Nearshore fish communities of the mid-Hudson River estuary, 1985-2001

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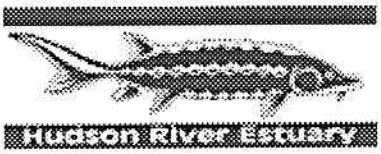
Participating Agencies:



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Abstract

Two hundred-eight seine hauls were completed in the 2001 young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 16,130 YOY striped bass were captured, resulting in a geometric mean catch per unit effort (CPUE) of 26.37 fish/haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 22.98 fish/haul. This catch rate was the third highest since 1980. YOY striped bass grew at an estimated 0.62 mm/day between mid-July and mid-September. Catch rates of other anadromous fish, American shad, alewife and blueback herring, were below average. However, catch rates of both YOY and older white perch were among the highest observed in over a decade. Composition of the catch was similar to previous years with Atlantic silversides, striped bass and white perch the most abundant species in the catch. Air and water temperatures through the summer and autumn were near average, while salinities were slightly above average.

Introduction

The striped bass (*Morone saxatilis*) is an anadromous species spawning in large river systems. Its native range extends from the St. Lawrence River, Nova Scotia, Canada to the St. Johns River, Florida (Scott and Scott 1988). Spawning occurs in the region above the salt wedge in the spring when river temperatures rise above 12 °C. Semibuoyant eggs and larvae drift down into the low salinity regions of the estuary. During the first summer of life, Hudson River striped bass reside in nearshore regions throughout the estuary and in coastal marine embayments (Boreman et al. 1988; McKown and Gelardi 2000). In the autumn, striped bass migrate to higher salinities in the lower estuary, the only known concentration area for overwintering YOY fish (Dovel 1992). Striped bass were introduced to the to Pacific coast in the late 1800's where several sustaining populations have become established. Striped bass have also been introduced as a sport fish into reservoirs throughout the southern United States (Smith 1985).

Historically, this species has supported important commercial and recreational fisheries along the east coast of North America (Merriman 1941; Boreman and Austin 1985). Catches in the coastwide commercial fishery reached a peak in 1973 at 5.98 metric tonnes (mt), declining rapidly thereafter, falling below 2 mt/year by the late 1970's (NMFS 1999). The Atlantic States Marine Fisheries Commission implemented a management strategy aimed at protecting the last successful yearclass (1982) in the Chesapeake Bay from harvest. Moratoria on commercial harvest of striped bass were issued for Maryland and Delaware waters. Following a strong recruitment event into the Chesapeake Bay

population in 1989, a limited fishery was re-established. Continued improvement in recruitment to the Chesapeake Bay population has allowed increases in harvest levels in recent years (Richards and Rago 1999). The commercial fishery in the Hudson River was closed and recreational harvest restricted in 1976 due to concerns over high levels of poly-chlorinated biphenols (PCBs) in fish flesh. The commercial fishery within the Hudson River remains closed (NMFS 1999). Since the late 1970's improvements in water quality in the Delaware River have allowed the increased production of striped bass in that system (Weisberg et al. 1996). Recent estimates indicate that Chesapeake Bay populations contribute 75% of the coastwide stock, with the Hudson River and Delaware Bay contributing 15 and 10% respectively (K. McKown, NYS DEC, personal communication).

Indices of the abundance of early life stages of striped bass to monitor annual recruitment patterns have been developed for several east coast populations, including the main tributaries to the Chesapeake Bay and the Hudson River (Goodyear 1985; McKown 1991; Heimbuch et al. 1992). The use of these indices as predictors of future population size is based on the assumption that recruitment level is determined prior to the life-stage surveyed (Bradford 1992). Goodyear (1985) validated the Maryland Department of Natural Resources YOY index based on its relationship to fishery harvests when those year-classes entered the fishery. Based on this result, a number of studies have been conducted to determine the factors regulating survival during the larval phase in the Chesapeake Bay population (Uphoff 1989; Secor and Houde 1995; McGovern and Olney 1996).

The index of YOY abundance in the Hudson River population was correlated with

the abundance of age-1 fish, indicating its utility in predicting recruitment (McKown 1991). However, a more recent analysis, incorporating a longer time series, found that the abundance of age-1 fish was more closely related to the severity of winter than to the abundance of YOY fish in the previous summer (Hurst and Conover 1998). Mortality of overwintering YOY striped bass in the Hudson River and Miramichi populations has been shown to be size-selective against smaller fish (Bradford and Chaput 1997; Hurst and Conover 1998). These analyses suggest that the first winter of life may play an important role in the recruitment dynamics of these northern populations.

Here we present the results of the 2001 young-of-the-year survey for the Hudson River population of striped bass and compare the results to previous years. We also include catch data on all species captured during the survey, and detailed catch data, including size-distributions, for a number of resource species.

Methods

The survey is conducted between mid-July and early November in the Haverstraw-Tappan Zee region of the Hudson River (river miles 23-42; Figure 1). Within this stretch of river, 25 sites are sampled bi-weekly, 9 times. The 25 sites sampled during each bi-weekly survey are chosen from 36 potential fixed stations based on prevailing conditions (wind direction, speed and tide stage). Prior to 1985, stations were sampled 6 times between late August and early November. A subset of the 2001 data covering the same period is compared with data from 1980 to 1984.

Fish collections are made with a 200 foot x 10 foot (12 foot depth in the bag) beach seine with 1/4 inch square mesh in the wings and 3/16 inch square mesh in the bag (61 m x 3 m with 6 mm wing mesh and 5 mm bag mesh) set by boat. The performance of the sampling gear and representation of the catch was rated for each set of the gear. Following each collection, measurements of air temperature, water temperature, dissolved oxygen and salinity were made in the immediate vicinity of the gear set using a YSI Model 85 probe. Environmental parameters such as wind direction and speed, tidal stage, wave height, cloud cover, precipitation were recorded. The types of any aquatic vegetation in the vicinity of the sampling site were recorded and the spatial coverage of vegetation at the site was estimated. While some sites were generally sampled at a particular tidal stage or time of day due to accessibility, others were sampled at all tidal stages and times of day.

All fish captured were sorted by species (where feasible young-of-the-year fish were counted separately from older fish) counted and returned to the water. In the case of

extremely high catch rates, a volumetric subsampling procedure was used to estimate catches of individual species. Young-of-the-year and older blue crab were the only invertebrates counted. The occurrence of shrimp and gelatinous zooplankton captured in each set of the net was noted, with a visual estimate of abundance. Up to 50 YOY striped bass and all older striped bass were measured from each haul. In addition, up to 30 individuals each of bluefish, crevalle jack, weakfish, summer flounder, winter flounder, Atlantic tomcod, American eel, American shad, alewife, blueback herring and Atlantic menhaden were measured (mm TL) from each collection. Atlantic silversides and YOY white perch were measured periodically throughout sampling. All measurements were made in the field and fish were returned to the water at the site of capture.

Scales were removed from above the lateral line between the first and second dorsal fins from all striped bass larger than 110 mm TL. These scales were pressed into acetate at 180 °C and 2000 lbs./foot2. The age of all fish larger than 110 mm was determined by visual analysis of the acetate impression of multiple scales under magnification.

All captured striped bass larger than 170 mm TL were tagged as part of the United States Fish and Wildlife Service coastwide tagging program. Tags were individually numbered floy type tags with 6.5 x 19.25 mm oval anchor and 91 mm streamer. Several scales were removed from the fish half way between the pectoral and anal fin. An incision was made through the body wall and the tag anchor was inserted into the body cavity.

Results and Discussion

During the 2001 sampling season, 9 sampling trips were conducted between July 16 and November 8. During this sampling, a total of 48,232 fish and 482 blue crab were captured in 208 gear sets. This total included 16,130 young-of-the-year striped bass and 176 older striped bass.

Environmental conditions

Weekly average water temperatures generally decreased through the sampling season, from a high of 27.9 °C on August 15-16 to a low of 12.3 °C on November 8 (Table 1). Air temperatures also generally decreased during the sampling season, ranging from 28.4 to 9.9 °C. Average river salinity generally increased through the sampling season from a low of 4.2 ppt on July 16-17 to a high of 9.6 ppt observed on October 9-10. Dissolved oxygen levels were relatively high throughout the sampling period ranging from 4.6-7.2 mg/L and did not show any distinct seasonal pattern.

The environmental conditions during the 2001 sampling season are compared to historical patterns in Table 2 and Figure 2. River temperatures followed the general pattern of decreasing through the sampling season and were similar to historical averages. Salinity patterns were unusual during the 2000 sampling season (Figure 2). Salinity was higher than the historical average through much of the sampling season. This was especially true in during weeks 6-9 when salinities were consistently above 8 ppt, a time when salinity is generally decreasing. This pattern of high salinity late in the summer is similar to, but much less dramatic than the pattern observed in 2000 (Hurst and Conover

2001).

Species composition

Forty-one species of fish were captured during the 2001 sampling season in the Hudson River. Fish catches varied from a peak of 12,521 in week 4 (August 28-29) to a minimum of 439 in week 9 (November 8). The most abundant species captured during the 2001 sampling season were the Atlantic silverside (19,557 fish), striped bass (16,306) white perch (8,748), bluefish (862) and killifish (503; Table 3). Although not abundant in samples, tautog, naked goby and pumpkinseed sunfish were more commonly captured than in recent years. Catch composition during the 2001 sampling season is compared to historical catch composition in Tables 4 and 5. Detailed catch information is presented below for selected species.

Striped bass *Morone saxatilis*

During the 2001 sampling season 16,130 YOY striped bass were captured in 208 hauls, a mean CPUE of 77.6 and geometric mean CPUE of 36.37 (Table 6). Using only the final 6 weeks of catch data for comparison with earlier data, 12,345 YOY striped bass were captured in 135 hauls, resulting in a mean CPUE of 91.4 and a geometric mean CPUE of 22.98 (Figure 3). The 6-week geometric mean CPUE, used as the index of recruitment to this population was well above the historical average of 13.9, being the third highest since 1980. The 9-week geometric mean CPUE was also above the historical annual average of 20.7 (average since 1985).

Acknowledgments

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Table 1. Biweekly environmental conditions, Hudson River 2001.

		AIR TEMPERATURE				H20 TEMPERATURE			
Dates	WEEK	AVG	STD	MIN	MAX	AVG	STD	MIN	MAX
July 16-17	1					26.0	1.7	23.7	30.4
Aug. 1-2	2	26.9	3.0	23.0	32.0	27.2	1.4	24.9	29.5
Aug. 15-16	3	28.4	3.4	23.0	34.0	27.9	0.8	26.4	29.1
Aug. 28-29	4	25.2	3.0	21.0	30.0	27.0	1.2	24.7	30.0
Sept. 10-11	5	24.5	4.0	16.0	29.0	25.1	1.3	22.9	29.0
Oct. 2-3	6	18.0	4.4	10.0	26.0	20.5	1.9	18.4	28.3
Oct. 9-10	7	12.2	4.3	5.0	21.0	14.4	3.2	9.0	20.0
Oct. 22	8	20.0	2.7	16.0	24.0	17.6	1.3	15.7	20.0
Nov. 8	9	9.9	3.1	4.0	14.0	12.3	0.7	10.6	13.4

		SALINITY				DISSOLVED OXYGEN			
Dates	WEEK	AVG	STD	MIN	MAX	AVG	STD	MIN	MAX
July 16-17	1	4.2	0.8	2.8	5.9	5.8	1.3	4.4	10.4
Aug. 1-2	2	7.1	1.5	5.6	10.3	5.2	0.7	3.8	6.9
Aug. 15-16	3	7.5	0.9	6.3	9.2	4.8	0.6	3.8	6.0
Aug. 28-29	4	8.5	1.7	6.2	12.2	5.4	1.4	4.2	8.6
Sept. 10-11	5	9.0	1.8	6.5	12.7	6.1	1.4	4.6	9.9
Oct. 2-3	6	8.3	1.6	3.2	10.9	4.6	0.3	3.9	5.2
Oct. 9-10	7	9.6	1.5	7.0	12.0				
Oct. 22	8	8.0	2.1	4.6	12.1	5.3	0.4	4.7	6.3
Nov. 8	9	9.1	1.2	7.2	10.5	7.2	0.8	6.4	8.4

Table 2. Comparison of physical data, 1985-2000.

Mean Air Temperature

WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1.0	28.7	27.9	30.4	28.7	23.6	27.4	27.4	22.2	28.4	24.6	27.9	24.1	24.0	30.1	28.2	28.2	
2.0	29.3	26.8	31.4	28.0	33.0	25.3	22.8	23.1	27.6	27.7	30.3	27.0	28.2	27.6	26.1	31.7	26.9
3.0		24.2	28.2	31.1	24.5	22.5	22.6	23.2	24.0	23.6	26.8	26.2	29.3	26.4	27.0	26.5	28.4
4.0	25.0	24.1	22.1	20.5	24.7	23.4	20.6	19.0	25.4	20.0	24.4	27.1	24.7	27.1	25.1	25.1	25.2
5.0	21.4	23.0	24.8	21.7	19.7	27.4	16.4	21.0	20.8	20.2	20.2	16.2	20.8	23.4	22.2	20.3	24.5
6.0	17.6	23.0	22.1	24.1	22.0	20.8	16.9	10.8	13.2	16.5	16.8	17.9	18.5	25.8	20.2	20.6	18.0
7.0	18.9	20.0	15.7	15.2	18.3	19.9	9.2	10.2	13.9	12.6	15.6	18.9	23.2	14.7	15.5	13.7	12.2
8.0	13.3	16.7	13.4	13.5	14.1	15.8	4.6	9.9	13.0	12.9	11.8	13.1	14.3	14.4	12.9	13.0	20.0
9.0	13.1	4.4	11.0	11.5	13.8	12.5	8.2	5.6	7.1	16.2	3.6	9.1	14.4	9.2	12.2	6.1	9.9

Mean Water Temperature

WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1.0	26.5	25.2	28.0	26.5	24.3	27.2	28.0	25.5	26.9	27.9	26.9	24.0	24.5	25.1	28.5	24.6	26.0
2.0	27.0	26.1	28.4	26.9	27.2	26.3	26.4	24.5	26.7	29.7	29.4	26.4	25.8	26.5	27.6	27.0	27.2
3.0	27.9	25.4	28.4	27.4	25.5	25.8	25.0	24.0	26.1	28.0	28.0	25.8	25.8	26.5	27.5	23.8	27.9
4.0	25.6	23.9	23.6	22.2	25.2	25.4	24.7	23.4	26.0	25.3	25.4	26.3	24.0	26.8	24.8	23.3	27.0
5.0	22.3	22.6	24.0	21.5	23.6	24.5	21.1	23.0	25.3	21.1	23.0	20.8	23.0	20.4	24.7	19.6	25.1
6.0	19.8	21.5	21.1	22.0	22.1	19.6	19.5	16.5	18.5	21.7	20.3	20.6	20.9	25.1	20.4	19.5	20.5
7.0	19.0	19.1	14.4	17.7	17.4	18.8	15.1	13.9	17.2	18.1	19.8	15.9	20.1	19.0	15.5	16.1	14.4
8.0	15.6	15.9	13.2	14.0	16.4	18.2	12.3	12.6	14.9	16.5	17.2	11.5	13.2	16.0	13.8	12.1	17.6
9.0	13.7	11.5	9.6	11.0	13.4	13.7	10.0	10.0	11.3	16.2	12.7	8.1	13.8	11.6	11.8	8.8	12.3

Mean Salinity

WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1.0	5.8	4.5	6.0	7.4	4.4	11.9	7.5	3.0	6.2	6.0	5.6	0.6	6.1	4.0	5.1	1.6	4.2
2.0	4.5	4.8	6.8	6.5	7.4	5.8	8.4	3.9	9.3	3.9	5.5	2.2	6.7	3.3	8.6	1.2	7.1
3.0	3.7	2.6	7.2	6.1	5.9	4.9	7.7	0.8	6.1	7.0	6.2	4.2	5.3	6.8	8.1	2.0	7.5
4.0	3.9	2.5	6.9	6.3	8.6	3.4	7.8	4.7	6.9	3.9	8.8	3.7	7.2	4.8	9.6	1.7	8.5
5.0	7.1		4.5	5.8	7.1	6.7	8.1	5.8	5.1	6.2	9.1	4.7	6.9	7.9	8.6	3.5	9.0
6.0	6.0	4.3	3.8	5.0	7.4	5.1	6.4	6.3	4.4	5.5	9.6	2.6	6.2	6.3	1.5	2.9	8.3
7.0	2.6	5.0	3.5	5.0	3.2	6.0	6.8	5.1	4.5	4.0	8.0	5.3	6.6	5.6	3.3	6.7	9.6
8.0	3.8	4.6	5.8	5.4	5.4	2.4	7.0	3.1	4.7	5.4	2.3	1.5	8.2	4.8	3.9	7.1	8.0
9.0	5.7	5.4	2.2	6.4	3.7	3.7	6.4	4.4		6.8	0.6	0.3	6.1	5.6	1.9	6.5	9.1

Table 3. Species composition of catch in the Hudson River, 2001.

Species	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	WEEKS 4-9 TOTAL	WEEKS 1-9 TOTAL
Diadromous											
Alewife	9	9	41	0	6	0	0	1	0	7	66
American eel	11	6	2	3	0	4	4	4	1	16	35
American shad	43	60	0	16	0	4	143	68	61	292	395
Atlantic tomcod	130	5	0	0	0	1	0	0	0	1	136
Blueback herring	7	38	2	0	0	0	0	146	117	263	310
Striped bass (YOY)	1641	1111	1033	6567	2323	1455	1558	414	28	12345	16130
Striped bass (older)	41	22	36	14	31	9	11	12	0	77	176
Striped bass (hatchery)	0	0	0	0	0	0	0	0	0	0	0
Marine											
Atlantic menhaden (YOY)	69	7	0	0	17	0	3	0	1	21	97
Atlantic needlefish	6	7	0	0	0	0	0	0	0	0	13
Bay anchovy	52	3	2	3	9	26	35	237	0	310	367
Bluefish (YOY)	105	65	42	57	518	61	9	5	0	650	862
Crevalle jack	1	6	1	0	0	0	1	2	0	3	11
Inshore lizardfish	0	1	4	1	2	1	0	0	0	4	9
Naked Goby	0	1	1	6	10	4	13	0	0	33	35
Northern kingfish	0	0	1	12	3	0	0	0	0	15	16
Northern pipefish	0	0	0	0	0	0	2	0	0	2	2
Northern pipefish	10	30	22	33	41	44	135	44	21	318	380
Northern puffer	0	1	0	9	2	0	0	0	0	11	12
Northern searobin	0	2	0	0	0	0	0	0	0	0	2
Northern stargazer	0	0	1	0	0	0	0	0	0	0	1
Silver perch	0	0	1	0	0	0	0	0	0	0	1
Silverside spp.	344	2678	4152	3949	4160	1088	1633	1383	170	12383	19557
Spot	1	1	0	0	0	0	0	0	0	0	2
Striped mullet	0	0	0	0	0	0	1	0	0	1	1
Summer flounder	1	0	0	0	0	0	0	0	0	0	1
Tautog	0	0	1	20	6	3	8	0	0	37	38
Weakfish	7	0	0	0	0	0	0	0	0	0	7
White mullet	3	0	0	0	0	0	0	0	0	0	3
Winter flounder	11	13	2	11	3	4	7	6	17	48	74
Estuarine											
Hogchoker	30	5	14	3	2	0	1	0	0	6	55
Killifish spp.	36	2	12	6	25	406	6	1	9	453	503
White perch (YOY)	58	349	636	1491	511	176	1313	30	5	3526	4569
White perch (older)	993	2450	362	268	70	0	25	11	0	374	4179

Table 3 (cont.)

Species	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	WEEKS 4-9 TOTAL	WEEKS 1-9 TOTAL
Freshwater											
Bluegill	2	0	0	0	1	2	0	0	0	3	5
Brown bullead catfish	5	0	0	0	0	0	0	0	0	0	5
Carp	7	2	0	0	0	0	0	1	0	1	10
Golden shiner	6	0	1	12	0	0	0	0	0	12	19
Largemouth bass	2	0	0	0	0	0	0	0	0	0	2
Pumpkinseed	0	5	5	31	3	1	0	0	0	35	45
Redbreast sunfish	0	0	0	1	0	0	0	0	0	1	1
Spottail shiner	5	9	0	0	0	0	1	0	0	1	15
Tesselated darter	0	20	23	8	4	8	4	6	9	39	82
White sucker	1	0	0	0	0	0	0	0	0	0	1
Yellow perch	0	0	0	0	0	0	1	1	0	2	2
TOTAL FISH CATCH	3637	6908	6397	12521	7747	3297	4914	2372	439	31290	48232
Invertebrate											
Bluecrab (YOY)	27	1	8	133	68	48	59	27	9	344	380
Bluecrab (older)	10	38	16	11	4	9	12	2	0	38	102

Table 5. Catch per unit effort of all species in Hudson River Survey, 1985-2001 weeks 1-9.

Diadromous	age	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Alewife	999	1.3	1.4	0.8	2.5	0.5	0.7	0.1	0.0	0.0	0.4	0.4	0.2	3.3	0.1	2.7	0.3	0.3
American eel	999	0.6	0.3	0.5	0.8	0.5	0.6	0.5	0.4	0.3	0.3	0.3	0.2	0.4	0.2	0.3	0.2	0.2
American shad	999	10.1	22.2	6.8	11.5	11.9	11.2	1.0	12.0	2.1	10.3	2.2	8.3	11.0	0.4	3.9	0.8	1.9
Atlantic tomcod	999	1.9	1.6	1.2	2.6	1.6	1.3	0.1	1.4	0.0	0.1	0.0	0.5	0.2	2.3	0.0	0.6	0.7
Blueback herring	999	28.4	6.2	32.2	27.8	38.0	139.8	35.1	104.6	10.7	6.2	104.2	29.7	19.1	0.1	59.9	1.4	1.5
Striped bass	0	4.6	8.7	82.9	70.4	59.5	58.0	15.2	26.6	55.9	43.5	33.8	21.3	59.0	33.7	58.0	22.9	77.5
Striped bass	1	0.8	0.2	0.1	0.7	0.7	0.4	0.8	0.8	0.6	0.3	1.2	0.5	0.5	0.7	0.7	0.8	0.8
Striped bass	999	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Striped bass (hatchery)	0	0.9	1.2	0.6	0.3	0.4	0.0	0.0	0.2	0.3	0.1	0.9	0.0	0.0	0.0	0.0	0.0	0.0
Striped bass (hatchery)	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	0.0	0.0	0.0	0.0
Striped bass (hatchery)	2	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	0.0	0.0	0.0	0.0
Estuarine																		
Fourspine stickleback	999	1.2	0.9	2.0	1.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0
Hogchoker	999	5.8	3.7	2.5	4.0	7.0	2.4	1.6	3.1	1.3	2.4	2.4	0.5	0.7	0.3	0.4	0.1	0.3
Killifish spp.	999	14.1	6.8	15.3	18.8	3.8	5.0	2.3	0.7	0.8	1.6	3.7	0.3	5.0	2.4	1.8	0.6	2.4
Rainbow smelt	999	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	0.0	0.0	0.0	0.0
Striped anchovy	999	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Threespine stickleback	999	0.0	0.0	0.2	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	0.0
White perch	0	8.8	37.0	11.5	75.8	33.8	7.5	2.3	5.5	3.7	6.1	1.9	3.0	1.5	4.1	22.3	6.2	22.0
White perch	1	20.5	28.9	15.7	20.2	26.6	10.7	9.8	6.4	7.7	7.8	11.1	7.0	5.6	9.7	6.9	16.1	20.1
Freshwater																		
Black crappie	999	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	0.0	0.0	0.0	0.0
Bluegill	999	0.0	0.4	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.2	0.0	0.0	0.1	0.0	0.0	0.3	0.0
Brown bullead catfish	999	0.0	0.0	0.0	0.0	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
Carp	999	0.2	0.2	0.2	0.2	0.3	0.3	0.0	0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.0
Chain pickerel	999	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	0.0	0.0	0.0	0.0
Fallfish	999	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	0.0	0.0	0.0	0.0
Gizzard shad	999	0.0	0.0	0.2	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.1	0.3	0.0
Golden shiner	999	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	0.0	0.0	0.0	0.1
Goldfish	999	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	0.0	0.0	0.0	0.0
Largemouth bass	999	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	0.0	0.0	0.0	0.0
Pumpkinseed	999	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.2	0.0	0.3	0.0	0.0	0.1	0.2
Redbreast sunfish	999	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0
Smallmouth bass	999	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	0.0	0.0	0.0	0.0
Spottail shiner	999	0.0	0.0	0.0	0.3	1.3	0.4	0.1	0.0	0.0	0.2	0.1	0.2	1.9	0.6	0.1	0.2	0.1
Tesselated darter	999	0.0	0.0	0.3	0.1	0.2	0.2	0.1	0.1	0.2	0.2	0.0	0.2	3.5	0.8	0.0	0.2	0.4
White catfish	999	0.1	2.3	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
White sucker	999	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	0.0	0.0	0.0	0.0
Yellow perch	999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0

Table 5. Catch per unit effort of all species in Hudson River Survey, 1985-2001 weeks 1-9 (cont.).

Marine	age	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Atlantic menhaden	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	0.0	0.0	0.0	47.5	0.5
Atlantic menhaden	999	20.9	23.5	4.8	0.9	0.8	0.0	2.8	5.7	0.1	3.5	0.3	1.9	0.3	14.7	93.0	0.0	0.0
Atlantic needlefish	999	1.0	0.2	0.8	0.4	0.7	0.7	0.5	0.2	0.1	0.3	0.2	0.1	1.5	0.1	0.1	0.1	0.1
Bay anchovy	999	52.3	5.3	60.4	37.3	244.4	11.0	34.0	40.4	7.6	183.7	88.6	33.5	47.2	34.5	9.2	13.7	1.8
Bluefish	0	6.2	3.2	3.5	5.0	2.0	3.1	1.3	1.3	2.6	1.1	1.5	0.8	1.7	1.1	13.8	0.9	4.1
Bluefish	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	0.0	0.0	0.0	0.0
Bonefish	999	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	0.0	0.0	0.0	0.0
Butterfish	999	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	0.0	0.0	0.0	0.0
Butterflyfish	999	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	0.0	0.0	0.0	0.0
Crevalle jack	999	0.3	0.1	0.0	0.2	0.3	0.2	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.1	0.1	0.2	0.1
Grey snapper	999	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	0.0	0.0	0.0	0.0
Inshore lizardfish	999	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0
Lookdown	999	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	0.0	0.0	0.0	0.0
Naked Goby	999	0.0	0.1	0.2	0.1	0.1	0.1	0.2	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.4	0.0	0.2
Northern kingfish	999	0.2	0.0	0.0	0.2	0.1	0.1	0.3	0.2	0.2	0.1	0.1	0.0	0.4	0.4	0.1	0.0	0.1
Northern pipefish	99	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	0.0	0.0	0.0	0.0
Northern pipefish	999	2.4	0.9	1.7	3.7	1.5	2.1	2.6	0.8	0.7	0.4	2.1	0.2	3.6	1.3	1.2	0.2	1.8
Northern puffer	999	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
Northern searobin	999	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	0.0	0.0	0.0	0.0
Northern stargazer	999	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
Northern tonguefish	999	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	0.0	0.0	0.0	0.0
Permit	999	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	0.0	0.0	0.0	0.0
Pigfish	999	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	0.0	0.0	0.0	0.0
Scup	999	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	0.0	0.0	0.0	0.0
Silver perch	999	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.3	0.3	11.3	0.1	0.1	0.0	0.0	0.0	0.0
Silverside spp.	999	21.1	69.9	20.0	120.2	7.9	55.5	147.2	50.3	90.7	191.9	165.7	65.9	126.0	120.0	90.3	67.1	94.0
Smallmouth flounder	999	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	0.0	0.0	0.0	0.0
Spanish mackeral	999	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	0.0	0.0	0.0	0.0
Spot	999	0.5	3.1	0.3	0.8	0.0	1.7	0.0	0.0	1.0	0.3	0.0	0.4	0.0	0.1	0.2	0.1	0.0
Spotfin mojarra	999	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	0.0	0.0	0.0	0.0
Spotted hake	999	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	0.0	0.0	0.0	0.0
Striped mullet	999	0.0	0.3	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	0.0	0.0
Striped searobin	999	0.1	0.1	0.0	0.0	0.0	0.1	0.4	0.0	0.1	0.0	0.0	0.0	0.7	0.5	0.1	0.0	0.0
Summer flounder	999	0.2	0.4	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.0	0.0	0.1	0.1	0.0
Tautog	999	0.0	0.1	0.0	0.5	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.2
Weakfish	999	0.3	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.0	0.0
White mullet	999	0.0	0.0	0.0	0.1	0.1	0.1	0.2	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
Windowpane flounder	999	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	0.0	0.0	0.0	0.0
Winter flounder	999	2.5	0.9	0.2	0.8	0.3	0.8	0.7	1.3	1.1	0.4	0.6	0.2	1.8	0.6	0.2	0.4	0.4
Invertebrate																		
Bluecrab	999	1.7	0.3	1.4	4.7	3.0	2.7	6.2	5.5	1.2	1.2	2.1	0.6	13.6	27.5	16.1	1.2	2.3

Table 6. Hudson River YOY striped bass index of abundace, 1980-2001.

6 WEEK SURVEY

year	hauls	catch	CPUE	std dev	range	zeros	geo. Mean index	conf. limits
1980	150	3597	23.98	57.63	0-547	34	6.08	4.51-8.1
1981	131	2823	21.55	42.53	0-346	9	8.86	6.95-11.24
1982	143	4363	30.51	47.98	0-285	8	14.17	11.37-17.62
1983	148	7112	48.05	110.71	0-1178	8	16.27	12.58-20.96
1984	146	5418	37.11	89.84	0-906	6	15.00	12.03-18.65
1985	146	574	3.93	5.76	0-31	51	1.91	1.47-2.43
1986	147	904	6.15	8.97	0-55	34	2.92	2.29-3.67
1987	150	9100	60.67	157.77	0-1333	13	15.90	11.98-21.01
1988	145	7584	52.30	45.10	0-205	2	33.46	27.89-40.1
1989	150	6291	41.94	57.84	0-537	4	21.35	17.23-26.41
1990	142	5393	37.98	43.51	0-240	2	19.08	15.31-23.72
1991	140	959	6.85	7.95	0-41	30	3.60	2.84-4.52
1992	146	2526	17.30	15.51	0-83	5	11.44	9.63-13.56
1993	150	3975	26.50	34.31	0-230	7	12.59	10.08-15.67
1994	146	4159	28.49	31.73	0-246	4	17.64	14.74-21.09
1995	148	4035	27.26	45.03	0-389	2	16.15	13.67-19.06
1996	134	1964	14.66	18.40	0-143	6	8.93	7.41-10.72
1997	139	6989	50.28	63.53	0-328	6	22.30	17.41-28.48
1998	127	2909	22.91	24.09	0-135	6	13.39	10.85-16.47
1999	104	5514	53.02	79.63	1-524	0	26.64	21.12-33.54
2000	136	1064	7.82	16.57	0-120	32	3.16	2.43-4.05
2001	135	12345	91.44	220.55	0-1711	11	22.98	16.95-31.04

9 WEEK SURVEY

year	hauls	catch	CPUE	std dev	range	zeros	geo. Mean index	conf. limits
1985	216	993	4.60	6.57	0-32	71	2.19	1.77-2.67
1986	222	1942	8.75	11.30	0-57	38	4.29	3.55-5.15
1987	225	18649	82.88	184.57	0-1432	13	25.12	20.09-31.34
1988	220	15488	70.40	85.38	0-869	2	42.16	36.33-48.89
1989	225	13398	59.55	86.16	0-642	4	28.42	23.79-33.92
1990	217	12592	58.03	64.66	0-473	2	29.80	24.9-35.63
1991	215	3275	15.23	22.57	0-160	32	6.56	5.35-7.99
1992	221	5875	26.58	25.50	0-142	5	16.94	14.67-19.53
1993	225	12588	55.95	74.17	0-402	7	23.32	19.13-28.39
1994	221	9624	43.55	50.38	0-367	4	25.71	22.1-29.89
1995	222	7465	33.63	44.57	0-389	2	20.15	17.53-23.15
1996	204	4346	21.30	25.83	0-188	6	12.76	10.94-14.85
1997	194	11444	58.99	71.05	0-412	7	27.92	22.8-34.15
1998	198	6673	33.70	34.47	0-183	6	19.18	16.16-22.73
1999	173	10031	57.98	69.34	1-524	0	33.82	28.64-39.91
2000	211	4830	22.89	51.89	0-416	32	7.17	5.73-8.92
2001	208	16130	77.55	180.11	0-1711	12	26.37	21.23-32.71

Table 7. YOY striped bass catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	39	77		160	21	9	8	7		45.86
21E	23	81	39	65	23	12	1	10	13	2	27.33
17E	24		78		94	15	4	9	11	0	30.14
16E	25	79	34	27	54		24	9	9	5	30.13
15E	27			30			119		13	0	40.50
12E	29	5	16	1	0	27	1	29	7	0	9.56
13E	29		22	15	15	40	50	33	21	0	24.50
14E	29	88		0	0	95	47	35	21	6	36.50
19E	33	9	115	70	59	108	115	33	11	0	57.78
10E	34										
11E	34	164	82	94	106	399	110				159.17
9E	34	43	41	18	121	51		76	2		50.29
7E1	35										
7EC	35										
7EE	35	68	23	21	1190	61		154	29	0	193.25
7EW	35	78	23	11	881	593	386	29	76	2	231.00
8E	35	166	13	144	1711	234	115	3	11	0	266.33
6E	36										
3E	39	58	35	119	288		120	158	49		118.14
4E	39	28	68	42	1022		28	333	3		217.71
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	44		11	45	209	28	1		0	48.29
16WN	27	40		20	77	150	60	178	33	0	69.75
16WS	27		16								16.00
13W	29										
14W	29	139	134	71	228	39	20	3	1	2	70.78
12W	30	103	50	12	48	9	61	41	3	6	37.00
11W	32	74	12	42	48	86	15	55	16	5	39.22
10W	35	6	18	16	28	142	40	24	1		34.38
9W	35	34	24	1	2	32	18	41	8		20.00
8W	36	1	14	29			26	118	17		34.17
7W	37	96	30	89	27		2	108	12		52.00
3W	39										
4W	39	95	88	62	290		10	26	37		86.86
4WN	39										
5W	39	103	59	23	50		46	44	3		46.86
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		1641	1111	1033	6567	2323	1455	1558	414	28	
C/E		68.38	46.29	41.32	262.68	122.26	58.20	62.32	16.56	1.75	

Table 9. CPUE of YOY striped bass by station, weeks 4-9, 1980-2001.

SITE	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992
EAST													
18E	13.7	30.8	24.2	36.7	23.1	0.2	2.8	27.8	68.3	36.0	15.0	2.6	17.3
21E						0.0	1.0	65.5		60.5	50.8	0.8	15.7
17E	9.3	17.6	35.7	91.7	36.8	0.2	7.0	46.5	96.3	73.3	57.6	5.8	13.0
16E	6.3	4.0	20.0	21.4	11.0		3.0		48.7	15.2	22.3	1.3	12.8
15E	24.0			302.6	52.8		8.0	29.0	38.0	10.0	10.0	6.3	
12E	2.7	3.5	8.4	24.3	10.4	2.8	1.8	17.5	29.0	20.0	21.8	1.0	17.6
13E	6.3	4.0			11.0	4.5	4.5	46.3	17.0	12.5	31.0	8.5	12.0
14E	35.5	10.6	15.0	42.2	11.8	0.2	4.3	30.2	51.0	42.3	28.0	2.0	15.7
19E					20.7	2.2	2.8	121.8	21.3	34.2	22.8	4.8	11.5
10E													
11E		22.5	9.6	26.4	7.3	2.8	2.5	163.8	62.4	59.0	22.4	22.2	33.8
9E	3.1	6.7	8.8	5.2	6.2	0.3	0.8	33.4	33.8	22.3	50.6	7.6	17.8
7E1							10.0			1.0	17.5	1.0	
7EC			94.0			0.0							
7EE	0.0	22.0	88.3	48.2	146.0	0.7	6.6	274.7	41.5	50.3	28.8	8.3	6.8
7EW	19.7	10.0	66.0	35.7	215.3	2.5	5.0	406.6	37.5	106.3	54.6	8.0	23.2
8E	38.5	11.0	103.3	45.0	48.2	1.5	5.0	0.0	16.3		15.3	3.5	
6E	12.7	5.5	41.3	147.0	34.3	0.5	2.5	39.7	18.5	34.8			
3E		12.0			109.5	3.6	2.0	37.2	36.3	28.0	17.7	4.0	9.7
4E	29.0	14.0	27.8	22.2	41.8	6.3	6.3	32.7	36.6	31.5	30.7	5.5	16.2
5E	28.5	29.8	20.7	14.5	53.0	5.0		9.0	26.0	21.0	17.0	9.2	13.5
1E				5.0									
20E													
WEST													
15WN	39.0	9.4	16.7	36.3	42.7	0.0		21.0	28.5	53.4	47.6	3.0	16.2
15WS	20.6	10.2	8.4	81.3	26.0	2.6	5.5	9.8	67.7	22.0	77.5	15.6	17.4
16WN	68.3	32.0	11.3	17.5	15.2	3.7	12.3	27.8	64.8	82.7	93.0		16.0
16WS	60.3	29.6	8.5	49.7	11.0	2.8	15.2	3.7	50.7	32.8	44.0		6.0
13W	10.2	14.7	17.3					25.3	21.0		3.5	2.3	6.0
14W	45.3	55.5	17.8	33.3	4.2	5.7		71.5	58.2	36.7	39.6	9.5	8.3
12W	8.3	9.7	12.0	10.8	7.0	2.7	1.4	35.8	40.7	36.8	65.2	9.5	10.2
11W	137.0	9.4	12.2	8.0	5.0	2.7	2.2	12.5	45.6	13.2	6.6	7.5	13.2
10W	21.6	22.2		15.4	7.5	3.3	2.0	20.7	37.2	24.2	29.5	9.0	16.4
9W	27.7	61.3	13.3	16.3	12.0	5.2	5.0	24.4	86.8	30.3	36.0	4.7	18.6
8W	19.0	26.8	15.0	29.8	18.3	10.5	15.5	23.5	99.2	47.8	29.8	8.2	42.8
7W	4.3	47.0	51.0	46.7	34.3	11.3	10.0	13.2	97.2	61.5	74.6	8.5	42.8
3W	12.2	10.3	23.4	8.0			2.0						
4W	15.3	26.2	41.8	37.5	38.0	18.0	15.8	52.0	95.0	69.0	73.0	12.5	20.0
4WN													
5W	7.8	20.6	38.4	44.0	39.8	8.3	15.0	27.3	39.4	33.0	40.6	9.5	19.0
20W													
Annual C/f	23.98	21.55	30.51	48.05	37.11	3.93	6.15	60.67	52.3	41.94	37.98	6.85	17.3

Table 9. (cont.)

SITE	1993	1994	1995	1996	1997	1998	1999	2000	2001
EAST									
18E	39.2	23.4	31.2	12.0	31.7	7.8	23.7	3.3	41.0
21E	18.5	30.0	30.8	16.3	10.5	17.3	36.3	2.0	10.2
17E	31.7	60.3	14.0	12.3	19.2	35.5	18.3	1.0	22.2
16E	30.8	16.8	13.0	7.2	12.2	15.2	31.7	1.7	20.2
15E	12.5							5.0	44.0
12E	13.7	8.2	14.0	10.5	9.5	12.5	60.3	3.5	10.7
13E	12.2	9.4	18.0	8.0	20.8	11.0	33.7	0.6	26.5
14E	26.8	20.0	16.0	12.0	29.3	27.4	42.0	2.0	34.0
19E	14.8	30.5	25.4	11.3	54.8	24.2	21.7	5.8	54.3
10E					26.0				
11E	19.8	44.8	146.0	31.4	115.0	50.7	61.6	14.0	205.0
9E	21.8	16.6	14.3	20.3	52.8	44.2	76.6	18.0	62.5
7E1			52.0						
7EC									
7EE	90.0	16.8	16.0	12.5	61.7	10.0	30.2	8.2	286.8
7EW	57.3	25.6	47.0	10.5	36.7	33.2	27.0	17.3	327.8
8E	70.7	70.8	11.3	34.3	130.0	56.6	48.4	36.2	345.7
6E									
3E	9.6	55.6	20.2	8.0	87.0	22.3	76.0	9.4	153.8
4E	9.3	16.0	14.8	13.3	94.2	14.8	93.0	4.6	346.5
5E		11.0	18.0	19.0		24.0			
1E									
20E									
WEST									
15WN	11.0		26.7		16.0				
15WS	56.4	55.0	16.3	6.5	78.3	22.5	176.8	3.2	56.6
16WN	21.7	11.0	21.0	4.2	100.5		99.3	2.0	83.0
16WS						12.8			
13W									
14W	30.7	16.8	18.2	8.8	25.5	23.3	48.5	6.7	48.8
12W	8.0	37.2	12.0	8.3	14.8	13.8	134.8	3.8	28.0
11W	17.2	32.3	23.3	10.5		37.0	101.8	27.2	37.5
10W	24.3	17.0	13.3	11.7	47.7	17.2	13.0	5.4	47.0
9W	15.3	13.8	21.4	6.8	45.6	5.5	15.2	3.2	20.2
8W	35.8	38.5	24.4	17.7	36.7	13.5	16.2	5.5	53.7
7W	13.8	36.8	31.5	36.5	60.2	13.7	23.0	13.0	37.3
3W									
4W	15.5	17.8	40.8	24.3	71.8	19.0	103.0	8.0	90.8
4WN			17.0						
5W	14.2	14.8	35.2	17.5	69.8	39.0	72.0	4.3	35.8
20W									
Annual C/f	26.5	28.49	27.26	14.66	50.28	22.91	53.02	7.82	91.44

Table 10. Size-frequency distribution of YOY striped bass, Hudson River 2001

TL	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	weeks 4-9	weeks 1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-24	13	0	0	0	0	0	0	0	0	0	13
25-29	43	8	0	0	0	0	0	0	0	0	51
30-34	117	49	0	0	0	0	0	0	0	0	166
35-39	127	64	1	0	0	0	0	0	0	0	192
40-44	165	75	3	1	0	0	0	0	0	1	244
45-49	187	95	46	1	0	0	0	0	0	1	329
50-54	147	103	81	15	0	0	0	0	0	15	346
55-59	78	105	104	43	4	0	0	0	0	47	334
60-64	52	99	90	120	16	2	6	5	0	149	390
65-69	16	91	107	140	41	21	21	11	0	234	448
70-74	1	63	76	185	75	36	46	35	0	377	517
75-79	0	42	80	127	103	78	90	37	0	435	557
80-84	1	11	51	106	108	105	116	52	0	487	550
85-89	2	2	37	82	119	122	109	51	3	486	527
90-94	0	2	26	72	89	103	115	52	2	433	461
95-99	0	0	10	42	71	77	56	32	2	280	290
100-104	0	0	3	26	32	61	59	31	8	217	220
105-109	0	0	2	7	28	49	45	29	3	161	163
110-114	0	0	0	8	13	49	41	19	7	137	137
115-119	0	0	0	0	9	38	28	7	1	83	83
120-124	0	0	0	5	6	17	22	5	0	55	55
125-129	0	0	0	0	2	17	12	6	2	39	39
130-134	0	0	0	0	3	7	8	5	0	23	23
135-139	0	0	0	0	1	6	5	5	0	17	17
140-144	0	0	0	0	1	2	5	0	0	8	8
145-149	0	0	0	0	0	1	2	3	0	6	6
150-154	0	0	0	0	0	0	1	1	0	2	2
155-159	0	0	0	0	0	0	0	3	0	3	3
160-164	0	0	0	0	0	2	2	1	0	5	5
165-169	0	0	0	0	0	1	1	0	0	2	2
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	949	809	717	980	721	794	790	390	28	3703	6178
Mean	44.29	54.77	67.13	75.74	85.94	93.95	92.62	92.62	104.57	87.23	74.05
StdDev.	10.00	13.21	12.81	12.65	13.10	15.92	16.49	17.59	10.80	16.67	22.76

Table 11. Biweekly size comparison of YOY striped bass, 1985-2001.

		week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9
2001	Mean	44.29	54.77	67.13	75.74	85.94	93.95	92.62	92.62	104.57
	StdDev.	10.00	13.21	12.81	12.65	13.10	15.92	16.49	17.59	10.80
2000	mean TL	41.7	47.5	53.0	62.4	71.8	73.0	79.3	71.6	70.7
	STD	9.9	10.8	11.8	13.3	14.8	15.4	17.5	8.1	4.9
1999	mean TL	52.5	62.9	75.3	93.4	101.4	95.6	89.4	91.1	88.5
	STD	11.4	10.9	14.9	20.1	18.4	22.4	21.0	24.4	24.1
1998	mean TL	39.3	47.9	60.6	70.5	79.7	81.8	84.9	98.3	91.9
	STD	11.9	12.7	11.8	14.2	11.9	15.0	13.1	15.2	15.2
1997	mean TL	41.5	52.3	73.3	72.8	79.1	83.6	87.7	87.7	87.2
	STD	9.2	11.1	10.0	13.0	13.5	13.8	13.6	12.2	15.1
1996	mean TL	44.4	51.8	58.6	66.8	81.5	86.4	88.1	84.3	83.2
	STD	12.0	12.4	13.5	12.3	17.6	19.5	16.0	17.0	16.5
1995	mean TL	42.0	62.4	69.9	78.8	87.6	94.7	100.2	99.9	90.8
	STD	9.0	11.2	11.4	11.2	13.0	16.2	18.3	20.3	20.0
1994	mean TL	41.3	54.6	62.1	71.2	76.0	84.0	84.1	87.8	88.9
	STD	8.8	10.8	11.8	13.7	14.4	15.6	13.2	14.6	13.4
1993	mean TL	38.1	52.6	62.2	69.0	76.3	83.5	84.6	88.1	88.6
	STD	8.1	11.5	12.4	13.3	13.4	14.8	13.4	16.4	19.2
1992	mean TL	46.9	57.8	65.4	72.5	82.0	85.4	91.0	89.6	89.9
	STD	10.8	12.5	12.3	12.6	12.1	14.5	15.3	15.3	15.6
1991	mean TL	62.4	71.5	82.0	89.9	97.6	101.0	101.9	94.0	97.3
	STD	15.4	14.3	15.0	18.5	18.6	22.9	27.3	27.5	22.8
1990	mean TL	48.9	46.0	57.5	65.0	71.6	76.2	77.5	78.3	74.8
	STD	23.6	15.7	15.0	13.4	13.9	13.7	14.0	14.3	16.0
1989	mean TL	36.1	46.7	57.3	65.1	72.4	81.1	81.2	82.1	85.0
	STD	9.4	9.4	10.8	11.3	11.0	12.2	12.6	12.4	14.2
1988	mean TL	41.9	51.3	59.9	73.8	80.9	84.1	88.1	85.9	86.9
	STD	10.6	15.3	14.7	15.5	16.3	15.8	17.2	18.6	16.4
1987	mean TL	47.8	59.8	67.5	72.5	80.7	85.6	85.2	87.6	85.0
	STD	9.5	9.6	10.6	10.7	10.7	12.0	13.4	13.5	15.3
1986	mean TL	58.0	67.0	76.1	86.5	90.2	97.2	95.6	99.6	98.8
	STD	7.1	10.7	13.1	11.9	11.3	15.9	14.0	22.2	16.3
1985	mean TL	54.3	63.7	80.8	84.1	93.2	102.5	105.8	100.3	105.2
	STD	7.3	11.3	11.0	10.6	14.1	14.9	17.5	12.9	19.2

Table 12. Age-distribution of striped bass captured in Hudson River Sampling, 1985-2001

Age	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994
0	1185	2203	9183	9322	9449	9828	3188	5796	7591	7620
1	84	43	27	151	144	58	154	156	108	57
2	13	3	3	6	12	9	11	7	23	5
3	0	4	0	1	0	2	3	2	6	0
4	0	3	0	1	0	0	1	4	1	3
5	1	0	2	0	1	0	0	0	0	0
6	0	0	0	1	0	1	0	0	0	1
7	0	0	0	0	0	0	0	0	0	0
8	0	0	0	0	0	1	0	0	0	0
>8	0	0	0	0	1	0	0	1	0	0

Age	1995	1996	1997	1998	1999	2000	2001
0	5899	4346	5987	5071	5720	2917	6178
1	245	93	87	129	118	149	168
2	23	5	10	15	4	11	7
3	5	3	2	1	0	1	0
4	2	0	0	1	0	0	1
5	0	0	0	0	1	0	0
6	0	0	0	0	1	0	0
7	0	1	0	0	0	0	0
8	2	2	0	0	1	0	0
>8	1	0	0	0	0	0	0

Table13. Size-frequency distribution of older striped bass, Hudson River 2001

TL	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	weeks 4-9	weeks 1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-39	0	0	0	0	0	0	0	0	0	0	0
40-59	0	0	0	0	0	0	0	0	0	0	0
60-79	0	0	0	0	0	0	0	0	0	0	0
80-99	0	0	0	0	0	0	0	0	0	0	0
100-119	18	0	0	0	0	0	0	0	0	0	18
120-139	12	9	4	0	0	0	0	0	0	0	25
140-159	5	7	23	4	0	1	0	1	0	6	41
160-179	4	1	6	3	6	0	1	1	0	11	22
180-199	1	3	3	5	13	3	2	1	0	24	31
200-219	1	0	0	0	11	0	1	4	0	16	17
220-239	0	1	0	1	1	1	5	2	0	10	11
240-259	0	0	0	0	0	2	1	2	0	5	5
260-279	0	0	0	0	0	0	1	1	0	2	2
280-299	0	0	0	0	0	0	0	0	0	0	0
300-319	0	0	0	0	0	1	0	0	0	1	1
320-339	0	0	0	0	0	1	0	0	0	1	1
340-359	0	0	0	0	0	0	0	0	0	0	0
360-379	0	0	0	0	0	0	0	0	0	0	0
380-399	0	1	0	0	0	0	0	0	0	0	1
400-419	0	0	0	1	0	0	0	0	0	1	1
420-439	0	0	0	0	0	0	0	0	0	0	0
440-459	0	0	0	0	0	0	0	0	0	0	0
460-479	0	0	0	0	0	0	0	0	0	0	0
480-499	0	0	0	0	0	0	0	0	0	0	0
500-519	0	0	0	0	0	0	0	0	0	0	0
520-539	0	0	0	0	0	0	0	0	0	0	0
540-559	0	0	0	0	0	0	0	0	0	0	0
560-579	0	0	0	0	0	0	0	0	0	0	0
580-599	0	0	0	0	0	0	0	0	0	0	0
600-619	0	0	0	0	0	0	0	0	0	0	0
620-639	0	0	0	0	0	0	0	0	0	0	0
640-659	0	0	0	0	0	0	0	0	0	0	0
660-679	0	0	0	0	0	0	0	0	0	0	0
680-699	0	0	0	0	0	0	0	0	0	0	0
>699	0	0	0	0	0	0	0	0	0	0	0
# measured	41	22	36	14	31	9	11	12	0	77	176
Mean	129.85	159.32	152.53	188.14	191.29	229.11	219.55	214.08		202.73	170.06
StdDev.	25.67	56.89	14.04	66.06	16.87	59.65	31.40	33.47		41.97	47.64

Table 14. Older striped bass catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	1	0		0	1	0	2	2		0.86
21E	23	2	0	0	3	2	1	2	1	0	1.22
17E	24		0		0	1	2	4	1	0	1.14
16E	25	0	0	0	0		0	3	0	0	0.38
15E	27			0			0		3	0	0.75
12E	29	3	0	0	0	1	0	0	0	0	0.44
13E	29		0	0	0	0	0	0	0	0	0.00
14E	29	4		2	2	2	0	0	2	0	1.50
19E	33	5	2	0	0	0	1	0	0	0	0.89
10E	34										
11E	34	2	5	2	4	0	1				2.33
9E	34	7	0	16	4	23		0	0		7.14
7E1	35										
7EC	35										
7EE	35	3	3	4	0	0		0	0	0	1.25
7EW	35	1	4	5	0	0	0	0	0	0	1.11
8E	35	3	1	0	0	0	0	0	0	0	0.44
6E	36										
3E	39	0	1	0	0		0	0	0		0.14
4E	39	0	1	1	0		0	0	0		0.29
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	1		0	0	0	0	0		0	0.14
16WN	27	0		2	1	0	0	0	0	0	0.38
16WS	27		4								4.00
13W	29										
14W	29	0	0	0	0	0	1	0	0	0	0.11
12W	30	0	0	0	0	0	0	0	0	0	0.00
11W	32	0	0	0	0	1	0	0	0	0	0.11
10W	35	5	0	0	0	0	0	0	0		0.63
9W	35	2	0	2	0	0	1	0	1		0.75
8W	36	1	0	0			0	0	0		0.17
7W	37	1	0	0	0		0	0	0		0.14
3W	39										
4W	39	0	1	1	0		2	0	1		0.71
4WN	39										
5W	39	0	0	1	0		0	0	1		0.29
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		41	22	36	14	31	9	11	12	0	
C/E		1.71	0.92	1.44	0.56	1.63	0.36	0.44	0.48	0.00	

Table 15. YOY white perch catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	0	3		6	0	0	0	0		1.29
21E	23	0	0	0	0	0	0	0	0	0	0.00
17E	24		0		1	0	0	0	0	0	0.14
16E	25	0	2	10	9		0	0	0	0	2.63
15E	27			3			14		0	0	4.25
12E	29	0	0	0	0	4	0	4	1	0	1.00
13E	29		28	6	11	3	0	13	1	0	7.75
14E	29	1		0	0	1	0	1	0	0	0.38
19E	33	0	0	0	0	3	0	41	3	0	5.22
10E	34										
11E	34	2	9	4	0	0	0				2.50
9E	34	0	0	0	0	0		641	0		91.57
7E1	35										
7EC	35										
7EE	35	0	0	0	52	12		21	1	0	10.75
7EW	35	0	0	0	97	8	56	13	0	0	19.33
8E	35	7	107	452	899	170	43	4	19	3	189.33
6E	36										
3E	39	7	7	3	4		3	24	0		6.86
4E	39	0	25	30	266		5	215	0		77.29
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	0		0	2	6	16	0		0	3.43
16WN	27	0		2	1	5	0	12	0	0	2.50
16WS	27		2								2.00
13W	29										
14W	29	0	23	29	52	40	0	2	0	0	16.22
12W	30	20	133	72	62	9	6	75	5	2	42.67
11W	32	5	0	0	1	0	0	0	0	0	0.67
10W	35	4	5	3	10	250	30	8	0		38.75
9W	35	0	0	0	0	0	0	0	0		0.00
8W	36	0	0	0			1	71	0		12.00
7W	37	12	4	22	3		1	135	0		25.29
3W	39										
4W	39	0	1	0	12		0	1	0		2.00
4WN	39										
5W	39	0	0	0	3		1	32	0		5.14
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		58	349	636	1491	511	176	1313	30	5	
C/E		2.42	14.54	25.44	59.64	26.89	7.04	52.52	1.20	0.31	

Table 16. Older white perch catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	1	0		0	2	0	2	3		1.14
21E	23	0	0	0	0	0	0	1	0	0	0.11
17E	24		2		0	0	0	0	0	0	0.29
16E	25	8	0	107	0		0	0	0	0	14.38
15E	27			27			0		7	0	8.50
12E	29	0	0	0	0	0	0	0	0	0	0.00
13E	29		35	1	221	0	0	0	0	0	32.13
14E	29	0		0	0	0	0	0	0	0	0.00
19E	33	6	0	0	0	0	0	0	1	0	0.78
10E	34										
11E	34	57	30	18	0	0	0				17.50
9E	34	1	0	11	0	0		0	0		1.71
7E1	35										
7EC	35										
7EE	35	610	0	0	0	0		0	0	0	76.25
7EW	35	0	0	0	0	0	0	0	0	0	0.00
8E	35	46	2160	26	15	1	0	0	0	0	249.78
6E	36										
3E	39	11	73	0	0		0	0	0		12.00
4E	39	79	47	167	0		0	0	0		41.86
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	14		0	0	0	0	0		0	2.00
16WN	27	41		0	0	0	0	0	0	0	5.13
16WS	27		0								0.00
13W	29										
14W	29	7	0	0	0	9	0	0	0	0	1.78
12W	30	13	1	1	1	1	0	11	0	0	3.11
11W	32	14	14	2	31	0	0	0	0	0	6.78
10W	35	14	0	0	0	57	0	0	0		8.88
9W	35	2	2	0	0	0	0	0	0		0.50
8W	36	2	1	0			0	10	0		2.17
7W	37	45	16	2	0		0	0	0		9.00
3W	39										
4W	39	2	14	0	0		0	1	0		2.43
4WN	39										
5W	39	20	55	0	0		0	0	0		10.71
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		993	2450	362	268	70	0	25	11	0	
C/E		41.38	102.08	14.48	10.72	3.68	0.00	1.00	0.44	0.00	

Table 17. Size-frequency distribution of YOY white perch, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	1	0	0	0	0	0	0	0	0	1
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	2	3	0	0	0	0	0	0	0	5
35-39	0	5	4	0	0	0	0	0	0	0	9
40-44	0	10	6	2	0	0	0	0	0	2	18
45-49	0	24	9	4	1	0	0	0	0	5	38
50-54	0	9	14	8	5	0	0	1	0	14	37
55-59	0	4	15	20	14	0	0	1	0	35	54
60-64	0	2	7	22	31	1	1	1	0	56	65
65-69	0	0	1	17	29	2	4	3	0	55	56
70-74	0	0	0	13	22	4	13	1	0	53	53
75-79	0	0	0	6	13	6	24	3	0	52	52
80-84	0	0	0	2	11	10	19	2	0	44	44
85-89	0	0	0	0	6	9	16	0	0	31	31
90-94	0	0	0	0	0	3	3	0	0	6	6
95-99	0	0	0	0	0	1	0	0	0	1	1
100-104	0	0	0	0	0	0	0	0	0	0	0
105-109	0	0	0	0	0	0	0	0	0	0	0
110-114	0	0	0	0	0	0	0	0	0	0	0
115-119	0	0	0	0	0	0	0	0	0	0	0
120-124	0	0	0	0	0	0	0	0	0	0	0
125-129	0	0	0	0	0	0	0	0	0	0	0
130-134	0	0	0	0	0	0	0	0	0	0	0
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	0	0	0	0	0	0	0
145-149	0	0	0	0	0	0	0	0	0	0	0
150-154	0	0	0	0	0	0	0	0	0	0	0
155-159	0	0	0	0	0	0	0	0	0	0	0
160-164	0	0	0	0	0	0	0	0	0	0	0
165-169	0	0	0	0	0	0	0	0	0	0	0
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	0	57	59	94	132	36	80	12	0	354	470
Mean		45.65	51.08	62.05	68.09	80.89	79.23	70.67		70.39	64.97
StdDev.		8.33	8.24	8.30	8.47	7.74	6.45	9.90		10.60	13.90

Table 18. Atlantic tomcod catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	0	0		0	0	0	0	0		0.00
21E	23	0	0	0	0	0	0	0	0	0	0.00
17E	24		0		0	0	0	0	0	0	0.00
16E	25	0	0	0	0		0	0	0	0	0.00
15E	27			0			0		0	0	0.00
12E	29	0	0	0	0	0	0	0	0	0	0.00
13E	29		0	0	0	0	0	0	0	0	0.00
14E	29	0		0	0	0	0	0	0	0	0.00
19E	33	0	0	0	0	0	0	0	0	0	0.00
10E	34										
11E	34	0	0	0	0	0	0				0.00
9E	34	4	0	0	0	0		0	0		0.57
7E1	35										
7EC	35										
7EE	35	0	0	0	0	0		0	0	0	0.00
7EW	35	0	0	0	0	0	0	0	0	0	0.00
8E	35	1	0	0	0	0	0	0	0	0	0.11
6E	36										
3E	39	0	0	0	0		0	0	0		0.00
4E	39	0	0	0	0		0	0	0		0.00
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	0		0	0	0	0	0		0	0.00
16WN	27	0		0	0	0	0	0	0	0	0.00
16WS	27		0								0.00
13W	29										
14W	29	4	0	0	0	0	0	0	0	0	0.44
12W	30	118	4	0	0	0	0	0	0	0	13.56
11W	32	1	0	0	0	0	0	0	0	0	0.11
10W	35	2	1	0	0	0	1	0	0		0.50
9W	35	0	0	0	0	0	0	0	0		0.00
8W	36	0	0	0			0	0	0		0.00
7W	37	0	0	0	0		0	0	0		0.00
3W	39										
4W	39	0	0	0	0		0	0	0		0.00
4WN	39										
5W	39	0	0	0	0		0	0	0		0.00
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		130	5	0	0	0	1	0	0	0	
C/E		5.42	0.21	0.00	0.00	0.00	0.04	0.00	0.00	0.00	

Table 19. Size-frequency distribution of Atlantic tomcod, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0	0	0	0
60-64	2	0	0	0	0	0	0	0	0	0	2
65-69	0	1	0	0	0	0	0	0	0	0	1
70-74	4	1	0	0	0	0	0	0	0	0	5
75-79	4	2	0	0	0	0	0	0	0	0	6
80-84	14	0	0	0	0	0	0	0	0	0	14
85-89	9	1	0	0	0	1	2	0	0	3	13
90-94	12	0	0	0	0	0	0	0	0	0	12
95-99	6	0	0	0	0	0	0	0	0	0	6
100-104	3	0	0	0	0	0	0	0	0	0	3
105-109	2	0	0	0	0	0	0	0	0	0	2
110-114	0	0	0	0	0	0	0	0	0	0	0
115-119	0	0	0	0	0	0	0	0	0	0	0
120-124	0	0	0	0	0	0	0	0	0	0	0
125-129	0	0	0	0	0	0	0	0	0	0	0
130-134	0	0	0	0	0	0	0	0	0	0	0
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	0	0	0	0	0	0	0
145-149	0	0	0	0	0	0	0	0	0	0	0
150-154	0	0	0	0	0	0	0	0	0	0	0
155-159	0	0	0	0	0	0	0	0	0	0	0
160-164	0	0	0	0	0	0	0	0	0	0	0
165-169	0	0	0	0	0	0	0	0	0	0	0
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	56	5	0	0	0	1	2	0	0	3	64
Mean	86.36	76.80				89.00	88.50			88.67	85.72
StdDev.	9.98	7.50					0.71			0.58	9.88

Table 20. American eel catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	2	0		0	0	0	0	0		0.29
21E	23	0	0	0	0	0	0	0	0	0	0.00
17E	24		0		0	0	0	0	0	0	0.00
16E	25	0	1	0	0		0	0	0	0	0.13
15E	27			0			1		0	0	0.25
12E	29	0	0	0	0	0	0	0	0	0	0.00
13E	29		0	0	0	0	0	0	0	1	0.13
14E	29	0		0	0	0	0	0	0	0	0.00
19E	33	0	0	0	0	0	0	0	0	0	0.00
10E	34										
11E	34	0	0	1	0	0	0				0.17
9E	34	0	0	0	0	0		0	0		0.00
7E1	35										
7EC	35										
7EE	35	0	0	0	0	0		0	0	0	0.00
7EW	35	0	0	0	0	0	0	0	0	0	0.00
8E	35	0	0	0	0	0	2	1	0	0	0.33
6E	36										
3E	39	0	0	0	0		0	0	0		0.00
4E	39	0	0	0	0		0	0	0		0.00
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	0		0	0	0	0	0		0	0.00
16WN	27	0		0	0	0	0	0	0	0	0.00
16WS	27		0								0.00
13W	29										
14W	29	1	0	0	0	0	0	0	0	0	0.11
12W	30	5	3	0	1	0	0	0	2	0	1.22
11W	32	1	1	1	2	0	0	0	2	0	0.78
10W	35	1	0	0	0	0	1	0	0		0.25
9W	35	0	0	0	0	0	0	0	0		0.00
8W	36	1	0	0			0	0	0		0.17
7W	37	0	0	0	0		0	3	0		0.43
3W	39										
4W	39	0	0	0	0		0	0	0		0.00
4WN	39										
5W	39	0	1	0	0		0	0	0		0.14
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		11	6	2	3	0	4	4	4	1	
C/E		0.46	0.25	0.08	0.12	0.00	0.16	0.16	0.16	0.06	

Table 21. Size-frequency distribution of American eel, Hudson River 2001

TL	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	weeks 4-9	weeks 1-9
20-39	0	0	0	0	0	0	0	0	0	0	0
40-59	0	0	0	0	0	0	0	0	0	0	0
60-79	0	0	0	0	0	0	0	0	0	0	0
80-99	0	0	0	0	0	0	0	0	0	0	0
100-119	0	0	0	0	0	0	1	1	1	3	3
120-139	4	0	0	0	0	0	0	1	0	1	5
140-159	0	3	1	1	0	0	0	2	0	3	7
160-179	1	1	1	1	0	0	0	0	0	1	4
180-199	0	0	0	0	0	0	0	0	0	0	0
200-219	1	0	0	0	0	0	0	0	0	0	1
220-239	0	0	0	1	0	0	0	0	0	1	1
240-259	0	0	0	0	0	0	0	0	0	0	0
260-279	0	0	0	0	0	0	0	0	0	0	0
280-299	0	0	0	0	0	0	0	0	0	0	0
300-319	0	0	0	0	0	1	0	0	0	1	1
320-339	0	0	0	0	0	0	0	0	0	0	0
340-359	1	0	0	0	0	0	0	0	0	0	1
360-379	0	0	0	0	0	0	0	0	0	0	0
380-399	0	0	0	0	0	0	0	0	0	0	0
400-419	0	0	0	0	0	0	0	0	0	0	0
420-439	0	0	0	0	0	0	0	0	0	0	0
440-459	0	0	0	0	0	0	0	0	0	0	0
460-479	0	0	0	0	0	0	1	0	0	1	1
480-499	0	0	0	0	0	0	0	0	0	0	0
500-519	0	0	0	0	0	0	0	0	0	0	0
520-539	0	0	0	0	0	0	1	0	0	1	1
540-559	0	0	0	0	0	1	0	0	0	1	1
560-579	0	0	0	0	0	0	0	0	0	0	0
580-599	1	0	0	0	0	1	0	0	0	1	2
600-619	3	0	0	0	0	1	0	0	0	1	4
620-639	0	1	0	0	0	0	0	0	0	0	1
640-659	0	0	0	0	0	0	1	0	0	1	1
660-679	0	0	0	0	0	0	0	0	0	0	0
680-699	0	0	0	0	0	0	0	0	0	0	0
700-719	0	0	0	0	0	0	0	0	0	0	0
720-739	0	1	0	0	0	0	0	0	0	0	1
740-759	0	0	0	0	0	0	0	0	0	0	0
760-779	0	0	0	0	0	0	0	0	0	0	0
780-799	0	0	0	0	0	0	0	0	0	0	0
800-819	0	0	0	0	0	0	0	0	0	0	0
# measured	11	6	2	3	0	4	4	4	1	16	35
Mean	332.55	327.67	161.00	182.33		513.75	437.00	133.00	110.00	312.00	312.51
StdDev.	222.18	275.02	22.63	38.03		144.76	232.08	19.65		211.85	216.75

Table 22. YOY bluefish catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	5	1		0	9	0	3	0		2.57
21E	23	13	3	0	8	2	1	2	0	0	3.22
17E	24		5		0	2	0	1	0	0	1.14
16E	25	8	0	0	11		0	0	0	0	2.38
15E	27			0			0		0	0	0.00
12E	29	0	0	1	3	170	3	0	0	0	19.67
13E	29		0	1	12	37	0	0	0	0	6.25
14E	29	6		10	1	82	0	0	0	0	12.38
19E	33	1	2	0	3	3	0	0	0	0	1.00
10E	34										
11E	34	1	1	2	1	3	0				1.33
9E	34	8	0	1	0	0		0	0		1.29
7E1	35										
7EC	35										
7EE	35	1	1	2	3	0		0	0	0	0.88
7EW	35	1	3	0	0	2	0	0	1	0	0.78
8E	35	7	30	1	0	4	18	0	0	0	6.67
6E	36										
3E	39	0	0	1	0		0	0	0		0.14
4E	39	1	3	12	1		0	0	0		2.43
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	10		5	0	9	0	0		0	3.43
16WN	27	2		1	0	1	0	0	0	0	0.50
16WS	27		3								3.00
13W	29										
14W	29	7	0	1	4	4	36	0	0	0	5.78
12W	30	1	0	1	0	0	0	0	0	0	0.22
11W	32	4	0	0	1	3	0	0	0	0	0.89
10W	35	0	1	0	1	179	1	0	0		22.75
9W	35	6	3	0	0	8	1	0	4		2.75
8W	36	11	0	0			0	0	0		1.83
7W	37	10	1	0	0		0	2	0		1.86
3W	39										
4W	39	0	4	0	0		0	1	0		0.71
4WN	39										
5W	39	2	4	3	8		1	0	0		2.57
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		105	65	42	57	518	61	9	5	0	
C/E		4.38	2.71	1.68	2.28	27.26	2.44	0.36	0.20	0.00	

Table 23. Size-frequency distribution of YOY bluefish, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-39	0	0	0	0	0	0	0	0	0	0	0
40-59	0	1	0	2	0	0	0	0	0	2	3
60-79	0	0	3	2	2	0	0	0	0	4	7
80-99	26	1	0	10	117	1	0	0	0	128	155
100-119	47	9	0	5	37	23	0	0	0	65	121
120-139	29	31	11	7	23	20	1	0	0	51	122
140-159	2	19	14	9	9	9	1	0	0	28	63
160-179	0	4	12	15	3	2	1	0	0	21	37
180-199	0	0	2	7	9	1	1	0	0	18	20
200-219	0	0	0	0	2	2	0	3	0	7	7
220-239	0	0	0	0	0	1	2	1	0	4	4
240-259	0	0	0	0	0	2	1	0	0	3	3
260-279	0	0	0	0	0	0	1	1	0	2	2
280-299	0	0	0	0	0	0	0	0	0	0	0
300-319	0	0	0	0	0	0	0	0	0	0	0
320-339	0	0	0	0	0	0	0	0	0	0	0
340-359	0	0	0	0	0	0	0	0	0	0	0
360-379	0	0	0	0	0	0	0	0	0	0	0
380-399	0	0	0	0	0	0	0	0	0	0	0
400-419	0	0	0	0	0	0	0	0	0	0	0
420-439	0	0	0	0	0	0	0	0	0	0	0
440-459	0	0	0	0	0	0	0	0	0	0	0
460-479	0	0	0	0	0	0	0	0	0	0	0
480-499	0	0	0	0	0	0	0	0	0	0	0
500-519	0	0	0	0	0	0	0	0	0	0	0
520-539	0	0	0	0	0	0	0	0	0	0	0
540-559	0	0	0	0	0	0	0	0	0	0	0
560-579	0	0	0	0	0	0	0	0	0	0	0
580-599	0	0	0	0	0	0	0	0	0	0	0
600-619	0	0	0	0	0	0	0	0	0	0	0
620-639	0	0	0	0	0	0	0	0	0	0	0
640-659	0	0	0	0	0	0	0	0	0	0	0
660-679	0	0	0	0	0	0	0	0	0	0	0
680-699	0	0	0	0	0	0	0	0	0	0	0
700-719	0	0	0	0	0	0	0	0	0	0	0
# measured	104	65	42	57	202	61	8	5	0	333	545
Mean	109.38	132.49	144.83	136.02	105.39	131.70	198.00	228.40		119.53	121.09
StdDev.	13.79	18.72	25.76	38.99	28.69	33.81	52.30	25.56		39.36	34.05

Table 24. Winter flounder catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	4	0		4	0	1	0	0		1.29
21E	23	5	2	0	1	0	0	2	0	1	1.22
17E	24		8		4	1	0	1	1	7	3.14
16E	25	1	3	0	1		1	0	1	1	1.00
15E	27			0			1		1	0	0.50
12E	29	0	0	1	0	1	0	0	0	1	0.33
13E	29		0	0	1	1	1	3	1	5	1.50
14E	29	0		1	0	0	0	0	0	2	0.38
19E	33	0	0	0	0	0	0	0	0	0	0.00
10E	34										
11E	34	0	0	0	0	0	0				0.00
9E	34	0	0	0	0	0		0	0		0.00
7E1	35										
7EC	35										
7EE	35	0	0	0	0	0		0	0	0	0.00
7EW	35	0	0	0	0	0	0	0	0	0	0.00
8E	35	0	0	0	0	0	0	0	0	0	0.00
6E	36										
3E	39	0	0	0	0		0	0	0		0.00
4E	39	0	0	0	0		0	0	0		0.00
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	0		0	0	0	0	0		0	0.00
16WN	27	1		0	0	0	0	0	0	0	0.13
16WS	27		0								0.00
13W	29										
14W	29	0	0	0	0	0	0	0	0	0	0.00
12W	30	0	0	0	0	0	0	0	1	0	0.11
11W	32	0	0	0	0	0	0	0	1	0	0.11
10W	35	0	0	0	0	0	0	1	0		0.13
9W	35	0	0	0	0	0	0	0	0		0.00
8W	36	0	0	0			0	0	0		0.00
7W	37	0	0	0	0		0	0	0		0.00
3W	39										
4W	39	0	0	0	0		0	0	0		0.00
4WN	39										
5W	39	0	0	0	0		0	0	0		0.00
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		11	13	2	11	3	4	7	6	17	
C/E		0.46	0.54	0.08	0.44	0.16	0.16	0.28	0.24	1.06	

Table 25. Size-frequency distribution of winter flounder, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	2	0	0	0	0	0	0	0	0	0	2
40-44	2	0	0	0	0	0	0	0	0	0	2
45-49	1	0	0	0	0	0	0	0	0	0	1
50-54	0	4	0	1	0	0	0	0	0	1	5
55-59	1	1	1	3	0	0	0	0	0	3	6
60-64	1	4	1	0	2	0	1	0	0	3	9
65-69	2	3	0	6	0	0	0	0	0	6	11
70-74	2	3	0	2	1	0	0	0	0	3	8
75-79	0	0	0	1	1	0	1	0	0	3	3
80-84	0	0	0	0	1	1	0	0	0	2	2
85-89	0	0	0	0	0	1	1	0	1	3	3
90-94	0	0	0	0	0	0	0	0	0	0	0
95-99	0	0	0	0	0	0	2	1	0	3	3
100-104	0	0	0	0	0	2	0	0	1	3	3
105-109	0	0	0	0	0	0	0	1	1	2	2
110-114	0	0	0	0	0	0	1	2	1	4	4
115-119	0	0	0	0	0	0	0	2	2	4	4
120-124	0	0	0	0	0	0	0	0	1	1	1
125-129	0	0	0	0	0	0	0	1	2	3	3
130-134	0	0	0	0	0	0	0	0	0	0	0
135-139	0	0	0	0	0	0	0	1	0	1	1
140-144	0	0	0	0	0	0	0	0	0	0	0
145-149	0	0	0	0	0	0	0	0	1	1	1
150-154	0	0	0	0	0	0	0	0	1	1	1
155-159	0	0	0	0	1	0	0	0	0	1	1
160-164	0	0	0	0	0	0	1	0	0	1	1
165-169	0	0	0	0	0	0	0	0	1	1	1
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	11	15	2	13	6	4	7	8	12	50	78
Mean	54.91	62.27	58.00	65.00	83.83	92.00	98.71	115.00	124.42	96.40	83.00
StdDev.	14.07	7.53	2.83	7.57	36.21	10.03	31.18	12.80	21.54	30.54	30.96

Table 26. American shad catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	0	0		0	0	0	0	3		0.43
21E	23	0	0	0	0	0	0	0	1	9	1.11
17E	24		0		0	0	0	0	0	2	0.29
16E	25	0	0	0	0		0	0	2	25	3.38
15E	27			0			0		0	12	3.00
12E	29	0	0	0	0	0	1	0	0	2	0.33
13E	29		0	0	0	0	0	0	5	0	0.63
14E	29	1		0	0	0	0	0	0	5	0.75
19E	33	0	0	0	1	0	0	0	0	1	0.22
10E	34										
11E	34	0	8	0	0	0	0				1.33
9E	34	11	0	0	0	0		0	0		1.57
7E1	35										
7EC	35										
7EE	35	0	0	0	0	0		83	12	0	11.88
7EW	35	1	0	0	0	0	0	18	27	4	5.56
8E	35	6	42	0	15	0	0	11	12	0	9.56
6E	36										
3E	39	0	0	0	0		0	2	4		0.86
4E	39	0	10	0	0		0	2	0		1.71
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	1		0	0	0	0	0		0	0.14
16WN	27	0		0	0	0	0	0	0	0	0.00
16WS	27		0								0.00
13W	29										
14W	29	0	0	0	0	0	0	0	0	0	0.00
12W	30	0	0	0	0	0	0	3	0	1	0.44
11W	32	3	0	0	0	0	0	0	0	0	0.33
10W	35	15	0	0	0	0	1	17	0		4.13
9W	35	0	0	0	0	0	0	7	1		1.00
8W	36	0	0	0			2	0	0		0.33
7W	37	0	0	0	0		0	0	0		0.00
3W	39										
4W	39	0	0	0	0		0	0	0		0.00
4WN	39										
5W	39	5	0	0	0		0	0	1		0.86
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		43	60	0	16	0	4	143	68	61	
C/E		1.79	2.50	0.00	0.64	0.00	0.16	5.72	2.72	3.81	

Table 27. Size-frequency distribution of American shad, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0	0
25-29	0	0	0	0	0	0	0	0	0	0	0
30-34	0	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0	0
45-49	3	0	0	0	0	0	0	0	0	0	3
50-54	19	7	0	0	0	0	0	0	0	0	26
55-59	12	27	0	0	0	0	0	0	0	0	39
60-64	4	10	0	0	0	0	0	0	0	0	14
65-69	3	4	0	1	0	0	5	1	0	7	14
70-74	2	0	0	0	0	2	26	32	11	71	73
75-79	0	1	0	1	0	2	36	31	29	99	100
80-84	0	0	0	0	0	0	13	9	16	38	38
85-89	0	0	0	0	0	0	5	0	4	9	9
90-94	0	0	0	0	0	0	4	1	1	6	6
95-99	0	0	0	0	0	0	0	0	0	0	0
100-104	0	0	0	0	0	0	1	0	0	1	1
105-109	0	0	0	0	0	0	0	0	0	0	0
110-114	0	0	0	0	0	0	0	0	0	0	0
115-119	0	0	0	0	0	0	0	0	0	0	0
120-124	0	0	0	0	0	0	0	0	0	0	0
125-129	0	0	0	0	0	0	0	0	0	0	0
130-134	0	0	0	0	0	0	0	0	0	0	0
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	0	0	0	0	0	0	0
145-149	0	0	0	0	0	0	0	0	0	0	0
150-154	0	0	0	0	0	0	0	0	0	0	0
155-159	0	0	0	0	0	0	0	0	0	0	0
160-164	0	0	0	0	0	0	0	0	0	0	0
165-169	0	0	0	0	0	0	0	0	0	0	0
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	43	49	0	2	0	4	90	74	61	231	323
Mean	56.23	59.02		72.50		74.00	77.00	75.64	78.25	76.80	71.37
StdDev.	5.69	4.66		9.19		3.46	5.86	3.97	4.09	4.95	10.00

Table 28. Atlantic silversides catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	74	671		133	87	57	86	22		161.43
21E	23	16	137	12	0	5	5	3	73	2	28.11
17E	24		1		257	65	66	0	5	4	56.86
16E	25	15	11	24	0		1	55	100	3	26.13
15E	27			0			28		51	23	25.50
12E	29	26	298	35	232	124	21	23	72	2	92.56
13E	29		147	85	209	123	12	181	230	1	123.50
14E	29	0		61	49	162	7	22	16	7	40.50
19E	33	31	5	27	76	74	110	33	132	8	55.11
10E	34										
11E	34	0	629	2257	69	490	72				586.17
9E	34	6	322	505	1768	1053		70	115		548.43
7E1	35										
7EC	35										
7EE	35	2	44	253	69	582		421	85	4	182.50
7EW	35	2	13	84	75	45	43	264	348	38	101.33
8E	35	46	66	104	174	127	119	3	4	4	71.89
6E	36										
3E	39	1	109	69	8		47	237	30		71.57
4E	39	2	0	27	0		0	93	3		17.86
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	106		148	284	1103	247	26		10	274.86
16WN	27	5		34	16	40	41	16	22	30	25.50
16WS	27		81								81.00
13W	29										
14W	29	5	20	28	18	9	14	7	9	8	13.11
12W	30	4	38	121	403	11	41	22	7	7	72.67
11W	32	2	6	54	36	25	13	4	11	19	18.89
10W	35	0	15	46	18	10	9	0	1		12.38
9W	35	0	13	12	0	25	53	8	13		15.50
8W	36	0	2	89			0	9	4		17.33
7W	37	0	20	39	34		0	48	1		20.29
3W	39										
4W	39	0	20	1	21		33	0	26		14.43
4WN	39										
5W	39	1	10	37	0		49	2	3		14.57
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		344	2678	4152	3949	4160	1088	1633	1383	170	
C/E		14.33	111.58	166.08	157.96	218.95	43.52	65.32	55.32	10.63	

Table 29. Size-frequency distribution of Atlantic silversides, Hudson River 2001

	week 1	week 2	week 3	week 4	week 5	week 6	week 7	week 8	week 9		
	July	Aug.	Aug.	Aug.	Sept.	Oct.	Oct.	Oct.	Nov.	weeks	weeks
TL	16-17	1-2	15-16	28-29	10-11	2-3	9-10	22	8	4-9	1-9
<20	0	0	0	0	0	0	0	0	0	0	0
20-24	0	1	0	0	0	0	0	0	0	0	1
25-29	0	0	1	0	0	0	0	0	0	0	1
30-34	1	1	1	0	0	0	0	0	0	0	3
35-39	2	0	0	0	0	0	0	0	0	0	2
40-44	0	0	1	1	0	0	0	0	0	1	2
45-49	0	0	1	0	0	0	0	0	0	0	1
50-54	0	1	4	2	0	1	0	0	0	3	8
55-59	0	6	15	4	0	0	0	0	0	4	25
60-64	0	7	47	18	1	2	0	0	1	22	76
65-69	1	33	43	32	4	8	0	0	1	45	122
70-74	0	43	53	37	19	16	0	0	3	75	171
75-79	0	55	32	43	31	23	5	0	7	109	196
80-84	0	18	18	29	40	32	16	0	3	120	156
85-89	0	4	8	21	27	51	18	0	8	125	137
90-94	0	3	0	11	19	36	27	0	18	111	114
95-99	0	0	0	1	7	19	16	0	31	74	74
100-104	0	1	0	0	2	5	13	0	25	45	46
105-109	0	4	0	0	0	1	1	0	18	20	24
110-114	0	0	1	1	0	0	1	0	6	8	9
115-119	0	2	0	0	0	0	0	0	1	1	3
120-124	0	0	0	0	0	0	0	0	0	0	0
125-129	0	1	0	0	0	0	0	0	0	0	1
130-134	0	0	0	0	0	0	0	0	0	0	0
135-139	0	0	0	0	0	0	0	0	0	0	0
140-144	0	0	0	0	0	0	0	0	0	0	0
145-149	0	0	0	0	0	0	0	0	0	0	0
150-154	0	0	0	0	0	0	0	0	0	0	0
155-159	0	0	0	0	0	0	0	0	0	0	0
160-164	0	0	0	0	0	0	0	0	0	0	0
165-169	0	0	0	0	0	0	0	0	0	0	0
170-174	0	0	0	0	0	0	0	0	0	0	0
175-179	0	0	0	0	0	0	0	0	0	0	0
180-184	0	0	0	0	0	0	0	0	0	0	0
185-189	0	0	0	0	0	0	0	0	0	0	0
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	0	0	0	0	0
>200	0	0	0	0	0	0	0	0	0	0	0
# measured	4	180	225	200	150	194	97	0	122	763	1172
Mean	43.75	74.18	69.03	74.78	82.13	84.97	91.05		96.40	84.34	79.70
StdDev.	15.59	11.60	9.32	9.42	7.72	8.87	7.38		10.10	11.49	12.99

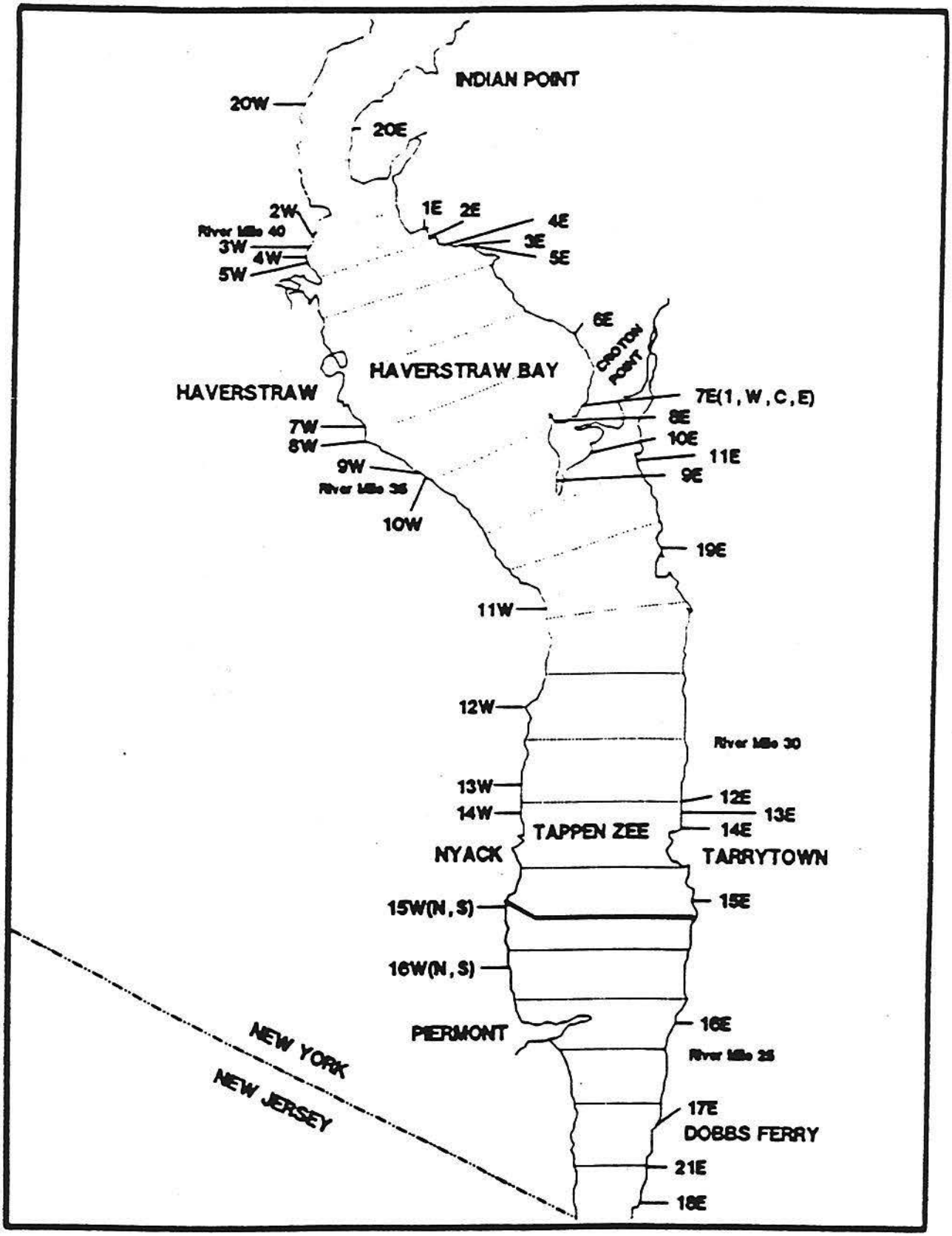
Table 30. YOY blue crab catch by station, 2001.

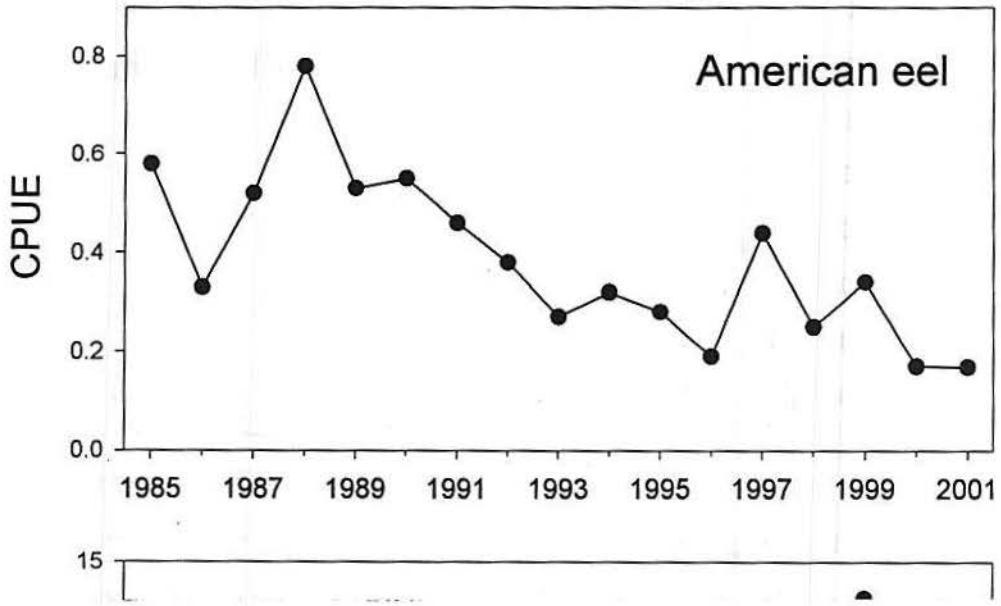
STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	0	0		30	0	1	0	2		4.71
21E	23	4	0	0	40	0	0	0	0	0	4.89
17E	24		0		7	0	0	4	2	0	1.86
16E	25	1	0	0	6		0	0	2	0	1.13
15E	27			1			35		0	0	9.00
12E	29	0	0	1	0	1	2	0	0	1	0.56
13E	29		1	0	1	45	7	8	1	1	8.00
14E	29	3		0	1	10	0	1	4	2	2.63
19E	33	1	0	1	0	0	0	0	1	0	0.33
10E	34										
11E	34	0	0	3	0	0	0				0.50
9E	34	1	0	0	0	0		0	0		0.14
7E1	35										
7EC	35										
7EE	35	1	0	0	0	0		0	0	0	0.13
7EW	35	0	0	0	0	0	0	0	0	0	0.00
8E	35	1	0	0	0	10	0	5	2	2	2.22
6E	36										
3E	39	0	0	0	0		0	1	0		0.14
4E	39	0	0	0	0		0	0	0		0.00
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	0		0	0	0	0	5		0	0.71
16WN	27	0		1	16	0	0	1	0	0	2.25
16WS	27		0								0.00
13W	29										
14W	29	3	0	1	0	1	0	4	1	0	1.11
12W	30	4	0	0	15	1	0	21	10	3	6.00
11W	32	4	0	0	17	0	0	3	0	0	2.67
10W	35	0	0	0	0	0	3	0	1		0.50
9W	35	0	0	0	0	0	0	0	0		0.00
8W	36	0	0	0			0	0	0		0.00
7W	37	3	0	0	0		0	4	0		1.00
3W	39										
4W	39	1	0	0	0		0	2	1		0.57
4WN	39										
5W	39	0	0	0	0		0	0	0		0.00
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		27	1	8	133	68	48	59	27	9	
C/E		1.13	0.04	0.32	5.32	3.58	1.92	2.36	1.08	0.56	

Table 31. Older blue crab catch by station, 2001.

STATION	riv mile	week 1 July 16-17	week 2 Aug. 1-2	week 3 Aug. 15-16	week 4 Aug. 28-29	week 5 Sept. 10-11	week 6 Oct. 2-3	week 7 Oct. 9-10	week 8 Oct. 22	week 9 Nov. 8	C/F
EAST											
18E	23	0	1		0	0	2	1	0		0.57
21E	23	1	2	0	0	0	1	1	0	0	0.56
17E	24		2		0	0	0	1	0	0	0.43
16E	25	1	2	2	0		2	0	0	0	0.88
15E	27			0			2		0	0	0.50
12E	29	0	2	2	2	0	0	0	0	0	0.67
13E	29		6	0	2	0	0	2	0	0	1.25
14E	29	1		2	2	2	0	0	0	0	0.88
19E	33	0	3	1	0	0	0	0	0	0	0.44
10E	34										
11E	34	0	2	8	0	0	0				1.67
9E	34	0	0	0	0	0		0	0		0.00
7E1	35										
7EC	35										
7EE	35	0	3	0	0	0		0	0	0	0.38
7EW	35	1	0	0	0	0	0	0	0	0	0.11
8E	35	0	0	0	2	0	0	1	0	0	0.33
6E	36										
3E	39	0	1	0	0		0	0	0		0.14
4E	39	0	0	0	0		0	0	0		0.00
5E	39										
20E	41										
WEST											
15WN	27										
15WS	27	1		0	0	0	0	0		0	0.14
16WN	27	2		0	0	0	0	0	0	0	0.25
16WS	27		0								0.00
13W	29										
14W	29	0	0	1	1	0	0	0	0	0	0.22
12W	30	0	1	0	0	0	0	1	2	0	0.44
11W	32	2	7	0	1	1	0	1	0	0	1.33
10W	35	0	0	0	0	1	0	1	0		0.25
9W	35	0	3	0	0	0	0	1	0		0.50
8W	36	1	0	0			3	1	0		0.83
7W	37	0	3	0	0		0	1	0		0.57
3W	39										
4W	39	0	0	0	0		0	0	0		0.00
4WN	39										
5W	39	0	0	0	1		0	0	0		0.14
20W	42										
Effort		24	24	25	25	19	25	25	25	16	
Catch		10	38	16	11	4	10	12	2	0	
C/E		0.42	1.58	0.64	0.44	0.21	0.40	0.48	0.08	0.00	

FIGURE 1 NYS DEC YOY STRIPED BASS SEINE STATIONS

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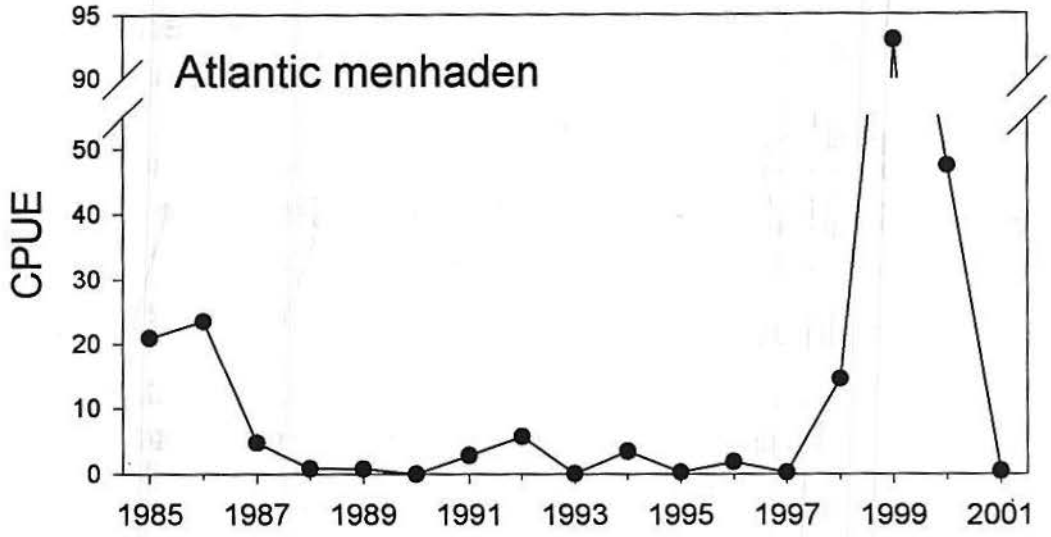
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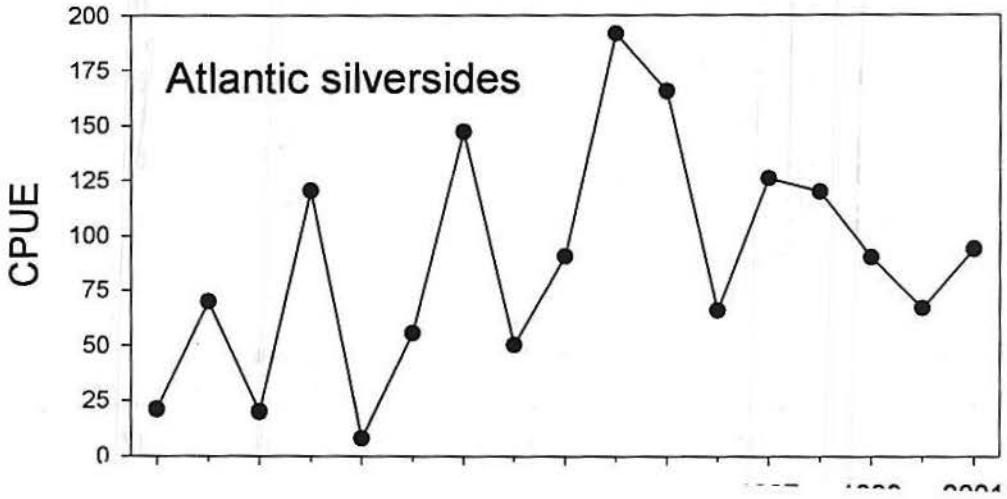
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150
125
100
75
50
25
0