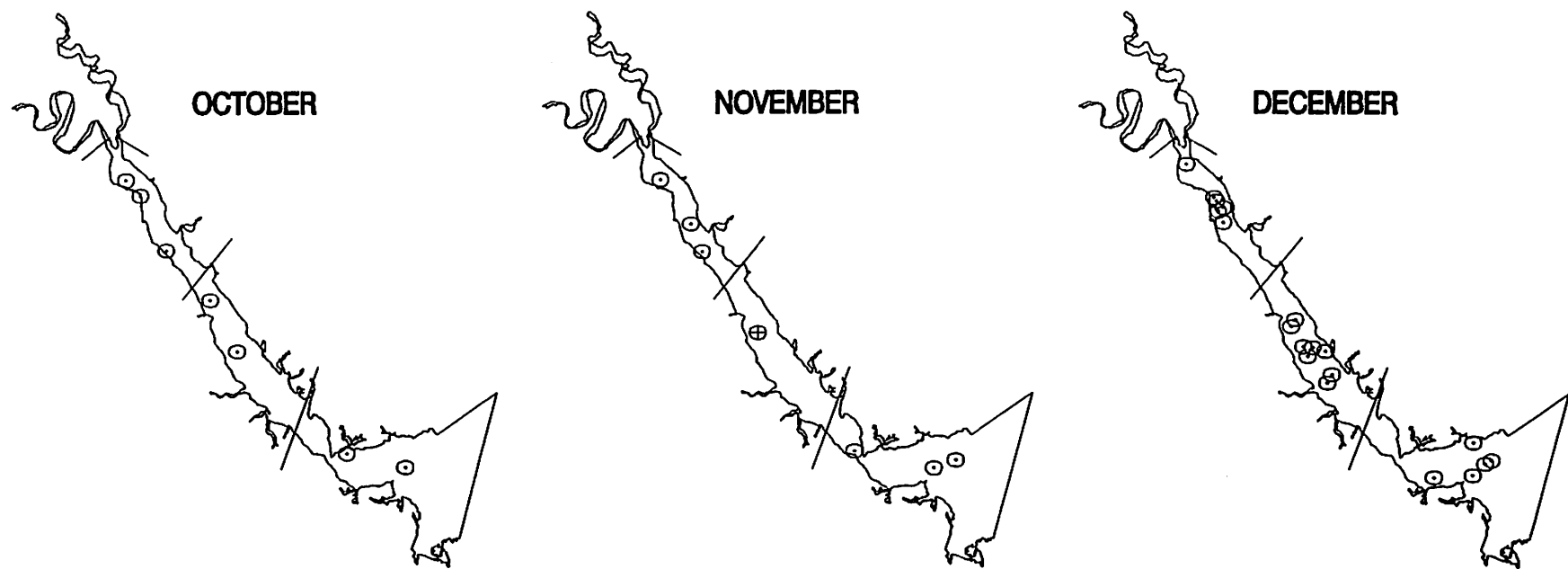
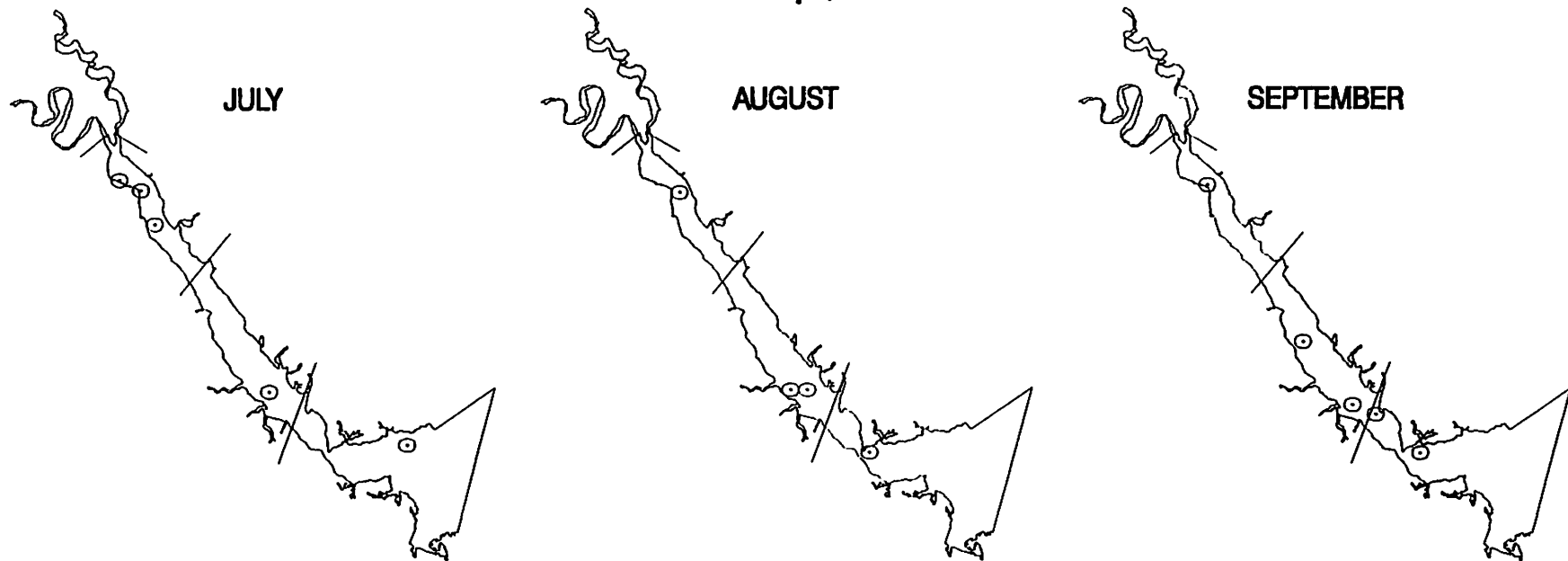


Figure 64.



# Penaeid Shrimp, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊕• = 100 to 999    ● =  $\geq 1,000$

# Scup, 1991 – 1994

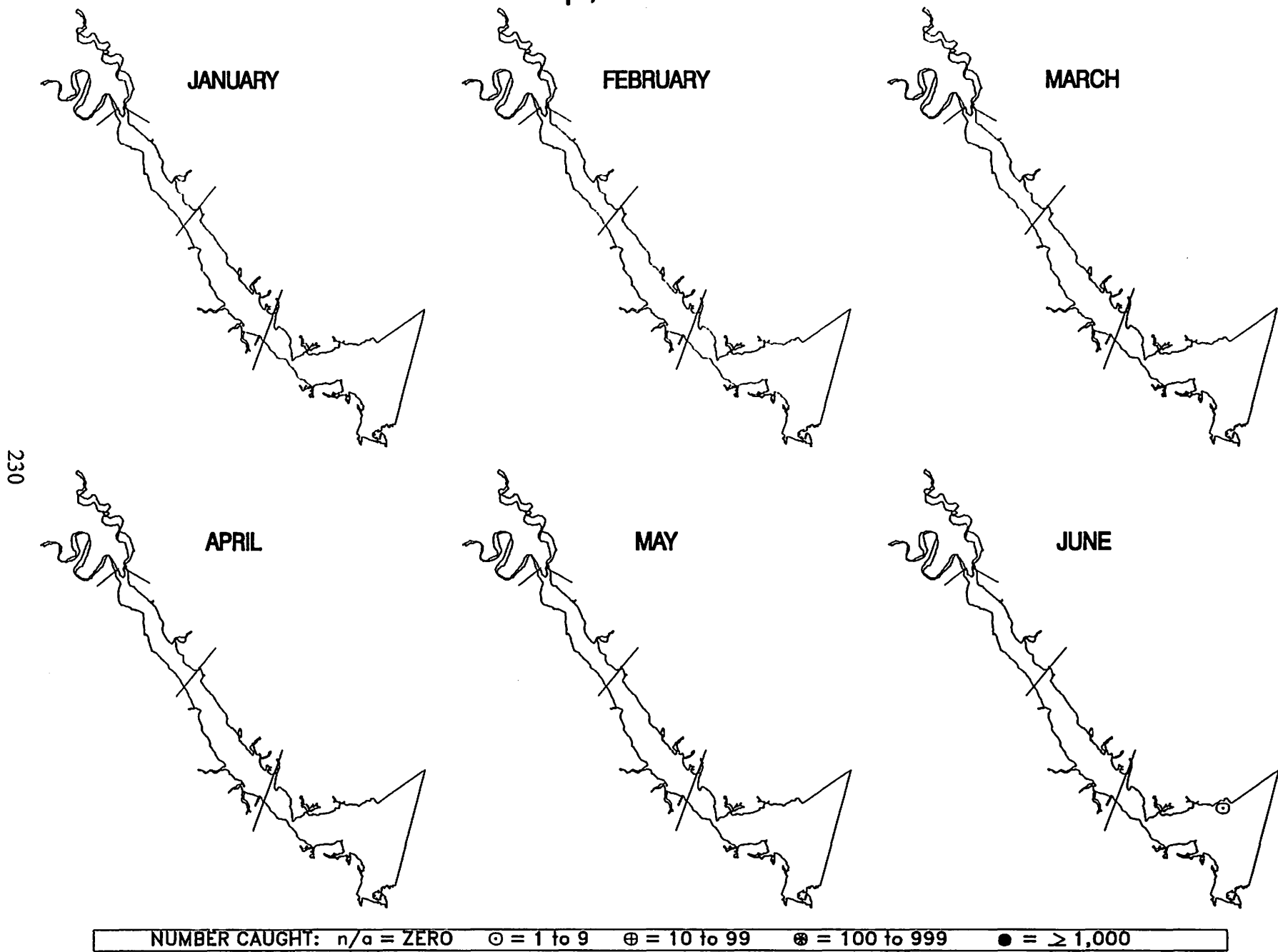
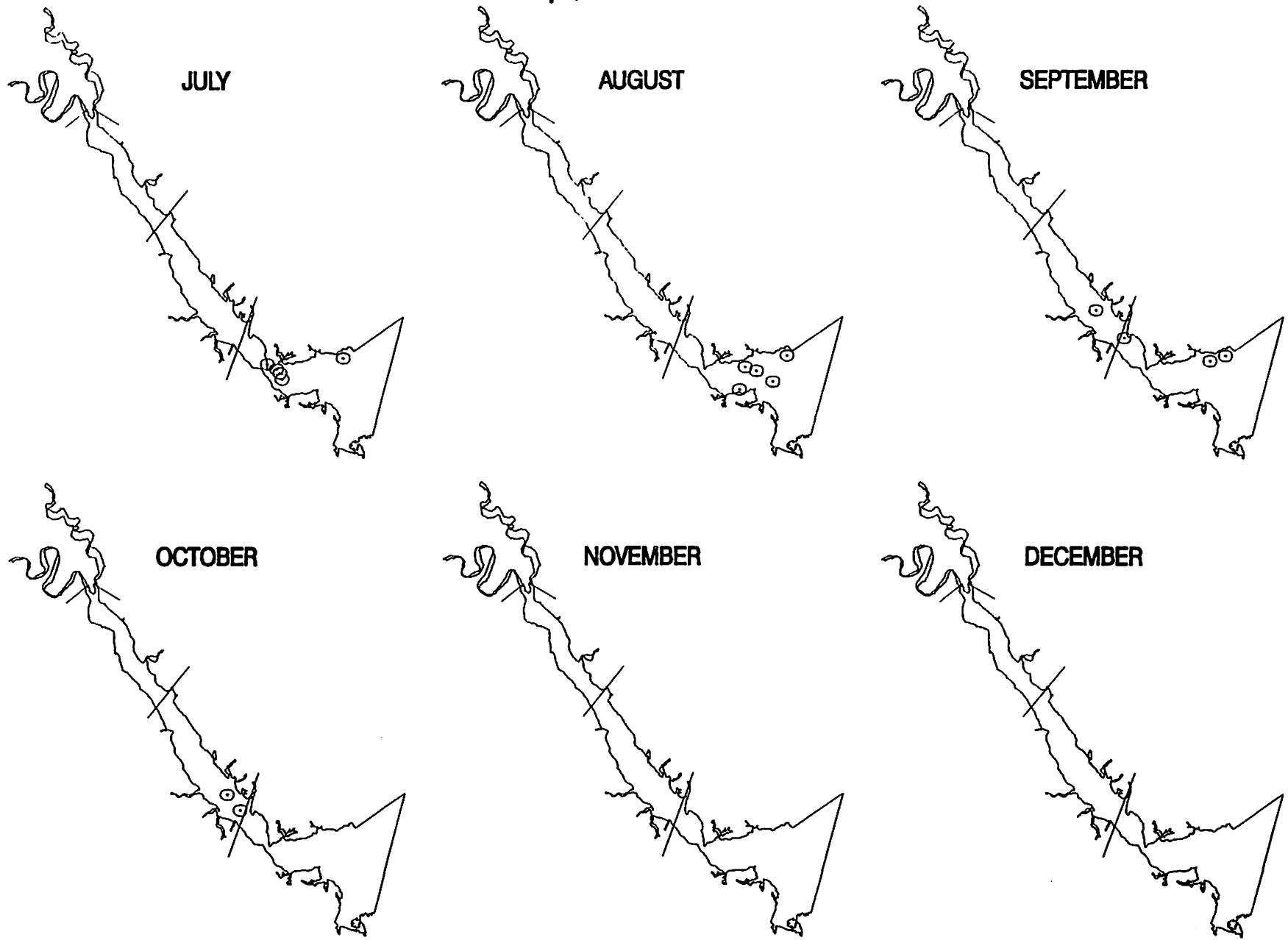


Figure 65.

# Scup, 1991 – 1994

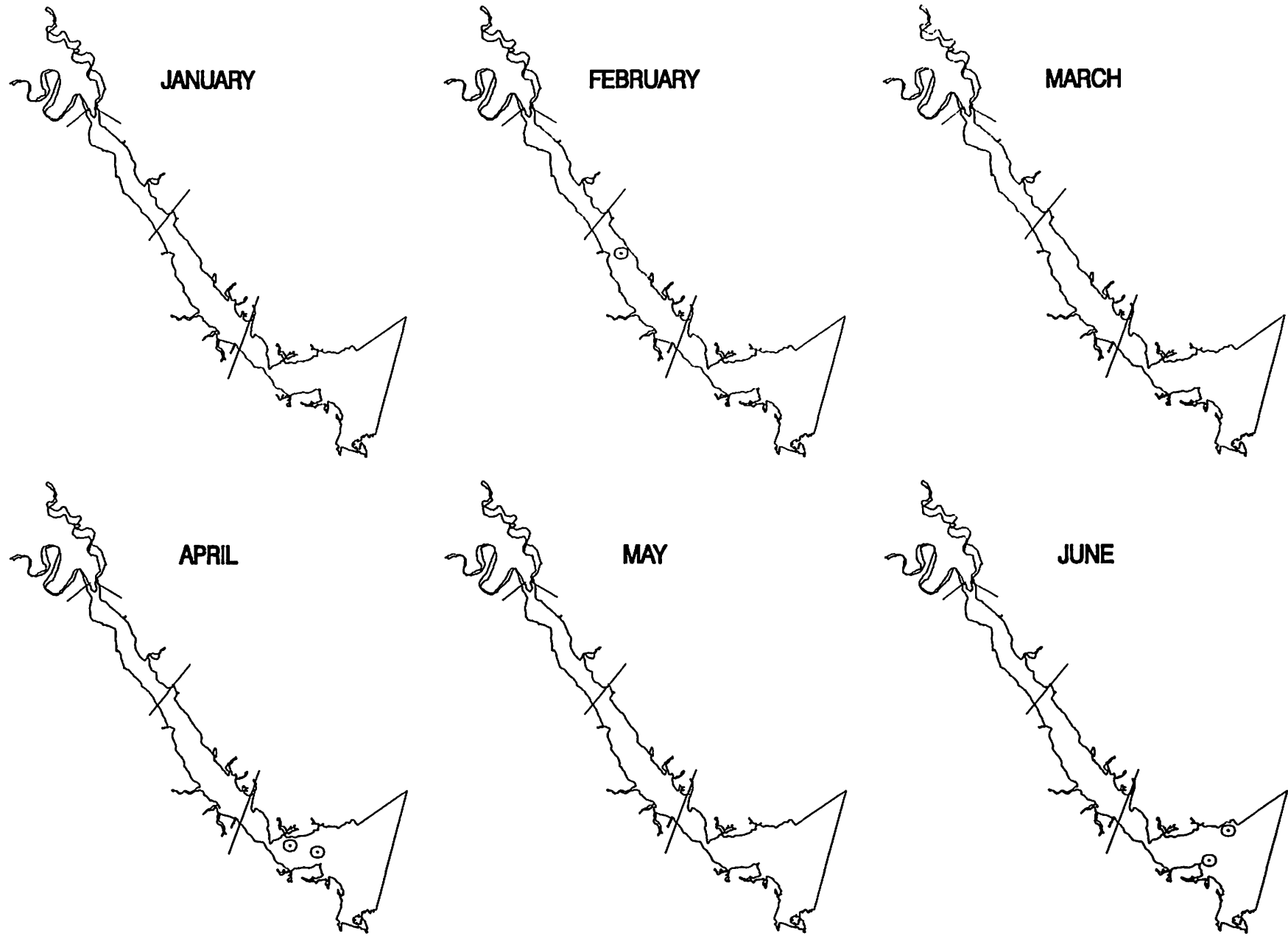


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NUMBER CAUGHT: n/a = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

Figure 65.(cont.)

# Smallmouth Flounder, 1991 – 1994



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

Figure 66.

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# Smallmouth Flounder, 1991 – 1994

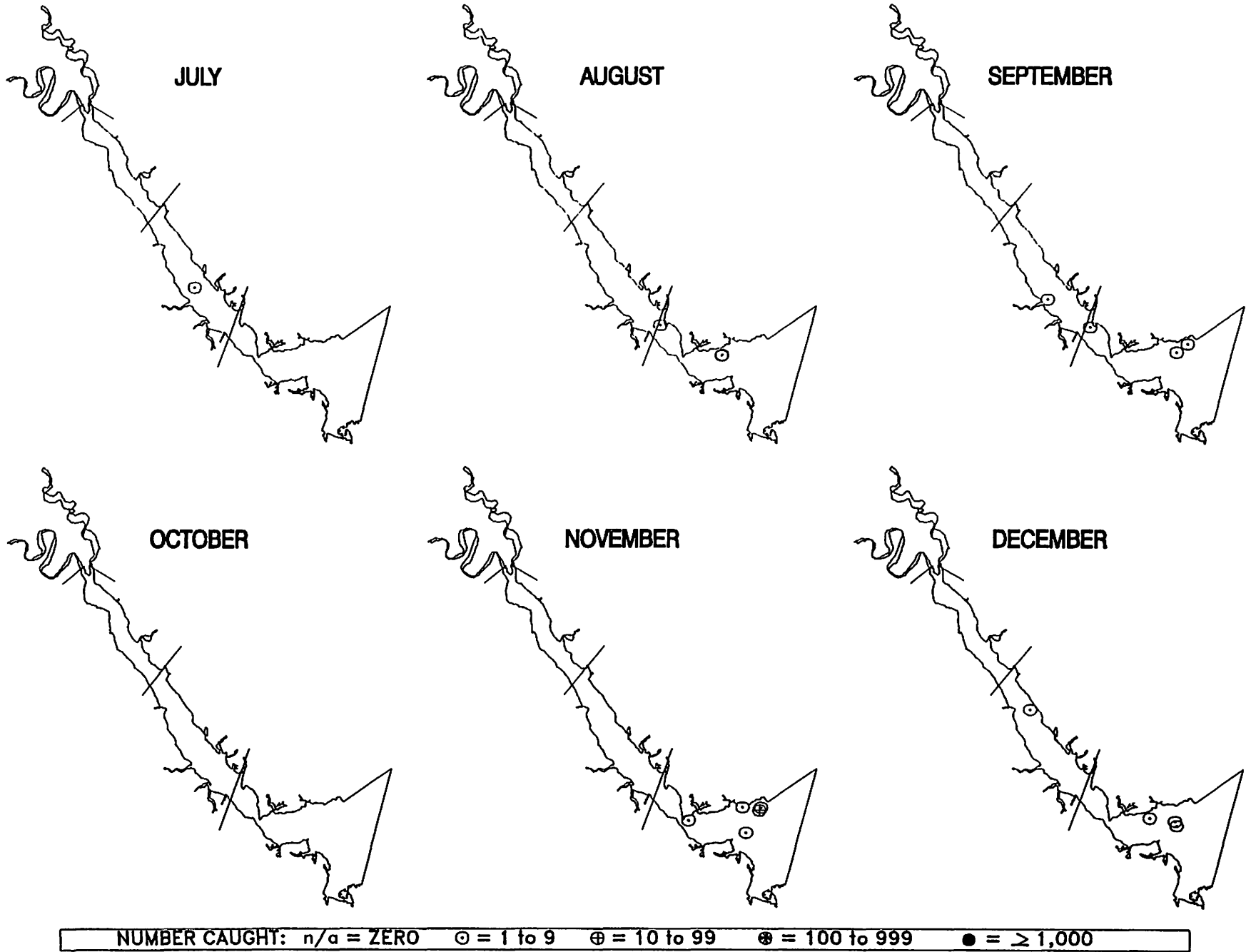


Figure 66.(cont.)

# Spotted Hake, 1991 – 1994

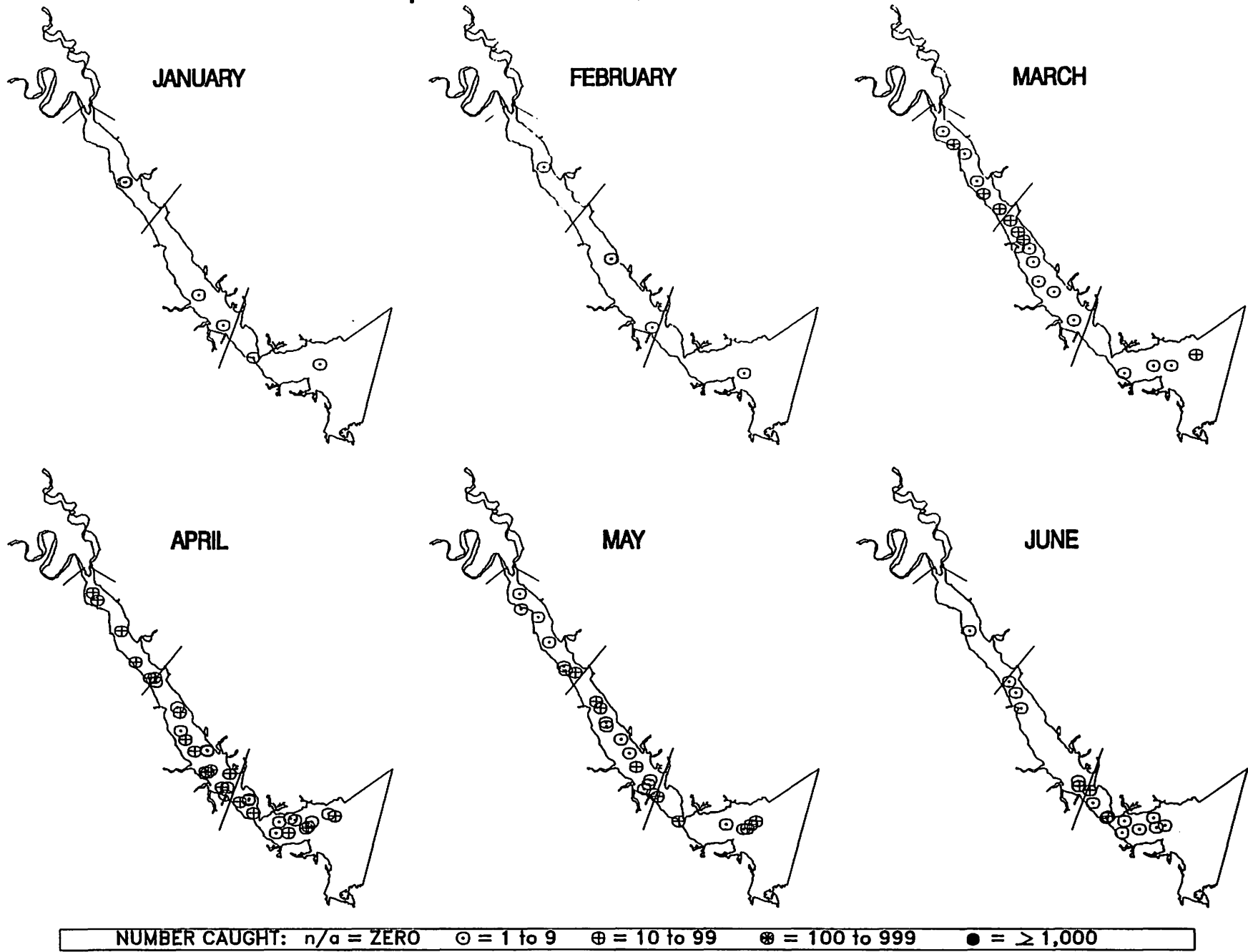
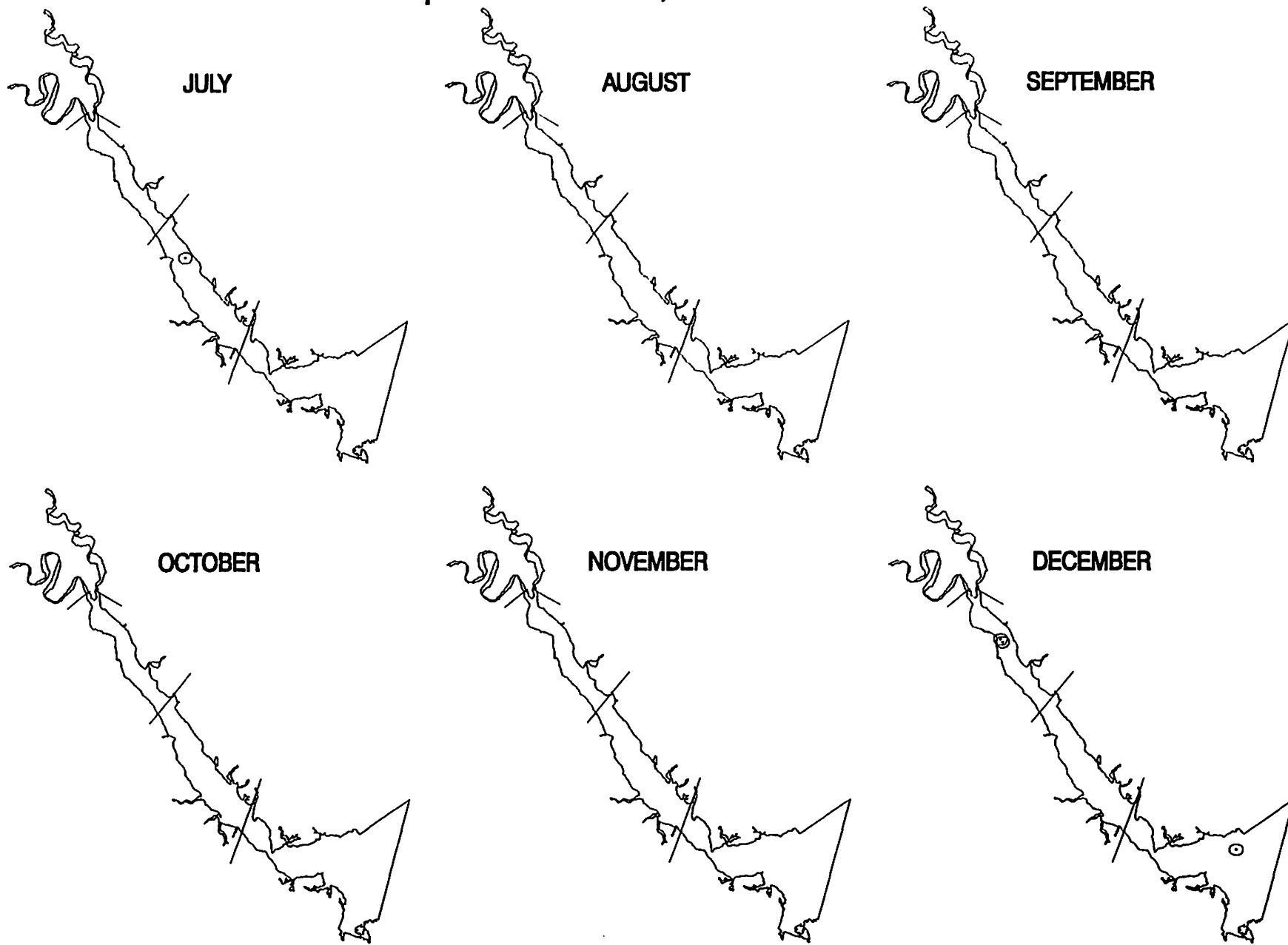


Figure 67.

# Spotted Hake, 1991 – 1994

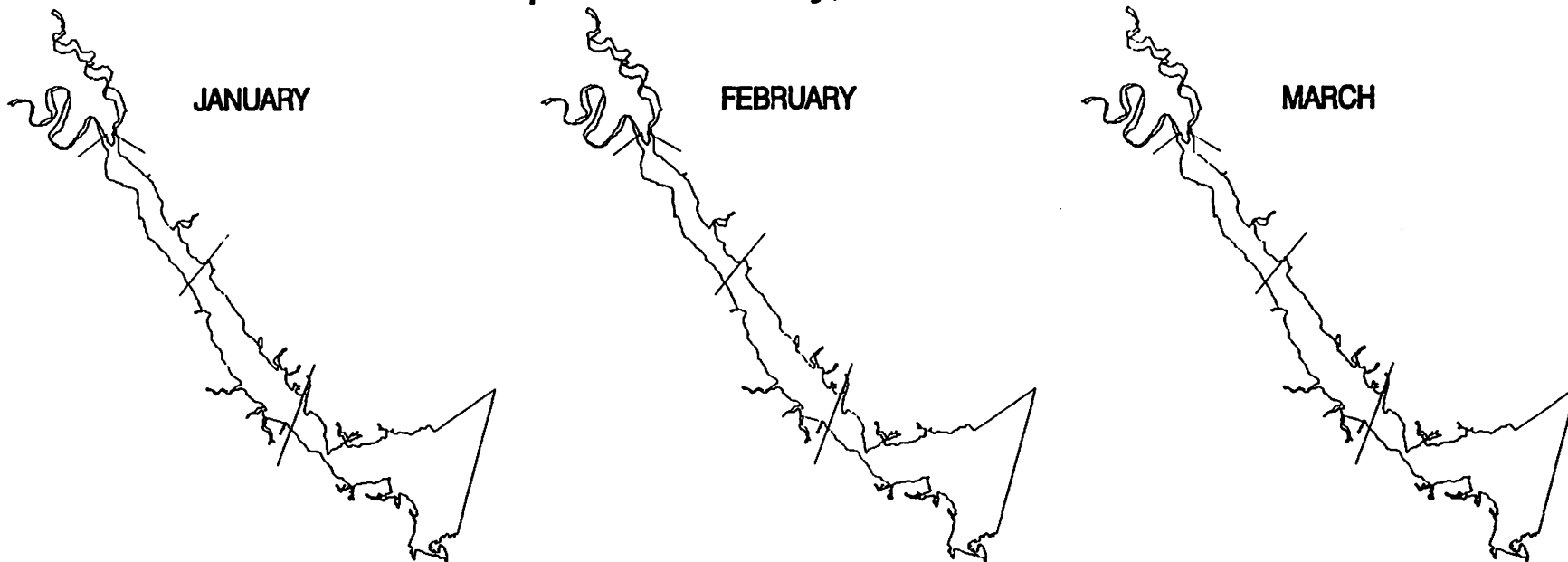


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NUMBER CAUGHT: n/a = ZERO    ⊙ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

Figure 67.(cont.)

# Striped Anchovy, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO    ○ = 1 to 9    ⊕ = 10 to 99    ⊗ = 100 to 999    ● = ≥ 1,000

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Figure 68.



# Striped Anchovy, 1991 – 1994

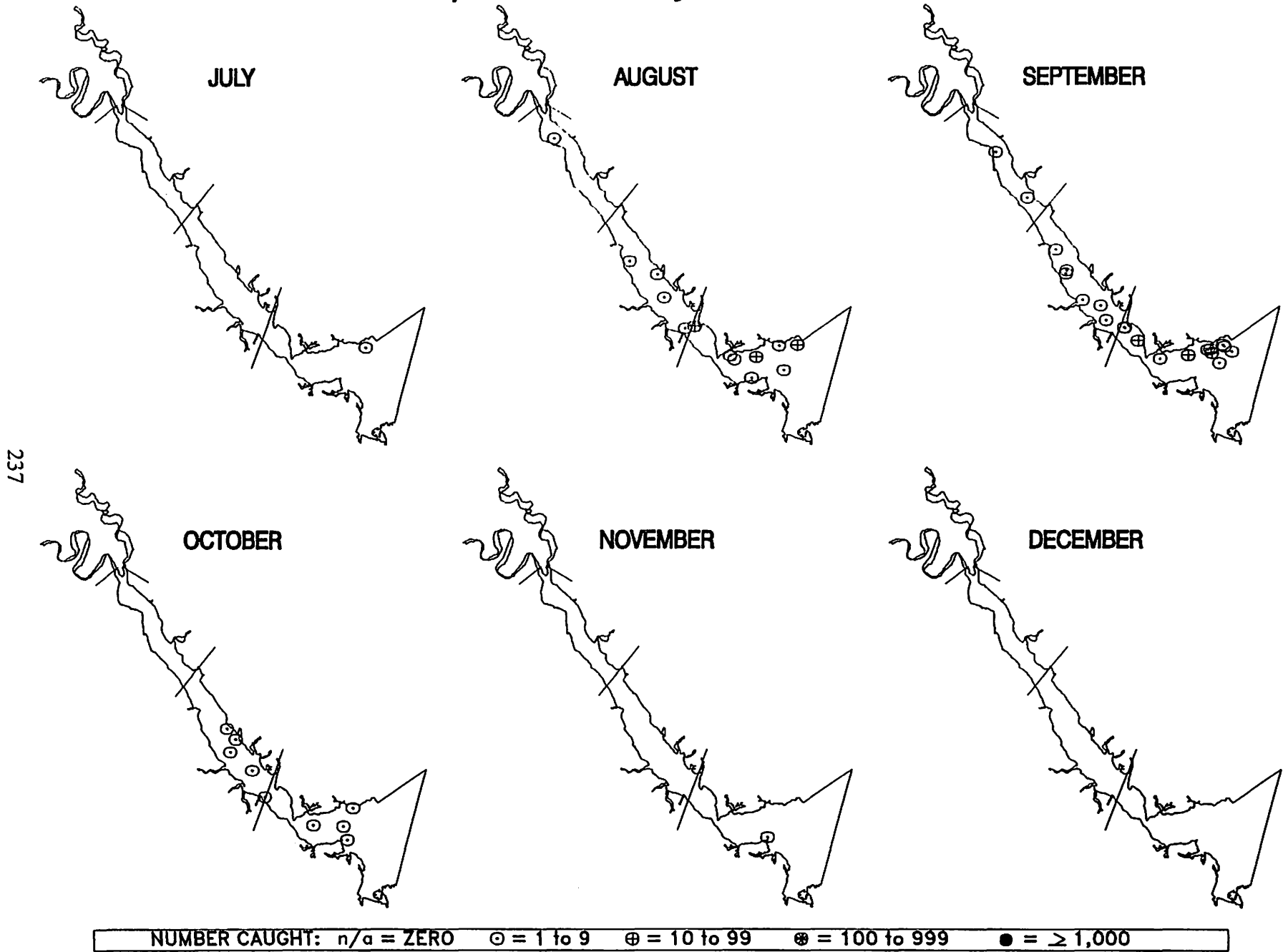
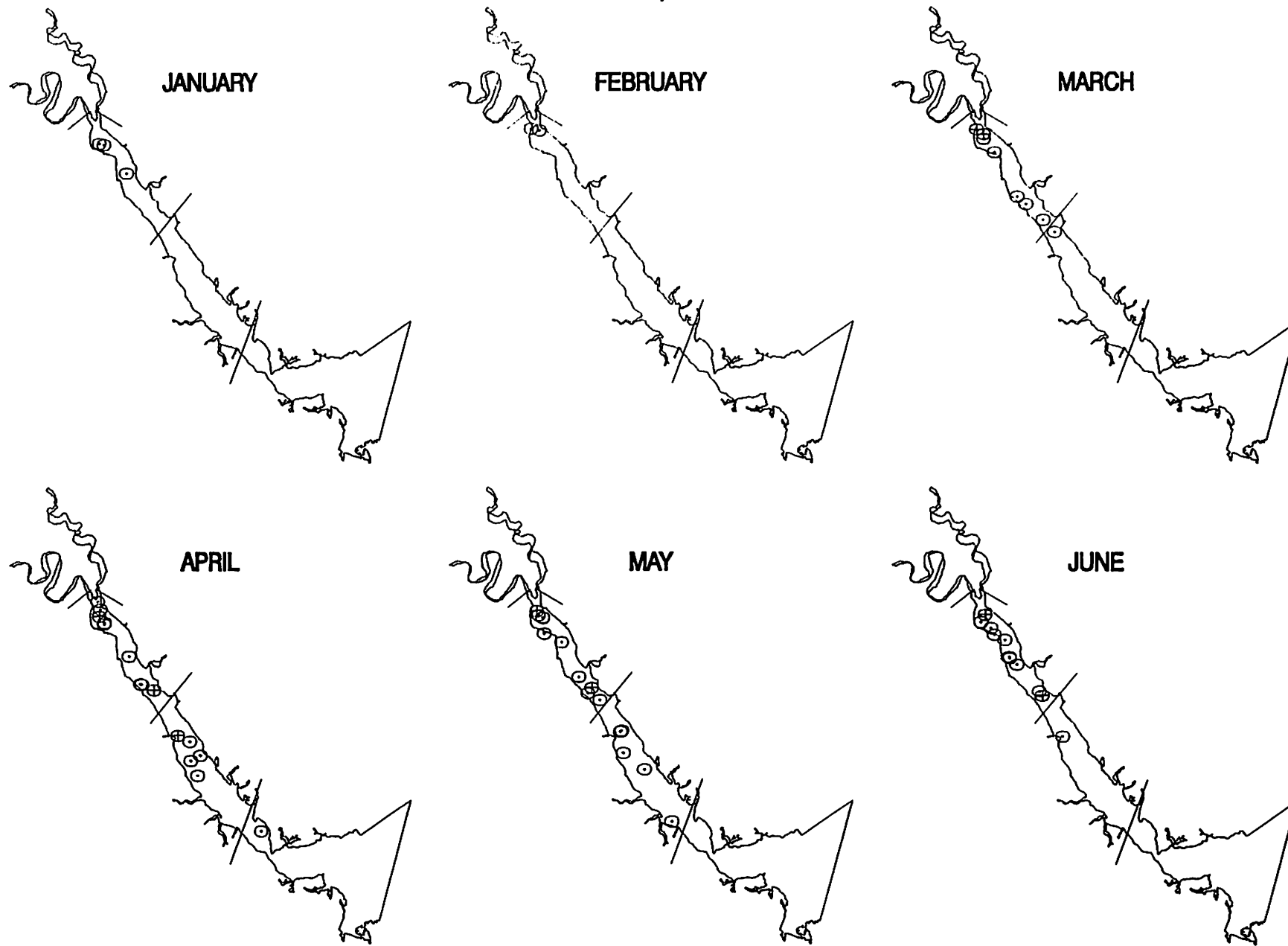


Figure 68.(cont.)

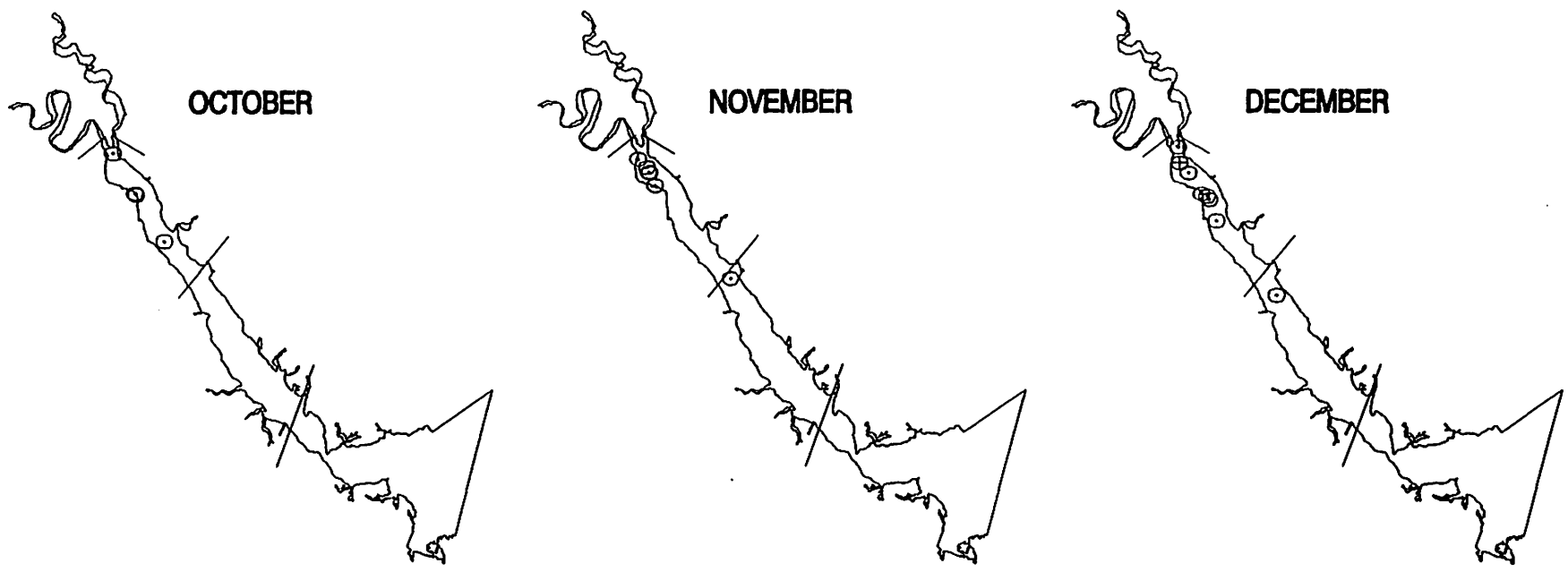
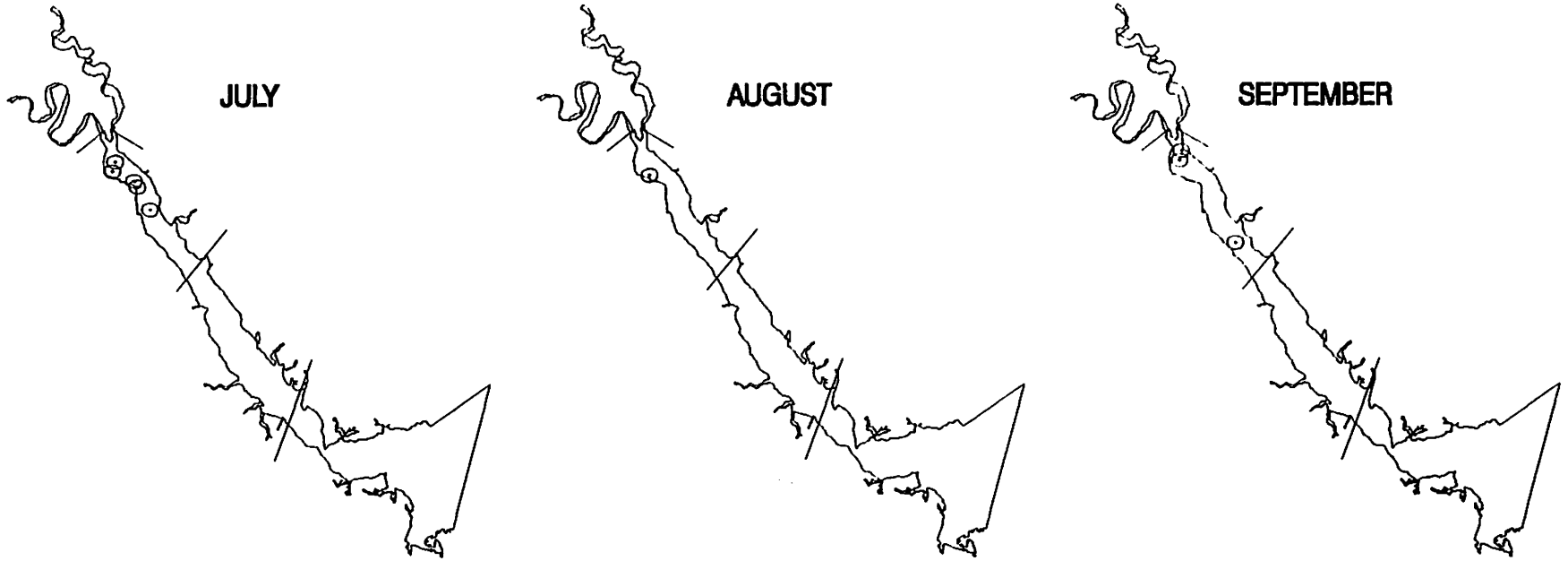
# White Catfish, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO ○ = 1 to 9 ⊕ = 10 to 99 ⊗ = 100 to 999 ● = ≥ 1,000

Figure 69.

# White Catfish, 1991 – 1994



NUMBER CAUGHT: n/a = ZERO   ○ = 1 to 9   ⊕ = 10 to 99   ⊗ = 100 to 999   ● = ≥ 1,000

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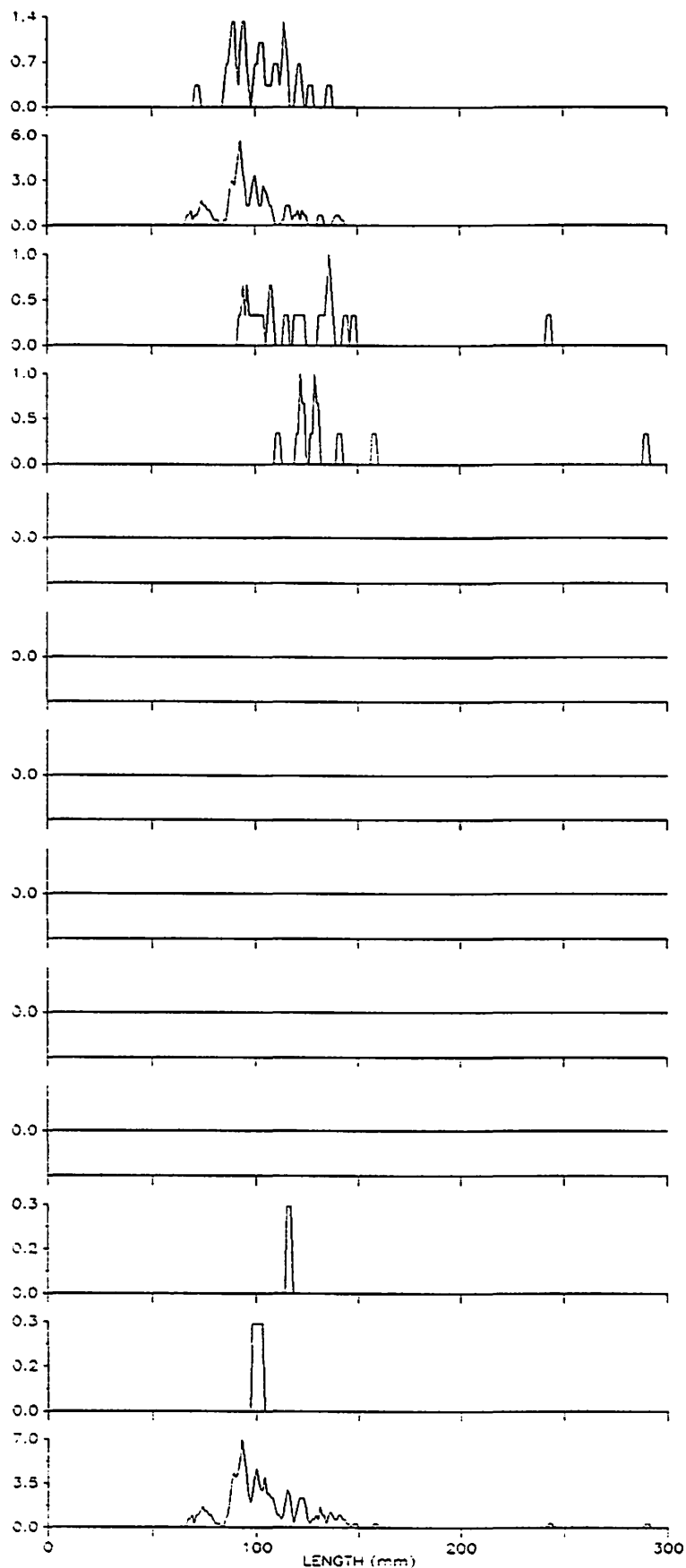
Figure 69.(cont.)

Figures 70-98. Monthly length frequency summaries for the predominant species.

- Explanations:
- A. These figures represent all fish of each species presented from all years combined.
  - 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 all years combined.
  - D. The values to the right of the month name on each plot represent the inclusive dates of the cruises during the month for all years combined, 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 70.

Alewife  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 28 MEAN SIZE - 100.7  
 NO. MEAS. - 28 S.E. SIZE - 2.7  
 NO. HAULS - 51 MIN. SIZE - 70  
 CAT./HAUL - 0.5 MAX. SIZE - 134

FEBRUARY 920210 - 940203  
 NO. CGHT. - 85 MEAN SIZE - 96  
 NO. MEAS. - 85 S.E. SIZE - 1.8  
 NO. HAULS - 52 MIN. SIZE - 66  
 CAT./HAUL - 1.6 MAX. SIZE - 140

MARCH 920303 - 940308  
 NO. CGHT. - 17 MEAN SIZE - 123.6  
 NO. MEAS. - 17 S.E. SIZE - 8.5  
 NO. HAULS - 51 MIN. SIZE - 91  
 CAT./HAUL - 0.3 MAX. SIZE - 241

APRIL 920415 - 940407  
 NO. CGHT. - 10 MEAN SIZE - 143.5  
 NO. MEAS. - 10 S.E. SIZE - 16.5  
 NO. HAULS - 51 MIN. SIZE - 109  
 CAT./HAUL - 0.2 MAX. SIZE - 288

MAY 920505 - 940505  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 54 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

JUNE 910605 - 940602  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 67 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

JULY 910708 - 940713  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 68 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

AUGUST 910807 - 940809  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 70 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 72 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

OCTOBER 911008 - 941006  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 69 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

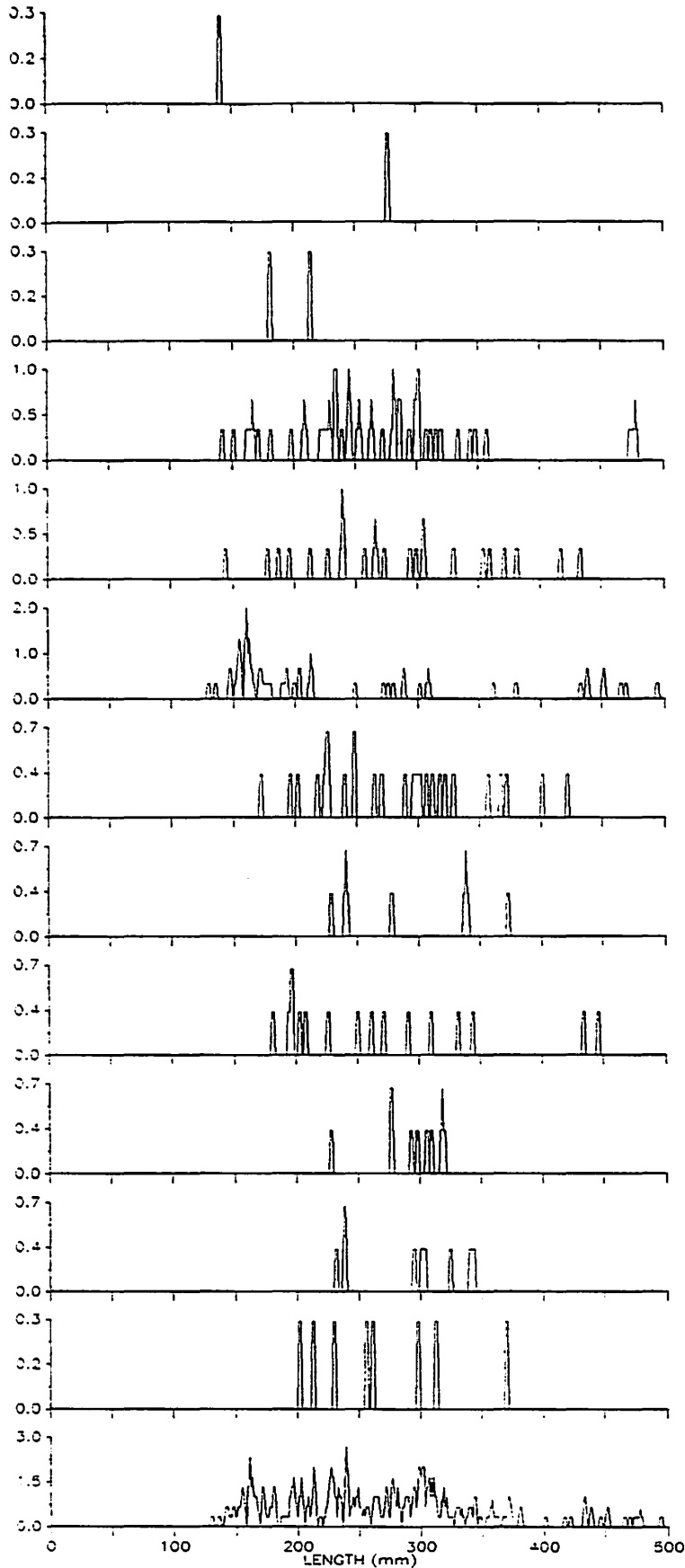
NOVEMBER 911104 - 941116  
 NO. CGHT. - 1 MEAN SIZE - 114  
 NO. MEAS. - 1 S.E. SIZE - .  
 NO. HAULS - 68 MIN. SIZE - 114  
 CAT./HAUL - 0 MAX. SIZE - 114

DECEMBER 911205 - 941208  
 NO. CGHT. - 2 MEAN SIZE - 98.5  
 NO. MEAS. - 2 S.E. SIZE - 1.5  
 NO. HAULS - 66 MIN. SIZE - 97  
 CAT./HAUL - 0 MAX. SIZE - 100

JAN - DEC 910605 - 941208  
 NO. CGHT. - 143 MEAN SIZE - 103.7  
 NO. MEAS. - 143 S.E. SIZE - 2.2  
 NO. HAULS - 739 MIN. SIZE - 66  
 CAT./HAUL - 0.2 MAX. SIZE - 288

Figure 71.

American Eel  
1991 - 1994 Pooled



JANUARY 920120 - 940112			
NO. CGHT.	- 1	MEAN SIZE	- 139
NO. MEAS.	- 1	S.E. SIZE	- .
NO. HAULS	- 51	MIN. SIZE	- 139
CAT./HAUL	- 0	MAX. SIZE	- 139

FEBRUARY 920210 - 940203			
NO. CGHT.	- 1	MEAN SIZE	- 275
NO. MEAS.	- 1	S.E. SIZE	- .
NO. HAULS	- 52	MIN. SIZE	- 275
CAT./HAUL	- 0	MAX. SIZE	- 275

MARCH 920303 - 940308			
NO. CGHT.	- 3	MEAN SIZE	- 393.7
NO. MEAS.	- 3	S.E. SIZE	- 198.4
NO. HAULS	- 51	MIN. SIZE	- 179
CAT./HAUL	- 0.1	MAX. SIZE	- 790

APRIL 920415 - 940407			
NO. CGHT.	- 49	MEAN SIZE	- 272.4
NO. MEAS.	- 49	S.E. SIZE	- 12
NO. HAULS	- 51	MIN. SIZE	- 140
CAT./HAUL	- 1	MAX. SIZE	- 525

MAY 920505 - 940505			
NO. CGHT.	- 26	MEAN SIZE	- 302.9
NO. MEAS.	- 26	S.E. SIZE	- 21.3
NO. HAULS	- 54	MIN. SIZE	- 142
CAT./HAUL	- 0.5	MAX. SIZE	- 599

JUNE 910605 - 940602			
NO. CGHT.	- 52	MEAN SIZE	- 250.1
NO. MEAS.	- 52	S.E. SIZE	- 17
NO. HAULS	- 67	MIN. SIZE	- 128
CAT./HAUL	- 0.8	MAX. SIZE	- 662

JULY 910708 - 940713			
NO. CGHT.	- 27	MEAN SIZE	- 293.4
NO. MEAS.	- 27	S.E. SIZE	- 15.7
NO. HAULS	- 68	MIN. SIZE	- 170
CAT./HAUL	- 0.4	MAX. SIZE	- 547

AUGUST 910807 - 940809			
NO. CGHT.	- 17	MEAN SIZE	- 319.4
NO. MEAS.	- 8	S.E. SIZE	- 35.5
NO. HAULS	- 70	MIN. SIZE	- 227
CAT./HAUL	- 0.2	MAX. SIZE	- 529

SEPTEMBER 910910 - 940902			
NO. CGHT.	- 16	MEAN SIZE	- 269.6
NO. MEAS.	- 16	S.E. SIZE	- 20.8
NO. HAULS	- 72	MIN. SIZE	- 179
CAT./HAUL	- 0.2	MAX. SIZE	- 444

OCTOBER 911008 - 941006			
NO. CGHT.	- 10	MEAN SIZE	- 317.3
NO. MEAS.	- 10	S.E. SIZE	- 28.7
NO. HAULS	- 69	MIN. SIZE	- 226
CAT./HAUL	- 0.1	MAX. SIZE	- 564

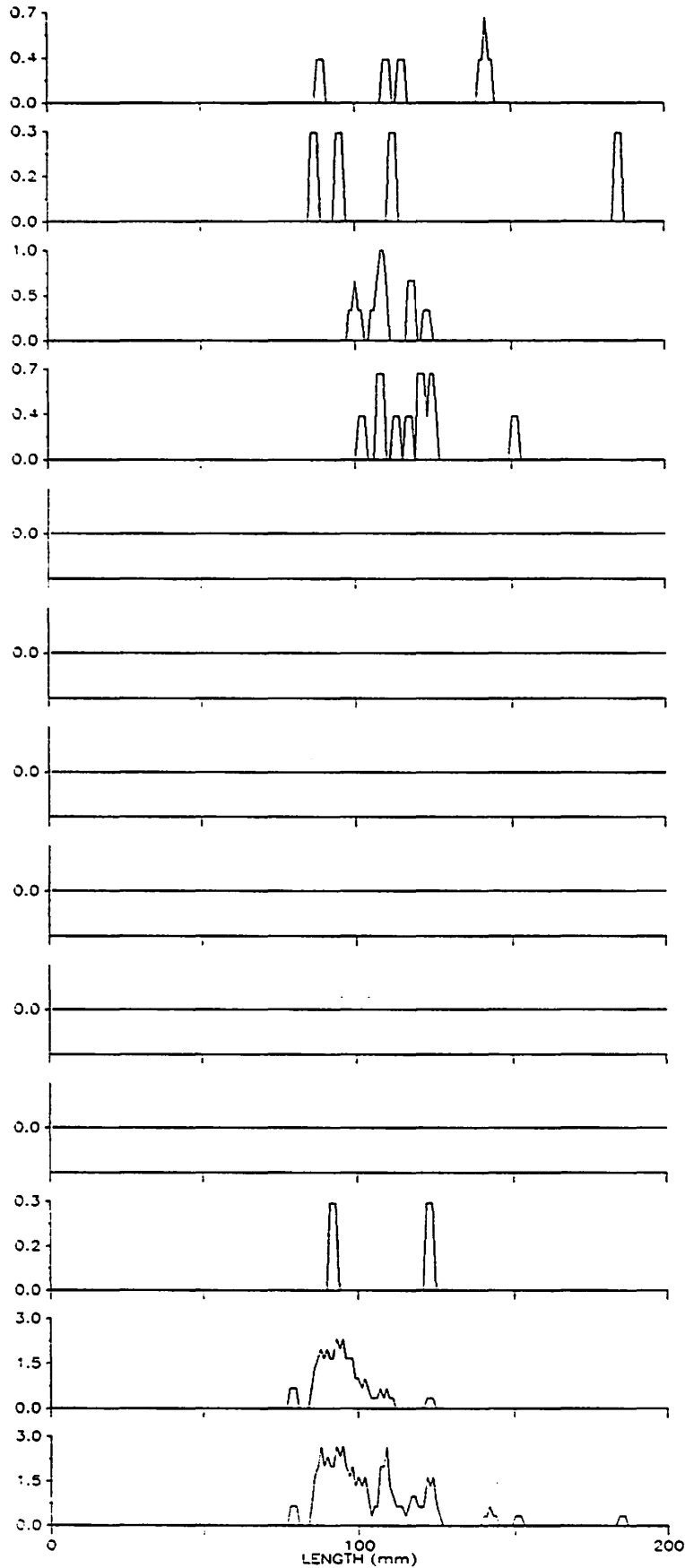
NOVEMBER 911104 - 941116			
NO. CGHT.	- 10	MEAN SIZE	- 313.5
NO. MEAS.	- 10	S.E. SIZE	- 27.8
NO. HAULS	- 68	MIN. SIZE	- 230
CAT./HAUL	- 0.1	MAX. SIZE	- 534

DECEMBER 911205 - 941208			
NO. CGHT.	- 8	MEAN SIZE	- 265.9
NO. MEAS.	- 8	S.E. SIZE	- 20
NO. HAULS	- 66	MIN. SIZE	- 200
CAT./HAUL	- 0.1	MAX. SIZE	- 368

JAN - DEC 910605 - 941208			
NO. CGHT.	- 220	MEAN SIZE	- 279.9
NO. MEAS.	- 211	S.E. SIZE	- 7.2
NO. HAULS	- 739	MIN. SIZE	- 128
CAT./HAUL	- 0.3	MAX. SIZE	- 790

Figure 72.

American Shad  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 5 MEAN SIZE - 117.6  
 NO. MEAS. - 5 S.E. SIZE - 10.1  
 NO. HAULS - 51 MIN. SIZE - 87  
 CAT./HAUL - 0.1 MAX. SIZE - 141

FEBRUARY 920210 - 940203  
 NO. CGHT. - 4 MEAN SIZE - 117.8  
 NO. MEAS. - 4 S.E. SIZE - 22.4  
 NO. HAULS - 52 MIN. SIZE - 85  
 CAT./HAUL - 0.1 MAX. SIZE - 183

MARCH 920303 - 940308  
 NO. CGHT. - 9 MEAN SIZE - 108.1  
 NO. MEAS. - 9 S.E. SIZE - 2.7  
 NO. HAULS - 51 MIN. SIZE - 97  
 CAT./HAUL - 0.2 MAX. SIZE - 121

APRIL 920415 - 940407  
 NO. CGHT. - 10 MEAN SIZE - 117  
 NO. MEAS. - 10 S.E. SIZE - 4.3  
 NO. HAULS - 51 MIN. SIZE - 100  
 CAT./HAUL - 0.2 MAX. SIZE - 149

MAY 920505 - 940505  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 54 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

JUNE 910605 - 940602  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 67 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

JULY 910708 - 940713  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 68 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

AUGUST 910807 - 940809  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 70 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 72 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

OCTOBER 911008 - 941006  
 NO. CGHT. - 0 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 69 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

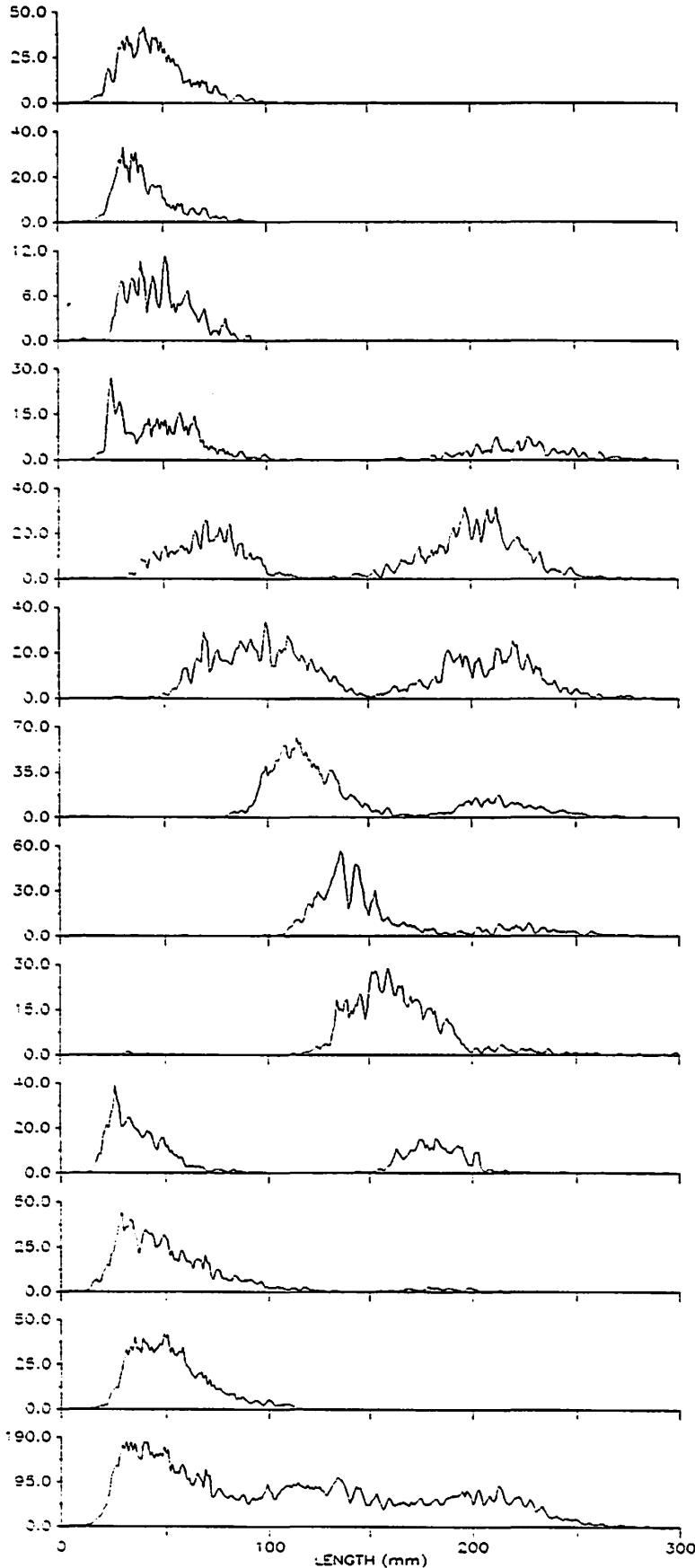
NOVEMBER 911104 - 941116  
 NO. CGHT. - 2 MEAN SIZE - 105.5  
 NO. MEAS. - 2 S.E. SIZE - 15.5  
 NO. HAULS - 68 MIN. SIZE - 90  
 CAT./HAUL - 0 MAX. SIZE - 121

DECEMBER 911205 - 941208  
 NO. CGHT. - 54 MEAN SIZE - 92.7  
 NO. MEAS. - 35 S.E. SIZE - 1.5  
 NO. HAULS - 66 MIN. SIZE - 77  
 CAT./HAUL - 0.8 MAX. SIZE - 121

JAN - DEC 910605 - 941208  
 NO. CGHT. - 84 MEAN SIZE - 102.4  
 NO. MEAS. - 65 S.E. SIZE - 2.3  
 NO. HAULS - 739 MIN. SIZE - 77  
 CAT./HAUL - 0.1 MAX. SIZE - 183

Figure 73.

Atlantic Croaker  
1991 - 1994 Pooled



JANUARY	920120 - 940112	
NO. CGHT.	- 3956	MEAN SIZE - 44.4
NO. MEAS.	- 1264	S.E. SIZE - 0.5
NO. HAULS	- 51	MIN. SIZE - 11
CAT./HAUL	- 77.6	MAX. SIZE - 151

FEBRUARY	920210 - 940203	
NO. CGHT.	- 5877	MEAN SIZE - 39.6
NO. MEAS.	- 719	S.E. SIZE - 0.5
NO. HAULS	- 52	MIN. SIZE - 9
CAT./HAUL	- 113	MAX. SIZE - 91

MARCH	920303 - 940308	
NO. CGHT.	- 6334	MEAN SIZE - 46.8
NO. MEAS.	- 297	S.E. SIZE - 0.9
NO. HAULS	- 51	MIN. SIZE - 21
CAT./HAUL	- 124.2	MAX. SIZE - 89

APRIL	920415 - 940407	
NO. CGHT.	- 5034	MEAN SIZE - 96.5
NO. MEAS.	- 890	S.E. SIZE - 2.8
NO. HAULS	- 51	MIN. SIZE - 15
CAT./HAUL	- 98.7	MAX. SIZE - 302

MAY	920505 - 940505	
NO. CGHT.	- 6730	MEAN SIZE - 145.8
NO. MEAS.	- 2152	S.E. SIZE - 1.5
NO. HAULS	- 54	MIN. SIZE - 25
CAT./HAUL	- 124.6	MAX. SIZE - 295

JUNE	910605 - 940602	
NO. CGHT.	- 13645	MEAN SIZE - 141.4
NO. MEAS.	- 2517	S.E. SIZE - 1.2
NO. HAULS	- 67	MIN. SIZE - 24
CAT./HAUL	- 203.7	MAX. SIZE - 312

JULY	910708 - 940713	
NO. CGHT.	- 9040	MEAN SIZE - 138.4
NO. MEAS.	- 2703	S.E. SIZE - 0.9
NO. HAULS	- 68	MIN. SIZE - 12
CAT./HAUL	- 132.9	MAX. SIZE - 290

AUGUST	910807 - 940809	
NO. CGHT.	- 3345	MEAN SIZE - 151.5
NO. MEAS.	- 1709	S.E. SIZE - 0.9
NO. HAULS	- 70	MIN. SIZE - 33
CAT./HAUL	- 47.8	MAX. SIZE - 337

SEPTEMBER	910910 - 940902	
NO. CGHT.	- 1480	MEAN SIZE - 162.3
NO. MEAS.	- 1181	S.E. SIZE - 0.8
NO. HAULS	- 72	MIN. SIZE - 28
CAT./HAUL	- 20.6	MAX. SIZE - 330

OCTOBER	911008 - 941006	
NO. CGHT.	- 2369	MEAN SIZE - 89.9
NO. MEAS.	- 1259	S.E. SIZE - 2
NO. HAULS	- 69	MIN. SIZE - 6
CAT./HAUL	- 34.3	MAX. SIZE - 283

NOVEMBER	911104 - 941116	
NO. CGHT.	- 4902	MEAN SIZE - 53.1
NO. MEAS.	- 1631	S.E. SIZE - 0.8
NO. HAULS	- 68	MIN. SIZE - 10
CAT./HAUL	- 72.1	MAX. SIZE - 211

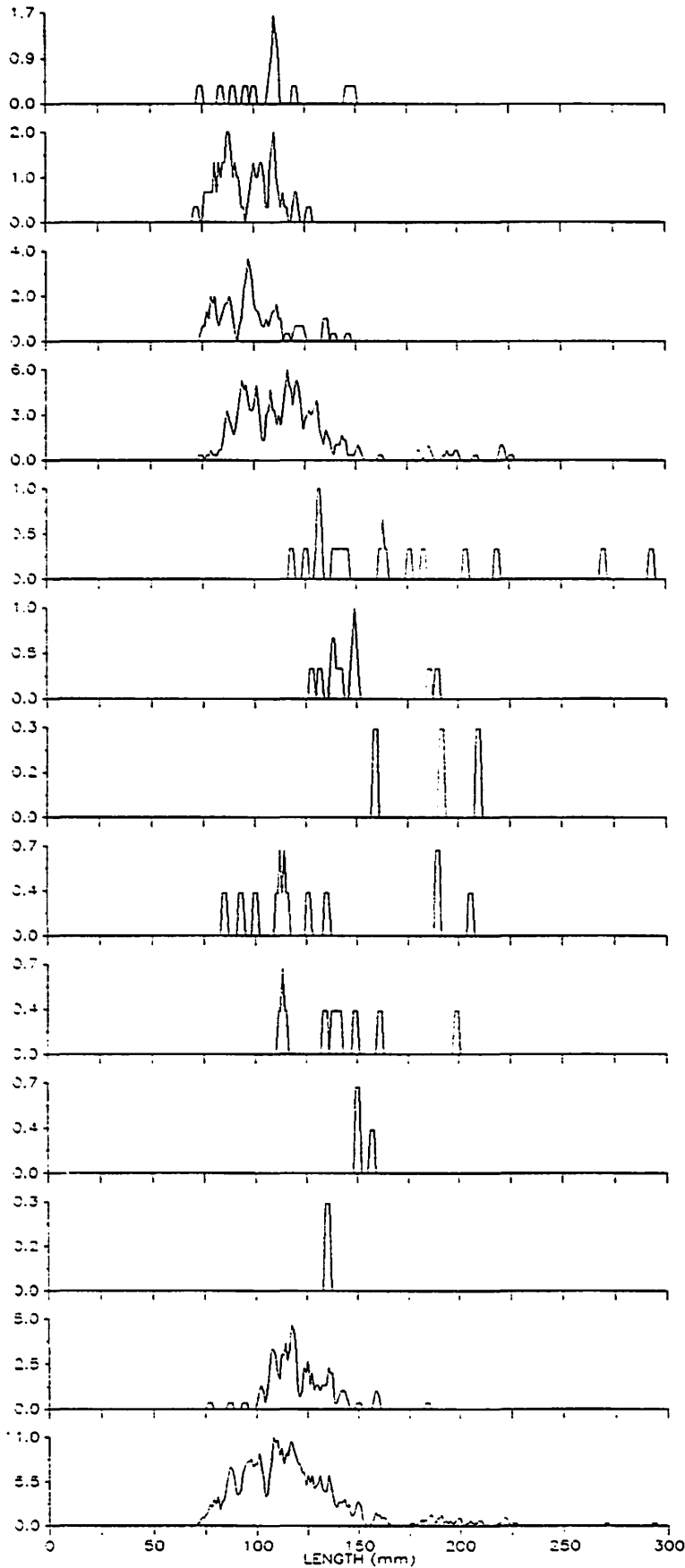
DECEMBER	911205 - 941208	
NO. CGHT.	- 5545	MEAN SIZE - 50.4
NO. MEAS.	- 1597	S.E. SIZE - 0.5
NO. HAULS	- 66	MIN. SIZE - 10
CAT./HAUL	- 84	MAX. SIZE - 122

JAN - DEC	910605 - 941208	
NO. CGHT.	- 58257	MEAN SIZE - 109.3
NO. MEAS.	- 17919	S.E. SIZE - 0.5
NO. HAULS	- 739	MIN. SIZE - 6
CAT./HAUL	- 92.4	MAX. SIZE - 337



Figure 74.

Atlantic Menhaden  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 14 MEAN SIZE - 106.5  
 NO. MEAS. - 14 S.E. SIZE - 5.5  
 NO. HAULS - 51 MIN. SIZE - 72  
 CAT./HAUL - 0.3 MAX. SIZE - 147

FEBRUARY 920210 - 940203  
 NO. CGHT. - 43 MEAN SIZE - 94.5  
 NO. MEAS. - 43 S.E. SIZE - 2  
 NO. HAULS - 52 MIN. SIZE - 70  
 CAT./HAUL - 0.8 MAX. SIZE - 125

MARCH 920303 - 940308  
 NO. CGHT. - 153 MEAN SIZE - 97.5  
 NO. MEAS. - 64 S.E. SIZE - 2.1  
 NO. HAULS - 51 MIN. SIZE - 73  
 CAT./HAUL - 3 MAX. SIZE - 144

APRIL 920415 - 940407  
 NO. CGHT. - 205 MEAN SIZE - 116.2  
 NO. MEAS. - 205 S.E. SIZE - 2  
 NO. HAULS - 51 MIN. SIZE - 72  
 CAT./HAUL - 4 MAX. SIZE - 224

MAY 920505 - 940505  
 NO. CGHT. - 16 MEAN SIZE - 168.9  
 NO. MEAS. - 16 S.E. SIZE - 13  
 NO. HAULS - 54 MIN. SIZE - 116  
 CAT./HAUL - 0.3 MAX. SIZE - 291

JUNE 910605 - 940602  
 NO. CGHT. - 10 MEAN SIZE - 148.2  
 NO. MEAS. - 10 S.E. SIZE - 6.7  
 NO. HAULS - 67 MIN. SIZE - 126  
 CAT./HAUL - 0.1 MAX. SIZE - 188

JULY 910708 - 940713  
 NO. CGHT. - 3 MEAN SIZE - 185  
 NO. MEAS. - 3 S.E. SIZE - 14.9  
 NO. HAULS - 68 MIN. SIZE - 157  
 CAT./HAUL - 0 MAX. SIZE - 208

AUGUST 910807 - 940809  
 NO. CGHT. - 13 MEAN SIZE - 146.3  
 NO. MEAS. - 12 S.E. SIZE - 19.2  
 NO. HAULS - 70 MIN. SIZE - 83  
 CAT./HAUL - 0.2 MAX. SIZE - 313

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 8 MEAN SIZE - 141.5  
 NO. MEAS. - 8 S.E. SIZE - 9.8  
 NO. HAULS - 72 MIN. SIZE - 110  
 CAT./HAUL - 0.1 MAX. SIZE - 197

OCTOBER 911008 - 941006  
 NO. CGHT. - 3 MEAN SIZE - 150.3  
 NO. MEAS. - 3 S.E. SIZE - 2.3  
 NO. HAULS - 69 MIN. SIZE - 148  
 CAT./HAUL - 0 MAX. SIZE - 155

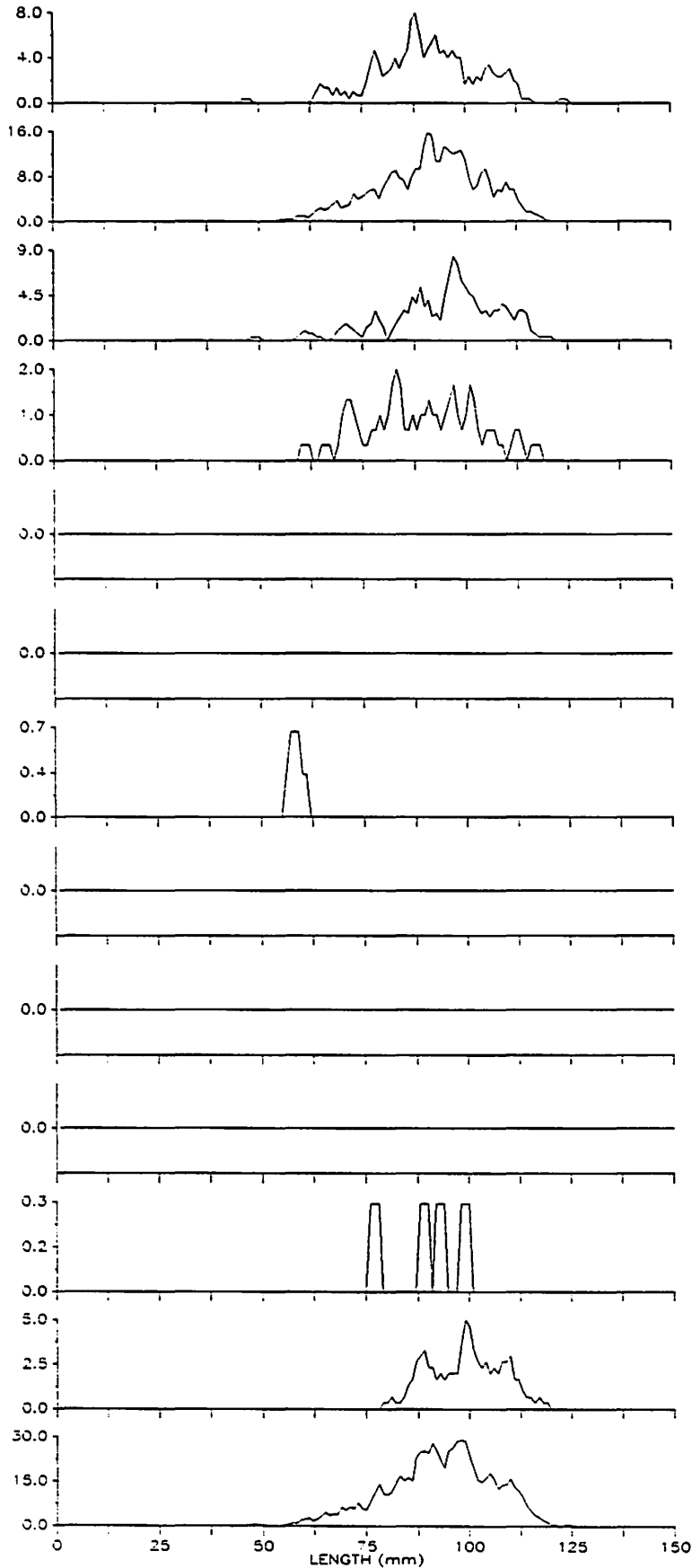
NOVEMBER 911104 - 941116  
 NO. CGHT. - 2 MEAN SIZE - 232.5  
 NO. MEAS. - 2 S.E. SIZE - 99.5  
 NO. HAULS - 68 MIN. SIZE - 133  
 CAT./HAUL - 0 MAX. SIZE - 332

DECEMBER 911205 - 941208  
 NO. CGHT. - 90 MEAN SIZE - 119  
 NO. MEAS. - 90 S.E. SIZE - 1.7  
 NO. HAULS - 66 MIN. SIZE - 75  
 CAT./HAUL - 1.4 MAX. SIZE - 182

JAN - DEC 910605 - 941208  
 NO. CGHT. - 560 MEAN SIZE - 116.7  
 NO. MEAS. - 470 S.E. SIZE - 1.5  
 NO. HAULS - 739 MIN. SIZE - 70  
 CAT./HAUL - 0.8 MAX. SIZE - 332

Figure 75.

Atlantic Silverside  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	340	MEAN SIZE	88.9
NO. MEAS.	152	S.E. SIZE	1
NO. HAULS	51	MIN. SIZE	45
CAT./HAUL	6.7	MAX. SIZE	122

FEBRUARY	920210 - 940203		
NO. CGHT.	570	MEAN SIZE	89.8
NO. MEAS.	373	S.E. SIZE	0.7
NO. HAULS	52	MIN. SIZE	54
CAT./HAUL	11	MAX. SIZE	116

MARCH	920303 - 940308		
NO. CGHT.	242	MEAN SIZE	92.8
NO. MEAS.	148	S.E. SIZE	1.1
NO. HAULS	51	MIN. SIZE	47
CAT./HAUL	4.7	MAX. SIZE	118

APRIL	920415 - 940407		
NO. CGHT.	43	MEAN SIZE	87.1
NO. MEAS.	43	S.E. SIZE	2.1
NO. HAULS	51	MIN. SIZE	59
CAT./HAUL	0.8	MAX. SIZE	115

MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	54	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

JUNE	910605 - 940602		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	67	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

JULY	910708 - 940713		
NO. CGHT.	3	MEAN SIZE	56.3
NO. MEAS.	3	S.E. SIZE	0.9
NO. HAULS	68	MIN. SIZE	55
CAT./HAUL	0	MAX. SIZE	58

AUGUST	910807 - 940809		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	70	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

SEPTEMBER	910910 - 940902		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	72	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

OCTOBER	911008 - 941006		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	69	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

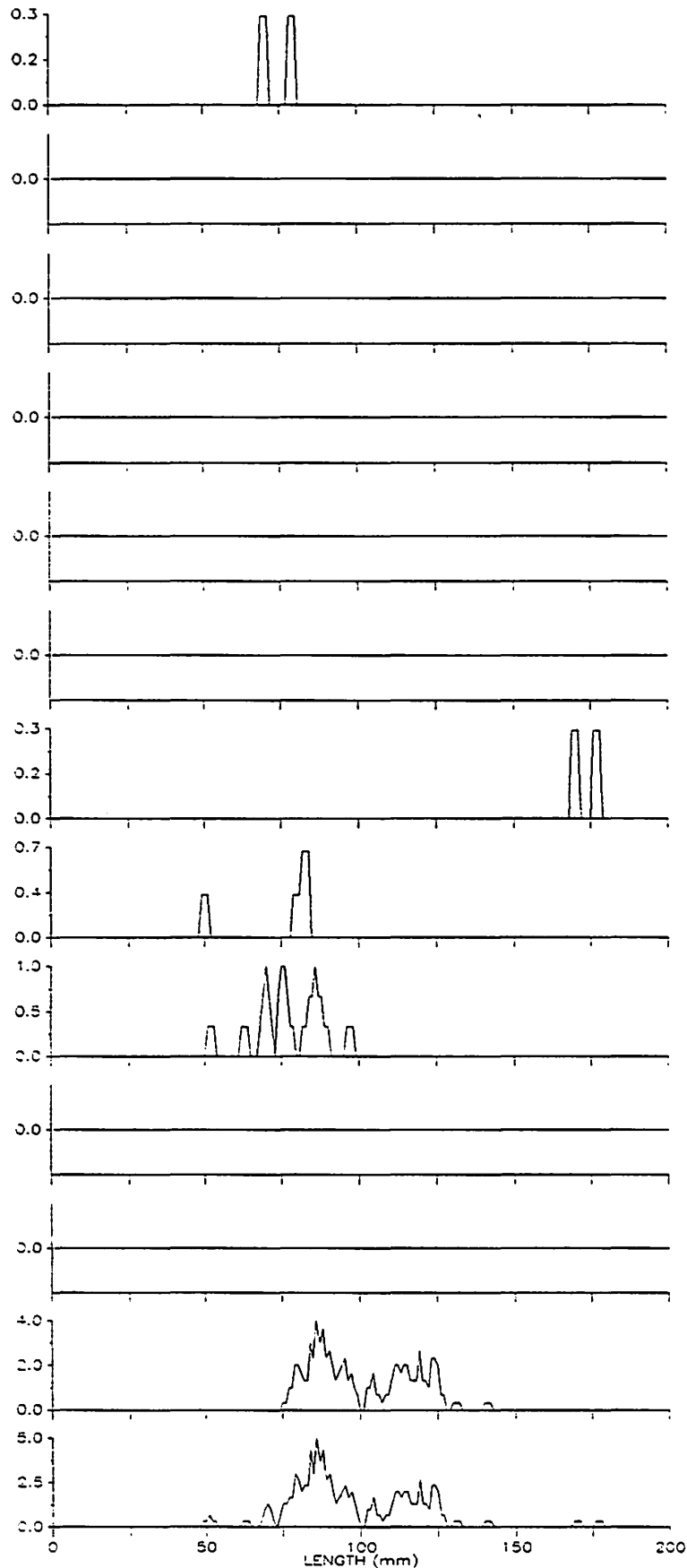
NOVEMBER	911104 - 941116		
NO. CGHT.	4	MEAN SIZE	87.5
NO. MEAS.	4	S.E. SIZE	4.6
NO. HAULS	68	MIN. SIZE	75
CAT./HAUL	0.1	MAX. SIZE	97

DECEMBER	911205 - 941208		
NO. CGHT.	301	MEAN SIZE	97
NO. MEAS.	77	S.E. SIZE	1
NO. HAULS	66	MIN. SIZE	78
CAT./HAUL	4.6	MAX. SIZE	116

JAN - DEC	910605 - 941208		
NO. CGHT.	1503	MEAN SIZE	90.6
NO. MEAS.	800	S.E. SIZE	0.5
NO. HAULS	739	MIN. SIZE	45
CAT./HAUL	2	MAX. SIZE	122

Figure 76.

Atlantic Thread Herring  
1991 - 1994 Poolec



JANUARY	920120 - 940112		
NO. CGHT.	- 2	MEAN SIZE	- 72.5
NO. MEAS.	- 2	S.E. SIZE	- 4.5
NO. HAULS	- 51	MIN. SIZE	- 68
CAT./HAUL	- 0	MAX. SIZE	- 77

FEBRUARY	920210 - 940203		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 52	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

MARCH	920303 - 940308		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 51	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

APRIL	920415 - 940407		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 51	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

MAY	920505 - 940505		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 54	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

JUNE	910605 - 940602		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 67	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

JULY	910708 - 940713		
NO. CGHT.	- 2	MEAN SIZE	- 71.5
NO. MEAS.	- 2	S.E. SIZE	- 3.5
NO. HAULS	- 68	MIN. SIZE	- 68
CAT./HAUL	- 0	MAX. SIZE	- 175

AUGUST	910807 - 940809		
NO. CGHT.	- 4	MEAN SIZE	- 72
NO. MEAS.	- 4	S.E. SIZE	- 8
NO. HAULS	- 70	MIN. SIZE	- 48
CAT./HAUL	- 0.1	MAX. SIZE	- 81

SEPTEMBER	910910 - 940902		
NO. CGHT.	- 15	MEAN SIZE	- 75.1
NO. MEAS.	- 15	S.E. SIZE	- 2.9
NO. HAULS	- 72	MIN. SIZE	- 50
CAT./HAUL	- 0.2	MAX. SIZE	- 95

OCTOBER	911008 - 941006		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 69	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

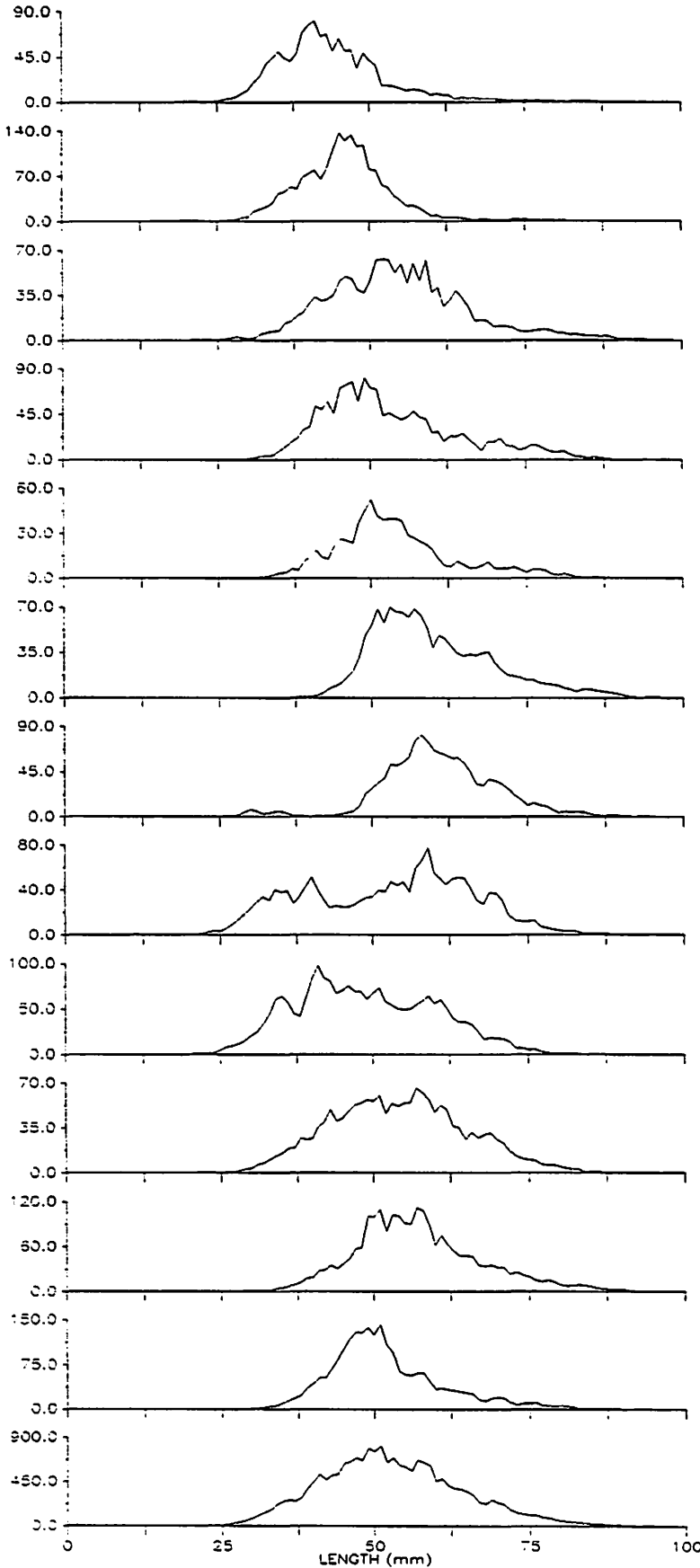
NOVEMBER	911104 - 941116		
NO. CGHT.	- 0	MEAN SIZE	- .
NO. MEAS.	- 0	S.E. SIZE	- .
NO. HAULS	- 68	MIN. SIZE	- .
CAT./HAUL	- 0	MAX. SIZE	- .

DECEMBER	911205 - 941208		
NO. CGHT.	- 84	MEAN SIZE	- 98.7
NO. MEAS.	- 84	S.E. SIZE	- 1.8
NO. HAULS	- 66	MIN. SIZE	- 74
CAT./HAUL	- 1.3	MAX. SIZE	- 139

JAN - DEC	910605 - 941208		
NO. CGHT.	- 107	MEAN SIZE	- 95.3
NO. MEAS.	- 107	S.E. SIZE	- 2
NO. HAULS	- 739	MIN. SIZE	- 48
CAT./HAUL	- 0.1	MAX. SIZE	- 175

Figure 77.

Bay Anchovy  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 9091	MEAN SIZE	- 41.6
NO. MEAS.	- 1255	S.E. SIZE	- 0.2
NO. HAULS	- 51	MIN. SIZE	- 18
CAT./HAUL	- 178.3	MAX. SIZE	- 88

FEBRUARY	920210 - 940203		
NO. CGHT.	-44517	MEAN SIZE	- 43.9
NO. MEAS.	- 1904	S.E. SIZE	- 0.2
NO. HAULS	- 52	MIN. SIZE	- 18
CAT./HAUL	- 856.1	MAX. SIZE	- 86

MARCH	920303 - 940308		
NO. CGHT.	-80209	MEAN SIZE	- 52.5
NO. MEAS.	- 1453	S.E. SIZE	- 0.3
NO. HAULS	- 51	MIN. SIZE	- 20
CAT./HAUL	-1572.7	MAX. SIZE	- 95

APRIL	920415 - 940407		
NO. CGHT.	-18957	MEAN SIZE	- 51.1
NO. MEAS.	- 1562	S.E. SIZE	- 0.3
NO. HAULS	- 51	MIN. SIZE	- 29
CAT./HAUL	- 371.7	MAX. SIZE	- 96

MAY	920505 - 940505		
NO. CGHT.	- 4341	MEAN SIZE	- 51.6
NO. MEAS.	- 792	S.E. SIZE	- 0.3
NO. HAULS	- 54	MIN. SIZE	- 25
CAT./HAUL	- 80.4	MAX. SIZE	- 85

JUNE	910605 - 940602		
NO. CGHT.	-22123	MEAN SIZE	- 57.9
NO. MEAS.	- 1378	S.E. SIZE	- 0.3
NO. HAULS	- 67	MIN. SIZE	- 36
CAT./HAUL	- 330.2	MAX. SIZE	- 93

JULY	910708 - 940713		
NO. CGHT.	-17802	MEAN SIZE	- 58.7
NO. MEAS.	- 1402	S.E. SIZE	- 0.3
NO. HAULS	- 68	MIN. SIZE	- 25
CAT./HAUL	- 258.9	MAX. SIZE	- 93

AUGUST	910807 - 940809		
NO. CGHT.	-17111	MEAN SIZE	- 50.5
NO. MEAS.	- 1820	S.E. SIZE	- 0.3
NO. HAULS	- 70	MIN. SIZE	- 18
CAT./HAUL	- 244.4	MAX. SIZE	- 93

SEPTEMBER	910910 - 940902		
NO. CGHT.	-32459	MEAN SIZE	- 46.9
NO. MEAS.	- 2309	S.E. SIZE	- 0.2
NO. HAULS	- 72	MIN. SIZE	- 19
CAT./HAUL	- 450.8	MAX. SIZE	- 132

OCTOBER	911008 - 941006		
NO. CGHT.	-22962	MEAN SIZE	- 52
NO. MEAS.	- 1679	S.E. SIZE	- 0.3
NO. HAULS	- 69	MIN. SIZE	- 20
CAT./HAUL	- 332.8	MAX. SIZE	- 92

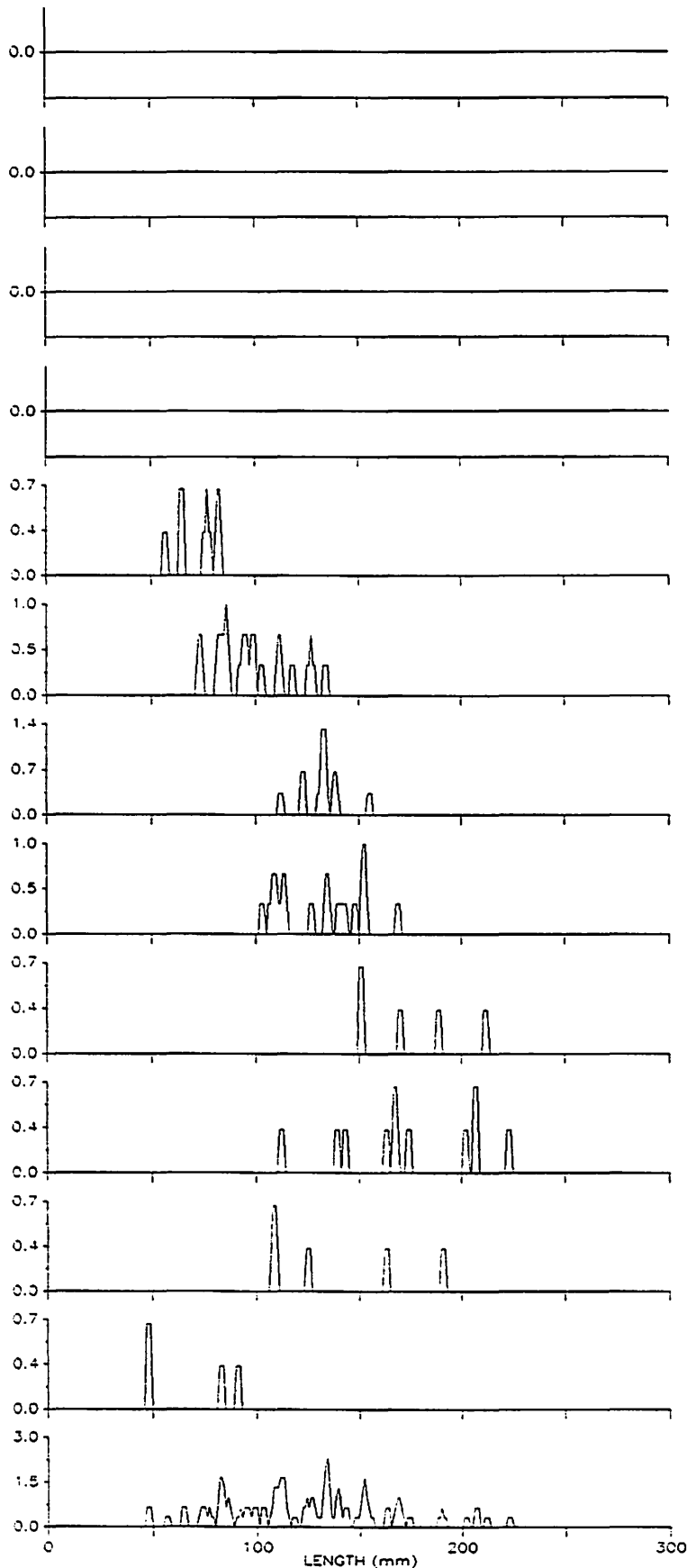
NOVEMBER	911104 - 941116		
NO. CGHT.	-47912	MEAN SIZE	- 55
NO. MEAS.	- 2246	S.E. SIZE	- 0.2
NO. HAULS	- 68	MIN. SIZE	- 27
CAT./HAUL	- 704.6	MAX. SIZE	- 91

DECEMBER	911205 - 941208		
NO. CGHT.	-74629	MEAN SIZE	- 49.7
NO. MEAS.	- 2251	S.E. SIZE	- 0.2
NO. HAULS	- 66	MIN. SIZE	- 27
CAT./HAUL	-1130.7	MAX. SIZE	- 91

JAN - DEC	910605 - 941208		
NO. CGHT.	-91915	MEAN SIZE	- 50.8
NO. MEAS.	-20051	S.E. SIZE	- 0.1
NO. HAULS	- 739	MIN. SIZE	- 18
CAT./HAUL	- 530.3	MAX. SIZE	- 132

Figure 78.

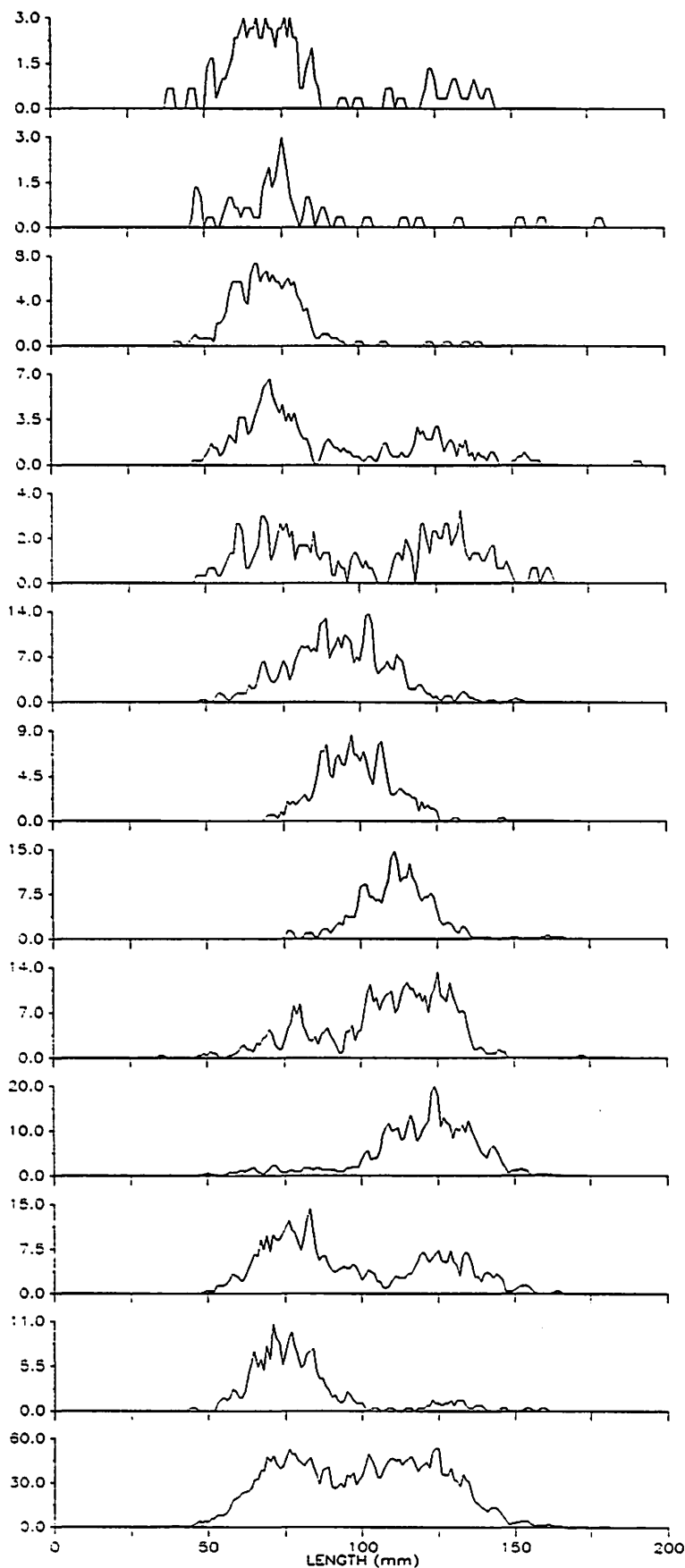
Black Seabass  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	920505 - 940505		
NO. CGHT.	7	MEAN SIZE	- 70.3
NO. MEAS.	7	S.E. SIZE	- 3.8
NO. HAULS	54	MIN. SIZE	- 55
CAT./HAUL	0.1	MAX. SIZE	- 81
JUNE	910605 - 940602		
NO. CGHT.	19	MEAN SIZE	- 97.2
NO. MEAS.	19	S.E. SIZE	- 4.2
NO. HAULS	67	MIN. SIZE	- 71
CAT./HAUL	0.3	MAX. SIZE	- 132
JULY	910708 - 940713		
NO. CGHT.	11	MEAN SIZE	- 130.2
NO. MEAS.	11	S.E. SIZE	- 3.3
NO. HAULS	68	MIN. SIZE	- 110
CAT./HAUL	0.2	MAX. SIZE	- 153
AUGUST	910807 - 940809		
NO. CGHT.	16	MEAN SIZE	- 129.8
NO. MEAS.	16	S.E. SIZE	- 5.1
NO. HAULS	70	MIN. SIZE	- 101
CAT./HAUL	0.2	MAX. SIZE	- 167
SEPTEMBER	910910 - 940902		
NO. CGHT.	5	MEAN SIZE	- 172.6
NO. MEAS.	5	S.E. SIZE	- 11.7
NO. HAULS	72	MIN. SIZE	- 149
CAT./HAUL	0.1	MAX. SIZE	- 210
OCTOBER	911008 - 941006		
NO. CGHT.	11	MEAN SIZE	- 171.2
NO. MEAS.	11	S.E. SIZE	- 10.3
NO. HAULS	69	MIN. SIZE	- 110
CAT./HAUL	0.2	MAX. SIZE	- 221
NOVEMBER	911104 - 941116		
NO. CGHT.	5	MEAN SIZE	- 137.2
NO. MEAS.	5	S.E. SIZE	- 16.3
NO. HAULS	68	MIN. SIZE	- 106
CAT./HAUL	0.1	MAX. SIZE	- 189
DECEMBER	911205 - 941208		
NO. CGHT.	4	MEAN SIZE	- 65.5
NO. MEAS.	4	S.E. SIZE	- 11.4
NO. HAULS	66	MIN. SIZE	- 46
CAT./HAUL	0.1	MAX. SIZE	- 89
JAN - DEC	910605 - 941208		
NO. CGHT.	78	MEAN SIZE	- 122.3
NO. MEAS.	78	S.E. SIZE	- 4.5
NO. HAULS	739	MIN. SIZE	- 46
CAT./HAUL	0.1	MAX. SIZE	- 221

Figure 79.

Blackcheek Tonguefish  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 97	MEAN SIZE	- 77.7
NO. MEAS.	- 97	S.E. SIZE	- 2.6
NO. HAULS	- 51	MIN. SIZE	- 37
CAT./HAUL	- 1.9	MAX. SIZE	- 141

FEBRUARY	920210 - 940203		
NO. CGHT.	- 45	MEAN SIZE	- 78.6
NO. MEAS.	- 45	S.E. SIZE	- 4.3
NO. HAULS	- 52	MIN. SIZE	- 45
CAT./HAUL	- 0.9	MAX. SIZE	- 177

MARCH	920303 - 940308		
NO. CGHT.	- 275	MEAN SIZE	- 69.3
NO. MEAS.	- 173	S.E. SIZE	- 1.1
NO. HAULS	- 51	MIN. SIZE	- 39
CAT./HAUL	- 5.4	MAX. SIZE	- 137

APRIL	920415 - 940407		
NO. CGHT.	- 367	MEAN SIZE	- 88.5
NO. MEAS.	- 187	S.E. SIZE	- 2.1
NO. HAULS	- 51	MIN. SIZE	- 45
CAT./HAUL	- 7.2	MAX. SIZE	- 189

MAY	920505 - 940505		
NO. CGHT.	- 959	MEAN SIZE	- 99.3
NO. MEAS.	- 141	S.E. SIZE	- 2.6
NO. HAULS	- 54	MIN. SIZE	- 46
CAT./HAUL	- 17.8	MAX. SIZE	- 160

JUNE	910605 - 940602		
NO. CGHT.	- 894	MEAN SIZE	- 91.3
NO. MEAS.	- 406	S.E. SIZE	- 0.8
NO. HAULS	- 67	MIN. SIZE	- 47
CAT./HAUL	- 13.3	MAX. SIZE	- 150

JULY	910708 - 940713		
NO. CGHT.	- 890	MEAN SIZE	- 96.6
NO. MEAS.	- 210	S.E. SIZE	- 0.8
NO. HAULS	- 68	MIN. SIZE	- 68
CAT./HAUL	- 13.1	MAX. SIZE	- 144

AUGUST	910807 - 940809		
NO. CGHT.	- 469	MEAN SIZE	- 109.4
NO. MEAS.	- 299	S.E. SIZE	- 0.7
NO. HAULS	- 70	MIN. SIZE	- 74
CAT./HAUL	- 6.7	MAX. SIZE	- 163

SEPTEMBER	910910 - 940902		
NO. CGHT.	- 671	MEAN SIZE	- 105.5
NO. MEAS.	- 477	S.E. SIZE	- 1
NO. HAULS	- 72	MIN. SIZE	- 33
CAT./HAUL	- 9.3	MAX. SIZE	- 170

OCTOBER	911008 - 941006		
NO. CGHT.	- 828	MEAN SIZE	- 116.5
NO. MEAS.	- 502	S.E. SIZE	- 0.9
NO. HAULS	- 69	MIN. SIZE	- 47
CAT./HAUL	- 12	MAX. SIZE	- 159

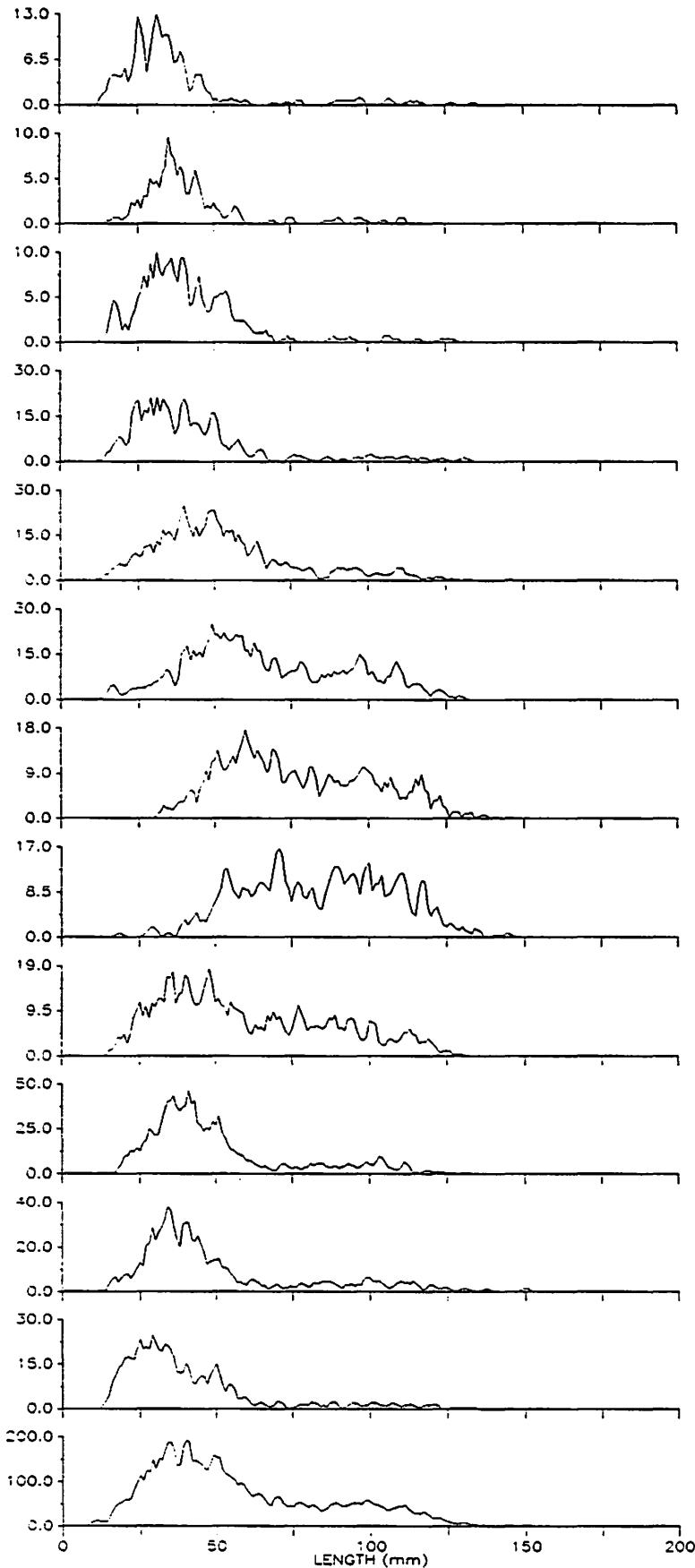
NOVEMBER	911104 - 941116		
NO. CGHT.	- 1953	MEAN SIZE	- 94.9
NO. MEAS.	- 496	S.E. SIZE	- 1.2
NO. HAULS	- 68	MIN. SIZE	- 48
CAT./HAUL	- 28.7	MAX. SIZE	- 162

DECEMBER	911205 - 941208		
NO. CGHT.	- 271	MEAN SIZE	- 78.7
NO. MEAS.	- 234	S.E. SIZE	- 1.3
NO. HAULS	- 66	MIN. SIZE	- 43
CAT./HAUL	- 4.1	MAX. SIZE	- 157

JAN - DEC	910605 - 941208		
NO. CGHT.	- 7719	MEAN SIZE	- 97.3
NO. MEAS.	- 3267	S.E. SIZE	- 0.4
NO. HAULS	- 739	MIN. SIZE	- 33
CAT./HAUL	- 10.4	MAX. SIZE	- 189

Figure 80.

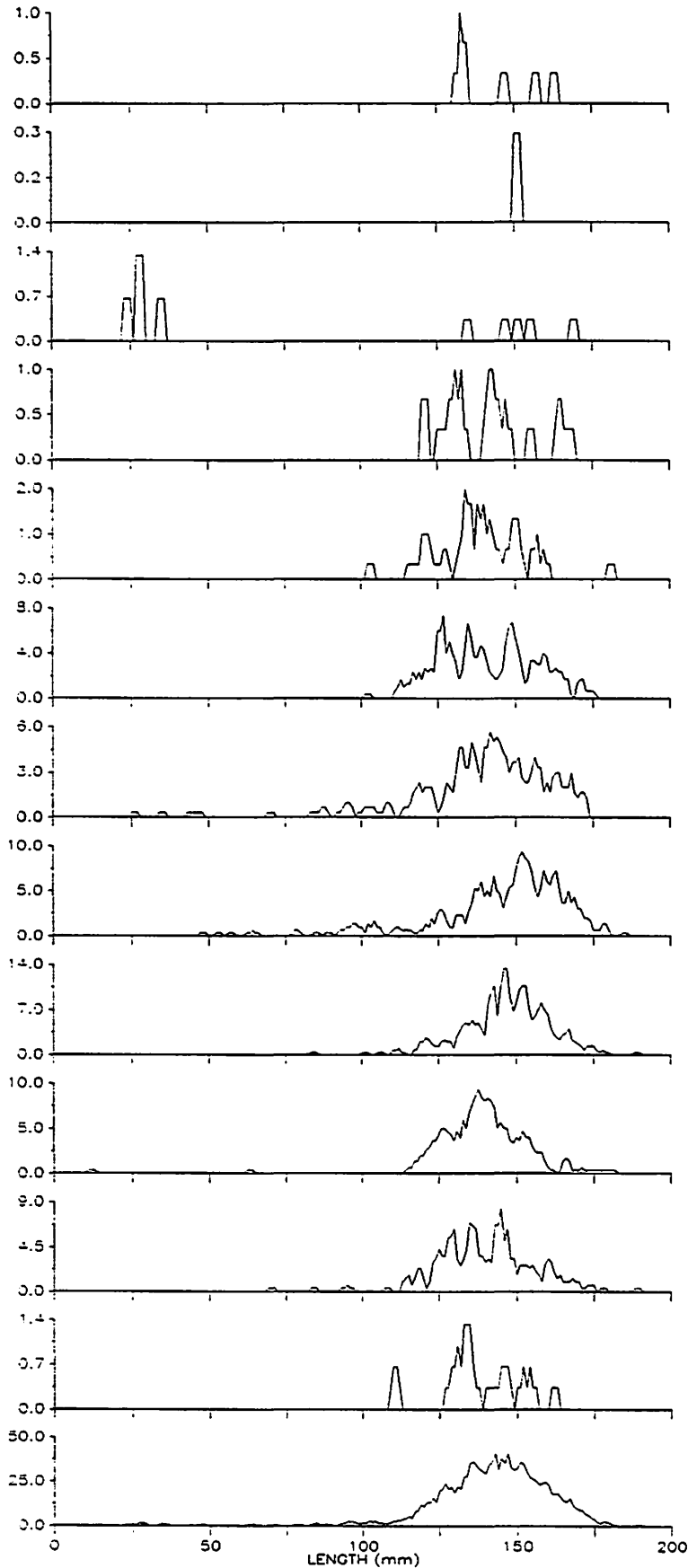
Blue Crab — Juvenile Female  
1991 — 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 571	MEAN SIZE	- 34.3
NO. MEAS.	- 257	S.E. SIZE	- 1.3
NO. HAULS	- 51	MIN. SIZE	- 7
CAT./HAUL	- 11.2	MAX. SIZE	- 132
FEBRUARY	920210 - 940203		
NO. CGHT.	- 148	MEAN SIZE	- 39.9
NO. MEAS.	- 148	S.E. SIZE	- 1.4
NO. HAULS	- 52	MIN. SIZE	- 14
CAT./HAUL	- 2.8	MAX. SIZE	- 109
MARCH	920303 - 940308		
NO. CGHT.	- 265	MEAN SIZE	- 39.2
NO. MEAS.	- 265	S.E. SIZE	- 1.1
NO. HAULS	- 51	MIN. SIZE	- 9
CAT./HAUL	- 5.2	MAX. SIZE	- 125
APRIL	920415 - 940407		
NO. CGHT.	- 1233	MEAN SIZE	- 41
NO. MEAS.	- 626	S.E. SIZE	- 0.9
NO. HAULS	- 51	MIN. SIZE	- 8
CAT./HAUL	- 24.2	MAX. SIZE	- 130
MAY	920505 - 940505		
NO. CGHT.	- 1000	MEAN SIZE	- 50.6
NO. MEAS.	- 859	S.E. SIZE	- 0.8
NO. HAULS	- 54	MIN. SIZE	- 6
CAT./HAUL	- 18.5	MAX. SIZE	- 143
JUNE	910605 - 940602		
NO. CGHT.	- 1209	MEAN SIZE	- 64.7
NO. MEAS.	- 1107	S.E. SIZE	- 0.8
NO. HAULS	- 67	MIN. SIZE	- 8
CAT./HAUL	- 18	MAX. SIZE	- 128
JULY	910708 - 940713		
NO. CGHT.	- 865	MEAN SIZE	- 75.2
NO. MEAS.	- 741	S.E. SIZE	- 0.9
NO. HAULS	- 68	MIN. SIZE	- 30
CAT./HAUL	- 12.7	MAX. SIZE	- 139
AUGUST	910807 - 940809		
NO. CGHT.	- 941	MEAN SIZE	- 81.6
NO. MEAS.	- 777	S.E. SIZE	- 0.9
NO. HAULS	- 70	MIN. SIZE	- 16
CAT./HAUL	- 13.4	MAX. SIZE	- 143
SEPTEMBER	910910 - 940902		
NO. CGHT.	- 930	MEAN SIZE	- 58.3
NO. MEAS.	- 826	S.E. SIZE	- 1
NO. HAULS	- 72	MIN. SIZE	- 7
CAT./HAUL	- 12.9	MAX. SIZE	- 127
OCTOBER	911008 - 941006		
NO. CGHT.	- 1528	MEAN SIZE	- 47.7
NO. MEAS.	- 1292	S.E. SIZE	- 0.6
NO. HAULS	- 69	MIN. SIZE	- 8
CAT./HAUL	- 22.1	MAX. SIZE	- 129
NOVEMBER	911104 - 941116		
NO. CGHT.	- 1363	MEAN SIZE	- 48.2
NO. MEAS.	- 974	S.E. SIZE	- 0.9
NO. HAULS	- 68	MIN. SIZE	- 10
CAT./HAUL	- 20	MAX. SIZE	- 148
DECEMBER	911205 - 941208		
NO. CGHT.	- 939	MEAN SIZE	- 38.2
NO. MEAS.	- 724	S.E. SIZE	- 0.9
NO. HAULS	- 66	MIN. SIZE	- 7
CAT./HAUL	- 14.2	MAX. SIZE	- 131
JAN - DEC	910605 - 941208		
NO. CGHT.	- 10992	MEAN SIZE	- 54.6
NO. MEAS.	- 8586	S.E. SIZE	- 0.3
NO. HAULS	- 739	MIN. SIZE	- 6
CAT./HAUL	- 14.9	MAX. SIZE	- 148

Figure 81.

Blue Crab – Adult Female  
1991 – 1994 Pooled



JANUARY	920120	-	940112	
NO. CGHT.	-	6	MEAN SIZE	- 142.5
NO. MEAS.	-	6	S.E. SIZE	- 5.4
NO. HAULS	-	51	MIN. SIZE	- 130
CAT./HAUL	-	0.1	MAX. SIZE	- 161

FEBRUARY	920210	-	940203	
NO. CGHT.	-	1	MEAN SIZE	- 149
NO. MEAS.	-	1	S.E. SIZE	-
NO. HAULS	-	52	MIN. SIZE	- 149
CAT./HAUL	-	0	MAX. SIZE	- 149

MARCH	920303	-	940308	
NO. CGHT.	-	13	MEAN SIZE	- 73.9
NO. MEAS.	-	13	S.E. SIZE	- 17.4
NO. HAULS	-	51	MIN. SIZE	- 22
CAT./HAUL	-	0.3	MAX. SIZE	- 167

APRIL	920415	-	940407	
NO. CGHT.	-	18	MEAN SIZE	- 139.2
NO. MEAS.	-	18	S.E. SIZE	- 3.4
NO. HAULS	-	51	MIN. SIZE	- 119
CAT./HAUL	-	0.4	MAX. SIZE	- 166

MAY	920505	-	940505	
NO. CGHT.	-	55	MEAN SIZE	- 136.9
NO. MEAS.	-	38	S.E. SIZE	- 2.4
NO. HAULS	-	54	MIN. SIZE	- 101
CAT./HAUL	-	1	MAX. SIZE	- 179

JUNE	910605	-	940602	
NO. CGHT.	-	223	MEAN SIZE	- 139
NO. MEAS.	-	189	S.E. SIZE	- 1.1
NO. HAULS	-	67	MIN. SIZE	- 100
CAT./HAUL	-	3.3	MAX. SIZE	- 173

JULY	910708	-	940713	
NO. CGHT.	-	350	MEAN SIZE	- 136.3
NO. MEAS.	-	184	S.E. SIZE	- 1.8
NO. HAULS	-	68	MIN. SIZE	- 24
CAT./HAUL	-	5.1	MAX. SIZE	- 170

AUGUST	910807	-	940809	
NO. CGHT.	-	703	MEAN SIZE	- 142.7
NO. MEAS.	-	270	S.E. SIZE	- 1.4
NO. HAULS	-	70	MIN. SIZE	- 46
CAT./HAUL	-	10	MAX. SIZE	- 183

SEPTEMBER	910910	-	940902	
NO. CGHT.	-	539	MEAN SIZE	- 144.9
NO. MEAS.	-	284	S.E. SIZE	- 0.8
NO. HAULS	-	72	MIN. SIZE	- 82
CAT./HAUL	-	7.5	MAX. SIZE	- 187

OCTOBER	911008	-	941006	
NO. CGHT.	-	240	MEAN SIZE	- 137.5
NO. MEAS.	-	212	S.E. SIZE	- 0.9
NO. HAULS	-	69	MIN. SIZE	- 61
CAT./HAUL	-	3.5	MAX. SIZE	- 179

NOVEMBER	911104	-	941116	
NO. CGHT.	-	189	MEAN SIZE	- 138
NO. MEAS.	-	189	S.E. SIZE	- 1.2
NO. HAULS	-	68	MIN. SIZE	- 68
CAT./HAUL	-	2.8	MAX. SIZE	- 200

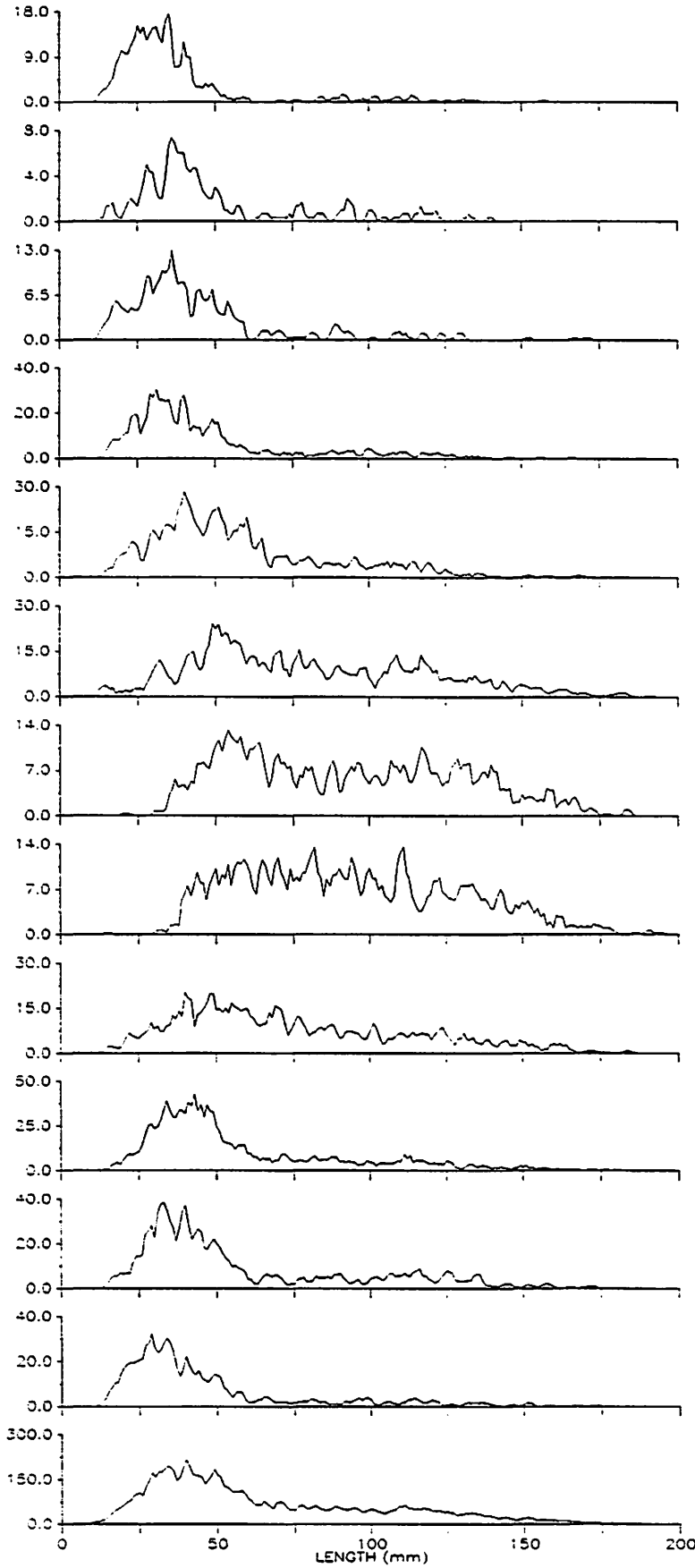
DECEMBER	911205	-	941208	
NO. CGHT.	-	19	MEAN SIZE	- 135.6
NO. MEAS.	-	19	S.E. SIZE	- 3.1
NO. HAULS	-	66	MIN. SIZE	- 108
CAT./HAUL	-	0.3	MAX. SIZE	- 160

JAN - DEC	910605	-	941208	
NO. CGHT.	-	2356	MEAN SIZE	- 139.5
NO. MEAS.	-	1423	S.E. SIZE	- 0.5
NO. HAULS	-	739	MIN. SIZE	- 22
CAT./HAUL	-	3.2	MAX. SIZE	- 200



Figure 82.

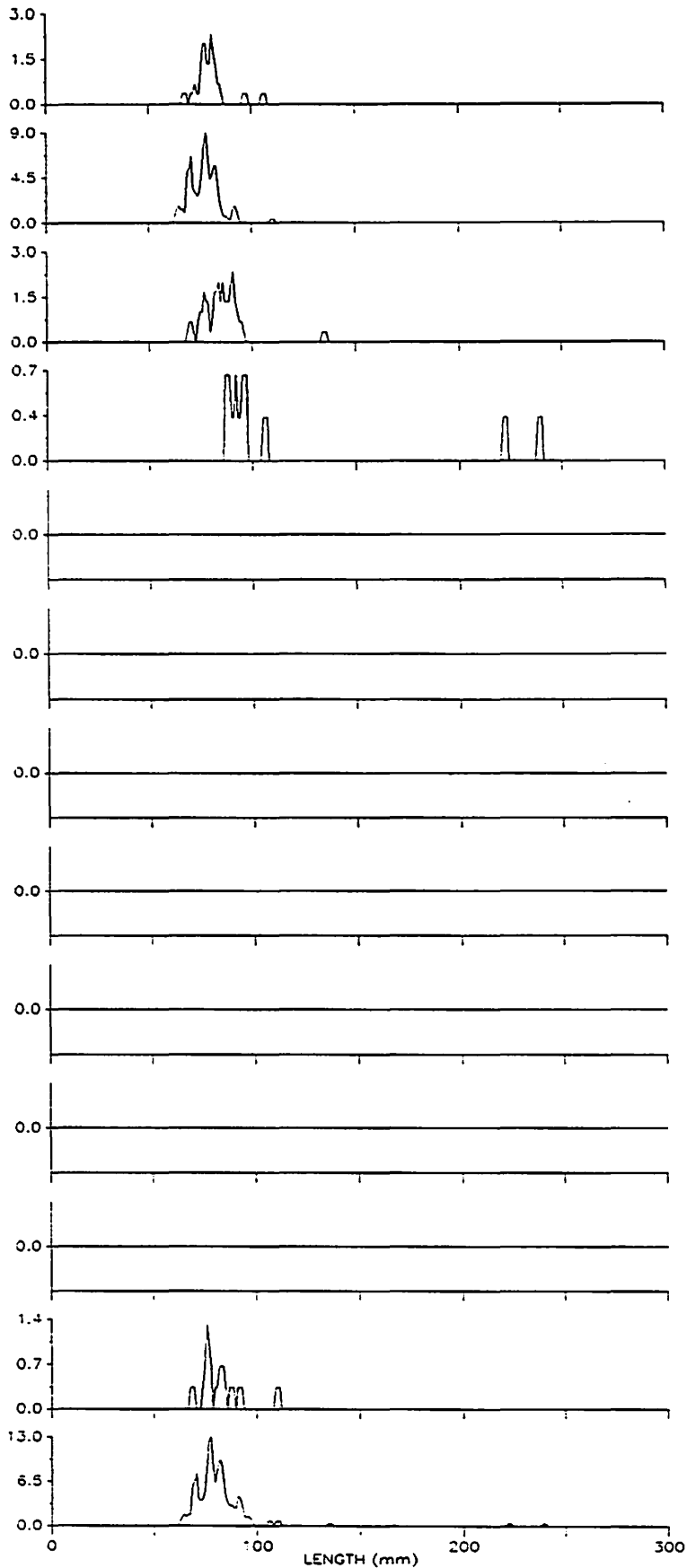
Blue Crab - Male  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 739	MEAN SIZE	- 34.8
NO. MEAS.	- 378	S.E. SIZE	- 1.2
NO. HAULS	- 51	MIN. SIZE	- 8
CAT./HAUL	- 14.5	MAX. SIZE	- 155
FEBRUARY	920210 - 940203		
NO. CGHT.	- 167	MEAN SIZE	- 49.1
NO. MEAS.	- 167	S.E. SIZE	- 2.2
NO. HAULS	- 52	MIN. SIZE	- 12
CAT./HAUL	- 3.2	MAX. SIZE	- 138
MARCH	920303 - 940308		
NO. CGHT.	- 328	MEAN SIZE	- 42.9
NO. MEAS.	- 328	S.E. SIZE	- 1.5
NO. HAULS	- 51	MIN. SIZE	- 7
CAT./HAUL	- 6.4	MAX. SIZE	- 169
APRIL	920415 - 940407		
NO. CGHT.	- 1460	MEAN SIZE	- 45.4
NO. MEAS.	- 941	S.E. SIZE	- 0.9
NO. HAULS	- 51	MIN. SIZE	- 10
CAT./HAUL	- 28.6	MAX. SIZE	- 164
MAY	920505 - 940505		
NO. CGHT.	- 1230	MEAN SIZE	- 56.1
NO. MEAS.	- 1037	S.E. SIZE	- 0.9
NO. HAULS	- 54	MIN. SIZE	- 9
CAT./HAUL	- 22.8	MAX. SIZE	- 167
JUNE	910605 - 940602		
NO. CGHT.	- 1419	MEAN SIZE	- 79
NO. MEAS.	- 1260	S.E. SIZE	- 1
NO. HAULS	- 67	MIN. SIZE	- 7
CAT./HAUL	- 21.2	MAX. SIZE	- 189
JULY	910708 - 940713		
NO. CGHT.	- 1221	MEAN SIZE	- 91.4
NO. MEAS.	- 872	S.E. SIZE	- 1.2
NO. HAULS	- 68	MIN. SIZE	- 19
CAT./HAUL	- 18	MAX. SIZE	- 182
AUGUST	910807 - 940809		
NO. CGHT.	- 1330	MEAN SIZE	- 91.9
NO. MEAS.	- 963	S.E. SIZE	- 1.1
NO. HAULS	- 70	MIN. SIZE	- 13
CAT./HAUL	- 19	MAX. SIZE	- 192
SEPTEMBER	910910 - 940902		
NO. CGHT.	- 1368	MEAN SIZE	- 73.6
NO. MEAS.	- 1146	S.E. SIZE	- 1.1
NO. HAULS	- 72	MIN. SIZE	- 12
CAT./HAUL	- 19	MAX. SIZE	- 182
OCTOBER	911008 - 941006		
NO. CGHT.	- 1624	MEAN SIZE	- 56.4
NO. MEAS.	- 1425	S.E. SIZE	- 0.9
NO. HAULS	- 69	MIN. SIZE	- 13
CAT./HAUL	- 23.5	MAX. SIZE	- 178
NOVEMBER	911104 - 941116		
NO. CGHT.	- 1753	MEAN SIZE	- 57.5
NO. MEAS.	- 1257	S.E. SIZE	- 1
NO. HAULS	- 68	MIN. SIZE	- 8
CAT./HAUL	- 25.8	MAX. SIZE	- 179
DECEMBER	911205 - 941208		
NO. CGHT.	- 1208	MEAN SIZE	- 43.7
NO. MEAS.	- 908	S.E. SIZE	- 1
NO. HAULS	- 66	MIN. SIZE	- 8
CAT./HAUL	- 18.3	MAX. SIZE	- 171
JAN - DEC	910605 - 941208		
NO. CGHT.	- 13847	MEAN SIZE	- 63.9
NO. MEAS.	- 10582	S.E. SIZE	- 0.4
NO. HAULS	- 739	MIN. SIZE	- 7
CAT./HAUL	- 18.7	MAX. SIZE	- 192

Figure 83.

Blueback Herring  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 20	MEAN SIZE	- 78.9
NO. MEAS.	- 20	S.E. SIZE	- 1.8
NO. HAULS	- 51	MIN. SIZE	- 66
CAT./HAUL	- 0.4	MAX. SIZE	- 104

FEBRUARY	920210 - 940203		
NO. CGHT.	- 151	MEAN SIZE	- 75.4
NO. MEAS.	- 99	S.E. SIZE	- 0.7
NO. HAULS	- 52	MIN. SIZE	- 62
CAT./HAUL	- 2.9	MAX. SIZE	- 108

MARCH	920303 - 940308		
NO. CGHT.	- 34	MEAN SIZE	- 83.7
NO. MEAS.	- 32	S.E. SIZE	- 2
NO. HAULS	- 51	MIN. SIZE	- 68
CAT./HAUL	- 0.7	MAX. SIZE	- 133

APRIL	920415 - 940407		
NO. CGHT.	- 9	MEAN SIZE	- 122.3
NO. MEAS.	- 9	S.E. SIZE	- 20.2
NO. HAULS	- 51	MIN. SIZE	- 86
CAT./HAUL	- 0.2	MAX. SIZE	- 237

MAY	920505 - 940505		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 54	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

JUNE	910605 - 940602		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 67	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

JULY	910708 - 940713		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 68	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

AUGUST	910807 - 940809		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 70	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

SEPTEMBER	910910 - 940902		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 72	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

OCTOBER	911008 - 941006		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 69	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

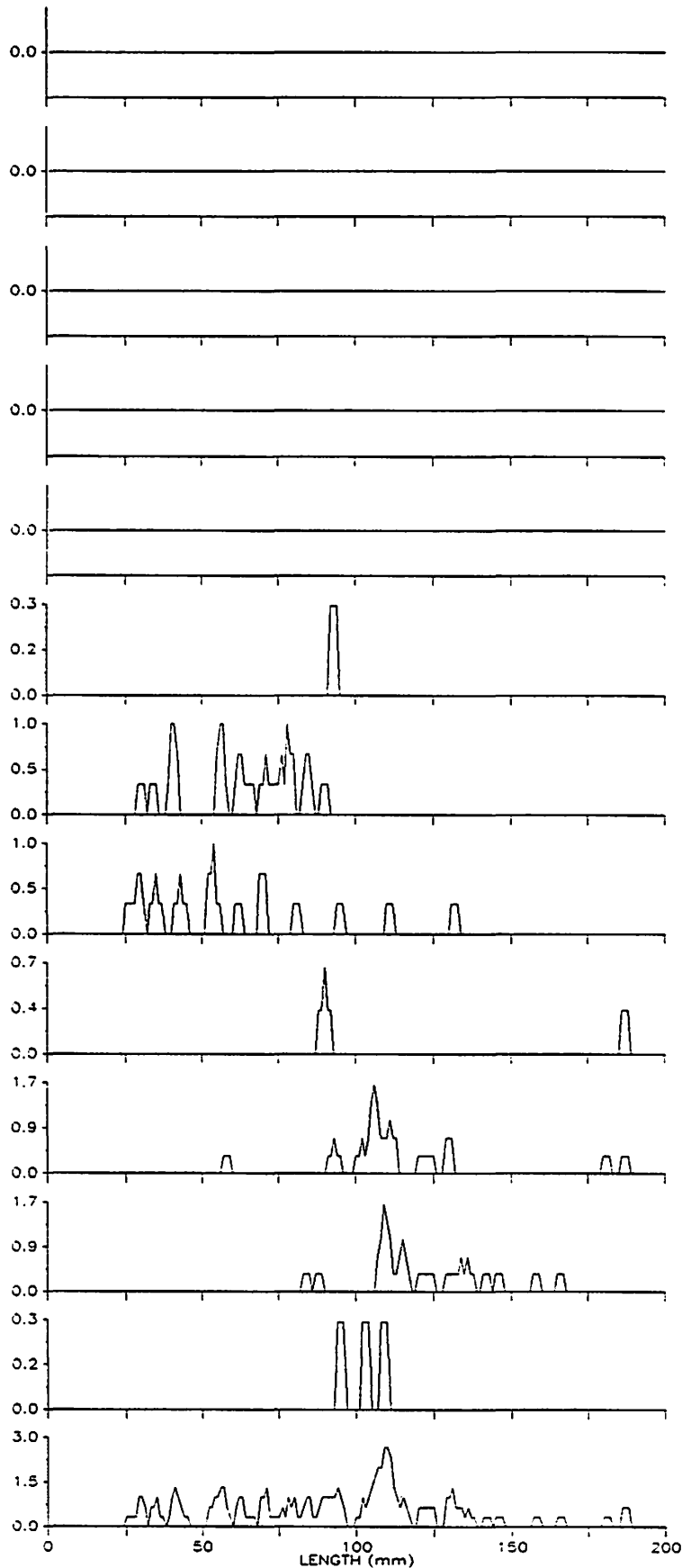
NOVEMBER	911104 - 941116		
NO. CGHT.	- 0	MEAN SIZE	-
NO. MEAS.	- 0	S.E. SIZE	-
NO. HAULS	- 68	MIN. SIZE	-
CAT./HAUL	- 0	MAX. SIZE	-

DECEMBER	911205 - 941208		
NO. CGHT.	- 178	MEAN SIZE	- 80.9
NO. MEAS.	- 11	S.E. SIZE	- 3.3
NO. HAULS	- 66	MIN. SIZE	- 67
CAT./HAUL	- 2.7	MAX. SIZE	- 108

JAN - DEC	910605 - 941208		
NO. CGHT.	- 392	MEAN SIZE	- 80.2
NO. MEAS.	- 171	S.E. SIZE	- 1.4
NO. HAULS	- 739	MIN. SIZE	- 62
CAT./HAUL	- 0.5	MAX. SIZE	- 237

Figure 84.

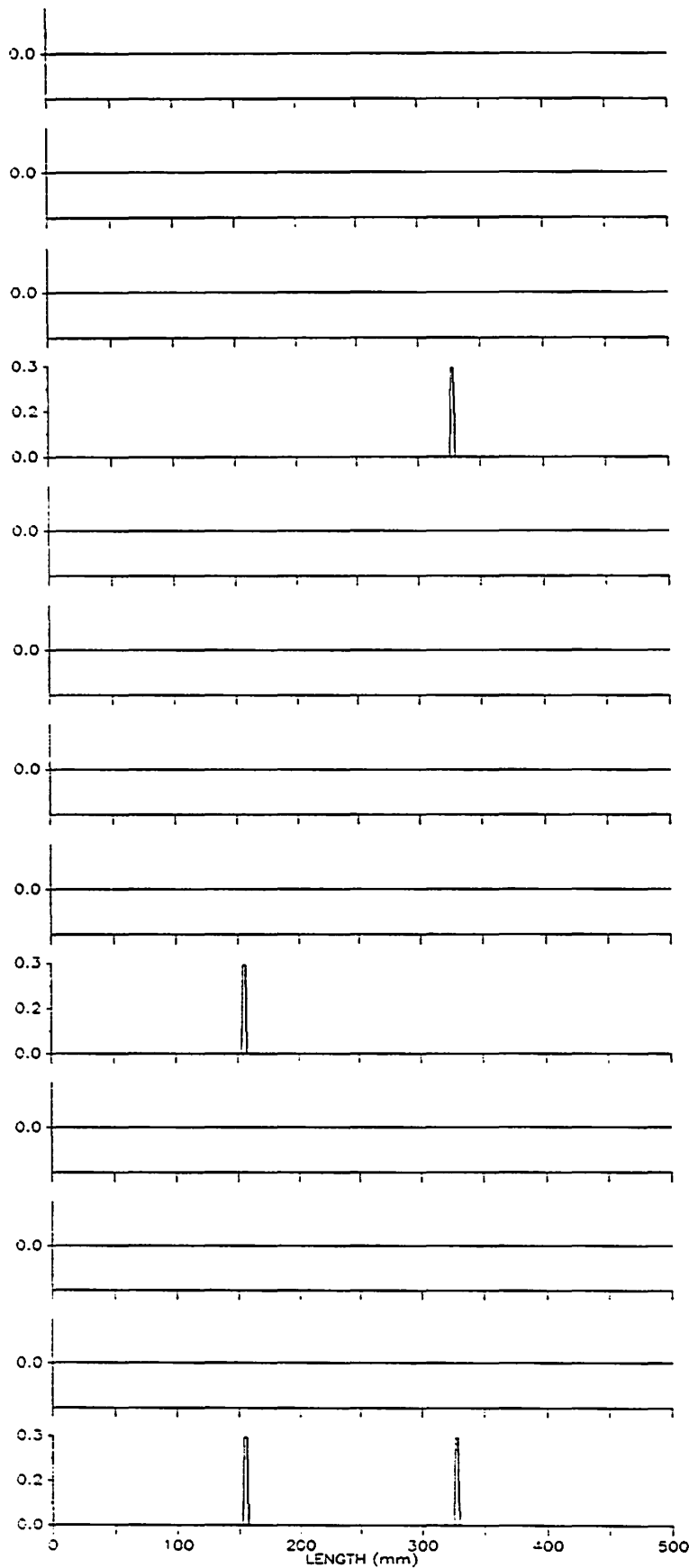
Butterfish  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	54	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	910605 - 940602		
NO. CGHT.	1	MEAN SIZE	91
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	67	MIN. SIZE	91
CAT./HAUL	0	MAX. SIZE	91
JULY	910708 - 940713		
NO. CGHT.	20	MEAN SIZE	60.9
NO. MEAS.	20	S.E. SIZE	4
NO. HAULS	68	MIN. SIZE	28
CAT./HAUL	0.3	MAX. SIZE	88
AUGUST	910807 - 940809		
NO. CGHT.	19	MEAN SIZE	58.2
NO. MEAS.	17	S.E. SIZE	7.3
NO. HAULS	70	MIN. SIZE	24
CAT./HAUL	0.3	MAX. SIZE	130
SEPTEMBER	910910 - 940902		
NO. CGHT.	3	MEAN SIZE	120.3
NO. MEAS.	3	S.E. SIZE	32.3
NO. HAULS	72	MIN. SIZE	87
CAT./HAUL	0	MAX. SIZE	185
OCTOBER	911008 - 941006		
NO. CGHT.	20	MEAN SIZE	112.7
NO. MEAS.	20	S.E. SIZE	6.3
NO. HAULS	69	MIN. SIZE	56
CAT./HAUL	0.3	MAX. SIZE	185
NOVEMBER	911104 - 941116		
NO. CGHT.	21	MEAN SIZE	120.1
NO. MEAS.	21	S.E. SIZE	4.5
NO. HAULS	68	MIN. SIZE	82
CAT./HAUL	0.3	MAX. SIZE	164
DECEMBER	911205 - 941208		
NO. CGHT.	3	MEAN SIZE	100.3
NO. MEAS.	3	S.E. SIZE	4.1
NO. HAULS	66	MIN. SIZE	93
CAT./HAUL	0	MAX. SIZE	107
JAN - DEC	910605 - 941208		
NO. CGHT.	87	MEAN SIZE	91
NO. MEAS.	85	S.E. SIZE	4.1
NO. HAULS	739	MIN. SIZE	24
CAT./HAUL	0.1	MAX. SIZE	185

Figure 85.

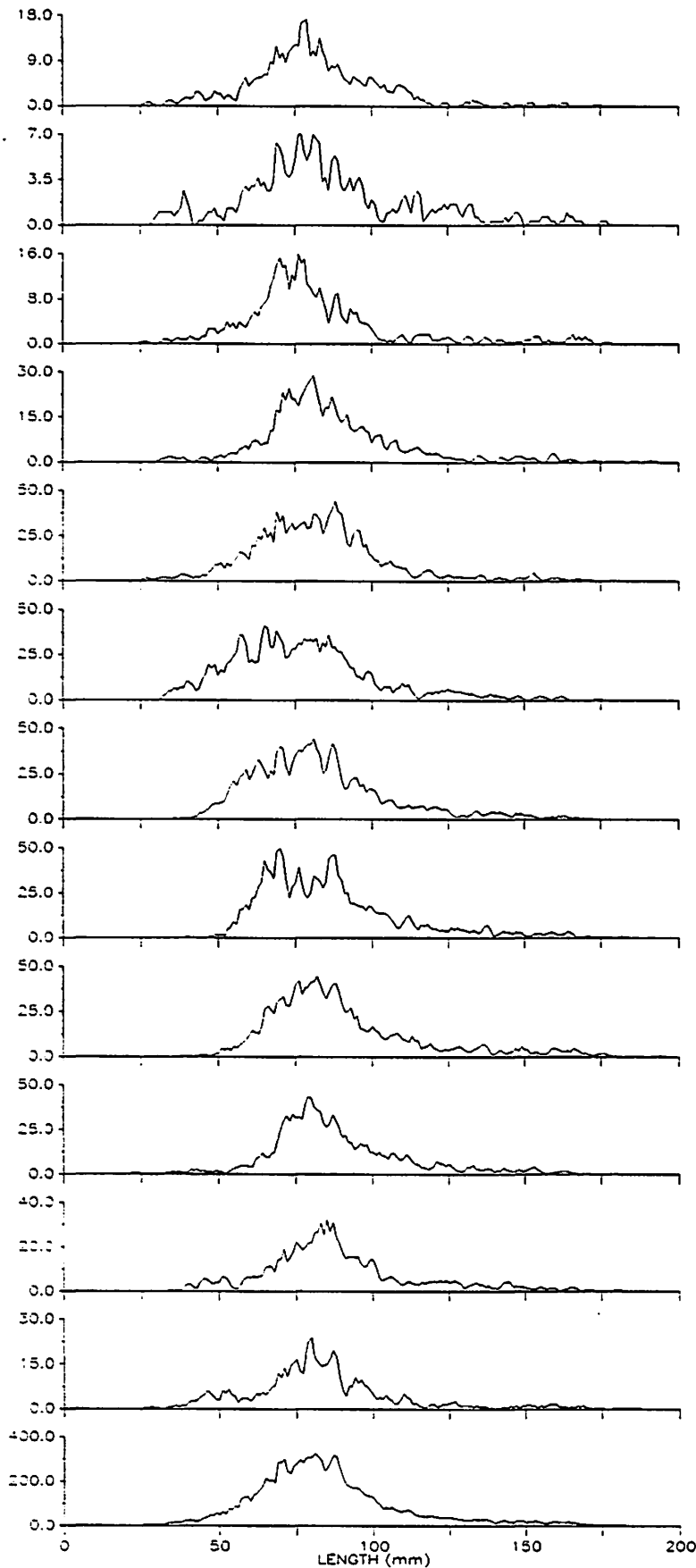
Channel Catfish  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	1	MEAN SIZE	326
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	326
CAT./HAUL	0	MAX. SIZE	326
MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	54	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	910605 - 940602		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	67	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JULY	910708 - 940713		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	68	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
AUGUST	910807 - 940809		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	70	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
SEPTEMBER	910910 - 940902		
NO. CGHT.	1	MEAN SIZE	153
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	72	MIN. SIZE	153
CAT./HAUL	0	MAX. SIZE	153
OCTOBER	911008 - 941006		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	69	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
NOVEMBER	911104 - 941116		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	68	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
DECEMBER	911205 - 941208		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	66	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	910605 - 941208		
NO. CGHT.	2	MEAN SIZE	239.5
NO. MEAS.	2	S.E. SIZE	86.5
NO. HAULS	739	MIN. SIZE	153
CAT./HAUL	0	MAX. SIZE	326

Figure 86.

Hogchoker  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	- 1653	MEAN SIZE	- 79.4
NO. MEAS.	- 474	S.E. SIZE	- 1
NO. HAULS	- 51	MIN. SIZE	- 25
CAT./HAUL	- 32.4	MAX. SIZE	- 172

FEBRUARY	920210 - 940203		
NO. CGHT.	- 388	MEAN SIZE	- 84.2
NO. MEAS.	- 262	S.E. SIZE	- 1.7
NO. HAULS	- 52	MIN. SIZE	- 28
CAT./HAUL	- 7.5	MAX. SIZE	- 174

MARCH	920303 - 940308		
NO. CGHT.	- 809	MEAN SIZE	- 79.9
NO. MEAS.	- 448	S.E. SIZE	- 1.2
NO. HAULS	- 51	MIN. SIZE	- 24
CAT./HAUL	- 15.9	MAX. SIZE	- 175

APRIL	920415 - 940407		
NO. CGHT.	- 7565	MEAN SIZE	- 85.1
NO. MEAS.	- 855	S.E. SIZE	- 0.8
NO. HAULS	- 51	MIN. SIZE	- 30
CAT./HAUL	- 148.3	MAX. SIZE	- 190

MAY	920505 - 940505		
NO. CGHT.	- 17334	MEAN SIZE	- 81.2
NO. MEAS.	- 1583	S.E. SIZE	- 0.6
NO. HAULS	- 54	MIN. SIZE	- 24
CAT./HAUL	- 321	MAX. SIZE	- 179

JUNE	910605 - 940602		
NO. CGHT.	- 10835	MEAN SIZE	- 76
NO. MEAS.	- 1736	S.E. SIZE	- 0.6
NO. HAULS	- 67	MIN. SIZE	- 30
CAT./HAUL	- 161.7	MAX. SIZE	- 185

JULY	910708 - 940713		
NO. CGHT.	- 8611	MEAN SIZE	- 81.3
NO. MEAS.	- 1735	S.E. SIZE	- 0.6
NO. HAULS	- 68	MIN. SIZE	- 18
CAT./HAUL	- 126.6	MAX. SIZE	- 177

AUGUST	910807 - 940809		
NO. CGHT.	- 19558	MEAN SIZE	- 85
NO. MEAS.	- 1665	S.E. SIZE	- 0.6
NO. HAULS	- 70	MIN. SIZE	- 37
CAT./HAUL	- 279.4	MAX. SIZE	- 180

SEPTEMBER	910910 - 940902		
NO. CGHT.	- 16483	MEAN SIZE	- 88.4
NO. MEAS.	- 1623	S.E. SIZE	- 0.6
NO. HAULS	- 72	MIN. SIZE	- 37
CAT./HAUL	- 228.9	MAX. SIZE	- 192

OCTOBER	911008 - 941006		
NO. CGHT.	- 7659	MEAN SIZE	- 86.7
NO. MEAS.	- 1298	S.E. SIZE	- 0.6
NO. HAULS	- 69	MIN. SIZE	- 13
CAT./HAUL	- 111	MAX. SIZE	- 177

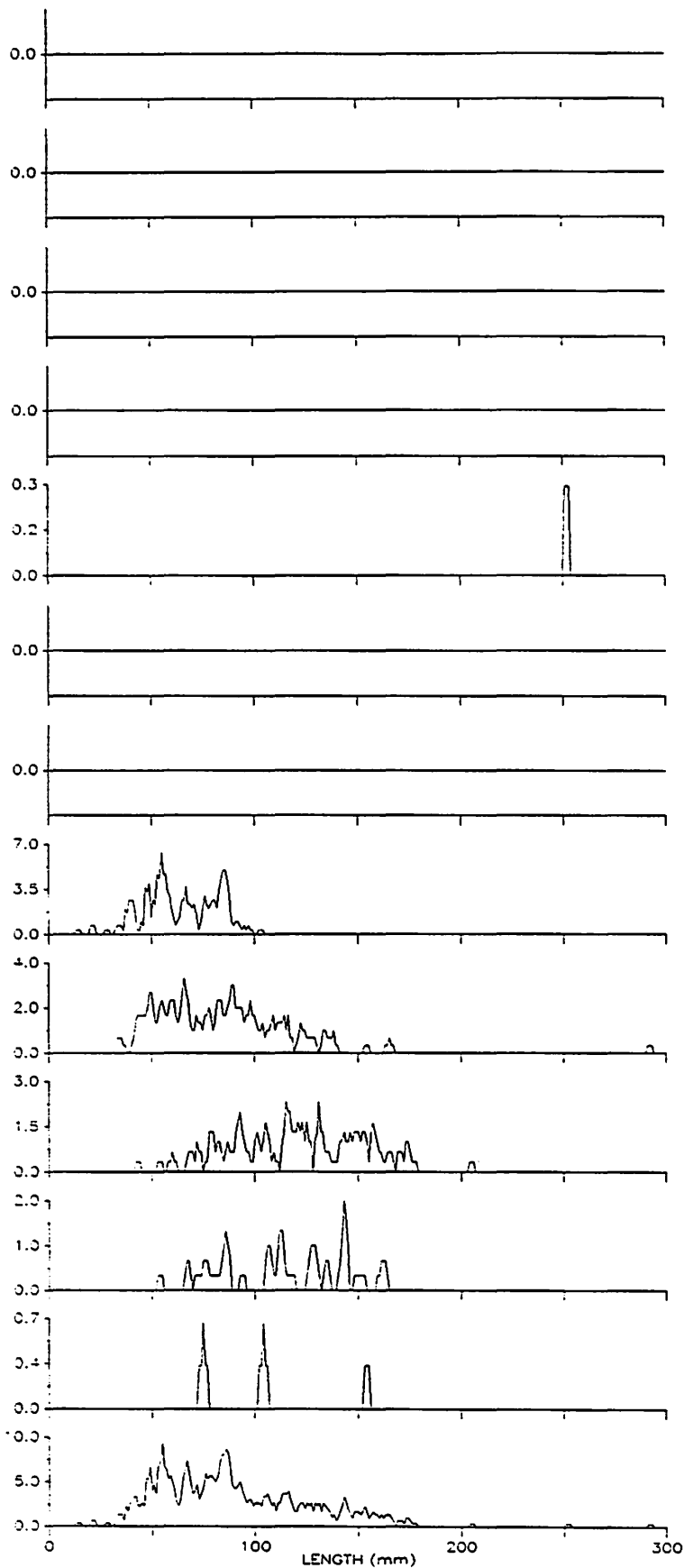
NOVEMBER	911104 - 941116		
NO. CGHT.	- 4604	MEAN SIZE	- 86.9
NO. MEAS.	- 1000	S.E. SIZE	- 0.8
NO. HAULS	- 68	MIN. SIZE	- 33
CAT./HAUL	- 67.7	MAX. SIZE	- 178

DECEMBER	911205 - 941208		
NO. CGHT.	- 3503	MEAN SIZE	- 81.7
NO. MEAS.	- 845	S.E. SIZE	- 1
NO. HAULS	- 66	MIN. SIZE	- 25
CAT./HAUL	- 53.1	MAX. SIZE	- 184

JAN - DEC	910605 - 941208		
NO. CGHT.	- 99002	MEAN SIZE	- 83.1
NO. MEAS.	- 13324	S.E. SIZE	- 0.2
NO. HAULS	- 739	MIN. SIZE	- 13
CAT./HAUL	- 134	MAX. SIZE	- 192

Figure 87.

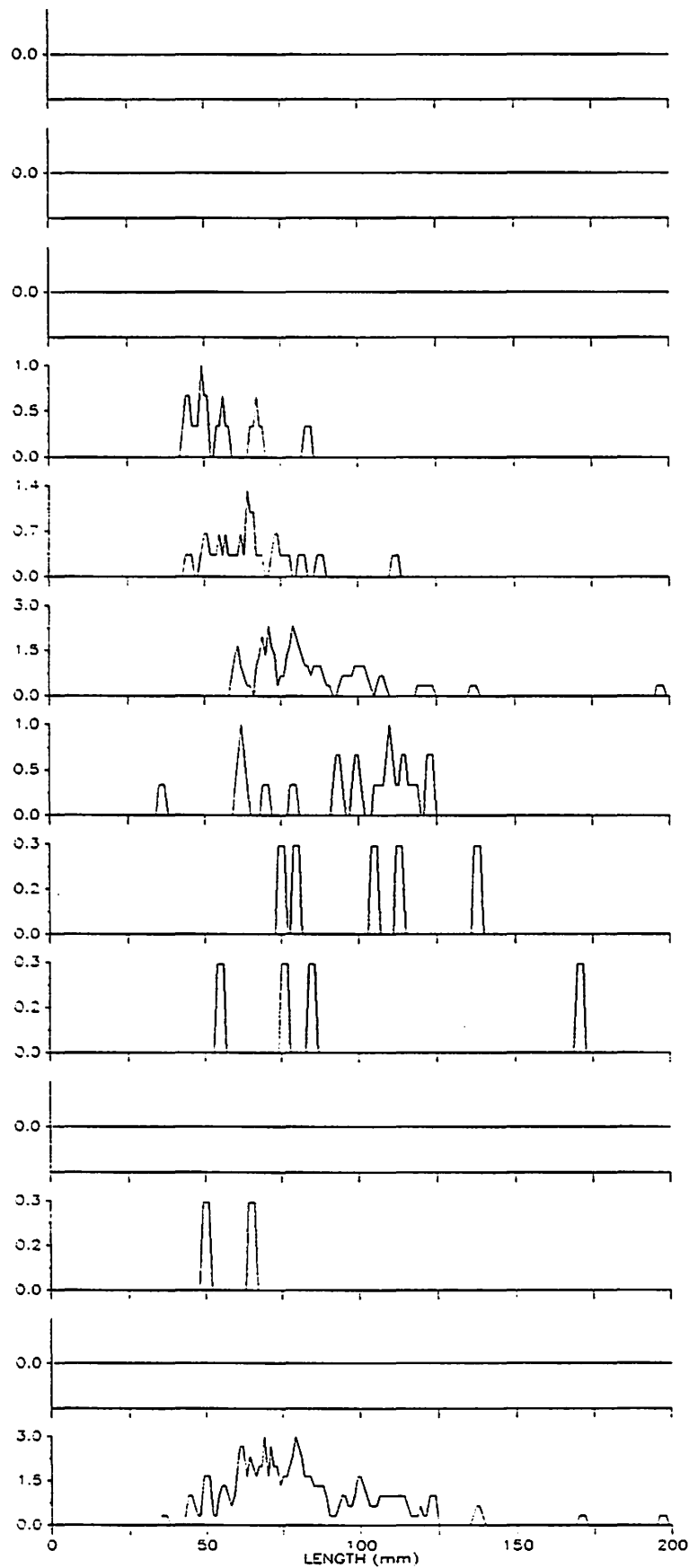
Kingfish  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	920505 - 940505		
NO. CGHT.	1	MEAN SIZE	- 250
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	54	MIN. SIZE	- 250
CAT./HAUL	0	MAX. SIZE	- 250
JUNE	910605 - 940602		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	67	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JULY	910708 - 940713		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	68	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
AUGUST	910807 - 940809		
NO. CGHT.	174	MEAN SIZE	- 62
NO. MEAS.	150	S.E. SIZE	- 1.5
NO. HAULS	70	MIN. SIZE	- 12
CAT./HAUL	2.5	MAX. SIZE	- 101
SEPTEMBER	910910 - 940902		
NO. CGHT.	168	MEAN SIZE	- 82
NO. MEAS.	154	S.E. SIZE	- 2.6
NO. HAULS	72	MIN. SIZE	- 31
CAT./HAUL	2.3	MAX. SIZE	- 290
OCTOBER	911008 - 941006		
NO. CGHT.	107	MEAN SIZE	- 118.1
NO. MEAS.	107	S.E. SIZE	- 3.1
NO. HAULS	69	MIN. SIZE	- 41
CAT./HAUL	1.6	MAX. SIZE	- 203
NOVEMBER	911104 - 941116		
NO. CGHT.	43	MEAN SIZE	- 112
NO. MEAS.	43	S.E. SIZE	- 4.5
NO. HAULS	68	MIN. SIZE	- 52
CAT./HAUL	0.6	MAX. SIZE	- 161
DECEMBER	911205 - 941208		
NO. CGHT.	5	MEAN SIZE	- 100.4
NO. MEAS.	5	S.E. SIZE	- 14.4
NO. HAULS	66	MIN. SIZE	- 72
CAT./HAUL	0.1	MAX. SIZE	- 152
JAN - DEC	910605 - 941208		
NO. CGHT.	498	MEAN SIZE	- 87.2
NO. MEAS.	460	S.E. SIZE	- 1.7
NO. HAULS	739	MIN. SIZE	- 12
CAT./HAUL	0.7	MAX. SIZE	- 290

Figure 88.

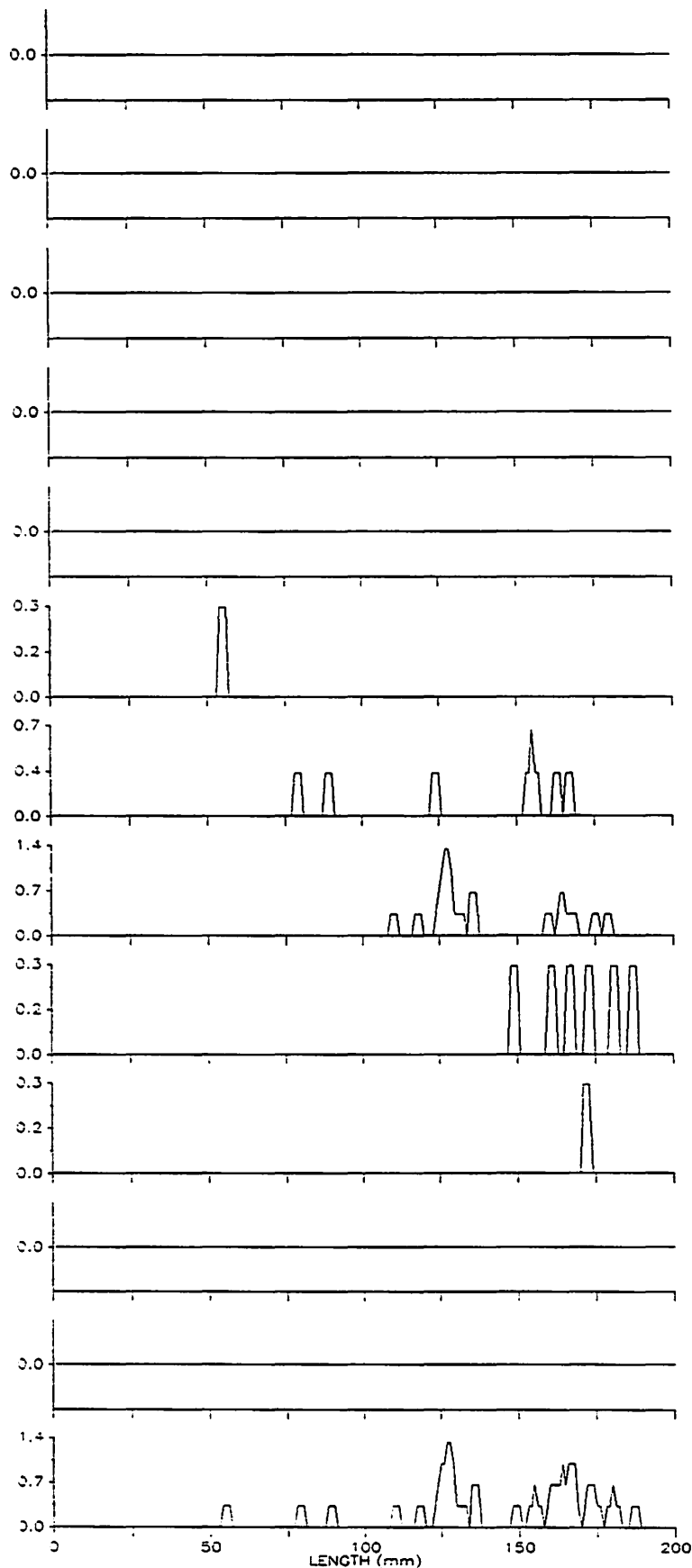
Northern Searobin  
1991 - 1994 Pooled



JANUARY		920120 - 940112	
NO. CGHT.	-	0	MEAN SIZE -
NO. MEAS.	-	0	S.E. SIZE -
NO. HAULS	-	51	MIN. SIZE -
CAT./HAUL	-	0	MAX. SIZE -
FEBRUARY		920210 - 940203	
NO. CGHT.	-	0	MEAN SIZE -
NO. MEAS.	-	0	S.E. SIZE -
NO. HAULS	-	52	MIN. SIZE -
CAT./HAUL	-	0	MAX. SIZE -
MARCH		920303 - 940308	
NO. CGHT.	-	0	MEAN SIZE -
NO. MEAS.	-	0	S.E. SIZE -
NO. HAULS	-	51	MIN. SIZE -
CAT./HAUL	-	0	MAX. SIZE -
APRIL		920415 - 940407	
NO. CGHT.	-	10	MEAN SIZE - 54.7
NO. MEAS.	-	10	S.E. SIZE - 4
NO. HAULS	-	51	MIN. SIZE - 42
CAT./HAUL	-	0.2	MAX. SIZE - 92
MAY		920505 - 940505	
NO. CGHT.	-	18	MEAN SIZE - 65.1
NO. MEAS.	-	18	S.E. SIZE - 3.8
NO. HAULS	-	54	MIN. SIZE - 43
CAT./HAUL	-	0.3	MAX. SIZE - 110
JUNE		910605 - 940602	
NO. CGHT.	-	50	MEAN SIZE - 83.5
NO. MEAS.	-	50	S.E. SIZE - 3.3
NO. HAULS	-	67	MIN. SIZE - 58
CAT./HAUL	-	0.7	MAX. SIZE - 195
JULY		910708 - 940713	
NO. CGHT.	-	19	MEAN SIZE - 92
NO. MEAS.	-	19	S.E. SIZE - 5.8
NO. HAULS	-	68	MIN. SIZE - 34
CAT./HAUL	-	0.3	MAX. SIZE - 121
AUGUST		910807 - 940809	
NO. CGHT.	-	5	MEAN SIZE - 100.2
NO. MEAS.	-	5	S.E. SIZE - 11.5
NO. HAULS	-	70	MIN. SIZE - 73
CAT./HAUL	-	0.1	MAX. SIZE - 136
SEPTEMBER		910910 - 940902	
NO. CGHT.	-	4	MEAN SIZE - 94.8
NO. MEAS.	-	4	S.E. SIZE - 25.5
NO. HAULS	-	72	MIN. SIZE - 53
CAT./HAUL	-	0.1	MAX. SIZE - 169
OCTOBER		911008 - 941006	
NO. CGHT.	-	0	MEAN SIZE -
NO. MEAS.	-	0	S.E. SIZE -
NO. HAULS	-	69	MIN. SIZE -
CAT./HAUL	-	0	MAX. SIZE -
NOVEMBER		911104 - 941116	
NO. CGHT.	-	2	MEAN SIZE - 55.5
NO. MEAS.	-	2	S.E. SIZE - 7.5
NO. HAULS	-	68	MIN. SIZE - 48
CAT./HAUL	-	0	MAX. SIZE - 63
DECEMBER		911205 - 941208	
NO. CGHT.	-	0	MEAN SIZE -
NO. MEAS.	-	0	S.E. SIZE -
NO. HAULS	-	66	MIN. SIZE -
CAT./HAUL	-	0	MAX. SIZE -
JAN - DEC		910605 - 941208	
NO. CGHT.	-	108	MEAN SIZE - 79.9
NO. MEAS.	-	108	S.E. SIZE - 2.5
NO. HAULS	-	739	MIN. SIZE - 34
CAT./HAUL	-	0.1	MAX. SIZE - 195

Figure 89.

Scup  
1991 - 1994 Pooled

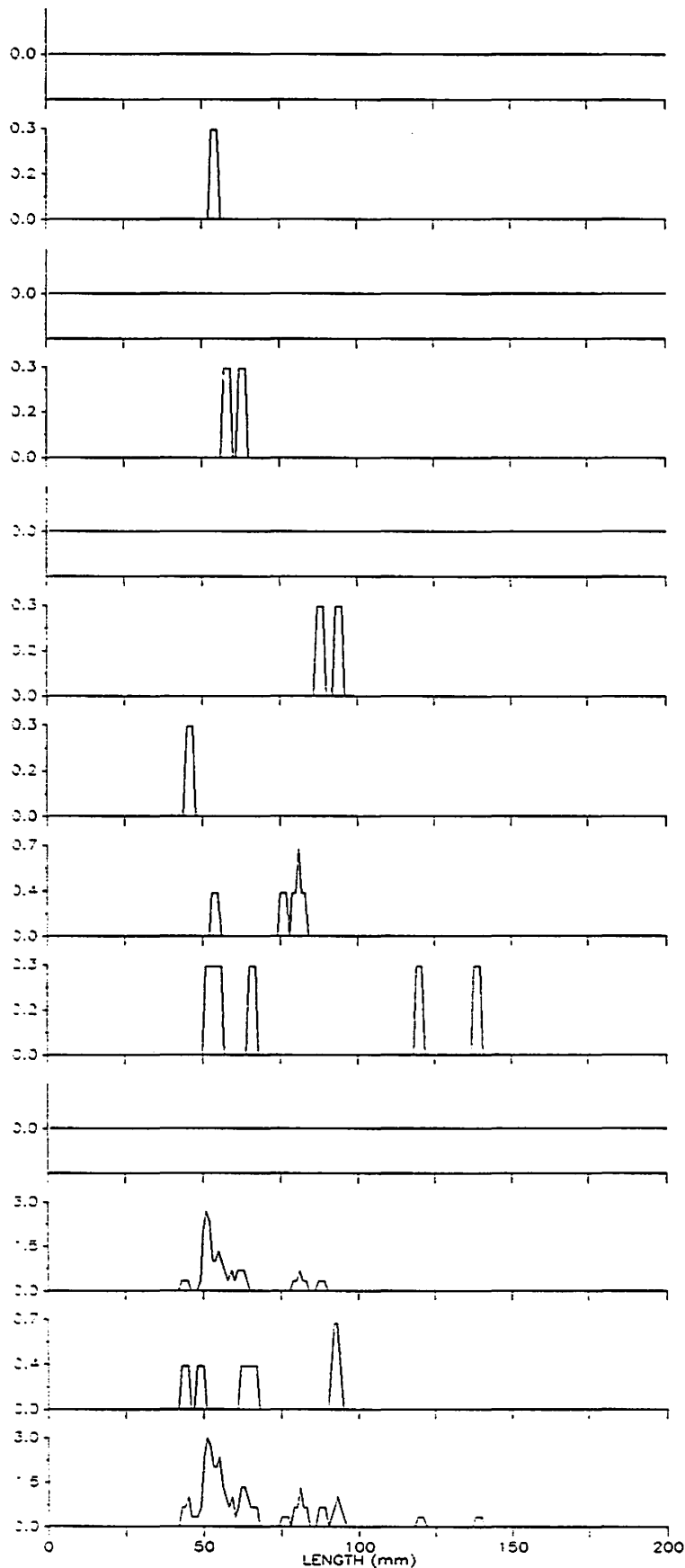


JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	54	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	910605 - 940602		
NO. CGHT.	1	MEAN SIZE	- 53
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	67	MIN. SIZE	- 53
CAT./HAUL	0	MAX. SIZE	- 53
JULY	910708 - 940713		
NO. CGHT.	7	MEAN SIZE	- 131.1
NO. MEAS.	7	S.E. SIZE	- 13.8
NO. HAULS	68	MIN. SIZE	- 77
CAT./HAUL	0.1	MAX. SIZE	- 165
AUGUST	910807 - 940809		
NO. CGHT.	17	MEAN SIZE	- 139.5
NO. MEAS.	17	S.E. SIZE	- 5.3
NO. HAULS	70	MIN. SIZE	- 108
CAT./HAUL	0.2	MAX. SIZE	- 177
SEPTEMBER	910910 - 940902		
NO. CGHT.	6	MEAN SIZE	- 167.7
NO. MEAS.	6	S.E. SIZE	- 5.6
NO. HAULS	72	MIN. SIZE	- 147
CAT./HAUL	0.1	MAX. SIZE	- 185
OCTOBER	911008 - 941006		
NO. CGHT.	2	MEAN SIZE	- 186.5
NO. MEAS.	2	S.E. SIZE	- 16.5
NO. HAULS	69	MIN. SIZE	- 170
CAT./HAUL	0	MAX. SIZE	- 203
NOVEMBER	911104 - 941116		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	68	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
DECEMBER	911205 - 941208		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	66	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	910605 - 941208		
NO. CGHT.	33	MEAN SIZE	- 143.1
NO. MEAS.	33	S.E. SIZE	- 5.7
NO. HAULS	739	MIN. SIZE	- 53
CAT./HAUL	0	MAX. SIZE	- 203



Figure 90.

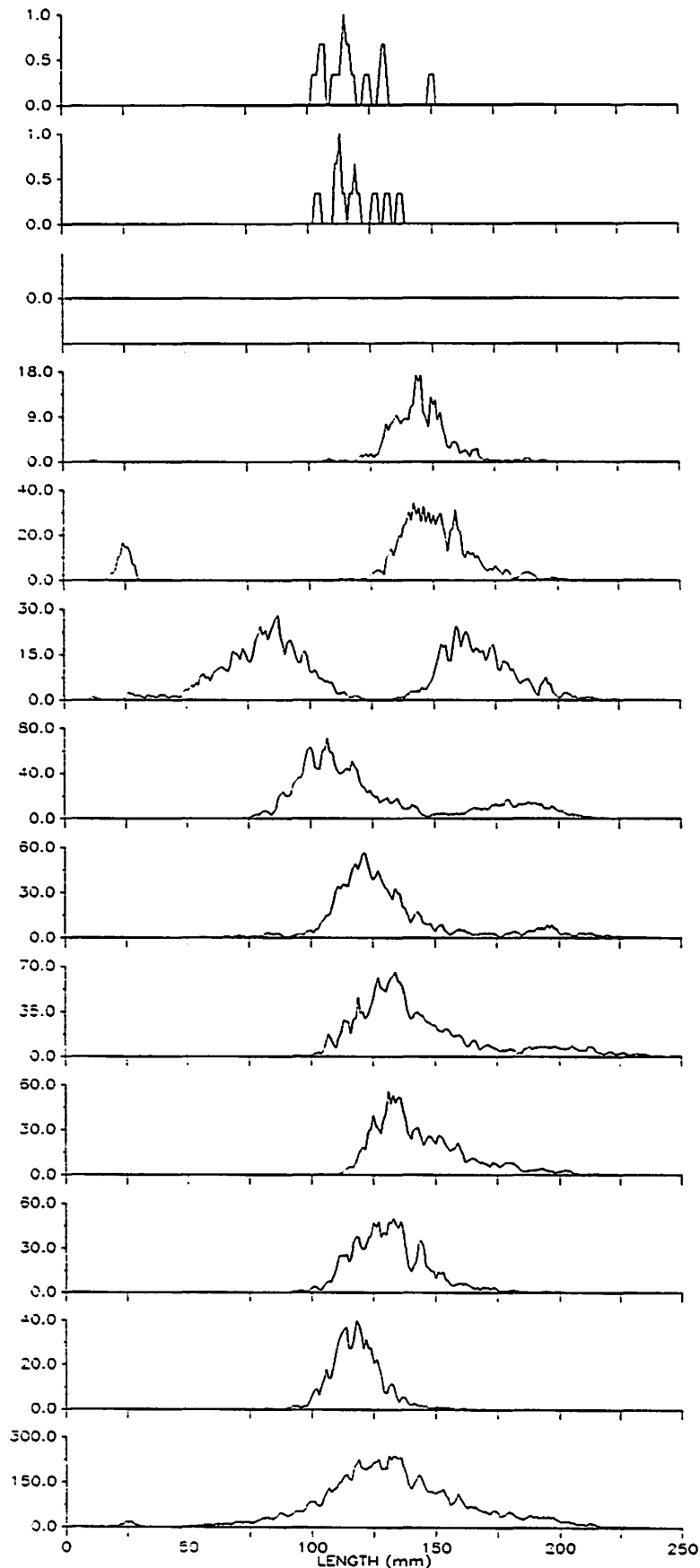
Smallmouth Flounder  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	51	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
FEBRUARY	920210 - 940203		
NO. CGHT.	1	MEAN SIZE	52
NO. MEAS.	1	S.E. SIZE	.
NO. HAULS	52	MIN. SIZE	52
CAT./HAUL	0	MAX. SIZE	52
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	51	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
APRIL	920415 - 940407		
NO. CGHT.	2	MEAN SIZE	58.5
NO. MEAS.	2	S.E. SIZE	2.5
NO. HAULS	51	MIN. SIZE	56
CAT./HAUL	0	MAX. SIZE	61
MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	54	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
JUNE	910605 - 940602		
NO. CGHT.	2	MEAN SIZE	89
NO. MEAS.	2	S.E. SIZE	3
NO. HAULS	67	MIN. SIZE	86
CAT./HAUL	0	MAX. SIZE	92
JULY	910708 - 940713		
NO. CGHT.	1	MEAN SIZE	44
NO. MEAS.	1	S.E. SIZE	.
NO. HAULS	68	MIN. SIZE	44
CAT./HAUL	0	MAX. SIZE	44
AUGUST	910807 - 940809		
NO. CGHT.	4	MEAN SIZE	71
NO. MEAS.	4	S.E. SIZE	6.5
NO. HAULS	70	MIN. SIZE	52
CAT./HAUL	0.1	MAX. SIZE	80
SEPTEMBER	910910 - 940902		
NO. CGHT.	5	MEAN SIZE	84.4
NO. MEAS.	5	S.E. SIZE	18
NO. HAULS	72	MIN. SIZE	50
CAT./HAUL	0.1	MAX. SIZE	137
OCTOBER	911008 - 941006		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	69	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.
NOVEMBER	911104 - 941116		
NO. CGHT.	20	MEAN SIZE	56.3
NO. MEAS.	20	S.E. SIZE	2.6
NO. HAULS	68	MIN. SIZE	42
CAT./HAUL	0.3	MAX. SIZE	86
DECEMBER	911205 - 941208		
NO. CGHT.	6	MEAN SIZE	65.8
NO. MEAS.	6	S.E. SIZE	8.5
NO. HAULS	66	MIN. SIZE	42
CAT./HAUL	0.1	MAX. SIZE	91
JAN - DEC	910605 - 941208		
NO. CGHT.	41	MEAN SIZE	63.9
NO. MEAS.	41	S.E. SIZE	3.2
NO. HAULS	739	MIN. SIZE	42
CAT./HAUL	0.1	MAX. SIZE	137

Figure 91.

Spot  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 12 MEAN SIZE - 116.7  
 NO. MEAS. - 12 S.E. SIZE - 3.9  
 NO. HAULS - 51 MIN. SIZE - 101  
 CAT./HAUL - 0.2 MAX. SIZE - 148

FEBRUARY 920210 - 940203  
 NO. CGHT. - 9 MEAN SIZE - 117.6  
 NO. MEAS. - 9 S.E. SIZE - 3.5  
 NO. HAULS - 52 MIN. SIZE - 102  
 CAT./HAUL - 0.2 MAX. SIZE - 135

MARCH 920303 - 940308  
 NO. CGHT. - 1 MEAN SIZE - .  
 NO. MEAS. - 0 S.E. SIZE - .  
 NO. HAULS - 51 MIN. SIZE - .  
 CAT./HAUL - 0 MAX. SIZE - .

APRIL 920415 - 940407  
 NO. CGHT. - 1439 MEAN SIZE - 143  
 NO. MEAS. - 313 S.E. SIZE - 0.7  
 NO. HAULS - 51 MIN. SIZE - 105  
 CAT./HAUL - 28.2 MAX. SIZE - 192

MAY 920505 - 940505  
 NO. CGHT. - 2060 MEAN SIZE - 136.4  
 NO. MEAS. - 1038 S.E. SIZE - 1.3  
 NO. HAULS - 54 MIN. SIZE - 17  
 CAT./HAUL - 38.1 MAX. SIZE - 256

JUNE 910605 - 940602  
 NO. CGHT. - 3036 MEAN SIZE - 117.3  
 NO. MEAS. - 1501 S.E. SIZE - 1.2  
 NO. HAULS - 67 MIN. SIZE - 11  
 CAT./HAUL - 45.3 MAX. SIZE - 221

JULY 910708 - 940713  
 NO. CGHT. - 5916 MEAN SIZE - 123.5  
 NO. MEAS. - 2447 S.E. SIZE - 0.7  
 NO. HAULS - 68 MIN. SIZE - 58  
 CAT./HAUL - 87 MAX. SIZE - 332

AUGUST 910807 - 940809  
 NO. CGHT. - 3574 MEAN SIZE - 130  
 NO. MEAS. - 1648 S.E. SIZE - 0.7  
 NO. HAULS - 70 MIN. SIZE - 54  
 CAT./HAUL - 51.1 MAX. SIZE - 281

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 3015 MEAN SIZE - 141.6  
 NO. MEAS. - 2240 S.E. SIZE - 0.6  
 NO. HAULS - 72 MIN. SIZE - 86  
 CAT./HAUL - 41.9 MAX. SIZE - 247

OCTOBER 911008 - 941006  
 NO. CGHT. - 3107 MEAN SIZE - 142.4  
 NO. MEAS. - 1533 S.E. SIZE - 0.5  
 NO. HAULS - 69 MIN. SIZE - 110  
 CAT./HAUL - 45 MAX. SIZE - 220

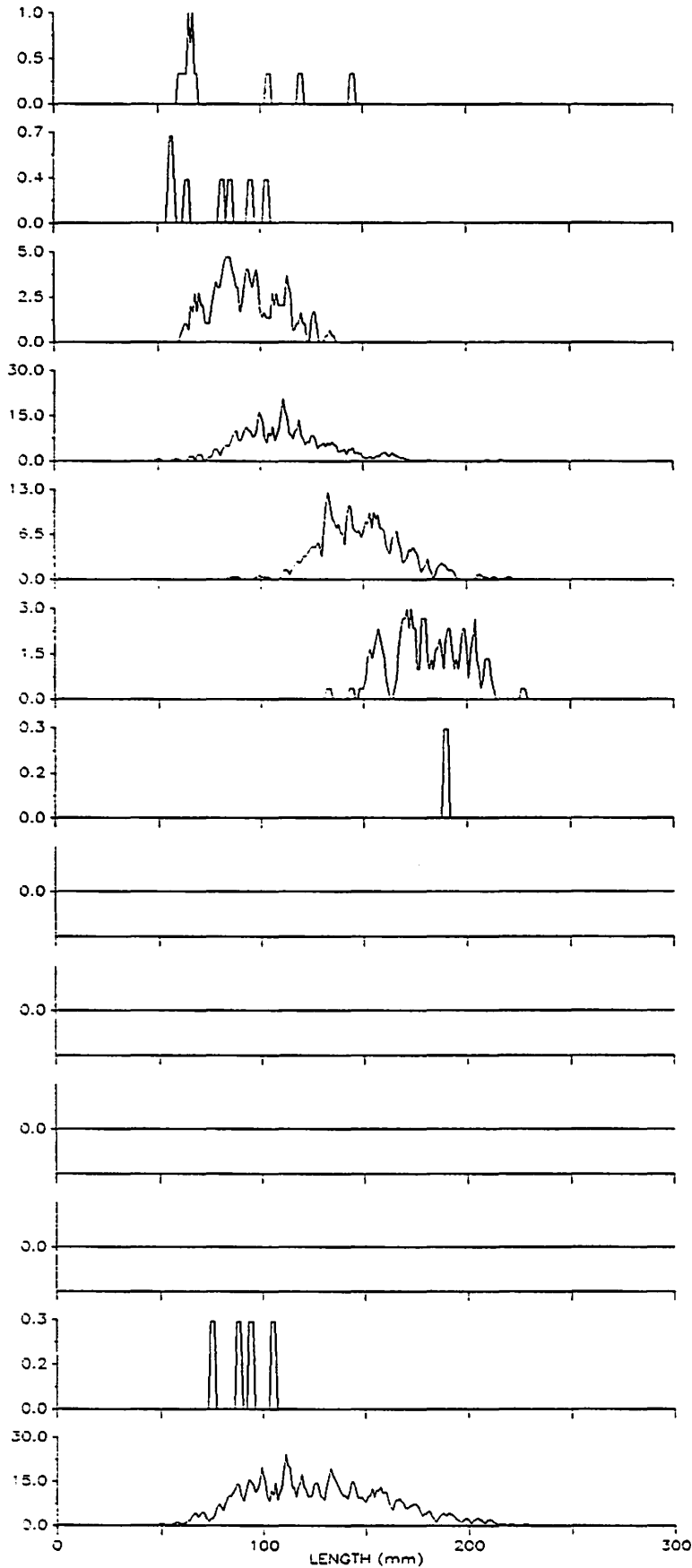
NOVEMBER 911104 - 941116  
 NO. CGHT. - 3313 MEAN SIZE - 129.3  
 NO. MEAS. - 1496 S.E. SIZE - 0.4  
 NO. HAULS - 68 MIN. SIZE - 90  
 CAT./HAUL - 48.7 MAX. SIZE - 197

DECEMBER 911205 - 941208  
 NO. CGHT. - 2873 MEAN SIZE - 116.1  
 NO. MEAS. - 788 S.E. SIZE - 0.4  
 NO. HAULS - 66 MIN. SIZE - 80  
 CAT./HAUL - 43.5 MAX. SIZE - 159

JAN - DEC 910605 - 941208  
 NO. CGHT. - 28355 MEAN SIZE - 130.7  
 NO. MEAS. - 13025 S.E. SIZE - 0.3  
 NO. HAULS - 739 MIN. SIZE - 11  
 CAT./HAUL - 38.4 MAX. SIZE - 332

Figure 92.

Spotted Hake  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	8	MEAN SIZE	84.8
NO. MEAS.	8	S.E. SIZE	11.3
NO. HAULS	51	MIN. SIZE	59
CAT./HAUL	0.2	MAX. SIZE	143

FEBRUARY	920210 - 940203		
NO. CGHT.	7	MEAN SIZE	75.3
NO. MEAS.	7	S.E. SIZE	7.1
NO. HAULS	52	MIN. SIZE	54
CAT./HAUL	0.1	MAX. SIZE	101

MARCH	920303 - 940308		
NO. CGHT.	156	MEAN SIZE	91
NO. MEAS.	150	S.E. SIZE	1.4
NO. HAULS	51	MIN. SIZE	60
CAT./HAUL	3.1	MAX. SIZE	133

APRIL	920415 - 940407		
NO. CGHT.	598	MEAN SIZE	109.9
NO. MEAS.	598	S.E. SIZE	0.9
NO. HAULS	51	MIN. SIZE	48
CAT./HAUL	11.7	MAX. SIZE	214

MAY	920505 - 940505		
NO. CGHT.	447	MEAN SIZE	146.7
NO. MEAS.	414	S.E. SIZE	1
NO. HAULS	54	MIN. SIZE	83
CAT./HAUL	8.3	MAX. SIZE	218

JUNE	910605 - 940602		
NO. CGHT.	102	MEAN SIZE	178.6
NO. MEAS.	102	S.E. SIZE	1.8
NO. HAULS	67	MIN. SIZE	131
CAT./HAUL	1.5	MAX. SIZE	225

JULY	910708 - 940713		
NO. CGHT.	1	MEAN SIZE	188
NO. MEAS.	1	S.E. SIZE	.
NO. HAULS	68	MIN. SIZE	188
CAT./HAUL	0	MAX. SIZE	188

AUGUST	910807 - 940809		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	70	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

SEPTEMBER	910910 - 940902		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	72	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

OCTOBER	911008 - 941006		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	69	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

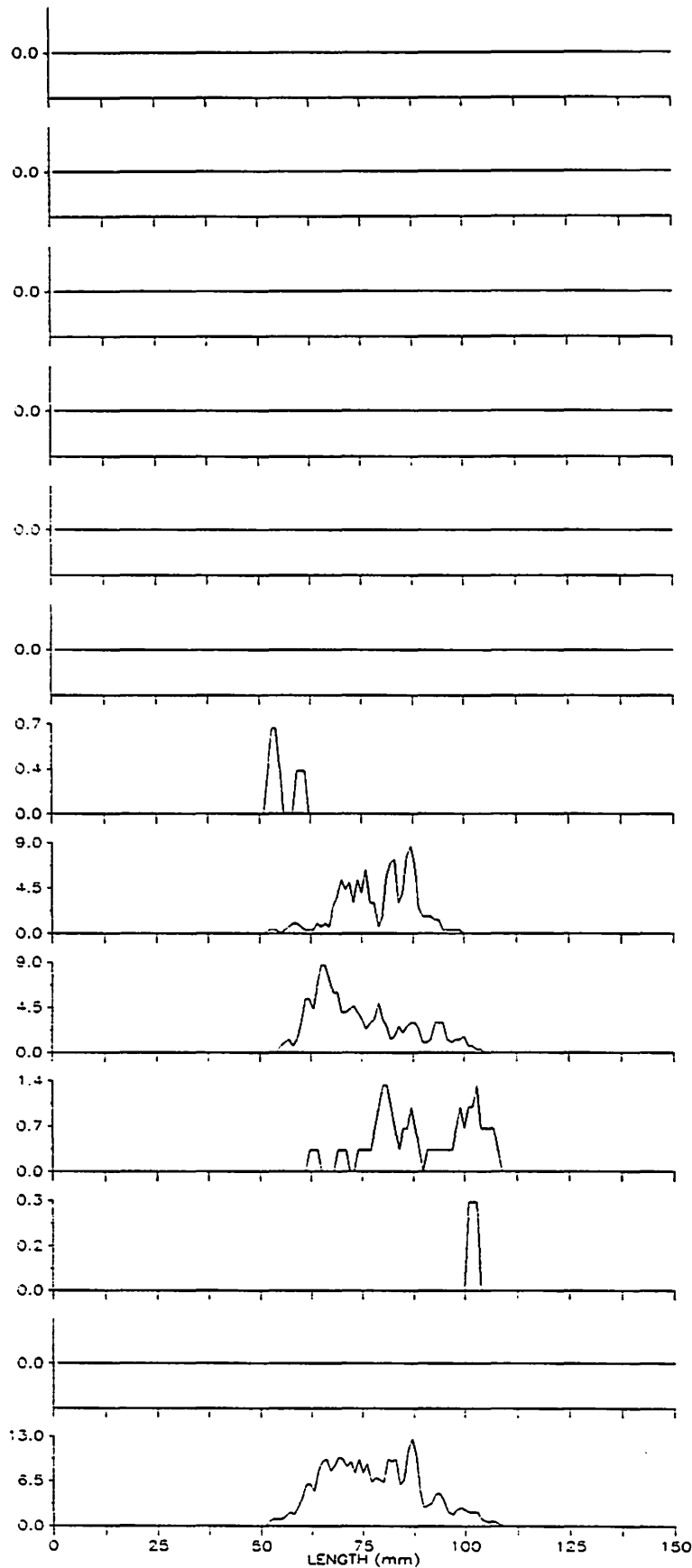
NOVEMBER	911104 - 941116		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. HAULS	68	MIN. SIZE	.
CAT./HAUL	0	MAX. SIZE	.

DECEMBER	911205 - 941208		
NO. CGHT.	4	MEAN SIZE	88.5
NO. MEAS.	4	S.E. SIZE	6.3
NO. HAULS	66	MIN. SIZE	73
CAT./HAUL	0.1	MAX. SIZE	103

JAN - DEC	910605 - 941208		
NO. CGHT.	1323	MEAN SIZE	124.7
NO. MEAS.	1284	S.E. SIZE	0.9
NO. HAULS	739	MIN. SIZE	48
CAT./HAUL	1.8	MAX. SIZE	225

Figure 93.

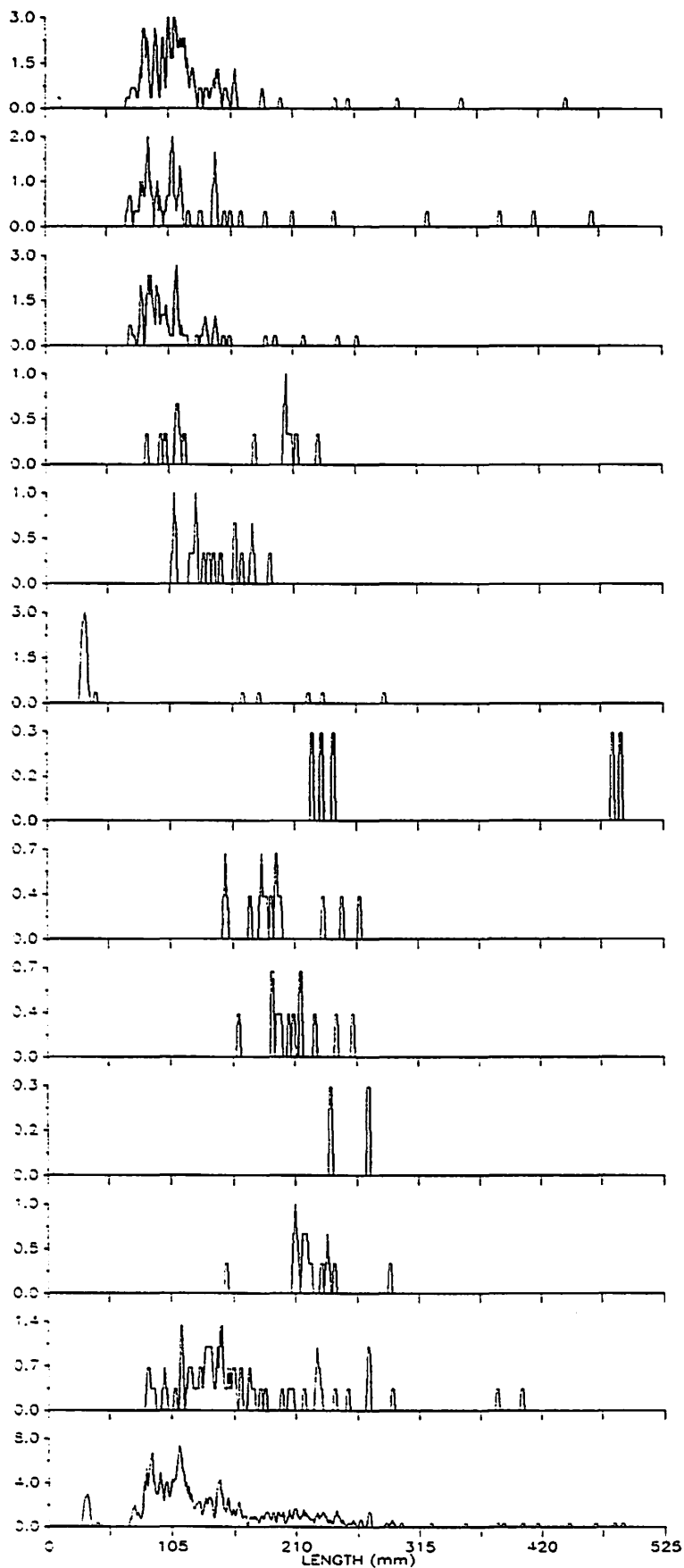
Striped Anchovy  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MAY	920505 - 940505		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	54	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JUNE	910605 - 940602		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	67	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JULY	910708 - 940713		
NO. CGHT.	3	MEAN SIZE	53.7
NO. MEAS.	3	S.E. SIZE	2.2
NO. HAULS	68	MIN. SIZE	51
CAT./HAUL	0	MAX. SIZE	58
AUGUST	910807 - 940809		
NO. CGHT.	119	MEAN SIZE	77
NO. MEAS.	119	S.E. SIZE	0.8
NO. HAULS	70	MIN. SIZE	51
CAT./HAUL	1.7	MAX. SIZE	96
SEPTEMBER	910910 - 940902		
NO. CGHT.	150	MEAN SIZE	72.6
NO. MEAS.	150	S.E. SIZE	0.9
NO. HAULS	72	MIN. SIZE	54
CAT./HAUL	2.1	MAX. SIZE	101
OCTOBER	911008 - 941006		
NO. CGHT.	24	MEAN SIZE	87.3
NO. MEAS.	24	S.E. SIZE	2.5
NO. HAULS	69	MIN. SIZE	61
CAT./HAUL	0.3	MAX. SIZE	105
NOVEMBER	911104 - 941116		
NO. CGHT.	1	MEAN SIZE	100
NO. MEAS.	1	S.E. SIZE	-
NO. HAULS	68	MIN. SIZE	100
CAT./HAUL	0	MAX. SIZE	100
DECEMBER	911205 - 941208		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	66	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
JAN - DEC	910605 - 941208		
NO. CGHT.	297	MEAN SIZE	75.5
NO. MEAS.	297	S.E. SIZE	0.7
NO. HAULS	739	MIN. SIZE	51
CAT./HAUL	0.4	MAX. SIZE	105

Figure 94.

Striped Bass  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 117 MEAN SIZE - 119.4  
 NO. MEAS. - 117 S.E. SIZE - 4.7  
 NO. HAULS - 51 MIN. SIZE - 68  
 CAT./HAUL - 2.3 MAX. SIZE - 442

FEBRUARY 920210 - 940203  
 NO. CGHT. - 53 MEAN SIZE - 142.2  
 NO. MEAS. - 53 S.E. SIZE - 14.8  
 NO. HAULS - 52 MIN. SIZE - 68  
 CAT./HAUL - 1 MAX. SIZE - 618

MARCH 920303 - 940308  
 NO. CGHT. - 68 MEAN SIZE - 110.8  
 NO. MEAS. - 64 S.E. SIZE - 4.8  
 NO. HAULS - 51 MIN. SIZE - 70  
 CAT./HAUL - 1.3 MAX. SIZE - 262

APRIL 920415 - 940407  
 NO. CGHT. - 14 MEAN SIZE - 153.8  
 NO. MEAS. - 14 S.E. SIZE - 14.3  
 NO. HAULS - 51 MIN. SIZE - 84  
 CAT./HAUL - 0.3 MAX. SIZE - 229

MAY 920505 - 940505  
 NO. CGHT. - 17 MEAN SIZE - 140.4  
 NO. MEAS. - 17 S.E. SIZE - 6.1  
 NO. HAULS - 54 MIN. SIZE - 106  
 CAT./HAUL - 0.3 MAX. SIZE - 188

JUNE 910605 - 940602  
 NO. CGHT. - 26 MEAN SIZE - 71.2  
 NO. MEAS. - 23 S.E. SIZE - 16.8  
 NO. HAULS - 67 MIN. SIZE - 28  
 CAT./HAUL - 0.4 MAX. SIZE - 284

JULY 910708 - 940713  
 NO. CGHT. - 5 MEAN SIZE - 332.4  
 NO. MEAS. - 5 S.E. SIZE - 61.8  
 NO. HAULS - 68 MIN. SIZE - 223  
 CAT./HAUL - 0.1 MAX. SIZE - 487

AUGUST 910807 - 940809  
 NO. CGHT. - 14 MEAN SIZE - 224.1  
 NO. MEAS. - 14 S.E. SIZE - 31.2  
 NO. HAULS - 70 MIN. SIZE - 148  
 CAT./HAUL - 0.2 MAX. SIZE - 613

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 12 MEAN SIZE - 207.3  
 NO. MEAS. - 12 S.E. SIZE - 7.5  
 NO. HAULS - 72 MIN. SIZE - 160  
 CAT./HAUL - 0.2 MAX. SIZE - 257

OCTOBER 911008 - 941006  
 NO. CGHT. - 2 MEAN SIZE - 254  
 NO. MEAS. - 2 S.E. SIZE - 16  
 NO. HAULS - 69 MIN. SIZE - 238  
 CAT./HAUL - 0 MAX. SIZE - 270

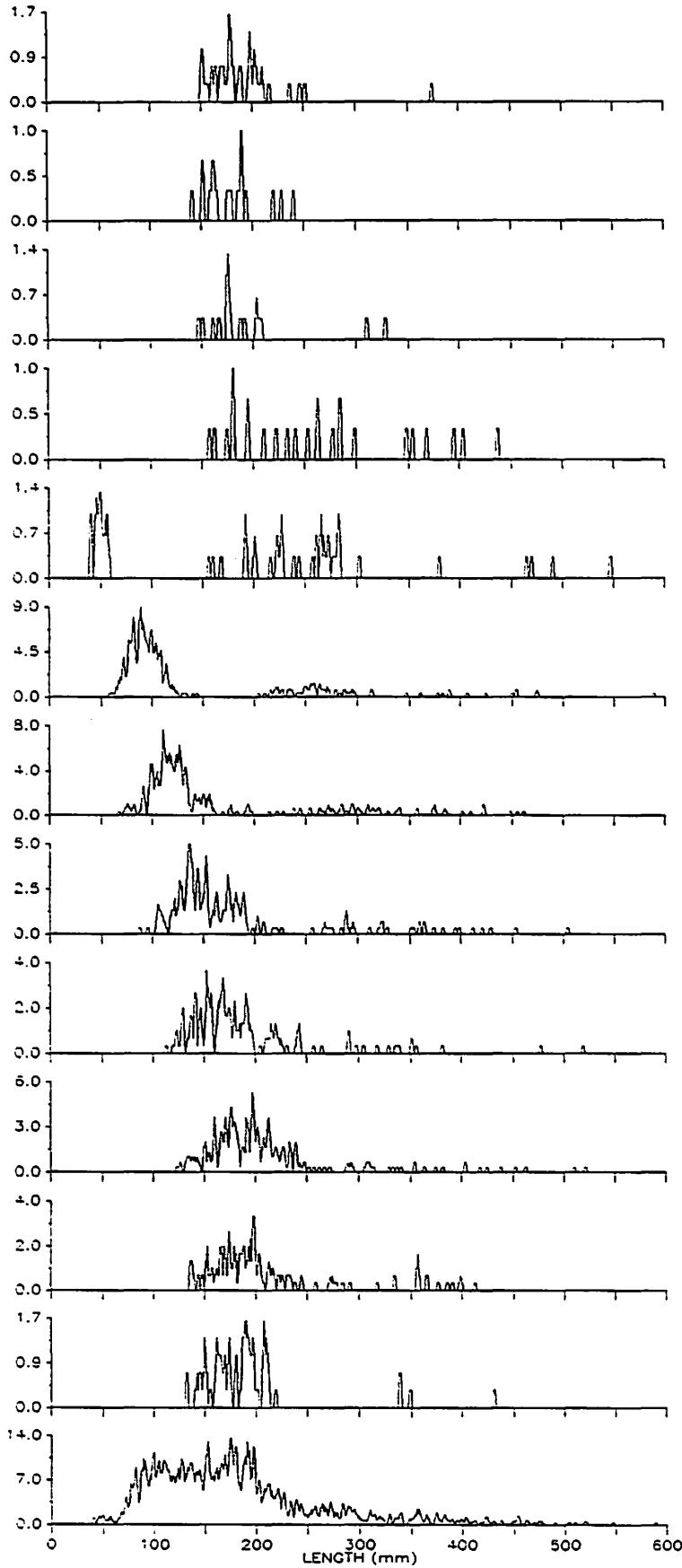
NOVEMBER 911104 - 941116  
 NO. CGHT. - 15 MEAN SIZE - 219.7  
 NO. MEAS. - 15 S.E. SIZE - 7.3  
 NO. HAULS - 68 MIN. SIZE - 149  
 CAT./HAUL - 0.2 MAX. SIZE - 288

DECEMBER 911205 - 941208  
 NO. CGHT. - 66 MEAN SIZE - 164.9  
 NO. MEAS. - 61 S.E. SIZE - 8.5  
 NO. HAULS - 66 MIN. SIZE - 82  
 CAT./HAUL - 1 MAX. SIZE - 401

JAN - DEC 910605 - 941208  
 NO. CGHT. - 409 MEAN SIZE - 140.9  
 NO. MEAS. - 397 S.E. SIZE - 3.9  
 NO. HAULS - 739 MIN. SIZE - 28  
 CAT./HAUL - 0.6 MAX. SIZE - 618

Figure 95.

Summer Flounder  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	39	MEAN SIZE	189.2
NO. MEAS.	39	S.E. SIZE	6.3
NO. HAULS	51	MIN. SIZE	149
CAT./HAUL	0.8	MAX. SIZE	373

FEBRUARY	920210 - 940203		
NO. CGHT.	17	MEAN SIZE	179.4
NO. MEAS.	17	S.E. SIZE	6.8
NO. HAULS	52	MIN. SIZE	139
CAT./HAUL	0.3	MAX. SIZE	238

MARCH	920303 - 940308		
NO. CGHT.	16	MEAN SIZE	194.3
NO. MEAS.	16	S.E. SIZE	12.8
NO. HAULS	51	MIN. SIZE	145
CAT./HAUL	0.3	MAX. SIZE	326

APRIL	920415 - 940407		
NO. CGHT.	25	MEAN SIZE	260.2
NO. MEAS.	25	S.E. SIZE	16.4
NO. HAULS	51	MIN. SIZE	155
CAT./HAUL	0.5	MAX. SIZE	435

MAY	920505 - 940505		
NO. CGHT.	53	MEAN SIZE	197.3
NO. MEAS.	53	S.E. SIZE	17.7
NO. HAULS	54	MIN. SIZE	38
CAT./HAUL	1	MAX. SIZE	545

JUNE	910605 - 940602		
NO. CGHT.	325	MEAN SIZE	132.6
NO. MEAS.	305	S.E. SIZE	5.2
NO. HAULS	67	MIN. SIZE	56
CAT./HAUL	4.9	MAX. SIZE	587

JULY	910708 - 940713		
NO. CGHT.	288	MEAN SIZE	156.7
NO. MEAS.	288	S.E. SIZE	5
NO. HAULS	68	MIN. SIZE	65
CAT./HAUL	4.2	MAX. SIZE	459

AUGUST	910807 - 940809		
NO. CGHT.	268	MEAN SIZE	178.8
NO. MEAS.	206	S.E. SIZE	5.3
NO. HAULS	70	MIN. SIZE	85
CAT./HAUL	3.8	MAX. SIZE	502

SEPTEMBER	910910 - 940902		
NO. CGHT.	154	MEAN SIZE	187.5
NO. MEAS.	154	S.E. SIZE	5.1
NO. HAULS	72	MIN. SIZE	111
CAT./HAUL	2.1	MAX. SIZE	517

OCTOBER	911008 - 941006		
NO. CGHT.	234	MEAN SIZE	208.5
NO. MEAS.	234	S.E. SIZE	4.4
NO. HAULS	69	MIN. SIZE	121
CAT./HAUL	3.4	MAX. SIZE	519

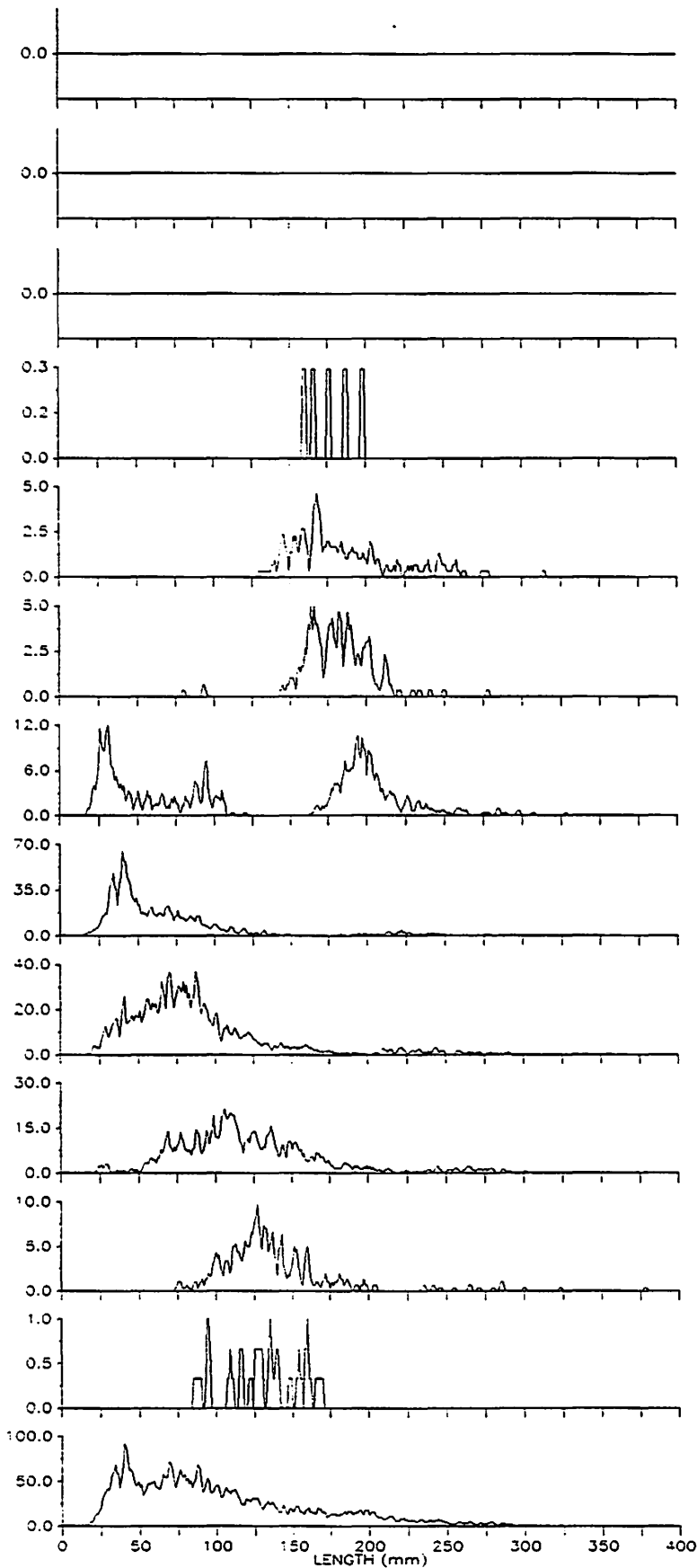
NOVEMBER	911104 - 941116		
NO. CGHT.	132	MEAN SIZE	209.9
NO. MEAS.	132	S.E. SIZE	5.8
NO. HAULS	68	MIN. SIZE	134
CAT./HAUL	1.9	MAX. SIZE	411

DECEMBER	911205 - 941208		
NO. CGHT.	65	MEAN SIZE	188.9
NO. MEAS.	60	S.E. SIZE	6.8
NO. HAULS	66	MIN. SIZE	130
CAT./HAUL	1	MAX. SIZE	429

JAN - DEC	910605 - 941208		
NO. CGHT.	1616	MEAN SIZE	176.3
NO. MEAS.	1529	S.E. SIZE	2.1
NO. HAULS	739	MIN. SIZE	38
CAT./HAUL	2.2	MAX. SIZE	587

Figure 96.

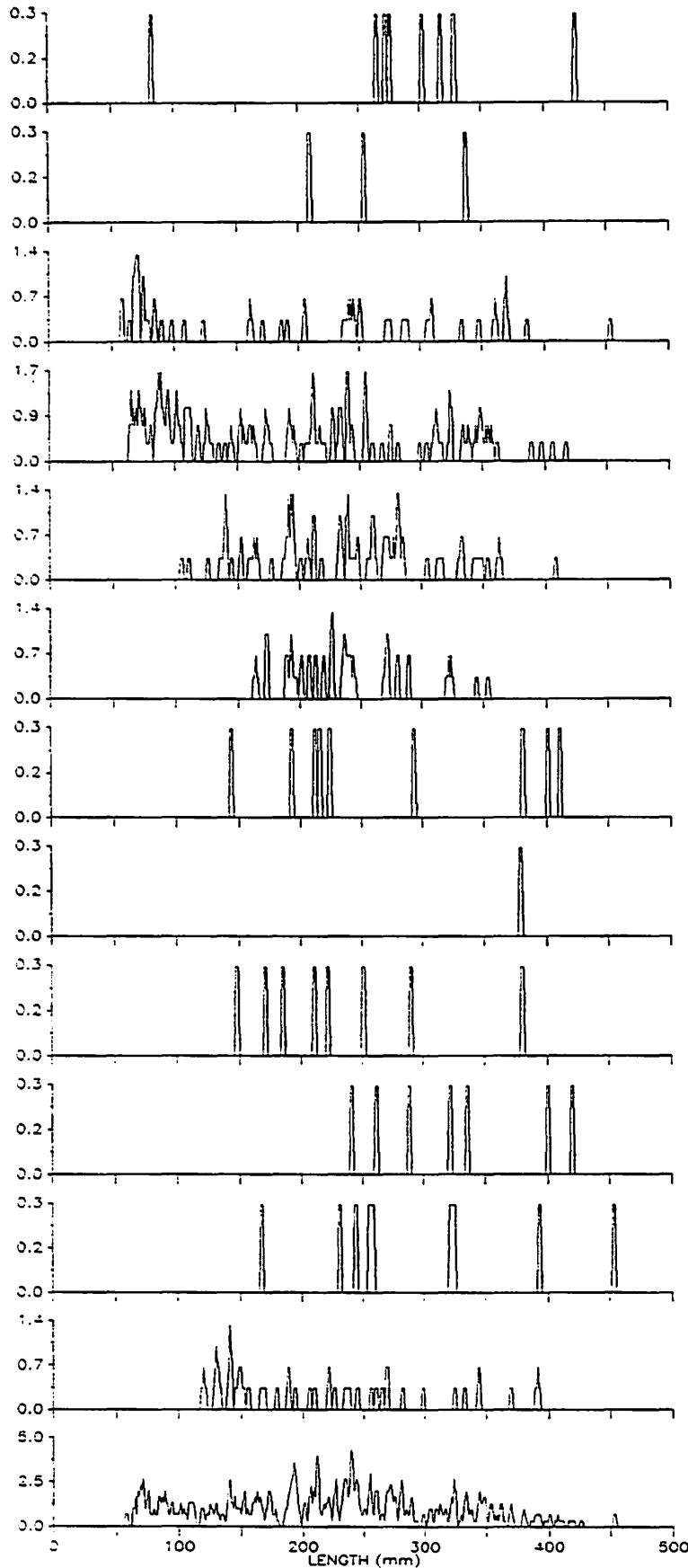
Weakfish  
1991 - 1994 Pooled



JANUARY	920120 - 940112		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
FEBRUARY	920210 - 940203		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	52	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
MARCH	920303 - 940308		
NO. CGHT.	0	MEAN SIZE	-
NO. MEAS.	0	S.E. SIZE	-
NO. HAULS	51	MIN. SIZE	-
CAT./HAUL	0	MAX. SIZE	-
APRIL	920415 - 940407		
NO. CGHT.	5	MEAN SIZE	- 175.4
NO. MEAS.	5	S.E. SIZE	- 6.9
NO. HAULS	51	MIN. SIZE	- 158
CAT./HAUL	0.1	MAX. SIZE	- 196
MAY	920505 - 940505		
NO. CGHT.	261	MEAN SIZE	- 182.6
NO. MEAS.	151	S.E. SIZE	- 2.8
NO. HAULS	54	MIN. SIZE	- 128
CAT./HAUL	4.8	MAX. SIZE	- 312
JUNE	910605 - 940602		
NO. CGHT.	189	MEAN SIZE	- 179
NO. MEAS.	177	S.E. SIZE	- 1.8
NO. HAULS	67	MIN. SIZE	- 78
CAT./HAUL	2.8	MAX. SIZE	- 276
JULY	910708 - 940713		
NO. CGHT.	763	MEAN SIZE	- 128.5
NO. MEAS.	597	S.E. SIZE	- 3.3
NO. HAULS	68	MIN. SIZE	- 16
CAT./HAUL	11.2	MAX. SIZE	- 326
AUGUST	910807 - 940809		
NO. CGHT.	5365	MEAN SIZE	- 66.9
NO. MEAS.	1886	S.E. SIZE	- 1.1
NO. HAULS	70	MIN. SIZE	- 14
CAT./HAUL	76.6	MAX. SIZE	- 314
SEPTEMBER	910910 - 940902		
NO. CGHT.	6506	MEAN SIZE	- 86.2
NO. MEAS.	2116	S.E. SIZE	- 1.1
NO. HAULS	72	MIN. SIZE	- 16
CAT./HAUL	90.4	MAX. SIZE	- 353
OCTOBER	911008 - 941006		
NO. CGHT.	1891	MEAN SIZE	- 121.1
NO. MEAS.	1367	S.E. SIZE	- 1.4
NO. HAULS	69	MIN. SIZE	- 15
CAT./HAUL	27.4	MAX. SIZE	- 376
NOVEMBER	911104 - 941116		
NO. CGHT.	344	MEAN SIZE	- 136.4
NO. MEAS.	344	S.E. SIZE	- 2.1
NO. HAULS	68	MIN. SIZE	- 72
CAT./HAUL	5.1	MAX. SIZE	- 376
DECEMBER	911205 - 941208		
NO. CGHT.	27	MEAN SIZE	- 127.4
NO. MEAS.	27	S.E. SIZE	- 4.8
NO. HAULS	66	MIN. SIZE	- 84
CAT./HAUL	0.4	MAX. SIZE	- 167
JAN - DEC	910605 - 941208		
NO. CGHT.	15351	MEAN SIZE	- 99.2
NO. MEAS.	6670	S.E. SIZE	- 0.7
NO. HAULS	739	MIN. SIZE	- 14
CAT./HAUL	20.8	MAX. SIZE	- 376

Figure 97.

White Catfish  
1991 - 1994 Pooled



JANUARY 920120 - 940112  
 NO. CGHT. - 8 MEAN SIZE - 282  
 NO. MEAS. - 8 S.E. SIZE - 34  
 NO. HAULS - 51 MIN. SIZE - 81  
 CAT./HAUL - 0.2 MAX. SIZE - 424

FEBRUARY 920210 - 940203  
 NO. CGHT. - 3 MEAN SIZE - 265.3  
 NO. MEAS. - 3 S.E. SIZE - 37.5  
 NO. HAULS - 52 MIN. SIZE - 208  
 CAT./HAUL - 0.1 MAX. SIZE - 336

MARCH 920303 - 940308  
 NO. CGHT. - 50 MEAN SIZE - 197  
 NO. MEAS. - 50 S.E. SIZE - 16.4  
 NO. HAULS - 51 MIN. SIZE - 56  
 CAT./HAUL - 1 MAX. SIZE - 451

APRIL 920415 - 940407  
 NO. CGHT. - 132 MEAN SIZE - 195.3  
 NO. MEAS. - 132 S.E. SIZE - 8.6  
 NO. HAULS - 51 MIN. SIZE - 62  
 CAT./HAUL - 2.6 MAX. SIZE - 415

MAY 920505 - 940505  
 NO. CGHT. - 73 MEAN SIZE - 234.1  
 NO. MEAS. - 73 S.E. SIZE - 8.1  
 NO. HAULS - 54 MIN. SIZE - 103  
 CAT./HAUL - 1.4 MAX. SIZE - 406

JUNE 910605 - 940602  
 NO. CGHT. - 44 MEAN SIZE - 234.3  
 NO. MEAS. - 44 S.E. SIZE - 7.4  
 NO. HAULS - 67 MIN. SIZE - 161  
 CAT./HAUL - 0.7 MAX. SIZE - 352

JULY 910708 - 940713  
 NO. CGHT. - 9 MEAN SIZE - 273  
 NO. MEAS. - 9 S.E. SIZE - 33.3  
 NO. HAULS - 68 MIN. SIZE - 142  
 CAT./HAUL - 0.1 MAX. SIZE - 409

AUGUST 910807 - 940809  
 NO. CGHT. - 1 MEAN SIZE - 377  
 NO. MEAS. - 1 S.E. SIZE -  
 NO. HAULS - 70 MIN. SIZE - 377  
 CAT./HAUL - 0 MAX. SIZE - 377

SEPTEMBER 910910 - 940902  
 NO. CGHT. - 8 MEAN SIZE - 230.3  
 NO. MEAS. - 8 S.E. SIZE - 26.4  
 NO. HAULS - 72 MIN. SIZE - 146  
 CAT./HAUL - 0.1 MAX. SIZE - 378

OCTOBER 911008 - 941006  
 NO. CGHT. - 7 MEAN SIZE - 322  
 NO. MEAS. - 7 S.E. SIZE - 25.5  
 NO. HAULS - 69 MIN. SIZE - 239  
 CAT./HAUL - 0.1 MAX. SIZE - 418

NOVEMBER 911104 - 941116  
 NO. CGHT. - 9 MEAN SIZE - 292.2  
 NO. MEAS. - 9 S.E. SIZE - 29.4  
 NO. HAULS - 68 MIN. SIZE - 165  
 CAT./HAUL - 0.1 MAX. SIZE - 451

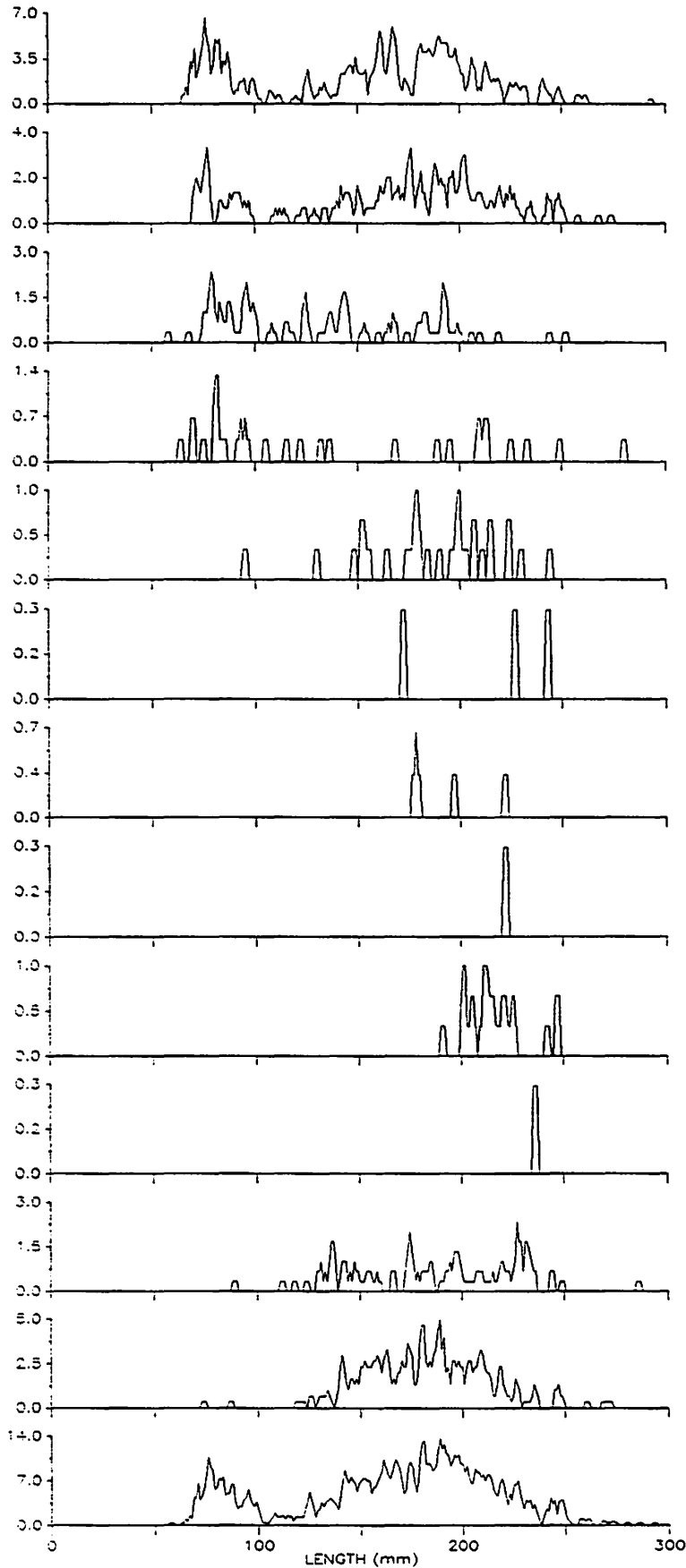
DECEMBER 911205 - 941208  
 NO. CGHT. - 43 MEAN SIZE - 215.8  
 NO. MEAS. - 43 S.E. SIZE - 12.2  
 NO. HAULS - 66 MIN. SIZE - 117  
 CAT./HAUL - 0.7 MAX. SIZE - 390

JAN - DEC 910605 - 941208  
 NO. CGHT. - 387 MEAN SIZE - 219.4  
 NO. MEAS. - 387 S.E. SIZE - 4.7  
 NO. HAULS - 739 MIN. SIZE - 56  
 CAT./HAUL - 0.5 MAX. SIZE - 451



Figure 98.

White Perch  
1991 - 1994 Pooled



JANUARY	920120 - 940112	
NO. CGHT.	433	MEAN SIZE - 157.1
NO. MEAS.	394	S.E. SIZE - 2.8
NO. HAULS	51	MIN. SIZE - 64
CAT./HAUL	8.5	MAX. SIZE - 373

FEBRUARY	920210 - 940203	
NO. CGHT.	186	MEAN SIZE - 164.9
NO. MEAS.	186	S.E. SIZE - 3.8
NO. HAULS	52	MIN. SIZE - 69
CAT./HAUL	3.6	MAX. SIZE - 272

MARCH	920303 - 940308	
NO. CGHT.	86	MEAN SIZE - 131.6
NO. MEAS.	84	S.E. SIZE - 5.1
NO. HAULS	51	MIN. SIZE - 56
CAT./HAUL	1.7	MAX. SIZE - 250

APRIL	920415 - 940407	
NO. CGHT.	28	MEAN SIZE - 139.6
NO. MEAS.	28	S.E. SIZE - 12.5
NO. HAULS	51	MIN. SIZE - 62
CAT./HAUL	0.5	MAX. SIZE - 278

MAY	920505 - 940505	
NO. CGHT.	28	MEAN SIZE - 184.9
NO. MEAS.	28	S.E. SIZE - 6.2
NO. HAULS	54	MIN. SIZE - 93
CAT./HAUL	0.5	MAX. SIZE - 242

JUNE	910605 - 940602	
NO. CGHT.	3	MEAN SIZE - 212
NO. MEAS.	3	S.E. SIZE - 21.5
NO. HAULS	67	MIN. SIZE - 170
CAT./HAUL	0	MAX. SIZE - 241

JULY	910708 - 940713	
NO. CGHT.	4	MEAN SIZE - 191.8
NO. MEAS.	4	S.E. SIZE - 10.4
NO. HAULS	68	MIN. SIZE - 175
CAT./HAUL	0.1	MAX. SIZE - 220

AUGUST	910807 - 940809	
NO. CGHT.	1	MEAN SIZE - 220
NO. MEAS.	1	S.E. SIZE - .
NO. HAULS	70	MIN. SIZE - 220
CAT./HAUL	0	MAX. SIZE - 220

SEPTEMBER	910910 - 940902	
NO. CGHT.	20	MEAN SIZE - 214.7
NO. MEAS.	20	S.E. SIZE - 3.4
NO. HAULS	72	MIN. SIZE - 189
CAT./HAUL	0.3	MAX. SIZE - 245

OCTOBER	911008 - 941006	
NO. CGHT.	1	MEAN SIZE - 234
NO. MEAS.	1	S.E. SIZE - .
NO. HAULS	69	MIN. SIZE - 234
CAT./HAUL	0	MAX. SIZE - 234

NOVEMBER	911104 - 941116	
NO. CGHT.	81	MEAN SIZE - 184.3
NO. MEAS.	81	S.E. SIZE - 4.4
NO. HAULS	68	MIN. SIZE - 87
CAT./HAUL	1.2	MAX. SIZE - 284

DECEMBER	911205 - 941208	
NO. CGHT.	233	MEAN SIZE - 180.3
NO. MEAS.	228	S.E. SIZE - 2
NO. HAULS	66	MIN. SIZE - 72
CAT./HAUL	3.5	MAX. SIZE - 270

JAN - DEC	910605 - 941208	
NO. CGHT.	1104	MEAN SIZE - 165.3
NO. MEAS.	1058	S.E. SIZE - 1.5
NO. HAULS	739	MIN. SIZE - 56
CAT./HAUL	1.5	MAX. SIZE - 373

Figure 99. Comparison of number of species caught and mean number of fish per trawl between York River random and fixed surveys.

# York River Random-Stratified and Fixed Station Surveys

## Species Information 1991-1994

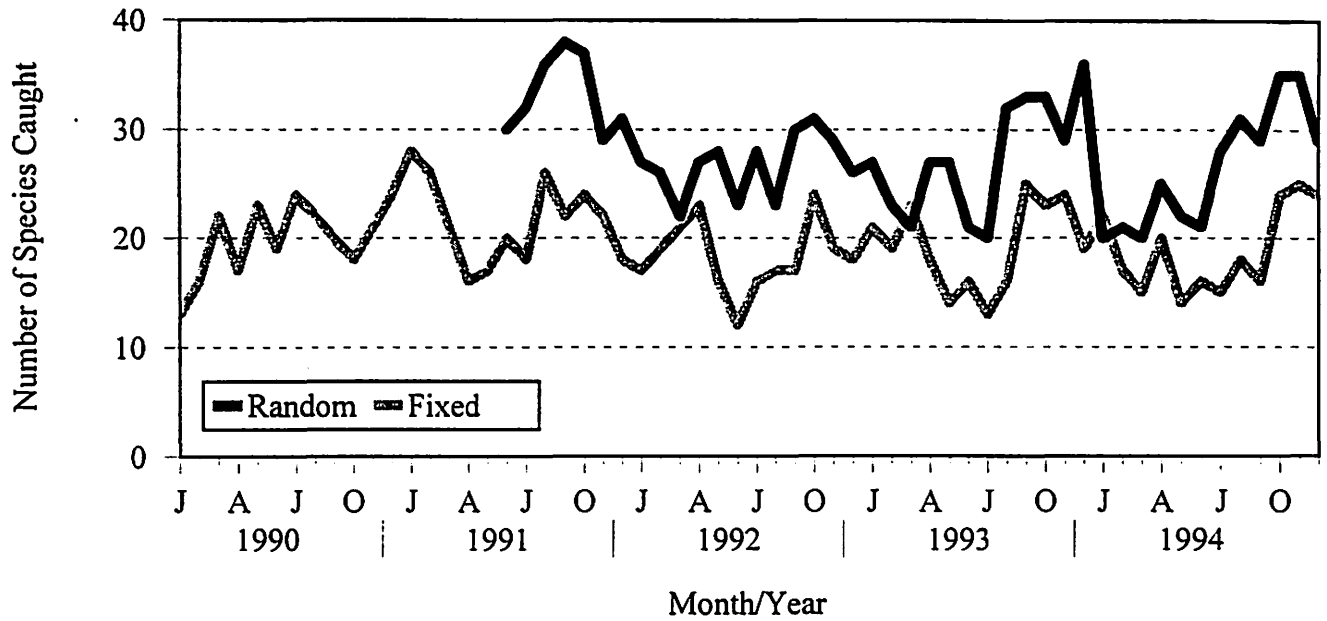


Figure 99a. Comparison of number of species caught between York River random and fixed surveys.

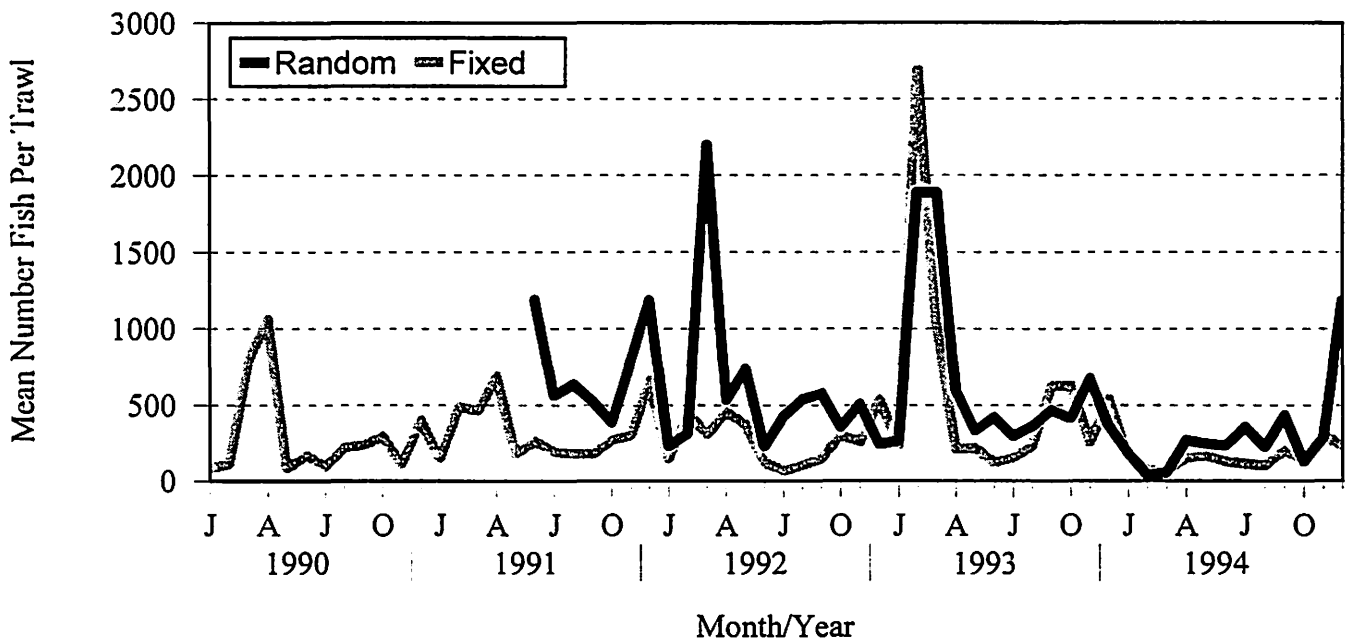


Figure 99b. Comparison of mean number of fish per trawl in both random and fixed trawl surveys

# APPENDICES

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**APPENDIX A**

**Sample Data Sheet**

FILE: STADATA.SHT  
6-18-92

\*\*\*\*\*  
Station Data Record  
VIMS Trawl Survey  
\*\*\*\*\*

Cruise: TS94R4  
StaDate: 94 / 11 / 16  
year month day  
(LOCAL TIME)

STATION DATA

(Tow #) Station#	River	RiverMile	Lat_beg	Long_beg	SetDepth feet meters	Tide	TowDir1	TowDir2	Time_beg	Time_end
12	YK	—	3715.06	7631.00	48 14.6	6	1	2	739	744
Stratum	Compass	Gear	Lat_end	Long_end	Eng_rpm	Secchi	Tow Duration	Tow Distance	Remarks	
22	320	108	3715.14	7631.46	1000	2.0	5	—	104	

HYDRO DATA

WaterDepth	PCodeTemp	TempDegC	ParCodeDO	D.O.	ParCodeSal	Salinity
Surface:	HL	14.79	HL	8.32	HL	18.7
Bottom:	HL	14.70	HL	8.08	HL	20.0
Other:						

CREW

Chief Sci.	MATHES				
Captain	GERDES				
Transcrib.	LAND				
	SEB0				

ATHOS DATA

ParCodeTemp	AirTempC	ParCodeWind	WindSpeed	WindDir	ParWeather	Weather	ParCodeSea	SeaState
275	WS	14.2	03	05	36	03	2	V11
			10	N				

CRUISE DATA

Cruise Number	Cruise Date Begin	Time Begin
	1 9	
Vessel	Cruise Date End	Time End
	1 9	

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

COMMENTS

**APPENDIX B**

Common and Scientific Names of Species Caught 1991-1994.

Species Names - Common Name Order		YEAR			
Common Name	Latin Name	1991	1992	1993	1994
American eel	<i>Anguilla rostrata</i>	X	X	X	X
American shad	<i>Alosa sapidissima</i>	X	X	X	X
Atlantic croaker	<i>Micropogonias undulatus</i>	X	X	X	X
Atlantic cutlassfish	<i>Trichiurus lepturus</i>	X			X
Atlantic herring	<i>Clupea harengus</i>		X	X	X
Atlantic menhaden	<i>Brevoortia tyrannus</i>	X	X	X	X
Atlantic needlefish	<i>Strongylura marina</i>				X
Atlantic silverside	<i>Menidia menidia</i>	X	X	X	X
Atlantic spadefish	<i>Chaetodipterus faber</i>	X	X	X	X
Atlantic stingray	<i>Dasyatis sabina</i>		X		X
Atlantic thread herring	<i>Opisthonema oglinum</i>	X	X	X	X
alewife	<i>Alosa pseudoharengus</i>		X	X	X
bay anchovy	<i>Anchoa mitchilli</i>	X	X	X	X
bighead searobin	<i>Prionotus tribulus</i>				X
black drum	<i>Pogonius cromis</i>			X	
black seabass	<i>Centropristis striata</i>	X	X	X	X
blackcheek tonguefish	<i>Symphurus plagiusa</i>	X	X	X	X
blue crab	<i>Callinectes sapidus</i>				X
blue crab, adult female	<i>Callinectes sapidus, ad fem</i>	X	X	X	X
blue crab, juvenile female	<i>Callinectes sapidus, juv fem</i>	X	X	X	X
blue crab, male	<i>Callinectes sapidus, male</i>	X	X	X	X
blue runner	<i>Caranx crysos</i>			X	
blueback herring	<i>Alosa aestivalis</i>	X	X	X	X
bluefish	<i>Pomatomus saltatrix</i>	X		X	X
bluntnose stingray	<i>Dasyatis sayi</i>		X		
brown shrimp	<i>Penaeus aztecus</i>	X	X	X	X
butterfish	<i>Peprilus triacanthus</i>	X	X	X	X
chain pipefish	<i>Syngnathus louisianae</i>	X		X	
channel catfish	<i>Ictalurus punctatus</i>		X		
cobia	<i>Rachycentron canadum</i>			X	
conger eel	<i>Conger oceanicus</i>	X	X		X
crested blenny	<i>Hypseurochilus geminatus</i>				X
dusky pipefish	<i>Syngnathus floridae</i>			X	
fawn cusk-eel	<i>Lepophidium cervinum</i>	X			
feather blenny	<i>Hypsoblennius hentzi</i>	X	X	X	X
fourespine stickleback	<i>Apeltes quadracus</i>				X
fringed flounder	<i>Etropus crossotus</i>	X			X
gag	<i>Mycteroperca microlepis</i>	X			
gizzard shad	<i>Dorosoma cepedianum</i>	X	X	X	X
gray snapper	<i>Lutjanus griseus</i>	X	X		
green goby	<i>Microgobius thalassinus</i>	X	X	X	X
harvestfish	<i>Peprilus alepidotus</i>	X	X	X	X
hogchoker	<i>Trinectes maculatus</i>	X	X	X	X
inshore lizardfish	<i>Synodus foetens</i>	X	X	X	X
kingfish	<i>Menticirrhus spp.</i>	X	X	X	X



Species Names - Common Name Order		YEAR			
Common Name	Latin Name	1991	1992	1993	1994
least brook lamprey	<i>Lampetra aepyptera</i>		X		
lined seahorse	<i>Hippocampus erectus</i>	X	X	X	X
longnose gar	<i>Lepisosteus osseus</i>		X	X	X
lookdown	<i>Selene vomer</i>	X			X
mottled mojarra	<i>Eucinostomus lefroyi</i>		X		
mummichog	<i>Fundulus heteroclitus</i>		X		
naked goby	<i>Gobiosoma bosci</i>	X	X	X	X
northern kingfish	<i>Menticirrhus saxatilis</i>	X		X	
northern pipefish	<i>Syngnathus fuscus</i>	X	X	X	X
northern puffer	<i>Sphoeroides maculatus</i>	X	X	X	
northern searobin	<i>Prionotus carolinus</i>	X	X	X	X
northern stargazer	<i>Astroscopus guttatus</i>	X			
orange filefish	<i>Aluterus schoepfi</i>			X	
oyster toadfish	<i>Opsanus tau</i>	X	X	X	X
pigfish	<i>Orthopristis chrysoptera</i>	X	X	X	X
pinfish	<i>Lagodon rhomboides</i>		X		X
pink shrimp	<i>Penaeus duorarum</i>	X		X	
planehead filefish	<i>Monocanthus hispidus</i>	X			
pumpkinseed	<i>Lepomis gibbosus</i>				X
red drum	<i>Sciaenops ocellatus</i>		X	X	
red hake	<i>Urophycis chuss</i>				X
scup	<i>Stenotomus chrysops</i>	X	X	X	X
sea lamprey	<i>Petromyzon marinus</i>			X	X
seaboard goby	<i>Gobiosoma ginsburgi</i>			X	X
searobins	<i>Prionotus spp.</i>	X			
sheepshead	<i>Archosargus probatocephalus</i>	X			X
sheepshead minnow	<i>Cyprinodon variegatus</i>	X			
silver perch	<i>Bairdiella chrysoura</i>	X	X	X	X
skilletfish	<i>Gobiesox strumosus</i>	X	X	X	X
smallmouth flounder	<i>Etropus microstomus</i>	X	X	X	X
southern kingfish	<i>Menticirrhus americanus</i>	X	X	X	
southern stingray	<i>Dasyatis americana</i>				X
Spanish mackerel	<i>Scomberomorus maculatus</i>	X		X	
spiny butterfly ray	<i>Gymnura altavela</i>	X			
spot	<i>Leiostomus xanthurus</i>	X	X	X	X
spotfin butterflyfish	<i>Chaetodon ocellatus</i>	X			
spotfin mojarra	<i>Eucinostomus argenteus</i>			X	
spottail shiner	<i>Notropis hudsonius</i>				X
spotted hake	<i>Urophycis regia</i>	X	X	X	X
spotted seatrout	<i>Cynoscion nebulosus</i>	X	X	X	X
squid	<i>Loliginid sp.</i>		X	X	X
striped anchovy	<i>Anchoa hepsetus</i>	X	X	X	X
striped bass	<i>Morone saxatilis</i>	X	X	X	X
striped blenny	<i>Chasmodes bosquianus</i>	X	X		X
striped burrfish	<i>Chilomycterus schoepfi</i>			X	

Species Names - Common Name Order		YEAR			
Common Name	Latin Name	1991	1992	1993	1994
striped cusk-eel	<i>Ophidion marginatum</i>	X	X		
striped killifish	<i>Fundulus majalis</i>				X
striped mullet	<i>Mugil cephalus</i>		X		
striped searobin	<i>Prionotus evolans</i>	X	X	X	X
summer flounder	<i>Paralichthys dentatus</i>	X	X	X	X
tautog	<i>Tautoga onitis</i>	X	X	X	X
threadfin shad	<i>Dorosoma petenense</i>	X			X
threespine stickleback	<i>Gasterosteus aculeatus</i>				X
weakfish	<i>Cynoscion regalis</i>	X	X	X	X
white catfish	<i>Ictalurus catus</i>	X	X	X	X
white mullet	<i>Mugil curema</i>	X			
white perch	<i>Morone americana</i>	X	X	X	X
white shrimp	<i>Penaeus setiferus</i>		X	X	X
windowpane	<i>Scophthalmus aquosus</i>		X	X	X

Species Names - Latin Name Order		YEAR			
Latin Name	Common Name	1991	1992	1993	1994
<i>Alosa aestivalis</i>	blueback herring	X	X	X	X
<i>Alosa pseudoharengus</i>	alewife		X	X	X
<i>Alosa sapidissima</i>	American shad	X	X	X	X
<i>Aluterus schoepfi</i>	orange filefish			X	
<i>Anchoa hepsetus</i>	striped anchovy	X	X	X	X
<i>Anchoa mitchilli</i>	bay anchovy	X	X	X	X
<i>Anguilla rostrata</i>	American eel	X	X	X	X
<i>Apeltes quadracus</i>	fourspine stickleback				X
<i>Archosargus probatocephalus</i>	sheepshead	X			X
<i>Astroscopus guttatus</i>	northern stargazer	X			
<i>Bairdiella chrysoura</i>	silver perch	X	X	X	X
<i>Brevoortia tyrannus</i>	Atlantic menhaden	X	X	X	X
<i>Callinectes sapidus</i>	blue crab				X
<i>Callinectes sapidus, ad fem</i>	blue crab, adult female	X	X	X	X
<i>Callinectes sapidus, juv fem</i>	blue crab, juvenile female	X	X	X	X
<i>Callinectes sapidus, male</i>	blue crab, male	X	X	X	X
<i>Caranx crysos</i>	blue runner			X	
<i>Centropristis striata</i>	black seabass	X	X	X	X
<i>Chaetodipterus faber</i>	Atlantic spadefish	X	X	X	X
<i>Chaetodon ocellatus</i>	spotfin butterflyfish	X			
<i>Chasmodes bosquianus</i>	striped blenny	X	X		X
<i>Chilomycterus schoepfi</i>	striped burrfish			X	
<i>Clupea harengus</i>	Atlantic herring		X	X	X
<i>Conger oceanicus</i>	conger eel	X	X		X
<i>Cynoscion nebulosus</i>	spotted seatrout	X	X	X	X
<i>Cynoscion regalis</i>	weakfish	X	X	X	X
<i>Cyprinodon variegatus</i>	sheepshead minnow	X			
<i>Dasyatis americana</i>	southern stingray				X
<i>Dasyatis sabina</i>	Atlantic stingray		X		X
<i>Dasyatis sayi</i>	bluntnose stingray		X		
<i>Dorosoma cepedianum</i>	gizzard shad	X	X	X	X
<i>Dorosoma petenense</i>	threadfin shad	X			X
<i>Etropus crossotus</i>	fringed flounder	X			X
<i>Etropus microstomus</i>	smallmouth flounder	X	X	X	X
<i>Eucinostomus argenteus</i>	spotfin mojarra			X	
<i>Eucinostomus lefroyi</i>	mottled mojarra		X		
<i>Fundulus heteroclitus</i>	mummichog		X		
<i>Fundulus majalis</i>	striped killifish				X
<i>Gasterosteus aculeatus</i>	threespine stickleback				X
<i>Gobiosox strumosus</i>	skilletfish	X	X	X	X
<i>Gobiosoma bosci</i>	naked goby	X	X	X	X
<i>Gobiosoma ginsburgi</i>	seaboard goby			X	X
<i>Gymnura altavela</i>	spiny butterfly ray	X			
<i>Hippocampus erectus</i>	lined seahorse	X	X	X	X
<i>Hyppleurochilus geminatus</i>	crested blennv				X

Species Names - Latin Name Order		YEAR			
Latin Name	Common Name	1991	1992	1993	1994
<i>Hypsoblennius hentzi</i>	feather blenny	X	X	X	X
<i>Ictalurus catus</i>	white catfish	X	X	X	X
<i>Ictalurus punctatus</i>	channel catfish		X		
<i>Lagodon rhomboides</i>	pinfish		X		X
<i>Lampetra aepyptera</i>	least brook lamprey		X		
<i>Leiostomus xanthurus</i>	spot	X	X	X	X
<i>Lepisosteus osseus</i>	longnose gar		X	X	X
<i>Lepomis gibbosus</i>	pumpkinseed				X
<i>Lepophidium cervinum</i>	fawn cusk-eel	X			
<i>Loliginid sp.</i>	squid		X	X	X
<i>Lutjanus griseus</i>	gray snapper	X	X		
<i>Menidia menidia</i>	Atlantic silverside	X	X	X	X
<i>Menticirrhus americanus</i>	southern kingfish	X	X	X	
<i>Menticirrhus saxatilis</i>	northern kingfish	X		X	
<i>Menticirrhus spp.</i>	kingfish	X	X	X	X
<i>Microgobius thalassinus</i>	green goby	X	X	X	X
<i>Micropogonias undulatus</i>	Atlantic croaker	X	X	X	X
<i>Monocanthus hispidus</i>	planehead filefish	X			
<i>Morone americana</i>	white perch	X	X	X	X
<i>Morone saxatilis</i>	striped bass	X	X	X	X
<i>Mugil cephalus</i>	striped mullet		X		
<i>Mugil curema</i>	white mullet	X			
<i>Mycteroperca microlepis</i>	gag	X			
<i>Notropis hudsonius</i>	spottail shiner				X
<i>Ophidion marginatum</i>	striped cusk-eel	X	X		
<i>Opisthonema oglinum</i>	Atlantic thread herring	X	X	X	X
<i>Opsanus tau</i>	oyster toadfish	X	X	X	X
<i>Orthopristis chrysoptera</i>	pigfish	X	X	X	X
<i>Paralichthys dentatus</i>	summer flounder	X	X	X	X
<i>Penaeus aztecus</i>	brown shrimp	X	X	X	X
<i>Penaeus duorarum</i>	pink shrimp	X		X	
<i>Penaeus setiferus</i>	white shrimp		X	X	X
<i>Peprilus alepidonus</i>	harvestfish	X	X	X	X
<i>Peprilus triacanthus</i>	butterfish	X	X	X	X
<i>Petromyzon marinus</i>	sea lamprey			X	X
<i>Pogonius cromis</i>	black drum			X	
<i>Pomatomus saltatrix</i>	bluefish	X		X	X
<i>Prionotus carolinus</i>	northern searobin	X	X	X	X
<i>Prionotus evolans</i>	striped searobin	X	X	X	X
<i>Prionotus spp.</i>	searobins	X			
<i>Prionotus tribulus</i>	bighead searobin				X
<i>Rachycentron canadum</i>	cobia			X	
<i>Sciaenops ocellatus</i>	red drum		X	X	
<i>Scomberomorus maculatus</i>	Spanish mackerel	X		X	
<i>Scophthalmus aquosus</i>	windowpane		X	X	X

Species Names - Latin Name Order		YEAR			
Latin Name	Common Name	1991	1992	1993	1994
<i>Selene vomer</i>	lookdown	X			X
<i>Sphoeroides maculatus</i>	northern puffer	X	X	X	
<i>Stenotomus chrysops</i>	scup	X	X	X	X
<i>Strongylura marina</i>	Atlantic needlefish				X
<i>Symphurus plagiusa</i>	blackcheek tonguefish	X	X	X	X
<i>Syngnathus floridae</i>	dusky pipefish			X	
<i>Syngnathus fuscus</i>	northern pipefish	X	X	X	X
<i>Syngnathus louisianae</i>	chain pipefish	X		X	
<i>Synodus foetens</i>	inshore lizardfish	X	X	X	X
<i>Tautoga onitis</i>	tautog	X	X	X	X
<i>Trichiurus lepturus</i>	Atlantic cutlassfish	X			X
<i>Trinectes maculatus</i>	hogchoker	X	X	X	X
<i>Urophycis chuss</i>	red hake				X
<i>Urophycis regia</i>	spotted hake	X	X	X	X

## APPENDIX C

Number of potential trawl sites and approximate area of sampling strata for the York River Random Stratified Pilot Survey (1989-1995). Segment represents a VIMS geographic classification based on approximately five mile increments.

Area	Stratum <sup>1</sup>	Segment, Depth	Station No.	No. of Points	Square Miles
Bottom York	17	YK1, 4-12ft	1-2	55	3.55
	18	YK1, 12-30ft	3-4	57	3.68
	19	YK1, > 30ft	5-6	79	5.10
	20	YK2, 4-12ft	7-8	39	2.52
	21	YK2, 12-30ft	9-10	30	1.94
	22	YK2, > 30ft	11-12	54	3.49
				314	20.27
Lower York	23	YK3, 4-12ft	13-14	70	4.52
	24	YK3, 12-30ft	15-16	61	3.94
	25	YK3, > 30ft	17-18	15	0.97
	26	YK4, 4-12ft	19-20	41	2.64
	27	YK4, 12-30ft	21-22	53	3.42
	28 <sup>2</sup>	YK4, >30ft	23-24	17	1.10
				257	16.59
Upper York	29	YK5, 4-12ft	25-26	26	1.68
	30	YK5, > 12ft	27-28	45	2.91
	31	YK6, 4-12ft	29-30	27	1.74
	32	YK6, > 12ft	31-32	37	2.39
				135	8.72

1. Strata were changed from a two character variable to a three character variable beginning in 1996.
2. Stratum 28 was combined with 27 beginning June 1992.

**APPENDIX D**

**York River Trawl Survey Strata**



# York River Random Stratified Design

