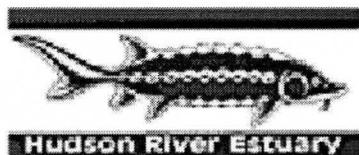


# Nearshore fish communities of the mid-Hudson River estuary, 1985-2004

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*NYS Department of  
Environmental Conservation*

July 2005

Special Report #131  
Reference 05-01

Approved for Publication:

A handwritten signature in black ink, which appears to read "David Conover". The signature is written in a cursive style and is positioned above a horizontal line.

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Dean and Director

## Abstract

During the 2004 field season, 220 seine hauls were completed in the young-of-the-year (YOY) striped bass survey in the Hudson River. A total of 3,613 YOY striped bass were captured, resulting in a geometric mean catch per unit effort (CPUE) of 9.86 fish/haul. The Hudson River index of YOY striped bass abundance, based on the geometric mean CPUE of the 6-week survey, was 8.81 fish/haul. This catch rate was slightly lower than the average historical geometric mean CPUE of 14.09 fish/haul. YOY striped bass grew at an estimated 0.58 mm/day between mid-July and the beginning of October. Catch rates of American shad, alewife, and blueback herring were less than the average historical records. Atlantic silverside catch rates doubled compared to 2003, but the catch rates were still lower than the average historical record. Catch rates of YOY white perch (2.09 fish/haul) fell to levels similar to the period from 1990 to 1998. Older white perch catch rates were the lowest since 1985. Composition of the catch was different to previous years. Silversides were the most abundant fish, followed by Atlantic menhaden and striped bass. The Atlantic menhaden catch rates were mostly effected by 6 hauls which contained a large number of menhaden, while the large majority of hauls throughout the 2004 field season did not contain any Atlantic menhaden. Air and water temperatures during the survey were near the historical average. Salinity was below normal from week 2 to week 6, ranging between 0 and 3 ppt. The salinity in weeks 1 and 7-9 were near the survey average. The unusual salinity profile throughout the sampling period could have contributed to the low catches and the unusual fish community observed in 2004.

## 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. The semi-buoyant 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 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 coast-wide commercial fishery reached a peak in 1973 at 5.98 metric tons (mt), declining rapidly thereafter to 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 year class (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 coast-wide 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). A more recent analysis, which incorporates 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 over-wintering 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 2004 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 data from 1985 to 2004, covering the same period, is used to compare 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, and 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 sub-sampling procedure was used to estimate catches of individual species. Young-of-the-year and older blue crabs 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./foot<sup>2</sup>. 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 coast-wide tagging program. Tags were individually numbered floy type tags with 6.5 x 19.25 mm oval anchor and 91 mm streamer. A few 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 2004 sampling season, 9 sampling trips were conducted between July 19<sup>th</sup> and November 15<sup>th</sup>. During this sampling, a total of 33,216 fish were collected. This was about 3,000 fish less than the previous year and 15,000 fish less than 2002. Also, we only caught 199 compared to 169 blue crabs in 2003. Of the 33,216 fish caught 3,613 were young-of-the-year striped bass and only 106 were older striped bass. In total 220 beach seine samples were collected in 2004.

### **Environmental conditions**

Weekly average water temperatures generally decreased through the sampling season, from a high of 26.48 °C in July to a low of 10.34°C on November 15 (Table 1 and 2). This was close to the historical average (figure 2, Table 2). Air temperatures also generally decreased during the sampling season, ranging from 26.02 to 9.29°C. Both air and water temperatures followed the historical averages (figure 2, Table 2). Salinity in the Lower Hudson River started out on July 19<sup>th</sup> near the historic average with 6.48 ppt. It subsequently declined exponentially, reaching the lowest salinity of 0.25 ppt on sampling week 6 (October 4<sup>th</sup>). The following sampling week (October 18) the salinity restored to historical levels (figure 2, Table 2). The low salinity observed from sampling week 2 (August 10) to 6 (October 4) could have been the cause of the unusually low level of fish caught in the 2004. Weekly average of dissolved oxygen levels ranged between 6.49 and 10.46 mg/L throughout the sampling season, and did not show any distinct seasonal pattern. The unusually high O<sub>2</sub> level found on the 5<sup>th</sup> sampling week (September 20) was most likely caused by a malfunctioning oxygen probe.

### **Species composition**

Forty-six different species of fish were captured in the Hudson River during the 2004 sampling season. Fish catches varied throughout the sampling period without a seasonal trend.

Catches peaked in sampling week 8 (November 1) with 6,795 fish and week 2 (August 10) with 6,152 fish. However the large catches in sampling week 8 was attributed to one large catch of Atlantic menhaden. The second largest catch in sampling week 2 consisted of a wide range of species. The lowest catches were observed in sampling weeks 7 (October 18) and 9 (November 15) with 1,176 and 1,506 fish caught in those sampling weeks respectively. Silversides (14,290), Atlantic menhaden (9,817 fish) and Striped bass (3,613 fish) were the most abundant species in 2004. Catch composition during the 2004 sampling season is compared to historical catch composition in Tables 3, 4 and 5. Detailed catch information on selected species is presented below.

### **Striped bass, *Morone saxatilis***

During the 2004 sampling season 3,613 YOY striped bass were captured in 220 hauls, with a mean CPUE of 16.42 and a geometric mean CPUE of 9.86 (Table 6). Between 1980 and 1985, catch data was collected in a period corresponding to the last 6 weeks of the 2004 sampling season. In order to compare 2004 catch data with results obtained previous to 1985, the statistics on the final 6 weeks of catch data for 2004 is presented in Table 6 together with historical records. In the final six weeks, 2,078 YOY striped bass were captured in 145 hauls, resulting in a mean CPUE of 14.33 and a geometric mean CPUE of 8.81 (Figure 3). The 6-week geometric mean CPUE, used as the young of the year striped bass index of relative abundance, was low in 2004 compared to previous years. It was much lower than the historical average of 14.09. The 2004 9-sampling week geometric mean of 9.86 was also much lower than the historical average of 20.31 (Table 6).

Catch-per-unit-effort of YOY striped bass peaked during the fourth week of the survey at 27.36 fish/haul, where after the CPUE declined throughout the remaining sampling season. The lowest catch rate of 6.43 fish/haul was reached during the final week of the survey. This year's catch rate peaked late in the sampling season (week 4). This is similar to 2001 and 2002, where catch rates peaked in week 4 and 5 respectively. In 2003 CPUE peaked as early as week 2. Catch patterns similar to that of 2001 and 2002 and 2004 with peak catch rates in week 4 or 5 of the survey, were also observed in 1987, 1997, and 1999. The reason for the late peak in catch rate observed during some years is unknown. It has been hypothesized that YOY striped bass, recruiting to the western Long Island bays early in the summer migrate back to the Hudson River

nursery area later in the year. However, when comparing catch records in the western Long Island bays and the Hudson River, this hypothesis is not supported by observations. Only after 2001 have YOY striped bass been observed in sufficient numbers from the Western Long Island Beach Seine Survey to potentially affect the abundance of striped bass in the Hudson River survey. Furthermore, years of high abundance recorded in western Long Island bays does not correspond to the years in the Hudson River with peak catch rates occurring late in the year (Brischler, 2004). The low number of striped bass caught in the Lower Hudson River in 2004, coincided with very low salinity in much of the sampling season. It is possible that the low salinity either caused the YOY striped bass to migrate towards higher salinity or that post-yolk-sac larvae are prone to settle in higher saline environments.

Catch-per-unit-effort of YOY striped bass varied considerably across sites in 2004 (Table 7). Excluding 13E which was only sampled once, the sites with the highest CPUE ( $> 30$  fish/haul) were in Haverstraw Bay 7W and 8W on the West side of the river. Station 15WS, next to the Tappan Zee bridge, had the lowest catch rates (3.8 fish/haul, Table 7). The distribution of catch among sites observed in 2004, was generally consistent with previous years, as the sites 9E and 7W are commonly among those sites with the highest catch rates of YOY striped bass. Annual catch-per-unit-effort data for the full 9-week survey and the 6-week subset, are shown in Tables 8 and 9.

Total length measurements were collected from 3,295 YOY striped bass during the 9-week survey. The YOY bass ranged in size from 22 to 164 mm and their size-frequency distributions are shown in Table 10. Mean lengths of YOY striped bass, captured during the 2004 sampling season are compared to previous years in Table 11. Mean lengths of measured fish increased through the first five sampling weeks, and were relatively stable thereafter (Figure 4). The apparent cessation of growth in YOY striped bass, based on observed fish lengths has been observed in most years of the study, and may in part be due to a size-dependent emigration from the nursery area to the lower estuarine wintering grounds. The alternative explanation is that growth ceases because of limited availability of food. Growth rate of YOY striped bass in the 2004 cohort, estimated from the regression of mean total length against date, was 0.58 mm/day through the first 6 weeks of the survey. This is in the lower range of the mean growth rates observed. Annual cohort growth rates ranged from 0.45 mm/day in 1990 to 0.72 mm/day in 1995. In an analysis of historical data, Hurst (2000) found that body sizes of YOY striped bass

in August and October were negatively related to density in the nursery area suggesting density dependent growth.

The age composition of striped bass captured between 1985 and 2004 is shown in Table 12. During the 9-week survey, 106 striped bass aged 1 to 2 were captured and ranged in length from 114-370 mm TL (Table 13). Older striped bass were most abundant at site 11E and 7EW, where CPUE were 2.2 and 1.7 respectively (Table 14).

Twenty-four older striped bass, ranging in length from 174 to 370 mm were tagged with internal anchor tags as part of the United States Fish and Wildlife Service coast-wide tagging program. The majority of these (n=20) were age 1.

### **White perch, *Morone americana***

In 2004, only 1,258 white perch were captured. White perch were classified as either young-of-the-year or older based on observed size-distribution among the catch. Of the white perch captured, 441 were YOY and 817 were age-1 or older. Young-of-the-year white perch were most abundant at sites 5W and 12W (Table 15). Catch-per-unit-effort of YOY white perch was highest in week 2 (3.64 fish per haul), and lowest in week 5 (12 fish were captured in 25 hauls). Older white perch were most abundant at site 7EE and 7EW (Table 16). During the sampling season catch-per-unit-effort of older white perch declined from 10.16 fish per haul in week 2, to 0.22 fish per haul in week 9.

Through the entire study period, the highest mean catch rates of YOY white perch were 75.75 fish per haul in 1988 and 36.97 fish per haul in 1986 (Figure 5). Catch rates of less than 2 fish per haul occurred in 1995 and 1997. In 2004, mean catch rates of YOY white perch were 2.09 fish per haul. This catch rate is equivalent to historically low catch rates found from 1990 to 1998. The reasons for the low catch rates are unknown. It is much lower than the catch rates observed in the previous 5 years (Figure 5). Catch rates of older white perch went down in 2004 to 3.7, from 20.1 and 8.2 fish per haul in 2002 and 2003. Catch rates of older perch were the lowest observed since 1985.

### **Atlantic tomcod, *Microgadus tomcod***

During the 2004 sampling season, 50 Atlantic tomcod were captured. The total length frequency of captured Atlantic tomcod is presented in Table 19. The size ranged between 54 and

135 mm and the CPUE of Atlantic tomcod ranged between 0.04 to 1.36 fish per haul. The mean catch rate was very low compared to previous years. However, the CPUE was also low in 1991, 1993, 1994, 1995, 1999 and 2003. In those years, catch rates were as low as 0.03 fish per haul. High catches of 2.64 and 2.30 fish per haul were observed in 1988 and 1998 respectively (Figure 5).

#### **American eel, *Anguilla rostrata***

In 2004, 66 American eel were captured during sampling. The highest catch rates (1.3 & 0.9 fish per haul) were observed at sites 4E and 12W (Table 19). The catch rate of 0.30 eels per haul was low compared to historical records, but it was slightly higher than the previous 4 years (Figure 6). The highest catches (0.78 fish per haul) occurred in 1988. American eel ranged in length from 80 to 660 mm TL, with an overall mean length of 265.4 mm. The total length frequency of American eel is shown in Table 20.

#### **Bluefish, *Pomatomus saltatrix***

In 2004, 175 YOY bluefish were captured. They were caught during the first 7 weeks of the survey (Table 21). The bluefish spring-spawned cohort was present in the catches from week 1 to week 4, while the summer-spawned cohort was first observed in week 2 and was present in the catches until week 7 (Table 22). Bluefish CPUE was 2.5 fish/haul at station 15WS, and 1.3 fish/haul for stations 21E, 17E, 14E, 11W and 4W. The mean CPUE was 0.79 fish per haul in 2004 (Table 21). Catch rates of YOY bluefish in 2004 were not as high as in 2003 (1 fish per haul), 2002 (2.9 fish per haul) and 2001 (4.1 fish per haul). The highest bluefish abundances ever observed was in 1999 (Figure 6). Bluefish captured in 2004 ranged in length from 70 to 264 mm TL (Table 22). Based on the size-frequency distributions (Table 22), spring spawned bluefish were more abundant than the summer spawned bluefish. The spring cohort is spawned in the South Atlantic Bight in March-April, and the summer cohort is spawned in the Mid-Atlantic Bight in June-July (Munch and Conover 2000).

#### **Winter flounder, *Pleuronectes americanus***

Mean catch rate of winter flounder in 2004 was 0.45 fish/haul. These were mostly captured in the south eastern half of the sampling region with peak catch rates occurring in the

first weeks of the sampling season (Table 23). Historical extreme low and high catch rates in this survey were 0.17 and 2.51 fish/haul observed in 1987 and 1985 respectively (Figure 6). Winter flounder ranged in length from 40 to 210 mm, with a mean length of 84.9 mm. The total length frequencies are shown in Table 24.

#### **American shad, *Alosa sapidissima***

In 2004, 396 American shad were captured. American shad were most abundant at sites 12E, 8E, and 8W (Table 25). Weekly CPUE of American shad was highest in week 8 of sampling. Historically, peak CPUE of American shad occurred most commonly in weeks 1-2 or 8-9. The CPUE of American shad in 2004 (1.8 fish per haul) was similar to the last 6 years. The highest catch rate (22.18 fish per haul) was observed in 1986 (Figure 7). American shad ranged from 60 to 125 mm TL, with a mean length of 88.3 mm (Table 26).

#### **Alewife, *Alosa pseudoharengus*, and Blueback herring, *Alosa aestivalis***

During sampling in 2004, 82 alewife and 255 blueback herring were captured (Table 27 and 29). Alewife ranged in length from 60 to 125 mm TL, with a mean of 86.5 mm (Table 28). Blueback herring measured 25 to 95 mm TL with a mean length of 63.8 mm TL (Table 30). The mean CPUE of alewife and blueback herring were 0.37 and 1.5 fish per haul respectively (Table 27 and 29). Catches of blueback herring were similar to the low abundance levels observed in 2000 and 2001.

#### **Atlantic menhaden, *Brevoortia tyrannus***

During sampling in 2004, 9,817 Atlantic menhaden were captured (Table 31). Measured Atlantic menhaden ranged from 33 to 122 mm TL with a mean of 75.0 mm TL (Table 32). The 2004 high average catch rate of 44.6 fish per haul, was due to single catches in weeks 6, 8, and 9, where more than a 1,000 Atlantic menhaden were caught in one haul (Figure 8 and Table 32).

#### **Atlantic silversides, *Menidia menidia***

In 2004, only 14,290 silversides were caught. This number was not high compared to 2002, but higher than in 2003 (Figure 8). Atlantic silversides were most abundant at site 17E, 9E, 8E 15 WS and 12W with catch rates higher than 100 fish per haul (Table 33). In 2004, 568

silversides were measured and they ranged in length from 40 to 110 mm TL with a mean of 75.8 mm (Table 35). Annual catch rates of Atlantic silversides in the survey have been extremely variable, ranging from 7.9 fish per haul in 1989 to 191.9 fish per haul in 1994. In 2004, the overall catch rate of silversides was 64.95 fish per haul (Figure 8).

### **Blue crab, *Callinectes sapidus***

During sampling in 2004, 199 blue crabs were captured. The majority of these were young-of-the-year. YOY blue crabs were most abundant at sites 18E and 21E, while older blue crabs were most abundant at 7EW and 7EE (Tables 35 and 36). Catch rates peaked in weeks 5 and 3 for YOY and older blue crab respectively. Prior to 1998, no distinction was made between YOY and older crabs, so the time trend of catch rates is presented for the total numbers of blue crab. Catch rates in 2004 were 0.90 crab/haul, which is an intermediate level in the 18 year time series. The 2004 catch rate was slightly less than the catch rate of 3.78 and 2.32 crab/haul observed 2002 and 2001, but similar to catch rates in 2003 (Figure 8).

## **Conclusions**

Catch composition during the 2004 Hudson River beach seine sampling season was generally consistent with previous years. The most abundant species were Atlantic silversides, Atlantic menhaden, and striped bass, although the abundance of striped bass was below those in recent years with peak catches occurring in the fourth week of sampling. The 6-week YOY striped bass index of relative abundance was 8.81, which was lower than the historical average of 14.09. Growth rates of YOY striped bass, based on length frequency progression, was 0.58 mm/day. Catch rates of American shad, alewife, and blueback herring were lower than average. The Atlantic silverside catch rate recovered from last year's low catch level, but the catch rate was still lower than average. Catch rates of both YOY and older white perch were among the lowest ever observed since 1980. Salinities in the sampling region were below average from sampling week 2 to sampling week 6. In the remaining weeks the salinities were average.

## Acknowledgments

This project was carried out under a cooperative agreement between the Marine Sciences Research Center of the State University of New York at Stony Brook (MSRC) and the New York State Department of Environmental Conservation (NYS DEC) governed under MOU #000098. Funding for this project was provided by the Environmental Protection Fund of the NYS DEC. Many people from MSRC provided assistance with field sampling including Lora Clarke, Gabrielle Dorr, Keith Dunton, Joanna Gyory, and John Maniscalco. Administrative support was provided by Lynn Bianchet, Bill Wise, and Karen Pfister.

This is Special Report #05-01 of the Marine Sciences Research Center, State University of New York at Stony Brook. This report also serves as part of the Anadromous Fish Conservation Act P.L. 89-304 Project Completion Report for New York State, Project Number AFC-29.

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TABLE 1

## 2004 HUDSON RIVER ENVIRONMENTAL DATA

Dates	Week	Air Temperature (deg. C)				Water Temperature (deg. C)			
		Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 19, 20	1	26.48	3.40	20	32	26.02	0.76	24.7	27.4
Aug. 10	2	26.53	2.21	21	31	26.82	1.38	22.0	29.0
Aug. 24	3	23.94	3.63	20	34	26.37	1.09	24.7	28.4
Sept. 07	4	22.24	3.57	15	28	25.50	1.06	23.9	27.3
Sept. 20	5	21.16	2.86	15	26	21.36	0.86	19.6	22.8
Oct. 04	6	20.56	2.77	16	24	20.16	0.65	18.8	21.0
Oct. 18	7	14.76	2.39	11	19	15.63	1.29	12.6	17.4
Nov. 01	8	14.62	1.27	13	18	14.59	0.45	13.6	15.3
Nov. 15	9	10.34	3.09	6	17	9.29	0.90	6.7	10.8

Dates	Week	Salinity (ppt)				Dissolved Oxygen (mg/L)			
		Avg	Std	Min	Max	Avg	Std	Min	Max
Jul. 19, 20	1	6.48	1.29	4.7	9.4	6.49	1.58	4.3	9.6
Aug. 10	2	2.57	1.27	1.5	6.7	7.60	1.79	5.5	10.8
Aug. 24	3	1.30	1.79	0.2	9.21	7.73	2.23	1.5	11.8
Sept. 07	4	0.70	0.65	0.2	2.2	6.67	0.60	5.9	7.9
Sept. 20	5	0.38	0.20	0.2	0.9	146.87	374.66	10.2	1167.0
Oct. 04	6	0.25	0.30	0	1.4	9.37	0.70	8.2	11.3
Oct. 18	7	5.06	1.95	0.1	8.8	8.46	1.53	3.3	11.2
Nov. 01	8	4.16	1.32	2.2	6.2	9.54	0.58	7.4	10.5
Nov. 15	9	4.96	1.88	2.6	8.8	10.46	0.86	7.1	11.5

TABLE 2

## HUDSON RIVER ENVIRONMENTAL DATA 1985 - 2004

Mean Air Temperature (deg. C)																				
Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	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		31.3	27.9	26.5
2	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	33.9	25.0	26.5
3		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	31.2	30.7	23.9
4	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	27.9	15.0	22.2
5	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	28.2	22.6	21.2
6	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	21.7	13.8	20.6
7	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	15.6	15.1	14.8
8	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	8.2	11.2	14.6
9	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	7.5	3.8	10.3

Mean Water Temperature (deg. C)																				
Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	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	26.0	26.8	26.0
2	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	27.5	27.0	26.8
3	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	27.4	28.5	26.4
4	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	26.8	23.6	25.5
5	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	25.0	23.7	21.4
6	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	23.1	20.6	20.2
7	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	20.1	18.1	15.6
8	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	15.6	14.1	14.6
9	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	11.0	9.5	9.3

Mean Salinity (ppt)																				
Week	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1	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	8.3	3.9	6.5
2	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	8.0	3.7	2.6
3	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	9.7	1.1	1.3
4	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	9.5	5.9	0.7
5	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	10.9	3.2	0.4
6	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	9.2	1.6	0.2
7	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	8.7	1.7	5.1
8	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	7.3	0.7	4.2
9	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	5.0	0.6	5.0

Mean Dissolved Oxygen (mg/L)																				
WEEK	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
1			7.1	7.4	9.9	7.4	8.6	9.1	9.2		8.3			8.4	6.2		5.8	6.3	6.8	6.5
2			9.3	8.1	8.1	8.0	8.9	8.2	7.6	7.2				7.4	6.5	6.5	5.2	6.3	5.9	7.6
3			7.4	10.2	8.7	7.9	6.3	7.6	9.0	7.7	8.3			6.7	5.6	7.4	4.8	6.8	8.7	7.7
4			7.6		8.3	7.4	8.5	9.1	7.0	7.8	7.5			7.2	5.2	7.4	5.4	6.9	5.5	6.7
5			8.6	8.0	8.2		7.8	8.9	7.2	7.9	8.9			7.1	4.4	6.5	6.1	6.1	7.3	11.4
6			8.6	9.6	7.4	9.6	9.3	9.4	8.5	7.7	6.3				4.8	7.3	4.6	6.0	7.0	9.4
7			9.7	9.9	8.5	8.4	9.2	9.8	9.0	8.3	5.1				4.1	6.9		6.0	7.0	8.5
8			7.8	9.3	8.3	9.1	9.6	9.2	8.7	8.2	5.9				4.5	9.0	5.6	7.4	7.9	9.5
9			8.3	9.4	9.1	8.8	10.2	9.3		8.0	6.2				5.0	8.8	7.2	8.2	9.0	10.5

TABLE 3

## 2004 HUDSON RIVER SPECIES COMPOSITION

Species	Age*	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
<b>Diadromous</b>												
Alewife	999	8	26	1	6	10	10	20	1		47	82
American eel	999	13	23	9	7	4	1	4	2	3	21	66
American shad	999	34	16	30	12	22	32	62	180	8	316	396
Atlantic tomcod	999	34	2	3	5	2	1	1	1	1	11	50
Blueback herring	999		57	2	5	2	66	58	45	20	196	255
Striped bass	0	607	467	461	684	356	334	304	252	148	2078	3613
Striped bass	1	21	29	20	13	6	6	3	3	5	36	106
<b>Estuarine</b>												
Fourspine stickleback	999	9	2								0	11
Hogchoker	999	20	16	11	12	1	4	4	4		25	72
Killifish spp.	999	15	249	518	775	349	102	10	4	1	1241	2023
Threespine stickleback	999	2			13	3	5	6			27	29
White perch	0	34	91	53	57	12	39	81	54	20	263	441
White perch	1	214	254	137	72	23	36	58	18	5	212	817
<b>Freshwater</b>												
Bluegill	999				1	2	1				4	4
Brown bullhead catfish	999		2		2	1	1	5			9	11
Carp	999	4	1	3		1	1		4		6	14
Gizzard shad	999				1	7	6		1		15	15
Golden shiner	999				1						1	1
Hickory shad	999					18	11	26	11		66	66
Largemouth bass	999	1		6		1			1		2	9
Longnose sucker	999					1					1	1
Pumpkinseed	999		3			5	2		1		8	11
Smallmouth bass	999	1		1			1				1	3
Spottail shiner	999	3	3	2		1	8	4	1	1	15	23
Tesselated darter	999	66	10	8	10	2	1	2		2	17	101
White catfish	999			3			1	2			3	6
Yellow perch	999	7	3	1				1			1	12
<b>Marine</b>												
Atlantic croaker	999				1		2	33	27		63	63
Atlantic menhaden	0	7	591	2	1	5	1931	169	5933	1178	9217	9817
Atlantic needlefish	999	13	4	17	2						2	36
Bay anchovy	999	66	6	2		103	13	42	6	2	166	240
Bluefish	0	69	49	13	32	4	3	5			44	175
Creville jack	999		1						1		1	2
Grey snapper	999		1								0	1
Naked Goby	999		8	7	2	4	1				7	22
Northern kingfish	999	20	15	18							0	53
Northern pipefish	999	63	39	21	2				2		4	127
Northern puffer	999	1									0	1
Northern stargazer	999	1									0	1
Silver perch	999			4	3						3	7
Silverside spp.	999	1504	4164	2671	4137	991	241	262	232	88	5951	14290
Spot	999	1	1								0	2
Striped searobin	999	11	2								0	13
Summer flounder	999	3	6	2	5	2		4	1		12	23
Tautog	0	1	2								0	3
Weakfish	999	2									0	2
White mullet	999						1				1	1
Winter flounder	0	27	8	17		2		10	9	23	44	96
Winter flounder	1		1						1	1	2	3
Total Fish Catch		2882	6152	4043	5861	1940	2861	1176	6795	1506	20139	33216
<b>Invertebrates</b>												
Blue crab	0	13	8	3	18	26	13	1			58	82
Blue crab	1	18	26	44	14	9	4	2			29	117
Total Invertebrate Catch		31	34	47	32	35	17	3	0	0	87	199
Number of seines (n)		25	25	25	25	25	25	25	22	23	145	220

\* 0=Young-of-the-year; 1=Older; 999=age unknown



TABLE 5

## HUDSON RIVER TOTAL SPECIES CPUE 1985 - 2004, WEEKS 1 - 9

Species	Age*	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>Diadromous</b>																					
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	0.7	2.1	0.4
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	0.2	0.2	0.3
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	3.3	4.3	1.8
Atlantic sturgeon	1																				0.0
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	0.6	0.0	1.4	0.2
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	7.9	8.0	1.2
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	77.4	22.2	72.6	16.4
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	0.9	0.3	0.5
Striped bass (hatchery)	0	0.9	1.2	0.6	0.3	0.4			0.2	0.3	0.1	0.9									
Striped bass (hatchery)	1		0.0	0.0	0.0		0.0			0.0	0.0	0.0	0.0								
<b>Estuarine</b>																					
Fourspine stickleback	999	1.2	0.9	2.0	1.1	0.2	0.2	0.2	0.1	0.0	0.0	0.1	0.3	0.1			0.0			0.2	0.1
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	1.7	1.5	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	5.5	10.1	9.2
Rainbow smelt	999				0.0																
Striped anchovy	999	0.3	0.0					0.0	0.1	0.0	0.0	0.0	0.0						0.1	0.0	
Threespine stickleback	999			0.2										0.0						0.0	0.1
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	6.3	21.8	11.4	25.6	2.0
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	16.2	20.3	20.1	8.2	3.7
<b>Freshwater</b>																					
Black crappie	999					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	1.4	0.1	0.0
Brown bullhead 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	0.0	0.2	0.1
Carp	999	0.2	0.2	0.2	0.2	0.3	0.3		0.1	0.1	0.2	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Chain pickerel	999					0.0	0.0	0.0		0.0										0.0	
Fallfish	999					0.0															
Gizzard shad	999	0.0		0.2	0.0	0.0	0.0	0.1			0.0	0.1	0.0	0.1		0.1	0.3		0.1	0.1	0.1
Golden shiner	999		0.0			0.0	0.0	0.0			0.0		0.0					0.1		0.0	0.0
Goldfish	999	0.0	0.0	0.0	0.0	0.0			0.0			0.0			0.0				0.1		0.0
Green sunfish	999																			0.0	
Hickory shad	999		0.0			0.0															0.3
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
Longnose sucker	999																				0.0
Pumpkinseed	999	0.3	0.2	0.1	0.1	0.1	0.1	0.0		0.0	0.1	0.2	0.0	0.3	0.0	0.0	0.1	0.2	0.0	0.1	0.1
Red Finned Pickerel	999																			0.0	
Redbreast sunfish	999	0.0	0.1	0.0	0.0	0.1	0.0	0.0	0.0		0.0	0.0		0.4			0.0	0.0	0.0	0.0	0.0
Smallmouth bass	999					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	0.0	0.6	0.1
Tessellated 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	0.1	0.5	0.5
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	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			
Yellow perch	999	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	0.0	0.1	0.1
<b>Invertebrate</b>																					
Blue crab	0														24.6	14.0	0.3	1.8	2.0	0.4	0.4
Blue crab	1														2.9	2.1	0.9	0.5	1.5	0.4	0.5
Blue crab	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							
Mudcrab	999											0.0			0.0	0.1				0.0	
<b>Marine</b>																					
Atlantic croaker	999																			0.0	0.3
Atlantic menhaden	0																48.8	0.5	0.7	3.6	44.6
Atlantic menhaden	1																0.0		9.6	0.1	
Atlantic menhaden	999	20.9	23.5	4.8	0.9	0.8	7.9	2.8	5.7	0.1	3.5	0.3	1.9	0.3	14.7	93.0					
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	0.1	0.1	0.2
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	14.0	1.8	13.3	11.7	1.1
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	2.9	1.0	0.8
Bluefish	1						0.0													0.0	
Bonefish	999										0.0										
Butterfish	999					0.0				0.0	0.0		0.0							0.0	
Butterflyfish	999																			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	0.1	0.0	0.0
Cunner	999			0.0																	
Grey snapper	999	0.0		0.0							0.0	0.0									0.0
Inshore lizardfish	999	0.0				0.0	0.1	0.1	0.1	0.1	0.0			0.1	0.1	0.0			0.0	0.1	
Lookdown	999	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		0.1	0.1	0.4	0.0	0.2	0.1	0.0	0.1
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	0.4	0.0	0.2
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	1.1	0.6	0.6
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	0.1		0.1	0.0	0.0	0.0
Northern searobin	999																		0.0		
Northern sennet	999	0.0				0.0													0.0	0.1	0.0
Northern stargazer	999			0.0	0.0		0.0	0.0	0.0	0.0				0.1		0.0			0.0	0.1	0.0
Northern tonguefish	999							0.0													
Permit	999																				
Pigfish	999										0.0				0.0				0.0		
Scup	999																				
Silver perch	999	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	192.0	165.7	65.9	126.0	120.0	90.3	68.5	93.8	104.4	20.7	65.0
Smallmouth flounder	999	0.0						0.0	0.0	0.0					0.0						
Spanish mackerel	999					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	0.3	0.0	0.0
Spotfin butterflyfish	999																			0.0	
Spotfin mojarra	999								0.0		0.0										
Spotted hake	999							0.0						0.0	0.0						
Striped mullet	999	0.0	0.3	0.0				0.0									0.0	0.0	0.0	0.1	0.0
Striped searobin	999	0.1	0.1			0.0	0.1	0.4	0.0	0.1	0.0	0.0		0.7	0.5	0.1		0.0	0.1	0.0	0.1
Summer flounder	999	0.2	0.4	0.0	0.0	0.1	0.1	0.2	0.2	0.2											

TABLE 6

## HUDSON RIVER YOY STRIPED BASS ABUNDANCE INDEX

**6 week survey**

Year	Hauls	Catch	CPUE	StDev	Range	Zeros	Index	Confidence Intervals
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	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	15.9	11.98-21.01
1988	145	7584	52.3	45.1	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	3.6	2.84-4.52
1992	146	2526	17.3	15.51	0-83	5	11.44	9.63-13.56
1993	150	3975	26.5	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	18.4	0-143	6	8.93	7.41-10.72
1997	139	6989	50.28	63.53	0-328	6	22.3	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		26.64	21.12-33.54
2000	136	1064	7.82	16.57	0-120	32	3.16	2.43-4.05
2001	135	12317	91.24	220.55	0-1711	11	22.97	16.95-31.04
2002	137	2949	21.53	26.78	0-203	5	12.26	10.07-14.88
2003	147	5141	34.97	39.23	0-209	9	17.34	13.77-21.82
2004	145	2078	14.33	16.47	0-121	9	8.81	7.31-10.59

**9 week survey**

Year	Hauls	Catch	CPUE	StDev	Range	Zeros	Index	Confidence Intervals
1985	216	993	4.6	6.57	0-32	71	2.19	1.77-2.67
1986	222	1942	8.75	11.3	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	70.4	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	29.8	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	25.5	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	21.3	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	33.7	34.47	0-183	6	19.18	16.16-22.73
1999	173	10031	57.98	69.34	1-524		33.82	28.64-39.91
2000	211	4830	22.89	51.89	0-416	32	7.17	5.73-8.92
2001	208	16103	77.42	180.11	0-1711	12	26.36	21.23-32.71
2002	210	4656	22.17	25.62	0-203	6	13.30	11.43-15.44
2003	222	16116	72.59	98.42	0-624	10	31.24	25.55-38.1
2004	220	3613	16.42	18.49	0-121	11	9.86	8.46-11.49

TABLE 7

## 2004 HUDSON RIVER YOY STRIPED BASS CATCH BY STATION

Station	River mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	22	1	5	15	10	12	27	4	6	11.3
21E	23	27	0	8	15	24	24	30	32	43	22.6
17E	24	29	20	6	28	5	8	28	13	9	16.2
16E	25	2	1	11	9	6	16	25	29	20	13.2
12E	29	10	2	19	3	12	0	13	8	3	7.8
13E	29	61									61.0
14E	29	11	4	12	29	8	1	5		0	8.8
19E	33	8	15	12	25	14	18	3	12	1	12.0
11E	34	3	99	29	36	22	16	2	0	0	23.0
9E	34	12	3	30	30	68	25	23		2	24.1
7EE	35	58	22	25	36	13	14	4	0	2	19.3
7EW	35		26	13	32	12	18	5		0	15.1
8E	35	21	43	19	30	11	14	6	1	3	16.4
3E	39	16	10	20	7	3	17	2	14	1	10.0
4E	39	10	24	0	20	6	1	3	2	2	7.6
<b>West</b>											
15WS	27	5	1	2	1	6	5	8	2		3.8
16WN	27	3	2	3	11	15	19	12	15	2	9.1
14W	29	17	4	3	11	9	17	19	12	0	10.2
12W	30	13	10	2	12	10	8	2	13	5	8.3
11W	32	18	22	27	23	18	9	9	4	34	18.2
10W	35	110	29	16	27	17	2	13	19		29.1
9W	35	0	7	45	35	16	1	7	19	4	14.9
8W	36	31	62	52	115	15	27	11	18	0	36.8
7W	37	5	33	43	121	17	41	18	10	0	32.0
3W	39			26	9	14		21	10	2	13.7
4W	39	53	11				11				25.0
5W	39	62	16	33	4	5	10	8	15	9	18.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		607	467	461	684	356	334	304	252	148	
C/E		24.28	18.68	18.44	27.36	14.24	13.36	12.16	11.45	6.43	

TABLE 8

HUDSON RIVER YOY STRIPED BASS  
CPUE BY STATION 1985 - 2004, WEEKS 1 - 9

STATION	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>East</b>																				
18E	0.1	3.4	64.2	56.0	30.5	35.8	7.3	21.5	66.6	39.5	34.7	18.3	41.4	26.8	39.8	13.3	45.9	21.3	115.5	11.3
21E	0.0	1.0	70.3	23.5	111.8	70.2	1.0	24.6	89.8	42.3	59.4	46.1	26.1	44.4	38.6	12.2	27.3	9.6	108.7	22.6
17E	0.1	8.3	45.7	96.4	157.7	97.6	13.8	21.7	61.8	61.6	34.2	18.0	27.5	48.6	48.2	12.3	30.1	18.0	81.8	16.2
16E		3.0	135.0	50.1	34.5	42.6	4.7	17.0	50.7	26.6	38.7	14.3	23.2	38.8	37.8	4.6	30.1	6.2	44.1	13.2
15E		8.0	29.0	38.0	51.3	45.6	6.3		73.6				48.0	80.0	126.0	7.0	40.5		83.3	
12E	2.0	1.9	35.4	49.7	36.5	39.8	0.9	18.4	57.3	29.9	31.1	11.3	10.9	20.9	51.9	11.0	9.6	8.0	50.6	7.8
13E	3.7	4.5	93.3	14.5	12.5	31.0	24.2	19.7	55.6	14.3	82.3	13.0	44.4	22.3	47.5	4.6	24.5	26.4	58.5	61.0
14E	0.2	9.1	37.0	78.4	96.6	67.6	2.7	37.7	35.1	44.0	33.4	20.0	41.1	58.5	48.8	22.6	36.5	27.6	112.4	8.8
19E	1.7	6.0	259.5	88.8	67.6	33.1	7.0	19.8	33.1	59.7	31.8	16.5	109.8	30.4	15.2	16.0	57.8	12.8	70.3	12.0
10E	1.0												26.0							
11E	6.0	9.8	319.9	128.3	45.3	28.0	36.0	37.3	73.3	51.0	129.4	27.4	124.9	69.7	79.5	73.2	159.2	26.1	115.8	23.0
9E	1.0	6.0	47.4	37.0	42.9	57.3	17.0	35.5	73.0	55.8	14.8	23.2	54.1	40.7	92.5	18.2	50.3	15.9	124.2	24.1
7E1		10.0	54.0		1.0	17.5	1.0				52.0									
7EC	15.5																			
7EE	5.0	12.9	222.0	54.3	58.0	30.1	10.1	13.9	65.1	26.4	17.1	19.0	54.1	11.8	35.1	34.8	193.3	50.5	41.8	19.3
7EW	5.9	10.8	358.7	66.3	99.8	52.5	7.9	26.5	57.3	28.1	42.7	12.3	31.6	27.7	35.6	51.7	231.0	21.3	39.5	15.1
8E	1.2	5.0	0.0	29.0		15.3	7.0		85.3	90.0	13.3	34.7	122.4	54.0	85.3	131.1	266.3	51.9	167.8	16.4
6E	1.3	1.9	38.9	51.8	31.0															
3E	4.1	4.9	46.9	29.9	24.4	21.9	6.7	13.1	17.4	46.8	17.8	8.9	96.6	22.1	60.0	12.9	118.1	18.5		10.0
4E	7.7	6.4	38.0	42.3	30.4	40.3	15.0	27.8	33.2	21.6	13.3	16.7	78.6	18.3	47.3	7.8	217.7	25.4	24.8	7.6
5E	5.0	18.3	9.0	25.8	26.0	34.0	16.0	13.5	186.0	11.0	10.5	22.3	28.0	24.0		11.0			44.2	
20E	8.0																			
<b>West</b>																				
15WN	0.7		63.3	32.3	53.3	53.5	3.0	32.5	11.0	105.0	27.6		16.0							
15WS	4.0	7.1	145.8	109.8	63.0	159.6	45.8	32.4	80.6	57.9	22.8	8.1	153.8	56.6	149.0	13.9	48.3	17.0	98.1	3.8
16WN	4.0	15.3	53.1	89.6	62.2	162.4		22.3	48.4	11.0	20.2	5.1	79.5		81.6	5.2	69.8	12.8	60.1	9.1
16WS	3.1	16.3	20.0	149.5	25.3	82.4		6.0			51.0			15.0		24.0	16.0			
13W		16.0	25.3	21.0		3.5	20.7	13.7		5.0										
14W	4.6	10.0	93.0	65.1	55.6	64.9	40.6	20.0	76.9	24.4	26.6	12.2	36.9	29.2	54.2	19.8	70.8	19.3	77.4	10.2
12W	3.0	3.4	46.4	36.7	36.6	83.1	15.8	22.4	53.3	41.8	21.7	14.6	26.3	24.9	106.8	7.8	37.0	17.9	36.3	8.3
11W	2.8	4.9	18.7	42.8	11.2	7.0	11.6	11.9	28.7	39.9	31.1	38.2	4.0	22.0	78.6	32.3	39.2	16.9	35.4	18.2
10W	4.1	2.8	24.3	37.1	41.5	47.9	14.0	25.6	55.1	29.0	17.3	18.2	53.4	16.3	33.6	18.3	34.4	21.6	61.8	29.1
9W	5.1	6.4	25.4	96.5	37.4	39.5	6.6	21.1	20.9	32.3	20.3	12.3	41.3	30.1	26.6	11.2	20.0	12.8	44.6	14.9
8W	8.4	15.8	35.6	127.8	137.9	95.3	26.1	69.0	87.3	83.2	34.5	34.1	41.4	28.6	26.4	6.0	34.2	29.7	77.0	36.8
7W	10.6	15.7	65.7	114.1	56.6	71.0	20.9	59.5	43.2	74.2	35.6	54.3	68.3	14.3	45.8	17.5	52.0	37.6	121.1	32.0
3W		5.7																		13.7
4W	15.9	20.1	71.4	93.9	143.8	80.6	23.4	28.6	38.8	27.8	35.1	31.3	97.7	37.3	51.8	33.7	86.9	30.8	33.0	25.0
4WN											17.0									
5W	10.3	18.1	43.1	64.8	63.8	54.1	27.1	26.2	46.8	33.2	34.6	25.3	78.0	42.7	49.5	22.6	46.9	18.2	42.0	18.0
20W	11.0																			
Annual C/E	4.6	8.7	82.9	70.4	59.5	58.0	15.2	26.6	55.9	43.5	33.6	21.3	59.0	33.7	58.0	22.9	77.5	22.2	72.3	18.1

TABLE 9

HUDSON RIVER YOY STRIPED BASS  
CPUE BY STATION 1980 - 2004, WEEKS 4 - 9

STATION	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
<b>East</b>																									
18E	13.7	30.8	20.2	36.7	23.1	0.2	2.8	27.8	68.3	36.0	15.0	2.6	17.3	39.2	23.4	31.2	12.0	31.7	7.8	23.7	3.3	41.0	7.4	74.2	12.3
21E						0.0	1.0	65.5		60.5	50.8	0.8	15.7	18.5	30.0	30.8	16.3	10.5	17.3	36.3	2.0	10.2	5.0	61.3	28.0
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	31.7	60.3	14.0	12.3	19.2	35.5	18.3	1.0	22.2	14.5	61.0	15.2
16E	6.3	4.0	20.0	21.4	11.0		3.0		48.7	15.2	22.3	1.3	12.8	30.8	16.8	13.0	7.2	12.2	15.2	31.7	1.7	20.2	6.2	31.5	17.5
15E	24.0			302.6	52.8		8.0	29.0	38.0	10.0	10.0	6.3		12.5							5.0	44.0		39.5	
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	13.7	8.2	14.0	10.5	9.5	12.5	60.3	3.5	10.7	9.8	23.5	6.5
13E	6.3	4.0			11.0	4.5	4.5	46.3	17.0	12.5	31.0	8.5	12.0	12.2	9.4	18.0	8.0	20.8	11.0	33.7	0.6	26.5	29.4	31.3	
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	26.8	20.0	16.0	12.0	29.3	27.4	42.0	2.0	34.0	15.6	27.2	8.6
19E					20.7	2.2	2.8	121.8	21.3	34.2	22.8	4.8	11.5	14.8	30.5	25.4	11.3	54.8	24.2	21.7	5.8	54.3	11.2	25.7	12.2
10E																		26.0							
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	19.8	44.8	146.0	31.4	115.0	50.7	61.6	14.0	205.0	24.5	36.0	12.7
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	21.8	16.6	14.3	20.3	52.8	44.2	76.6	18.0	62.5	22.0	62.8	29.6
7E1							10.0			1.0	17.5	1.0				52.0									
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	90.0	16.8	16.0	12.5	61.7	10.0	30.2	8.2	286.8	63.2	35.2	11.5
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	57.3	25.6	47.0	10.5	36.7	33.2	27.0	17.3	327.8	12.5	39.5	13.4
8E	38.5	11.0	103.3	45.0	48.2	1.5	5.0	0.0	16.3		15.3	3.5		70.7	70.8	11.3	34.3	130.0	56.6	48.4	36.2	345.7	34.2	38.0	10.8
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	9.6	55.6	20.2	8.0	87.0	22.3	76.0	9.4	153.8	23.4		7.3
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	9.3	16.0	14.8	13.3	94.2	14.8	93.0	4.6	346.5	36.0	15.3	5.7
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		11.0	18.0	19.0		24.0						42.7
1E				5.0																					
<b>West</b>																									
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	11.0		26.7		16.0							
15WS	20.6	10.2	8.4	71.0	26.0	2.6	5.5	9.8	67.7	22.0	77.5	15.6	17.4	56.4	55.0	16.3	6.5	78.3	22.5	176.8	3.2	56.6	27.0	48.3	4.4
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	21.7	11.0	21.0	4.2	100.5		99.3	2.0	83.0	15.8	31.7	12.3
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						12.8						
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	30.7	16.8	18.2	8.8	25.5	23.3	48.5	6.7	48.8	18.7	16.3	11.3
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	8.0	37.2	12.0	8.3	14.8	13.8	134.8	3.8	28.0	21.6	25.2	8.3
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	17.2	32.3	23.3	10.5		37.0	101.8	27.2	37.5	18.4	19.0	16.2
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	24.3	17.0	13.3	11.7	47.7	17.2	13.0	5.4	47.0	14.4	40.8	15.6
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	15.3	13.8	21.4	6.8	45.6	5.5	15.2	3.2	20.2	11.3	26.0	13.7
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	35.8	38.5	24.4	17.7	36.7	13.5	16.2	5.5	53.7	20.2	26.2	31.0
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	13.8	36.8	31.5	36.5	60.2	13.7	23.0	13.0	37.3	35.8	47.7	34.5
3W	12.2	10.3	23.4	8.0			2.0																		11.2
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	15.5	17.8	40.8	24.3	71.8	19.0	103.0	8.0	90.8	38.8	10.0	11.0
4WN																17.0									
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	14.2	14.8	35.2	17.5	69.8	39.0	72.0	4.3	35.8	20.5	21.0	8.5
Annual C/E	24.0	21.5	30.5	48.1	37.1	3.9	6.1	60.7	52.3	41.9	38.0	6.9	17.3	26.5	28.5	27.3	14.7	50.3	22.9	53.0	7.8	91.4	21.5	35.0	14.2

TABLE 10

2004 HUDSON RIVER YOY STRIPED BASS  
TOTAL LENGTH FREQUENCY

TL (mm)	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
<10	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	0	0	0	0	0	0	0	0	0	0	0
20-24	3	0	1	0	0	0	0	0	0	0	4
25-29	13	1	0	0	0	0	0	0	0	0	14
30-34	32	4	0	0	0	0	0	0	0	0	36
35-39	37	2	3	0	0	0	0	0	0	0	42
40-44	65	20	4	0	0	1	0	0	0	1	90
45-49	79	24	19	1	0	0	0	0	0	1	123
50-54	68	32	26	3	2	2	1	0	0	8	134
55-59	69	35	47	8	3	4	4	2	0	21	172
60-64	50	38	52	34	10	13	6	10	3	76	216
65-69	40	55	49	64	14	22	19	19	15	153	297
70-74	26	36	37	91	26	38	44	36	21	256	355
75-79	19	43	32	69	45	59	47	25	15	260	354
80-84	8	36	33	74	48	55	47	45	18	287	364
85-89	0	29	45	46	43	33	35	28	24	209	283
90-94	0	29	27	35	28	27	27	11	15	143	199
95-99	1	14	29	31	30	23	12	22	8	126	170
100-104	1	5	22	33	20	19	17	11	6	106	134
105-109	0	1	18	20	13	9	10	16	6	74	93
110-114	0	0	9	18	17	12	9	10	6	72	81
115-119	1	0	2	13	15	2	10	5	3	48	51
120-124	0	0	1	4	6	4	3	3	2	22	23
125-129	0	0	2	1	4	4	1	4	2	16	18
130-134	0	0	0	1	6	3	1	2	3	16	16
135-139	0	0	1	0	3	1	3	1	0	8	9
140-144	0	0	0	0	1	1	2	0	0	4	4
>144	0	0	0	0	2	2	6	2	1	13	13
# Measured	512	404	459	546	336	334	304	252	148	1920	3295
Mean	52.23	68.84	75.31	82.17	90.13	85.06	86.85	86.73	86.91	85.77	77.03
StdDev	13.47	15.97	18.56	15.36	17.83	16.61	18.42	17.24	16.78	17.08	20.64

TABLE 11

AVERAGE TOTAL LENGTH (mm) OF HUDSON RIVER  
YOY STRIPED BASS, 1985 - 2004

YEAR		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9
1985	Mean	54.30	63.74	80.80	84.10	93.19	102.55	105.76	100.28	105.22
	StdDev	7.34	11.29	11.04	10.60	14.13	14.90	17.51	12.88	19.18
1986	Mean	58.03	67.05	76.08	86.55	90.21	97.18	95.60	99.56	98.75
	StdDev	7.14	10.68	13.08	11.94	11.32	15.94	14.00	22.23	16.34
1987	Mean	47.84	59.84	67.50	72.49	80.71	85.56	85.17	87.58	84.96
	StdDev	9.52	9.61	10.61	10.71	10.71	11.97	13.41	13.53	15.29
1988	Mean	41.90	51.28	59.89	73.84	80.91	84.06	88.09	85.91	86.88
	StdDev	10.56	15.28	14.67	15.53	16.32	15.82	17.16	18.63	16.43
1989	Mean	36.10	46.68	57.32	65.12	72.35	81.13	81.16	82.11	85.05
	StdDev	9.36	9.40	10.84	11.29	11.02	12.20	12.64	12.45	14.17
1990	Mean	48.94	45.95	57.52	65.00	71.59	76.17	77.46	78.28	74.82
	StdDev	23.57	15.70	14.99	13.42	13.91	13.66	13.97	14.32	16.01
1991	Mean	62.42	71.48	82.04	89.93	97.61	100.96	101.95	94.02	97.25
	StdDev	15.45	14.34	15.00	18.54	18.56	22.94	27.32	27.51	22.83
1992	Mean	46.89	57.77	65.38	72.52	82.02	85.40	91.01	89.59	89.89
	StdDev	10.82	12.47	12.31	12.60	12.08	14.46	15.25	15.26	15.57
1993	Mean	38.12	52.58	62.17	68.99	76.33	83.52	84.60	88.12	88.59
	StdDev	8.13	11.53	12.35	13.30	13.40	14.83	13.41	16.38	19.19
1994	Mean	41.26	54.56	62.11	71.21	75.99	84.01	84.08	87.83	88.93
	StdDev	8.77	10.82	11.76	13.69	14.37	15.55	13.21	14.61	13.45
1995	Mean	41.98	62.43	69.91	78.85	87.57	94.65	100.20	99.90	90.76
	StdDev	8.95	11.20	11.38	11.19	12.99	16.21	18.29	20.34	20.04
1996	Mean	44.43	51.79	58.60	66.78	81.48	86.36	88.09	84.31	83.25
	StdDev	12.02	12.45	13.49	12.25	17.56	19.53	16.02	17.03	16.46
1997	Mean	41.50	52.26	73.32	72.85	79.14	83.59	87.66	87.71	87.16
	StdDev	9.19	11.12	10.00	12.98	13.48	13.79	13.61	12.23	15.10
1998	Mean	39.28	47.88	60.56	70.46	79.73	81.81	84.88	98.30	91.93
	StdDev	11.93	12.68	11.81	14.15	11.85	15.03	13.15	15.23	15.21
1999	Mean	52.53	62.91	75.34	93.44	101.45	95.64	89.42	91.13	88.49
	StdDev	11.43	10.90	14.86	20.11	18.39	22.37	21.01	24.39	23.93
2000	Mean	41.66	47.55	53.04	62.40	71.50	73.03	79.30	71.55	70.71
	StdDev	9.93	10.77	11.76	13.27	14.35	15.40	17.53	8.06	4.92
2001	Mean	44.29	54.78	67.14	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
2002	Mean	43.74	54.62	66.58	76.66	88.13	93.25	112.83	100.98	104.25
	StdDev	12.56	15.14	17.68	19.61	17.46	18.38	22.27	21.38	21.12
2003	Mean	39.78	48.20	56.30	63.21	67.28	72.11	72.49	74.48	71.67
	StdDev	10.79	12.24	12.26	11.12	11.21	12.73	13.99	14.94	14.08
2004	Mean	52.23	68.84	75.31	82.17	90.13	85.06	86.85	86.73	86.91
	StdDev	13.47	15.97	18.56	15.36	17.83	16.61	18.42	17.24	16.78

TABLE 12

## HUDSON RIVER STRIPED BASS AGE FREQUENCIES 1985 - 2004

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0	1185	2203	9183	9322	9449	9828	3188	5796	7591	7620	5899	4190	5987	5071	5725	2916	6180	4255	7265	3295
1	84	43	27	151	144	58	154	156	108	57	245	93	87	129	118	150	168	174	63	102
2	13	3	3	6	12	9	11	7	23	5	23	5	10	15	4	11	7	12	7	4
3	0	4	0	1	0	2	3	2	6	0	5	3	2	1	0	1	0	2	1	0
4	0	3	0	1	0	0	1	4	1	3	2	0	0	1	0	0	1	0	0	0
5	1	0	2	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6	0	0	0	1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0
8	0	0	0	0	0	1	0	0	0	0	2	2	0	0	1	0	0	0	0	0
9	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0

## Tagged with USFWS Internal Anchor Tags

AGE	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004
0				0	0	0	0	0	1	0	5	0	0	0	13	0	0	0	0	0
1				50	43	27	80	83	44	13	67	40	29	46	57	33	63	98	28	20
2				4	12	8	10	6	23	4	18	3	9	14	3	6	6	12	7	4
3				1	0	2	2	2	6	0	4	2	1	1	0	1	0	2	1	0
4				1	0	0	1	4	1	3	2	0	0	1	0	0	1	0	0	0
5				0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0
6				1	0	1	0	0	0	1	0	0	0	0	1	0	0	0	0	0
7				0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8				0	0	1	0	0	0	0	2	1	0	0	1	0	0	0	0	0
9				0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10				0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0
UNK				0	0	6	0	0	0	0	0	3	0	0	1	0	0	0	0	0
<b># Tagged</b>	0	0	0	57	57	45	93	95	75	21	99	49	39	62	77	40	70	112	36	24

TABLE 13 2004 HUDSON RIVER OLDER STRIPED BASS LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	weeks 4-9	weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
<110	0	0	0	0	0	0	0	0	0	0	0
110-114	1	0	0	0	0	0	0	0	0	0	1
115-119	2	1	1	0	0	0	0	0	0	0	4
120-124	5	3	1	0	1	0	0	0	0	1	10
125-129	2	1	1	0	0	0	0	0	0	0	4
130-134	2	1	0	0	0	0	0	0	0	0	3
135-139	2	3	4	2	0	0	0	0	0	2	11
140-144	2	4	4	0	0	0	0	0	0	0	10
145-149	0	3	1	0	0	0	0	0	0	0	4
150-154	0	7	3	2	1	2	0	0	0	5	15
155-159	0	0	2	1	1	0	0	0	0	2	4
160-164	0	1	0	1	2	0	0	0	0	3	4
165-169	1	3	0	2	1	1	0	1	1	6	10
170-174	1	0	0	0	0	0	0	0	0	0	1
175-179	0	2	1	0	0	0	0	0	3	3	6
180-184	0	0	1	1	0	1	1	0	0	3	4
185-189	0	0	0	1	0	0	0	0	1	2	2
190-194	0	0	0	0	0	0	0	0	0	0	0
195-199	0	0	0	0	0	0	2	1	0	3	3
200-204	0	0	0	1	0	0	0	0	0	1	1
205-209	0	0	0	0	0	1	0	1	0	2	2
210-214	0	0	0	0	0	0	0	0	0	0	0
215-219	0	0	0	0	0	0	0	0	0	0	0
220-224	0	0	0	1	0	0	0	0	0	1	1
225-229	1	0	1	0	0	0	0	0	0	0	2
230-234	1	0	0	0	0	0	0	0	0	0	1
235-239	0	0	0	0	0	0	0	0	0	0	0
240-244	1	0	0	0	0	0	0	0	0	0	1
245-249	0	0	0	0	0	1	0	0	0	1	1
>249	0	0	0	1	0	0	0	0	0	1	1

TABLE 14

## 2004 HUDSON RIVER OLDER STRIPED BASS CATCH BY STATION

Station	River mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/F
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<u>East</u>											
18E	23	0	0	0	1	0	0	0	0	0	0.1
21E	23	0	1	0	0	0	0	0	0	0	0.1
17E	24	0	1	0	0	0	0	0	0	0	0.1
16E	25	0	1	1	0	1	1	0	0	2	0.7
12E	29	0	0	0	1	0	0	0	1	0	0.2
13E	29	0									0.0
14E	29	1	4	0	1	0	1	0		0	0.9
19E	33	1	4	0	2	1	0	0	0	2	1.1
11E	34	4	8	1	2	0	2	2	1	0	2.2
9E	34	4	0	1	0	1	0	0		0	0.8
7EE	35	5	1	2	1	0	0	0	0	0	1.0
7EW	35		0	8	4	0	0	0		0	1.7
8E	35	0	0	0	1	0	0	0	0	0	0.1
3E	39	0	1	0	0	0	0	1	0	0	0.2
4E	39	0	1	0	0	0	0	0	0	0	0.1
<u>West</u>											
15WS	27	2	1	0	0	1	2	0	0		0.8
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	0	0	0	0	0	0	0	0	0.0
12W	30	0	0	0	0	0	0	0	0	0	0.0
11W	32	0	3	2	0	0	0	0	0	1	0.7
10W	35	1	0	0	0	0	0	0	1		0.3
9W	35	0	2	1	0	1	0	0	0	0	0.4
8W	36	0	1	1	0	0	0	0	0	0	0.2
7W	37	3	0	1	0	1	0	0	0	0	0.6
3W	39			2	0	0		0	0	0	
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		21	29	20	13	6	6	3	3	5	
C/E		0.84	1.16	0.80	0.52	0.24	0.24	0.12	0.14	0.22	

TABLE 15

## 2004 HUDSON RIVER YOY WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1 July 19-20	Week 2 Aug 10	Week 3 Aug. 24	Week 4 Sept. 7	Week 5 Sept. 20	Week 6 Oct. 4	Week 7 Oct. 18	Week 8 Nov. 1	Week 9 Nov. 15	C/E
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
13E	29	12									12.0
14E	29	0	0	0	0	1	0	0		0	0.1
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	1	1	0	0	1	1	0	0	0.4
9E	34	0	0	0	0	0	1	1		0	0.3
7EE	35	1	0	0	0	0	5	2	0	0	0.9
7EW	35		0	0	0	0	5	0		0	0.7
8E	35	9	30	23	23	0	0	2	0	2	9.9
3E	39	0	1	0	14	0	9	11	4	5	4.9
4E	39	0	0	3	0	0	0	0	2	1	0.7
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	0	0	0	0	0	1	0	1	0	0.2
14W	29	4	2	1	0	0	3	0	0	0	1.1
12W	30	2	13	9	8	5	0	8	9	2	6.2
11W	32	0	0	0	0	0	1	2	2	5	1.1
10W	35	6	7	8	3	4	2	6	6		5.3
9W	35	0	0	0	0	0	0	1	1	0	0.2
8W	36	0	3	3	4	0	1	6	4	0	2.3
7W	37	0	5	5	4	1	4	8	2	0	3.2
3W	39			0	0	0		0	0	1	0.2
4W	39	0	29				3				10.7
5W	39	0	0	0	1	1	3	33	23	4	7.2
Effort		25	25	25	25	25	25	25	22	23	
Catch		34	91	53	57	12	39	81	54	20	
C/E		1.28	3.64	2.12	2.28	0.48	2.08	3.32	2.64	0.91	

TABLE 16

## 2004 HUDSON RIVER OLDER WHITE PERCH CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	1	0	0	0	1	2	13	1	0	2.0
21E	23	0	0	0	0	1	2	0	4	0	0.8
17E	24	0	0	2	5	2	1	13	0	0	2.6
16E	25	0	0	1	0	6	0	8	9	0	2.7
12E	29	2	0	3	5	2	0	2	1	0	1.7
13E	29	2									2.0
14E	29	0	1	0	1	0	1	0		0	0.4
19E	33	0	1	0	0	0	0	0	0	0	0.1
11E	34	7	3	0	0	0	6	3	0	0	2.1
9E	34	0	15	0	0	1	0	0		0	2.0
7EE	35	113	26	10	9	0	9	0	0	2	18.8
7EW	35		40	26	26	0	6	0		0	14.0
8E	35	3	15	7	2	0	0	0	0	0	3.0
3E	39	4	21	29	0	0	2	0	0	1	6.3
4E	39	3	39	0	2	6	0	0	0	2	5.8
<b>West</b>											
15WS	27	23	0	0	1	0	0	0	0		3.0
16WN	27	17	0	5	11	1	0	0	1	0	3.9
14W	29	0	8	4	3	0	1	1	0	0	1.9
12W	30	15	10	3	0	0	0	7	2	0	4.1
11W	32	0	2	9	1	0	0	2	0	0	1.6
10W	35	4	17	6	0	0	0	0	0		3.4
9W	35	0	1	0	0	0	0	0	0	0	0.1
8W	36	2	13	8	0	0	2	0	0	0	2.8
7W	37	10	0	16	2	3	2	0	0	0	3.7
3W	39			4	0	0		0	0	0	0.7
4W	39	1	0				2				1.0
5W	39	7	42	4	4	0	0	9	0	0	7.3
Effort		25	25	25	25	25	25	25	22	23	
Catch		214	254	137	72	23	36	58	18	5	
C/E		8.56	10.16	5.48	2.88	0.92	1.44	2.32	0.82	0.22	

TABLE 17

## 2004 HUDSON RIVER ATLANTIC TOMCOD CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	1	0.1
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
13E	29	0									0.0
14E	29	0	0	0	0	0	0	0		0	0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35		0	0	0	0	0	0		0	0.0
8E	35	0	0	0	0	0	0	0	0	0	0.0
3E	39	0	1	0	1	0	0	0	0	0	0.2
4E	39	0	0	0	0	0	0	0	0	0	0.0
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	0	0	0	0	0	0	0	1	0	0.1
14W	29	3	1	0	0	0	1	0	0	0	0.6
12W	30	10	0	3	3	2	0	0	0	0	2.0
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	21	0	0	1	0	0	1	0		2.9
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	0	0		0	0	0	0.0
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		34	2	3	5	2	1	1	1	1	
C/E		1.36	0.08	0.12	0.20	0.08	0.04	0.04	0.05	0.04	

TABLE 18

## 2004 HUDSON RIVER ATLANTIC TOMCOD LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
<10	0	0	0	0	0	0	0	0	0	0	0
10-14	0	0	0	0	0	0	0	0	0	0	0
15-19	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	1	0	0	0	0	0	0	0	0	0	1
55-59	0	0	0	0	0	0	0	0	0	0	0
60-64	1	0	0	1	0	0	0	0	0	1	2
65-69	1	1	0	0	0	0	0	0	0	0	2
70-74	5	0	1	1	0	0	0	0	0	1	7
75-79	9	0	0	0	0	0	1	0	0	1	10
80-84	7	0	0	1	0	0	0	0	0	1	8
85-89	3	1	1	0	1	0	0	0	0	1	6
90-94	3	0	0	1	0	1	0	0	0	2	5
95-99	1	0	0	0	0	0	0	0	1	1	2
100-104	0	0	0	0	0	0	0	0	0	0	0
105-109	0	0	0	1	1	0	0	0	0	2	2
110-114	0	0	1	0	0	0	0	0	0	0	1
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	1	0	1	1
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
>144	0	0	0	0	0	0	0	0	0	0	0
Measured	31	2	3	5	2	1	1	1	1	11	47
Mean	78.9	78.0	88.3	82.2	97.5	92	78	134	96	91.5	82.4
StdDev	9.0	12.7	20.2	17.2	12.0					19.6	13.7

TABLE 19

## 2004 HUDSON RIVER AMERICAN EEL CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	3	0	0	0	0	0	0	0	0	0.3
21E	23	0	0	0	0	0	0	0	1	0	0.1
17E	24	0	3	0	0	0	0	0	0	0	0.3
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
13E	29	3									3.0
14E	29	1	0	0	0	0	0	0		0	0.1
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	1	1	0	1	0	0	0	0	0	0.3
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	1	0	0	0	0	0	0	0	0	0.1
7EW	35		0	0	0	0	0	0		0	0.0
8E	35	0	2	1	2	0	0	0	0	0	0.6
3E	39	0	1	0	0	0	0	0	0	0	0.1
4E	39	0	11	0	0	1	0	0	0	0	1.3
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	1	0	1	0	0	0	0	0	0	0.2
14W	29	0	1	1	2	0	0	0	1	0	0.6
12W	30	1	2	0	1	2	1	1	0	0	0.9
11W	32	0	0	0	0	0	0	1	0	3	0.4
10W	35	1	2	1	0	0	0	2	0		0.8
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	4	0	0	0	0	0	0	0.4
7W	37	1	0	1	1	1	0	0	0	0	0.4
3W	39			0	0	0		0	0	0	0.0
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		13	23	9	7	4	1	4	2	3	
C/E		0.52	0.92	0.36	0.28	0.16	0.04	0.16	0.09	0.13	

TABLE 20

## 2004 HUDSON RIVER AMERICAN EEL LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 60	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	1	1	1
100 - 119	0	0	1	1	0	0	0	0	0	1	2
120 - 139	1	1	3	1	0	0	1	0	1	3	8
140 - 159	1	6	1	0	1	1	1	1	0	4	12
160 - 179	1	2	2	1	1	0	2	0	0	4	9
180 - 199	0	2	0	0	0	0	0	0	0	0	2
200 - 219	1	0	0	0	0	0	0	0	0	0	1
220 - 239	1	2	0	0	0	0	0	0	0	0	3
240 - 259	1	1	0	0	0	0	0	0	0	0	2
260 - 279	0	3	0	1	0	0	0	0	0	1	4
280 - 299	0	0	0	0	0	0	0	0	0	0	0
300 - 319	0	1	0	1	0	0	0	0	0	1	2
320 - 339	1	0	1	0	0	0	0	0	0	0	2
340 - 359	0	0	0	0	0	0	0	0	0	0	0
360 - 379	0	1	0	0	0	0	0	0	0	0	1
380 - 399	0	1	0	0	0	0	0	0	0	0	1
400 - 419	0	0	0	0	0	0	0	1	0	1	1
420 - 439	0	0	0	0	1	0	0	0	0	1	1
440 - 459	0	0	0	0	0	0	0	0	0	0	0
460 - 479	1	0	0	1	0	0	0	0	0	1	2
480 - 499	0	0	0	0	0	0	0	0	0	0	0
500 - 519	0	0	0	0	0	0	0	0	1	1	1
520 - 539	0	0	0	0	0	0	0	0	0	0	0
540 - 559	1	1	0	0	1	0	0	0	0	1	3
560 - 579	1	0	0	0	0	0	0	0	0	0	1
580 - 599	0	0	0	1	0	0	0	0	0	1	1
600 - 619	1	0	0	0	0	0	0	0	0	0	1
620 - 639	1	1	0	0	0	0	0	0	0	0	2
640 - 659	1	0	0	0	0	0	0	0	0	0	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
> 699	0	0	0	0	0	0	0	0	0	0	0
Measured	13	22	8	7	4	1	4	2	3	21	64
Mean	377.7	246.0	162.5	290.1	321.3	155.0	156.8	270.0	242.0	255.4	265.4
StDev	198.6	132.5	70.8	182.2	201.0		21.2	183.8	233.0	164.3	163.1

TABLE 21

## 2004 HUDSON RIVER YOY BLUEFISH CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	7	0	0	0	1	3	0	0	0	1.2
21E	23	9	0	1	0	1	0	1	0	0	1.3
17E	24	5	2	3	2	0	0	0	0	0	1.3
16E	25	0	2	1	7	1	0	0	0	0	1.2
12E	29	1	1	0	4	0	0	1	0	0	0.8
13E	29	2									2.0
14E	29	4	4	1	0	0	0	1		0	1.3
19E	33	5	2	0	0	0	0	0	0	0	0.8
11E	34	2	2	1	0	0	0	0	0	0	0.6
9E	34	1	3	1	0	0	0	0		0	0.6
7EE	35	2	1	0	2	0	0	1	0	0	0.7
7EW	35		1	0	0	0	0	0		0	0.1
8E	35	2	1	3	0	0	0	1	0	0	0.8
3E	39	2	1	0	0	0	0	0	0	0	0.3
4E	39	0	0	0	2	0	0	0	0	0	0.2
<b>West</b>											
15WS	27	1	19	0	0	0	0	0	0		2.5
16WN	27	3	0	1	2	1	0	0	0	0	0.8
14W	29	4	1	0	0	0	0	0	0	0	0.6
12W	30	9	0	0	0	0	0	0	0	0	1.0
11W	32	0	3	0	9	0	0	0	0	0	1.3
10W	35	1	3	1	2	0	0	0	0		0.9
9W	35	3	0	0	1	0	0	0	0	0	0.4
8W	36	2	0	0	0	0	0	0	0	0	0.2
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	1	0		0	0	0	0.2
4W	39	2	2				0				1.3
5W	39	2	1	0	0	0	0	0	0	0	0.3
Effort		25	25	25	25	25	25	25	22	23	
Catch		69	49	13	32	4	3	5	0	0	175
C/E		2.76	1.96	0.52	1.28	0.16	0.12	0.20	0.00	0.00	

TABLE 22

## 2004 HUDSON RIVER BLUEFISH LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 65	0	0	0	0	0	0	0	0	0	0	0
65 - 69	0	0	0	0	0	0	0	0	0	0	0
70 - 74	0	1	0	0	0	0	0	0	0	0	1
75 - 79	0	1	1	0	0	0	0	0	0	0	2
80 - 84	0	1	0	0	0	0	0	0	0	0	1
85 - 89	0	0	0	0	0	0	0	0	0	0	0
90 - 94	0	0	1	0	1	0	0	0	0	1	2
95 - 99	2	0	0	7	1	0	0	0	0	8	10
100 - 104	8	0	0	4	1	0	0	0	0	5	13
105 - 109	8	1	0	1	0	0	0	0	0	1	10
110 - 114	13	1	0	5	0	0	0	0	0	5	19
115 - 119	10	2	0	0	0	0	0	0	0	0	12
120 - 124	7	2	0	1	0	0	0	0	0	1	10
125 - 129	4	1	0	0	0	0	0	0	0	0	5
130 - 134	4	2	0	0	1	0	1	0	0	2	8
135 - 139	5	4	0	1	0	0	0	0	0	1	10
140 - 144	1	3	0	0	0	0	0	0	0	0	4
145 - 149	2	4	0	0	0	1	0	0	0	1	7
150 - 154	1	2	1	0	0	0	1	0	0	1	5
155 - 159	2	1	1	0	0	0	1	0	0	1	5
160 - 164	0	0	0	1	0	0	0	0	0	1	1
165 - 169	0	0	3	2	0	2	1	0	0	5	8
170 - 174	0	2	0	0	0	0	0	0	0	0	2
175 - 179	0	2	1	3	0	0	0	0	0	3	6
180 - 184	1	1	0	2	0	0	0	0	0	2	4
185 - 189	0	0	1	2	0	0	0	0	0	2	3
190 - 194	0	0	1	2	0	0	0	0	0	2	3
195 - 199	0	0	0	1	0	0	0	0	0	1	1
200 - 204	0	0	0	0	0	0	0	0	0	0	0
205 - 209	0	0	0	0	0	0	0	0	0	0	0
210 - 214	0	0	0	0	0	0	0	0	0	0	0
215 - 219	0	0	1	0	0	0	0	0	0	0	1
220 - 224	0	0	0	0	0	0	0	0	0	0	0
225 - 229	0	0	1	0	0	0	1	0	0	1	2
230 - 234	0	0	0	0	0	0	0	0	0	0	0
235 - 239	0	1	0	0	0	0	0	0	0	0	1
240 - 244	0	0	0	0	0	0	0	0	0	0	0
245 - 249	0	0	0	0	0	0	0	0	0	0	0
250 - 254	0	0	0	0	0	0	0	0	0	0	0
255 - 259	0	0	0	0	0	0	0	0	0	0	0
260 - 264	0	0	1	0	0	0	0	0	0	0	1
265 - 269	0	0	0	0	0	0	0	0	0	0	0
>269	0	0	0	0	0	0	0	0	0	0	0
#measured	68	32	13	32	4	3	5	0	0	44	157
Mean	119.8	139.1	172.7	136.0	106.3	159.7	166.6			138.4	133.3
StDev	16.0	32.5	50.1	38.9	18.9	11.0	36.0			38.3	33.8

TABLE 23

## 2004 HUDSON RIVER WINTER FLOUNDER CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	6	3	3	0	0	0	0	0	4	1.8
21E	23	3	2	4	0	0	0	2	4	5	2.2
17E	24	5	4	7	0	0	0	4	0	7	3.0
16E	25	7	0	1	0	0	0	4	6	6	2.7
12E	29	3	0	1	0	1	0	0	0	1	0.7
13E	29	0									0.0
14E	29	3	0	1	0	0	0	0		0	0.5
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35		0	0	0	0	0	0		0	0.0
8E	35	0	0	0	0	0	0	0	0	0	0.0
3E	39	0	0	0	0	0	0	0	0	0	0.0
4E	39	0	0	0	0	0	0	0	0	0	0.0
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	0	0	0	0	1	0	0	0	1	0.2
14W	29	0	0	0	0	0	0	0	0	0	0.0
12W	30	0	0	0	0	0	0	0	0	0	0.0
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	0	0	0	0	0	0	0	0		0.0
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	0	0		0	0	0	0.0
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		27	9	17	0	2	0	10	10	24	
C/E		1.08	0.36	0.68	0.00	0.08	0.00	0.40	0.45	1.04	

TABLE 24

## 2004 HUDSON RIVER WINTER FLOUNDER LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	1	0	0	0	0	0	0	0	0	0	1
45 - 49	1	0	0	0	1	0	0	0	0	1	2
50 - 54	4	0	0	0	0	0	0	0	0	0	4
55 - 59	5	0	2	0	0	0	0	0	0	0	7
60 - 64	4	0	3	0	0	0	0	0	1	1	8
65 - 69	7	1	3	0	0	0	2	1	0	3	14
70 - 74	2	3	2	0	0	0	1	1	1	3	10
75 - 79	1	1	2	0	1	0	1	1	1	4	8
80 - 84	1	3	3	0	0	0	0	0	1	1	8
85 - 89	1	0	2	0	0	0	0	1	3	4	7
90 - 94	0	0	0	0	0	0	1	1	2	4	4
95 - 99	0	0	0	0	0	0	1	1	2	4	4
100 - 104	0	0	0	0	0	0	1	0	4	5	5
105 - 109	0	0	0	0	0	0	0	1	1	2	2
110 - 114	0	0	0	0	0	0	0	0	2	2	2
115 - 119	0	0	0	0	0	0	0	0	1	1	1
120 - 124	0	0	0	0	0	0	0	0	1	1	1
125 - 129	0	0	0	0	0	0	1	0	0	1	1
130 - 134	0	0	0	0	0	0	0	0	0	0	0
135 - 139	0	0	0	0	0	0	2	0	1	3	3
140 - 144	0	0	0	0	0	0	0	1	0	1	1
145 - 149	0	0	0	0	0	0	0	1	0	1	1
150 - 154	0	0	0	0	0	0	0	0	1	1	1
155 - 159	0	0	0	0	0	0	0	0	0	0	0
160 - 164	0	0	0	0	0	0	0	0	1	1	1
165 - 169	0	0	0	0	0	0	0	0	0	0	0
170 - 174	0	0	0	0	0	0	0	1	0	1	1
175 - 179	0	0	0	0	0	0	0	0	0	0	0
180 - 184	0	0	0	0	0	0	0	0	1	1	1
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
> 199	0	1	0	0	0	0	0	0	0	0	1
Measured	27	9	17	0	2	0	10	10	24	46	99
Mean	62.3	90.6	71.2		61.0		97.4	105.9	106.1	102.2	84.9
StDev	10.3	44.8	9.6		19.8		27.2	35.9	28.7	30.4	30.8

TABLE 25

## 2004 HUDSON RIVER AMERICAN SHAD CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	2	0	0.2
17E	24	0	0	0	0	0	0	1	0	3	0.4
16E	25	0	0	0	0	0	2	1	6	0	1.0
12E	29	0	0	0	0	3	0	12	128	2	16.1
13E	29	7									7.0
14E	29	0	0	0	0	0	0	0		0	0.0
19E	33	0	0	4	0	0	0	0	7	0	1.2
11E	34	3	0	0	0	0	2	0	0	0	0.6
9E	34	0	0	0	0	0	4	24		0	3.5
7EE	35	0	0	0	1	0	2	0	0	0	0.3
7EW	35		0	0	0	0	1	0		0	0.1
8E	35	0	15	24	10	0	8	9	0	0	7.3
3E	39	0	0	0	0	2	4	0	1	0	0.8
4E	39	0	1	1	0	1	5	1	3	1	1.4
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	0	0	0	0	2	0	0	1	0	0.3
14W	29	0	0	0	0	0	0	0	5	0	0.6
12W	30	15	0	0	0	0	0	0	0	0	1.7
11W	32	9	0	0	0	0	0	0	3	0	1.3
10W	35	0	0	0	0	0	3	3	5		1.4
9W	35	0	0	0	1	13	0	1	9	2	2.9
8W	36	0	0	0	0	0	1	7	7	0	1.7
7W	37	0	0	0	0	0	0	2	3	0	0.6
3W	39			1	0	0		1	0	0	0.3
4W	39	0	0				0				0.0
5W	39	0	0	0	0	1	0	0	0	0	0.1
Effort		25	25	25	25	25	25	25	22	23	
Catch		34	16	30	12	22	32	62	180	8	
C/E		1.36	0.64	1.20	0.48	0.88	1.28	2.48	8.18	0.35	

TABLE 26

## 2004 HUDSON RIVER AMERICAN SHAD LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	3	0	1	0	0	0	0	0	0	0	4
65 - 69	10	0	0	0	0	0	0	0	0	0	10
70 - 74	16	5	0	1	0	0	0	1	0	2	23
75 - 79	4	9	1	1	0	0	3	1	1	6	20
80 - 84	1	2	5	0	0	1	2	14	2	19	27
85 - 89	0	0	12	4	1	2	6	11	2	26	38
90 - 94	0	0	10	3	3	10	11	8	2	37	47
95 - 99	0	0	0	2	8	12	15	1	1	39	39
100 - 104	0	0	1	1	8	6	18	0	0	33	34
105 - 109	0	0	0	0	2	1	3	0	0	6	6
110 - 114	0	0	0	0	0	0	2	0	0	2	2
115 - 119	0	0	0	0	0	0	1	0	0	1	1
120 - 124	0	0	0	0	0	0	1	0	0	1	1
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
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	34	16	30	12	22	32	62	36	8	172	252
Mean	70.5	75.9	86.9	89.7	98.3	95.7	96.2	85.4	86.8	93.2	88.3
StDev	4.2	3.5	6.9	8.1	4.6	4.8	8.7	4.9	6.4	8.2	11.2

TABLE 27

## 2004 HUDSON RIVER ALEWIFE CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	3	0	0	0.3
21E	23	0	0	0	0	0	0	1	0	0	0.1
17E	24	0	0	0	0	0	0	0	0	0	0.0
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	0	0	0	0	0	0	0	0.0
13E	29	6									6.0
14E	29	0	0	0	0	0	0	0		0	0.0
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	0	0	0	0	0.0
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35		0	0	0	0	0	0		0	0.0
8E	35	0	24	1	6	5	7	14	0	0	6.3
3E	39	0	0	0	0	0	0	0	0	0	0.0
4E	39	0	0	0	0	0	3	0	0	0	0.3
<b>West</b>											
15WS	27	0	0	0	0	0	0	0	0		0.0
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	2	0	0	0	0	0	0	0	0.2
12W	30	2	0	0	0	1	0	0	1	0	0.4
11W	32	0	0	0	0	0	0	0	0	0	0.0
10W	35	0	0	0	0	3	0	1	0		0.5
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	1	0	0	0	0	0.1
3W	39			0	0	0		0	0	0	0.0
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	1	0	0	0.1
Effort		25	25	25	25	25	25	25	22	23	
Catch		8	26	1	6	10	10	20	1	0	
C/E		0.32	1.04	0.04	0.24	0.40	0.40	0.80	0.05	0.00	

TABLE 28

## 2004 HUDSON RIVER ALEWIFE LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	4	0	0	0	0	0	0	0	0	0	4
70 - 74	0	7	0	0	1	0	0	0	0	1	8
75 - 79	0	4	0	0	0	0	0	0	0	0	4
80 - 84	0	10	1	1	0	1	2	0	0	4	15
85 - 89	1	1	0	2	3	4	4	0	0	13	15
90 - 94	0	3	0	0	3	4	5	0	0	12	15
95 - 99	0	0	0	2	2	1	6	0	0	11	11
100 - 104	0	0	0	1	0	0	3	1	0	5	5
105 - 109	0	0	0	0	0	0	0	0	0	0	0
110 - 114	0	1	0	0	1	0	0	0	0	1	2
115 - 119	0	0	0	0	0	0	0	0	0	0	0
120 - 124	1	0	0	0	0	0	0	0	0	0	1
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
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	8	26	1	6	10	10	20	1	0	47	82
Mean	75.5	80.2	83.0	91.8	91.4	90.0	92.7	103.0		92.0	86.5
StDev	20.4	9.0		6.4	10.1	4.1	6.0			6.8	11.4

TABLE 29

## 2004 HUDSON RIVER BLUEBACK HERRING CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	0	0	0	0	0	0	0	0	14	1.6
16E	25	0	0	0	0	0	0	0	0	1	0.1
12E	29	0	0	0	0	0	0	39	0	0	4.3
13E	29	0									0.0
14E	29	0	0	0	0	0	0	0		4	0.5
19E	33	0	0	0	0	0	0	0	0	0	0.0
11E	34	0	0	0	0	0	1	3	0	0	0.4
9E	34	0	0	1	0	0	0	0	0	0	0.1
7EE	35	0	0	0	0	0	0	2	0	0	0.2
7EW	35		0	0	0	0	0	4		0	0.6
8E	35	0	0	0	5	0	16	0	6	0	3.0
3E	39	0	0	0	0	0	4	0	0	0	0.4
4E	39	0	0	0	0	0	34	0	0	1	3.9
<b>West</b>											
15WS	27	0	29	0	0	0	0	0	0		3.6
16WN	27	0	0	0	0	0	0	0	0	0	0.0
14W	29	0	28	0	0	0	0	0	0	0	3.1
12W	30	0	0	0	0	0	1	0	0	0	0.1
11W	32	0	0	0	0	0	0	5	0	0	0.6
10W	35	0	0	1	0	2	10	0	7		2.5
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	0	0		2	6	0	1.3
4W	39	0	0				0				0.0
5W	39	0	0	0	0	0	0	3	26	0	3.2
Effort		25	25	25	25	25	25	25	22	23	
Catch		0	57	2	5	2	66	58	45	20	
C/E		0.00	2.28	0.08	0.20	0.08	2.64	2.32	2.05	0.87	

TABLE 30

## 2004 HUDSON RIVER BLUEBACK HERRING LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	1	1	0	0	0	0	0	0	0	2
35 - 39	0	11	1	0	0	0	0	0	0	0	12
40 - 44	0	16	0	0	0	0	0	0	0	0	16
45 - 49	0	2	0	0	0	0	0	0	0	0	2
50 - 54	0	1	0	0	0	0	0	4	0	4	5
55 - 59	0	0	0	2	0	1	0	4	1	8	8
60 - 64	0	0	0	2	0	10	8	21	5	46	46
65 - 69	0	0	0	0	2	18	18	15	3	56	56
70 - 74	0	0	0	0	0	15	18	1	6	40	40
75 - 79	0	0	0	1	0	11	3	0	2	17	17
80 - 84	0	0	0	0	0	5	0	0	2	7	7
85 - 89	0	0	0	0	0	2	1	0	1	4	4
90 - 94	0	0	0	0	0	0	1	0	0	1	1
95 - 99	0	0	0	0	0	0	0	0	0	0	0
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
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	0	31	2	5	2	62	49	45	20	183	216
Mean		41.00	34.00	62.60	66.50	70.89	69.20	62.36	69.80	67.9	63.8
StDev		3.57	4.24	8.20	2.12	6.45	5.79	4.69	7.41	6.9	11.8

TABLE 31

## 2004 HUDSON RIVER ATLANTIC MENHADEN CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	0	0	0	0	0	0	0	0	0.0
17E	24	1	0	0	0	0	0	0	0	1	0.2
16E	25	0	0	0	0	0	0	0	0	0	0.0
12E	29	0	0	1	0	0	1199	0	0	2	133.6
13E	29	0									0.0
14E	29	0	0	0	0	0	0	0		0	0.0
19E	33	0	0	0	0	0	1	0	0	0	0.1
11E	34	0	0	0	0	0	0	142	0	1175	146.3
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	0	0	0	0	0	0	0	0	0.0
7EW	35		0	0	0	0	722	9		0	104.4
8E	35	0	0	1	0	0	2	9	5933	0	660.6
3E	39	0	0	0	0	0	0	0	0	0	0.0
4E	39	0	0	0	0	0	0	0	0	0	0.0
<b>West</b>											
15WS	27	1	581	0	0	0	0	0	0		72.8
16WN	27	0	2	0	0	3	1	0	0	0	0.7
14W	29	0	0	0	0	2	0	0	0	0	0.2
12W	30	5	0	0	0	0	0	9	0	0	1.6
11W	32	0	2	0	0	0	0	0	0	0	0.2
10W	35	0	0	0	0	0	5	0	0		0.6
9W	35	0	0	0	0	0	1	0	0	0	0.1
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	1	0	0	0	0	0	0.1
3W	39			0	0	0		0	0	0	0.0
4W	39	0	6				0				2.0
5W	39	0	0	0	0	0	0	0	0	0	0.0
Effort		25	25	25	25	25	25	25	22	23	
Catch		7	591	2	1	5	1931	169	5933	1178	
C/E		0.28	23.64	0.08	0.04	0.20	77.24	6.76	269.68	51.22	

TABLE 32

## 2004 HUDSON RIVER ATLANTIC MENHADEN LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	1	3	0	0	0	0	0	0	0	0	4
35 - 39	0	11	0	0	0	0	0	0	0	0	11
40 - 44	0	14	0	0	0	0	0	0	0	0	14
45 - 49	0	13	0	0	0	0	0	0	1	1	14
50 - 54	0	1	0	0	0	1	0	0	0	1	2
55 - 59	0	0	0	0	0	2	1	0	0	3	3
60 - 64	0	0	2	0	0	1	0	0	0	1	3
65 - 69	0	0	0	0	0	1	0	1	1	3	3
70 - 74	0	0	0	0	1	2	4	3	3	13	13
75 - 79	0	0	0	1	1	0	1	1	0	4	4
80 - 84	0	0	0	0	2	2	4	4	4	16	16
85 - 89	0	0	0	0	1	1	6	1	7	16	16
90 - 94	1	0	0	0	0	5	4	5	5	19	20
95 - 99	1	0	0	0	0	15	4	5	9	33	34
100 - 104	1	0	0	0	0	5	1	3	4	13	14
105 - 109	0	0	0	0	0	2	1	6	0	9	9
110 - 114	0	0	0	0	0	2	1	1	0	4	4
115 - 119	0	0	0	0	0	0	0	0	0	0	0
120 - 124	0	0	0	0	0	1	0	0	0	1	1
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
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	4	42	2	1	5	40	27	30	34	137	185
Mean	82.0	41.8	62.0	76.0	79.8	91.4	86.2	92.2	88.4	89.3	78.0
StDev	32.1	4.6	2.8		7.0	15.4	12.5	12.6	11.9	13.3	23.4

TABLE 33

## 2004 HUDSON RIVER ATLANTIC SILVERSIDE CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	18	119	4	149	12	13	5	7	0	36.3
21E	23	114	44	48	105	30	25	0	13	1	42.2
17E	24	139	127	498	338	16	0	38	0	22	130.9
16E	25	7	126	11	45	22	26	8	7	5	28.6
12E	29	26	163	2	162	72	0	28	20	9	53.6
13E	29	75									75.0
14E	29	65	6	12	31	28	2	10		1	19.4
19E	33	46	82	27	502	127	0	6	12	0	89.1
11E	34	99	722	36	7	16	51	29	37	0	110.8
9E	34	56	206	425	733	93	0	9		21	192.9
7EE	35	69	64	109	372	0	0	7	1	1	69.2
7EW	35		42	0	179	6	0	0		14	34.4
8E	35	223	316	162	466	266	2	8	3	1	160.8
3E	39	28	17	114	1	34	0	2	3	2	22.3
4E	39	1	47	0	23	35	0	0	0	0	11.8
<b>West</b>											
15WS	27	30	1264	118	86	150	44	43	46		222.6
16WN	27	24	27	41	33	13	2	33	4	1	19.8
14W	29	4	6	73	180	17	44	15	13	3	39.4
12W	30	65	414	530	270	20	32	13	31	4	153.2
11W	32	0	19	17	98	0	0	0	7	1	15.8
10W	35	42	34	10	74	0	0	1	5		20.8
9W	35	115	8	8	117	12	0	0	0	2	29.1
8W	36	64	224	2	16	0	0	2	9	0	35.2
7W	37	77	80	363	142	11	0	1	3	0	75.2
3W	39			15	0	0		4	2	0	3.5
4W	39	72	3				0				25.0
5W	39	45	4	46	8	11	0	0	9	0	13.7
Effort		25	25	25	25	25	25	25	22	23	
Catch		1504	4164	2671	4137	991	241	262	232	88	
C/E		60.16	166.56	106.84	165.48	39.64	9.64	10.48	10.55	3.83	

TABLE 34

## 2004 HUDSON RIVER ATLANTIC SILVERSIDE LENGTH FREQUENCY

TL	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Weeks 4-9	Weeks 1-9
	July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15		
< 25	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	4	0	0	0	0	0	0	0	0	0	4
45 - 49	13	0	0	0	1	0	0	0	0	1	14
50 - 54	6	0	3	1	0	2	0	0	0	3	12
55 - 59	6	2	4	3	0	3	0	0	0	6	18
60 - 64	8	3	15	6	3	7	2	1	1	20	46
65 - 69	4	11	16	12	4	8	4	0	1	29	60
70 - 74	9	13	11	11	9	12	14	10	7	63	96
75 - 79	9	14	9	7	12	7	11	18	13	68	100
80 - 84	3	5	4	6	17	10	6	9	13	61	73
85 - 89	0	2	2	4	10	10	10	16	18	68	72
90 - 94	0	0	1	0	2	2	6	6	20	36	37
95 - 99	0	0	0	0	0	2	6	5	10	23	23
100 - 104	0	0	0	0	0	1	3	2	3	9	9
105 - 109	0	0	0	0	0	1	1	0	1	3	3
110 - 114	0	0	0	0	0	0	0	1	0	1	1
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
> 149	0	0	0	0	0	0	0	0	0	0	0
Measured	62	50	65	50	58	65	63	68	87	391	568
Mean	61.0	72.5	68.4	71.1	77.6	75.5	81.3	83.2	85.7	79.8	75.8
StDev	12.7	6.9	8.5	8.7	8.4	11.7	10.7	9.2	8.7	10.7	12.3

TABLE 35

## 2004 HUDSON RIVER YOY BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	10	2	2	0	0	0	1.6
21E	23	0	2	2	1	6	0	0	0	0	1.2
17E	24	0	1	0	3	3	0	0	0	0	0.8
16E	25	3	0	1	2	2	2	0	0	0	1.1
12E	29	0	0	0	1	1	0	0	0	0	0.2
13E	29	0									0.0
14E	29	1	0	0	0	1	0	0		0	0.3
19E	33	0	0	0	0	0	1	0	0	0	0.1
11E	34	0	0	0	0	0	1	0	0	0	0.1
9E	34	0	0	0	0	0	1	0		0	0.1
7EE	35	1	0	0	0	0	0	0	0	0	0.1
7EW	35		0	0	0	0	0	0		0	0.0
8E	35	0	0	0	0	1	1	0	0	0	0.2
3E	39	0	0	0	0	0	1	0	0	0	0.1
4E	39	2	1	0	0	0	0	0	0	0	0.3
<b>West</b>											
15WS	27	1	0	0	0	3	0	0	0		0.5
16WN	27	0	0	0	0	0	0	1	0	0	0.1
14W	29	1	0	0	0	0	1	0	0	0	0.2
12W	30	0	0	0	0	5	2	0	0	0	0.8
11W	32	0	4	0	0	2	0	0	0	0	0.7
10W	35	0	0	0	0	0	1	0	0		0.1
9W	35	0	0	0	0	0	0	0	0	0	0.0
8W	36	0	0	0	0	0	0	0	0	0	0.0
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	0	0		0	0	0	0.0
4W	39	3	0				0				1.0
5W	39	1	0	0	1	0	0	0	0	0	0.2
Effort		25	25	25	25	25	25	25	22	23	
Catch		13	8	3	18	26	13	1	0	0	
C/E		0.52	0.32	0.12	0.72	1.04	0.52	0.04	0.00	0.00	

TABLE 36

## 2004 HUDSON RIVER OLDER BLUE CRAB CATCH BY STATION

Station	River Mile	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	C/E
		July 19-20	Aug 10	Aug. 24	Sept. 7	Sept. 20	Oct. 4	Oct. 18	Nov. 1	Nov. 15	
<b>East</b>											
18E	23	0	0	0	0	0	0	0	0	0	0.0
21E	23	0	2	4	0	0	0	0	0	0	0.7
17E	24	1	0	1	1	0	0	0	0	0	0.3
16E	25	1	1	4	1	0	0	0	0	0	0.8
12E	29	1	1	2	3	0	0	0	0	0	0.8
13E	29	5									5.0
14E	29	0	0	0	0	0	0	0		0	0.0
19E	33	0	1	0	0	1	0	0	0	0	0.2
11E	34	0	6	0	0	0	0	0	0	0	0.7
9E	34	0	0	0	0	0	0	0		0	0.0
7EE	35	0	5	5	4	0	0	0	0	0	1.6
7EW	35		3	13	0	0	1	0		0	2.4
8E	35	4	0	0	1	1	0	0	0	0	0.7
3E	39	1	0	2	0	0	1	0	0	0	0.4
4E	39	0	1	0	0	0	0	0	0	0	0.1
<b>West</b>											
15WS	27	0	0	0	0	1	0	0	0		0.1
16WN	27	2	0	1	2	2	0	2	0	0	1.0
14W	29	1	0	0	0	2	0	0	0	0	0.3
12W	30	0	1	4	0	0	2	0	0	0	0.8
11W	32	0	0	2	2	2	0	0	0	0	0.7
10W	35	0	0	0	0	0	0	0	0		0.0
9W	35	0	0	4	0	0	0	0	0	0	0.4
8W	36	0	0	1	0	0	0	0	0	0	0.1
7W	37	0	0	0	0	0	0	0	0	0	0.0
3W	39			0	0	0		0	0	0	0.0
4W	39	2	3				0				1.7
5W	39	0	2	1	0	0	0	0	0	0	0.3
Effort		25	25	25	25	25	25	25	22	23	
Catch		18	26	44	14	9	4	2	0	0	
C/E		0.72	1.04	1.76	0.56	0.36	0.16	0.08	0.00	0.00	

FIGURE 1

NYS DEC YOY STRIPED BASS SEINE STATIONS

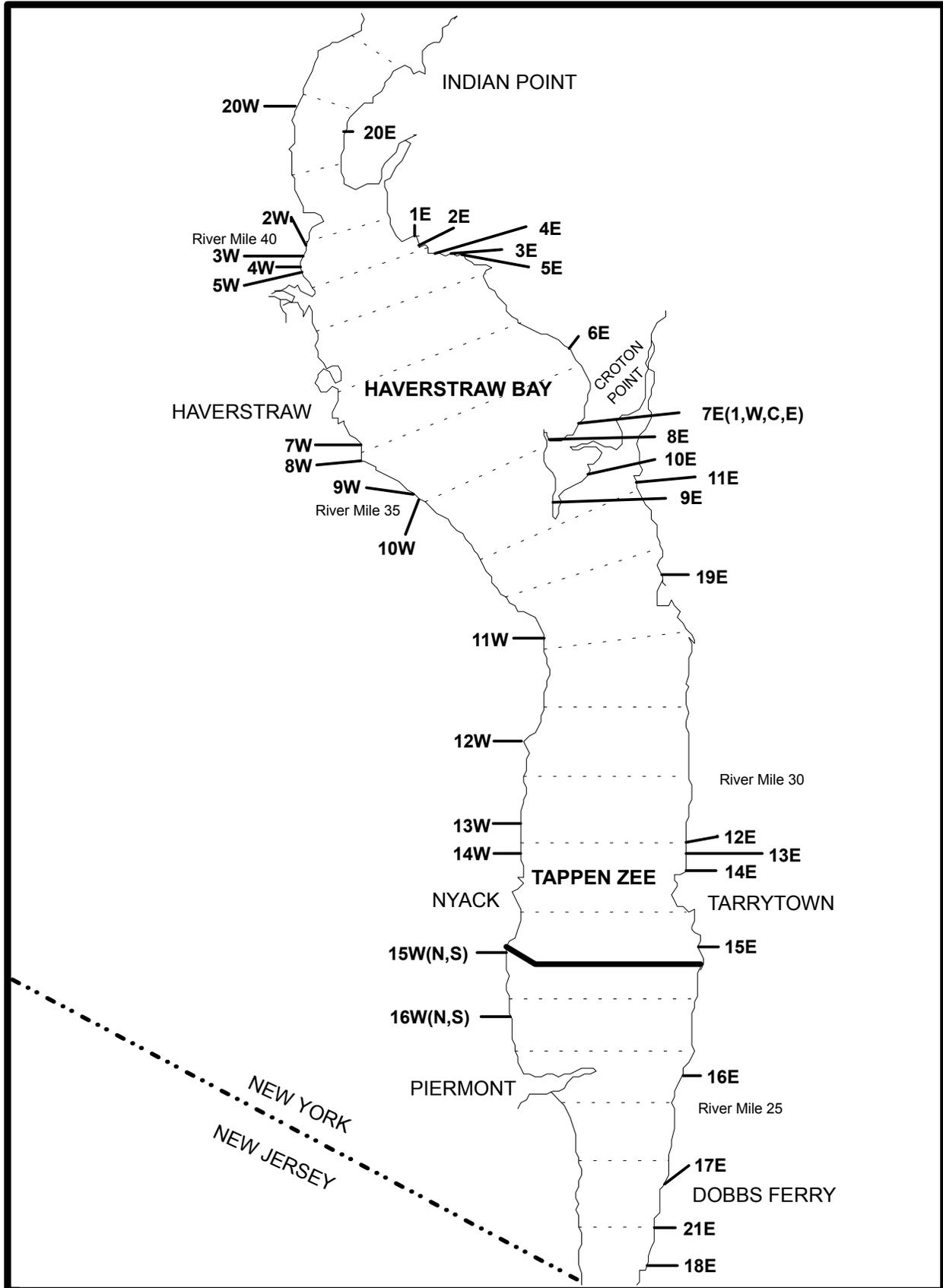


FIGURE 2

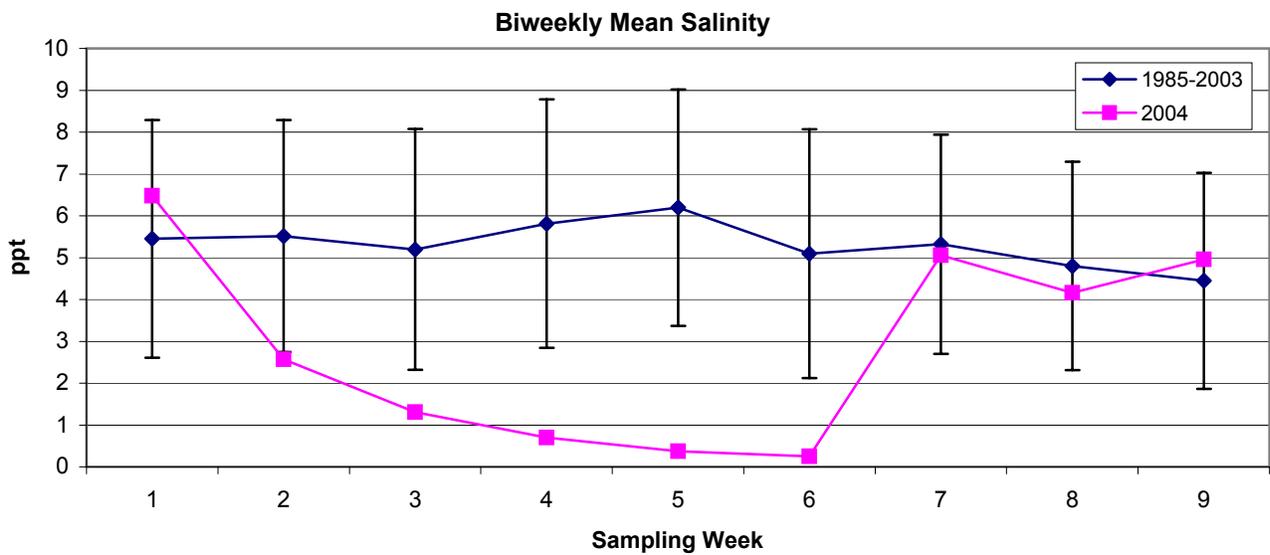
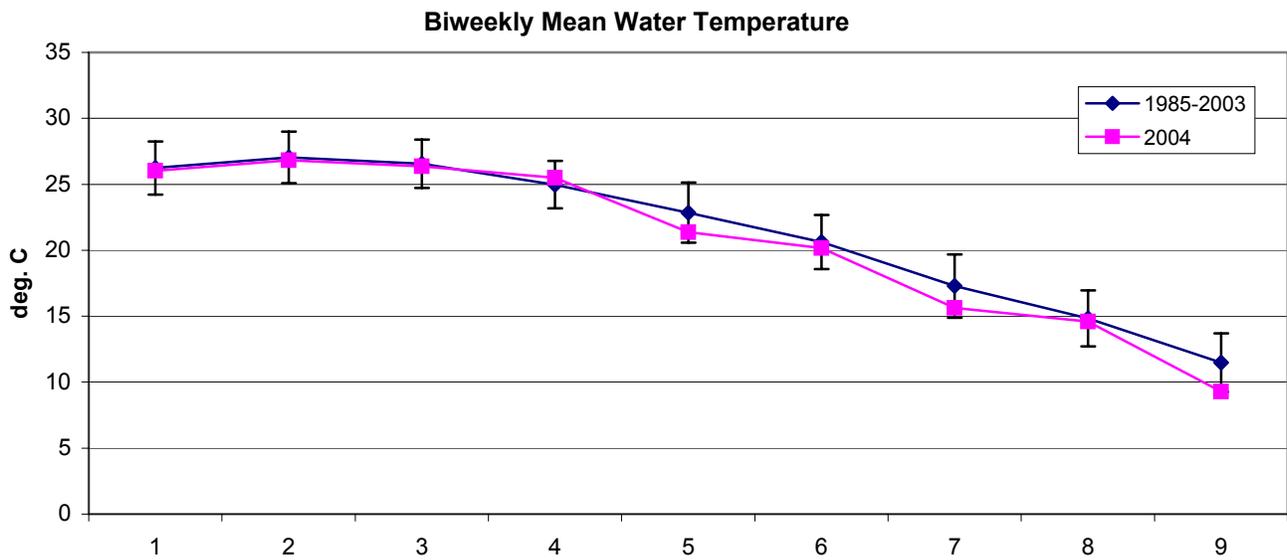
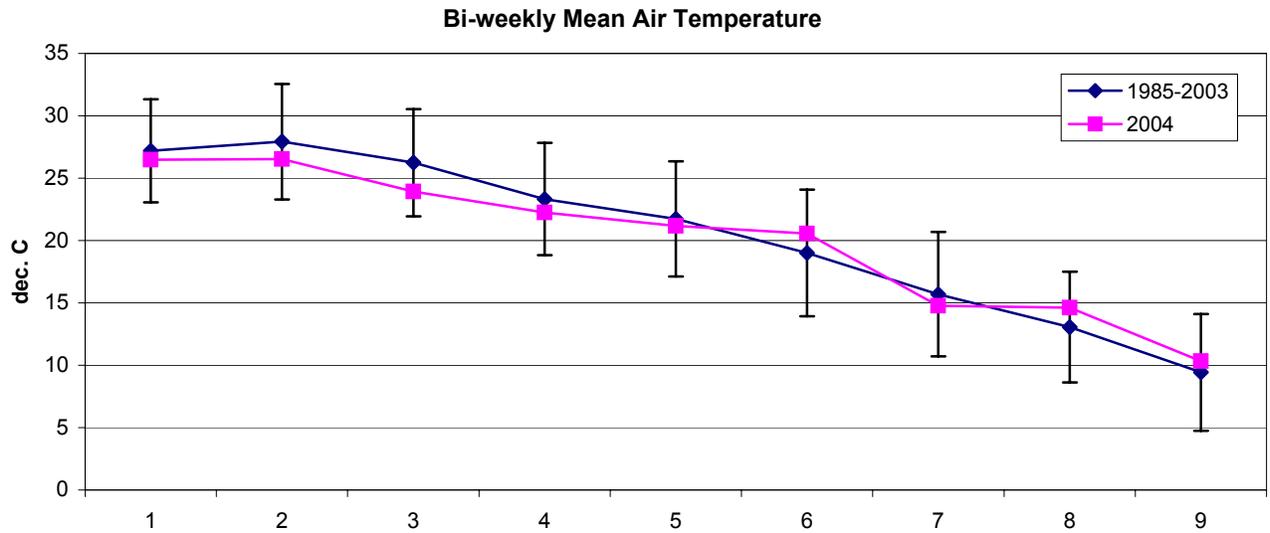


FIGURE 3

### Hudson River YOY Striped Bass Index of Abundance (weeks 4 - 9)

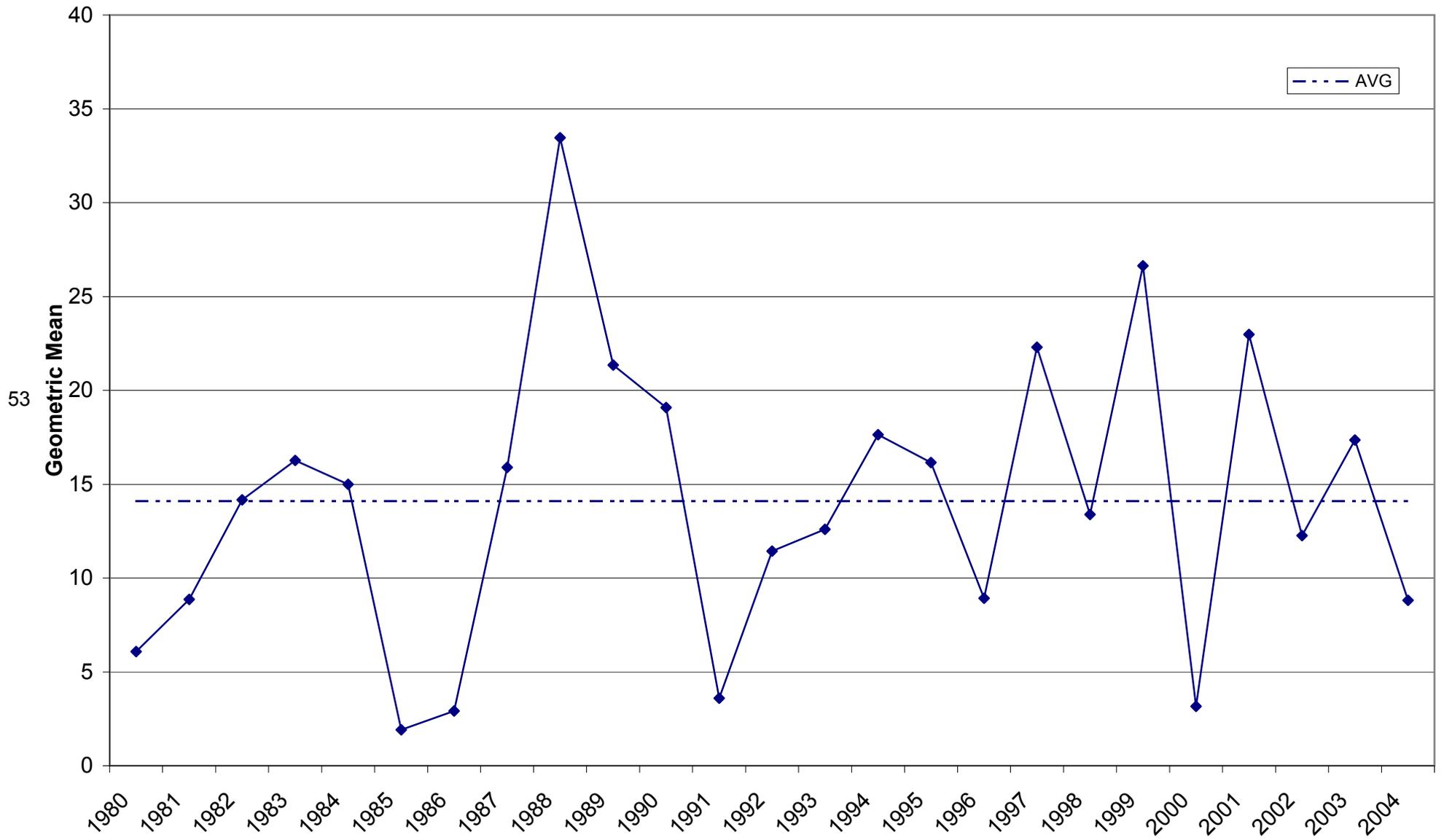


FIGURE 4

### 2004 Hudson River YOY Striped Bass Growth

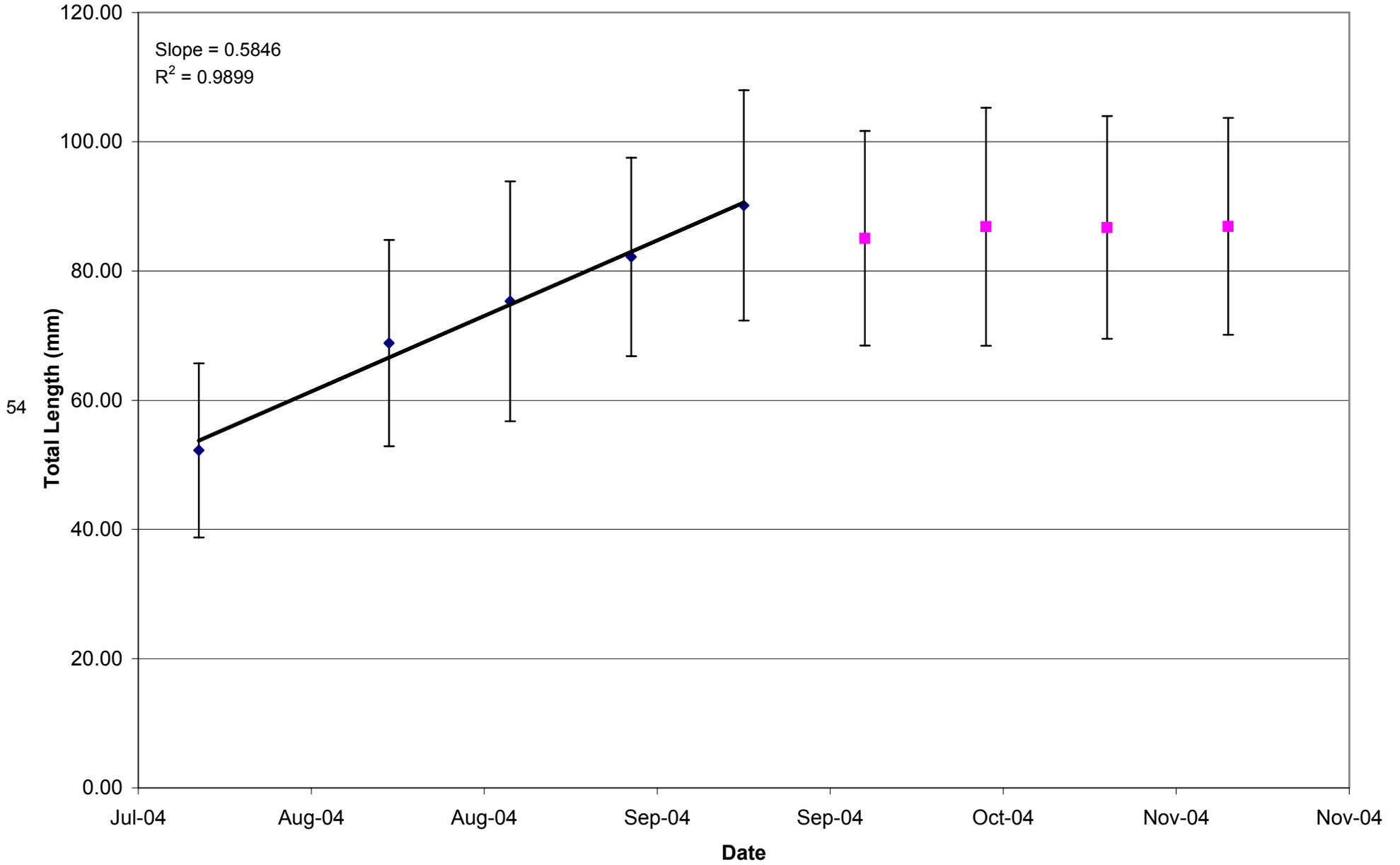


FIGURE 5

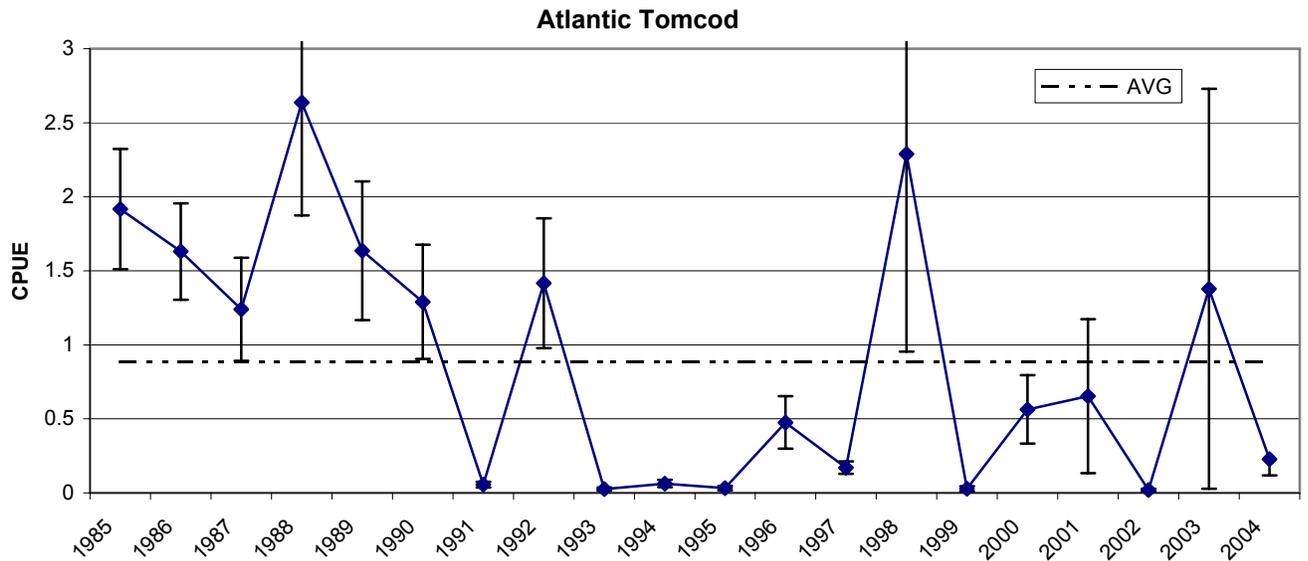
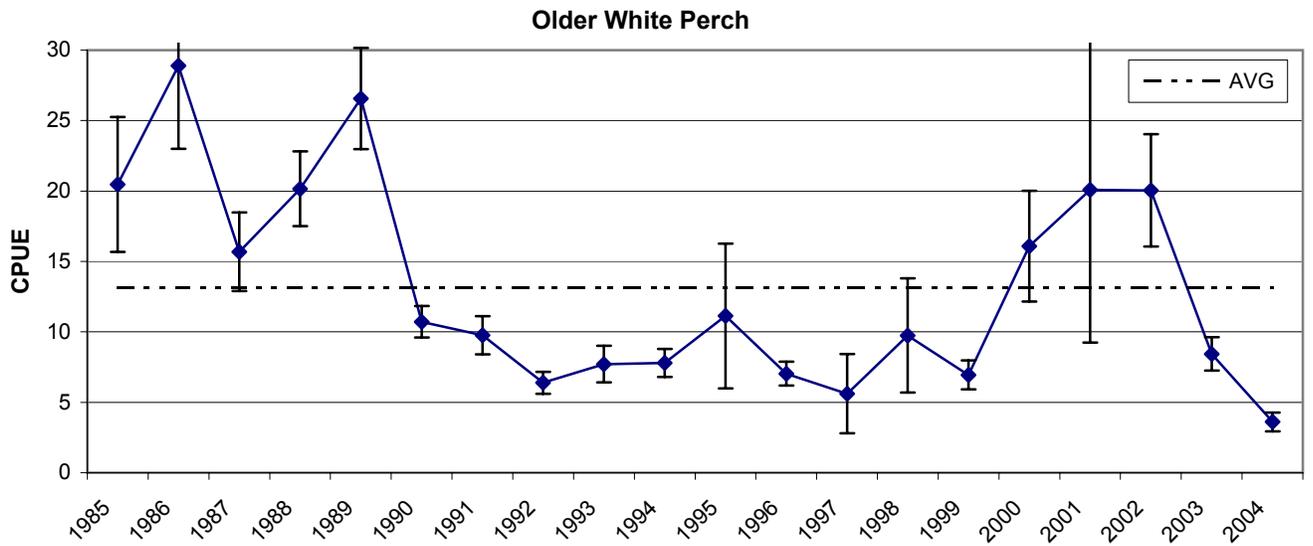
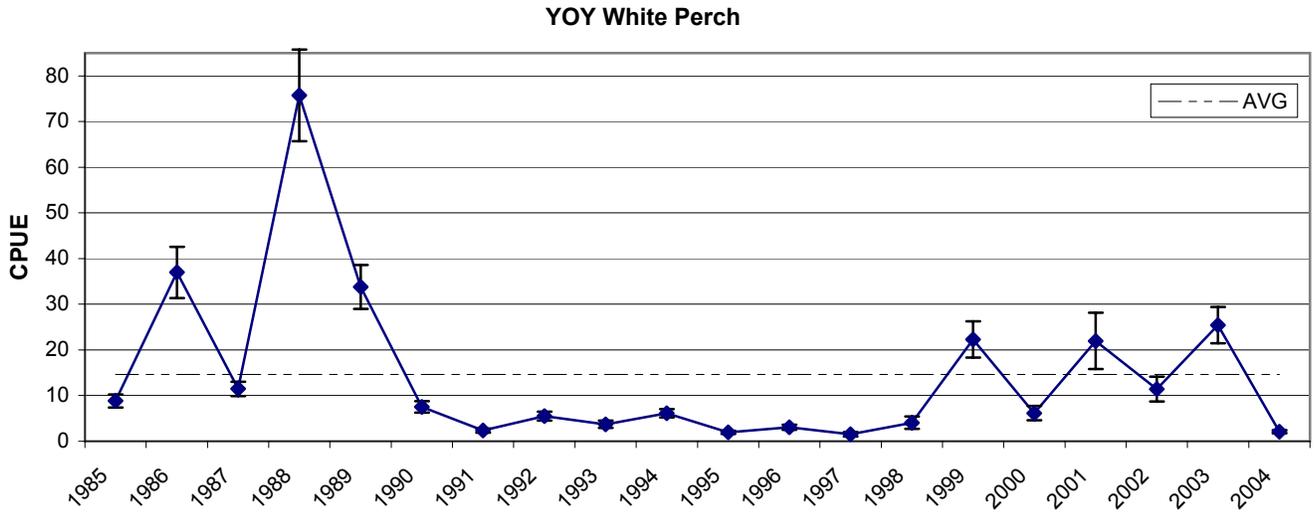


FIGURE 6

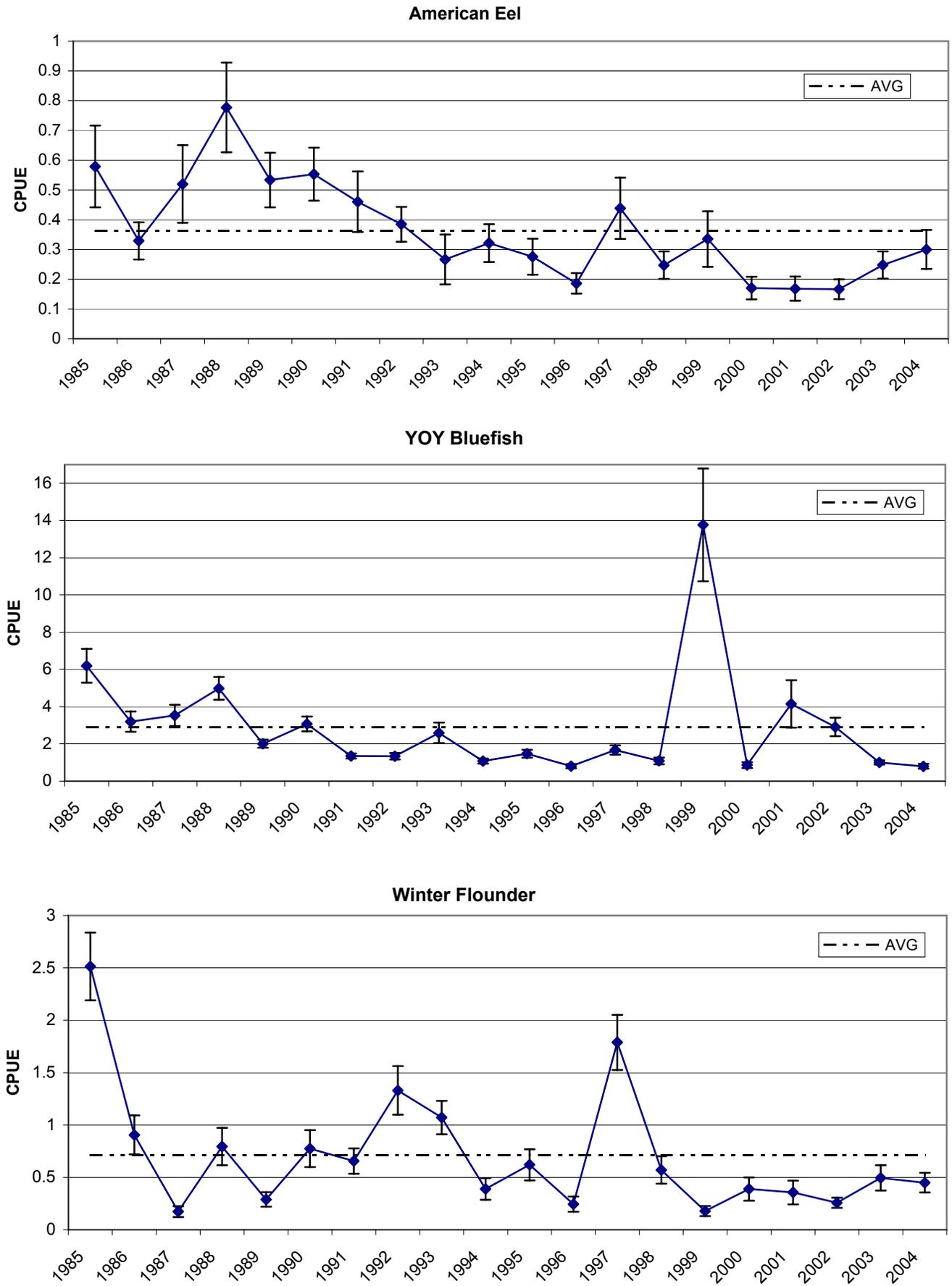


FIGURE 7

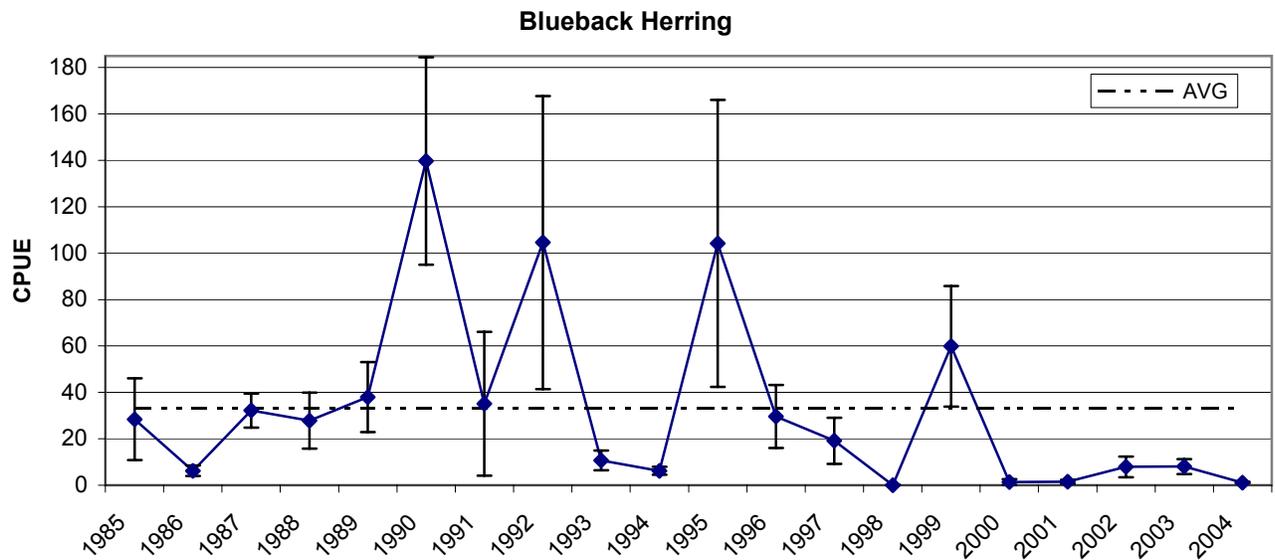
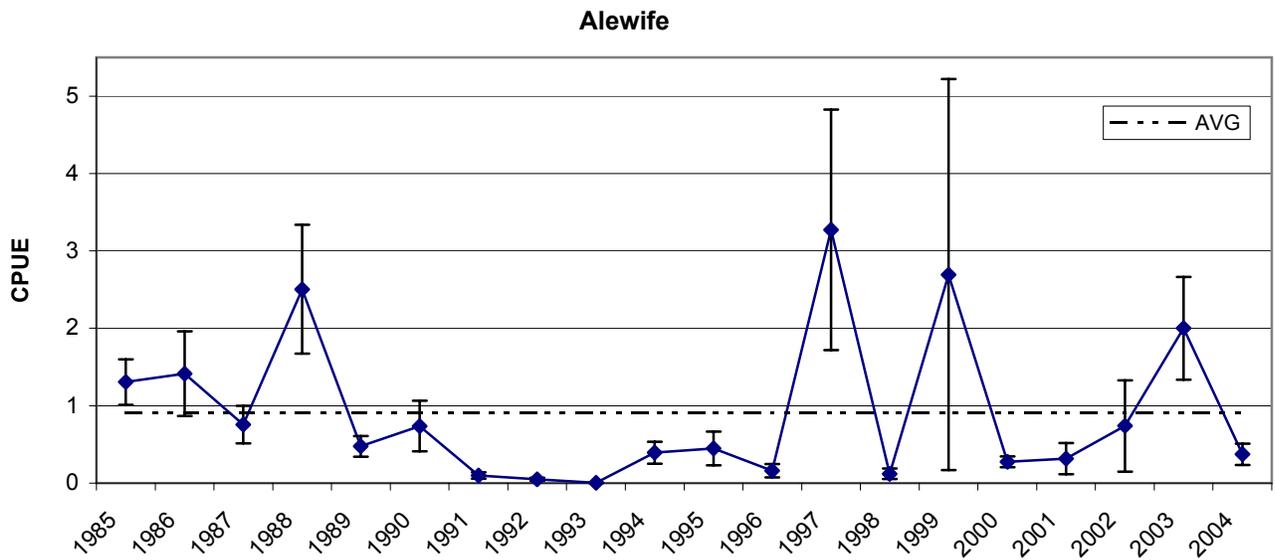
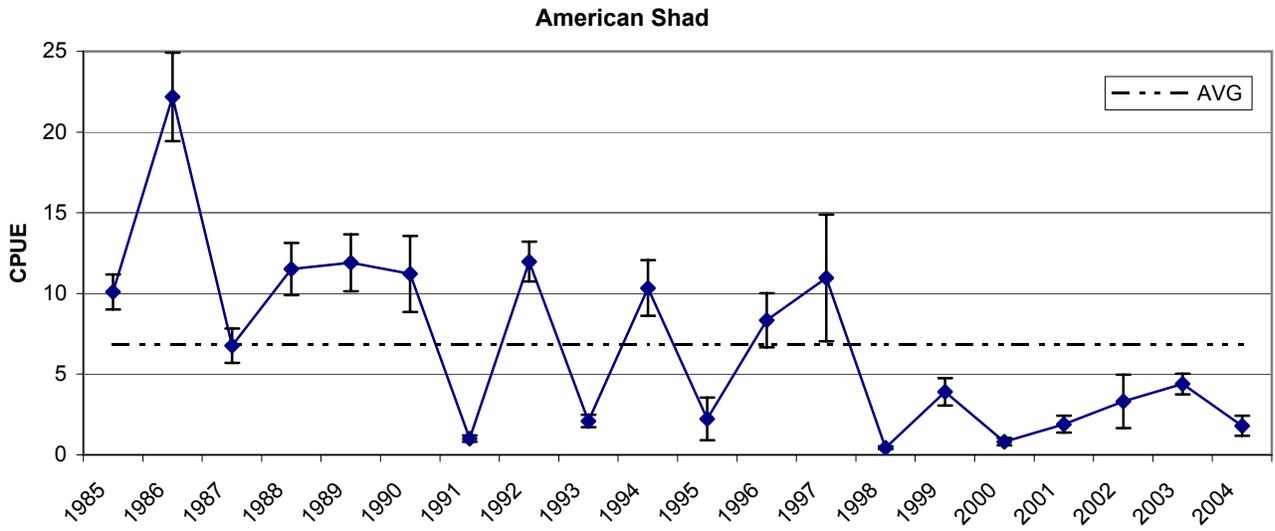


FIGURE 8

