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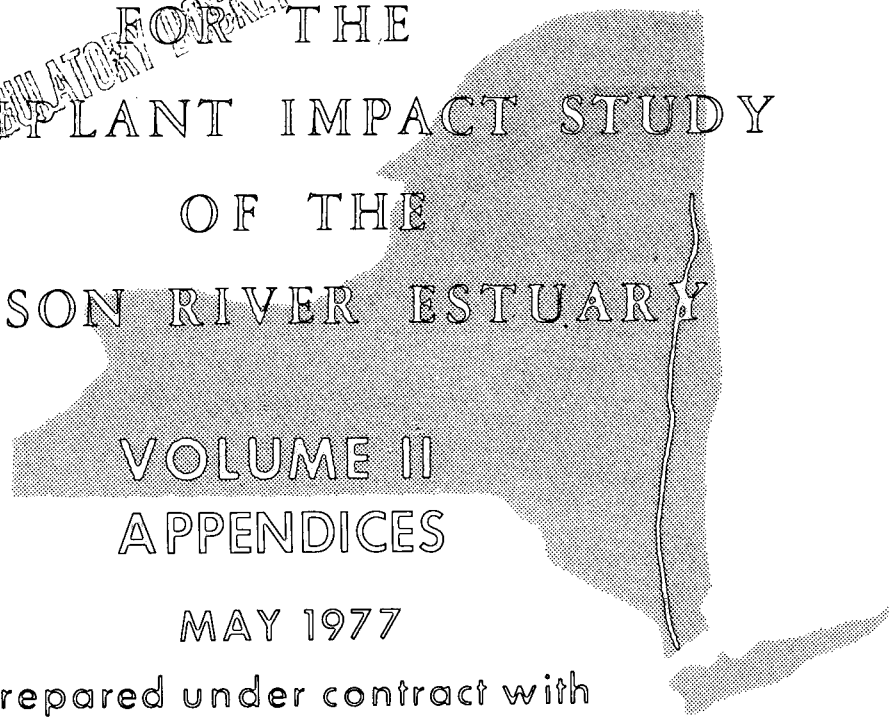

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Density

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ATLANTIC TOMCOD

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Abundance Vs Water Quality

Figure A-62. American Shad Egg Abundance in Epibenthic Sled and Tucker Trawl, April-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Figure A-63. American Shad Yolk-Sac Larvae Abundance in Epibenthic Sled and Tucker Trawl, May-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Figure A-64. American Shad Post Yolk-Sac Larvae Abundance in Epibenthic Sled and Tucker Trawl, May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Juveniles

Density

Table A-38. Juvenile American Shad Density Estimates (No./1000 m^3) within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, April-August 1974

Table A-39. Juvenile American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Data plotted in Figure A-41)

Catch per Unit Effort

Table A-40. Juvenile American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-December 1974

Table A-41. Juvenile American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1974

Table A-42. Juvenile American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), March-November 1974. (Data plotted in Figure A-40)

Standing Crop Estimates

Table A-57. Juvenile American Shad Standing Crop within Each Geographical Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-August 1974. (Data plotted in Figure A-37)

Table A-58. Juvenile American Shad Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974. (Data plotted in Figure A-38)

Table A-59. Juvenile American Shad Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1974. (Data plotted in Figure A-39)

Table A-67. Juvenile American Shad Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974

Table A-74. Percentage of Juvenile American Shad Total Standing Crop from Beach Seine Sampling in Power Plant Regions, Hudson River Estuary, during Period of Peak Abundance in 1974

Length-Frequency Distribution

Table A-97. Juvenile American Shad Length-Frequency Distribution (Percent) Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 12-152 (KM 19-243)], June-November 1974

Table A-98. Juvenile American Shad Length-Frequency Distribution (Percent) Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 34-61 (KM 54-98)], August-November 1974

Table A-99. Juvenile American Shad Length-Frequency Distribution (Percent) Based on Day Sampling by Bottom Trawl, Hudson River Estuary [RM 12-61 (KM 19-98)], June-November 1974

Table A-100. Juvenile American Shad Length-Frequency Distribution (Percent) Based on Night Sampling with Epibenthic Sled in Areas ≤20 Ft Deep and >20 Ft Deep, Hudson River Estuary [RM 34-76 (KM 54-122)], August-November 1974

Abundance Vs Water Quality

Figure A-65. Juvenile American Shad Abundance in Epibenthic Sled and Tucker Trawl, May-August 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Figure A-66. Juvenile American Shad Abundance in Epibenthic Sled, August-December 1974 Fall Shoals Survey, Hudson River Estuary [RM 14-77 (KM 22-123)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Figure A-67. Juvenile American Shad Abundance in Bottom Trawl, April-November 1974 Interregional Bottom Trawl Survey, Hudson River Estuary [RM 12-61 (KM 19-98)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

Figure A-68. Juvenile American Shad Abundance in 100-Ft (30.5-m) Beach Seine, June-November 1974 Beach Seine Survey, Hudson River Estuary [RM 12-152 (KM 19-243)], as Related to Water Temperature and Conductivity

Yearlings

Density

Table A-43. Yearling American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-November 1974

Catch per Unit Effort

Table A-44. Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974. (Data plotted in Figure A-42)

Table A-45. Yearling American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-December 1974

Table A-78. Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975. (Data plotted in Figure A-44)

Table A-46. Yearling American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), March-December 1974. (Data plotted in Figure A-43)

Table A-84. Yearling American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975. (Data plotted in Figure A-45)

Age II and Older

Density

Table A-47. Age II and Older American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-November 1974. (Data plotted in Figure A-46)

III

WATER QUALITY DISTRIBUTION

Figure A-73. Weekly Distribution of Mean Temperature and Conductivity by River Mile, Hudson River Estuary, as Determined from Measurements during 1974 Ichthyoplankton and Fall Shoals Surveys

Figure A-74. Distribution of Mean Dissolved Oxygen by River Mile, Hudson River Estuary, as Determined from Measurements during 1974 Ichthyoplankton Surveys

LONGITUDINAL RIVER AND POWER PLANT REGION
DISTRIBUTION AND ABUNDANCE

A. TABLES

The following tables present 1974 abundance data for striped bass, white perch, and Atlantic tomcod for the end of the 1974 sampling period, October-December. Earlier months' data on these species appear in a previous report (TI, 1975a); however, the 1974 abundance data for American shad represent the entire 1974 sampling period, April-December. The 1975 abundance data for all four species represent the early portion of the 1975 sampling period, late March-June. Data are presented only for those time intervals in which samples were taken in at least one sampling region.

Geographical (sampling) regions are abbreviated as follows:

Sampling Region	Abbreviation	River Miles	Kilometers
Yonkers	YK	12-23	19-37
Tappan Zee	TZ	24-33	38-53
Croton-Haverstraw	CH	34-38	54-61
Indian Point	IP	39-46	62-74
West Point	WP	47-55	75-88
Cornwall	CW	56-61	89-98
Poughkeepsie	PK	62-76	99-122
Hyde Park	HP	77-85	123-136
Kingston	KG	86-93	137-149
Saugerties	SG	94-106	150-170
Catskill	CS	107-124	171-198
Albany	AL	125-152	199-243

Power plant regions are defined as follows:

Plant	Site (River Mile)	River Miles	Kilometers
Bowline	37	31-43	50-69
Lovett	41	35-47	56-75
Indian Point	42	36-48	58-77
Roseton	65	59-71	94-114
Danskammer	66	60-72	96-115

Table A-1

River Strata Volumes (m^{3*}) by River Mile, Hudson River Estuary [RM 14-140 (KM 22-224)], Used To Calculate 1974 Ichthyoplankton Standing Crop Estimates from Epibenthic Sled and Tucker Trawl Catches (Page 1 of 2)

River Mile	Shoals	Bottom	Channel	Total
14	3,300,000	5,100,000	10,500,000	18,900,000
15	2,700,000	5,500,000	11,100,000	19,400,000
16	2,700,000	6,800,000	15,600,000	25,100,000
17	2,300,000	6,700,000	15,100,000	24,100,000
18	1,800,000	6,700,000	16,300,000	24,700,000
19	2,100,000	6,500,000	16,200,000	24,800,000
20	2,300,000	5,800,000	13,100,000	21,200,000
21	2,200,000	6,500,000	16,400,000	25,100,000
22	3,000,000	5,400,000	16,100,000	24,600,000
23	4,200,000	4,400,000	13,000,000	21,600,000
24	6,800,000	4,300,000	13,500,000	24,700,000
25	7,900,000	4,200,000	10,500,000	22,500,000
26	14,400,000	5,500,000	13,200,000	33,100,000
27	15,800,000	7,100,000	15,900,000	38,800,000
28	16,200,000	6,000,000	14,300,000	36,400,000
29	13,600,000	7,000,000	15,400,000	36,000,000
30	20,700,000	3,700,000	9,200,000	33,700,000
31	8,900,000	7,300,000	12,000,000	28,300,000
32	6,900,000	8,600,000	16,800,000	32,300,000
33	10,500,000	8,300,000	17,200,000	36,100,000
34	4,900,000	4,500,000	11,800,000	21,300,000
35	15,300,000	5,400,000	11,900,000	32,600,000
36	14,600,000	7,900,000	12,100,000	34,600,000
37	11,800,000	7,900,000	12,500,000	32,200,000
38	7,200,000	6,800,000	13,000,000	27,000,000
39	3,700,000	6,600,000	19,100,000	29,400,000
40	2,500,000	3,800,000	21,400,000	27,700,000
41	1,100,000	4,700,000	20,000,000	25,800,000
42	1,100,000	5,700,000	17,600,000	24,400,000
43	3,000,000	5,200,000	24,100,000	32,300,000
44	600,000	3,100,000	20,300,000	23,900,000
45	0	2,300,000	21,300,000	23,600,000
46	500,000	2,100,000	18,600,000	21,200,000
47	100,000	2,200,000	18,600,000	20,800,000
48	500,000	2,700,000	17,200,000	20,400,000
49	200,000	2,700,000	20,400,000	23,300,000
50	0	2,600,000	17,100,000	19,700,000
51	0	3,100,000	17,200,000	20,400,000
52	200,000	2,900,000	30,500,000	33,600,000
53	800,000	2,700,000	19,300,000	22,800,000
54	600,000	3,200,000	19,600,000	23,400,000
55	400,000	3,800,000	18,900,000	23,000,000
56	1,200,000	4,600,000	14,900,000	20,700,000
57	2,100,000	6,300,000	15,600,000	23,900,000
58	1,800,000	6,700,000	15,800,000	24,200,000
59	1,400,000	6,600,000	16,700,000	24,600,000
60	600,000	6,300,000	15,700,000	22,600,000
61	1,200,000	6,300,000	16,300,000	23,800,000
62	1,200,000	6,200,000	15,800,000	23,200,000
63	800,000	5,800,000	17,600,000	24,200,000
64	600,000	5,300,000	17,000,000	22,900,000
65	400,000	4,600,000	15,700,000	20,700,000
66	900,000	4,300,000	19,100,000	24,300,000
67	300,000	3,700,000	16,800,000	20,800,000
68	300,000	5,800,000	17,500,000	23,600,000
69	100,000	3,900,000	15,300,000	19,300,000
70	100,000	3,100,000	13,700,000	16,800,000
71	0	3,700,000	13,800,000	17,600,000
72	0	3,600,000	12,800,000	16,400,000
73	100,000	3,100,000	13,100,000	16,300,000
74	0	3,700,000	14,300,000	18,000,000
75	100,000	3,500,000	14,000,000	17,600,000

*Rounded to nearest 100,000 m^3.

Table A-1 (Page 2 of 2)

River Mile	Shoals	Bottom	Channel	Total
76	1,200,000	2,800,000	12,600,000	16,600,000
77	100,000	3,400,000	15,600,000	19,100,000
78	0	3,600,000	14,400,000	18,000,000
79	0	2,400,000	17,600,000	20,000,000
80	300,000	2,800,000	13,900,000	17,000,000
81	300,000	3,800,000	14,600,000	18,700,000
82	400,000	3,800,000	13,300,000	17,400,000
83	100,000	3,700,000	14,200,000	18,100,000
84	500,000	4,700,000	13,500,000	18,700,000
85	500,000	3,700,000	14,200,000	18,500,000
86	1,700,000	2,500,000	12,900,000	17,200,000
87	1,800,000	3,800,000	14,400,000	20,000,000
88	1,300,000	4,700,000	12,900,000	18,000,000
89	1,100,000	4,700,000	12,300,000	19,400,000
90	2,600,000	4,300,000	12,600,000	19,500,000
91	700,000	4,800,000	10,000,000	15,500,000
92	1,900,000	6,500,000	9,100,000	17,500,000
93	1,200,000	4,300,000	9,400,000	14,900,000
94	1,200,000	3,800,000	11,000,000	16,000,000
95	1,300,000	3,500,000	9,800,000	14,600,000
96	1,900,000	3,800,000	7,600,000	13,300,000
97	1,800,000	4,400,000	12,100,000	18,300,000
98	2,400,000	5,000,000	11,400,000	18,800,000
99	3,100,000	2,400,000	8,500,000	13,900,000
100	1,100,000	3,600,000	7,200,000	11,800,000
101	1,100,000	2,500,000	9,600,000	13,200,000
102	1,400,000	3,000,000	9,900,000	14,200,000
103	1,200,000	3,100,000	7,300,000	11,600,000
104	1,300,000	2,900,000	6,400,000	10,500,000
105	900,000	2,700,000	6,900,000	10,600,000
106	1,800,000	2,200,000	5,400,000	9,400,000
107	3,000,000	3,100,000	5,500,000	11,600,000
108	1,100,000	4,100,000	6,600,000	11,900,000
109	1,500,000	3,800,000	6,500,000	11,900,000
110	2,300,000	3,200,000	6,600,000	12,100,000
111	200,000	2,200,000	5,100,000	7,600,000
112	1,600,000	1,800,000	4,100,000	7,500,000
113	2,000,000	1,400,000	3,300,000	6,600,000
114	1,500,000	2,300,000	4,500,000	8,300,000
115	1,700,000	2,700,000	5,300,000	9,600,000
116	2,500,000	1,600,000	3,100,000	7,200,000
117	2,600,000	1,700,000	3,400,000	7,700,000
118	2,200,000	1,700,000	3,700,000	7,600,000
119	3,100,000	1,800,000	3,700,000	8,500,000
120	2,000,000	3,000,000	6,900,000	11,900,000
121	700,000	2,900,000	6,100,000	9,700,000
122	1,700,000	2,700,000	4,500,000	8,900,000
123	2,700,000	1,000,000	2,400,000	6,100,000
124	2,100,000	1,300,000	2,500,000	5,900,000
125	1,500,000	1,400,000	3,300,000	6,300,000
126	1,900,000	1,500,000	3,500,000	6,900,000
127	2,300,000	700,000	1,800,000	4,800,000
128	2,200,000	1,000,000	2,500,000	5,700,000
129	2,700,000	800,000	1,900,000	5,400,000
130	1,600,000	1,000,000	2,000,000	4,600,000
131	1,500,000	1,300,000	2,900,000	5,700,000
132	1,900,000	700,000	1,600,000	4,200,000
133	2,200,000	600,000	1,600,000	4,400,000
134	1,200,000	800,000	1,800,000	3,800,000
135	1,300,000	400,000	900,000	2,600,000
136	1,200,000	600,000	1,400,000	3,200,000
137	1,400,000	600,000	1,500,000	3,500,000
138	1,100,000	600,000	1,600,000	3,400,000
139	1,000,000	700,000	1,900,000	3,600,000
140	600,000	700,000	1,700,000	3,000,000

*Rounded to nearest 100,000 m^3.

Table A-2

Surface Area (m^{2*}) of Shoreline 0 to 10 Ft Deep by River Mile, Hudson River Estuary [RM 12-152 (KM 19-243)], Used To Calculate 1974 Standing Crop Estimates from Beach Seine Catches

River Mile	Shoreline Surface Area (depth, 0-10 ft)	River Mile	Shoreline Surface Area (depth, 0-10 ft)
12	249,000		
13	238,000		
14	135,000	83	181,000
15	318,000	84	167,000
16	321,000	85	63,000
17	165,000	86	691,000
18	95,000	87	1,361,000
19	237,000	88	383,000
20	153,000	89	102,000
21	367,000	90	338,000
22	415,000	91	146,000
23	696,000	92	490,000
24	931,000	93	363,000
25	2,031,000	94	560,000
26	2,697,000	95	788,000
27	4,581,000	96	261,000
28	373,000	97	364,000
29	855,000	98	441,000
30	1,752,000	99	832,000
31	1,368,000	100	507,000
32	1,472,000	101	517,000
33	4,386,000	102	933,000
34	1,258,000	103	596,000
35	3,305,000	104	569,000
36	3,260,000	105	669,000
37	1,961,000	106	863,000
38	2,317,000	107	602,000
39	1,459,000	108	1,371,000
40	517,000	109	832,000
41	120,000	110	173,000
42	62,000	111	250,000
43	1,610,000	112	254,000
44	198,000	113	429,000
45	53,000	114	558,000
46	128,000	115	827,000
47	0	116	275,000
48	63,000	117	289,000
49	166,000	118	354,000
50	0	119	557,000
51	69,000	120	272,000
52	196,000	121	617,000
53	275,000	122	507,000
54	143,000	123	321,000
55	274,000	124	366,000
56	246,000	125	246,000
57	1,232,000	126	282,000
58	1,332,000	127	230,000
59	1,102,000	128	265,000
60	599,000	129	238,000
61	282,000	130	128,000
62	552,000	131	609,000
63	738,000	132	446,000
64	438,000	133	585,000
65	135,000	134	295,000
66	319,000	135	155,000
67	226,000	136	127,000
68	244,000	137	164,000
69	90,000	138	172,000
70	107,000	139	157,000
71	80,000	140	155,000
72	61,000	141	155,000**
73	109,000	142	155,000**
74	0	143	155,000**
75	94,000	144	155,000**
76	0	145	155,000**
77	93,000	146	155,000**
78	0	147	155,000**
79	54,000	148	155,000**
80	0	149	155,000**
81	0	150	155,000**
82	0	151	155,000**
		152	155,000**

*Rounded to nearest 1,000 m^2.

**$\bar{x}$ of RM 135-140.

Table A-3

Juvenile Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974*

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	0 (0)** n = 14	1.39 (0.57) n = 34	12.15 (2.67) n = 19	1.94 (0.77) n = 12	0 (0) n = 5	6.95 (5.93) n = 6	0 (0) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0 (0) n = 16	1.47 (1.07) n = 34	2.03 (0.87) n = 20	1.58 (0.33) n = 12	0 (0) n = 5	0.37 (0.12) n = 8	0 (0) n = 5					
Sep 3-6	0.98 (0.44) n = 16	1.61 (0.71) n = 34	8.28 (3.27) n =20	2.05 (0.57) n = 12	0 (0) n = 4	1.96 (1.72) n = 8	0 (0) n = 5					
Sep 9-12	0.54 (0.37) n = 16	0.66 (0.26) n = 34	3.86 (1.19) n = 19	3.05 (0.89) n = 12	0 (0) n = 5	0.12 (0.08) n = 8	0 (0) n = 5					
Sep 16-19	0.21 (0.21) n = 16	3.17 (1.25) n = 34	7.86 (1.82) n = 20	5.92 (2.72) n = 12	0 (0) n = 5	0.32 (0.08) n = 8	0 (0) n = 5					
Sep 23-26	0 (0) n = 16	0.90 (0.43) n = 34	2.44 (1.32) n = 20	0.25 (0.25) n = 8	0 (0) n = 4	0.94 (0.94) n = 7	0 (0) n = 5					
Sep 30- Oct 4	0.58 (0.31) n = 16	1.43 (0.72) n = 33	2.97 (1.49) n = 20	1.54 (0.59) n = 11	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 7-10	0.82 (0.59) n = 14	1.68 (0.53) n = 31	0.87 (0.24) n = 19	0.44 (0.25) n = 13	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 14-18	1.38 (0.69) n = 15	4.31 (1.32) n = 31	6.88 (1.69) n = 19	4.71 (3.13) n = 12	0 (0) n = 4	1.34 (1.34) n = 7	0 (0) n = 5					
Oct 21-24	0.45 (0.31) n = 16	0.56 (0.24) n = 33	1.79 (0.66) n = 19	0.12 (0.12) n = 12	0 (0) n = 5	0.94 (0.94) n = 8	0 (0) n = 4					
Oct 28 Nov 1	0.90 (0.69) n = 16	0.73 (0.40) n = 34	1.04 (0.34) n = 20	0.52 (0.29) n = 12	0 (0) n = 5	0.84 (0.84) n = 8	0 (0) n = 5					
Nov 5-9	2.41 (0.75) n = 16	1.69 (0.58) n = 28	3.93 (2.20) n = 18	0.64 (0.28) n = 9	0.38 (0.38) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0.63 (0.36) n = 13	1.32 (0.35) n = 34	2.53 (0.97) n = 18	0.19 (0.12) n = 12	0 (0) n = 5	0.08 (0.08) n = 8	0.80 (0.80) n = 4					
Nov 18-21	5.10 (1.77) n = 16	1.56 (0.40) n = 34	0.81 (0.53) n = 20	0.94 (0.94) n = 12	0.38 (0.38) n = 5	0.07 (0.07) n = 8	0 (0) n = 4					
Nov 24-27	0.30 (0.20) n = 16	0.78 (0.35) n = 35	0.41 (0.26) n = 20	0.51 (0.51) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	5.82 (2.29) n = 16	2.70 (0.61) n = 34	0.68 (0.52) n = 20	0.61 (0.50) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 9-12	2.40 (0.68) n = 16	0.86 (0.45) n = 33	0.19 (0.19) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

**Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-4

Juvenile Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	2.23 (0.76)* n = 13	3.38 (1.03) n = 13	12.29 (3.11) n = 21	4.07 (0.69) n = 15	1.33 (0.43) n = 18	0.17 (0.11) n = 12	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0.25 (0.25) n = 4	3.55 (0.69) n = 118
Oct 20-Nov 2	8.14 (2.16) n = 7	4.25 (1.10) n = 20	11.26 (2.54) n = 27	2.67 (0.70) n = 21	0.87 (0.27) n = 15	0.36 (0.24) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	5.14 (0.84) n = 101
Nov 3-16	5.25 (1.24) n = 12	12.25 (5.59) n = 8	4.93 (1.24) n = 29	1.57 (0.49) n = 21	0.33 (0.33) n = 18	0 (0) n = 6	0.40 (0.40) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	3.11 (0.61) n = 111
Nov 17-30	4.00 (1.86) n = 6	4.32 (1.35) n = 22	4.56 (1.97) n = 18	0.55 (0.16) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	2.96 (0.71) n = 70
Dec 1-14	5.61 (1.93) n = 18	0.23 (0.12) n = 13	0.05 (0.05) n = 20	0.16 (0.16) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	1.04 (0.38) n = 105
Dec 15-28	0 (0) n = 0	0.25 (0.25) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.05 (0.05) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-5

Juvenile Striped Bass Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	14.00 (1.00)* n = 2	5.00 (1.82) n = 8	14.60 (3.53) n = 5	1.50 (0.89) n = 8	0.67 (0.33) n = 3	NS	NS	NS	NS	NS	NS	5.96 (1.38) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	14.20 (7.51) n = 10	1.00 (1.00) n = 7	0.25 (0.25) n = 4							7.14 (3.80) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	10.78 (4.50) n = 9	1.29 (0.64) n = 7	0 (0) n = 6							4.82 (2.09) n = 22
Nov 17-30		0 (0) n = 0	0 (0) n = 0	2.57 (0.92) n = 7	0.22 (0.15) n = 9	0 (0) n = 6							0.91 (0.38) n = 22
Dec 1-14		0 (0) n = 0	0 (0) n = 0	7.00 (4.53) n = 5	0 (0) n = 0	0 (0) n = 0							7.00 (4.53) n = 5
Dec 15-28	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0 (0) n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

Table A-6

Juvenile Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-133)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0.31 (0.31) n = 5	0 (0) n = 2	0.26 (0.25) n = 6	0 (0) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.15 (0.10) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0.19 (0.19) n = 8	0 (0) n = 4	0 (0) n = 5	0 (0) n = 0						0.09 (0.08) n = 18
Nov 3-16	0.57 (0.28) n = 8	0 (0) n = 3	0.51 (0.51) n = 3	0 (0) n = 4	0.51 (0.51) n = 3	0 (0) n = 4	0 (0) n = 0						0.31 (0.12) n = 25
Nov 17-30	0 (0) n = 0	0.40 (0.20) n = 19	0.38 (0.38) n = 4	0.26 (0.25) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						0.37 (0.15) n = 29
Dec 1-14	0 (0) n = 0	3.06 (0) n = 1	0 (0) n = 2	0 (0) n = 10	0 (0) n = 4	0 (0) n = 3	0 (0) n = 2						0.14 (0.14) n = 22
Dec 15-28	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

services group

Table A-7

Yearling Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	2.45 (1.40)* n = 14	1.31 (0.33) n = 34	1.53 (0.38) n = 19	0.43 (0.21) n = 12	0 (0) n = 5	1.21 (1.01) n = 6	0 (0) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0.69 (0.51) n = 16	0.82 (0.43) n = 34	0.72 (0.46) n = 20	0.36 (0.25) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 3-6	1.28 (0.49) n = 16	0.84 (0.32) n = 34	1.36 (0.51) n = 20	0.46 (0.29) n = 12	0 (0) n = 4	0 (0) n = 8	0 (0) n = 5					
Sep 9-12	0.53 (0.53) n = 16	1.09 (0.37) n = 34	0.57 (0.32) n = 19	0.20 (0.20) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 16-19	1.34 (0.47) n = 16	1.16 (0.31) n = 34	1.99 (0.92) n = 20	0.40 (0.30) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 23-26	0.27 (0.27) n = 16	0.58 (0.23) n = 34	0.87 (0.65) n = 20	0.42 (0.42) n = 8	0 (0) n = 4	0.11 (0.11) n = 7	0 (0) n = 5					
Sep 30- Oct 5	0.62 (0.45) n = 16	0.24 (0.11) n = 33	0.51 (0.31) n = 20	0 (0) n = 11	0 (0) n = 5	0 (0) n = 7	0 (0) n = 5					
Oct 7-10	0.53 (0.53) n = 14	0.61 (0.21) n = 31	0.18 (0.13) n = 19	0 (0) n = 13	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 14-18	1.19 (0.45) n = 15	1.13 (0.34) n = 31	0.63 (0.29) n = 19	0.11 (0.11) n = 12	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Oct 21-24	0.22 (0.22) n = 16	0.05 (0.05) n = 33	0.11 (0.11) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3					
Oct 28 Nov 1	2.42 (0.61) n = 16	0.89 (0.75) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0.84 (0.84) n = 8	0 (0) n = 5					
Nov 5-9	0.39 (0.28) n = 16	0.13 (0.13) n = 28	0.29 (0.15) n = 18	0 (0) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0 (0) n = 13	0.33 (0.17) n = 34	0.33 (0.24) n = 18	0.12 (0.12) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	0.14 (0.14) n = 16	0.06 (0.06) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 24-27	0.91 (0.43) n = 16	0.05 (0.05) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	0.92 (0.44) n = 16	0.15 (0.08) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 9-12	1.72 (0.79) n = 16	0.31 (0.14) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-8

Yearling Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243), Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0.85 (0.34)* n = 13	0.46 (0.27) n = 13	0.19 (0.19) n = 21	0.40 (0.21) n = 15	0.61 (0.26) n = 18	0.33 (0.19) n = 12	0.33 (0.33) n = 6	0.75 (0.75) n = 4	0.67 (0.33) n = 3	0.25 (0.25) n = 4	0.20 (0.20) n = 5	0 (0) n = 4	0.43 (0.08) n = 118
Oct 20-Nov 2	0 (0) n = 7	0.60 (0.35) n = 20	0.26 (0.10) n = 27	0.33 (0.17) n = 21	0.27 (0.15) n = 15	0.27 (0.19) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.33 (0.09) n = 101
Nov 3-16	0.08 (0.08) n = 12	0.75 (0.31) n = 8	0.17 (0.09) n = 29	0.05 (0.05) n = 21	0.11 (0.11) n = 18	0.50 (0.34) n = 6	0 (0) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	0.16 (0.05) n = 111
Nov 17-30	0.17 (0.17) n = 6	0.27 (0.10) n = 22	0.11 (0.08) n = 18	0.27 (0.14) n = 11	0.17 (0.17) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.19 (0.05) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0.05 (0.05) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0.01 (0.01) n = 105
Dec 15-28	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-9

Yearling Striped Bass Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	0.50 (0.50)* n = 2	0.63 (0.42) n = 8	0.20 (0.20) n = 5	0.50 (0.33) n = 8	0.67 (0.33) n = 3	NS	NS	NS	NS	NS	NS	0.50 (0.17) n = 26
Oct 20-Nov 2		NS	NS	0.50 (0.22) n = 10	0.14 (0.14) n = 7	0 (0) n = 4							0.29 (0.12) n = 21
Nov 3-16				2.33 (2.09) n = 9	0.29 (0.18) n = 7	0 (0) n = 6							1.05 (0.86) n = 22
Nov 17-30				0 (0) n = 7	0.11 (0.11) n = 9	0 (0) n = 6							0.05 (0.05) n = 22
Dec 1-14				0.20 (0.20) n = 5	0 (0) n = 0	0 (0) n = 0							0.20 (0.20) n = 5
Dec 15-28	NS	NS	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0 (0) n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

Table A-10

Yearling Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 190122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0 (0) n = 5	0 (0) n = 2	0 (0) n = 6	0 (0) n = 2	0 (0) n = 3	NS	NS	NS	NS	NS	NS	0 (0) n = 21
Oct 20- Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0 (0) n = 8	0 (0) n = 4	0 (0) n = 5							0 (0) n = 18
Nov 3-16	0.38 (0.25) n = 8	0.51 (0.51) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4							0.18 (0.10) n = 25
Nov 17-30	0 (0) n = 0	0.08 (0.08) n = 19	0 (0) n = 4	0 (0) n = 6	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0.05 (0.05) n = 29

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

services group

Table A-11

Age II and Older Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	0.78 (0.41)* n = 14	0.64 (0.32) n = 34	1.83 (0.62) n = 19	0 (0) n = 12	0 (0) n = 5	0.11 (0.11) n = 6	0 (0) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0 (0) n = 16	0 (0) n = 34	0.32 (0.24) n = 20	0.09 (0.09) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 3-6	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 4	0.57 (0.57) n = 8	0 (0) n = 5					
Sep 9-12	0 (0) n = 16	0.35 (0.25) n = 34	0.52 (0.30) n = 19	0.41 (0.41) n = 12	0.49 (0.49) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 16-19	0 (0) n = 16	0.21 (0.10) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 23-26	0.26 (0.26) n = 16	0.15 (0.09) n = 34	0.10 (0.10) n = 20	0.14 (0.14) n = 8	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Sep 30- Oct 4	0 (0) n = 16	0.12 (0.90) n = 33	0 (0) n = 20	0.26 (0.26) n = 11	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 7-10	0.29 0.29 n = 14	0.11 (0.08) n = 31	0.19 (0.13) n = 19	0 (0) n = 13	0 (0) n = 5	0.07 (0.07) n = 8	0 (0) n = 5					
Oct 14-18	0 (0) n = 15	0 (0) n = 31	0 (0) n = 19	0.11 (0.11) n = 12	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Oct 21-24	0 (0) n = 16	0.37 (0.32) n = 33	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3					
Oct 28- Nov 1	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 5-9	0 (0) n = 16	0.06 (0.06) n = 28	0.10 (0.10) n = 18	0.69 (0.69) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0 (0) n = 13	0.05 (0.05) n = 34	0 (0) n = 18	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	0 (0) n = 16	0 (0) n =34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 24-27	0 (0) n = 16	0 (0) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 9-12	0 (0) n = 16	0.10 (0.07) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-12

Age II and Older Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0.15 (0.15)* n = 13	0 (0) n = 13	0.10 (0.07) n = 21	0 (0) n = 15	0 (0) n = 18	0 (0) n = 12	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0.20 (0.20) n = 5	0.25 (0.25) n = 4	0.05 (0.02) n = 118
Oct 20-Nov 2	0 (0) n = 7	0.05 (0.05) n = 20	0 (0) n = 27	0 (0) n = 21	0 (0) n = 15	0.09 (0.09) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.02 (0.01) n = 101
Nov 3-16	0 (0) n = 12	0.13 (0.13) n = 8	0 (0) n = 29	0.05 (0.05) n = 21	0.06 (0.06) n = 18	0 (0) n = 6	0 (0) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	0.03 (0.02) n = 111
Nov 17-30	0 (0) n = 6	0 (0) n = 22	0 (0) n = 18	0.09 (0.09) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.01 (0.01) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n =2	0 (0) n = 4	0 (0) n = 105
Dec 15-28	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-13

Age II and Older Striped Bass Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	0 (0)* n = 2	0 (0) n = 8	0.20 (0.20) n = 5	0.13 (0.13) n = 8	0.67 (0.33) n = 3	NS	NS	NS	NS	NS	NS	0.15 (0.07) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	0.10 (0.10) n = 10	0 (0) n = 7	0 (0) n = 4							0.05 (0.05) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	0.11 (0.11) n = 9	0 (0) n = 7	0 (0) n = 6							0.05 (0.05) n = 22
Nov 17-30		0 (0) n = 0	0 (0) n = 0	0 (0) n = 7	0 (0) n = 9	0 (0) n = 6							0 (0) n = 22
Dec 1-14		0 (0) n = 0	0 (0) n = 0	0 (0) n = 5	0 (0) n = 0	0 (0) n = 0							0 (0) n = 5
Dec 15-28	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0 (0) n = 0

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of hauls.

Table A-14

Age II and Older Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0 (0) n = 5	0.76 (0.76) n = 2	0 (0) n = 6	0 (0) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.07 (0.07) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0 (0) n = 8	0 (0) n = 4	0 (0) n = 5	0 (0) n = 0	NS	NS	NS	NS	NS	0 (0) n = 18

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of tows.

Table A-15

Juvenile White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	0 (0)* n = 14	0 (0) n = 34	0.08 (0.08) n = 19	0 (0) n = 12	0 (0) n = 5	8.42 (3.55) n = 6	0.40 (0.40) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0 (0) n = 16	0.23 (0.11) n = 34	0 (0) n = 20	0.20 (0.13) n = 12	0 (0) n = 5	3.91 (3.07) n = 8	0.80 (0.49) n = 5					
Sep 3-6	0 (0) n = 16	0.05 (0.05) n = 34	0 (0) n = 20	0.11 (0.11) n = 12	0 (0) n = 4	13.92 6.84 n = 8	1.26 (0.51) n = 5					
Sep 9-12	0 (0) n = 16	0 (0) n = 34	0 (0) n = 19	1.80 (1.35) n = 12	1.46 (0.60) n = 5	4.45 (2.25) n = 8	0.91 (0.91) n = 5					
Sep 16-19	0 (0) n = 16	0 (0) n = 34	0.17 (0.12) n = 20	0.23 (0.23) n = 12	0 (0) n = 5	8.34 (7.20) n = 8	0.85 (0.52) n = 5					
Sep 23-26	0 (0) n = 16	0 (0) n = 34	0.30 (0.21) n = 20	0.54 (0.54) n = 8	2.83 (1.52) n = 4	13.24 (1.24) n = 7	1.99 (1.38) n = 5					
Sep 30 Oct 4	0 (0) n = 16	0.19 (0.19) n = 33	0.38 (0.24) n = 20	1.32 (0.89) n = 11	11.18 (8.42) n = 5	5.70 (1.35) n = 8	7.84 (4.74) n = 5					
Oct 7-10	0 0 n = 14	0.05 (0.05) n = 31	0.09 (0.09) n = 19	3.32 (2.47) n = 13	0.41 (0.41) n = 5	3.70 (3.48) n = 8	2.08 (1.72) n = 5					
Oct 14-18	0 (0) n = 15	0.11 (0.11) n = 31	2.77 (2.29) n = 19	2.11 (1.20) n = 12	1.50 (1.05) n = 4	4.71 (3.27) n = 7	2.49 (0.96) n = 5					
Oct 21-24	0.15 (0.15) n = 16	0.97 (0.34) n = 33	2.86 (0.72) n = 19	5.48 (2.81) n = 12	0 (0) n = 5	28.05 (21.08) n = 8	0.59 (0.59) n = 3					
Oct 28 Nov 1	0 (0) n = 16	0.23 (0.14) n = 34	3.10 (1.30) n = 20	7.01 (2.69) n = 12	5.08 (2.84) n = 5	9.29 (2.92) n = 8	2.06 (0.92) n = 5					
Nov 5-9	0.14 (0.14) n = 16	1.21 (0.60) n = 28	7.27 (2.50) n = 18	4.95 (1.47) n = 9	1.15 (1.15) n = 4	6.83 (2.71) n = 8	0.42 (0.42) n = 4					
Nov 11-14	0.25 (0.25) n = 13	0.81 (0.37) n = 34	4.24 (3.50) n = 18	2.44 (0.82) n = 12	0 (0) n = 5	6.09 (2.22) n = 8	1.61 (1.61) n = 4					
Nov 18-21	2.74 (0.79) n = 16	3.16 (0.76) n = 34	5.72 (2.51) n = 20	3.13 (0.76) n = 12	0.71 (0.71) n = 5	0.47 (0.19) n = 8	3.45 (1.72) n = 5					
Nov 24-27	8.74 (2.29) n = 16	5.82 (1.67) n = 33	29.32 (23.51) n = 20	3.80 (1.93) n = 12	2.74 (1.83) n = 5	0.64 (0.64) n = 8	2.47 (1.53) n = 5					
Dec 2-5	10.29 (3.01) n = 16	7.48 (2.10) n = 34	8.59 (1.63) n = 20	15.03 (8.01) n = 12	2.47 (2.09) n = 5	2.36 (0.93) n = 8	1.70 (1.70) n = 5					
Dec 9-12	3.24 (0.70) n = 16	15.50 (8.71) n = 33	6.27 (2.32) n = 20	0.40 (0.29) n = 12	1.11 (0.46) n = 5	14.03 (13.74) n = 8	0.79 (0.48) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-16

Juvenile White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 13	0.77 (0.47) n = 13	0.62 (0.46) n = 21	10.93 (6.93) n = 15	5.83 (2.36) n = 18	0.50 (0.34) n = 12	2.00 (2.00) n = 6	2.75 (1.89) n = 4	1.33 (1.33) n = 3	1.00 (1.00) n = 4	1.00 (0.63) n = 5	0 (0) n = 4	2.83 (1.00) n = 118
Oct 20-Nov 2	0 (0) n = 7	0.75 (0.47) n = 20	1.04 (0.45) n = 27	2.76 (0.85) n = 21	0.80 (0.35) n = 15	1.55 (0.64) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	1.29 (0.26) n = 101
Nov 3-16	0.17 (0.17) n = 12	14.25 (10.69) n = 8	1.03 (0.52) n = 29	1.29 (0.44) n = 21	2.00 (1.19) n = 18	0.83 (0.65) n = 6	1.80 (1.11) n = 5	1.00 (0.58) n = 3	2.67 (2.67) n = 3	2.25 (1.03) n = 4	0 (0) n = 2	0 (0) n = 0	2.19 (0.84) n = 111
Nov 17-30	0 (0) n = 6	0.73 (0.64) n = 22	0.06 (0.06) n = 18	0.09 (0.09) n = 11	0.67 (0.49) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.31 (0.21) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0 (0) n = 105
Dec 15-28	0 (0) n = 0	0.25 (0.25) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0.33 (0.33) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.09 (0.06) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-17

Juvenile White Perch Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	2.00 (2.00)* n = 2	0.38 (0.38) n = 8	8.40 (5.07) n = 5	16.63 (14.25) n = 8	9.67 (5.93) n = 3	NS	NS	NS	NS	NS	NS	8.12 (4.52) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	17.70 (6.52) n = 10	15.14 (8.23) n = 7	3.50 (1.32) n = 4							14.14 (4.16) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	22.89 (10.23) n = 9	3.86 (2.12) n = 7	1.00 (0.52) n = 6							10.86 (4.64) n = 22
Nov 17-30		0 (0) n = 0	0 (0) n = 0	0.86 (0.70) n = 7	0.44 (0.24) n = 9	0.50 (0.34) n = 6							0.59 (0.25) n = 22
Dec 1-14		0 (0) n = 0	0 (0) n = 0	0.60 (0.60) n = 5	0 (0) n = 0	0 (0) n = 0							0.60 (0.60) n = 5
Dec 15-28	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0 (0) n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

Table A-18

Juvenile White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0) n = 3	0 (0) n = 5	0 (0) n = 2	0.84 (0.55) n = 6	3.83 (0.76) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.60 (0.29) n = 21
Oct 20 Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	1.15 (0.38) n = 8	17.21 (5.84) n = 4	6.12 (2.74) n = 5	0 (0) n = 0						6.03 (2.06) n = 18
Nov 3-16	0 (0) n = 8	0 (0) n = 3	3.57 (1.02) n = 3	3.44 (1.15) n = 4	1.02 (0.51) n = 3	1.15 (0.38) n = 4	0 (0) n = 0						1.29 (0.36) n = 25
Nov 17-30	0 (0) n = 0	2.98 (1.04) n = 19	19.89 (7.65) n = 4	20.91 (5.30) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						9.02 (1.66) n = 29
Dec 1-14	0 (0) n = 0	47.43 (0) n = 1	4.59 (3.06) n = 2	8.11 (2.19) n = 10	32.13 (9.60) n = 4	33.15 (6.92) n = 3	1.53 (0) n = 2						16.76 (3.62) n = 22
Dec 15-28	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

services group

Table A-19

Yearling White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	0 (0)* n = 14	1.88 (0.83) n = 34	0.92 (0.32) n = 19	1.10 (0.45) n =12	0.38 (0.38) n = 5	5.26 (3.21) n = 6	1.67 (1.02) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0 (0) n = 16	0.67 (0.21) n = 34	1.40 (0.92) n = 20	1.87 (1.15) n = 12	0 (0) n = 5	2.84 (2.05) n = 8	1.97 (1.47) n = 5					
Sep 3-6	0.26 (0.26) n = 16	1.59 (0.92) n = 34	10.28 (5.54) n = 20	3.97 (1.26) n = 12	0 (0) n = 4	3.51 (2.09) n = 8	4.30 (1.86) n = 5					
Sep 9-12	0.26 (0.26) n = 16	1.33 (0.71) n = 34	3.57 (1.56) n = 19	2.61 (1.54) n = 12	0 (0) n = 5	0 (0) n = 8	1.52 (1.06) n = 5					
Sep 16-19	0 (0) n = 16	3.73 (1.00) n = 34	18.47 (7.31) n = 20	2.65 (0.92) n = 12	0 (0) n = 5	1.87 (1.35) n = 8	3.56 (1.56) n = 5					
Sep 23-26	0 (0) n = 16	1.53 (0.64) n = 34	6.46 (3.53) n = 20	2.03 (1.30) n = 8	0 (0) n = 4	11.96 (1.92) n = 7	3.68 (2.40) n = 5					
Sep 30- Oct 4	0 (0) n = 16	0.40 (0.22) n = 33	8.77 (2.40) n = 20	6.56 (2.55) n = 11	1.26 (1.26) n = 5	2.98 (1.50) n = 8	17.92 12.30 n = 5					
Oct 7-10	1.66 (1.09) n = 14	2.63 (0.62) n = 31	3.86 (1.34) n = 19	4.37 (1.56) n = 13	0 (0) n = 5	0.33 (0.11) n = 8	3.22 (2.03) n = 5					
Oct 14-18	2.04 (0.97) n = 15	2.38 (0.90) n = 31	25.15 (7.97) n = 19	8.62 (2.95) n = 12	0 (0) n = 4	2.04 (1.38) n = 7	5.60 (4.57) n = 5					
Oct 21-24	3.99 (2.40) n = 16	2.38 (0.62) n = 33	5.17 (1.11) n = 19	3.84 (1.91) n = 12	0 (0) n = 5	7.41 (6.63) n = 8	0 (0) n = 3					
Oct 28- Nov 1	5.94 (1.79) n = 16	5.29 (1.29) n = 34	11.09 (5.15) n = 20	5.55 (2.83) n = 12	2.21 (0.70) n = 5	0.21 (0.10) n = 8	2.87 (1.38) n = 5					
Nov 5-9	2.21 (1.05) n = 16	3.93 (0.89) n = 28	8.39 (3.15) n = 18	4.00 (1.35) n = 9	0.38 (0.38) n = 4	0.95 (0.65) n = 8	0.99 (0.57) n = 4					
Nov 11-14	12.13 (2.70) n = 13	3.81 (0.85) n = 34	5.26 (1.93) n = 18	2.05 (0.76) n = 12	0.32 (0.32) n = 5	1.94 (1.51) n = 8	0 (0) n = 4					
Nov 18-21	36.59 (7.19) n = 16	10.27 (2.07) n = 34	13.45 (4.66) n = 20	1.31 (0.37) n = 12	0.35 (0.35) n = 5	2.18 (1.55) n = 8	4.79 (2.12) n = 5					
Nov 24-27	16.88 (2.33) n = 16	9.83 (1.82) n = 33	19.36 (10.19) n = 20	2.84 (1.72) n = 12	0.43 (0.43) n = 5	8.59 (5.15) n = 8	2.06 (1.56) n = 5					
Dec 2-5	14.64 (3.19) n = 16	10.71 (1.60) n = 34	14.82 (3.23) n = 20	10.27 (5.87) n = 12	0.86 (0.55) n = 5	0.40 (0.31) n = 8	3.06 (0.77) n = 5					
Dec 9-12	15.64 (3.40) n = 16	19.51 (4.98) n = 33	28.21 (5.10) n = 20	1.12 (0.60) n = 12	0.39 (0.39) n = 5	4.29 (4.29) n = 8	1.60 (1.19) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-20

Yearling White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0.08 (0.08)* n = 13	3.92 (1.98) n = 13	2.19 (1.08) n = 21	2.67 (1.41) n = 15	3.89 (1.39) n = 18	1.67 (0.83) n = 12	6.83 (6.24) n = 6	3.25 (1.49) n = 4	1.00 (1.00) n = 3	1.00 (0.71) n = 4	0.60 (0.40) n = 5	0.25 (0.25) n = 4	2.48 (0.52) n = 118
Oct 20-Nov 2	0 (0) n = 7	0.40 (0.20) n = 20	1.67 (0.61) n = 27	1.48 (0.64) n = 21	0.87 (0.27) n = 15	1.09 (0.67) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	1.08 (0.23) n = 101
Nov 3-16	0.17 (0.11) n = 12	1.63 (0.60) n = 8	1.07 (0.34) n = 29	2.00 (0.73) n = 21	1.00 (0.77) n = 18	0.67 (0.49) n = 6	1.60 (1.36) n = 5	1.33 (1.33) n = 3	0.67 (0.67) n = 3	2.25 (1.93) n = 4	0 (0) n = 2	0 (0) n = 0	1.20 (0.23) n = 111
Nov 17-30	0 (0) n = 6	0.36 (0.14) n = 22	1.78 (1.45) n = 18	0.27 (0.19) n = 11	3.00 (1.90) n = 6	0.14 (0.14) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.89 (0.41) n = 70

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-21

Yearling White Perch Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 34-61 (KM 54-122)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	7.00 (3.00)* n = 2	6.13 (2.22) n = 8	11.80 (6.76) n = 5	4.25 (2.70) n = 8	4.33 (1.20) n = 3	NS	NS	NS	NS	NS	NS	6.50 (1.67) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	6.10 (1.59) n = 10	2.71 (1.69) n = 7	1.75 (1.11) n = 4							4.14 (1.02) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	2.89 (1.47) n = 9	2.00 (1.09) n = 7	0.83 (0.65) n = 6							2.05 (0.71) n = 22
Nov 17-30	NS	0 (0) n = 0	0 (0) n = 0	0.14 (0.14) n = 7	1.22 (1.10) n = 9	0.50 (0.50) n = 6	NS	NS	NS	NS	NS	NS	0.68 (0.47) n = 22

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of hauls.

Table A-22

Yearling White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0 (0) n = 5	0 (0) n = 2	0.26 (0.25) n = 6	1.53 (1.53) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.22 (0.16) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0.38 (0.38) n = 8	2.68 (1.58) n = 4	1.84 (0.89) n = 5	0 (0) n = 0						1.27 (0.48) n = 18
Nov 3-16	0.38 (0.25) n = 8	0 (0) n = 3	1.02 (0.51) n = 3	0.38 (0.38) n = 4	2.55 (2.55) n = 3	1.53 (1.08) n = 4	0 (0) n = 0						0.86 (0.35) n = 25
Nov 17-30	0 (0) n = 0	3.38 (0.93) n = 19	42.84 (18.91) n = 4	13.52 (3.02) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						10.92 (3.52) n = 29
Dec 1-14	0 (0) n = 0	38.25 (0) n = 1	3.83 (3.83) n = 2	6.43 (2.46) n = 10	19.89 (8.94) n = 4	12.24 (8.10) n = 3	3.06 (3.06) n = 2						10.57 (2.73) n = 22
Dec 15-28	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of tows.

Table A-23

Age II and Older White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	1.02 (0.59)* n = 14	6.15 (1.19) n = 34	11.07 (5.03) n = 19	0.09 (0.09) n = 12	0.35 (0.35) n = 5	4.45 (1.35) n = 6	2.41 (1.48) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0.23 (0.23) n = 16	2.42 (0.73) n = 34	1.78 (1.48) n = 20	1.30 (0.82) n = 12	0.42 (0.42) n = 5	1.04 (0.83) n = 8	1.74 (1.25) n = 5					
Sep 3-6	4.42 (1.82) n = 16	5.28 (2.38) n = 34	7.12 (3.86) n = 20	2.79 (1.12) n = 12	0 (0) n = 4	5.60 (5.16) n = 8	2.11 (1.17) n = 5					
Sep 9-12	0.99 (0.58) n = 16	2.73 (0.75) n = 34	2.06 (0.83) n = 19	5.46 (2.52) n = 12	0.99 (0.99) n = 5	3.08 (2.19) n = 8	1.41 (0.92) n = 5					
Sep 16-19	2.16 (0.54) n = 16	11.14 (4.49) n = 34	17.51 (8.59) n = 20	0.60 (0.16) n = 12	0 (0) n = 5	0.99 (0.77) n = 8	0 (0) n = 5					
Sep 23-26	1.96 (1.00) n = 16	6.19 (1.54) n = 34	2.98 (1.16) n = 20	2.98 (2.10) n = 8	0.59 (0.59) n = 4	4.00 (1.73) n = 7	1.03 (0.64) n = 5					
Sep 30- Oct 4	12.90 (4.24) n = 16	7.02 (4.12) n = 33	8.29 (3.27) n = 20	1.90 (0.96) n = 11	0.42 (0.42) n = 5	1.01 (0.54) n = 8	1.89 (1.18) n = 5					
Oct 7-10	43.01 (8.09) n = 14	11.67 (4.22) n = 31	1.76 (0.56) n = 19	0.64 (0.44) n = 13	0 (0) n = 5	0.87 (0.87) n = 8	0 (0) n = 5					
Oct 14-18	28.39 (5.53) n = 15	11.76 (2.11) n = 31	19.08 (11.56) n = 19	1.70 (0.59) n = 12	0 (0) n = 4	0.11 (0.11) n = 7	0 (0) n = 5					
Oct 21-24	1.32 (0.95) n = 16	5.35 (2.38) n = 33	0.83 (0.59) n = 19	1.06 (1.06) n = 12	0 (0) n = 5	0.84 (0.84) n = 8	0 (0) n = 3					
Oct 28- Nov 1	39.15 (9.28) n = 16	6.70 (1.62) n = 34	5.55 (2.23) n = 20	3.27 (2.07) n = 12	0.48 (0.48) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 5-9	38.41 (11.55) n = 16	10.40 (2.78) n = 28	5.97 (1.56) n = 18	3.84 (2.60) n = 9	0 (0) n = 4	1.07 (0.66) n = 8	0.49 (0.49) n = 4					
Nov 11-14	41.16 (8.42) n = 13	5.75 (1.31) n = 34	1.30 (0.48) n = 18	0.60 (0.29) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	46.66 (7.22) n = 16	36.15 (8.52) n = 34	13.61 (4.30) n = 20	0.09 (0.09) n = 12	0.37 (0.37) n = 5	0.08 (0.08) n = 8	1.28 (0.84) n = 5					
Nov 24-27	0.16 (0.16) n = 16	5.04 (1.65) n = 33	4.79 (1.65) n = 20	0.32 (0.14) n = 12	0.37 (0.37) n = 5	1.14 (0.91) n = 8	0.40 (0.40) n = 5					
Dec 2-5	12.51 (4.73) n = 16	38.03 (9.19) n = 34	19.16 (4.78) n = 20	1.99 (1.66) n = 12	0.32 (0.32) n = 5	0 (0) n = 8	0.36 (0.36) n = 5					
Dec 9-12	6.46 (1.83) n = 16	10.62 (2.83) n = 33	35.65 (8.90) n = 20	0.37 (0.28) n = 12	0 (0) n = 5	0 (0) n = 8	0.38 (0.38) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-24

Age II and Older White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	5.38 (2.49)* n = 13	5.23 (2.65) n = 13	0.62 (0.23) n = 21	0.13 (0.13) n = 15	0.61 (0.20) n = 18	0.08 (0.08) n = 12	0.33 (0.33) n = 6	2.00 (1.22) n = 4	0 (0) n = 3	0.50 (0.50) n = 4	0.40 (0.40) n = 5	0 (0) n = 4	1.52 (0.44) n = 118
Oct 20-Nov 2	3.43 (1.34) n = 7	0.55 (0.26) n = 20	0.33 (0.23) n = 27	0.57 (0.34) n = 21	0.33 (0.23) n = 15	0.18 (0.18) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.62 (0.16) n = 101
Nov 3-16	0.83 (0.34) n = 12	1.00 (0.50) n = 8	0.41 (0.18) n = 29	0.62 (0.24) n = 21	0.78 (0.78) n = 18	0.17 (0.17) n = 6	1.20 (0.73) n = 5	0.67 (0.67) n = 3	0.67 (0.67) n = 3	2.25 (0.75) n = 4	0 (0) n = 2	0 (0) n = 0	0.69 (0.16) n = 111
Nov 17-30	0 (0) n = 6	0.91 (0.43) n = 22	2.28 (1.88) n = 18	0.09 (0.09) n = 11	3.33 (2.25) n = 6	0.14 (0.14) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	1.19 (0.54) n = 70
Dec 1-14	0 (0) n = 18	0.15 (0.10) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0.02 (0.01) n = 105
Dec 15-28	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-25

Age II and Older White Perch Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	8.50 (5.50)* n = 2	7.38 (2.20) n = 8	1.00 (0.63) n = 5	1.75 (1.35) n = 8	0.67 (0.67) n = 3	NS	NS	NS	NS	NS	NS	3.73 (1.03) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	1.40 (0.70) n = 10	1.00 (0.58) n = 7	0 (0) n = 4							1.00 (0.39) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	2.78 (2.78) n = 9	0.86 (0.55) n = 7	0 (0) n = 6							1.41 (1.14) n = 22
Nov 17-30	NS	0 (0) n = 0	0 (0) n = 0	0.14 (0.14) n = 7	4.11 (4.11) n = 9	0.17 (0.17) n = 6	NS	NS	NS	NS	NS	NS	1.77 (1.68) n = 22

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

Table A-26

Age II and Older White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined) October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0.92 (0.92) n = 5	0 (0) n = 2	1.68 (0.76) n = 6	1.53 (1.53) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.85 (0.34) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	2.87 (1.14) n = 8	0.38 (0.38) n = 4	0.61 (0.61) n = 5	0 (0) n = 0						1.53 (0.59) n = 18
Nov 3-16	1.53 (0.87) n = 8	6.78 (5.82) n = 3	0 (0) n = 3	0.38 (0.38) n = 4	0 (0) n = 3	0.38 (0.38) n = 4	0 (0) n = 0						1.43 (0.77) n = 25
Nov 17-30	0 (0) n = 0	3.95 (1.10) n = 19	71.15 (32.97) n = 4	7.14 (3.25) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						13.88 (5.98) n = 29
Dec 1-14	0 (0) n = 0	13.77 (0) n = 1	3.83 (0.76) n = 2	1.99 (0.46) n = 10	3.44 (0.96) n = 4	3.57 (2.84) n = 3	5.35 (5.35) n = 2						3.48 (0.77) n = 22
Dec 15-28	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

services group

Table A-27

Juvenile Atlantic Tomcod Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Aug 19-22	61.77 (30.49)* n = 14	19.37 (6.00) n = 34	9.06 (2.84) n = 19	95.80 (35.22) n = 12	185.11 (41.93) n = 5	138.62 (87.77) n = 6	4.28 (3.31) n = 5	NS	NS	NS	NS	NS
Aug 26-29	0 (0) n = 16	0 (0) n = 34	0.25 (0.25) n = 20	17.79 (8.89) n = 12	41.66 (24.96) n = 5	53.03 (30.56) n = 8	5.74 (3.85) n = 5					
Sep 3-6	0 (0) n = 16	0 (0) n = 34	4.40 (2.56) n = 20	57.82 (15.43) n = 12	125.54 (27.09) n = 4	84.95 (38.32) n = 8	1.36 (0.91) n = 5					
Sep 9-12	0.19 (0.19) n = 16	0 (0) n = 34	0.88 (0.58) n = 19	33.05 (17.35) n = 12	22.66 (9.38) n = 5	25.55 (19.27) n = 8	7.30 (4.18) n = 5					
Sep 16-19	0.71 (0.38) n = 16	10.90 (2.95) n = 34	19.88 (5.18) n = 20	56.09 (16.86) n = 12	28.10 (5.74) n = 5	27.74 (18.87) n = 8	10.41 (7.02) n = 5					
Sep 23-26	0.52 (0.52) n = 16	0 (0) n = 34	1.47 (0.80) n = 20	8.43 (3.20) n = 8	1.19 (1.19) n = 4	6.73 (4.54) n = 7	6.90 (4.99) n = 5					
Sep 30- Oct 4	2.84 (0.58) n = 16	0.43 (0.21) n = 33	4.75 (2.24) n = 20	38.24 (23.96) n = 11	40.38 (17.08) n = 5	5.06 (2.45) n = 8	4.51 (3.18) n = 5					
Oct 7-10	1.57 (0.73) n = 14	1.95 (1.14) n = 31	0.63 (0.63) n = 19	4.78 (3.46) n = 13	16.66 (9.33) n = 5	10.74 (8.63) n = 8	2.58 (0.84) n = 5					
Oct 14-18	1.41 (0.76) n = 15	5.53 (2.01) n = 31	3.10 (2.05) n = 19	14.47 (8.01) n = 12	19.39 (8.02) n = 4	14.83 (12.96) n = 7	14.92 (7.99) n = 5					
Oct 21-24	0.59 (0.32) n = 16	1.55 (0.83) n = 33	3.66 (1.37) n = 19	7.12 (5.10) n = 12	2.99 (2.99) n = 5	6.61 (6.61) n = 8	0 (0) n = 3					
Oct 28- Nov 1	1.00 (0.39) n = 16	2.16 (0.79) n = 34	2.59 (0.46) n = 20	11.86 (5.62) n = 12	13.41 (5.01) n = 5	11.28 (9.59) n = 8	19.14 (11.41) n = 5					
Nov 5-9	4.10 (1.03) n = 16	2.86 (0.68) n = 28	2.04 (0.66) n = 18	4.34 (1.79) n = 9	5.37 (3.66) n = 4	7.19 (6.97) n = 8	2.26 (1.05) n = 4					
Nov 11-14	3.03 (0.82) n = 13	1.92 (0.50) n = 34	0.65 (0.33) n = 18	0.59 (0.36) n = 12	0.32 (0.32) n = 5	0.84 (0.75) n = 8	1.66 (1.66) n = 4					
Nov 18-21	2.64 (0.84) n = 16	4.02 (1.19) n = 34	8.34 (3.59) n = 20	18.62 (12.76) n = 12	3.01 (2.55) n = 5	0.21 (0.14) n = 8	10.49 (6.89) n = 5					
Nov 24-27	0.48 (0.26) n = 16	0.80 (0.32) n = 33	3.54 (2.53) n = 20	3.60 (2.76) n = 12	0.98 (0.98) n = 5	0.86 (0.86) n = 8	0 (0) n = 5					
Dec 2-5	0.88 (0.41) n = 16	3.22 (1.71) n = 34	5.86 (1.25) n = 20	1.04 (0.67) n = 12	1.20 (0.74) n = 5	6.21 (2.35) n = 8	0 (0) n = 5					
Dec 9-12	1.29 (0.53) n = 16	1.29 (0.45) n = 33	1.75 (0.65) n = 20	0.84 (0.37) n = 12	0.31 (0.31) n = 5	0.08 (0.08) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-28

Juvenile Atlantic Tomcod Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft 30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 13	0.31 (0.17) n = 13	0 (0) n = 21	0.13 (0.13) n = 15	0 (0) n = 18	0 (0) n = 12	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0 (0) n = 4	0.05 (0.03) n = 118
Oct 20-Nov 2	0.14 (0.14) n = 7	0.10 (0.10) n = 20	0.33 (0.21) n = 27	0.05 (0.05) n = 21	0 (0) n = 15	0.09 (0.09) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.14 (0.06) n = 101
Nov 3-16	0 (0) n = 12	0.88 (0.64) n = 8	0 (0) n = 29	0 (0) n = 21	0 (0) n = 18	0 (0) n = 6	0 (0) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	0.06 (0.05) n = 111
Nov 17-30	0 (0) n = 6	0.27 (0.16) n = 22	0 (0) n = 18	0 (0) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.09 (0.05) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0 (0) n = 105
Dec 15-28	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-29

Juvenile Atlantic Tomcod Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	0 (0)* n = 2	0.25 (0.25) n = 8	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3	NS	NS	NS	NS	NS	NS	0.08 (0.08) n = 26
Oct 20-Nov 2	NS	0 (0) n = 0	0 (0) n = 0	0.10 (0.10) n = 10	0 (0) n = 7	0 (0) n = 4	NS	NS	NS	NS	NS	NS	0.05 (0.05) n = 21

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of hauls.

Table A-30

Juvenile Atlantic Tomcod Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974

	Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0 (0) n = 5	0 (0) n = 2	2.30 (1.23) n = 6	1.53 (0) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0.80 (0.40) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	3.06 (0) n = 1	4.40 (1.17) n = 8	2.30 (1.33) n = 4	5.81 (2.75) n = 5	0 (0) n = 0						4.25 (0.95) n = 18
Nov 3-16	0.19 (0.19) n = 8	5.00 (1.50) n = 3	1.02 (0.51) n = 3	9.56 (5.77) n = 4	3.06 (1.53) n = 3	1.91 (1.15) n = 4	0 (0) n = 0						2.99 (1.09) n = 25
Nov 17-30	0 (0) n = 0	5.40 (1.87) n = 19	30.98 (18.40) n = 4	17.60 (9.87) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						11.45 (3.62) n = 29
Dec 1-14	0 (0) n = 0	1.53 (0) n = 1	1.53 (1.53) n = 2	3.67 (1.43) n = 10	8.42 (5.50) n = 4	0.51 (0.51) n = 3	0.77 (0.77) n = 2						3.55 (1.23) n = 22
Dec 15-28	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error. NS = no samples taken; n = number of tows.

Table A-31

Yearling and Older Atlantic Tomcod Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Sep 3-6	0 (0)* n = 16	0 (0) n = 34	0.09 (0.09) n = 20	0 (0) n = 12	0 (0) n = 4	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS
Sep 9-12	0.26 (0.26) n = 16	0 (0) n = 34	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 14-18	0.26 (0.26) n = 15	0.12 (0.12) n = 31	0.19 (0.19) n = 19	0 (0) n = 12	0.56 (0.56) n = 4	0.65 (0.65) n = 7	0.40 (0.40) n = 5					
Oct 21-24	0 (0) n = 16	0.11 (0.08) n = 33	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0.84 (0.84) n = 8	0 (0) n = 3					
Oct 28- Nov 1	0.74 (0.33) n = 16	0.84 (0.75) n = 34	0.16 (0.16) n = 20	0.25 (0.25) n = 12	0.44 (0.44) n = 5	0 (0) n = 8	6.69 (4.33) n = 5					
Nov 5-9	0.76 (0.45) n = 16	0.06 (0.06) n = 28	0 (0) n =18	0.34 (0.34) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0.68 (0.36) n = 13	0.11 (0.08) n = 34	0 (0) n = 18	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	0 (0) n = 16	0.06 (0.06) n = 34	0.09 (0.09) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 24-27	0.16 (0.16) n = 16	0 (0) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	0.14 (0.14) n = 16	0.45 (0.36) n = 34	0.08 (0.08) n = 20	0.35 (0.27) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-32

Yearling and Older Atlantic Tomcod Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 13	0.08 (0.08) n = 13	0 (0) n = 21	0 (0) n = 15	0 (0) n = 18	0 (0) n = 12	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0 (0) n = 4	0.01 (0.01) n = 118
Oct 20- Nov 2	0 (0) n = 7	0.05 (0.05) n = 20	0.07 (0.07) n = 27	0 (0) n = 21	0 (0) n = 15	0 (0) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.03 (0.02) n = 1.01
Nov 3-16	0 (0) n = 12	0.25 (0.25) n = 8	0 (0) n = 29	0 (0) n = 21	0 (0) n = 18	0 (0) n = 6	0 (0) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	0.02 (0.02) n = 111
Nov 17-30	0 (0) n = 6	0.09 (0.09) n = 22	0.06 (0.06) n = 18	0 (0) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.04 (0.03) n = 70

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-33

Yearling and Older Atlantic Tomcod Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	NS	0 (0)* n = 2	0 (0) n = 8	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3	NS	NS	NS	NS	NS	NS	0 (0) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	0 (0) n = 10	0 (0) n = 7	0 (0) n = 4							0 (0) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	0.11 (0.11) n = 9	0 (0) n = 7	0 (0) n = 6							0.05 (0.05) n = 22
Nov 17-30	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 7	0 (0) n = 9	0 (0) n = 6	NS	NS	NS	NS	NS	NS	0 (0) n = 22

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

Table A-34

Yearling and Older Atlantic Tomcod Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)* n = 3	0 (0) n = 5	0 (0) n = 2	0 (0) n = 6	0 (0) n = 2	0 (0) n = 3	0 (0) n = 0	NS	NS	NS	NS	NS	0 (0) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0 (0) n = 8	1.53 (0.62) n = 4	0.31 (0.31) n = 5	0 (0) n = 0						0.43 (0.21) n = 18
Nov 3-16	0.19 (0.19) n = 8	0.66 (0.66) n = 3	0 (0) n = 3	0.38 (0.38) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 0	NS	NS	NS	NS	NS	0.20 (0.11) n = 25
Nov 17-30	0 (0) n = 0	0 (0) n = 19	0 (0) n = 4	0 (0) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 29

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-35

American Shad Egg Density Estimates (No./1000 m^3) within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day or Night Sampling by Epibenthic Sled and Tucker Trawl, April-August 1974

	Geographical Region											
Date/Time	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Apr 23-25 (Night)	0 (0)* n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0 (0) n=4	0 (0) n=1	0 (0) n=13	0 (0) n=8	0.98 (0.31) n=4	71.40 (25.51) n=6	0.19 (0.19) n=13	0 (0) n=3
Apr 29-May 4 (Night)	0 (0) n=3	0 (0) n=14	0 (0) n=9	0 (0) n=8	0 (0) n=4	0 (0) n=7	0.07 (0.07) n=9	0 (0) n=4	2.13 (0.20) n=3	195.60 (94.36) n=6	16.17 (8.70) n=5	0 (0) n=1
May 6-11 (Night)	0 (0) n=2	0 (0) n=20	0 (0) n=9	0 (0) n=8	0 (0) n=6	0 (0) n=6	0 (0) n=11	6.17 (4.79) n=5	4.69 (4.04) n=6	33.13 (29.66) n=7	66.70 (3.37) n=6	0 (0) n=2
May 13-18 (Night)	0 (0) n=11	0 (0) n=19	0 (0) n=8	0.63 (0.63) n=7	0 (0) n=5	0 (0) n=5	1.50 (0.95) n=10	40.35 (35.17) n=6	5.79 (4.20) n=6	2.15 (2.15) n=7	23.86 (17.59) n=5	0 (0) n=3
May 15-18 (Day)	0 (0) n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0 (0) n=5	0 (0) n=8	0 (0) n=11	0 (0) n=5	72.58 (60.82) n=6	39.12 (26.11) n=9	2.09 (2.09) n=3	0 (0) n=2
May 21-25 (Day)	0 (0) n=7	0 (0) n=20	0 (0) n=11	0 (0) n=7	0 (0) n=5	0 (0) n=6	10.98 (10.98) n=10	0.89 (0.40) n=7	3.64 (2.53) n=5	19.01 (15.48) n=10	74.97 (44.84) n=6	3.72 (3.72) n=3
May 23-29 (Night)	0 (0) n=5	0 (0) n=16	0 (0) n=7	0 (0) n=9	0 (0) n=6	0 (0) n=6	0 (0) n=10	0.25 (0.25) n=5	16.21 (9.70) n=6	187.58 (127.69) n=7	124.23 (76.22) n=6	15.68 (15.68) n=2
May 28-31 (Day)	0 (0) n=9	0 (0) n=18	0 (0) n=10	0 (0) n=6	0 (0) n=5	0 (0) n=5	14.95 (14.52) n=9	0.48 (0.28) n=5	5.12 (5.12) n=4	60.43 (42.48) n=9	308.81 (33.10) n=5	0 (0) n=2
May 30-Jun 5 (Night)	0 (0) n=11	0 (0) n=20	0 (0) n=9	0 (0) n=9	0 (0) n=6	0 (0) n=7	8.08 (5.54) n=12	0 (0) n=5	0.87 (0.87) n=6	602.61 (526.12) n=5	38.72 (17.99) n=5	0 (0) n=1
Jun 4-7 (Day)	0 (0) n=11	0 (0) n=17	0 (0) n=6	0 (0) n=7	0 (0) n=6	0 (0) n=8	0.47 (0.47) n=12	0 (0) n=5	28.85 (23.56) n=5	41.45 (24.41) n=7	4.17 (3.31) n=4	0 (0) n=3
Jun 10-14 (Day)	0 (0) n=11	0 (0) n=17	0 (0) n=9	0 (0) n=11	0 (0) n=6	0 (0) n=7	0 (0) n=10	0 (0) n=6	0 (0) n=5	8.10 (4.22) n=10	2.36 (1.44) n=6	0 (0) n=1
Jun 12-17 (Night)	0 (0) n=10	0 (0) n=15	0 (0) n=7	0 (0) n=9	0 (0) n=7	0 (0) n=7	0 (0) n=10	0 (0) n=6	0 (0) n=5	0.25 (0.25) n=10	10.02 (0) n=4	0 (0) n=2
Jun 17-23 (Night)	0 (0) n=18	0 (0) n=31	0 (0) n=14	0 (0) n=15	0 (0) n=10	0 (0) n=11	0 (0) n=17	0 (0) n=9	0 (0) n=7	0 (0) n=16	0.24 (0.24) n=8	0 (0) n=4
Jun 24-27 (Night)	0 (0) n=10	0 (0) n=31	0 (0) n=22	0 (0) n=21	0 (0) n=11	0 (0) n=16	0 (0) n=17	0 (0) n=13	0 (0) n=13	0 (0) n=1	0 (0) n=0	0 (0) n=0
Jul 1-5 (Night)	0 (0) n=17	0 (0) n=30	0 (0) n=20	0 (0) n=22	0 (0) n=14	0 (0) n=11	0 (0) n=15	0 (0) n=14	0 (0) n=13	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 8-11 (Night)	0 (0) n=13	0 (0) n=28	0 (0) n=17	0 (0) n=22	0 (0) n=14	0 (0) n=11	0 (0) n=14	0 (0) n=14	0 (0) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 15-18 (Night)	0 (0) n=16	0 (0) n=31	0 (0) n=20	0 (0) n=20	0 (0) n=13	0 (0) n=11	0 (0) n=15	0 (0) n=14	0 (0) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 22-26 (Night)	0 (0) n=9	0 (0) n=14	0 (0) n=19	0 (0) n=20	0 (0) n=15	0 (0) n=11	0 (0) n=16	0 (0) n=14	0 (0) n=13	0 (0) n=5	0 (0) n=3	0 (0) n=0
Jul 29-Aug 2 (Night)	0 (0) n=14	0 (0) n=27	0 (0) n=16	0 (0) n=19	0 (0) n=12	0 (0) n=12	0 (0) n=17	0 (0) n=12	0 (0) n=11	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 5-9 (Night)	0 (0) n=16	0 (0) n=30	0 (0) n=19	0 (0) n=20	0 (0) n=11	0 (0) n=12	0 (0) n=17	0 (0) n=11	0 (0) n=13	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 12-15 (Night)	0 (0) n=15	0 (0) n=29	0 (0) n=17	0 (0) n=17	0 (0) n=11	0 (0) n=12	0 (0) n=16	0 (0) n=12	0 (0) n=11	0 (0) n=6	0 (0) n=4	0 (0) n=2

*Numbers in parentheses represent one standard error.
n = number of tows.

Table A-36

American Shad Yolk-Sac Larvae Density Estimates (No./1000 m^3) within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day or Night Sampling by Epibenthic Sled and Tucker Trawl, April-August 1974

	Geographical Region											
Date/Time	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Apr 23-25 (Night)	0 (0)* n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0 (0) n=4	0 (0) n=1	0 (0) n=13	0 (0) n=8	0 (0) n=4	0 (0) n=6	0 (0) n=13	0 (0) n=3
Apr 29-May 4 (Night)	0 (0) n=3	0 (0) n=14	0 (0) n=9	0 (0) n=8	0 (0) n=4	0 (0) n=7	0 (0) n=9	0 (0) n=4	0 (0) n=3	0 (0) n=6	0 (0) n=5	0 (0) n=1
May 6-11 (Night)	0 (0) n=2	0 (0) n=20	0 (0) n=9	0 (0) n=8	0 (0) n=6	0 (0) n=6	0 (0) n=11	0 (0) n=5	0 (0) n=6	0 (0) n=7	0 (0) n=6	0 (0) n=2
May 13-18 (Night)	0 (0) n=11	0 (0) n=19	0 (0) n=8	0 (0) n=7	0.70 (0.70) n=5	0 (0) n=5	1.12 (0.81) n=10	4.59 (3.97) n=6	4.13 (1.89) n=6	2.51 1.31 n=7	0 (0) n=5	0 (0) n=3
May 15-18 (Day)	0 (0) n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0.71 (0.71) n=5	1.32 (0.85) n=8	1.45 (0.73) n=11	6.48 (0.74) n=5	13.77 (5.28) n=6	1.47 (0.72) n=9	0 (0) n=3	0 (0) n=2
May 21-24 (Day)	0 (0) n=7	0 (0) n=20	0 (0) n=11	0 (0) n=7	0 (0) n=5	0 (0) n=6	0.78 (0.78) n=10	1.51 (1.14) n=7	16.57 (8.18) n=5	17.24 (4.73) n=10	8.74 (8.74) n=6	0 (0) n=3
May 23-29 (Night)	0 (0) n=5	0 (0) n=16	0 (0) n=7	0 (0) n=9	0 (0) n=6	0 (0) n=6	0 (0) n=10	3.67 (2.49) n=5	9.95 (6.25) n=6	2.80 (1.99) n=7	0 (0) n=6	0 (0) n=2
May 28-31 (Day)	0 (0) n=9	0 (0) n=18	0 (0) n=10	0 (0) n=6	0 (0) n=5	0 (0) n=5	1.15 (1.15) n=9	4.89 (0) n=5	0 (0) n=4	24.74 (10.56) n=9	17.59 (3.56) n=5	0 (0) n=2
May 30-Jun 5 (Night)	0 (0) n=11	0 (0) n=20	0 (0) n=9	0 (0) n=9	0 (0) n=6	0 (0) n=7	0.69 (0.69) n=12	0 (0) n=5	3.11 (2.59) n=6	18.11 (9.13) n=5	1.83 (0) n=5	0 (0) n=1
Jun 4-7 (Day)	0 (0) n=11	0 (0) n=17	0 (0) n=6	0 (0) n=7	0 (0) n=6	0 (0) n=8	4.89 (4.06) n=12	0 (0) n=5	4.58 (3.31) n=5	10.60 (4.33) n=7	9.27 (7.14) n=4	0 (0) n=3
Jun 10-14 (Day)	0 (0) n=11	0 (0) n=17	0 (0) n=9	0 (0) n=11	0 (0) n=6	0 (0) n=7	0 (0) n=10	0 (0) n=6	0 (0) n=5	0 (0) n=10	1.18 (0.30) n=6	0 (0) n=1
Jun 12-17 (Night)	0 (0) n=10	0 (0) n=15	0 (0) n=7	0 (0) n=9	0 (0) n=7	0 (0) n=7	0 (0) n=10	0 (0) n=6	0 (0) n=5	0 (0) n=10	0 (0) n=4	0 (0) n=2
Jun 17-23 (Night)	0 (0) n=18	0 (0) n=31	0 (0) n=14	0 (0) n=15	0 (0) n=10	0 (0) n=11	0 (0) n=17	0 (0) n=9	0 (0) n=7	0.19 (0.19) n=16	0 (0) n=8	0 (0) n=4
Jun 24-27 (Night)	0 (0) n=10	0 (0) n=31	0 (0) n=22	0 (0) n=21	0 (0) n=11	0 (0) n=16	0 (0) n=17	0 (0) n=13	0.46 (0.46) n=13	0 (0) n=1	0 (0) n=0	0 (0) n=0
Jul 1-5 (Night)	0 (0) n=17	0 (0) n=30	0 (0) n=20	0 (0) n=22	0 (0) n=14	0 (0) n=11	0 (0) n=15	0 (0) n=14	0 (0) n=13	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 8-11 (Night)	0 (0) n=13	0 (0) n=28	0 (0) n=17	0 (0) n=22	0 (0) n=14	0 (0) n=11	0 (0) n=14	0 (0) n=14	0 (0) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 15-18 (Night)	0 (0) n=16	0 (0) n=31	0 (0) n=20	0 (0) n=20	0 (0) n=13	0 (0) n=11	0 (0) n=15	0 (0) n=14	0 (0) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 22-26 (Night)	0 (0) n=9	0 (0) n=24	0 (0) n=19	0 (0) n=20	0 (0) n=15	0 (0) n=11	0 (0) n=16	0 (0) n=14	0 (0) n=13	0 (0) n=5	0 (0) n=3	0 (0) n=0
Jul 29-Aug 2 (Night)	0 (0) n=14	0 (0) n=27	0 (0) n=16	0 (0) n=19	0 (0) n=12	0 (0) n=12	0 (0) n=17	0 (0) n=12	0 (0) n=11	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 5-9 (Night)	0 (0) n=16	0 (0) n=30	0 (0) n=19	0 (0) n=20	0 (0) n=11	0 (0) n=12	0 (0) n=17	0 (0) n=11	0 (0) n=13	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 12-15 (Night)	0 (0) n=15	0 (0) n=29	0 (0) n=17	0 (0) n=17	0 (0) n=11	0 (0) n=12	0 (0) n=16	0 (0) n=12	0 (0) n=11	0 (0) n=6	0 (0) n=4	0 (0) n=2

*Numbers in parentheses represent one standard error.
n = number of tows.

Table A-37

American Shad Post Yolk-Sac Larvae Density Estimates (No./1000 m^3) within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day or Night Sampling by Epibenthic Sled and Tucker Trawl, April-August 1974

Date/Time	Geographical Region											
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Apr 23-25 (Night)	0 (0)* n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0 (0) n=4	0 (0) n=1	0 (0) n=13	0 (0) n=8	0 (0) n=4	0 (0) n=6	0 (0) n=13	0 (0) n=3
Apr 29-May 4 (Night)	0 (0) n=3	0 (0) n=14	0 (0) n=9	0 (0) n=8	0 (0) n=4	0 (0) n=7	0 (0) n=9	0 (0) n=4	0 (0) n=3	0 (0) n=6	0 (0) n=5	0 (0) n=1
May 6-11 (Night)	0 (0) n=2	0 (0) n=20	0 (0) n=9	0 (0) n=8	0 (0) n=6	0 (0) n=6	0 (0) n=11	0 (0) n=5	0 (0) n=6	0 (0) n=7	0 (0) n=6	0 (0) n=2
May 13-18 (Night)	0 (0) n=11	1.23 (0.81) n=19	0 (0) n=8	0 (0) n=7	1.41 (1.41) n=5	2.20 (1.47) n=5	2.49 (2.14) n=10	3.73 (3.08) n=6	7.12 (3.23) n=6	0 (0) n=7	0 (0) n=5	0 (0) n=3
May 15-18 (Day)	0 (0) n=0	0 (0) n=0	0 (0) n=0	0 (0) n=2	0.71 (0.71) n=5	4.33 (1.70) n=8	5.63 (2.77) n=11	7.51 (4.15) n=5	4.35 (2.01) n=6	1.32 (0.60) n=9	0 (0) n=3	0 (0) n=2
May 21-24 (Day)	0 (0) n=7	0.89 (0.73) n=20	2.92 (1.87) n=11	0 (0) n=7	0.17 (0.17) n=5	0 (0) n=6	19.72 (14.86) n=10	18.16 (7.77) n=7	14.80 (4.59) n=5	105.41 (39.01) n=10	0 (0) n=6	0 (0) n=3
May 23-29 (Night)	0 (0) n=5	0.69 (0.54) n=16	0 (0) n=7	0.47 (0.27) n=9	0 (0) n=6	0.35 (0.35) n=6	0.09 (0.09) n=10	7.54 (5.69) n=5	32.61 (11.98) n=6	13.24 (5.40) n=7	0 (0) n=6	0 (0) n=2
May 28-31 (Day)	0 (0) n=9	0.10 (0.10) n=18	0.35 (0.35) n=10	0 (0) n=6	3.31 (3.31) n=5	0 (0) n=5	3.15 (1.61) n=9	20.78 (11.08) n=5	97.32 (10.24) n=4	11.91 (3.64) n=9	2.15 (2.15) n=5	0 (0) n=2
May 30-Jun 5 (Night)	0 (0) n=11	0.12 (0.12) n=20	0 (0) n=9	1.10 (0.92) n=9	0.97 (0.97) n=6	0 (0) n=7	3.21 (1.18) n=12	7.21 (5.84) n=5	119.46 (109.04) n=6	34.37 (11.93) n=5	74.47 (1.05) n=5	0 (0) n=1
Jun 4-7 (Day)	0 (0) n=11	0 (0) n=17	1.67 (1.67) n=6	5.15 (5.15) n=7	0 (0) n=6	0 (0) n=8	8.56 (4.67) n=12	58 (29) n=5	34.08 (9.20) n=5	92.43 (47.18) n=7	10.42 (4.79) n=4	0 (0) n=3
Jun 10-14 (Day)	0 (0) n=11	0 (0) n=17	0.90 (0.90) n=9	4.36 (1.06) n=11	3.38 (1.85) n=6	0 (0) n=7	3.58 (2.32) n=10	24.32 (16.39) n=6	15.54 (7.37) n=5	24.42 (9.59) n=10	30.46 (4.07) n=6	14 70 (0) n=1
Jun 12-17 (Night)	0 (0) n=10	0 (0) n=15	0 (0) n=7	0 (0) n=9	0 (0) n=7	0.26 (0.26) n=7	9.84 (8.44) n=10	17.87 (10.30) n=6	30.73 (15.81) n=5	103.60 (40.62) n=10	104.90 (23.13) n=4	1.88 (1.88) n=2
Jun 17-23 (Night)	0 (0) n=18	0 (0) n=31	0 (0) n=14	0 (0) n=15	0 (0) n=10	4.30 (2.47) n=11	1.38 (0.48) n=17	31.83 (21.76) n=9	110.64 (58.51) n=7	212.22 (72.69) n=16	126.99 (15.27) n=8	39.56 (39.56) n=4
Jun 24-27 (Night)	0 (0) n=10	0 (0) n=31	0 (0) n=22	0 (0) n=21	2.25 (1.98) n=11	2.91 (2.11) n=16	2.49 (1.60) n=17	21.23 (6.86) n=13	67.77 (18.68) n=13	8.82 (0) n=1	0 (0) n=6	0 (0) n=0
Jul 1-5 (Night)	0 (0) n=17	0 (0) n=30	0 (0) n=20	0.07 (0.07) n=22	0 (0) n=14	4.65 (1.77) n=11	3.52 (1.25) n=15	6.34 (2.15) n=14	42.52 (29.07) n=13	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 8-11 (Night)	0 (0) n=13	0 (0) n=28	0 (0) n=17	0.11 (0.11) n=22	0 (0) n=14	0.47 (0.38) n=11	4.30 (3.69) n=14	0.47 (0.47) n=14	7.77 (4.11) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 15-18 (Night)	0 (0) n=16	0 (0) n=31	0 (0) n=20	0 (0) n=20	0 (0) n=13	0 (0) n=11	1.01 (0.91) n=15	0.27 (0.27) n=14	0.40 (0.40) n=12	0 (0) n=0	0 (0) n=0	0 (0) n=0
Jul 22-26 (Night)	0 (0) n=9	0 (0) n=24	0 (0) n=19	0 (0) n=20	0 (0) n=15	0 (0) n=11	0 (0) n=16	0 (0) n=14	0.37 (0.37) n=13	0 (0) n=5	0 (0) n=3	0 (0) n=0
Jul 29-Aug 2 (Night)	0 (0) n=14	0 (0) n=27	0 (0) n=16	0 (0) n=19	0 (0) n=12	0 (0) n=12	0 (0) n=17	0 (0) n=12	0 (0) n=11	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 5-9 (Night)	0 (0) n=16	0 (0) n=30	0 (0) n=19	0 (0) n=20	0 (0) n=11	0 (0) n=12	0 (0) n=17	0 (0) n=11	0 (0) n=13	0 (0) n=5	0 (0) n=4	0 (0) n=2
Aug 12-15 (Night)	0 (0) n=15	0 (0) n=29	0 (0) n=17	0 (0) n=17	0 (0) n=11	0 (0) n=12	0 (0) n=16	0 (0) n=12	0 (0) n=11	0 (0) n=6	0 (0) n=4	0 (0) n=2

*Numbers in parentheses represent one standard error.
n = number of tows.

Table A-38

Juvenile American Shad Density Estimates (No./1000 m^3) within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day or Night Sampling by Epibenthic Sled and Tucker Trawl, April-August 1974

	Geographical Region											
Date/Time	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Apr 23-24 (Night)	0 (0)* n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 2	0 (0) n = 4	0 (0) n = 1	0 (0) n = 13	0 (0) n = 8	0 (0) n = 4	0 (0) n = 6	0 (0) n = 13	0 (0) n = 3
Apr 29-May 4 (Night)	0 (0) n = 3	0 (0) n = 14	0 (0) n = 9	0 (0) n = 8	0 (0) n = 4	0 (0) n = 7	0 (0) n = 9	0 (0) n = 4	0 (0) n = 3	0 (0) n = 6	0 (0) n = 5	0 (0) n = 1
May 6-11 (Night)	0 (0) n = 2	0 (0) n = 20	0 (0) n = 9	0 (0) n = 8	0 (0) n = 6	0 (0) n = 6	0 (0) n = 11	0 (0) n = 5	0 (0) n = 6	0 (0) n = 7	0 (0) n = 6	0 (0) n = 2
May 13-18 (Night)	0 (0) n = 11	0 (0) n = 19	0 (0) n = 8	0 (0) n = 7	0 (0) n = 5	0 (0) n = 5	0 (0) n = 10	0 (0) n = 6	0 (0) n = 6	0 (0) n = 7	0 (0) n = 5	0 (0) n = 3
May 15-18 (Day)	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 2	0 (0) n = 5	0 (0) n = 8	0 (0) n = 11	0 (0) n = 5	0 (0) n = 6	0 (0) n = 9	0 (0) n = 3	0 (0) n = 2
May 21-24 (Day)	0 (0) n = 7	0.48 (0.48) n = 20	0 (0) n = 11	0 (0) n = 7	0 (0) n = 5	0 (0) n = 6	0 (0) n = 10	0 (0) n = 7	0 (0) n = 5	0 (0) n = 10	0 (0) n = 6	0 (0) n = 3
May 23-29 (Night)	0 (0) n = 5	0.58 (0.36) n = 16	0.59 (0.34) n = 7	0 (0) n = 9	0 (0) n = 6	0 (0) n = 6	0 (0) n = 10	0 (0) n = 5	0 (0) n = 6	0 (0) n = 7	0 (0) n = 6	0 (0) n = 2
May 28-31 (Day)	0 (0) n = 9	0.27 (0.27) n = 18	0 (0) n = 10	0 (0) n = 6	0 (0) n = 5	0 (0) n = 5	0 (0) n = 9	0 (0) n = 5	0 (0) n = 4	0 (0) n = 9	0 (0) n = 5	0 (0) n = 2
May 30-Jun 5 (Night)	0 (0) n = 11	0.11 (0.11) n = 20	0 (0) n = 9	0 (0) n = 9	0 (0) n = 6	0 (0) n = 7	0 (0) n = 12	0 (0) n = 5	0 (0) n = 6	0 (0) n = 5	0 (0) n = 5	0 (0) n = 1
Jun 4-7 (Day)	0 (0) n = 11	0 (0) n = 17	0 (0) n = 6	0 (0) n = 7	0 (0) n = 6	0 (0) n = 8	0 (0) n = 12	0 (0) n = 5	0 (0) n = 5	0 (0) n = 7	0 (0) n = 4	0 (0) n = 3
Jun 10-14 (Day)	0 (0) n = 11	0 (0) n = 17	0.16 (0.16) n = 9	0 (0) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 10	0 (0) n = 6	0 (0) n = 5	0 (0) n = 10	0 (0) n = 6	0 (0) n = 1
Jun 12-17 (Night)	0 (0) n = 10	0 (0) n = 15	0 (0) n = 7	0 (0) n = 9	0 (0) n = 7	0 (0) n = 7	0.68 (0.68) n = 10	0 (0) n = 6	0 (0) n = 5	0 (0) n = 10	0 (0) n = 4	0 (0) n = 2
Jun 17-23 (Night)	0 (0) n = 18	0 (0) n = 31	0 (0) n = 14	0 (0) n = 15	0 (0) n = 10	0.15 (0.15) n = 11	0 (0) n = 17	0 (0) n = 9	0 (0) n = 7	0 (0) n = 16	0 (0) n = 8	0 (0) n = 4
Jun 24-27 (Night)	0 (0) n = 10	0 (0) n = 31	0 (0) n = 22	0.04 (0.04) n = 21	0.88 (0.88) n = 11	0 (0) n = 16	0.35 (0.28) n = 17	0.17 (0.17) n = 13	0.66 (0.53) n = 13	0 (0) n = 1	0 (0) n = 0	0 (0) n =0
Jul 1-5 (Night)	0 (0) n = 17	0 (0) n = 30	0 (0) n = 20	1.81 (1.07) n = 22	8.31 (2.61) n = 14	19.42 (9.84) n = 11	8.19 (3.09) n = 15	1.81 (0.81) n = 14	3.34 (1.14) n = 13	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0
Jul 8-11 (Night)	0 (0) n = 13	3.85 (1.40) n = 28	7.78 (3.01) n = 17	19.68 (10.47) n = 22	28.68 (9.58) n = 14	10.56 (5.17) n = 11	5.99 (1.49) n = 14	4.23 (1.67) n = 14	9.31 (2.92) n = 12	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0
Jul 15-18 (Night)	1.89 (1.24) n = 16	5.16 (2.93) n = 31	11.85 (4.40) n = 20	1.52 (0.07) n = 20	0.47 (0.47) n = 13	10.80 (3.82) n = 11	14.30 (5.23) n = 15	7.89 (3.35) n = 14	2.85 (0.44) n = 12	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0
Jul 22-26 (Night)	1.37 (0.90) n = 9	2.40 (0.76) n = 24	4.40 (0.91) n = 19	4.39 (1.97) n = 20	2.37 (0.65) n = 15	2.97 (0.65) n = 11	11.78 (3.32) n = 16	9.34 (5.86) n = 14	5.67 (0.96) n = 13	1.66 (1.66) n = 5	0 (0) n = 3	0 (0) n = 0
Jul 29-Aug 2 (Night)	0.59 (0.25) n = 14	2.42 (0.88) n = 27	3.98 (1.29) n = 16	1.91 (0.78) n = 19	0.71 (0.56) n = 12	8.25 (0.60) n = 12	3.62 (1.39) n = 17	1.78 (0.85) n = 12	0.40 (0.40) n = 11	1.59 (1.59) n = 5	4.92 (0.66) n = 4	3.12 (3.12) n = 2
Aug 5-9 (Night)	4.07 (1.65) n = 16	2.62 (1.00) n = 30	7.94 (3.07) n = 19	1.50 (0.51) n = 20	0.89 (0.77) n = 11	2.08 (1.13) n = 12	3.51 (0.95) n = 17	0 (0) n = 11	0.41 (0.21) n = 13	0 (0) n = 5	0.71 (0.71) n = 4	9.90 (0.06) n = 2
Aug 12-15 (Night)	0.62 (0.34) n = 15	1.51 (0.69) n = 29	2.72 (1.16) n = 17	1.01 (0.68) n = 17	0 (0) n = 11	1.25 (0.69) n = 12	1.29 (0.60) n = 16	9.75 (8.03) n = 12	4.59 (2.69) n = 11	0.45 (0.45) n = 6	0.87 (0.87) n = 4	0 (0) n = 2

*Numbers of parentheses represent one standard error.

n = number of tows.

Table A-39

Juvenile American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SH	CS	AL
Aug 19-22	1.24 (0.59)* n = 14	1.06 (0.35) n = 34	4.75 (2.17) n = 19	1.39 (0.42) n = 12	0.35 (0.35) n = 5	1.61 (1.00) n = 6	3.73 (1.26) n = 7	NS	NS	NS	NS	NS
Aug 26-29	7.55 (2.42) n = 16	0.57 (0.21) n = 34	1.71 (0.41) n = 20	1.26 (0.61) n = 12	0 (0) n = 5	2.57 (2.36) n = 8	0 (0) n = 5					
Sep 3-6	3.75 (0.90) n = 16	1.99 (0.40) n = 34	5.37 (2.54) n = 20	1.60 (0.71) n = 12	1.29 (0.43) n = 5	3.27 (2.86) n = 8	0.83 (0.51) n = 5					
Sep 9-12	4.46 (1.37) n = 16	0.71 (0.20) n = 34	1.74 (0.56) n = 20	1.61 (0.60) n = 12	2.47 (1.13) n = 4	1.28 (1.02) n = 8	4.48 (1.94) n = 5					
Sep 16-19	3.14 (0.98) n = 16	3.10 (1.02) n = 34	2.50 (0.76) n = 20	2.14 (0.59) n = 12	0 (0) n = 5	2.69 (2.61) n = 8	1.59 (1.17) n = 5					
Sep 23-26	5.01 (1.52) n = 16	2.52 (0.40) n = 34	2.46 (1.10) n = 20	0 (0) n = 8	1.19 (1.19) n = 4	5.24 (1.40) n = 7	0.94 (0.58) n = 5					
Sep 30-Oct 4	1.56 (0.54) n = 16	2.96 (0.67) n = 33	4.02 (1.45) n = 20	2.05 (1.06) n = 11	1.24 (0.83) n = 5	3.59 (3.49) n = 8	0.77 (0.77) n = 5					
Oct 7-10	3.83 (1.08) n = 14	2.19 (0.70) n = 21	2.64 (1.83) n = 19	1.87 (0.47) n = 13	0 (0) n = 5	11.42 (2.25) n = 8	2.57 (1.75) n = 5					
Oct 14-18	6.20 (1.49) n = 15	6.63 (2.30) n = 31	4.56 (1.40) n = 19	1.54 (0.95) n = 12	2.64 (1.33) n = 4	4.49 (2.32) n = 7	4.27 (2.22) n = 5					
Oct 21-24	3.63 (1.25) n = 16	8.29 (2.70) n = 33	2.43 (0.53) n = 19	1.52 (0.72) n = 12	0 (0) n = 5	0.05 (0.05) n = 8	4.05 (2.50) n = 3					
Oct 28-Nov 1	2.85 (0.67) n = 16	0.98 (0.40) n = 34	4.61 (1.22) n = 20	1.89 (0.69) n = 12	5.24 (1.75) n = 5	1.69 (1.69) n = 8	1.64 (0.75) n = 5					
Nov 5-9	2.07 (0.99) n = 16	1.27 (0.42) n = 28	1.93 (0.65) n = 18	2.50 (1.91) n = 9	0.82 (0.47) n = 4	1.44 (1.27) n = 8	0.97 (0.97) n = 4					
Nov 11-14	0.73 (0.39) n = 13	1.03 (0.37) n = 34	1.32 (0.70) n = 18	2.21 (2.21) n = 12	0 (0) n = 5	1.34 (0.68) n = 8	0 (0) n = 4					
Nov 18-21	0.53 (0.29) n = 16	1.38 (0.65) n = 34	1.86 (0.50) n = 20	0.24 (0.24) n = 12	0.75 (0.46) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 24-27	0.30 (0.20) n = 16	0.73 (0.28) n = 33	0.51 (0.30) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	10.29 (3.01) n = 16	7.48 (2.10) n = 34	8.59 (1.63) n = 20	15.03 (8.01) n = 12	2.47 (2.09) n = 5	2.36 (0.93) n = 8	1.70 (1.70) n = 5					
Dec 9-12	3.24 (0.70) n = 16	15.50 (8.71) n = 33	6.27 (2.32) n = 20	0.40 (0.29) n = 12	1.11 (0.46) n = 5	14.03 (13.74) n = 8	0.79 (0.48) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-40

Juvenile American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 24-Apr 6	0 (0)* n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0
Apr 7-20	0 (0) n = 0	0 (0) n = 0	0 (0) n = 8	0 (0) n = 5	0 (0) n = 10	0 (0) n = 6	0 (0) n = 0	0 (0) n = 1	0 (0) n = 3	0 (0) n = 4	0 (0) n = 9	0 (0) n = 7	0 (0) n = 53
Apr 21-May 4	0 (0) n = 7	0 (0) n = 7	0 (0) n = 13	0 (0) n = 13	0 (0) n = 13	0 (0) n = 11	0 (0) n = 8	0 (0) n = 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0 (0) n = 75
May 5-18	0 (0) n = 14	0 (0) n = 8	0 (0) n = 16	0 (0) n = 9	0 (0) n = 8	0 (0) n = 6	0 (0) n = 3	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0 (0) n = 8	0 (0) n = 87
May 19-Jun 1	0 (0) n = 11	0 (0) n = 5	0 (0) n = 14	0 (0) n = 16	0 (0) n = 12	0 (0) n = 6	0 (0) n = 8	0 (0) n = 2	0 (0) n = 2	0 (0) n = 2	0 (0) n = 5	0 (0) n = 8	0 (0) n = 91
Jun 2-15	0 (0) n = 11	0.14 (0.14) n = 7	0 (0) n = 21	0 (0) n = 18	0.20 (0.16) n = 20	0 (0) n = 8	0 (0) n = 15	0 (0) n = 8	0 (0) n = 6	0 (0) n = 8	0 (0) n = 13	0 (0) n = 20	0.03 (0.02) n = 155
Jun 16-29	0 (0) n = 13	0 (0) n = 8	0 (0) n = 13	0 (0) n = 15	0.20 (0.14) n = 15	2.22 (1.86) n = 9	2.25 (1.09) n = 16	5.44 (2.86) n = 9	8.33 (6.39) n = 6	1.46 (0.66) n = 13	0.25 (0.25) n = 16	0 (0) n = 20	1.18 (0.36) n = 153
Jun 30-Jul 13	3.50 (1.29) n = 16	5.63 (5.63) n = 8	1.90 (1.59) n = 10	13.00 (7.61) n = 8	21.90 (6.79) n = 10	49.60 (31.11) n = 5	25.33 (14.39) n = 6	6.50 (4.48) n = 4	8.67 (5.55) n = 3	2.50 (1.63) n = 6	1.30 (0.99) n = 10	1.79 (1.32) n = 19	9.11 (2.16) n = 105
Jul 14-27	1.67 (0.69) n = 12	8.50 (3.37) n = 12	13.50 (6.16) n = 12	10.35 (2.89) n = 17	13.80 (6.06) n = 15	15.00 (7.46) n = 8	31.81 (6.25) n = 16	17.50 (4.63) n = 8	6.40 (1.96) n = 5	12.50 (4.40) n = 10	6.15 (1.76) n = 13	10.55 (2.69) n = 20	12.73 (1.42) n = 148
Jul 28-Aug 10	6.63 (1.46) n = 19	12.06 (2.87) n = 16	12.06 (3.02) n = 16	14.65 (3.59) n = 26	12.95 (4.80) n = 19	46.42 (8.92) n = 12	45.14 (13.29) n = 14	12.00 (2.89) n = 8	11.00 (4.97) n = 4	16.30 (5.90) n = 10	13.19 (3.61) n = 16	26.94 (9.40) n = 16	18.60 (1.96) n = 176
Aug 11-24	7.71 (3.33) n = 17	8.42 (1.64) n = 12	11.71 (6.38) n = 14	10.90 (3.12) n = 21	6.00 (2.25) n = 9	41.43 (12.21) n = 7	23.86 (4.88) n = 14	6.57 (1.89) n = 7	12.25 (6.88) n = 4	9.33 (5.54) n = 9	10.23 (1.86) n = 13	19.54 (4.26) n = 24	13.80 (1.48) n = 151
Aug 25-Sep 7	7.25 (1.91) n = 8	5.33 (2.81) n = 6	12.87 (2.64) n = 15	17.88 (4.79) n = 8	30.00 (14.54) n = 5	49.83 (19.30) n = 6	18.00 (3.16) n = 15	10.00 (3.07) n = 6	9.50 (3.59) n = 6	22.00 (7.76) n = 9	18.20 (3.54) n = 15	7.27 (1.80) n = 15	16.16 (1.77) n = 114
Sep 8-21	8.60 (6.53) n = 10	7.33 (3.92) n = 9	6.09 (2.14) n = 23	14.86 (3.94) n = 28	11.75 (2.06) n = 8	39.60 (13.25) n = 5	16.36 (4.56) n = 11	7.33 (1.20) n = 9	17.50 (9.26) n = 4	13.25 (4.73) n = 8	9.92 (2.13) n = 13	7.94 (2.23) n = 17	11.63 (1.30) n = 145
Sep 22-Oct 5	4.00 (1.90) n = 26	4.69 (1.58) n = 13	4.25 (1.99) n = 8	6.08 (1.41) n = 12	16.22 (10.90) n = 9	25.64 (6.62) n = 11	21.69 (3.46) n = 13	11.86 (3.84) n = 7	6.75 (2.87) n = 4	8.22 (3.15) n = 9	18.38 (9.48) n = 16	3.40 (1.33) n = 15	10.57 (1.57) n = 143
Oct 6-19	2.38 (0.75) n = 13	21.23 (13.90) n = 13	11.71 (4.04) n = 21	23.47 (7.62) n = 15	27.28 (9.73) n = 18	31.08 (9.76) n = 12	9.17 (2.40) n = 6	3.25 (2.93) n = 4	1.00 (0.58) n = 3	3.00 (1.22) n = 4	2.80 (2.56) n = 5	0 (0) n = 4	15.81 (2.75) n = 118
Oct 20-Nov 2	11.71 (3.25) n = 7	12.20 (2.44) n = 20	17.33 (3.92) n = 27	17.43 (5.48) n = 21	6.20 (2.39) n = 15	4.00 (2.00) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	12.84 (1.73) n = 101
Nov 3-16	3.08 (1.08) n = 12	12.00 (4.66) n = 8	8.21 (1.79) n = 29	7.67 (1.35) n = 21	1.28 (0.33) n = 18	1.17 (0.65) n = 6	0.20 (0.20) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	5.07 (0.72) n = 111
Nov 17-30	0.83 (0.48) n = 6	0.05 (0.05) n = 22	0.44 (0.23) n = 18	0.73 (0.30) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.31 (0.09) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0 (0) n = 105
Dec 15-18	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-41

Juvenile American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 34-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	0 (0)* n = 0	0 (0) n = 1	0.86 (0.59) n = 7	2.33 (2.33) n = 3	28.00 (23.12) n = 3	NS	NS	NS	NS	NS	NS	6.93 (5.22) n = 14
Aug 11-24		0 (0) n = 0	0 (0) n = 1	0.14 (0.14) n = 14	2.67 (1.26) n = 6	12.83 (5.84) n = 6							3.52 (1.59) n = 27
Aug 25-Sep 7		0 (0) n = 0	0 (0) n = 0	0 (0) n = 15	10.40 (9.43) n = 5	47.50 (43.50) n = 2							6.68 (4.57) n = 22
Sep 8-21		0 (0) n = 0	0.50 (0.50) n = 2	0 (0) n = 13	16.75 (10.96) n = 4	9.33 (4.48) n = 3							4.36 (2.34) n = 22
Sep 22-Oct 5		0 (0) n = 0	0 (0) n = 2	0 (0) n = 12	4.50 (2.53) n = 4	0 (0) n = 6							0.75 (0.51) n = 24
Oct 6-19		0.50 (0.50) n = 2	1.75 (1.35) n = 8	1.20 (0.73) n = 5	4.75 (2.08) n = 8	1.67 (1.67) n = 3							2.46 (0.82) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	3.30 (0.78) n = 10	1.57 (1.15) n = 7	0.50 (0.50) n = 4							2.19 (0.58) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	0.78 (0.78) n = 9	0 (0) n = 7	0 (0) n = 6							0.32 (0.32) n = 22
Nov 17-30	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 7	0 (0) n = 9	0 (0) n = 6	NS	NS	NS	NS	NS	NS	0 (0) n = 22

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

services group

Table A-42

Juvenile American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), March-November 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 24-Apr 6	0 (0)* n = 0	0 (0) n = 2	0 (0) n = 1	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	0 (0) n = 6
Apr 7-20	0 (0) n = 1	0 (0) n = 6	0 (0) n = 5	0 (0) n = 9	0 (0) n = 1	0 (0) n = 3							0 (0) n = 25
Apr 21-May 4	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 6	0 (0) n = 6	0 (0) n = 5							0 (0) n = 17
May 5-18	0 (0) n = 0	0 (0) n = 9	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0							0 (0) n = 15
May 19-Jun 1	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0							- - n = 0
Jun 2-15	0 (0) n = 5	0 (0) n = 8	0.51 (0.51) n = 3	0 (0) n = 5	0 (0) n = 3	0 (0) n = 10							0.04 (0.04) n = 34
Jun 16-29	0 (0) n = 4	0 (0) n = 10	0 (0) n = 3	0 (0) n = 10	0 (0) n = 4	0 (0) n = 5							0 (0) n = 36
June 30-Jul 13	0.38 (0.38) n = 4	1.84 (0.78) n = 10	7.65 (0.88) n = 3	33.32 (24.83) n = 9	156.37 (133.62) n = 5	53.17 (53.17) n = 4							38.21 (21.07) n = 35
Jul 14-27	0.38 (0.38) n = 4	0.38 (0.38) n = 8	2.55 (2.55) n = 3	4.97 (2.64) n = 12	0.51 (0.32) n = 6	10.10 (6.84) n = 5							3.30 (1.28) n = 38
Jul 28-Aug 10	0.76 (0.76) n = 4	0 (0) n = 3	5.35 (2.83) n = 4	0.44 (0.44) n = 7	0.92 (0.37) n = 5	2.04 (0.51) n = 3							1.47 (0.55) n = 26
Aug 11-24	0 (0) n = 0	0 (0) n = 3	0.51 (0.51) n = 3	0.31 (0.20) n = 10	0 (0) n = 4	0.76 (0.52) n = 6							0.35 (0.15) n = 26
Aug 25-Sep 7	0.38 (0.38) n = 4	1.72 (0.61) n = 8	0 (0) n = 2	0.38 (0.25) n = 8	2.04 (1.35) n = 3	2.55 (1.02) n = 6							1.28 (0.32) n = 31
Sep 8-21	0 (0) n = 3	0.28 (0.19) n = 11	0.25 (0.25) n = 6	0.76 (0.76) n = 2	1.84 (0.75) n = 5	2.14 (0.61) n = 5							0.81 (0.22) n = 32
Sep 22-Oct 5	0 (0) n = 0	0 (0) n = 0	0 (0) n = 2	1.90 (1.32) n = 9	0 (0) n = 1	0 (0) n = 0							1.42 1.01 n = 12
Oct 6-19	1.02 (0.51) n = 3	3.98 (3.61) n = 5	0.77 (0.77) n = 2	4.97 (0.18) n = 6	11.47 (2.54) n = 2	8.67 (3.34) n = 3							4.92 (1.12) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	1.53 (0) n = 1	5.74 (2.22) n = 8	3.44 (1.45) n = 4	0.61 (0.61) n = 5							3.57 (1.13) n = 18
Nov 3-16	4.78 (1.77) n = 8	0 (0) n = 3	1.53 (0) n = 3	1.91 (1.45) n = 4	0.51 (0.51) n = 3	0 (0) n = 4							2.08 (0.71) n = 25
Nov 17-30	0 (0) n = 0	1.69 (0.42) n = 19	0 (0) n = 4	0.26 (0.25) n = 6	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	NS	1.16 (0.31) n = 29

*Numbers in parentheses represent one standard error.

NS = no samples taken.

n = number of tows.

Table A-43

Yearling American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-November 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KH	SG	CS	AL
Sep 3-6	0 (0)* n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 4	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS
Sep 9-12	0 (0) n = 16	0 (0) n = 34	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 16-19	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 23-26	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 8	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Sep 30-Oct 4	0 (0) n = 16	0 (0) n = 33	0 (0) n = 20	0 (0) n = 11	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 7-10	0 (0) n = 14	0 (0) n = 31	0 (0) n = 19	0 (0) n = 13	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 14-18	0 (0) n = 15	0 (0) n = 31	0 (0) n = 19	0 (0) n = 12	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Oct 21-24	0 (0) n = 16	0 (0) n = 33	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3					
Oct 28-Nov 1	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 5-9	0 (0) n = 16	0 (0) n = 28	0 (0) n = 18	0 (0) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0 (0) n = 13	0 (0) n = 34	0 (0) n = 18	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 24-27	0 (0) n = 16	0 (0) n =33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 2-5	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Dec 9-12	0 (0) n = 16	0 (0) n = 33	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.

n = number of tows.

NS = no samples taken.

Table A-44

Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 7-20	0 (0) n = 0	0 (0) n = 0	0 (0) n = 8	0 (0) n = 5	0 (0) n = 10	0 (0) n = 6	0 (0) n = 0	0 (0) n = 1	0 (0) n = 3	0 (0) n = 4	0 (0) n = 9	0 (0) n = 7	0 (0) n = 53
Apr 21-May 4	0 (0) n = 7	0 (0) n = 7	0 (0) n = 13	0 (0) n = 13	0 (0) n = 13	0 (0) n = 11	0 (0) n = 8	0 (0) n = 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0 (0) n = 75
May 5-18	0.07 (0.07) n = 14	0 (0) n = 8	0 (0) n = 16	0 (0) n = 9	0 (0) n = 8	0 (0) n = 6	0 (0) n = 3	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0 (0) n = 8	0.01 (0.01) n = 87
May 19-Jun 1	0 (0) n = 11	0 (0) n = 5	0 (0) n = 14	0.13 (0.13) n = 16	0 (0) n = 12	0 (0) n = 6	0 (0) n = 8	0 (0) n = 2	0 (0) n = 2	0 (0) n = 2	0 (0) n = 5	0 (0) n = 8	0.02 (0.02) n = 91
Jun 2-15	0 (0) n = 11	0 (0) n = 7	0 (0) n = 21	0 (0) n = 18	0 (0) n = 20	0 (0) n = 8	0.20 (0.20) n = 15	0.13 (0.13) n = 8	0 (0) n = 6	0 (0) n = 8	0 (0) n = 13	0 (0) n = 20	0.03 (0.02) n = 155
Jun 16-29	0 (0) n = 13	0 (0) n = 8	0 (0) n = 13	0 (0) n = 15	0 (0) n = 15	0 (0) n = 9	0.13 (0.09) n = 16	0 (0) n = 9	0.17 (0.17) n = 6	0.15 (0.15) n = 13	0.44 (0.38) n = 16	0.60 (0.42) n = 20	0.16 (0.07) n = 153
Jun 30-Jul 13	0 (0) n = 16	0 (0) n = 8	0 (0) n = 10	0 (0) n = 8	0 (0) n = 10	0 (0) n = 5	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 6	0 (0) n = 10	0 (0) n = 19	0 (0) n = 105
Jul 14-27	0 (0) n = 12	0 (0) n = 12	0 (0) n = 12	0 (0) n = 17	0 (0) n = 15	0.38 (0.38) n = 8	0.06 (0.06) n = 16	0 (0) n = 8	0 (0) n = 5	0 (0) n = 10	0 (0) n = 13	0 (0) n = 20	0.03 (0.02) n = 148
Jul 28-Aug 10	0 (0) n = 19	0 (0) n = 16	0.06 (0.06) n = 16	0.04 (0.04) n = 26	0 (0) n = 19	0 (0) n = 12	0 (0) n = 14	0 (0) n = 8	0 (0) n = 4	0 (0) n = 10	0 (0) n = 16	0 (0) n = 16	0.01 (0.01) n = 176
Aug 11-24	0 (0) n = 17	0 (0) n = 12	0 (0) n = 14	0 (0) n = 21	0 (0) n = 9	0 (0) n = 7	0 (0) n = 14	0 (0) n = 7	0 (0) n = 4	0 (0) n = 9	0 (0) n = 13	0 (0) n = 24	0 (0) n = 151
Aug 25-Sep 7	0 (0) n = 8	0 (0) n = 6	0 (0) n = 15	0 (0) n = 8	0 (0) n = 5	0 (0) n = 6	0.40 (0.40) n = 15	0 (0) n = 6	0 (0) n = 6	0 (0) n = 9	0 (0) n = 15	0 (0) n = 15	0.05 (0.05) n = 114
Sep 8-21	0 (0) n = 10	0 (0) n = 9	0 (0) n = 23	0 (0) n = 28	0 (0) n = 8	0 (0) n = 5	0 (0) n = 11	0.11 (0.11) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 13	0 (0) n = 17	0.01 (0.01) n = 145
Sep 22-Oct 5	0 (0) n = 26	0 (0) n = 13	0 (0) n = 8	0 (0) n = 12	0 (0) n = 9	0 (0) n = 11	0 (0) n = 13	0 (0) n = 7	0 (0) n = 4	0 (0) n = 9	0 (0) n = 16	0 (0) n = 15	0 (0) n = 143
Oct 6-19	0 (0) n = 13	0.08 (0.08) n = 13	0 (0) n = 21	0 (0) n = 15	0.11 (0.08) n = 18	0 (0) n = 12	0 (0) n = 6	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 5	0 (0) n = 4	0.03 (0.01) n = 118
Oct 20-Nov 2	0.14 (0.14) n = 7	0 (0) n = 20	0 (0) n = 27	0.05 (0.05) n = 21	0 (0) n = 15	0 (0) n = 11	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.02 (0.01) n = 101
Nov 3-16	0 (0) n = 12	0 (0) n = 8	0 (0) n = 29	0 (0) n = 21	0 (0) n = 18	0 (0) n = 6	0 (0) n = 5	0 (0) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 2	0 (0) n = 0	0 (0) n = 111
Nov 17-30	0 (0) n = 6	0 (0) n = 22	0 (0) n = 18	0 (0) n = 11	0 (0) n = 6	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 70
Dec 1-14	0 (0) n = 18	0 (0) n = 13	0 (0) n = 20	0 (0) n = 25	0 (0) n = 9	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 2	0 (0) n = 2	0 (0) n = 4	0 (0) n = 105
Dec 15-18	0 (0) n = 0	0 (0) n = 4	0 (0) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 22

*Numbers in parentheses represent one standard error.

n = number of hauls.

Table A-45

Yearling American Shad Catch per Unit Effort within Five Geographical Regions Hudson River Estuary [RM 34-61 (KM 38-98], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-December 1974

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	0 (0)* n = 0	0 (0) n = 1	0 (0) n = 7	0 (0) n = 3	0 (0) n = 3	NS	NS	NS	NS	NS	NS	0 (0) n = 14
Aug 11-24		0 (0) n = 0	0 (0) n = 1	0 (0) n = 14	0 (0) n = 6	0 (0) n = 6							0 (0) n = 27
Aug 25-Sep 7		0 (0) n = 0	0 (0) n = 0	0 (0) n = 15	0 (0) n = 5	0 (0) n = 2							0 (0) n = 22
Sep 8-21		0 (0) n = 0	0 (0) n = 2	0 (0) n = 13	0 (0) n = 4	0 (0) n = 3							0 (0) n = 22
Sep 22-Oct 5		0 (0) n = 0	0 (0) n = 2	0 (0) n = 12	0 (0) n = 4	0 (0) n = 6							0 (0) n = 24
Oct 6-19		0 (0) n = 2	0 (0) n = 8	0 (0) n = 5	0.13 (0.13) n = 8	0.33 (0.33) n = 3							0.08 (0.05) n = 26
Oct 20-Nov 2		0 (0) n = 0	0 (0) n = 0	0 (0) n = 10	0 (0) n = 7	0 (0) n = 4							0 (0) n = 21
Nov 3-16		0 (0) n = 0	0 (0) n = 0	0 (0) n = 9	0 (0) n = 7	0 (0) n = 6							0 (0) n = 22
Nov 17-30	NS	0 (0) n = 0	0 (0) n = 0	0 (0) n = 7	0 (0) n = 9	0 (0) n = 6	NS	NS	NS	NS	NS	NS	0 (0) n = 22

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of hauls.

services group

Table A-46

Yearling American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), March-December 1974

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 24-Apr 6	0 (0)* n = 0	0 (0) n = 2	0 (0) n = 1	0 (0) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	NS	NS	NS	NS	NS	0 (0) n = 6
Apr 7-20	0 (0) n = 1	0 (0) n = 6	0 (0) n = 5	0 (0) n = 9	0 (0) n = 1	0 (0) n = 3	0 (0) n = 0						0 (0) n = 25
Apr 21-May 4	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0.76 (0.52) n = 6	0.51 (0.51) n = 6	0 (0) n = 5	0 (0) n = 0						0.45 (0.25) n = 17
May 5-18	0 (0) n = 0	1.70 (1.52) n = 9	2.04 (2.04) n = 3	1.02 (1.02) n = 3	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						1.63 (0.97) n = 15
May 19-Jun 1	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0						- - n = 0
Jun 2-15	0.31 (0.31) n = 5	0 (0) n = 8	0 (0) n = 3	0 (0) n = 5	0 (0) n = 3	0.15 (0.15) n = 10	0 (0) n = 0						0.09 (0.06) n = 34
Jun 16-29	0 (0) n = 4	0 (0) n = 10	0 (0) n = 3	0 (0) n = 10	0 (0) n = 4	0 (0) n = 5	0 (0) n = 0						0 (0) n = 36
Jun 30-Jul 13	0 (0) n = 4	0 (0) n = 10	0 (0) n = 3	0 (0) n = 9	0 (0) n = 5	0 (0) n = 4	0 (0) n = 0						0 (0) n = 35
Jul 14-27	0.38 (0.38) n = 4	0 (0) n = 8	0 (0) n = 3	0 (0) n = 12	0 (0) n = 6	0 (0) n = 5	0 (0) n = 0						0.04 (0.04) n = 38
Jul 28-Aug 10	0 (0) n = 4	0.51 (0.51) n = 3	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5	0 (0) n = 3	0 (0) n = 0						0.06 (0.06) n = 26
Aug 11-24	0 (0) n = 0	0 (0) n = 3	0 (0) n = 3	0 (0) n = 10	0 (0) n = 4	0 (0) n = 6	0 (0) n = 0						0 (0) n = 26
Aug 25-Sep 7	0 (0) n = 4	0 (0) n = 8	0 (0) n = 2	0 (0) n = 8	0 (0) n = 3	0 (0) n = 6	0 (0) n = 0						0 (0) n = 31
Sep 8-21	0 (0) n = 3	0 (0) n = 11	0 (0) n = 6	0 (0) n = 2	0 (0) n = 5	0 (0) n = 5	0 (0) n = 0						0 (0) n = 32
Sep 22-Oct 5	0 (0) n = 0	0 (0) n = 0	0 (0) n = 2	0.18 (0.18) n = 9	0 (0) n = 1	0 (0) n = 0	0 (0) n = 0						0.14 (0.14) n = 12
Oct 6-19	0 (0) n = 3	0.31 (0.31) n = 5	0 (0) n = 2	0 (0) n = 6	0 (0) n = 2	0 (0) n = 3	0 (0) n = 0						0.07 (0.07) n = 21
Oct 20-Nov 2	0 (0) n = 0	0 (0) n = 0	0 (0) n = 1	0.38 (0.25) n = 8	0 (0) n = 4	0 (0) n = 5	0 (0) n = 0						0.17 (0.12) n = 18
Nov 3-16	0.19 (0.19) n = 8	0.51 (0.51) n = 3	0 (0) n = 3	0 (0) n = 4	0 (0) n = 3	0 (0) n = 4	0 (0) n = 0						0.12 (0.08) n = 25
Nov 17-30	0 (0) n = 0	0 (0) n = 19	0 (0) n = 4	0 (0) n = 6	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0						0 (0) n = 29
Dec 1-14	0 (0) n = 0	0 (0) n = 1	0 (0) n = 2	0 (0) n = 10	0 (0) n = 4	0 (0) n = 3	0 (0) n = 2						0 (0) n = 22
Dec 15-18	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	- - n = 0	NS	NS	NS	NS	NS	- - n = 0

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-47

Age II and Older American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-November 1974

	Geographical Region											
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL
Sep 3-6	0 (0)* n = 16	0.21 (0.21) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 4	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS
Sep 9-12	0 (0) n = 16	0.12 (0.08) n = 34	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 16-19	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Sep 23-26	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 8	0 (0) n = 4	0 (0) n = 7	0 (0) n = 5					
Sep 30- Oct 4	0 (0) n = 16	0 (0) n = 33	0 (0) n = 20	0 (0) n = 11	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5					
Oct 7-10	0 (0) n = 14	0.22 (0.18) n = 31	0.45 (0.29) n = 19	0.21 (0.21) n = 13	0.39 (0.39) n = 5	1.09 (0.95) n = 8	0 (0) n = 5					
Oct 14-18	0 (0) n = 15	0.17 (0.12) n = 31	0 (0) n = 19	0 (0) n = 12	0 (0) n = 4	0 (0) n = 7	0.40 (0.40) n = 5					
Oct 21-24	2.40 (1.06) n = 16	0.12 (0.08) n = 33	0 (0) n = 19	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 3					
Oct 28- Nov 1	0 (0) n = 16	0 (0) n = 34	0.28 (0.28) n = 20	0.13 (0.13) n = 12	0.40 (0.40) n = 5	0 (0) n = 8	0 (0) n = 5					
Nov 5-9	0 (0) n = 16	0 (0) n = 28	0 (0) n = 18	0 (0) n = 9	0 (0) n = 4	0 (0) n = 8	0 (0) n = 4					
Nov 11-14	0.19 (0.19) n = 13	0.11 (0.08) n = 34	0 (0) n = 18	0.63 (0.63) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 4					
Nov 18-21	0 (0) n = 16	0 (0) n = 34	0 (0) n = 20	0 (0) n = 12	0 (0) n = 5	0 (0) n = 8	0 (0) n = 5	NS	NS	NS	NS	NS

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-48

Juvenile Striped Bass Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

Dates	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	16,800 (5,731)*	153,782 (47,021)	330,377 (83,590)	37,477 (6,389)	3,514 (1,127)	1,775 (1,197)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3,397 (3,397)	547,121 (96,305)
Oct 20-Nov 2	61,324 (16,306)	193,101 (49,759)	302,774 (68,274)	24,575 (6,496)	2,284 (721)	3,873 (2,598)	NS	NS	NS	NS	NS	NS	587,932 (86,329)
Nov 3-16	39,539 (9,369)	556,586 (253,811)	132,601 (33,363)	14,482 (4,522)	879 (879)	0 (0)	2,838 (2,838)	0 (0)	0 (0)	0 (0)	0 (0)	NS	746,924 (257,818)
Nov 17-30	30,125 (14,023)	196,199 (61,439)	122,504 (52,995)	5,027 (1,451)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	353,854 (91,493)
Dec 1-14	42,257 (14,514)	10,485 (5,526)	1,345 (1,345)	1,474 (1,474)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	55,562 (15,658)
Dec 15-28	NS	11,359 (11,359)	0 (0)	0 (0)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	11,359 (11,359)

*Numbers in parentheses represent one standard error.
NS no samples taken.

Table A-49

Juvenile Striped Bass Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-December 1974

Dates	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	NS	457,149 (0)*	135,600 (33,027)	54,468 (53,156)	244,976 (53,609)	NS	NS	NS	NS	NS	NS	892,193 (82,403)
Aug 11-24			107,564 (0)	139,550 (38,592)	20,206 (6,335)	99,410 (17,538)							366,731 (42,861)
Aug 25-Sep 7			NS (NS)	145,606 (36,312)	17,395 (5,810)	228,999 (133,139)							391,999 (138,124)
Sep 8-21			416,812 (147,901)	158,791 (33,879)	25,697 (16,472)	159,767 (96,057)							761,067 (180,335)
Sep 22-Oct 5		NS	766,397 (685,723)	148,985 (42,030)	13,178 (6,973)	60,356 (15,718)							988,916 (687,225)
Oct 6-19		636,098 (45,436)	134,456 (49,008)	134,547 (32,530)	3,953 (2,336)	7,101 (3,550)							916,155 (74,448)
Oct 20-Nov 2		NS	NS	130,861 (69,233)	2,636 (2,636)	2,663 (2,663)							136,159 (69,335)
Nov 3-16				99,323 (41,435)	3,389 (1,698)	0 (0)							102,712 (41,470)
Nov 17-30				23,697 (8,498)	586 (387)	0 (0)							24,283 (8,507)
Dec 1-14	NS	NS	NS	64,509 (41,725)	NS	NS	NS	NS	NS	NS	NS	NS	64,509 (41,725)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-50

Juvenile White Perch Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Geographical Region												
Dates	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)*	34,950 (21,307)	16,647 (12,376)	100,757 (63,876)	15,374 (6,228)	5,326 (3,590)	14,191 (14,191)	3,410 (2,340)	11,479 (11,479)	17,556 (17,556)	19,676 (12,444)	0 (0)	239,364 (74,435)
Oct 20-Nov 2	0 (0)	34,077 (21,330)	27,887 (12,050)	25,452 (7,812)	2,108 (934)	16,461 (6,792)	NS	NS	NS	NS	NS	NS	105,985 (26,612)
Nov 3-16	1,255 (1,255)	647,457 (485,556)	27,818 (14,028)	11,849 (4,079)	5,271 (3,124)	8,876 (6,966)	12,772 (7,901)	1,240 (716)	22,957 (22,957)	39,500 (18,096)	0 (0)	NS (NS)	778,995 (486,781)
Nov 17-30	0 (0)	33,044 (29,012)	1,494 (1,494)	838 (838)	1,757 (1,303)	0 (0)	NS	NS	NS	NS	NS	NS	37,133 (29,091)
Dec 1-14	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 15-28	NS	11,359 (11,359)	0 (0)	0 (0)	0 (0)	3,550 (3,550)	NS	NS	NS	NS	NS	NS	14,909 (11,901)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

services group

Table A-51

Juvenile White Perch Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-December 1974

	Geographical Region												
Dates	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	NS	53,782 (0)*	25,014 (12,350)	12,299 (5,761)	42,604 (18,448)	NS	NS	NS	NS	NS	NS	133,700 (22,936)
Aug 11-24			26,891 (0)	38,179 (14,389)	16,692 (7,868)	51,480 (19,911)							133,242 (25,795)
Aug 25-Sep 7			NS	52,221 (24,558)	21,612 (6,090)	95,860 (21,302)							169,693 (33,076)
Sep 8-21			121,010 (121,010)	108,460 (26,830)	48,758 (20,028)	85,209 (60,565)							363,437 (139,401)
Sep 22-Oct 5		NS	40,337 (40,337)	82,172 (16,101)	32,286 (9,026)	108,286 (33,390)							263,081 (55,522)
Oct 6-19		90,871 (90,871)	10,084 (10,084)	77,411 (46,682)	43,816 (37,554)	102,961 (63,113)							325,143 (126,222)
Oct 20-Nov 2		NS	NS	163,115 (60,087)	39,910 (21,683)	37,279 (14,090)							240,304 (65,415)
Nov 3-16				210,934 (94,262)	10,166 (5,589)	10,651 (5,500)							231,751 (94,587)
Nov 17-30				7,899 (6,494)	1,171 (638)	5,326 (3,638)							14,396 (7,471)
Dec 1-14	NS	NS	NS	5,529 (5,529)	NS	NS	NS	NS	NS	NS	NS	NS	5,529 (5,529)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-52

Juvenile Atlantic Tomcod Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974

	Geographical Region												
Dates	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Oct 6-19	0 (0)*	13,980 (7,944)	0 (0)	1,229 (1,229)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	15,209 (80,391)
Oct 20-Nov 2	1,076 (1,076)	4,544 (4,544)	8,964 (5,559)	439 (439)	0 (0)	968 (968)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	15,991 (7,337)
Nov 3-16	0 (0)	39,756 (29,039)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	NS (NS)	39,756 (29,039)
Nov 17-30	0 (0)	12,392 (7,433)	0 (0)	0 (0)	0 (0)	0 (0)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	NS (NS)	12,392 (7,433)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-53

Juvenile Atlantic Tomcod Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1974

Dates	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	NS	0 (0)*	7,899 (6,494)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	7,899 (6,494)
Aug 11-24			0 (0)	1,975 (1,049)	0 (0)	0 (0)							1,975 (1,049)
Aug 25-Sep 7			NS	614 (614)	0 (0)	0 (0)							614 (614)
Sep 8-21			0 (0)	1,418 (960)	0 (0)	0 (0)							1,418 (960)
Sep 22-Oct 5		NS	0 (0)	3,072 (2,361)	0 (0)	0 (0)							3,072 (2,361)
Oct 6-19		0 (0)	6,723 (6,723)	0 (0)	0 (0)	0 (0)							6,723 (6,723)
Oct 20-Nov 2		NS	NS	922 (922)	0 (0)	0 (0)							922 (922)
Nov 3-16				0 (0)	0 (0)	0 (0)							0 (0)
Nov 17-30	NS	NS	NS	0 (0)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	0 (0)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-54

American Shad Egg Standing Crop within Each Geographical Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, April-June 1974

Date	Time*	Geographical Region											
		YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 23-25	D	NS	NS	NS	0 (0)**	0 (0)	0 (0)	0 (0)	0 (0)	138,129 (43,117)	12,582,880 (4,497,484)	30,169 (30,169)	0 (0)	12,756,178 (4,497,792)
Apr 29-May 4	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	20,278 (20,278)	0 (0)	301,100 (28,199)	34,483,650 (16,635,957)	2,598,789 (1,398,376)	0 (0)	37,403,817 (16,694,661)
May 6-11	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,021,069 (791,893)	663,807 (570,935)	5,841,269 (5,228,163)	10,718,147 (541,930)	0 (0)	18,244,832 (5,346,068)
May 13-18	N	0 (0)	0 (0)	0 (0)	131,444 (131,444)	0 (0)	0 (0)	447,048 (284,497)	6,678,053 (5,821,125)	819,380 (593,704)	379,716 (379,716)	3,834,840 (2,826,932)	0 (0)	12,290,481 (6,515,723)
May 15-18	D	NS	NS	NS	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	10,270,391 (8,605,876)	6,896,689 (4,603,401)	335,356 (335,356)	0 (0)	17,502,436 (9,765,494)
May 21-24	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	3,274,331 (3,274,331)	147,436 (65,500)	514,507 (357,240)	3,350,829 (2,729,903)	12,048,106 (7,205,628)	264,381 (264,381)	19,599,590 (12,870,950)
May 23-29	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	40,483 (40,483)	2,293,829 (1,372,468)	33,069,799 (22,511,600)	19,964,196 (12,249,012)	1,115,162 (1,115,162)	56,483,469 (28,733,268)
May 28-31	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	4,457,640 (4,330,197)	80,709 (46,500)	724,407 (724,407)	10,654,054 (7,488,400)	49,625,168 (5,319,179)	0 (0)	65,541,378 (30,483,570)
May 30-Jun 5	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	2,408,980 (1,652,686)	0 (0)	122,799 (122,799)	106,239,770 (92,825,776)	6,221,878 (2,890,324)	0 (0)	114,993,427 (97,759,773)
Jun 4-7	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	140,451 (140,451)	0 (0)	4,082,264 (3,333,620)	7,307,995 (4,303,105)	670,615 (531,761)	0 (0)	12,201,325 (5,471,036)
Jun 10-14	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,427,666 (743,161)	379,789 (230,948)	0 (0)	1,807,453 (778,219)
Jun 12-17	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	43,634 (43,634)	1,610,921 (0)	0 (0)	1,654,555 (43,634)
Jun 17-23	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	38,979 (38,979)	0 (0)	38,979 (38,979)

*D = day samples; N = night samples.
**Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-55

American Shad Yolk-Sac Larvae Standing Crop within Each Geographical Region, Hudson River Estuary RM 14-140 (KM 22-224), Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-June 1974

		Geographical Region												
Date	Time*	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
May 13-18	N	0 (0)**	0 (0)	0 (0)	0 (0)	144,212 (144,212)	0 (0)	333,895 (241,581)	760,268 (656,163)	584,775 (267,028)	441,994 (230,418)	0 (0)	0 (0)	2,265,144 (796,307)
May 15-18	D	NS	NS	NS	0 (0)	146,299 (146,299)	184,662 (118,386)	430,974 (217,320)	1,071,590 (121,935)	1,948,580 (747,679)	258,920 (126,991)	0 (0)	0 (0)	4,041,025 (1,143,140)
May 21-24	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	232,738 (232,738)	250,299 (188,398)	2,344,460 (1,157,264)	3,039,574 (834,117)	1,404,920 (1,404,920)	0 (0)	7,271,991 (2,024,468)
May 23-29	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	608,020 (412,348)	1,407,155 (884,332)	493,227 (350,040)	0 (0)	0 (0)	2,508,402 (1,036,630)
May 28-31	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	343,364 (343,364)	809,227 (0)	0 (0)	4,361,435 (1,862,098)	2,826,248 (571,713)	0 (0)	8,340,274 (1,977,919)
May 30- Jun 5	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	204,545 (204,545)	0 (0)	439,558 (366,002)	3,192,789 (1,610,087)	293,346 (0)	0 (0)	4,130,238 (1,663,784)
Jun 4-7	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	1,455,658 (1,211,884)	0 (0)	647,603 (468,670)	1,868,695 (763,368)	1,490,364 (1,147,539)	0 (0)	5,462,320 (1,894,173)
Jun 10-14	D	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	189,224 (47,992)	0 (0)	189,224 (47,992)
Jun 17-23	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	33,636 (33,636)	0 (0)	0 (0)	33,636 (33,636)
Jun 24-27	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	65,563 (65,563)	0 (0)	NS	NS	65,563 (65,563)

*D = day samples; N = night samples.
**Numbers in parentheses represent one standard error.
NS = no samples taken.

services group

Table A-56

American Shad Post Yolk-Sac Larvae Standing Crop within Each Geographical Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-July 1974

		Geographical Region												
Date	Time*	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
May 13-18	N	0 (0)	395,020 (259,540)	0 (0)	0 (0)	292,344 (292,344)	308,056 (205,179)	741,697 (638,036)	617,257 (509,237)	1,007,655 (470,779)	0 (0)	0 (0)	0 (0)	3,362,029 (1,040,658)
May 15-18	D	NS	NS	NS	0 (0)	146,299 (146,299)	604,650 (238,078)	1,679,049 (827,086)	1,243,026 (686,476)	616,059 (284,202)	233,375 (105,634)	0 (0)	0 (0)	4,522,458 (1,151,232)
May 21-24	D	0 (0)	287,458 (233,987)	431,714 (276,752)	0 (0)	35,147 (35,147)	0 (0)	5,880,739 (4,431,469)	3,004,817 (1,287,143)	2,094,370 (649,177)	18,583,822 (6,876,663)	0 (0)	0 (0)	30,318,067 (8,314,876)
May 23-29	N	0 (0)	223,230 (174,548)	0 (0)	97,732 (55,179)	0 (0)	48,558 (48,558)	26,537 (26,537)	1,247,017 (941,638)	4,614,737 (1,694,683)	2,333,885 (951,240)	0 (0)	0 (0)	8,591,696 (2,167,963)
May 28-31	D	0 (0)	32,737 (32,737)	51,338 (51,338)	0 (0)	686,460 (686,460)	0 (0)	938,483 (480,438)	3,439,773 (1,821,319)	13,770,754 (1,448,813)	2,100,112 (640,961)	345,790 (345,790)	0 (0)	21,365,447 (2,579,228)
May 30- Jun 5	N	0 (0)	39,162 (39,162)	0 (0)	228,847 (191,775)	200,346 (200,346)	0 (0)	956,904 (350,812)	1,193,678 (966,782)	16,903,189 (15,428,753)	6,060,115 (2,102,297)	11,967,325 (167,948)	0 (0)	37,549,566 (15,608,666)
Jun 4-7	D	0 (0)	0 (0)	247,089 (247,089)	1,072,108 (1,072,108)	0 (0)	0 (0)	2,553,783 (1,419,994)	3,240,934 (3,191,990)	4,822,233 (1,302,320)	16,296,191 (8,318,129)	1,673,962 (769,896)	0 (0)	29,906,300 (9,213,886)
Jun 10-14	D	0 (0)	0 (0)	133,515 (133,515)	907,327 (221,479)	700,492 (382,739)	0 (0)	1,067,229 (692,278)	4,024,396 (2,712,474)	2,198,736 (1,042,731)	4,305,915 (1,691,368)	4,895,177 (654,209)	1,045,588 (0)	19,278,375 (3,525,072)
Jun 12-17	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	36,754 (36,754)	2,934,167 (2,517,730)	2,958,061 (1,704,650)	4,347,715 (2,236,451)	18,263,848 (7,161,470)	16,856,997 (3,716,333)	133,286 (133,286)	45,530,828 (8,908,614)
Jun 17-23	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	600,386 (345,188)	411,750 (143,533)	5,267,263 (3,601,298)	15,655,071 (8,279,069)	37,414,423 (12,815,752)	20,407,834 (2,453,908)	2,812,817 (2,812,817)	82,569,544 (16,119,218)
Jun 24-27	N	0 (0)	0 (0)	0 (0)	0 (0)	466,831 (410,604)	407,423 (294,240)	742,213 (477,201)	3,513,039 (1,136,049)	9,589,408 (2,642,853)	1,555,740 (0)	NS	NS	16,274,654 (2,959,421)
Jul 1-5	N	0 (0)	0 (0)	0 (0)	14,050 (14,050)	0 (0)	650,132 (247,300)	1,050,847 (371,672)	1,048,768 (355,922)	6,016,854 (4,113,077)	NS			8,780,651 (4,152,539)
Jul 8-11	N	0 (0)	0 (0)	0 (0)	23,213 (23,213)	0 (0)	65,763 (53,619)	1,282,285 (1,098,775)	78,151 (78,151)	1,099,968 (581,749)	NS			2,549,380 (1,247,100)
Jul 15-18	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	302,436 (270,061)	44,976 (44,976)	55,841 (55,841)	NS	NS		403,253 (219,417)
Jul 22-26	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	52,792 (52,792)	0 (0)	0 (0)	NS	52,792 (52,792)

*D = day samples; N = night samples.
**Numbers in parentheses represent one standard error.
NS = no samples taken.

services group

Table A-57

Juvenile American Shad Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-August 1974

		Geographical Region												
Date	Time*	TK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
May 21-24	D	0 (0)**	153,926 (153,926)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	153,926 (153,926)
May 23-29	N	0 (0)	186,958 (114,969)	87,805 (50,756)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	274,763 (125,674)
May 28-31	D	0 (0)	87,178 (87,178)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	87,178 (87,178)
May 30- Jun 5	N	0 (0)	35,874 (35,874)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	35,874 (35,874)
Jun 10-14	D	0 (0)	0 (0)	24,185 (24,185)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	24,185 (24,185)
Jun 12-17	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	201,460 (201,460)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	201,460 (201,460)
Jun 17-23	N	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	20,402 (20,402)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	20,402 (20,402)
Jun 24-27	N	0 (0)	0 (0)	0 (0)	9,084 (9,084)	181,403 (181,403)	0 (0)	104,484 (82,514)	28,397 (28,397)	93,344 (75,548)	0 (0)	NS	NS	416,712 (215,202)
Jul 1-5	N	0 (0)	0 (0)	0 (0)	377,649 (223,709)	1,722,780 (540,397)	2,715,027 (1,375,224)	2,441,610 (920,173)	299,028 (134,587)	472,739 (161,487)	NS			8,028,833 (1,767,548)
Jul 8-11	N	0 (0)	1,237,288 (449,342)	1,148,308 (444,742)	4,099,384 (2,180,366)	5,948,172 (1,987,051)	1,476,572 (722,103)	1,785,119 (444,684)	700,225 (276,447)	1,317,432 (412,897)				17,712,500 (2,173,036)
Jul 15-18	N	432,641 (283,501)	1,660,562 (941,287)	1,749,955 (649,386)	317,033 (14,910)	97,202 (97,202)	1,509,775 (533,699)	4,263,857 (1,558,142)	1,305,639 (554,171)	402,778 (61,908)	NS	NS		11,739,442 (2,102,700)
Jul 22-26	N	315,231 (205,521)	771,237 (244,574)	650,284 (134,501)	913,893 (411,121)	491,200 (133,793)	415,215 (90,247)	3,513,298 (990,519)	1,544,901 (969,599)	802,265 (136,453)	292,384 (292,384)	0 (0)	NS	9,709,908 (1,529,892)
Jul 29- Aug 2	N	136,168 (56,394)	779,947 (283,372)	588,382 (189,932)	397,492 (161,822)	148,041 (116,144)	1,152,600 (843,341)	1,078,432 (415,709)	295,304 (140,980)	56,211 (56,211)	281,109 (281,109)	790,088 (106,529)	222,132 (222,132)	5,925,906 (1,098,188)
Aug 5-9	N	934,646 (378,172)	841,718 (322,016)	1,173,128 (453,738)	311,334 (105,612)	184,137 (159,989)	290,639 (151,880)	1,047,739 (283,082)	0 (0)	57,524 (30,082)	0 (0)	113,960 (113,960)	703,983 (405,025)	5,658,538 (878,826)
Aug 12-15	N	144,171 (77,684)	485,385 (222,501)	401,861 (170,663)	210,581 (141,090)	0 (0)	174,505 (95,750)	385,415 (177,789)	1,613,418 (1,329,364)	649,717 (522,374)	78,783 (78,783)	139,359 (139,359)	0 (0)	4,283,195 (1,486,964)

*D = day samples; N = night samples
**Numbers in parentheses represent one standard error
NS = no samples taken

services group

Table A-58

Juvenile American Shad Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974

	Geographical Region												
Dates	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 7-20	NS	NS	0 (0)*	0 (0)	0 (0)	0 (0)	NS	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Apr 21-May 4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	NS	NS	NS	0 (0)	0 (0)
May 5-18	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
May 19-Jun 1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Jun 2-15	0 (0)	6,491 (6,491)	0 (0)	0 (0)	527 (410)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	7,018 (6,504)
Jun 16-29	0 (0)	0 (0)	0 (0)	0 (0)	527 (381)	23,669 (19,830)	15,965 (7,705)	6,751 (3,544)	71,741 (55,019)	25,658 (11,525)	4,919 (4,919)	0 (0)	149,230 (60,410)
Jun 30-Jul 13	26,359 (9,723)	255,575 (255,575)	51,093 (42,885)	119,802 (70,162)	57,719 (17,899)	528,295 (331,361)	179,754 (102,098)	8,060 (5,557)	74,610 (47,760)	43,889 (28,578)	25,578 (19,467)	24,313 (17,923)	1,395,048 (443,338)
Jul 14-27	12,552 (5,189)	386,202 (152,908)	363,030 (165,553)	95,408 (26,622)	36,371 (15,966)	159,767 (79,426)	225,727 (44,336)	21,700 (5.745)	55,097 (16,914)	219,444 (77,202)	121,080 (34,574)	143,339 (36,596)	1,839,718 (262,426)
Jul 28-Aug 10	49,943 (10,962)	548,066 (130,271)	324,374 (81,212)	135,043 (33,073)	34,124 (12,652)	494,389 (94,963)	320,314 (94,327)	14,880 (3,585)	94,698 (42,757)	286,156 (103,565)	259,471 (70,992)	365,991 (127,710)	2,927,449 (277,078)
Aug 11-24	58,033 (25,069)	382,416 (74,503)	315,010 (171,596)	100,493 (28,764)	15,813 (5,942)	441,260 (130,010)	169,280 (34,600)	8,149 (2,341)	105,459 (59,268)	163,852 (97,262)	201,296 (36,549)	265,506 (57,846)	2,226,568 (268,788)
Aug 25-Sep 7	54,600 (14,357)	242,323 (127,795)	345,999 (70,898)	164,728 (44,177)	79,067 (38,329)	530,780 (205,531)	127,720 (22,417)	12,400 (3,802)	81,784 (30,940)	386,222 (136,173)	358,095 (69,556)	98,730 (24,430)	2,482,449 (304,434)
Sep 8-21	64,767 (49,187)	333,194 (178,077)	163,685 (57,529)	136,917 (36,287)	30,968 (5,428)	421,784 (141,126)	116,109 (32,322)	9,093 (1,490)	150,656 (79,719)	232,611 (83,058)	195,242 (42,003)	107,894 (30,302)	1,962,920 (275,111)
Sep 22-Oct 5	30,125 (14,321)	213,198 (71,726)	114,287 (53,481)	56,061 (13,006)	42,755 (28,720)	273,056 (70,524)	153,919 (24,572)	14,703 (4,760)	58,110 (24,696)	144,346 (55,267)	361,538 (186,519)	46,195 (18,122)	1,508,291 (231,487)
Oct 6-19	17,959 (5,627)	964,632 (631,424)	315,010 (108,666)	216,258 (70,258)	71,892 (25,639)	331,072 (103,934)	65,043 (17,031)	4,030 (3,628)	8,609 (4,970)	52,667 (21,501)	55,092 (50,317)	0 (0)	2,102,263 (655,938)
Oct 20-Nov 2	88,221 (24,472)	554,314 (110,736)	466,113 (105,476)	160,614 (50,510)	16,340 (6,291)	42,604 (21,351)	NS	NS	NS	NS	NS	NS	1,328,206 (164,418)
Nov 3-16	23,221 (8,106)	545,227 (211,723)	220,693 (46,832)	70,653 (12,451)	3,368 (873)	12,426 (6,966)	1,419 (1,419)	0 (0)	0 (0)	0 (0)	0 (0)	NS	877,006 (217,467)
Nov 17-30	6,276 (3,595)	2,065 (2,065)	11,952 (6,234)	6,702 (2,804)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	26,995 (7,995)
Dec 1-14	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 15-28	NS	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	0 (0)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

services group

Table A-59

Juvenile American Shad Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1974

	Geographical Region												
Dates	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Jul 28-Aug 10	NS	NS	0 (0)*	7,899 (5,481)	6,150 (6,150)	298,231 (246,207)	NS	NS	NS	NS	NS	NS	312,280 (246,345)
Aug 11-24			0 (0)	1,317 (1,317)	7,028 (3,311)	136,689 (62,253)							145,034 (62,355)
Aug 25-Sep 7			NS	0 (0)	27,410 (24,858)	505,928 (463,323)							533,338 (463,990)
Sep 8-21			13,446 (13,446)	0 (0)	44,146 (28,879)	99,410 (47,765)							157,001 (57,413)
Sep 22-Oct 5		NS	0 (0)	0 (0)	11,860 (6,676)	0 (0)							11,860 (6,676)
Oct 6-19		22,718 (22,718)	47,059 (36,203)	11,059 (6,772)	12,519 (5,473)	17,752 (17,752)							111,107 (47,093)
Oct 20-Nov 2		NS	NS	30,411 (7,145)	4,142 (3,036)	5,326 (5,326)							39,878 (9,414)
Nov 3-16				7,168 (7,168)	0 (0)	0 (0)							7,168 (7,168)
Nov 17-30	NS	NS	NS	0 (0)	0 (0)	0 (0)	NS	NS	NS	NS	NS	NS	0 (0)

*Numbers in parentheses represent one standard error.
NS = no samples taken.

Table A-60

Standing Crops of Striped Bass Yolk-Sac and Post Yolk-Sac Larvae and Juveniles within Each Power Plant Region, Hudson River Estuary RM 14-140 (KM 22-224) , Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl during Periods of Peak Abundance in 1974

		Life Stage*/Date		
Power Plant Region		Yolk-Sac Larvae 5/28-31	Post Yolk-Sac Larvae 6/17-23	Juveniles 7/22-26
Bowline	Below	2,115,609	1,949,610	1,311,636
	Within	24,928,640	56,918,115	1,085,351
	Above	130,743,941	263,298,655	1,575,368
Lovett	Below	5,739,350	3,291,345	1,934,061
	Within	24,640,123	88,430,804	526,050
	Above	127,408,717	230,444,231	1,512,244
Indian Point	Below	9,890,401	4,064,688	2,026,179
	Within	21,278,019	94,550,862	445,467
	Above	126,619,770	223,550,830	1,500,709
Roseton	Below	54,223,742	167,038,103	2,990,396
	Within	63,050,731	77,834,481	479,015
	Above	40,513,717	77,293,796	502,944
Danskammer	Below	60,187,720	171,562,832	3,142,575
	Within	60,607,715	78,285,445	329,890
	Above	36,992,755	72,318,103	499,890

*Sampling during period of peak egg abundance imcomplete.

Table A-61

Juvenile Striped Bass Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

	Power Plant Region				
Dates	Bowline	Lovett	Indian Point	Roseton	Danskammer
Oct 6-19	418,727 (85,419)*	333,493 (75,168)	243,487 (52,467)	734 (495)	326 (220)
Oct 20-Nov 2	393,277 (70,744)	295,860 (61,517)	213,324 (43,028)	1,603 (1,075)	712 (478)
Nov 3-16	342,239 (95,693)	133,292 (30,233)	97,138 (21,271)	2,602 (2,602)	2,656 (2,656)
Nov 17-30	196,331 (57,276)	114,790 (47,505)	81,346 (33,047)	0 (0)	0 (0)
Dec 1-14	6,386 (2,722)	2,679 (1,904)	2,312 (1,695)	0 (0)	0 (0)
Dec 15-28	4,009 (4,009)	0 (0)	0 (0)	0 (0)	0 (0)

*Numbers in parentheses represent one standard error.

Table A-62

Standing Crops of White Perch Eggs, Yolk-Sac and Post Yolk-Sac Larvae, and Juveniles within Each Power Plant Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl during Periods of Peak Abundance, May-August 1974

		Life Stage/Date			
Power Plant Region		Eggs 5/30-6/5	Yolk-Sac Larvae 5/21-24	Post Yolk-Sac Larvae 6/12-17	Juveniles 7/29-8/2
Bowline	Below	781,022	16,007,852	157,392	0
	Within	176,793,714	23,433,040	18,714,604	137,088
	Above	8,891,872	68,379,608	395,856,434	219,686,389
Lovett	Below	26,525,840	24,952,193	1,001,171	0
	Within	151,212,446	15,313,963	30,871,241	204,609
	Above	10,959,814	67,554,344	382,856,018	4,773,912
Indian Point	Below	65,346,818	28,320,874	2,258,556	0
	Within	112,553,384	12,267,644	36,155,817	204,609
	Above	10,797,898	67,231,982	376,314,057	4,773,912
Roseton	Below	179,223,775	44,849,723	104,677,066	204,609
	Within	3,310,829	11,842,656	84,900,705	251,560
	Above	6,163,496	51,128,121	225,150,659	4,522,352
Danskammer	Below	179,229,616	45,441,033	109,446,338	204,609
	Within	3,559,239	12,029,944	85,595,703	270,884
	Above	5,909,245	50,349,523	219,686,389	4,503,028

Table A-63

Juvenile White Perch Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

Dates	Power Plant Region				
	Bowline	Lovett	Indian Point	Roseton	Danskammer
Oct 6-19	120,572 (59,841)*	115,672 (64,830)	111,942 (64,339)	15,218 (13,097)	14,262 (13,299)
Oct 20-Nov 2	63,052 (15,884)	50,439 (13,326)	42,937 (10,834)	6,814 (2,811)	3,028 (1,249)
Nov 3-16	267,140 (172,014)	36,773 (13,214)	29,458 (9,645)	15,386 (7,798)	13,587 (7,505)
Nov 17-30	13,920 (10,377)	2,176 (1,579)	1,861 (1,254)	0 (0)	0 (0)
Dec 1-14	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 15-28	4,009 (4,009)	0 (0)	0 (0)	1,469 (1,469)	653 (653)

*Numbers in parentheses represent one standard error.

Table A-64

Juvenile Atlantic Tomcod Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl during Period of Peak Abundance, April-May 1974

Power Plant Region		Life Stage Date Juveniles 4/29-5/4
Bowline	Below	1,100,854,058
	Within	113,696,592
	Above	0
Lovett	Below	1,214,438,325
	Within	130,875
	Above	0
Indian Point	Below	1,214,463,079
	Within	106,126
	Above	0
Roseton	Below	1,214,569,200
	Within	0
	Above	0
Danskammer	Below	1,214,569,200
	Within	0
	Above	0

Table A-65

Juvenile Atlantic Tomcod Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974

Dates	Power Plant Region				
	Bowline	Lovett	Indian Point	Roseton	Danskammer
Oct 6-19	6,051 (3,018)*	1,228 (1,228)	1,228 (1,228)	0 (0)	0 (0)
Oct 20-Nov 2	10,966 (5,799)	8,470 (5,000)	6,023 (3,490)	400 (400)	178 (178)
Nov 3-16	14,033 (10,250)	0 (0)	0 (0)	0 (0)	0 (0)
Nov 17-30	4,374 (2,623)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 1-14	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 15-28	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

*Numbers in parentheses represent one standard error.

Table A-66

Standing Crops of American Shad Eggs, Yolk-Sac and Post Yolk-Sac Larvae, and Juveniles within Each Power Plant Region, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl during Periods of Peak Abundance, May-July 1974

Power Plant Region		Life Stage/Date			
		Eggs 5/30-6/5	Yolk-Sac Larvae 5/28-31	Post Yolk-Sac Larvae 6/17-23	Juveniles 7/8-11
Bowline	Below	0	0	0	866,108
	Within	0	0	0	4,266,075
	Above	114,993,430	8,340,274	82,569,544	12,580,317
Lovett	Below	0	0	0	1,402,644
	Within	0	0	0	5,677,153
	Above	114,993,430	8,340,274	82,569,544	10,632,703
Indian Point	Below	0	0	0	1,655,272
	Within	0	0	0	6,013,394
	Above	114,993,430	8,340,274	82,569,544	10,043,834
Roseton	Below	0	0	295,390	13,159,625
	Within	1,724,830	245,849	599,809	2,028,244
	Above	113,268,600	8,094,425	81,674,345	2,524,631
Danskammer	Below	0	770,535	401,058	13,419,502
	Within	2,408,980	264,734	516,787	1,866,549
	Above	112,584,450	7,305,005	81,651,699	2,426,449

Table A-67

Juvenile American Shad Standing Crop within Each Power Plant Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-December 1974

Date	Power Plant Region				
	Bowline	Lovett	Indian Point	Roseton	Danskammer
Apr 7-20	0 (0)*	0 (0)	0 (0)	0 (0)	0 (0)
Apr 21-May 4	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
May 5-18	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
May 19-Jun 1	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Jun 2-15	2,291 (2,291)	0 (0)	27 (21)	0 (0)	0 (0)
Jun 16-29	0 (0)	0 (0)	27 (20)	24,438 (10,831)	19,298 (8,082)
Jun 30-Jul 13	250,211 (118,515)	165,581 (79,995)	154,692 (75,082)	383,548 (166,086)	265,456 (113,357)
Jul 14-27	586,085 (175,803)	420,682 (150,705)	323,503 (106,523)	273,135 (52,289)	240,677 (43,997)
Jul 28-Aug 10	640,595 (98,050)	425,682 (79,929)	338,936 (60,449)	498,404 (95,012)	390,781 (90,002)
Aug 11-24	541,351 (175,557)	382,742 (156,417)	297,582 (110,706)	337,911 (62,480)	239,637 (40,262)
Aug 25-Sep 7	581,276 (93,135)	474,743 (77,375)	384,475 (62,503)	336,862 (87,537)	217,209 (43,248)
Sep 8-21	405,759 (91,373)	283,578 (63,037)	240,533 (51,003)	281,090 (65,514)	186,286 (39,869)
Sep 22-Oct 5	240,505 (60,341)	158,462 (49,652)	129,528 (35,799)	254,188 (36,880)	194,310 (26,407)
Oct 6-19	852,104 (256,062)	498,507 (120,066)	416,319 (97,576)	196,707 (45,775)	121,797 (24,896)
Oct 20-Nov 2	807,783 (121,495)	578,250 (107,157)	451,868 (82,881)	17,638 (8,839)	7,839 (3,928)
Nov 3-16	477,380 (88,922)	268,393 (43,769)	208,322 (31,721)	6,445 (3,164)	3,614 (1,845)
Nov 17-30	18,772 (6,774)	17,410 (6,249)	14,148 (4,789)	0 (0)	0 (0)
Dec 1-14	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)
Dec 15-28	0 (0)	0 (0)	0 (0)	0 (0)	0 (0)

*Numbers in parentheses represent one standard error.

Table A-68

Percentage of Total Standing Crops of Striped Bass Yolk-Sac and Post Yolk-Sac Larvae and Juveniles from Ichthyoplankton Sampling in Power Plant Regions, Hudson River Estuary, during Period of Peak Abundance, May-July 1974

Power Plant Region		Life Stage*/Date		
		Yolk-Sac Larvae 5/28-31	Post Yolk-Sac Larvae 6/17-23	Juveniles 7/22-26
Bowline	Below	1.3	0.04	33.0
	Within	15.8	17.7	27.3
	Above	82.9	82.3	39.7
Lovett	Below	3.6	1.0	48.7
	Within	15.6	27.4	13.2
	Above	80.8	71.6	38.1
Indian Point	Below	6.3	1.3	51.0
	Within	13.5	29.3	11.2
	Above	80.2	69.4	37.8
Roseton	Below	34.4	51.8	75.3
	Within	40.0	24.2	12.1
	Above	25.6	24.0	12.6
Danskammer	Below	38.1	53.3	79.1
	Within	38.4	24.2	8.3
	Above	23.5	22.5	12.6

*Sampling during peak egg abundance incomplete.

Table A-69

Percentage of Juvenile Striped Bass Total Standing Crop from Beach Seine Sampling in Power Plant Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], during Period of Peak Abundance in 1974

Power Plant Region		Life Stage Date Juveniles 8/25-9/7
Bowline	Below	42.0
	Within	44.2
	Above	13.8
Lovett	Below	65.7
	Within	20.9
	Above	13.4
Indian Point	Below	69.9
	Within	16.8
	Above	13.3
Roseton	Below	90.0
	Within	2.5
	Above	7.6
Danskammer	Below	91.1
	Within	1.3
	Above	7.6

Table A-70

Percentage of Total Standing Crops of White Perch Eggs, Yolk-Sac and Post Yolk-Sac Larvae, and Juveniles from Ichthyoplankton Sampling in Power Plant Regions, Hudson River Estuary, during Periods of Peak Abundance, May-August 1974

Power Plant Region		Life Stage/Date			
		Eggs 5/30-6/5	Yolk-Sac Larvae 5/21-24	Post Yolk-Sac Larvae 6/12-17	Juveniles 7/29-8/2
Bowline	Below	0.4	14.8	0.04	0.0
	Within	93.7	21.7	4.5	2.8
	Above	5.9	63.5	95.5	97.2
Lovett	Below	14.1	23.17	0.04	0
	Within	80.1	14.2	7.4	4.1
	Above	5.9	62.7	92.6	95.9
Indian Point	Below	34.6	26.3	0.5	0
	Within	59.6	11.4	8.7	4.1
	Above	5.8	62.3	90.8	95.9
Roseton	Below	95.0	41.6	25.2	4.1
	Within	1.8	10.9	20.5	5.1
	Above	3.2	47.5	54.3	90.8
Danskammer	Below	95.0	42.1	26.4	4.1
	Within	1.9	11.2	20.6	5.4
	Above	3.1	46.7	53.0	90.5

Table A-71

Percentage of Juvenile White Perch Total Standing Crop from Beach Seine Sampling in Power Plant Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], during Period of Peak Abundance in 1974

Power Plant Region		Life Stage/ Date Juveniles 8/25-9/7
Bowline	Below	3.6
	Within	18.6
	Above	77.9
Lovett	Below	5.9
	Within	17.5
	Above	76.6
Indian Point	Below	7.0
	Within	16.4
	Above	76.6
Roseton	Below	30.3
	Within	8.0
	Above	61.7
Danskammer	Below	32.7
	Within	5.6
	Above	61.7

Table A-72

Percentage of Juvenile Atlantic Tomcod Total Standing Crop from Ichthyoplankton Sampling in Power Plant Regions, Hudson River Estuary, during Period of Peak Abundance in 1974

Power Plant Region		Life Stage Date Juveniles 4/29-5/4
Bowline	Below	90.6
	Within	9.4
	Above	0
Lovett	Below	100
	Within	0.01
	Above	0
Indian Point	Below	100
	Within	0
	Above	0
Roseton	Below	100
	Within	0
	Above	0
Danskammer	Below	100
	Within	0
	Above	0

Table A-73

Percentage of Total Standing Crops of American Shad Eggs, Yolk-Sac and Post Yolk-Sac Larvae, and Juveniles from Ichthyoplankton Sampling in Power Plant Regions, Hudson River Estuary, during Periods of Peak Abundance, May-July 1974

Power Plant Region		Life Stage/Date Eggs 5/30-6/5	Yolk-Sac Larvae 5/28-31	Post Yolk-Sac Larvae 6/17-23	Juveniles 7/8-11
Bowline	Below	0	0	0	4.9
	Within	0	0	0	24.1
	Above	100	100	100	71.0
Lovett	Below	0	0	0	7.9
	Within	0	0	0	32.1
	Above	100	100	100	60.0
Indian Point	Below	0	0	0	9.3
	Within	0	0	0	34.0
	Above	100	100	100	56.7
Roseton	Below	0	0	0.4	74.3
	Within	1.5	2.9	0.7	11.5
	Above	98.5	97.1	98.9	14.2
Danskammer	Below	0	9.2	0.5	75.8
	Within	2.1	3.2	0.6	10.5
	Above	97.9	87.6	98.9	13.7

Table A-74

Percentage of Juvenile American Shad Total Standing Crop from Beach Seine Sampling in Power Plant Regions, Hudson River Estuary, during Period of Peak Abundance in 1974

Power Plant Region		Life Stage Date Juveniles 7/28-8/10
Bowline	Below	13.9
	Within	21.9
	Above	64.2
Lovett	Below	21.5
	Within	14.5
	Above	63.9
Indian Point	Below	24.6
	Within	11.6
	Above	63.8
Roseton	Below	47.3
	Within	17.0
	Above	35.7
Danskammer	Below	51.1
	Within	13.3
	Above	35.5

Table A-75

Yearling Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 23-Apr 5	8.25 (3.23)* n = 12	1.00 (1.00) n = 3	0 (0) n = 5	0 (0) n = 2	0 (0) n = 5	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	3.00 (1.30) n = 34
Apr 6-19	4.27 (1.24) n = 22	0.45 (0.31) n = 11	0.06 (0.06) n = 33	0.04 (0.04) n = 27	0.03 (0.03) n = 37	0 (0) n = 18	0 (0) n = 4	0 (0) n = 3	0 (0) n = 3	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0.61 (0.19) n = 169
Apr 20-May 3	8.77 (1.87) n = 26	0.63 (0.22) n = 19	0.20 (0.12) n = 30	0.04 (0.04) n = 23	0 (0) n = 21	0.04 (0.04) n = 24	0 (0) n = 6	0 (0) n = 1	0 (0) n = 2	0 (0) n = 5	0 (0) n = 6	0 (0) n = 11	1.43 (0.36) n = 174
May 4-17	9.13 (1.58) n = 38	1.61 (0.97) n = 18	0.27 (0.16) n = 37	0.33 (0.16) n = 21	0.09 (0.06) n = 22	0 (0) n = 15	0 (0) n = 6	0 (0) n = 3	0 (0) n = 3	0.20 (0.20) n = 5	0 (0) n = 7	0 (0) n = 8	2.16 (0.43) n = 183
May 18-31	2.80 (0.96) n = 15	3.54 (2.29) n = 13	0.29 (0.14) n = 28	0.42 (0.28) n = 19	0.19 (0.09) n = 37	0.07 (0.07) n = 14	0.25 (0.16) n = 8	0 (0) n = 3	0 (0) n = 0	0.20 (0.20) n = 5	0 (0) n = 10	0.09 (0.09) n = 11	0.71 (0.22) n = 163
Jun 1-14	0.57 (0.16) n = 28	2.00 (0.77) n = 10	0.81 (0.19) n = 27	1.32 (0.41) n = 25	0.25 (0.13) n = 28	0.33 (0.14) n = 21	1.00 (1.00) n = 3	0 (0) n = 2	0 (0) n = 1	2.00 (0.58) n = 3	0.80 (0.58) n = 5	2.00 (1.33) n = 13	0.87 (0.14) n = 166
Jun 15-28	0.57 (0.31) n = 21	0.25 (0.11) n = 16	0.56 (0.18) n = 34	1.12 (0.36) n = 34	1.00 (0.45) n = 25	0.84 (0.36) n = 32	0.67 (0.33) n = 3	6.33 (3.48) n = 3	3.00 (1.53) n = 3	0.25 (0.25) n = 4	0.40 (0.40) n = 5	0.38 (0.18) n = 8	0.86 (0.14) n = 188

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-76

Yearling White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 23-	0.08	0	0	0	0	0	0	0	0	0	0	0	0.03
Apr 5	(0.08)*	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0.03)
	n = 12	n = 3	n = 5	n = 2	n = 5	n = 7	n = 0	n = 0	n = 0	n = 0	n = 0	n = 0	n = 34
Apr 6-19	0.05	0	0	0	0.03	0	0.25	0	1.00	0	0	0	0.04
	(0.05)	(0)	(0)	(0)	(0.03)	(0)	(0.25)	(0)	(0.58)	(0)	(0)	(0)	(0.02)
	n = 22	n = 11	n = 33	n = 27	n = 37	n = 18	n = 4	n = 3	n = 3	n = 6	n = 3	n = 2	n = 169
Apr 20-	0.54	0.32	0	0	0	0.04	0	0	0	0	0	0	0.12
May 3	(0.22)	(0.17)	(0)	(0)	(0)	(0.04)	(0)	(0)	(0)	(0)	(0)	(0)	(0.04)
	n = 26	n = 19	n = 30	n = 23	n = 21	n = 24	n = 6	n = 1	n = 2	n = 5	n = 6	n = 11	n = 174
May 4-17	0.34	1.28	0.08	0.29	0.32	0.73	0	0	0	0	0	0	0.34
	(0.15)	(0.57)	(0.06)	(0.24)	(0.19)	(0.38)	(0)	(0)	(0)	(0)	(0)	(0)	(0.08)
	n = 38	n = 18	n = 37	n = 21	n = 22	n = 15	n = 6	n = 3	n = 3	n = 5	n = 7	n = 8	n = 183
May 18-31	0.20	25.46	1.11	1.11	0.97	5.00	3.75	1.00	0	0.60	0	0	3.24
	(0.14)	(14.33)	(0.40)	(0.37)	(0.43)	(3.51)	(1.92)	(0.58)	(0)	(0.40)	(0)	(0)	(1.26)
	n = 15	n = 13	n = 28	n = 19	n = 37	n = 14	n = 8	n = 3	n = 0	n = 5	n = 10	n = 11	n = 163
Jun 1-14	0.07	15.60	9.44	4.56	1.04	0.24	0	0	0	37.33	2.20	2.08	4.28
	(0.05)	(5.64)	(4.59)	(2.32)	(0.43)	(0.19)	(0)	(0)	(0)	(2.19)	(1.43)	(1.42)	(1.01)
	n = 28	n = 10	n = 27	n = 25	n = 28	n = 21	n = 3	n = 2	n = 1	n = 3	n = 5	n = 13	n = 166
Jun 15-28	0	11.63	10.32	10.24	6.28	1.59	2.33	0.67	6.00	5.75	1.60	0.75	6.15
	(0)	(3.24)	(3.99)	(4.51)	(2.04)	(0.76)	(1.86)	(0.67)	(3.06)	(4.77)	(0.51)	(0.62)	(1.20)
	n = 21	n = 16	n = 34	n = 34	n = 25	n = 32	n = 3	n = 3	n = 3	n = 4	n = 5	n = 8	n = 188

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-77

Yearling and Older Atlantic Tomcod Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975

	Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 23-	0	0	0	0	0	0	0	0	0	0	0	0	0
Apr 5	(0)*	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 12	n = 3	n = 5	n = 2	n = 5	n = 7	n = 0	n = 0	n = 0	n = 0	n = 0	n = 0	n = 34
Apr 6-19	0	0	0	0	0	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 22	n = 11	n = 33	n = 27	n = 37	n = 18	n = 4	n = 3	n = 3	n = 6	n = 3	n = 2	n = 169
Apr 20-	0	0	0	0	0	0	0	0	0	0	0	0	0
May 3	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 26	n = 19	n = 30	n = 23	n = 21	n = 24	n = 6	n = 1	n = 2	n = 5	n = 6	n = 11	n = 174
May 4-17	0	0	0	0	0	0	0	0.33	0	0	0	0	0.01
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0.33)	(0)	(0)	(0)	(0)	(0.01)
	n = 38	n = 18	n = 37	n = 21	n = 22	n = 15	n = 6	n = 3	n = 3	n = 5	n = 7	n = 8	n = 183
May 18-31	0	0	0	0	0	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 15	n = 13	n = 28	n = 19	n = 37	n = 14	n = 8	n = 3	n = 0	n = 5	n = 10	n = 11	n = 163
Jun 1-14	0	0	0	0	0	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 28	n = 10	n = 27	n = 25	n = 28	n = 21	n = 3	n = 2	n = 1	n = 3	n = 5	n = 13	n = 166
Jun 15-28	0	0	0	0	0	0	0	0	0	0	0	0	0
	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
	n = 21	n = 16	n = 34	n = 34	n = 25	n = 32	n = 3	n = 3	n = 3	n = 4	n = 5	n = 8	n = 188

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-78

Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Mar 23-Apr 5	0 (0)* n = 12	0 (0) n = 3	0 (0) n = 5	0 (0) n = 2	0 (0) n = 5	0 (0) n = 7	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 0	0 (0) n = 34
Apr 6-19	0.09 (0.09) n = 22	0 (0) n = 11	0 (0) n = 33	0.04 (0.04) n = 27	0 (0) n = 37	0 (0) n = 18	0 (0) n = 4	0 (0) n = 3	0 (0) n = 3	0 (0) n = 6	0 (0) n = 3	0 (0) n = 2	0.02 (0.01) n = 169
Apr 20-May 3	0 (0) n = 26	0.11 (0.11) n = 19	0.03 (0.03) n = 30	0 (0) n = 23	0 (0) n = 21	0 (0) n = 24	0 (0) n = 6	0 (0) n = 1	0 (0) n = 2	0 (0) n = 5	0 (0) n = 6	0 (0) n = 11	0.02 (0.01) n = 174
May 4-17	0.34 (0.17) n = 38	0.11 (0.08) n = 18	1.35 (0.98) n = 37	4.48 (3.93) n = 21	0.23 (0.16) n = 22	0 (0) n = 15	0 (0) n = 6	0 (0) n = 3	0 (0) n = 3	0 (0) n = 5	0 (0) n = 7	0 (0) n = 8	0.90 (0.50) n = 183
May 18-31	0 (0) n = 15	0.38 (0.24) n = 13	0.11 (0.06) n = 28	0.05 (0.05) n = 19	0.32 (0.25) n = 37	0.07 (0.07) n = 14	0.13 (0.13) n = 8	0 (0) n = 3	0 (0) n = 0	0 (0) n = 5	0 (0) n = 10	0 (0) n = 11	0.14 (0.06) n = 163
Jun 1-14	0 (0) n = 28	0 (0) n = 10	0.07 (0.05) n = 27	0.24 (0.12) n = 25	0.11 (0.08) n = 28	0.14 (0.08) n = 21	0.67 (0.67) n = 3	0 (0) n = 2	0 (0) n = 1	0 (0) n = 3	0 (0) n = 5	0 (0) n = 13	0.10 (0.03) n = 166
Jun 15-28	0 (0) n = 21	0.06 (0.06) n = 16	0.18 (0.15) n = 34	0.06 (0.04) n = 34	0.04 (0.04) n = 25	0.16 (0.08) n = 32	0.33 (0.33) n = 3	0.67 (0.67) n = 3	2.33 (1.20) n = 3	0.25 (0.25) n = 4	0 (0) n = 5	0 (0) n = 8	0.14 (0.04) n = 188

*Numbers in parentheses represent one standard error.
n = number of hauls.

Table A-79

Yearling Striped Bass Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975

Date	Geographical Region												
	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 6-19	NS	2.31 (1.42)* n = 6	0.38 (0.38) n = 4	2.86 (1.36) n = 7	0 (0) n = 3	0 (0) n = 3	NS	NS	NS	NS	NS	NS	1.54 (0.59) n = 23
Apr 20-May 3		1.23 (0.58) n = 5	0 (0) n = 0	0 (0) n = 1	0 (0) n = 2	0.51 (0.51) n = 3							0.70 (0.32) n = 11
May 4-17		0.26 (0.26) n = 6	0 (0) n = 2	0.31 (0.21) n = 10	0 (0) n = 5	0 (0) n = 5							0.16 (0.09) n = 28
May 18-31		0 (0) n = 8	0 (0) n = 4	0.17 (0.17) n = 9	0 (0) n = 5	0 (0) n = 4							0.05 (0.05) n = 30
Jun 1-14		0.38 (0.25) n = 8	0 (0) n = 3	0 (0) n = 9	0 (0) n = 5	0 (0) n = 5							0.10 (0.07) n = 30
Jun 15-28	NS	0 (0) n = 7	0 (0) n = 2	0 (0) n = 8	0 (0) n = 5	0 (0) n = 4	NS	NS	NS	NS	NS	NS	0 (0) n = 26

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-80

Yearling White Perch Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 6-19	NS	1.28 (1.01)* n = 6	1.15 (1.15) n = 4	21.54 (6.43) n = 7	4.10 (2.71) n = 3	2.05 (1.36) n = 3	NS	NS	NS	NS	NS	NS	7.89 (2.72) n = 23
Apr 20-May 3		2.15 (1.15) n = 5	0 (0) n = 0	3.08 (0) n = 1	9.23 (3.77) n = 2	1.54 (0.89) n = 3							3.36 (0.90) n = 11
May 4-17		3.33 (3.33) n = 6	0 (0) n = 2	6.31 (2.24) n = 10	1.54 (0.97) n = 5	0.62 (0.62) n = 5							3.35 (1.14) n = 28
May 18-31		0.19 (0.19) n = 8	0 (0) n = 4	0.34 (0.23) n = 9	0.31 (0.31) n = 5	0 (0) n = 4							0.21 (0.10) n = 30
Jun 1-14		0 (0) n = 8	0 (0) n = 3	0 (0) n = 9	0 (0) n = 5	0 (0) n = 5							0 (0) n = 30
Jun 15-28	NS	0.22 (0.22) n = 7	0 (0) n = 2	0.58 (0.40) n = 8	0.31 (0.31) n = 5	0 (0) n = 4	NS	NS	NS	NS	NS	NS	0.30 (0.15) n = 26

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-81

Yearling and Older Atlantic Tomcod Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 6-19	NS	1.79 (1.28)* n = 6	0 (0) n = 4	2.20 (1.46) n = 7	0 (0) n = 3	0 (0) n = 3	NS	NS	NS	NS	NS	NS	1.14 (0.57) n = 23
Apr 20-May 3		0.62 (0.38) n = 5	0 (0) n = 0	6.15 (0) n = 1	0.77 (0.77) n = 2	1.03 (1.03) n = 3							1.26 (0.58) n = 11
May 4-17		0 (0) n = 6	0 (0) n = 2	2.77 (1.73) n = 10	0 (0) n = 5	0 (0) n = 5							0.99 (0.65) n = 28
May 18-31		0.96 (0.65) n = 8	0 (0) n = 4	0.51 (0.36) n = 9	0 (0) n = 5	0 (0) n = 4							0.41 (0.21) n = 30
Jun 1-14		0 (0) n = 8	0 (0) n = 3	0.17 (0.17) n = 9	0 (0) n = 5	0 (0) n = 5							0.05 (0.05) n = 30
Jun 15-28	NS	1.76 (1.52) n = 7	0 (0) n = 2	0 (0) n = 8	0 (0) n = 5	0 (0) n = 4	NS	NS	NS	NS	NS	NS	0.47 (0.42) n = 26

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-82

Atlantic Tomcod Catch per Hour within Six Geographical Regions, Hudson River Estuary [RM 34-106 (KM 54-170)], Based on Day and Night Sampling with Box Traps, December 1973-March 1974

	Geographical Region										
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	Total
Dec 2-8	NS	NS	0 (24.00)*	0.02 (168.00)	NS	NS	NS	NS	NS	NS	0.02
Dec 9-15			0.07 (120.00)	0.34 (840.00)							0.04
Dec 16-22			0.02 (144.00)	0.02 (1008.00)							0.02
Dec 23-29			NS	18.52 (30.50)		NS					18.52
Dec 30-Jan 5			NS	18.84 (92.67)	NS	2.66 (108.50)		NS		NS	10.12
Jan 6-12			NS	11.88 (128.67)	5.36 (96.00)	2.51 (164.00)		0.40 (96.00)		0.29 (24.00)	4.92
Jan 13-19			0 (19.00)	8.12 (191.25)	15.42 (24.00)	0.67 (48.00)		NS		NS	6.93
Jan 20-26			0.25 (78.50)	9.10 (106.10)	2.16 (89.33)	0.17 (144.00)					2.88
Jan 27-Feb 2			0.01 (97.00)	5.08 (219.42)	0 (24.00)	0.04 (192.00)					2.13
Feb 3-9			NS	2.08 (142.00)	0.04 (24.00)	NS					1.78
Feb 10-16			0 (72.00)	0.24 (300.17)	NS	0 (72.00)					0.16
Feb 17-23			0.02 (47.67)	0.34 (294.67)	NS	0 (192.00)					0.19
Feb 24-Mar 2			0.01 (98.08)	0.04 (296.75)	0.01 (97.00)	0 (99.00)					0.02
Mar 3-9			NS	0 (48.00)	0.04 (49.00)	0 (48.00)					0.01
Mar 10-16				0 (48.00)	NS	0.01 (101.75)					0.01
Mar 17-23				0 (46.50)	NS	0 (168.83)					0
Mar 24-30	NS	NS	NS	0 (261.25)	NS	0 (152.33)	NS	NS	NS	NS	0

*Numbers in parentheses represent total number of hours fished.
NS = no samples taken.

Table A-83

Atlantic Tomcod Catch per Hour within Seven Geographical Regions, Hudson River Estuary [RM 24-106 (KM 38-170)], Based on Day and Night Sampling with Box Traps, December 1974-March 1975

	Geographical Region										
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	Total
Dec 1-7	NS	NS	NS	0 (88.00)	0 (22.50)	0.04 (23.50)	NS	NS	NS	NS	0.01
Dec 8-14		0.03 (72.00)*	0.03 (72.00)	0.02 (191.43)	20.63 (42.67)	0.85 (95.50)	0 (137.58)			0.02 (48.17)	1.47
Dec 15-21		0.04 (333.48)	0.05 (168.42)	0.35 (374.12)	20.20 (157.17)	2.64 (194.00)	0.04 (290.33)			0.01 (144.00)	2.32
Dec 22-28		0.02 (330.75)	0.20 (167.08)	1.34 (490.50)	5.16 (333.33)	4.31 (337.33)	0.21 (333.08)			0 (130.50)	1.86
Dec 29-Jan 4		0.04 (328.92)	0.11 (163.92)	0.90 (393.17)	12.22 (143.50)	8.80 (184.00)	0.22 (280.00)			0 (144.83)	2.40
Jan 5-11		0.21 (241.00)	0.04 (164.75)	0.42 (546.33)	8.40 (332.58)	9.47 (152.67)	0.16 (428.17)			0 (193.42)	2.23
Jan 12-18		0.23 (176.67)	0.07 (177.92)	0.11 (673.33)	7.43 (346.17)	0.43 (233.50)	0.09 (519.25)			0 (160.00)	1.24
Jan 19-25		0.09 (164.00)	0.04 (161.67)	0.13 (605.67)	2.31 (467.83)	0.09 (337.92)	0.06 (489.50)			0 (75.42)	0.54
Jan 26-Feb 1		0.22 (172.92)	0.12 (173.00)	0.24 (545.50)	2.37 (477.00)	0.03 (335.67)	0.02 (494.83)			NS	0.61
Feb 2-8		0.01 (165.67)	0.01 (164.42)	0.08 (551.42)	1.25 (436.58)	0.01 (234.33)	0.01 (384.50)				0.31
Feb 9-15		0.03 (72.17)	0.01 (220.00)	0.04 (677.25)	0.72 (481.08)	NS	NS				0.26
Feb 16-22		0 (75.17)	0 (168.08)	0.01 (533.83)	0.30 (530.75)						0.12
Feb 23-Mar 1		0.02 (120.83)	0 (122.50)	0 (359.00)	0.10 (235.75)						0.00
Mar 2-8		0 (211.08)	0 (214.83)	0 (602.33)	0.01 (538.58)						0.00
Mar 9-15		NS	NS	0 (134.92)	NS						0
Mar 23-29	NS	NS	NS	NS	0 (49.25)	NS	NS	NS	NS	NS	0

*Numbers in parentheses indicate total number of hours fished.
NS = no samples taken.

Table A-84

Yearling American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975

	Geographical Region												
Date	YK	TZ	CH	IP	WP	CW	PK	HP	KG	SG	CS	AL	Total
Apr 6-19	NS	0 (0)* n = 6	0 (0) n = 4	0 (0) n = 7	0 (0) n = 3	0 (0) n = 3	NS	NS	NS	NS	NS	NS	0 (0) n = 23
Apr 20-May 3		0 (0) n = 5	0 (0) n = 0	0 (0) n = 1	0 (0) n = 2	0 (0) n = 3							0 (0) n = 11
May 4-17		0 (0) n = 6	0 (0) n = 2	0 (0) n = 10	0 (0) n = 5	0 (0) n = 5							0 (0) n = 28
May 18-31		0.38 (0.38) n = 8	0 (0) n = 4	0 (0) n = 9	0 (0) n = 5	0 (0) n = 4							0.10 (0.10) n = 30
Jun 1-14		0 (0) n = 8	0 (0) n = 3	0.34 (0.23) n = 9	0 (0) n = 5	0 (0) n = 5							0.10 (0.07) n = 30
Jun 15-28	NS	0 (0) n = 7	0 (0) n = 2	0 (0) n = 8	0 (0) n = 5	0.77 (0.77) n = 4	NS	NS	NS	NS	NS	NS	0.12 (0.12) n = 26

*Numbers in parentheses represent one standard error.
NS = no samples taken.
n = number of tows.

Table A-85

Juvenile Striped Bass Length-Frequency Distribution (Percent) Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 12-152 (KM 19-243)], June-December 1974

	Total Length Interval (mm)																							Length		
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Min.	Max.
Jun 23-29	0	16	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30	41	24	18	30
Jun 30-Jul 6	0	0	67	33	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	28	21	35
Jul 7-13	0	0	44	45	11	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	80	80	33	22	45
Jul 14-20	0	0	6	46	39	9	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	123	123	41	28	63
Jul 21-27	0	<1	4	29	37	25	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	325	342	45	20	70
Jul 28-Aug 3	0	0	4	19	21	35	19	3	0	0	0	0	0	0	0	0	0	0	0	0	0	325	364	51	23	75
Aug 4-10	0	0	1	2	19	43	31	4	0	0	0	0	0	0	0	0	0	0	0	0	0	367	535	57	24	75
Aug 11-17	0	0	0	0	5	27	45	19	4	0	0	0	0	0	0	0	0	0	0	0	0	285	285	65	44	85
Aug 18-24	0	0	0	0	3	18	42	31	7	0	0	0	0	0	0	0	0	0	0	0	0	270	274	68	41	85
Aug 25-31	0	0	0	<1	<1	7	22	40	26	4	1	1	0	0	0	0	0	0	0	0	0	429	587	76	34	119
Sep 1-7	0	0	0	1	0	3	20	37	24	8	2	4	0	0	0	0	0	0	0	0	0	183	203	79	32	117
Sep 8-14	0	0	0	<1	<1	2	11	16	31	27	8	5	0	0	0	0	0	0	0	0	0	415	740	87	40	119
Sep 15-21	0	0	0	0	0	1	8	29	35	18	4	3	2	0	0	0	0	0	0	0	0	268	336	85	51	129
Sep 22-28	0	0	0	0	0	0	5	16	31	23	17	2	6	0	0	0	0	0	0	0	0	305	359	92	62	130
Sep 29-Oct 5	0	0	0	0	0	1	6	14	25	24	17	9	4	0	0	0	0	0	0	0	0	143	155	93	59	130
Oct 6-12	0	0	0	0	0	1	6	15	20	23	18	15	3	0	0	0	0	0	0	0	0	199	249	94	59	129
Oct 13-19	0	0	0	0	0	1	5	16	26	23	19	5	5	0	0	0	0	0	0	0	0	169	169	92	57	130
Oct 20-26	0	0	0	0	0	<1	4	26	40	13	8	5	3	1	0	0	0	0	0	0	0	220	265	88	59	135
Oct 27-Nov 2	0	0	0	0	0	<1	4	13	23	23	21	12	3	1	0	0	0	0	0	0	0	230	248	96	59	140
Nov 3-9	0	0	0	0	0	1	7	18	25	15	24	8	2	<1	0	0	0	0	0	0	0	196	228	91	53	138
Nov 10-16	0	0	0	0	0	0	10	33	28	17	10	2	0	1	0	0	0	0	0	0	0	115	117	85	61	138
Nov 17-23	0	1	0	0	0	0	4	14	27	23	20	6	3	2	0	0	0	0	0	0	0	152	162	93	18	140
Nov 24-30	0	0	0	0	0	0	7	20	24	31	13	0	2	2	0	0	0	0	0	0	0	45	45	90	68	135
Dec 1-7	0	0	0	0	8	8	17	17	25	25	0	0	0	0	0	0	0	0	0	0	0	12	12	78	49	100
Dec 8-14	0	0	0	0	0	0	6	23	29	20	19	2	0	0	0	0	0	0	0	0	0	95	97	88	62	118
Dec 15-21	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	72	72	72

services group

Table A-86

Juvenile Striped Bass Length-Frequency Distribution (Percent) Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 34-61 (KM 54-98)], August-December 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
Aug 4-10	0	0	<1	5	21	35	29	11	0	0	0	0	0	0	0	0	0	0	0	0	0	200	251	58	30	78
Aug 11-17	0	0	0	0	11	43	34	9	3	0	0	0	0	0	0	0	0	0	0	0	0	153	154	61	44	85
Aug 18-24	0	0	0	0	3	32	46	19	0	0	0	0	0	0	0	0	0	0	0	0	0	124	164	63	48	80
Aug 25-31	0	0	0	0	2	31	42	17	8	0	0	0	0	0	0	0	0	0	0	0	0	82	110	66	50	85
Sep 1-7	0	0	0	0	3	18	26	28	12	7	2	4	0	0	0	0	0	0	0	0	0	173	203	74	45	120
Sep 8-14	0	0	0	<1	2	15	37	28	10	5	1	1	0	0	0	0	0	0	0	0	0	195	219	71	31	115
Sep 15-21	0	0	0	0	1	5	33	42	11	4	2	1	0	0	0	0	0	0	0	0	0	96	120	74	48	119
Sep 22-28	0	0	0	0	0	4	23	35	22	8	1	4	3	0	0	0	0	0	0	0	0	107	107	80	57	129
Sep 29-Oct 5	0	0	0	0	0	3	21	39	23	7	5	2	1	0	0	0	0	0	0	0	0	131	198	79	54	127
Oct 6-12	0	0	0	0	1	1	10	19	25	30	10	3	0	0	0	0	0	0	0	0	0	69	69	87	49	116
Oct 13-19	0	0	0	0	0	1	8	35	30	13	3	4	6	0	0	0	0	0	0	0	0	84	86	85	60	129
Oct 20-26	0	0	0	0	0	1	18	37	24	7	5	3	5	0	0	0	0	0	0	0	0	64	127	82	58	125
Oct 27-Nov 2	0	0	0	0	0	0	13	48	9	9	4	9	0	9	0	0	0	0	0	0	0	23	23	87	62	136
Nov 3-9	0	0	0	0	0	0	8	20	30	22	3	0	7	9	0	0	0	0	0	0	0	31	41	92	64	138
Nov 10-16	0	0	0	0	0	2	15	23	29	9	6	3	8	5	0	0	0	0	0	0	0	65	65	89	52	140
Nov 17-23	0	0	0	0	0	0	10	15	24	26	10	5	0	10	0	0	0	0	0	0	0	19	20	93	70	138
Nov 24-30	No Catch																									
Dec 1-7	0	0	0	0	0	0	9	23	29	11	11	6	9	3	0	0	0	0	0	0	0	35	35	93	65	136

services group

Table A-87

Juvenile Striped Bass Length-Frequency Distribution (Percent) Based on Day Sampling by Bottom Trawl, Hudson River Estuary [RM 12-61 (KM 19-98)], July-November 1974

Week	Gear*	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Min.	Max.
Jul 21-27	A	No Catch																									
	B	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	29	29	29
	C	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	29	29	29
Jul 28-Aug 3		No Tows																									
Aug 4-10	A	No Catch																									
	B	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	61	50	71
	C	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	61	50	71
Aug 11-17		No Tows																									
Aug 18-24	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Aug 25-31		No Tows																									
Sep 1-7	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Sep 8-14		No Tows																									
Sep 15-21	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Sep 22-28		No Tows																									
Sep 29-Oct 5	A	No Catch																									
	B	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	1	1	81	81	81
	C	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	1	1	81	81	81
Oct 6-12		No Tows																									
Oct 13-19	A	No Catch																									
	B	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	79	74	83
	C	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	79	74	83
Oct 20-26		No Tows																									
Oct 27-Nov 2	A	No Catch																									
	B	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	1	1	110	110	110
	C	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	1	1	110	110	110
Nov 3-9	A	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	1	1	120	120	120
	B	0	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	1	1	123	123	123
	C	0	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	2	2	122	120	123
Nov 10-16	A	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	2	2	117	116	117
	B	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	72	64	80
	C	0	0	0	0	0	0	25	25	0	0	0	50	0	0	0	0	0	0	0	0	0	4	4	94	64	117
Nov 17-23	A	0	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	2	2	110	104	116
	B	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	1	1	90	90	90
	C	0	0	0	0	0	0	0	0	33	0	33	33	0	0	0	0	0	0	0	0	0	3	3	103	90	116
Nov 24-30	A	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	74	74	74
	B	0	0	0	0	0	0	0	33	67	0	0	0	0	0	0	0	0	0	0	0	0	3	3	81	75	87
	C	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	4	4	80	74	87
Dec 1-7		No Tows																									
Dec 8-14	A	0	0	0	0	0	0	0	0	0	0	67	33	0	0	0	0	0	0	0	0	0	3	3	110	109	111
	B	No Catch																									
	C	0	0	0	0	0	0	0	0	0	0	67	33	0	0	0	0	0	0	0	0	0	3	3	110	109	111

*A = cod end
B = cod end cover
C = combination

services group

Table A-88

Juvenile Striped Bass Length-Frequency Distribution (Percent) Based on Night Sampling by Epibenthic Sled in Areas ≤20 Ft Deep and >20 Ft Deep, Hudson River Estuary [RM 14-76 (KM 22-122)], August-December 1974

Week	Depth (ft)	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Min.	Max.
Aug 19-22	≤20	0	0	0	0	1	16	38	30	13	2	0	1	0	0	0	0	0	0	0	0	0	170	170	71	50	118
	>20	0	0	0	0	4	26	22	30	13	4	0	0	0	0	0	0	0	0	0	0	0	23	23	70	50	94
Aug 26-29	≤20	0	0	0	0	2	13	30	30	20	2	2	0	0	0	0	0	0	0	0	0	0	40	40	72	48	104
	>20	0	0	0	0	0	14	14	57	14	0	0	0	0	0	0	0	0	0	0	0	0	7	7	73	56	87
Sep 3-6	≤20	0	0	0	0	1	1	17	11	31	28	8	4	0	0	0	0	0	0	0	0	0	106	108	86	49	116
	>20	0	0	0	0	0	10	14	29	29	19	0	0	0	0	0	0	0	0	0	0	0	21	21	79	54	99
Sep 9-12	≤20	0	0	0	0	2	16	18	27	14	13	11	0	0	0	0	0	0	0	0	0	0	56	56	78	44	108
	>20	0	0	0	0	0	0	33	22	44	0	0	0	0	0	0	0	0	0	0	0	0	9	9	77	66	89
Sep 16-19	≤20	0	0	0	0	1	3	22	34	16	16	7	1	1	0	0	0	0	0	0	0	0	151	156	80	47	129
	>20	0	0	0	0	0	0	17	22	28	17	17	0	0	0	0	0	0	0	0	0	0	18	18	87	62	109
Sep 23-26	≤20	0	0	0	0	0	4	11	21	25	18	11	11	0	0	0	0	0	0	0	0	0	28	28	87	60	116
	>20	0	0	0	0	0	0	14	43	43	0	0	0	0	0	0	0	0	0	0	0	0	7	7	80	69	89
Sep 30-Oct 4	≤20	0	0	0	0	0	0	17	22	17	30	13	0	0	0	0	0	0	0	0	0	0	23	23	87	64	110
	>20	0	0	0	0	0	0	11	32	16	11	26	0	5	0	0	0	0	0	0	0	0	19	19	89	63	125
Oct 7-10	≤20	0	0	0	0	0	0	0	4	16	44	11	24	0	0	0	0	0	0	0	0	0	45	45	99	79	119
	>20	0	0	0	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	2	2	113	95	130
Oct 14-18	≤20	0	0	0	0	0	1	7	18	23	20	21	9	1	0	0	0	0	0	0	0	0	136	136	92	59	126
	>20	0	0	0	0	0	0	25	13	28	9	16	6	0	3	0	0	0	0	0	0	0	32	32	87	61	136
Oct 21-24	≤20	0	0	0	0	0	0	0	26	23	26	19	6	0	0	0	0	0	0	0	0	0	31	31	91	74	115
	>20	0	0	0	0	0	0	50	0	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	74	67	81
Oct 28-Nov 1	≤20	0	0	0	0	0	0	8	21	13	21	25	4	8	0	0	0	0	0	0	0	0	24	24	94	68	130
	>20	0	0	0	0	0	0	0	25	25	0	25	25	0	0	0	0	0	0	0	0	0	4	4	97	78	116
Nov 5-9	≤20	0	0	0	0	0	0	6	9	21	22	26	12	4	0	0	0	0	0	0	0	0	68	68	97	63	129
	>20	0	0	0	0	0	0	10	40	30	10	0	10	0	0	0	0	0	0	0	0	0	10	10	83	65	113
Nov 11-14	≤20	0	0	0	0	0	0	7	7	20	30	25	10	0	0	0	0	0	0	0	0	0	40	40	94	62	119
	>20	0	0	0	0	0	0	14	29	29	29	0	0	0	0	0	0	0	0	0	0	0	7	7	85	70	99
Nov 18-21	≤20	0	0	0	0	0	0	2	15	18	27	23	10	5	2	0	0	0	0	0	0	0	62	62	96	69	135
	>20	0	0	0	0	0	0	25	25	0	25	0	25	0	0	0	0	0	0	0	0	0	4	4	88	69	111
Nov 24-27	≤20	0	0	0	0	0	0	7	7	20	20	33	13	0	0	0	0	0	0	0	0	0	15	15	96	69	116
	>20	0	0	0	0	0	0	50	0	0	25	0	25	0	0	0	0	0	0	0	0	0	4	4	86	68	117
Dec 2-5	≤20	0	0	0	0	0	0	4	11	14	31	20	13	5	1	0	0	0	0	0	0	0	83	83	97	65	131
	>20	0	0	0	0	0	0	11	11	44	11	11	11	0	0	0	0	0	0	0	0	0	9	9	90	68	119
Dec 9-12	≤20	0	0	0	0	0	0	0	32	20	16	16	12	4	0	0	0	0	0	0	0	0	25	25	92	73	122
	>20	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	76	76	76

services group

Table A-89

Juvenile White Perch Length-Frequency Distribution (Percent) Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 12-152 (KM 19-243)], July-December 1974

Week	Total Length Interval (mm)																					Total Meas.	Total No.	%	Length Min.	Max.
	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200					
Jul 7-13	0	44	54	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	46	60	21	13	41
Jul 14-20	0	3	73	20	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	90	95	28	20	50
Jul 21-27	0	1	42	46	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	71	71	32	20	48
Jul 28-Aug 3	0	0	20	55	26	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	97	98	37	22	50
Aug 4-10	0	0	8	32	47	13	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	213	301	43	21	57
Aug 11-17	0	0	6	17	33	40	4	<1	0	0	0	0	0	0	0	0	0	0	0	0	0	242	328	47	24	74
Aug 18-24	0	0	0	8	26	39	23	4	0	0	0	0	0	0	0	0	0	0	0	0	0	364	436	55	31	75
Aug 25-31	0	0	<1	3	13	31	45	8	0	0	0	0	0	0	0	0	0	0	0	0	0	287	342	60	25	74
Sep 1-7	0	0	0	1	18	33	37	10	0	0	0	0	0	0	0	0	0	0	0	0	0	235	271	59	36	80
Sep 8-14	0	0	0	2	8	17	49	24	0	0	0	0	0	0	0	0	0	0	0	0	0	190	313	64	32	80
Sep 15-21	0	0	0	0	13	29	45	12	1	0	0	0	0	0	0	0	0	0	0	0	0	197	322	62	42	89
Sep 22-28	0	0	0	<1	2	19	48	24	6	0	0	0	0	0	0	0	0	0	0	0	0	201	203	67	37	90
Sep 29-Oct 5	0	0	0	0	1	9	28	56	6	0	0	0	0	0	0	0	0	0	0	0	0	81	81	72	43	85
Oct 6-12	0	0	0	0	0	18	32	45	5	0	0	0	0	0	0	0	0	0	0	0	0	97	175	69	51	85
Oct 13-19	0	0	0	0	1	7	25	48	18	0	0	0	0	0	0	0	0	0	0	0	0	133	159	73	50	89
Oct 20-26	0	0	0	0	0	5	29	48	16	1	0	0	0	0	0	0	0	0	0	0	0	98	99	73	53	92
Oct 27-Nov 2	0	0	0	0	0	5	32	50	14	0	0	0	0	0	0	0	0	0	0	0	0	22	22	73	55	88
Nov 3-9	0	0	0	0	1	13	40	38	7	0	0	0	0	0	0	0	0	0	0	0	0	125	188	69	45	89
Nov 10-16	0	0	0	0	0	11	40	36	13	0	0	0	0	0	0	0	0	0	0	0	0	47	47	71	58	87
Nov 17-23	0	0	0	0	0	9	36	32	18	5	0	0	0	0	0	0	0	0	0	0	0	22	22	73	57	95
Nov 24-30	No Catch																									
Dec 1-7	No Catch																									
Dec 8-14	No Catch																									
Dec 15-21	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	52	50	53

services group

Table A-90

Juvenile White Perch Length-Frequency Distribution (Percent) Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 34-61 (KM 54-98)], August-December 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
Aug 4-10	0	6	11	4	79	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	47	47	41	19	50
Aug 11-17	0	0	2	4	27	63	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	49	49	52	30	63
Aug 18-24	0	0	1	12	14	52	19	1	0	0	0	0	0	0	0	0	0	0	0	0	0	77	77	53	29	71
Aug 25-31	0	0	0	19	19	19	44	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	16	55	39	70
Sep 1-7	0	0	0	2	7	24	42	26	0	0	0	0	0	0	0	0	0	0	0	0	0	113	128	65	38	80
Sep 8-14	0	0	0	1	17	23	43	17	0	0	0	0	0	0	0	0	0	0	0	0	0	166	183	61	34	80
Sep 15-21	0	0	0	0	3	19	37	41	0	0	0	0	0	0	0	0	0	0	0	0	0	66	77	67	45	80
Sep 22-28	0	0	0	0	0	12	43	39	6	0	0	0	0	0	0	0	0	0	0	0	0	121	121	70	52	87
Sep 29-Oct 5	0	0	0	0	2	23	35	36	3	0	0	0	0	0	0	0	0	0	0	0	0	99	99	67	46	83
Oct 6-12	0	0	0	0	0	9	36	55	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	70	57	80
Oct 13-19	0	0	0	0	0	7	25	50	17	0	0	0	0	0	0	0	0	0	0	0	0	104	200	73	51	89
Oct 20-26	0	0	0	0	1	12	33	41	12	1	0	0	0	0	0	0	0	0	0	0	0	94	146	71	47	92
Oct 27-Nov 2	0	0	0	0	0	6	39	46	8	1	0	0	0	0	0	0	0	0	0	0	0	101	151	72	51	93
Nov 3-9	0	0	0	0	0	8	38	35	19	1	0	0	0	0	0	0	0	0	0	0	0	81	170	72	51	93
Nov 10-16	0	0	0	0	0	13	36	46	5	0	0	0	0	0	0	0	0	0	0	0	0	60	69	70	51	86
Nov 17-23	0	0	0	0	0	30	0	40	30	0	0	0	0	0	0	0	0	0	0	0	0	10	10	74	56	86
Nov 24-30	0	0	0	0	0	0	0	67	33	0	0	0	0	0	0	0	0	0	0	0	0	3	3	80	79	81
Dec 1-7	0	0	0	0	0	0	67	0	0	33	0	0	0	0	0	0	0	0	0	0	0	3	3	74	62	93

services group

Table A-91

Juvenile White Perch Length-Frequency Distribution (Percent) Based on Day Sampling by Bottom Trawl, Hudson River Estuary [RM 12-61 (KM 19-98)], August-December 1974

		Total Length Interval (mm)																									
Week	Gear*	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Length Min.	Length Max.
Aug 4-10	A	No Catch																									
	B	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	47	45	48
	C	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	47	45	48
Aug 11-17		No Tows																									
Aug 18-24	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Aug 25-31		No Tows																									
Sep 1-7	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Sep 8-14		No Tows																									
Sep 15-21	A	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	60	60	60
	B	No Catch																									
	C	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	60	60	60
Sep 22-28		No Tows																									
Sep 29-Oct 5	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Oct 6-12		No Tows																									
Oct 13-19	A	0	0	0	0	0	33	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	64	59	69
	B	0	0	0	0	0	20	40	40	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	68	60	74
	C	0	0	0	0	0	25	50	25	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	67	59	74
Oct 20-26		No Tows																									
Oct 27-Nov 2	A	0	0	0	0	0	7	30	53	0	10	0	0	0	0	0	0	0	0	0	0	0	30	30	73	54	95
	B	0	0	0	0	12	15	46	24	2	0	0	0	0	0	0	0	0	0	0	0	0	41	41	65	44	81
	C	0	0	0	0	7	11	39	37	1	4	0	0	0	0	0	0	0	0	0	0	0	71	71	68	44	95
Nov 3-9	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Nov 10-16	A	0	0	0	0	17	0	17	33	0	33	0	0	0	0	0	0	0	0	0	0	0	6	6	74	47	95
	B	0	0	0	0	0	13	64	22	0	0	0	0	0	0	0	0	0	0	0	0	0	14	15	67	56	74
	C	0	0	0	0	5	10	51	25	0	10	0	0	0	0	0	0	0	0	0	0	0	20	21	69	47	95
Nov 17-23	A	0	0	0	0	0	0	25	50	0	25	0	0	0	0	0	0	0	0	0	0	0	4	4	80	68	92
	B	0	0	0	0	0	17	33	50	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	66	54	74
	C	0	0	0	0	0	10	30	50	0	10	0	0	0	0	0	0	0	0	0	0	0	10	10	72	54	92
Nov 24-30	A	0	0	0	0	0	10	33	43	13	2	0	0	0	0	0	0	0	0	0	0	0	61	61	72	54	91
	B	0	0	0	0	5	15	48	29	2	0	0	0	0	0	0	0	0	0	0	0	0	96	100	66	43	84
	C	0	0	0	0	3	13	42	34	6	1	0	0	0	0	0	0	0	0	0	0	0	157	161	68	43	91
Dec 1-7		No Tows																									
Dec 8-14	A	0	0	0	0	0	12	30	44	12	2	0	0	0	0	0	0	0	0	0	0	0	110	116	71	52	95
	B	0	0	0	0	0	17	51	28	3	1	0	0	0	0	0	0	0	0	0	0	0	110	135	67	52	92
	C	0	0	0	0	0	15	41	36	7	1	0	0	0	0	0	0	0	0	0	0	0	220	251	69	52	95

*A = cod end
B = cod end cover
C = combination

services group

Table A-92

Juvenile White Perch Length-Frequency Distribution (Percent) Based on Night Sampling by Epibenthic Sled in Areas ≤20 Ft Deep and >20 Ft Deep, Hudson River Estuary [RM 14-76 (KM 22-122)], August-December 1974

Week	Depth (ft)	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Min.	Max.
Aug 19-22	≤20	0	0	0	2	19	58	22	0	0	0	0	0	0	0	0	0	0	0	0	0	0	59	59	56	40	69
	>20	0	0	0	0	25	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	4	54	49	60
Aug 26-29	≤20	0	0	0	0	17	40	30	5	7	0	0	0	0	0	0	0	0	0	0	0	0	40	40	60	44	86
	>20	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	59	52	65
Sep 3-6	≤20	0	0	0	0	11	22	44	22	0	0	0	0	0	0	0	0	0	0	0	0	0	9	9	64	50	75
	>20	0	0	0	4	7	48	33	7	0	0	0	0	0	0	0	0	0	0	0	0	0	27	27	59	40	75
Sep 9-12	≤20	0	0	0	0	3	33	49	14	0	0	0	0	0	0	0	0	0	0	0	0	0	79	83	63	41	77
	>20	0	0	0	0	0	60	40	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	61	52	68
Sep 16-19	≤20	0	0	0	0	0	33	44	22	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	64	52	76
	>20	0	0	0	0	8	38	46	8	0	0	0	0	0	0	0	0	0	0	0	0	0	13	13	60	50	75
Sep 23-26	≤20	0	0	0	0	0	27	53	20	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	65	51	80
	>20	0	0	0	0	0	16	66	18	0	0	0	0	0	0	0	0	0	0	0	0	0	48	55	66	53	80
Sep 30-Oct 4	≤20	0	0	0	0	0	25	50	15	10	0	0	0	0	0	0	0	0	0	0	0	0	20	20	66	52	86
	>20	0	0	0	0	2	29	48	18	3	0	0	0	0	0	0	0	0	0	0	0	0	62	62	65	43	90
Oct 7-10	≤20	0	0	0	0	0	6	44	34	16	0	0	0	0	0	0	0	0	0	0	0	0	32	32	71	55	85
	>20	0	0	0	0	0	9	64	27	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	68	55	78
Oct 14-18	≤20	0	0	0	0	2	7	63	24	2	0	0	0	0	0	0	0	0	0	0	0	0	41	41	68	46	82
	>20	0	0	0	0	8	8	38	42	4	0	0	0	0	0	0	0	0	0	0	0	0	24	24	68	49	85
Oct 21-24	≤20	0	0	0	0	1	10	45	38	5	1	0	0	0	0	0	0	0	0	0	0	0	100	100	70	43	95
	>20	0	0	0	0	5	10	45	38	2	0	0	0	0	0	0	0	0	0	0	0	0	40	40	68	48	81
Oct 28-Nov 1	≤20	0	0	0	0	0	8	37	38	12	4	0	0	0	0	0	0	0	0	0	0	0	73	73	72	52	92
	>20	0	0	0	0	0	17	37	46	0	0	0	0	0	0	0	0	0	0	0	0	0	35	35	68	58	80
Nov 5-9	≤20	0	0	0	0	0	11	38	43	6	1	0	0	0	0	0	0	0	0	0	0	0	144	144	70	53	94
	>20	0	0	0	0	0	13	40	47	0	0	0	0	0	0	0	0	0	0	0	0	0	15	15	69	57	80
Nov 11-14	≤20	0	0	0	0	2	6	34	49	7	1	0	0	0	0	0	0	0	0	0	0	0	91	97	71	49	94
	>20	0	0	0	0	0	0	73	18	9	0	0	0	0	0	0	0	0	0	0	0	0	11	11	69	62	84
Nov 18-21	≤20	0	0	0	0	2	11	31	48	7	1	0	0	0	0	0	0	0	0	0	0	0	163	165	71	48	92
	>20	0	0	0	0	0	22	39	33	6	0	0	0	0	0	0	0	0	0	0	0	0	18	18	68	54	86
Nov 24-27	≤20	0	0	0	0	0	4	37	44	16	0	0	0	0	0	0	0	0	0	0	0	0	183	183	73	55	89
	>20	0	0	0	0	0	10	38	46	6	0	0	0	0	0	0	0	0	0	0	0	0	64	126	70	51	83
Dec 2-5	≤20	0	0	0	0	2	10	45	38	5	1	0	0	0	0	0	0	0	0	0	0	0	314	359	69	47	95
	>20	0	0	0	0	0	16	39	41	4	0	0	0	0	0	0	0	0	0	0	0	0	49	49	69	53	87
Dec 9-12	≤20	0	0	0	0	2	7	40	43	8	0	0	0	0	0	0	0	0	0	0	0	0	193	195	70	46	90
	>20	0	0	0	0	0	12	23	37	8	2	4	4	6	0	2	2	2	0	0	0	0	52	52	82	54	155

services group

Table A-93

Juvenile Atlantic Tomcod Length-Frequency Distribution (Percent) Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 12-152 (KM 19-243)], May-November 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
May 5-11	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	43	38	47
May 12-18	0	0	0	6	63	31	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	86	89	48	32	58
May 19-25	0	0	0	2	18	61	19	0	0	0	0	0	0	0	0	0	0	0	0	0	0	128	306	55	38	67
May 26-Jun 1	0	0	0	0	1	31	49	19	0	0	0	0	0	0	0	0	0	0	0	0	0	99	342	64	45	77
Jun 2-8	No Catch																									
Jun 9-15	0	0	0	0	0	18	50	28	4	0	0	0	0	0	0	0	0	0	0	0	0	106	283	68	52	88
Jun 16-22	0	0	0	0	0	<1	5	31	42	17	5	0	0	0	0	0	0	0	0	0	0	95	654	84	56	110
Jun 23-29	0	0	0	0	0	<1	4	35	39	19	3	0	0	0	0	0	0	0	0	0	0	207	1343	84	57	108
Jun 30-Jul 6	0	0	0	0	0	<1	4	24	46	21	4	1	0	0	0	0	0	0	0	0	0	225	924	85	56	118
Jul 7-13	0	0	0	0	0	0	0	55	45	0	0	0	0	0	0	0	0	0	0	0	0	22	22	80	73	90
Jul 14-20	0	0	0	0	0	0	0	24	43	16	16	0	0	0	0	0	0	0	0	0	0	37	37	87	73	110
Jul 21-27	0	0	0	0	0	0	2	13	40	33	11	0	0	0	0	0	0	0	0	0	0	45	45	89	69	104
Jul 28-Aug 3	0	0	0	0	0	0	33	17	17	33	0	0	0	0	0	0	0	0	0	0	0	6	6	80	63	94
Aug 4-10	0	0	0	0	0	0	0	0	43	29	29	0	0	0	0	0	0	0	0	0	0	7	7	94	84	107
Aug 11-17	0	0	0	0	0	0	0	29	24	12	29	0	6	0	0	0	0	0	0	0	0	17	17	92	71	121
Aug 18-24	0	0	0	0	0	0	0	21	57	7	14	0	0	0	0	0	0	0	0	0	0	14	14	86	71	107
Aug 25-31	0	0	0	0	0	0	33	0	33	33	0	0	0	0	0	0	0	0	0	0	0	3	3	84	67	97
Sep 1-7	No Catch																									
Sep 8-14	No Catch																									
Sep 15-21	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	78	74	81
Sep 22-28	0	0	0	0	0	0	0	27	36	9	9	18	0	0	0	0	0	0	0	0	0	11	11	92	74	117
Sep 29-Oct 5	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	84	80	87
Oct 6-12	0	0	0	0	0	0	0	0	33	33	17	17	0	0	0	0	0	0	0	0	0	6	6	96	81	117
Oct 13-19	No Catch																									
Oct 20-26	0	0	0	0	0	0	0	0	0	25	0	75	0	0	0	0	0	0	0	0	0	4	4	112	98	118
Oct 27-Nov 2	0	0	0	0	0	0	0	0	0	10	60	10	20	0	0	0	0	0	0	0	0	10	10	109	94	123
Nov 3-9	0	0	0	0	0	0	0	0	0	0	14	0	71	14	0	0	0	0	0	0	0	7	7	123	103	138
Nov 10-16	No Catch																									
Nov 17-23*	0	0	0	0	0	0	0	0	0	0	0	20	60	20	0	0	0	0	0	0	0	5	5	126	115	133

* Few Juvenile Atlantic tomcod were caught in night beach seines after November 23, 1974.

services group

Table A-94

Juvenile Atlantic Tomcod Length-Frequency Distribution (Percent) Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 34-61 (KM 54-98)], August-October 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
Aug 4-10	0	0	0	0	0	0	0	0	33	67	0	0	0	0	0	0	0	0	0	0	0	6	6	91	82	100
Aug 11-17	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	2	2	85	80	89
Aug 18-24	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	68	68	68
Aug 25-31	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	79	79	79
Sep 1-7	No Catch																									
Sep 8-14	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	1	1	96	96	96
Sep 15-21	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	73	73	73
Sep 22-28	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	1	1	85	85	85
Sep 29-Oct 5	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	3	3	97	92	100
Oct 6-12*	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	2	2	92	87	96

* Few Juvenile Atlantic tomcod were caught in night beach seines after October 12, 1974.

services group

Table A-95

Juvenile Atlantic Tomcod Length-Frequency Distribution (Percent) Based on Day Sampling by Bottom Trawl, Hudson River Estuary [RM 12-61 (KM 19-98)], May-December 1974

		Total Length Interval (mm)																									
Week	Gear*	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Length Min.	Length Max.
May 5-11	A	No Catch																									
	B	0	6	89	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140	3997	26	15	38
	C	0	6	89	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	140	3997	26	15	38
May 12-18		No Tows																									
May 19-25		No Tows																									
May 26-Jun 1		No Tows																									
Jun 2-8	A	0	0	0	0	0	13	75	13	0	0	0	0	0	0	0	0	0	0	0	0	0	8	8	66	55	73
	B	0	0	0	0	0	9	45	45	0	0	0	0	0	0	0	0	0	0	0	0	0	11	11	70	58	80
	C	0	0	0	0	0	11	58	32	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19	68	55	80
Jun 9-15	A	0	0	0	0	0	0	38	29	29	4	0	0	0	0	0	0	0	0	0	0	0	24	24	75	62	91
	B	0	0	0	0	0	32	32	32	5	0	0	0	0	0	0	0	0	0	0	0	0	19	19	66	52	81
	C	0	0	0	0	0	14	35	30	19	2	0	0	0	0	0	0	0	0	0	0	0	43	43	71	52	91
Jun 16-22		No Tows																									
Jun 23-29	A	0	0	0	0	0	1	22	40	21	15	1	0	0	0	0	0	0	0	0	0	0	190	346	78	56	105
	B	0	0	0	0	1	2	23	42	23	9	1	0	0	0	0	0	0	0	0	0	0	236	389	77	48	101
	C	0	0	0	0	<1	2	23	41	22	12	1	0	0	0	0	0	0	0	0	0	0	426	735	78	48	105
Jun 30-Jul 6		No Tows																									
Jul 7-13	A	No Catch																									
	B	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	58	58	58
	C	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	58	58	58
Jul 14-20		No Tows																									
Jul 21-27	A	0	0	0	0	0	0	19	48	18	11	3	1	0	0	0	0	0	0	0	0	0	101	142	79	64	112
	B	0	0	0	0	0	3	27	57	9	3	1	0	0	0	0	0	0	0	0	0	0	100	146	74	56	106
	C	0	0	0	0	0	1	23	52	14	7	2	<1	0	0	0	0	0	0	0	0	0	201	288	77	56	112
Jul 28-Aug 3		No Tows																									
Aug 4-10	A	0	0	0	0	0	0	15	39	28	17	1	1	0	0	0	0	0	0	0	0	0	75	191	80	62	120
	B	0	0	0	0	0	2	18	44	29	5	2	0	0	0	0	0	0	0	0	0	0	88	285	77	55	103
	C	0	0	0	0	0	1	17	42	29	10	2	<1	0	0	0	0	0	0	0	0	0	163	476	78	55	120
Aug 11-17		No Tows																									
Aug 18-24	A	0	0	0	0	0	0	9	27	38	21	4	0	0	0	0	0	0	0	0	0	0	114	198	84	65	108
	B	0	0	0	0	0	0	9	50	32	9	0	0	0	0	0	0	0	0	0	0	0	81	115	79	64	95
	C	0	0	0	0	0	0	9	36	36	17	3	0	0	0	0	0	0	0	0	0	0	195	313	82	64	108
Aug 25-31		No Tows																									
Sep 1-7	A	0	0	0	0	0	0	9	41	29	17	3	0	0	0	0	0	0	0	0	0	0	63	70	82	65	104
	B	0	0	0	0	0	0	26	50	23	0	1	0	0	0	0	0	0	0	0	0	0	77	219	76	63	104
	C	0	0	0	0	0	0	22	48	24	4	1	0	0	0	0	0	0	0	0	0	0	140	289	77	63	104
Sep 8-14		No Tows																									
Sep 15-21	A	0	0	0	0	0	0	33	33	22	11	0	0	0	0	0	0	0	0	0	0	0	9	9	76	62	92
	B	0	0	0	0	0	0	28	50	17	0	0	6	0	0	0	0	0	0	0	0	0	18	18	78	66	120
	C	0	0	0	0	0	0	30	44	19	4	0	4	0	0	0	0	0	0	0	0	0	27	27	77	62	120
Sep 22-28		No Tows																									
Sep 29-Oct 5	A	0	0	0	0	0	13	0	25	25	25	0	13	0	0	0	0	0	0	0	0	0	8	8	85	52	114
	B	0	0	0	0	0	0	0	27	64	0	0	9	0	0	0	0	0	0	0	0	0	11	11	85	71	112
	C	0	0	0	0	0	5	0	26	47	11	0	11	0	0	0	0	0	0	0	0	0	19	19	85	52	114
Oct 6-12		No Tows																									
Oct 13-19	A	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	2	2	108	106	110
	B	0	0	0	0	0	0	0	0	44	44	11	0	0	0	0	0	0	0	0	0	0	9	9	94	87	103
	C	0	0	0	0	0	0	0	0	36	36	27	0	0	0	0	0	0	0	0	0	0	11	11	97	87	110
Oct 20-26		No Tows																									
Oct 27-Nov 2	A	0	0	0	0	0	0	4	0	12	28	28	20	0	8	0	0	0	0	0	0	0	25	25	103	67	136
	B	0	0	0	4	0	4	12	0	12	20	36	8	4	0	0	0	0	0	0	0	0	25	25	94	35	127
	C	0	0	0	2	0	2	8	0	12	24	32	14	2	4	0	0	0	0	0	0	0	50	50	99	35	136
Nov 3-9	A	0	0	0	0	0	0	0	0	0	0	17	33	0	50	0	0	0	0	0	0	0	6	6	125	110	140
	B	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	2	2	105	100	109
	C	0	0	0	0	0	0	0	0	0	13	25	25	0	38	0	0	0	0	0	0	0	8	8	120	100	140
Nov 10-16	A	0	0	0	0	0	3	0	0	0	5	29	26	24	13	0	0	0	0	0	0	0	38	38	116	58	138
	B	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	1	1	120	120	120
	C	0	0	0	0	0	3	0	0	0	5	28	28	23	13	0	0	0	0	0	0	0	39	39	116	58	138
Nov 17-23	A	0	0	0	0	0	0	0	0	3	0	23	16	19	16	19	3	0	0	0	0	0	31	31	125	88	155
	B	0	0	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	1	1	112	112	112
	C	0	0	0	0	0	0	0	0	3	0	22	19	19	16	19	3	0	0	0	0	0	32	32	124	88	155
Nov 24-30	A	0	0	0	0	0	0	0	0	0	1	2	15	26	30	19	2	3	1	0	0	0	116	170	132	100	171
	B	0	0	0	0	0	0	0	0	0	7	13	40	33	0	7	0	0	0	0	0	0	15	15	118	100	141
	C	0	0	0	0	0	0	0	0	0	2	3	17	27	28	18	2	2	1	0	0	0	131	185	131	100	171
Dec 1-7		No Tows																									
Dec 8-14	A	0	0	0	0	0	0	0	0	0	0	0	11	18	24	24	11	11	2	0	0	0	55	55	141	112	171
	B	No Catch																									
	C	0	0	0	0	0	0	0	0	0	0	0	11	18	24	24	11	11	2	0	0	0	55	55	141	112	171

*A = cod end
B = cod end cover
C = combination

Table A-96

Juvenile Atlantic Tomcod Length-Frequency Distribution (Percent) Based on Night Sampling by Epibenthic Sled in Areas ≤20 Ft Deep and >20 Ft Deep, Hudson River Estuary [RM 14-76 (KM 22-122)], August-December 1974

Week	Depth (ft)	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Min.	Max.
Aug 19-22	≤20	0	0	0	0	0	<1	10	35	33	13	5	4	0	0	0	0	0	0	0	0	0	253	459	83	54	119
	>20	0	0	0	0	0	1	20	37	33	7	1	1	0	0	0	0	0	0	0	0	0	376	1227	78	56	119
Aug 26-29	≤20	0	0	0	0	0	0	6	24	33	24	12	0	0	0	0	0	0	0	0	0	0	33	33	87	67	107
	>20	0	0	0	0	0	0	13	46	28	11	1	1	0	0	0	0	0	0	0	0	0	170	251	80	62	112
Sep 3-6	≤20	0	0	0	0	0	0	0	26	41	23	6	3	0	0	0	0	0	0	0	0	0	40	59	87	71	114
	>20	0	0	0	0	0	<1	10	38	38	11	3	0	0	0	0	0	0	0	0	0	0	351	672	81	60	110
Sep 9-12	≤20	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	1	1	86	86	86
	>20	0	0	0	0	0	1	11	46	29	12	2	1	0	0	0	0	0	0	0	0	0	147	190	80	53	118
Sep 16-19	≤20	0	0	0	1	0	0	10	45	26	10	6	1	0	0	0	0	0	0	0	0	0	120	150	81	35	117
	>20	0	0	0	<1	0	<1	17	44	28	10	2	0	0	0	0	0	0	0	0	0	0	374	493	79	33	108
Sep 23-26	≤20	0	0	0	0	0	0	0	50	30	20	0	0	0	0	0	0	0	0	0	0	0	10	10	82	73	92
	>20	0	0	0	0	0	0	9	42	36	12	1	0	0	0	0	0	0	0	0	0	0	86	92	81	66	108
Sep 30-Oct 4	≤20	0	0	0	0	0	0	5	27	43	20	5	0	0	0	0	0	0	0	0	0	0	68	83	86	70	106
	>20	0	0	0	0	0	0	4	36	39	17	3	1	0	0	0	0	0	0	0	0	0	171	259	84	61	113
Oct 7-10	≤20	0	0	0	0	0	0	0	6	63	13	6	13	0	0	0	0	0	0	0	0	0	16	16	92	74	112
	>20	0	0	0	0	0	0	0	14	46	31	9	0	0	0	0	0	0	0	0	0	0	87	87	89	73	110
Oct 14-18	≤20	0	0	0	0	0	0	0	2	19	42	36	2	0	0	0	0	0	0	0	0	0	59	59	97	75	114
	>20	0	0	0	0	0	0	1	9	27	33	23	8	0	0	0	0	0	0	0	0	0	183	184	95	68	119
Oct 21-24	≤20	0	0	0	0	0	0	0	0	0	38	46	15	0	0	0	0	0	0	0	0	0	13	13	102	92	113
	>20	0	0	0	0	0	0	0	7	20	43	20	11	0	0	0	0	0	0	0	0	0	56	56	96	74	119
Oct 28-Nov 1	≤20	0	0	0	0	0	0	0	0	0	23	23	42	12	0	0	0	0	0	0	0	0	26	26	110	91	128
	>20	0	0	0	0	0	0	0	1	6	27	34	26	4	2	0	0	0	0	0	0	0	152	158	106	74	137
Nov 5-9	≤20	0	0	0	0	0	0	0	0	0	8	19	32	31	10	0	0	0	0	0	0	0	76	78	117	96	139
	>20	0	0	0	0	0	0	0	2	2	13	38	32	9	5	0	0	0	0	0	0	0	56	56	110	76	136
Nov 11-14	≤20	0	0	0	0	0	0	0	0	0	4	17	38	26	15	0	0	0	0	0	0	0	47	47	119	98	139
	>20	0	0	0	0	0	0	0	0	0	0	33	44	11	11	0	0	0	0	0	0	0	9	9	114	101	135
Nov 18-21	≤20	0	0	0	0	0	0	0	0	0	4	13	24	30	21	3	3	0	0	0	0	0	90	90	123	92	159
	>20	0	0	0	0	0	0	0	1	0	2	18	28	20	15	9	7	0	0	0	0	0	130	148	124	75	159
Nov 24-27	≤20	0	0	0	0	0	0	0	0	0	5	9	27	18	32	9	0	0	0	0	0	0	22	22	126	98	149
	>20	0	0	0	0	0	0	0	0	0	3	7	34	34	10	10	0	0	0	0	0	0	29	29	123	99	149
Dec 2-5	≤20	0	0	0	0	2	0	0	0	0	0	0	20	17	32	17	10	0	0	0	0	0	40	40	132	50	160
	>20	0	0	0	0	0	0	0	0	0	0	0	10	37	31	13	10	0	0	0	0	0	52	52	134	114	160
Dec 9-12	≤20	0	0	0	0	0	0	0	0	0	0	2	11	16	30	20	9	9	0	0	2	0	44	44	139	110	192
	>20	0	0	0	0	0	0	0	0	0	0	0	0	38	25	25	13	0	0	0	0	0	8	8	138	126	153

services group

Table A-97

Juvenile American Shad Length-Frequency Distribution (Percent) Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 12-152 (KM 19-243)], June-November 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
Jun 9-15	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	5	35	33	36
Jun 16-22	0	12	86	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	63	82	25	19	31
Jun 23-29	0	13	29	58	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	99	99	30	18	40
Jun 30-Jul 6	0	0	3	69	27	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	114	362	39	28	73
Jul 7-13	0	0	3	27	55	15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	418	595	44	25	67
Jul 14-20	0	0	<1	9	28	56	7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	551	696	51	30	70
Jul 21-27	0	0	1	4	26	49	17	2	<1	0	0	0	0	0	0	0	0	0	0	0	0	802	1188	54	27	83
Jul 28-Aug 3	0	0	<1	<1	10	60	26	4	<1	0	0	0	0	0	0	0	0	0	0	0	0	1073	1769	58	30	82
Aug 4-10	0	0	0	0	2	37	50	9	2	0	0	0	0	0	0	0	0	0	0	0	0	954	1504	63	42	85
Aug 11-17	0	0	0	<1	<1	19	69	12	<1	0	0	0	0	0	0	0	0	0	0	0	0	664	969	65	39	82
Aug 18-24	0	0	0	0	<1	3	62	33	2	0	0	0	0	0	0	0	0	0	0	0	0	771	1115	69	47	90
Aug 25-31	0	0	0	0	<1	1	38	52	8	0	0	0	0	0	0	0	0	0	0	0	0	814	973	72	50	89
Sep 1-7	0	0	0	0	0	1	26	62	11	<1	0	0	0	0	0	0	0	0	0	0	0	572	861	74	57	92
Sep 8-14	0	0	0	0	<1	<1	26	60	14	<1	0	0	0	0	0	0	0	0	0	0	0	592	710	74	42	91
Sep 15-21	0	0	0	0	0	1	18	68	12	<1	<1	0	0	0	0	0	0	0	0	0	0	700	921	75	52	108
Sep 22-28	0	0	0	0	0	<1	5	47	40	8	<1	0	0	0	0	0	0	0	0	0	0	538	808	81	59	110
Sep 29-Oct 5	0	0	0	0	0	1	3	59	34	3	<1	0	0	0	0	0	0	0	0	0	0	555	703	79	53	104
Oct 6-12	0	0	0	0	0	0	4	61	30	5	0	0	0	0	0	0	0	0	0	0	0	361	524	79	61	97
Oct 13-19	0	0	0	0	0	0	<1	45	48	6	<1	0	0	0	0	0	0	0	0	0	0	641	1342	82	68	103
Oct 20-26	0	0	0	0	0	0	3	63	33	2	<1	0	0	0	0	0	0	0	0	0	0	515	818	79	65	103
Oct 27-Nov 2	0	0	0	0	0	0	1	44	48	7	1	0	0	0	0	0	0	0	0	0	0	409	478	82	69	110
Nov 3-9	0	0	0	0	0	0	1	48	46	4	<1	<1	0	0	0	0	0	0	0	0	0	429	464	81	65	119
Nov 10-16	0	0	0	0	0	0	1	43	52	4	0	0	0	0	0	0	0	0	0	0	0	99	99	82	67	97
Nov 17-23	0	0	0	0	5	0	5	30	50	5	5	0	0	0	0	0	0	0	0	0	0	20	20	82	42	107
Nov 24-30*	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	53	53	53

* Few Juvenile American shad were caught in day beach seines after November 30, 1974.

services group

Table A-98

Juvenile American Shad Length-Frequency Distribution (Percent) Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, Hudson River Estuary [RM 34-61 (KM 54-98)], August-November 1974

	Total Length Interval (mm)																									
Week	0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	$\bar{x}$	Length Min.	Max.
Aug 4-10	0	0	0	0	0	47	44	9	0	0	0	0	0	0	0	0	0	0	0	0	0	48	97	63	54	73
Aug 11-17	0	0	0	0	0	13	87	0	0	0	0	0	0	0	0	0	0	0	0	0	0	44	54	64	58	70
Aug 18-24	0	0	0	0	0	0	56	39	5	0	0	0	0	0	0	0	0	0	0	0	0	41	41	70	61	88
Aug 25-31	No Catch																									
Sep 1-7	0	0	0	0	0	0	20	64	8	9	0	0	0	0	0	0	0	0	0	0	0	58	147	76	65	99
Sep 8-14	0	0	0	0	0	0	24	64	12	1	0	0	0	0	0	0	0	0	0	0	0	71	95	75	65	95
Sep 15-21	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	69	69	69
Sep 22-28	0	0	0	0	0	0	0	88	12	0	0	0	0	0	0	0	0	0	0	0	0	17	17	77	73	90
Sep 29-Oct 5	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	77	77	77
Oct 6-12	0	0	0	0	0	0	0	46	37	15	2	0	0	0	0	0	0	0	0	0	0	52	52	83	74	104
Oct 13-19	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	12	12	79	74	86
Oct 20-26	0	0	0	0	0	0	3	59	31	6	0	0	0	0	0	0	0	0	0	0	0	32	32	80	69	91
Oct 27-Nov 2	0	0	0	0	0	0	0	50	43	7	0	0	0	0	0	0	0	0	0	0	0	14	14	81	72	93
Nov 3-9*	0	0	0	0	0	0	0	14	86	0	0	0	0	0	0	0	0	0	0	0	0	7	7	85	78	90

* Few Juvenile American shad were caught in night beach seines after November 1, 1974.

services group

Table A-99

Juvenile American Shad Length-Frequency Distribution (Percent) Based on Day Sampling by Bottom Trawl, Hudson River Estuary [RM 12-61 (KM 19-38)], June-November 1974

Week	Gear*	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	Length $\bar{x}$	Length Min.	Length Max.
Jun 9-15	A	No Catch																									
	B	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31	31	31
	C	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	31	31	31
Jun 16-22		No Tows																									
Jun 23-29	A	No Catch																									
	B	No Catch																									
	C	No Catch																									
Jun 30-Jul 6		No Tows																									
Jul 7-13	A	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	45	42	47
	B	0	0	1	48	40	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	165	868	41	27	57
	C	0	0	1	48	41	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	171	874	41	27	57
Jul 14-20		No Tows																									
Jul 21-27	A	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	61	61	61
	B	0	0	1	1	2	77	17	1	0	0	0	0	0	0	0	0	0	0	0	0	0	81	81	57	30	71
	C	0	0	1	1	2	76	18	1	0	0	0	0	0	0	0	0	0	0	0	0	0	82	82	58	30	71
Jul 28-Aug 3		No Tows																									
Aug 4-10	A	No Catch																									
	B	0	0	0	0	0	16	76	4	4	0	0	0	0	0	0	0	0	0	0	0	0	25	25	64	56	84
	C	0	0	0	0	0	16	76	4	4	0	0	0	0	0	0	0	0	0	0	0	0	25	25	64	56	84
Aug 11-17		No Tows																									
Aug 18-24	A	No Catch																									
	B	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	70	65	75
	C	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	0	0	0	6	6	70	65	75
Aug 25-31		No Tows																									
Sep 1-7	A	0	0	0	0	0	0	50	25	25	0	0	0	0	0	0	0	0	0	0	0	0	4	4	72	62	83
	B	0	0	0	0	0	0	41	50	9	0	0	0	0	0	0	0	0	0	0	0	0	22	22	72	63	84
	C	0	0	0	0	0	0	42	46	12	0	0	0	0	0	0	0	0	0	0	0	0	26	26	72	62	84
Sep 8-14		No Tows																									
Sep 15-21	A	0	0	0	0	0	0	0	50	25	25	0	0	0	0	0	0	0	0	0	0	0	4	4	81	74	95
	B	0	0	0	0	0	0	15	69	15	0	0	0	0	0	0	0	0	0	0	0	0	13	13	75	70	82
	C	0	0	0	0	0	0	12	65	18	6	0	0	0	0	0	0	0	0	0	0	0	17	17	77	70	95
Sep 22-28		No Tows																									
Sep 29-Oct 5	A	0	0	0	0	0	0	50	0	0	50	0	0	0	0	0	0	0	0	0	0	0	2	2	77	63	91
	B	0	0	0	0	0	0	0	22	67	11	0	0	0	0	0	0	0	0	0	0	0	9	9	85	73	91
	C	0	0	0	0	0	0	9	18	55	18	0	0	0	0	0	0	0	0	0	0	0	11	11	83	63	91
Oct 6-12		No Tows																									
Oct 13-19	A	0	0	0	0	0	0	0	0	38	50	13	0	0	0	0	0	0	0	0	0	0	8	8	92	83	101
	B	0	0	0	0	0	0	0	24	41	24	10	0	0	0	0	0	0	0	0	0	0	58	58	88	72	110
	C	0	0	0	0	0	0	0	21	41	27	11	0	0	0	0	0	0	0	0	0	0	66	66	89	72	110
Oct 20-26		No Tows																									
Oct 27-Nov 2	A	0	0	0	0	0	0	0	10	20	40	10	20	0	0	0	0	0	0	0	0	0	10	10	98	79	120
	B	0	0	0	0	0	0	3	13	44	25	16	0	0	0	0	0	0	0	0	0	0	32	32	90	62	109
	C	0	0	0	0	0	0	2	12	38	29	14	5	0	0	0	0	0	0	0	0	0	42	42	92	62	120
Nov 3-9	A	0	0	0	0	0	0	0	0	0	42	58	0	0	0	0	0	0	0	0	0	0	12	12	103	95	110
	B	0	0	0	0	0	0	0	0	0	100	0	0	0	0	0	0	0	0	0	0	0	2	2	97	95	99
	C	0	0	0	0	0	0	0	0	0	50	50	0	0	0	0	0	0	0	0	0	0	14	14	102	95	110
Nov 10-16	A	0	0	0	0	0	0	0	0	20	0	40	40	0	0	0	0	0	0	0	0	0	10	10	106	83	118
	B	0	0	0	0	0	0	0	17	42	42	0	0	0	0	0	0	0	0	0	0	0	12	12	88	72	100
	C	0	0	0	0	0	0	0	9	32	23	18	18	0	0	0	0	0	0	0	0	0	22	22	96	72	118
Nov 17-23	A	0	0	0	0	0	0	0	0	33	50	17	0	0	0	0	0	0	0	0	0	0	6	6	95	86	105
	B	0	0	0	0	0	0	25	0	75	0	0	0	0	0	0	0	0	0	0	0	0	4	4	82	69	89
	C	0	0	0	0	0	0	10	0	50	30	10	0	0	0	0	0	0	0	0	0	0	10	10	90	69	105
Nov 24-30	A	0	0	0	0	0	0	0	0	50	25	25	0	0	0	0	0	0	0	0	0	0	4	4	96	86	110
	B	0	0	0	0	0	0	0	13	50	25	13	0	0	0	0	0	0	0	0	0	0	8	8	91	79	105
	C	0	0	0	0	0	0	0	8	50	25	17	0	0	0	0	0	0	0	0	0	0	12	12	92	79	110

*A = cod end
B = cod end cover
C = combination

services group

Table A-100

Juvenile American Shad Length-Frequency Distribution (Percent) Based on Night Sampling with Epibenthic Sled in Areas ≤20 Ft Deep and >20 Ft Deep, Hudson River Estuary [RM 34-76 (KM 54-122)], August-November 1974

Week	Depth (ft)	Total Length Interval (mm) 0-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	101-110	111-120	121-130	131-140	141-150	151-160	161-170	171-180	181-190	191-200	>200	Total Meas.	Total No.	%	Length Min.	Max.
Aug 19-22	≤20	0	0	0	0	0	0	57	41	3	0	0	0	0	0	0	0	0	0	0	0	0	69	69	70	61	90
	>20	0	0	0	0	0	0	46	54	0	0	0	0	0	0	0	0	0	0	0	0	0	26	26	72	65	80
Aug 26-29	≤20	0	0	0	0	0	4	43	51	2	0	0	0	0	0	0	0	0	0	0	0	0	49	49	71	55	85
	>20	0	0	0	0	0	0	15	62	23	0	0	0	0	0	0	0	0	0	0	0	0	13	13	75	67	84
Sep 3-6	≤20	0	0	0	0	0	1	36	55	7	0	0	0	0	0	0	0	0	0	0	0	0	80	80	72	53	83
	>20	0	0	0	0	0	0	30	70	0	0	0	0	0	0	0	0	0	0	0	0	0	27	32	73	66	80
Sep 9-12	≤20	0	0	0	0	0	0	39	53	8	0	0	0	0	0	0	0	0	0	0	0	0	51	51	73	63	85
	>20	0	0	0	0	0	0	5	71	19	5	0	0	0	0	0	0	0	0	0	0	0	21	21	78	69	94
Sep 16-19	≤20	0	0	0	0	0	0	21	58	17	4	0	0	0	0	0	0	0	0	0	0	0	77	77	76	63	99
	>20	0	0	0	0	0	0	8	79	13	0	0	0	0	0	0	0	0	0	0	0	0	24	24	76	66	84
Sep 23-26	≤20	0	0	0	2	0	0	7	70	20	2	0	0	0	0	0	0	0	0	0	0	0	56	56	77	33	94
	>20	0	0	0	0	0	0	0	77	23	0	0	0	0	0	0	0	0	0	0	0	0	22	22	79	73	88
Sep 30-Oct 4	≤20	0	0	0	0	0	0	6	58	35	0	0	0	0	0	0	0	0	0	0	0	0	48	48	78	69	88
	>20	0	0	0	0	0	0	0	68	30	2	0	0	0	0	0	0	0	0	0	0	0	44	44	80	72	94
Oct 7-10	≤20	0	0	0	0	0	0	6	65	25	4	0	0	0	0	0	0	0	0	0	0	0	51	51	79	68	99
	>20	0	0	0	0	0	0	0	17	71	9	3	0	0	0	0	0	0	0	0	0	0	35	35	84	75	101
Oct 14-18	≤20	0	0	0	0	0	0	2	31	49	15	4	0	0	0	0	0	0	0	0	0	0	121	121	85	67	108
	>20	0	0	0	0	0	0	2	21	29	37	12	0	0	0	0	0	0	0	0	0	0	52	52	89	70	108
Oct 21-24	≤20	0	0	0	0	0	0	0	19	44	30	8	0	0	0	0	0	0	0	0	0	0	126	137	88	71	107
	>20	0	0	0	0	0	0	0	25	44	19	13	0	0	0	0	0	0	0	0	0	0	32	32	87	74	107
Oct 28-Nov 1	≤20	0	0	2	0	0	0	0	7	50	36	2	2	0	0	0	0	0	0	0	0	0	41	42	87	25	118
	>20	0	0	0	0	0	0	0	10	47	31	12	0	0	0	0	0	0	0	0	0	0	49	49	90	71	108
Nov 5-9	≤20	0	0	0	0	0	0	0	13	49	31	4	4	0	0	0	0	0	0	0	0	0	55	55	89	75	116
	>20	0	0	0	0	0	0	0	19	57	14	10	0	0	0	0	0	0	0	0	0	0	21	21	87	71	107
Nov 11-14	≤20	0	0	0	0	0	0	0	15	42	35	4	4	0	0	0	0	0	0	0	0	0	26	26	90	76	119
	>20	0	0	0	0	0	0	0	0	27	18	55	0	0	0	0	0	0	0	0	0	0	11	11	98	85	109
Nov 18-21	≤20	0	0	0	0	0	0	0	25	38	31	6	0	0	0	0	0	0	0	0	0	0	14	16	89	76	101
	>20	0	0	0	0	0	0	0	6	59	24	6	6	0	0	0	0	0	0	0	0	0	17	17	90	78	117
Nov 24-27 *	≤20	0	0	0	0	0	0	0	0	83	17	0	0	0	0	0	0	0	0	0	0	0	6	6	86	81	94
	>20	0	0	0	0	0	0	0	0	75	0	25	0	0	0	0	0	0	0	0	0	0	4	4	90	82	104

* Few Juvenile American shad were caught in epibenthic sleds (night sampling) after November 27, 1974.

services group

Table A-101

Tagged White Perch Recoveries, August 1974-June 1975 (Page 1 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
Aug 1974	09-12161	10/26/73	34-East	155	8/16/74	42-East	160	0.03	IP
	09-15727	4/08/74	42-East	174	8/15/74	42-East	167	-	IP
	09-18746	5/08/74	86-West	163	8/13/74	69-West	158	0.18	D
	09-C4722	10/25/73	40-West	134	8/08/74	42-East	135	0.01	IP
	09-C6064	10/30/73	37-West	163	8/07/74	41-West	150	0.01	L
	09-C6068	10/30/73	37-West	157	8/09/74	37-West	158	-	QLM
	09-C7962	11/28/73	36-East	195	8/16/74	42-East	192	0.02	IP
	09-C7977	11/28/73	39-East	160	8/21/74	42-East	159	0.01	IP
	09-16186	5/07/74	42-West	174	8/09/74	37-West	164	0.05	QLM
	29-17149	5/16/74	60-West	150	8/06/74	42-West	143	0.22	Box Trap
	29-17748	5/24/74	40-West	151	8/08/74	42-East	150	0.03	IP
Sep 1974	05-7633	9/17/74	40-West	101	9/23/74	40-East	101	-	100-Ft Beach Seine
	09-12165	10/26/73	34-East	156	9/11/74	42-East	159	0.03	IP
	09-13350	11/19/73	40-East	196	9/10/74	60-West	-	0.07	Sports Fisherman
	09-13865	11/19/73	40-East	166	9/05/74	42-East	166	0.01	100-Ft Beach Seine
	29-17347	5/30/74	66-West	174	9/25/74	18-West	168	0.41	Epibenthic Sled
	09-18627	4/24/74	42-East	151	9/20/74	42-East	-	-	IP
	09-18755	4/26/74	40-East	172	9/11/74	42-East	172	0.02	IP
	09-C6396	12/4/73	28-channel	164	9/03/74	42-East	162	0.05	IP
Oct 1974	05-735	?/73	-	-	10/21/74	57-West	143	-	Box Trap
	05-1381	10/16/73	54-West	130	10/02/74	43-East	135	0.03	100-Ft Beach Seine
	05-9298	9/25/74	43-East	130	10/24/74	43-East	127	-	100-Ft Beach Seine
	**05-9298	10/24/74	43-East	127	10/30/74	43-East	125	-	100-Ft Beach Seine
	05-9624	10/03/74	34-East	137	10/14/74	42-East	134	0.73	IP
	05-9958	9/27/74	30-West	131	10/08/74	30-West	128	-	100-Ft Beach Seine
	05-10046	10/07/74	42-West	122	10/08/74	42-East	123	-	IP
	05-10967	10/09/74	51-East	142	10/22/74	51-East	137	-	100-Ft Beach Seine
	05-11413	10/18/74	66-West	112	10/22/74	42-East	110	6.0	IP
	09-17242	5/23/74	39-East	156	10/17/74	23-West	150	0.11	NYSDEC
	09-C1443	11/16/73	38-West	157	10/17/74	42-East	155	0.01	IP
	09-C6454	10/18/73	41-East	171	10/30/74	37-West	162	0.01	B
	09-12245	10/22/73	38-East	151	10/16/74	39-West	154	<0.01	Box Trap
	09-13505	11/14/73	38-East	166	10/02/74	39-East	170	0.01	100-Ft Beach Seine
	29-16943	5/10/74	34-East	162	10/21/74	33-East	171	0.01	Box Trap
	29-17415	5/29/74	39-East	158	10/ ?/74	42-East	161	-	IP
	09-18473	4/23/74	59-East	174	10/28/74	38-West	172	0.11	100-Ft Beach Seine
	29-21357	9/25/74	42-East	178	10/02/74	42-East	160	-	Bottom Trawl
	29-21463	10/03/74	34-East	165	10/23/74	43-West	161	0.45	Bottom Trawl
	29-22308	10/05/74	40-West	240	10/28/74	40-West	236	-	Box Trap
	29-22362	10/05/74	34-East	172	10/07/74	34-East	-	-	Box Trap
	29-22719	9/24/74	14-West	204	10/04/74	16-West	198	0.20	100-Ft Beach Seine
	29-22932	10/04/74	34-East	164	10/18/74	34-East	164	-	200-Ft Beach Seine
	29-22940	10/02/74	43-East	165	10/30/74	43-East	163	-	100-Ft Beach SEine
	29-22986	10/01/74	14-West	185	10/20/74	12	-	0.11	Sports Fisherman
	29-23384	10/15/74	38-West	155	10/28/74	36-West	151	0.15	100-Ft Beach Seine
Nov 1974	05-3073	10/28/74	38-West	132	11/12/74	38-West	127	-	100-Ft Beach Seine
	05-9602	10/03/74	34-East	142	11/21/74	32-East	137	0.04	Epibenthic Sled
	05-10322	10/24/74	43-East	129	11/18/74	43-East	127	-	100-Ft Beach Seine
	05-10941	10/24/74	43-East	136	11/07/74	43-East	133	-	100-Ft Beach Seine
	05-10964	10/09/74	59-East	135	11/13/74	37-West	128	0.63	QLM
	05-11133	10/31/74	41-East	115	11/13/74	42-East	100	0.08	IP
	05-12091	11/06/74	42-East	130	11/07/74	42-East	135	-	IP
	05-12253	11/08/74	36-West	125	11/24/74	20-West	122	1.0	Epibenthic Sled
	05-12322	11/05/74	39-East	132	11/15/74	39-East	131	-	100-Ft Beach Seine
	05-12396	11/07/74	39-East	114	11/15/74	39-East	111	-	100-Ft Beach Seine
	05-12496	11/08/74	35-West	142	11/16/74	42-East	137	0.88	IP
	05-12678	11/06/74	37-West	121	11/07/74	37-West	119	-	B

*Danskammer(D), Indian Point (IP), Lovett (L), and Bowline (B) represent impingement collections at these plants and are considered recovery gear.

**2nd recovery

Table A-101 (Page 2 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
Nov 1974	05-12961	11/12/74	40-West	117	11/15/74	40-West	121	-	100-Ft Beach Seine
	29-16927	5/08/74	60-East	157	11/08/74	39-East	151	0.11	200-Ft Beach Seine
	29-17142	5/17/74	34-East	163	11/18/74	34-East	160	-	100-Ft Beach Seine
	29-17522	5/29/74	30-West	163	11/06/74	30-West	166	-	100-Ft Beach Seine
	29-19365	6/05/74	96-East	177	11/28/74	42-East	178	0.31	IP
	29-21270	10/09/74	40-West	177	11/13/74	40-West	177	-	100-Ft Beach Seine
	29-22423	10/01/74	23-Channel	192	11/20/74	31-West	190	0.16	Epibenthic Sled
	29-23399	10/18/74	59-East	208	11/04/74	59-East	209	-	Box Trap
	**29-23399	11/04/74	59-East	209	11/12/74	59-East	212	-	Box Trap
	29-23518	10/08/74	33-East	222	11/02/74	33-East	-	-	Sports Fisherman
	05-1318	10/02/74	43-East	135	11/ ?/74	-	134	-	100-Ft Beach Seine
	29-25107	10/19/74	29-West	185	11/20/74	30-West	185	0.03	Epibenthic Sled
	29-26081	11/05/74	39-East	186	11/11/74	39-East	180	-	100-Ft Beach Seine
	05-09094	10/25/74	40-East	119	12/20/74	42-East	118	0.04	IP
Dec 1974	05-11473	10/15/74	38-West	110	12/30/74	42-East	107	0.05	IP
	05-12353	11/08/74	33-East	135	12/30/74	42-East	127	0.17	IP
	05-12843	11/ ?/73	-	-	12/30/74	42-East	112	-	IP
	29-24132	10/16/74	22-West	198	12/03/74	23-West	199	0.02	Epibenthic Sled
	29-27031	11/14/74	17-West	196	12/27/74	42-East	195	0.58	IP
Jan 1975	05-10591	10/03/74	34-East	130	1/02/75	37-West	124	0.03	B
	05-12638	11/06/74	38-West	123	1/04/75	37-West	118	0.02	B
	09-18037	4/18/74	40-West	162	1/26/75	42-East	162	0.01	IP
	29-24049	10/21/74	57-West	172	1/01/75	42-East	169	0.21	IP
	29-24636	10/18/74	84-West	198	1/06/75	42-East	195	0.53	IP
Feb 1975	05-12890	11/07/74	35-East	111	2/07/75	37-West	110	0.02	QLM
	05-11807	10/24/74	39-East	132	2/12/75	37-West	136	0.02	B
	05-10985	10/10/74	48-East	136	2/13/75	41-West	124	0.06	L
	05-10776	10/14/74	36-East	114	2/16/75	42-East	113	0.05	IP
	05-9085	10/25/74	25-West	115	2/17/75	42-East	115	0.15	IP
	09-16860	4/30/74	42-East	156	2/13/75	42-East	168	-	IP
	09-C2879	6/05/73	57-West	169	2/13/75	37-West	172	0.03	B
Mar 1975	05-10375	10/02/74	40-West	117	3/10/75	42-East	120	0.01	IP
	09-27691	11/19/74	17-West	162	3/13/75	42-East	158	0.22	IP
	29-23432	11/08/74	36-West	164	3/20/75	37-West	159	0.01	B
Apr 1975	05-4715	10/29/74	52-East	129	4/23/75	42-East	-	0.06	IP
	05-11972	10/21/74	38-West	117	4/24/75	37-West	116	0.01	B
	05-10338	10/23/74	34-East	132	4/24/75	37-West	134	0.02	B
	05-4681	10/29/74	38-West	109	4/24/75	37-West	109	0.01	B
	05-17488	4/22/75	40-East	149	4/24/75	41-West	145	0.50	L
	05-11512	10/24/74	39-West	126	4/30/75	42-East	123	0.02	IP
	09-29012	4/17/75	Manhasset Bay	295	4/17/75	Manhasset Bay	295	-	200-Ft Beach Seine
	09-28710	4/18/75	42-East	179	4/19/75	42-East	180	-	IP
	09-30233	4/22/75	40-East	171	4/23/75	42-East	-	2.0	IP
	09-30257	4/22/75	40-East	160	4/24/75	37-West	161	1.5	B
	09-28438	4/17/75	40-West	170	4/24/75	37-West	172	0.43	B
	09-30174	4/22/75	40-East	151	4/24/75	41-West	152	0.50	L
	09-30060	4/23/75	40-West	182	4/24/75	41-West	181	1.0	L
	09-28216	4/22/75	40-East	166	4/25/75	42-East	165	0.67	IP
	09-28152	4/15/75	Manhasset Bay	234	4/28/75	Manhasset Bay	253	-	200-Ft Beach Seine
	09-29001	4/17/75	Manhasset Bay	207	4/28/75	Manhasset Bay	203	-	200-Ft Beach Seine
	09-28159	4/15/75	Manhasset Bay	250	4/28/75	Manhasset Bay	252	-	200-Ft Beach Seine
	09-28291	4/22/75	40-East	161	4/30/75	41-West	160	0.13	L
	29-23420	10/18/74	57-West	165	4/09/75	37-West	165	0.12	B
	29-23177	10/14/74	33-East	187	4/09/75	37-West	178	0.02	B

*Danskammer (D), Indian Point (IP), Lovett (L), and Bowline represent impingement collections at these plants and are considered recovery gear.

**2nd recovery

Table A-101 (Page 3 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
May 1975	05-10714	10/07/74	38-West	126	5/31/75	38-West	123	-	200-Ft Beach Seine
	05-22762	5/15/75	58-West	120	5/31/75	58-West	117	-	200-Ft Beach Seine
	05-17201	4/29/75	57-West	132	5/31/75	58-West	132	0.03	200-Ft Beach Seine
	09-26939	11/20/74	28-West	190	5/01/75	29-West	187	0.01	100-Ft Beach Seine
	09-31273	4/28/75	Manhasset Bay	253	5/01/75	Manhasset Bay	254	-	200-Ft Beach Seine
	09-31620	5/01/75	33-East	174	5/02/75	34-East	179	1.0	200-Ft Beach Seine
	09-30608	4/28/75	34-East	161	5/02/75	34-East	160	-	200-Ft Beach Seine
	09-28746	4/23/75	27-West	165	5/06/75	27-West	166	-	100-Ft Beach Seine
	09-30961	5/01/75	22-West	202	5/06/75	22-West	199	-	100-Ft Beach SEine
	09-32187	5/02/75	34-East	197	5/07/75	33-East	194	0.20	200-Ft Beach Seine
	09-31610	5/01/75	33-East	164	5/07/75	33-East	165	-	200-Ft Beach Seine
	09-33052	5/07/75	33-East	150	5/07/75	33-East	150	-	200-Ft Beach Seine
	09-28311	4/10/75	34-East	192	5/08/75	37-West	186	0.11	B
	09-28749	4/23/75	29-West	172	5/14/75	47-West	170	0.86	100-Ft Beach Seine
	09-33725	5/08/75	65-West	174	5/15/75	58-East	170	1.00	200-Ft Beach Seine
	09-30438	4/25/75	40-East	184	5/15/75	57-West	-	0.85	Sports Fisherman
	09-28437	4/17/75	40-West	198	5/15/75	58-East	198	0.64	200-Ft Beach Seine
	09-31307	4/28/75	Manhasset Bay	169	5/16/75	Manhasset Bay	169	-	200-Ft Beach Seine
	09-30106	4/22/75	34-East	181	5/16/75	34-East	180	-	Box Trap
	09-30173	4/22/75	40-East	180	5/17/75	42-East	179	0.08	IP
	09-18751	4/26/74	40-East	173	5/18/75	81-East	-	0.11	Sports Fisherman
	09-33163	5/07/75	33-East	191	5/21/75	34-East	189	0.07	200-Ft Beach Seine
	09-33978	5/15/75	58-East	163	5/22/75	58-East	156	-	100-Ft Beach Seine
	09-28679	4/24/75	74-East	165	5/22/75	74-East	165	-	100-Ft Beach Seine
	09-32207	5/14/75	47-East	163	5/23/75	48-East	158	0.11	100-Ft Beach Seine
	09-31965	5/15/75	58-East	190	5/25/75	61-East	-	0.30	Sports Fisherman
	09-13080	11/26/73	38-East	159	5/27/75	99-West	-	0.11	Sports Fisherman
	09-33469	5/20/75	34-East	180	5/27/75	34-East	171	-	Box Trap
	09-32503	5/02/75	34-East	180	5/28/75	33-East	172	0.04	Box Trap
	09-34527	5/21/75	34-East	188	5/28/75	34-East	184	-	200-Ft Beach Seine
	09-32764	5/02/75	34-East	173	5/28/75	33-East	165	0.04	500-Ft Beach Seine
	09-34528	5/21/75	34-East	185	5/28/75	33-East	180	0.14	500-Ft Beach Seine
	09-30602	4/28/75	34-East	166	5/29/75	69-East	163	1.13	100-Ft Beach Seine
	05-12057	11/06/74	40-West	115	5/08/75	37-West	-	0.02	B
	05-22044	5/07/75	33-East	113	5/09/75	34-East	112	0.50	100-Ft Beach Seine
	05-18103	5/05/75	33-East	144	5/14/75	33-East	141	-	Box Trap
	05-22471	5/07/75	33-East	144	5/14/75	33-East	138	-	200-Ft Beach Seine
	05-17739	5/01/75	39-East	145	5/15/75	42-East	141	0.21	IP
	05-22036	5/07/75	33-East	144	5/16/75	34-East	139	0.11	Other Agencies
	05-22196	5/15/75	34-East	135	5/20/75	34-East	133	-	100-Ft Beach Seine
	05-B013	5/31/73	53-West	124	5/21/75	53-West	153	-	100-Ft Beach Seine
	**05-22196	5/20/75	34-East	133	5/21/75	34-East	131	-	100-Ft Beach Seine
	05-12871	11/07/74	34-East	145	5/21/75	34-East	147	-	100-Ft Beach Seine
	05-3109	10/30/74	37-West	127	5/21/75	37-West	126	-	200-Ft Beach Seine
	05-22439	5/07/75	33-East	142	5/21/75	34-East	-	0.07	Other Agencies
	05-22032	5/07/75	33-East	142	5/21/75	34-East	-	0.07	Other Agencies
	05-20186	5/19/75	54-East	109	5/21/75	34-East	-	10.0	Other Agencies
	05-20194	5/19/75	54-East	131	5/22/75	54-East	128	-	Other Agencies
	05-22369	5/13/75	58-West	135	5/23/75	48-East	130	1.0	100-Ft Beach Seine
	05-22576	5/07/75	33-East	139	5/27/75	34-East	134	0.05	200-Ft Beach Seine
	05-11522	10/18/74	53-West	131	5/27/75	53-West	128	-	100-Ft Beach Seine
	05-9292	10/10/74	35-East	145	5/27/75	34-East	145	<0.01	100-Ft Beach Seine
	05-17899	4/25/75	34-East	143	5/27/75	34-East	141	-	500-Ft Beach Seine
	05-22127	5/07/75	33-East	137	5/28/75	34-East	135	0.05	200-Ft Beach Seine
	05-18655	5/21/75	90-East	117	5/29/75	42-East	110	6.0	IP
	05-10417	10/03/74	58-West	115	5/29/75	57-West	116	<.01	100-Ft Beach Seine
	05-17830	5/01/75	40-East	130	5/29/75	41-Channel	133	0.04	Bottom Trawl
	05-11870	10/24/74	36-West	117	5/29/75	35-West	115	<.01	200-Ft Beach Seine
	05-22478	5/07/75	33-East	141	5/29/75	34-East	136	0.05	500-Ft Beach Seine
	05-224[illegible]	5/0[illegible]	[illegible]-East	146	5/29/75	34-East	137	0.05	500-Ft Beach Seine
	05-185[illegible]	5/14/75	33-East	133	5/29/75	34-East	126	0.07	500-Ft Beach Seine
	05-19489	5/29/75	69-East	133	5/30/75	69-East	137	-	200-Ft Beach Seine
	05-22120	5/14/75	35-East	134	5/30/75	35-East	133	-	100-Ft Beach Seine
	05-19029	5/28/75	58-West	118	5/30/75	58-West	114	-	200-Ft Beach Seine
	05-17250	5/02/75	34-East	147	5/31/75	35-East	-	0.03	Sports Fisherman
	05-19067	5/28/75	59-East	139	5/31/75	64-East	-	1.67	Sports Fisherman

*Danskammer (D), Indian Point (IP), Lovett (L), and Bowline (B) represent impingement collections at these plants and are considered recovery gear.

**2nd recovery

Table A-101 (Page 4 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
May 1975	09-33807	5/16/75	58-East	163	5/29/75	53-East	157	0.38	100-Ft Beach Seine
	09-28724	4/14/75	34-West	204	5/29/75	35-West	197	0.02	200-Ft Beach Seine
	09-34691	5/22/75	58-East	174	5/29/75	58-East	161	-	100-Ft Beach Seine
	09-32370	5/27/75	48-West	165	5/29/75	49-West	162	0.50	100-Ft Beach Seine
	09-28146	4/15/75	Manhasset Bay	187	5/30/75	Manhasset Bay	193	-	200-Ft Beach Seine
	09-31371	5/16/75	Manhasset Bay	176	5/30/75	Manhasset Bay	180	-	200-Ft Beach Seine
	09-28173	4/15/75	Manhasset Bay	186	5/30/75	Manhasset Bay	186	-	200-Beach Seine
	**09-31307	5/16/75	Manhasset Bay	169	5/30/75	Manhasset Bay	177	-	200-Ft Beach Seine
	09-31272	4/28/75	Manhasset Bay	220	5/30/75	Manhasset Bay	222	-	200-Ft Beach Seine
	09-32931	5/31/75	58-West	155	5/30/75	58-West	151	-	200-Ft Beach Seine
	09-32725	5/02/75	34-East	184	5/31/75	35-East	-	0.03	Sports Fisherman
	09-32927	5/13/75	57-West	170	5/31/75	58-West	170	0.06	200-Ft Beach Seine
	09-C6422	10/04/73	58-West	192	5/31/75	58-West	195	-	200-Ft Beach Seine
	29-24976	10/28/74	34-East	182	5/02/75	34-East	188	-	200-Ft Beach Seine
	29-22152	10/03/74	34-East	227	5/07/75	33-East	223	0.01	200-Ft Beach Seine
	29-23650	10/07/74	14-West	175	5/12/75	16-West	178	0.01	100-Ft Beach Seine
	29-24824	10/29/74	24-Channel	187	5/15/75	58-East	195	0.17	200-Ft Beach Seine
	29-23529	10/23/74	37-West	179	5/19/75	37-West	179	-	100-Ft Beach Seine
	29-24614	10/11/74	38-West	216	5/23/75	38-West	206	-	100-Ft Beach Seine
	29-26597	11/11/74	39-East	163	5/26/75	39-East	-	-	Sports Fisherman
	29-26382	11/07/74	49-West	176	5/29/75	49-West	172	-	100-Ft Beach Seine
	29-24595	10/10/74	35-East	157	5/30/75	35-East	152	-	100-Ft Beach Seine
	09-26536	11/27/74	59-East	168	5/30/75	54-East	-	0.03	Sports Fisherman
	29-22720	9/24/74	14-West	164	5/27/75	66-West	162	0.21	QLM
	05-17204	4/30/75	57-West	147	5/27/75	66-West	142	0.33	QLM
	**05-10322	11/18/74	43-East	127	5/01/75	14-West	127	0.15	100-Ft Beach Seine
	05-3178	10/28/74	36-West	126	5/02/75	36-West	126	-	200-Ft Beach Seine
	05-22481	5/07/75	33-East	142	5/07/75	33-East	142	-	200-Ft Beach Seine
	05-18066	5/05/75	33-East	127	5/07/75	33-East	128	-	200-Ft Beach Seine
	05-4679	10/31/74	33-East	127	5/07/75	33-East	129	-	200-Ft Beach Seine
	05-12570	11/12/74	38-West	146	5/08/75	37-West	-	0.01	B
Jun 1975	09-31095	4/28/75	34-East	170	6/17/75	34-East	167	-	200-Ft Beach Seine
	09-30965	5/02/75	29-West	181	6/17/75	29-West	175	-	100-Ft Beach Seine
	09-41545	6/16/75	40-East	186	6/17/75	42-East	187	2.0	IP
	09-39333	6/10/75	34-East	159	6/17/75	37-East	157	0.43	Bottom Trawl
	09-30976	5/02/75	34-East	153	6/17/75	34-East	150	-	100-Ft Beach Seine
	09-37379	5/31/75	58-West	175	6/18/75	42-West	-	0.89	-
	09-30673	4/28/75	40-East	152	6/18/75	42-East	150	0.04	IP
	09-39427	6/18/75	34-East	154	6/18/75	29-West	-	-	100-Ft Beach Seine
	09-14936	11/15/73	33-East	161	6/18/75	36-East	180	0.01	100-Ft Beach Seine
	09-34560	5/15/75	38-East	177	6/19/75	16-East	-	0.63	Sports Fisherman
	09-30267	4/22/75	40-East	151	6/19/75	57-West	134	0.29	Box Trap
	29-C1186	6/04/74	57-West	170	6/19/75	57-West	174	-	Box Trap
	09-32486	5/05/75	53-West	190	6/20/75	52-West	-	0.02	Sports Fisherman
	09-32279	5/20/75	30-West	185	6/20/75	30-West	186	-	100-Ft Beach Seine
	09-13907	4/04/74	42-East	196	6/21/75	105-East		0.14	Sports Fisherman
	09-39246	6/12/75	57-West	191	6/23/75	57-West	188	-	Box Trap
	09-36978	6/05/75	57-West	164	6/25/75	25-West	-	1.6	Sports Fisherman
	09-30965	6/17/75	29-West	175	6/25/75	29-West	169	-	100-Ft Beach Seine
	09-42375	6/20/75	57-West	164	6/25/75	38-West	160	3.8	-
	09-39662	6/13/75	27-West	168	6/26/75	27-West	166	-	100-Ft Beach Seine
	09-36642	5/30/75	Manhasset Bay	274	6/27/75	Manhasset Bay	284	-	-
	09-34891	5/22/75	40-West	182	6/27/75	40-West	179	-	Box Trap
	09-30191	4/22/75	40-East	183	6/29/75	43-East	177	0.04	Sports Fisherman
	09-28447	4/17/75	25-West	167	6/30/75	46-West	-	0.32	Sports Fisherman
	29-23345	10/08/74	34-East	175	6/02/75	35-West	170	<0.001	Box Trap
	29-23388	10/16/74	36-East	165	6/09/75	29-West	-	0.03	Sports Fisherman
	29-23463	10/11/74	35-East	168	6/10/75	34-East	164	<0.001	Box Trap
	29-24617	10/11/74	38-East	201	6/10/75	38-East	194	-	100-Ft Beach Seine
	29-22980	9/30/74	36-East	165	6/13/75	36-East	159	-	100-Ft Beach Seine
	29-27779	11/15/74	25-Channel	161	6/15/75	42-East	160	0.08	IP

*Danskammer (D), Indian Point (IP), Lovett (L), and Bowline (B) represent impingement collections at these plants and are considered recovery gear.

**2nd recovery

Table A-101 (Page 5 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
Jun 1975	05-22300	5/16/75	30-West	140	6/ ?/75	25-West	-	-	Sports Fisherman
	05-19035	5/28/75	59-East	135	6/01/75	42-East	122	4.3	IP
	05-20514	5/29/75	54-East	131	6/02/75	42-East	121	3.0	IP
	05-17272	5/20/75	32-West	122	6/02/75	32-West	118	-	100-Ft Beach Seine
	05-22340	5/15/75	34-East	135	6/02/75	34-East	135	-	100-Ft Beach Seine
	05-22302	5/16/75	34-East	142	6/02/75	34-East	138	-	100-Ft Beach Seine
	05-18232	5/01/75	39-East	136	6/02/75	34-East	132	0.16	100-Ft Beach Seine
	05-22341	5/15/75	34-East	137	6/02/75	34-East	135	-	100-Ft Beach Seine
	05-17273	5/20/75	34-East	133	6/02/75	34-East	129		100-Ft Beach Seine
	05-10524	10/23/74	34-East	140	6/02/75	35-West	130	0.01	200-Ft Beach Seine
	05-17722	4/30/75	34-East	142	6/02/75	35-East	140	0.03	200-Ft Beach Seine
	05-18437	5/08/75	69-East	143	6/02/75	34-East	138	1.40	100-Ft Beach Seine
	05-19473	5/29/75	69-East	125	6/04/75	55-East	119	2.33	Stone and Webster
	05-12240	11/04/74	39-East	119	6/04/75	39-East	121	-	200-Ft Beach Seine
	05-20542	5/29/75	57-West	127	6/05/75	42-East	122	2.14	IP
	05-13012	11/12/74	39-East	112	6/06/75	42-East	-	0.01	IP
	05-9036	10/25/74	38-East	135	6/06/75	38-East	129	-	200-Ft Beach Seine
	05-18352	4/17/75	33-East	142	6/06/75	33-East	141	-	Box Trap
	05-18129	5/20/75	30-West	143	6/08/75	29-West	-	0.05	Sports Fisherman
	05-21312	6/05/75	58-West	116	6/09/75	42-East	112	4.0	IP
	05-10967	10/09/74	51-East	142	6/09/75	51-East	144	-	200-Ft Beach Seine
	05-21901	6/05/75	34-East	136	6/13/75	42-East	126	1.0	IP
	05-21881	6/09/75	49-West	126	6/13/75	42-East	121	1.8	IP
	05-19181	5/30/75	36-East	145	6/13/75	36-East	130	-	100-Ft Beach Seine
	05-11358	10/14/74	53-East	135	6/13/75	53-East	135	-	100-Ft Beach Seine
	05-21893	6/09/75	49-West	143	6/15/75	42-East	137	1.17	IP
	05-22117	5/13/75	15-West	145	6/17/75	12-West	-	0.09	Sports Fisherman
	05-19578	6/16/75	57-West	144	6/17/75	58-West	-	1.0	Sports Fisherman
	05-23370	6/9/75	34-East	149	6/17/75	34-East	149	-	200-Ft Beach Seine
	05-23368	6/09/75	34-East	145	6/17/75	34-East	145	-	200-Ft Beach Seine
	05-23340	6/09/75	34-East	143	6/17/75	34-East	140	-	200-Ft Beach Seine
	05-23347	6/09/75	34-East	133	6/17/75	34-East	132	-	200-Ft Beach Seine
	05-19642	5/23/75	34-East	149	6/17/75	34-East	140	-	200-Ft Beach Seine
	05-23334	6/09/75	34-East	133	6/17/75	34-East	134	-	200-Ft Beach Seine
	09-37216	5/13/75	58-West	167	6/05/75	41-West	161	3.4	L
	09-37494	5/31/75	58-West	171	6/05/75	41-West	162	3.4	L
	09-37484	5/31/75	58-West	172	6/05/75	42-East	-	3.2	IP
	29-26907	11/11/74	39-East	156	6/05/75	57-West	150	0.09	Box Trap
	09-30498	4/25/75	33-East	213	6/?/75	14-East	-	-	Sports Fisherman
	09-15631	4/16/74	40-East	163	6/05/75	57-West	160	0.04	200-Ft Beach Seine
	09-28992	4/16/75	29-West	190	6/06/75	75	-	0.90	Sports Fisherman
	09-32175	5/02/75	34-East	192	6/06/75	33-East	182	0.03	Box Trap
	09-33133	5/07/75	33-East	212	6/08/75	18-West	-	0.47	Sports Fisherman
	09-30312	4/23/75	33-East	191	6/09/75	26-East	-	0.15	Sports Fisherman
	09-36218	6/02/75	47-West	205	6/09/75	43-East	-	0.57	-
	09-35466	5/30/75	34-East	167	6/10/75	42-East	-	0.73	IP
	09-36369	5/29/75	34-East	183	6/10/75	34-East	180	-	Box Trap
	09-38144	6/09/75	34-East	177	6/10/75	34-East	175	-	Box Trap
	09-33633	5/12/75	34-East	176	6/11/75	34-East	170	-	Box Trap
	09-37516	5/29/75	34-West	180	6/11/75	34-East	170	-	100-Ft Beach Seine
	09-27677	11/19/74	17-West	186	6/12/75	37-West	-	0.10	B
	09-32884	5/06/75	13-West	193	6/12/75	41-West	-	0.76	L
	09-38911	6/06/75	57-West	186	6/12/75	41-West	-	2.67	L
	09-28173	5/30/75	Manhasset Bay	186	6/13/75	Manhasset Bay	185	-	200-Ft Beach Seine
	09-35707	5/30/75	Manhasset Bay	259	6/13/75	Manhasset Bay	260	-	200-Ft Beach Seine
	09-35672	5/30/75	Manhasset Bay	257	6/13/75	Manhasset Bay	259	-	200-Ft Beach Seine
	09-31246	4/28/75	Manhasset Bay	232	6/13/75	Manhasset Bay	231	-	200-Ft Beach Seine
	09-40515	6/13/75	Manhasset Bay	303	6/13/75	Manhasset Bay	303	-	200-Ft Beach Seine
	09-31141	5/20/75	41-East	199	6/13/75	34-East	194	0.29	Box Trap
	09-33957	5/22/75	40-West	192	6/13/75	40-West	184	-	100-Ft Beach Seine
	09-27764	11/19/74	17-West	166	6/13/75	56-West	166	0.19	Box Trap
	09-37394	5/31/75	58-East	192	6/14/75	42-East	184	1.14	100-Ft Beach Seine
	09-39256	6/12/75	57-West	163	6/15/75	42-East	161	5.0	IP
	09-39934	6/10/75	57-West	164	6/15/75	42-East	157	3.0	IP
	09-28611	4/28/75	33-East	173	6/16/75	18-East	-	0.31	Sports Fisherman
	09-31828	5/01/75	39-East	192	6/ ?/75	34-East	-	-	Sports Fisherman

* Danskammer (D), Indian Point (IP), Lovett (L), and Bowline (B) represent impingement collections at these plants and are considered recovery gear.

** 2nd recovery

Table A-101 (Page 6 of 6)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	(Mi/Day)	Recovery Gear*
Jun 1975	09-28449	4/17/75	22-West	204	6/16/75	28-West	-	0.10	Sports Fisherman
	09-34909	6/04/75	38-West	205	6/16/75	38-West	202	0.17	200-Ft Beach Seine
	09-33674	5/19/75	58-East	193	6/16/75	57-West	189	0.04	Box Trap
	09-31027	5/01/75	27-West	165	6/17/75	27-West	161	-	100-Ft Beach Seine
	09-35494	5/30/75	34-East	165	6/17/75	34-East	155	-	200-Ft Beach Seine
	05-23014	5/30/75	35-East	127	6/17/75	34-East	119	0.06	100-Ft Beach Seine
	05-12889	11/07/74	35-East	135	6/17/75	34-East	132	<0.01	100-Ft Beach Seine
	05-23108	6/13/75	34-East	131	6/17/75	34-East	129	-	100-Ft Beach Seine
	05-23335	6/09/75	34-East	135	6/17/75	34-East	132	-	200-Ft Beach Seine
	05-23346	6/09/75	34-East	133	6/17/75	34-East	130	-	200-Ft Beach Seine
	05-24025	6/13/75	36-East	136	6/17/75	36-East	130	-	100-Ft Beach Seine
	05-24021	6/13/75	36-East	138	6/17/75	36-East	138	-	100-Ft Beach Seine
	05-23242	6/04/75	32-West	132	6/18/75	42-East	120	0.71	IP
	05-19191	5/30/75	35-East	132	6/18/75	35-East	132	-	100-Ft Beach Seine
	05-21200	6/03/75	38-West	131	6/19/75	38-West	130	-	100-Ft Beach Seine
	05-18770	5/29/75	34-East	133	6/20/75	34-East	127	-	100-Ft Beach Seine
	05-23124	6/13/75	34-East	134	6/20/75	34-East	128	-	100-Ft Beach Seine
	05-17884	4/23/75	30-West	145	6/20/75	30-West	140	-	100-Ft Beach Seine
	05-18741	5/29/75	30-West	120	6/22/75	36-West	-	0.25	Sports Fisherman
	05-10508	10/07/74	39-East	134	6/23/75	37-East	128	0.01	100-Ft Beach Seine
	05-17749	5/01/75	39-East	136	6/23/75	37-East	133	0.04	100-Ft Beach Seine
	05-19695	5/23/75	34-East	144	6/24/75	43-East	-	0.28	Sports Fisherman
	05-21963	6/09/75	34-East	138	6/24/75	36-East	137	0.13	100-Ft Beach Seine
	05-19451	5/27/75	47-West	123	6/24/75	47-West	129	-	100-Ft Beach Seine
	05-25894	6/17/75	34-East	139	6/25/75	34-East	133	-	100-Ft Beach Seine
	05-19886	6/02/75	34-East	130	6/25/75	34-East	124	-	100-Ft Beach Seine
	05-24030	6/13/75	36-East	136	6/25/75	36-East	139	-	100-Ft Beach Seine
	05-23104	6/13/75	34-East	141	6/27/75	34-East	140	-	100-Ft Beach Seine
	05-20004	5/23/75	34-East	129	6/27/75	34-East	125	-	100-Ft Beach Seine
	05-12200	11/08/74	36-West	134	6/27/75	36-West	141	-	100-Ft Beach Seine
	05-12111	11/08/74	36-West	122	6/27/75	36-West	122	-	100-Ft Beach Seine
	05-18500	5/08/75	69-East	144	6/ ?/75	36-East	-	-	Sports Fisherman
	05-10900	10/08/74	29-West	132	6/19/75	18-East	-	0.04	Sports Fisherman
	09-30978	5/02/75	34-East	156	6/02/75	34-East	152	-	100-Ft Beach Seine
	09-28697	4/28/75	34-East	167	6/02/75	35-West	164	0.03	200-Ft Beach Seine
	09-05719	6/14/73	40-West	166	6/03/75	57-West	174	0.02	200-Ft Beach Seine
	29-21548	9/24/74	22-West	166	6/03/75	19-West	167	0.01	100-Ft Beach Seine
	09-34715	5/15/75	58-East	151	6/04/75	55-East	150	0.15	Stone and Webster
	09-35557	5/23/75	38-West	215	6/04/75	36-West	216	0.17	200-Ft Beach Seine
	09-42797	6/19/75	57-West	163	6/23/75	42-East	160	3.8	IP
	29-21326	10/07/74	39-East	176	6/ ?/75	39-East	-	-	Sports Fisherman
	29-16282	5/06/74	40-East	164	6/03/75	65-West	185	0.06	Roseton
	09-12982	10/30/73	39-East	172	6/10/75	65-West	175	0.04	Roseton
	05-18742	5/30/75	36-East	142	6/30/75	36-East	140	-	100-Ft Beach Seine
	05-20581	5/30/75	54-East	132	6/30/75	51-East	117	0.1	100-Ft Beach Seine

*Danskammer (D), Indian Point (IP), Lovett (L), and Bowline (B) represent impingement collections at these plants and are considered recovery gear.

**2nd recovery

Table A-102

Tagged Atlantic Tomcod Recoveries, December 1974-June 1975 (Page 1 of 3)

		Release			Recovery				
Recovery Period	Tag No.	Date	RM/Site	Total Length (mm)	Date	RM/Site	Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
December 1974	04-1050	12/16/74	51-East	151	12/19/74	51-East	145	-	Box Trap
	04-1091	12/16/74	51-East	172	12/19/74	51-East	169	-	Box Trap
	04-1116	12/16/74	51-East	157	12/18/74	51-East	152	-	Box Trap
	04-1117	12/16/74	51-East	175	12/20/74	51-East	174	-	Box Trap
	04-1245	12/16/74	51-East	163	12/27/74	51-East	163	-	Box Trap
	04-1348	12/17/74	51-East	170	12/19/74	51-East	174	-	Box Trap
	04-1472	12/18/74	51-East	156	12/20/74	51-East	161	-	Box Trap
	04-A507	12/26/74	41-East	194	12/31/74	41-East	190	-	Box Trap
	04-A518	12/26/74	41-East	147	12/31/74	41-East	146	-	Box Trap
	04-1644	12/19/74	41-East	126	12/23/74	41-East	129	-	Box Trap
	04-1647	12/19/74	41-East	135	12/23/74	41-East	135	-	Box Trap
	04-1686	12/19/74	56-West	162	12/20/74	56-West	161	-	Box Trap
	04-1750	12/18/74	56-West	162	12/23/74	56-West	168	-	Box Trap
	04-1763	12/17/74	41-East	145	12/19/74	41-East	145	-	Box Trap
	04-A774	12/26/74	41-East	166	12/30/74	41-East	159	-	Box Trap
	04-1777	12/17/74	41-East	136	12/23/74	41-East	137	-	Box Trap
	04-1878	12/18/74	51-East	141	12/27/74	51-East	143	-	Box Trap
	04-1885	12/18/74	51-East	157	12/19/74	51-East	158	-	Box Trap
	04-1924	12/16/74	51-East	137	12/26/74	46-West	-	0.50	Box Trap Sports Fisherman
	04-1925	12/17/74	51-East	155	12/19/74	51-East	157	-	Box Trap
	04-A949	12/23/74	56-West	138	12/26/74	56-West	138	-	Box Trap
	04-D517	12/26/74	56-West	137	12/27/74	56-West	142	-	Box Trap
	04-D650	12/26/74	56-West	191	12/27/74	56-West	197	-	Box Trap
	04-D654	12/26/74	56-West	183	12/27/74	56-West	188	-	Box Trap
	04-E139	12/20/74	51-East	137	12/26/74	51-East	134	-	Box Trap
	04-E238	12/20/74	56-West	133	12/27/74	66-West	128	1.4	D
	04-E340	12/20/74	56-West	140	12/26/74	56-West	137	-	Box Trap
	04-E391	12/23/74	56-West	150	12/31/74	56-West	150	-	Box Trap
	04-E479	12/23/74	56-West	133	12/26/74	56-West	132	-	Box Trap
	04-A575	12/26/74	41-East	146	12/27/74	50-West	-	9.0	Sports Fisherman
	04-E752	12/23/74	56-West	125	12/31/74	51-West	123	0.63	Box Trap
	04-1699	12/19/74	56-West	161	12/31/74	56-West	-	-	Box Trap
	04-1480	12/18/74	51-East	173	12/31/74	47-West	-	0.31	Sports Fisherman
	04-1473	12/18/74	51-East	140	12/31/74	47-West	-	0.31	Sports Fisherman
	04-F127	12/18/74	51-East	129	12/30/74	50-West	-	0.08	Sports Fisherman
	04-F354	12/19/74	51-East	135	12/29/74	42-West	-	0.90	Sports Fisherman
	04-E847	12/23/74	56-West	168	12/26/74	56-West	165	-	Box Trap
	04-F248	12/18/74	51-East	163	12/19/74	51-East	168	-	Box Trap
	04-F316	12/19/74	51-East	128	12/28/74	42-East	127	1.0	IP
	04-F735	12/19/74	51-East	150	12/29/74	42-East	143	0.90	IP
	04-F811	12/19/74	56-West	165	12/27/74	56-West	166	-	Box Trap
	04-F472	12/20/74	41-East	130	12/23/74	41-East	135	-	Box Trap
January 1975	04-15332	1/10/75	51-East	137	1/ ?/75	50-West	-	-	Sports Fisherman
	04-D600	12-26-74	56-West	132	1/02/75	37-West	126	2.7	B
	04-F187	12/19/74	51-East	158	1/02/75	56-West	161	0.36	Box Trap
	04-1038	12/31/74	41-East	148	1/02/75	41-East	148	-	Box Trap
	04-F635	12/19/74	51-East	154	1/02/75	47-West	-	0.29	Sports Fisherman
	04-F324	12/19/74	51-East	147	1/02/75	41-West	135	0.71	L
	04-E149	12/20/74	46-West	170	1/02/75	56-West	169	0.77	Box Trap
	04-F806	12/19/74	56-West	140	1/02/75	42-East	131	1.0	IP
	04-14384	1/02/75	56-West	174	1/03/75	56-West	174	-	Box TRap
	04-E941	12/23/74	56-West	155	1/03/75	56-West	155	-	Box Trap
	04-F531	12/19/74	51-East	149	1/03/75	51-East	153	-	Box Trap
	04-1303	12/17/74	51-East	143	1/03/75	42-East	143	0.53	IP
	04-14397	1/02/75	56-West	138	1/03/75	56-West	140	-	Box Trap
	04-E264	12/20/74	56-West	143	1/03/75	41-East	142	1.1	Box Trap
	04-E349	12/20/74	56-West	141	1/04/75	47-West	-	0.60	Sports Fisherman
	04-1180	12/16/74	51-East	153	1/05/75	42-East	153	0.45	IP
	04-14845	1/03/75	51-East	140	1/05/75	50-West	-	0.50	Sports Fisherman
	04-F706	12/19/74	51-East	135	1/05/75	50-West	-	0.06	Sports Fisherman
	04-D379	12/26/74	56-West	176	1/06/75	56-West	176	-	Box Trap
	04-E328	12/20/74	56-West	133	1/06/75	41-East	135	0.88	Box Trap
	04-790	12/27/74	51-East	139	1/06/75	50-West	-	0.10	Sports Fisherman
	04-14734	1/02/75	36-East	155	1/06/75	50-West	-	3.5	Sports Fisherman
	04-A587	12/26/74	41-East	192	1/06/75	41-East	190	-	Box Trap

*Danskammer (D), Indian Point (IP), Lovett (L), Bowline (B), and Roseton (R) represent impingement collections at these plants and are considered recovery gear.

Table A-102 (Page 2 of 3)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
January 1975	04-1651	12/19/74	56-West	168	1/07/75	56-West	165	-	Box Trap
	04-13585	1/06/75	41-East	128	1/07/75	41-East	-	-	Sports Fisherman
	04-14332	1/02/75	56-West	151	1/07/75	56-West	155	-	Box Trap
	04-13741	1/06/75	56-West	165	1/07/75	56-West	165	-	Box Trap
	04-F909	12/20/74	51-East	143	1/08/75	66-West	139	0.79	D
	04-F457	12/19/74	51-East	136	1/08/75	41-East	137	0.50	Box Trap
	04-14889	1/03/75	51-East	131	1/09/75	37-West	130	2.3	B
	04-E934	12/23/74	56-West	144	1/09/75	66-West	136	0.59	D
	04-E372	12/23/74	56-West	159	1/09/75	66-West	155	0.59	D
	04-14660	1/02/75	56-West	156	1/09/75	56-West	155	-	Box Trap
	04-14117	1/03/75	51-East	143	1/09/75	37-West	140	2.3	B
	04-E894	12/26/74	67-East	152	1/09/75	66-West	152	0.07	D
	04-13745	1/06/75	56-West	158	1/09/75	47-West	-	3.0	Sports Fisherman
	04-E235	12/20/74	56-West	138	1/09/75	66-West	131	0.5	D
	04-D638	12/26/74	56-West	160	1/09/75	66-West	158	0.71	D
	04-F183	12/19/74	51-East	162	1/09/75	66-West	163	0.71	D
	04-14402	1/02/75	56-West	129	1/10/75	51-West	130	0.63	Box Trap
	04-F839	12/19/74	56-West	178	1/10/75	66-West	174	0.45	D
	04-E898	12/26/74	67-East	145	1/10/75	66-West	140	0.07	D
	04-E892	12/26/74	67-East	148	1/10/75	66-West	145	0.07	D
	04-0688	12/26/74	56-West	139	1/11/75	42-East	134	0.88	IP
	04-E765	12/27/74	67-East	154	1/11/75	66-West	150	0.07	D
	04-E758	12/26/74	67-East	150	1/11/75	66-West	148	0.06	D
	04-D974	12/26/74	56-West	138	1/11/75	66-West	139	0.63	D
	04-F824	12/19/74	56-West	209	1/12/75	66-West	195	0.42	D
	04-D954	12/26/74	56-West	136	1/13/75	66-West	135	0.56	D
	04-14872	1/03/75	51-East	144	1/13/75	42-East	144	0.90	IP
	04-D665	12/26/74	56-West	151	1/13/75	66-West	148	0.56	D
	04-E873	12/23/74	75-East	173	1/13/75	66-West	165	0.43	D
	04-15899	1/09/75	56-West	185	1/13/75	56-West	181	-	Box Trap
	04-F632	12/19/74	51-East	145	1/13/75	42-East	145	0.36	IP
	04-15543	1/09/75	67-East	129	1/14/75	66-West	125	0.20	D
	04-16776	1/10/75	51-East	152	1/14/75	51-East	154	-	Box Trap
	04-14068	12/31/74	51-East	179	1/15/75	50-West	-	-	Sports Fisherman
	04-0997	12/26/74	46-West	137	1/15/75	41-West	135	0.25	L
	04-14106	1/15/75	41-East	148	1/15/75	41-East	152	0	Box Trap
	04-1971	12/16/74	51-East	172	1/15/75	66-West	164	0.50	D
	04-D569	12/26/74	56-West	159	1/15/75	50-West	-	0.30	Sports Fisherman
	04-2182	1/15/75	51-East	154	1/16/75	51-East	151	-	Box Trap
	04-F209	12/18/74	51-East	144	1/16/75	42-East	142	0.31	IP
	04-16897	1/15/75	51-East	132	1/16/75	51-East	128	-	Box Trap
	04-13780	1/06/75	56-West	171	1/16/75	51-East	165	0.50	Box Trap
	04-2792	1/16/75	76-East	142	1/17/75	76-East	142	-	Box Trap
	04-2725	1/17/75	51-East	131	1/17/75	51-East	126	0	Box Trap
	04-1838	12/18/74	51-East	140	1/18/75	50-West	-	0.03	Sports Fisherman
	04-1420	12/17/74	51-East	173	1/18/75	66-West	-	0.47	D
	04-13843	1/07/75	51-East	131	1/19/75	42-East	125	0.75	IP
	04-02761	1/17/75	51-East	130	1/20/75	51-East	130	-	Box Trap
	04-15973	1/10/75	56-West	150	1/21/75	51-East	155	0.45	Box Trap
	04-D933	12/26/74	56-West	169	1/22/75	66-West	170	0.37	D
	04-14205	1/03/75	51-East	131	1/22/75	37-West	130	0.74	B
	04-15979	1/10/75	56-West	149	1/23/75	41-West	144	1.2	L
	04-03403	1/22/74	51-East	141	1/23/75	51-East	137	-	Box Trap
	04-03209	1/17/75	51-East	150	1/23/75	51-East	146	-	Box Trap
	04-3509	1/24/75	51-East	136	1/27/75	42-East	136	3.0	IP
	04-16752	1/10/75	51-East	136	1/27/75	42-East	133	0.53	IP
	04-16457	1/10/75	51-East	136	1/27/75	37-West	135	0.82	B
	04-15285	1/09/75	51-East	151	1/27/75	42-East	149	0.50	IP
	04-15765	1/09/75	56-West	151	1/27/75	42-East	147	0.78	IP
	04-3951	1/24/75	51-East	134	1/28/75	51-East	135	-	Box Trap
	04-2438	1/16/75	51-East	155	1/30/75	66-West	153	1.1	D
	04-3032	1/17/75	51-East	126	1/31/75	37-West	122	1.0	B
	04-13772	1/06/75	56-East	129	1/31/75	37-West	124	0.76	B

*Danskammer (D), Indian Point (IP), Lovett (L), Bowline (B), and Roseton (R) represent impingement collections at these plants and are considered recovery gear.

Table A-102 (Page 3 of 3)

Recovery Period	Tag No.	Release Date	Release RM/Site	Release Total Length (mm)	Recovery Date	Recovery RM/Site	Recovery Total Length (mm)	Velocity (Mi/Day)	Recovery Gear*
February 1975	04-16086	1/17/75	41-West	140	2/01/75	42-East	138	0.07	IP
	04-15744	1/09/75	56-West	140	2/03/75	51-East	137	0.20	Box Trap
	04-3671	1/30/75	51-East	160	2/03/75	51-East	160	-	Box Trap
	04-2460	1/16/75	51-East	157	2/04/75	51-East	160	-	Box Trap
	04-3445	1/23/75	51-East	156	2/08/75	42-East	153	0.56	IP
	04-2032	1/15/75	51-East	166	2/10/75	42-East	162	0.35	IP
	04-3588	2/03/75	51-East	137	2/11/75	42-East	132	1.1	IP
	04-16666	1/17/75	51-West	150	2/11/75	42-East	143	0.36	IP
	04-2359	1/20/75	51-East	174	2/17/75	42-East	166	0.32	IP
	04-3099	2/17/75	41-East	171	2/18/75	42-East	166	1.0	IP
	04-3563	1/30/75	56-West	145	2/26/75	42-East	141	0.52	IP
	04-3500	1/24/75	51-East	131	2/06/75	37-West	126	1.08	B
	04-3982	1/22/75	51-East	126	2/06/75	37-West	121	0.93	B
	04-14885	1/03/75	51-East	140	2/07/75	37-West	135	0.4	QLM
	04-A788	12/27/74	41-East	159	2/18/75	51-West	-	0.19	Sports Fisherman
March 1975	04-14017	12/21/74	51-East	233	3/ ?/75	36-East	-	-	Sports Fisherman
April 1975	04-16303	1/13/75	56-West	158	4/18/75	2-West	-	0.57	Sports Fisherman
	04-3734	1/20/75	51-East	165	4/20/75	18-West	-	0.36	Sports Fisherman
May 1975	04-3120	1/17/75	51-East	172	5/01/75	12-West	-	0.38	Sports Fisherman
	04-14538	1/02/75	56-West	174	5/12/75	2-West	-	0.42	Sports Fisherman
	04-F219	12/18/74	51-East	210	5/18/75	15-West	-	0.24	Sports Fisherman
	04-13802	1/07/75	51-East	170	5/07/75	Brooklyn	-	-	Sports Fisherman
	04-F534	12/19/74	51-East	139	5/19/75	14-West	-	0.25	Sports Fisherman
June 1975	04-D362	12/26/74	56-West	177	6/21/75	18-West	-	0.21	Sports Fisherman
July 1975	04-15356	1/10/75	51-East	162	7/21/75	Huckleberry Island	-	-	Sports Fisherman

*Danskammer (D), Indian Point (IP), Lovett (L), Bowline (B), and Roseton (R) represent impingement collections at these plants and are considered recovery gear.

B. HISTOGRAMS

The histograms presented in Figures A-1 through A-47 illustrate the regional abundance of the selected species by life stage and are based on standing crop, density, or CPUE values given in Tables A-3 through A-84. The histograms present only those time periods during which a given life stage was collected. The one standard error around the standing crop, density, or CPUE estimates has been omitted on the histograms but does appear in the tables elsewhere in this appendix. The absence of an NC (no catch), an NS (no sample), or a bar in any region indicates that the value for that standing crop, density, or CPUE estimate is very small. The ordinate axis labels give the range of abundance values before plotting, e.g., a label of "Catch per Unit Effort * 10^{-1}" indicates that the actual abundance values have been multiplied by 0.1 and then plotted. For the exact numbers of all abundance estimates, refer to the appropriate tables in this appendix.

The 1974 abundance data for striped bass, white perch, and Atlantic tomcod represent only the end of the 1974 sampling period, October-December. Data from the earlier portion of the year appear in a previous report (TI, 1975a). The 1974 abundance data for American shad represent the entire 1974 sampling period, April-December. The abundance data for the 1974 year class in early 1975 for all four species represent the early portion of the 1975 sampling period, late March-June.

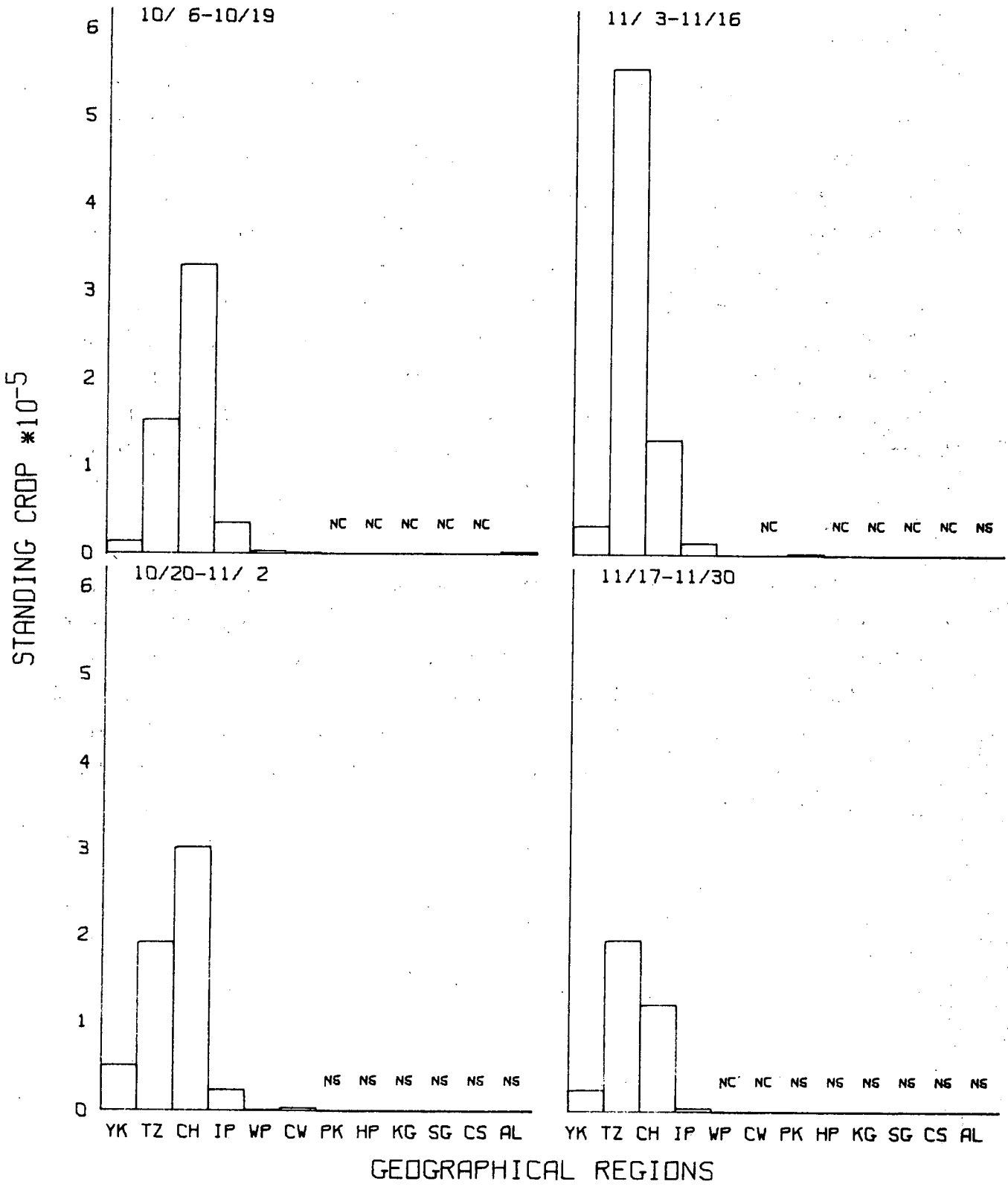


Figure A-1. Juvenile Striped Bass Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-48) (Page 1 of 2)

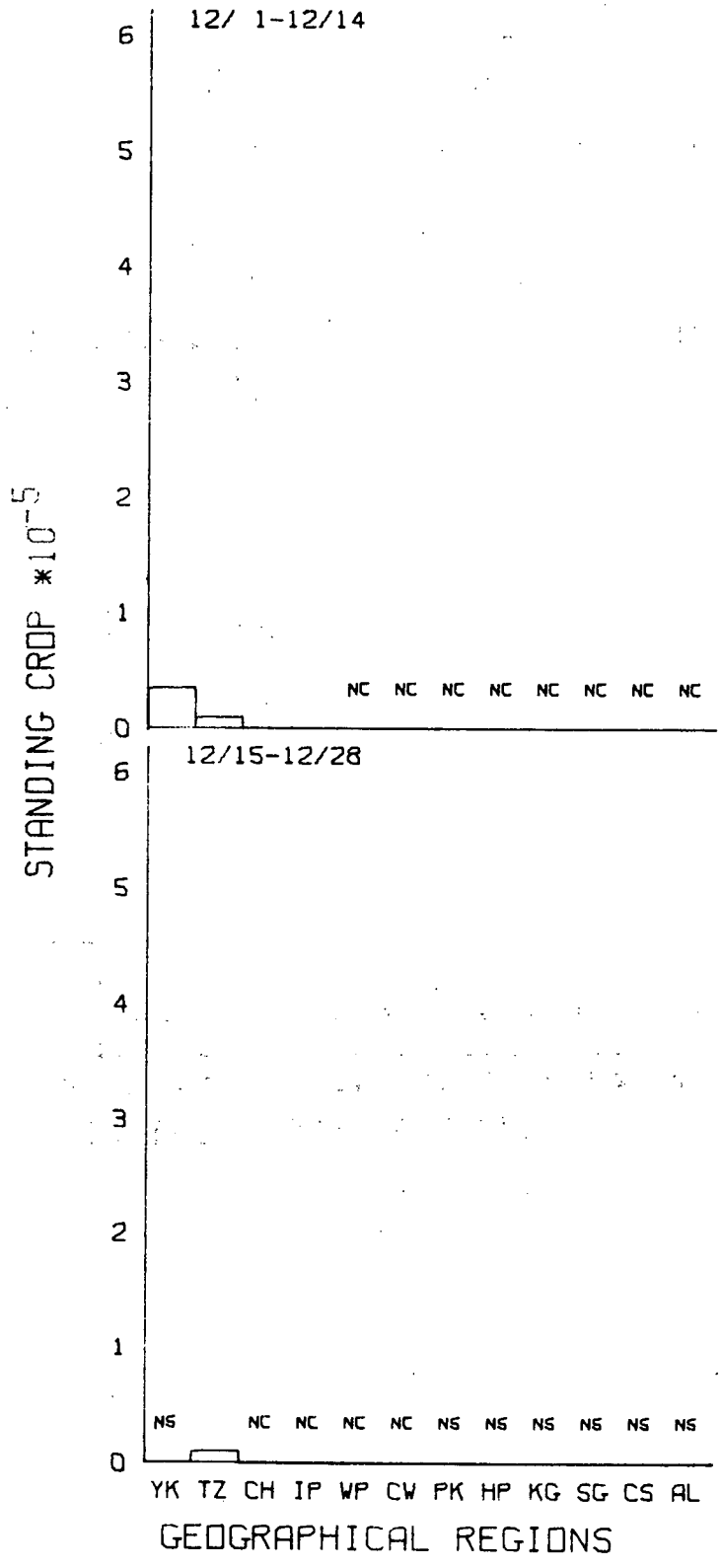


Figure A-1. (Page 2 of 2)

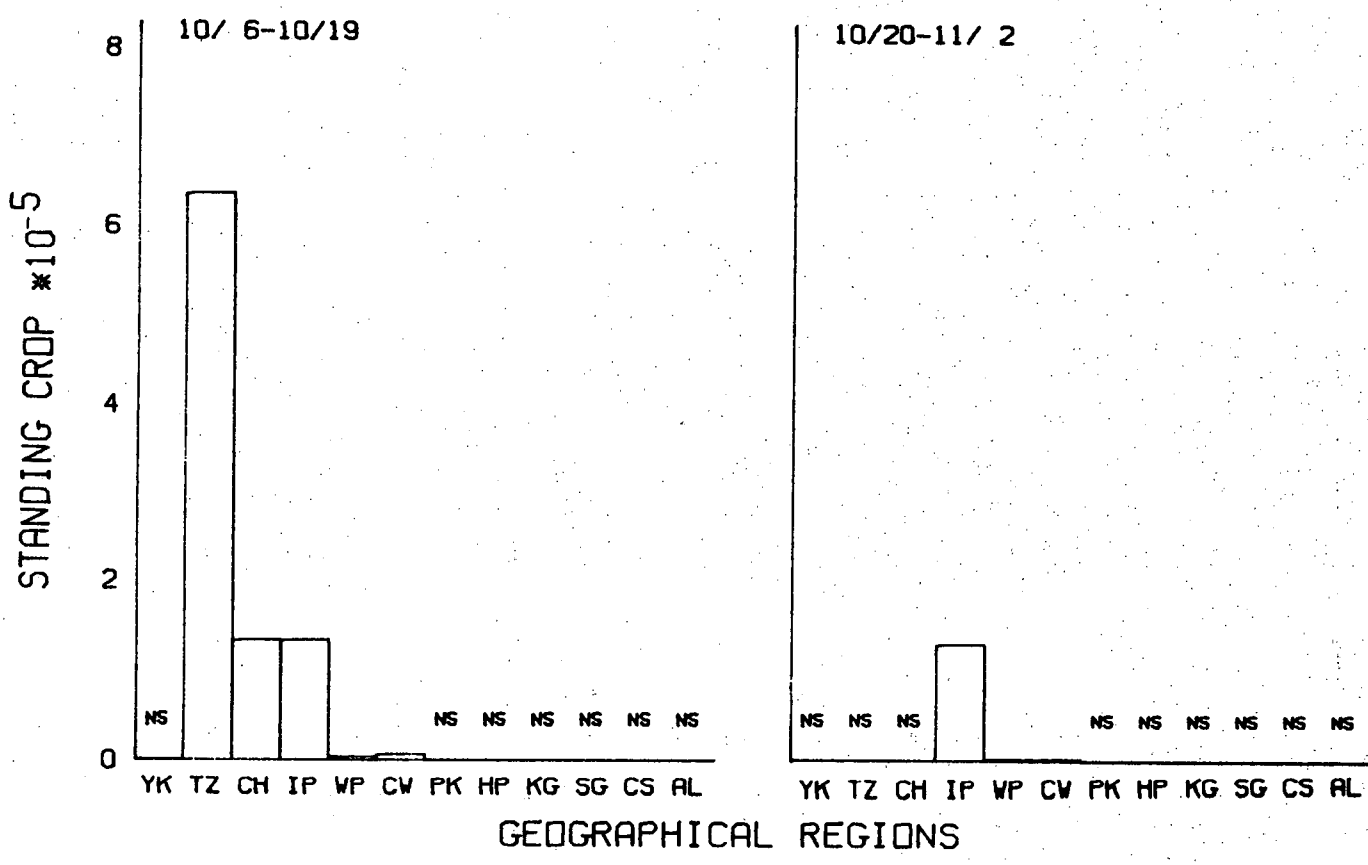


Figure A-2. Juvenile Striped Bass Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-49) (Page 1 of 2)

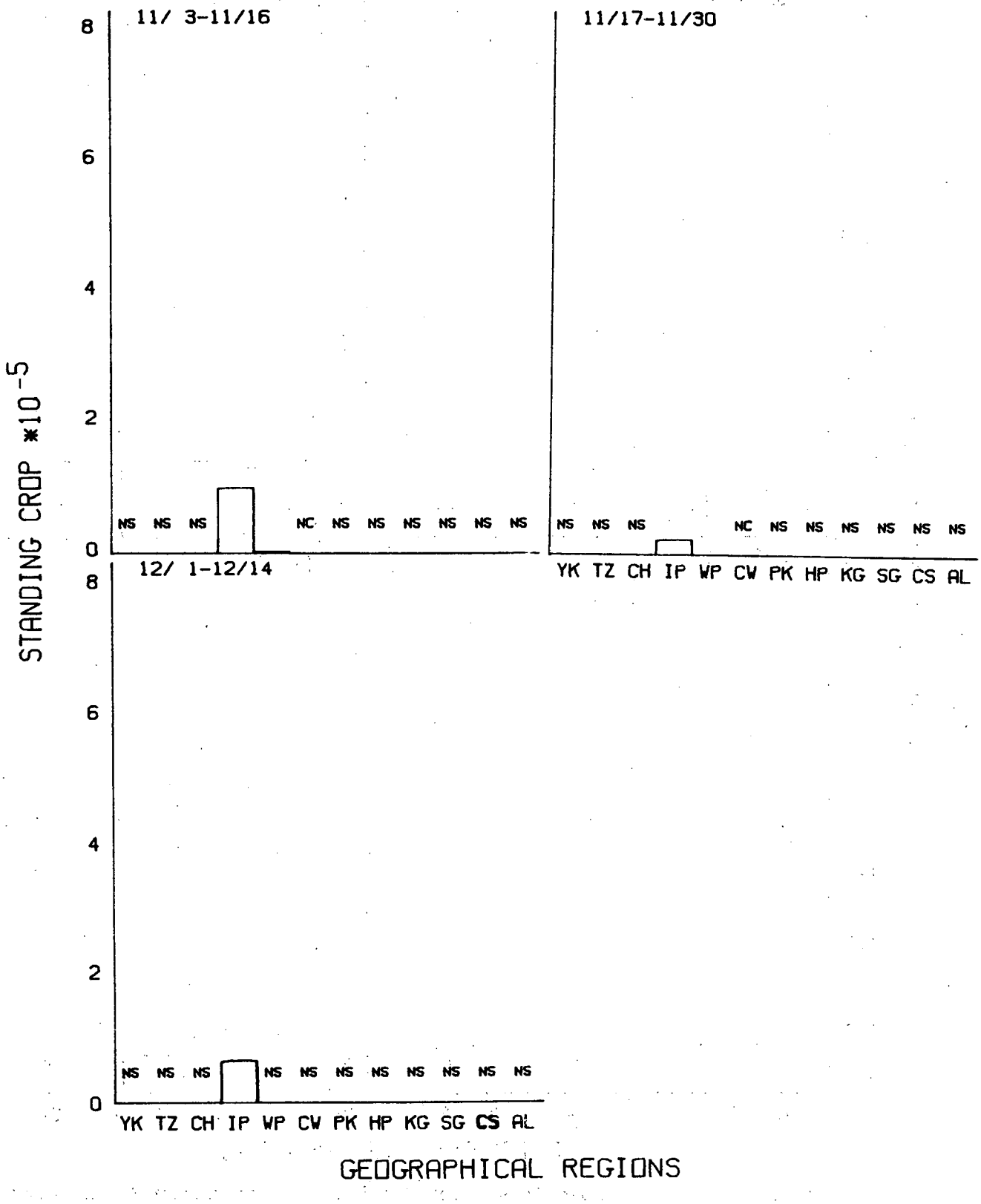


Figure A-2. (Page 2 of 2)

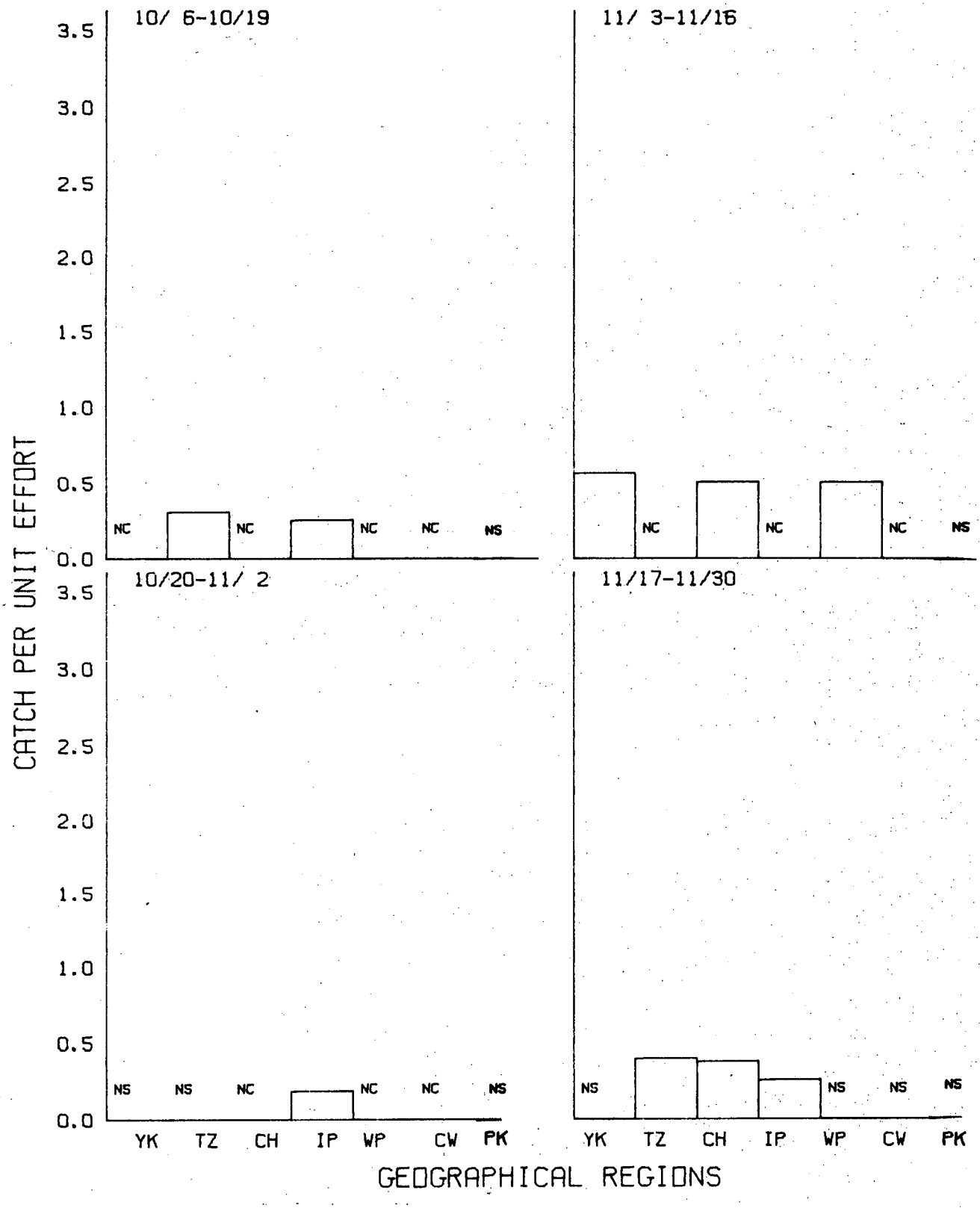


Figure A-3. Juvenile Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-6) (Page 1 of 2)

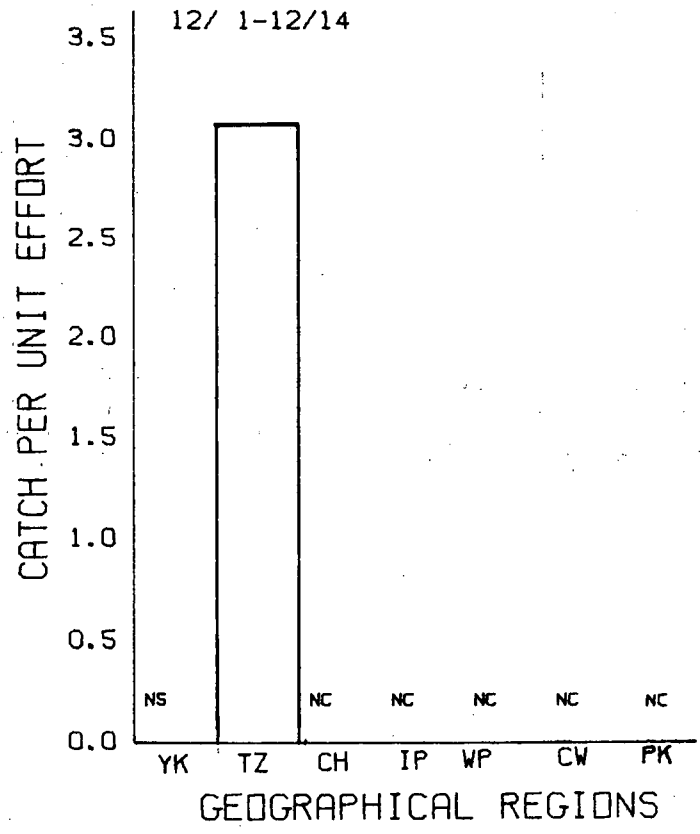


Figure A-3. (Page 2 of 2)

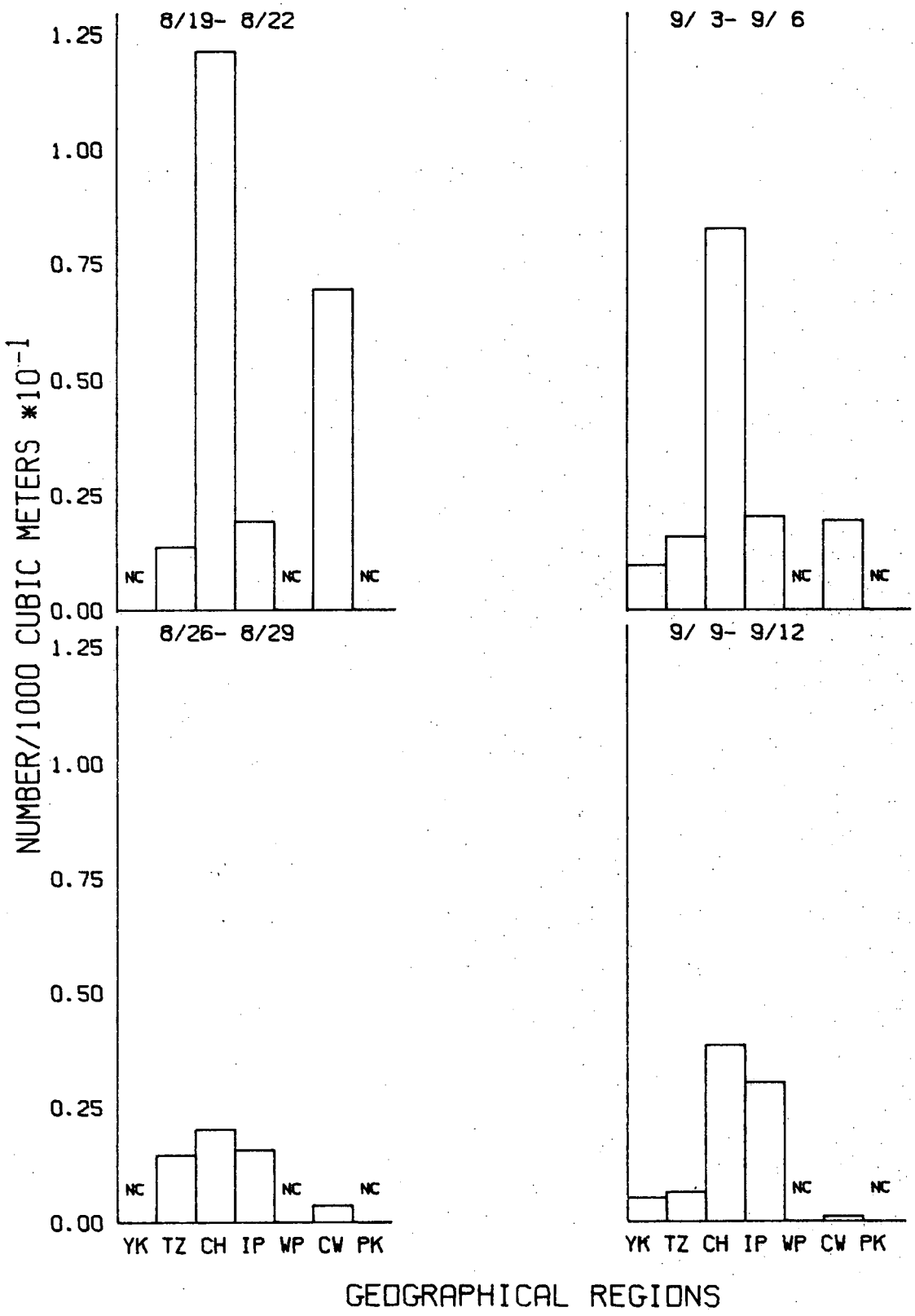


Figure A-4. Juvenile Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-3) (Page 1 of 5)

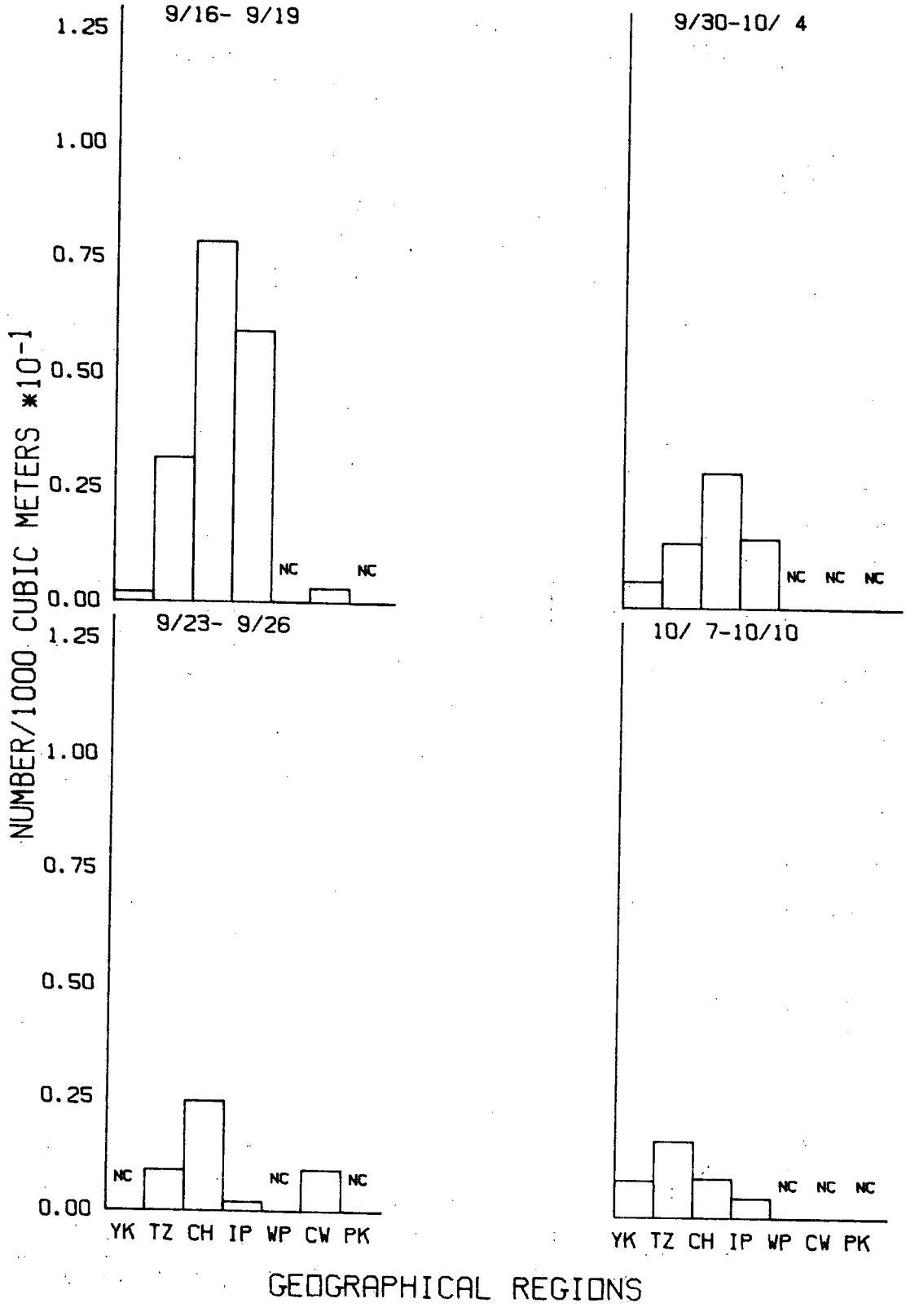


Figure A-4. (Page 2 of 5)

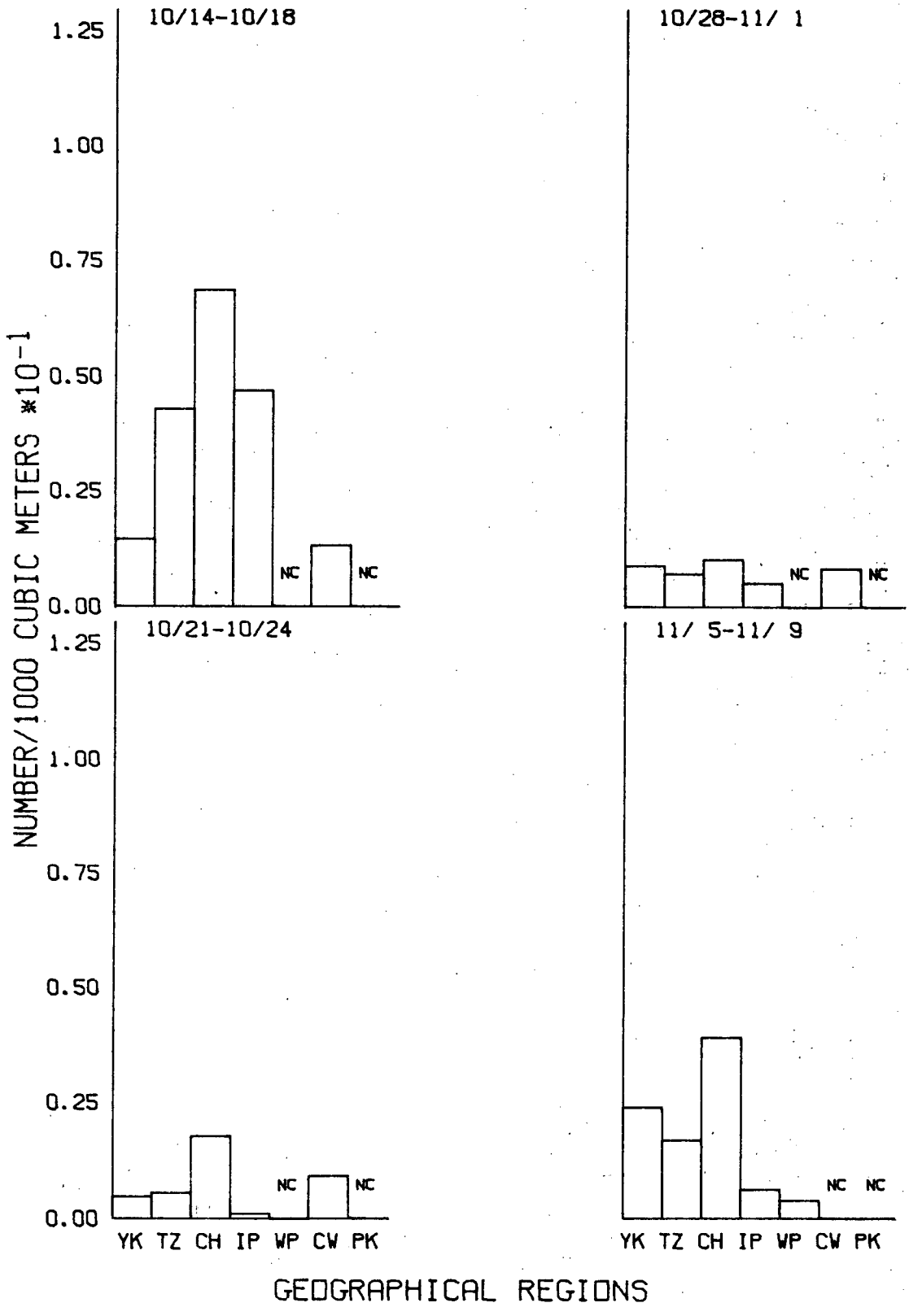


Figure A-4. (Page 3 of 5)

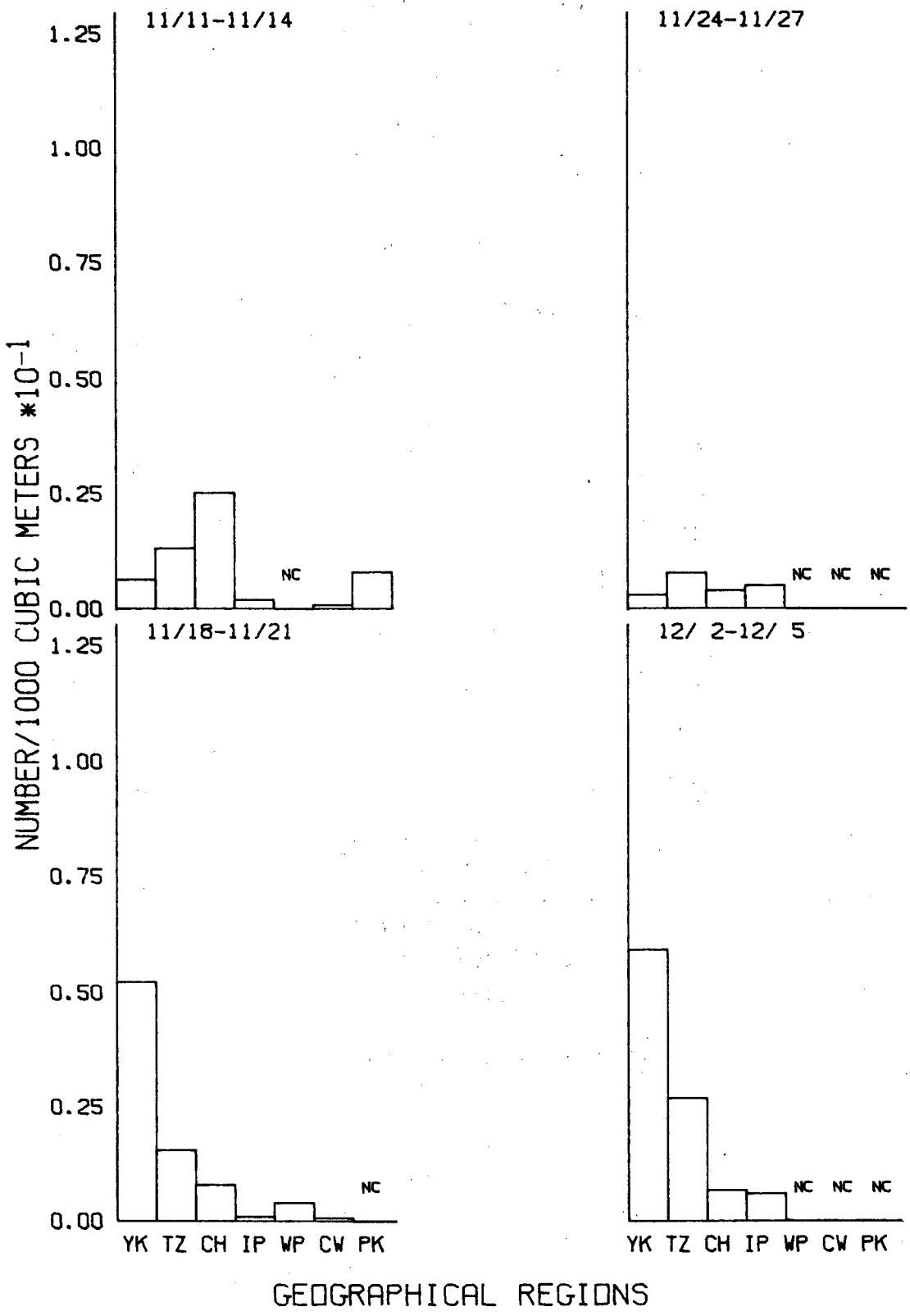


Figure A-4. (Page 4 of 5)

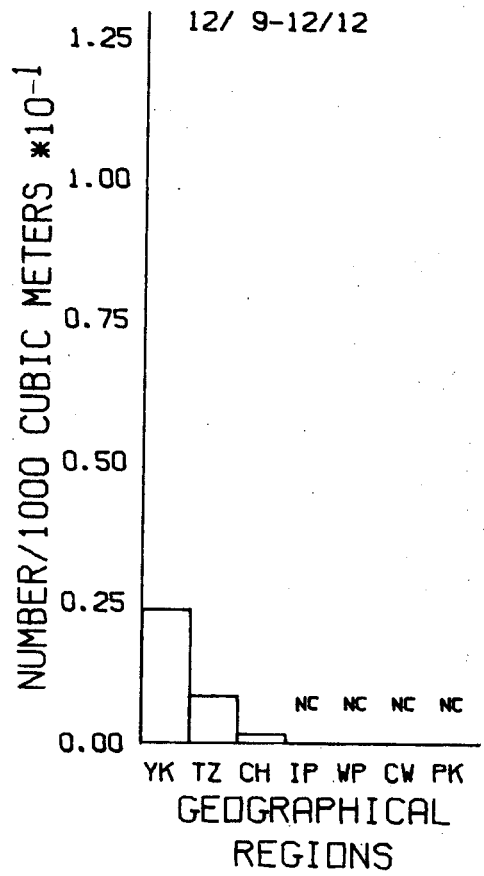


Figure A-4. (Page 5 of 5)

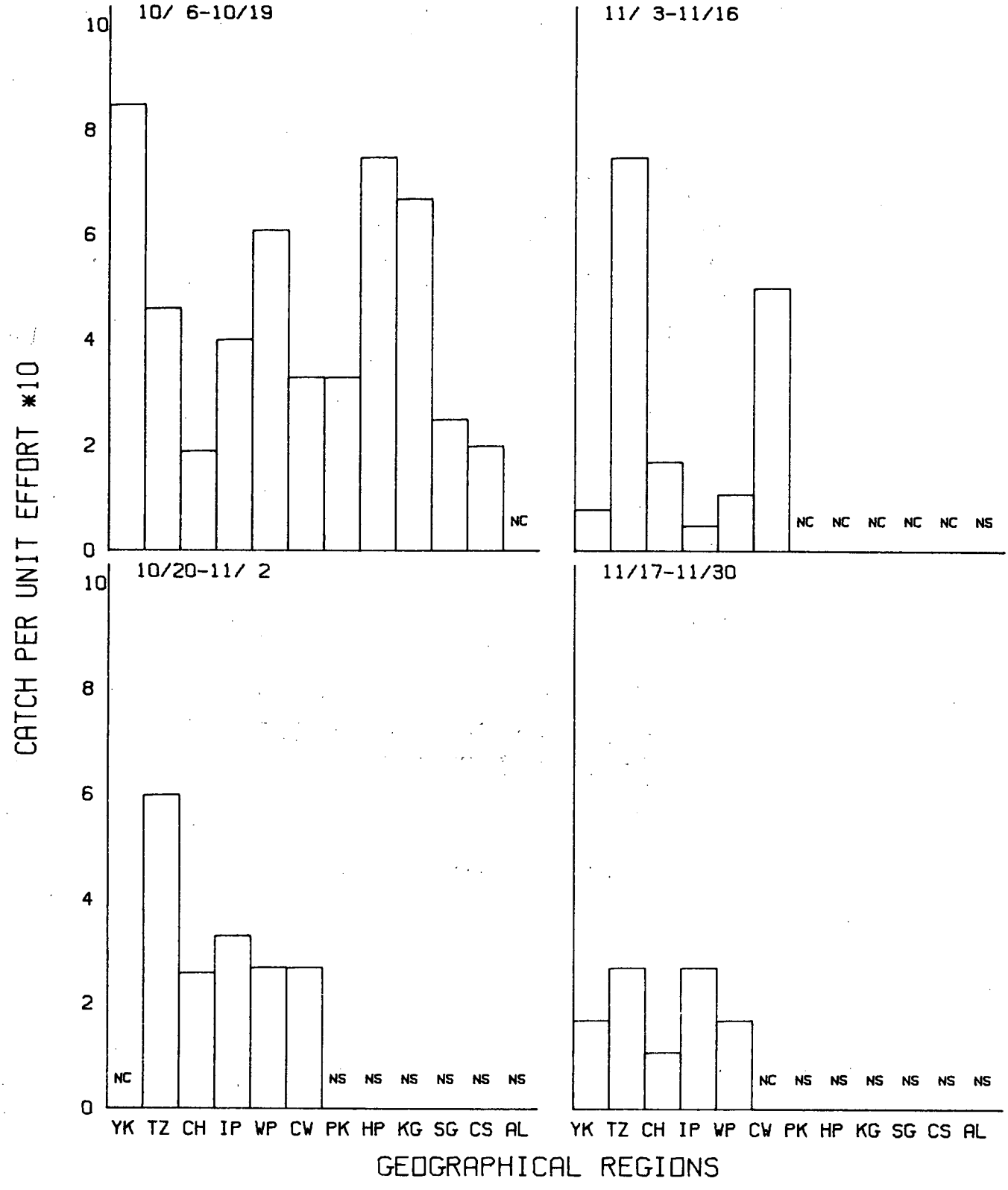


Figure A-5. Yearling Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-8) (Page 1 of 2)

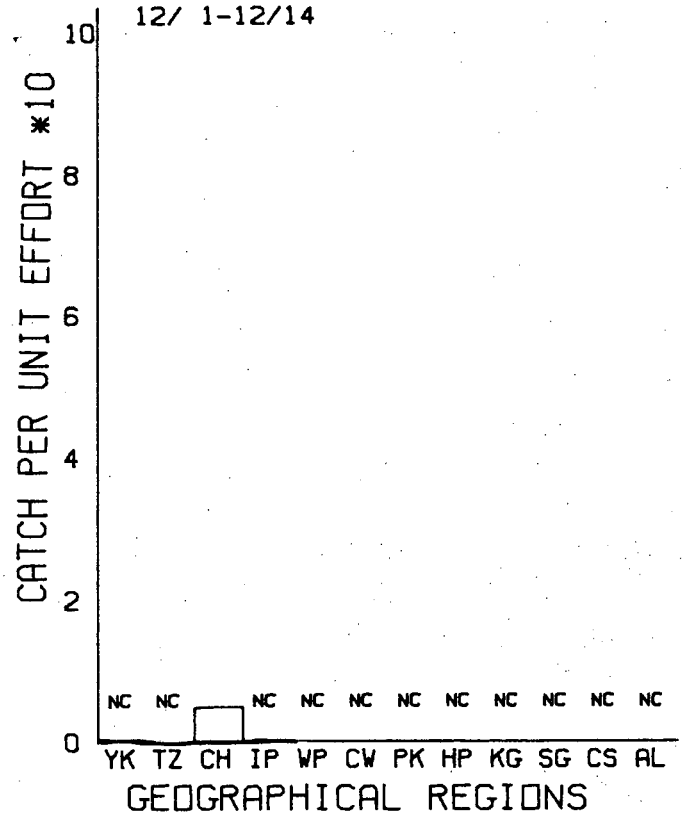


Figure A-5. (Page 2 of 2)

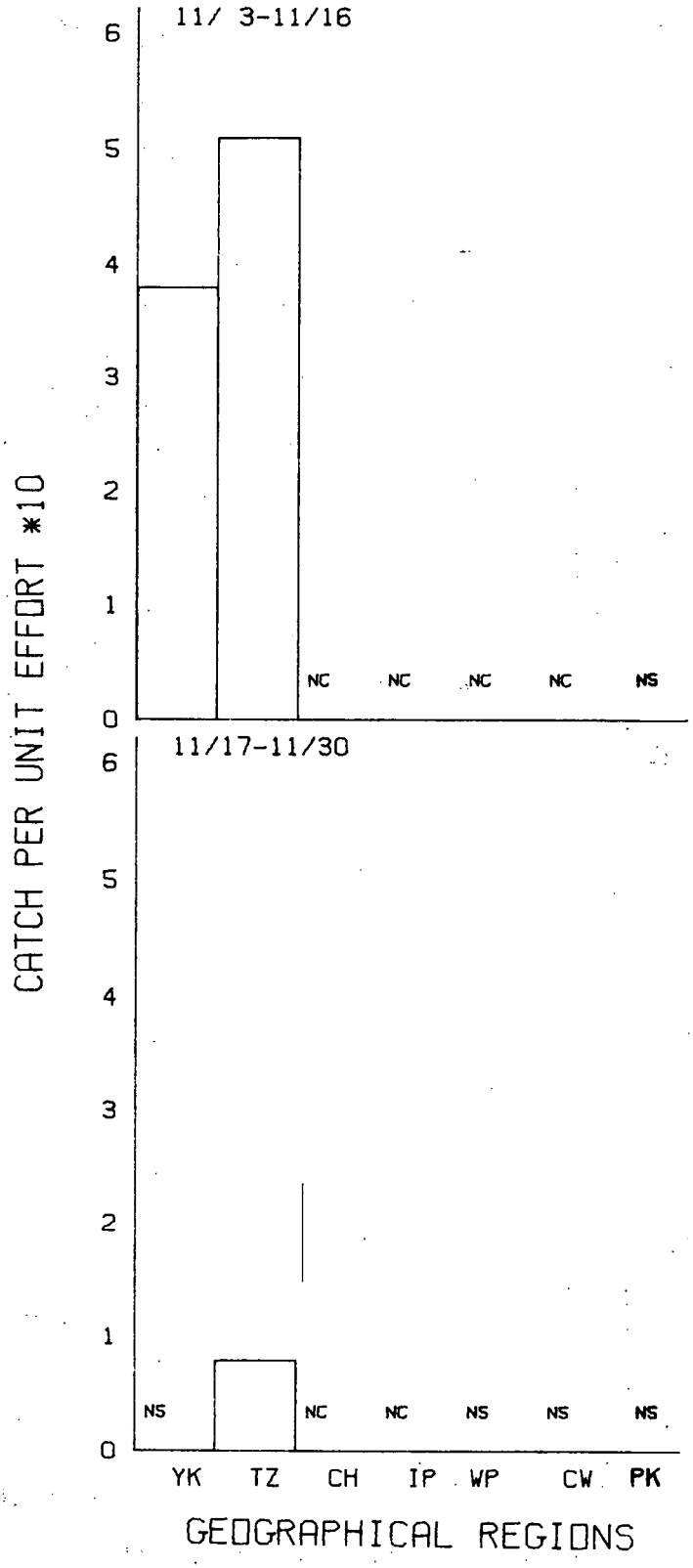


Figure A-6. Yearling Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), November 1974. (Histograms based on data in Table A-10)

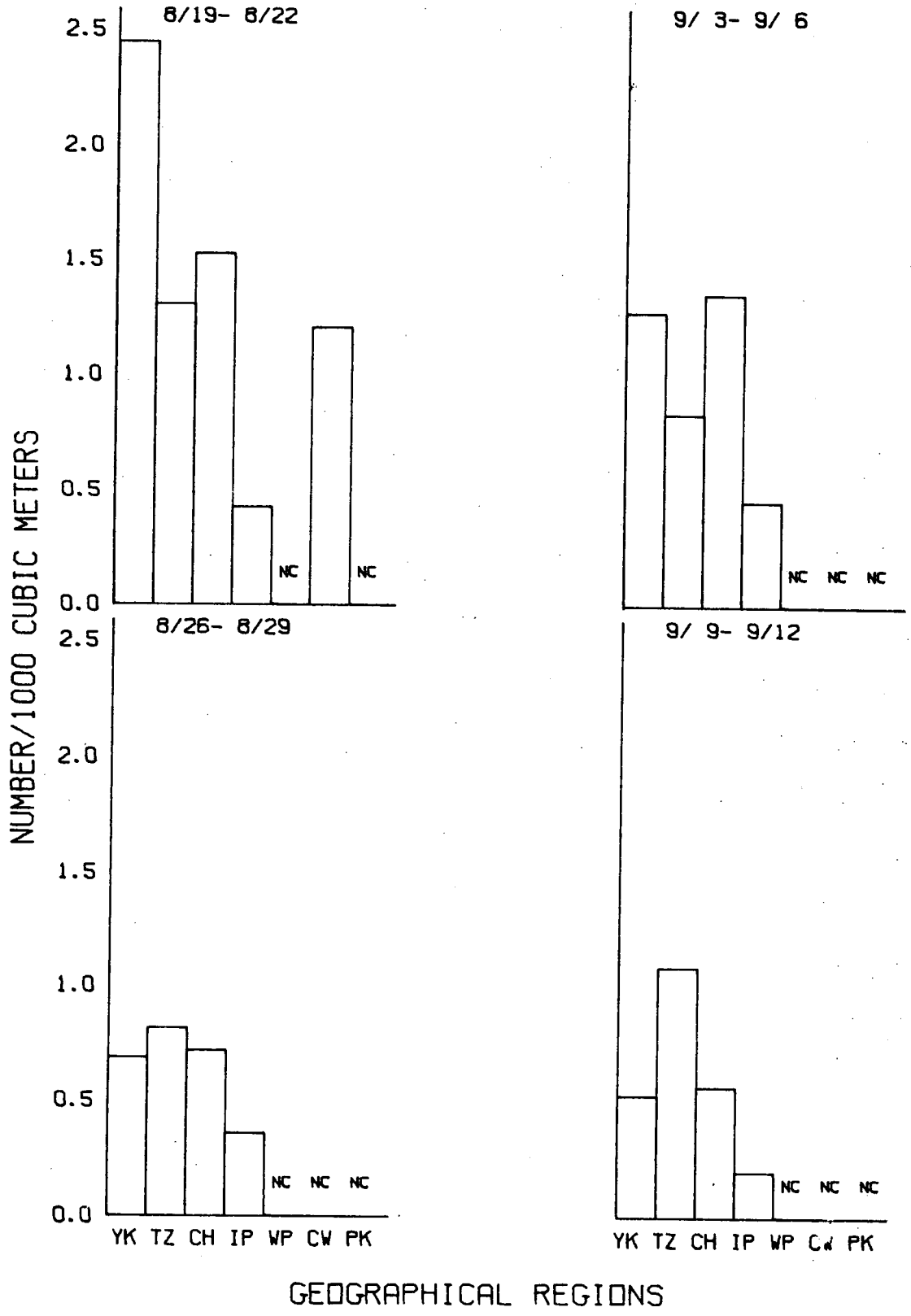
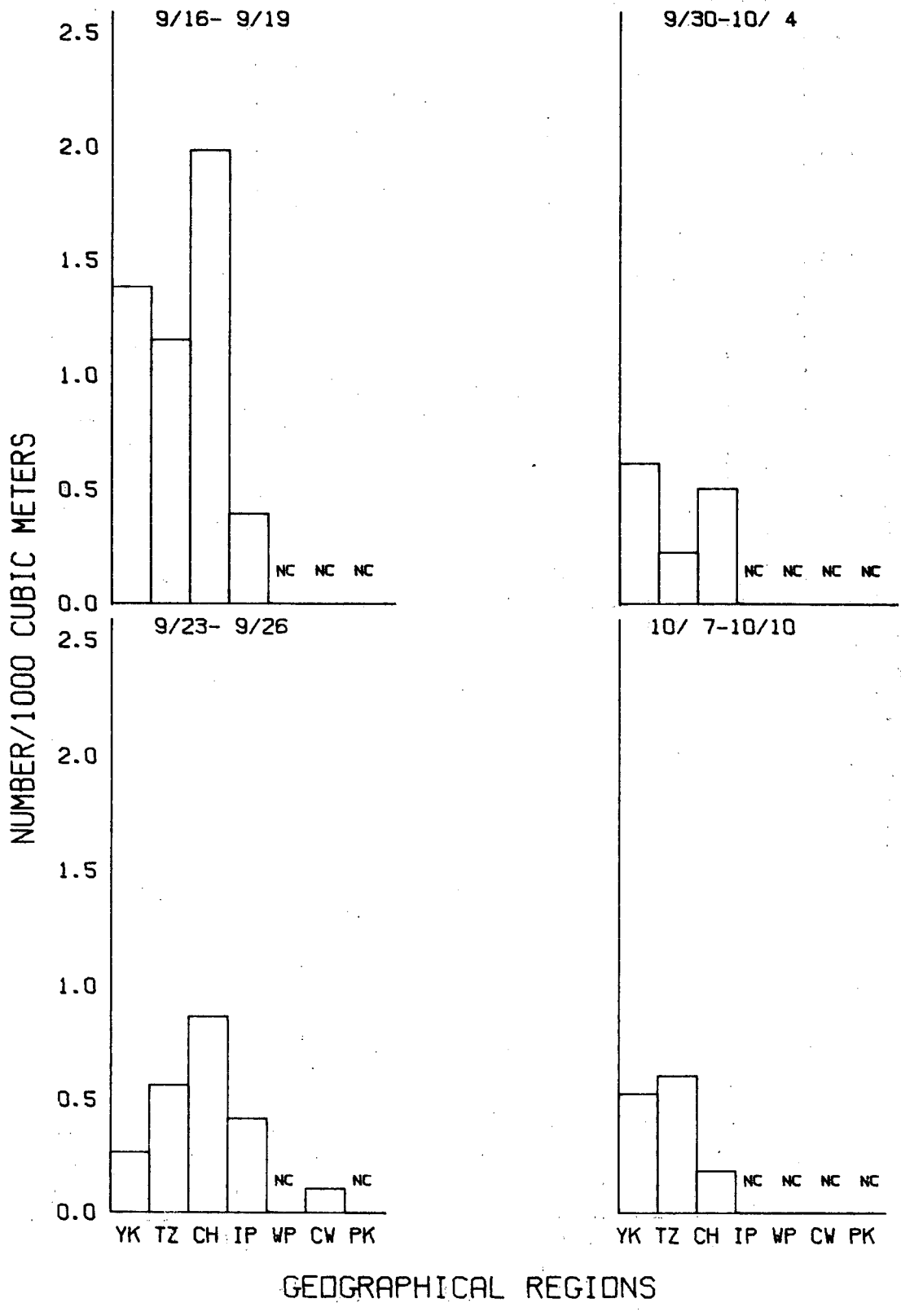


Figure A-7. Yearling Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-7) (Page 1 of 5)



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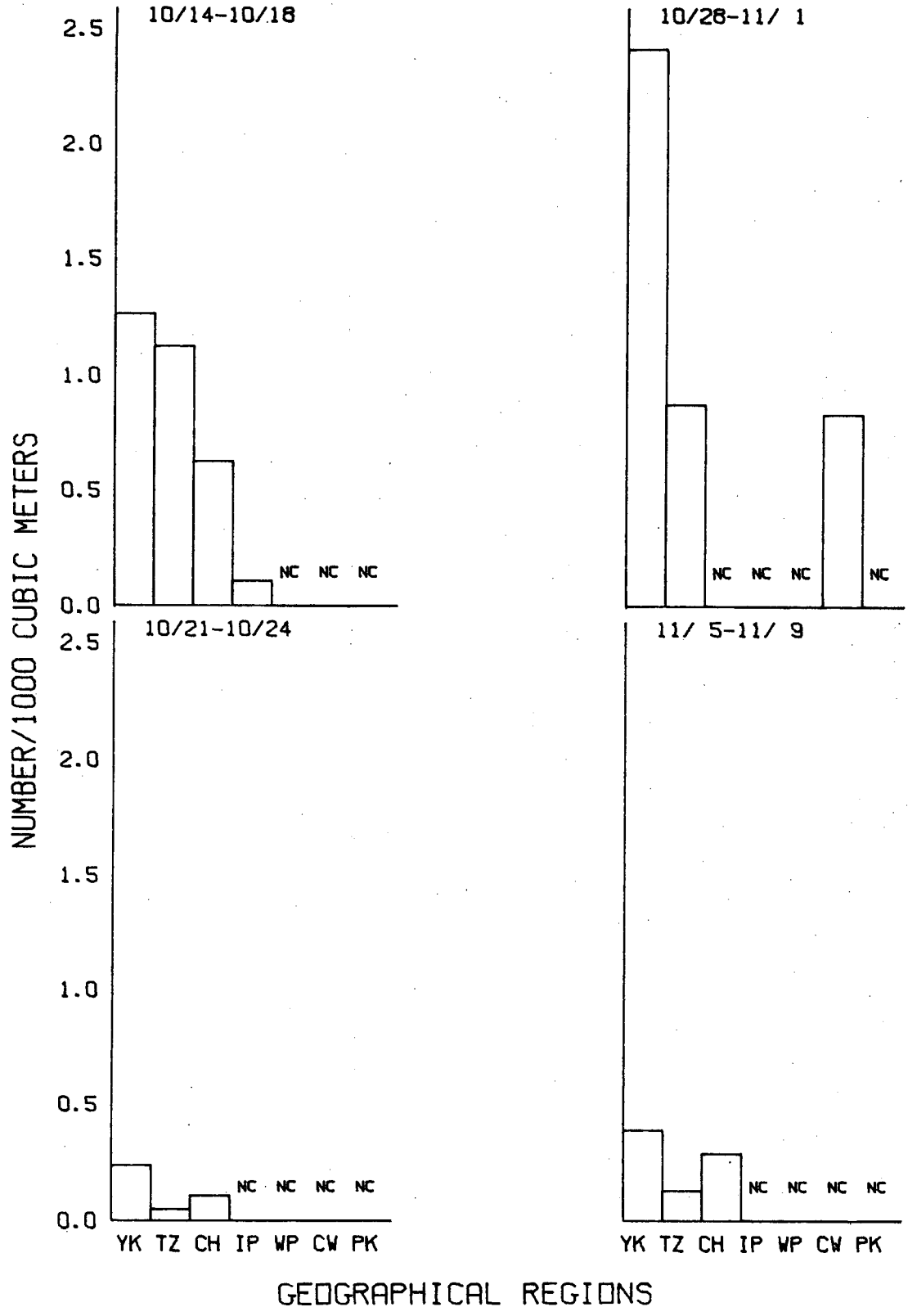

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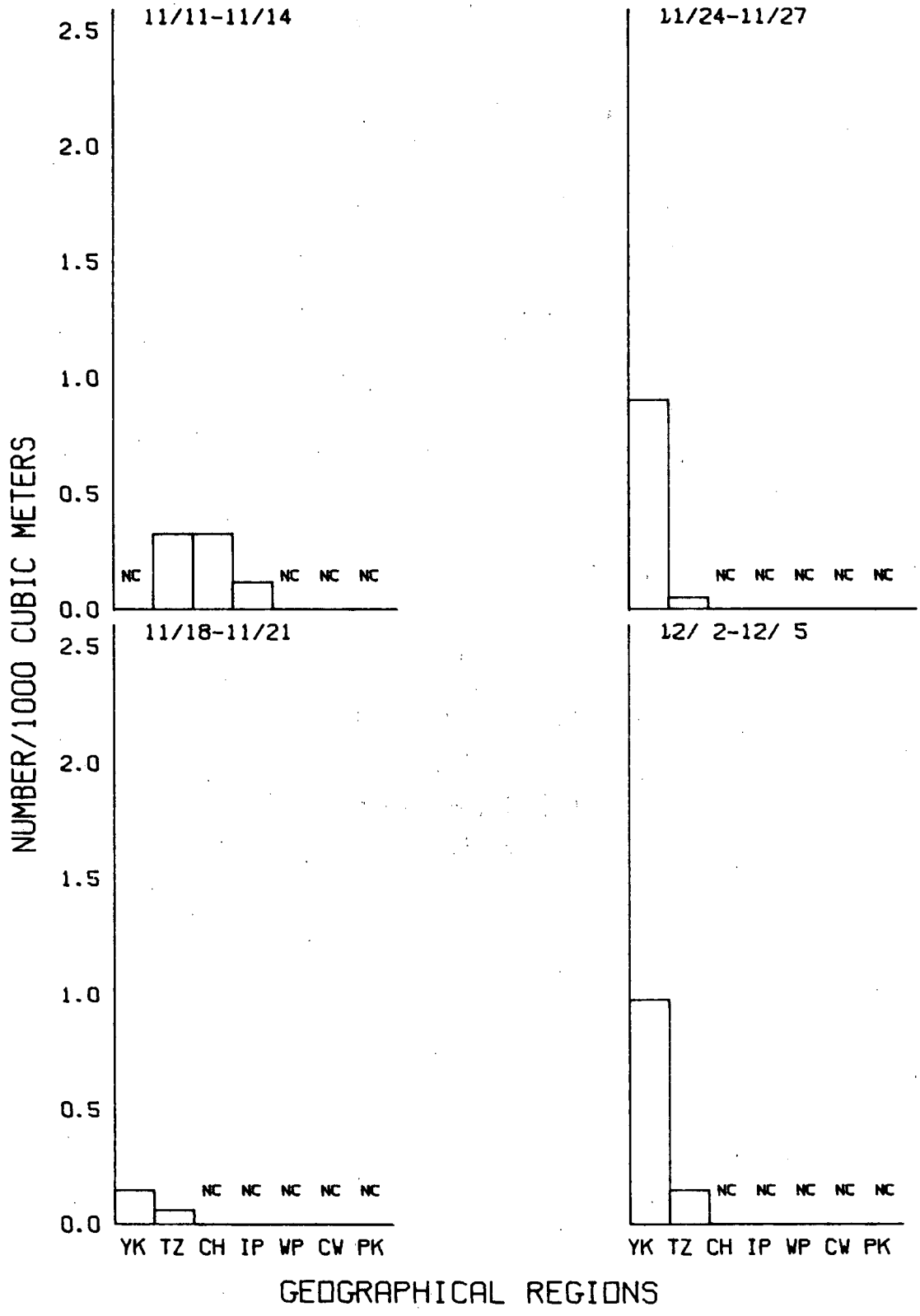

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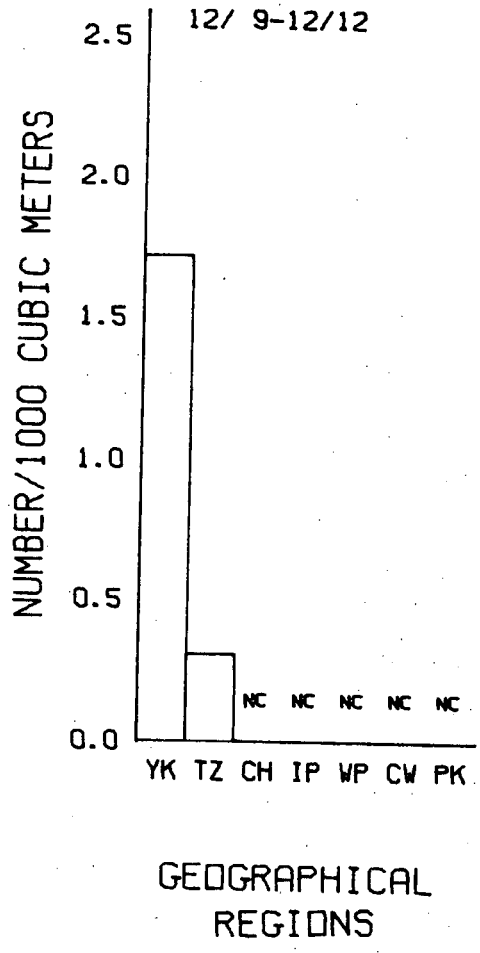

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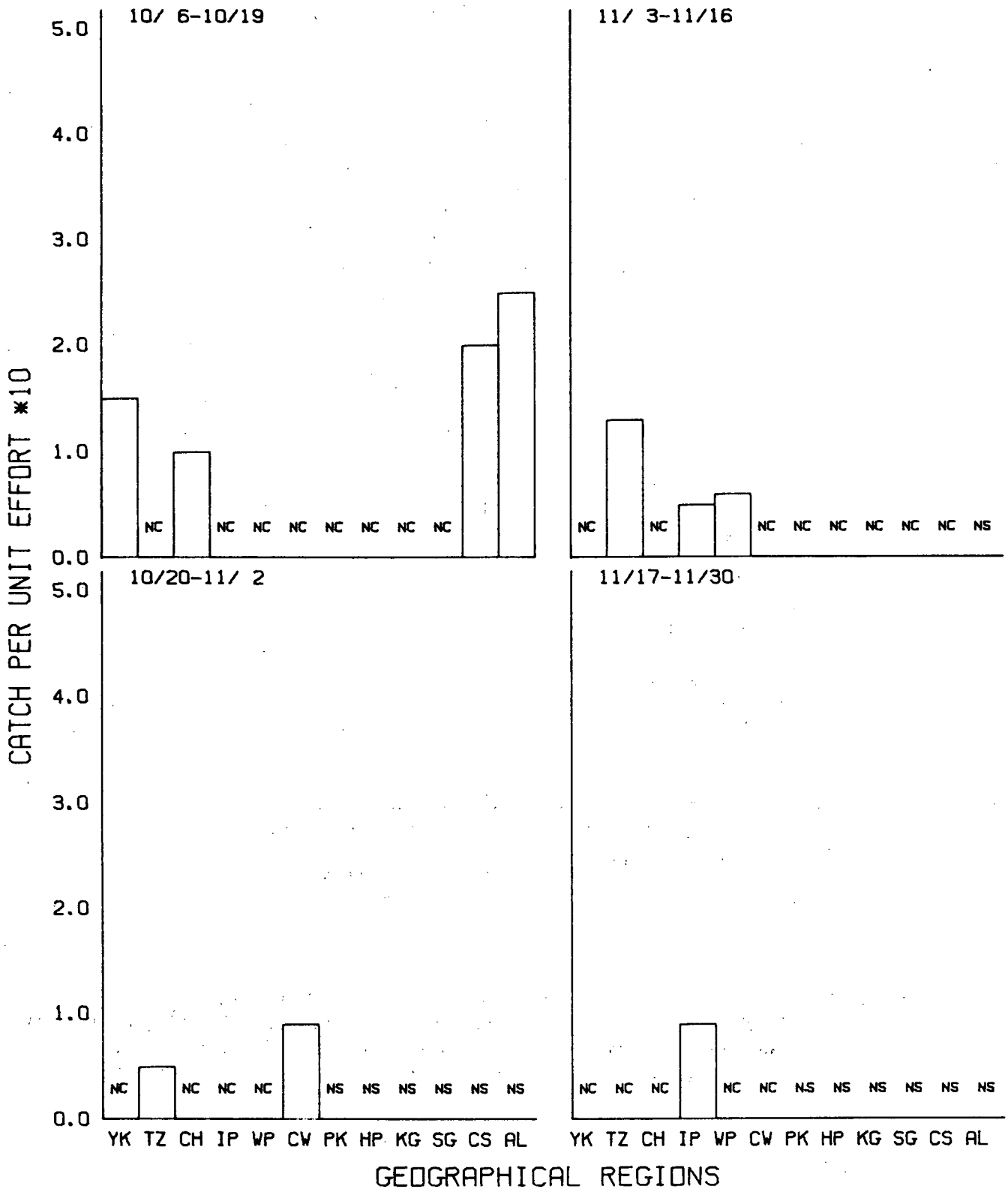


Figure A-8. Age II and Older Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974. (Histograms based on data in Table A-12)

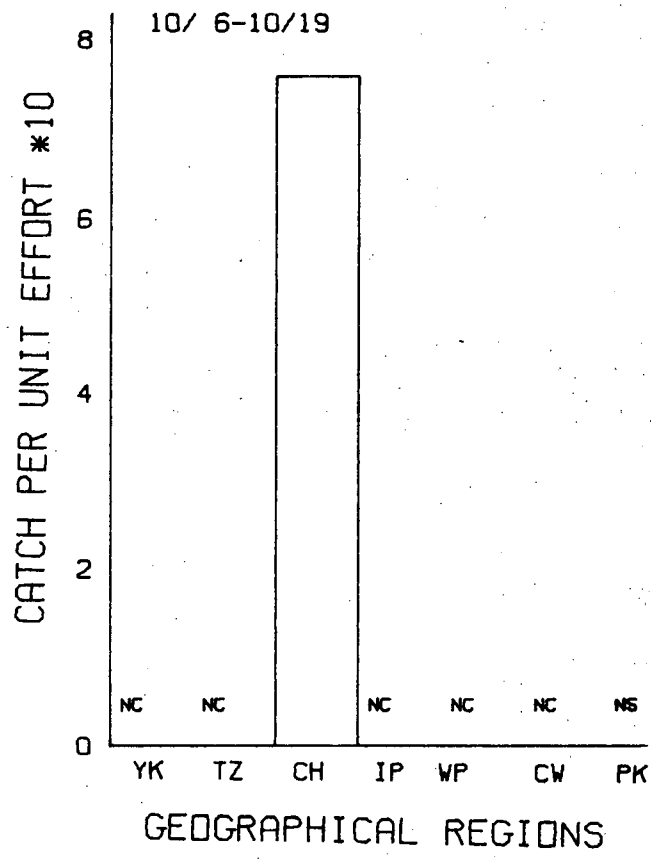


Figure A-9. Age II and Older Striped Bass Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October 1974. (Histograms based on data in Table A-14)

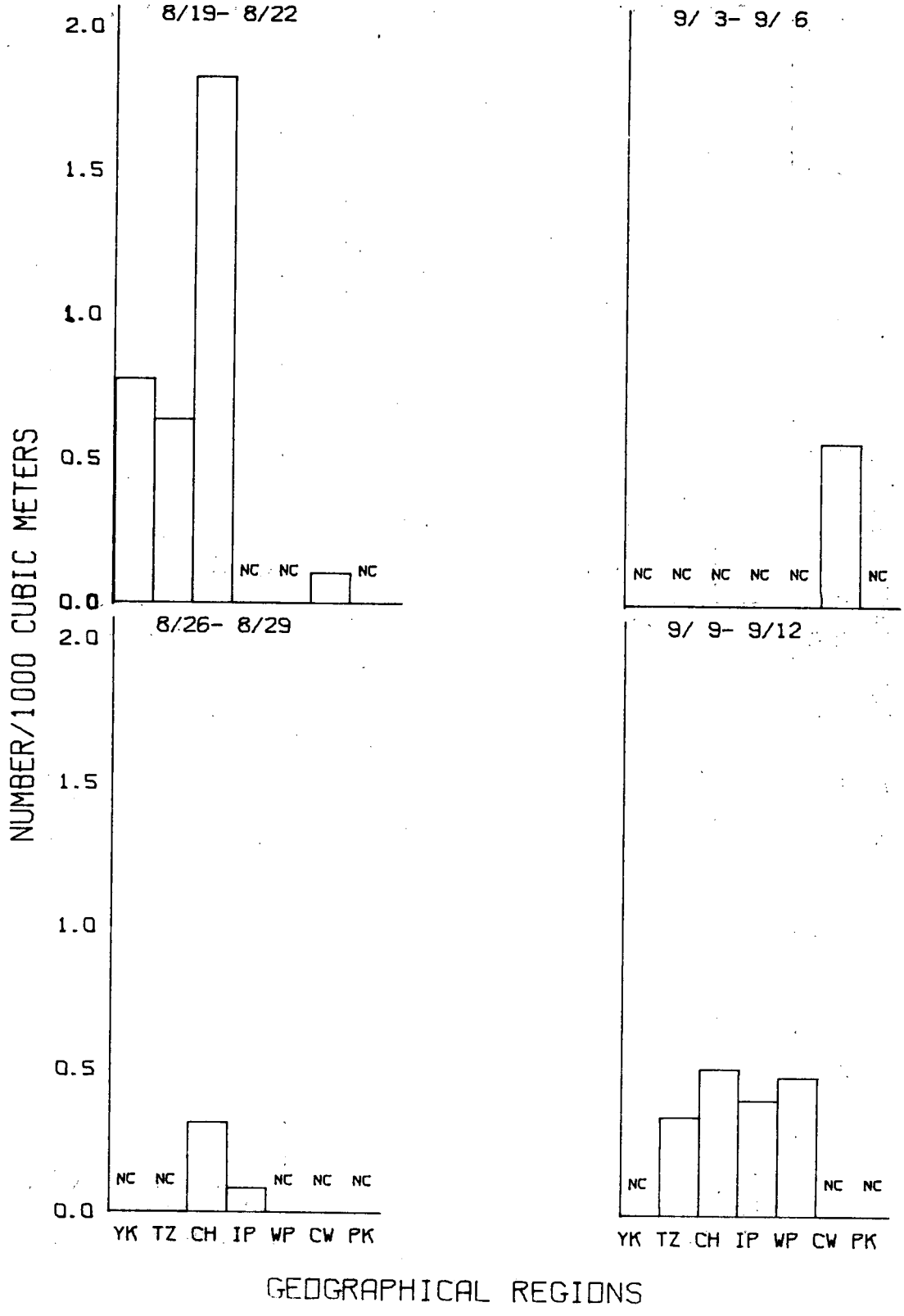
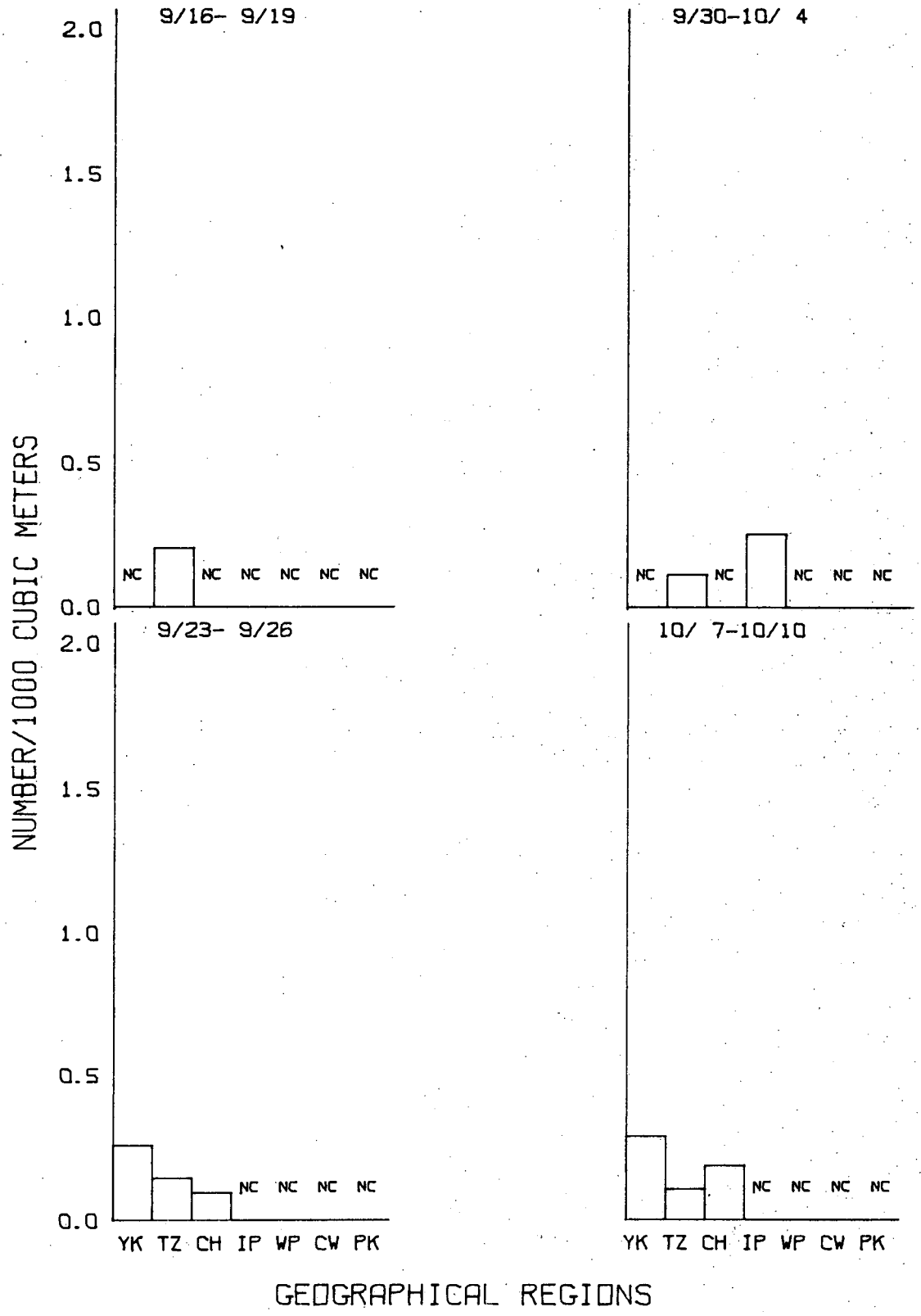


Figure A-10. Age II and Older Striped Bass Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-11) (Page 1 of 4)



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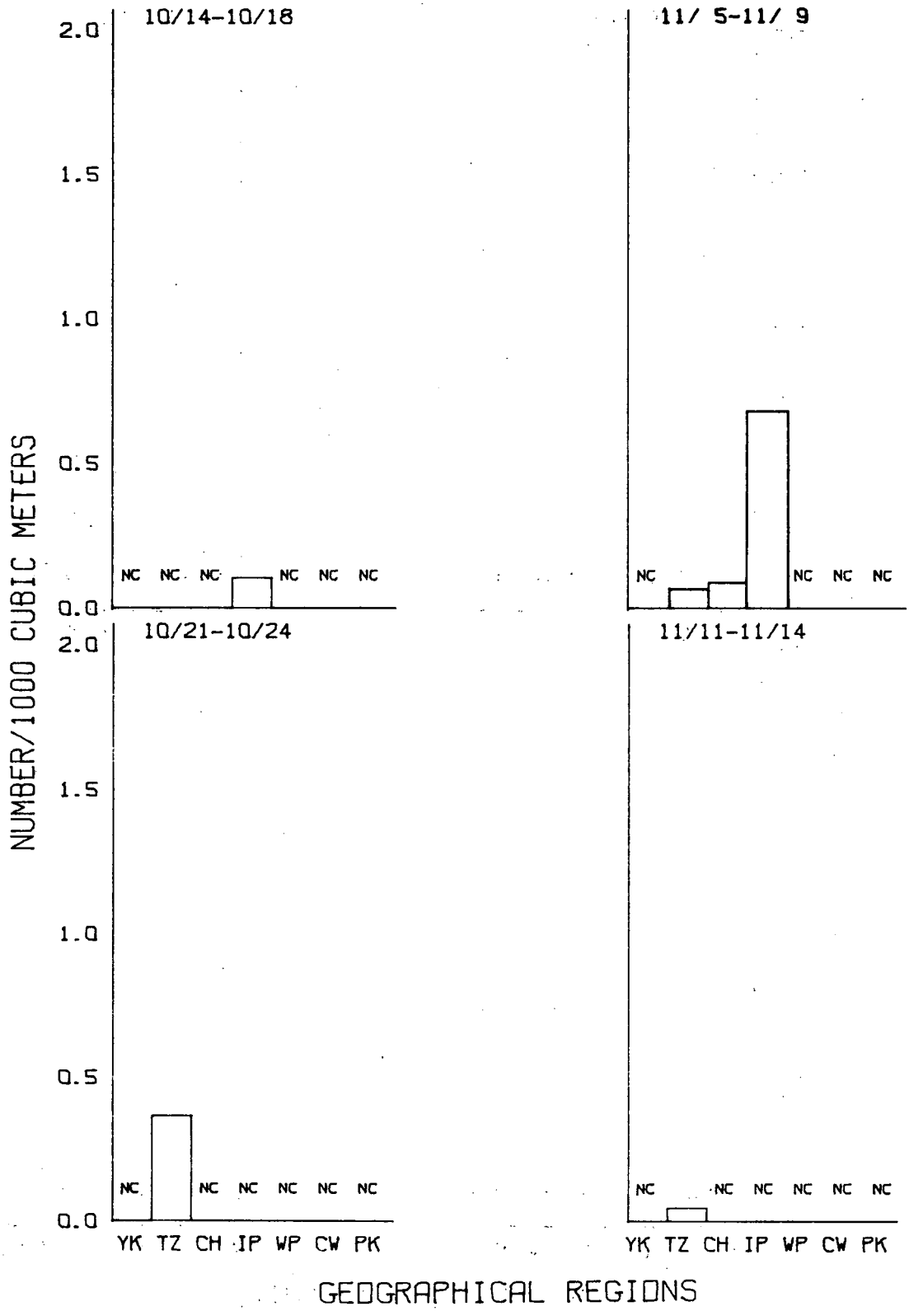

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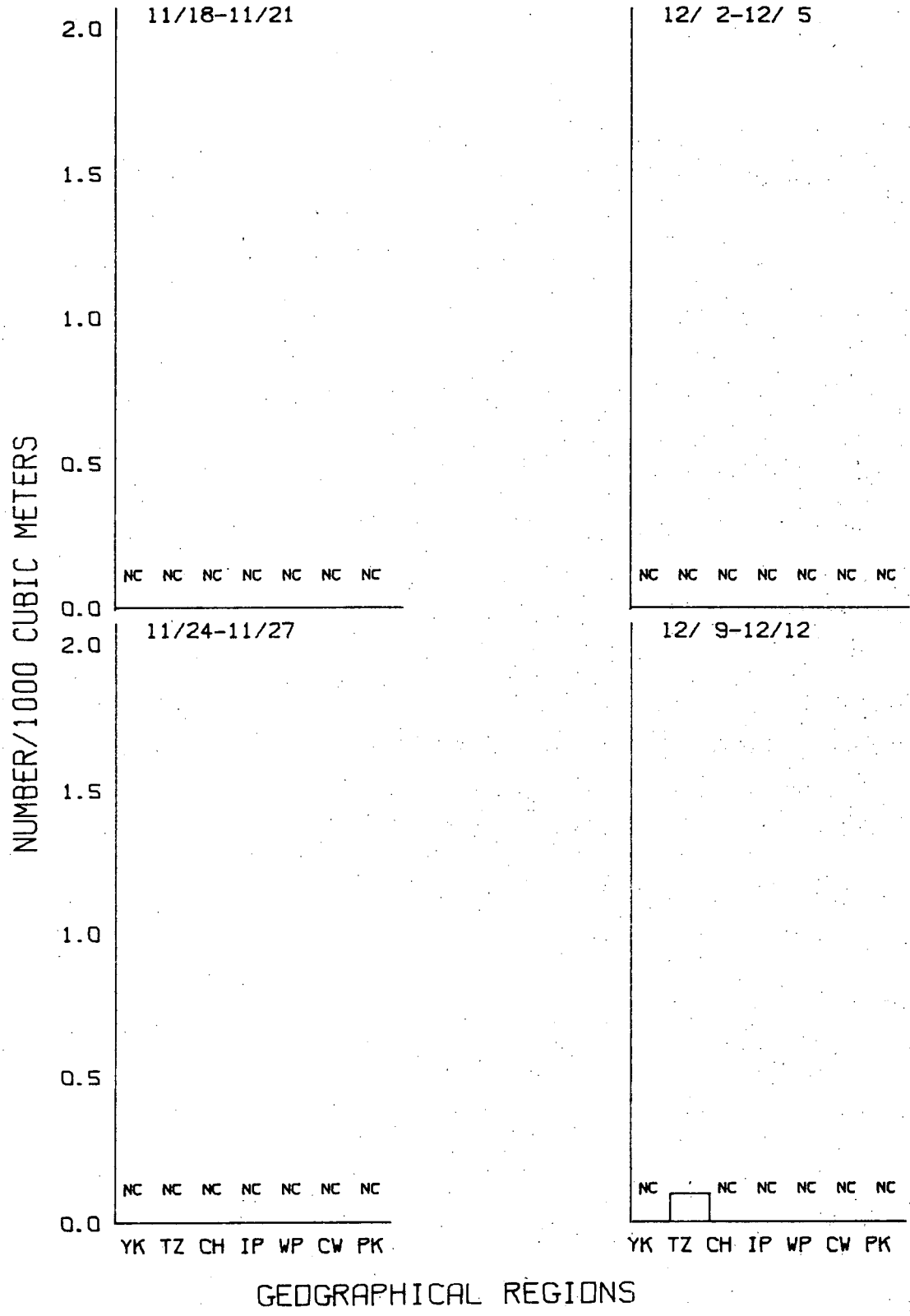

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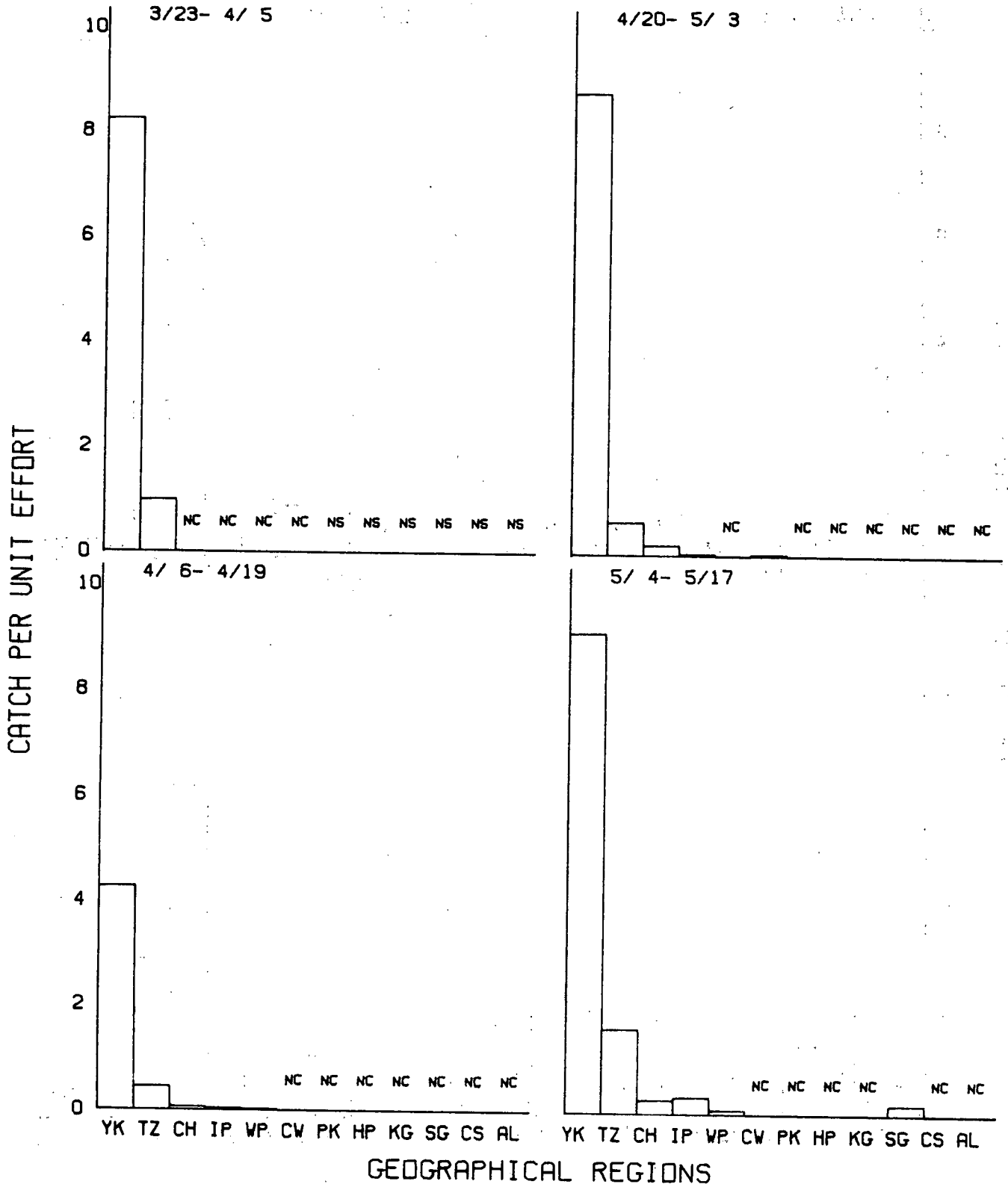
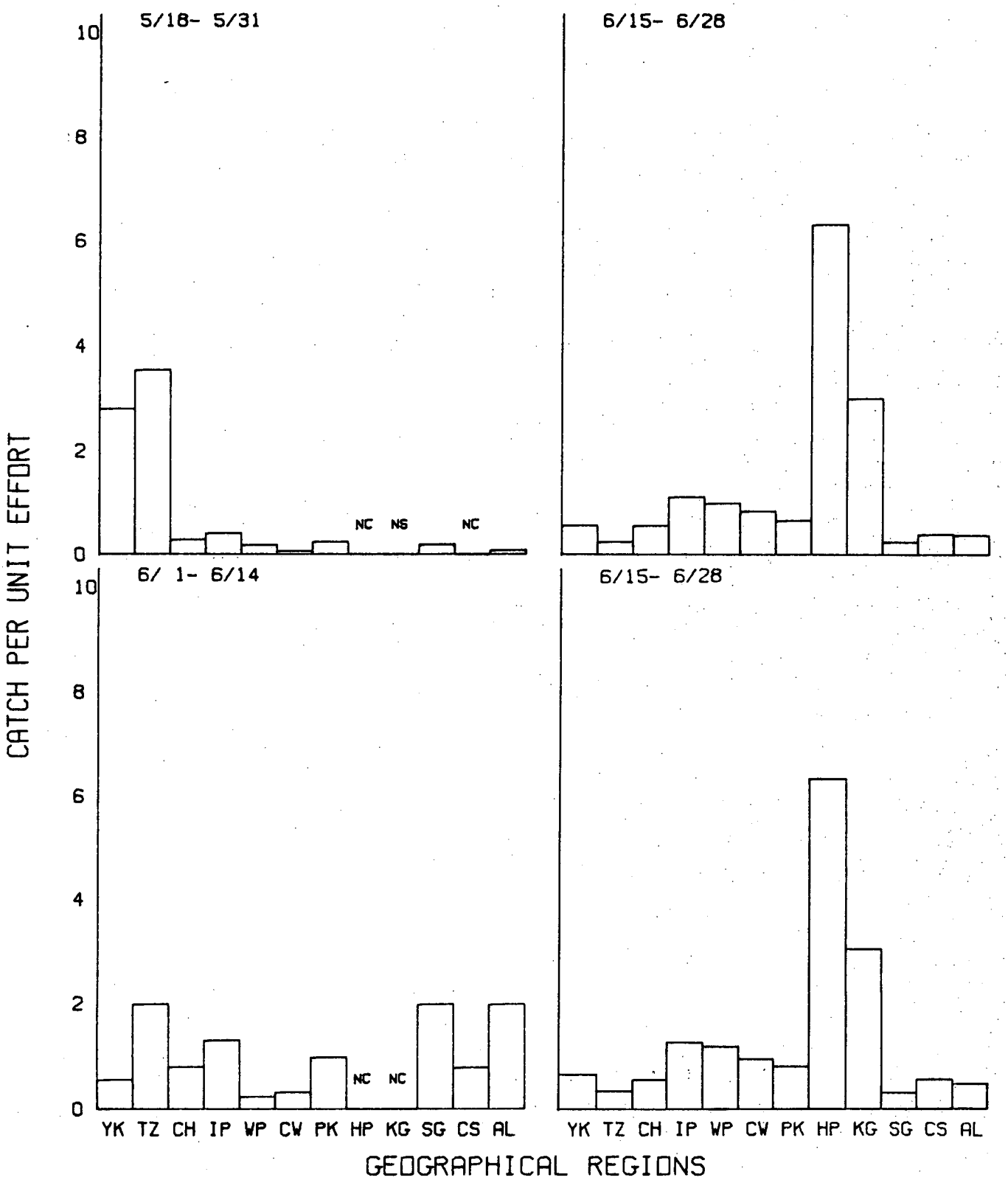


Figure A-11. Yearling Striped Bass Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975. (Histograms based on data in Table A-75) (Page 1 of 2)



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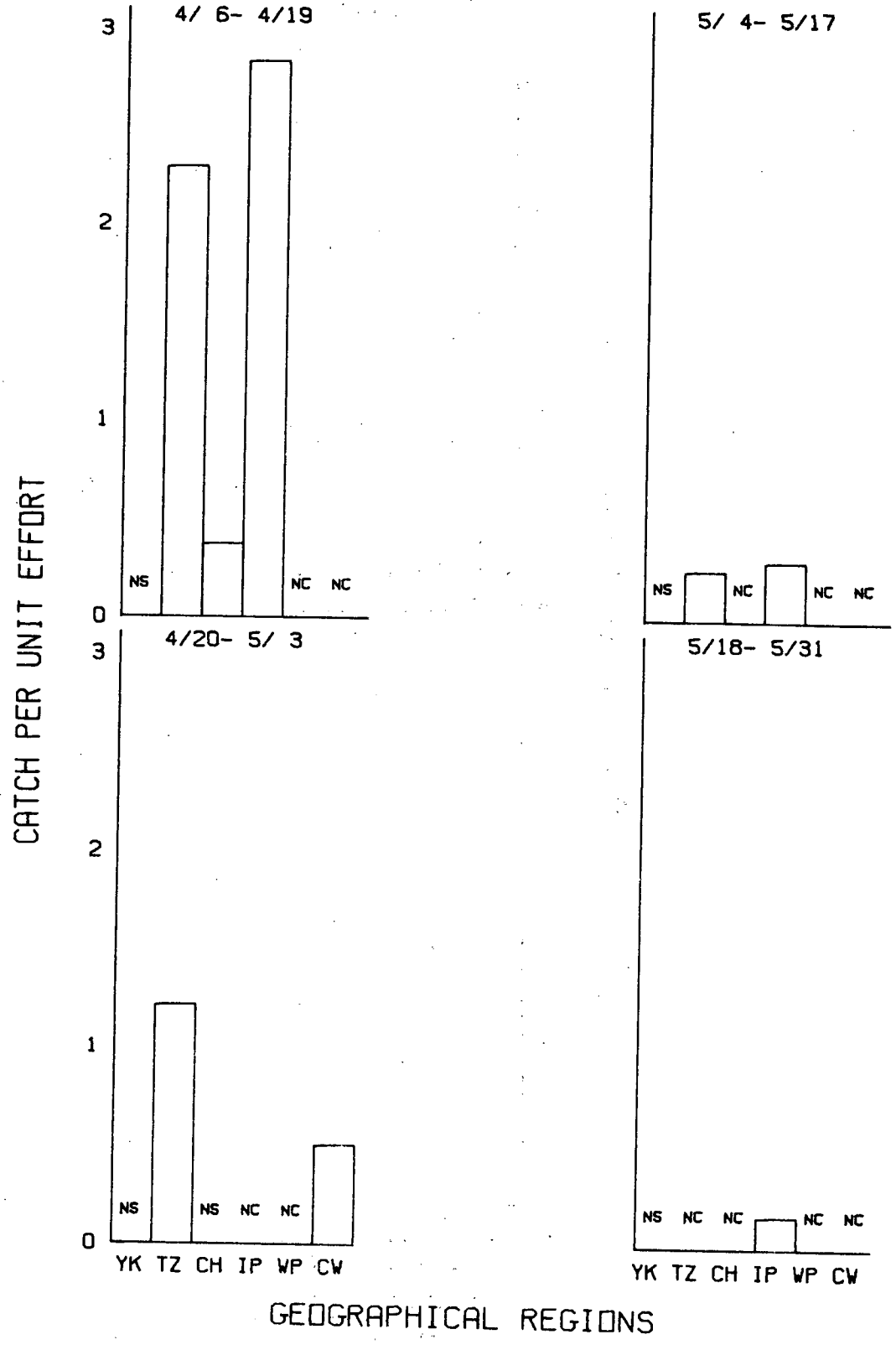
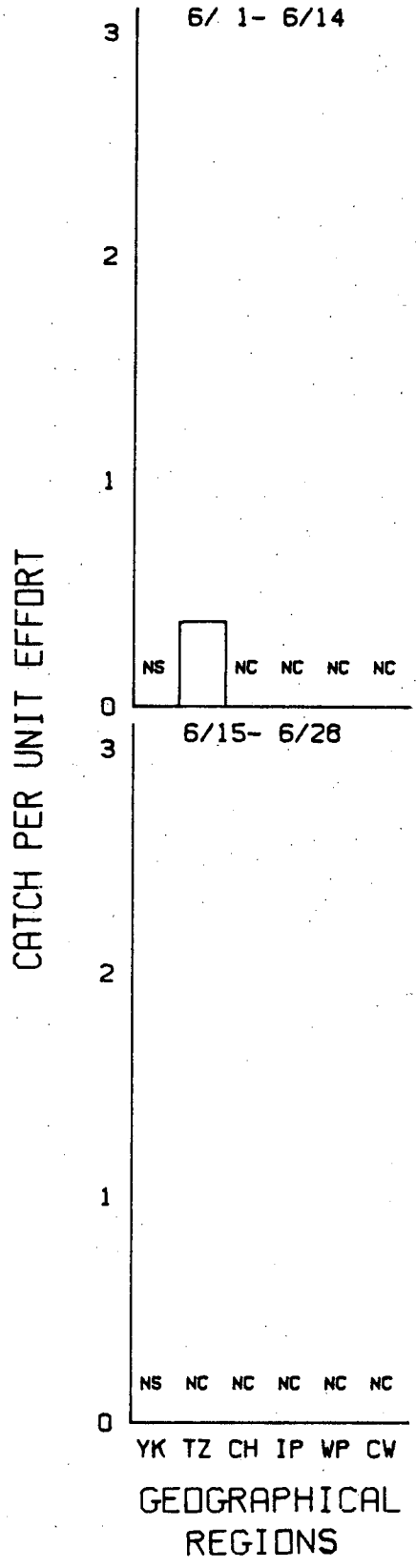


Figure A-12. Yearling Striped Bass Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975. (Histograms based on data in Table A-79) (Page 1 of 2)



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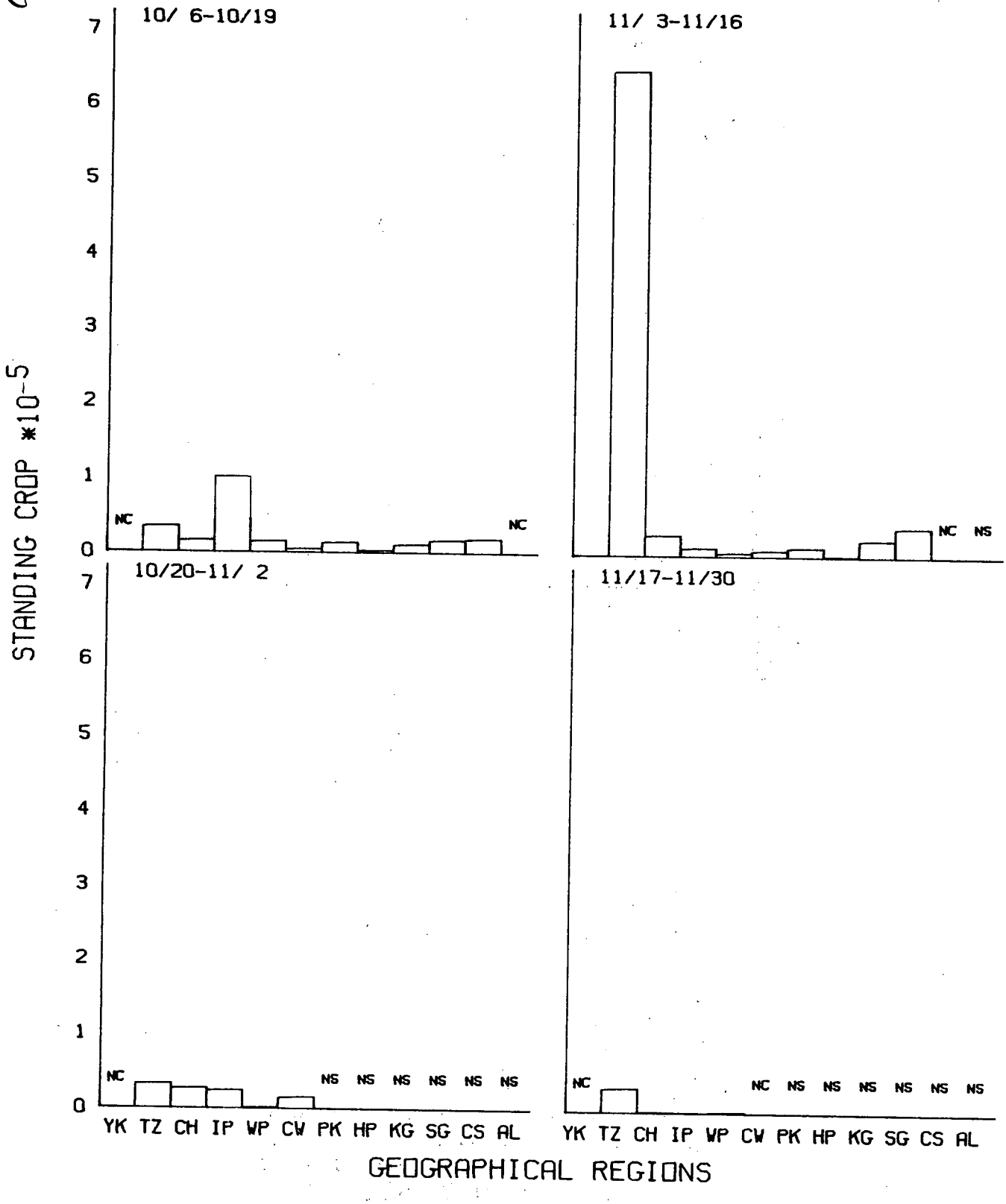
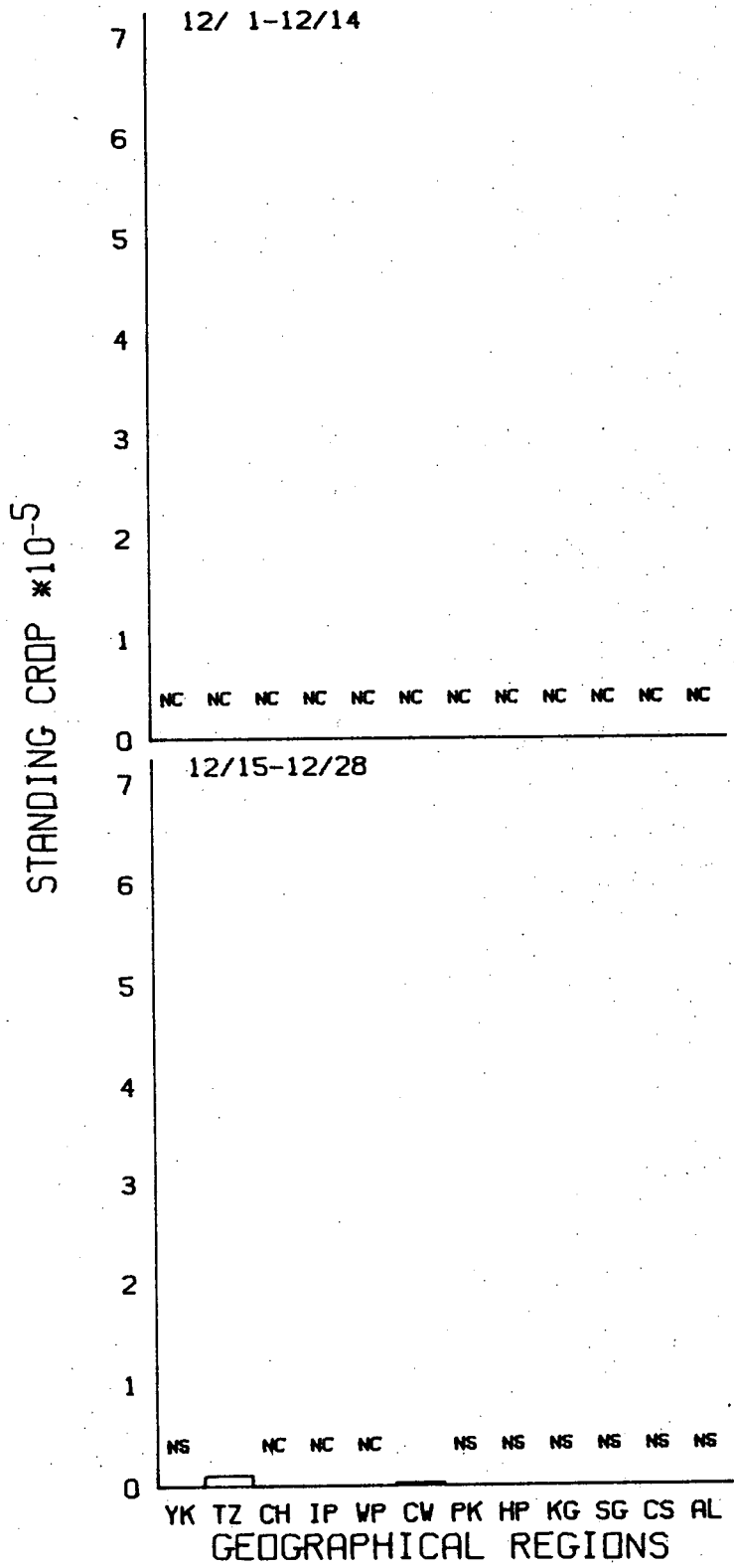


Figure A-13. Juvenile White Perch Standing Crop within Each Geographical Region, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-50) (Page 1 of 2)



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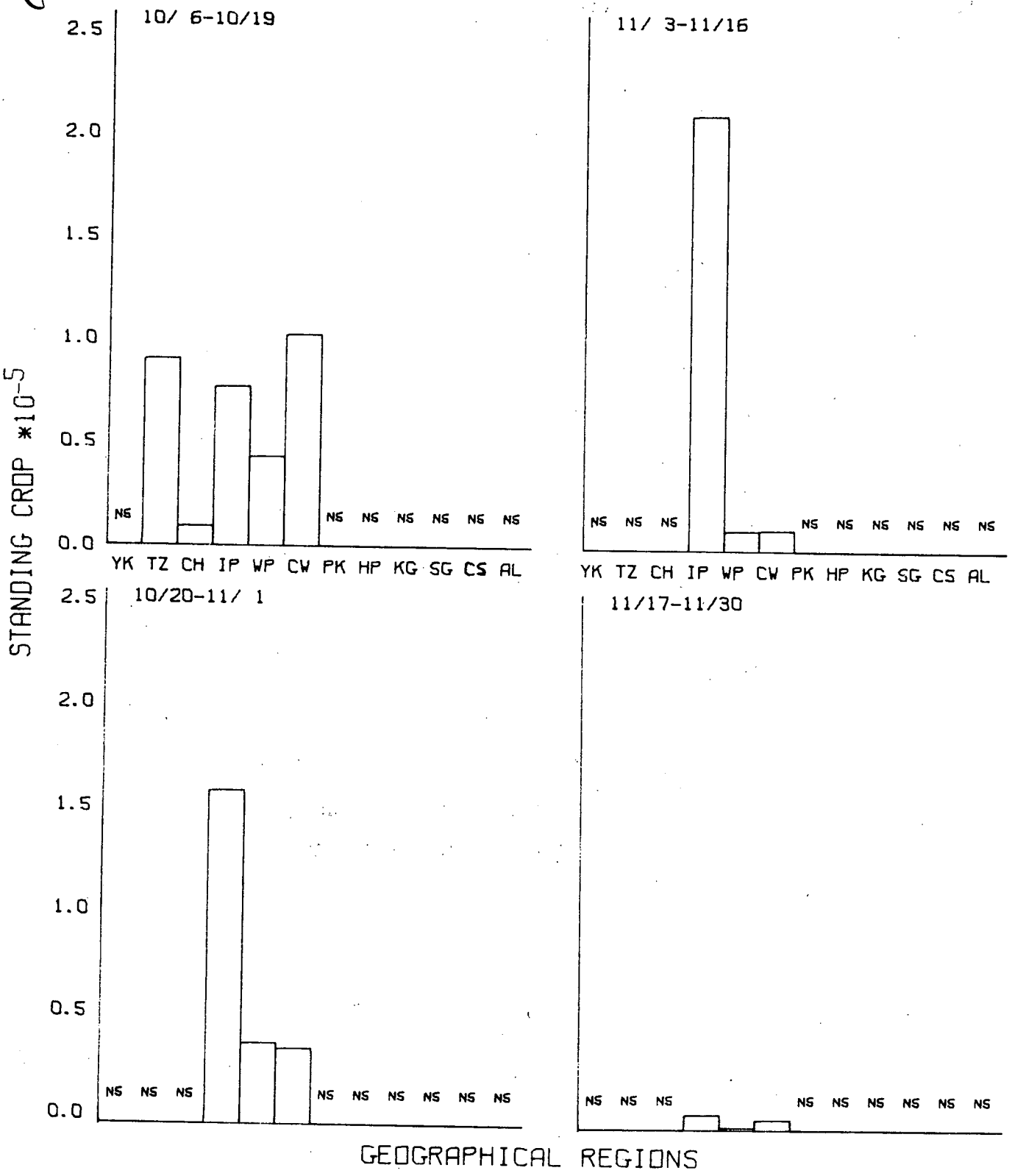
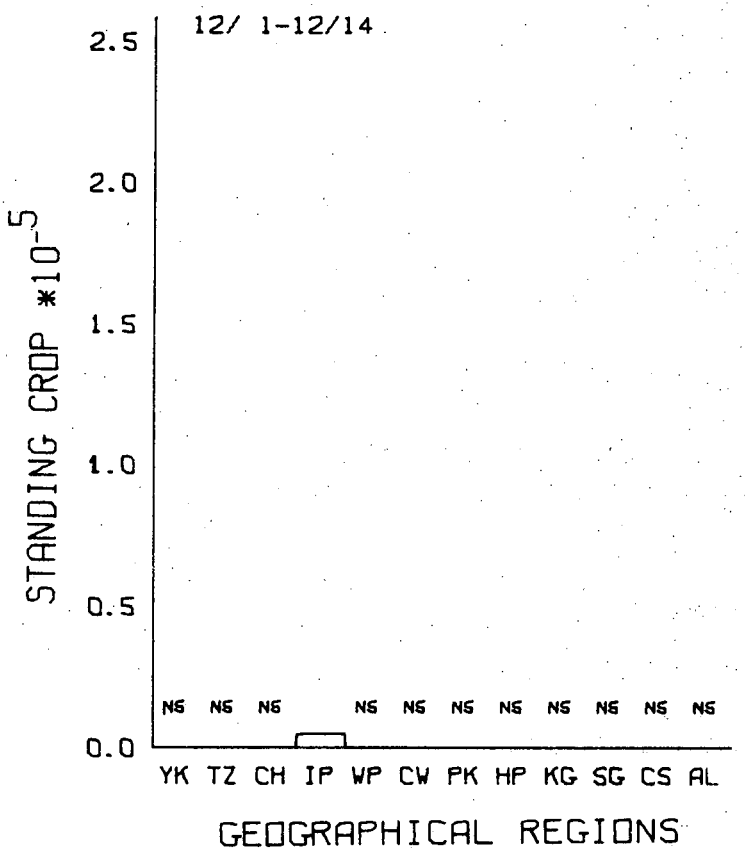


Figure A-14. Juvenile White Perch Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-51) (Page 1 of 2)



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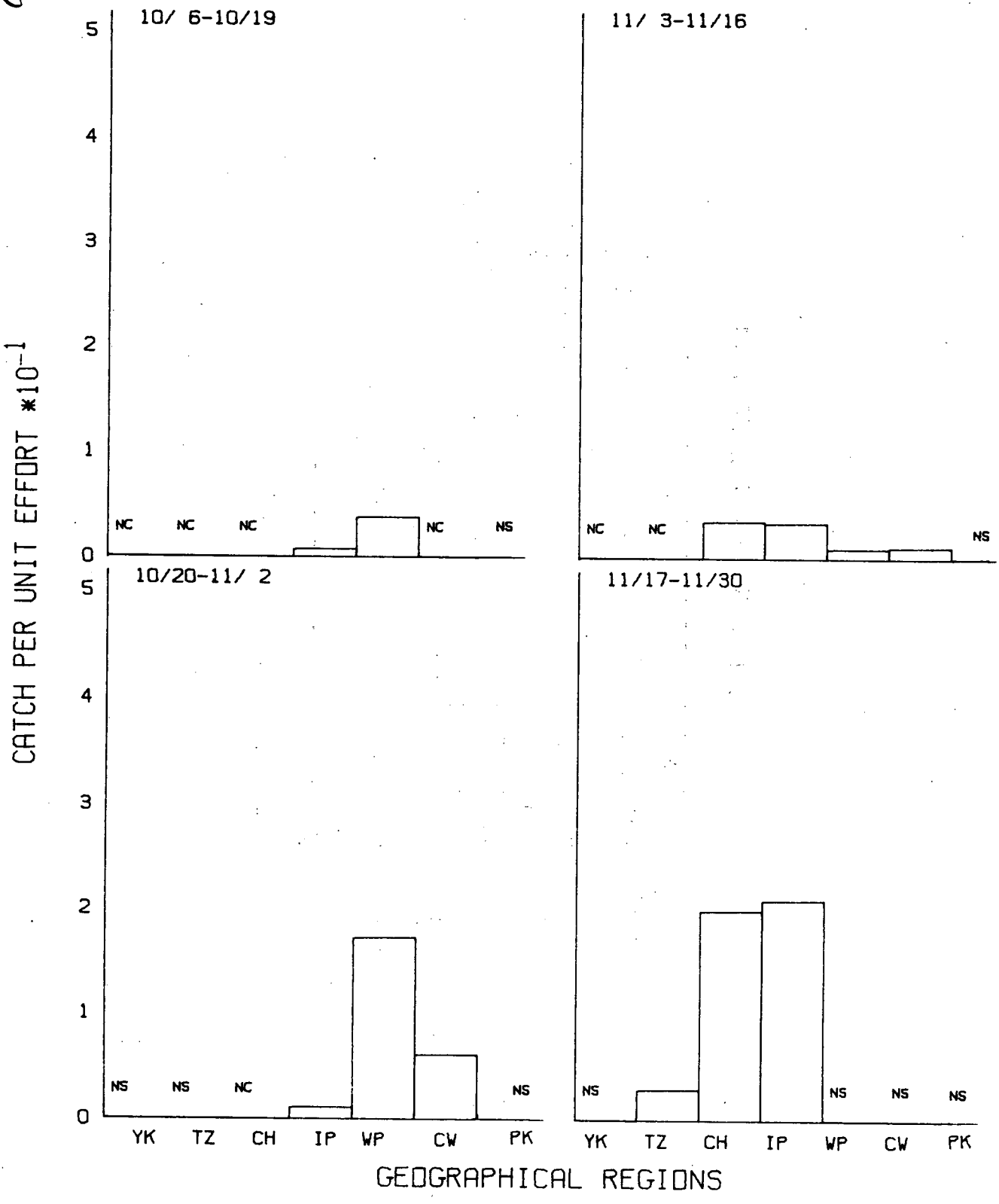
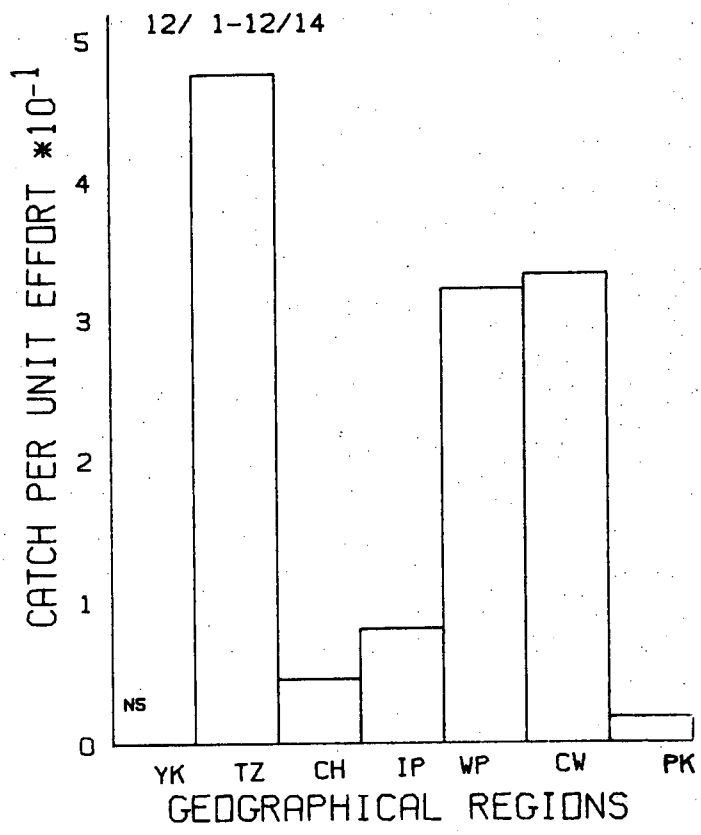


Figure A-15. Juvenile White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-18) (Page 1 of 2)



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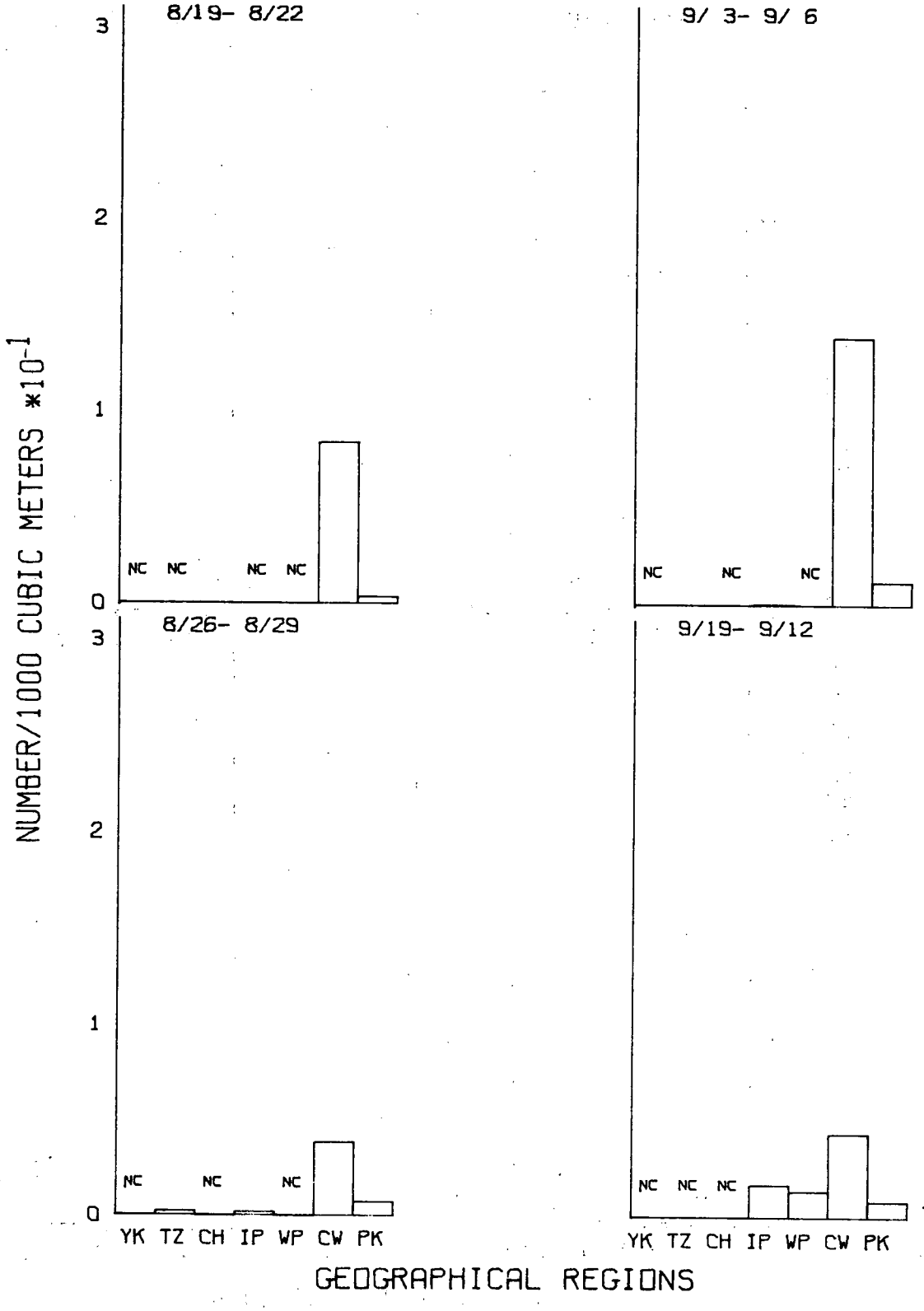
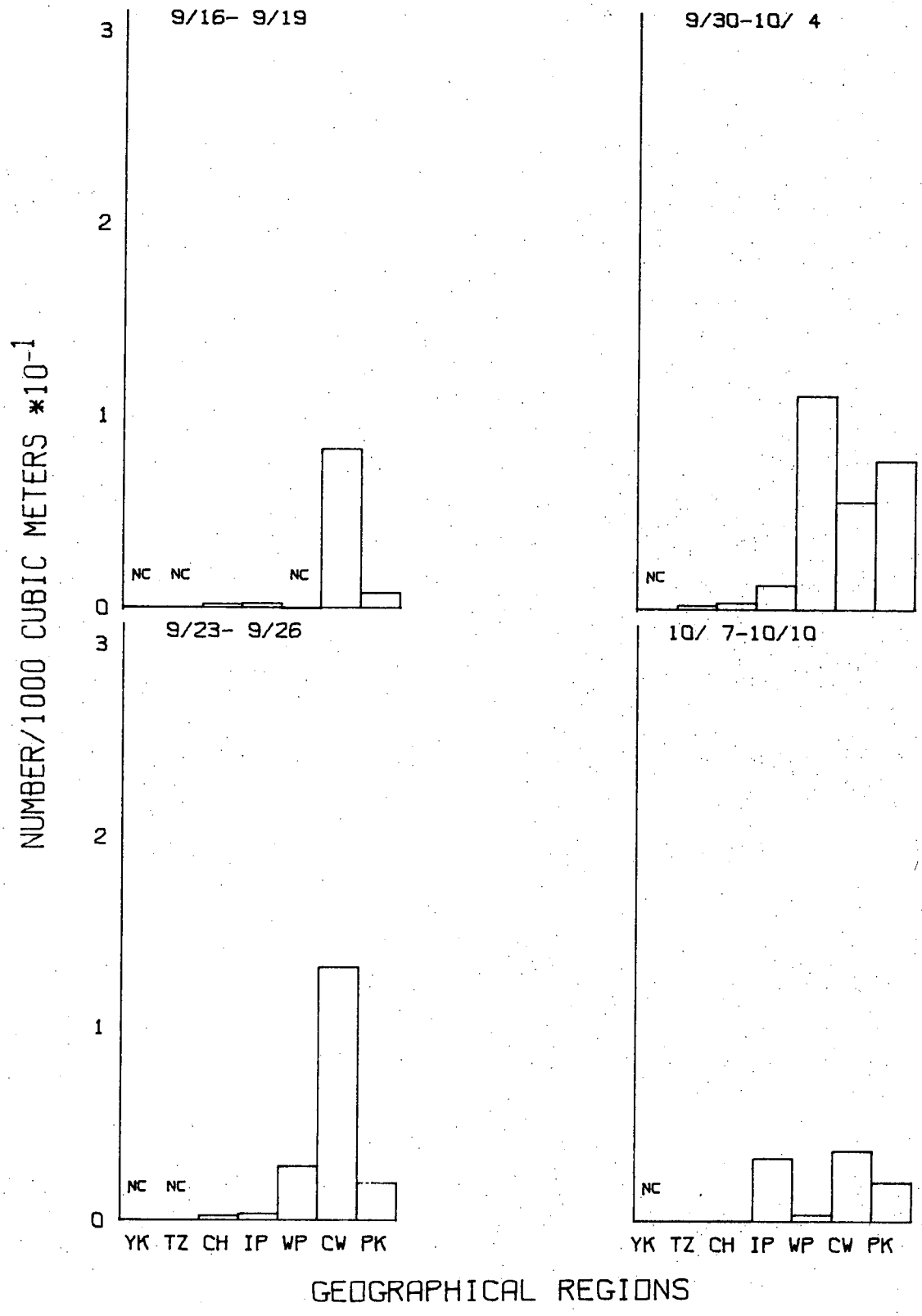


Figure A-16. Juvenile White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-15) (Page 1 of 5)



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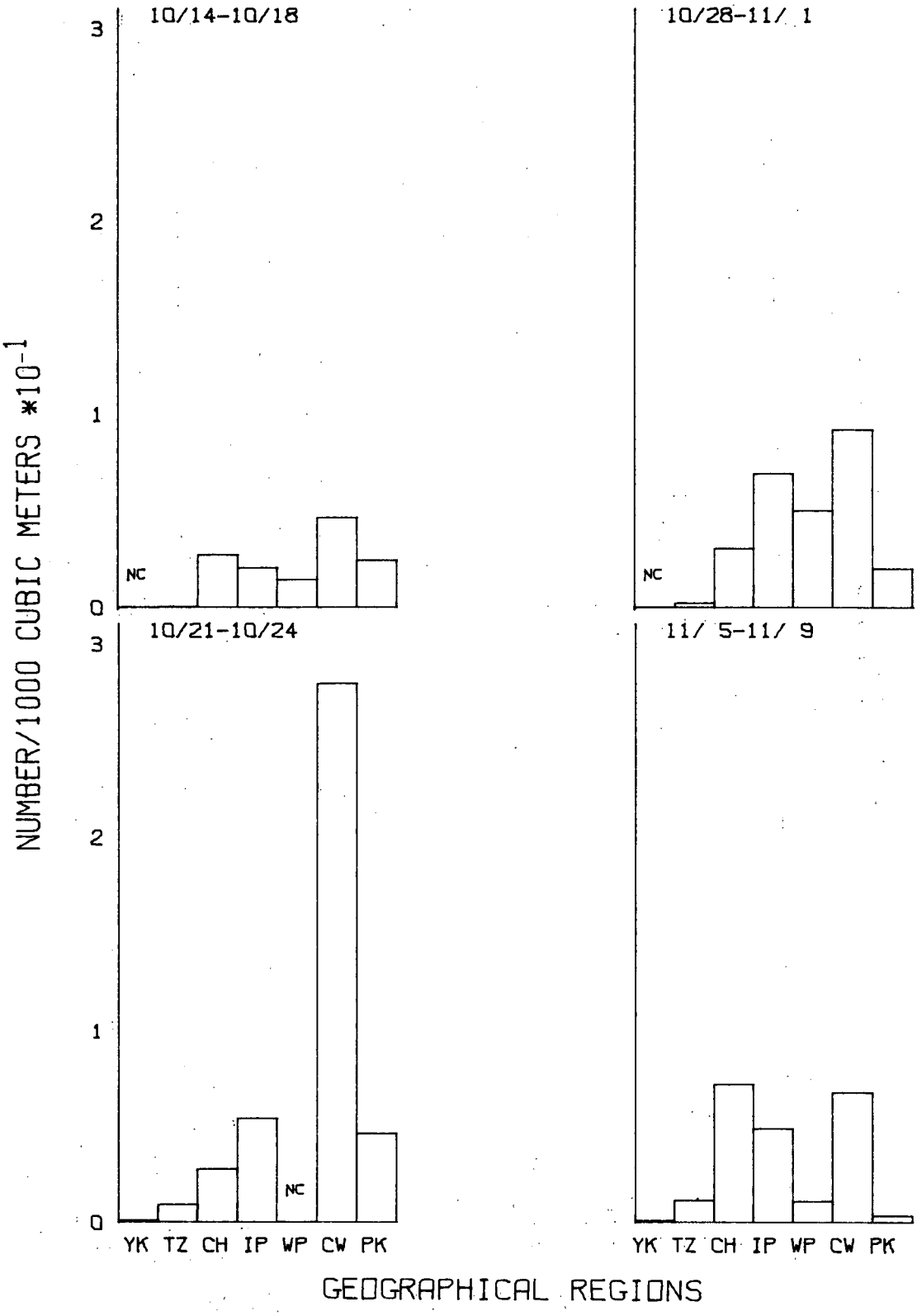

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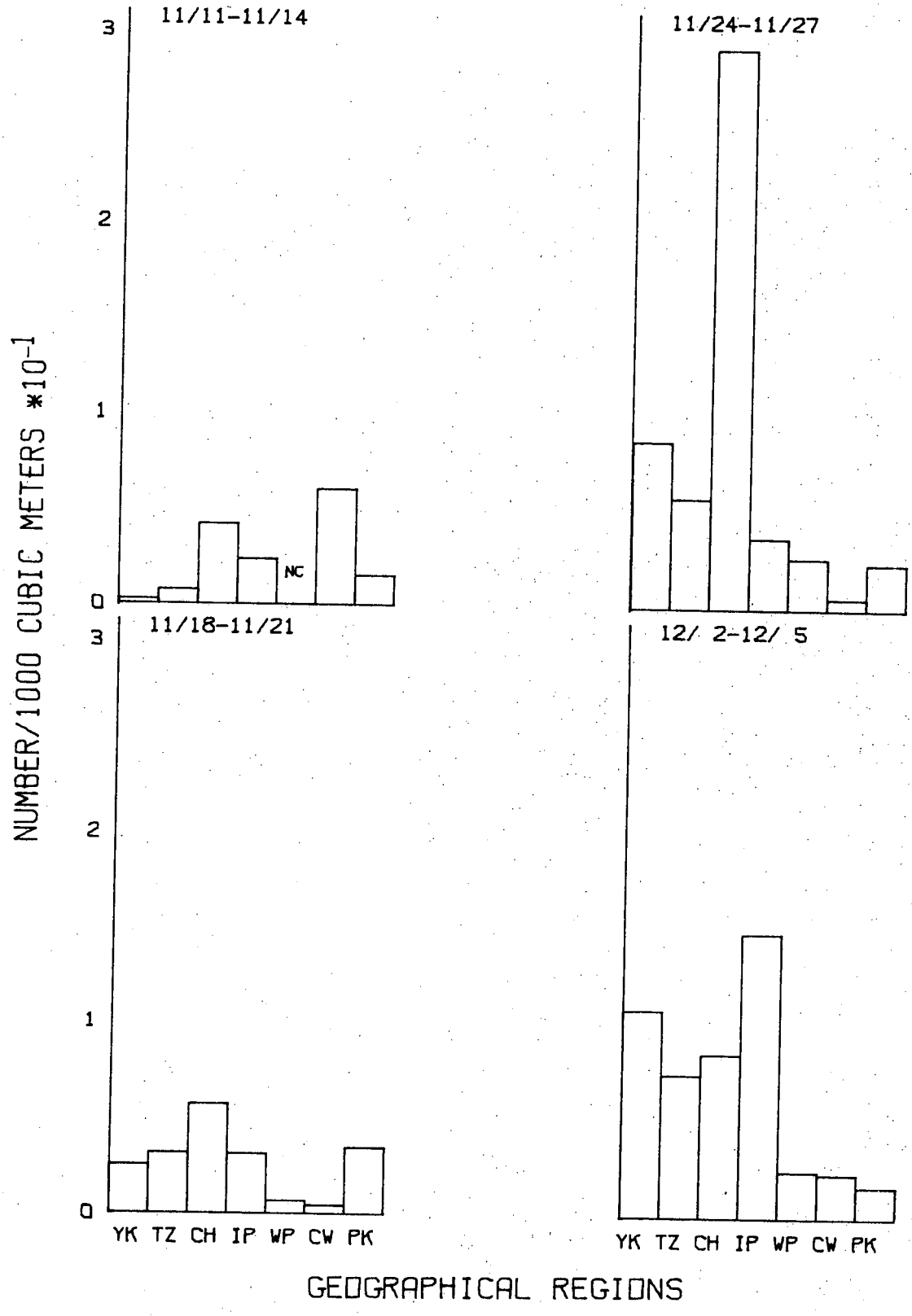

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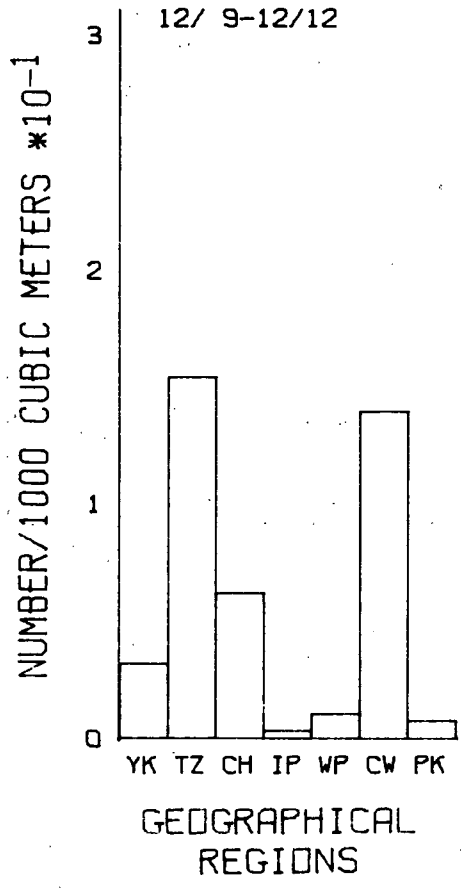

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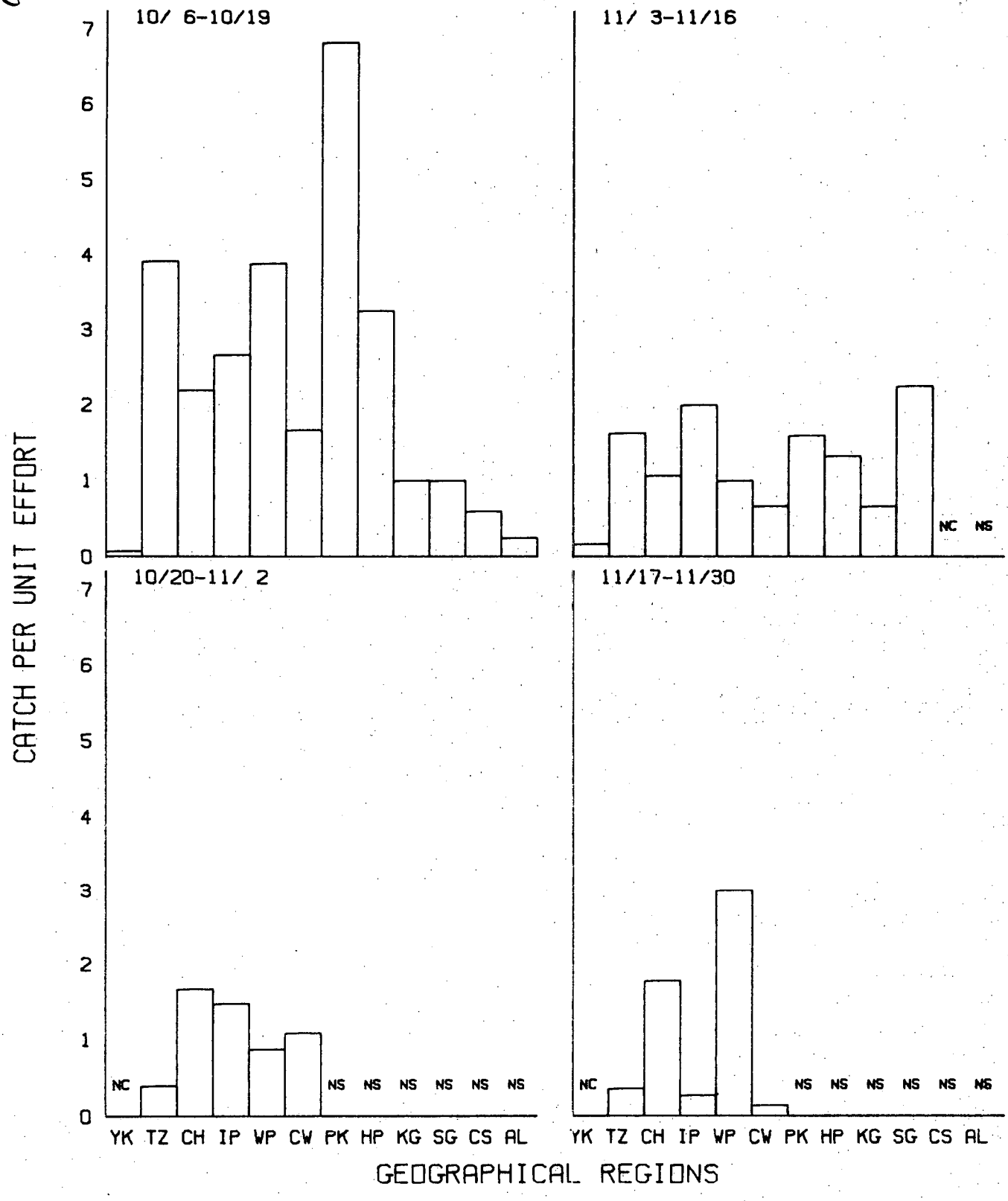


Figure A-17. Yearling White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October and November 1974. (Histograms based on data in Table A-20)

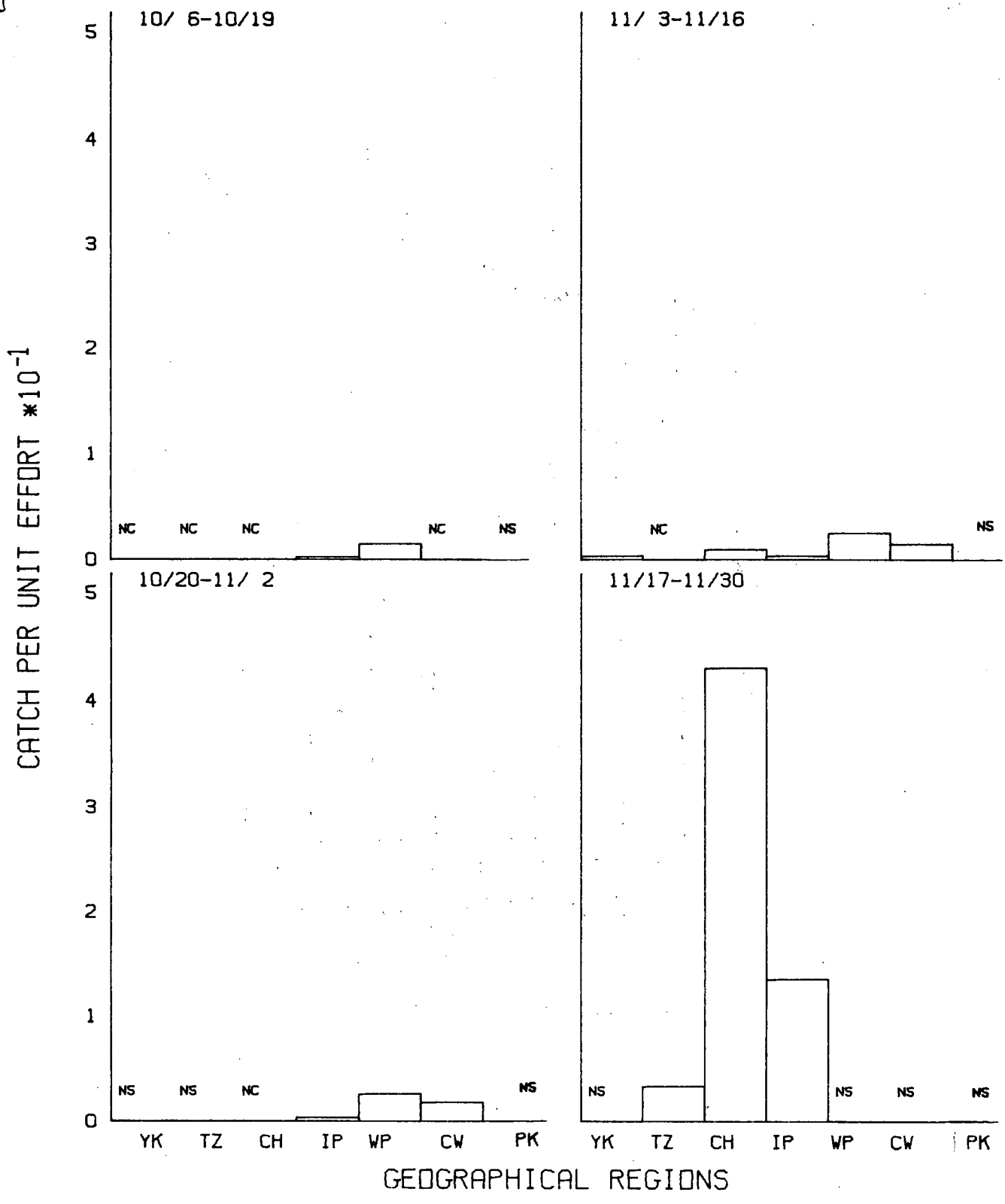
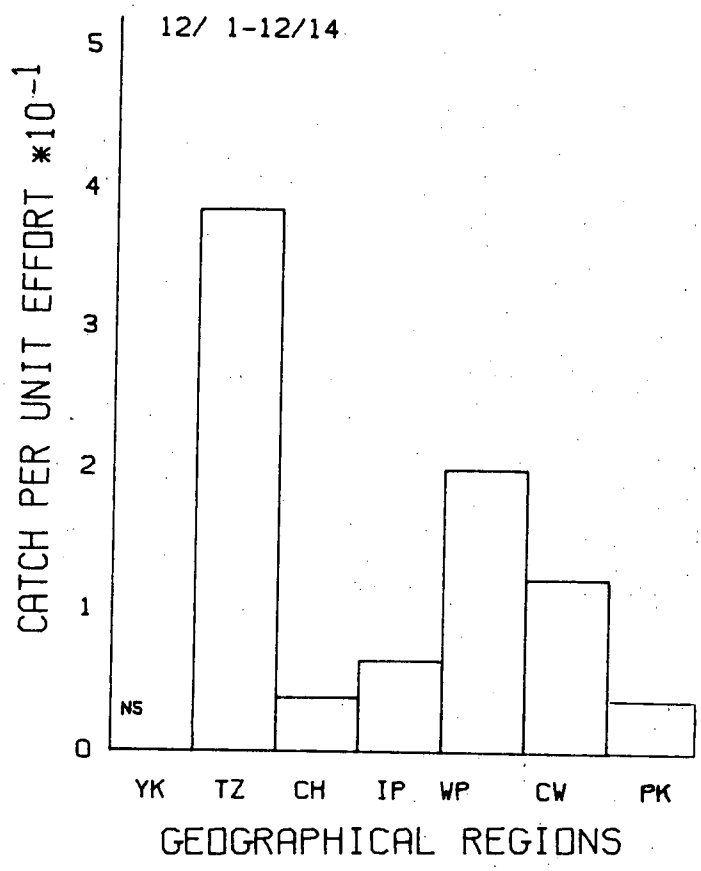


Figure A-18. Yearling White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-22) (Page 1 of 2)



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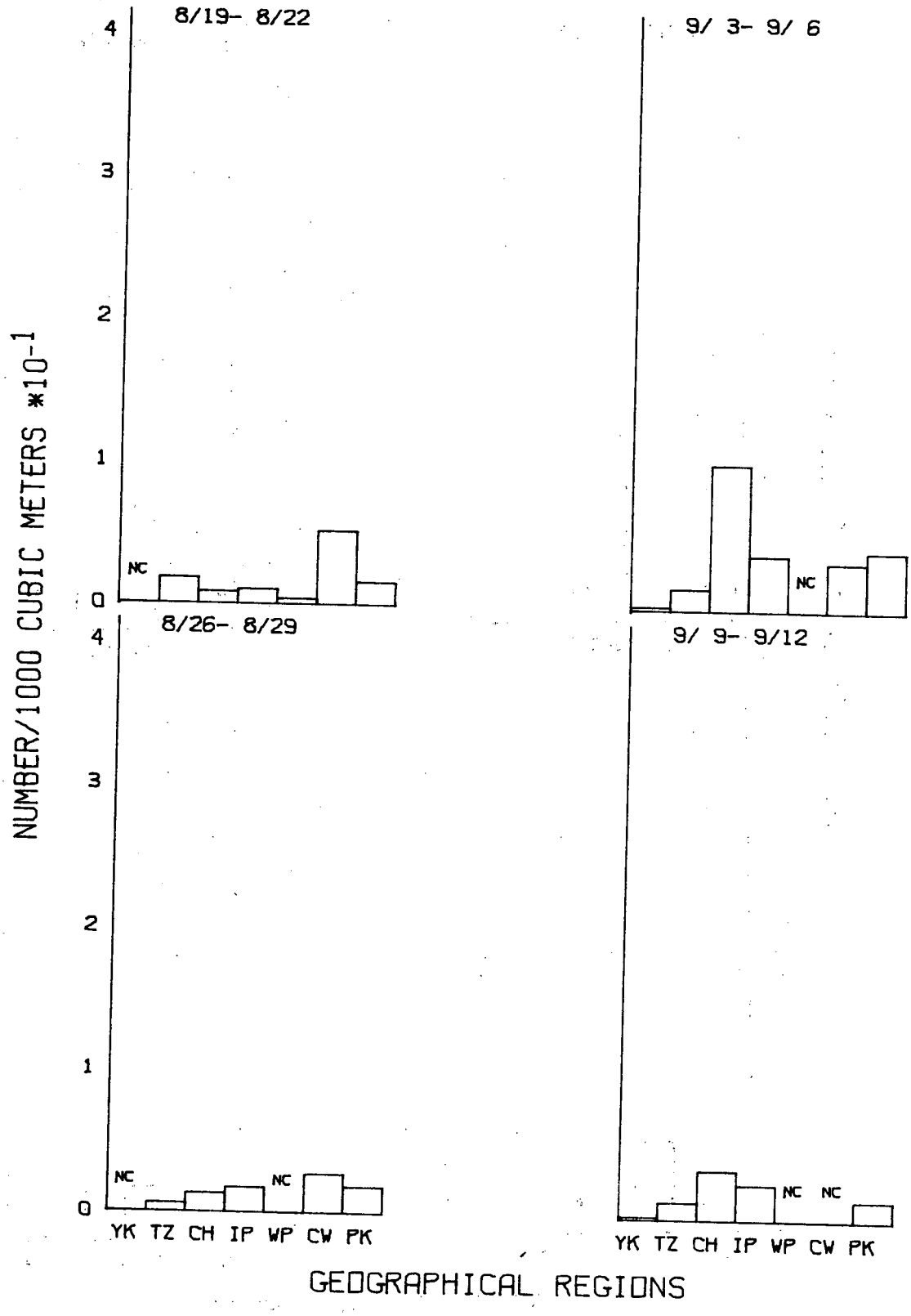
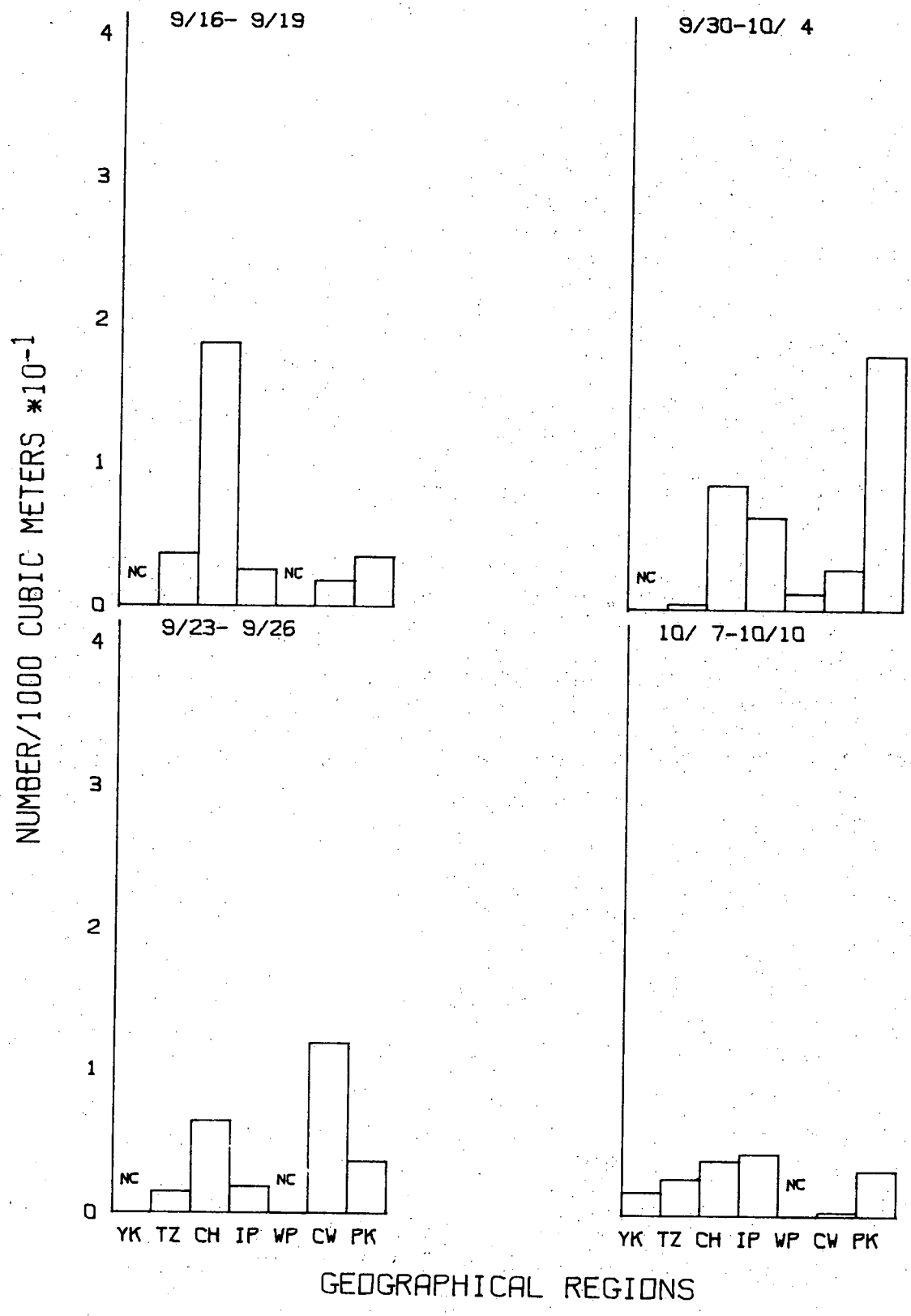


Figure A-19. Yearling White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-19) (Page 1 of 5)



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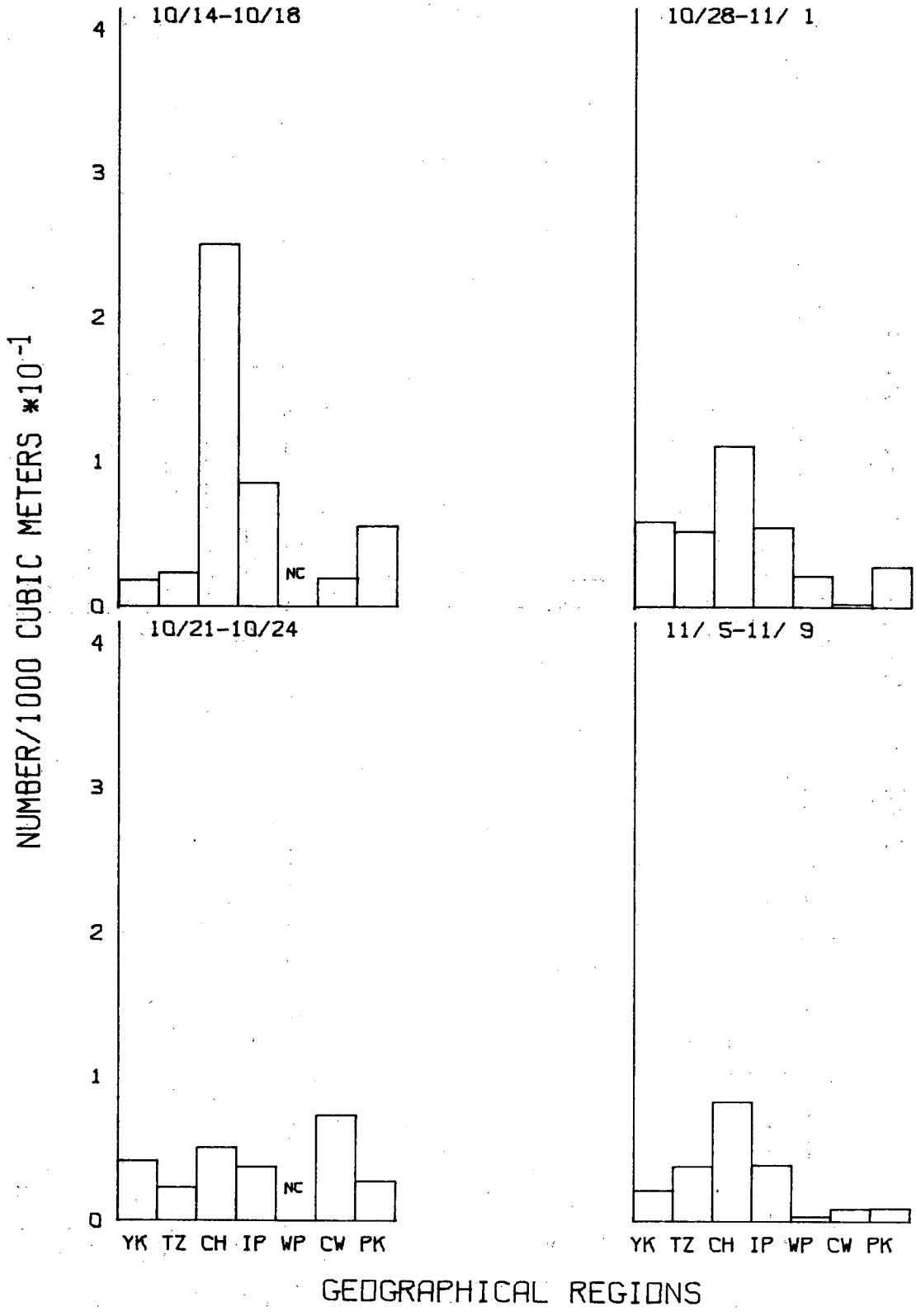

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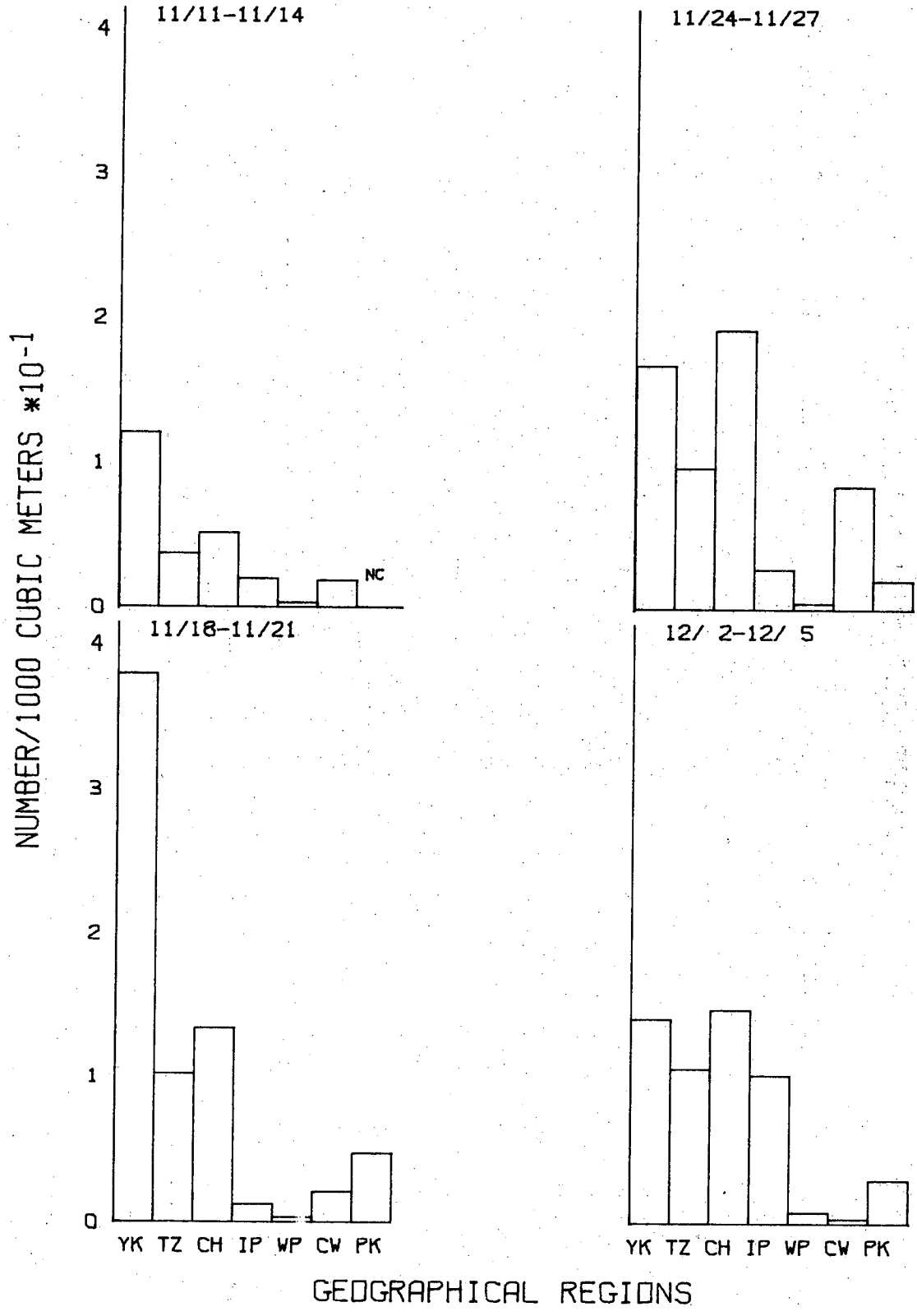

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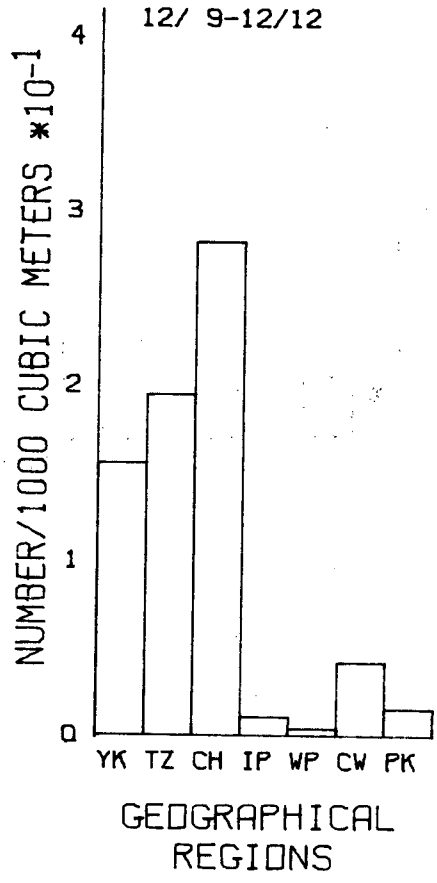

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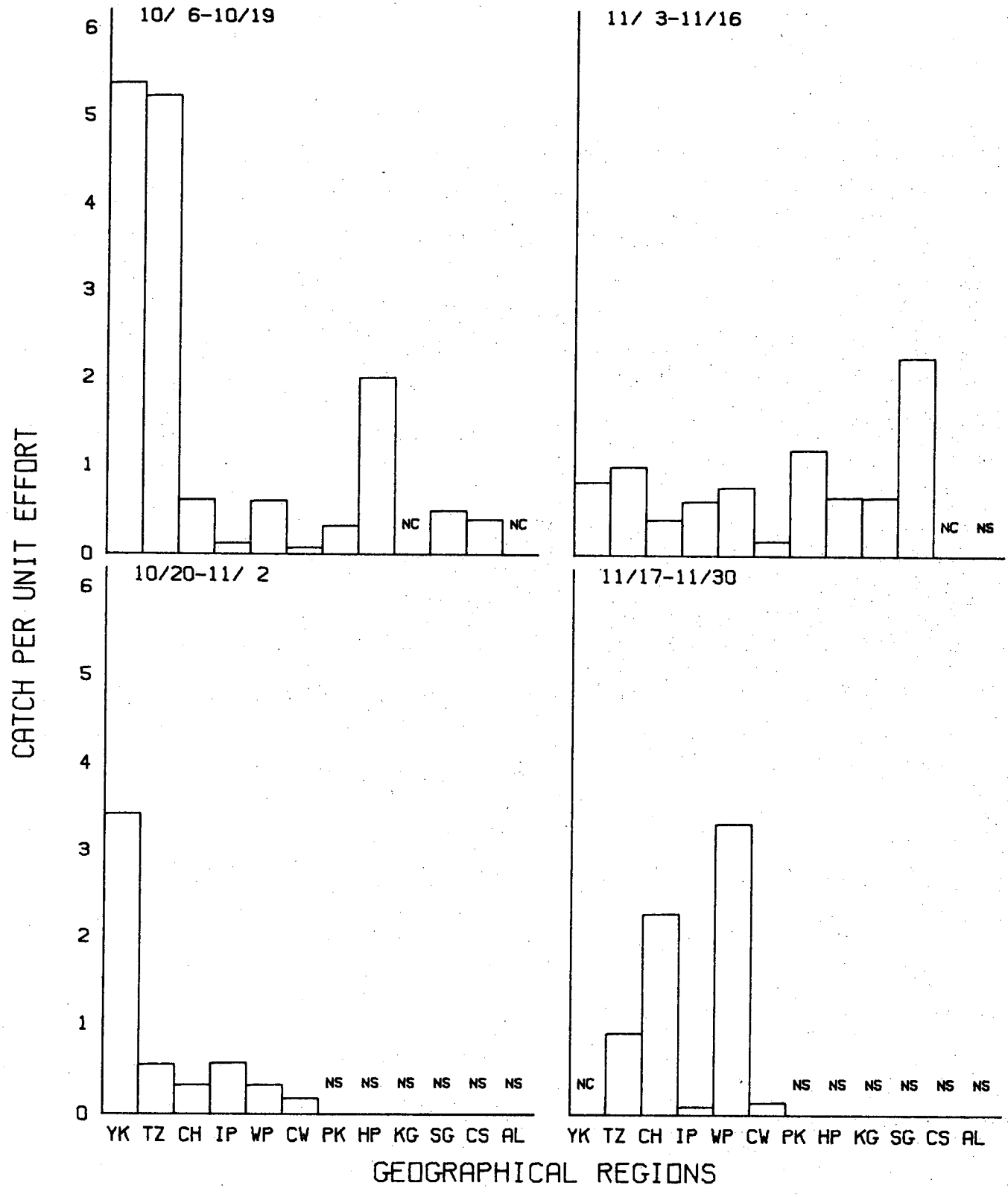
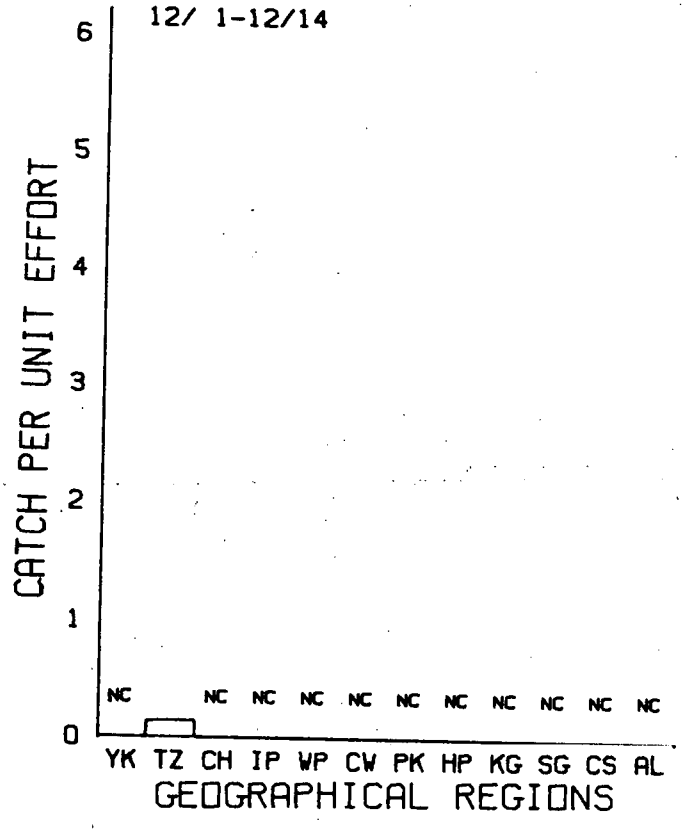


Figure A-20. Age II and Older White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-December 1974. (Histograms based on data in Table A-24) (Page 1 of 2)



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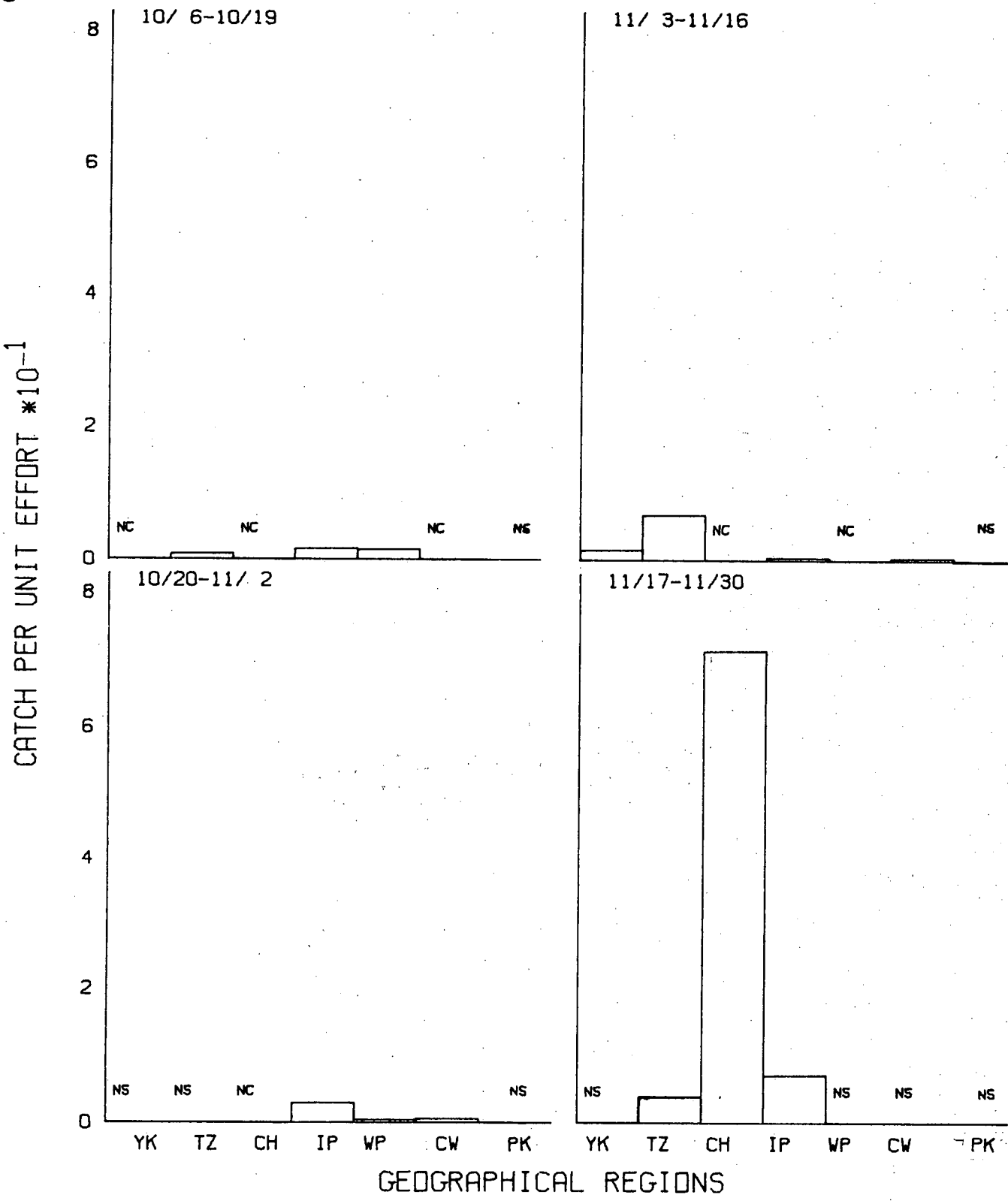
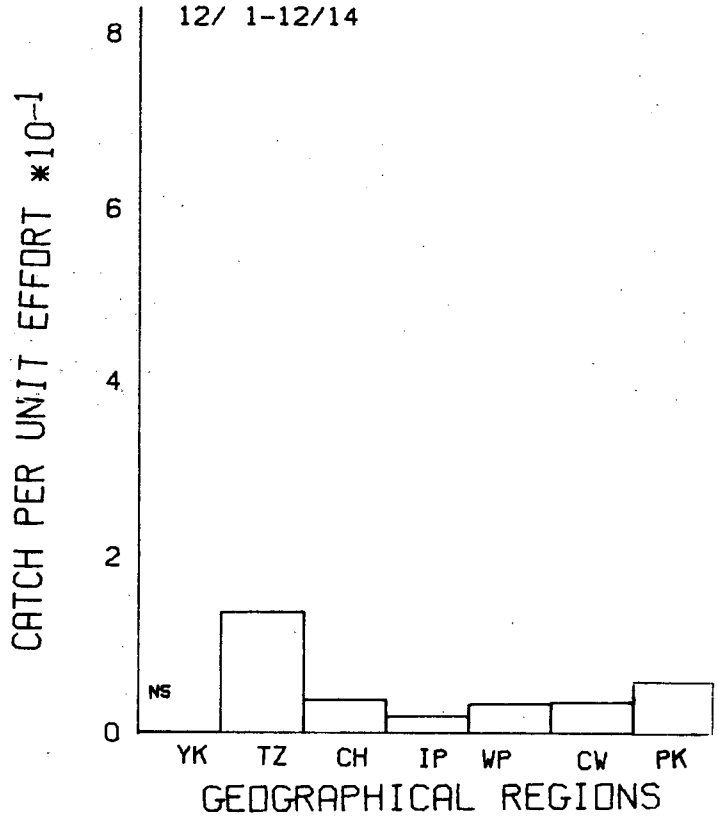


Figure A-21. Age II and Older White Perch Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-26) (Page 1 of 2)



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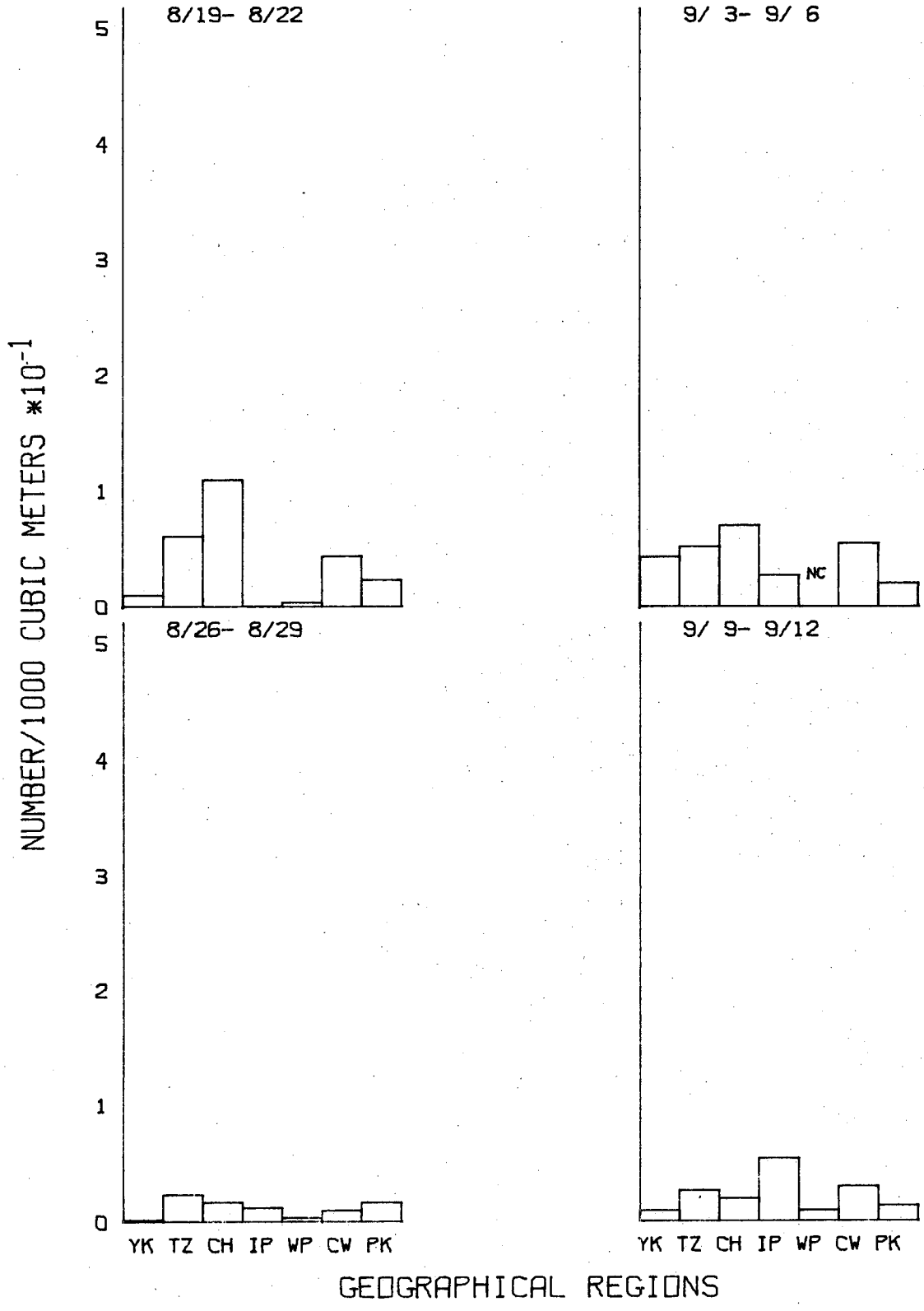
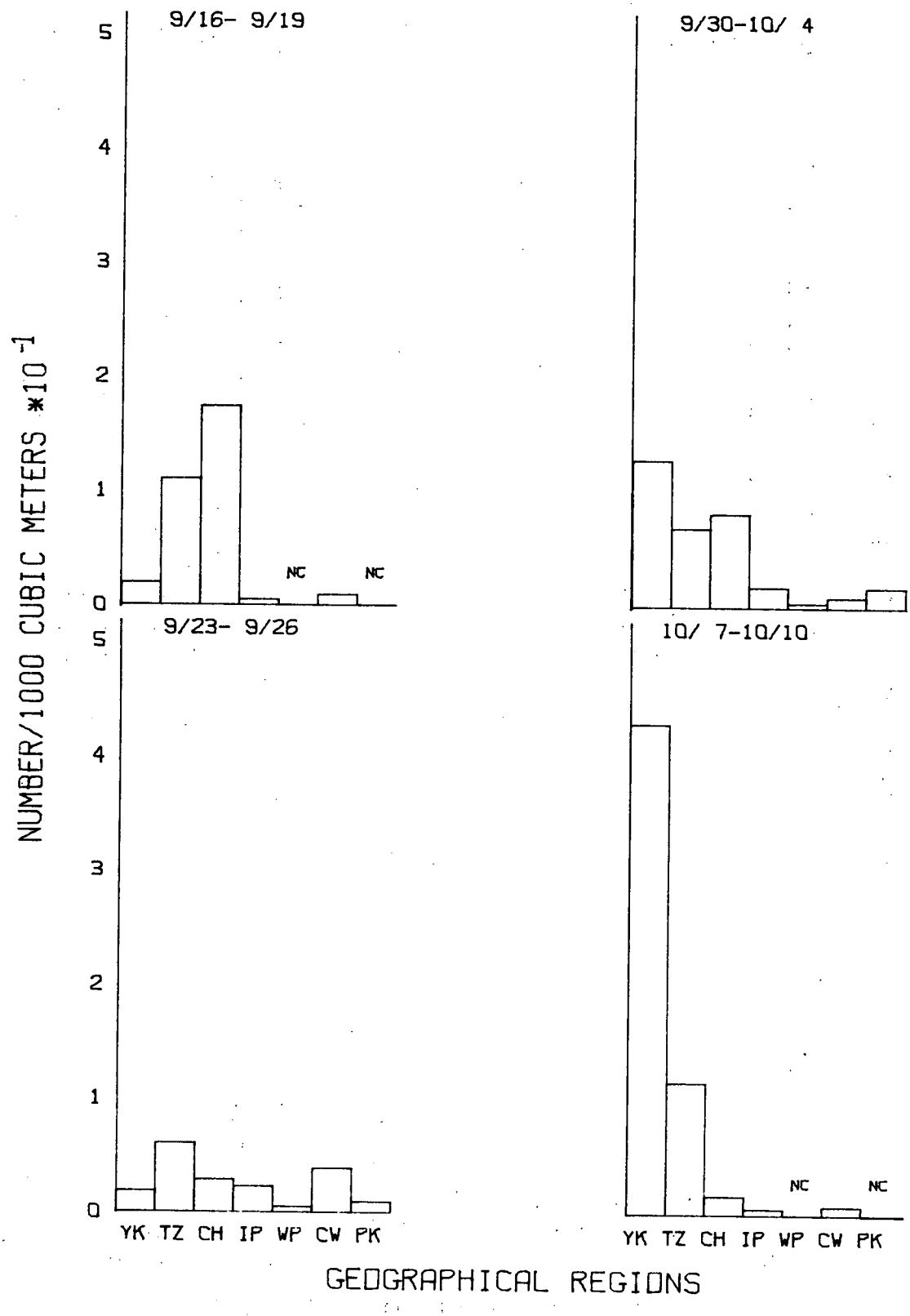


Figure A-22. Age II and Older White Perch Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-23) (Page 1 of 5)



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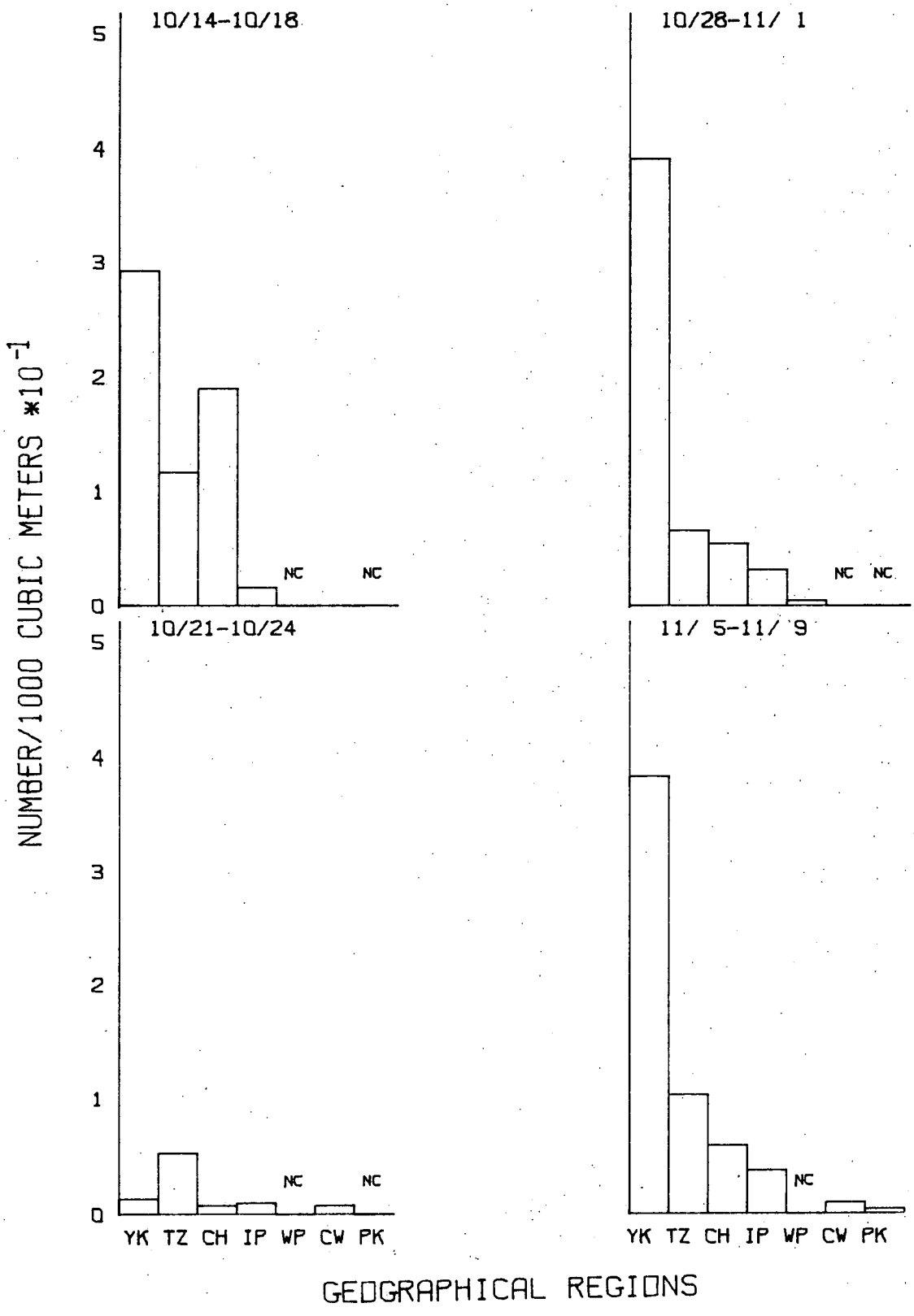

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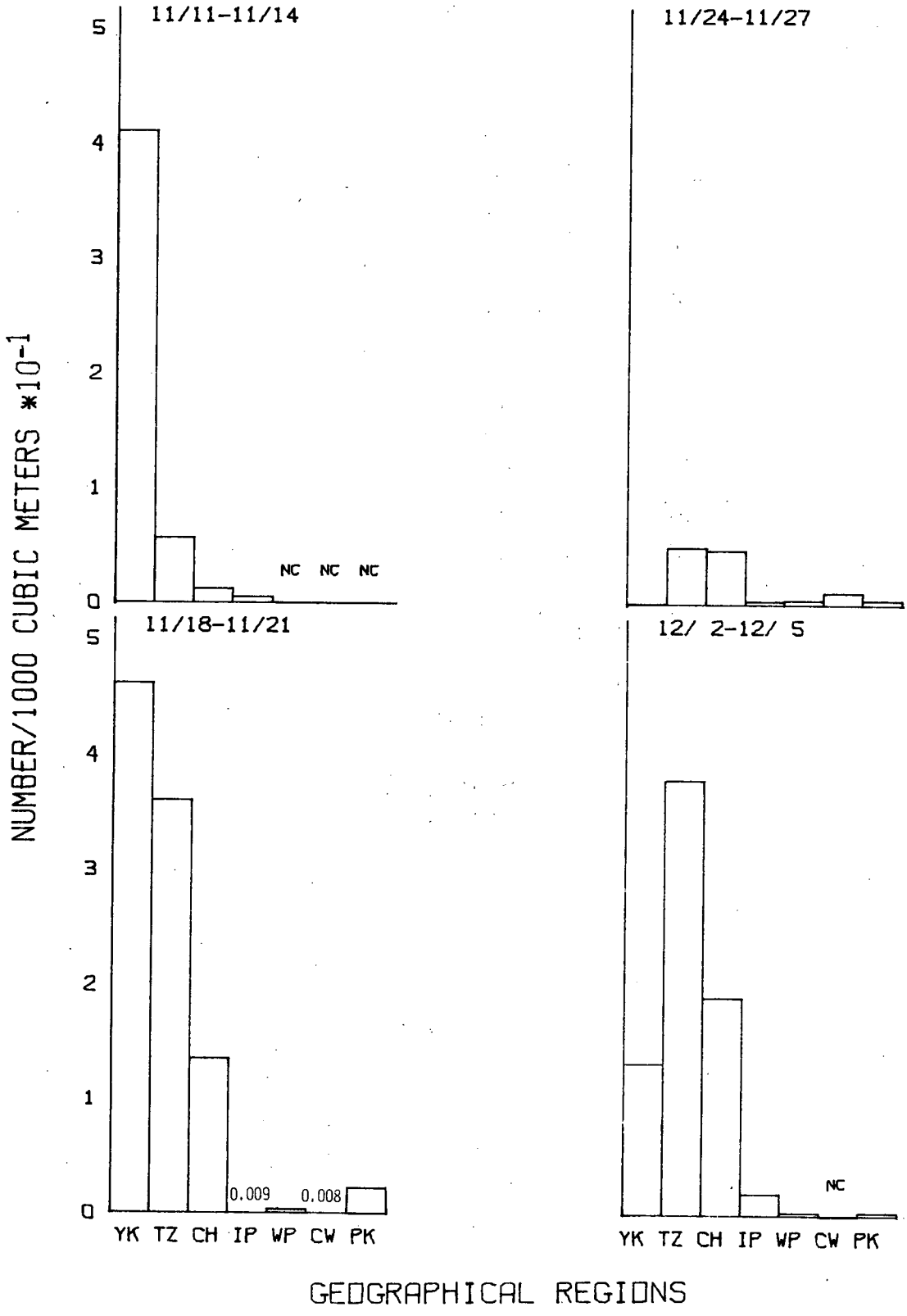

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Figure A-22. (Page 5 of 5)

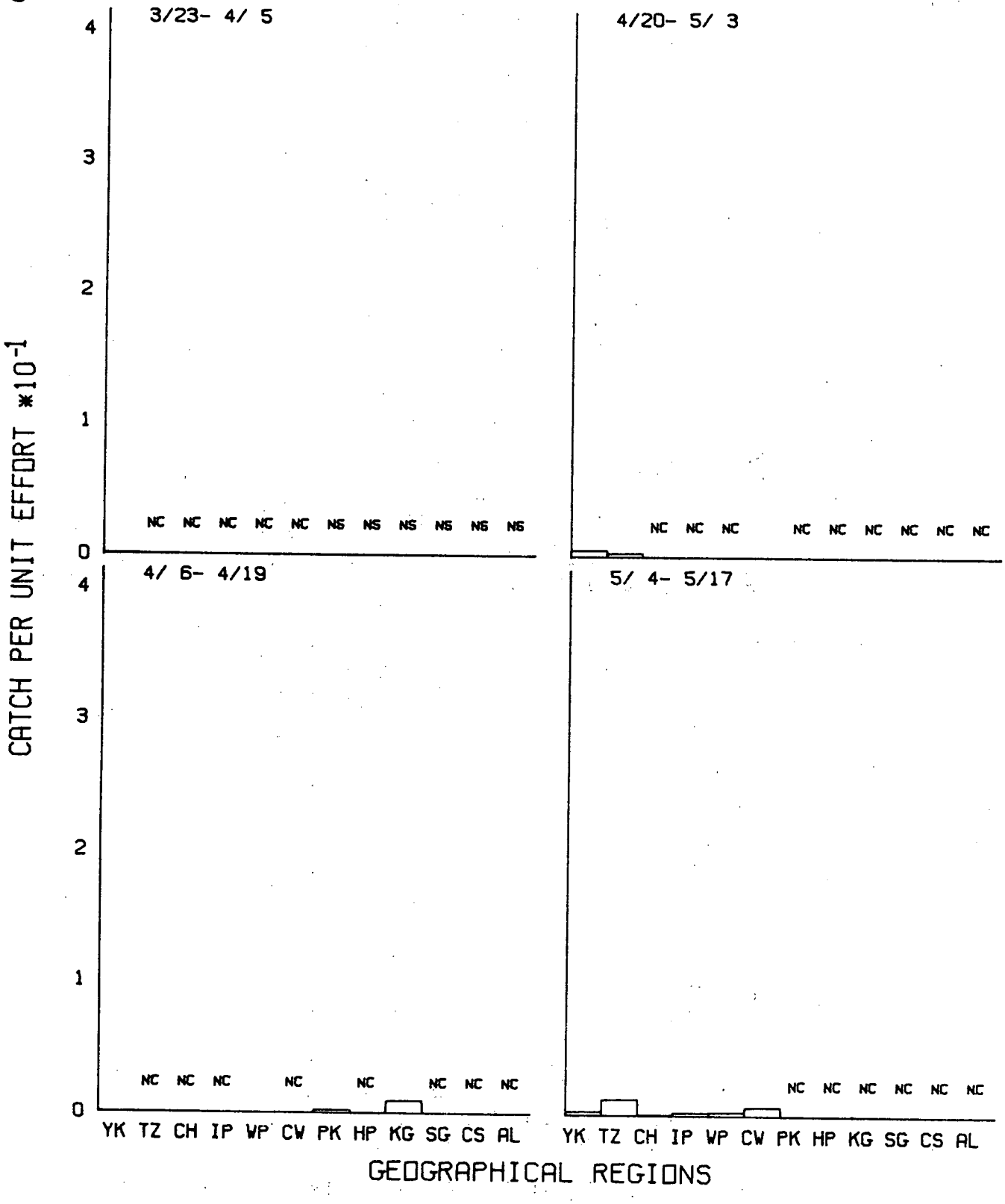
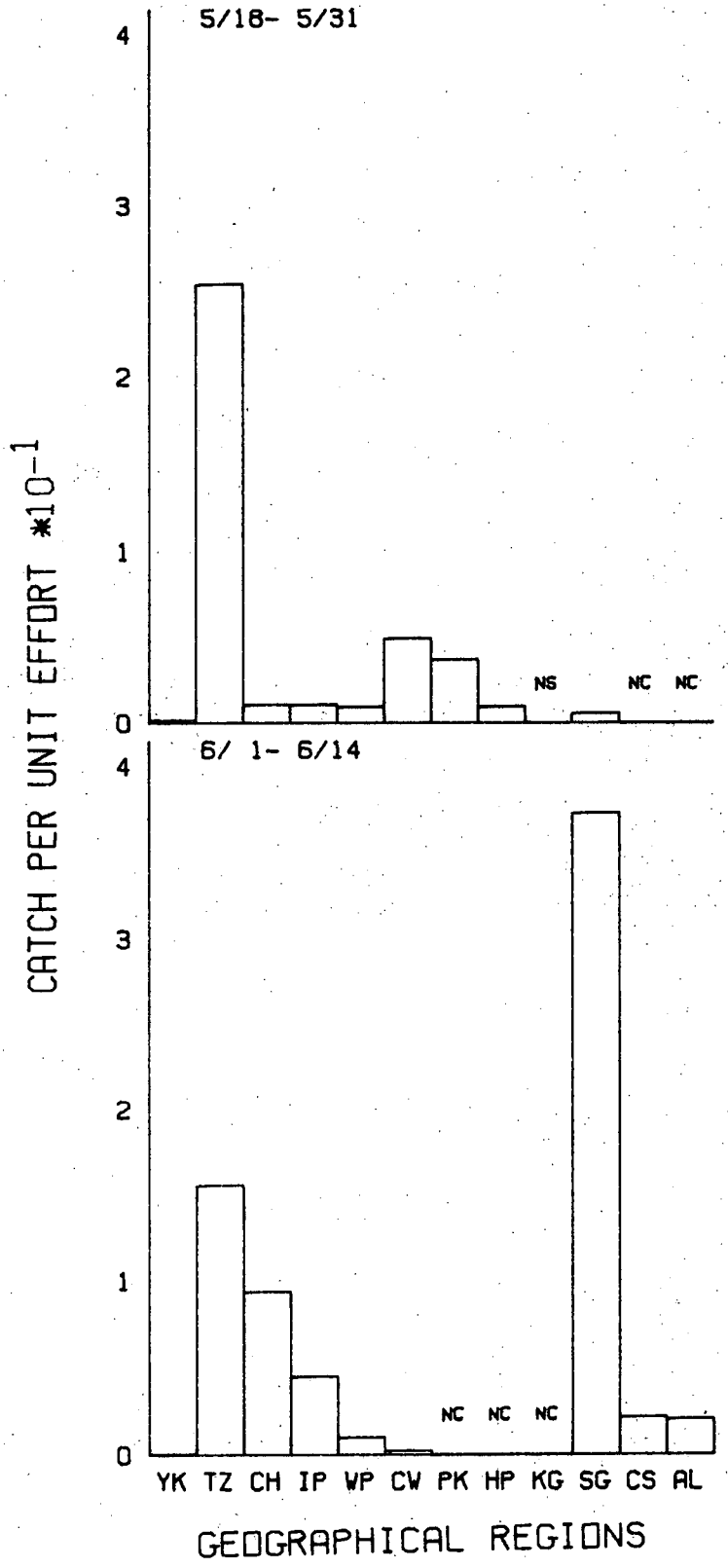


Figure A-23. Yearling White Perch Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, March-June 1975. (Histograms based on data in Table A-76) (Page 1 of 3)



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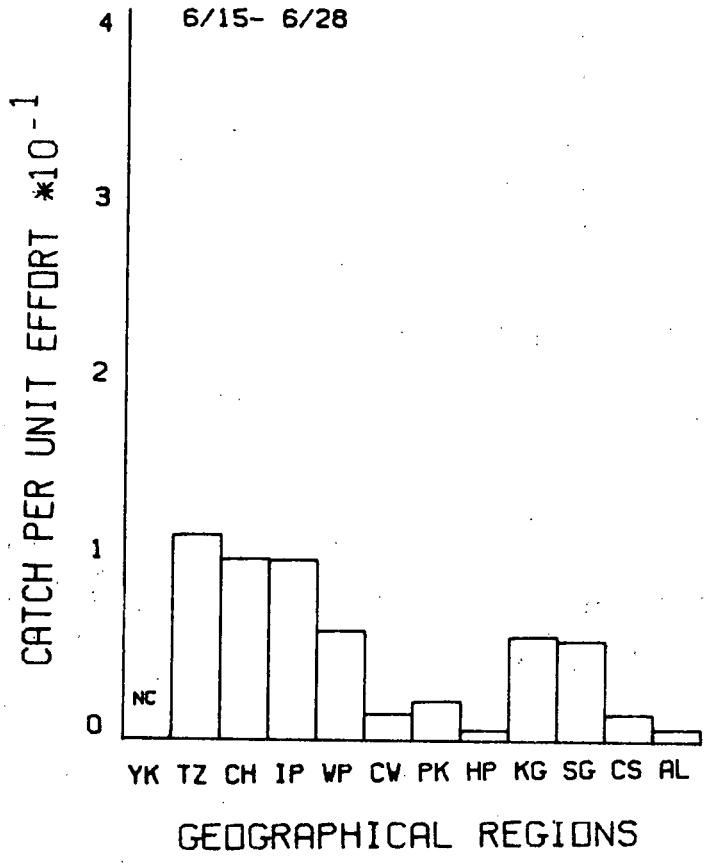

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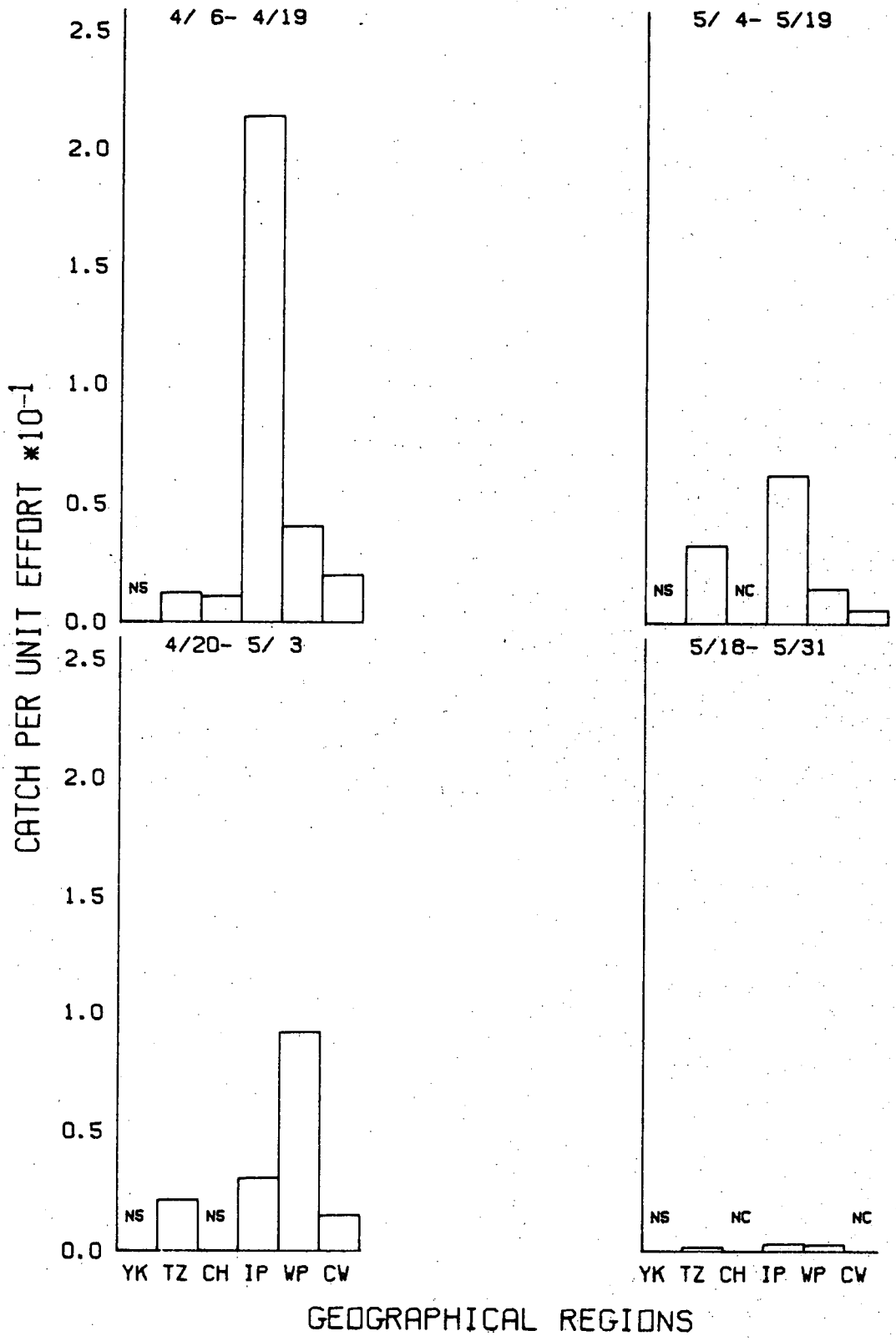
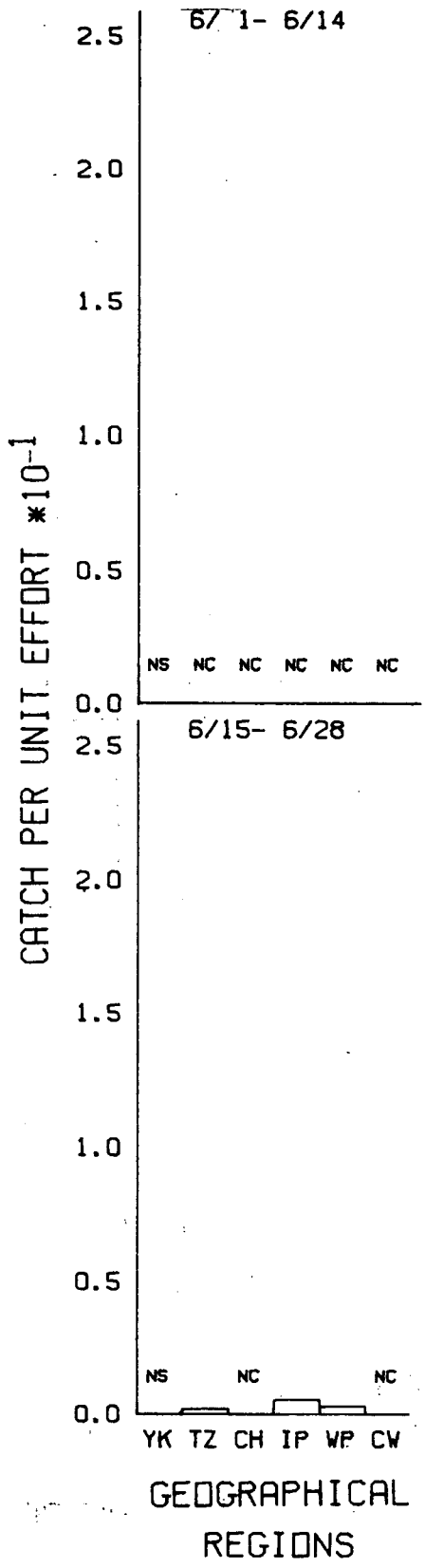


Figure A-24. Yearling White Perch Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975. (Histograms based on data in Table A-80) (Page 1 of 2)



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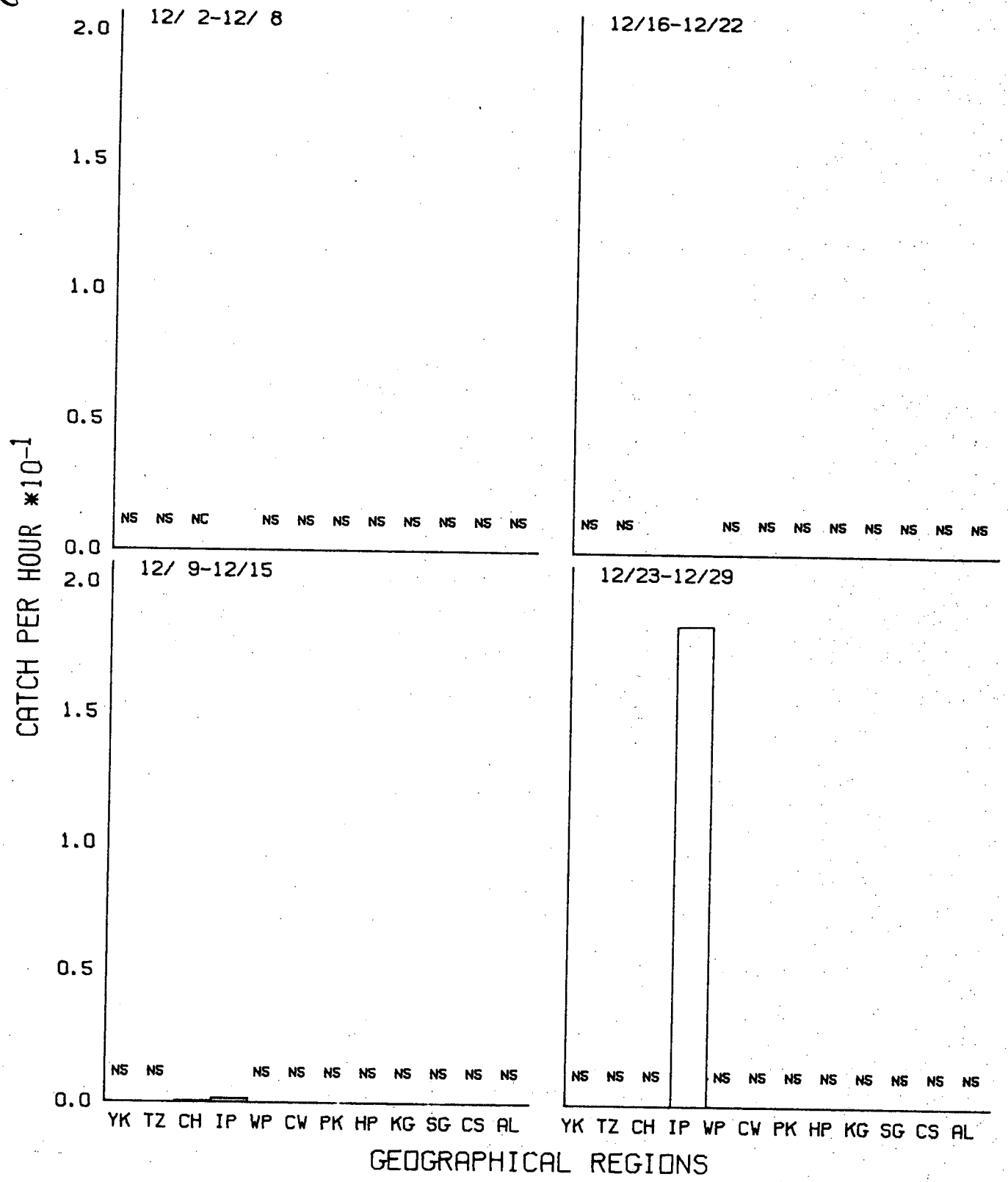
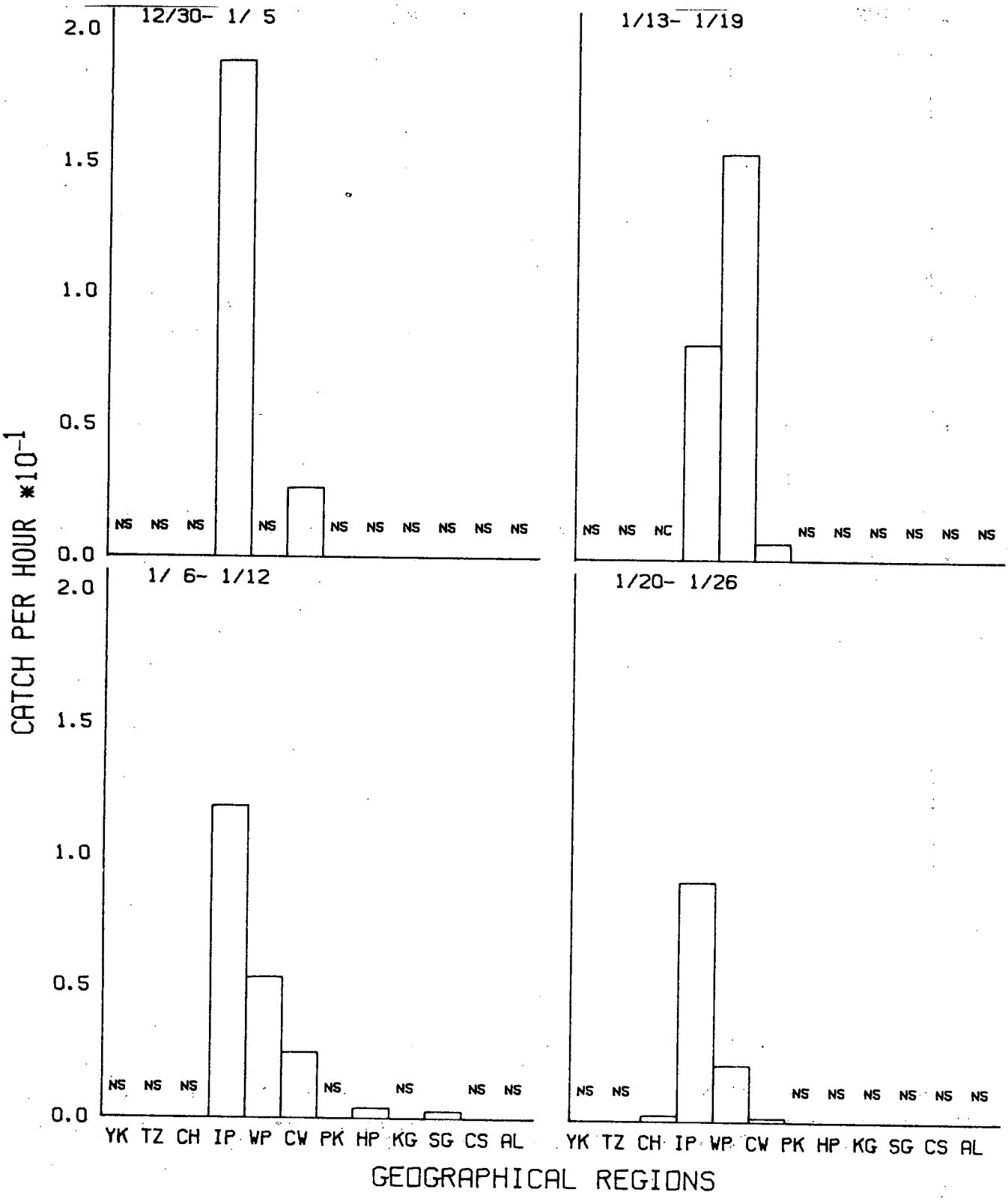


Figure A-25. Atlantic Tomcod Catch per Hour within Six Geographical Regions, Hudson River Estuary [RM 34-106 (KM 54-170)], Based on Day and Night Sampling with Box Traps, December 1973-March 1974. (Histograms based on data in Table A-82) (Page 1 of 5)



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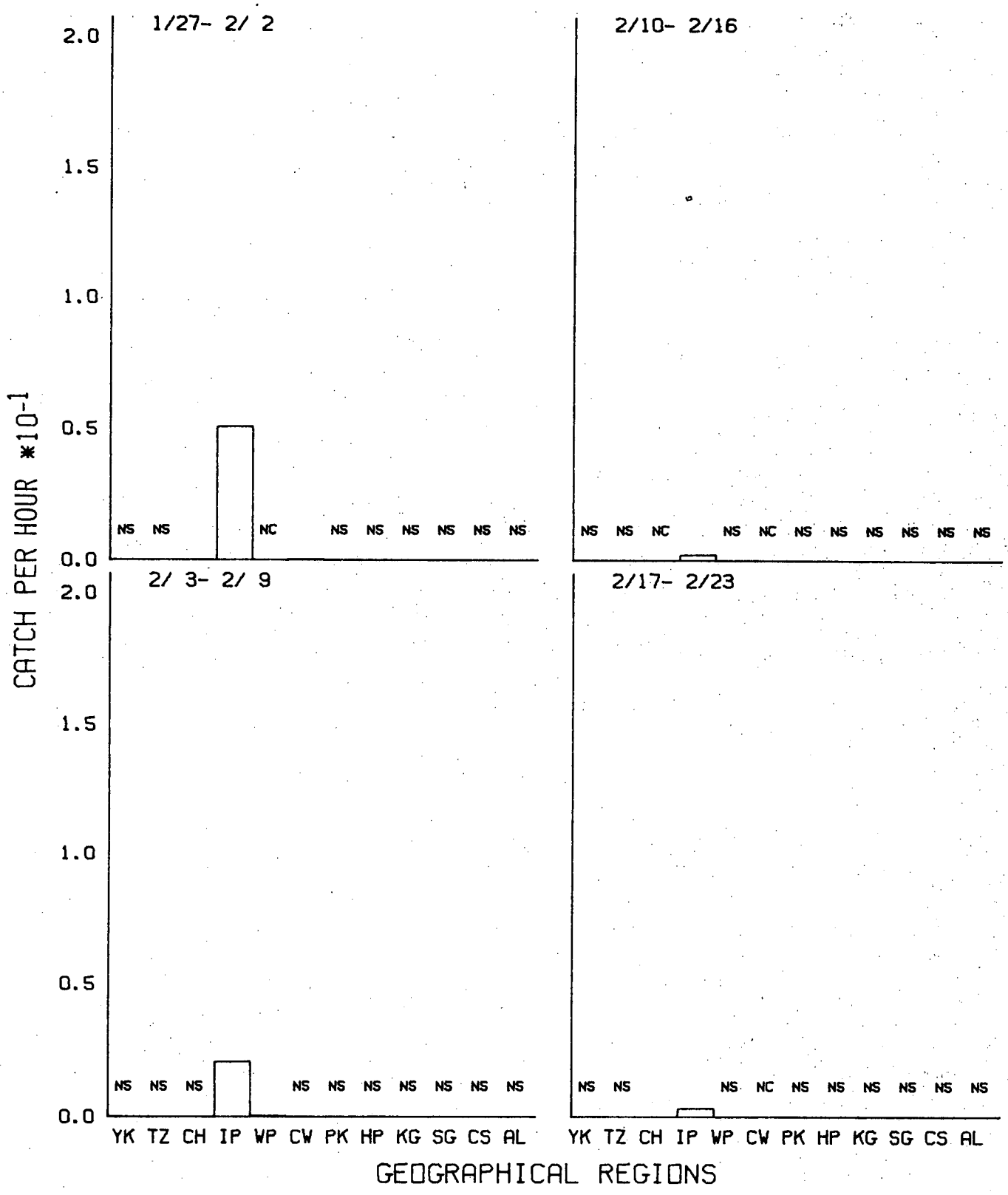

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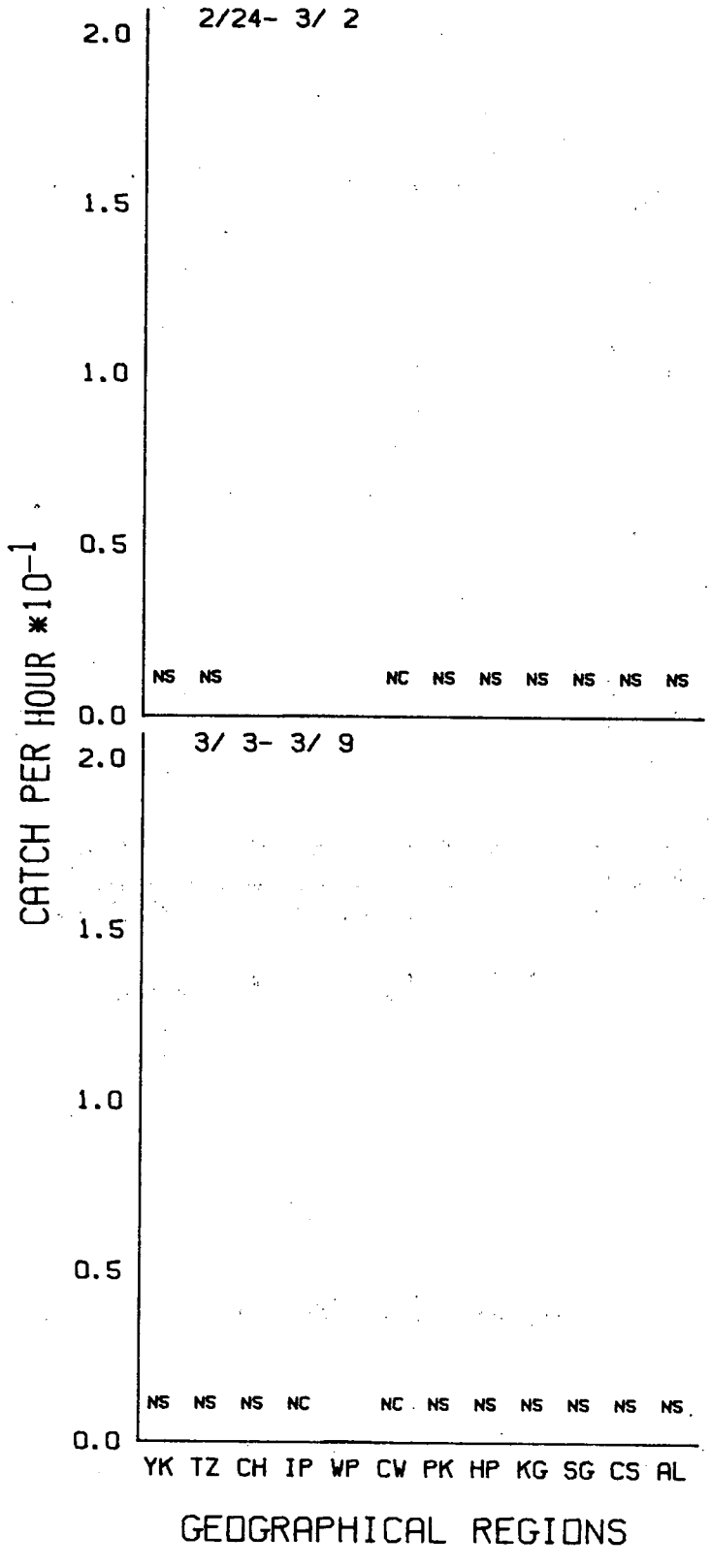

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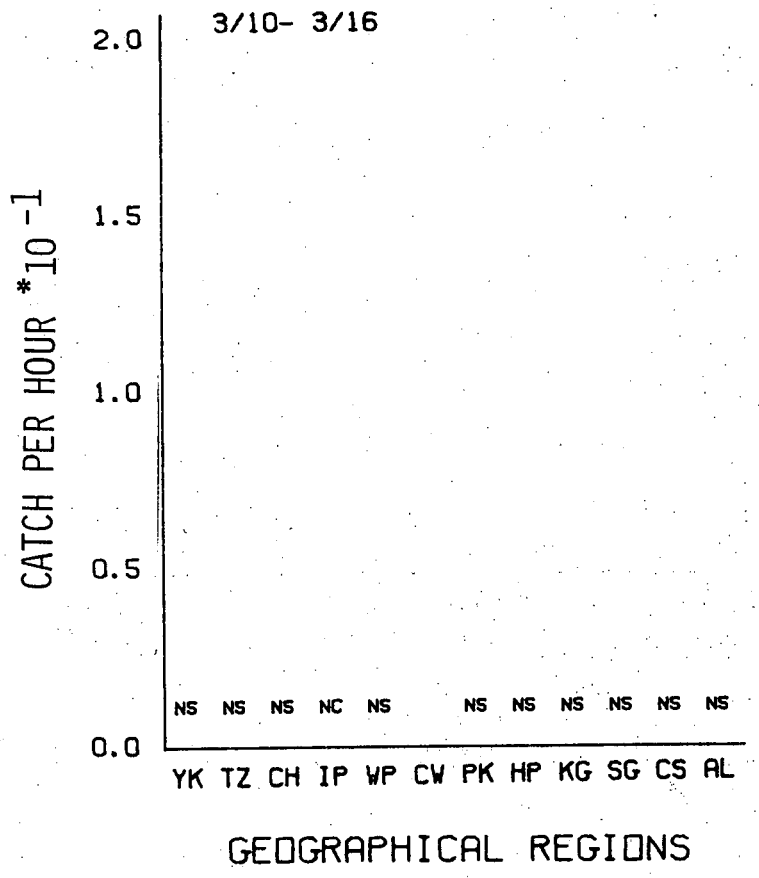

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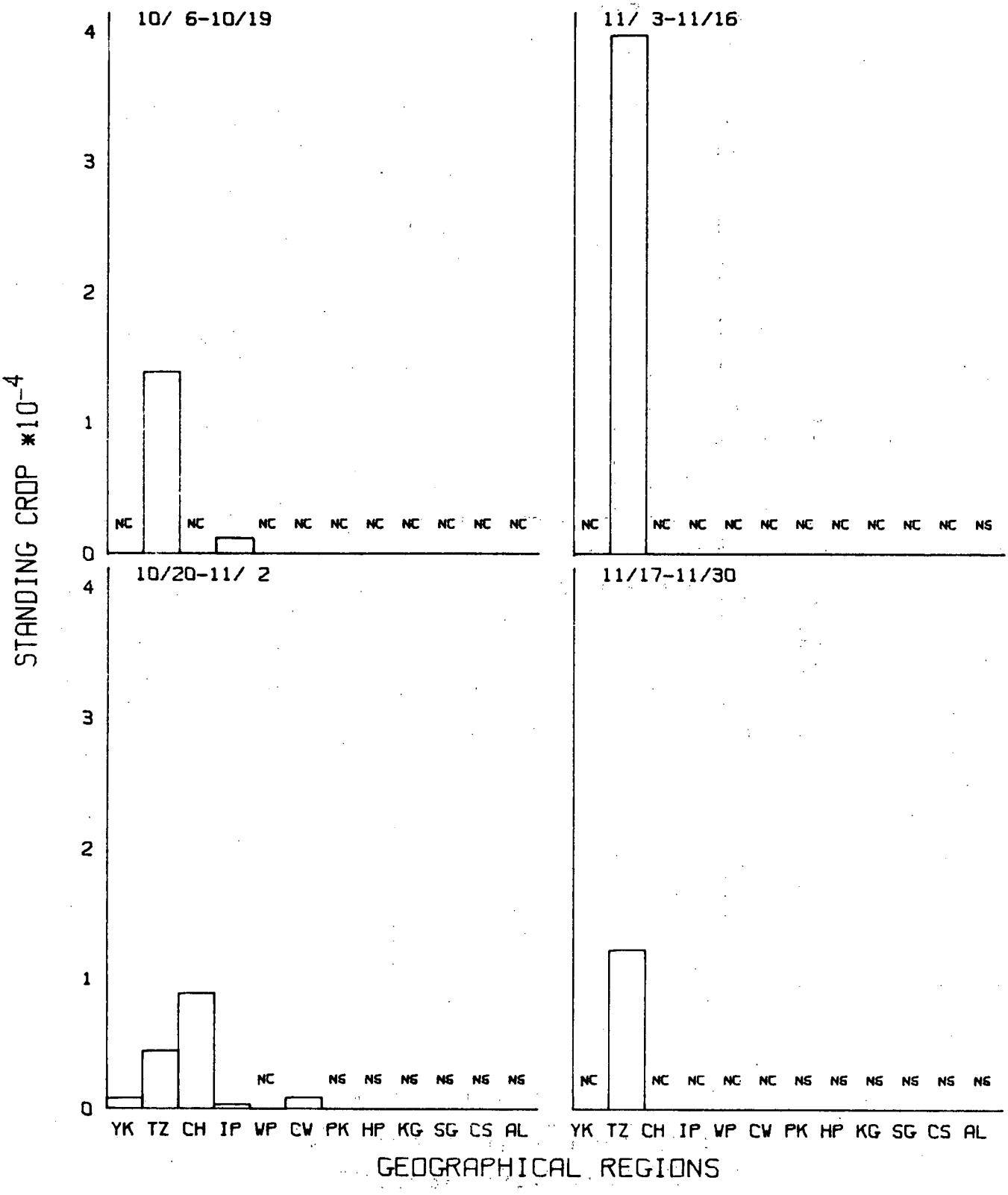


Figure A-26. Juvenile Atlantic Tomcod Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, October-November 1974. (Histograms based on data in Table A-52)

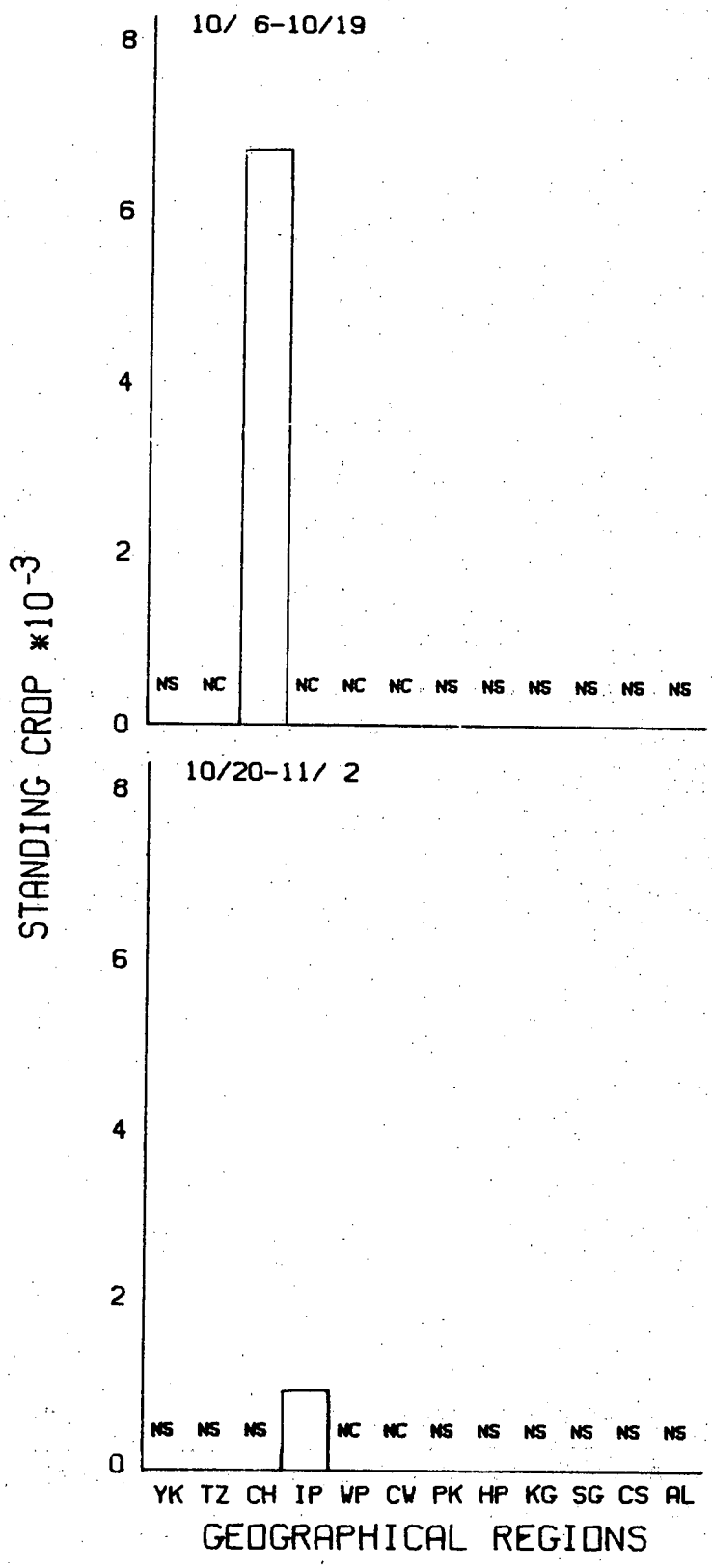


Figure A-27. Juvenile Atlantic Tomcod Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, October 1974. (Histograms based on data in Table A-53)

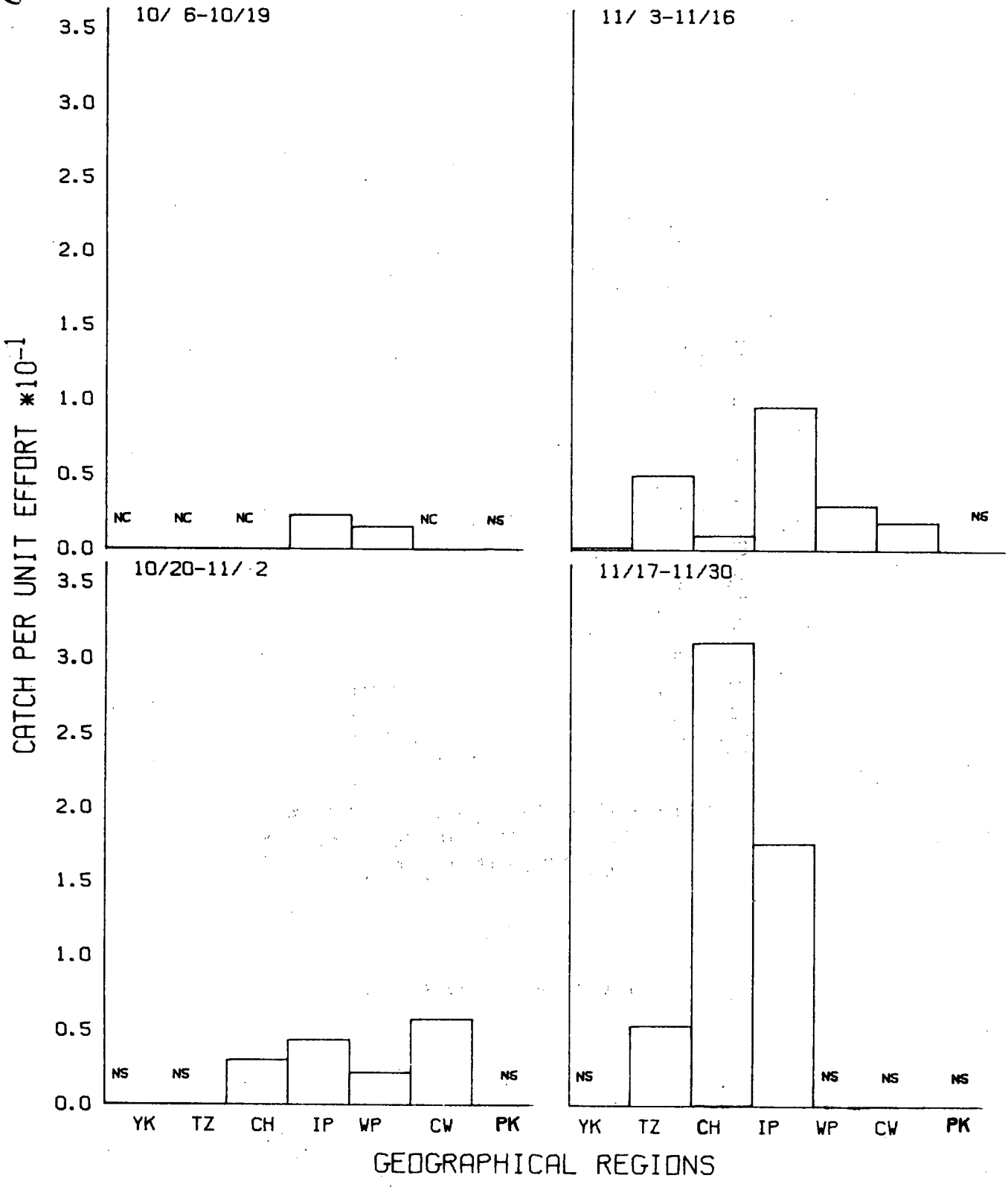


Figure A-28. Juvenile Atlantic Tomcod Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-30) (Page 1 of 2)

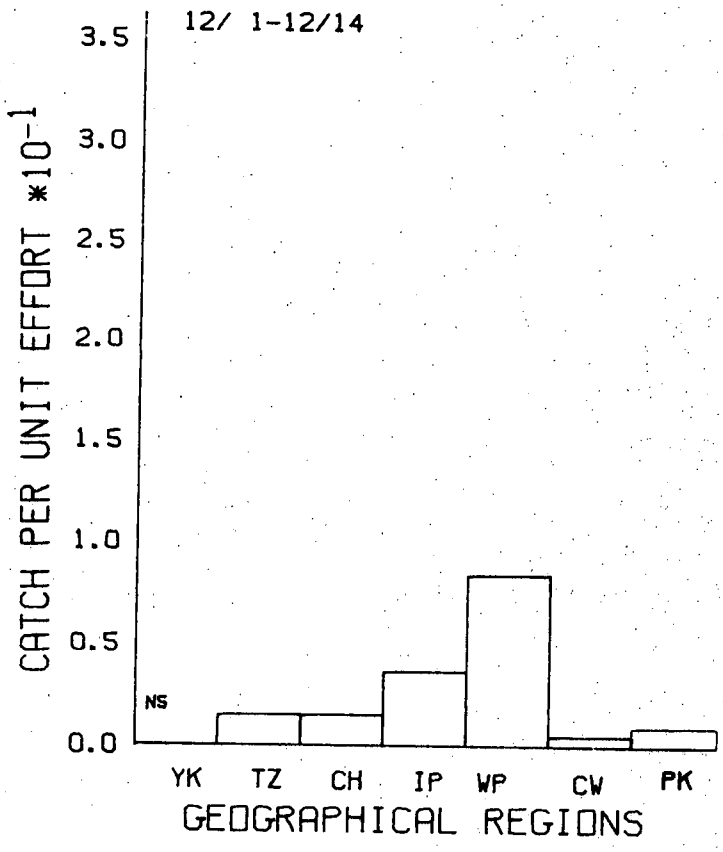


Figure A-28. (Page 2 of 2)

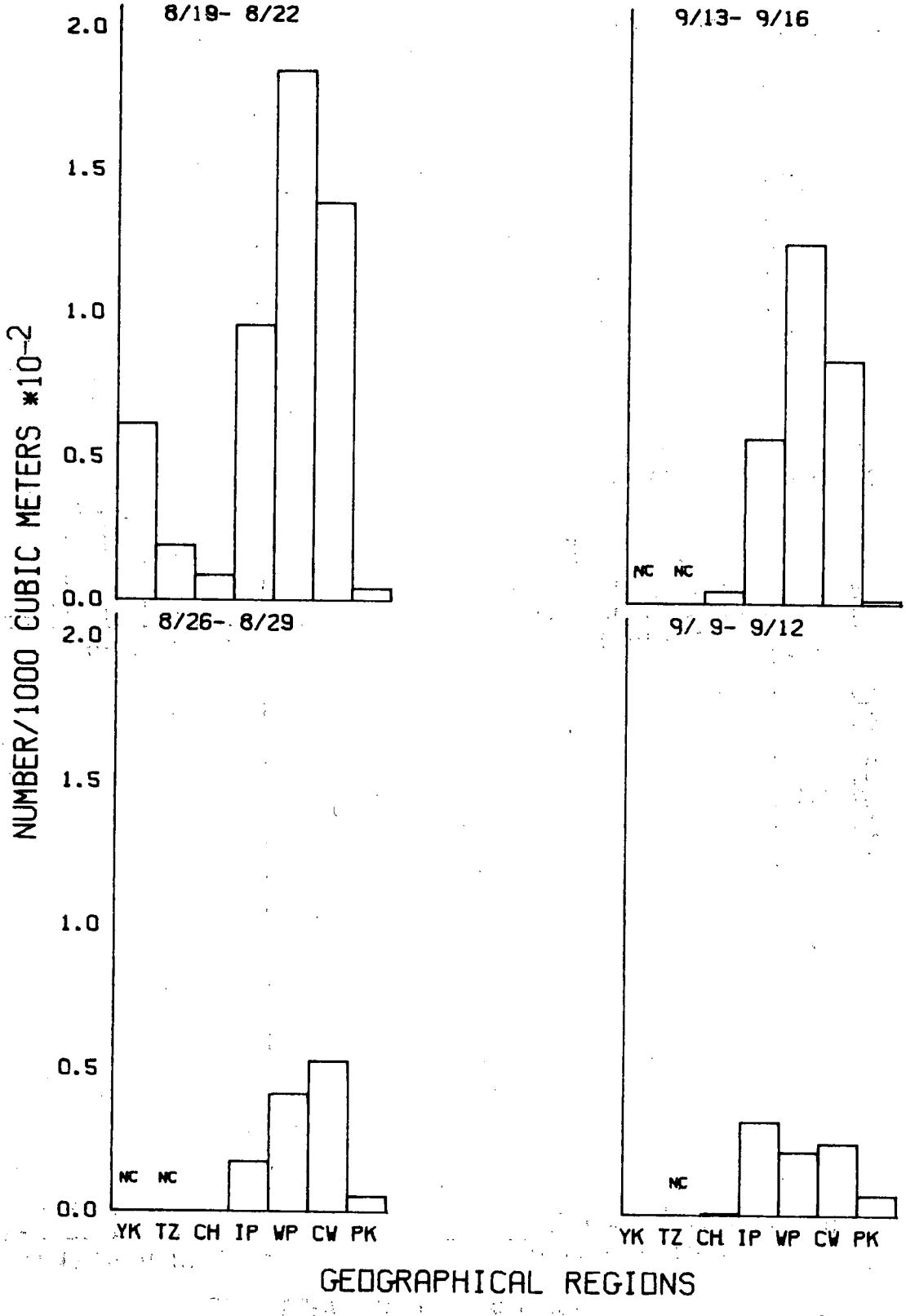
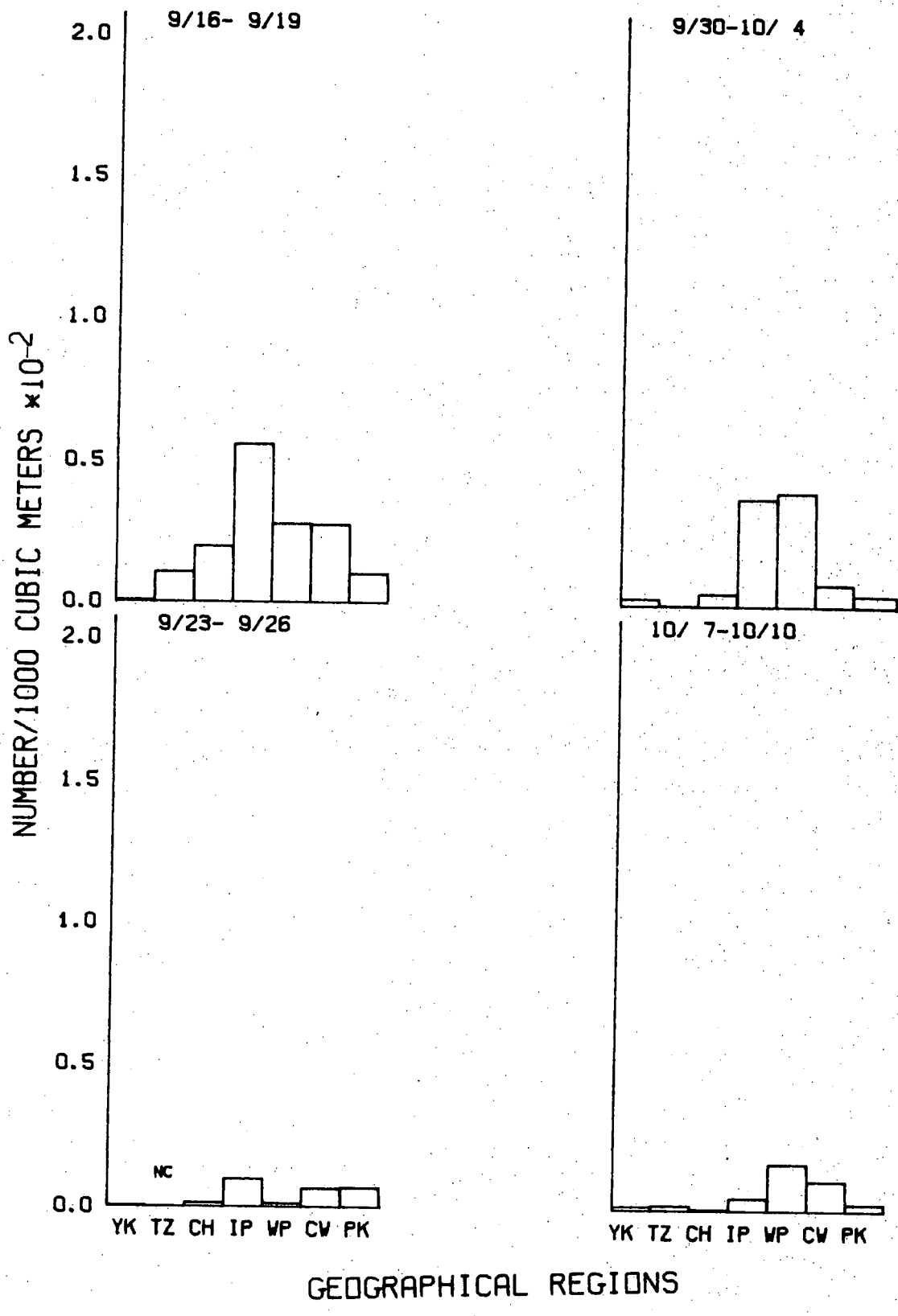


Figure A-29. Juvenile Atlantic Tomcod Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-27) (Page 1 of 5)



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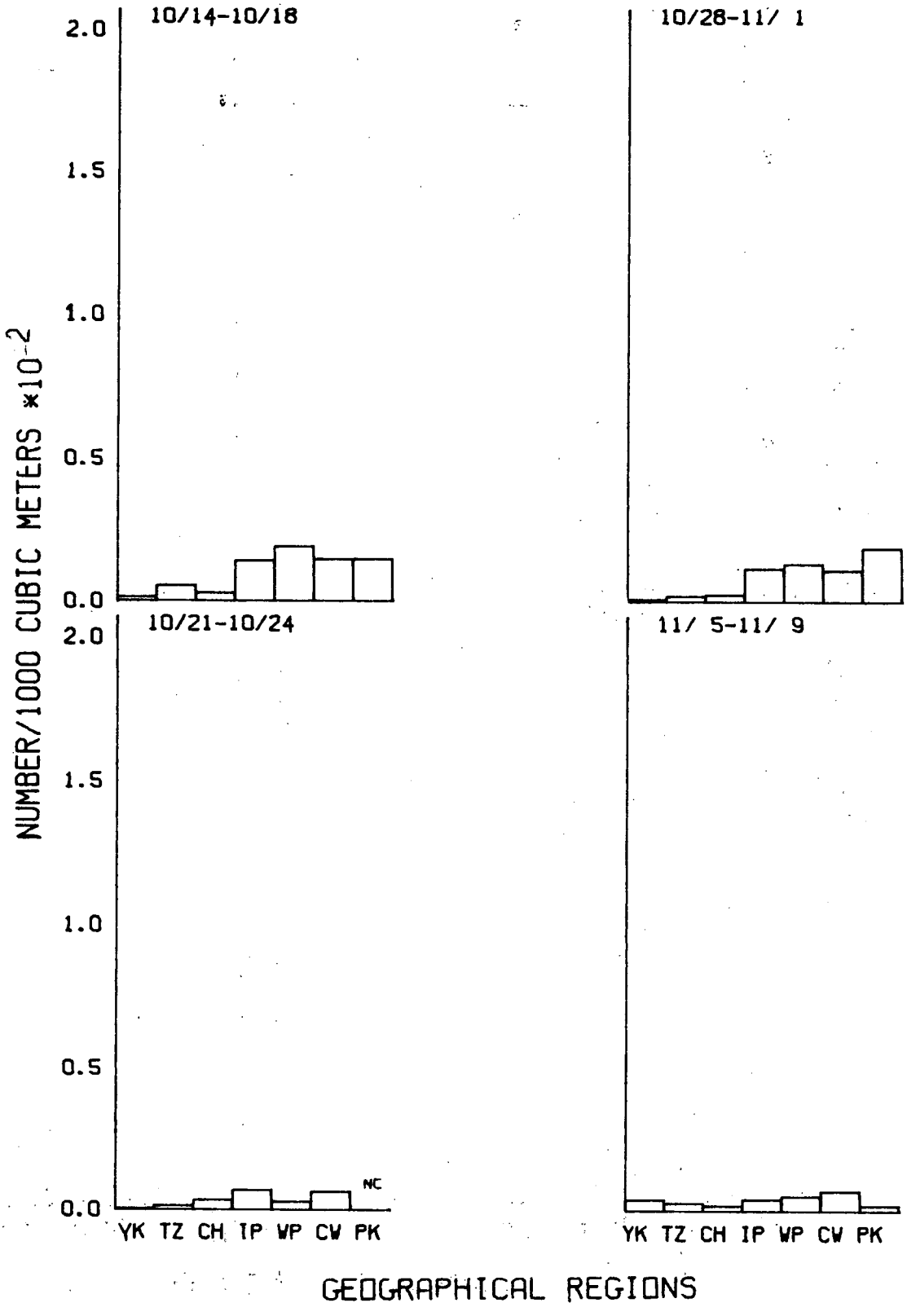

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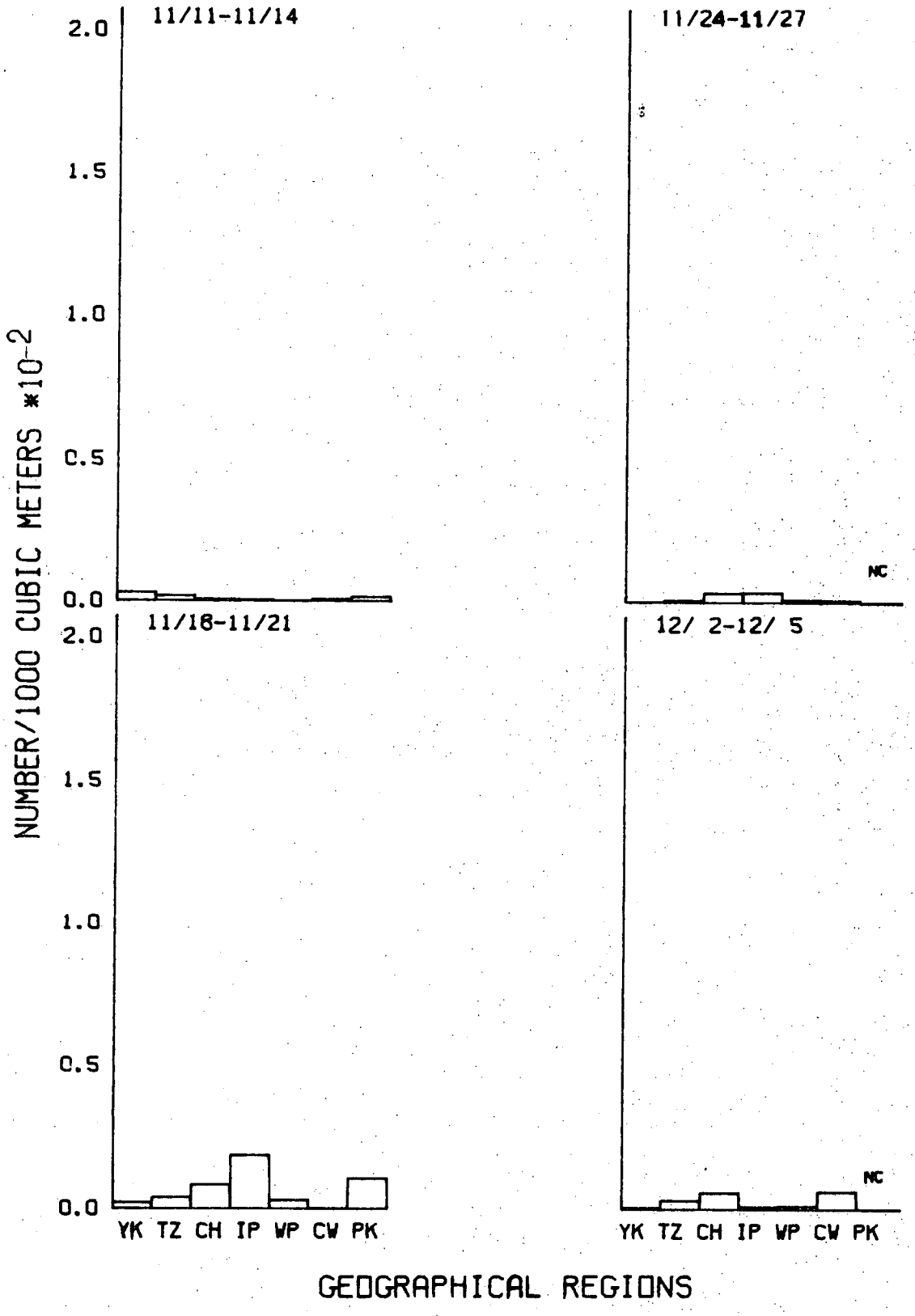

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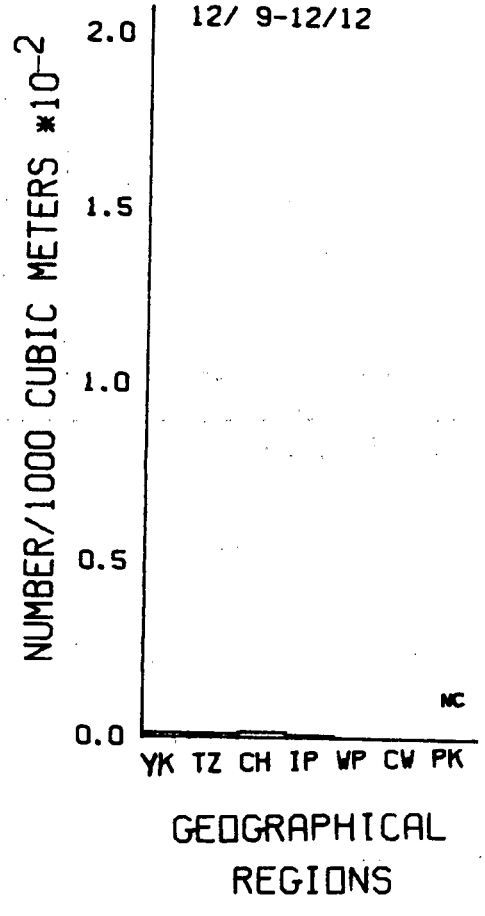

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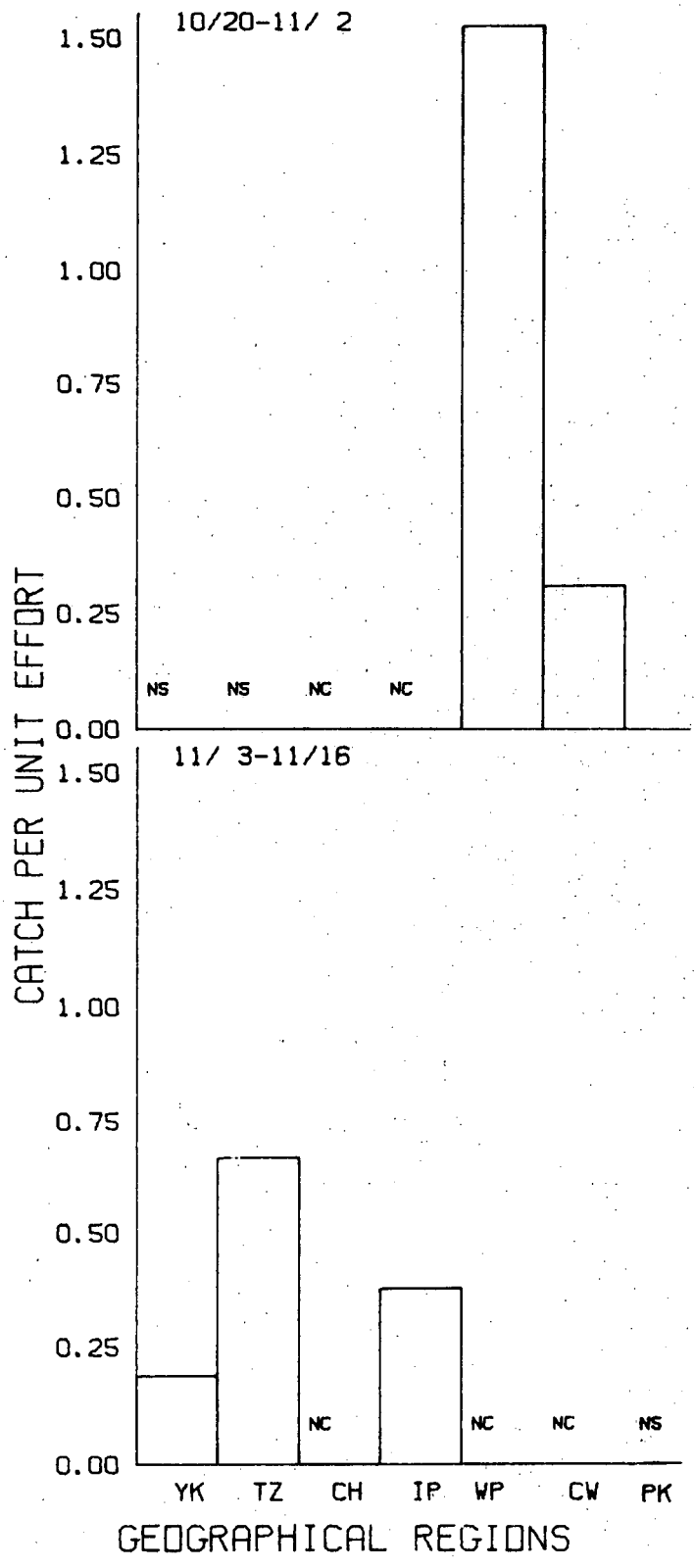


Figure A-30. Yearling and Older Atlantic Tomcod Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), October-December 1974. (Histograms based on data in Table A-34)

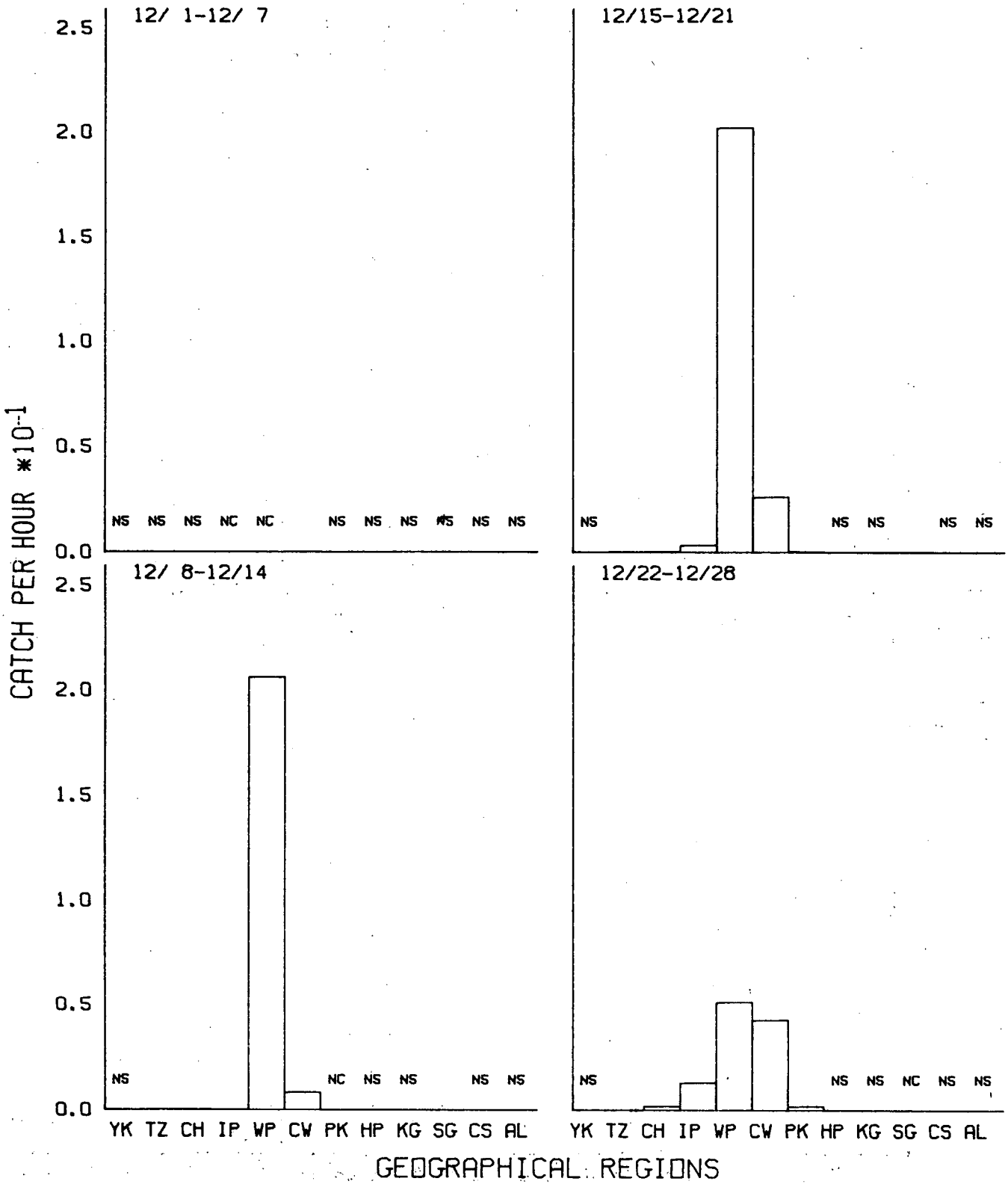
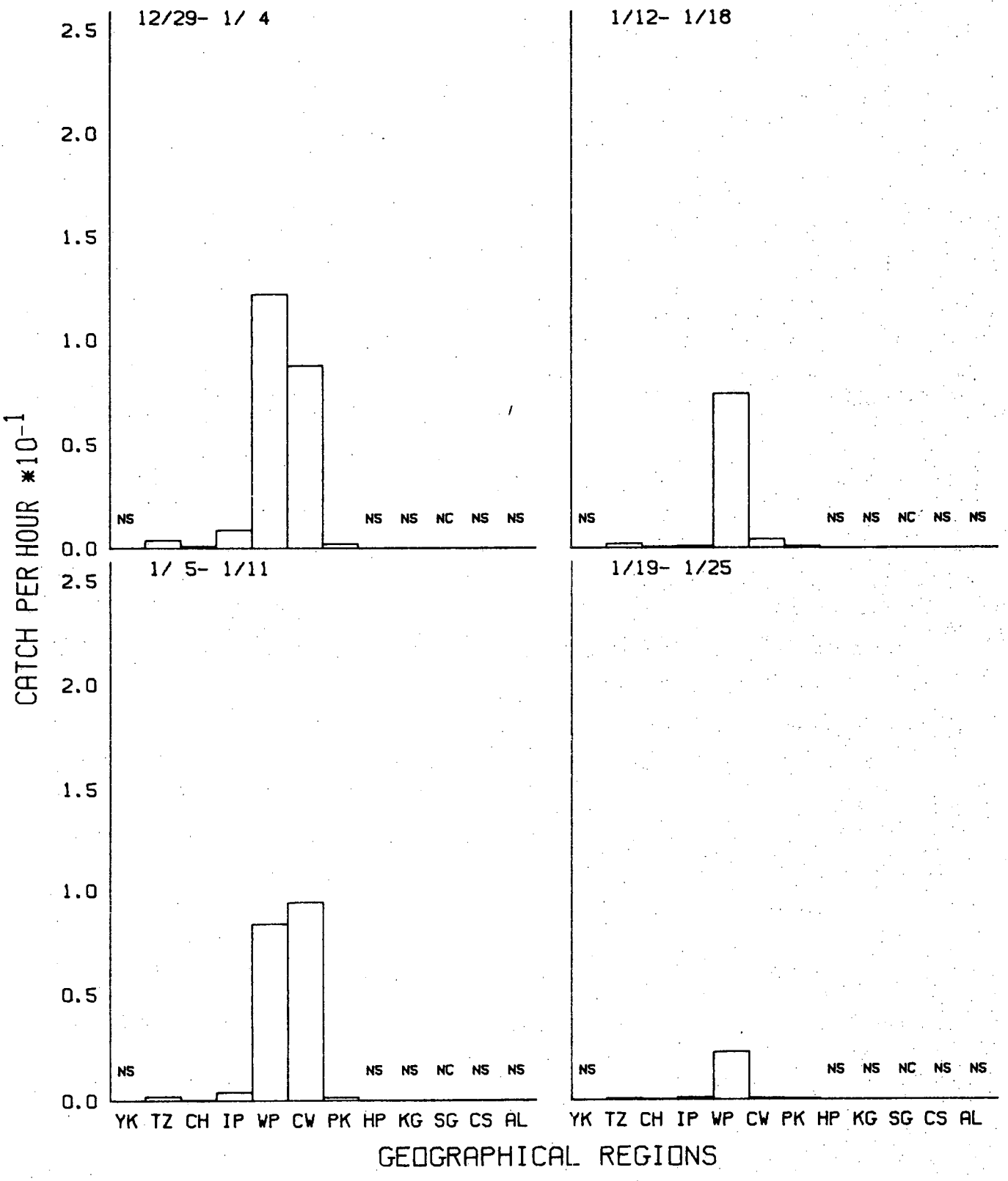


Figure A-31. Atlantic Tomcod Catch per Hour within Seven Geographical Regions, Hudson River Estuary [RM 24-106 (KM 38-170)], Based on Day and Night Sampling with Box Traps, December 1974-March 1975. (Histograms based on data in Table A-83) (Page 1 of 4)



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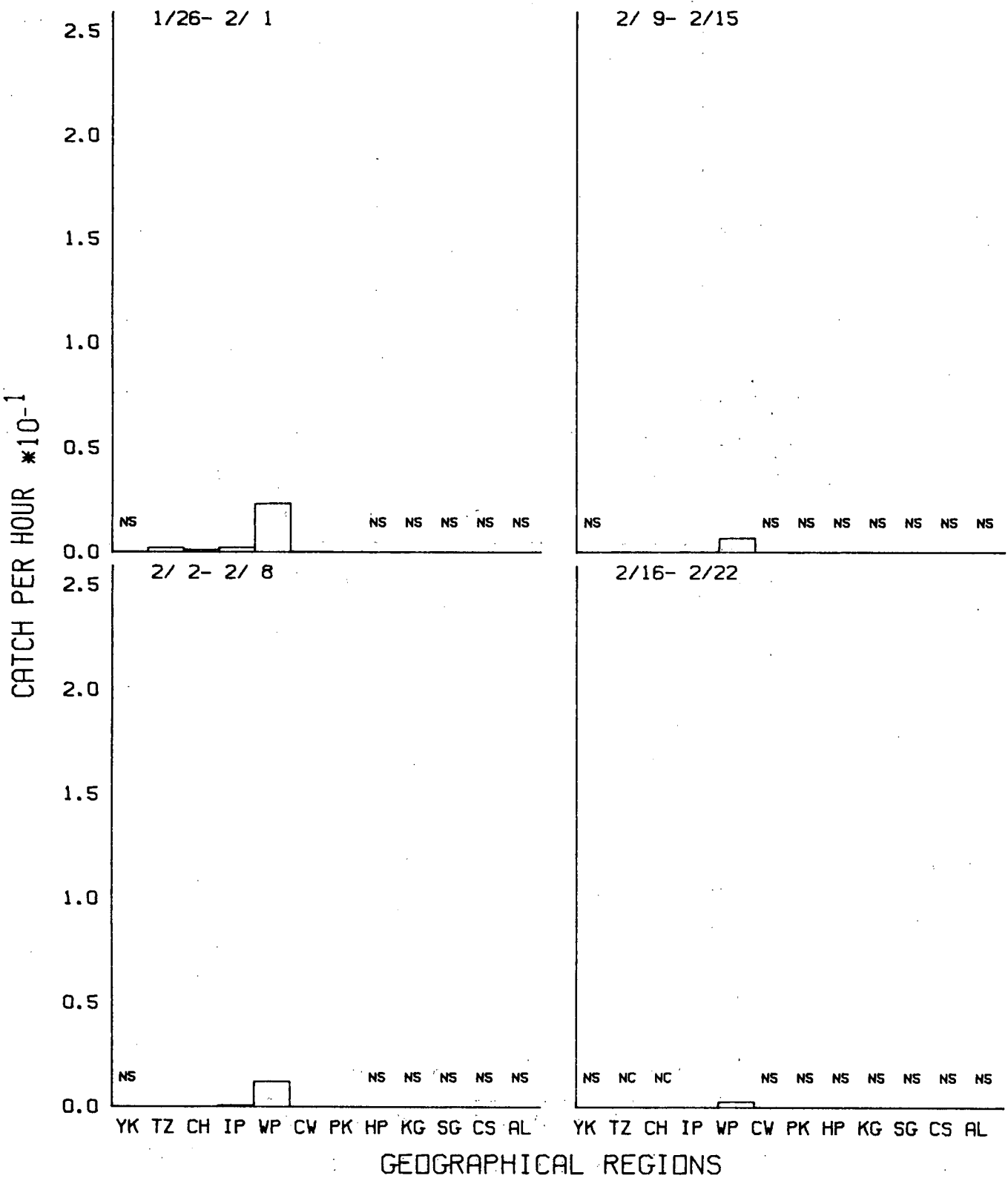

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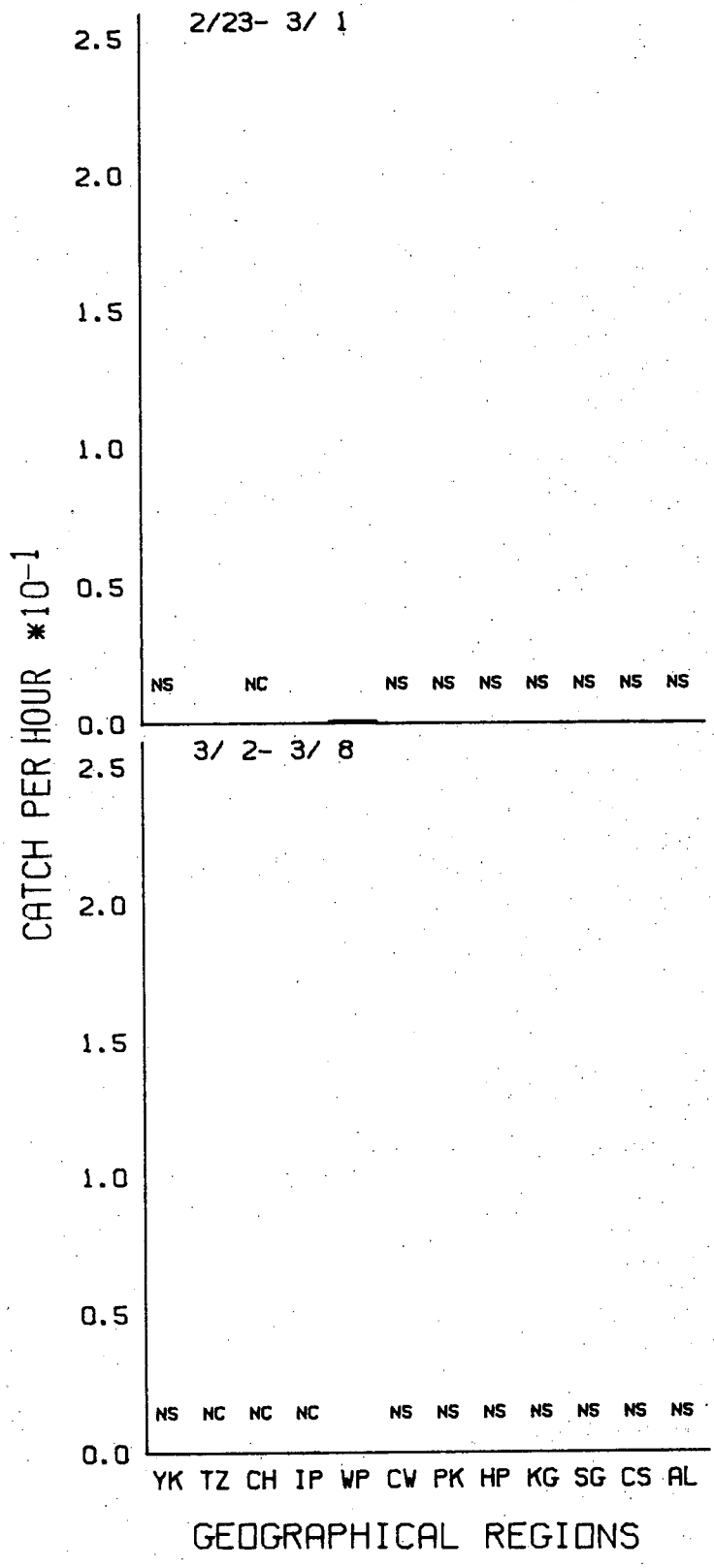

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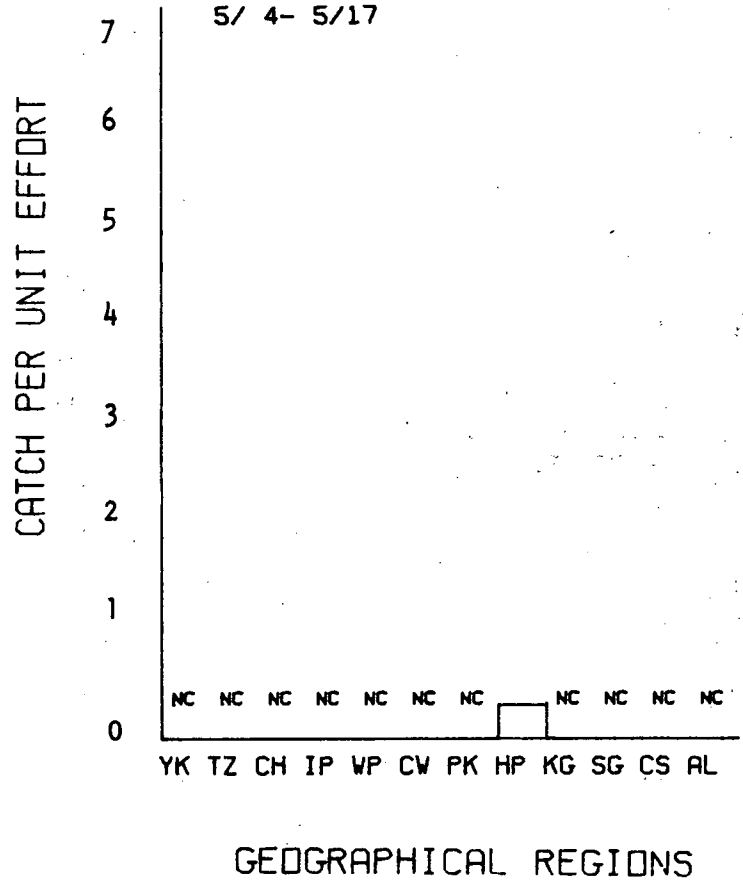


Figure A-32. Yearling and Older Atlantic Tomcod Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, May 1975. (Histograms based on data in Table A-77)

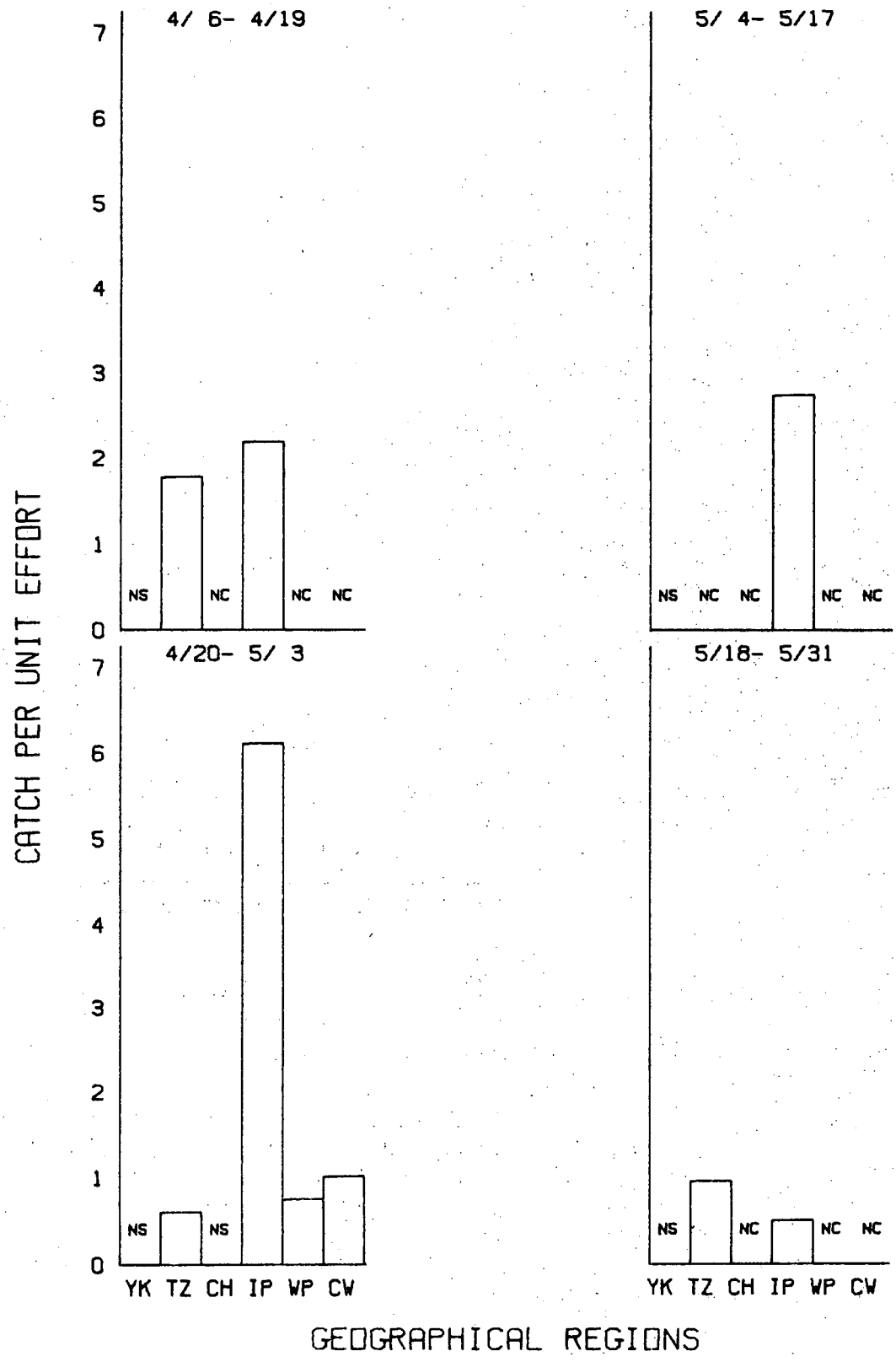
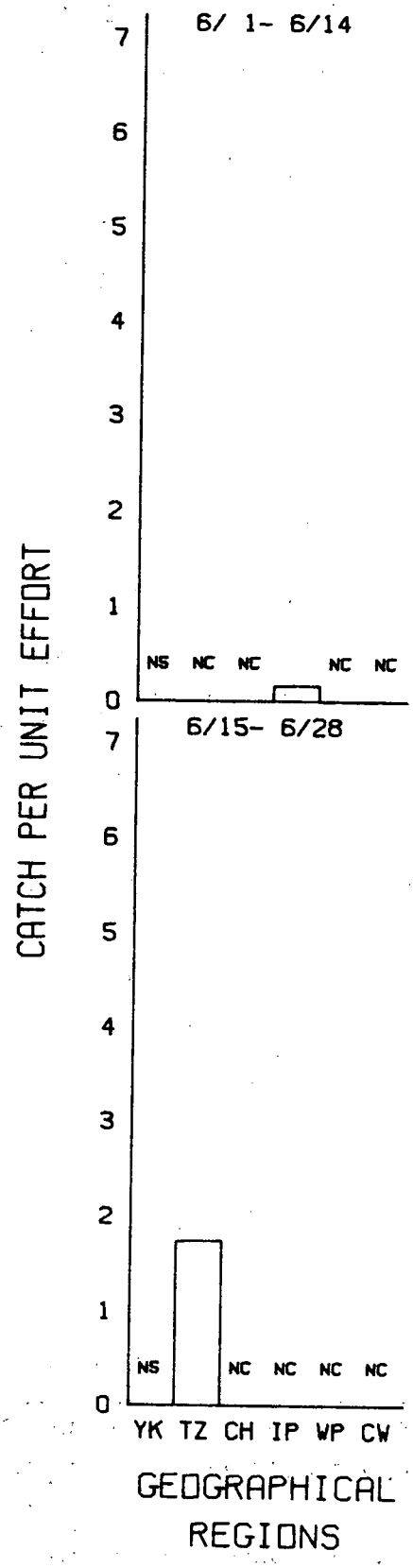


Figure A-33. Yearling and Older Atlantic Tomcod Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38 98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-June 1975. (Histograms based on data in Table A-81) (Page 1 of 2)



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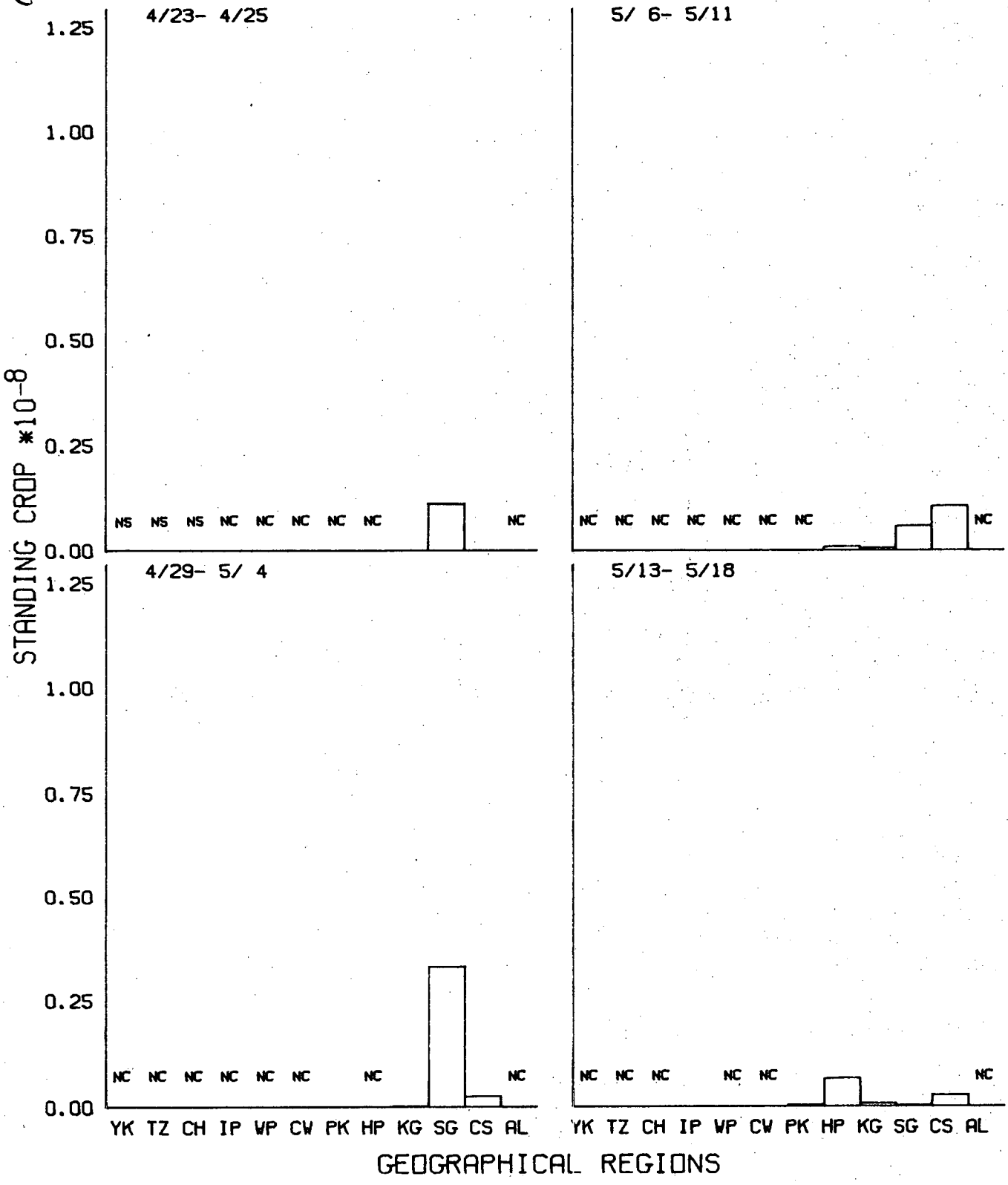
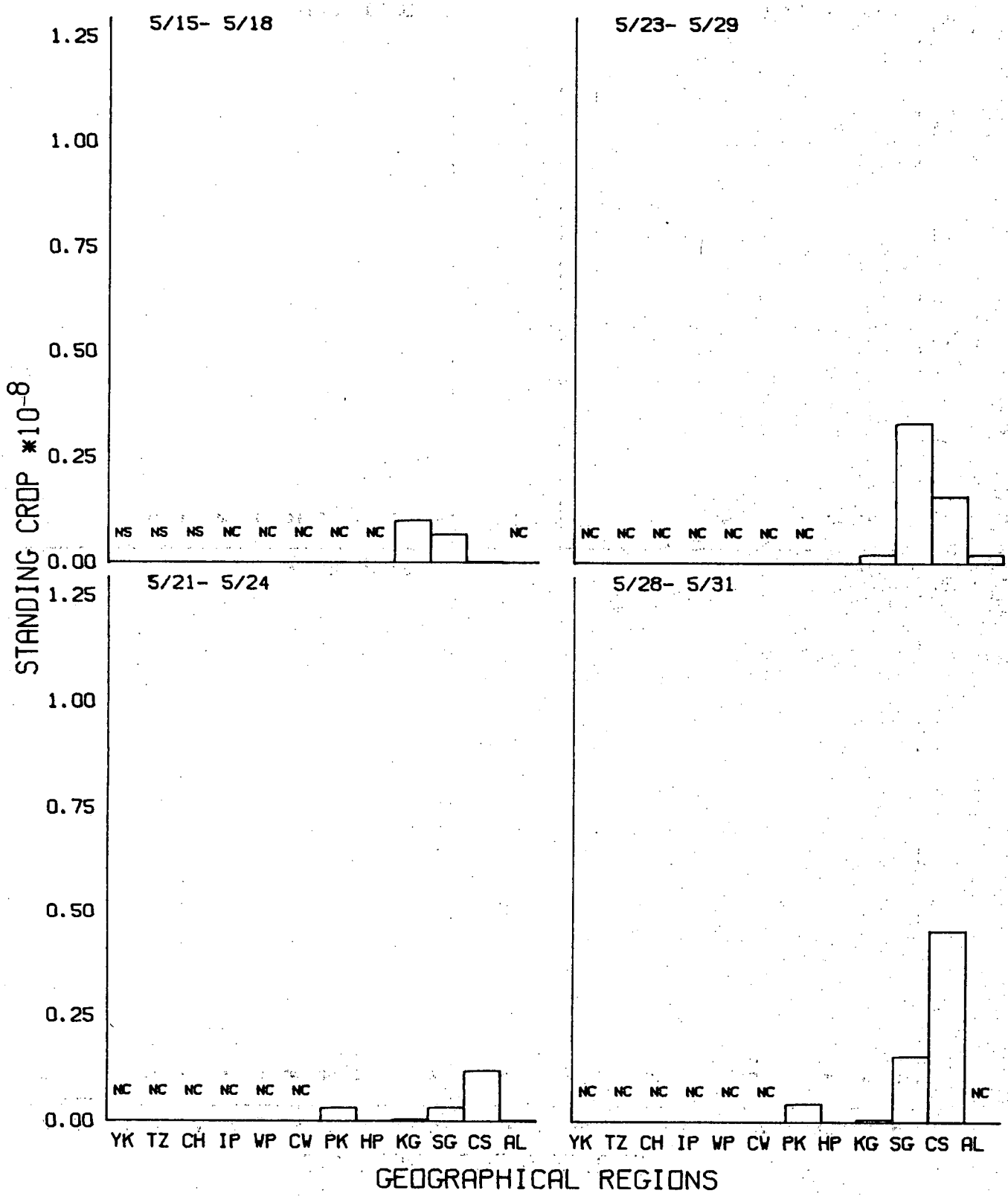


Figure A-34. American Shad Egg Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, April-June 1974. (Histograms based on data in Table A-54) (Page 1 of 4)



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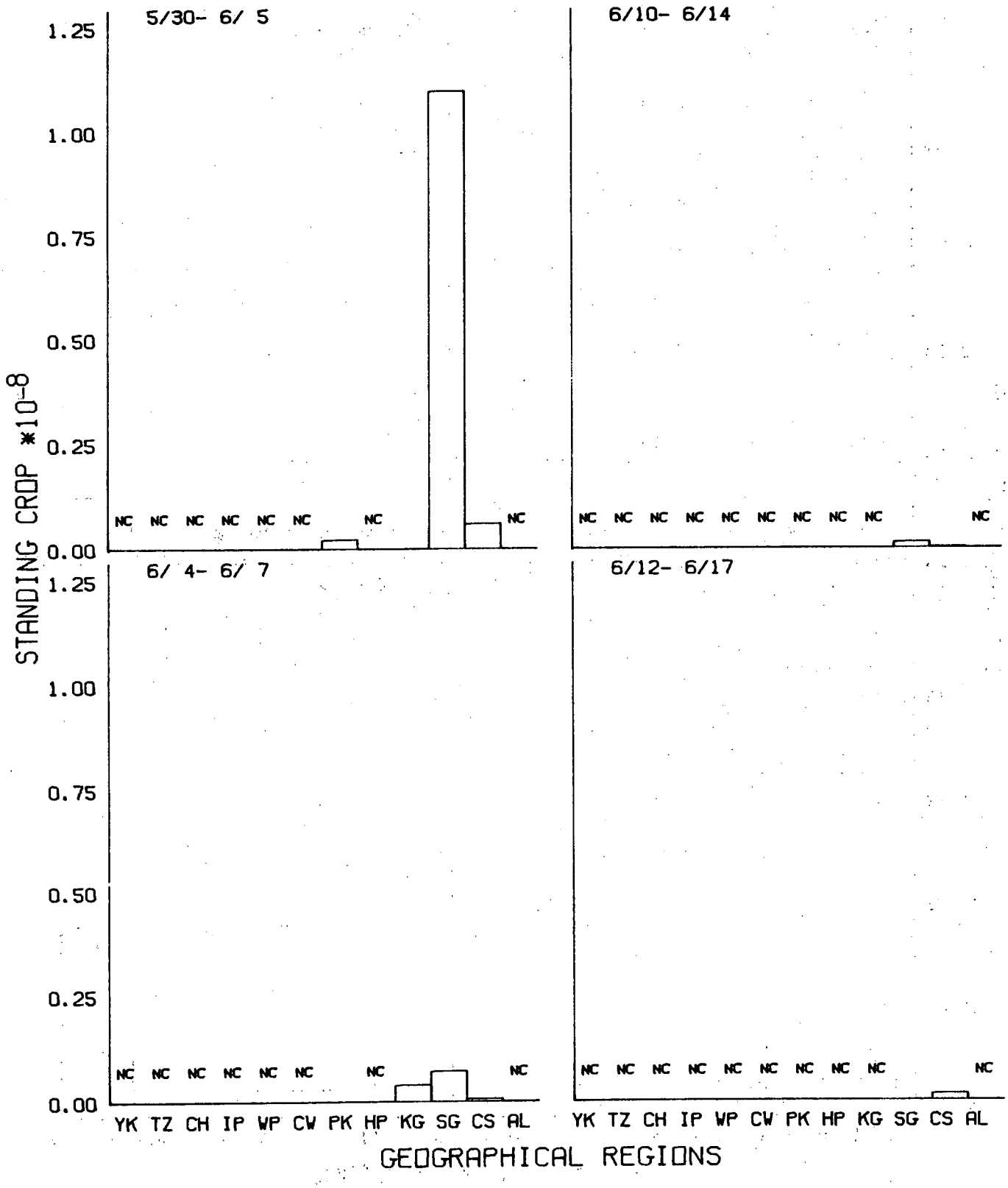

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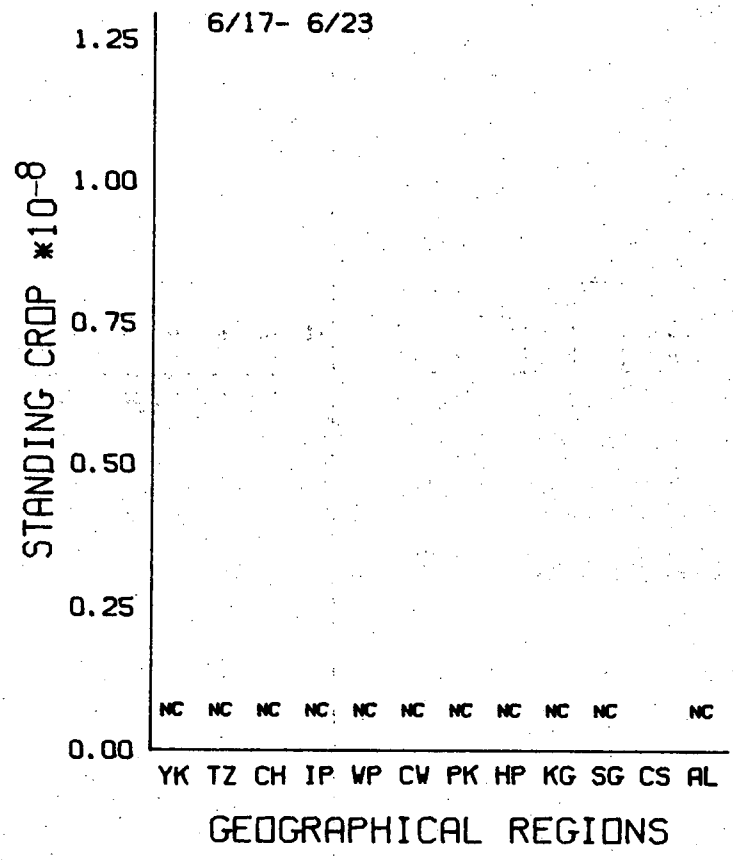

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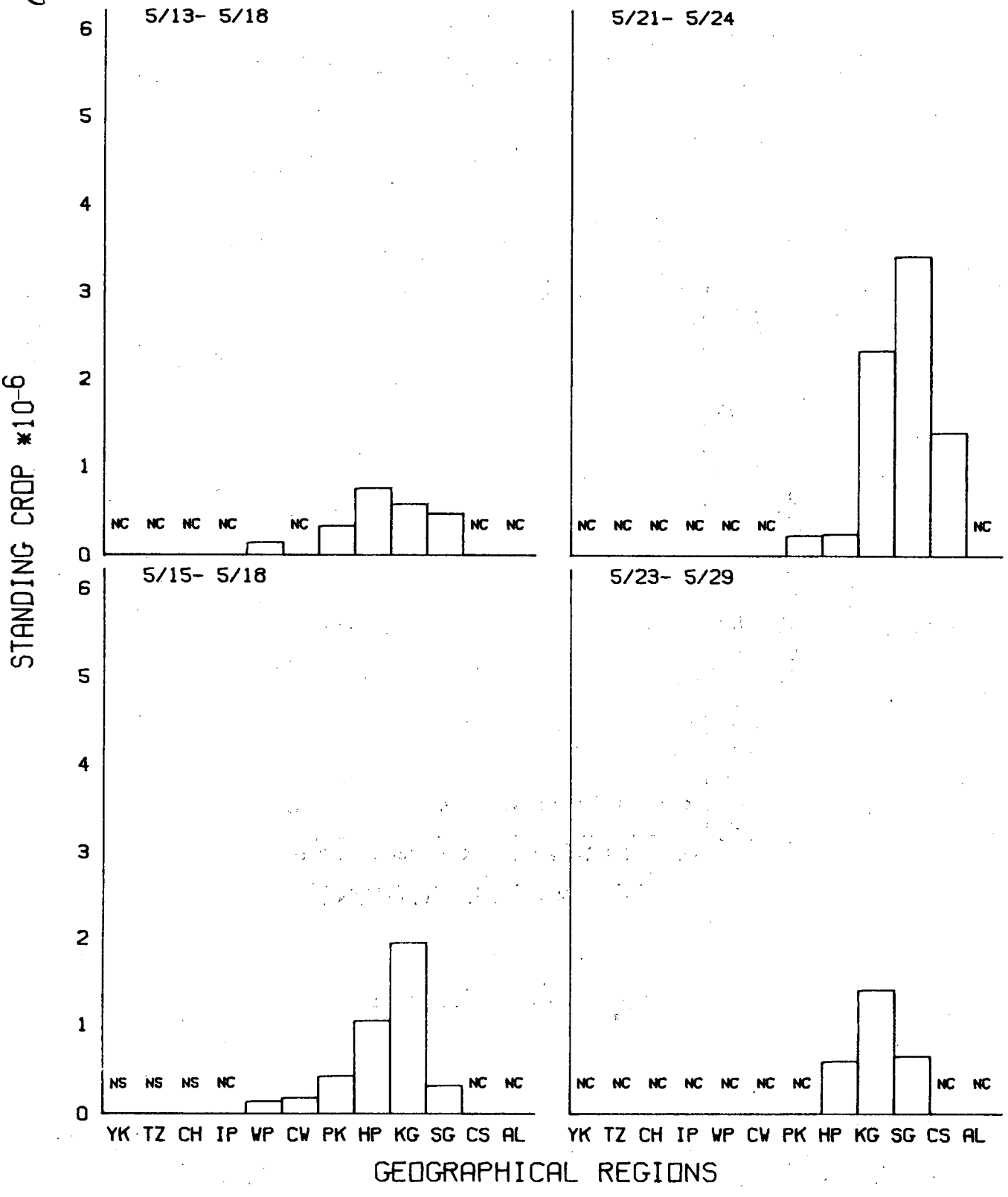
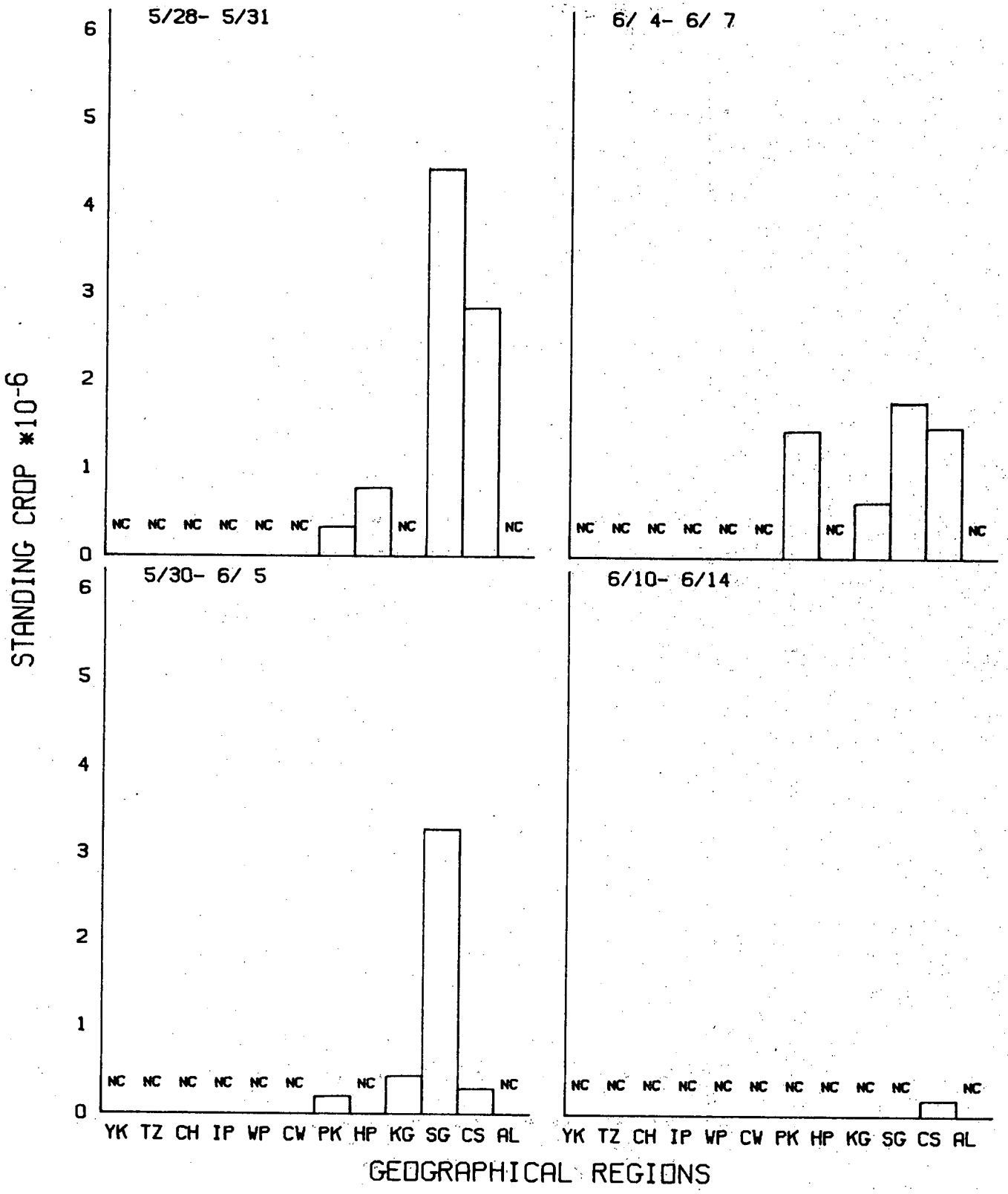


Figure A-35. American Shad Yolk-Sac Larvae Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-June 1974. (Histograms based on data in Table A-55) (Page 1 of 3)



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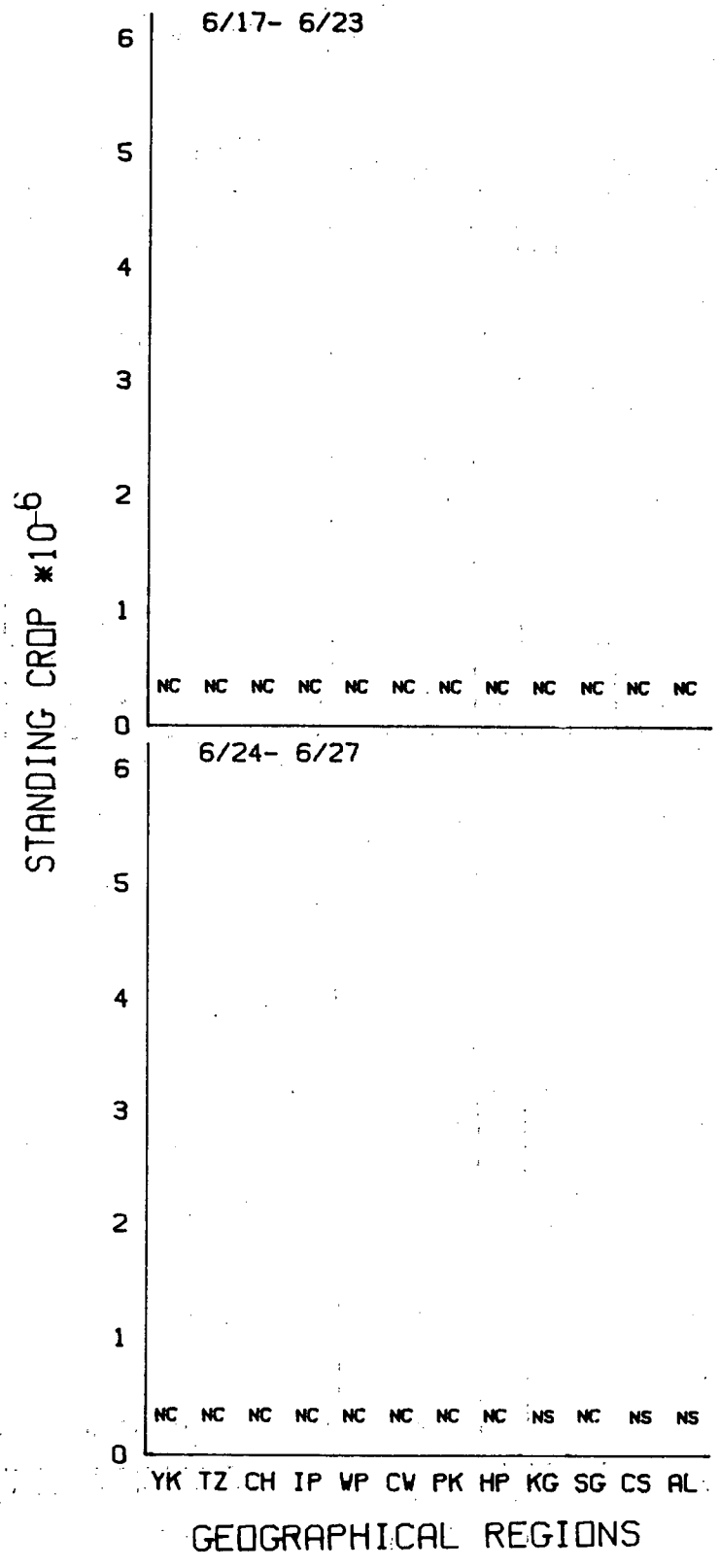

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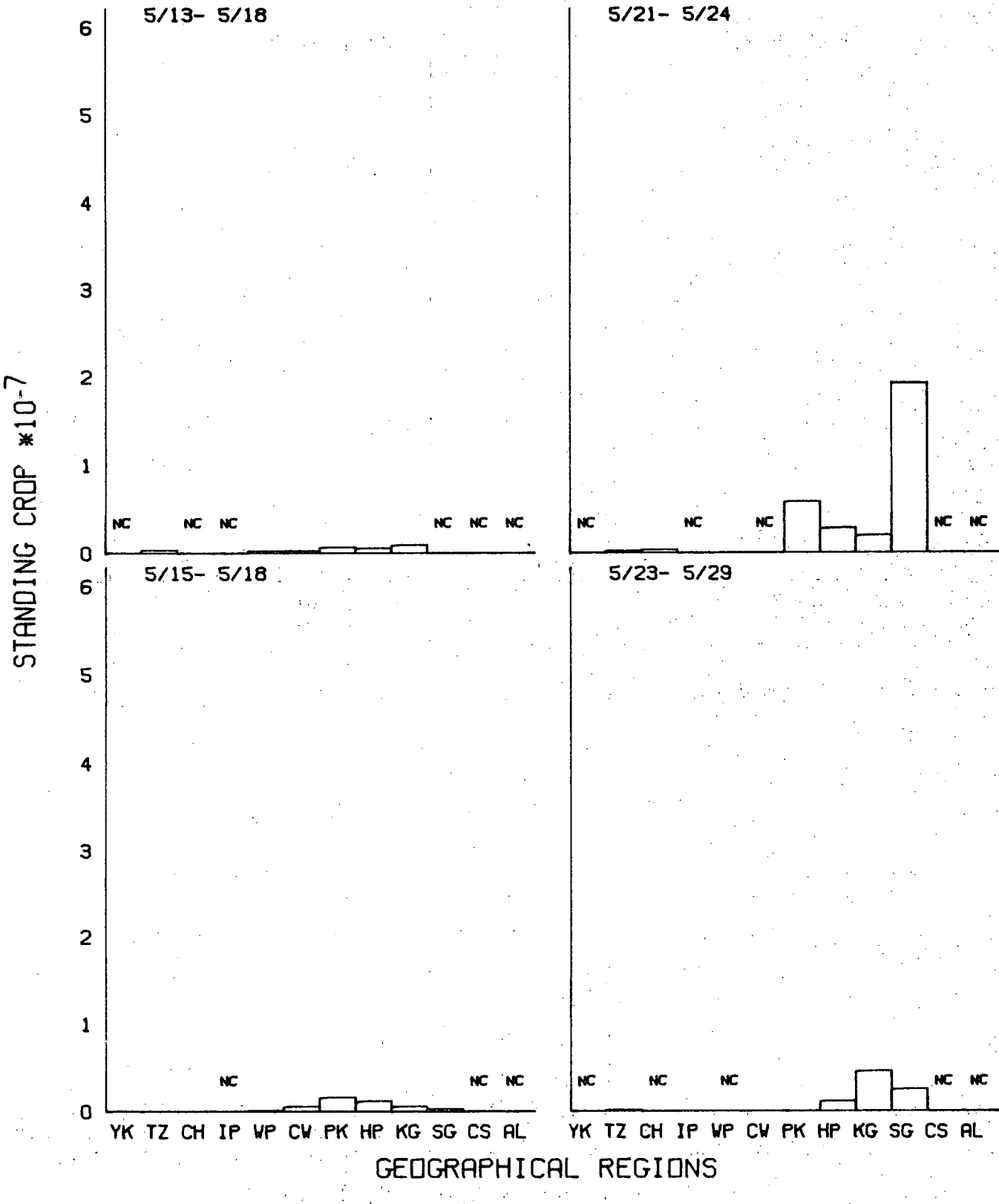
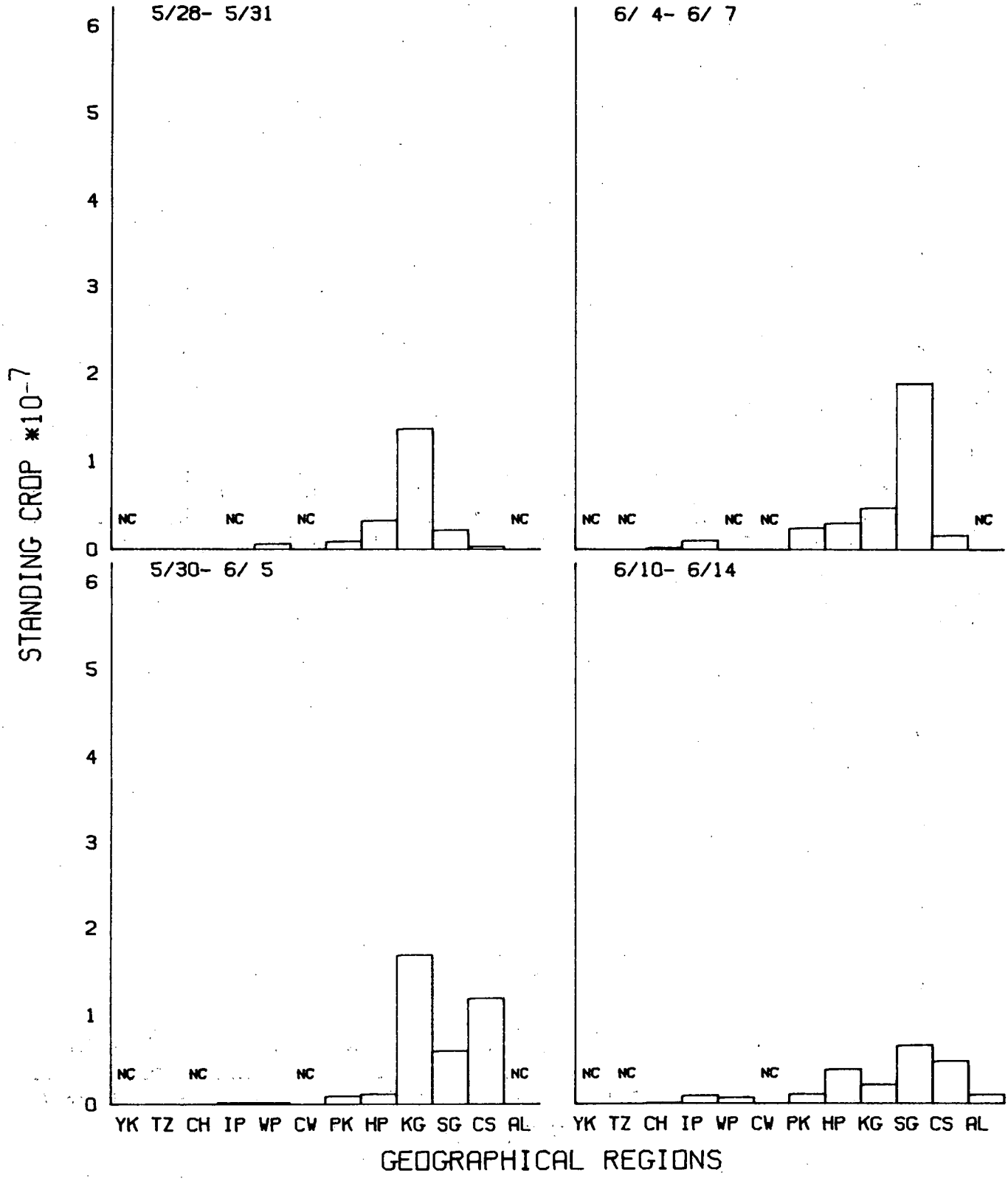


Figure A-36. American Shad Post Yolk-Sac Larvae Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-July 1974. (Histograms based on data in Table A-56) (Page 1 of 5)



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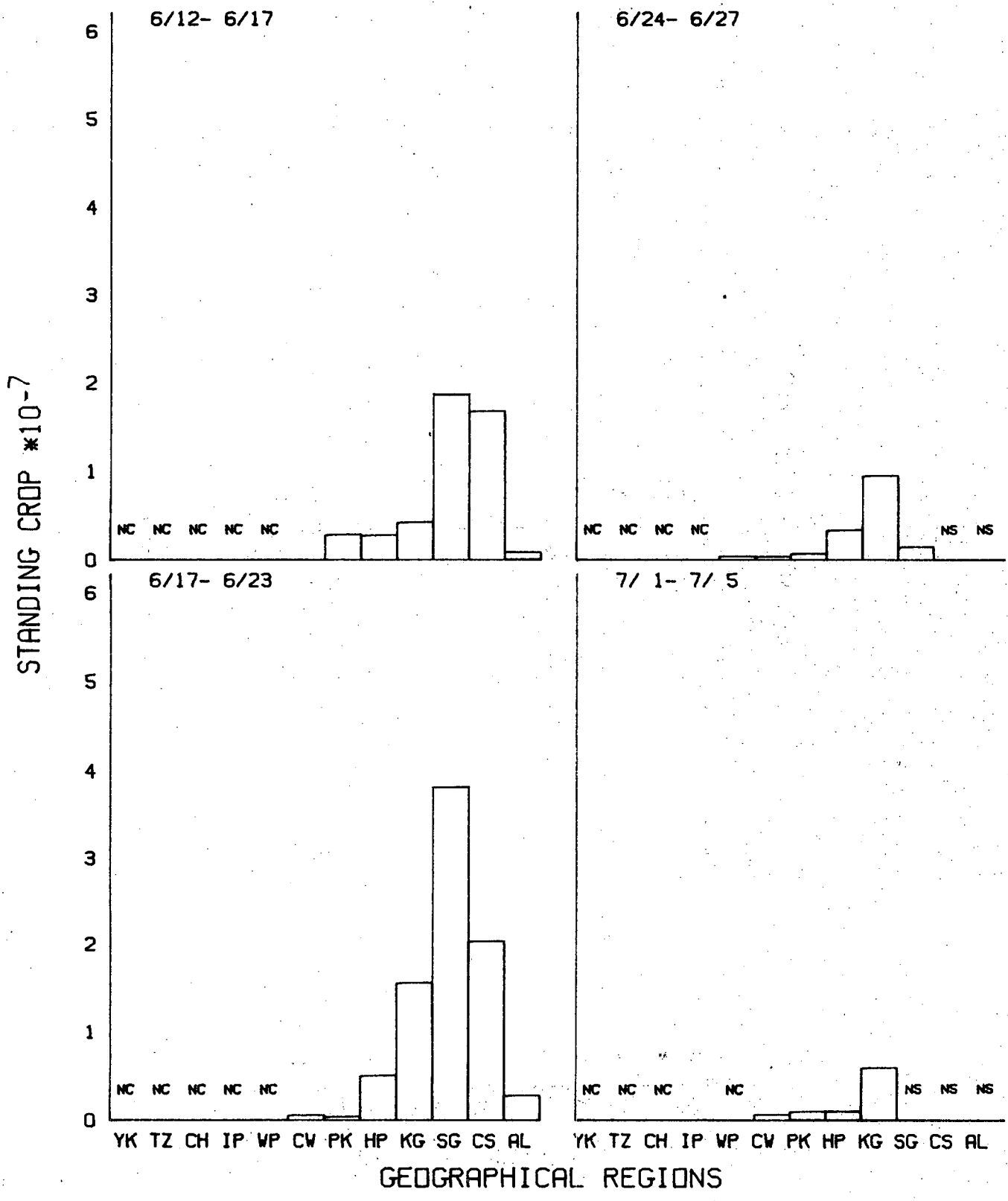

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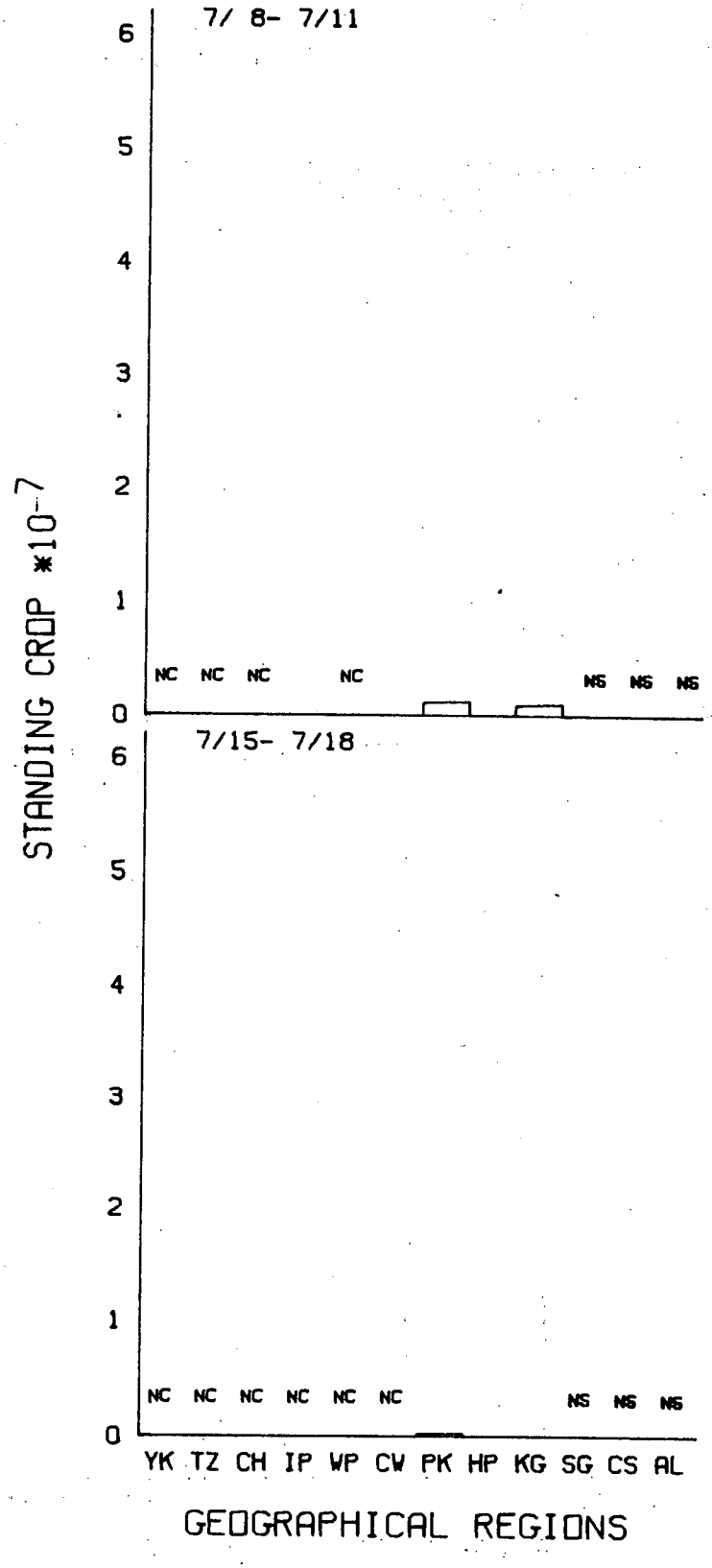

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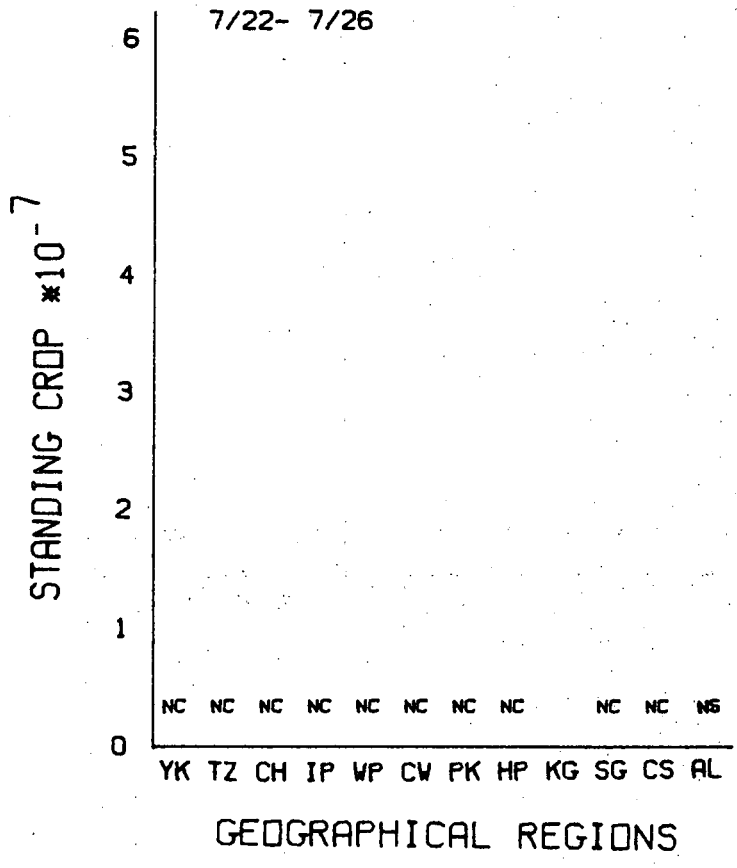


Figure A-36. (Page 5 of 5)

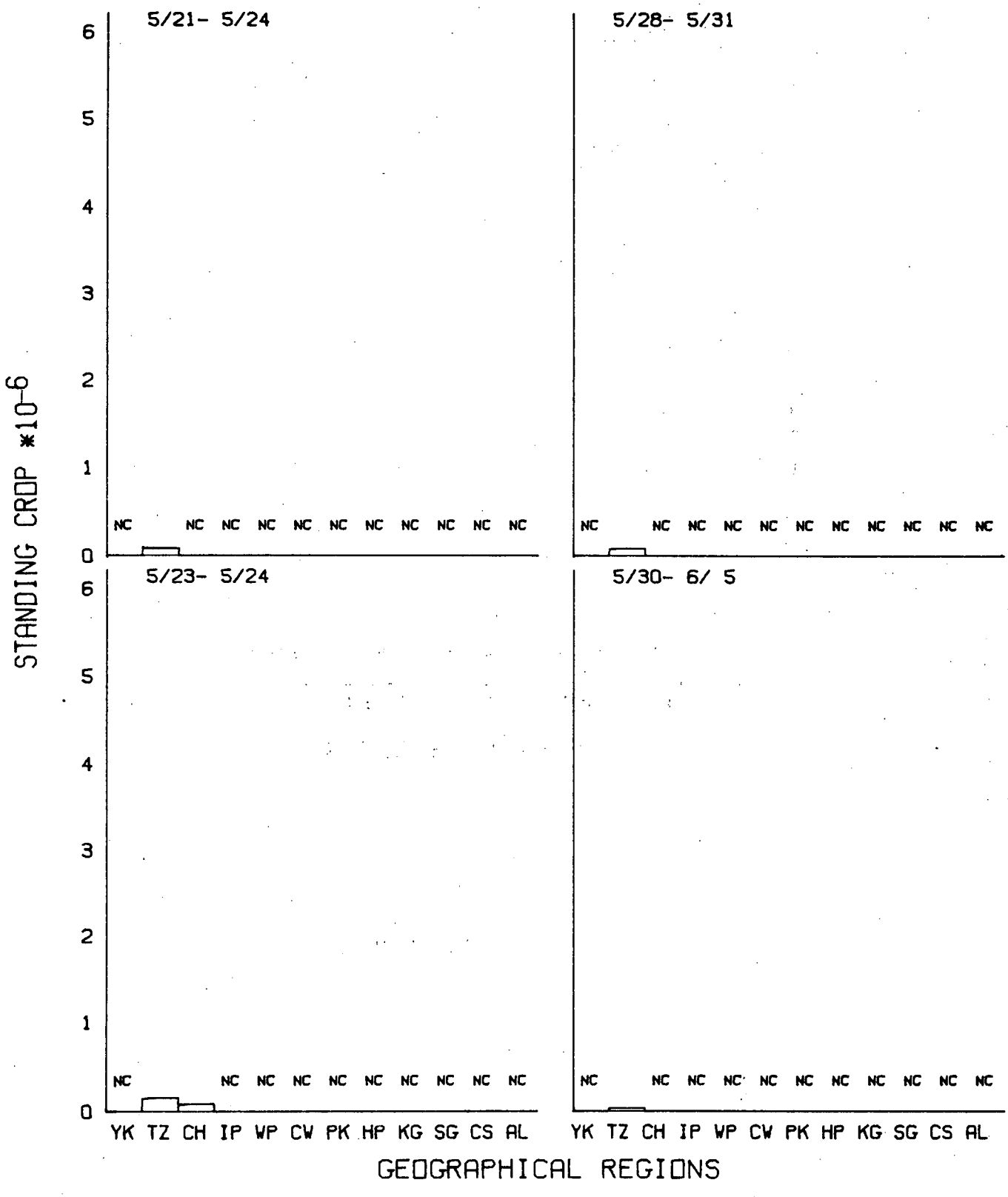


Figure A-37. Juvenile American Shad Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 14-140 (KM 22-224)], Based on Day and Night Sampling by Epibenthic Sled and Tucker Trawl, May-August 1974. (Histograms based on data in Table A-57) (Page 1 of 5)

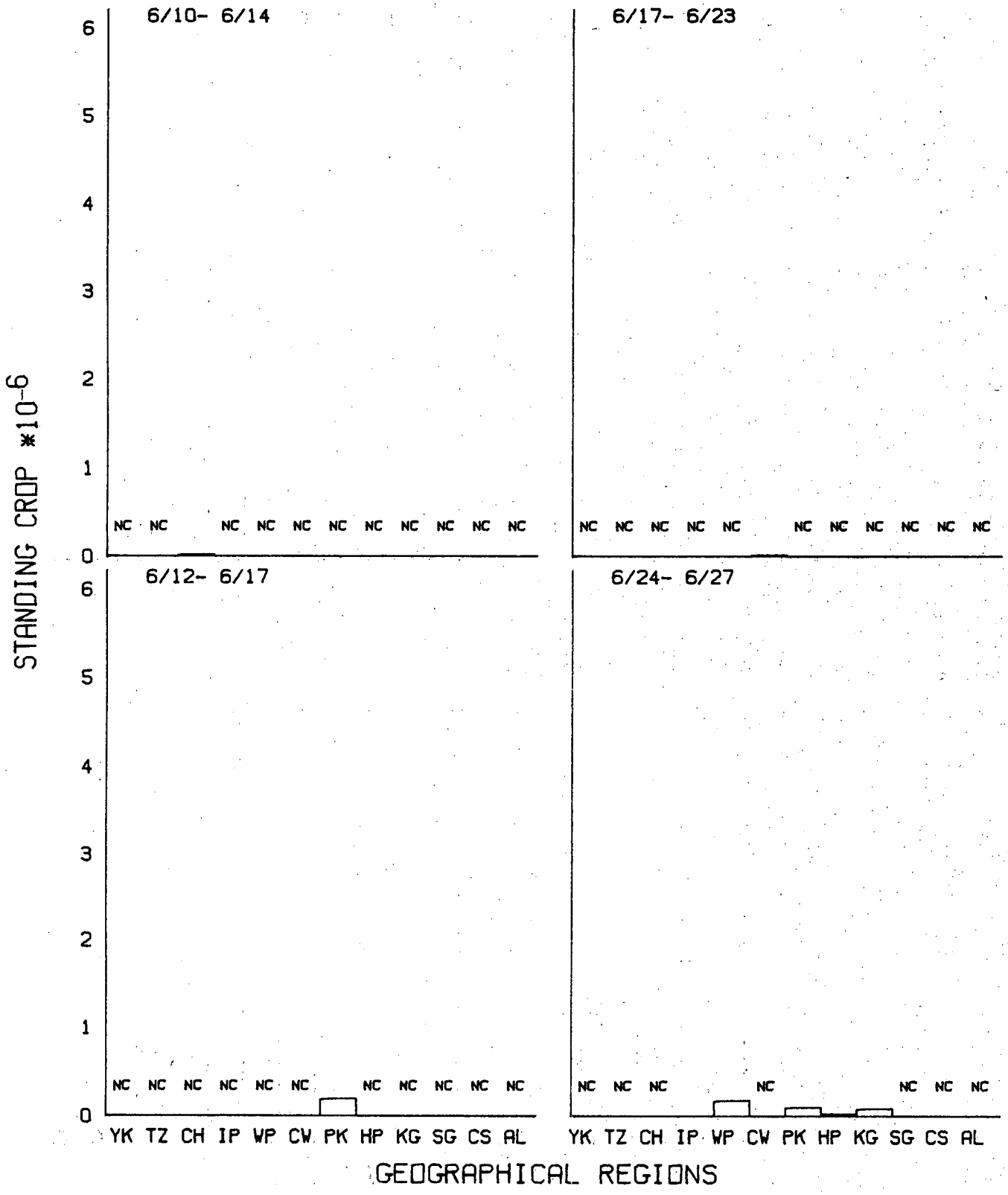
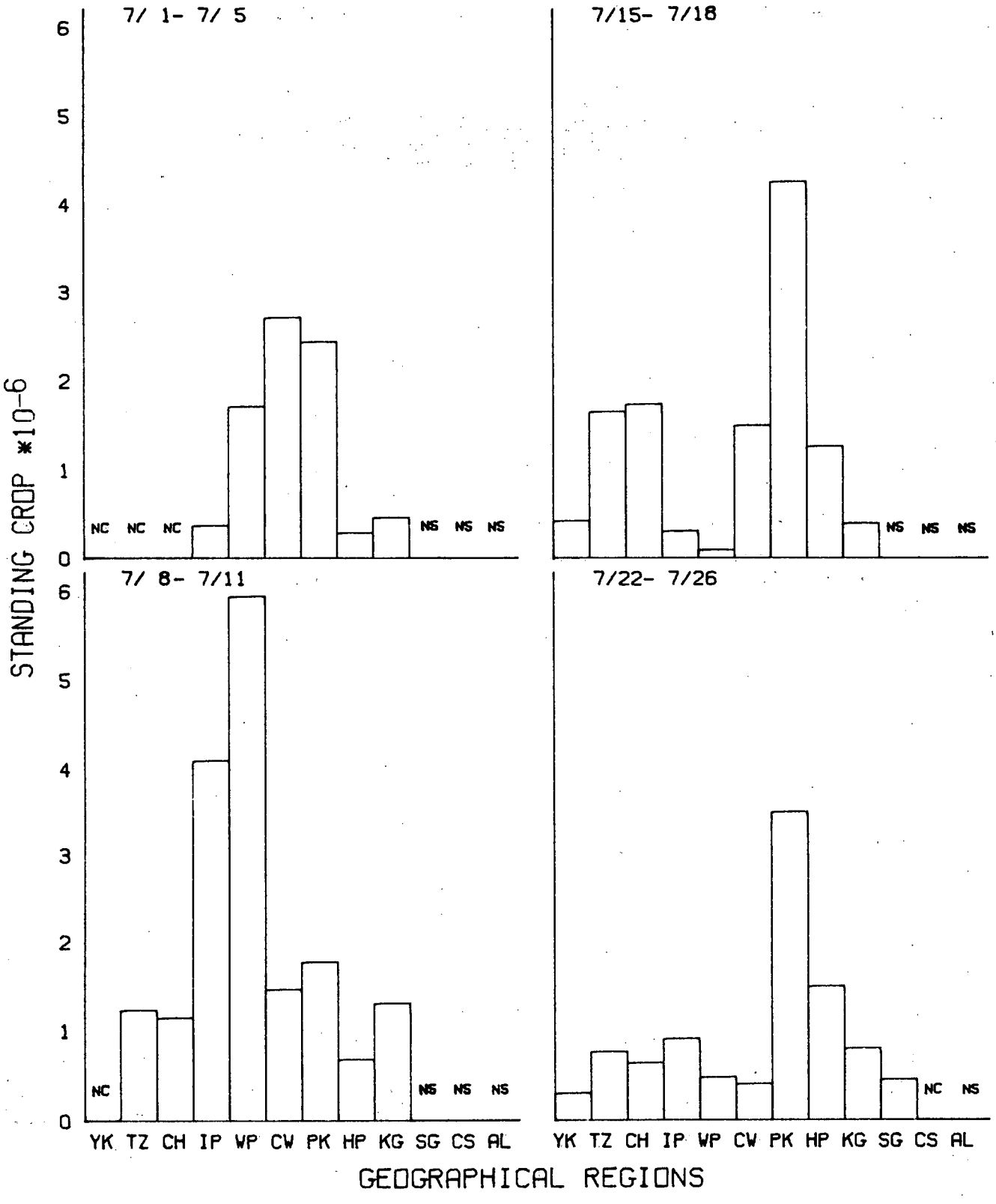


Figure A-37. (Page 2 of 5)



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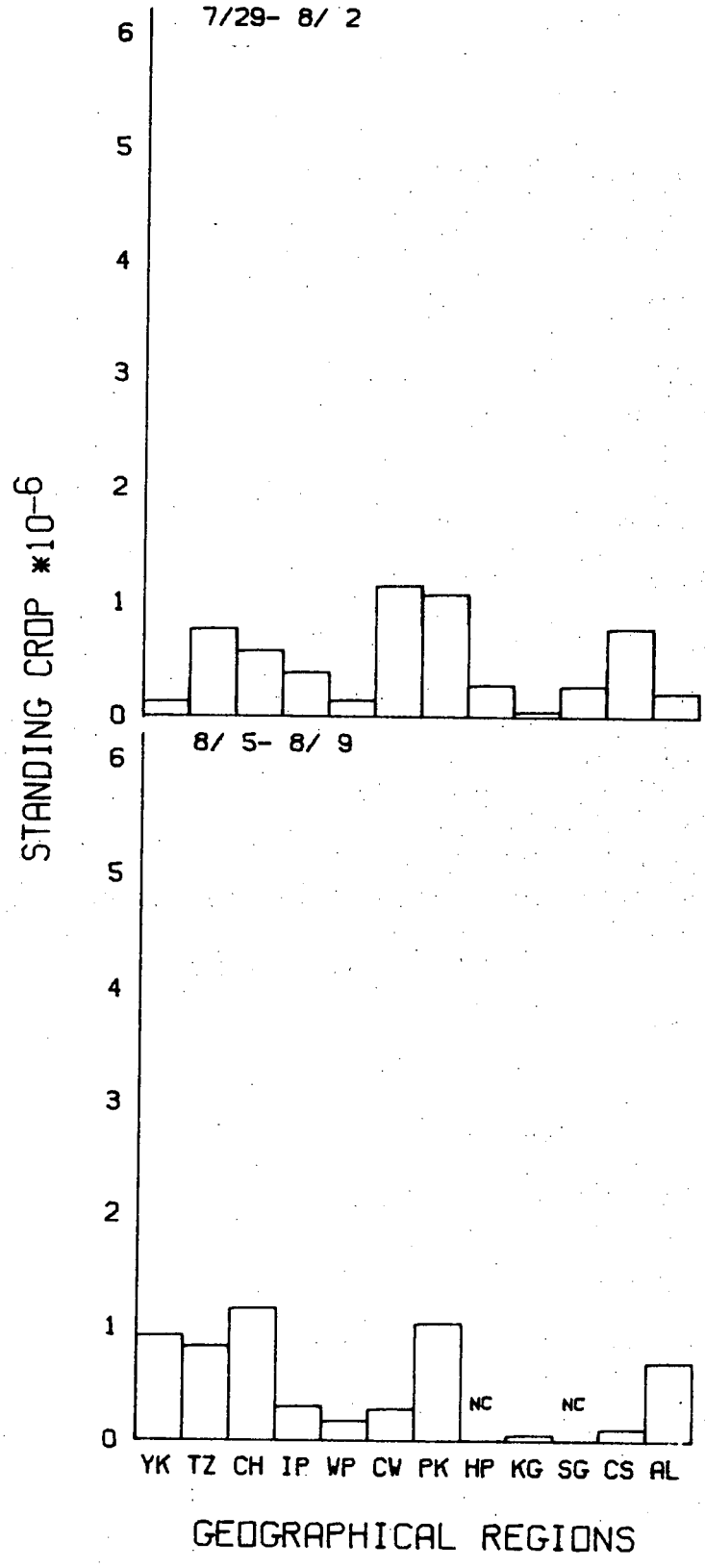

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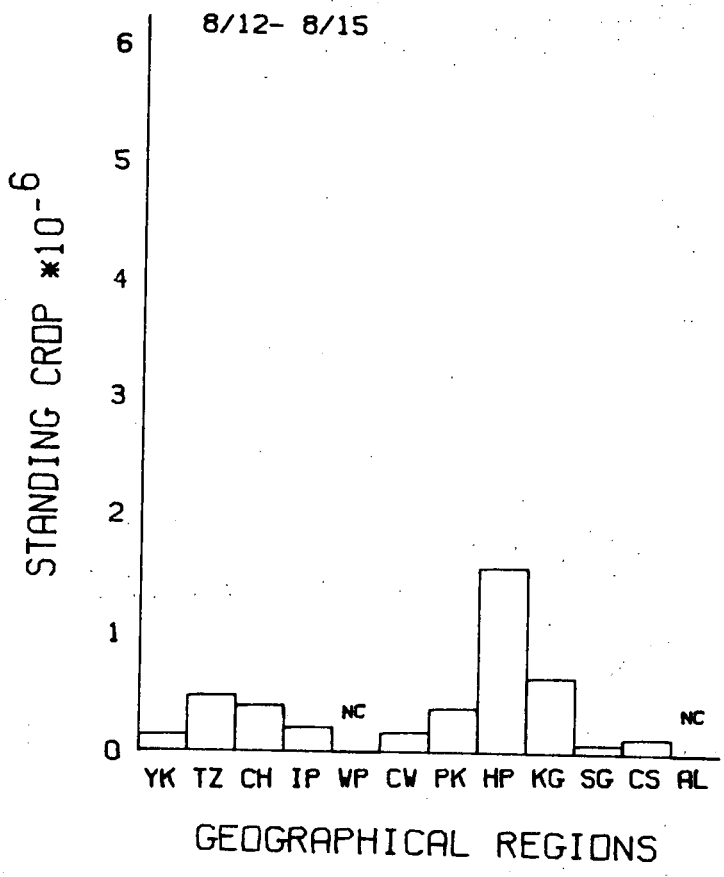

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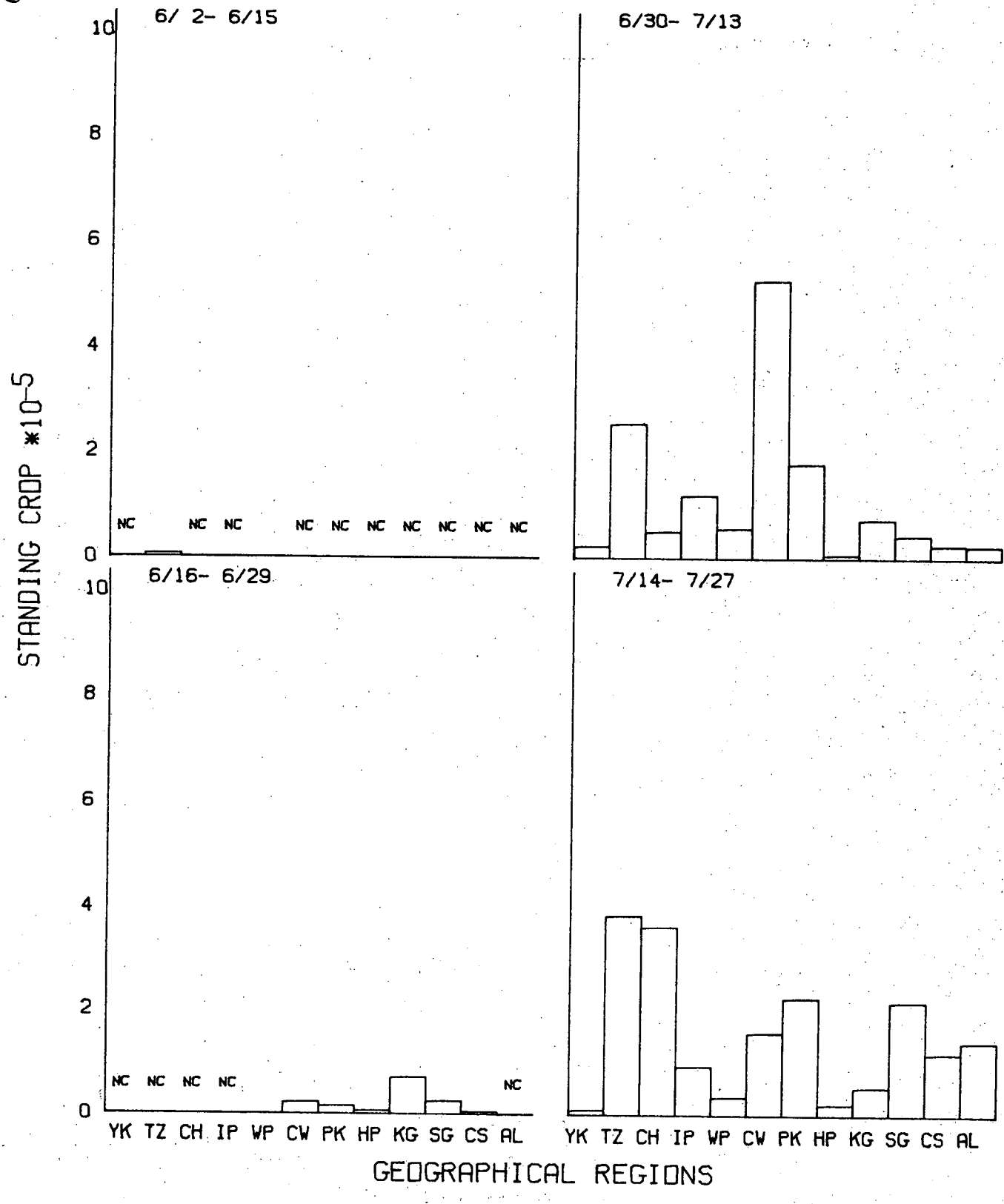
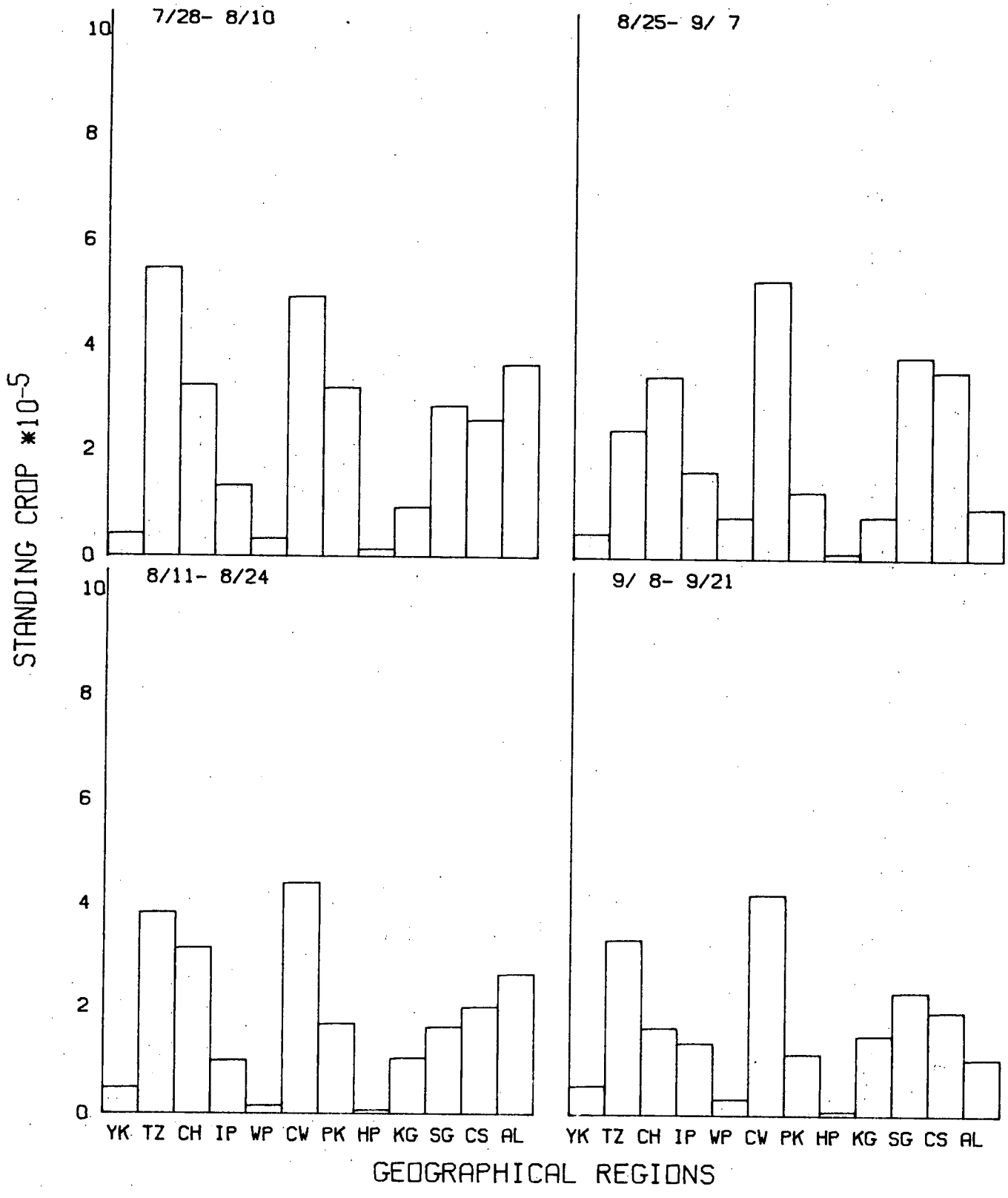


Figure A-38. Juvenile American Shad Standing Crop within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, June-November 1974. (Histograms based on data in Table A-58) (Page 1 of 4)



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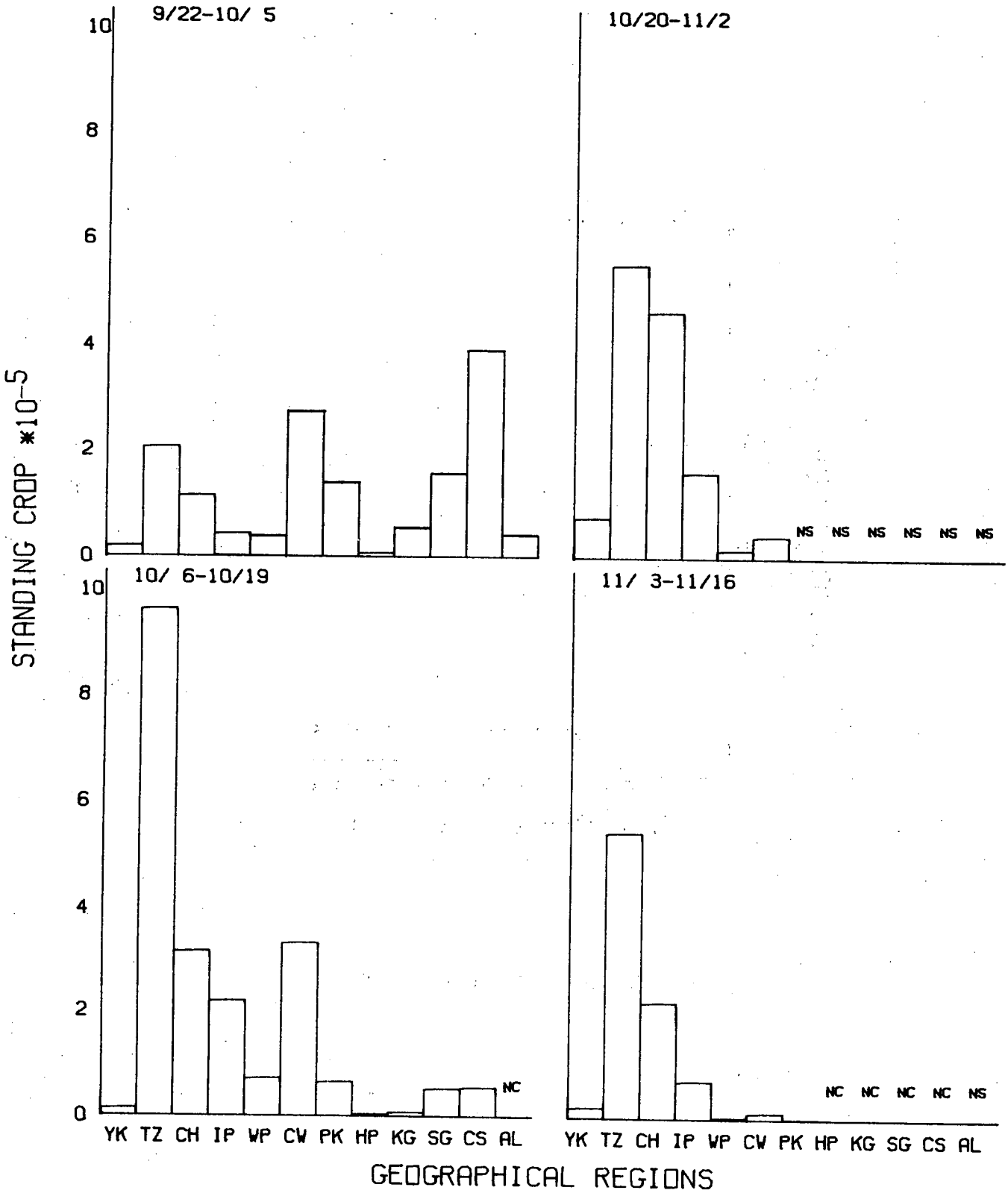

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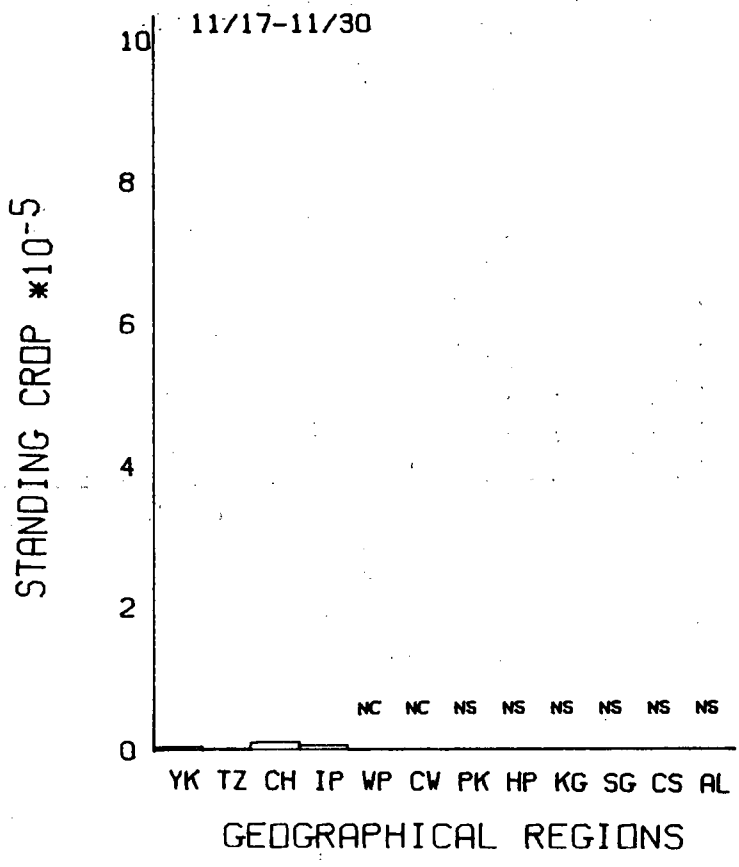

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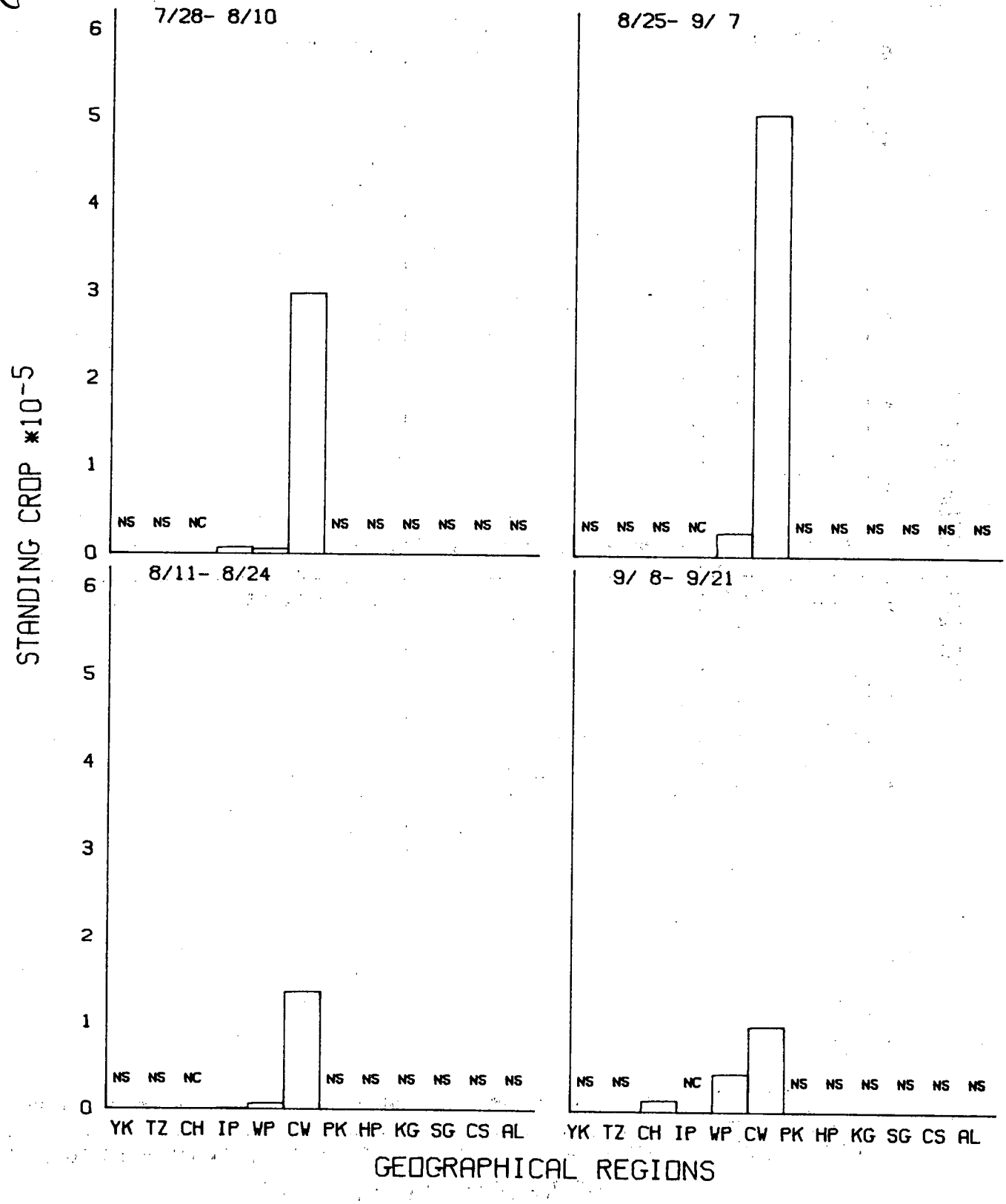
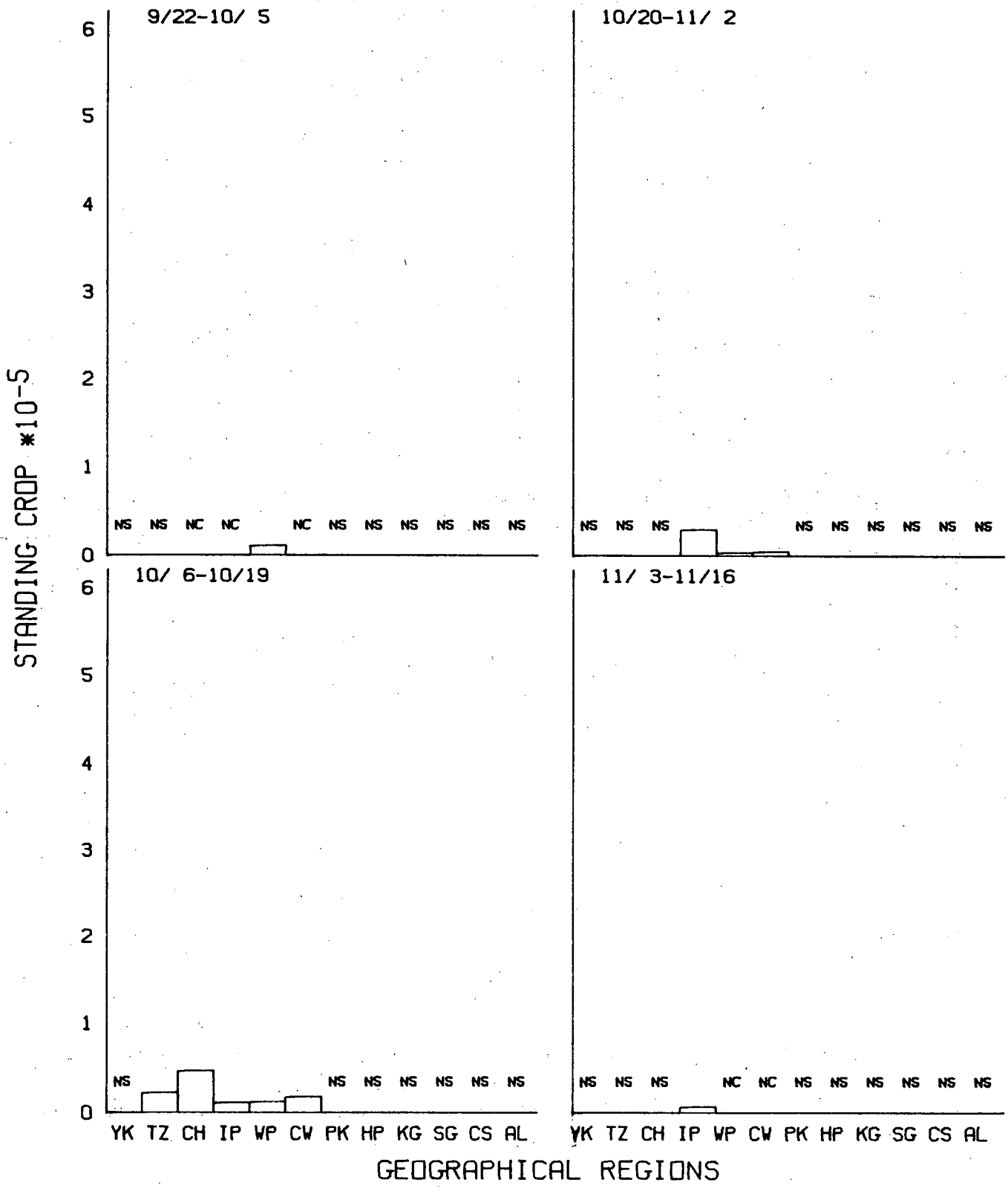


Figure A-39. Juvenile American Shad Standing Crop within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Night Sampling by 100-Ft (30.5-m) Beach Seine, July-November 1976. (Histograms based on data in Table A-59) (Page 1 of 2)



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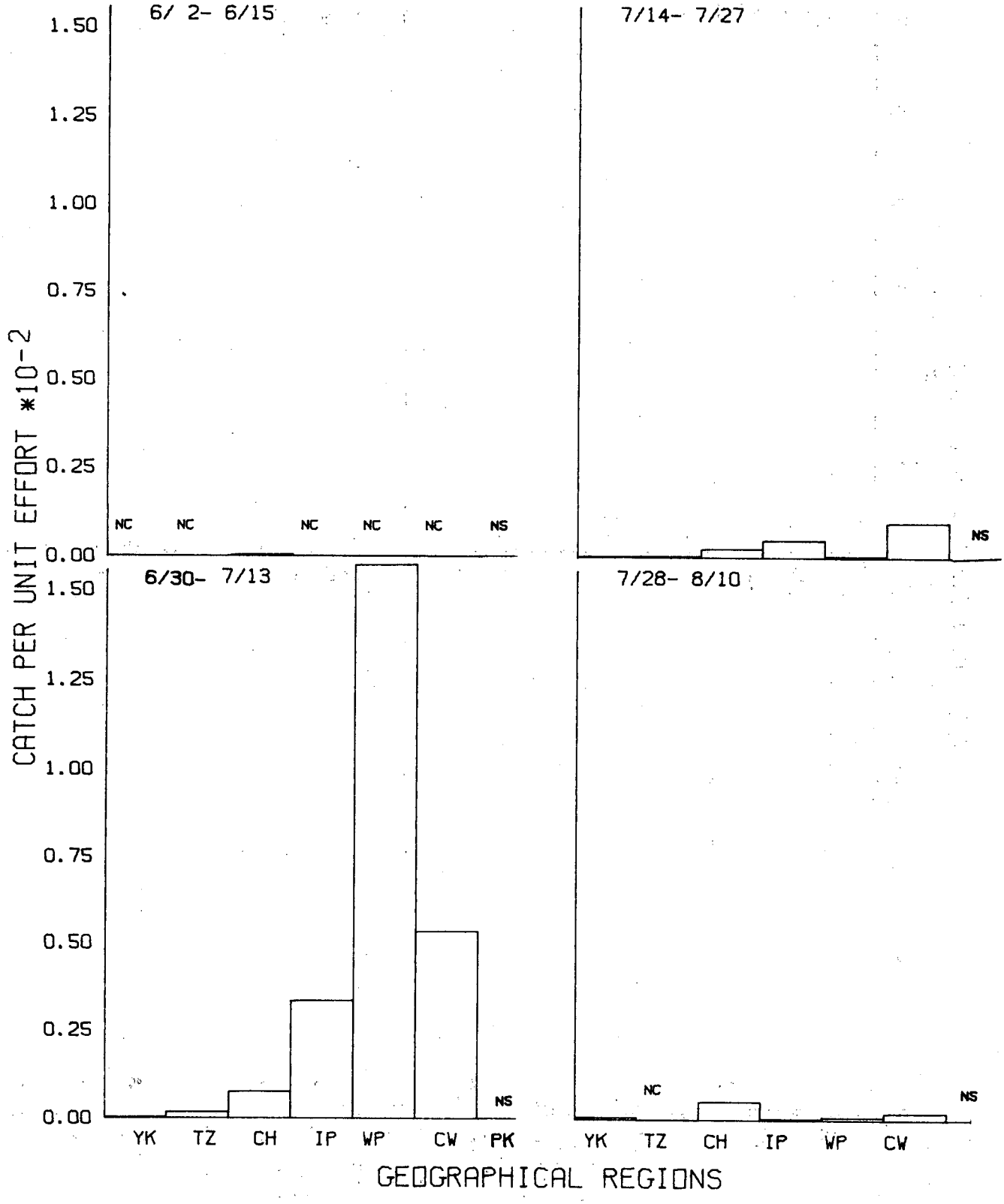
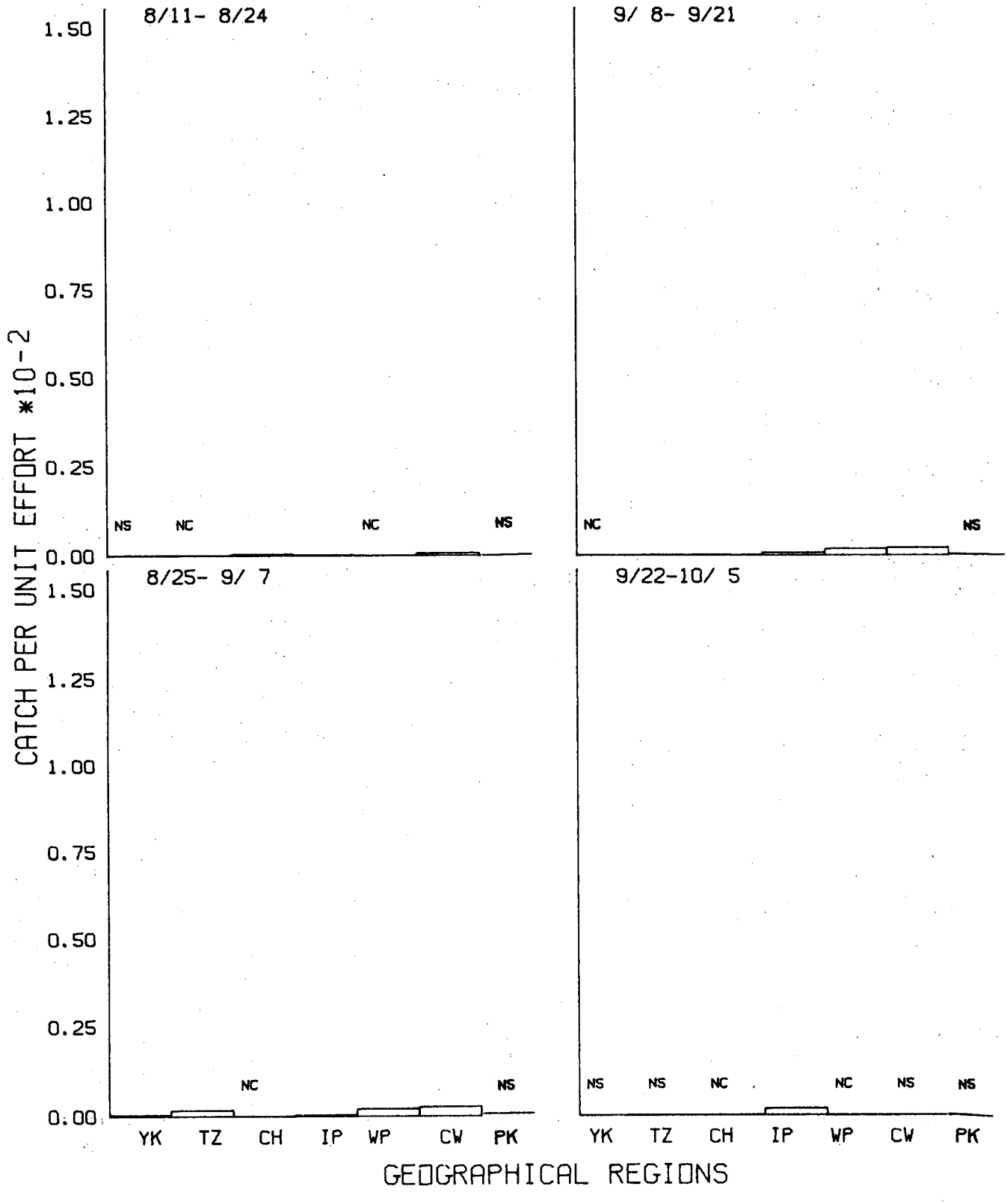


Figure A-40. Juvenile American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), June-November 1974. (Histograms based on data in Table A-42) (Page 1 of 3)



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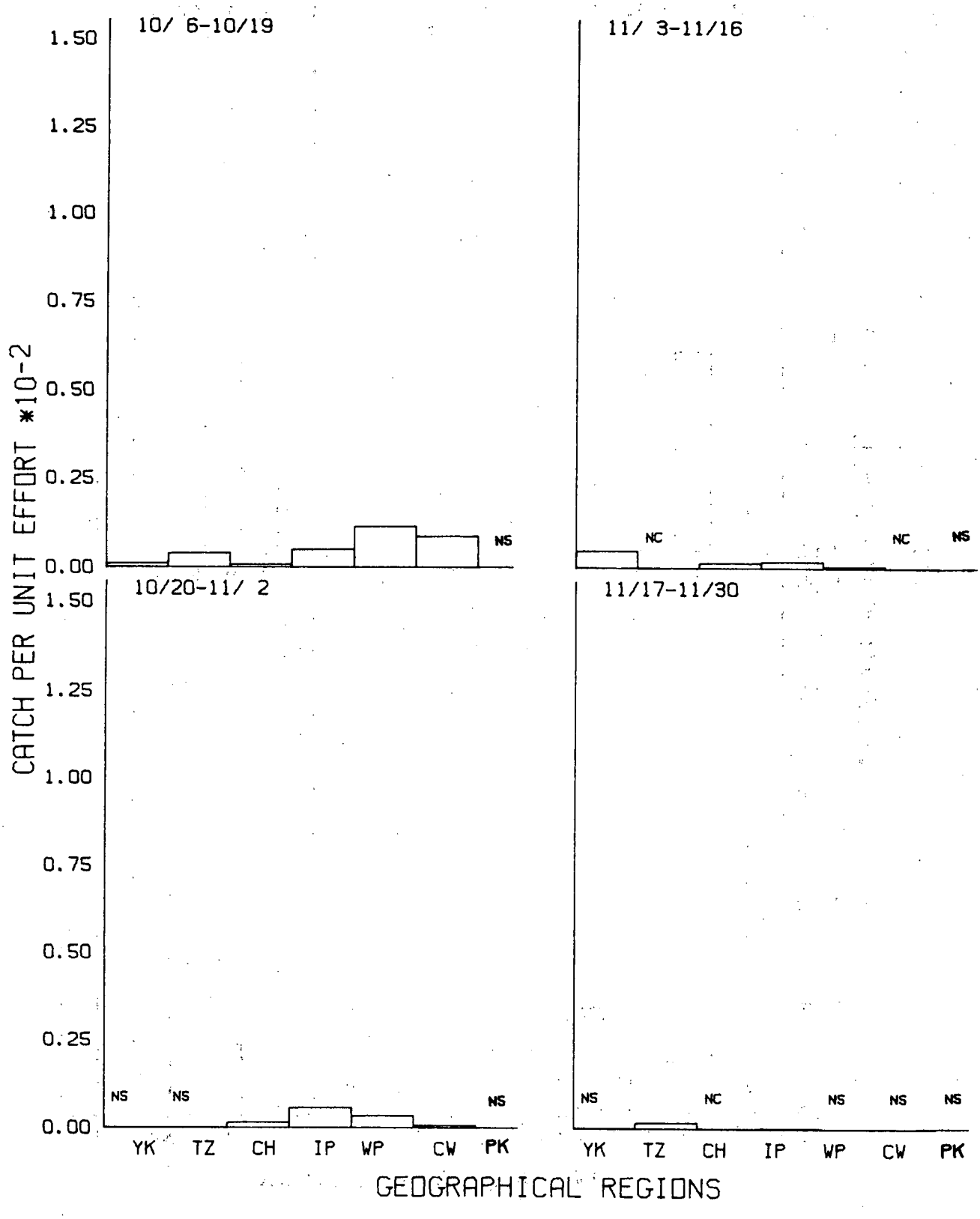

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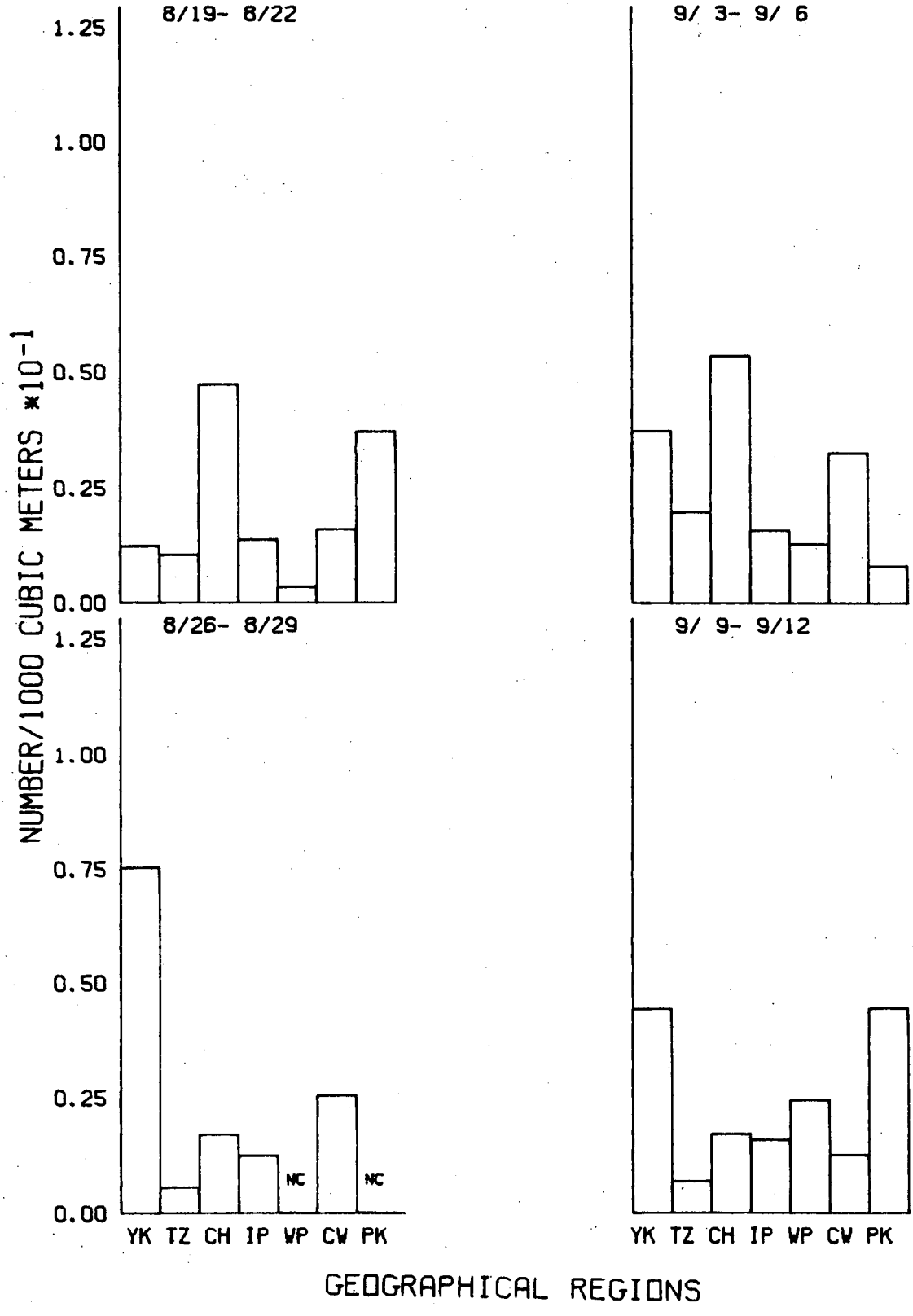


Figure A-41. Juvenile American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, August-December 1974. (Histograms based on data in Table A-39) (Page 1 of 5)

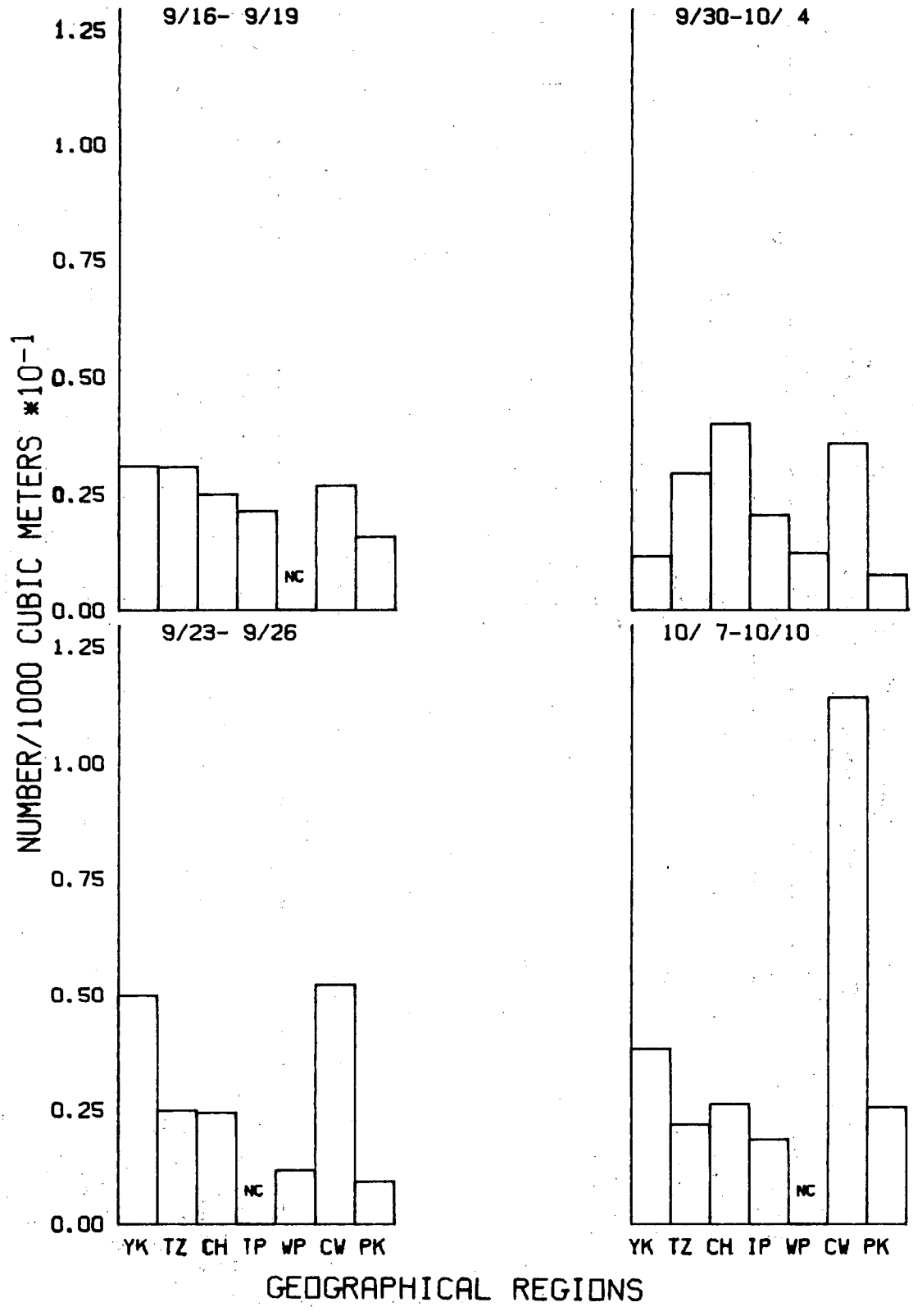
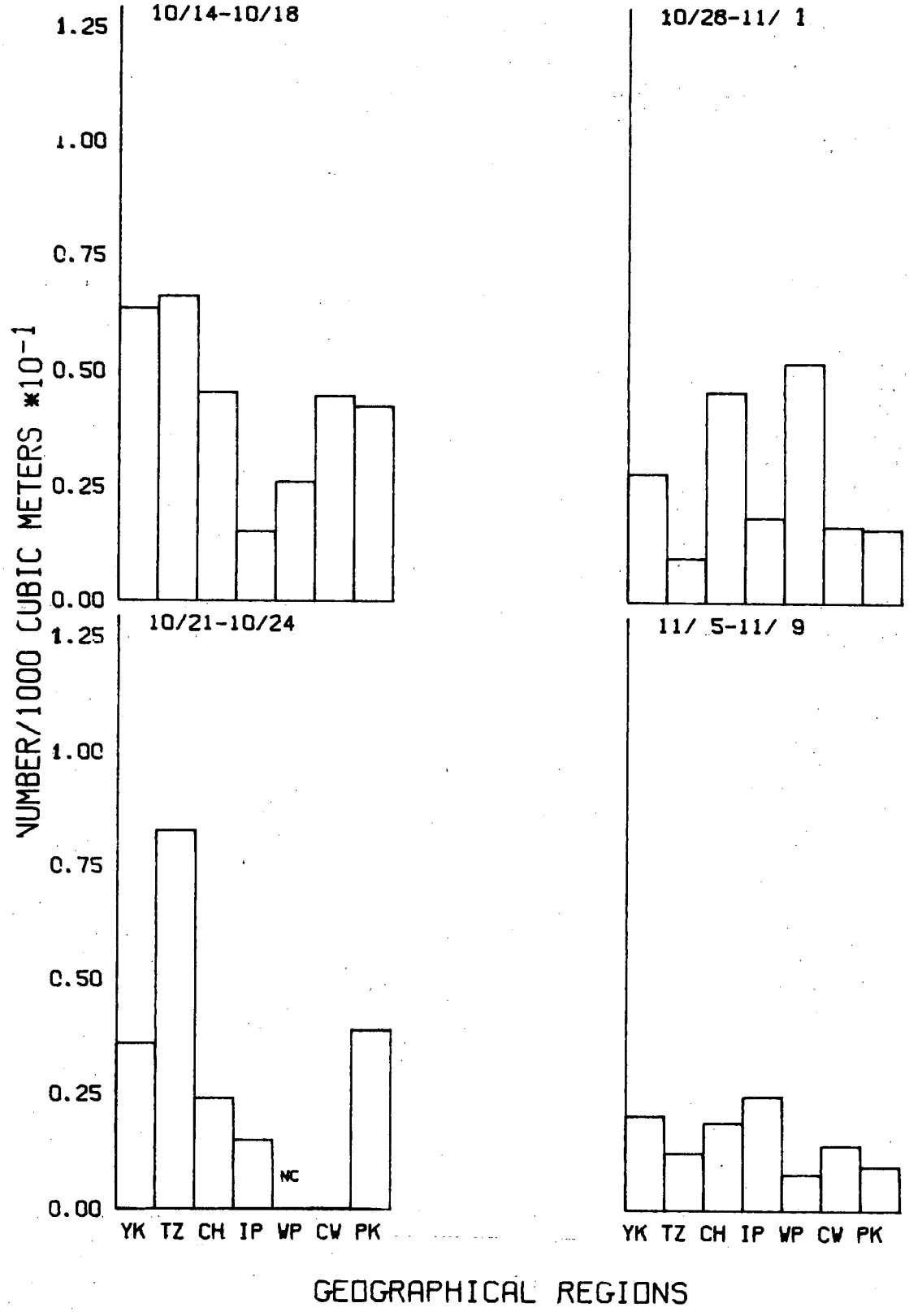


Figure A-41. (Page 2 of 5)



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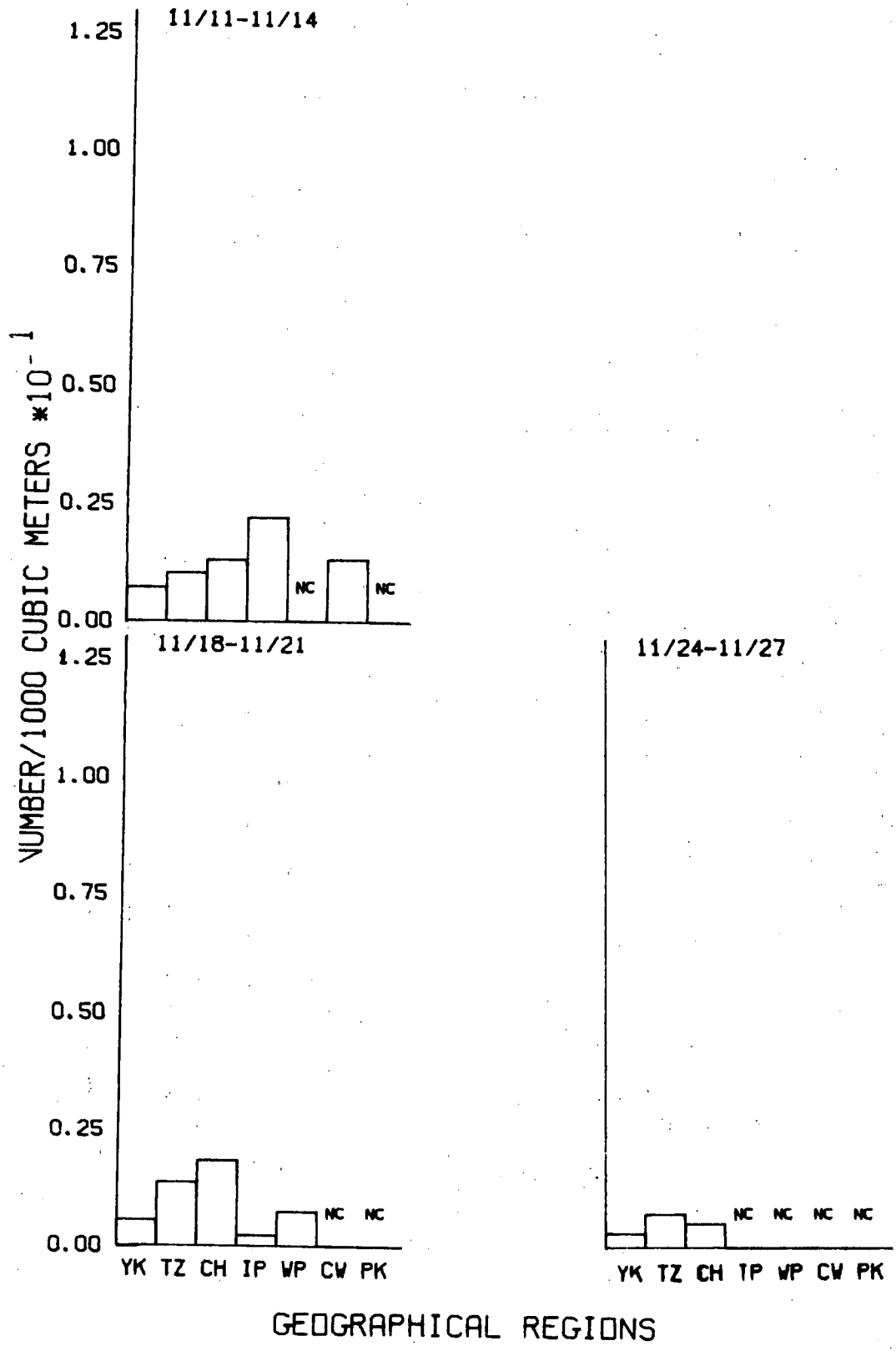

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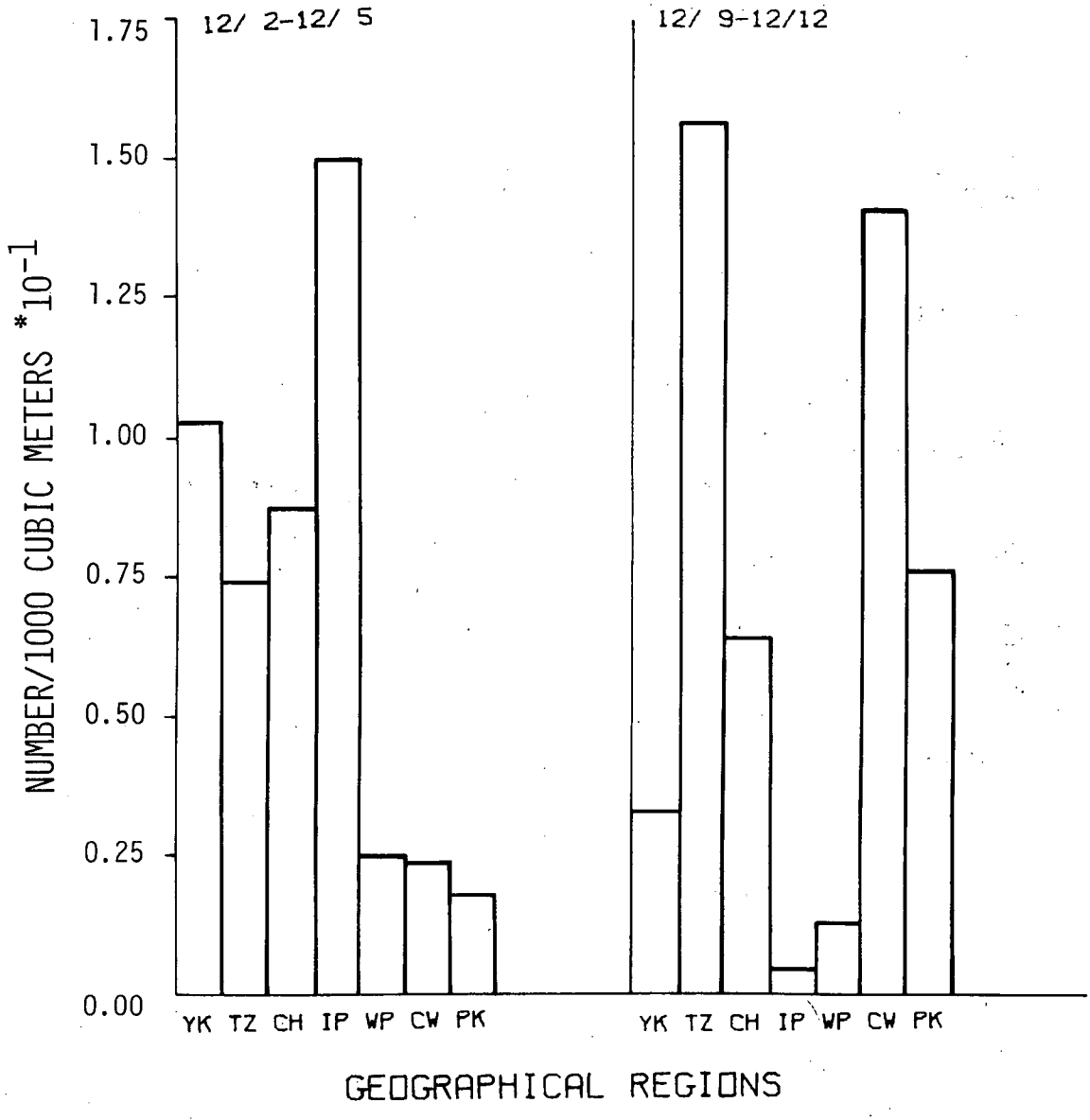

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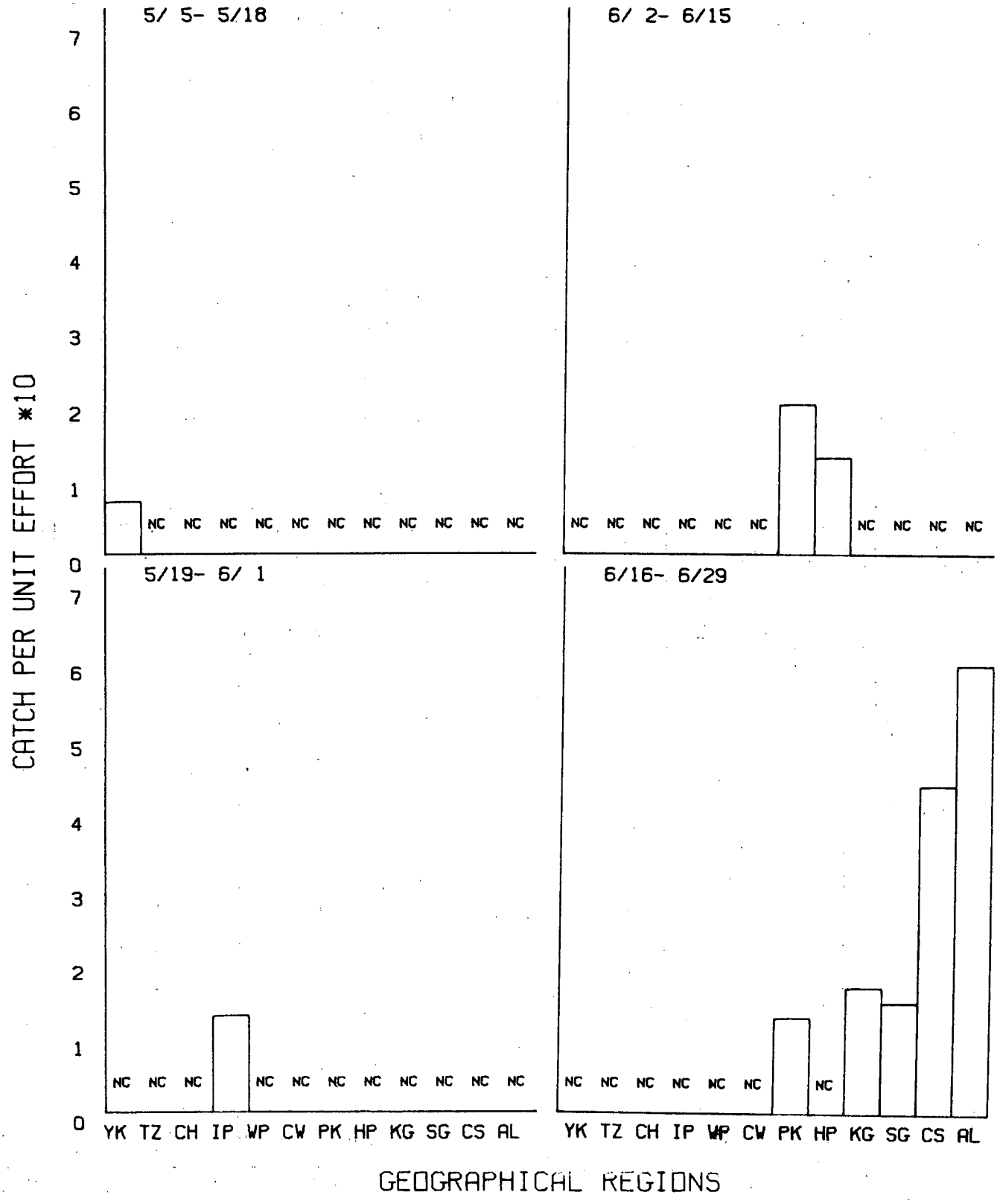


Figure A-42. Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, May-November 1974. (Histograms based on data in Table A-44) (Page 1 of 4)

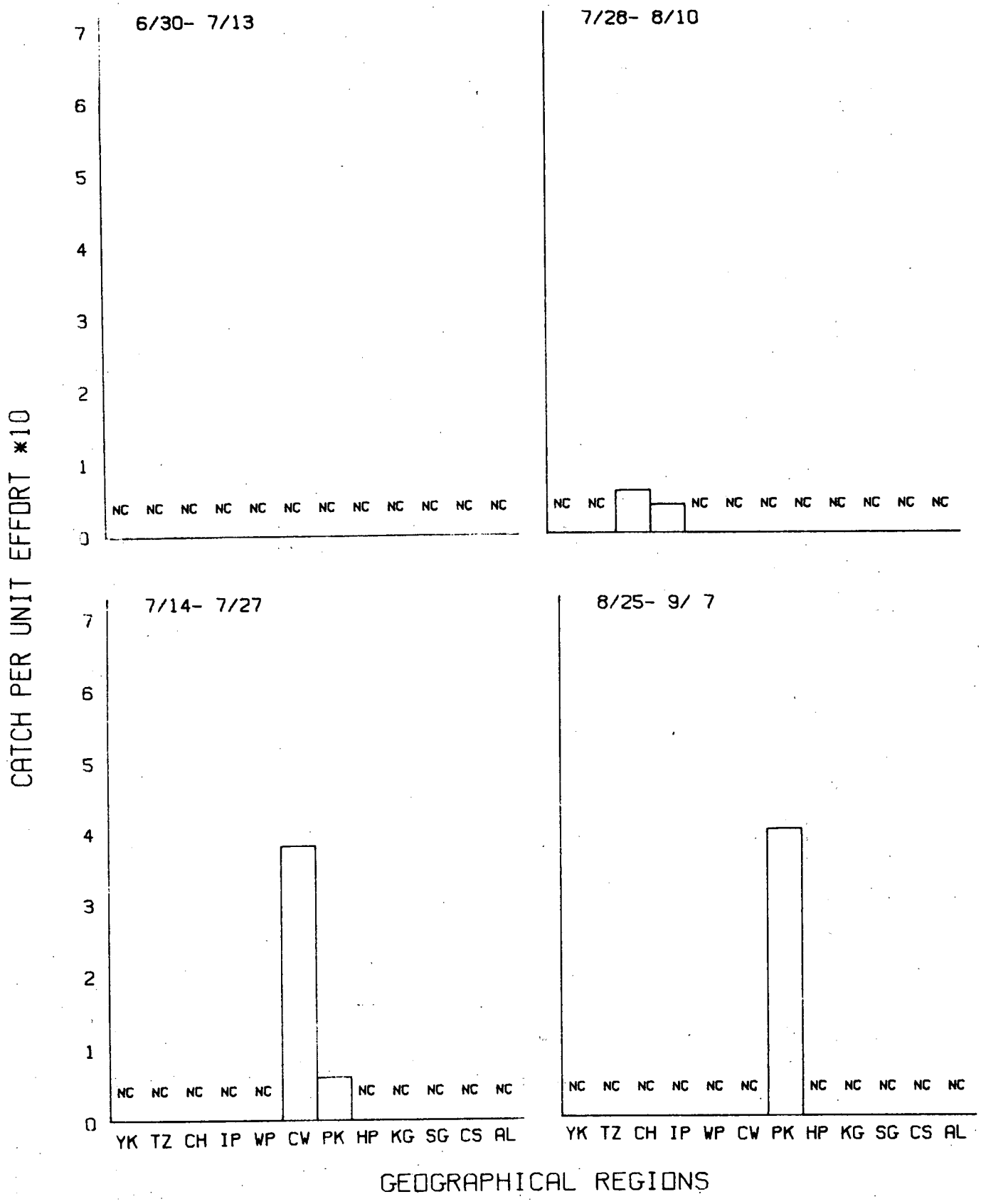
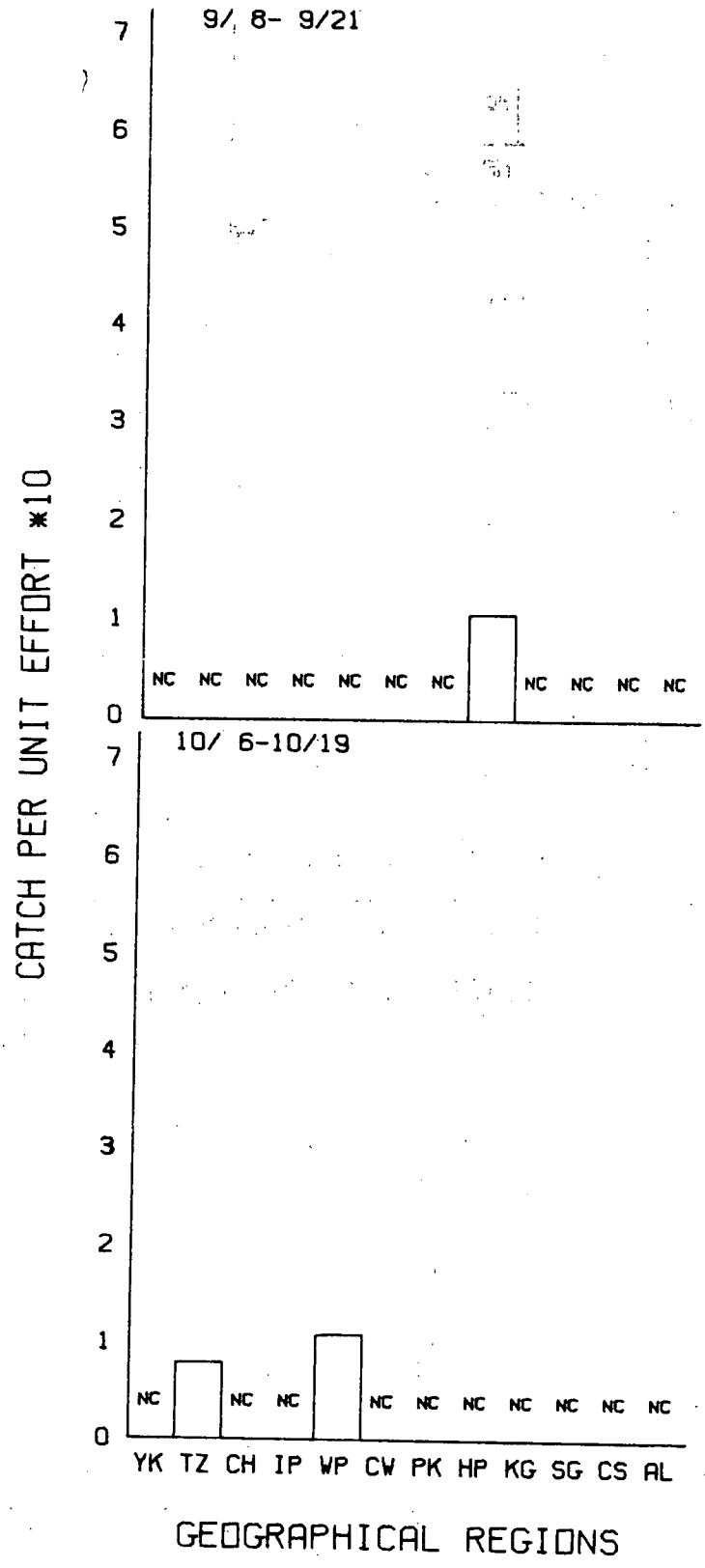


Figure A-42. (Page 2 of 4)



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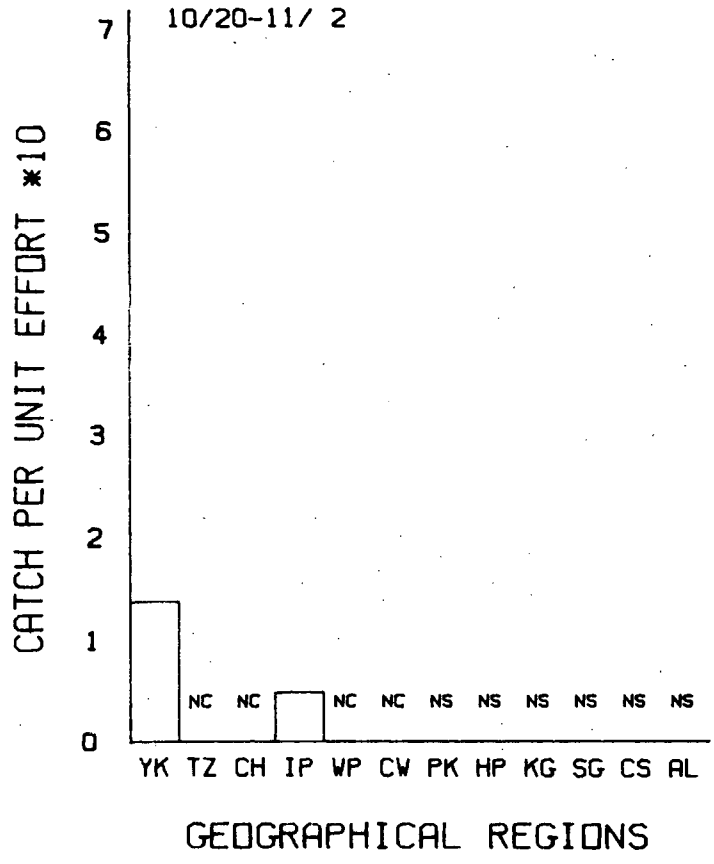


Figure A-42. (Page 4 of 4)

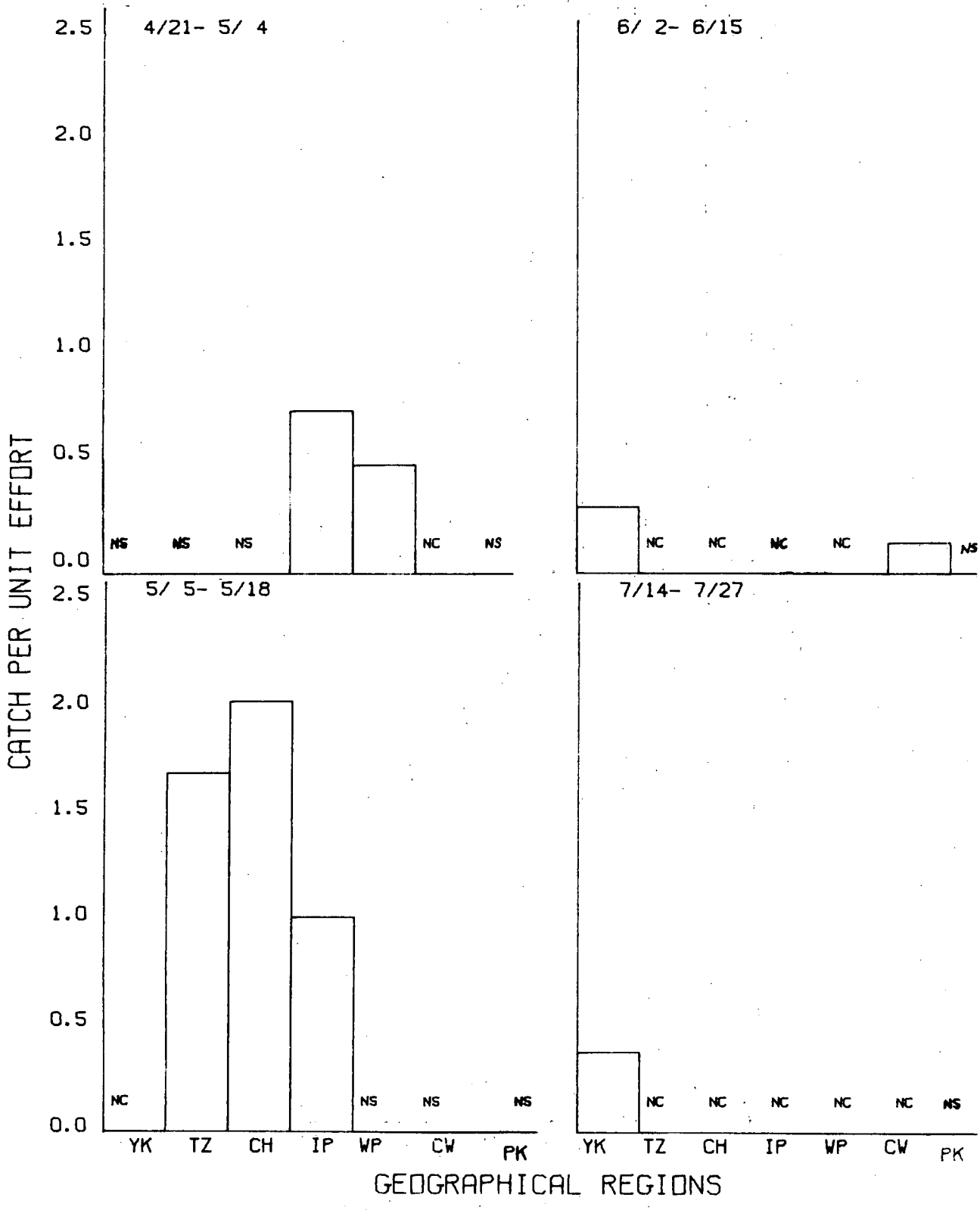


Figure A-43. Yearling American Shad Catch per Unit Effort within Seven Geographical Regions, Hudson River Estuary [RM 12-76 (KM 19-122)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), April-November 1974. (Histograms based on data in Table A-46) (Page 1 of 4)

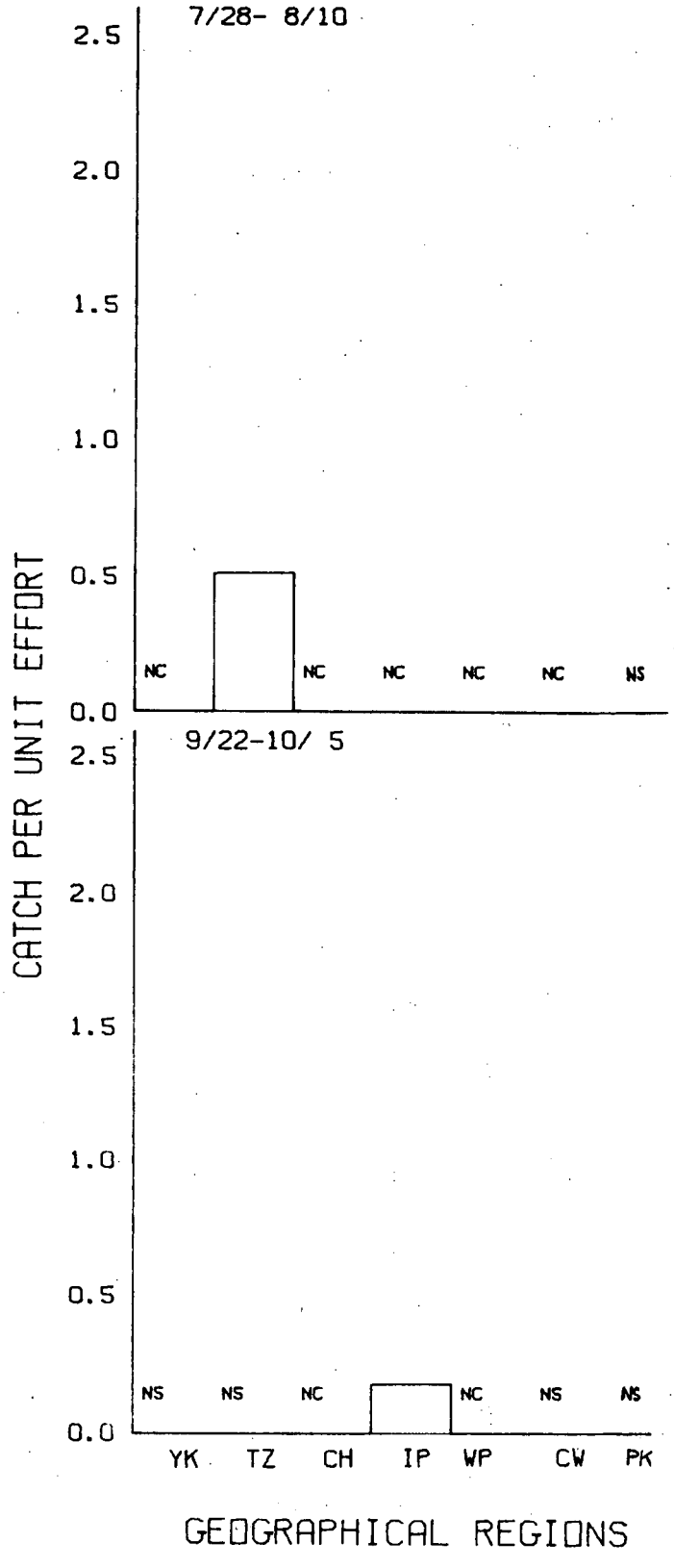


Figure A-43. (Page 2 of 4)

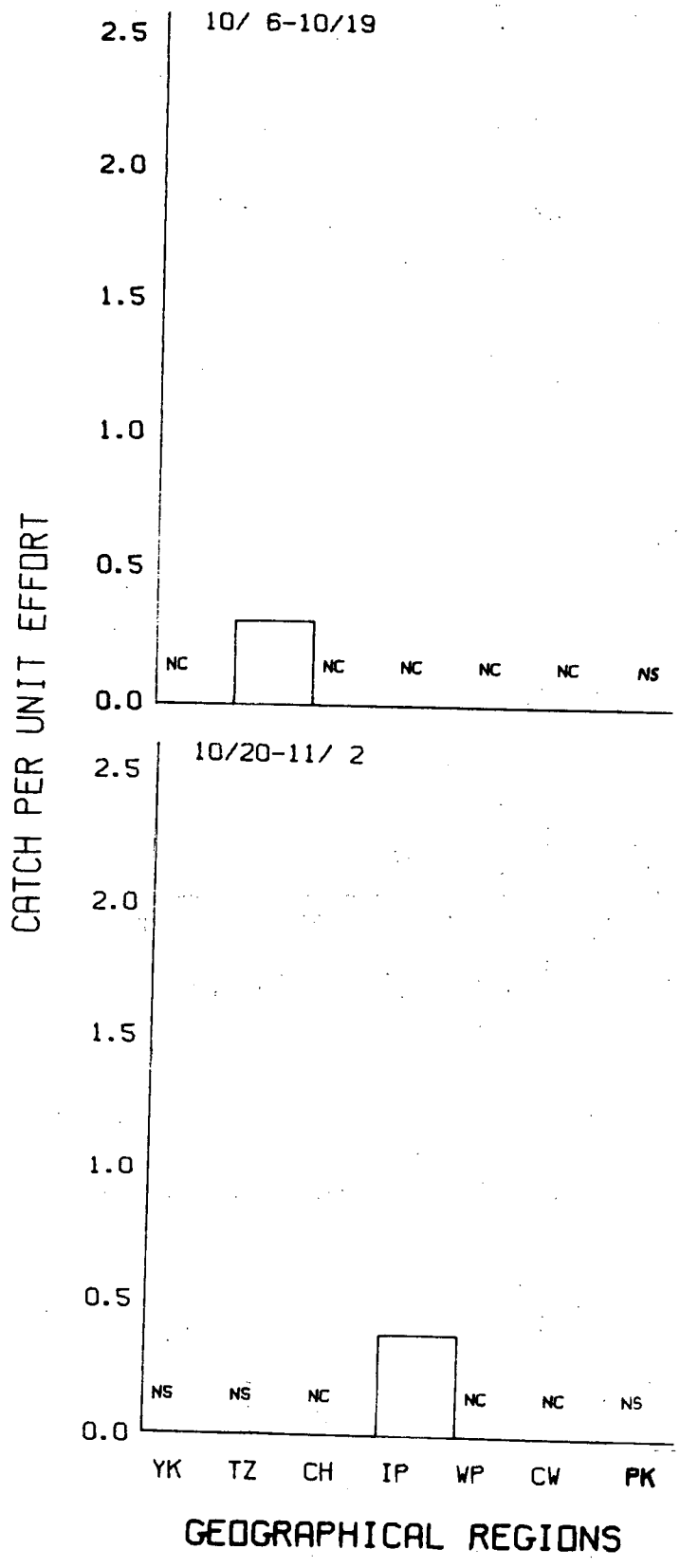
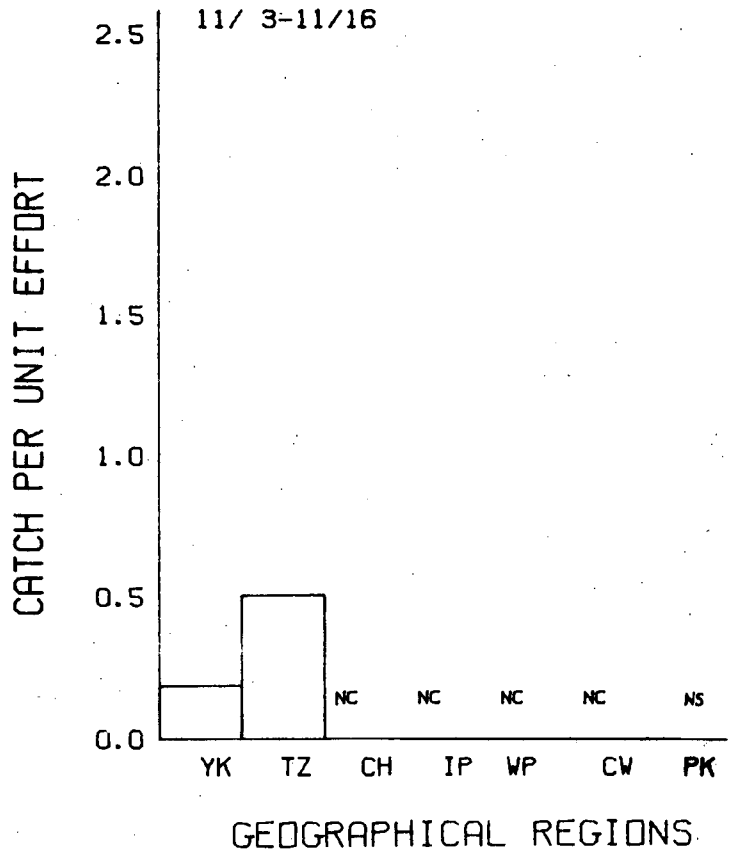


Figure A-43. (Page 3 of 4)



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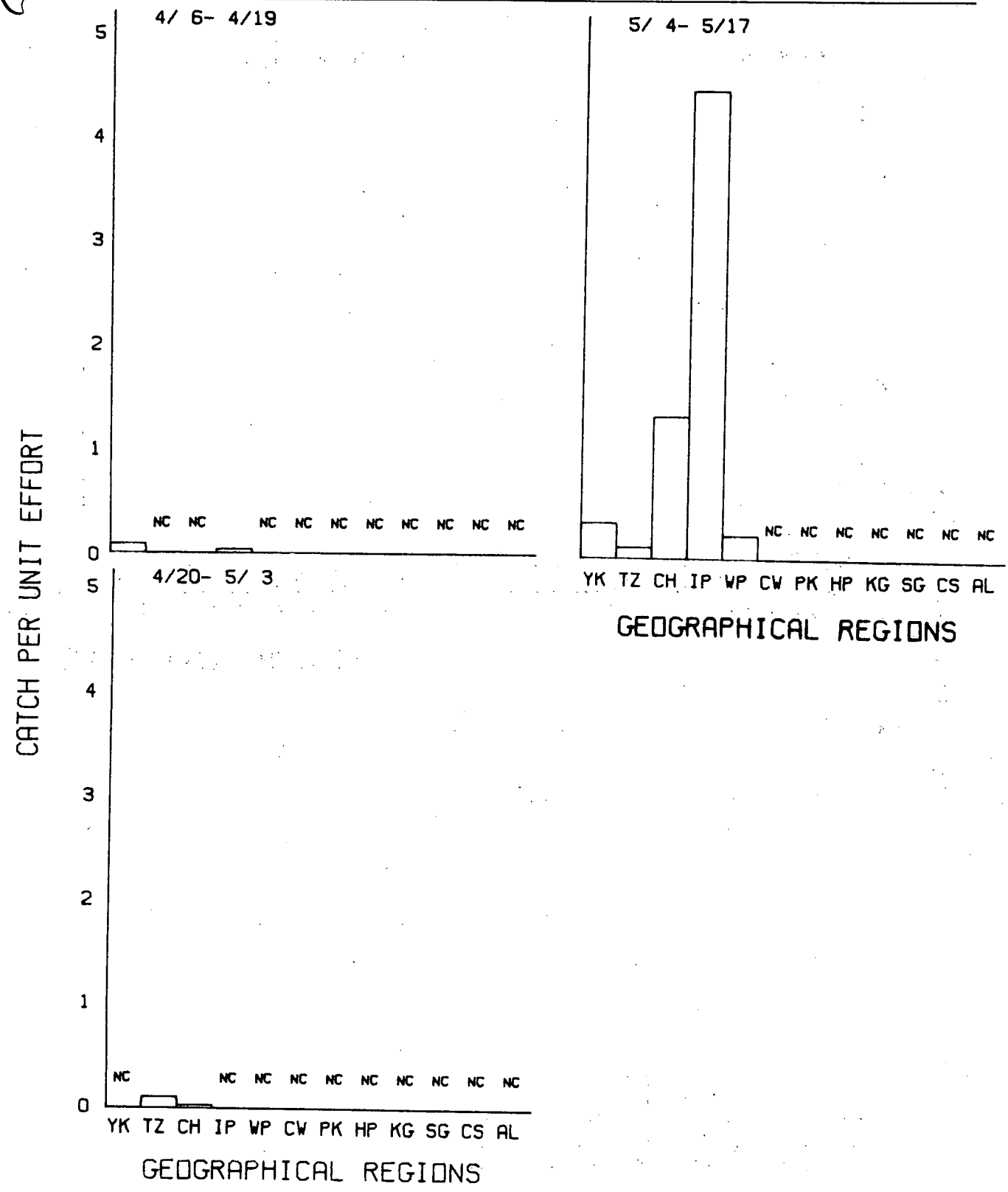


Figure A-44. Yearling American Shad Catch per Unit Effort within 12 Geographical Regions, Hudson River Estuary [RM 12-152 (KM 19-243)], Based on Day Sampling by 100-Ft (30.5-m) Beach Seine, April-June 1975 (Histograms based on data in Table A-78) (Page 1 of 2)

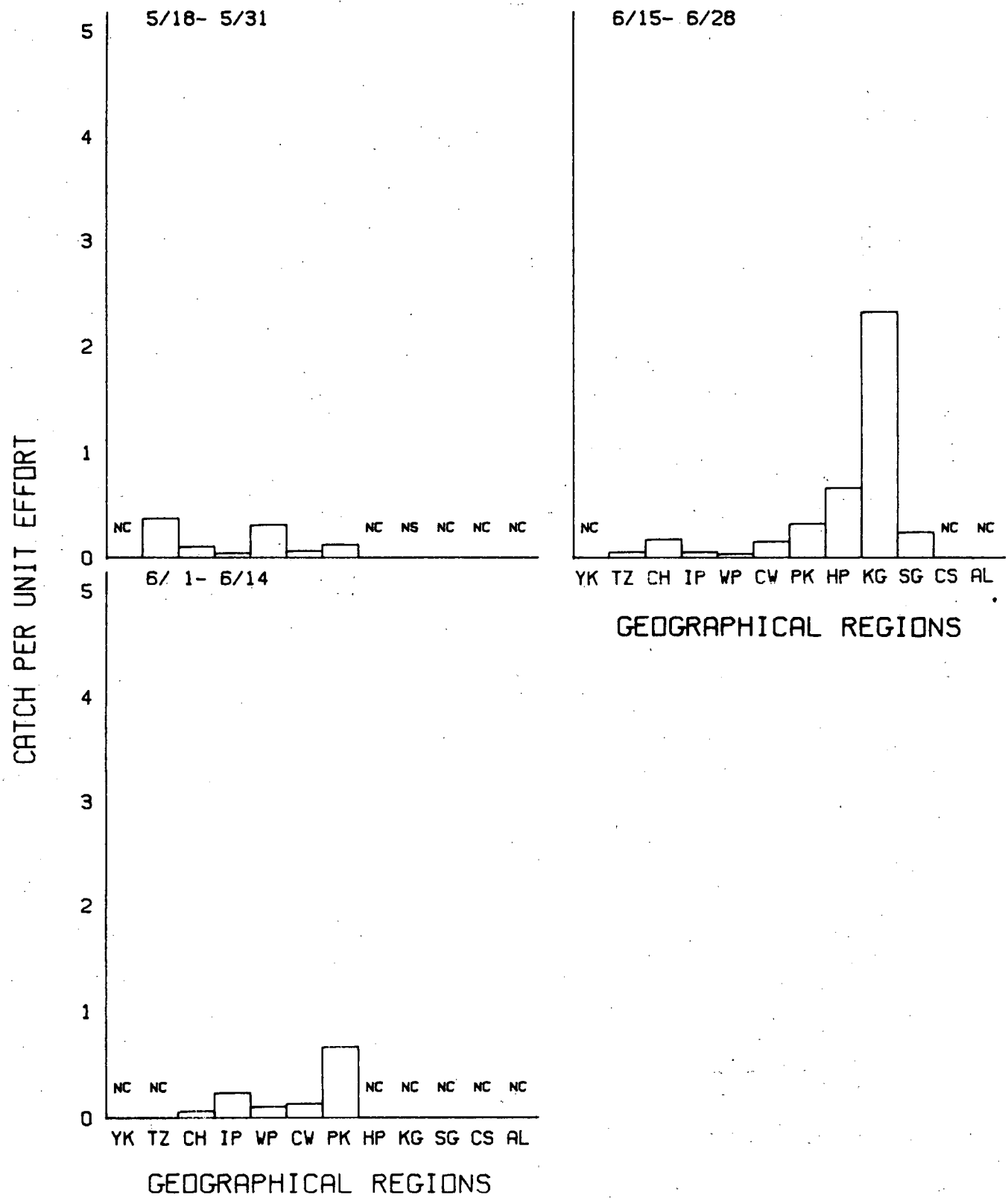


Figure A-44. (Page 2 of 2)

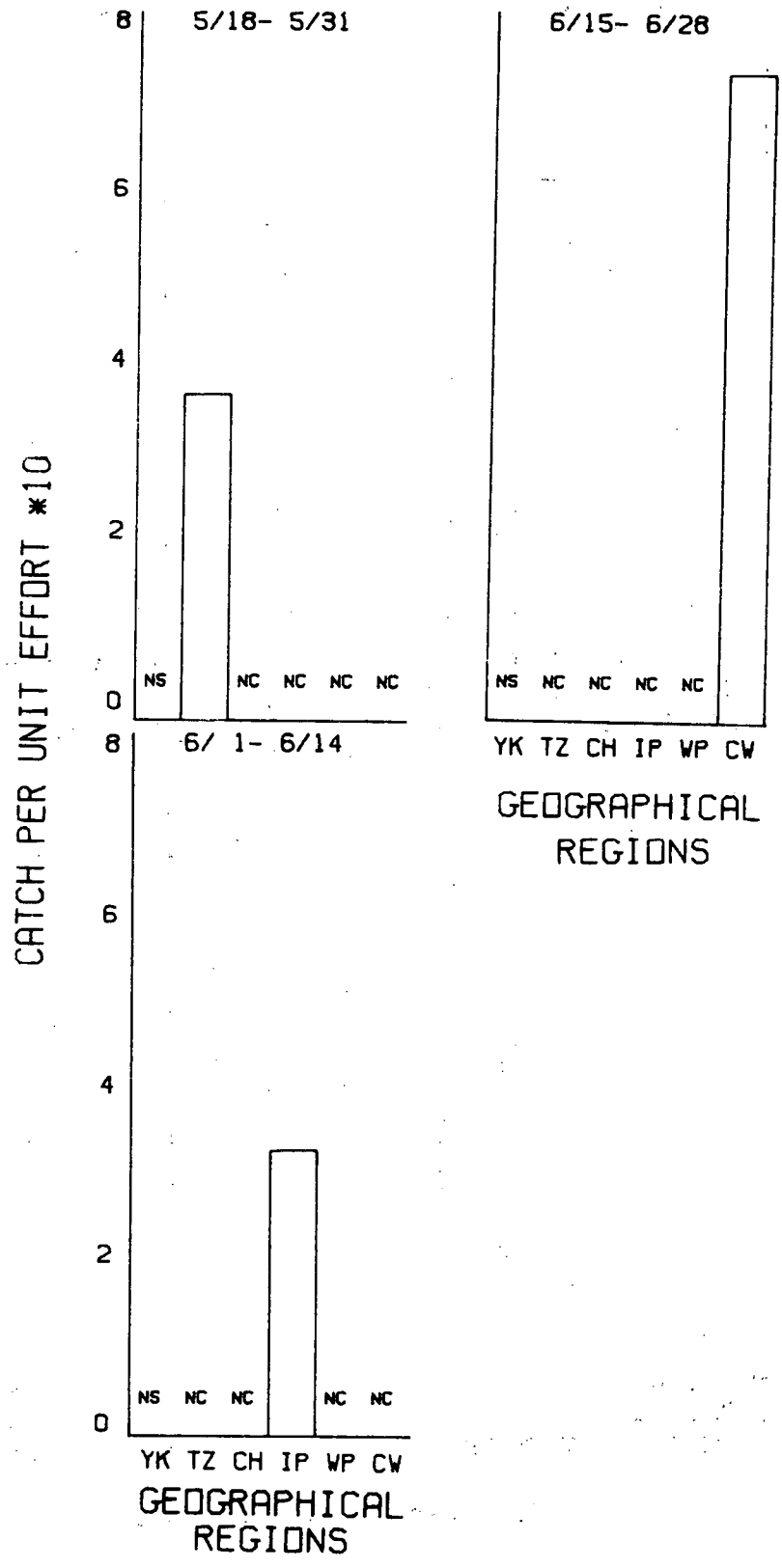


Figure A-45. Yearling American Shad Catch per Unit Effort within Five Geographical Regions, Hudson River Estuary [RM 24-61 (KM 38-98)], Based on Day Sampling by Bottom Trawl (Cod End/Cover Combined), May and June 1975. (Histograms based on data in Table A-84)

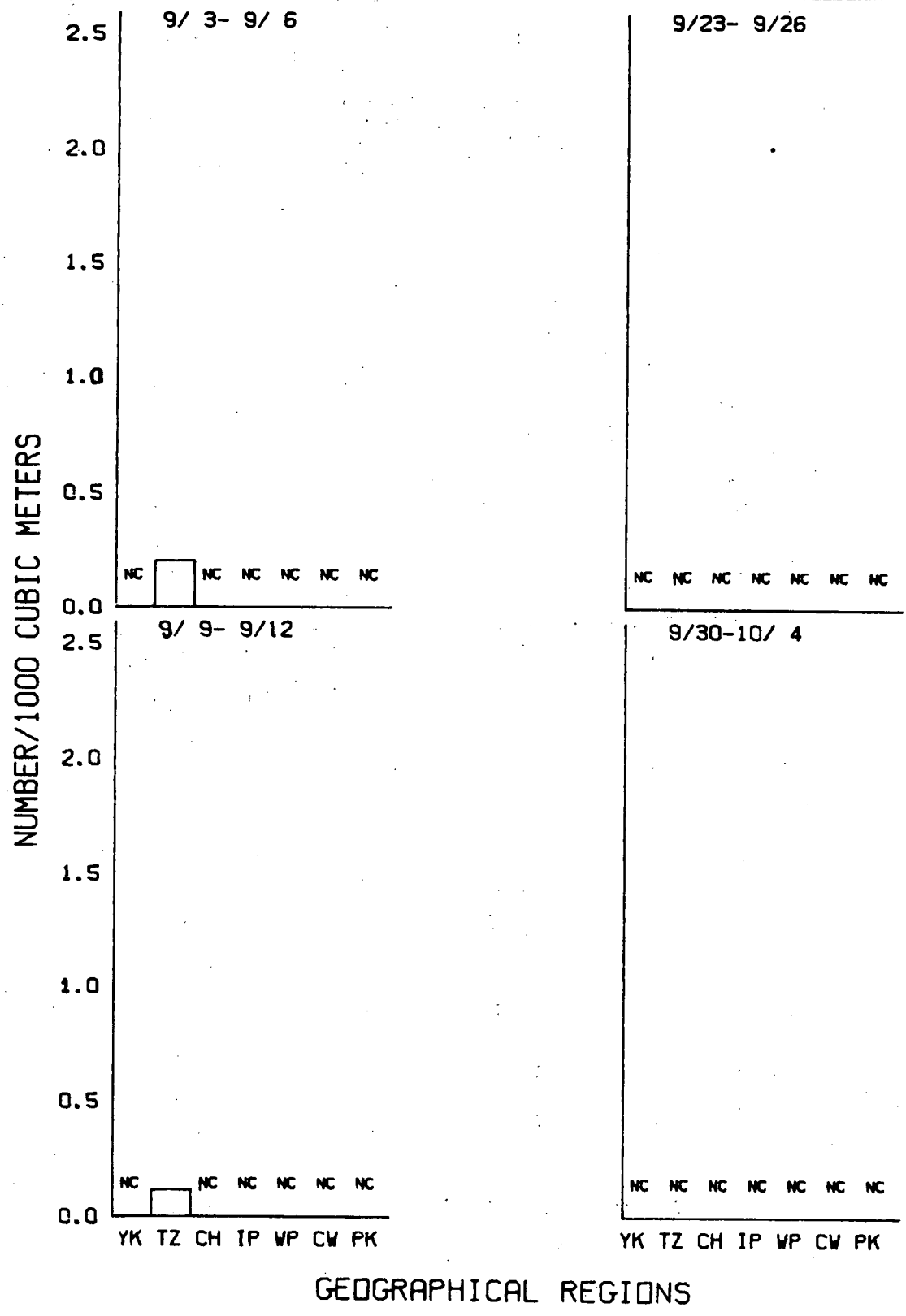


Figure A-46. Age II and Older American Shad Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-December 1974 (Histograms based on data in Table A-47) (Page 1 of 3)

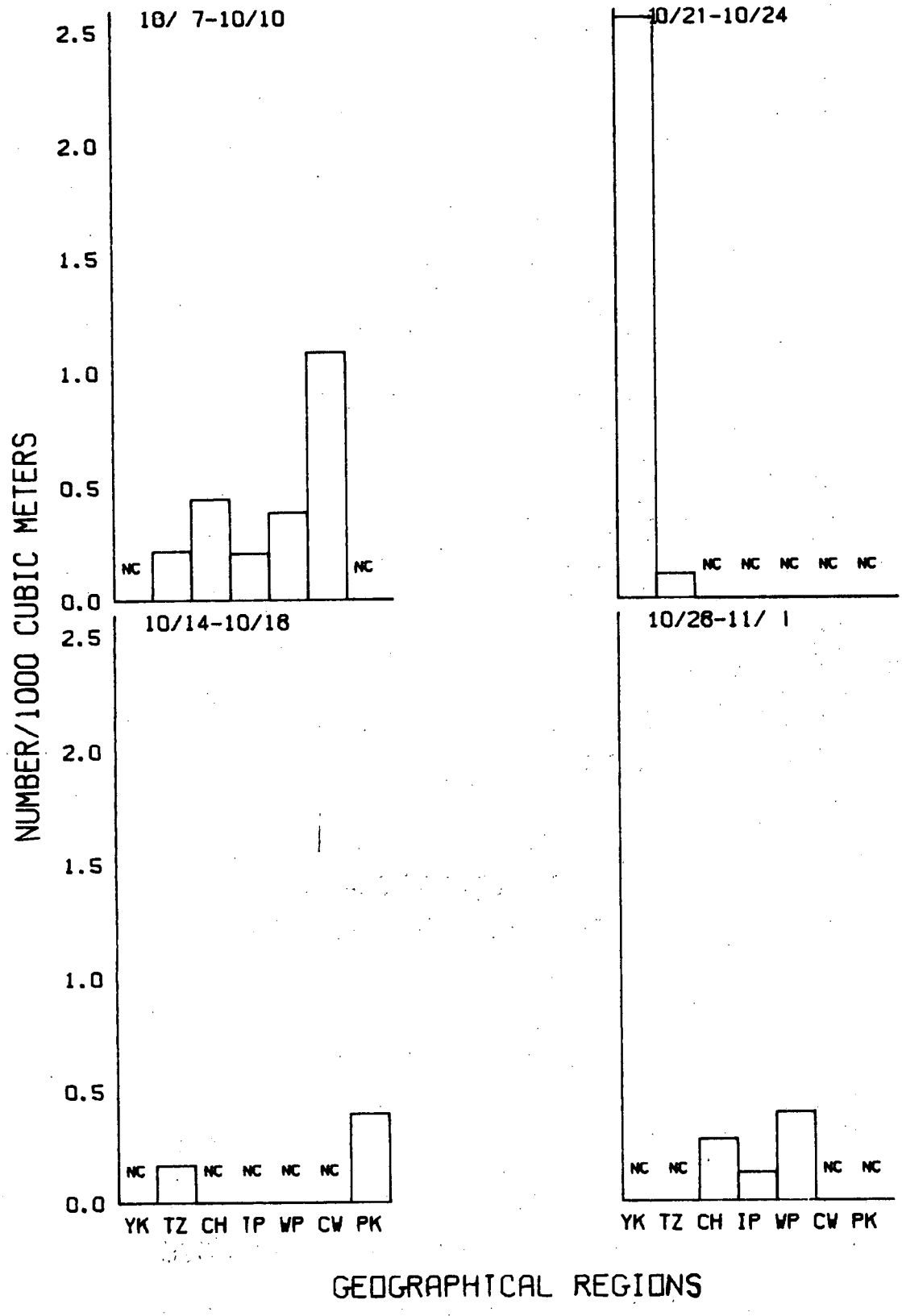
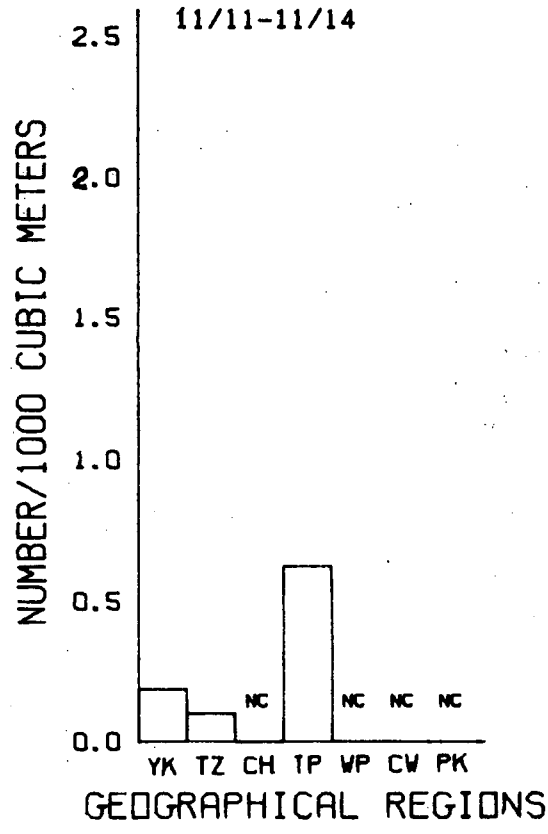


Figure A-46. (Page 2 of 3)



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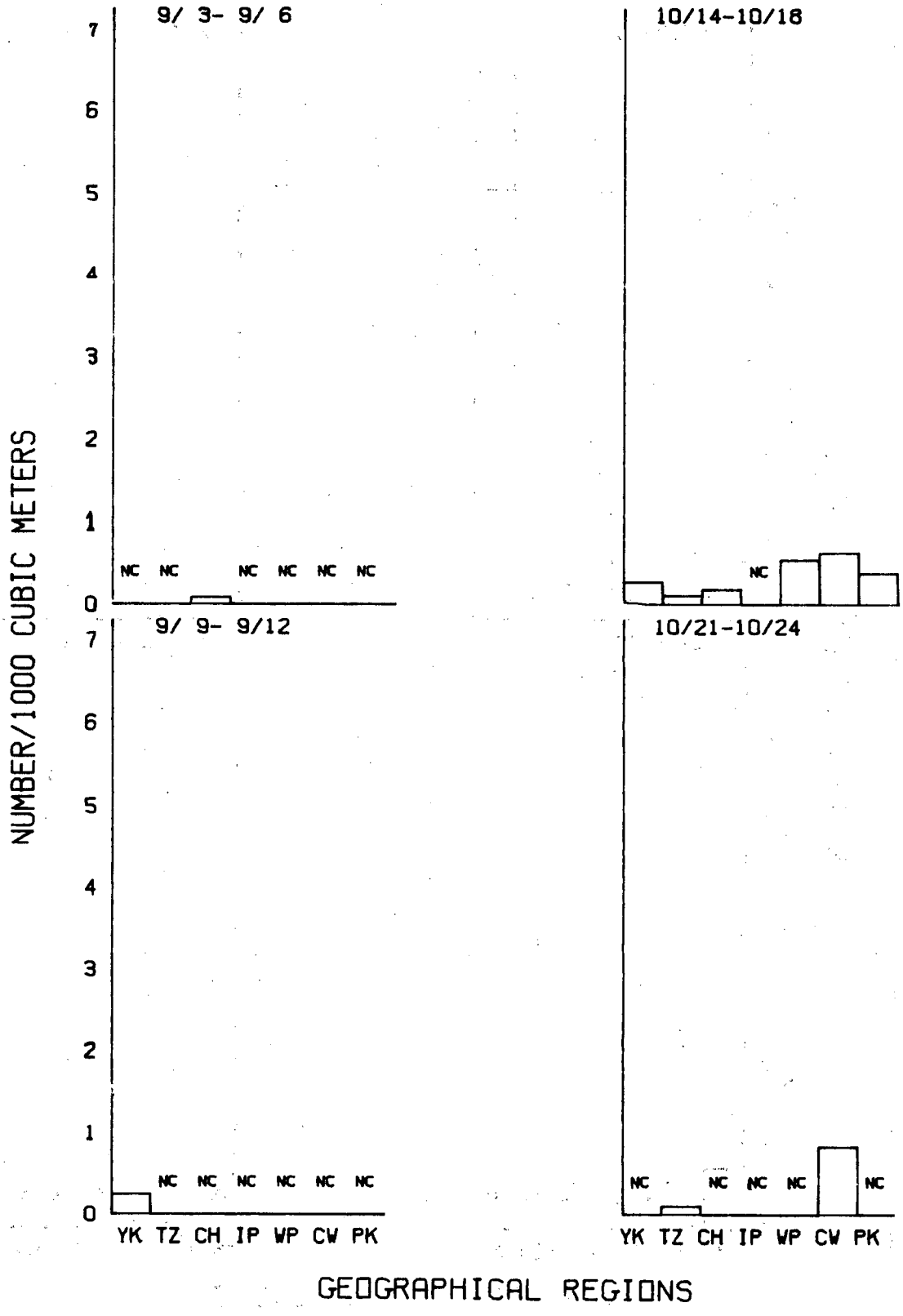
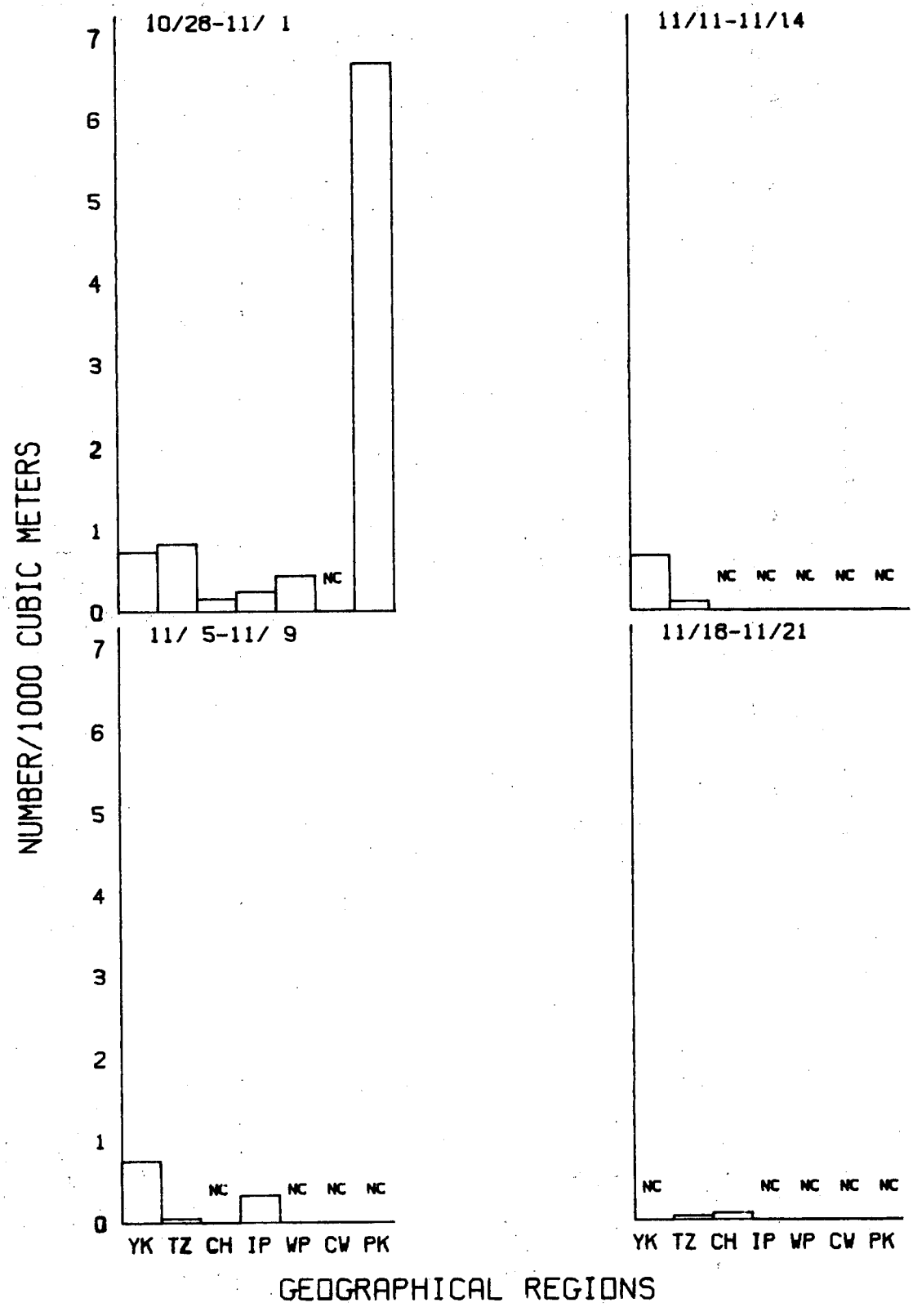


Figure A-47. Yearling and Older Atlantic Tomcod Density Estimates (No./1000 m^3) within Seven Geographical Regions, Hudson River Estuary [RM 14-76 (KM 22-122)], Based on Night Sampling in Shoals by Epibenthic Sled, September-December 1974. (Histograms based on data in Table A-31) (Page 1 of 3)



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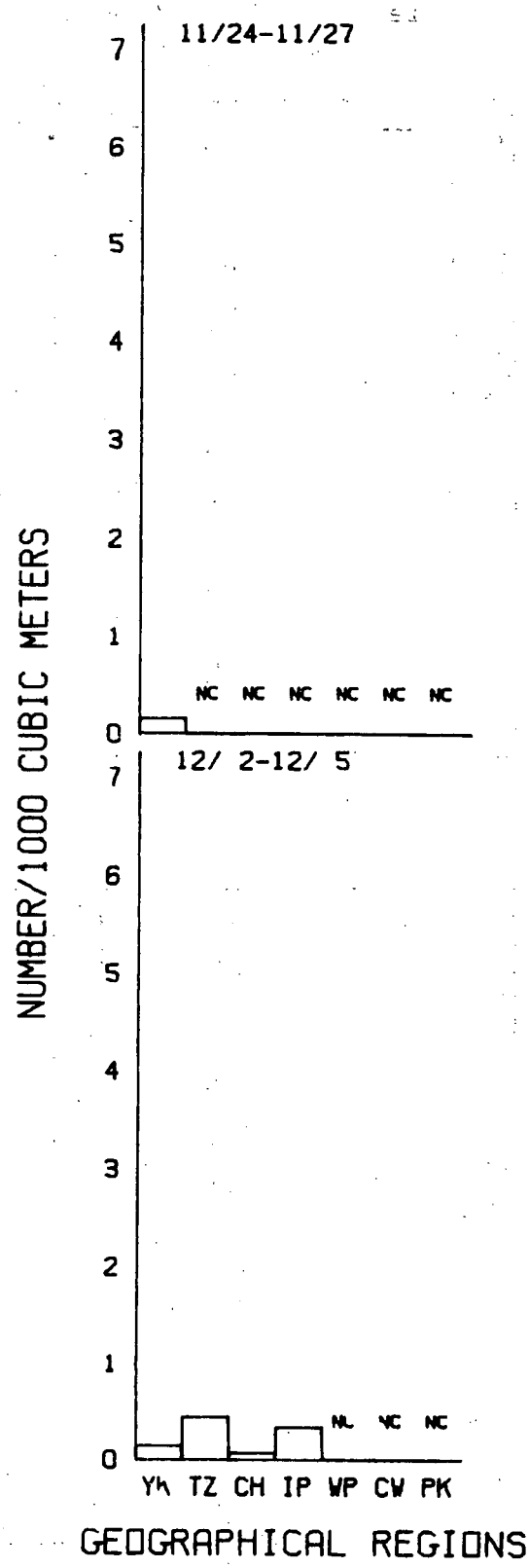

Figure A-47. (Page 3 of 3)

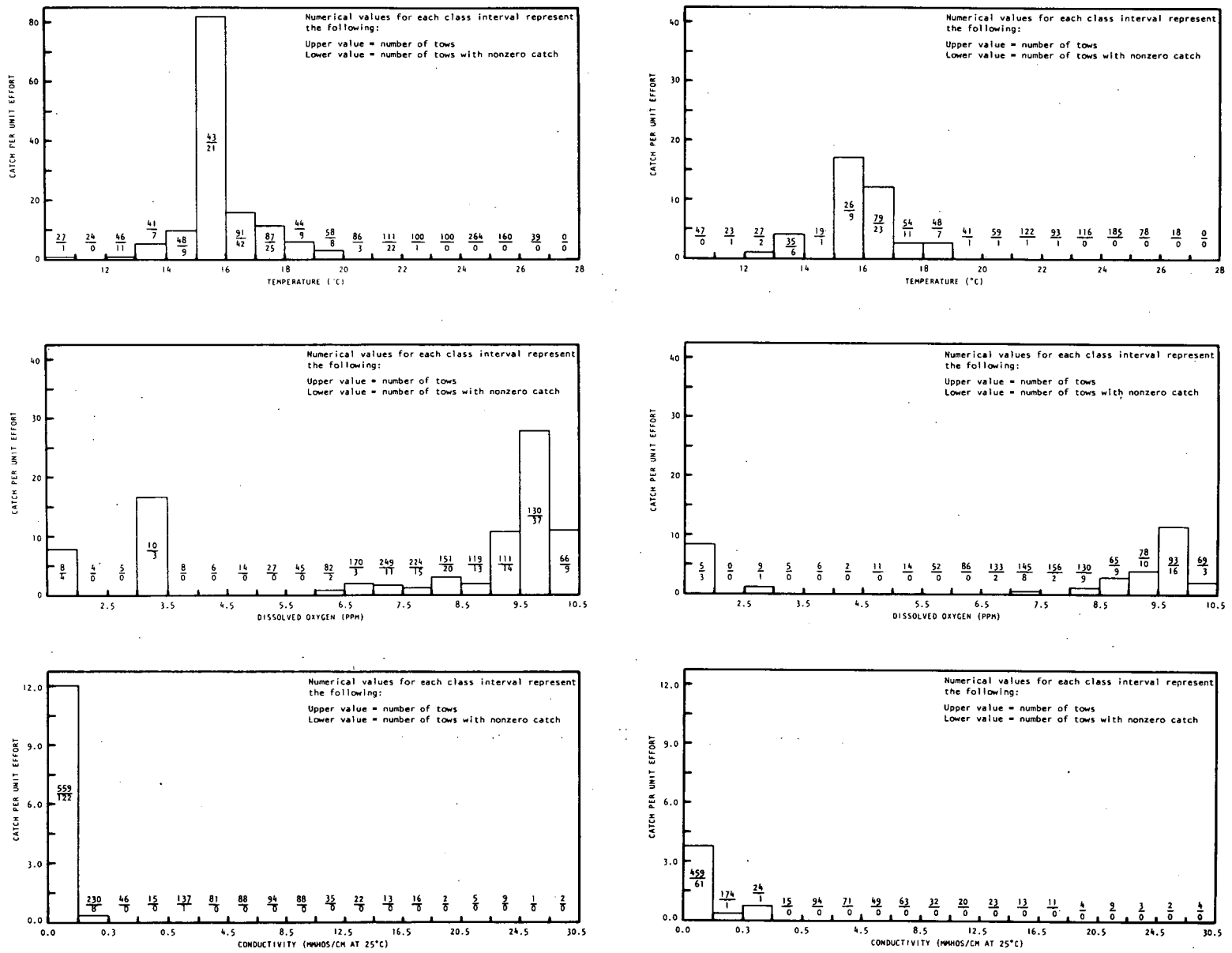

Figure A-48. Striped Bass Egg Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

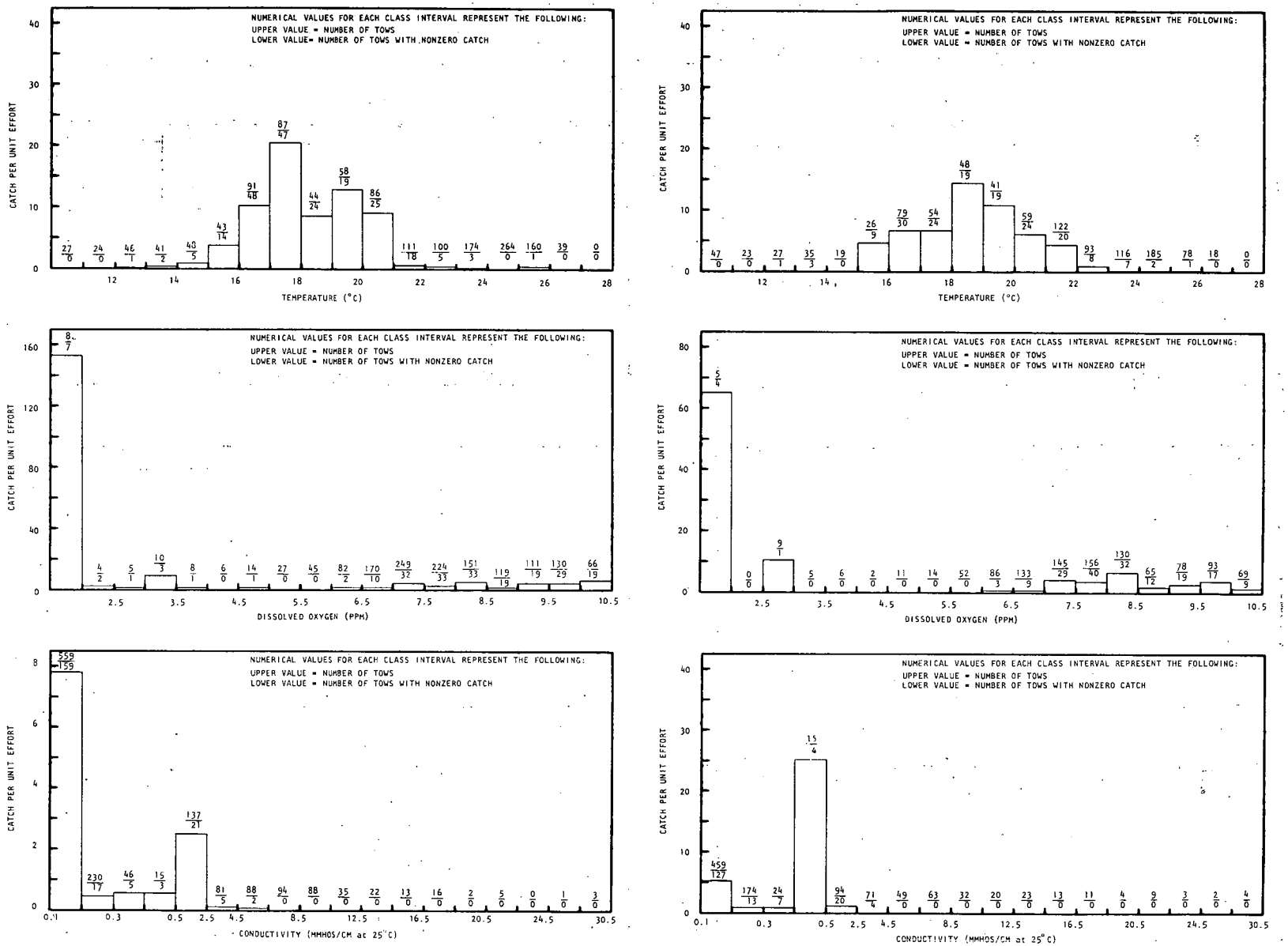

Figure A-49. Striped Bass Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

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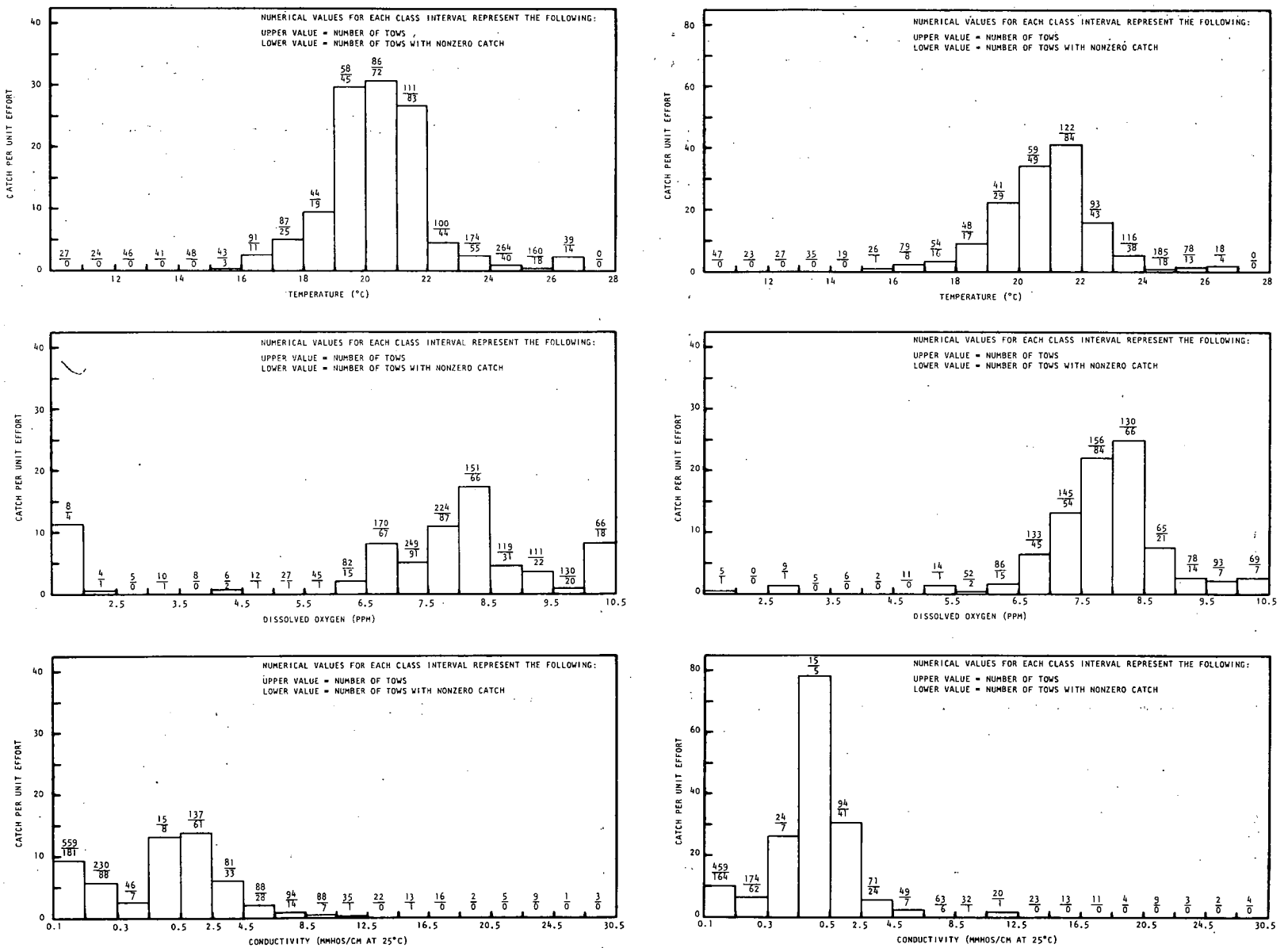


Figure A-50. Striped Bass Post Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

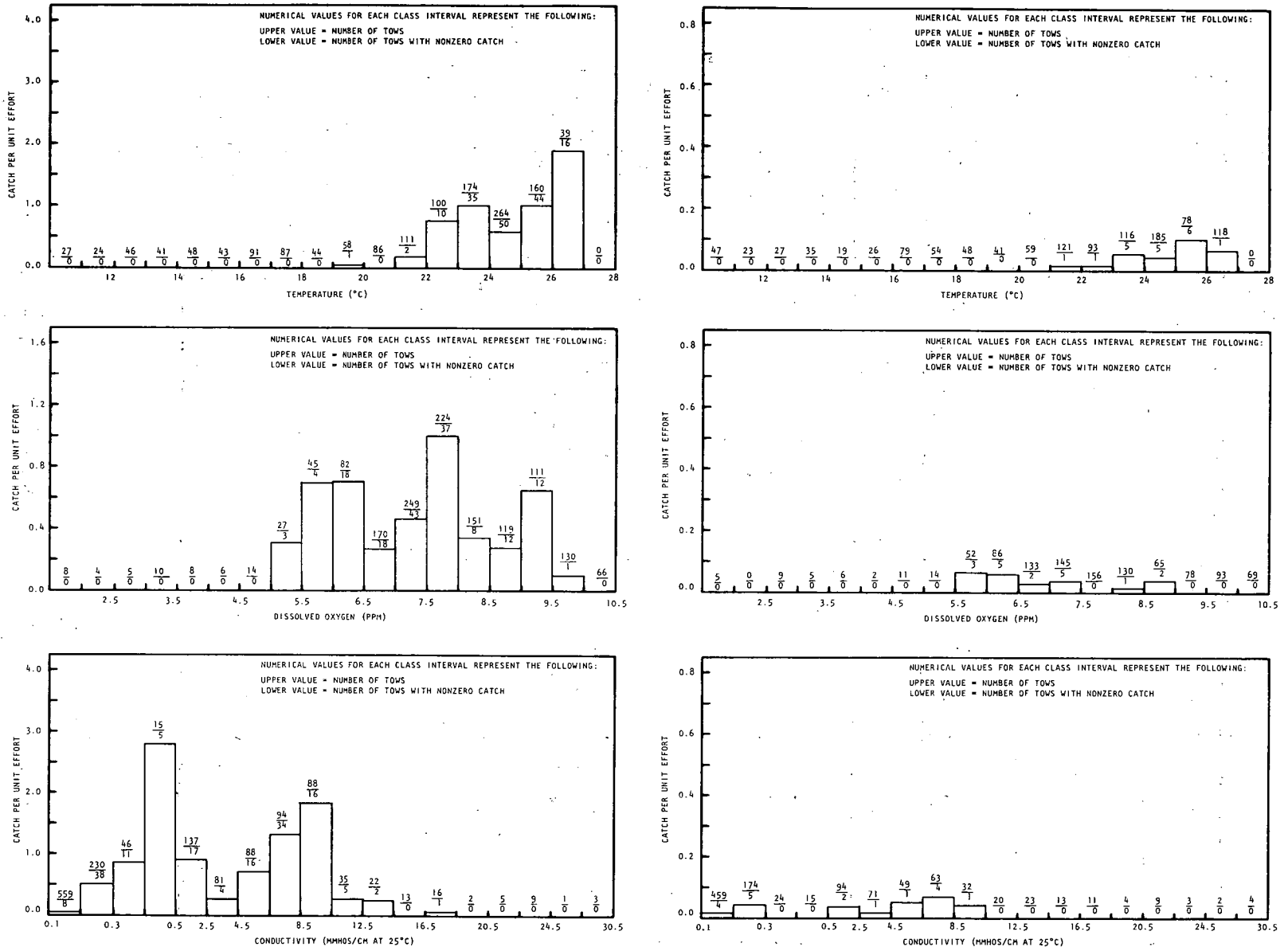
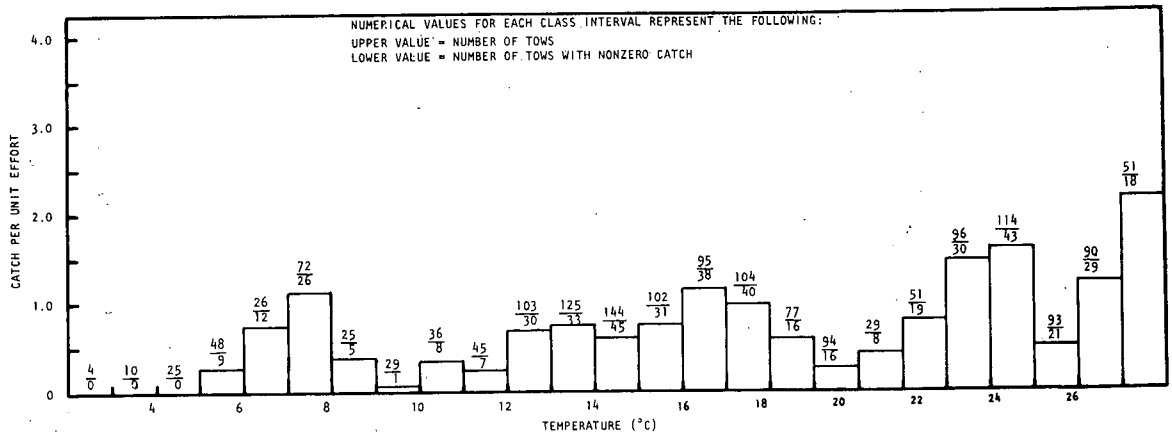
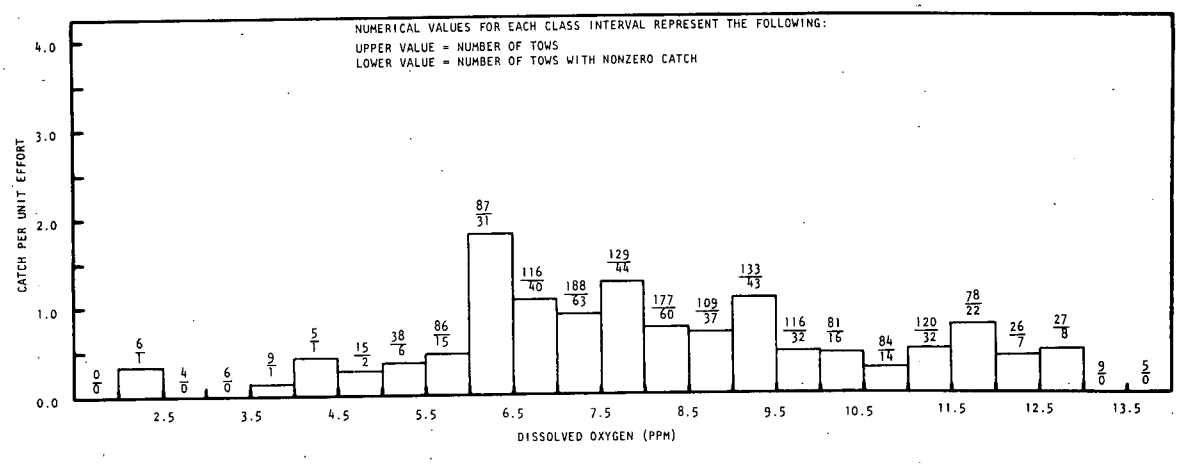


Figure A-51. Juvenile Striped Bass Abundance in Epibenthic Sled (left) and Tucker Trawl (right), June-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity





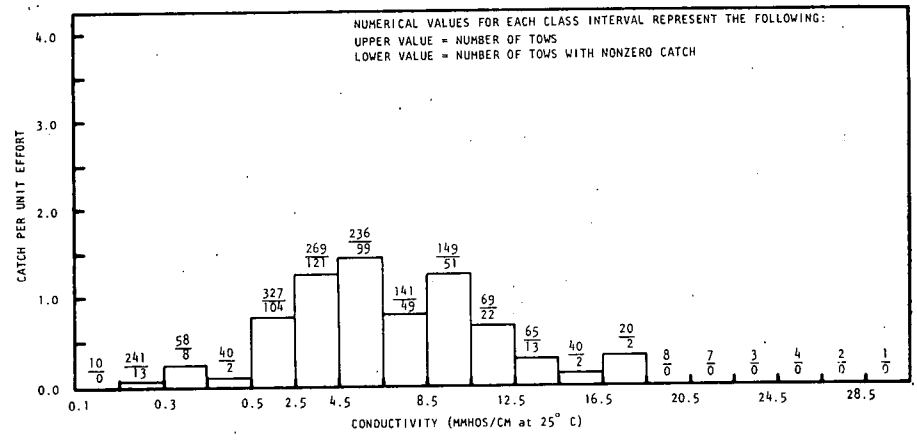


Figure A-52. Juvenile Striped Bass Abundance in Epibenthic Sled, August-December 1974 Fall Shoals Survey, Hudson River Estuary [RM 14-77 (KM 22-123)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

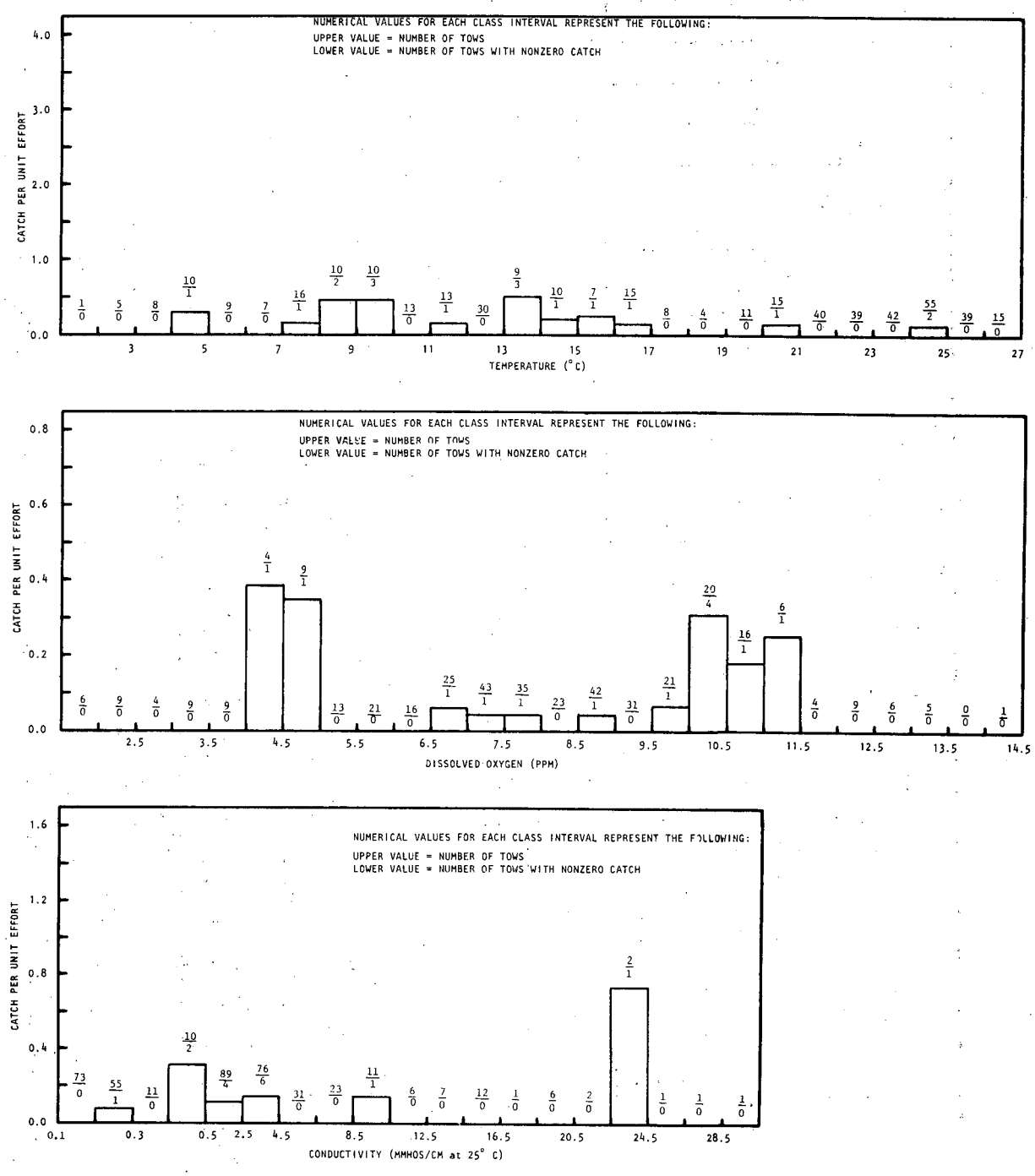


Figure A-53. Juvenile Striped Bass Abundance in Bottom Trawl, July-December 1974 Interregional Bottom Trawl Survey, Hudson River Estuary [RM 12-61 (KM 19-98)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

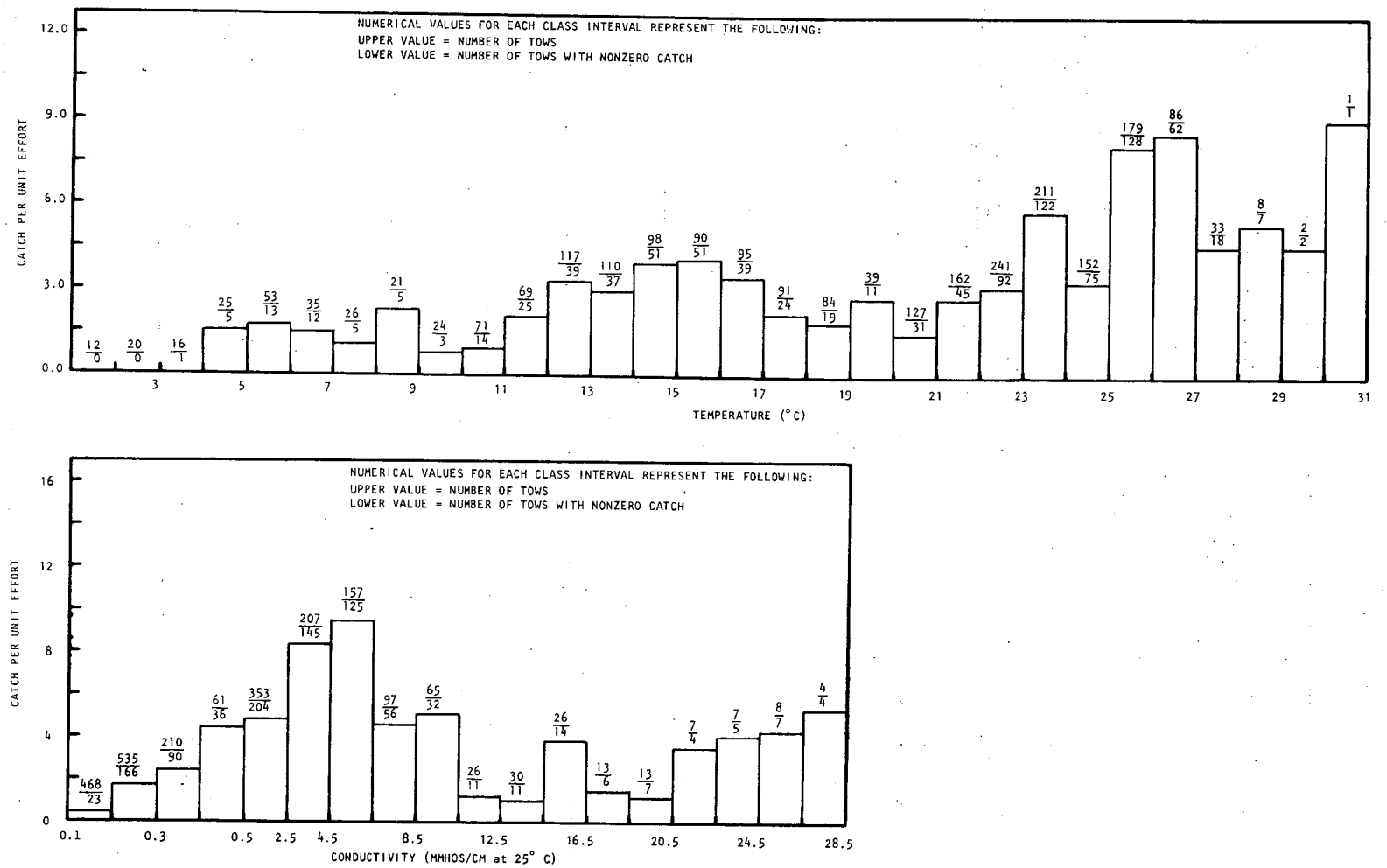


Figure A-54. Juvenile Striped Bass Abundance in 100-Ft Beach Seine, June-December 1974 Beach Seine Survey, Hudson River Estuary [RM 12-152 (KM 19-243)], as Related to Water Temperature and Conductivity

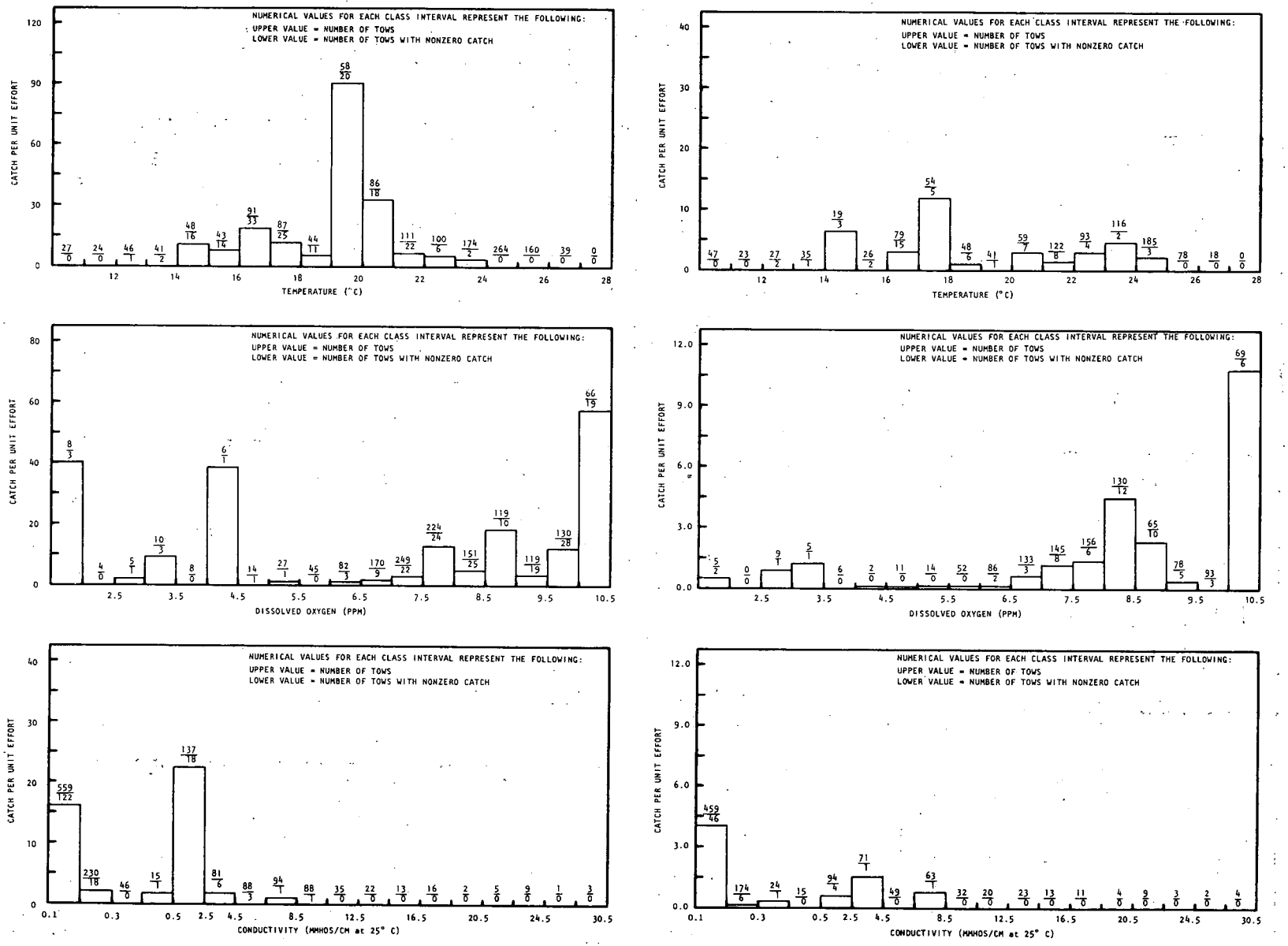


Figure A-55. White Perch Egg Abundance in Epibenthic Sled (left) and Tucker Trawl (right) May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

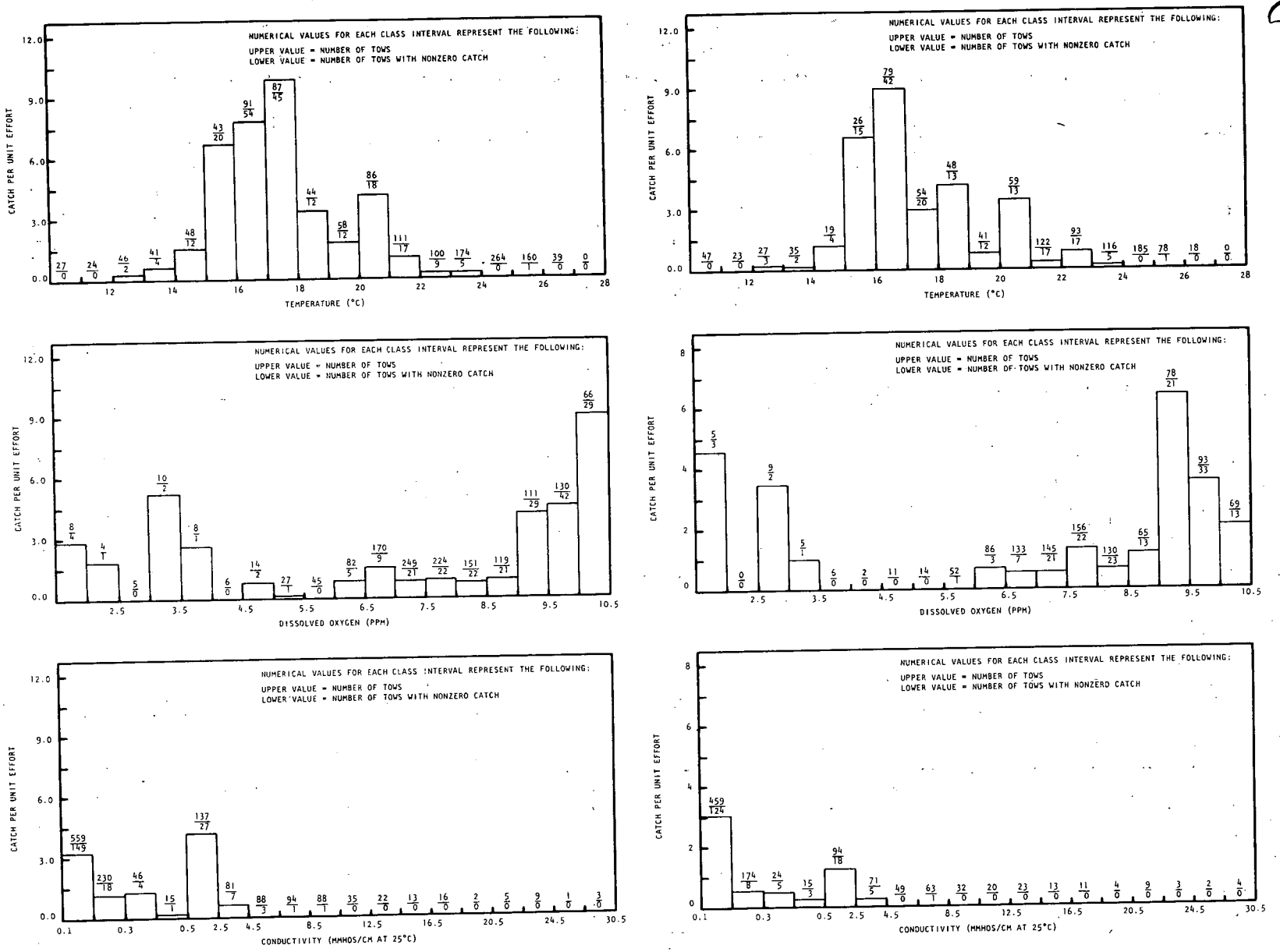


Figure A-56. White Perch Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

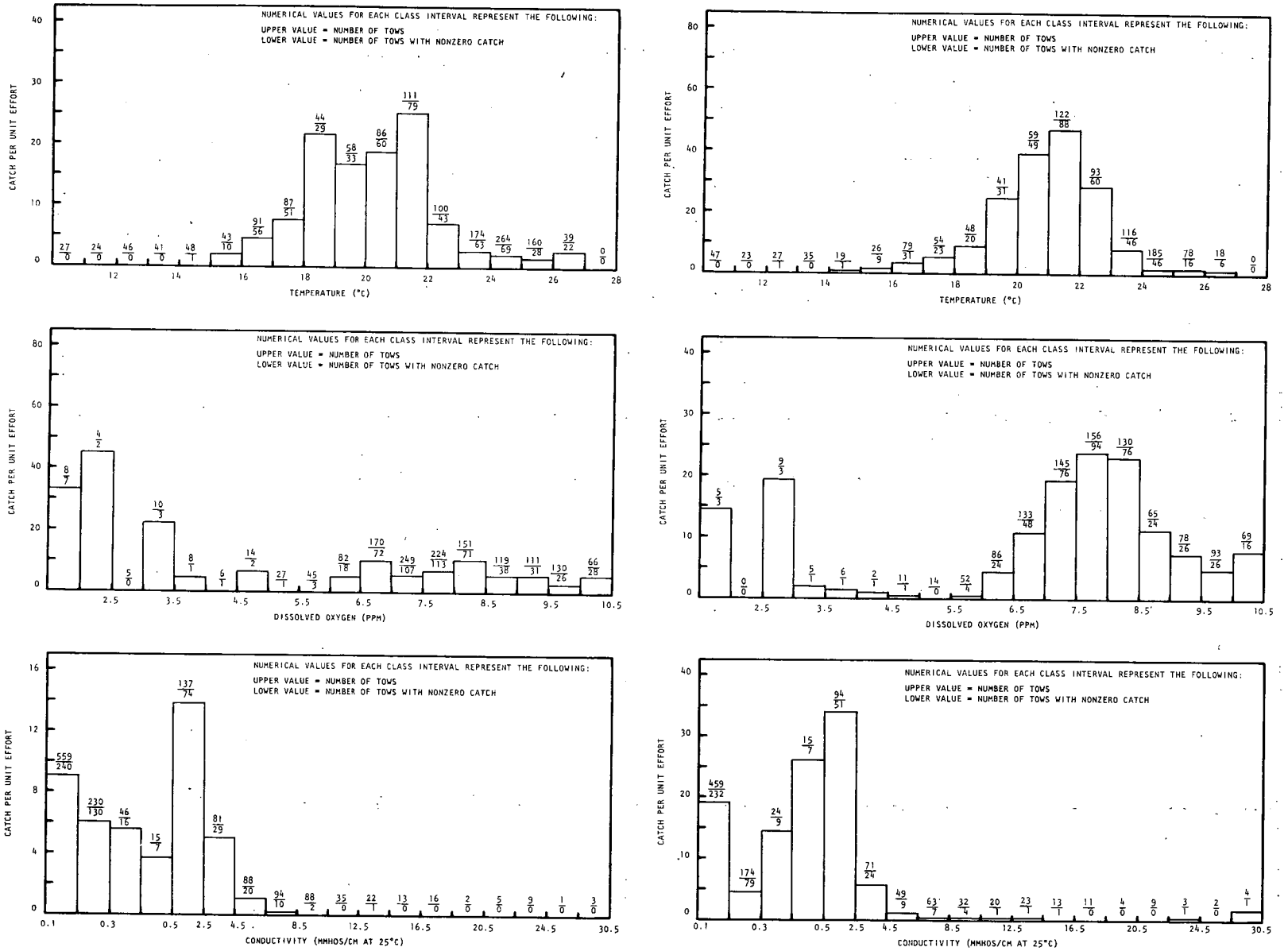


Figure A-57. White Perch Post Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

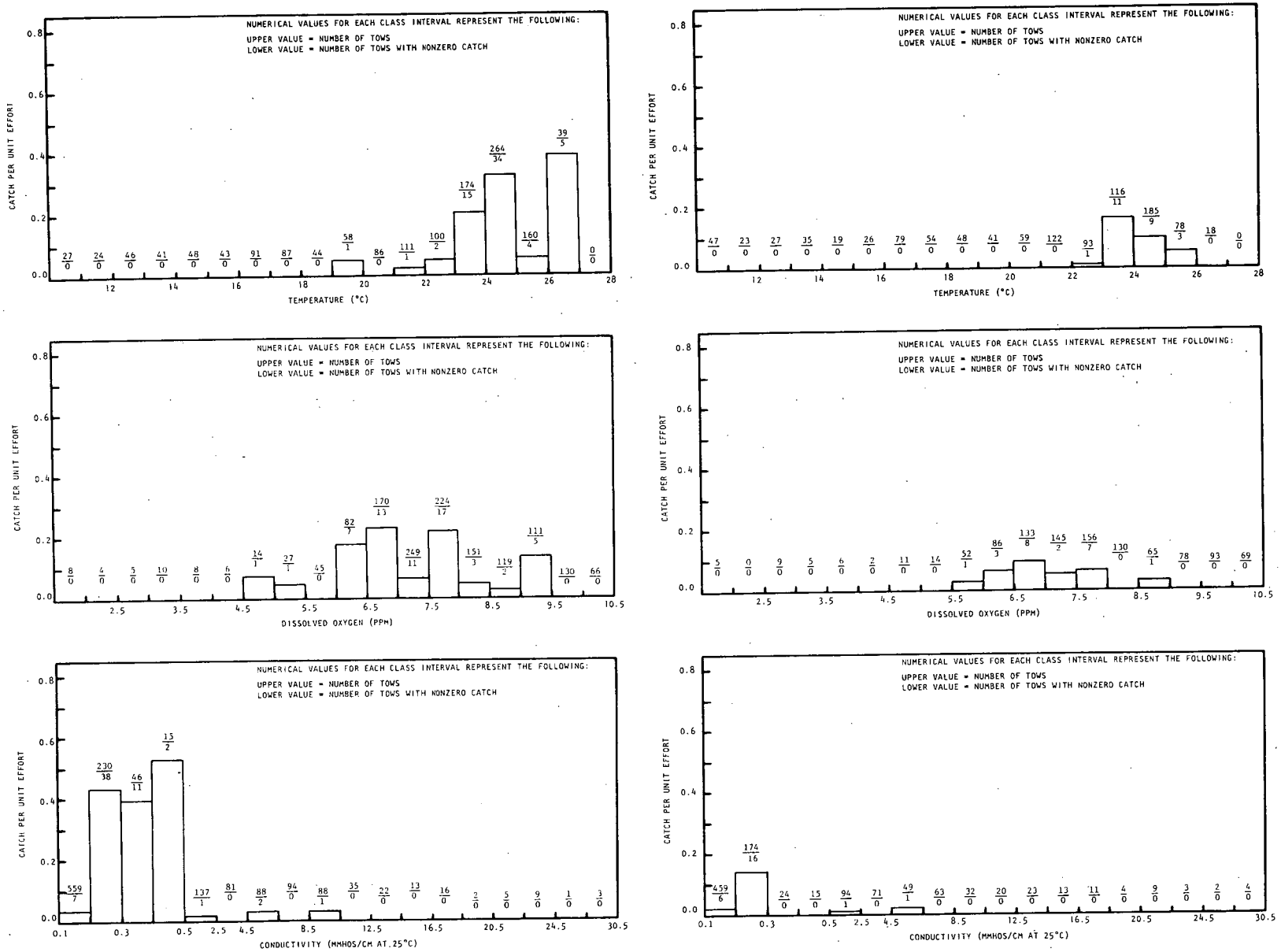


Figure A-58. Juvenile White Perch Abundance in Epibenthic Sled (left) and Tucker Trawl (right), June-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

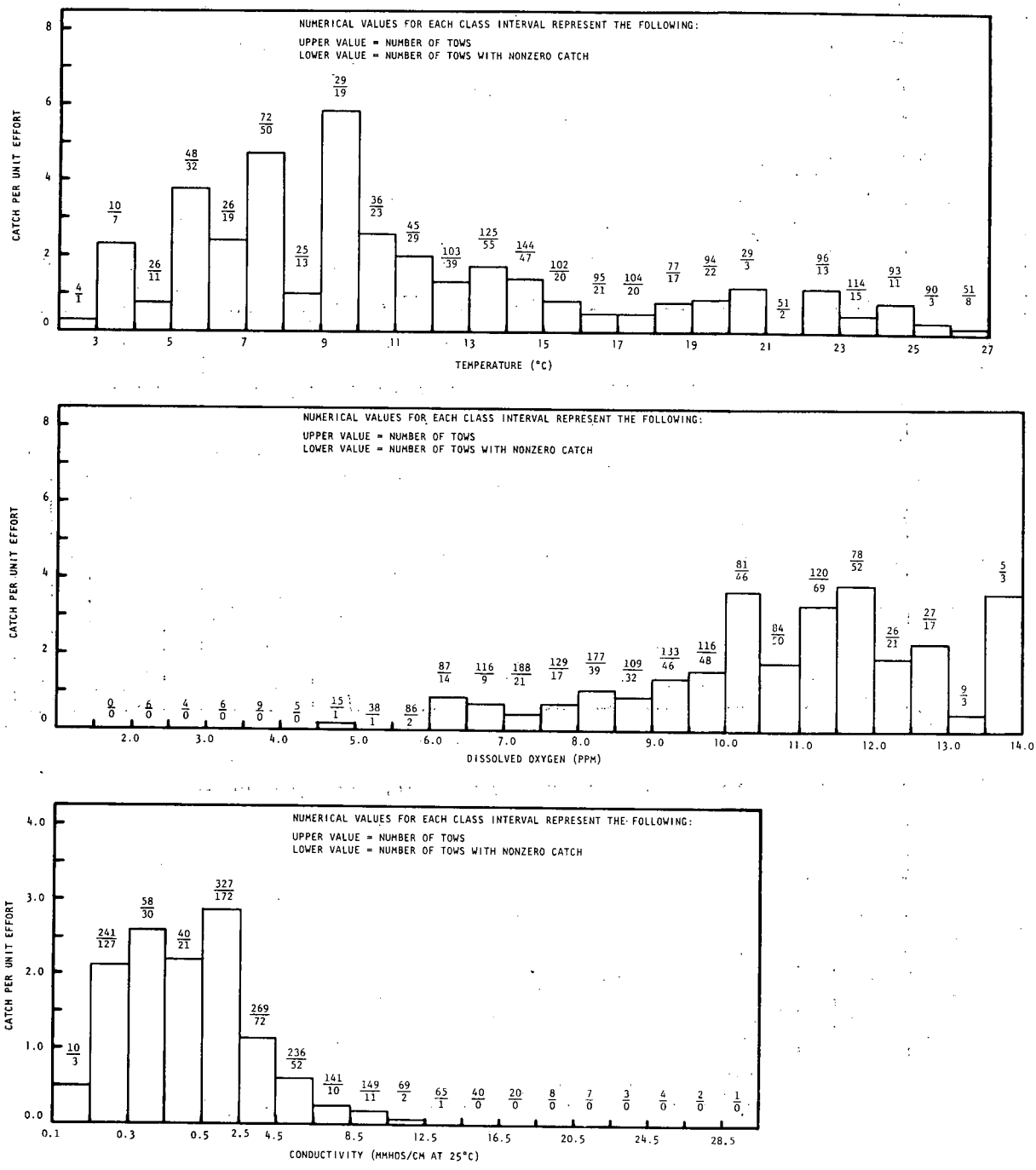


Figure A-59. Juvenile White Perch Abundance in Epibenthic Sled, August-December 1974 Fall Shoals Survey, Hudson River Estuary [RM 14-77 (KM 22-123)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

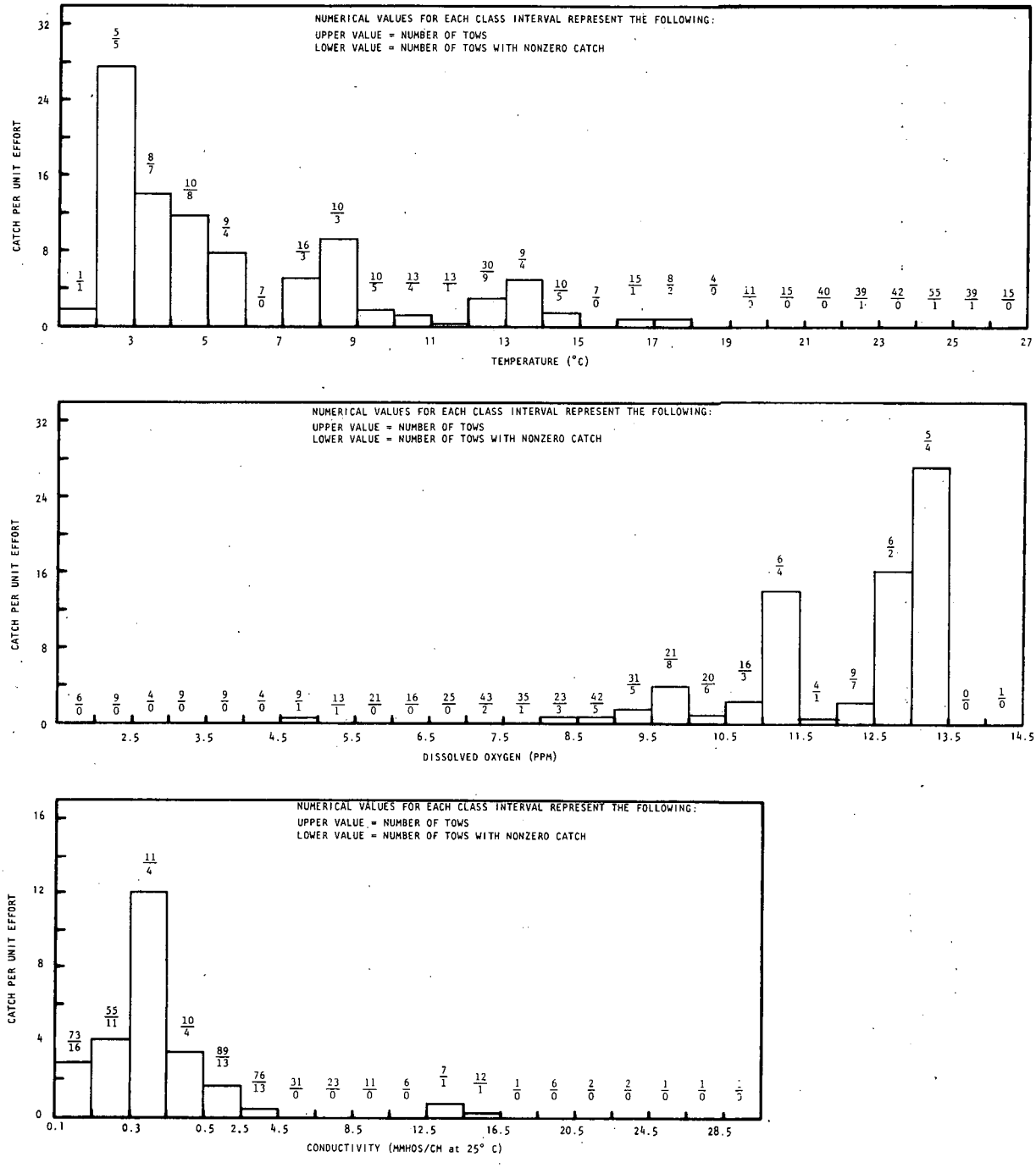
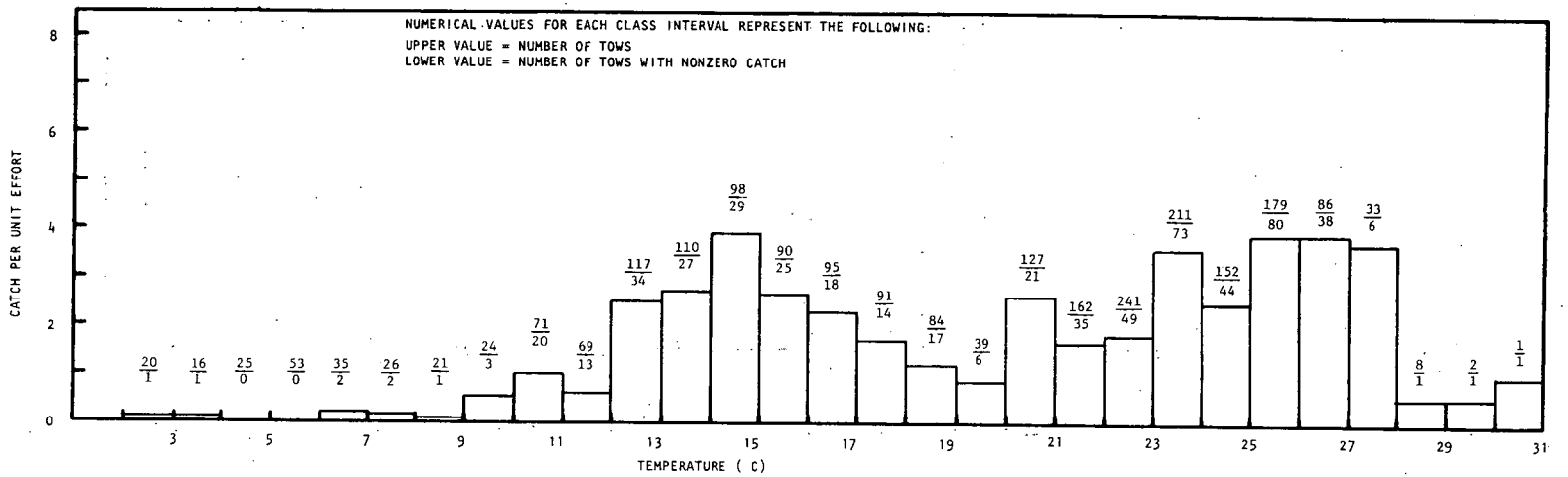


Figure A-60. Juvenile White Perch Abundance in Bottom Trawl, July-December 1974 Interregional Bottom Trawl Survey, Hudson River Estuary [RM 12-61 (KM 19-98)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity



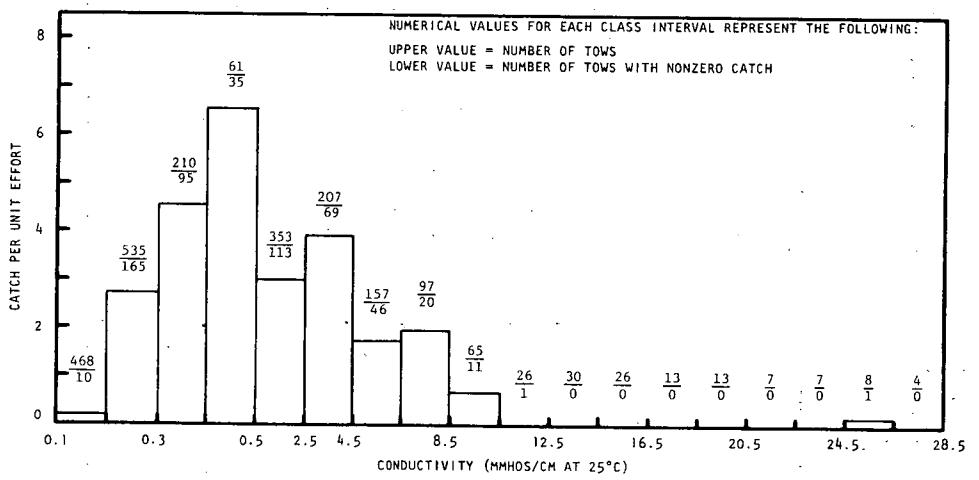


Figure A-61. Juvenile White Perch Abundance in 100-Ft Beach Seine, July-December 1974 Beach Seine Survey, Hudson River Estuary [RM 12-152 (KM 19-243)], as Related to Water Temperature and Conductivity

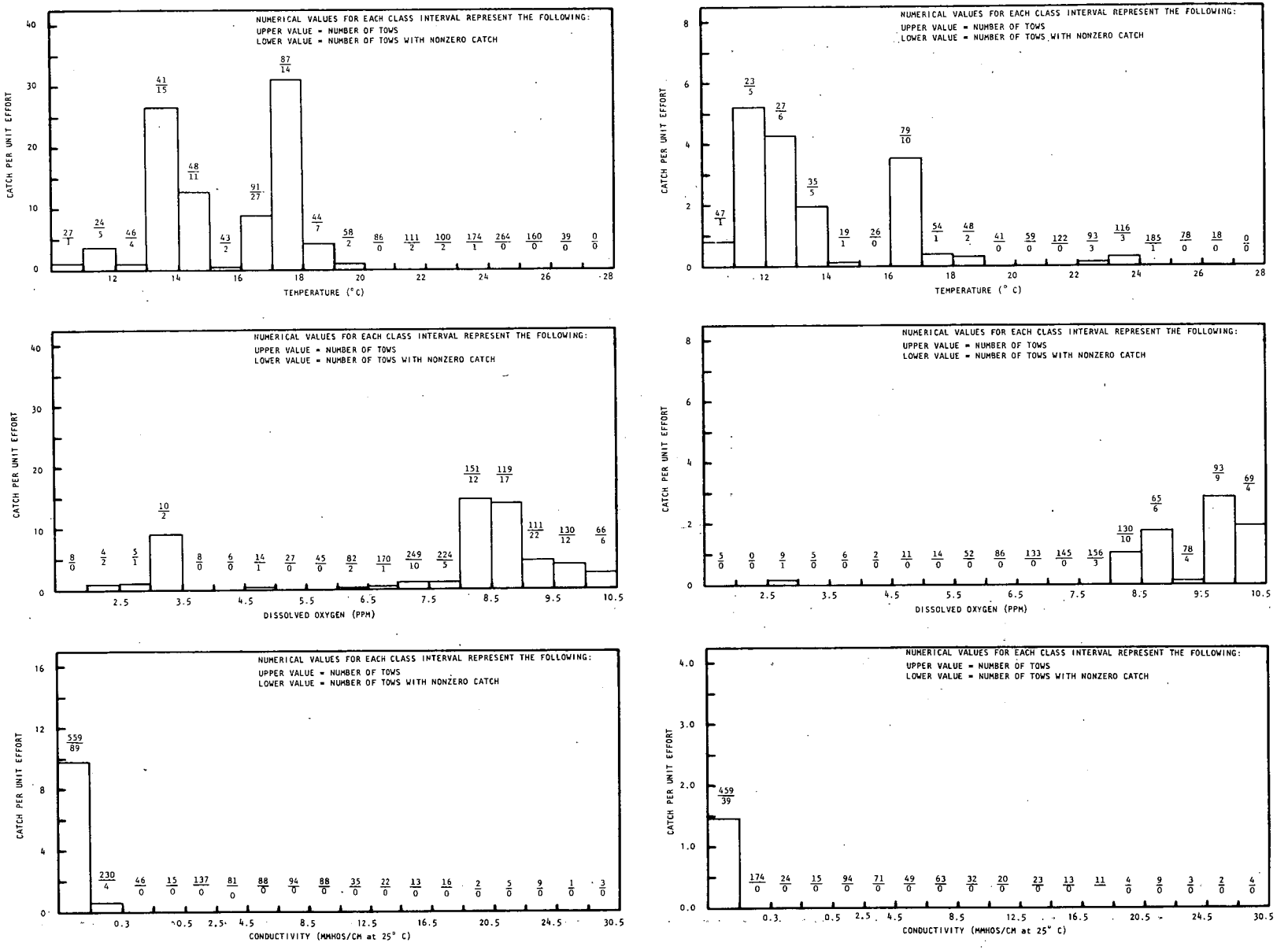


Figure A-62. American Shad Egg Abundance in Epibenthic Sled (left) and Tucker Trawl (right), April-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

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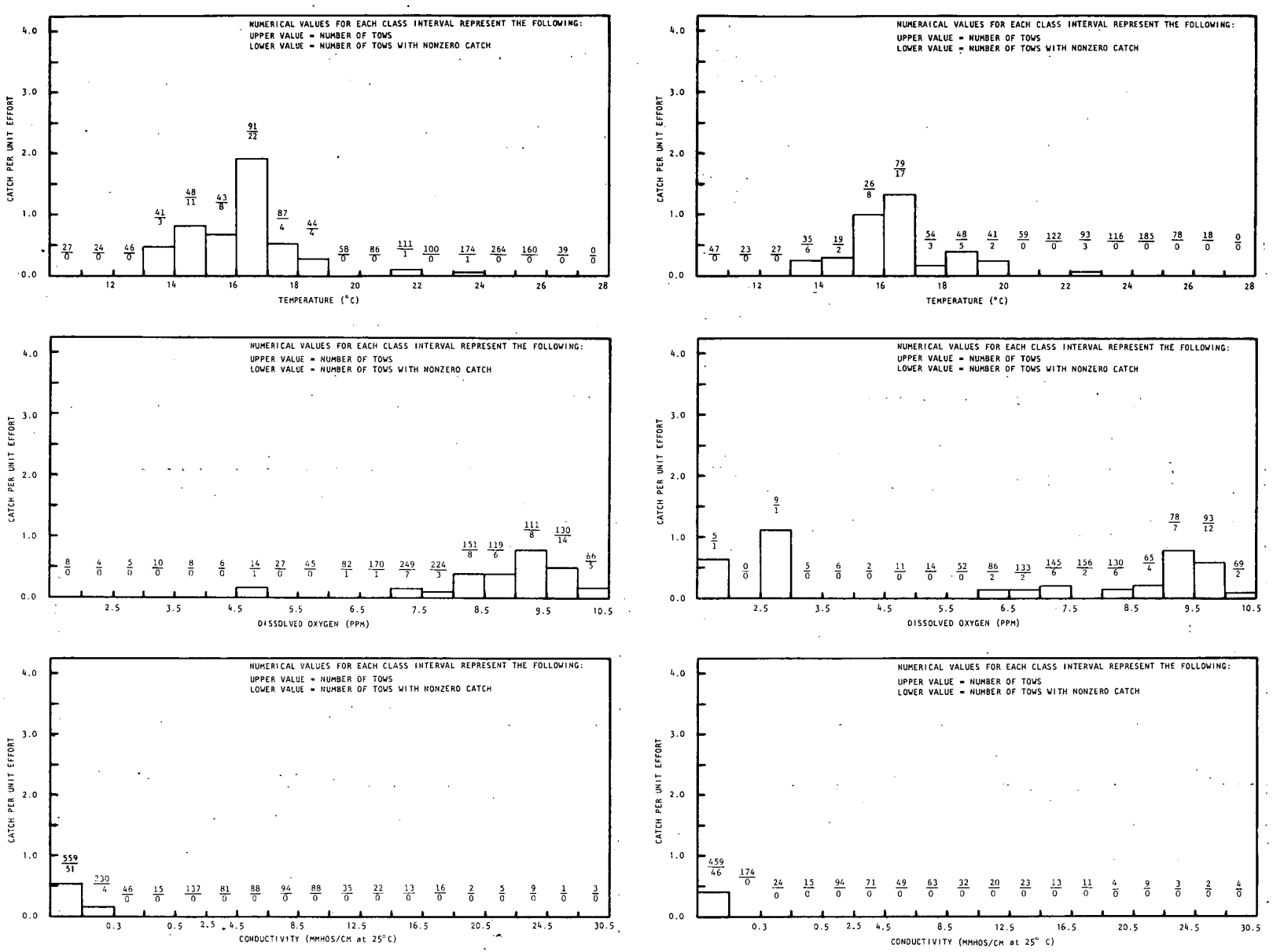


Figure A-63. American Shad Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-June 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

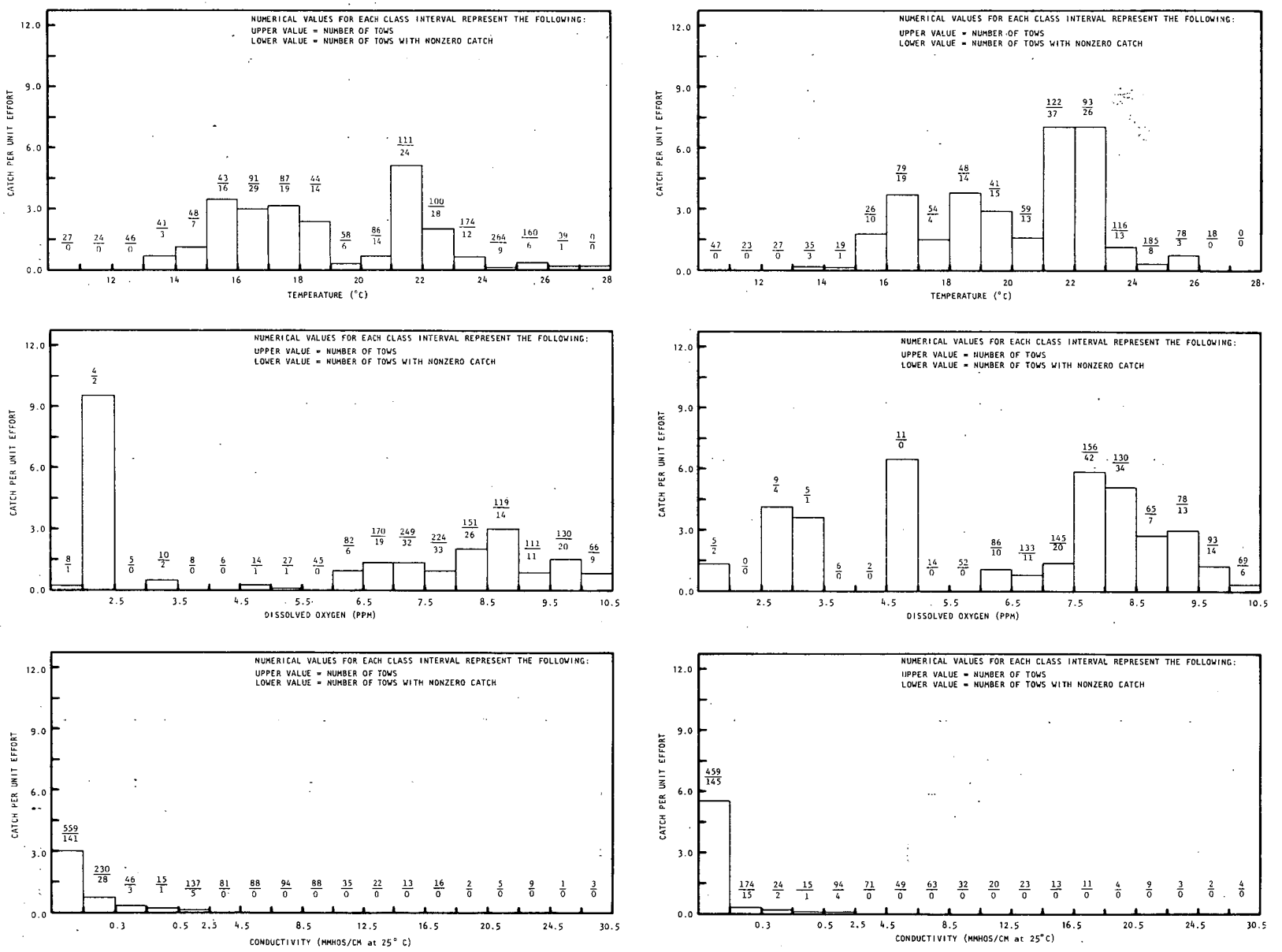


Figure A-64. American Shad Post Yolk-Sac Larvae Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-July 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

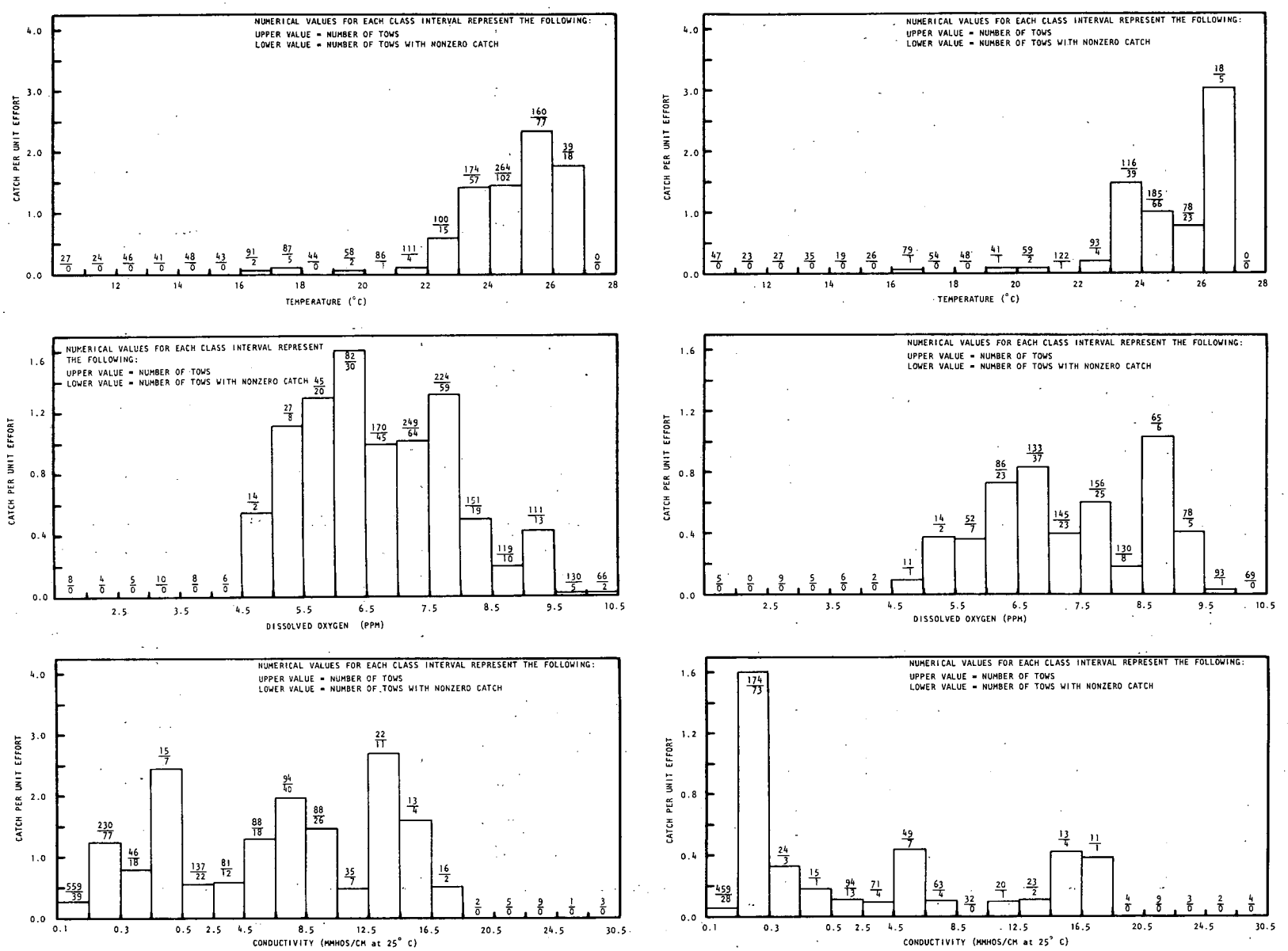


Figure A-65. Juvenile American Shad Abundance in Epibenthic Sled (left) and Tucker Trawl (right), May-August 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

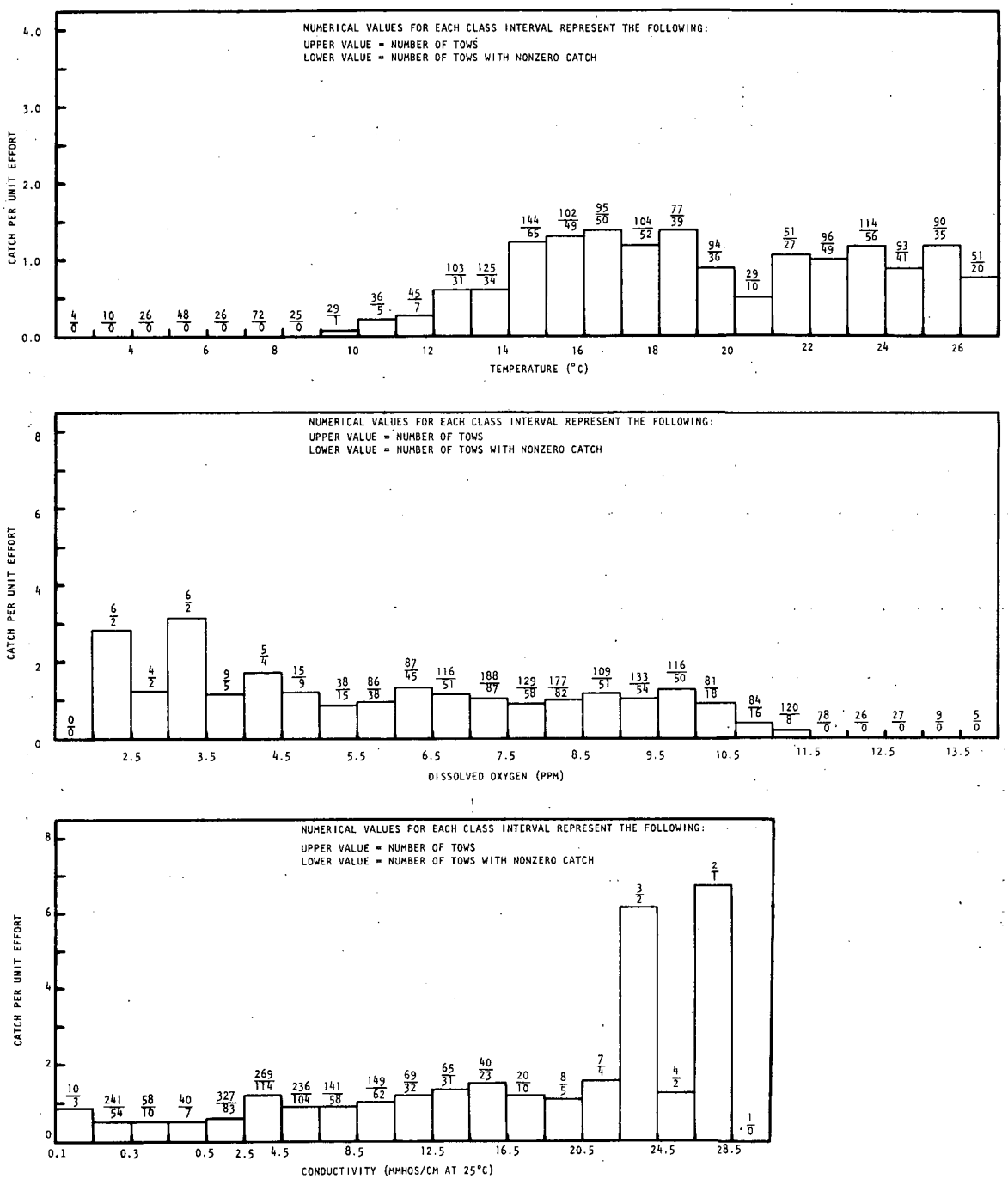


Figure A-66. Juvenile American Shad Abundance in Epibenthic Sled, August-December 1974 Fall Shoals Survey, Hudson River Estuary [RM 14-77 (KM 22-123)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

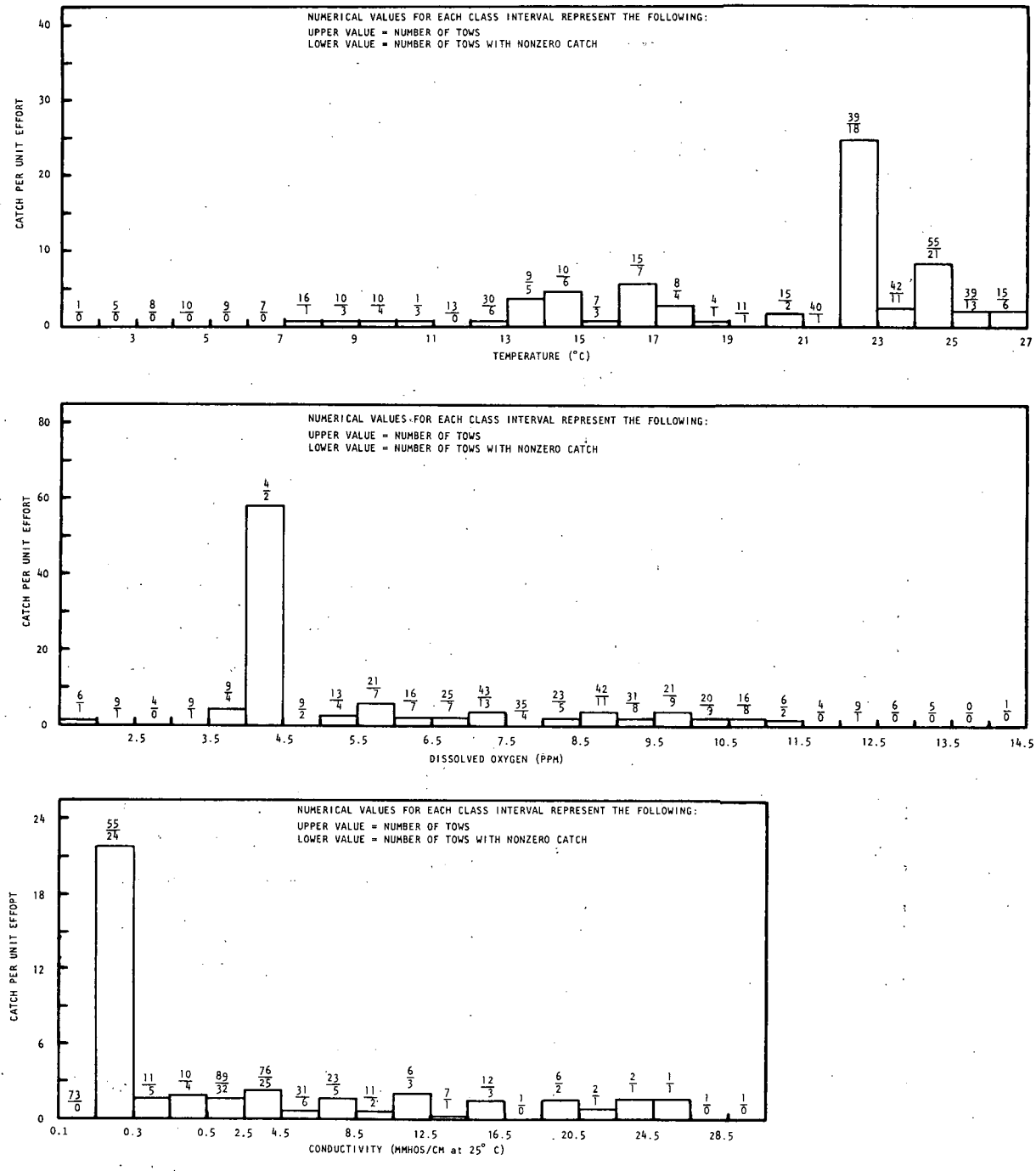
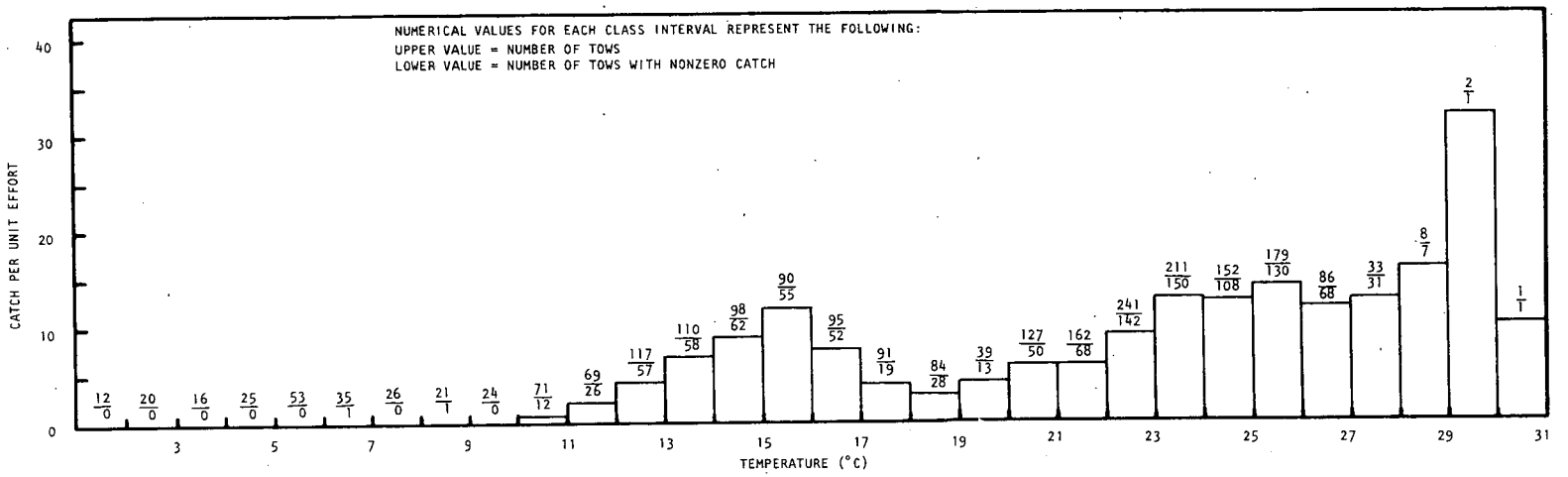


Figure A-67. Juvenile American Shad Abundance in Bottom Trawl, April-November 1974 Interregional Bottom Trawl Survey, Hudson River Estuary [RM 12-61 (KM 19-98)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity



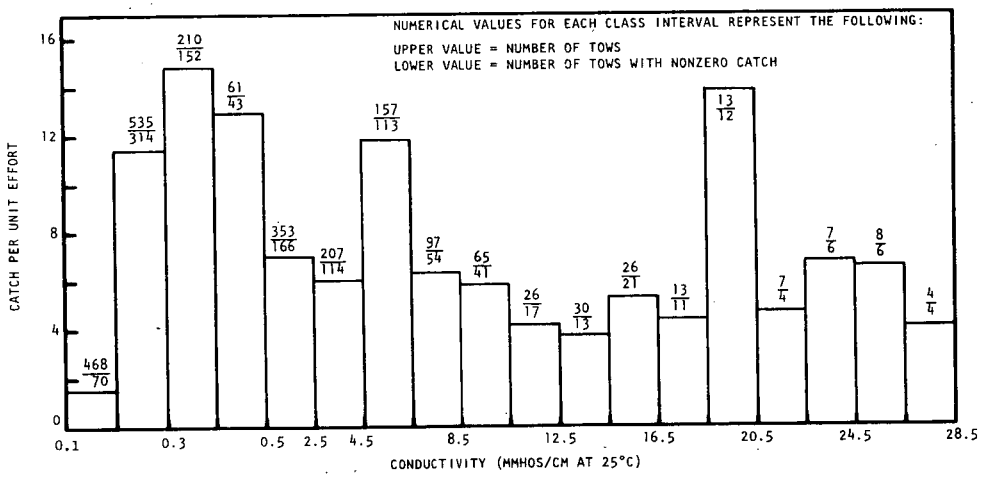


Figure A-68. Juvenile American Shad Abundance in 100-Ft Beach Seine, June-November 1974 Beach Seine Survey, Hudson River Estuary [RM 12-152 (KM 19-243)], as Related to Water Temperature and Conductivity

services group

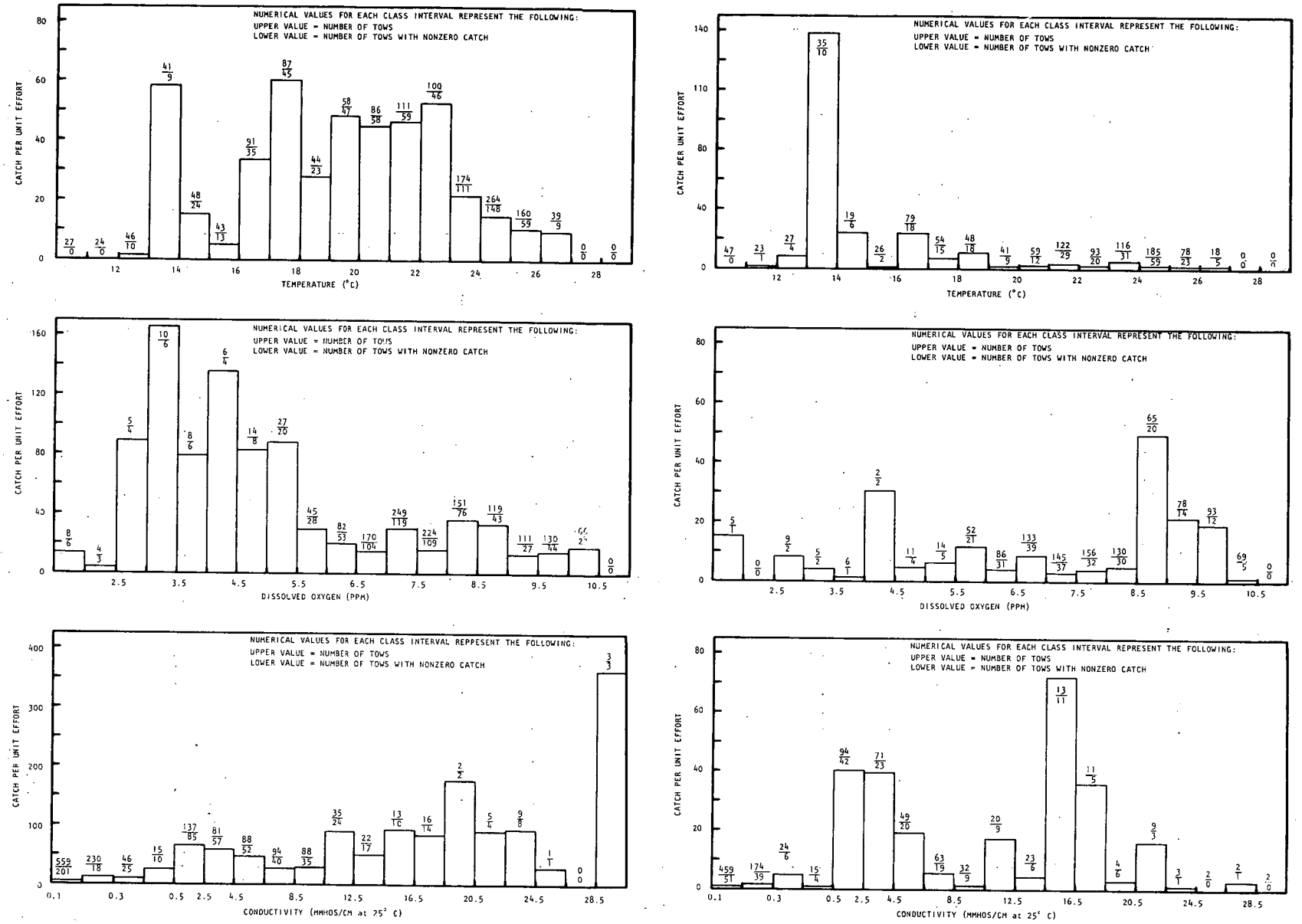


Figure A-69. Juvenile Atlantic Tomcod Abundance in Epibenthic Sled (left) and Tucker Trawl (right), April-August 1974 Ichthyoplankton Survey, Hudson River Estuary [RM 14-140 (KM 22-224)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity

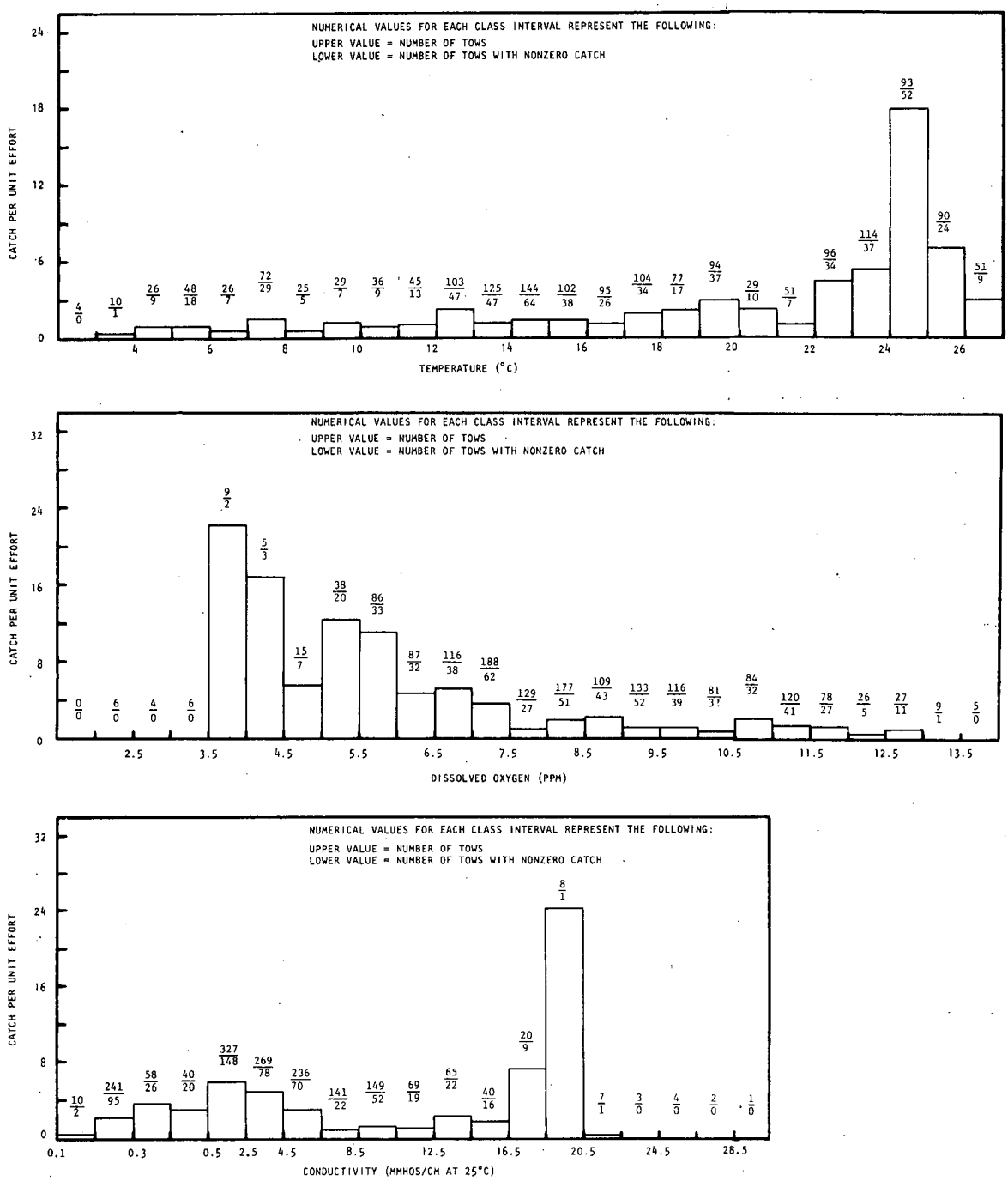


Figure A-70. Juvenile Atlantic Tomcod Abundance in Epibenthic Sled, August-December 1974 Fall Shoals Survey, Hudson River Estuary [RM 14-77 (KM 22-123)], as Related to Water Temperature, Dissolved Oxygen and Conductivity

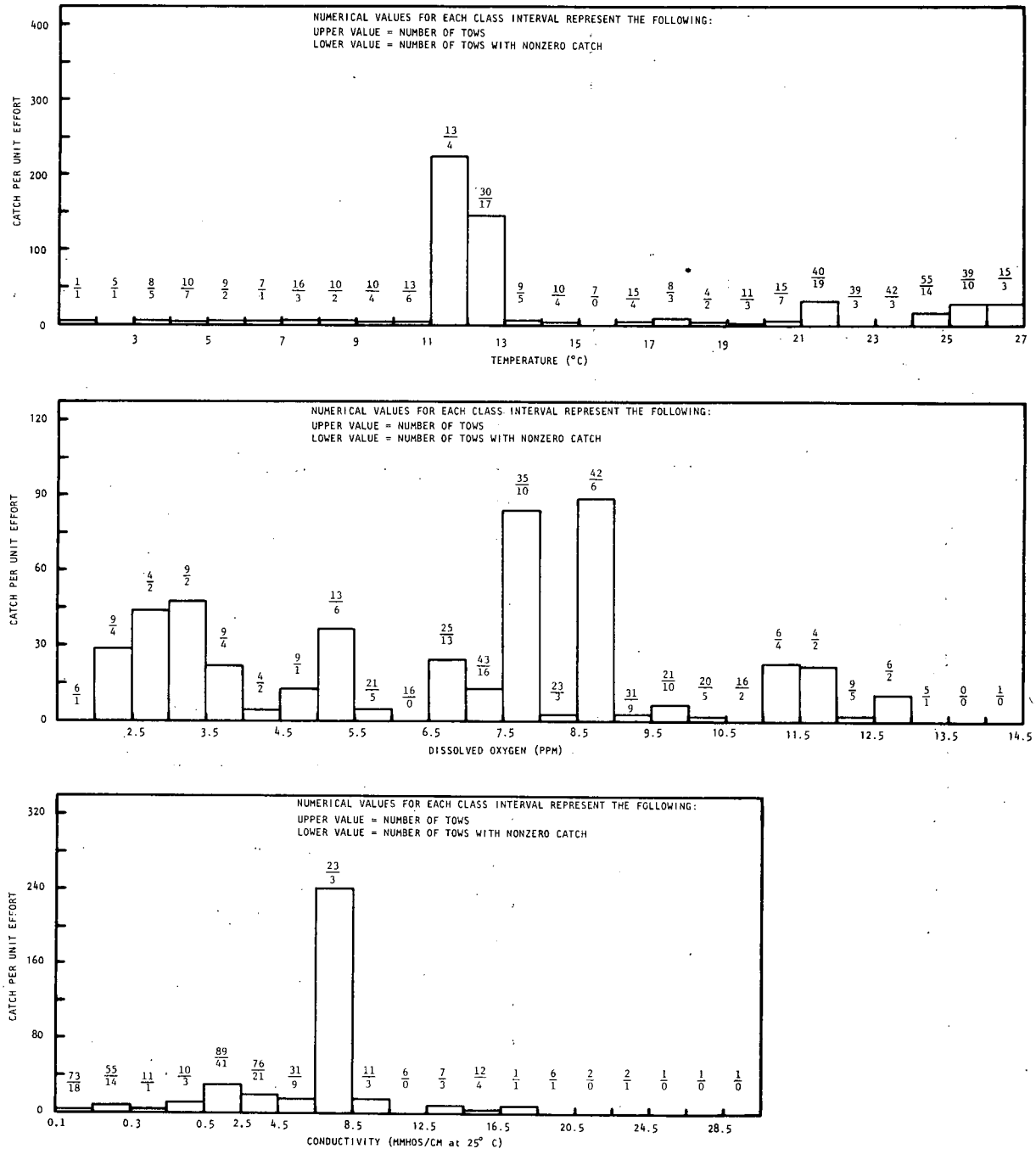
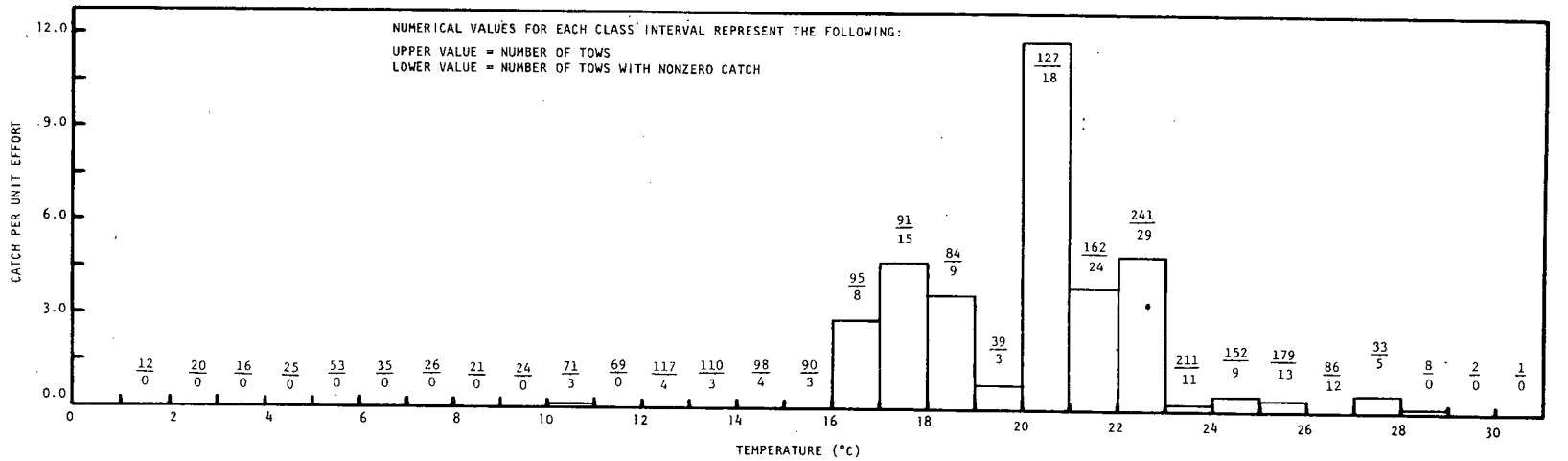


Figure A-71. Juvenile Atlantic Tomcod Abundance in Bottom Trawl, May-December 1974 Interregional Bottom Trawl Survey, Hudson River Estuary [RM 12-61 (KM 19-98)], as Related to Water Temperature, Dissolved Oxygen, and Conductivity



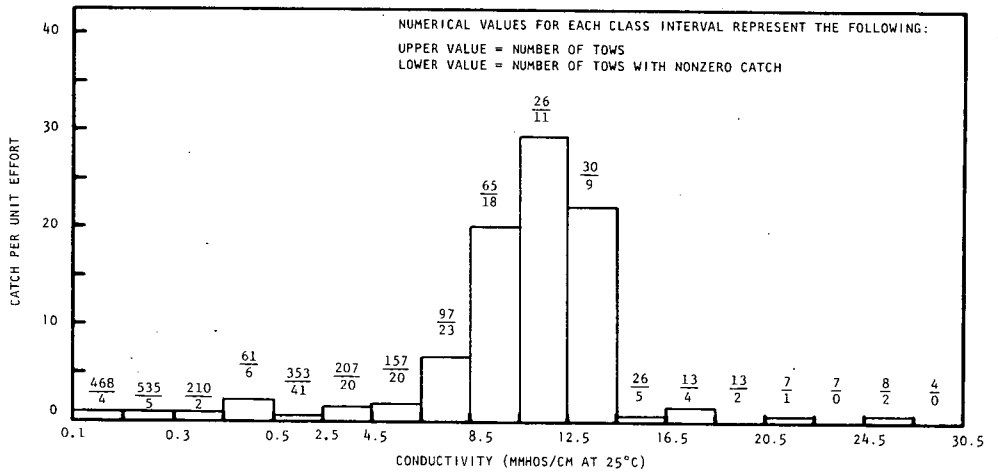


Figure A-72. Juvenile Atlantic Tomcod Abundance in 100-Ft Beach Seine, May-December 1974 Beach Seine Survey, Hudson River Estuary [RM 12-152 (KM 19-243), as Related to Water Temperature and Conductivity

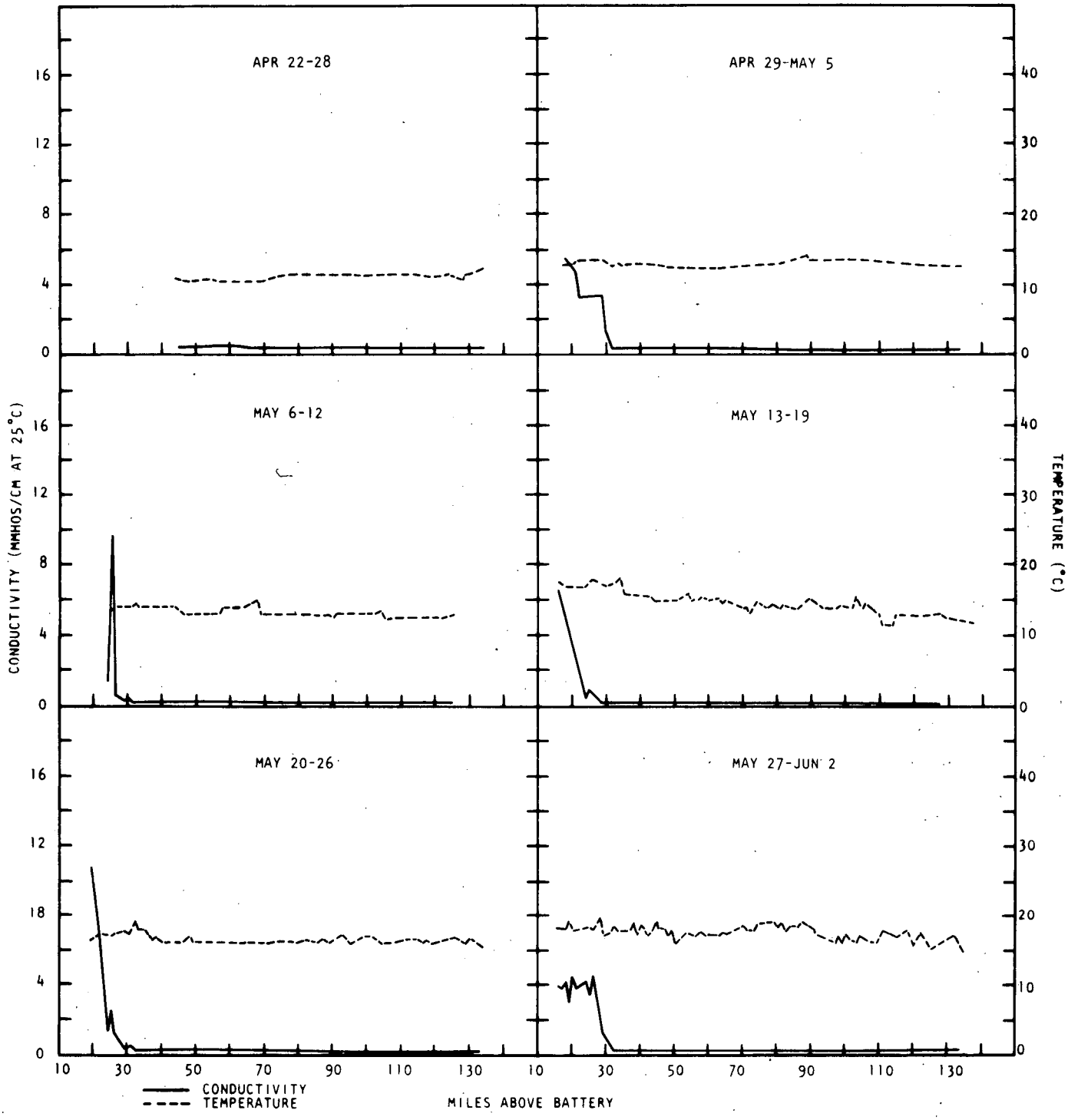


Figure A-73. Weekly Distribution of Mean Temperature and Conductivity by River Mile, Hudson River Estuary, as Determined from Measurements during 1974 Ichthyoplankton and Fall Shoals Surveys (Page 1 of 6)

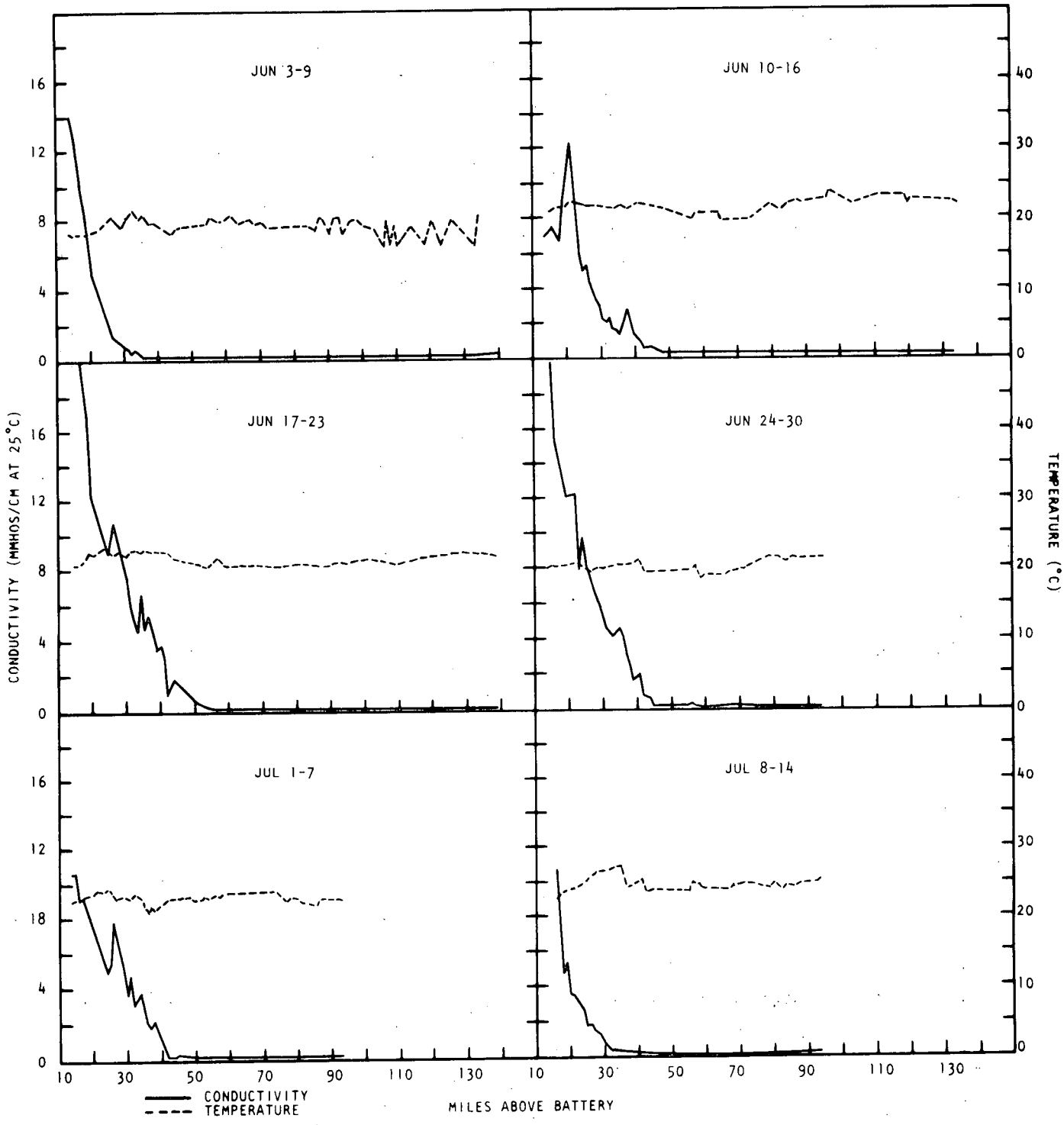


Figure A-73. (Page 2 of 6)

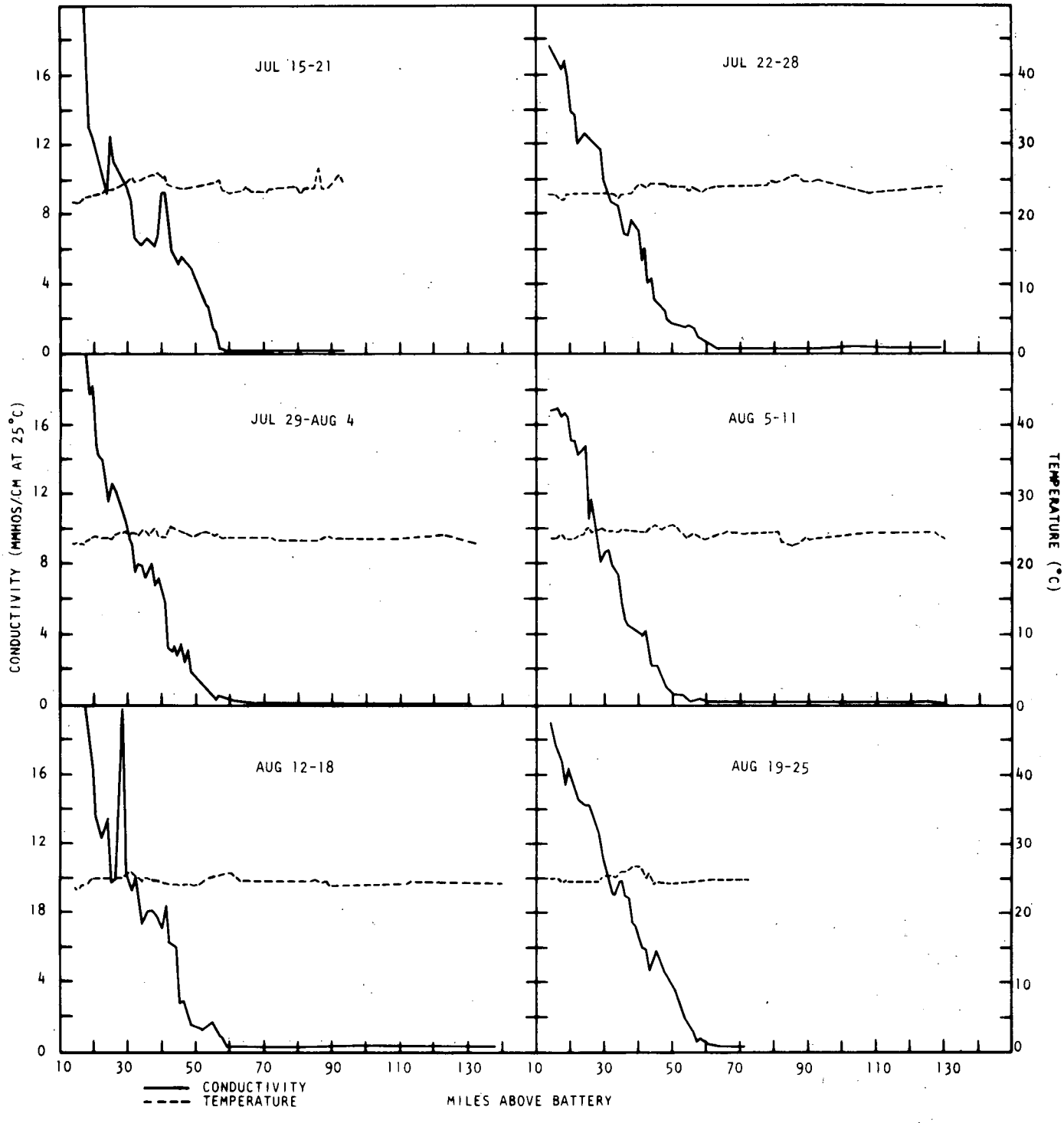


Figure A-73. (Page 3 of 6)

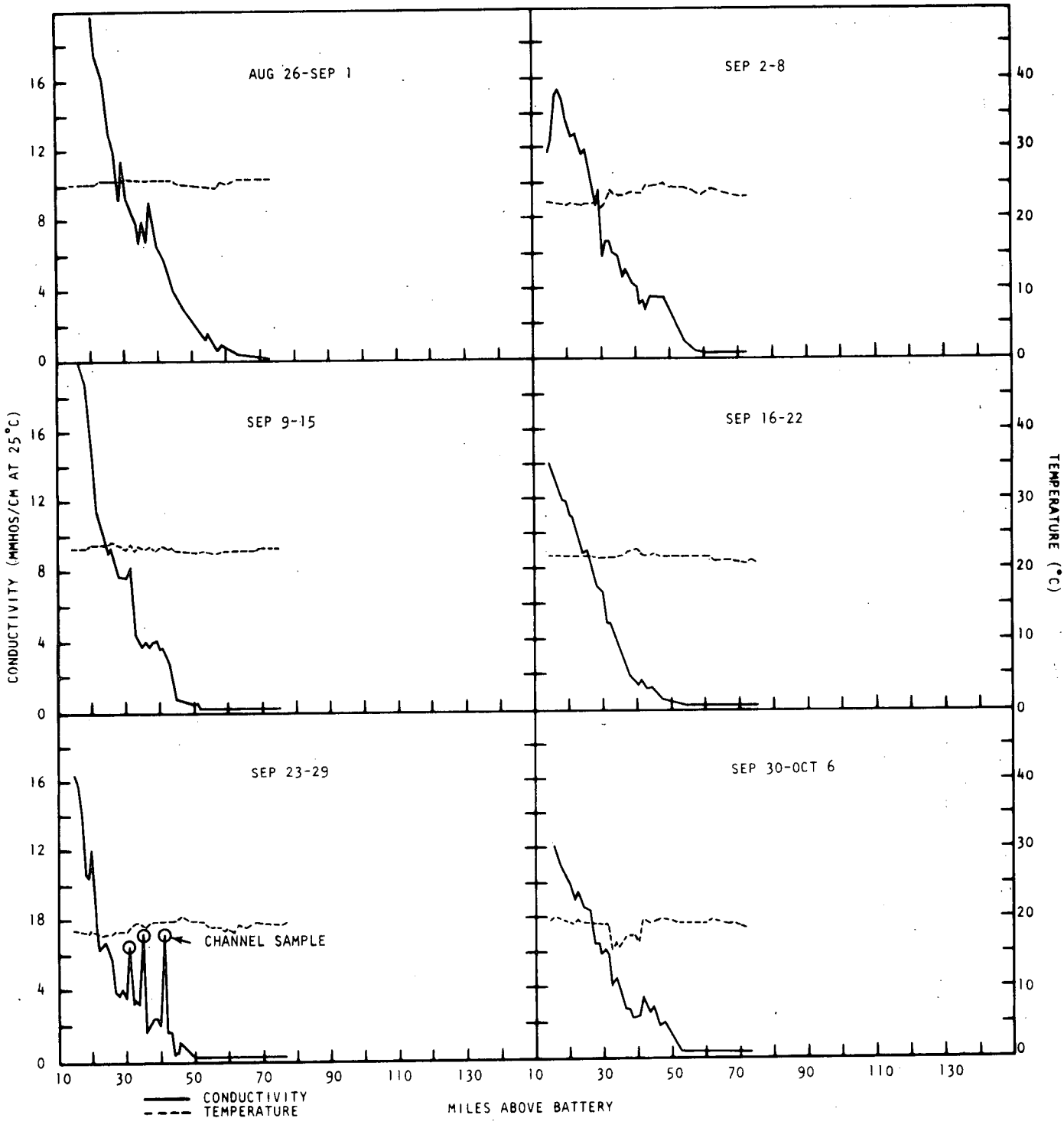


Figure A-73. (Page 4 of 6)

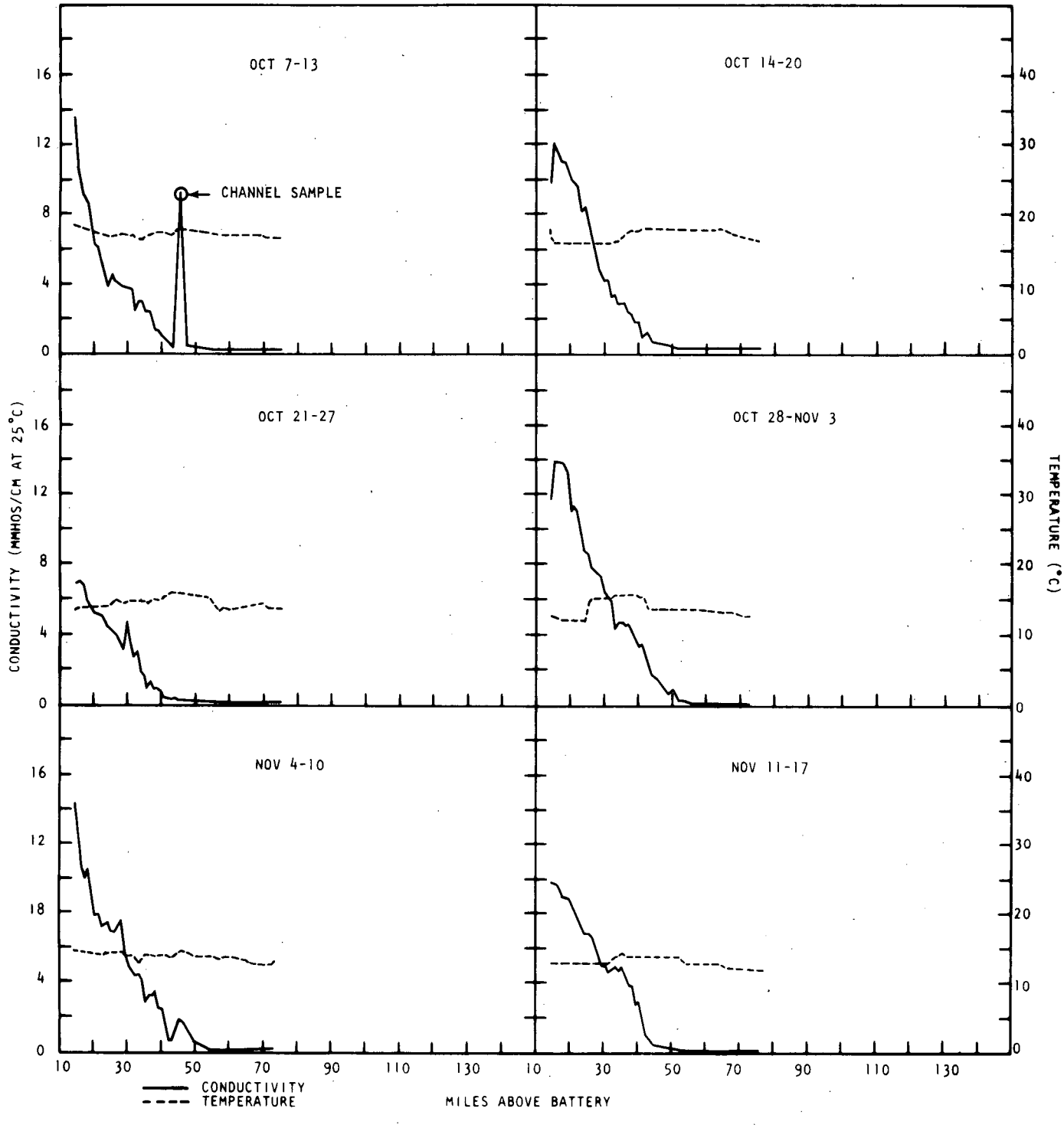


Figure A-73. (Page 5 of 6)

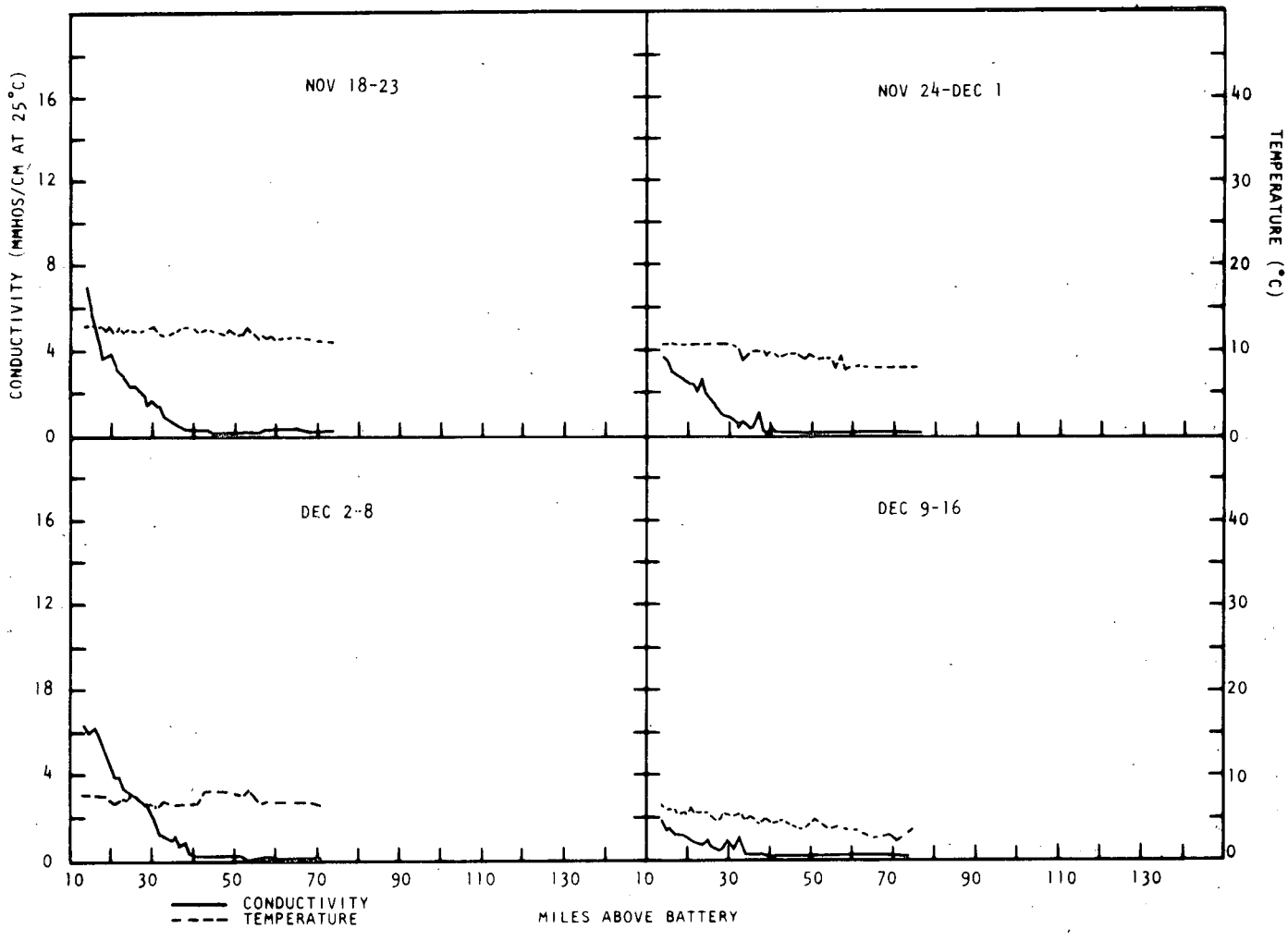


Figure A-73. (Page 6 of 6)

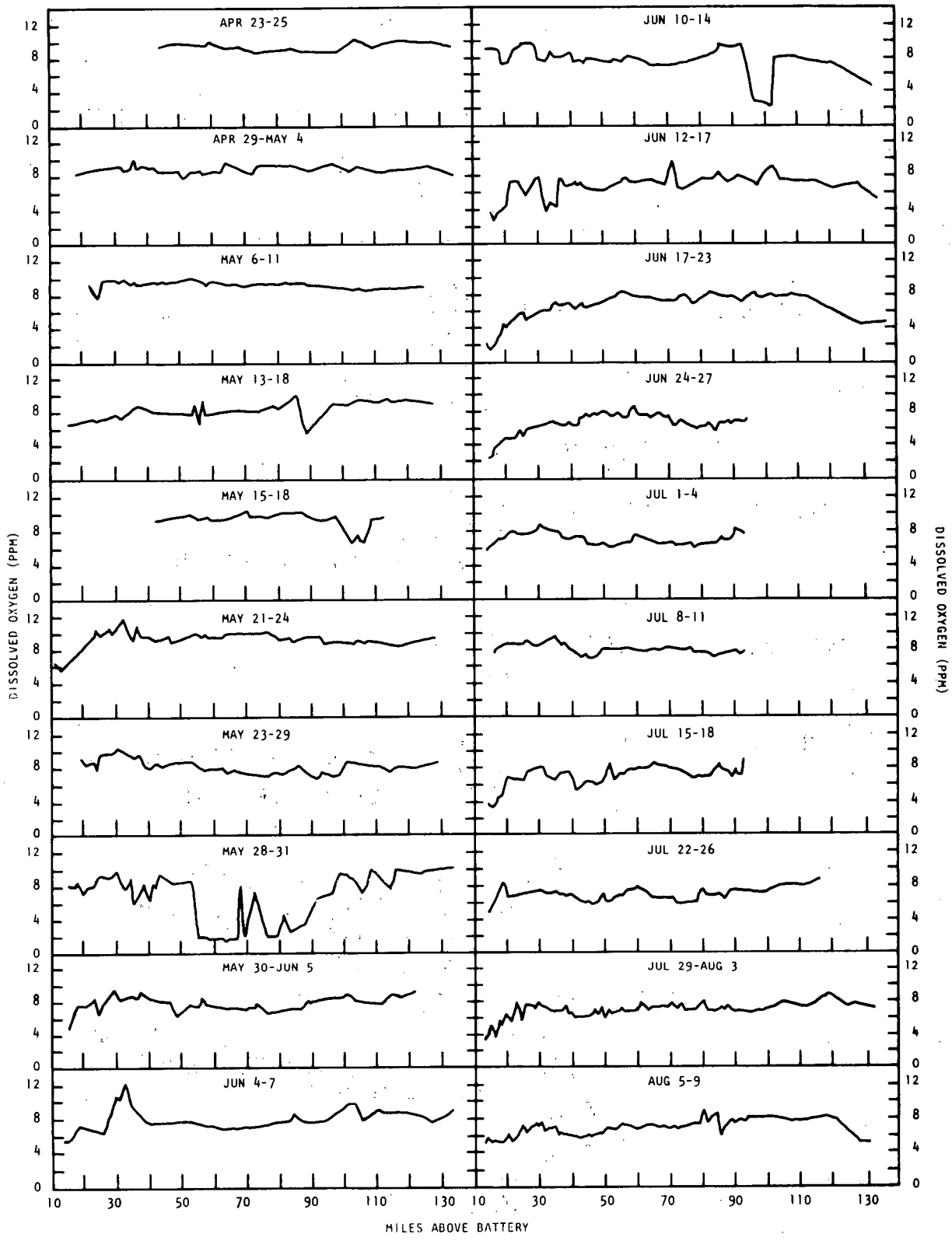


Figure A-74. Distribution of Mean Dissolved Oxygen Concentration by River Mile, Hudson River Estuary, as Determined from Measurements during 1974 Ichthyoplankton Survey

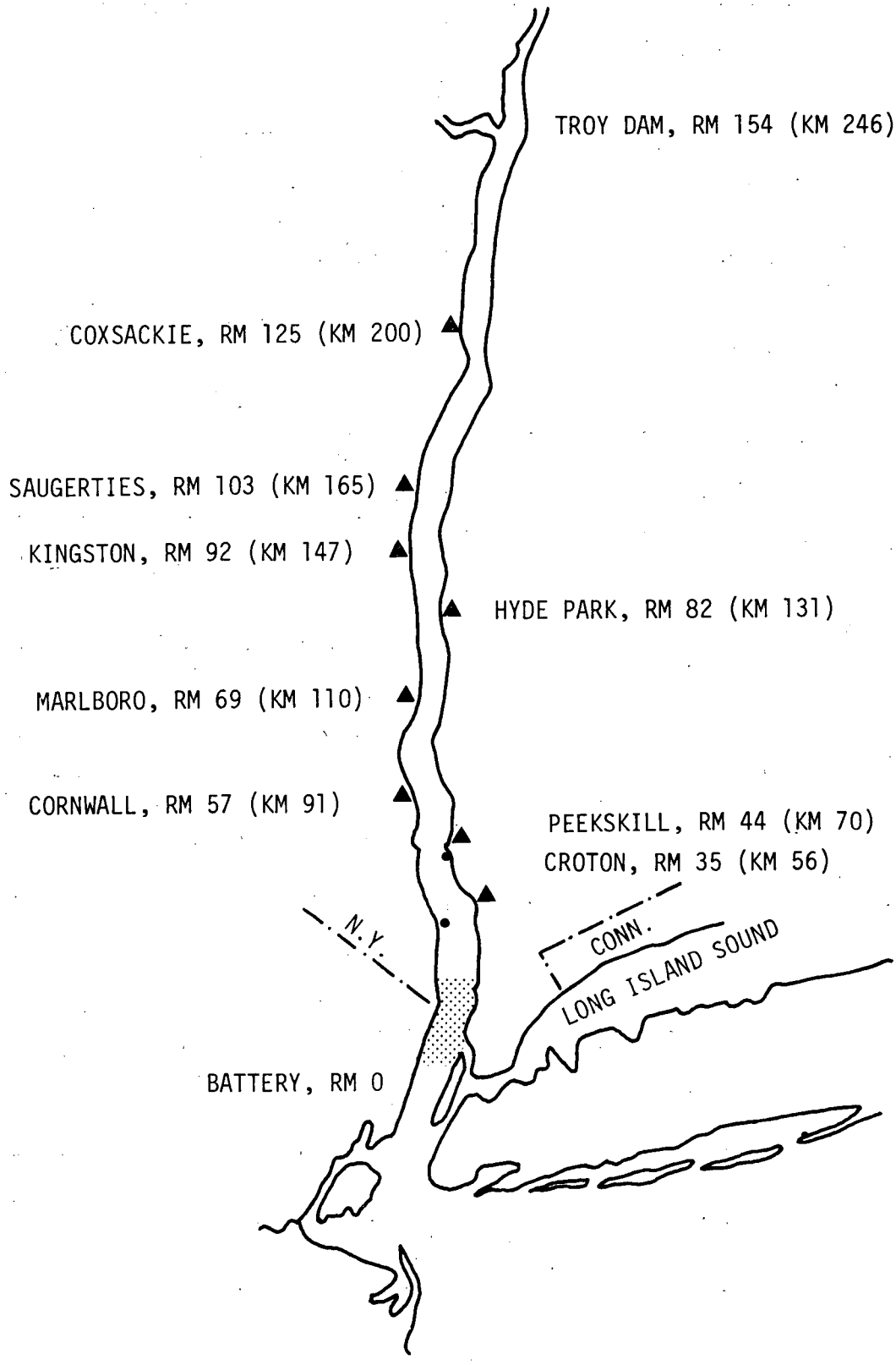


Figure A-75. Recapture Sites of White Perch Tagged in Area 1 (Shaded), September-December 1974, and Recovered outside the Area during Same Time Interval

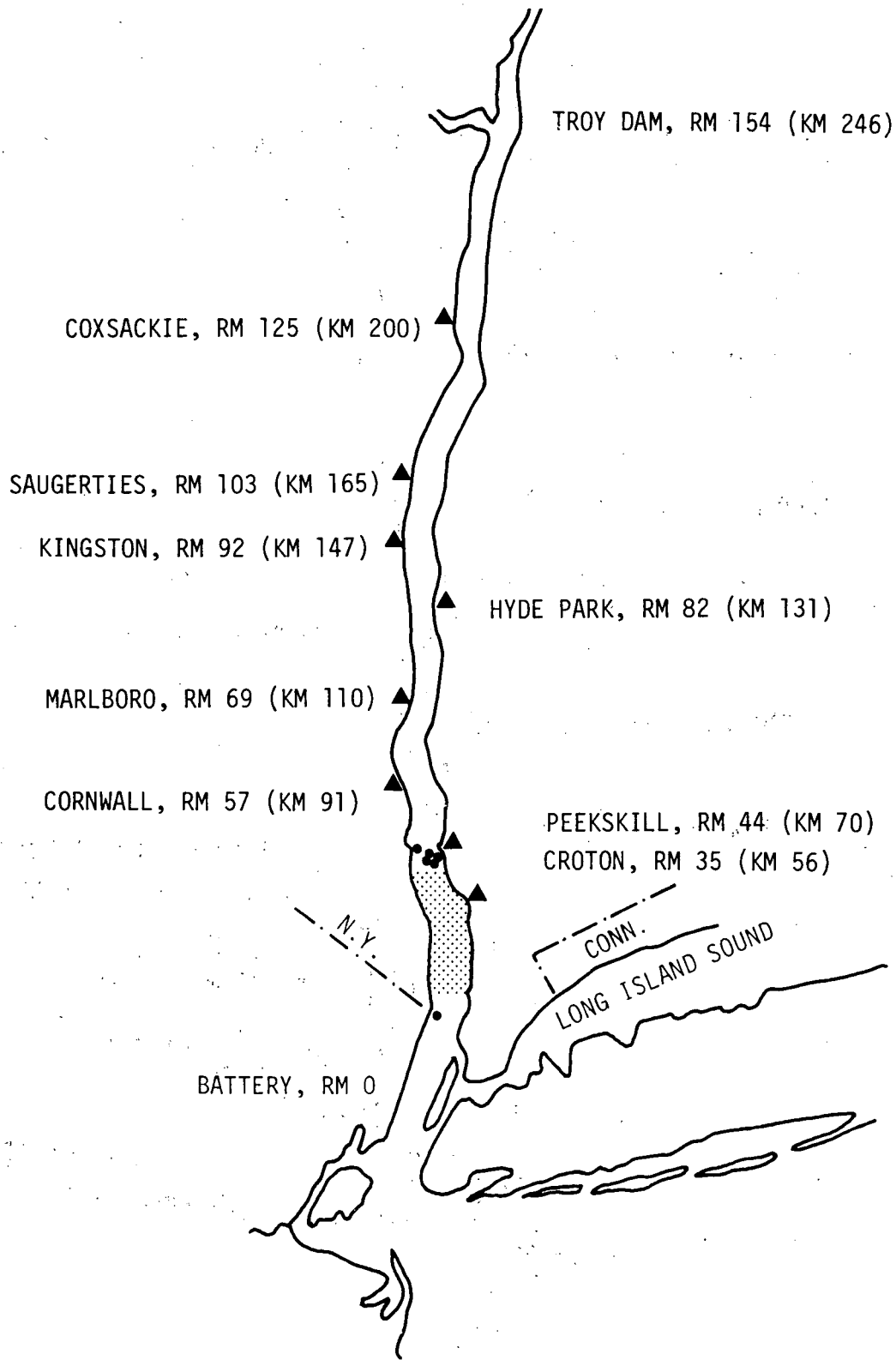


Figure A-76. Recapture Sites of White Perch Tagged in Area 2 (Shaded), September-December 1974, and Recovered outside the Area during Same Time Interval

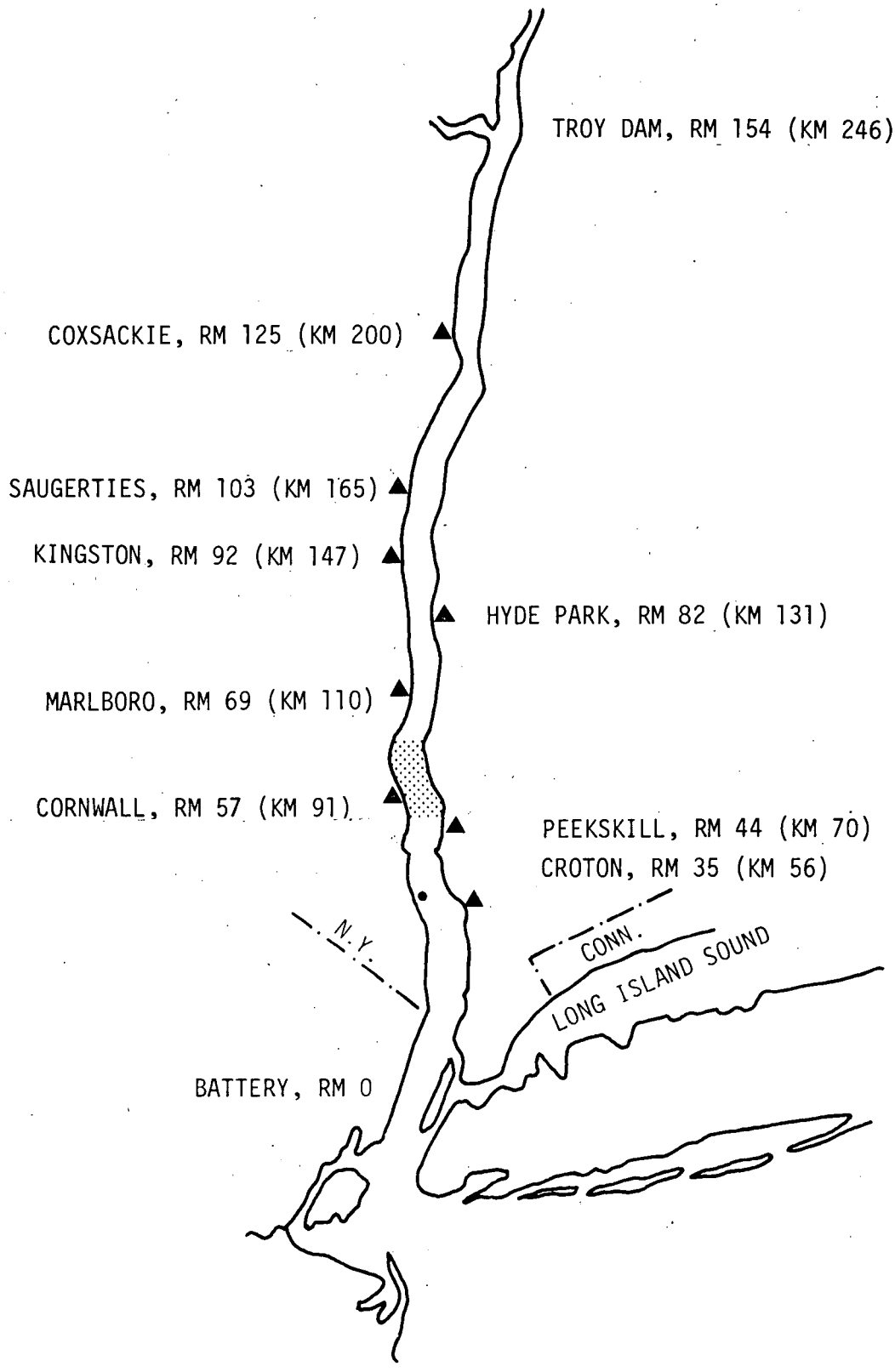


Figure A-77. Recapture Sites of White Perch Tagged in Area 4 (Shaded), September-December 1974, and Recovered outside the Area during Same Time Interval

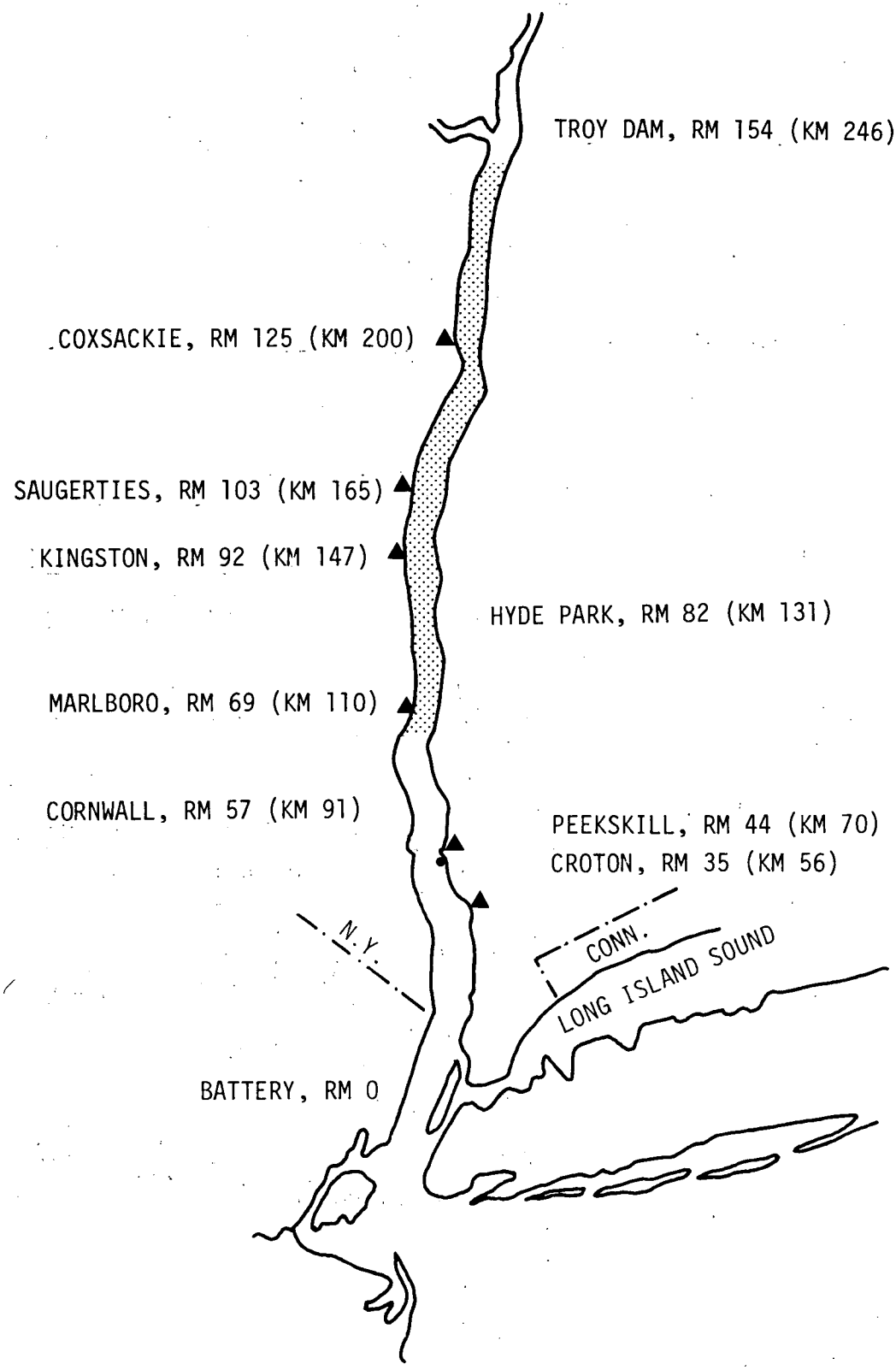


Figure A-78. Recapture Sites of White Perch Tagged in Area 5 (Shaded), September-December 1974, and Recovered outside the Area during Same Time Interval

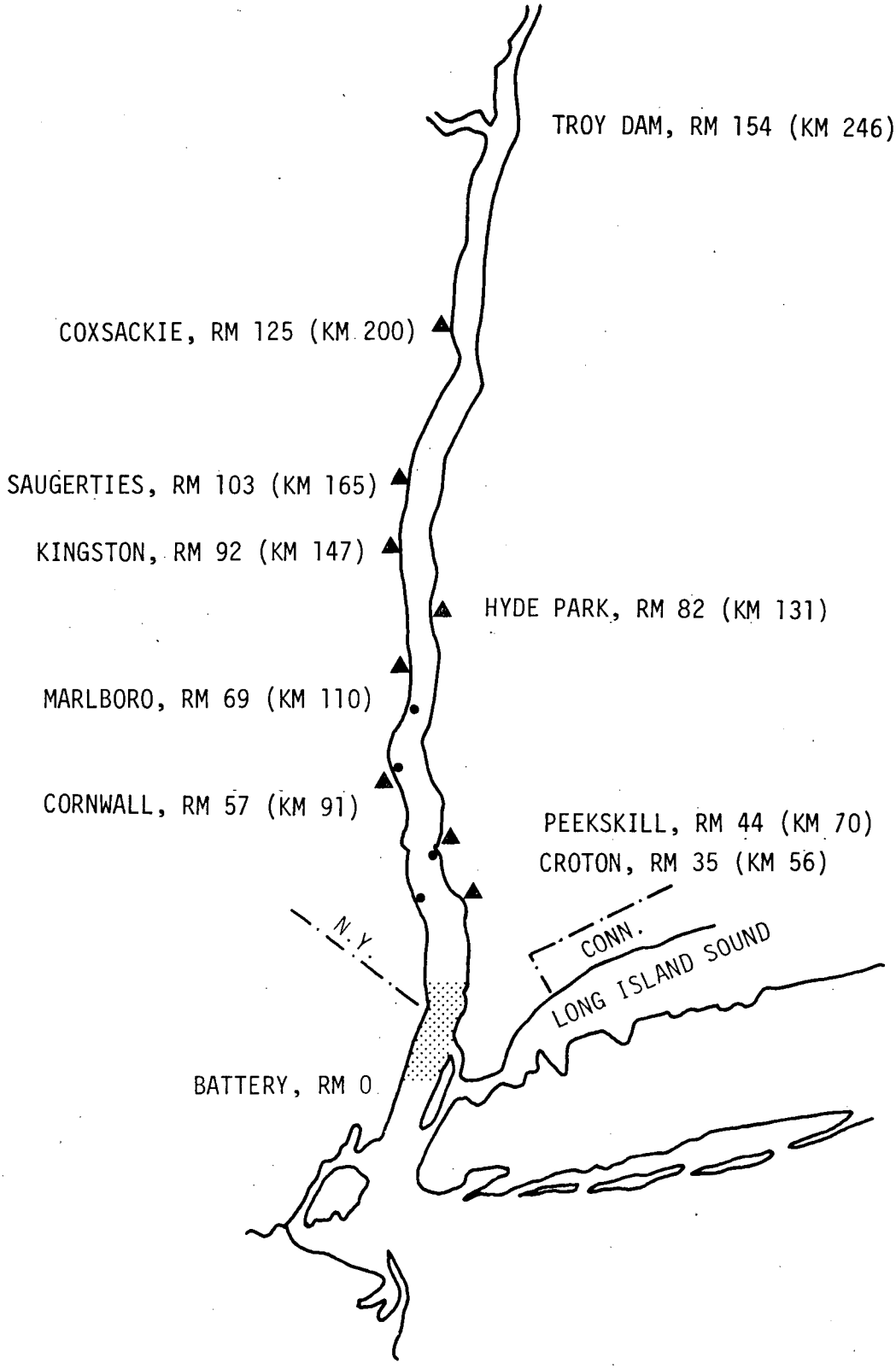


Figure A-79. Recapture Sites of White Perch Tagged in Area 1 (Shaded), September-December 1974, and Recovered outside the Area, January-June 1975

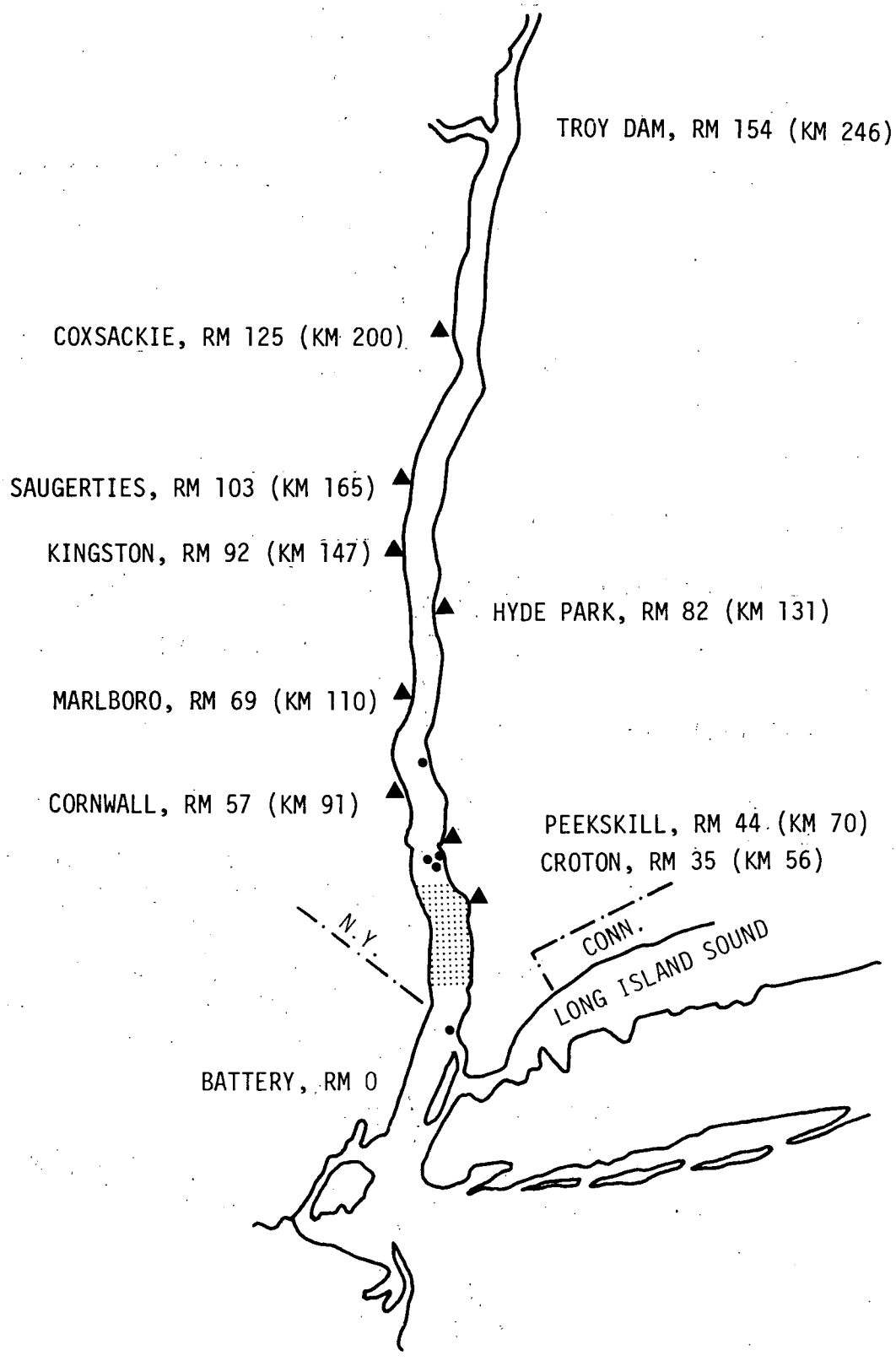


Figure A-80. Recapture Sites of White Perch Tagged in Area 2 (Shaded), September-December 1974, and Recovered outside the Area, January-June 1975

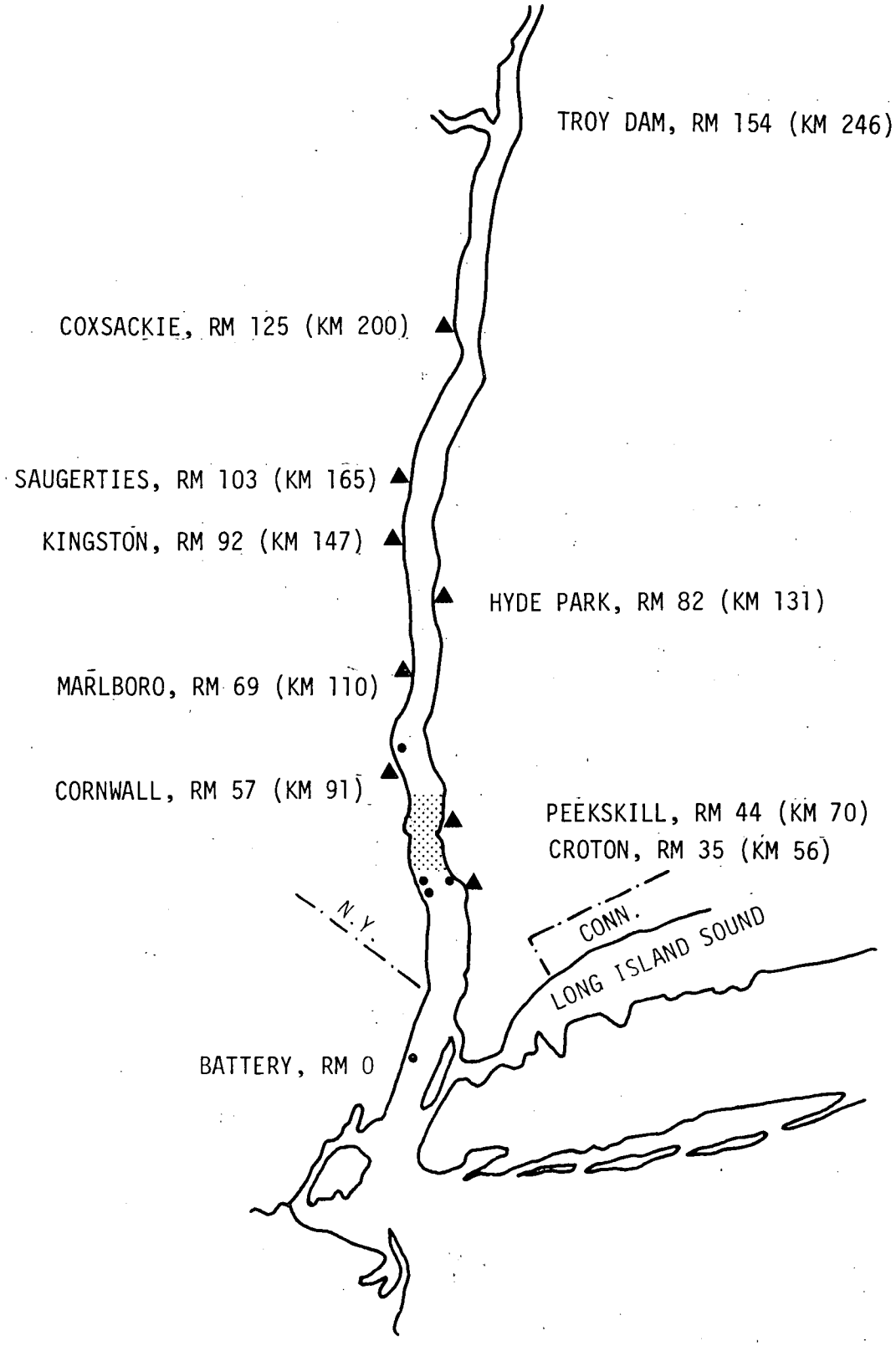


Figure A-81. Recapture Sites of White Perch Tagged in Area 3 (Shaded), September-December 1974, and Recovered outside the Area, January-June 1975

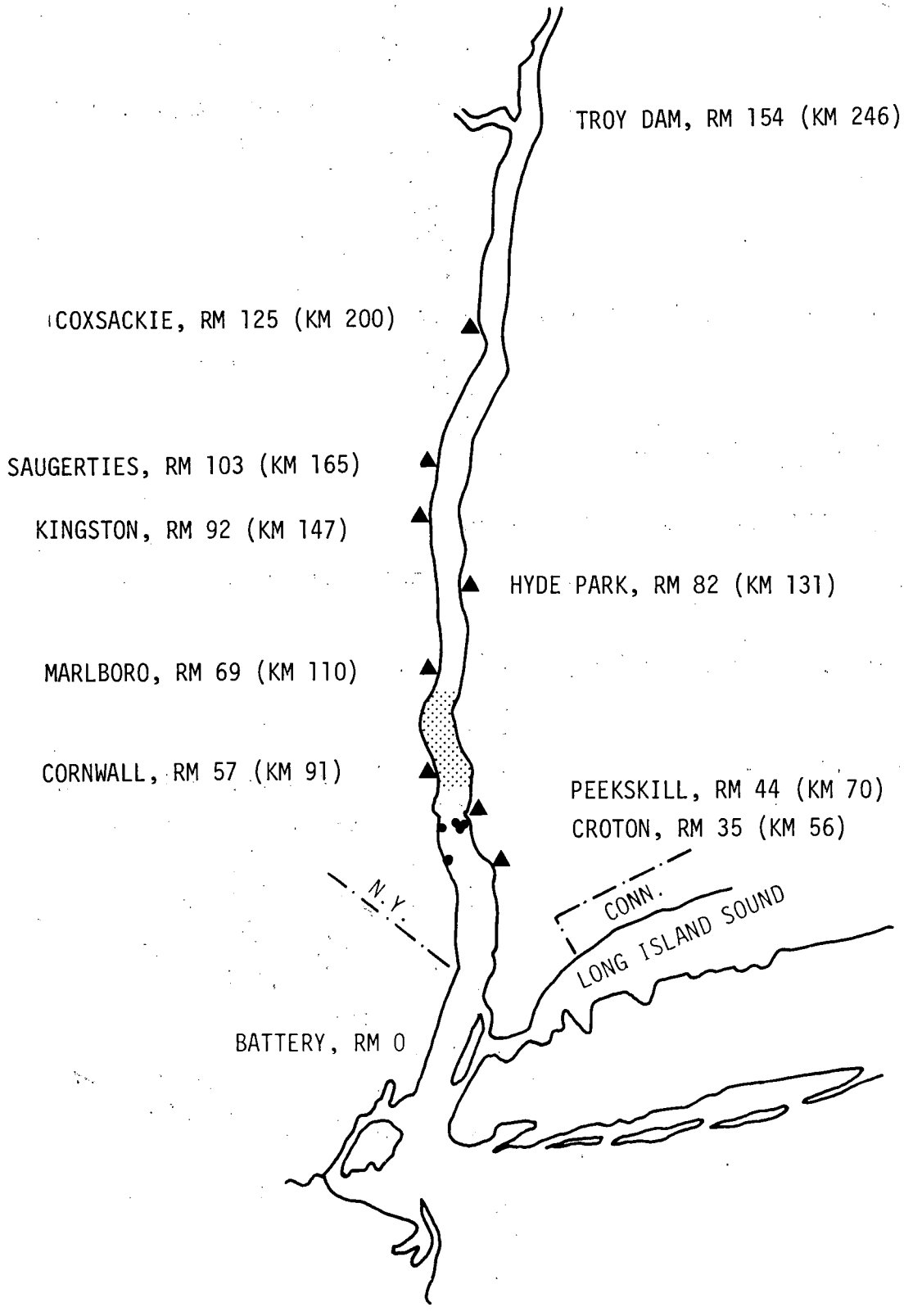


Figure A-82. Recapture Sites of White Perch Tagged in Area 4 (Shaded), September-December 1974, and Recovered outside the Area, January-June 1975

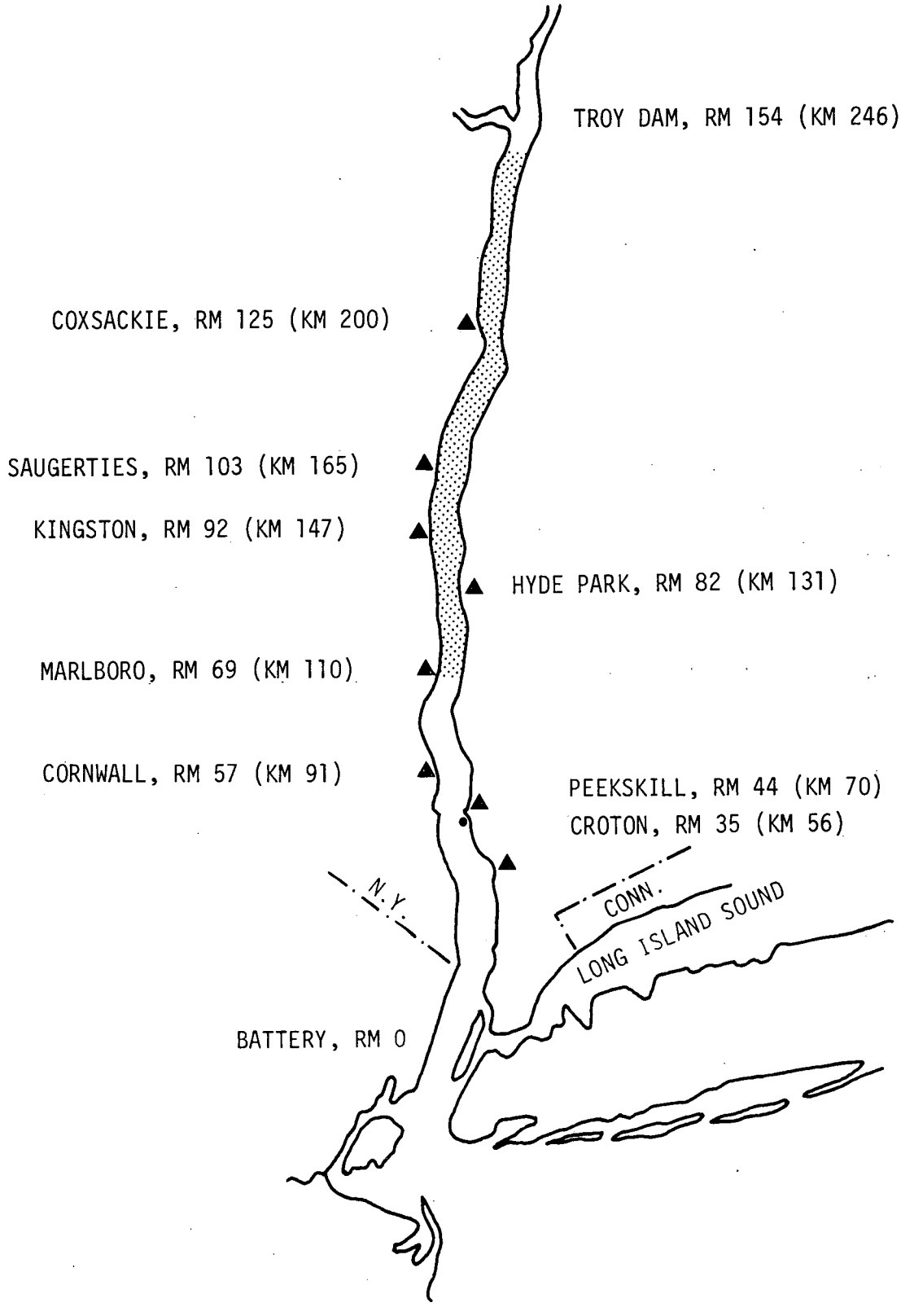


Figure A-83. Recapture Sites of White Perch Tagged in Area 5 (Shaded), September-December 1974, and Recovered outside the Area, January-June 1975

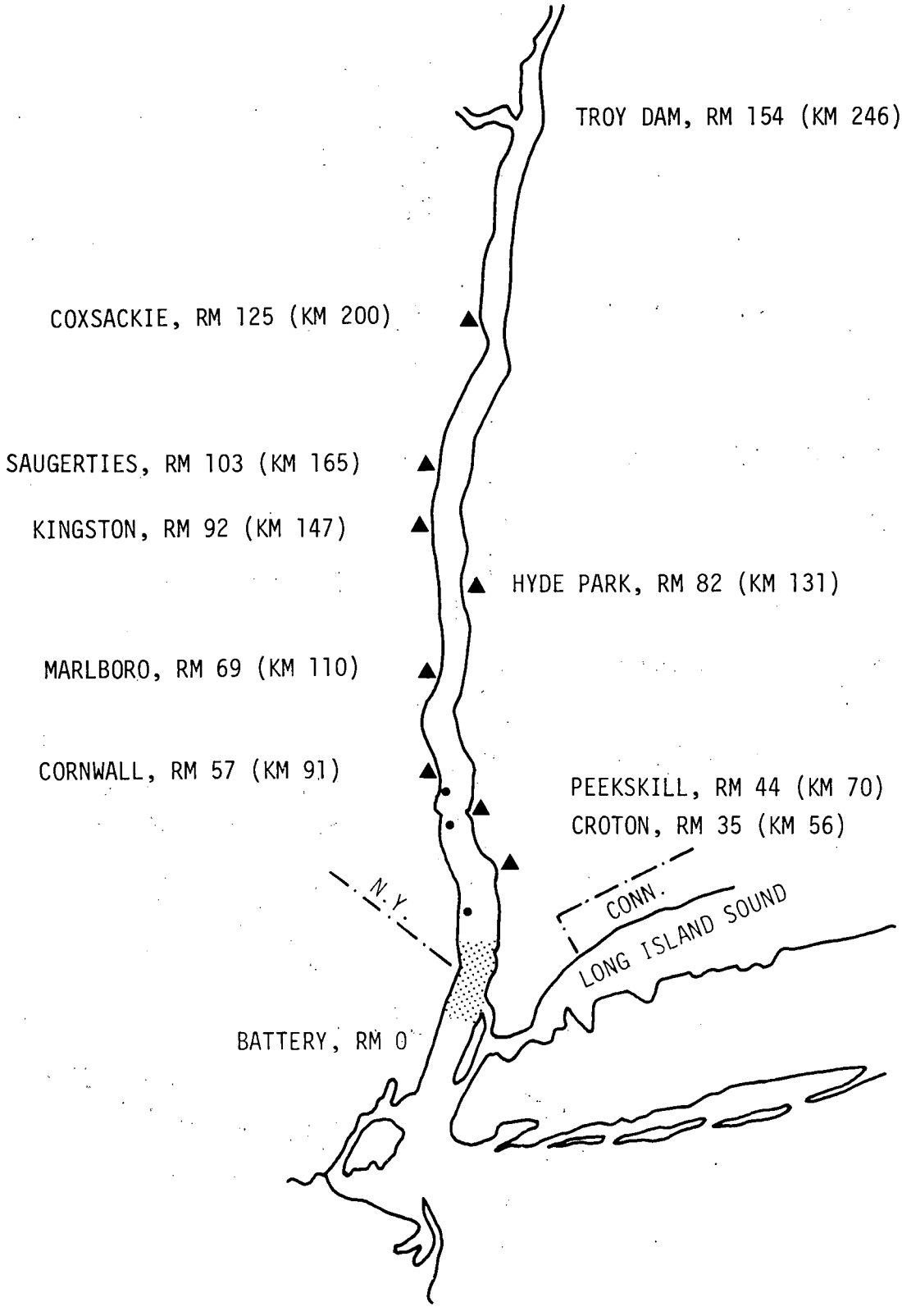


Figure A-84. Recapture Sites of White Perch Tagged in Area 1 (Shaded), January-June 1975, and Recovered outside the Area during Same Time Interval

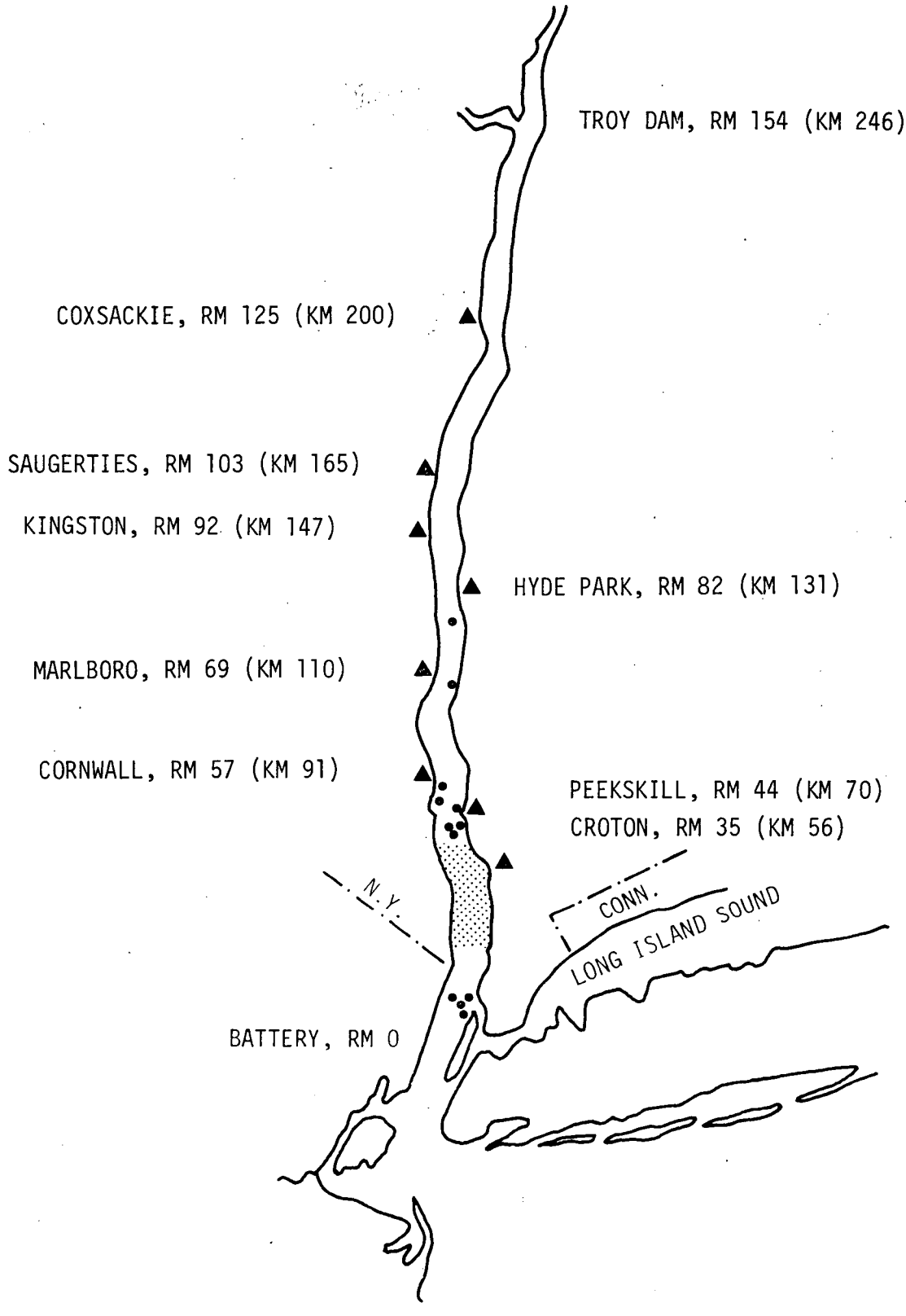


Figure A-85. Recapture Sites of White Perch Tagged in Area 2 (Shaded), January-June 1975, and Recovered outside the Area during Same Time Interval

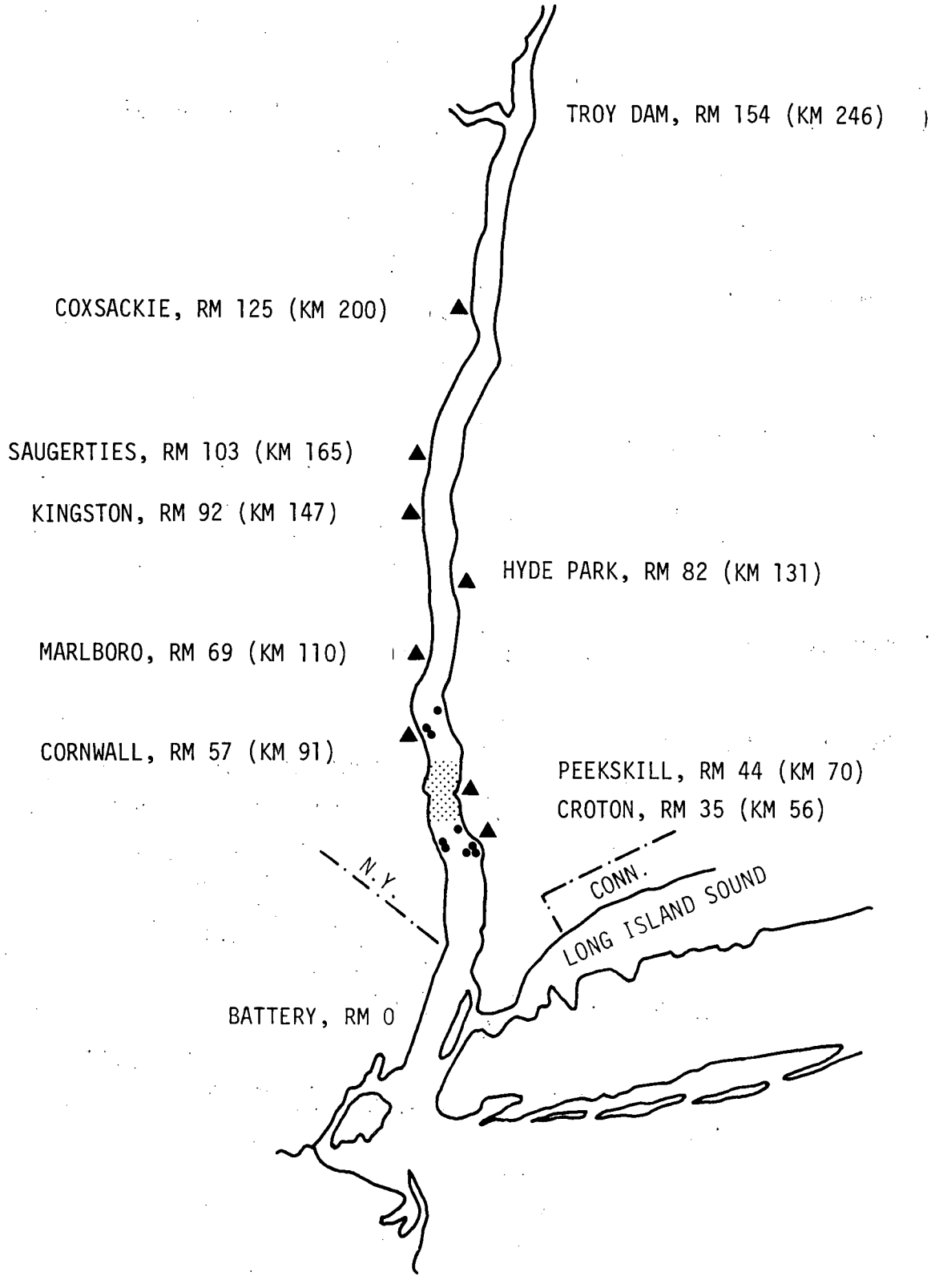


Figure A-86. Recapture Sites of White Perch Tagged in Area 3 (Shaded), January-June 1975, and Recovered outside the Area during Same Time Interval

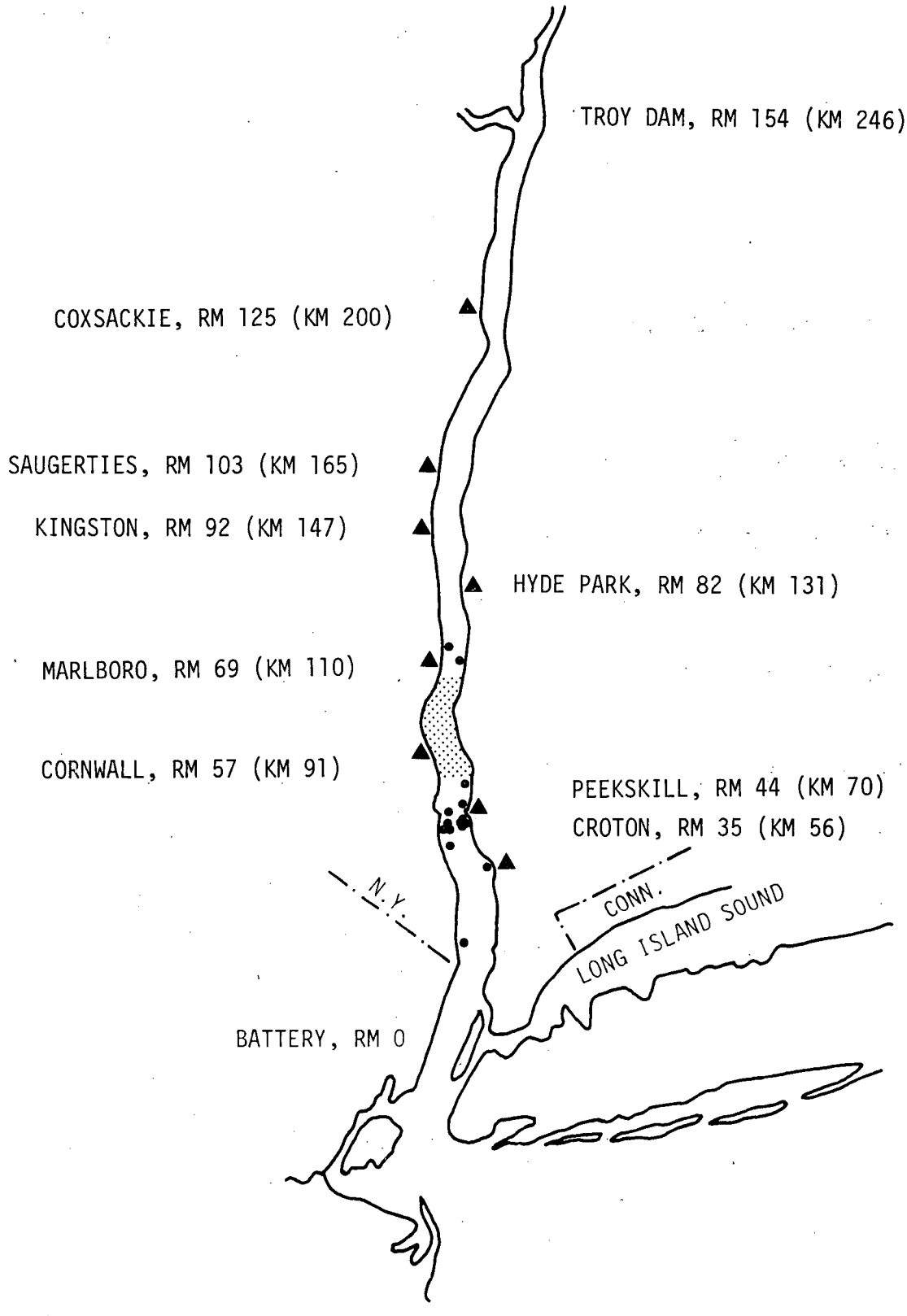


Figure A-87. Recapture Sites of White Perch Tagged in Area 4 (Shaded), January-June 1975, and Recovered outside the Area during Same Time Interval

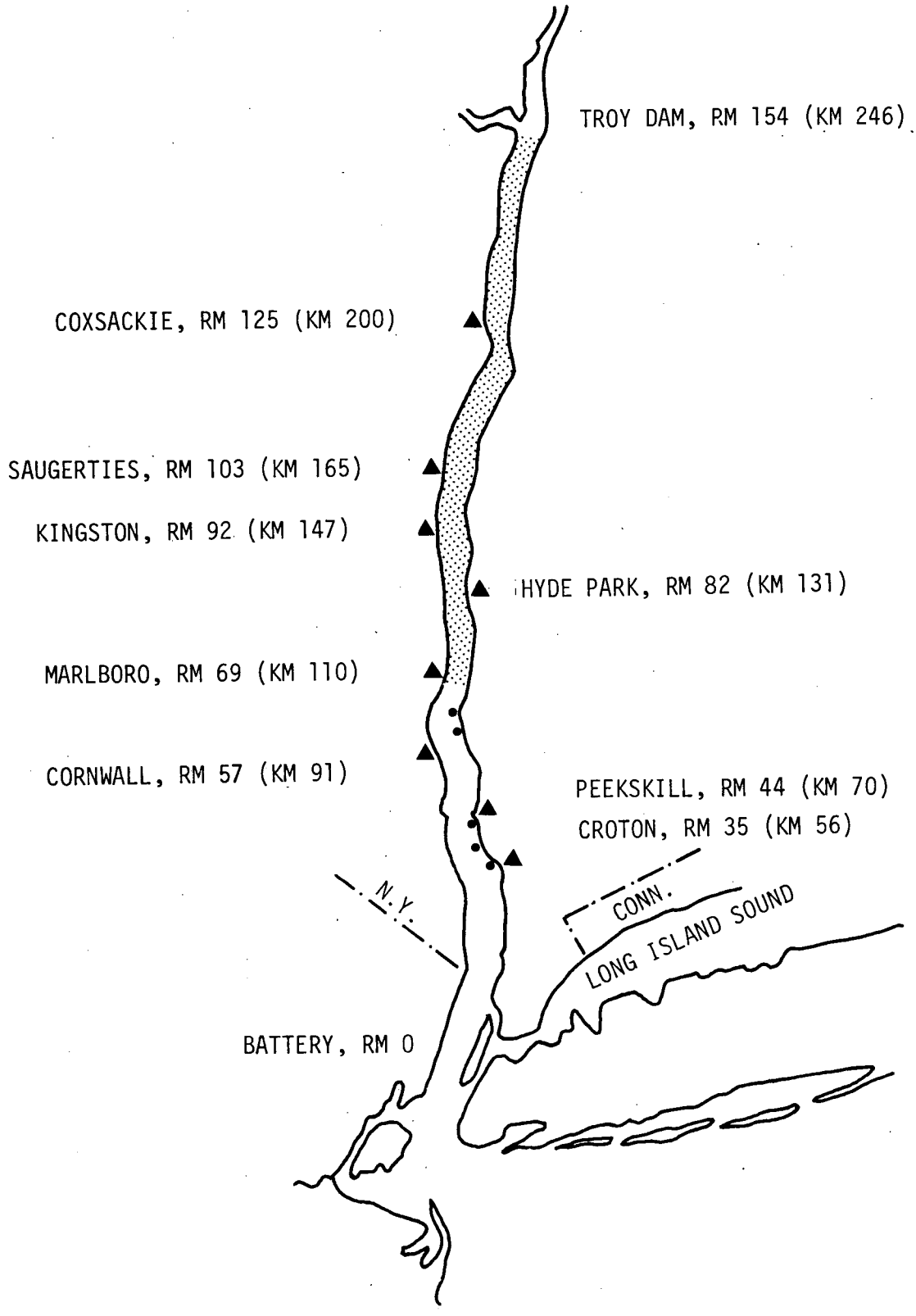


Figure A-88. Recapture Sites of White Perch Tagged in Area 5 (Shaded), January-June 1975, and Recovered outside the Area during Same Time Interval

APPENDIX B

NEARFIELD DATA

APPENDIX B

NEARFIELD DATA

A. NEARFIELD ICHTHYOPLANKTON SAMPLING METHODS

1. Bowline and Lovett*

Nearfield samples were collected in the vicinity of the Bowline and Lovett plants at nine stations approximately every 2 weeks from mid-April through mid-August 1974. Texas Instruments used eight of these stations in its analyses (Figure B-1): Bowline East (BE), Bowline Channel (BCH), Bowline West (BW), Bowline Pond Long (BPL), Bowline Pond Short (BPS), Lovett East (LE), Lovett Channel (LCA), and Lovett West (LW).

Samples were collected with 1.0-m mouth diameter Hensen-type plankton nets of 571-μ nylon mesh. A TSK or General Oceanics flowmeter was mounted in the center of the mouth of each net. Horizontal tows were made against the tidal current at a boat speed of approximately 0.85 m/sec. Durations of tows were 5 to 8 min except at Bowline Pond Short where tows were 2 min. Tows were made simultaneously at the surface, mid-depth, and just above the bottom at all stations except BE and BPL where no mid-depth tows were made.

After each sample was taken, the net was washed with river water and the sample preserved in 5-10% formalin buffered with hexamine. Flowmeter readings were recorded, and volumes sampled were calculated. Outlier flowmeter readings were corrected to a mean value based on all samples for the General Oceanics meters and on the daily average at a station for TSK meters.

In the laboratory, samples were examined and larvae identified to species and counted. Eggs were not identified to species.

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*Adapted from LMS 1974 Hudson River Aquatic Ecology Studies, Bowline Point and Lovett Generating Stations (draft), Volume I, Appendix 111-C. LMS refers to Lawler, Matusky and Skelly Engineers.

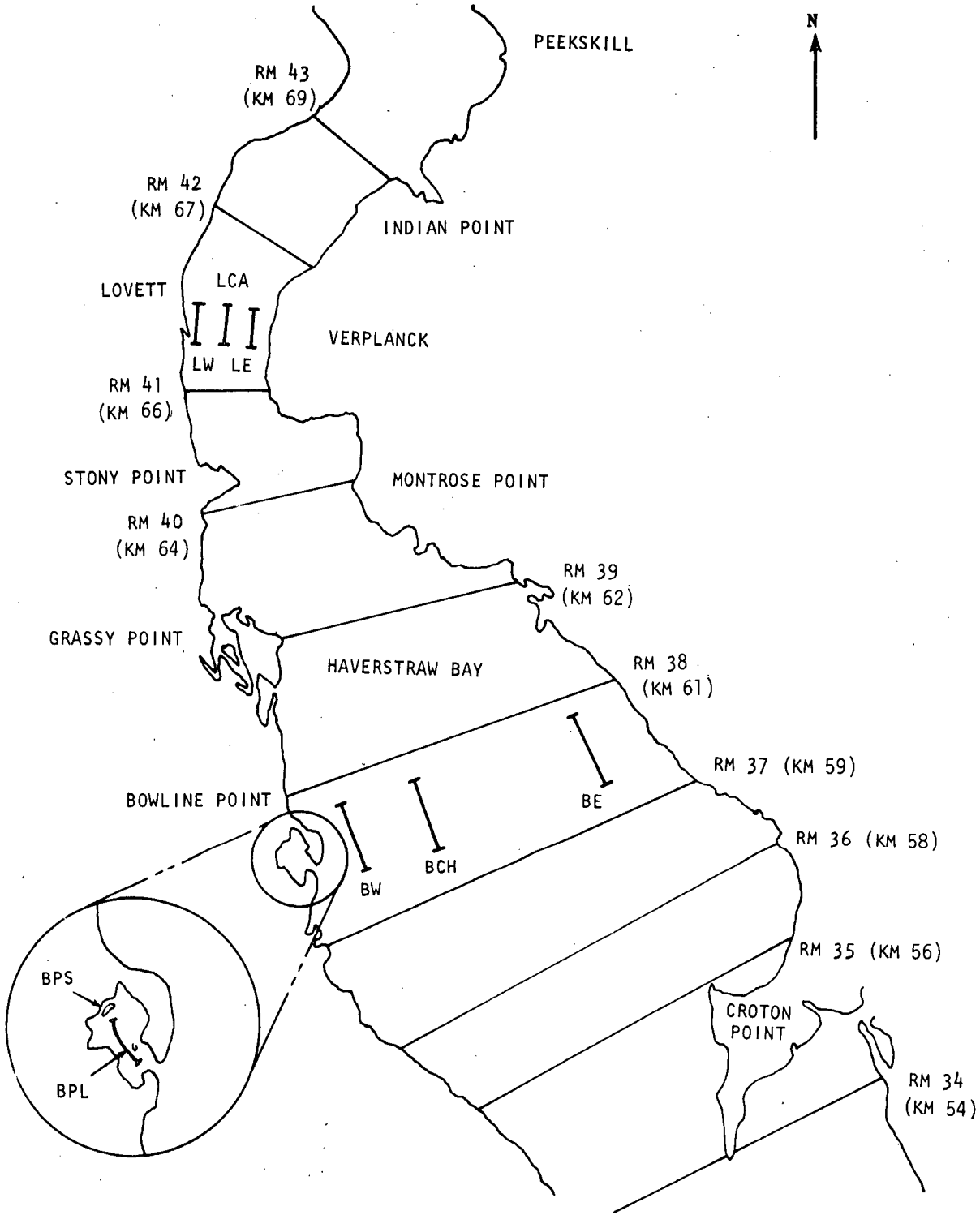

Figure B-1. Bowline and Lovett Nearfield Ichthyoplankton Sampling Sites, 1974 (LMS), Analyzed by Texas Instruments

2. Indian Point 1973*

Nearfield samples were collected in the Indian Point area at four stations (Figure B-2) at weekly intervals from late May 1973 until mid-July 1973; after that, samples were collected every other week until October. The sampling stations were designated as R-1, R-2, R-3, and R-4 (Figure B-2).

Samples were collected with a 0.5-m mouth diameter plankton net of 571-μ mesh during the early part of the season when larvae were small. The nets were towed simultaneously at surface, mid-depth, and approximately 2 ft (0.6 m) off the bottom. Beginning 24 July 1973, 1.0-m diameter Hensen-type nets of 571-μ mesh were utilized, but they were towed only at surface and bottom depths. A TSK digital flowmeter was mounted in the center of the net mouth. All tows were of 10-min duration and were made against the prevailing river current at a speed of 2 to 3 knots (1.0-1.5 m/sec) to keep the surface net under the water's surface. During slack tide, tows were made upstream against net river flow.

Samples were preserved in 10% formalin and examined in the laboratory where ichthyoplankton were identified to species and enumerated. Flowmeter readings were recorded, and the volumes sampled were calculated.

3. Indian Point 1974**

Nearfield samples were collected in the Indian Point area at seven stations (Figure B-3) at weekly intervals from late April 1974 until mid-July 1974.

Samples were collected with a 0.5-m mouth diameter net of 571-μ mesh. A Model 1031 General Oceanics digital flowmeter was secured in the mouth opening of each net. Horizontal tows were made against the prevailing tidal current for 10 min. During slack tide, they were made upstream against net river flow. Tows were made simultaneously at the surface, mid-depth, and just above the bottom at an engine speed of approximately 2000 rpm, or sufficient for the top net to remain under the water's surface.

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*Adapted from NYU (New York University) Hudson River Ecosystem Studies, 1973.

**Adapted from NYU (New York University) Hudson River Ecosystem Studies, 1974 (draft).

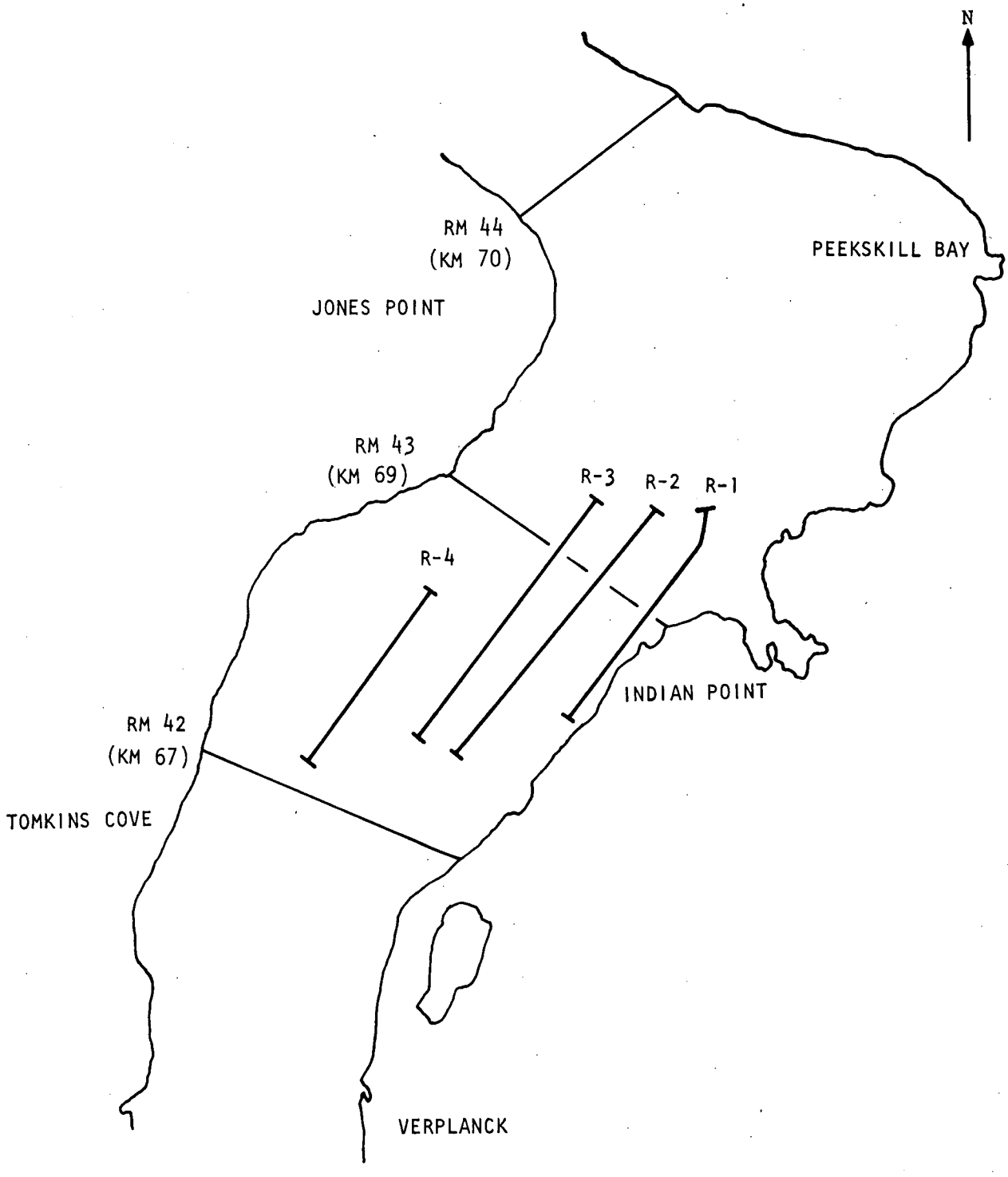

Figure B-2. Indian Point Nearfield Ichthyoplankton Sampling Sites, 1973 (NYU), Analyzed by Texas Instruments

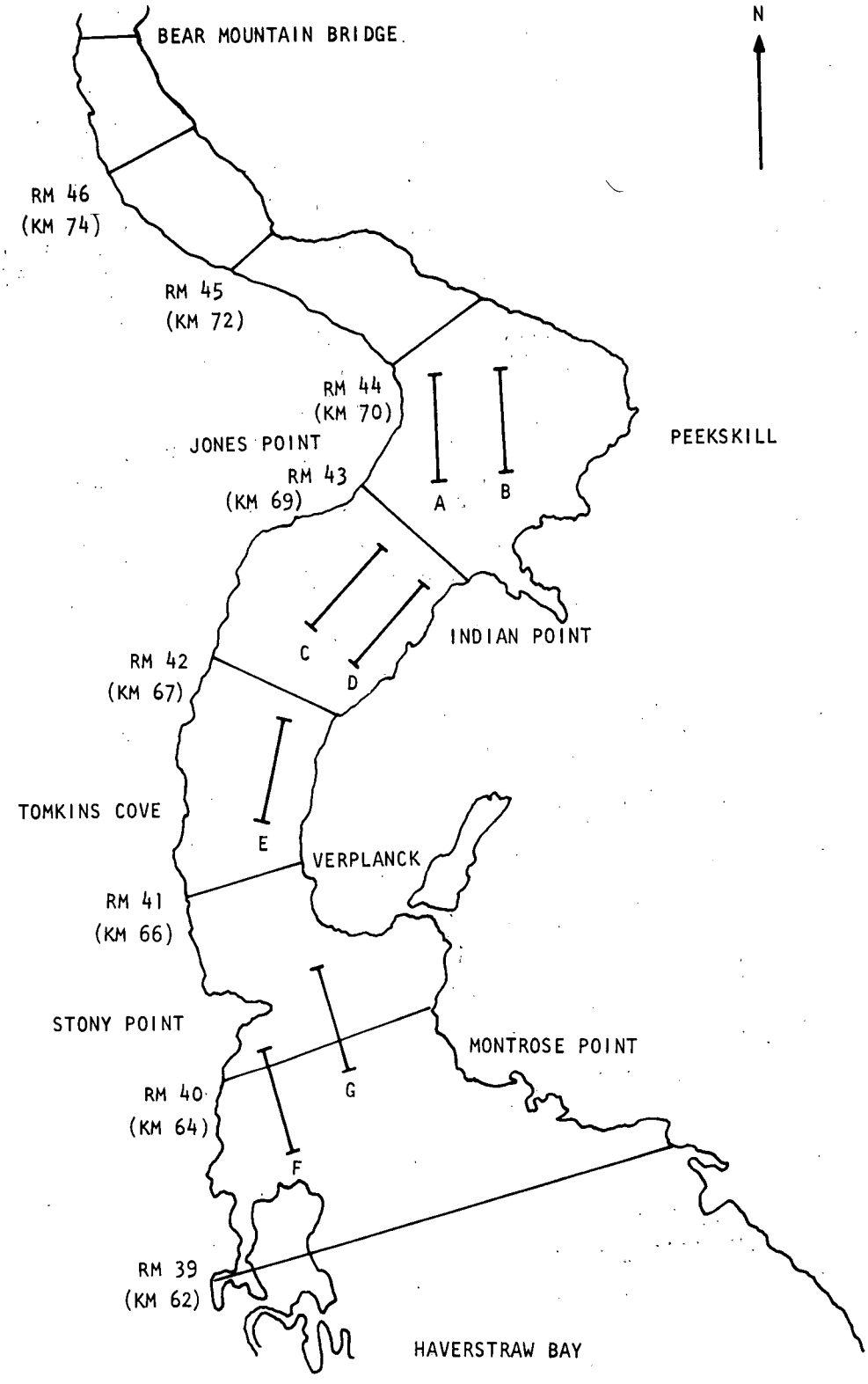

Figure B-3. Indian Point Nearfield Ichthyoplankton Sampling Sites, 1974 (NYU), Analyzed by Texas Instruments

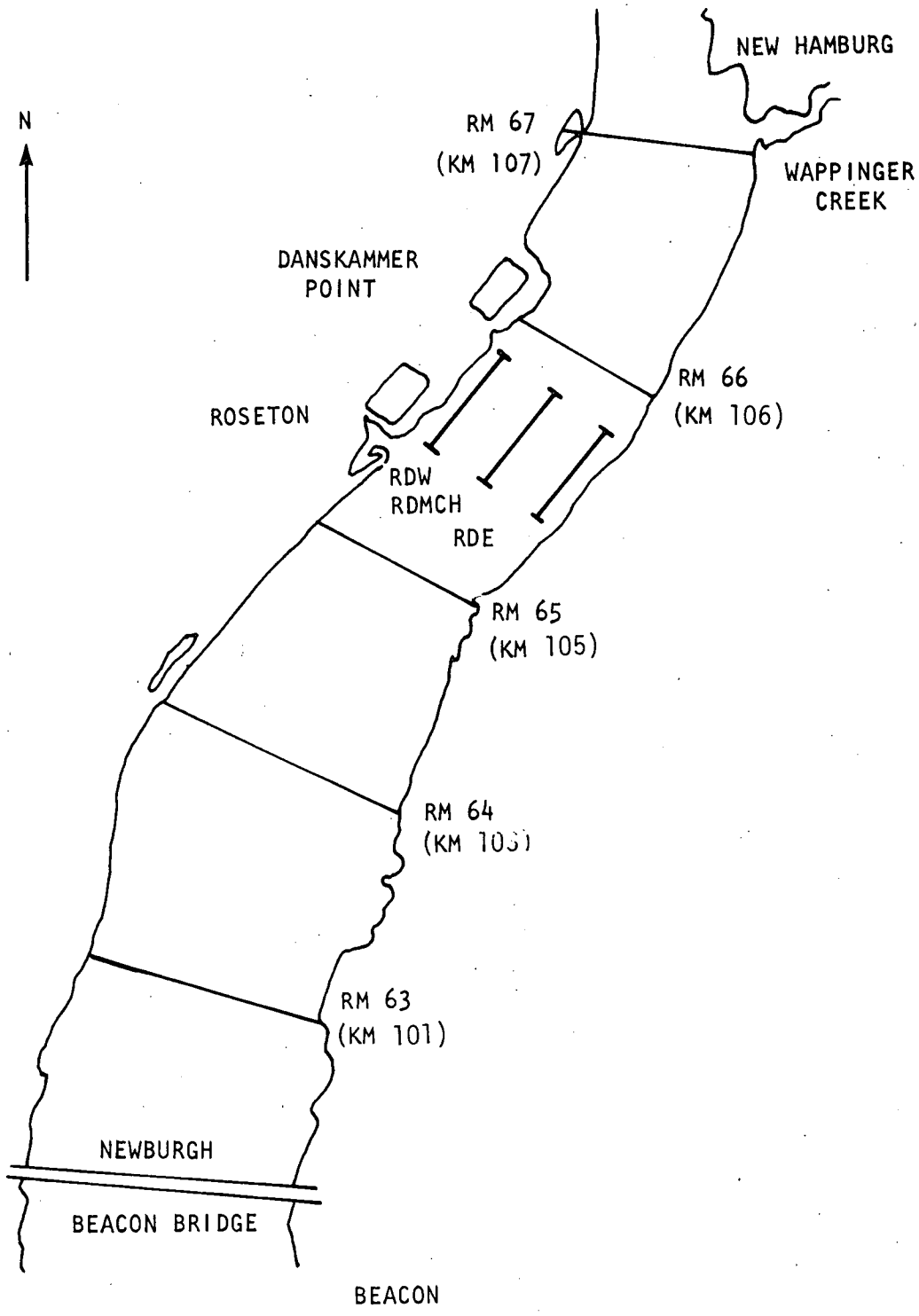

Figure B-4. Danskammer Nearfield Ichthyoplankton Sampling Sites, 1974 (LMS), Analyzed by Texas Instruments

After each sample was taken, the net was washed with river water and the sample preserved in 5-10% formalin. Flowmeter readings were recorded, and the volumes sampled were calculated. In the laboratory, the samples were examined and the eggs, yolk-sac larvae, post yolk-sac larvae, and juveniles identified to species and counted.

4. Danskammer-Roseton*

Nearfield samples were collected at three river transects — west shore (RDW), mid-channel (RDMCH), and east shore (RDE) — between the Danskammer Point and Roseton generating stations (Figure B-4). Sampling was done every 2 weeks until the end of August. Each sampling was over a 24-hr period. Samples were collected at 10-ft (3.0-m) intervals from surface to bottom. Surface and mid-water samples were collected with a 1.0-m mouth diameter Hensen-type net of 571-μ mesh. An epibenthic sled was used for bottom sampling. All tows were made against the current at a speed of approximately 2 ft/sec (0.6 m/sec) for 5 min. A TSK flowmeter was mounted in the center of the mouth of each net.

After each tow, nets were washed to concentrate all of the collected material into the cod-end bucket. The samples were preserved in 10% formalin. Flowmeter readings were recorded, and volumes sampled were calculated. In the laboratory, the samples were examined and eggs and larvae identified to species and counted.

B. ICHTHYOPLANKTON DENSITIES

Density tables appear on the following pages.

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*Adapted from LMS Central Hudson Gas and Electric Report, 1974 (draft).

Table B-1

Ichthyoplankton Densities (No./m^3) in Each Sample Collected by LMS at Bowline during 1974 (Page 1 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass		White Perch		Atlantic Tomcod	
				Larvae	Juveniles	Larvae	Juveniles	Larvae	Juveniles
May 8	D	BPL	S	0	0	0	0	0.002446	0
8	D	BPL	S	0	0	0	0	0	0
8	N	BPL	S	0	0	0	0	0.010930	0
8	N	BPL	S	0	0	0	0	0	0
8	D	BPL	B	0	0	0	0	0	0
8	N	BPL	B	0	0	0	0	0.003612	0.003612
8	N	BPL	B	0	0	0	0	0.003691	0
8	D	BPS	S	0	0	0	0	0	0
8	D	BPS	S	0	0	0	0	0	0
8	N	BPS	S	0	0	0	0	0	0
8	N	BPS	S	0	0	0	0	0	0
8	D	BPS	M	0	0	0	0	0	0
8	D	BPS	M	0	0	0.021222	0	0	0
8	N	BPS	M	0	0	0	0	0	0
8	N	BPS	M	0	0	0	0	0.020212	0
8	D	BPS	B	0	0	0	0	0	0
8	N	BPS	B	0	0	0	0	0	0
8	N	BPS	B	0	0	0	0	0	0
8	D	BW	S	0	0	0	0	0	0
8	D	BW	S	0	0	0	0	0	0
8	N	BW	S	0	0	0	0	0	0
8	N	BW	S	0	0	0	0	0	0
8	D	BW	M	0	0	0	0	0	0
8	D	BW	M	0	0	0	0	0	0
8	N	BW	M	0	0	0	0	0	0
8	D	BW	B	0	0	0	0	0	0
8	D	BW	B	0	0	0	0	0	0
8	N	BW	B	0	0	0	0	0	0
8	N	BW	B	0	0	0	0	0	0
8	D	BCH	S	0	0	0	0	0	0
8	D	BCH	S	0	0	0	0	0	0
8	N	BCH	S	0	0	0	0	0	0
8	N	BCH	S	0	0	0	0	0	0
8	D	BCH	M	0	0	0	0	0	0
8	D	BCH	M	0	0	0	0	0	0
8	D	BCH	M	0	0	0	0	0	0
8	N	BCH	M	0	0	0	0	0	0
8	D	BCH	B	0	0	0	0	0	0
8	D	BCH	B	0	0	0	0	0	0
8	N	BCH	B	0	0	0	0	0	0
8	N	BCH	B	0	0	0	0	0.035161	0.020092
8	D	BE	S	0	0	0	0	0	0
8	D	BE	S	0	0	0	0	0	0
8	D	BE	S	0	0	0	0	0	0
8	N	BE	S	0	0	0	0	0.027562	0.027562
8	D	BE	B	0	0	0	0	0.008162	0.008162
8	D	BE	B	0	0	0	0	0	0
8	D	BE	B	0	0	0	0	0	0
8	N	BE	B	0	0	0	0	0	0
23	D	BPL	S	0	0	0	0	0	0
22	N	BPL	S	0	0	0	0	0	0
23	N	BPL	S	0	0	0	0	0	0
22	D	BPL	B	0	0	0	0	0	0
23	D	BPL	B	0	0	0	0	0	0
22	N	BPL	B	0	0	0	0	0	0
23	N	BPL	B	0	0	0	0	0	0
22	D	BPS	S	0	0	0	0	0	0
23	D	BPS	S	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-1 (Page 2 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
May 23	N	BPS	S	0	0	0	0	0	0
22	D	BPS	M	0	0	0	0	0	0
23	D	BPS	M	0	0	0.030869	0	0	0
22	N	BPS	M	0	0	0	0	0	0
23	N	BPS	M	0.019974	0	0	0	0	0
22	D	BPS	B	0	0	0	0	0	0
23	D	BPS	B	0	0	0	0	0	0
22	N	BPS	B	0	0	0	0	0	0
23	N	BPS	B	0	0	0.012670	0	0	0.038010
22	D	BW	S	0	0	0	0	0	0
23	D	BW	S	0.033013	0	0.018864	0	0	0
22	N	BW	S	0.071137	0	0	0	0	0
23	N	BW	S	0.262488	0	0	0	0	0
22	D	BW	M	0.007382	0	0.014763	0	0	0
23	D	BW	M	0.072467	0	0.010352	0	0	0
22	N	BW	M	0.185853	0	0.020092	0	0	0
23	N	BW	M	0.004468	0	0	0	0.004468	0
22	D	BW	B	0	0	0	0	0	0
23	D	BW	B	0.107796	0	0.031441	0	0	0.031441
22	N	BW	B	0.028297	0	0	0	0	0
23	N	BW	B	0.034649	0	0.025987	0	0	0
22	D	BCH	S	0	0	0.015818	0	0	0
22	D	BCH	S	0.025724	0	0.015434	0	0	0
22	N	BCH	S	0.054185	0	0.025286	0	0	0
23	N	BCH	S	0.007860	0	0.027511	0	0	0
22	D	BCH	M	0	0	0	0	0	0
22	D	BCH	M	0.011170	0	0.027924	0	0	0
22	N	BCH	M	0	0	0	0	0	0
23	N	BCH	M	0	0	0	0	0	0
22	D	BCH	B	0	0	0	0	0	0.005814
22	D	BCH	B	0	0	0	0	0	0.005512
23	N	BCH	B	0.063061	0	0	0	0	0
23	N	BCH	B	0	0	0	0	0	0.057477
22	D	BE	S	0	0	0	0	0	0.022193
22	D	BE	S	0	0	0	0	0	0
22	N	BE	S	0.004444	0	0.022222	0	0	0
23	N	BE	S	0.117401	0	0.167070	0	0	0
22	D	BE	B	0.086935	0	0	0	0	0
22	D	BE	B	0	0	0	0	0	0
22	N	BE	B	0.003567	0	0.003567	0	0	0.003567
23	N	BE	B	0.073629	0	0.004331	0	0	0.012993
31	D	BPL	S	0.003191	0	0.009574	0	0	0
31	D	BPL	S	0.003168	0	0.003168	0	0	0
31	D	BPS	S	0	0	0	0	0	0
31	D	BPS	S	0	0	0	0	0	0
31	D	BPS	S	0	0	0	0	0	0
31	D	BPS	S	0	0	0	0	0	0
31	D	BPS	S	0	0	0	0	0	0
31	D	BPS	M	0	0	0	0	0	0
31	D	BPS	B	0	0	0	0	0	0
Jun 5	D	BPL	S	0	0	0	0	0	0
5	D	BPL	S	0.002512	0	0.002512	0	0	0
5	N	BPL	S	0.087066	0	0.002419	0	0	0
6	N	BPL	S	0.029917	0	0	0	0	0
5	D	BPL	B	0.004192	0	0.004192	0.002096	0	0
5	D	BPL	B	0.113032	0	0.002307	0	0	0
5	N	BPL	B	0.104776	0	0.006415	0	0	0
6	N	BPL	B	0.053787	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-1 (Page 3 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
Jun 5	D	BPS	S	0	0	0	0	0	0
5	D	BPS	S	0	0	0	0	0	0
5	N	BPS	S	0.046303	0	0.015434	0	0	0
6	N	BPS	S	0.126431	0	0	0	0	0
5	D	BPS	M	0	0	0	0	0	0
5	N	BPS	M	0.029786	0	0	0	0	0
6	N	BPS	M	0.013692	0	0	0	0	0
5	D	BPS	B	0	0	0	0	0	0
5	D	BPS	B	0.024968	0	0	0	0	0
5	N	BPS	B	0	0	0	0	0	0
6	N	BPS	B	0.160998	0	0	0.014636	0	0
5	D	BW	S	0.110911	0	0.025595	0	0	0
5	D	BW	S	0	0	0.005053	0	0	0
5	N	BW	S	0.586254	0	0.164151	0	0	0
6	N	BW	S	0.594228	0	0	0	0.006064	0.042445
5	D	BW	M	0.005697	0	0.017092	0	0	0
5	N	BW	M	0.166186	0	0.004492	0	0	0
6	N	BW	M	0.361466	0	0.043814	0	0	0
5	D	BW	B	0.435920	0	0	0	0	0
5	D	BW	B	0.127580	0	0.009814	0	0	0
5	N	BW	B	0.048355	0	0	0	0	0.005373
6	N	BW	B	0.277821	0	0.118331	0	0	0
5	D	BCH	S	0.005083	0	0.005083	0	0	0
6	N	BCH	S	1.259290	0	0.011244	0	0	0
5	N	BCH	S	0.764007	0	0.019590	0	0	0
5	D	BCH	M	0.528452	0	0.078706	0	0	0
5	D	BCH	M	0	0	0	0	0	0
5	N	BCH	M	0.230900	0	0	0	0	0.027165
6	N	BCH	M	0.360490	0	0.011629	0	0	0
5	D	BCH	B	0.337683	0	0.014070	0	0	0.098491
5	D	BCH	B	0.290129	0	0	0	0	0.102082
5	N	BCH	B	0.197929	0	0	0	0	0.013195
6	N	BCH	B	0.453643	0	0.017966	0	0	0
5	D	BE	S	0.037139	0	0.148557	0	0	0
5	D	BE	S	0.071738	0	0.053803	0	0	0
5	N	BE	S	0.174773	0	0.010700	0	0	0
6	N	BE	S	0.121271	0	0.022458	0	0	0
5	D	BE	B	0.132487	0	0	0	0	0
5	D	BE	B	0.173870	0	0.005114	0	0	0
5	N	BE	B	0.250253	0	0.019628	0	0	0
6	N	BE	B	0.071090	0	0.020909	0	0	0.025091
19	D	BPL	S	0	0	0.002968	0	0	0
19	D	BPL	S	0	0	0.007717	0	0	0
20	N	BPL	S	0	0	0	0	0	0
20	N	BPL	S	0.021298	0	0.012171	0	0	0
19	D	BPL	B	0.002557	0	0.012785	0	0	0
19	D	BPL	B	0	0	0	0	0	0
20	N	BPL	B	0.028297	0	0.023580	0	0	0
20	N	BPL	B	0.028063	0	0	0	0	0
19	D	BPS	S	0	0	0	0	0	0
19	D	BPS	S	0	0	0	0	0	0
19	N	BPS	S	0.021222	0	0	0	0	0
19	N	BPS	S	0	0	0.036909	0	0	0
19	D	BPS	M	0.015434	0	0.015434	0	0	0
19	D	BPS	M	0	0	0	0	0	0
20	N	BPS	M	0.099222	0	0	0	0	0
20	N	BPS	M	0.045886	0	0	0	0	0
19	D	BPS	B	0.009538	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-1 (Page 4 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
Jun 20	N	BPS	B	0.011956	0	0.011956	0	0	0.011956
20	N	BPS	B	0.030318	0	0	0	0	0
19	D	BW	S	0.004769	0	0.038153	0	0	0
20	N	BW	S	0	0	0.055583	0	0	0
20	N	BW	S	0.013916	0	0.018555	0	0	0
19	D	BW	M	0.097163	0	0.066480	0	0	0
19	D	BW	M	0.043758	0	0.021879	0	0	0
20	N	BW	M	0	0	0.049935	0	0	0
20	N	BW	M	0.034955	0	0	0	0	0
19	D	BW	B	0.067144	0	0.033572	0	0	0
19	D	BW	B	0.179929	0	0.055363	0	0	0
20	N	BW	B	0.094877	0	0.059922	0	0	0.019974
20	N	BW	B	0.003967	0	0.039668	0	0	0
19	D	BCH	S	0	0	0.145359	0	0	0
19	D	BCH	S	0	0	0	0	0	0
19	N	BCH	S	0	0	0.009871	0	0	0
20	N	BCH	S	0.042181	0	0.005273	0	0	0
19	D	BCH	M	0.082417	0	0.065934	0	0	0.123626
19	D	BCH	M	0	0	0.038200	0	0	0
19	N	BCH	M	0.006196	0	0.192086	0	0	0
20	N	BCH	M	0.032650	0	0.005442	0	0	0
19	D	BCH	B	0	0	0.033956	0	0	0.373514
19	D	BCH	B	0	0	0.100642	0	0	0
20	D	BCH	B	0.113186	0	0.282965	0	0	0.065300
20	N	BCH	B	0.003876	0	0.007752	0	0	0.054267
19	D	BE	S	0	0	0.027742	0	0	0
19	D	BE	S	0	0	0.047161	0	0	0
19	N	BE	S	0.098844	0	0.098844	0	0	0
20	N	BE	S	0.010352	0	0.036233	0	0	0
19	D	BE	B	0	0	0	0	0	0
19	D	BE	B	0.031834	0	0.070741	0	0	0
19	N	BE	B	0.033572	0	0.023980	0	0	0
19	N	BE	B	0.017594	0	0.008797	0	0	0
26	D	BPS	S	0.067912	0	0.101868	0	0	0
26	D	BPS	S	0.115759	0	0.327983	0	0	0
26	D	BPS	M	0.049935	0	0.083225	0	0	0
26	D	BPS	M	0.106112	0	0.042445	0	0	0
26	D	BCH	S	0.607852	0	0	0	0	0
26	D	BCH	S	0.484340	0	0.453092	0	0	0
26	D	BCH	M	0.074278	0	0.068973	0	0	0.005306
26	D	BCH	M	0.076708	0	0.265919	0	0	0
26	D	BCH	B	0.115037	0	0.023801	0	0	0.107104
26	D	BCH	B	0.045208	0	0.065300	0	0	0.010046
Jul 3	D	BPL	S	0.004353	0	0	0	0	0
3	D	BPL	S	0.002188	0	0	0	0	0
2	D	BPL	S	0	0	0.004690	0	0	0
2	D	BPL	S	0	0	0	0	0	0
2	N	BPL	S	0.002937	0	0.014687	0	0	0
3	D	BPL	B	0	0	0	0	0	0
2	D	BPL	B	0.002453	0	0.002453	0	0	0
2	D	BPL	B	0	0	0	0	0	0
3	N	BPL	B	0	0	0.005477	0	0	0
3	D	BPS	S	0	0	0	0	0	0
2	D	BPS	S	0	0	0	0	0	0
2	D	BPS	S	0	0	0	0	0	0
3	N	BPS	S	0	0	0	0	0	0
2	N	BPS	S	0	0	0.042445	0	0	0
3	D	BPS	M	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom

Table B-1 (Page 5 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
Jul 2	D	BPS	M	0	0	0	0	0	0
2	D	BPS	M	0	0	0	0	0	0
3	N	BPS	M	0	0	0.018864	0	0	0
2	N	BPS	M	0	0	0	0	0	0
3	D	BPS	B	0	0	0	0	0	0
3	D	BPS	B	0	0	0	0	0	0
2	D	BPS	B	0	0	0	0	0	0
2	D	BPS	B	0	0	0	0	0	0
3	N	BPS	B	0.027384	0	0	0	0	0
3	D	BW	S	0	0	0	0	0	0
2	D	BW	S	0	0	0.004796	0	0	0
2	D	BW	S	0	0	0	0	0	0
3	N	BW	S	0	0	0	0	0	0
2	N	BW	S	0	0	0.005936	0	0	0
3	D	BW	M	0	0	0	0	0	0
2	D	BW	M	0	0	0.016430	0	0	0
2	D	BW	M	0	0	0	0	0	0
3	N	BW	M	0	0	0	0	0	0
2	N	BW	M	0.024822	0	0.009929	0	0	0.029786
3	D	BW	B	0	0	0	0	0	0
2	D	BW	B	0.015434	0	0	0	0	0
2	D	BW	B	0	0	0.013546	0	0	0
3	N	BW	B	0	0	0	0	0	0.052329
2	N	BW	B	0	0	0	0	0	0.135222
3	D	BCH	S	0	0	0	0	0	0
2	D	BCH	S	0.005240	0	0	0	0	0
2	D	BCH	S	0	0	0	0	0	0
2	D	BCH	S	0.010814	0	0.005407	0	0	0
3	N	BCH	S	0.005053	0	0	0	0	0
3	D	BCH	M	0	0	0	0	0	0
2	D	BCH	M	0	0	0	0	0	0
2	D	BCH	M	0	0	0	0	0	0
2	D	BCH	M	0	0	0	0	0	0
3	N	BCH	M	0.016247	0	0	0	0	0.004062
3	D	BCH	B	0.021012	0	0	0	0	0.037822
2	D	BCH	B	0.068829	0	0.027532	0	0	0
2	D	BCH	B	0.003437	0	0	0	0	0
3	N	BCH	B	0	0	0	0	0	0.071236
2	N	BCH	B	0.008085	0	0.008085	0	0	0.016169
2	N	BCH	B	0	0	0	0	0	0.056593
3	D	BE	S	0	0	0.005622	0	0	0
2	D	BE	S	0	0	0	0	0	0
2	D	BE	S	0	0	0	0	0	0
2	D	BE	S	0	0	0	0	0	0
2	D	BE	S	0	0	0	0	0	0
3	N	BE	S	0.006021	0	0	0	0	0
3	D	BE	B	0.009929	0	0	0	0	0
2	D	BE	B	0	0	0.011900	0	0	0
2	D	BE	B	0	0	0	0	0	0
2	D	BE	B	0	0	0	0	0	0
2	D	BE	B	0	0	0	0	0	0
3	N	BE	B	0.006711	0	0.010066	0	0	0.010066
18	D	BPL	S	0	0	0	0	0	0
18	D	BPL	S	0	0	0	0	0	0
18	N	BPL	S	0	0	0	0	0	0
18	N	BPL	S	0	0	0	0	0	0
18	D	BPL	B	0	0	0	0	0	0
18	D	BPL	B	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-1 (Page 6 of 6)

Date	Day/ Night	Station	Depth*	Striped Bass		White Perch		Atlantic Tomcod	
				Larvae	Juveniles	Larvae	Juveniles	Larvae	Juveniles
Jul 18	D	BW	S	0	0	0	0	0	0
18	N	BW	S	0	0	0	0	0	0
18	N	BW	S	0	0	0	0	0	0
18	D	BW	M	0	0	0	0	0	0
18	D	BW	M	0	0	0	0	0	0
18	N	BW	M	0	0	0	0	0	0
18	N	BW	M	0	0	0	0	0	0
18	D	BW	B	0	0	0	0	0	0
18	D	BW	B	0	0	0	0	0	0
18	N	BW	B	0	0	0	0	0	0
18	N	BW	B	0	0	0	0	0	0
18	D	BCH	S	0	0	0	0	0	0.012303
18	D	BCH	S	0	0	0	0	0	0
18	D	BCH	S	0	0	0	0	0	0
18	N	BCH	S	0	0	0	0	0	0
18	D	BCH	M	0	0	0	0	0	0
18	D	BCH	M	0	0	0	0	0	0
18	N	BCH	M	0	0	0	0	0	0
18	N	BCH	M	0	0	0	0	0	0
18	D	BCH	B	0	0	0	0	0	0
18	D	BCH	B	0	0	0	0	0	0
18	D	BCH	B	0	0	0.005512	0	0	0.022049
18	N	BCH	B	0	0	0.006021	0	0	0
18	D	BE	S	0	0	0	0	0	0.004266
18	D	BE	S	0	0	0	0	0	0
18	D	BE	S	0	0	0	0	0	0
17	N	BE	S	0	0	0	0	0	0
18	D	BE	B	0	0	0	0	0	0
18	D	BE	B	0	0	0	0	0	0
18	D	BE	B	0	0	0	0	0	0
17	N	BE	B	0	0.005895	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-2

Ichthyoplankton Densities (No./m^3) in Each Sample Collected by LMS at Lovett during 1974 (Page 1 of 3)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
May 14	D	LW	S	0	0	0	0	0	0
14	D	LW	S	0	0	0	0	0	0
14	N	LW	S	0	0	0	0	0	0
15	N	LW	S	0	0	0	0	0	0
14	D	LW	M	0.008983	0	0	0	0	0
14	D	LW	M	0	0	0	0	0	0
14	N	LW	M	0	0	0	0	0	0
15	N	LW	M	0	0	0	0	0	0
14	D	LW	B	0.003859	0	0	0	0	0
15	D	LW	B	0.008618	0	0	0	0	0
14	N	LW	B	0	0	0	0	0	0
15	N	LW	B	0	0	0	0	0	0
14	D	LCH	S	0	0	0	0	0	0
14	D	LCH	S	0	0	0	0	0	0
14	N	LCH	S	0	0	0	0	0	0
15	N	LCH	S	0	0	0	0	0	0
14	D	LCH	M	0	0	0	0	0	0
14	D	LCH	M	0.007648	0	0	0	0	0
14	N	LCH	M	0	0	0	0	0	0
15	N	LCH	M	0.004879	0	0	0	0	0
15	D	LCH	B	0.003303	0	0	0	0	0
15	N	LCH	B	0	0	0	0	0	0.012070
14	N	LCH	B	0	0	0	0	0	0
14	D	LE	S	0.025416	0	0	0	0	0
14	D	LE	S	0	0	0	0	0	0
14	N	LE	S	0	0	0	0	0	0
14	N	LE	S	0.004081	0	0.004081	0	0	0
14	D	LE	M	0.058210	0	0	0	0	0
14	D	LE	M	0	0	0	0	0	0
14	N	LE	M	0	0	0	0	0	0
15	N	LE	M	0	0	0	0	0	0
14	D	LE	B	0	0	0	0	0	0
14	N	LE	B	0	0	0	0	0.004204	0.004202
14	N	LE	B	0	0	0	0	0	0
28	D	LW	S	0.034649	0	0.017324	0	0	0
29	D	LW	S	0.197902	0	0.010416	0	0	0
28	N	LW	S	0.247908	0	0	0	0	0
29	N	LW	S	0.205793	0	0	0	0	0
28	D	LW	M	0.011075	0	0.022150	0	0	0
29	D	LW	M	0.112437	0	0.005622	0	0	0
28	N	LW	M	0.086935	0	0	0	0	0
29	N	LW	M	0.130599	0	0.005936	0	0	0
28	D	LW	B	0.053278	0	0	0	0	0
29	D	LW	B	0.263294	0	0.013619	0	0	0.004540
28	N	LW	B	0.040211	0	0	0	0	0.004468
29	N	LW	B	0.312238	0	0.014636	0	0	0.004879
28	D	LCH	S	0.280737	0	0.013368	0	0	0
28	N	LCH	S	0.260685	0	0.086895	0	0	0
28	N	LCH	S	0.144152	0	0.010678	0	0	0
29	N	LCH	S	0	0	0	0	0	0
28	D	LCH	M	0.147016	0	0.018970	0	0	0
28	N	LCH	M	0.045329	0	0.012363	0	0	0
29	N	LCH	M	0.140750	0	0.021992	0	0	0
29	N	LCH	M	0.021767	0	0	0	0	0
28	D	LCH	B	0.183679	0	0.004964	0	0	0
29	D	LCH	B	0.213335	0	0.022222	0	0	0
28	N	LCH	B	0.034649	0	0	0	0	0
29	N	LCH	B	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-2 (Page 2 of 3)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
May 28	D	LE	S	0.060635	0	0.034649	0	0	0
28	D	LE	S	0.012041	0	0.018062	0	0	0
28	N	LE	S	0	0	0	0	0	0
29	N	LE	S	0.250063	0	0.059225	0	0	0.013161
28	D	LE	M	0.049935	0	0.033290	0	0	0
28	N	LE	M	0.304321	0	0.005339	0	0	0
29	N	LE	M	0.136041	0	0	0	0	0
28	D	LE	B	0.004823	0	0	0	0	0
28	D	LE	B	0	0	0	0	0	0
28	N	LE	B	0.189601	0	0.043091	0	0	0.038782
29	N	LE	B	0.067144	0	0.033572	0	0	0.071940
Jun 11	D	LW	S	0.088621	0	0	0	0	0
11	D	LW	S	0.004994	0	0.014981	0	0	0
11	N	LW	S	0.473694	0	0.028140	0	0	0
11	N	LW	S	1.665556	0	0.021491	0	0	0
11	D	LW	M	0.078059	0	0.009757	0	0	0
12	D	LW	M	0.010883	0	0.016325	0	0	0
11	N	LW	M	0.250316	0	0.032650	0	0	0
12	N	LW	M	1.053803	0	0.040981	0	0	0
11	D	LW	B	0.017594	0	0.118758	0	0	0
12	D	LW	B	0.818579	0	0.075794	0	0	0
11	N	LW	B	0.426539	0	0.012545	0	0	0
11	N	LW	B	0.201836	0	0	0	0	0
11	D	LCH	S	0	0	0.019076	0	0	0
11	D	LCH	S	0.015025	0	0.026293	0	0	0
11	D	LCH	S	0.032237	0	0.032237	0	0	0
11	N	LCH	S	0.190270	0	0.063423	0	0	0
11	D	LCH	M	0.057413	0	0.020505	0	0	0
11	D	LCH	M	0.021047	0	0.049110	0	0	0
11	D	LCH	M	0.162802	0	0.098844	0	0	0
11	N	LCH	M	0.196696	0	0.036233	0	0	0
11	D	LCH	B	0.155836	0	0.012303	0	0	0
11	D	LCH	B	0.051138	0	0.020455	0	0	0
11	D	LCH	B	0.093552	0	0.045043	0	0	0
11	N	LCH	B	0.214721	0	0.089883	0	0	0
11	D	LE	S	0.241837	0	0.064161	0	0	0
11	D	LE	S	0	0	0.101691	0	0	0
11	N	LE	S	0.044387	0	0.005548	0	0	0
11	N	LE	S	0.044942	0	0.009987	0	0	0
11	D	LE	M	0.054475	0	0.004540	0	0	0
11	D	LE	M	0.060946	0	0.056593	0	0	0
11	N	LE	M	0.184648	0	0.126338	0	0	0
11	N	LE	M	0.830962	0	0.107607	0	0	0
11	D	LE	B	0.110726	0	0.012303	0	0	0
11	D	LE	B	0.016810	0	0.050429	0	0	0
11	N	LE	B	1.158629	0	0.160602	0	0	0
11	N	LE	B	0.341629	0	0.072467	0	0	0
25	D	LW	S	0.010545	0	0.311086	0	0	0
25	D	LW	S	0.258547	0	0.667913	0	0	0
25	N	LW	S	0.031441	0	0.057641	0	0	0
25	N	LW	S	0.031441	0	0.018864	0	0	0
25	D	LW	M	0.015069	0	0.095438	0	0	0
25	D	LW	M	0.289254	0	0.421304	0	0	0
25	N	LW	M	0.022193	0	0.005548	0	0	0
25	N	LW	M	0.108700	0	0.046586	0	0	0.005176
25	D	LW	B	0.177197	0	0.016483	0	0	0.045329
25	D	LW	B	0.070741	0	0.084005	0	0	0.030949
26	N	LW	B	0.064068	0	0.020021	0	0	0.036038

*S = surface, M = midwater, B = bottom.

Table B-2 (Page 3 of 3)

Date	Day/ Night	Station	Depth*	Striped Bass Larvae	Striped Bass Juveniles	White Perch Larvae	White Perch Juveniles	Atlantic Tomcod Larvae	Atlantic Tomcod Juveniles
Jun 26	D	LCH	S	0.157046	0	0.059423	0	0	0.021222
26	D	LCH	S	0	0	0.038337	0	0	0
25	D	LCH	S	1.162248	0	0.700767	0	0	0
26	N	LCH	S	0.167746	0	0.050832	0	0	0
25	N	LCH	S	0	0	0.005273	0	0	0
26	D	LCH	M	0.004796	0	0.057552	0	0	0
25	D	LCH	M	0.202118	0	0.537057	0	0	0
26	N	LCH	M	0.179019	0	0.086622	0	0	0.005775
25	N	LCH	M	0	0	0.011472	0	0	0
26	D	LCH	B	0.037636	0	0.20909	0	0	0
25	D	LCH	B	0.065300	0	0.081625	0	0	0.089787
26	N	LCH	B	0.102453	0	0.024394	0	0	0.043908
25	N	LCH	B	0.055254	0	0.010046	0	0	0.090415
25	D	LE	S	0.526003	0	0.427052	0	0	0
25	D	LE	S	0.031057	0	0.274338	0	0	0
25	N	LE	S	0.137394	0	0.137394	0	0	0
25	N	LE	S	0.021222	0	0.095501	0	0	0
25	D	LE	M	0.247361	0	0.382284	0	0	0
25	D	LE	M	0.152366	0	0.293849	0	0	0
25	N	LE	M	0.011956	0	0.173366	0	0	0.005978
25	D	LE	B	0.009702	0	0.067912	0	0	0.373514
25	D	LE	B	0.008752	0	0.043758	0	0	0.061261
25	N	LE	B	0.280048	0	0	0	0	0.157527
26	N	LE	B	0.325326	0	0	0	0	0
Jul 9	D	LW	S	0	0	0.006505	0	0	0
9	D	LW	S	0	0	0.005978	0	0	0
9	N	LW	S	0.010814	0	0.005407	0	0	0
10	N	LW	S	0.014636	0	0.014636	0	0	0
9	D	LW	M	0	0	0.006196	0	0	0
9	N	LW	M	0	0	0	0	0	0
10	N	LW	M	0	0	0.005775	0	0	0
9	D	LW	B	0	0	0.012530	0	0	0
9	D	LW	B	0	0	0	0	0	0
9	N	LW	B	0	0	0	0	0	0
10	N	LW	B	0	0	0	0	0	0.041749
9	D	LCH	S	0	0	0.017778	0	0	0
9	D	LCH	S	0.004564	0	0	0	0	0.068459
9	D	LCH	S	0	0	0	0	0	0
10	N	LCH	S	0	0	0.017934	0	0	0
9	D	LCH	M	0	0	0	0	0	0
9	D	LCH	M	0	0	0.004935	0	0	0
9	N	LCH	M	0	0	0.005114	0	0	0
10	N	LCH	M	0	0	0.005895	0	0	0
9	D	LCH	B	0.003985	0	0.007971	0	0	0.019927
9	D	LCH	B	0	0	0.013692	0	0	0
9	D	LCH	B	0.030757	0	0.030757	0	0	0.153786
10	N	LCH	B	0	0	0	0	0	0.016645
9	D	LE	S	0.005477	0	0.005477	0	0	0
9	D	LE	S	0	0	0	0	0	0
9	N	LE	S	0.003859	0	0	0	0	0
9	N	LE	S	0	0	0	0	0	0
9	D	LE	M	0	0	0.007194	0	0	0
9	D	LE	M	0	0	0.045710	0	0	0
9	N	LE	M	0	0	0.008618	0	0	0
9	N	LE	M	0.006064	0	0	0	0	0
9	D	LE	B	0	0	0	0	0	0.004742
9	D	LE	B	0	0	0	0	0	0.075072
9	N	LE	B	0	0	0.014148	0	0	0.018864
9	N	LE	B	0.008662	0	0.021656	0	0	0.012993

*S = surface, M = midwater, B = bottom.

Table B-3

Ichthyoplankton Densities (No./m^3) in Each Sample Collected by NYU at Indian Point during 1974 (Page 1 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
May 7	D	A	S	0.012867	0.012867	0	0	0	0	0	0	0	0	0	0
7	D	B	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	C	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	E	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
7	D	A	M	0.007654	0.015309	0	0	0	0	0	0	0	0	0	0
7	D	B	M	0	0	0	0	0	0	0	0	0	0	0	0
7	D	C	M	0	0.020597	0.006866	0	0	0	0	0	0	0	0	0
7	D	D	M	0	0	0	0	0	0	0	0	0	0	0	0
7	D	E	M	0	0	0	0	0	0	0	0	0	0	0	0
7	D	F	M	0	0.012606	0	0	0	0	0	0	0	0	0	0
7	D	G	M	0	0	0	0	0	0	0	0	0	0	0	0
7	D	A	B	0.016721	0	0	0	0	0	0	0	0	0	0	0
7	D	B	B	0	0.008067	0	0	0	0	0	0	0	0	0	0
7	D	C	B	0	0	0	0	0	0	0	0	0	0	0	0
7	D	D	B	0	0	0	0	0	0	0	0	0	0	0	0
7	D	E	B	0	0.010985	0	0	0	0	0	0	0	0	0	0
7	D	F	B	0	0.009904	0	0	0	0	0	0	0	0	0	0
7	D	G	B	0.009939	0.009939	0	0	0	0	0	0	0	0	0	0
14	D	A	S	0.219684	0	0	0	0	0	0	0	0	0	0	0
14	D	B	S	0.083959	0	0	0	0	0	0	0	0	0	0	0
14	D	C	S	0.007348	0	0	0	0	0	0	0	0	0	0	0
14	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
14	D	E	S	0	0	0	0	0	0	0	0	0	0	0	0
14	D	F	S	0.006277	0	0	0	0	0	0	0	0	0	0	0
14	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
14	D	A	M	0.189731	0	0	0	0	0	0	0	0	0	0	0
14	D	B	M	0.417916	0.013267	0	0	0	0	0	0	0	0	0	0
14	D	C	M	0.483221	0.037171	0	0	0	0.009293	0	0	0	0	0	0
14	D	D	M	0.016039	0	0	0	0	0	0	0	0	0	0	0
14	D	E	M	0.014310	0	0	0	0	0	0	0	0	0	0	0
14	D	F	M	0.015160	0.015160	0	0	0	0	0	0	0	0	0	0
14	D	G	M	0.021517	0	0	0	0	0	0	0	0	0	0	0
14	D	A	B	0.532024	0.082759	0	0	0	0	0	0	0	0	0	0
14	D	B	B	0.510432	0	0	0	0	0	0	0	0	0	0	0
14	D	C	B	1.452699	0.045754	0	0	0	0	0.011439	0	0	0	0	0
14	D	D	B	0.010635	0.010635	0	0	0	0	0	0	0	0	0	0
14	D	E	B	0	0	0	0	0	0	0	0	0	0	0	0
14	D	F	B	0	0	0	0	0	0	0	0	0	0	0	0
14	D	G	B	0.057218	0.098087	0	0	0	0	0	0	0	0	0	0
21	D	A	S	0	0	0	0	0	0	0.006149	0	0	0	0	0
21	D	B	S	0	0	0	0	0	0	0	0	0	0	0	0
21	D	C	S	0.006523	0	0	0	0	0	0	0	0	0	0	0
21	D	D	S	0.313462	0.008249	0	0	0	0.008249	0	0	0	0	0	0
21	D	E	S	0.105902	0	0	0	0	0	0.030258	0	0	0	0	0
21	D	F	S	0.015358	0	0	0	0	0	0	0	0	0	0	0
21	D	G	S	0	0.008430	0	0	0	0	0.025291	0	0	0	0	0

*S = surface, M = midwater, B = bottom

services group

Table B-3 (Page 2 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
May 21	D	A	M	0.270346	0.131519	0.007307	0	0	0.014613	0.014613	0	0	0	0	0
21	D	B	M	0	0	0	0	0	0	0	0	0	0	0	0
21	D	C	M	0.274321	0.099060	0	0	0	0	0.045720	0	0	0	0	0
21	D	D	M	0.381837	0.330238	0	0	0	0	0.010320	0	0	0	0	0
21	D	E	M	0.322455	0.591168	0	0	0	0.096737	0.032246	0	0	0	0	0
21	D	F	M	0.544483	0.149466	0	0	0	0	0.010676	0	0	0	0	0
21	D	G	M	0.118368	0.204455	0	0	0	0.118368	0.053804	0	0	0	0	0
21	D	A	B	0.787706	0.165418	0	0	0	0.015754	0	0	0	0	0	0
21	D	B	B	0	0	0	0	0	0	0	0	0	0	0	0
21	D	C	B	0.023183	0.046366	0	0	0	0	0	0	0	0	0	0
21	D	D	B	1.384405	0.443442	0	0	0	0	0.010816	0	0	0	0	0
21	D	E	B	5.920845	0.787805	0	0	0	0.012309	0.036928	0	0	0	0	0
21	D	F	B	3.965262	0.134416	0.013442	0	0.336039	0.053766	0	0	0	0	0	0
21	D	G	B	0.336552	0.014023	0	0	0	0	0	0	0	0	0	0
28	D	A	S	0.049720	0	0	0	0	0	0.008287	0	0	0	0	0
28	D	B	S	0.014717	0	0.007358	0	0	0	0	0	0	0	0	0
28	D	C	S	0	0	0	0	0	0	0	0	0	0	0	0
28	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
28	D	E	S	0	0.007790	0	0	0	0	0	0	0	0	0	0
28	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
28	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
28	D	A	M	0.173343	0.071377	0.030590	0	0	0	0.020393	0	0	0	0	0
28	D	B	M	0.052970	0.158910	0.008828	0	0	0	0	0	0	0	0	0
28	D	C	M	0.104247	0.064152	0.056133	0	0	0	0.008019	0	0	0	0	0
28	D	D	M	0	0.081253	0	0	0	0	0.010157	0	0	0	0	0
28	D	E	M	0	0	0	0	0	0	0.010881	0	0	0	0	0
28	D	F	M	0.188362	0.059934	0.042810	0	0.008562	0	0.042810	0	0	0	0	0
28	D	G	M	0	0.023944	0.015963	0	0	0.023944	0.071832	0	0	0	0	0
28	D	A	B	0.027396	0.780798	0.109586	0	0	0	0.013698	0	0	0	0	0
28	D	B	B	0.052001	0.374405	0.020800	0	0	0	0.041601	0	0	0	0	0
28	D	C	B	0.050028	0.400221	0.100055	0	0	0.050028	0.100055	0	0	0	0	0
28	D	D	B	0.044913	0.044913	0.014971	0	0	0.044913	0.044913	0	0	0	0	0
28	D	E	B	0.018049	0.027074	0	0	0	0	0.027074	0	0	0	0	0
28	D	F	B	0.011879	1.116586	0.498900	0	0	0	0.059393	0	0	0	0	0
28	D	G	B	0	0.084968	0.025490	0	0	0	0.042484	0	0	0	0	0
Jun 4	D	A	S	0	0	0	0	0	0	0	0	0	0	0	0
4	D	B	S	0	0.007970	0	0	0	0	0	0	0	0	0	0
4	D	C	S	0.006752	0	0	0	0	0	0	0	0	0	0	0
4	D	D	S	0.031129	0	0	0	0	0	0	0	0	0	0	0
4	D	E	S	0	0	0	0	0	0	0.021208	0	0	0	0	0
4	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
4	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
4	D	A	M	0	0.220712	2.898683	0	0	0.007357	0.058857	0	0	0	0	0
4	D	B	M	0	0.018203	0.027305	0	0	0.009102	0.018203	0	0	0	0	0
4	D	C	M	0	0.240389	0.841360	0	0	0	0.025756	0	0	0	0	0
4	D	D	M	0.024581	0.024581	0.188458	0	0	0.008194	0.008194	0	0	0	0	0
4	D	E	M	0.026380	0.052760	0.378115	0	0	0	0.087934	0	0	0	0	0
4	D	F	M	0	0.088549	0.796937	0	0	0	0.044274	0	0	0	0	0
4	D	G	M	0	0.043973	0.140714	0	0	0.008795	0.123124	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-3 (Page 3 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
Jun 4	D	A	B	0	0.055976	1.023562	0	0	0	0	0	0	0	0	0
4	D	B	B	0	0.049499	0.653383	0	0	0.009900	0.049499	0	0	0	0	0
4	D	C	B	0.019530	0.214830	1.22065	0	0	0	0	0	0	0	0	0
4	D	D	B	0	0.018463	0.175395	0	0	0	0.009231	0	0	0	0	0
4	D	E	B	0.043028	0.053785	0.086057	0	0	0	0.010757	0	0	0	0	0
4	D	F	B	0	0.009291	0.334488	0	0	0.009291	0	0	0	0	0	0
4	D	G	B	0	0.045555	0.091110	0	0	0	0.018222	0	0	0	0	0
11	D	A	S	0	0	0	0	0	0	0.016939	0	0	0	0	0
11	D	B	S	0	0	0	0	0	0.008188	0.008188	0	0	0	0	0
11	D	C	S	0	0	0	0	0	0	0.031702	0	0	0	0	0
11	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
11	D	E	S	0	0	0.006932	0	0	0	0	0	0	0	0	0
11	D	F	S	0	0	0	0	0	0.007204	0	0	0	0	0	0
11	D	G	S	0	0	0	0	0	0	0.034181	0	0	0	0	0
11	D	A	M	0.010571	0	0.644822	0	0	0	0.031713	0	0	0	0	0
11	D	B	M	0.010050	0	0.090450	0	0	0.010050	0.030150	0	0	0	0	0
11	D	C	M	0	0	0	0	0	0	0	0	0	0	0	0
11	D	D	M	0	0	0	0	0.008140	0.008140	0.024421	0	0	0	0	0
11	D	E	M	0	0	0.085290	0	0.187639	0.127935	0.119406	0	0	0	0	0
11	D	F	M	0	0.008965	0.331693	0	0	0.215152	0.170329	0	0	0	0	0
11	D	G	M	0	0	0.165023	0	0	0.123767	0.445563	0	0	0	0	0
11	D	A	B	0	0.080161	0.761531	0	0	0	0.020040	0	0	0	0	0
11	D	B	B	0.011762	0.047046	0.058808	0	0	0	0	0	0	0	0	0
11	D	C	B	0	0.042927	0.154535	0	0	0	0	0	0	0	0	0
11	D	D	B	0	0	0.246008	0	0.035144	0.017572	0.070288	0	0	0	0	0
11	D	E	B	0	0	0.090132	0	3.087007	0.135197	0.191530	0	0	0	0	0
11	D	F	B	0	0	0.955770	0	0	0.290144	0.256010	0	0	0	0	0.059736
11	D	G	B	0	0	0.193298	0	0	0.091562	0.081389	0	0	0	0	0
18	D	A	S	0	0	0	0	0	0	0.006774	0	0	0	0	0
18	D	B	S	0	0	0	0	0	0	0.105827	0	0	0	0	0
18	D	C	S	0	0	0	0	0	0	0.027021	0	0	0	0	0
18	D	D	S	0	0	0	0	0	0.005389	0.037721	0	0	0	0	0
18	D	E	S	0	0	0	0	0	0	0.019681	0	0	0	0	0
18	D	F	S	0	0	0	0	0	0	0.006453	0	0	0	0	0
18	D	G	S	0	0	0	0	0	0	0.010656	0	0	0	0	0
18	D	A	M	0	0	0.069991	0	0	0.007777	0.451051	0	0	0	0	0
18	D	B	M	0	0	0.403333	0	0	0.013444	0.551222	0	0	0	0	0
18	D	C	M	0	0	0	0	0	0	0.163284	0	0	0	0	0
18	D	D	M	0	0	0.169717	0	0	0	1.024828	0	0	0	0	0
18	D	E	M	0	0	0	0	0	0	0.179702	0	0	0	0	0
18	D	F	M	0	0	0	0	0	0.008936	0.294895	0	0	0	0	0
18	D	G	M	0	0	0	0	0	0.006910	0.020729	0	0	0	0	0
18	D	A	B	0	0	0.634448	0	0	0	0.726397	0	0	0	0	0
18	D	B	B	0	0	0.393112	0	0	0.123758	0.305754	0	0	0	0	0
18	D	C	B	0	0	0.304244	0	0	0.192154	1.473181	0	0	0	0	0
18	D	D	B	0	0	0.389302	0	0.007345	0.110180	0.440719	0	0	0	0	0
18	D	E	B	0	0	0.079983	0	0	0.008887	0.204400	0	0	0	0	0
18	D	F	B	0	0	0.133369	0	0	0.028579	0.581108	0	0	0	0	0
18	D	G	B	0	0	0.007319	0	0.007319	0.043911	0.043911	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

services group

Table B-3 (Page 4 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
Jun 25	D	A	S	0	0	0.006586	0	0	0	0.302972	0	0	0	0	0
25	D	B	S	0	0	0	0	0	0	0.052382	0	0	0	0	0
25	D	C	S	0	0	0	0	0	0	0.225292	0	0	0	0	0
25	D	D	S	0	0	0	0	0	0	0.036245	0	0	0	0	0
25	D	E	S	0	0	0	0	0	0	0.025893	0	0	0	0	0
25	D	F	S	0	0	0	0	0	0	0.120196	0	0	0	0	0
25	D	G	S	0	0	0	0	0	0	0.055160	0	0	0	0	0
25	D	A	M	0	0.008450	0.050702	0	0	0	0.076053	0	0	0	0	0
25	D	B	M	0	0	0.041399	0	0	0.033119	0.149036	0	0	0	0	0
25	D	C	M	0	0	0.054464	0	0	0.023342	0.194515	0	0	0	0	0
25	D	D	M	0	0	0.112510	0	0	0.025964	0.276948	0	0	0	0	0
25	D	E	M	0	0	0.099005	0	0	0	0.140257	0	0	0	0	0
25	D	F	M	0	0	0.152262	0.008957	0	0	0.161218	0	0	0	0	0
25	D	G	M	0	0	0.153829	0	0	0	0.261510	0	0	0	0	0
25	D	A	B	0	0	0.031209	0	0	0	0.166448	0	0	0	0	0
25	D	B	B	0	0	0.049538	0	0	0.009908	0.277411	0	0	0	0	0
25	D	C	B	0	0	0.054912	0	0	0	0.201346	0	0	0	0	0.009152
25	D	D	B	0	0	0.237631	0	0	0	0.464461	0	0	0	0	0
25	D	E	B	0	0	0.020869	0	0.041739	0	0.323474	0	0	0	0	0
25	D	F	B	0	0	0	0	0	0	0.258633	0	0	0	0	0.024632
25	D	G	B	0	0	0.018123	0	0	0.009062	0.144985	0	0	0	0	0
Jul 2	D	A	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	B	S	0	0	0	0	0	0	0.006241	0	0	0	0	0
2	D	C	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	E	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
2	D	A	M	0	0	0	0.009012	0	0	0	0	0	0	0	0
2	D	B	M	0	0	0.008075	0	0	0	0.032298	0	0	0	0	0
2	D	C	M	0	0	0.021320	0	0	0	0.010660	0	0	0	0	0
2	D	D	M	0	0	0	0	0	0	0.016281	0	0	0	0	0
2	D	E	M	0	0	0.008496	0	0	0.008496	0.093452	0	0	0	0	0
2	D	F	M	0	0	0	0	0	0	0.017803	0	0	0	0	0
2	D	G	M	0	0	0	0	0	0	0.024520	0	0	0	0	0
2	D	A	B	0	0	0	0	0	0	0.015146	0	0	0	0	0
2	D	B	B	0	0	0.021125	0	0	0	0	0	0	0	0	0.007042
2	D	C	B	0	0	0	0	0	0	0.020695	0	0	0	0	0
2	D	D	B	0	0	0.022382	0	0	0.007461	0.096988	0	0	0	0	0
2	D	E	B	0	0	0	0	0	0	0.065126	0	0	0	0	0
2	D	F	B	0	0	0.006930	0	0	0	0.013860	0	0	0	0	0
2	D	G	B	0	0	0	0	0	0	0.021364	0	0	0	0	0
9	D	A	S	0	0	0.007295	0	0	0	0	0	0	0	0	0
9	D	B	S	0	0	0	0	0	0	0	0	0	0	0	0
9	D	C	S	0	0	0	0	0	0	0	0	0	0	0	0
9	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
9	D	E	S	0	0	0	0	0	0	0	0	0	0	0	0
9	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
9	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-3 (Page 5 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
Jul 9	D	A	M	0	0	0	0	0	0	0.009020	0	0	0	0	0
9	D	B	M	0	0	0.017841	0	0	0	0.026762	0	0	0	0	0
9	D	C	M	0	0	0.019919	0	0	0	0	0	0	0	0	0
9	D	D	M	0	0	0.017793	0	0	0.008897	0.026690	0	0	0	0	0
9	D	E	M	0	0	0.026736	0	0	0	0	0	0	0	0	0
9	D	F	M	0	0	0.034732	0	0	0	0	0	0	0	0	0
9	D	G	M	0	0	0.009962	0	0	0	0.019924	0	0	0	0	0
9	D	A	B	0	0	0.008456	0	0	0	0.008456	0	0	0	0	0.008456
9	D	B	B	0	0	0.008327	0	0	0	0.008327	0	0	0	0	0
9	D	C	B	0	0	0	0	0	0	0	0	0	0	0	0
9	D	D	B	0	0	0.008417	0	0	0	0	0	0	0	0	0
9	D	E	B	0	0	0.014563	0	0	0	0.021884	0	0	0	0	0
9	D	F	B	0	0	0	0	0	0	0	0	0	0	0	0
9	D	G	B	0	0	0.009276	0	0	0	0	0	0	0	0	0
16	D	A	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	B	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	C	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	D	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	E	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	F	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	G	S	0	0	0	0	0	0	0	0	0	0	0	0
16	D	A	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	B	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	C	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	D	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	E	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	F	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	G	M	0	0	0	0	0	0	0	0	0	0	0	0
16	D	A	B	0	0	0	0	0	0	0.008638	0	0	0	0	0
16	D	B	B	0	0	0	0	0	0	0	0	0	0	0	0
16	D	C	B	0	0	0	0	0	0	0.007261	0	0	0	0	0
16	D	D	B	0	0	0	0	0	0	0.008787	0	0	0	0	0
16	D	E	B	0	0	0	0	0	0.007301	0	0	0	0	0	0
16	D	F	B	0	0	0	0	0	0	0	0	0	0	0	0
16	D	G	B	0	0	0	0	0	0	0	0	0	0	0	0
May 8	N	A	S	0	0.008757	0	0	0	0	0	0	0	0	0	0
8	N	B	S	0	0	0	0	0	0	0	0	0	0	0	0
8	N	C	S	0	0	0	0	0	0	0	0	0	0	0	0
8	N	D	S	0	0.007330	0	0	0	0	0	0	0	0	0	0
8	N	E	S	0.012622	0.006311	0	0	0	0	0	0	0	0	0	0
8	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
8	N	G	S	0	0.035481	0	0	0	0	0	0	0	0	0	0
8	N	A	M	0.009696	0.009696	0	0	0	0	0	0	0	0	0	0
8	N	B	M	0.008460	0	0	0	0	0	0	0	0	0	0	0
8	N	C	M	0	0.010072	0	0	0	0	0	0	0	0	0	0
8	N	D	M	0	0	0	0	0	0	0	0	0	0	0	0
8	N	E	M	0.008065	0.008065	0	0	0	0	0	0	0	0	0	0
8	N	F	M	0	0.008295	0	0	0	0	0	0	0	0	0	0
8	N	G	M	0	0.019040	0	0	0	0	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

services group

Table B-3 (Page 6 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
May 8	N	A	B	0.064746	0.027748	0	0	0	0	0	0	0	0	0	0
8	N	B	B	0.059725	0.008532	0	0	0	0	0	0	0	0	0	0
8	N	C	B	0.093875	0.010431	0	0	0	0	0	0	0	0	0	0
8	N	D	B	0.004509	0	0	0	0	0	0	0	0	0	0	0
8	N	E	B	0.012715	0.012715	0	0	0	0	0	0	0	0	0	0
8	N	F	B	0	0.009496	0	0	0	0	0	0	0	0	0	0
8	N	G	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	A	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	B	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	C	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	E	S	0.007278	0	0.007278	0	0	0	0	0	0	0	0	0
16	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	G	S	0	0	0.008244	0	0	0	0	0	0	0	0	0
16	N	A	M	0	0.008292	0	0	0	0	0	0	0	0	0	0
16	N	B	M	0	0.023244	0	0	0	0	0	0	0	0	0	0
16	N	C	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	E	M	0	0.019386	0	0	0	0	0	0	0	0	0	0
16	N	F	M	0	0	0.008335	0	0	0	0	0	0	0	0	0
16	N	G	M	0	0.019953	0	0	0	0	0	0	0	0	0	0
16	N	A	B	0.311191	0	0	0	0	0	0	0	0	0	0	0
16	N	B	B	0	0.032045	0	0	0	0	0	0	0	0	0	0
16	N	C	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	E	B	0.213308	0.016408	0	0	0	0	0	0	0	0	0	0
16	N	F	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	G	B	0	0	0	0	0	0	0	0	0	0	0	0
23	N	F	S	0	0.036032	0	0	0	0	0	0	0	0	0	0
23	N	G	S	0	0.015069	0	0	0	0	0.007535	0	0	0	0	0
23	N	F	M	0	0.010659	0	0	0	0	0.021317	0	0	0	0	0
23	N	G	M	0	0.089282	0	0	0	0	0.017856	0	0	0	0	0
23	N	F	B	0.629210	0.027965	0	0	0	0	0.027965	0	0	0	0	0
23	N	G	B	0	0	0	0	0	0	0	0	0	0	0	0
29	N	A	S	0.012970	0	0.071334	0	0	0	0.012970	0	0	0	0	0
29	N	B	S	0	0.006375	0.044625	0	0	0	0	0	0	0	0	0
29	N	C	S	0	0.023825	0.119123	0	0	0	0	0	0	0	0	0
29	N	D	S	0	0	0.058189	0	0	0	0	0	0	0	0	0
29	N	E	S	0.005308	0.010615	0.100847	0	0	0.005308	0.015923	0	0	0	0	0
29	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
29	N	G	S	0	0.006733	0.040401	0	0	0.013467	0.006733	0	0	0	0	0
29	N	A	M	0	0.092297	0.184593	0	0	0	0.041953	0	0	0	0	0
29	N	B	M	0.008378	0.117291	0.117291	0	0	0.016756	0.108913	0	0	0	0	0
29	N	C	M	0	0.441787	0.152091	0	0	0	0.014485	0	0	0	0	0
29	N	D	M	0.016169	0.072759	0.064674	0	0	0	0.008084	0	0	0	0	0
29	N	E	M	0	0.029052	0.123472	0	0	0	0.029052	0	0	0	0	0
29	N	F	M	0	0.226933	0.196675	0	0	0	0.022693	0	0	0	0	0
29	N	G	M	0	0.061279	0.035017	0	0	0.070034	0.218855	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-3 (Page 7 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
May 29	N	A	B	0	0.490725	0.062456	0	0	0.026767	0.044611	0	0	0	0	0
29	N	B	B	0.028936	0.250775	0.115742	0	0	0	0.154323	0	0	0	0	0
29	N	C	B	0	0.208981	0.085141	0	0	0.030960	0	0	0	0	0	0
29	N	D	B	0.009377	0.121898	0.037507	0	0	0	0.009377	0	0	0	0	0
29	N	E	B	0	0.007832	0.039161	0	0	0	0.023497	0	0	0	0	0
29	N	F	B	0	0.192240	0.208956	0	0	0	0.008358	0	0	0	0	0
29	N	G	B	0	0	0.047673	0	0.028604	0	0.038138	0	0	0	0	0
Jun 5	N	A	S	0.00638	0	0.185858	0	0	0	0.033189	0	0	0	0	0
5	N	B	S	0.006574	0.026297	0.341858	0	0	0	0.052594	0	0	0	0	0
5	N	C	S	0	0	0.542073	0	0	0	0.063032	0	0	0	0	0
5	N	D	S	0.033994	0.067988	0.645882	0	0	0	0.088384	0	0	0	0	0
5	N	E	S	0	0.097516	0.735124	0	0	0	0	0	0	0	0	0
5	N	F	S	0	0	0.932083	0	0	0	0.006754	0	0	0	0	0
5	N	G	S	0	0	0.191229	0	0	0	0.007083	0	0	0	0	0
5	N	A	M	0.017527	0.035054	0.184035	0	0	0	0.035054	0	0	0	0	0
5	N	B	M	0	0	0.008978	0	0	0	0	0	0	0	0	0
5	N	C	M	0	0.015581	0.007791	0	0	0.007791	0.007791	0	0	0	0	0
5	N	D	M	0.008689	0.078200	0.278044	0	0	0	0.026067	0	0	0	0	0
5	N	E	M	0	0.208881	0.746004	0	0	0	0.029840	0	0	0	0	0
5	N	F	M	0	0.035004	0.455049	0	0	0	0.113762	0	0	0	0	0
5	N	G	M	0	0.070942	0.292636	0	0	0	0.035471	0	0	0	0	0
5	N	A	B	0.051772	0.051772	0.569496	0	0	0.031063	0.673041	0	0	0	0	0
5	N	B	B	0.053643	0.151988	0.831462	0	0	0.017881	0.143047	0	0	0	0	0
5	N	C	B	0.078551	0.196377	1.011343	0	0	0	0.186558	0	0	0	0	0
5	N	D	B	0.337786	0.143303	0.276371	0	0	0	0.020472	0	0	0	0	0.020472
5	N	E	B	0.069084	0.161195	0.299363	0	0	0.011514	0.115140	0	0	0	0	0
5	N	F	B	0	0.056592	0.028296	0	0	0	0.066025	0	0	0	0	0
5	N	G	B	0	0	0.019245	0	0	0	0	0	0	0	0	0
13	N	A	S	0	0	0.475245	0	0	0	0.110202	0	0	0	0	0
13	N	B	S	0	0	1.107485	0	0	0	0.028252	0	0	0	0	0
13	N	C	S	0	0	0.419739	0	0	0	0.135400	0	0	0	0	0
13	N	D	S	0.024825	0	0.726119	0	0	0.006206	0.136535	0	0	0	0	0
13	N	E	S	0	0	0.805011	0	0	0.005476	0.186193	0	0	0	0	0
13	N	F	S	0	0	0.041758	0	0	0	0.011931	0	0	0	0	0
13	N	G	S	0	0	0	0	0	0	0	0	0	0	0	0
13	N	A	M	0	0	0.408341	0	0	0.034028	0.433863	0	0	0	0	0
13	N	B	M	0	0.007079	0.906091	0	0	0.035394	0.339784	0	0	0	0	0
13	N	C	M	0	0.014858	0.386318	0.007429	0	0.029717	0.319455	0	0	0	0	0
13	N	D	M	0	0	0.164854	0	0	0.047101	0.416060	0	0	0	0	0
13	N	E	M	0	0	0.307773	0	0	0.078733	0.257671	0.007158	0	0	0	0
13	N	F	M	0	0	0.015669	0	0	0.007835	0.101849	0	0	0	0	0
13	N	G	M	0	0	0.015704	0	0	0	0.015704	0	0	0	0	0
13	N	A	B	0	0	0.262812	0	0	0.038935	0.389350	0	0	0	0	0
13	N	B	B	0	0.015569	0.716168	0	0	0.101198	0.747306	0	0	0	0	0.007784
13	N	C	B	0	0	0.151535	0	0	0.418950	0.597227	0	0	0	0	0
13	N	D	B	0	0	0.221478	0	0	0.211411	0.825509	0	0	0	0	0
13	N	E	B	0	0	0.077089	0	0	0.265528	0.548187	0	0	0	0	0
13	N	F	B	0	0	0.007894	0	0.149990	0.149990	0	0	0	0	0	0
13	N	G	B	0	0	0.051814	0	0	0.017271	0.086356	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-3 (Page 8 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk-Sac Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
Jun 18	N	A	S	0	0	0.087676	0	0	0	0.175352	0	0	0	0	0
18	N	B	S	0	0	0.067724	0	0	0	0.101586	0	0	0	0	0
18	N	C	S	0	0	0.089140	0	0	0	0.215421	0	0	0	0	0
18	N	D	S	0	0	0.101894	0	0	0.007278	0.181954	0	0	0	0	0
18	N	E	S	0	0	0.068943	0	0	0.008618	0.198211	0	0	0	0	0
18	N	F	S	0	0	0.014212	0	0	0	0.326877	0	0	0	0	0
18	N	G	S	0	0	0	0	0	0	0	0	0	0	0	0
18	N	A	M	0	0	0.087159	0	0	0.009684	0.464846	0	0	0	0	0.009684
18	N	B	M	0	0	0.115868	0	0	0	0.231736	0	0	0	0	0
18	N	C	M	0	0	0.017721	0	0	0.026582	0.487337	0	0	0	0	0
18	N	D	M	0	0	0.131839	0	0	0.026368	0.166996	0	0	0	0	0
18	N	E	M	0	0	0.008923	0	0	0	0.089227	0	0	0	0	0
18	N	F	M	0	0	0.018638	0	0	0	0.130464	0	0	0	0	0
18	N	G	M	0	0	0	0	0	0	0.054014	0	0	0	0	0
18	N	A	B	0	0	0.080762	0	0	0.010095	0.464379	0	0	0	0	0.010095
18	N	B	B	0	0	0.075593	0	0	0.010799	0.226778	0	0	0	0	0.010799
18	N	C	B	0	0	0.012820	0	0	0	0.012820	0	0	0	0	0
18	N	D	B	0	0	0.084965	0	0	0	0.018881	0	0	0	0	0
18	N	E	B	0	0	0.095148	0	0	0	0.010572	0	0	0	0	0
18	N	F	B	0	0	0.031253	0	0	0.281273	0.242207	0	0	0	0	0
18	N	G	B	0	0	0.027674	0	0.009225	0	0.036898	0	0	0	0	0
25	N	A	S	0	0	0.135254	0	0	0	0.122373	0	0	0	0	0
25	N	B	S	0	0	0.077407	0	0	0	0.051605	0	0	0	0	0
25	N	C	S	0	0	0.118416	0	0	0	0.062691	0	0	0	0	0
25	N	D	S	0	0	0.042218	0	0.007036	0	0.021109	0	0	0	0	0
25	N	E	S	0	0	0.246470	0	0	0	0.171159	0	0	0	0	0
25	N	F	S	0	0	0.024943	0	0	0	0.037414	0	0	0	0	0
25	N	G	S	0	0	0	0	0	0	0.037548	0	0	0	0	0
25	N	A	M	0	0	0.049839	0	0	0.009968	0.289064	0	0	0	0	0
25	N	B	M	0	0	0.061663	0	0	0	0.158561	0	0	0	0	0
25	N	C	M	0	0	0.070756	0	0	0.008844	0.309557	0	0	0	0	0
25	N	D	M	0	0	0.060649	0	0	0.017328	0.103970	0	0	0	0	0
25	N	E	M	0	0	0.008616	0	0	0	0.043079	0	0	0	0	0
25	N	F	M	0	0	0.049500	0	0	0	0.354753	0	0	0	0	0
25	N	G	M	0	0	0.063957	0	0	0	0.298464	0	0	0	0	0
25	N	A	B	0	0	0.047341	0	0	0.031561	0.402402	0	0	0	0	0
25	N	B	B	0	0	0.103281	0	0	0.015889	0.365457	0	0	0	0	0.007945
25	N	C	B	0	0	0.008703	0	0.008703	0.069623	0.896400	0	0	0	0	0.008703
25	N	D	B	0	0	0.077720	0	0	0	0.155441	0	0	0	0	0
25	N	E	B	0	0	0	0	0	0	0.025005	0	0	0	0	0
25	N	F	B	0	0	0.020942	0	0	0	0.188477	0	0	0	0	0
25	N	G	B	0	0	0	0	0	0	0.157387	0	0	0	0	0.009258
Jul 2	N	A	S	0	0	0	0	0	0.006496	0.051971	0	0	0	0	0
2	N	B	S	0	0	0	0	0	0	0.020228	0	0	0	0	0
2	N	C	S	0	0	0	0	0	0	0.041338	0	0	0	0	0
2	N	D	S	0	0	0	0	0	0.008400	0.025201	0	0	0	0	0
2	N	E	S	0	0	0	0	0	0	0.011216	0	0	0	0	0
2	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
2	N	G	S	0	0	0	0	0	0	0.006921	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

Table B-3 (Page 9 of 9)

Date	Day/ Night	Station	Depth*	Striped Bass Eggs	Striped Bass Yolk-Sac Larvae	Striped Bass Post Yolk-Sac Larvae	Striped Bass Juveniles	White Perch Eggs	White Perch Yolk Sac-Larvae	White Perch Post Yolk-Sac Larvae	White Perch Juveniles	Atlantic Tomcod Eggs	Atlantic Tomcod Yolk-Sac Larvae	Atlantic Tomcod Post Yolk-Sac Larvae	Atlantic Tomcod Juveniles
2	N	A	M	0	0	0	0	0	0	0.049037	0	0	0	0	0
2	N	B	M	0	0	0.007397	0	0	0	0.036986	0	0	0	0	0
2	N	C	M	0	0	0	0	0	0	0.033398	0	0	0	0	0
2	N	D	M	0	0	0.009888	0	0	0	0.049442	0	0	0	0	0
2	N	E	M	0	0	0	0	0	0	0.060139	0	0	0	0	0
2	N	F	M	0	0	0	0	0	0	0.008841	0	0	0	0	0
2	N	G	M	0	0	0	0	0	0	0.015391	0	0	0	0	0
2	N	A	B	0	0	0.016146	0	0	0	0.096879	0	0	0	0	0.016146
2	N	B	B	0	0	0	0	0	0	0.019320	0	0	0	0	0
2	N	C	B	0	0	0.008257	0	0	0.008257	0.123849	0	0	0	0	0.008257
2	N	D	B	0	0	0.022843	0	0	0.007614	0.098988	0	0	0	0	0.007614
2	N	E	B	0	0	0.007096	0	0	0	0.156121	0	0	0	0	0
2	N	F	B	0	0	0	0	0	0.007552	0.151040	0	0	0	0	0.007552
2	N	G	B	0	0	0	0	0	0.006890	0.013779	0	0	0	0	0
9	N	A	S	0	0	0.006236	0	0	0	0	0	0	0	0	0
9	N	B	S	0	0	0	0	0	0	0	0	0	0	0	0
9	N	C	S	0	0	0	0	0	0.006790	0	0	0	0	0	0
9	N	D	S	0	0	0	0	0	0	0.006446	0	0	0	0	0
9	N	E	S	0	0	0	0	0	0	0	0	0	0	0	0
9	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
9	N	G	S	0	0	0	0	0	0	0	0	0	0	0	0
9	N	A	M	0	0	0	0	0	0	0.015925	0	0	0	0	0
9	N	B	M	0	0	0.008634	0	0	0	0	0	0	0	0	0
9	N	C	M	0	0	0	0	0	0	0.007484	0	0	0	0	0
9	N	D	M	0	0	0	0	0	0	0	0	0	0	0	0
9	N	E	M	0	0	0	0	0	0	0.025414	0	0	0	0	0.008471
9	N	F	M	0	0	0	0	0	0.008610	0.017220	0	0	0	0	0
9	N	G	M	0	0	0	0	0	0	0.019547	0	0	0	0	0
9	N	A	B	0	0	0	0	0	0	0.007863	0	0	0	0	0
9	N	B	B	0	0	0	0	0	0.007869	0.031474	0	0	0	0	0
9	N	C	B	0	0	0	0	0	0.007642	0	0	0	0	0	0
9	N	D	B	0	0	0	0	0	0	0.013783	0	0	0	0	0
9	N	E	B	0	0	0	0	0	0	0.032788	0	0	0	0	0
9	N	F	B	0	0	0	0	0	0	0.008598	0	0	0	0	0
9	N	G	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	A	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	B	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	C	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	E	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	F	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	G	S	0	0	0	0	0	0	0	0	0	0	0	0
16	N	A	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	B	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	C	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	E	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	F	M	0	0	0	0	0	0	0.012569	0	0	0	0	0
16	N	G	M	0	0	0	0	0	0	0	0	0	0	0	0
16	N	A	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	B	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	C	B	0	0	0	0	0	0	0	0	0	0	0	0
16	N	D	B	0	0	0	0	0	0	0	0	0	0	0	0.008892
16	N	E	B	0	0	0	0	0	0	0	0	0	0	0	0.007539
16	N	F	B	0	0	0	0	0	0	0.009286	0	0	0	0	0
16	N	G	B	0	0	0	0	0	0	0	0	0	0	0	0

*S = surface, M = midwater, B = bottom.

services group

Table B-4

Ichthyoplankton Densities (No./m^3) in Each Sample Collected by LMS at Danskammer during 1974 (Page 1 of 9)

Date	Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Mar 11	N	RDE	M	0	0	0.138504
11	N	RDE	M	0	0	0.021528
11	N	RDE	M	0	0	0.007546
11	N	RDE	M	0	0	0.044559
11	D	RDE	B	0	0	0.321687
11	N	RDE	B	0	0	0.030729
11	N	RDE	B	0	0	0.076305
11	N	RDE	B	0	0	0.198443
11	D	RMCH	S	0	0	0.207048
11	D	RMCH	S	0	0	0.108099
11	D	RMCH	S	0	0	0.179649
11	D	RMCH	S	0	0	0.181225
11	N	RMCH	S	0	0	0.888973
11	N	RMCH	S	0	0	0.249896
11	N	RMCH	S	0	0	0.049266
11	N	RMCH	S	0	0	0.512339
11	D	RMCH	M	0	0	0.246842
11	D	RMCH	M	0	0	0.413748
11	D	RMCH	M	0	0	0.251525
11	D	RMCH	M	0	0	0.436932
11	N	RMCH	M	0	0	0.307842
11	N	RMCH	M	0	0	0.128370
11	N	RMCH	M	0	0	0.760948
11	N	RMCH	M	0	0	0.159755
11	D	RMCH	B	0	0	0.173552
11	D	RMCH	B	0	0	0.303177
11	D	RMCH	B	0	0	0
11	D	RMCH	B	0	0	0.055578
11	N	RMCH	B	0	0	0.418050
11	N	RMCH	B	0	0	0.523292
11	N	RMCH	B	0	0	0.296127
11	N	RMCH	B	0	0	0.822910
11	N	RMCH	B	0	0	0.302650
28	D	RDW	S	0	0	0.024082
28	N	RDW	S	0	0	0.036381
28	N	RDW	S	0	0	0.019628
28	D	RDW	M	0	0	0
28	D	RDW	M	0	0	0.030643
28	D	RDW	M	0	0	0.026391
28	D	RDW	M	0	0	0.029071
28	N	RDW	M	0	0	0.059834
28	N	RDW	M	0	0	0
28	N	RDW	M	0	0	0.026528
28	N	RDW	M	0	0	0.035431
28	D	RDW	B	0	0	0.235805
28	N	RDW	B	0	0	0.028776
28	N	RDW	B	0	0	0.047825
28	N	RDW	B	0	0	0.117540
28	D	RDE	S	0	0	0.009031
28	N	RDE	S	0	0	0.018355
28	N	RDE	S	0	0	0.019293
28	D	RDE	M	0	0	0.004677
28	D	RDE	M	0	0	0.021804
28	D	RDE	M	0	0	0.069522
28	D	RDE	M	0	0	0.158818
28	N	RDE	M	0	0	0.013974
28	N	RDE	M	0	0	0.036838
28	D	RDE	B	0	0	0
28	N	RDE	B	0	0	0.011356
28	N	RDE	B	0	0	0
28	N	RDE	B	0	0	0.036590

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 2 of 9)

Date	Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Mar 28	D	RMCH	S	0	0	0.021222
28	D	RMCH	S	0	0	0.099562
28	D	RMCH	S	0	0	0.035554
28	D	RMCH	S	0	0	0.008936
28	N	RMCH	S	0	0	0.005814
28	N	RMCH	S	0	0	0.028415
28	N	RMCH	S	0	0	0.012670
28	N	RMCH	S	0	0	0.020212
28	N	RMCH	S	0	0	0
28	N	RMCH	S	0	0	0.008489
28	N	RMCH	S	0	0	0
28	D	RMCH	M	0	0	0
28	D	RMCH	M	0	0	0.020789
28	D	RMCH	M	0	0	0.035371
28	D	RMCH	M	0	0	0.008575
28	N	RMCH	M	0	0	0
28	N	RMCH	M	0	0	0.053427
28	N	RMCH	M	0	0	0.029961
28	D	RMCH	B	0	0	0
28	D	RMCH	B	0	0	0.071403
28	D	RMCH	B	0	0	0.017685
28	N	RMCH	B	0	0	0.020053
28	N	RMCH	B	0	0	0.026528
28	N	RMCH	B	0	0	0.048383
28	N	RMCH	B	0	0	0.012670
Apr 10	D	RDW	S	0	0	0
10	D	RDW	S	0	0	0
10	N	RDW	S	0	0	0
10	N	RDW	S	0	0	0
10	D	RDW	M	0	0	0
10	D	RDW	M	0	0	0
10	D	RDW	M	0	0	0
10	D	RDW	M	0	0	0
10	N	RDW	M	0	0	0
10	N	RDW	M	0	0	0.004421
10	N	RDW	M	0	0	0
10	N	RDW	M	0	0	0
10	D	RDW	B	0	0	0
10	D	RDW	B	0	0	0
10	N	RDW	B	0	0	0
10	N	RDW	B	0	0	0
10	D	RDE	S	0	0	0
10	N	RDE	S	0	0	0
10	N	RDE	S	0	0	0
10	N	RDE	S	0	0	0
10	D	RDE	M	0	0	0
10	D	RDE	M	0	0	0
10	D	RDE	M	0	0	0
10	N	RDE	M	0	0	0
10	N	RDE	M	0	0	0
10	N	RDE	M	0	0	0
10	N	RDE	M	0	0	0
10	D	RDE	B	0	0	0
10	N	RDE	B	0	0	0
10	N	RDE	B	0	0	0
10	D	RMCH	S	0	0	0
10	D	RMCH	S	0	0	0
10	D	RMCH	S	0	0	0
10	D	RMCH	S	0	0	0
10	D	RMCH	S	0	0	0.003000
10	N	RMCH	S	0	0	0
10	N	RMCH	S	0	0	0
10	N	RMCH	S	0	0	0

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 3 of 9)

Date		Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Apr	10	N	RMCH	S	0	0	0
	10	N	RMCH	S	0	0	0
	10	N	RMCH	S	0	0	0
	10	N	RMCH	S	0	0	0
	10	D	RMCH	M	0	0	0
	10	D	RMCH	M	0	0	0
	10	D	RMCH	M	0	0	0
	10	D	RMCH	M	0	0	0
	10	N	RMCH	M	0	0	0
	10	N	RMCH	M	0	0	0
	10	N	RMCH	M	0	0	0
	10	N	RMCH	M	0	0	0
	10	D	RMCH	B	0	0	0
	10	D	RMCH	B	0	0	0.005240
	10	N	RMCH	B	0	0	0
	10	N	RMCH	B	0	0	0
	10	N	RMCH	B	0	0	0
	10	N	RMCH	B	0	0	0
	10	N	RMCH	B	0	0	0
	10	N	RMCH	B	0	0	0
	25	D	RDW	S	0	0	0
	25	D	RDW	S	0	0	0
	25	N	RDW	S	0	0	0
	25	N	RDW	S	0	0	0
	25	D	RDW	M	0	0	0
	25	D	RDW	M	0	0	0
	25	D	RDW	M	0	0	0
	25	D	RDW	M	0	0	0
	25	N	RDW	M	0	0	0
	25	N	RDW	M	0	0	0
	25	N	RDW	M	0	0	0
	25	N	RDW	M	0	0	0
	25	D	RDW	B	0	0	0
	25	N	RDW	B	0	0	0
	25	N	RDW	B	0	0	0
	25	D	RDE	S	0	0	0
	25	D	RDE	S	0	0	0
	25	N	RDE	S	0	0	0
	25	N	RDE	S	0	0	0
	25	D	RDE	M	0	0	0
	25	D	RDE	M	0	0	0
	25	D	RDE	M	0	0	0
	25	D	RDE	M	0	0	0
	25	N	RDE	M	0	0	0
	25	N	RDE	M	0	0	0
	25	N	RDE	M	0	0	0
	25	D	RDE	R	0	0	0
	25	D	RDE	B	0	0	0
	25	N	RDE	B	0	0	0
	25	N	RDE	B	0	0	0
	25	D	RMCH	S	0	0	0
	25	D	RMCH	S	0	0	0
	25	D	RMCH	S	0	0	0
	25	D	RMCH	S	0	0	0
	25	D	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0
	25	N	RMCH	S	0	0	0

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 4 of 9)

Date		Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Apr	25	N	RMCH	S	0	0	0
	25	D	RMCH	M	0	0	0
	25	D	RMCH	M	0	0	0
	25	D	RMCH	M	0	0	0
	25	D	RMCH	M	0	0	0
	25	N	RMCH	M	0	0	0
	25	N	RMCH	M	0	0.003465	0
	25	D	RMCH	B	0	0	0
	25	D	RMCH	B	0	0	0
	25	D	RMCH	B	0	0	0
	25	N	RMCH	B	0	0	0
	25	N	RMCH	B	0	0	0
	25	N	RMCH	B	0	0	0
	25	N	RMCH	B	0	0	0
	25	N	RMCH	B	0	0	0
May	7	D	RDW	S	0	0	0
	7	D	RDW	S	0	0	0
	7	D	RDW	S	0.004993	0	0
	7	N	RDW	S	0.003508	0	0
	7	D	RDW	M	0	0	0
	7	D	RDW	M	0	0	0
	7	D	RDW	M	0	0	0
	7	D	RDW	M	0	0	0
	7	N	RDW	M	0	0	0
	7	N	RDW	M	0	0	0
	7	N	RDW	M	0	0	0
	7	N	RDW	M	0	0	0
	7	D	RDW	B	0	0	0
	7	D	RDW	B	0	0	0
	7	N	RDW	B	0.004690	0	0
	7	D	RDE	S	0	0	0
	7	D	RDE	S	0	0	0
	7	N	RDE	S	0	0	0
	7	N	RDE	S	0	0	0
	7	D	RDE	M	0	0.003948	0
	7	D	RDE	M	0	0	0
	7	D	RDE	M	0	0	0
	7	D	RDE	M	0	0	0
	7	N	RDE	M	0.005373	0	0
	7	N	RDE	M	0	0	0
	7	N	RDE	M	0	0	0
	7	N	RDE	M	0	0	0
	7	D	RDE	B	0	0	0
	7	D	RDE	B	0	0	0
	7	N	RDE	B	0.408052	0	0
	7	N	RDE	B	0.075914	0	0
	7	D	RMCH	S	0	0.723613	0
	7	D	RMCH	S	0	0	0
	7	D	RMCH	S	0.003773	0	0
	7	D	RMCH	S	0	0	0
	7	D	RMCH	S	0	0	0
	7	D	RMCH	S	0	0	0
	7	N	RMCH	S	0.018062	0	0.009031
	7	N	RMCH	S	0	0	0
	7	N	RMCH	S	0	0	0
	7	N	RMCH	S	0	0	0
	7	N	RMCH	S	0	0	0
	7	D	RMCH	M	0.002686	0	0
	7	D	RMCH	M	0	0	0
	7	N	RMCH	M	0	0	0
	7	N	RMCH	M	0	0	0
	7	N	RMCH	M	0	0	0

*S = Surface
M= Middle
B = Bottom

services group

Table B-4 (Page 5 of 9)

Date	Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
May 7	N	RMCH	M	0	0	0
7	D	RMCH	B	0	0.003065	0
7	D	RMCH	B	0	0	0
7	D	RMCH	B	0.004101	0	0
7	D	RMCH	B	0	0	0
7	D	RMCH	B	0.007194	0	0
7	N	RMCH	B	0	0	0
7	N	RMCH	B	0	0	0
7	N	RMCH	B	0	0	0
21	D	RDW	S	0	0	0
21	N	RDW	S	0	0	0
21	D	RDW	M	0.023487	0	0
21	D	RDW	M	0	0.008489	0
21	D	RDW	M	0	0.015253	0
21	D	RDW	M	0.047241	0	0
21	N	RDW	M	0.007382	0	0
21	N	RDW	M	0.013391	0.013391	0
21	N	RDW	M	0.003382	0	0
21	N	RDW	M	0	0	0
21	D	RDW	B	0.004101	0.004100	0
21	D	RDW	B	0	0.026882	0
21	D	RDW	B	0.003841	0	0
21	N	RDW	B	0.011075	0	0
21	D	RDE	S	0	0	0
21	N	RDE	S	0	0	0
21	N	RDE	S	0	0	0
21	D	RDE	M	0	0	0
21	D	RDE	M	0.047546	0.036574	0
21	D	RDE	M	0.014032	0	0
21	D	RDE	M	0	0	0
21	N	RDE	M	0	0	0
21	N	RDE	M	0.016093	0.008046	0
21	N	RDE	M	0	0.074347	0
21	N	RDE	M	0	0	0
21	D	RDE	B	0	0	0
21	D	RDE	B	0.007546	0	0
21	N	RDE	B	0	0	0
21	N	RDE	B	0.009380	0.004690	0
21	D	RMCH	S	0	0	0
21	D	RMCH	S	0	0	0
21	D	RMCH	S	0.109522	0	0
21	D	RMCH	S	0.132275	0.113379	0
21	D	RMCH	S	0	0	0
21	D	RMCH	S	0.043277	0.006658	0
21	N	RMCH	S	0	0	0
21	N	RMCH	S	0.004796	0	0
21	N	RMCH	S	0	0	0
21	N	RMCH	S	0	0	0
21	N	RMCH	S	0	0	0
21	N	RMCH	S	0	0	0
21	D	RMCH	M	0.007717	0	0
21	D	RMCH	M	0	0	0
21	D	RMCH	M	0	0	0
21	D	RMCH	M	0	0	0
21	N	RMCH	M	0	0	0
21	N	RMCH	M	0.008323	0.016645	0
21	N	RMCH	M	0.004121	0.003858	0
21	D	RMCH	B	0	0	0
21	D	RMCH	B	0	0	0
21	D	RMCH	B	0.003841	0	0
21	D	RMCH	B	0.005915	0	0
21	N	RMCH	B	0.003824	0	0

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 6 of 9)

Date	Day/Night	Station	Depth	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
May 21	N	RMCH	B	0	0	0
21	N	RMCH	B	0.003329	0	0
21	N	RMCH	B	0	0	0
Jun 4	D	RDW	S	0.013692	0.004564	0
4	D	RDW	S	0.116780	0	0
4	N	RDW	S	0.035797	0	0
4	D	RDW	M	0.011376	0.102382	0
4	D	RDW	M	0	0.014148	0
4	D	RDW	M	0.011452	0.080166	0
4	N	RDW	M	0	0.019294	0
4	N	RDW	M	0	0	0
4	N	RDW	M	0	0.098115	0
4	N	RDW	M	0.022680	0	0
4	D	RDW	B	0	0.004398	0
4	N	RDW	B	0.038200	0.008489	0
4	D	RDE	S	0	0.077587	0
4	D	RDE	S	0	0.053056	0
4	D	RDE	S	0.003021	0.042294	0
4	N	RDE	S	0.273838	0.095843	0
4	D	RDE	M	0	0.652587	0
4	D	RDE	M	0.029385	0.078360	0
4	D	RDE	M	0.119766	0.131743	0
4	D	RDE	M	0.119716	0.126972	0
4	N	RDE	M	0	0.165920	0
4	N	RDE	M	0.130052	0.070028	0
4	N	RDE	M	0.166877	0.021767	0
4	N	RDE	M	0.025724	0.115759	0
4	D	RDE	B	0.014721	0.053976	0
4	D	RDE	B	0.139875	0.038586	0
4	D	RDE	B	0.036512	0.054768	0
4	N	RDE	B	0.087609	0	0
4	D	RMCH	S	0.049935	0.038838	0
4	D	RMCH	S	0.010187	0.169779	0
4	D	RMCH	S	0	0.102897	0
4	D	RMCH	S	0	0.013841	0
4	D	RMCH	S	0	0.155788	0
4	D	RMCH	S	0	0	0
4	N	RMCH	S	0.076855	0.066375	0
4	N	RMCH	S	0.279450	0.152907	0
4	N	RMCH	S	0.114524	0.160334	0
4	N	RMCH	S	0.048076	0.060095	0
4	N	RMCH	S	0.147842	0.109689	0
4	D	RMCH	M	0.061149	0.118702	0
4	D	RMCH	M	0.237855	0.028707	0
4	D	RMCH	M	0.325916	0.545719	0
4	D	RMCH	M	0.212224	0.009795	0
4	D	RMCH	M	0.019076	0.120817	0
4	D	RMCH	M	0.099383	0.178061	0
4	N	RMCH	M	0.090694	0.003628	0
4	N	RMCH	M	0.228833	0.199306	0
4	D	RMCH	B	0.124990	0.036456	0
4	D	RMCH	B	0.028109	0.022487	0
4	D	RMCH	B	0.724330	0	0
4	N	RMCH	B	0.126897	0.140024	0
4	N	RMCH	B	0.048265	0.025552	0
18	D	RDW	S	0.013916	0.078859	0
18	D	RDW	S	0.131519	0	0
18	N	RDW	S	0.113186	0.035371	0
18	D	RDW	M	0.034473	0.081873	0
18	D	RDW	M	0	0	0
18	D	RDW	M	0.039860	0	0
18	D	RDW	M	0.085955	0.159631	0

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 7 of 9)

Date		Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Jun	18	N	RDW	M	0.102761	0.049147	0
	18	N	RDW	M	0.026255	0.048133	0
	18	N	RDW	M	0.120521	0.066956	0
	18	D	RDW	B	0.057999	0.010545	0
	18	D	RDW	B	0.002948	0.032423	0
	18	D	RDW	B	0.016430	0.005477	0
	18	N	RDW	B	0.078511	0.181556	0
	18	D	RDE	S	0	0.027384	0
	18	D	RDE	S	0.021012	0.033620	0
	18	D	RDE	S	0.012765	0	0
	18	N	RDE	S	0.078059	0.209785	0
	18	D	RDE	M	0.024846	0.049691	0
	18	D	RDE	M	0.081261	0.023217	0
	18	D	RDE	M	0.014232	0.042695	0
	18	D	RDE	M	0.036909	0.114416	0
	18	N	RDE	M	0.218578	0.045749	0
	18	N	RDE	M	0.076540	0.177433	0
	18	N	RDE	M	0.124657	0.195890	0
	18	D	RDE	B	0.285470	0.338056	0
	18	D	RDE	B	0	0.032034	0
	18	D	RDE	B	0.030049	0.030049	0
	18	N	RDE	B	0.200027	0.053666	0
	18	D	RMCH	S	0.101245	0.109033	0
	18	D	RMCH	S	0.072349	0.192931	0
	18	D	RMCH	S	0.010166	0.050832	0
	18	D	RMCH	S	0.003493	0.006987	0
	18	D	RMCH	S	0.012598	0	0
	18	D	RMCH	S	0.012765	0.031913	0
	18	D	RMCH	S	0.082386	0.294235	0
	18	N	RMCH	S	0.138192	0.138192	0
	18	N	RMCH	S	0.029968	0.014984	0
	18	N	RMCH	S	0.123658	0.026737	0
	18	N	RMCH	S	0.133398	0.028297	0
	18	N	RMCH	S	0	0	0
	18	D	RMCH	M	0.014687	0.046998	0
	18	D	RMCH	M	0.264710	0.264710	0
	18	D	RMCH	M	0.084890	0.301358	0
	18	D	RMCH	M	0.126701	0.067574	0
	18	D	RMCH	M	0.039301	0.117902	0
	18	N	RMCH	M	0.066103	0.066103	0
	18	N	RMCH	M	0.054185	0.096329	0
	18	N	RMCH	M	0.100407	0.191686	0
	18	D	RMCH	B	0.162062	0.254669	0
	18	D	RMCH	B	0.159168	0.098533	0
	18	D	RMCH	B	0.095382	0.309990	0
	18	D	RMCH	B	0.065896	0.251956	0
	18	D	RMCH	B	0.027545	0.125206	0
	18	N	RMCH	B	0.361966	0	0
Jul	2	D	RDW	S	0	0	0
	2	D	RDW	S	0	0	0
	2	N	RDW	S	0	0	0
	2	D	RDW	M	0	0	0
	2	D	RDW	M	0	0	0
	2	D	RDW	M	0.004141	0.012423	0
	2	D	RDW	M	0	0	0
	2	N	RDW	M	0.048132	0	0
	2	N	RDW	M	0	0.019148	0
	2	N	RDW	M	0.005053	0.015159	0
	2	D	RDW	B	0	0.014721	0
	2	D	RDW	B	0	0	0
	2	N	RDW	B	0	0	0.005895

*S = Surface
M= Middle
B = Bottom

Table B-4 (Page 8 of 9)

Date	Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Jul 2	N	RDW	B	0.010106	0.010106	0
2	D	RDE	S	0	0	0
2	D	RDE	S	0	0.025987	0
2	N	RDE	S	0	0	0
2	N	RDE	S	0.007579	0	0
2	D	RDE	M	0.004266	0	0
2	D	RDE	M	0	0	0
2	D	RDE	M	0	0	0
2	D	RDE	M	0	0.014853	0
2	N	RDE	M	0	0.013771	0
2	N	RD	M	0.004376	0.004376	0
2	N	RDE	M	0.010563	0	0
2	N	RDE	M	0.024968	0.003121	0
2	D	RDE	B	0	0	0
2	D	RDE	B	0.032277	0.041961	0
2	N	RDE	B	0.007016	0.007016	0
2	N	RDE	B	0.006530	0	0
2	D	RMCH	S	0	0	0
2	D	RMCH	S	0	0	0
2	D	RMCH	S	0	0	0
2	D	RMCH	S	0	0.010310	0
2	D	RMCH	S	0	0	0
2	D	RMCH	S	0	0	0
2	N	RMCH	S	0	0.026888	0
2	N	RMCH	S	0.032903	0.026322	0.039484
2	N	RMCH	S	0	0.020505	0
2	N	RMCH	S	0.017685	0.017685	0
2	N	RMCH	S	0	0.006196	0
2	D	RMCH	M	0	0.008797	0
2	D	RMCH	M	0.083842	0.115282	0
2	D	RMCH	M	0	0	0
2	D	RMCH	M	0	0.003967	0
2	N	RMCH	M	0	0	0
2	N	RMCH	M	0	0	0
2	N	RMCH	M	0	0.004515	0
2	N	EMCH	M	0.015227	0.007613	0
2	D	RMCH	B	0	0.011319	0
2	D	RMCH	B	0	0	0
2	D	RMCH	B	0	0	0
2	D	RMCH	B	0.033956	0.049047	0
2	D	RMCH	B	0	0.004004	0
2	N	RMCH	B	0.003240	0.019440	0
2	N	RMCH	B	0.012303	0.018454	0
2	N	RMCH	B	0	0.003508	0
16	D	RDW	S	0	0	0
16	D	RDW	S	0	0	0
16	D	RDW	S	0	0	0
16	N	RDW	S	0	0	0
16	N	RDW	S	0	0.005978	0
16	N	RDW	S	0.004664	0	0
16	D	RDW	M	0	0	0
16	D	RDW	M	0	0	0
16	D	RDW	M	0	0	0
16	D	RDW	M	0	0	0
16	D	RDW	M	0	0	0
16	N	RDW	M	0	0	0
16	N	RDW	M	0	0	0
16	N	RDW	M	0	0	0
16	N	RDW	M	0.012835	0	0
16	D	RDW	B	0	0.008008	0
16	D	RDW	B	0	0	0
16	N	RDW	B	0	0	0
16	N	RDW	B	0	0.003824	0

*S = Surface
M= Middle
B = Bottom

services group

Table B-4 (Page 9 of 9)

Date		Day/Night	Station	Depth*	Striped Bass All Life Stages Combined	White Perch All Life Stages Combined	Atlantic Tomcod All Life Stages Combined
Jul	16	N	RDW	B	0	0	0
	16	D	RDE	S	0	0	0
	16	D	RDE	S	0	0	0
	16	D	RDE	S	0	0	0
	16	D	RDE	S	0	0	0
	16	N	RDE	S	0.009702	0	0
	16	N	RDE	S	0	0	0
	16	D	RDE	M	0	0	0
	16	D	RDE	M	0	0	0
	16	D	RDE	M	0	0	0
	16	D	RDE	M	0	0.006196	0
	16	D	RDE	M	0	0	0
	16	N	RDE	M	0	0.051148	0
	16	N	RDE	M	0	0	0
	16	N	RDE	M	0.002897	0	0
	16	N	RDE	M	0	0	0
	16	N	RDE	M	0.022193	0	0
	16	D	RDE	B	0.003121	0	0
	16	D	RDE	B	0	0	0
	16	D	RDE	B	0	0	0
	16	D	RDE	B	0	0	0
	16	N	RDE	B	0	0	0
	16	N	RDE	B	0.008532	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	D	RMCH	S	0	0	0
	16	N	RMCH	S	0	0	0
	16	N	RMCH	S	0	0	0
	16	N	RMCH	S	0	0	0
	16	N	RMCH	S	0.004879	0	0
	16	N	RMCH	S	0.004639	0	0
	16	N	RMCH	S	0	0	0
	16	D	RMCH	M	0	0	0
	16	D	RMCH	M	0	0.003329	0
	16	D	RMCH	M	0	0	0
	16	N	RMCH	M	0	0	0
	16	N	RMCH	M	0	0	0
	16	N	RMCH	M	0	0.004101	0
	16	D	RMCH	B	0	0	0
	16	D	RMCH	B	0.015576	0	0
	16	D	RMCH	B	0.008162	0	0
	16	D	RMCH	B	0	0.033421	0
	16	D	RMCH	B	0.013916	0.004639	0
	16	N	RMCH	B	0	0	0
	16	N	RMCH	B	0	0	0
	16	N	RMCH	B	0.004540	0.009079	0
	16	N	RMCH	B	0.010611	0	0

*S = Surface
M= Middle
B = Bottom

C. SCREENING OF FLOWMETER DATA

Flowmeter data are used indirectly in the analysis of ichthyoplankton data. Before the catches by the different tows can be compared, they must be converted to densities (number caught per volume of water strained). The volume of water strained per tow is determined by the effective mouth area of the sampling gear and the duration and velocity of the tow, the latter two being combined as a reading on a flowmeter. Sample densities are combined to compute river strata or region densities used in calculating direct entrainment impact. Occasionally, some flowmeter values differ so greatly from typical data (i.e., they are "outliers") that they are not comparable. These values may represent correct data but are not included in the analysis without scrutiny. Values adjudged to be "outliers" were eliminated or replaced with estimated values, depending on the results of the screening procedure. Figure B-5 summarizes the flowmeter screening procedure, with a more detailed description following the illustration as footnotes.

The percentage of flowmeter readings that were estimated or eliminated was small. For the 1974 NYU data at Indian Point, no replicates were available, so 47 out of approximately 1000 flowmeter values were estimated. Of the 47 outlier values, 20 flowmeter readings either were not taken when the sample was collected or were negative and consequently would have been eliminated by any procedure. For the 1973 NYU data at Indian Point, replicates were available and 62 out of approximately 1100 samples were eliminated. Replicates were generally available for the 1974 LMS data at Bowline, Lovett, and Roseton-Danskammer. For Bowline, 13 out of approximately 750 values were eliminated and four values were estimated; 12 out of approximately 400 values were eliminated for Lovett, and 55 out of approximately 350 values were eliminated for Roseton-Danskammer. The exact number of estimated flowmeter readings used in any analysis depends on the sampling dates included for each species and life stage.

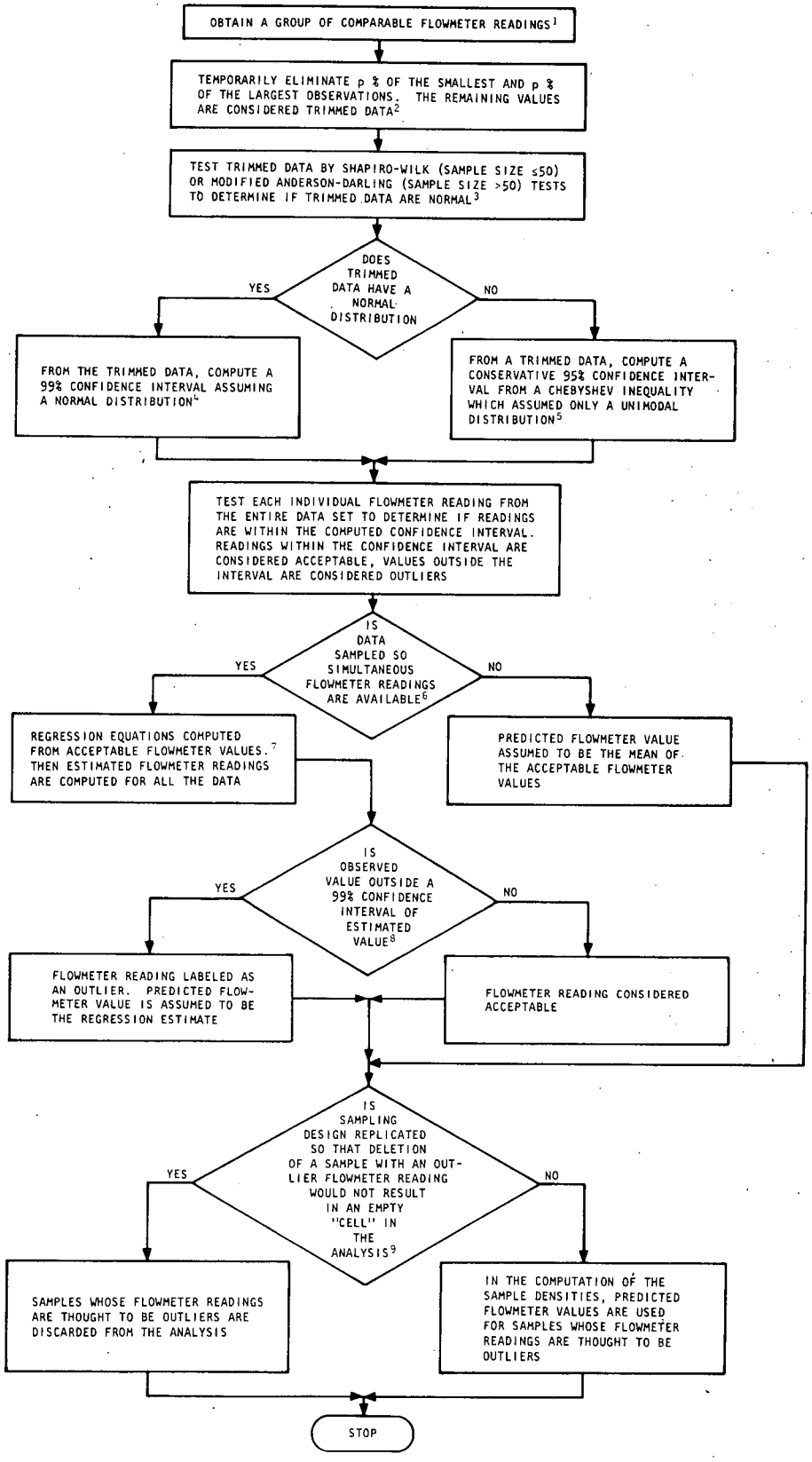

Figure B-5. Summary of Procedures for Screening Set of Flowmeter Readings for Possible Outlier Values and for Estimating Incorrect Values. (See footnotes for further details)

FOOTNOTES TO FIGURE B-5

[1] Grouping all tows of the same duration may be desirable. However, in a transect analysis where stations are sampled at different depths, it is possible to perform the usual analysis of variance (assuming that samples across time give replicated flowmeter readings) and determine which stations and depths have the same mean readings and can be grouped.

[2] Generally, eliminating a certain percentage (p) of observations from the extremes of a set of flowmeter data is necessary because procedures that test for normality are sensitive to very large or small deviations. Failure to trim data results in many incorrect rejections of a normal distribution. Also, since outliers inflate the standard error around the mean, resulting in a wider confidence interval, failure to trim data results in the inclusion of flowmeter values that are obviously incomparable with other values. The recommended value of p is 2%. With small sample sizes, a 5% trim is occasionally used. Trimming data to obtain good estimates of the mean is discussed by Andrews et al, 1972.

[3] The Shapiro-Wilk test performed the best of many statistical distribution tests (Stephens, 1974). Computational procedures were not available for sample sizes greater than 50, so the modified Anderson-Darling procedure was used and performed about as well as the Shapiro-Wilk procedure (Stephens, 1974). The traditional Kolmogorov-Smirnov test performed poorly compared with the other procedures.

[4] Letting $\bar{Y}$, S, and n respectively denote the trimmed sample mean, the trimmed sample standard deviation, and the number of values in the trimmed sample, then $\bar{Y} \pm t\ (n - 1,\ 0.005)\ S$, where $t\ (m, \alpha)$ is the α percentile from a t distribution with m degrees of freedom.

[5] For any continuous unimodal distribution, the following inequality holds (Cramer, 1946):

$$\Pr\ (|Y - \mu| \geq k\sigma) \leq \frac{4}{9}\ \frac{1 + W^2}{(k - |W|)^2}$$

where μ is the mean, σ the standard deviation, and $W = (\mu - \xi)/\sigma$, where ξ is the mode of Y. Thus,

$$\bar{Y} \pm \left\{2.98\ \sqrt{1 + W^2} + |W|\right\} S$$

where $W = (\bar{Y} - Y_o)/S$ is a conservative 95% confidence interval. (Y_o is an estimate of the mode of the distribution, and S is the sample standard deviation.)

[6] Simultaneous flowmeter readings refer to the case in which several samples may be collected during a single tow; e.g., surface, mid-depth, and bottom samples may be collected in one tow. The flowmeter samples from the three depths are then expected to be highly correlated, and it is reasonable to determine whether the simultaneous readings are compatible. If they are not, an outlier value may be present.

[7] Assume that the surface, mid-depth, and bottom flowmeter readings are taken simultaneously and that the surface value is in question; then, the data are considered (Y, X_1, X_2), where Y is the surface, X_1 the mid-depth, and X_2 the bottom readings. The computed equation uses possible independent variables X_1, X_1^2, X_1^3, X_2, X_2^2, X_2^3, X_1X_2 and dependent variable Y, considering only the acceptable flowmeter readings. A stepwise regression procedure is then used. The independent variables consider squares, cubes, and cross-products of X_1 and X_2 to possibly increase the fit of the resulting equation.

[8] The usual confidence interval procedure for a predicted regression value is appropriate (Draper and Smith, 1966).

[9] There may be several night samples, for example, so that deletion of one sample (having an outlier flowmeter value) does not greatly affect the results.

APPENDIX C

MARK/RECAPTURE PROGRAM

APPENDIX C
MARK/RECAPTURE PROGRAM

This appendix provides supplemental information concerning the contribution of the mark/recapture program to the investigation of vulnerability of fishes to impingement (as described in Section V of Volume I). The following paragraphs describe the methods that were used for collecting and analyzing the data.

A. DATA COLLECTION

Catches of striped bass, white perch, and Atlantic tomcod from the following sources were examined for marked individuals:

- All TI fisheries gear
- All TI ichthyoplankton gear
- TI impingement samples
- LMS impingement samples
- LMS river samples

Sources of additional recaptures of tagged fish were sport fishermen (rewarded $1 for each tag returned) and agencies such as the New York State Department of Conservation.

B. DATA ANALYSIS

1. Fin Anomalies

If the movements of marked fish are to be interpreted as representative of movements of the entire population, one must assume that marked fish behave like unmarked fish. There is an additional assumption that is particularly important when utilizing fin clips as marks: fish recaptured with missing fins are in fact fish marked by the investigator.

The incidence of natural fin loss on white perch in the Hudson River was previously reported (TI, 1975a). A comparison of recapture rates of individual fin-clip combinations released during 1973 indicated that certain fin clips, particularly the single and double pelvic clips of white perch, were

returned at disproportionately high rates; thus, they were intentionally eliminated from the 1974 program so the natural occurrence of fin anomalies could be evaluated. Either one or both pelvic fins were missing in a small fraction of the 1974 year class of white perch (Table C-1), but such a fraction would have a substantial effect on population estimates, considering the low recapture rate of marked fish from the Hudson River. Apparently, the young white perch were lacking pelvic fins early in life and the rate of occurrence of fin loss increased slightly through time. It is suspected that the fin anomalies are normal phenomena for white perch in the Hudson River and possibly elsewhere and that they have occurred in the past and will occur in the future.

Table C-1

Occurrence of Pelvic Fin Anomalies in 1974 Year Class of White Perch from Hudson River, September-December 1974 and January-June 1975

Fin	Time Period	No. Examined	No. of Anomalies	Rate
Right pelvic	Sep-Dec	121,179	88	0.000726
	Jan-Jun	188,798	184	0.000974
Left pelvic	Sep-Dec	121,179	97	0.000800
	Jan-Jun	188,798	234	0.001239
Both pelvics	Sep-Dec	121,179	30	0.000248
	Jan-Jun	188,798	42	0.000222

Juvenile striped bass were also examined for pelvic fin anomalies (Table C-2). Although single pelvic fin anomalies were two to five times rarer than for white perch, their occurrence could cause a considerable underestimate of the population and, in turn, an overestimate of impingement impact. It is suspected that, as on white perch, double pelvic fin anomalies on striped bass are much rarer than single pelvic fin anomalies. The rate of occurrence could not be measured since this fin combination was utilized for marking hatchery-reared striped bass; however, no juvenile striped bass missing both pelvic fins were encountered during 1974 prior to the late October release of hatchery fish marked with this clip.

Table C-2

Occurrence of Pelvic Fin Anomalies in 1974 Year Class of Striped Bass from Hudson River, September-December 1974 and January-June 1975

Fin	Time Period	No. Examined	No. of Anomalies	Rate
Right pelvic	Sep-Dec	16,678	3	0.000180
	Jan-Jun	4,684	0	0.0
Left pelvic	Sep-Dec	16,678	3	0.000180
	Jan-Jun	4,684	3	0.000640

Anomalies of single pectoral fins also occur, particularly on white perch, but they appear to be associated with physical injury. Because of the topological locations of the pectoral fins, they may be more susceptible to breakage during recovery of impinged fish from the fixed and traveling screens at power plants. Single pectoral fin clips were scheduled for the 1974 mark/recapture program. Because of the scarcity of juvenile white perch during fall 1974 in the mark area designated for single pectoral clips, only two white perch with a right pectoral clip were released; none with a left pectoral fin clip was released. This allowed an evaluation of anomalies of these fins. During the fall 1974 program, the "recapture" rate of pectoral clips was three to nine times greater in Indian Point impingement collections (Table C-3) than in TI fishery and ichthyoplankton collections. There were no yearling white perch missing the right pectoral fin in January-June collections by fishery or ichthyoplankton gear. However the "recapture" rate of left pectoral clips appeared to be the same for all sources (Table C-3).

To avoid future problems caused by fin anomalies, the mark/recapture programs (including 1975) now primarily employ double fin clips; single clips of the pelvic and pectoral fins and double clips of the pelvic fins have been eliminated. Fin anomalies will continue to be monitored to further document their occurrence. Movement analysis for the 1974 year class of striped bass and white perch (Section V.F, Volume I) does not include these fin-clip types in the release and recapture data.

Table C-3

Occurrence of Pectoral Fin Anomalies in 1974 Year Class of White Perch from Hudson River, September-December 1974 and January-June 1975

Fin	Time Period	Data Source*	No. Examined	No. of Anomalies	Rate
Right pectoral	Sep-Dec	Imp	100,017	35	0.000350
		Field	23,024	3	0.000130
	Jan-Jun	Imp	180,516	46	0.000255
		Field	8,282	0	0.0
Left pectoral	Sep-Dec	Imp	100,017	38	0.000380
		Field	23,024	1	0.000043
	Jan-Jun	Imp	180,516	45	0.000249
		Field	8,282	3	0.000362

*Imp = impingement collections at Indian Point.
Field = all TI fisheries and ichthyoplankton collections.

2. Mark Recognition

Fin anomalies afforded the opportunity to compare collection sources to investigate whether marked fish from these sources are recognized and reported equally. Since TI personnel checked all juvenile white perch in Indian Point impingement collections and field collections for fin clips, fin anomalies also were reported from these two data sources. If one assumes that anomalies occurred prior to collection (fish with obviously damaged fins were not counted) and that fish with fin anomalies are randomly distributed in the population, the capture rate of these anomalies should be the same in all collections.

White perch pelvic fin anomalies were reported at the same rate from both impingement and field collections (all ichthyoplankton and fisheries catches combined). The only exception was the left pelvic fin anomaly (Table C-4) during September-December, for which impingement exhibited a significantly higher rate ($p = 0.003$; $Z = 3.02$). The equal or higher return of anomalies through impingement was unexpected, because it had been assumed that marks could be more easily missed in the larger impingement collections.

Mark recognition of externally tagged fish — such as with the Carlin, internal anchor, and Floy fingerling tags — was simple provided that the tag was not shed.

Table C-4

Comparison of Capture Rates of Juvenile White Perch with Pelvic Fin Anomalies in Indian Point Impingement and TI Field Collections, September-December 1974 and January-June 1975

		Impingement			Field				
Time Period	Fin	No. Examined	No. of Anomalies	Rate	No. Examined	No. of Anomalies	Rate	Normal Score*	p
Sep-Dec	Right pelvic	99,431	75	0.000754	21,748	13	0.000598	0.776	0.435
	Left pelvic	99,431	91	0.000915	21,748	6	0.000276	3.02	0.003
	Double pelvic	99,431	28	0.000282	21,748	2	0.000092	1.61	0.107
Jan-Jun	Right pelvic	180,516	177	0.000980	8,282	7	0.000845	0.385	0.704
	Left pelvic	180,516	223	0.001235	8,282	11	0.001328	0.341	0.734
	Double pelvic	180,516	42	0.000233	8,282	0	0.0	1.40	0.162

*Comparison of observed frequencies with normal approximation (Brownlee, 1965); 2-tailed test.