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Potomac River Pound-Net Survey
Summer 1996

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1996
Annual Report

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POTOMAC RIVER POUND-NET SURVEY

History

The pound net (Fig 1) is a fixed fishing structure that intercepts fish as they migrate up- or down-river. Fish weirs made of stakes were first used by the Native Americans along the east coast of the English Colonies and were the model for the later development of the pound net. Pound nets were first used in New England around 1850; and were subsequently introduced to Long Island in 1855. A Captain Henry Fitzgerald is reported to have erected the first Chesapeake Bay pound net in 1858, but it failed due to its poor construction. No further attempts were made to use this gear until 1870. At this time two New Jersey fishermen successfully fished a pound net in the James River. A second net was erected in 1875 in the Mobjack Bay, and was so successful that the local fishermen destroyed it. The design of the net was passed around among the fishermen and by 1876 there were 12 nets. So great was the profit that by 1880 there were 162 nets in Virginia (Reid 1955, Austin 1987). The design of the gear has changed little over the years; and during the period between the World Wars the number of nets in the Chesapeake Bay exceeded 2,000. Since the mid-1950's the numbers have declined. June (1956) cited competition with the otter trawl after the mid-1950's as one reason for a general decline in pound nets in the Mid-Atlantic Bight states.

The pound net has been an important fishing device in the Potomac River for as long as it has existed in the Chesapeake Bay. Records maintained by the PRFC since 1963 (Fig 2) show a decline in the number of nets from over 120 nets to less than 100 during the late 1960's-early

1970's coincident with the period of declining food fish catches, a recovery during the 1970-mid 1980's to 110-130, then a drop to less than 100 as a result of the striped bass moratorium (1989). A limited entry management regime, instituted in 1994, has resulted in a constant 100 nets. The number of watermen fishing pound nets increased from less than 30 to more than 50 during the 1970-1980 period in concert with the increase in nets, decreased after 1985 to around 40 as a result of tightening regulations, and has remained fairly constant since (Fig 2) .

Chesapeake Bay pound nets have always taken a combination of "scrap" and food fish (June 1956, McHugh 1960). The relative species composition from year-to-year has varied in concert with the fluctuations in abundance of the species and environmental variability (for example the 1996 hurricanes). During the 1960's scup (porgy) and butterfish were common pound net catches as were croaker, weakfish, and striped bass (rockfish). Through the late 1960's and early 1970's the catch of shad, scup and butterfish dropped off as the mid-Atlantic stocks declined. Dramatic increases in the Chesapeake Bay striped bass stock in the late 1960's-early 1970's resulted in increased landings Bay-wide, including in the Potomac River (Boreman and Austin 1984). This was followed by an equally dramatic decline in striped bass landings through the late 1970's and ending in a Potomac River moratorium in 1989. Throughout the entire period however, menhaden have been the leading catch. The "scrapfish" component of the fishery in the 1950-1960's (menhaden, herrings, small spot and croaker) has been supplanted by today's more lucrative baitfish harvest of menhaden.

The PRFC, in response to the Atlantic Coastal Cooperative Fisheries Conservation and

Management Act of 1994 (PL 103-206) initiated a two year pound net monitoring program (1996-1997). This program, the first year of data which are reported here, has collected data on the size distribution of the dominant species in the catch. For several abundant species weight data were also collected. Length frequencies were also determined on shipboard for fish that were released due to size or season.

This survey had the following goals: (1) collect length and weight data on fishes captured in pound nets in the Potomac River; (2) collect length data of fish captured and released or discarded at-sea; and (3) establish length weight relations in summary statistics to provide baseline data.

Sampling protocol

Sampling was initiated during April 1996, and ran through October 1996 (Table 1-5). A list of pound-net fishermen and processing houses was provided to us by the PRFC and contacts were made by phone. Initially, and until the sampling protocol was established, only one house was used for convenience. In spite of continued phone contacts we were unable to locate actively fishing "up-river" net stands. The catch from several nets fished in mid- and down-river (Fig 3) were sold at the same houses in the Callao region. Fishing effort was suspended in July and September with the passage of hurricanes *Bertha* (12 July) and *Fran* (4 September). Effort was reduced through September and October primarily due to a drop in prices and market demand, although some watermen ceased fishing after hurricane *Fran*.

Efforts were made to visit the seafood houses at least weekly. Seafood houses specializing in both food- and bait-fish are visited each trip. Most of the pound-net fishing effort that we sampled during the 1996 season was concentrated in the lower river in the area of Herring Point, MD to Hull Creek, VA., Fig 3) and catches were commonly brought to either Pride of Virginia Seafood (Mundy Point, VA) or O'Biers Seafood (Hyacinth, VA). We concentrated our sampling efforts in these two establishments.

No "at-sea" samples were secured until 2 July, in the lower river (Table 5). In this instance we removed those fish from the catch that were recognized as out-of-season (weakfish) or undersized (striped bass, croaker, and bluefish). They were removed on a non-interference basis as they were brailed from the net to the hold of the boat. Fish were measured for fork length and returned to the water. Several additional trips were "blown-out" by the weather.

Sampling procedures in this survey are based largely on those of Chittenden (1989) who performed a similar survey with Atlantic croaker captured in the Potomac River. Pound nets (described fully in Chittenden 1986) are fished by watermen at slack tide in the morning. After the catch has been boated and run to shore, it is unloaded and sorted by species and size at seafood processing houses. Sorted fish are boxed and stored on ice before being shipped to their final destination. Our sampling is done either (1) after fish are sorted, or (2) after fish are boxed, depending on the sampling site, fish species, and the amount of time available to us before fish are loaded and shipped.

Actual sampling followed in this manner: watermen responsible for the catch were identified in order to pinpoint the location of their net(s) and to ensure that the catch was from the Potomac River. A random box or basket of sorted fish was taken aside and the species and size grouping of fish in the box recorded. A "size grouping" is the coded number penciled on the side of the box by seafood house employees to identify the general size of the fish in the box ("small", "medium" or "large"). The date (Table 2), location, (i.e. the seafood house at which data were being collected), and box number (e.g. the first, second, etc. box of each species measured) were also recorded. Individual fish in the box were then measured.

Measuring equipment consists of an electronic fish measuring board (LIMNOTERRA®), an electronic scale, and a laptop computer. Both the scale and the measuring board were connected to the computer so that length and weight data were simultaneously transmitted to the computer and stored. A database program originally written for the VIMS juvenile finfish survey organized the stored data for easy retrieval. Fish were removed from the box one at a time and placed on the measuring board. A magnetic wand was placed at the fork of the caudal fin and magnetic sensors within the board recorded the length of the fish to the nearest millimeter and transmitted these data to the computer. A wood meter-length measuring board was carried as a back-up, and when used the data were transcribed, then entered into the file upon return to the lab.

Weights of the individual fish were taken from a random sample of the fish measured in each box. Every fifth, sixth, seventh, or eighth fish, depending on the predicted number of fish in

the box, was placed on the scale and weighed after its length was recorded. This protocol resulted in weights for 10 to 20% of the fish in the box (and a minimum sample size of 10 fish per box). Because fish were placed in boxes en masse and removed from boxes randomly, it was assumed that weighing fish in this manner resulted in a random sample from each box. Length and weight measurements proceeded until every fish in the box had been sampled. Effort was made to sample two to three boxes from each size grouping of each species, if they are available. Species that had not been sampled recently (due to availability) took precedence over those for which adequate data had been collected. It should be noted that we modified the length frequency program for graphing length data generated by the measuring boards so that it would print the weight data in a similar format. It did, but in a histogram, and for whatever reason, plotted a "phantom fish" at weight zero. These zero-weight fish in the weight graphs should be ignored. There is a metric millimeter to inch conversion table (Table 6).

Results

The results are presented by species for the length (Table 3) and weight (Table 4) frequencies and length-weight curves for fish taken in fish houses. At-sea by-catch results (Table 5) are also by species. Total Potomac River commercial catch is presented in graphic form for each species since 1964, as are pound-net landings since 1981. Length frequencies and weight frequencies are presented for each species for which sufficient data were collected to make graphing meaningful; and length-weight curves are presented for those species for which there were sufficient data.

Landings Data

Anguillidae

American eel, *Anguilla rostrata* (Figs 4-5)

Eel were only taken in May (N=36), ranging from 326 to 870 mm (12.8 to 34 in). The average was 521 mm (20.5 in).

Clupeidae - herrings

Alewife and Blueback herring, *Alosa pseudoharengus* and *A. aestivalis* (Figs 6-8)

Blueback herring were only taken during April and May. These fish were probably "down run" after having completed spawning (Loesch 1987). A total of 69 were measured for length and 15 were weighed. They ranged in size from 175 to 254 mm, averaging 227 mm (Fig 7). While there are slight differences in growth rates, both by species and sex, fish averaging 220-230 mm are generally age four and have just completed their first spawn (Loesch 1987). A length-weight plot for the 15 fish with weights is shown in Fig 8.

American shad, *Alosa sapidissima* (Figs 9-10)

One shad was measured in April, 23 in May, and 17 in June (Fig 10). They ranged 252 mm to 499 mm, averaging 382 mm (15 in FL, 16 in TL). These fish would be 3-4 years old. Klauda et al (1991) report growth at 100 mm/y until reaching sexual maturity, then it drops to 50 mm/y. Maturity is reached at age four or five. As such, the May-June fish over 400 mm were probably sexually mature and returning to the ocean after spawning. The shad taken here were all part of the daily allowed "one bushel" by-catch.

Atlantic menhaden, *Brevoortia tyrannus* (Figs 11-14)

Menhaden were the leading commercial species taken by pound-nets during 1996 (Fig 11). A total of 3,418 fish were examined by us during the April-September period (Figs 12-14). There were three modal length groups in April by visual inspection (Fig 12). The smallest ranged between 130 and 200 mm (5 to 8 in FL), the second from about 210 to 260 mm (8 to 10 in FL), and the third from about 275 to 314 mm (10.7 to 12.3 in FL). The 1992 revision to the ASMFC Menhaden Fishery Management Plan (ASMFC 1992) lists lengths of 141, 214, and 262 mm as age 1-3 yr. The 130-200 mm fish collected in April are the age 1 fish, the 210-260 mm age 2, and the 275-314 mm fish age 4. Few fish were collected in the 250-275 mm range, which would constitute the age 3 fish. Only the age 2 fish were present from June to August. In September a new year class recruited to the fishery (Fig 12).

Although the age two fish grew only 20-30 mm through the season they gained nearly 100 g in weight (Fig 13). The length-weight key (Fig 14) shows that the grow rate increases after 240-250 mm.

Gizzard or mud shad, *Dorosoma cepedianum* (Figs 15-17)

Gizzard shad were collected from April through August although they were never common except during June (N=146). Lengths ranged from 253 to 418 mm, averaging 305 mm (12 in). There was a wide range of weights with three fish weighing in excess of 750 gm (1.5 lb) during April and August. This range in weights is apparent in the length-weight key (Fig 17).

Cyprinidae - carp

Carp, *Cyprinus carpio*

Too few carp were measured to graph. Five were taken in May and ranged 366-780 mm, the mean length was 562 mm (22 in) (Table 3).

Ictaluridae - catfishes

Catfishes, *Ictalurus ssp* (Figs 18-21)

Catfish were not separated by species although most were white and channel cats. Catfish were first taken in May over a wide size range (230-630 mm, 9-24 in). During June and July most ranged from 285-454 mm. They were not collected after July.

Serranidae - basses

White perch, *Morone americana* (Figs 22-25)

White perch were not collected until May, were abundant through July, then all but disappeared. Most were 112 to 270 mm, averaging 190 mm (7.5 in) and weighing 110-120 g (.25 lb). Growth in white perch is rapid during the first three to four years by which time they reach 180 mm. After four years growth slows and the fish 175-225 mm may be anywhere from four to six years (Seaver et al 1996).

Striped bass or rockfish, *Morone saxatilis* (Figs 26-29)

Striped bass were not collected until May and were never abundant in our samples, including the releases of under-sized fish and during the closed season. They began to return to the

River in October when they ranged 460-675 mm, averaging 541 mm (21.3 in FL, 22.7 in TL). The special pound-net samples collected in October by VIMS for the PRFC (Loesch, Personal communication) were included here, and compose the October striped bass length-weight data.

Pomatomidae - bluefish

Bluefish, *Pomatomus saxatilis* (Figs 30-33)

Few bluefish were caught before June. They were generally larger than the more abundant but smaller summer fish. The mean size in May (N=9) was 579 mm (23 in FL, 26 in TL), 433 mm in June (17 in FL, 19.5 in TL) and 268 mm (10.5 in FL, 12.5 in TL) in July. Normal bluefish migration patterns include a "wave" of larger fish in the late spring, then an influx of smaller fish during summer. The smaller fish (10-12 in) resident during the summer are yearling fish which weigh around 200-300 g (half a pound).

Sciaenidae - drums

Weakfish, *Cynoscion regalis* (Fig 34-37)

Weakfish, or trout, were first taken in May. There was a wide size range (244-570 mm) with a mean of 340 mm. During July and August the fish ranged 208 - 472 mm and showed a distinct bi-modal distribution of around 250 mm and 320 mm. These two frequencies represent the age one and age two fish spawned in 1994 and 1995 (Lowerre-Barbieri et al 1994). Merriner (1976) reported that by 190 mm SL 50% of the age zero females were sexually mature, and that by age one, 100% were mature. He also cited McHugh (1960) who

reported that the Chesapeake Bay pound net fishery landed 100 % sexually mature females between 170 and 250 TL mm during the late summer.

Spot, *Leiostomus xanthurus* (Fig 38-41)

Spot were first taken during May and remained abundant in the catch through August. Only eight were taken in September. In May the mean size was 195 mm (7.5 in FL, 8.2 in TL), increasing to over 250 mm (10 in FL, 10.6 in TL) by August. These fish were age one (Hata 1985). Young-of-the-year spot began to recruit into the catch in August when they were 125-150 mm (5 in FL, 5.5 in TL). These young-of-the-year were the only spot collected in September (N=8), averaging 160 mm (6 in FL, 6.5 in TL).

The age one fish gained weight rapidly over the summer increasing from an average of 155 g (0.3 lb) to 250 g (0.5 lb).

Atlantic Croaker, *Micropogonias undulatus* (Figs 42-45)

Atlantic croaker were taken from May through September, but were only abundant through August. The May through July catch was composed entirely of age two fish (Barbieri et al 1994a) ranging in average length from 263 mm (10 in) in May to 300 mm (12 in) in August. The catch in August appears to be composed of two year classes, both 200-250 mm age one fish, and 260-350 mm age two fish. There was a "wave" of large croaker during September that ranged 327 to 394 mm, averaging 362 mm (14 in). According to Barbieri et al (1994a) these fish could range from 6 to 8 years in age. Age one croaker (225 mm, 8 in) were only

collected in August. Barbieri et al (1994b) report that 50% of all croaker are sexually mature during their first year (173-185 mm), and 100% have reached maturity at the end of the first year (225 mm).

The June-July fish weighed 310-350 g (0.7 lb) and the large fish in September 760 g (1.5 lb).

Scombridae

Spanish mackerel, *Scomberomorus maculatus* (Fig 46-47)

Spanish mackerel were first collected (N=11) in May, and then again in July. There were too few fish taken in May to develop any statistics, but most were larger (450-517 mm, 19 in) age three fish (Gaichas and Chittenden 1997). The July catch was composed of fish 327 to 482 mm (13-19 in). The 327 to 375 mm fish in July were age one sexually mature fish (Gaichas and Chittenden 1997). They were not collected after July.

Bothidae

Summer flounder or fluke, *Paralichthys dentatus* (Fig 48-51)

Summer flounder were collected May through September. The size range was 290 to 564 mm, averaging 354 mm. Most were over 325 mm. Between June and September the modal, or most frequently occurring weight, went from 500 g (1.1 lb) to 600 g (1.3 lb). Most flounder weighed over 450 g, or about a pound.

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List of Tables

Table 1

Locations of Potomac River pound-nets sampled during Summer 1996

Net Number (Fig 3)	Fisherman	Lat	Long	Description
1	Lowery	38 00' 30"	76 26' 00"	Mouth of Coan River
2	Jewell	38 01' 45"	76 30' 00"	Mouth of Yeocomico River
3	Samuels	38 00' 45"	76 27' 00"	Off Judith Sound
4	Bradley	37 57' 30"	76 23' 30"	Mouth of Hull Creek
5	Hall	37 58' 00"	76 23' 00"	Mouth of Hull Creek
6	Crowder	38 10' 30"	76 33' 30"	Mouth of Herring Creek
7	Crowder	38 04' 20"	76 32' 00"	Off Sandy Point
8	Crowder	38 07' 30"	76 32' 00"	Off Sandy Point
9	Lumpkins	38 07' 50"	76 30' 20"	Off St. Georges Island Bridge

Table 2: **Sampling dates.** Species of fishes, and the dates of each month that fishes were sampled from seafood houses of the Potomac River.

Species	Dates sampled						
Atlantic Croaker	April	May 14, 17, 29, 30	June 3, 4, 6, 10, 12, 17, 19, 24, 27	July 1, 8, 16, 22	Aug. 5, 15	Sept.3	Oct.
Atlantic menhaden	April 17, 18	May 14	June 3, 4, 10, 17	July 1, 2, 8, 22	Aug. 5, 15	Sept.3	Oct.
Spot	April	May 29	June 3, 6, 10, 17, 19, 24	July 8, 10, 16, 22	Aug. 5, 15	Sept.3	Oct.
White Perch	April	May 14, 29	June 3, 4, 6, 10, 12, 17, 24	July 8, 16	Aug.	Sept.3	Oct.
Weakfish	April	May 17, 30	June	July 8, 10, 16, 22	Aug. 5, 15	Sept.	Oct.
Summer Flounder	April	May 29, 30	June 3, 10	July 8, 10, 16, 22	Aug. 5	Sept.3	Oct.
Bluefish	April	May 30	June 13, 14	July 8, 16, 22	Aug. 5, 15	Sept.3	Oct.
Gizzard Shad	April 17, 18	May 14, 17	June 3, 10	July 10	Aug.	Sept.	Oct.
Catfishes	April	May 17, 30	June 17	July 10	Aug.	Sept.	Oct.
Striped Bass	April	May 17, 29	June 3, 10, 13, 14	July 1, 10	Aug.	Sept.	Oct. 28
Blueback Herring	April 17, 18	May 14, 17	June	July	Aug.	Sept.	Oct.
Spanish Mackerel	April	May	June	July 16, 22	Aug.	Sept.	Oct.
American Shad	April 17, 18	May 30	June 3, 4	July	Aug.	Sept.	Oct.
American Eel	April	May 30	June	July	Aug.	Sept.	Oct.
Commom Carp	April	May 30	June	July	Aug.	Sept.	Oct.

Table 3: **Fish lengths.** Species of fishes, number of fishes, percentage of total fish, maximum and minimum fork length for each species, range, and mean lengths for each species of fish measured in the survey. Measurements are in millimeters. Fishes were caught in pound nets of the Potomac River from May 14 to October 28, 1996. Numbers in parentheses are ± 1 SE.

Species		No. of fish	% of fish	Max. length	Min. length	Range	Mean length	
Atlantic Croaker	*Micropogonias undulatus*	6668	39.2	433	180	253	271.8	(0.30)
Atlantic menhaden	*Brevoortia tyrannus*	3418	20.1	320	133	187	237.9	(0.60)
Spot	*Leiostomus xanthurus*	2529	14.8	281	122	159	204.6	(0.30)
White Perch	*Morone americana*	2235	20.7	270	112	158	189.6	(0.39)
Weakfish	*Cynoscion regalis*	972	13.1	570	208	362	287.2	(1.40)
Summer Flounder	*Paralichthys dentatus*	374	2.2	564	290	274	354.4	(1.70)
Bluefish	*Pomatomus saltatrix*	192	1.1	800	181	619	275.2	(5.9)
Gizzard Shad	*Dorosoma cepedianum*	180	1.1	418	253	165	305.0	(2.9)
Catfishes	*Ictalurus spp.*	94	0.55	630	209	421	346.9	(8.2)
Striped Bass	*Morone saxatilis*	155	0.91	770	292	478	354.4	(1.7)
Blueback Herring	*Alosa aestivalis*	69	0.41	254	175	79	226.9	(1.7)
Spanish Mackerel	*Scomberomorus maculatus*	44	0.26	517	327	190	380.7	(7.6)
American Shad	*Alosa sapidissima*	41	0.24	499	252	247	382.2	(11.8)
American Eel	*Anguilla rostrata*	36	0.21	870	326	544	521.6	(19.6)
Commom Carp	*Cyprinus carpio*	5	0.03	780	366	414	562.4	(66.2)
Total		**17012**	**100**					

Table 4: **Fish weights.** Species of fishes, number of fishes, percentage of total fish, maximum and minimum weights for each species, range, and mean weights for each species of fish measured in the survey. Measurements are in grams. Fishes were caught in pound nets of the Potomac River from May 14 to October 28, 1996. Numbers in parentheses are ± 1 SE.

Species		No. of fish	% of fish	Max Weight	Min weight	Range	Mean	weight
Atlantic Croaker	*Micropogonias undulatus*	915	34.1	909.0	177.8	731.2	352.3	(3.7)
Atlantic menhaden	*Brevoortia tyrannus*	345	12.8	620.6	31.9	588.7	269.2	(5.3)
Spot	*Leiostomus xanthurus*	286	10.6	299.8	28.5	271.3	173.3	(3.3)
White Perch	*Morone americana*	170	6.3	322.2	64.0	258.2	145.1	(3.3)
Weakfish	*Cynoscion regalis*	305	11.3	927.0	96.5	830.5	237.3	(6.2)
Summer Flounder	*Paralichthys dentatus*	246	9.2	1727.5	243.7	1483.8	486.5	(11.7)
Bluefish	*Pomatomus saltatrix*	155	5.8	2238.0	75.6	2162.4	364.4	(29.7)
Gizzard Shad	*Dorosoma cepedianum*	22	0.82	789.9	371.0	418.9	554.7	(25.8)
Catfishes	*Ictalurus spp.*	32	1.2	1302.5	356.7	945.8	676.7	(43.3)
Striped Bass	*Morone saxatilis*	176	6.6	5196.7	227.0	4969.7	2852.5	(101.2)
Blueback Herring	*Alosa aestivalis*	-	-	-	-	-	-	-
Spanish Mackerel	*Scomberomorus maculatus*	32	1.2	899.6	301.9	597.7	418.2	(18.8)
American Shad	*Alosa sapidissima*	-	-	-	-	-	-	-
American Eel	*Anguilla rostrata*	-	-	-	-	-	-	-
Commom Carp	*Cyprinus carpio*	-	-	-	-	-	-	-
Total		**2684**	**100**					

Table 5: **Bycatch - fish lengths.** Species of fishes, number of fishes, percentage of total fish, maximum and minimum fork length for each species, range, and mean length for each species of fish measured from pound net bycatch. Measurements are in millimeters. Fishes were caught in a pound net of a Potomac River waterman on July 2, 1996. Numbers in parentheses are ± 1 SE.

Species		No. of fish	% of fish	Max. length	Min. length	Range	Mean length	
Weakfish	*Cynoscion regalis*	42	51.2	375	215	160	280.7	(6.8)
Bluefish	*Pomatomus saltatrix*	25	30.5	360	220	140	251.1	(5.8)
Summer Flounder	*Paralichthys dentatus*	5	6.1	380	296	84	336.0	(15.3)
Striped Bass	*Morone saxatilis*	5	6.1	457	292	165	372.8	(26.4)
White Perch	*Morone americana*	5	6.1	194	162	32	174.4	(6.07)
Total		**82**	**100**					

Table 6

Metric to English Conversion

Metric	English
50 mm	2.0 inches
100 mm	4.0 in
200 mm	8.0 in
300 mm	12.0 in
350 mm	13.7 in
400 mm	15.5 in
450 mm	17.7 in
500 mm	19.6 in
550 mm	21.6 in
600 mm	23.6 in
914 mm	36.0 in (1 yd)
1,000 mm (1 meter)	39.4 in

List of Figures

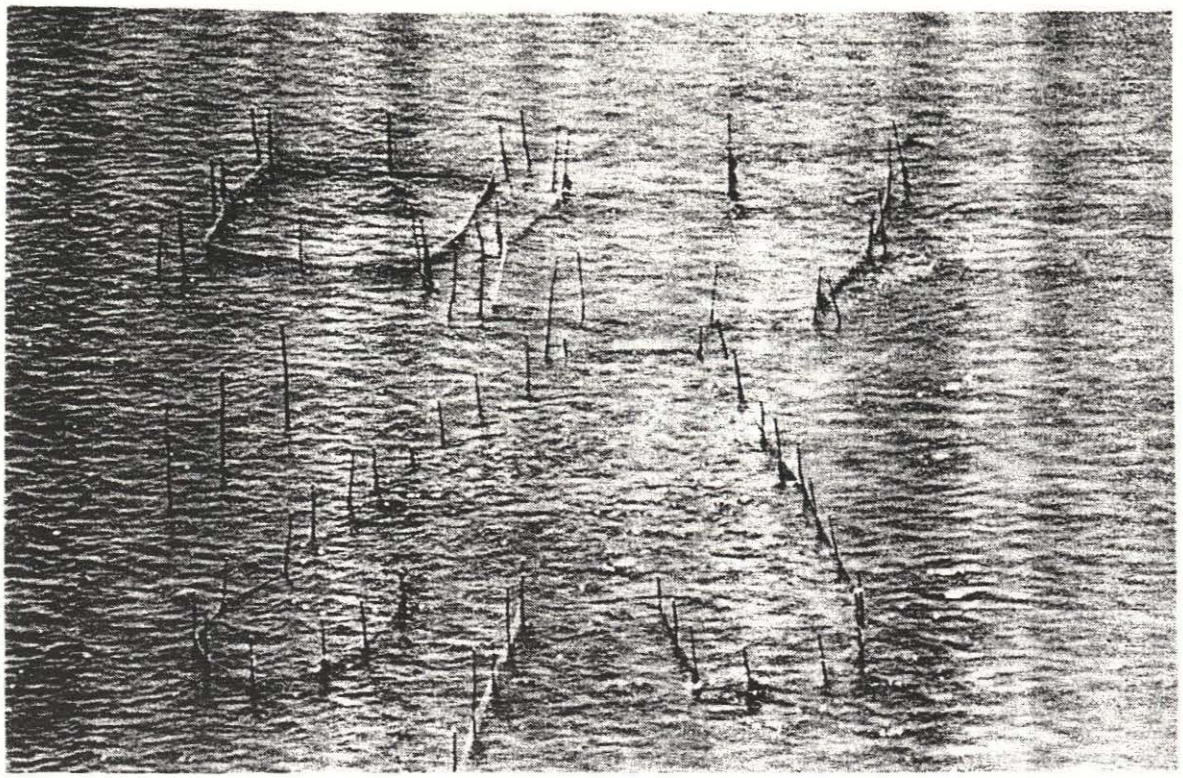
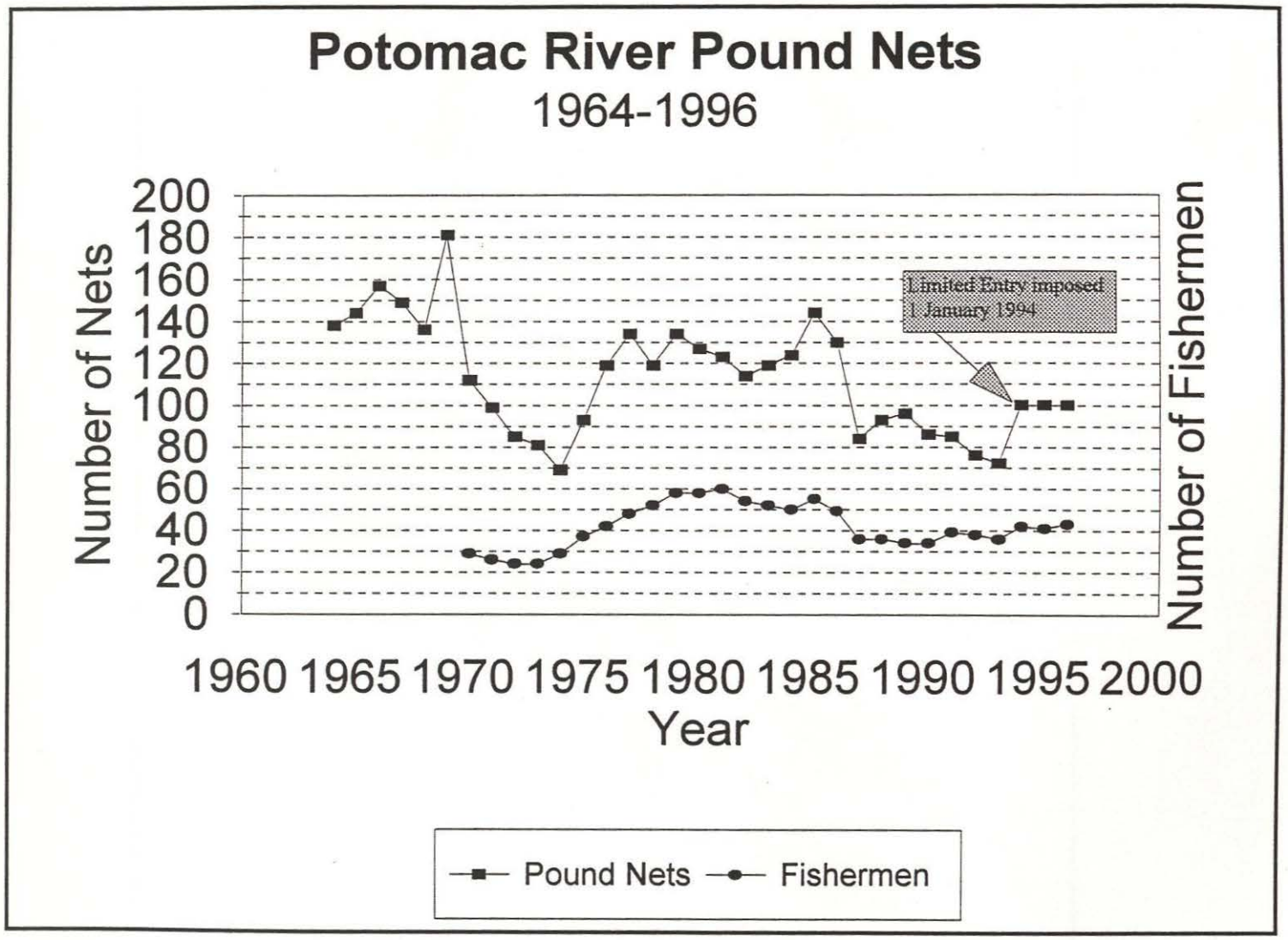
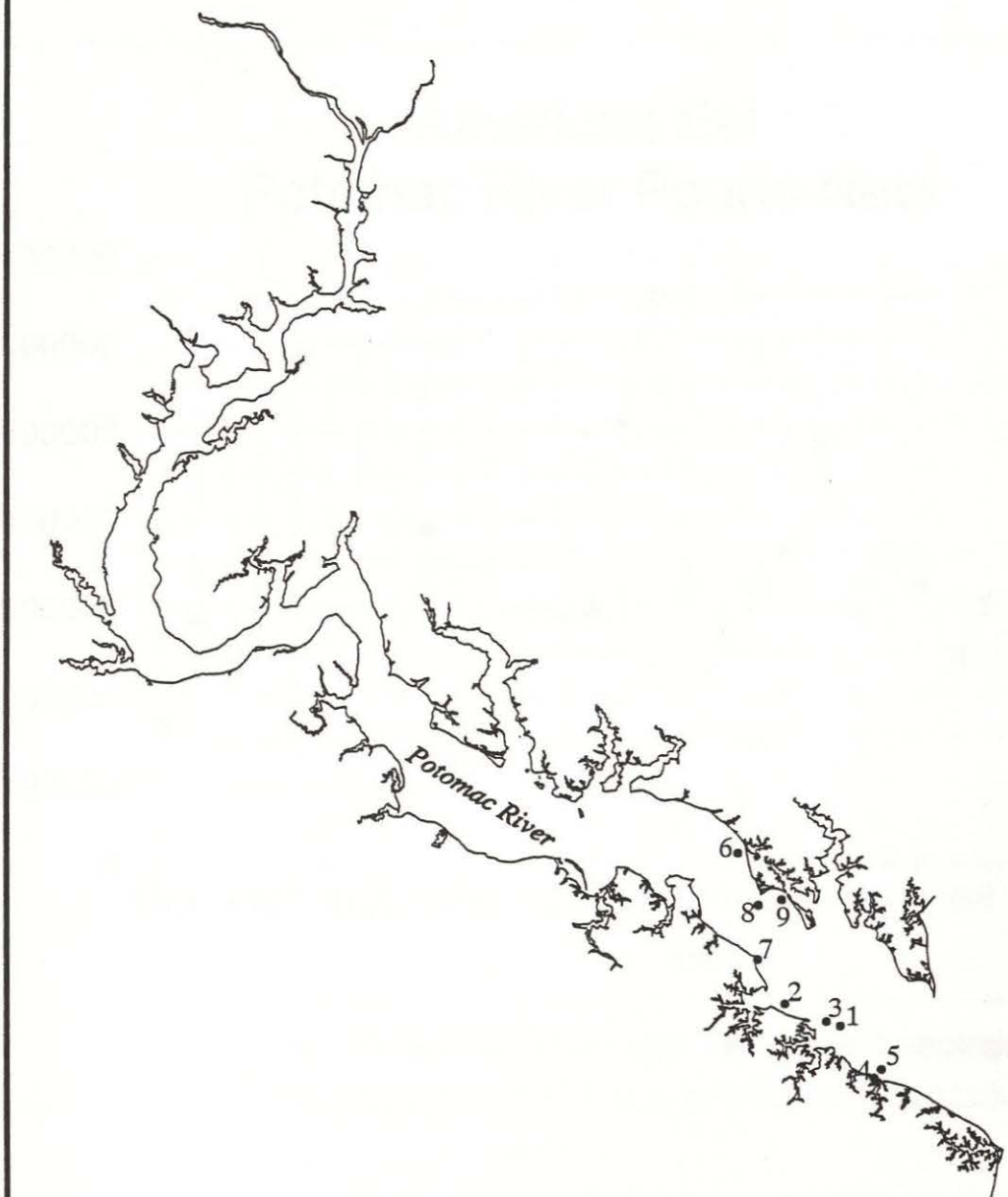


Figure 1. An aerial view of a pound net showing the leader (bottom of photo), heart (= bay), and trap (= head) - photo courtesy of M. Oesterling (VIMS).

From: Chittenden, M. 1986. Chesapeake Bay Pound-net survey, Part I, Final Rept. on Chesapeake Bay System pound-net survey and Chesapeake Bay waters trawling, Final Rept., Project 1.1, task 1, 110 pp. + A-21.


Potomac River Pound Nets
1964-1996
Number of Nets
200
180
160
140
120
100
80
60
40
20
0
Number of Fishermen
Limited Entry imposed
1 January 1994
1960 1965 1970 1975 1980 1985 1990 1995 2000
Year
Pound Nets
Fishermen

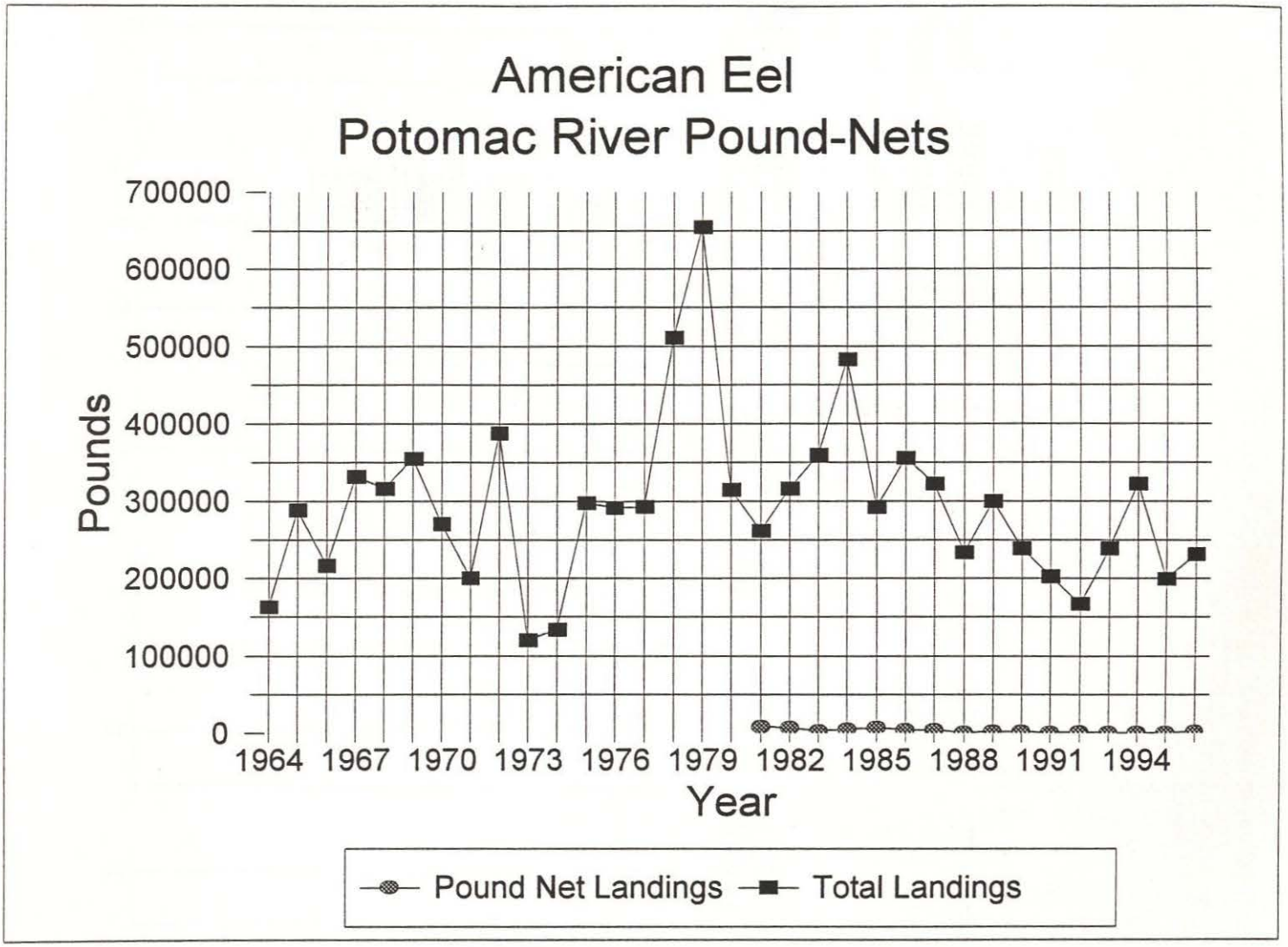
Potomac River Pound–Net Survey



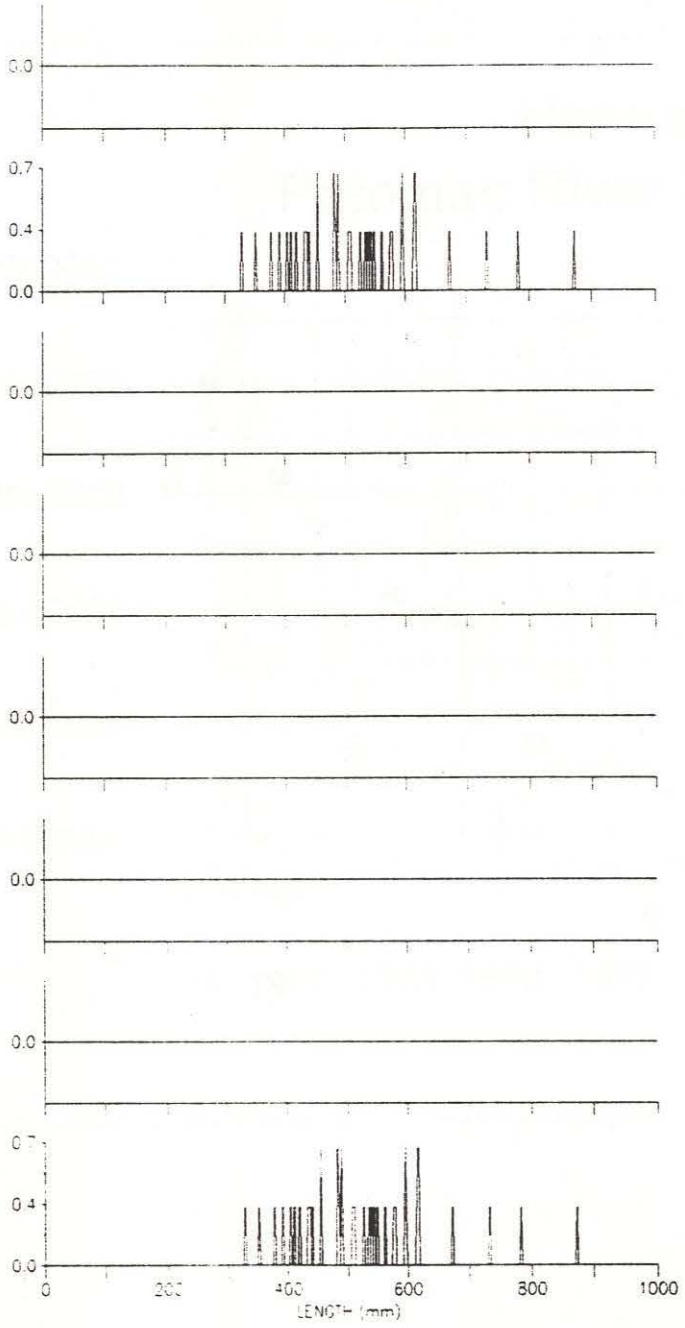
kilometers

0 10 20 30

cmap
Center for Coastal
Management and Policy


American Eel
Potomac River Pound-Nets
Pounds
700000
600000
500000
400000
300000
200000
100000
0
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings

Potomac River Pound Net Survey – American Eel – 1996



APRIL 960417 – 960430
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 2 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

MAY 960514 – 960530
NO. CGHT. – 36 MEAN SIZE – 521.6
NO. MEAS. – 36 S.E. SIZE – 19.6
NO. SITES – 6 MIN. SIZE – 326
CAT./SITE – 6 MAX. SIZE – 870

JUNE 960601 – 960627
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 16 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

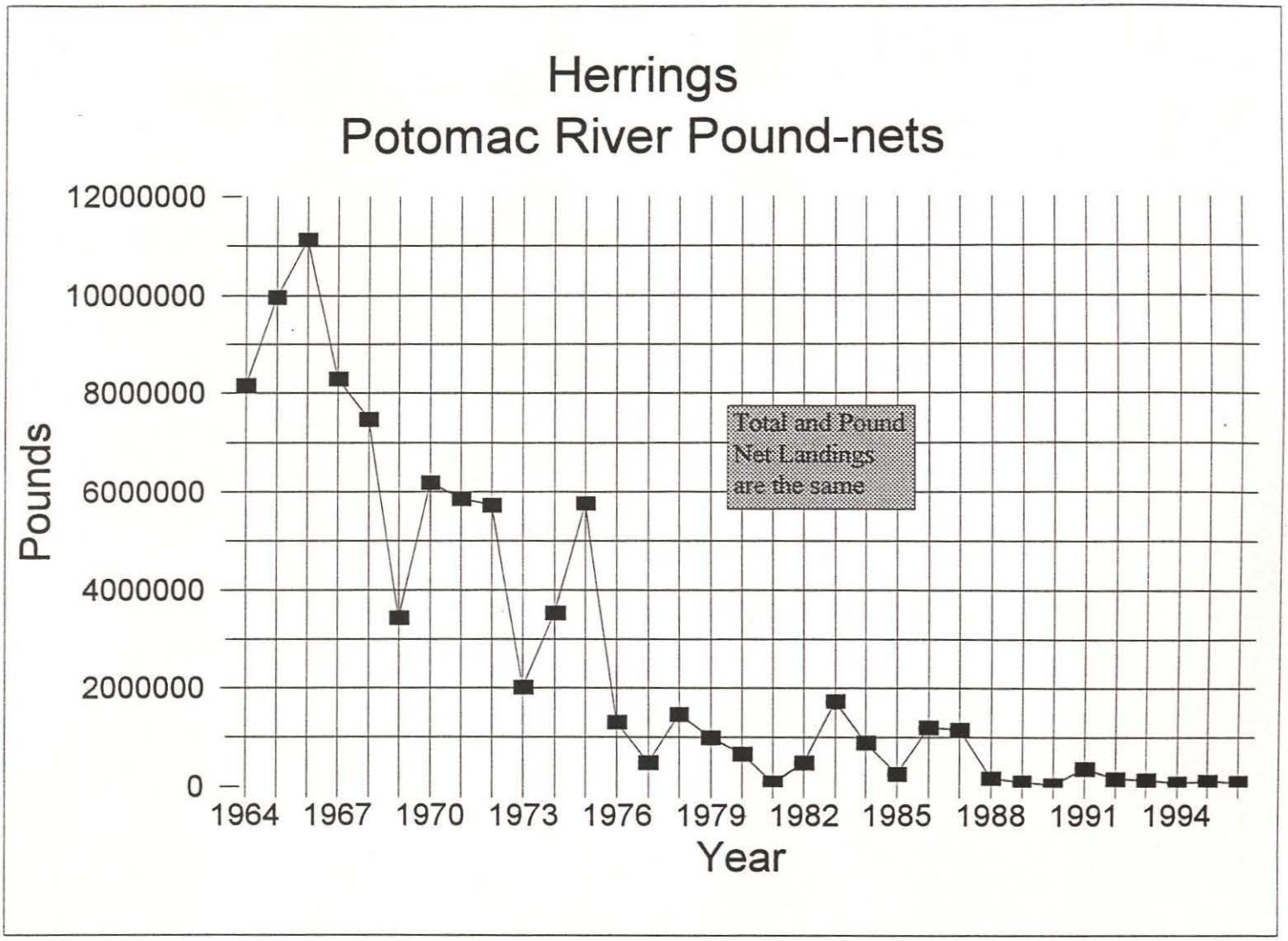
JULY 960701 – 960725
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 12 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

AUGUST 960805 – 960820
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 3 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

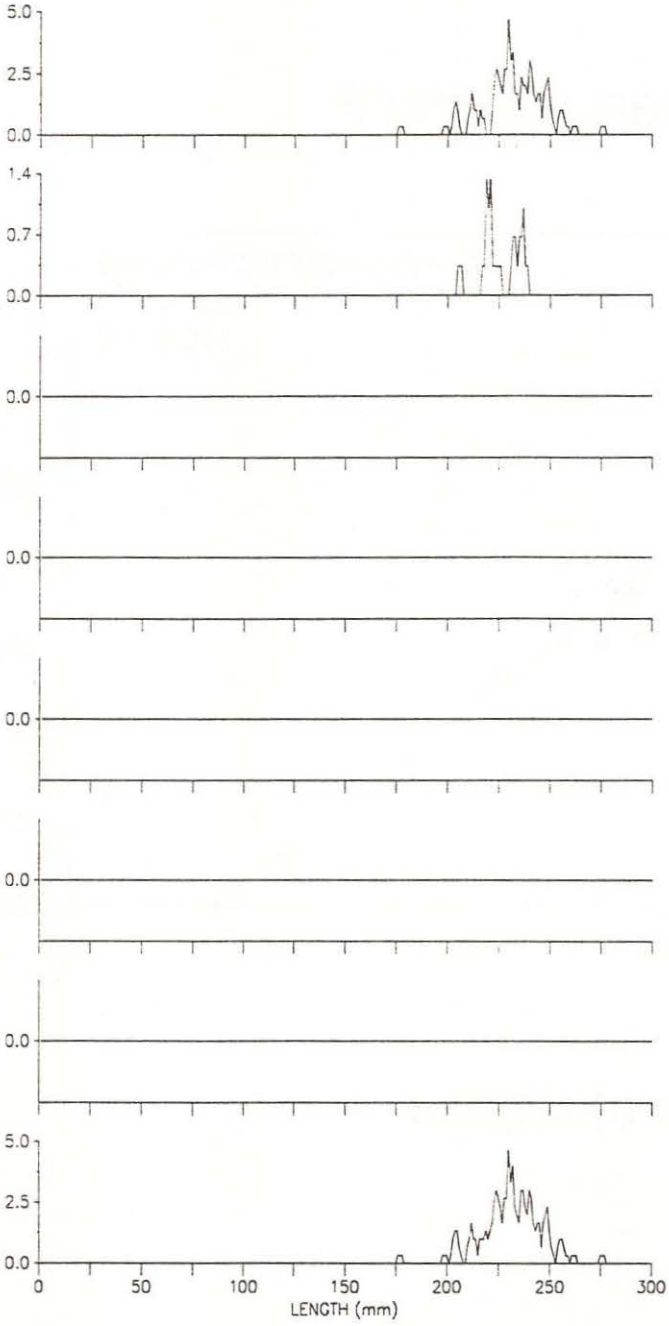
SEPTEMBER 960903 – 960903
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 1 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

OCTOBER 961028 – 961028
NO. CGHT. – 0 MEAN SIZE –
NO. MEAS. – 0 S.E. SIZE –
NO. SITES – 1 MIN. SIZE –
CAT./SITE – 0 MAX. SIZE –

MAY-OCT 960417 – 961028
NO. CGHT. – 36 MEAN SIZE – 521.6
NO. MEAS. – 36 S.E. SIZE – 19.6
NO. SITES – 41 MIN. SIZE – 326
CAT./SITE – 0.9 MAX. SIZE – 870


Herrings
Potomac River Pound-nets
12000000
10000000
8000000
6000000
4000000
2000000
0
Pounds
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
Year
Total and Pound Net Landings are the same

Potomac River Pound Net Survey – Herring – 1996



APRIL 960417 – 960430

NO. CGHT.	–	82	MEAN SIZE	–	230.3
NO. MEAS.	–	82	S.E. SIZE	–	1.7
NO. SITES	–	2	MIN. SIZE	–	175
CAT./SITE	–	41	MAX. SIZE	–	274

MAY 960514 – 960530

NO. CGHT.	–	12	MEAN SIZE	–	223.5
NO. MEAS.	–	12	S.E. SIZE	–	2.8
NO. SITES	–	6	MIN. SIZE	–	204
CAT./SITE	–	2	MAX. SIZE	–	236

JUNE 960601 – 960627

NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	14	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

JULY 960701 – 960725

NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	12	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

AUGUST 960805 – 960820

NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	3	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

SEPTEMBER 960903 – 960903

NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

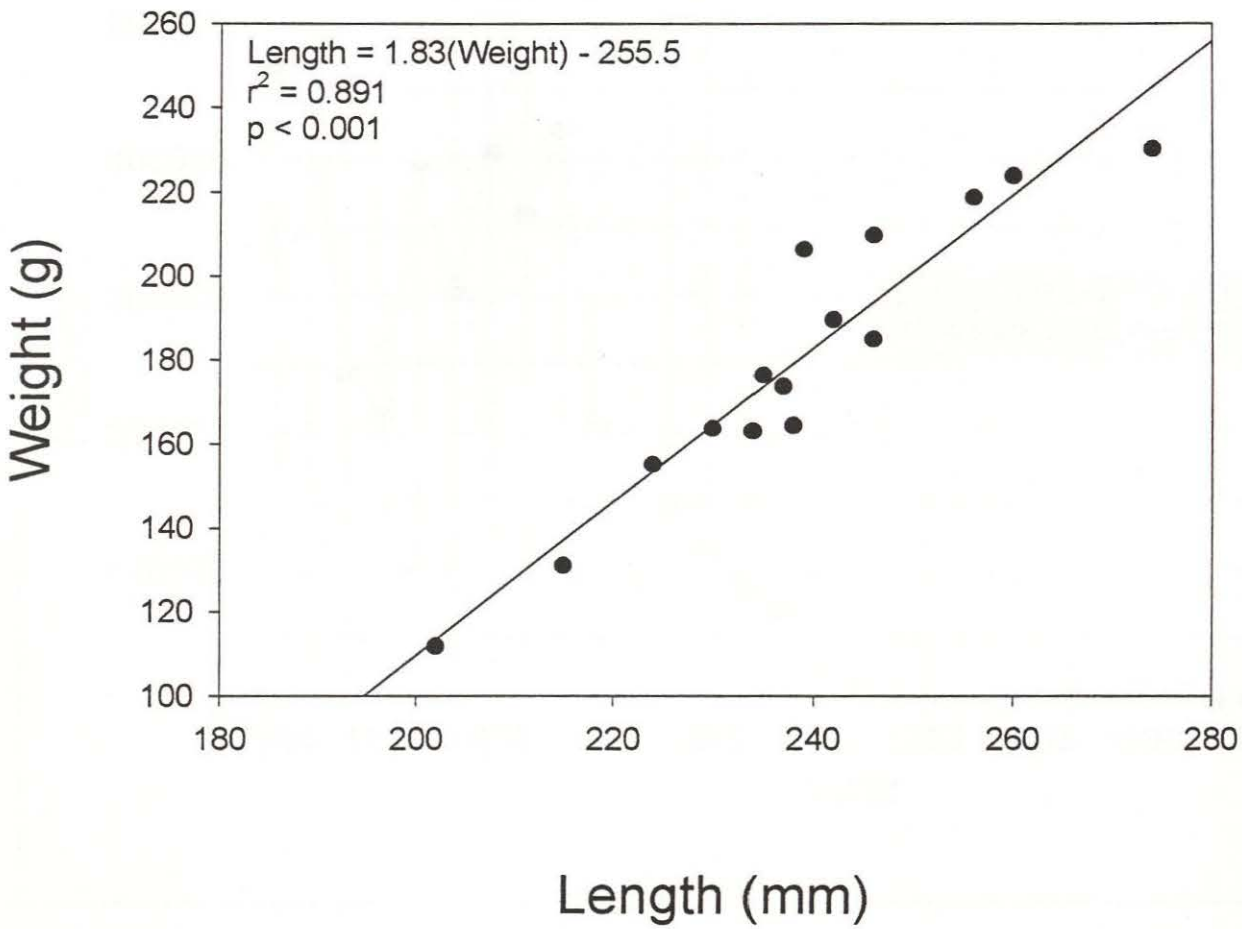
OCTOBER 961028 – 961028

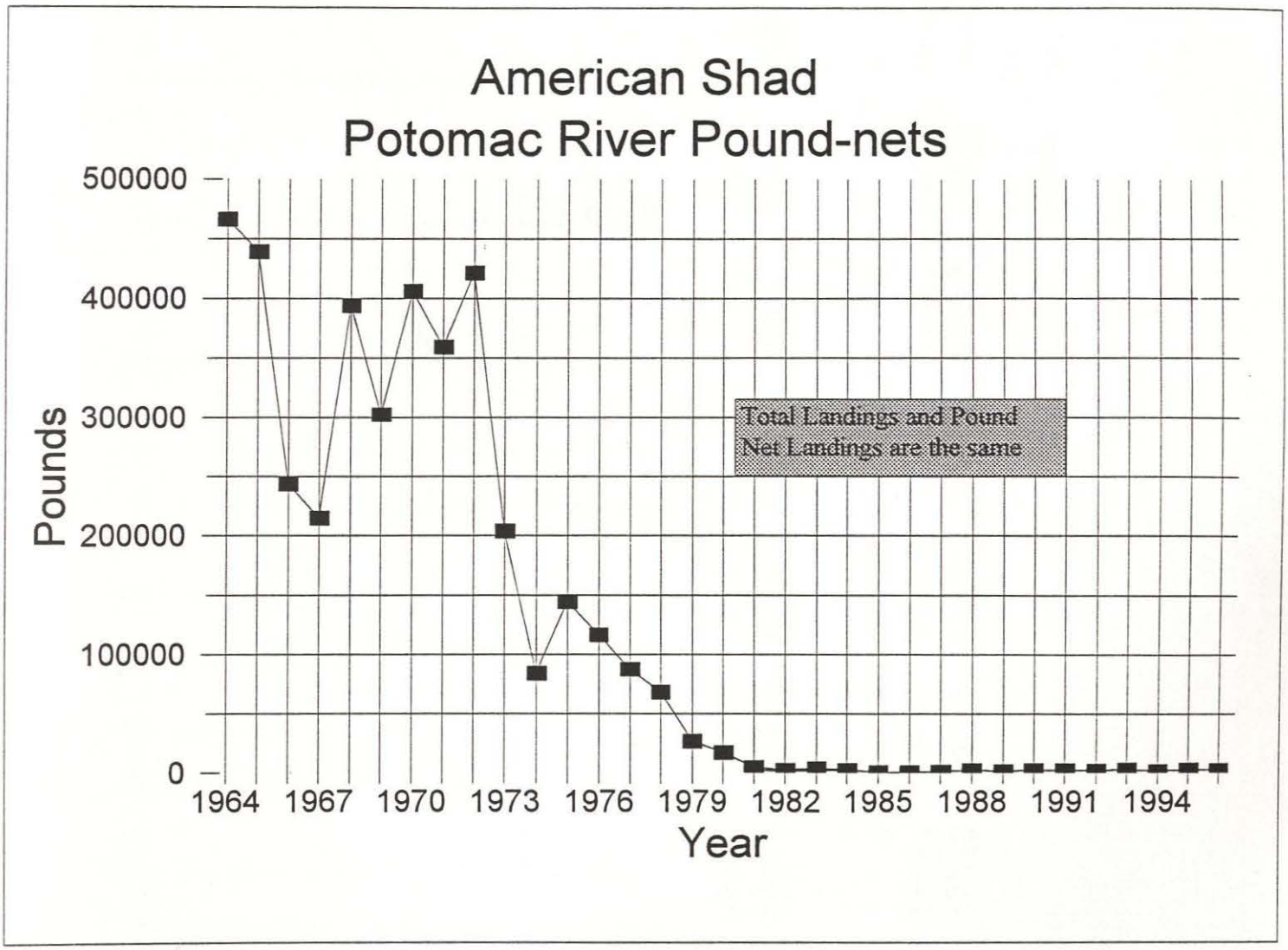
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY–OCT 960417 – 961028

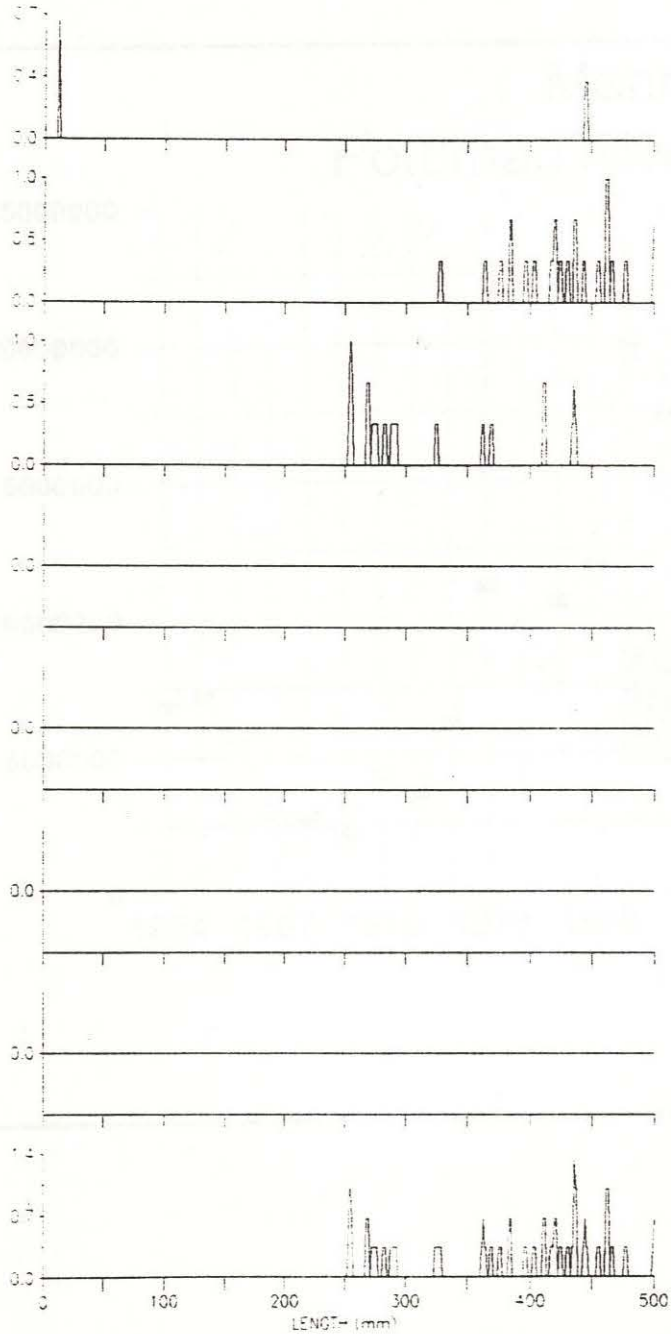
NO. CGHT.	–	94	MEAN SIZE	–	229.4
NO. MEAS.	–	94	S.E. SIZE	–	1.6
NO. SITES	–	39	MIN. SIZE	–	175
CAT./SITE	–	2.4	MAX. SIZE	–	274

Blueback herring




American Shad
Potomac River Pound-nets
500000
400000
300000
200000
100000
0
Pounds
Total Landings and Pound Net Landings are the same
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
Year

Potomac River Pound Net Survey – American Shad – 1996



APRIL 960417 - 960430

NO. CGHT	-	1	MEAN SIZE	-	443
NO. MEAS.	-	1	S.E. SIZE	-	.
NO. SITES	-	2	MIN. SIZE	-	443
CAT./SITE	-	0.5	MAX. SIZE	-	443

MAY 960514 - 960530

NO. CGHT.	-	23	MEAN SIZE	-	426.1
NO. MEAS.	-	23	S.E. SIZE	-	9.1
NO. SITES	-	6	MIN. SIZE	-	326
CAT./SITE	-	3.8	MAX. SIZE	-	499

JUNE 960601 - 960627

NO. CGHT.	-	17	MEAN SIZE	-	319.4
NO. MEAS.	-	17	S.E. SIZE	-	16.3
NO. SITES	-	16	MIN. SIZE	-	252
CAT./SITE	-	1.1	MAX. SIZE	-	434

JULY 960701 - 960725

NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	12	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

AUGUST 960805 - 960820

NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	3	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

SEPTEMBER 960903 - 960903

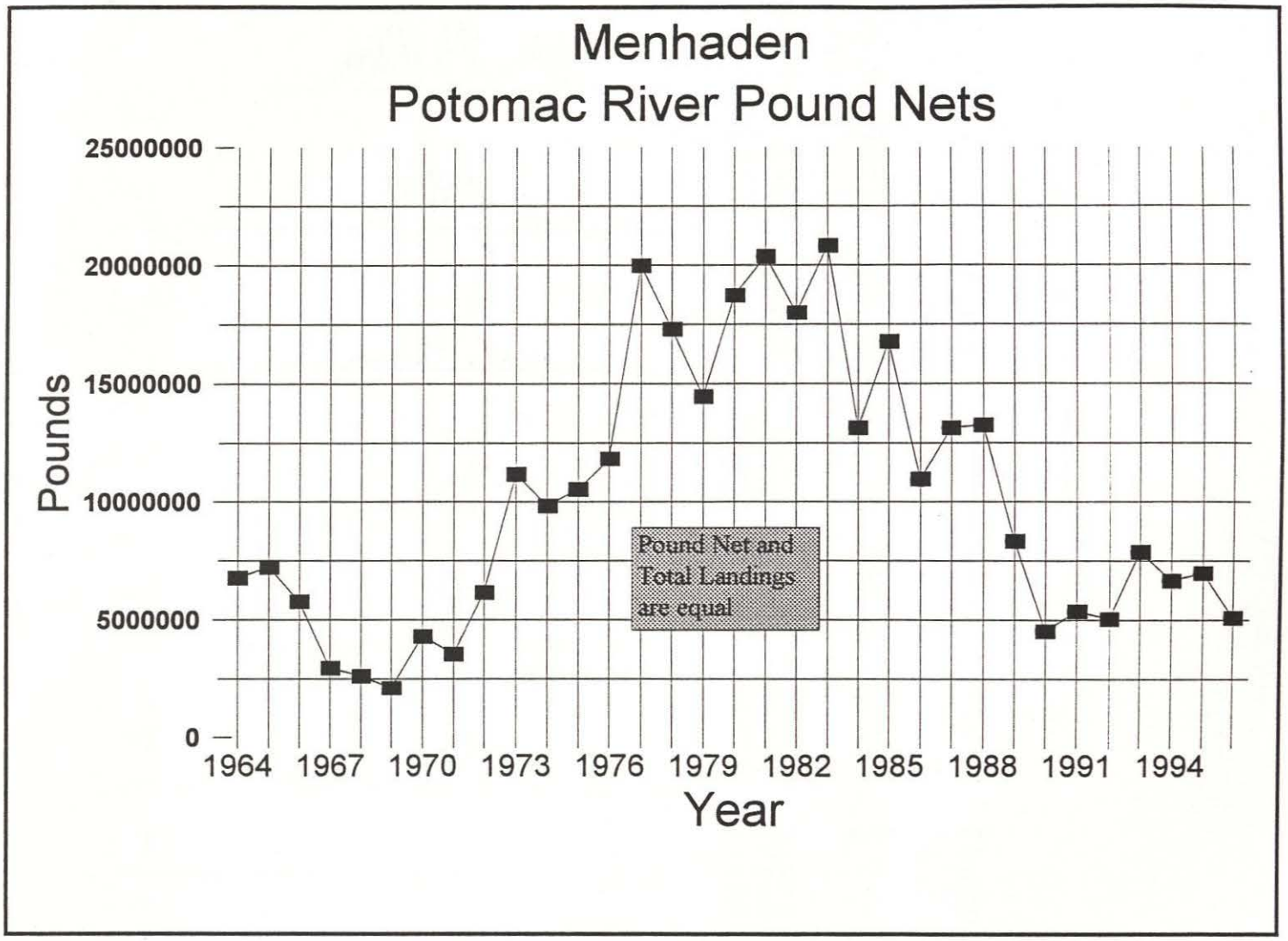
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	1	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

OCTOBER 961028 - 961028

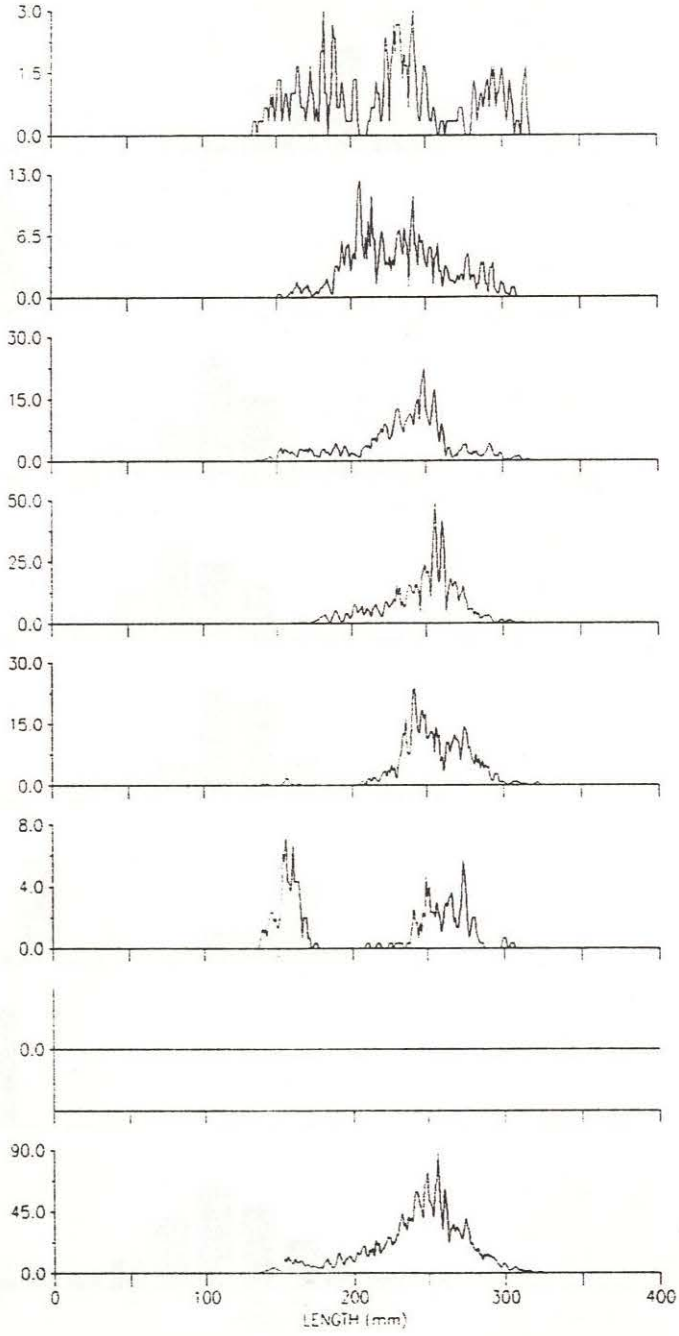
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	1	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

MAY-OCT 960417 - 961028

NO. CGHT.	-	41	MEAN SIZE	-	382.2
NO. MEAS.	-	41	S.E. SIZE	-	11.8
NO. SITES	-	41	MIN. SIZE	-	252
CAT./SITE	-	1	MAX. SIZE	-	499


Menhaden
Potomac River Pound Nets
25000000
20000000
15000000
10000000
5000000
0
Pounds
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
Year
Pound Net and
Total Landings
are equal

Potomac River Pound Net Survey – Atlantic Menhaden – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	164	MEAN SIZE	–	223.2
NO. MEAS.	–	164	S.E. SIZE	–	3.8
NO. SITES	–	2	MIN. SIZE	–	133
CAT./SITE	–	82	MAX. SIZE	–	314

MAY		960514 – 960530			
NO. CGHT.	–	482	MEAN SIZE	–	229.7
NO. MEAS.	–	482	S.E. SIZE	–	1.4
NO. SITES	–	6	MIN. SIZE	–	150
CAT./SITE	–	80.3	MAX. SIZE	–	305

JUNE		960601 – 960627			
NO. CGHT.	–	721	MEAN SIZE	–	231
NO. MEAS.	–	721	S.E. SIZE	–	1.3
NO. SITES	–	16	MIN. SIZE	–	135
CAT./SITE	–	45.1	MAX. SIZE	–	314

JULY		960701 – 960725			
NO. CGHT.	–	1125	MEAN SIZE	–	244.1
NO. MEAS.	–	1125	S.E. SIZE	–	0.7
NO. SITES	–	12	MIN. SIZE	–	159
CAT./SITE	–	93.8	MAX. SIZE	–	309

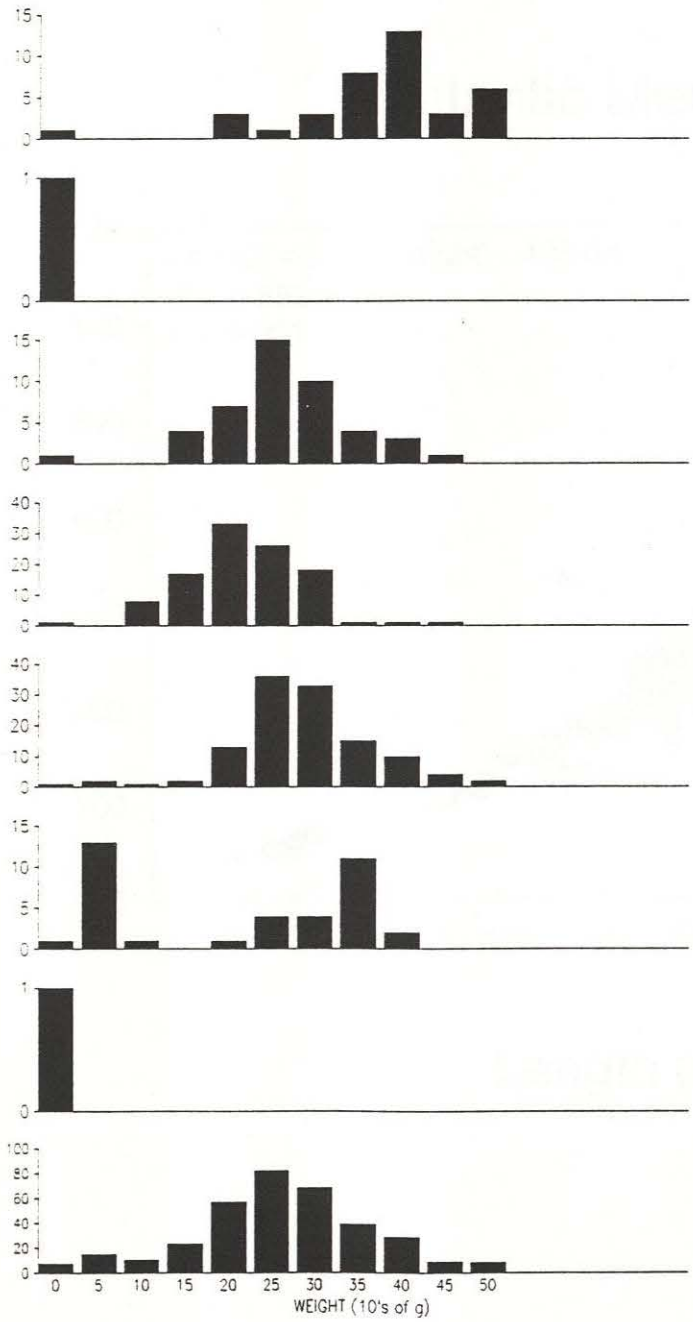
AUGUST		960805 – 960820			
NO. CGHT.	–	716	MEAN SIZE	–	251.8
NO. MEAS.	–	716	S.E. SIZE	–	0.9
NO. SITES	–	3	MIN. SIZE	–	138
CAT./SITE	–	238.7	MAX. SIZE	–	320

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	210	MEAN SIZE	–	210.3
NO. MEAS.	–	210	S.E. SIZE	–	3.7
NO. SITES	–	1	MIN. SIZE	–	136
CAT./SITE	–	210	MAX. SIZE	–	303

OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

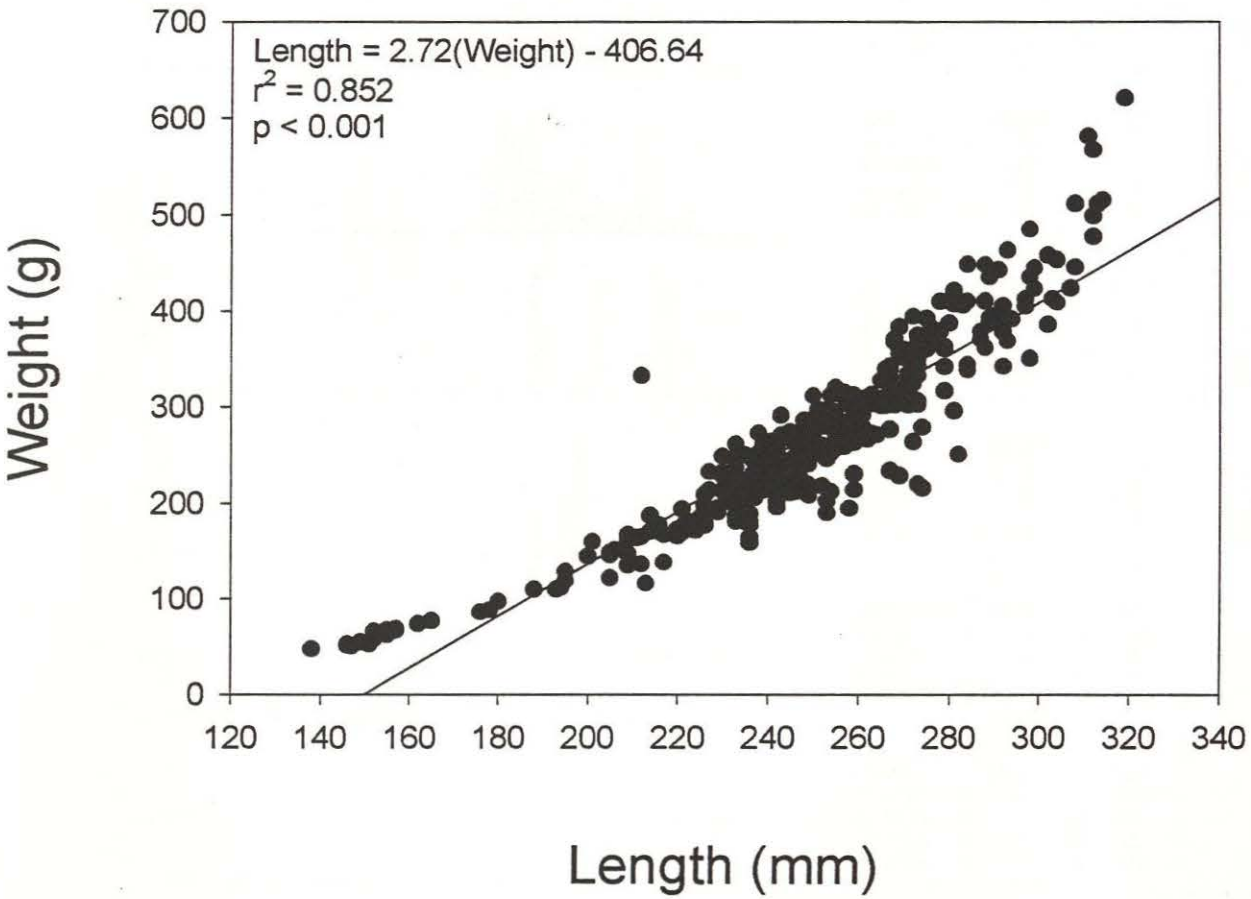
MAY–OCT		960417 – 961028			
NO. CGHT.	–	3418	MEAN SIZE	–	237.9
NO. MEAS.	–	3418	S.E. SIZE	–	0.6
NO. SITES	–	41	MIN. SIZE	–	133
CAT./SITE	–	83.4	MAX. SIZE	–	320

1996 Potomac River Pound Net Survey – Atlantic Menhaden Weights

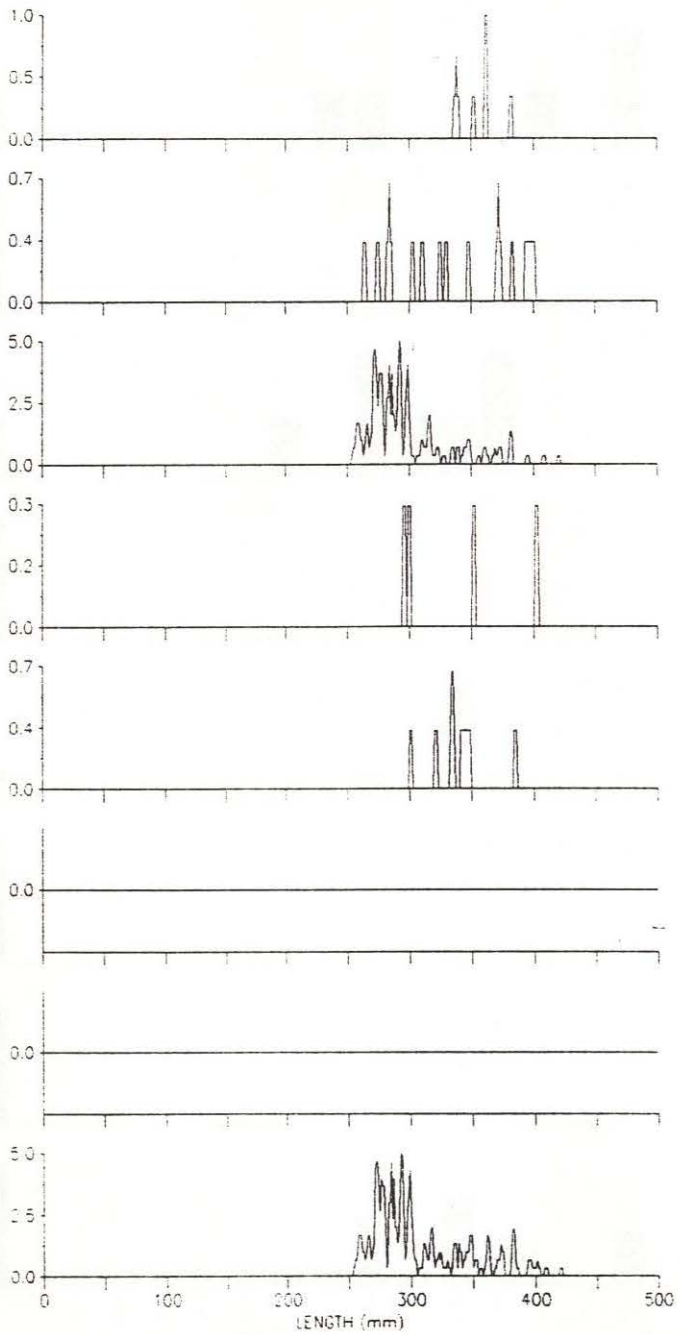


APRIL		960417 – 960430			
NO. CGHT.	–	164	MEAN WT	–	383.7
NO. WGHD.	–	37	S.E. WT	–	14.2
NO. SITES	–	2	MIN. WT	–	180.1
CAT./SITE	–	82	MAX. WT	–	566.9
MAY		960514 – 960530			
NO. CGHT.	–	482	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	80.3	MAX. WT	–	.
JUNE		960601 – 960627			
NO. CGHT.	–	721	MEAN WT	–	265.9
NO. WGHD.	–	44	S.E. WT	–	10.9
NO. SITES	–	16	MIN. WT	–	148.8
CAT./SITE	–	45.1	MAX. WT	–	463.3
JULY		960701 – 960725			
NO. CGHT.	–	1125	MEAN WT	–	220.2
NO. WGHD.	–	105	S.E. WT	–	6.3
NO. SITES	–	12	MIN. WT	–	86.2
CAT./SITE	–	93.8	MAX. WT	–	458.1
AUGUST		960805 – 960820			
NO. CGHT.	–	716	MEAN WT	–	290.7
NO. WGHD.	–	118	S.E. WT	–	7.4
NO. SITES	–	3	MIN. WT	–	64.6
CAT./SITE	–	238.7	MAX. WT	–	620.6
SEPTEMBER		960903 – 960903			
NO. CGHT.	–	210	MEAN WT	–	219
NO. WGHD.	–	36	S.E. WT	–	22.7
NO. SITES	–	1	MIN. WT	–	31.9
CAT./SITE	–	210	MAX. WT	–	410.2
OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.
MAY–OCT		960417 – 961028			
NO. CGHT.	–	3418	MEAN WT	–	268.3
NO. WGHD.	–	340	S.E. WT	–	5.3
NO. SITES	–	41	MIN. WT	–	31.9
CAT./SITE	–	83.4	MAX. WT	–	620.6

Atlantic Menhaden



Potomac River Pound Net Survey – Gizzard Shad – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	7	MEAN SIZE	–	354.6
NO. MEAS.	–	7	S.E. SIZE	–	5.9
NO. SITES	–	2	MIN. SIZE	–	335
CAT./SITE	–	3.5	MAX. SIZE	–	380

MAY		960514 – 960530			
NO. CGHT.	–	15	MEAN SIZE	–	334.1
NO. MEAS.	–	15	S.E. SIZE	–	12.4
NO. SITES	–	6	MIN. SIZE	–	262
CAT./SITE	–	2.5	MAX. SIZE	–	398

JUNE		960601 – 960627			
NO. CGHT.	–	146	MEAN SIZE	–	297
NO. MEAS.	–	146	S.E. SIZE	–	2.9
NO. SITES	–	16	MIN. SIZE	–	253
CAT./SITE	–	9.1	MAX. SIZE	–	418

JULY		960701 – 960725			
NO. CGHT.	–	4	MEAN SIZE	–	335.5
NO. MEAS.	–	4	S.E. SIZE	–	25
NO. SITES	–	12	MIN. SIZE	–	294
CAT./SITE	–	0.3	MAX. SIZE	–	400

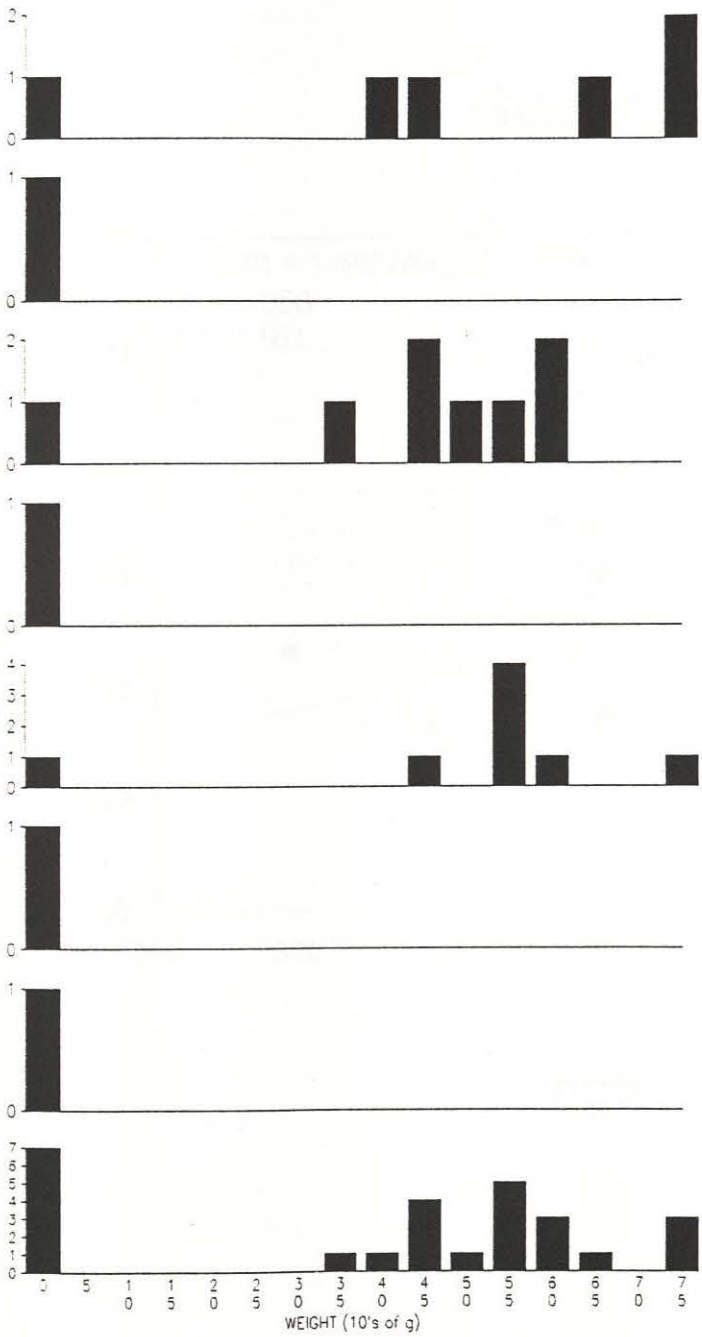
AUGUST		960805 – 960820			
NO. CGHT.	–	8	MEAN SIZE	–	336.9
NO. MEAS.	–	8	S.E. SIZE	–	8.5
NO. SITES	–	3	MIN. SIZE	–	299
CAT./SITE	–	2.7	MAX. SIZE	–	383

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	180	MEAN SIZE	–	305
NO. MEAS.	–	180	S.E. SIZE	–	2.9
NO. SITES	–	41	MIN. SIZE	–	253
CAT./SITE	–	4.4	MAX. SIZE	–	418

1996 Potomac River Pound Net Survey – Gizzard Shad Weights



APRIL	960417 – 960430		
NO. CGHT. –	7	MEAN WT	– 600.3
NO. WGHD. –	5	S.E. WT	– 80.8
NO. SITES –	2	MIN. WT	– 392
CAT./SITE –	3.5	MAX. WT	– 789.9

MAY	960514 – 960530		
NO. CGHT. –	15	MEAN WT	– .
NO. WGHD. –	0	S.E. WT	– .
NO. SITES –	6	MIN. WT	– .
CAT./SITE –	2.5	MAX. WT	– .

JUNE	960601 – 960627		
NO. CGHT. –	146	MEAN WT	– 514.9
NO. WGHD. –	7	S.E. WT	– 36.1
NO. SITES –	16	MIN. WT	– 371
CAT./SITE –	9.1	MAX. WT	– 621.7

JULY	960701 – 960725		
NO. CGHT. –	4	MEAN WT	– .
NO. WGHD. –	0	S.E. WT	– .
NO. SITES –	12	MIN. WT	– .
CAT./SITE –	0.3	MAX. WT	– .

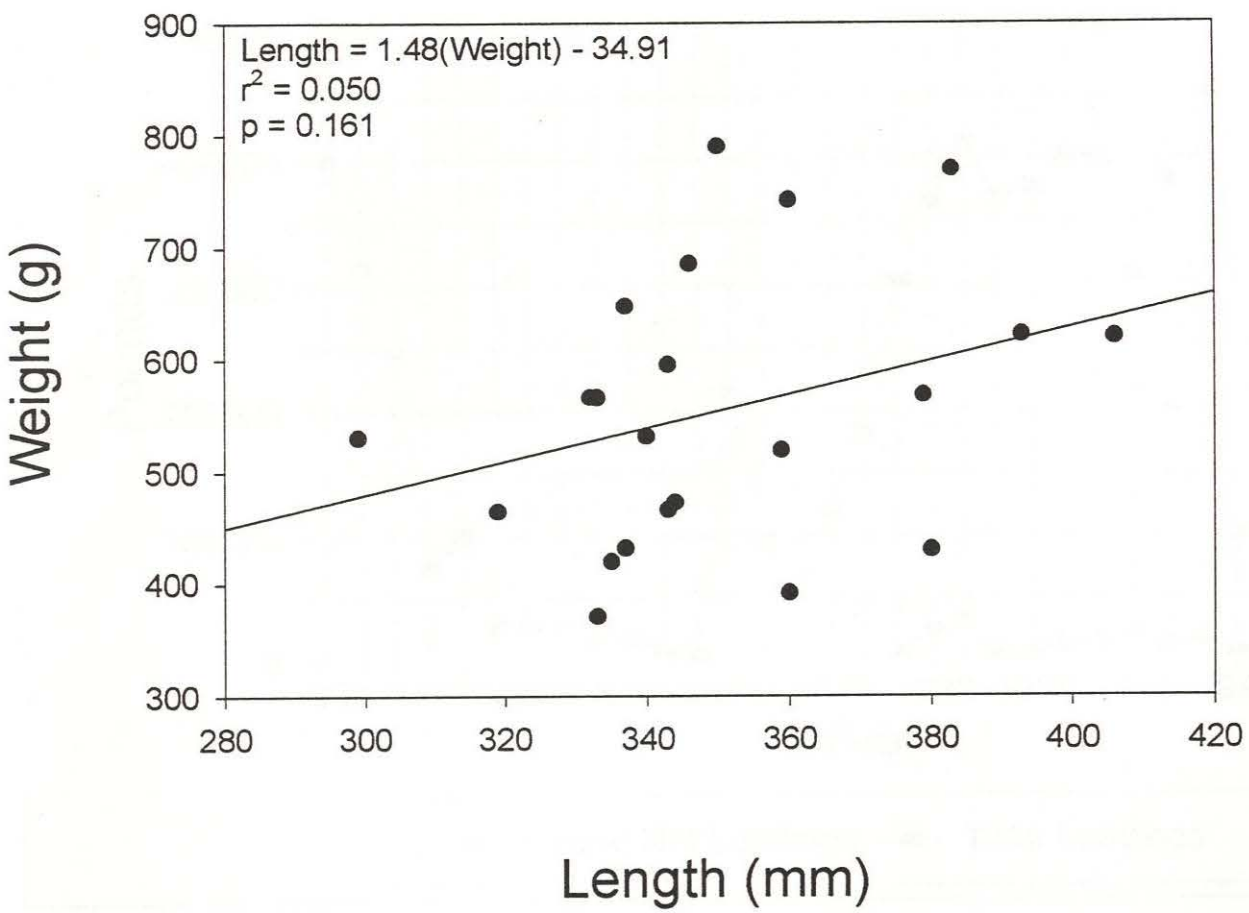
AUGUST	960805 – 960820		
NO. CGHT. –	8	MEAN WT	– 575
NO. WGHD. –	7	S.E. WT	– 35.9
NO. SITES –	3	MIN. WT	– 464.9
CAT./SITE –	2.7	MAX. WT	– 769.2

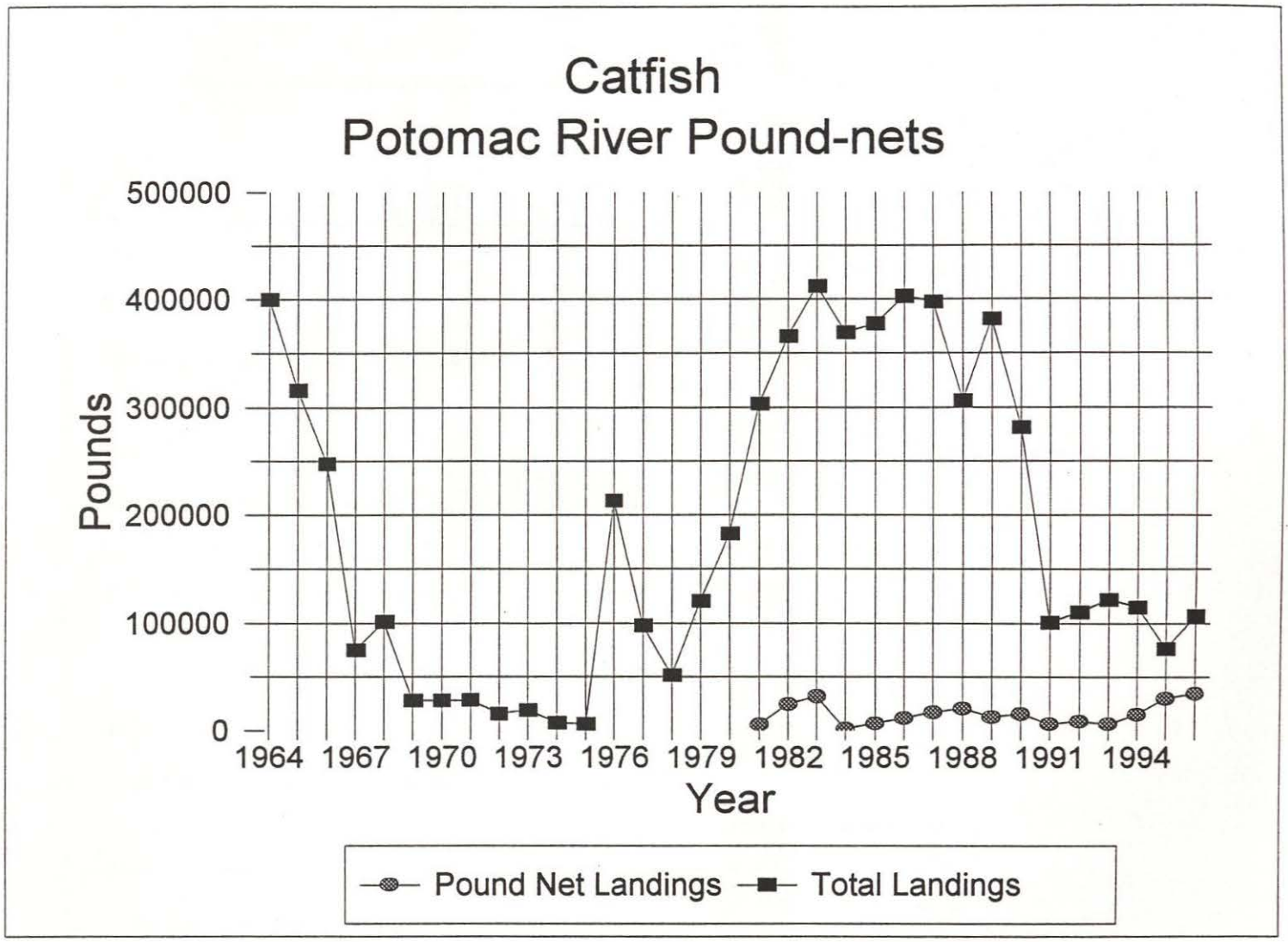
SEPTEMBER	960903 – 960903		
NO. CGHT. –	0	MEAN WT	– .
NO. WGHD. –	0	S.E. WT	– .
NO. SITES –	1	MIN. WT	– .
CAT./SITE –	0	MAX. WT	– .

OCTOBER	961028 – 961028		
NO. CGHT. –	0	MEAN WT	– .
NO. WGHD. –	0	S.E. WT	– .
NO. SITES –	1	MIN. WT	– .
CAT./SITE –	0	MAX. WT	– .

MAY–OCT	960417 – 961028		
NO. CGHT. –	180	MEAN WT	– 559.5
NO. WGHD. –	19	S.E. WT	– 27.8
NO. SITES –	41	MIN. WT	– 371
CAT./SITE –	4.4	MAX. WT	– 789.9

Gizzard shad





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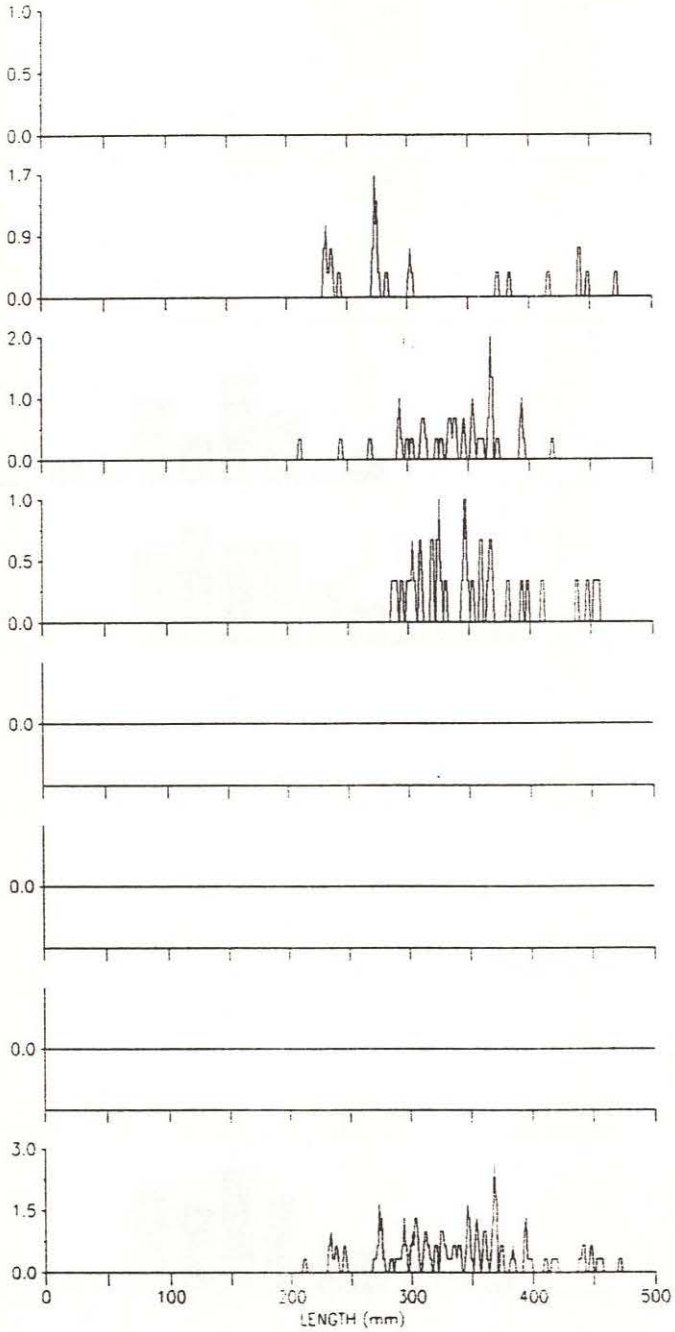
VIRGINIA INSTITUTE
of
MARINE SCIENCE

Potomac River Pound Net Survey – Catfish Spp. – 1996



APRIL	960417 – 960430		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. SITES	2	MIN. SIZE	.
CAT./SITE	0	MAX. SIZE	.

MAY	960514 – 960530		
NO. CGHT.	26	MEAN SIZE	357.9
NO. MEAS.	26	S.E. SIZE	25.9
NO. SITES	6	MIN. SIZE	230
CAT./SITE	4.3	MAX. SIZE	630

JUNE	960601 – 960627		
NO. CGHT.	36	MEAN SIZE	335.4
NO. MEAS.	36	S.E. SIZE	7.2
NO. SITES	16	MIN. SIZE	209
CAT./SITE	2.3	MAX. SIZE	417

JULY	960701 – 960725		
NO. CGHT.	32	MEAN SIZE	350.8
NO. MEAS.	32	S.E. SIZE	8.6
NO. SITES	12	MIN. SIZE	285
CAT./SITE	2.7	MAX. SIZE	454

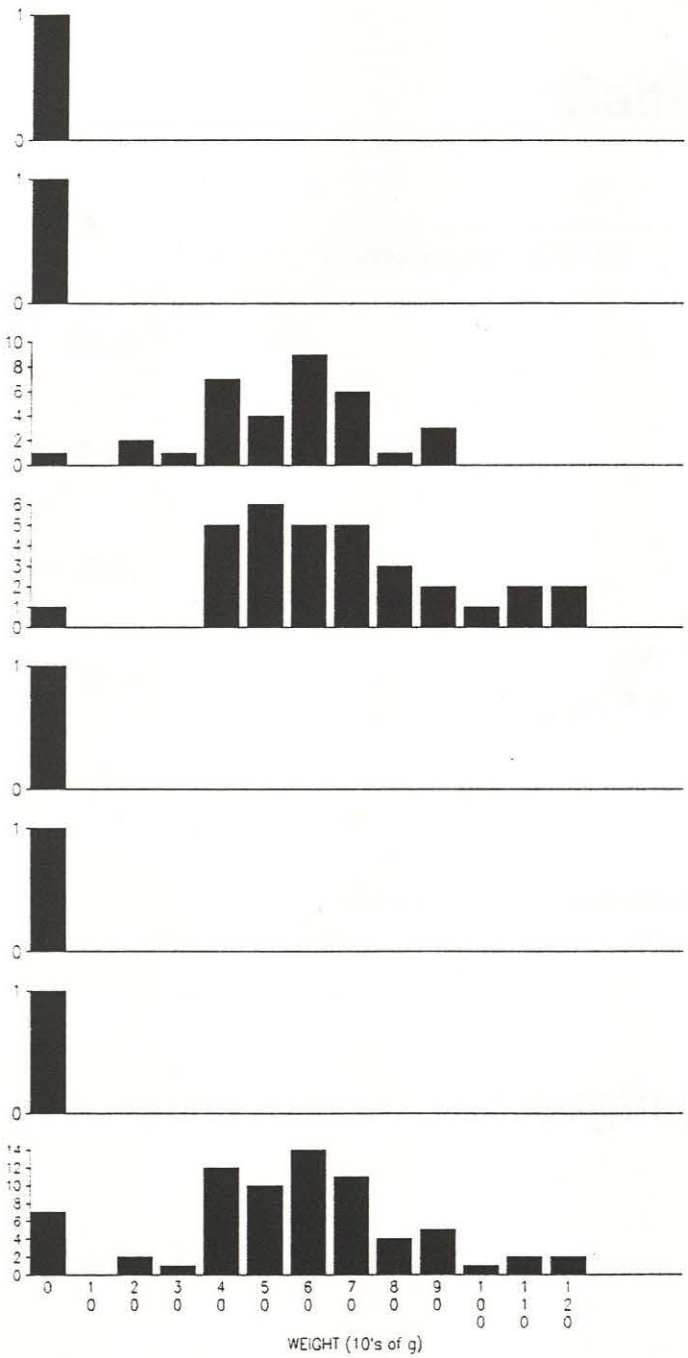
AUGUST	960805 – 960820		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. SITES	3	MIN. SIZE	.
CAT./SITE	0	MAX. SIZE	.

SEPTEMBER	960903 – 960903		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. SITES	1	MIN. SIZE	.
CAT./SITE	0	MAX. SIZE	.

OCTOBER	961028 – 961028		
NO. CGHT.	0	MEAN SIZE	.
NO. MEAS.	0	S.E. SIZE	.
NO. SITES	1	MIN. SIZE	.
CAT./SITE	0	MAX. SIZE	.

MAY–OCT	960417 – 961028		
NO. CGHT.	94	MEAN SIZE	346.9
NO. MEAS.	94	S.E. SIZE	8.2
NO. SITES	41	MIN. SIZE	209
CAT./SITE	2.3	MAX. SIZE	630

1996 Potomac River Pound Net Survey – Catfish Spp. Weights



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY		960514 – 960530			
NO. CGHT.	–	26	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	4.3	MAX. WT	–	.

JUNE		960601 – 960627			
NO. CGHT.	–	36	MEAN WT	–	571.1
NO. WGHD.	–	33	S.E. WT	–	33
NO. SITES	–	16	MIN. WT	–	150.7
CAT./SITE	–	2.3	MAX. WT	–	928.4

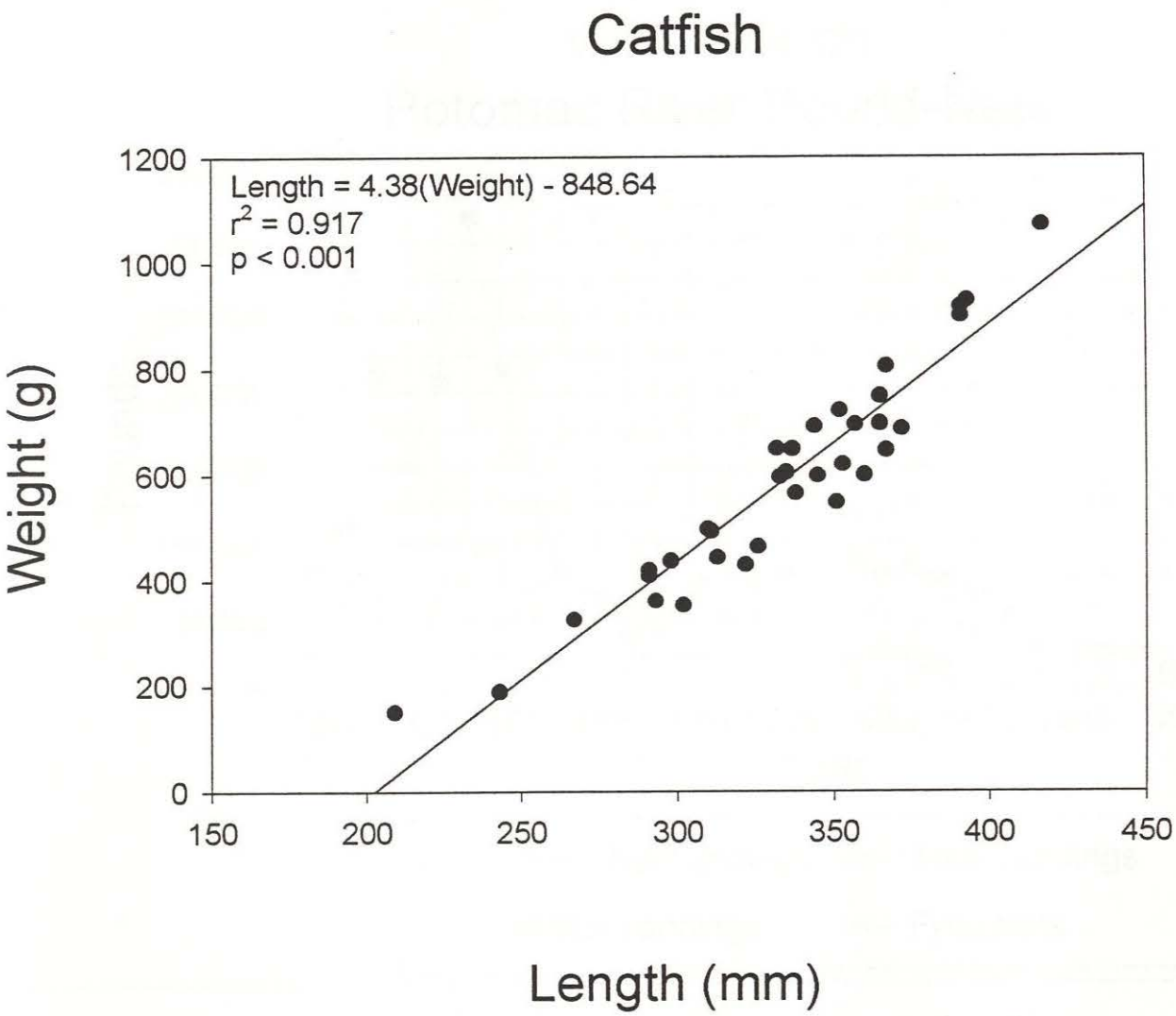
JULY		960701 – 960725			
NO. CGHT.	–	32	MEAN WT	–	687
NO. WGHD.	–	31	S.E. WT	–	43.5
NO. SITES	–	12	MIN. WT	–	378.1
CAT./SITE	–	2.7	MAX. WT	–	1302.5

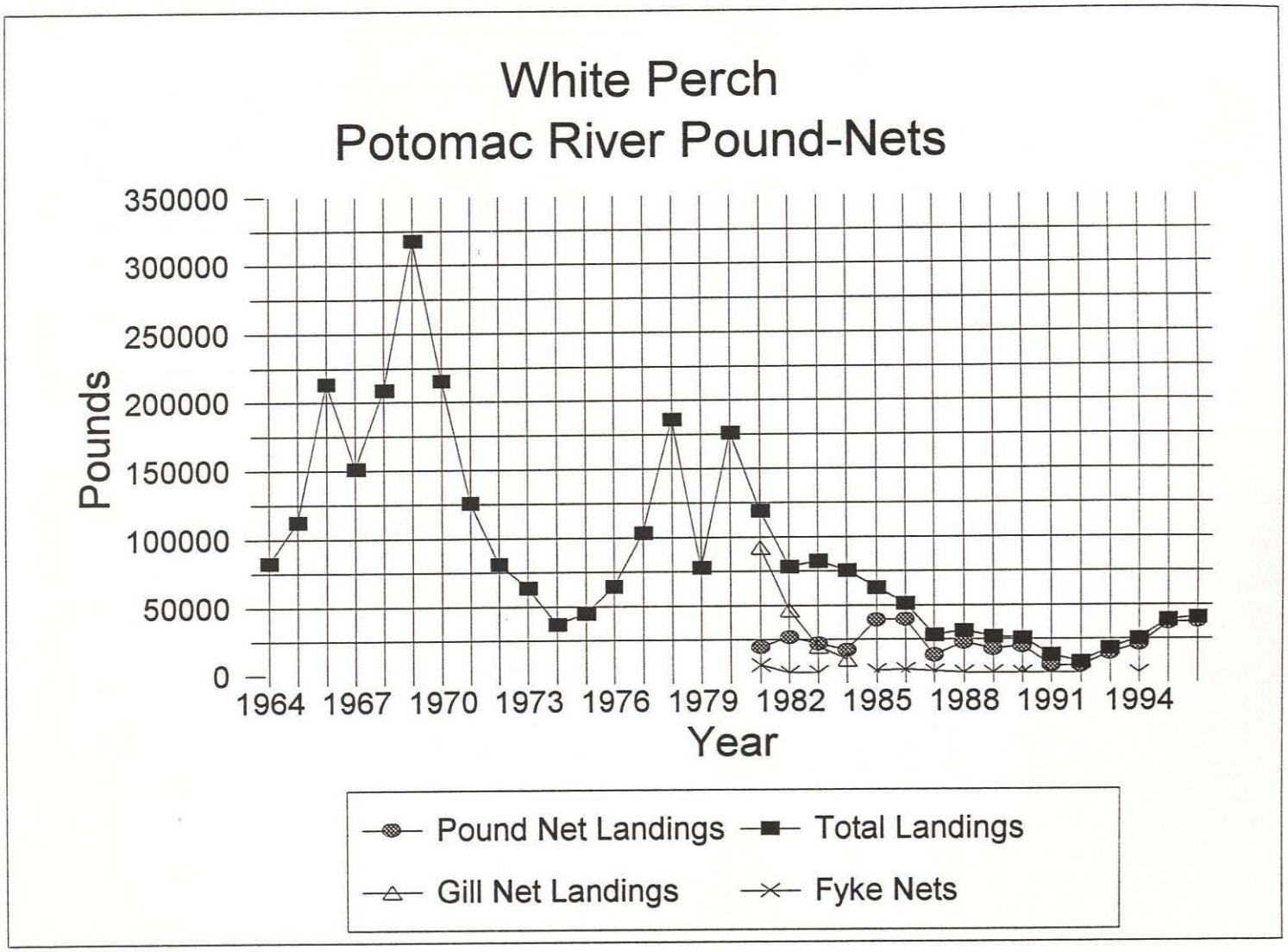
AUGUST		960805 – 960820			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	3	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

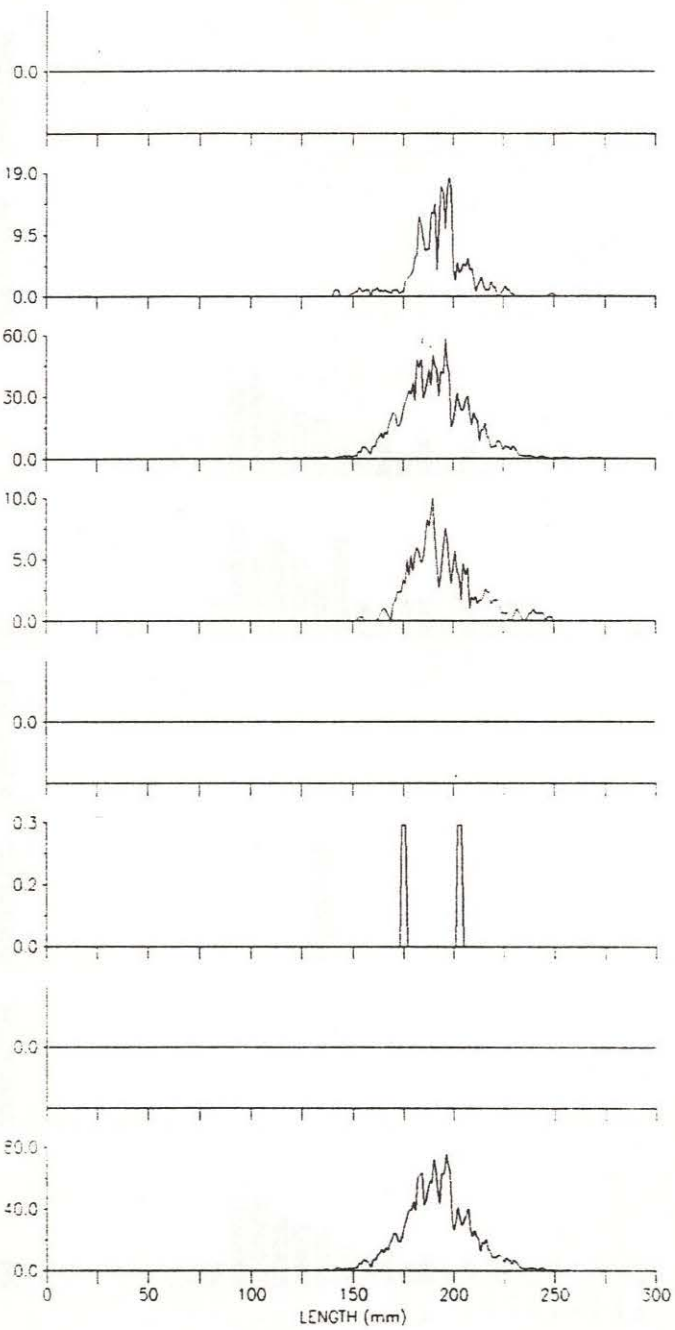
OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	94	MEAN WT	–	627.2
NO. WGHD.	–	64	S.E. WT	–	27.8
NO. SITES	–	41	MIN. WT	–	150.7
CAT./SITE	–	2.3	MAX. WT	–	1302.5


Catfish
Length = 4.38(Weight) - 848.64
r2 = 0.917
p < 0.001
Weight (g)
Length (mm)
0
200
400
600
800
1000
1200
150
200
250
300
350
400
450


White Perch
Potomac River Pound-Nets
Pounds
350000
300000
250000
200000
150000
100000
50000
0
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings
Gill Net Landings
Fyke Nets

Potomac River Pound Net Survey – White Perch – 1996



APRIL	960417 – 960430		
NO. CGHT. –	0	MEAN SIZE –	.
NO. MEAS. –	0	S.E. SIZE –	.
NO. SITES –	2	MIN. SIZE –	.
CAT./SITE –	0	MAX. SIZE –	.

MAY	960514 – 960530		
NO. CGHT. –	325	MEAN SIZE –	190.5
NO. MEAS. –	325	S.E. SIZE –	0.8
NO. SITES –	6	MIN. SIZE –	140
CAT./SITE –	54.2	MAX. SIZE –	247

JUNE	960601 – 960627		
NO. CGHT. –	1682	MEAN SIZE –	189.1
NO. MEAS. –	1682	S.E. SIZE –	0.4
NO. SITES –	16	MIN. SIZE –	112
CAT./SITE –	105.1	MAX. SIZE –	270

JULY	960701 – 960725		
NO. CGHT. –	226	MEAN SIZE –	192.8
NO. MEAS. –	226	S.E. SIZE –	1.1
NO. SITES –	12	MIN. SIZE –	152
CAT./SITE –	18.8	MAX. SIZE –	246

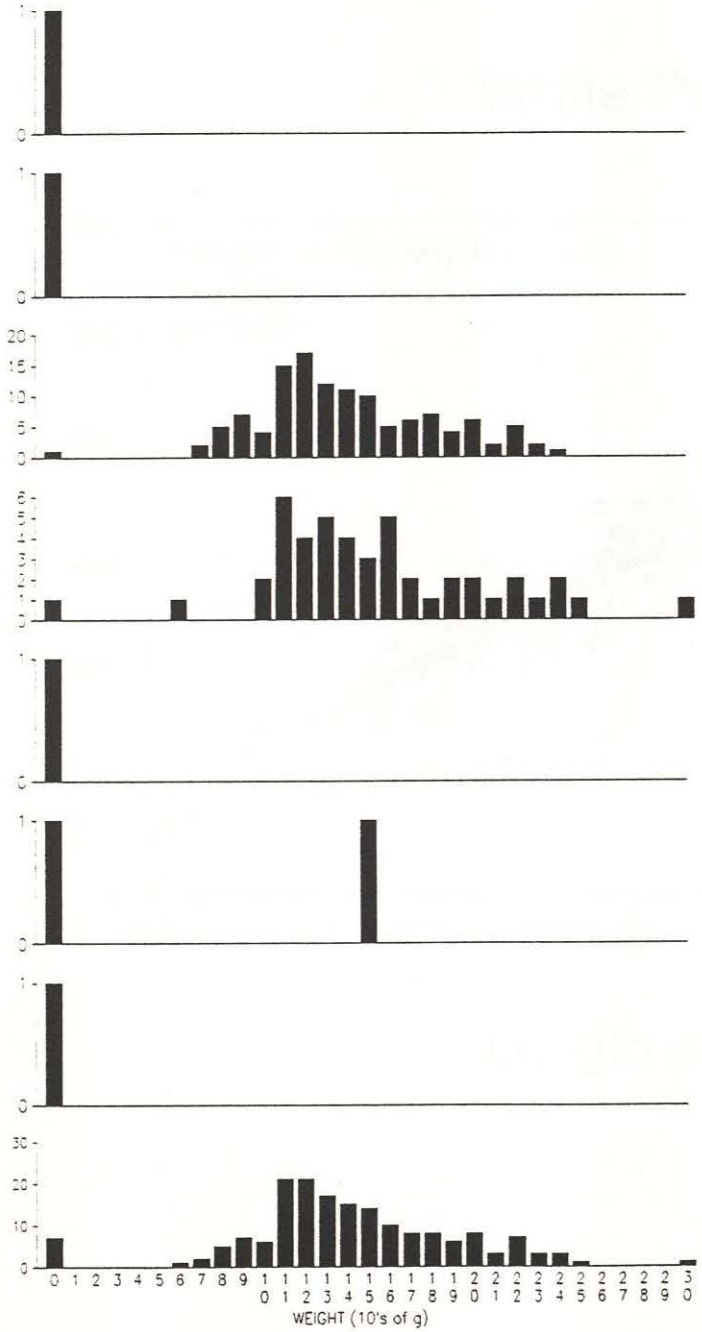
AUGUST	960805 – 960820		
NO. CGHT. –	0	MEAN SIZE –	.
NO. MEAS. –	0	S.E. SIZE –	.
NO. SITES –	3	MIN. SIZE –	.
CAT./SITE –	0	MAX. SIZE –	.

SEPTEMBER	960903 – 960903		
NO. CGHT. –	2	MEAN SIZE –	187
NO. MEAS. –	2	S.E. SIZE –	14
NO. SITES –	1	MIN. SIZE –	173
CAT./SITE –	2	MAX. SIZE –	201

OCTOBER	961028 – 961028		
NO. CGHT. –	0	MEAN SIZE –	.
NO. MEAS. –	0	S.E. SIZE –	.
NO. SITES –	1	MIN. SIZE –	.
CAT./SITE –	0	MAX. SIZE –	.

MAY–OCT	960417 – 961028		
NO. CGHT. –	2235	MEAN SIZE –	189.6
NO. MEAS. –	2235	S.E. SIZE –	0.4
NO. SITES –	41	MIN. SIZE –	112
CAT./SITE –	54.5	MAX. SIZE –	270

1996 Potomac River Pound Net Survey – White Perch Weights



APRIL 960417 – 960430

NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY 960514 – 960530

NO. CGHT.	–	325	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	54.2	MAX. WT	–	.

JUNE 960601 – 960627

NO. CGHT.	–	1682	MEAN WT	–	141.4
NO. WGHD.	–	121	S.E. WT	–	3.7
NO. SITES	–	16	MIN. WT	–	72.7
CAT./SITE	–	105.1	MAX. WT	–	240.5

JULY 960701 – 960725

NO. CGHT.	–	226	MEAN WT	–	156.9
NO. WGHD.	–	45	S.E. WT	–	7.5
NO. SITES	–	12	MIN. WT	–	64
CAT./SITE	–	18.8	MAX. WT	–	322.2

AUGUST 960805 – 960820

NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	3	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

SEPTEMBER 960903 – 960903

NO. CGHT.	–	2	MEAN WT	–	154.2
NO. WGHD.	–	1	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	154.2
CAT./SITE	–	2	MAX. WT	–	154.2

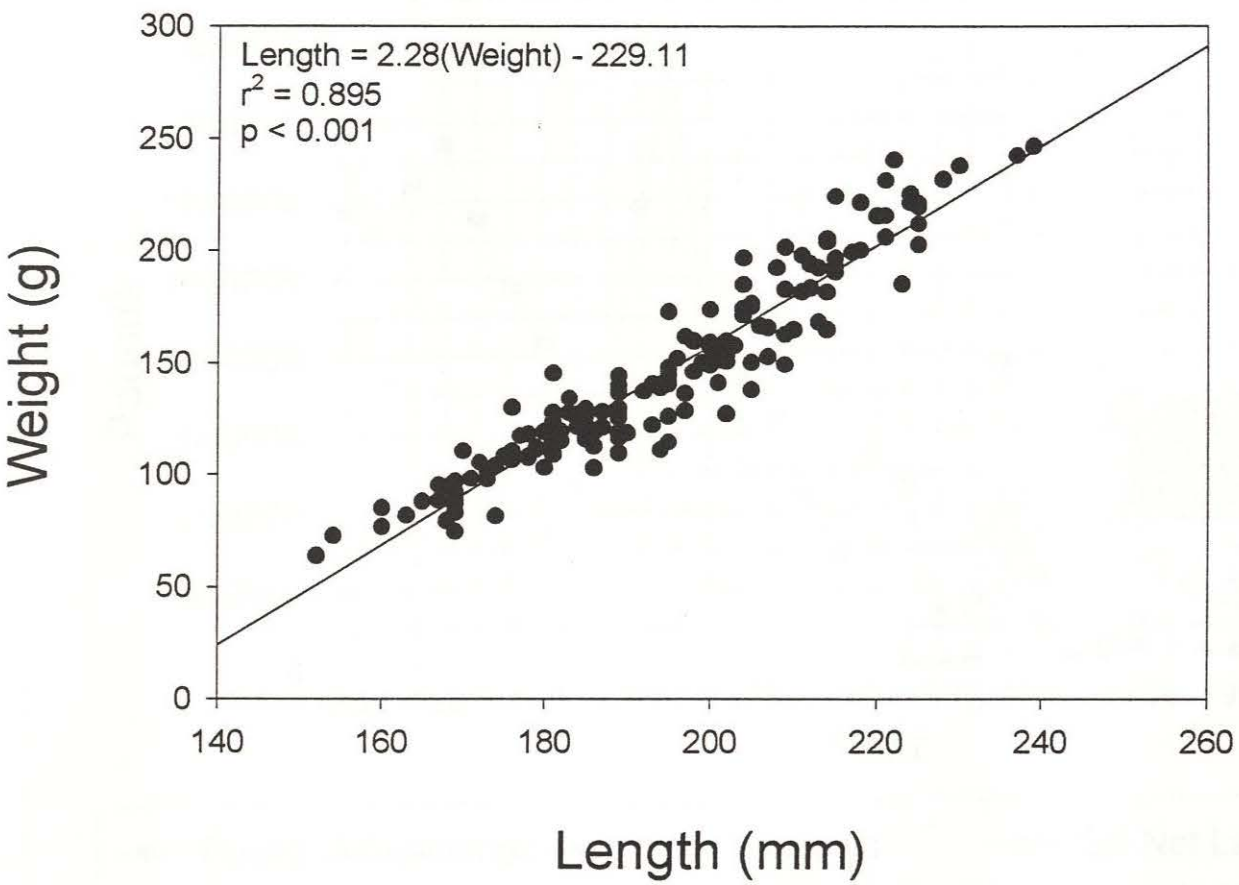
OCTOBER 961028 – 961028

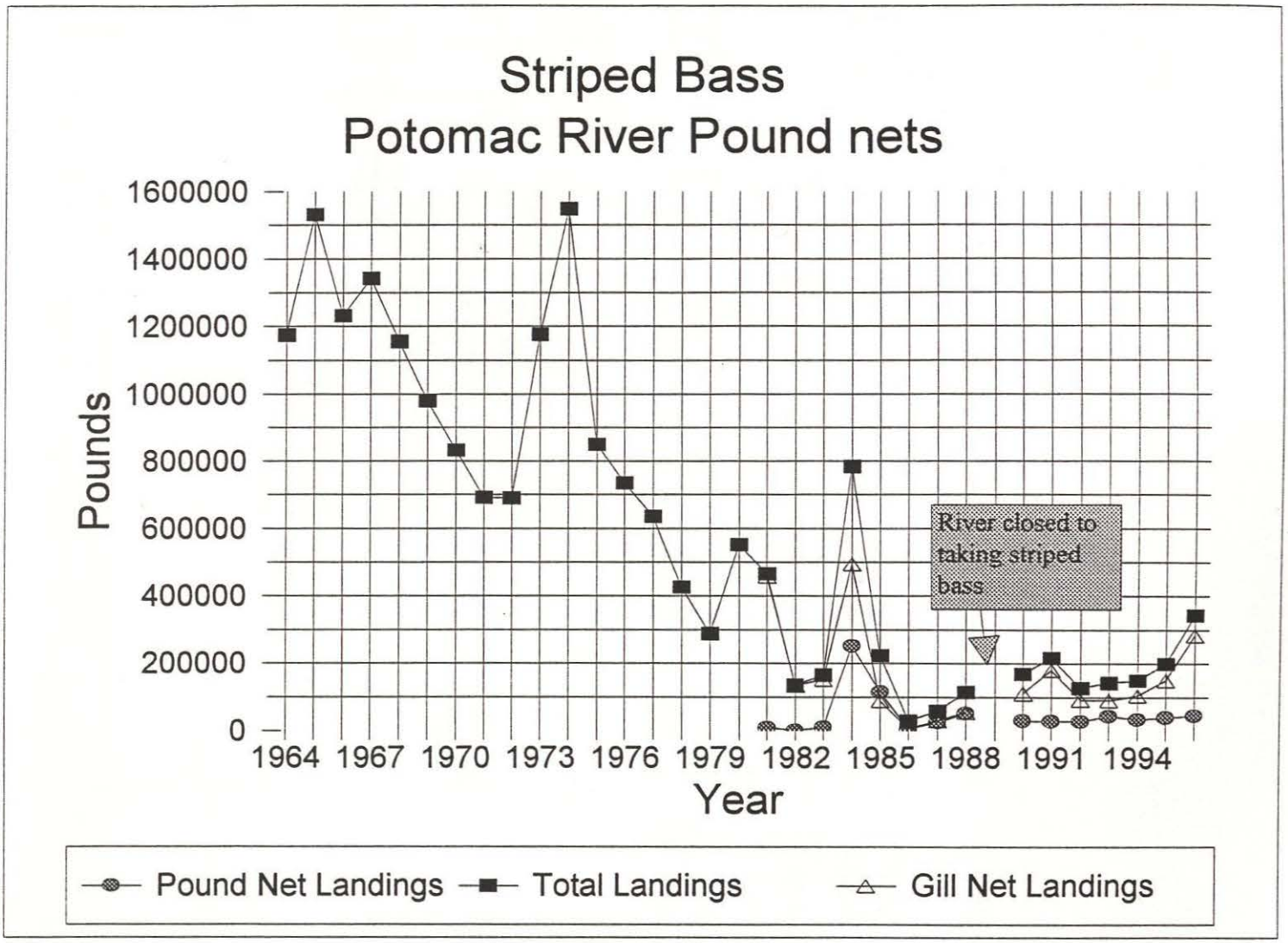
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT 960417 – 961028

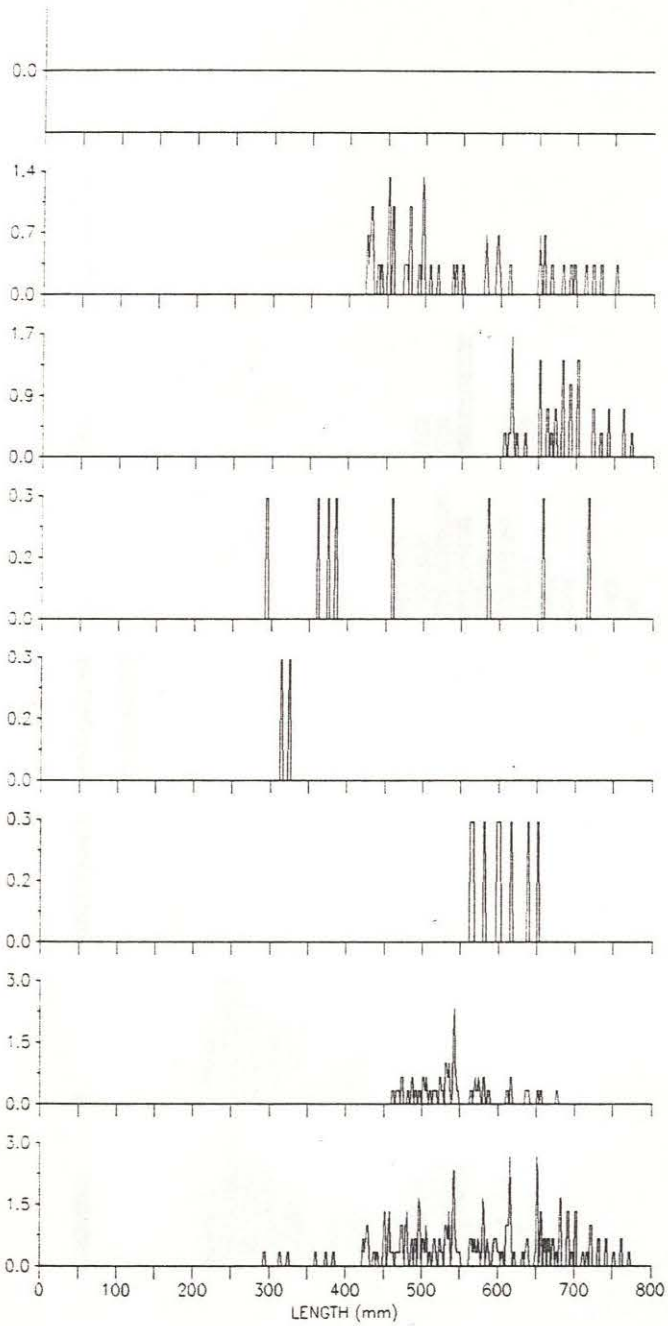
NO. CGHT.	–	2235	MEAN WT	–	145.7
NO. WGHD.	–	167	S.E. WT	–	3.4
NO. SITES	–	41	MIN. WT	–	64
CAT./SITE	–	54.5	MAX. WT	–	322.2

White Perch


Length = 2.28(Weight) - 229.11
r2 = 0.895
p < 0.001
Weight (g)
300
250
200
150
100
50
0
140
160
180
200
220
240
260
Length (mm)


Striped Bass
Potomac River Pound nets
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
Pounds
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
River closed to taking striped bass
Pound Net Landings
Total Landings
Gill Net Landings

Potomac River Pound Net Survey – Striped Bass – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	2	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY		960514 – 960530			
NO. CGHT.	–	49	MEAN SIZE	–	536.8
NO. MEAS.	–	49	S.E. SIZE	–	14.4
NO. SITES	–	6	MIN. SIZE	–	421
CAT./SITE	–	8.2	MAX. SIZE	–	750

JUNE		960601 – 960627			
NO. CGHT.	–	37	MEAN SIZE	–	675.4
NO. MEAS.	–	37	S.E. SIZE	–	7.7
NO. SITES	–	14	MIN. SIZE	–	604
CAT./SITE	–	2.6	MAX. SIZE	–	770

JULY		960701 – 960725			
NO. CGHT.	–	8	MEAN SIZE	–	477.3
NO. MEAS.	–	8	S.E. SIZE	–	54.8
NO. SITES	–	12	MIN. SIZE	–	292
CAT./SITE	–	0.7	MAX. SIZE	–	715

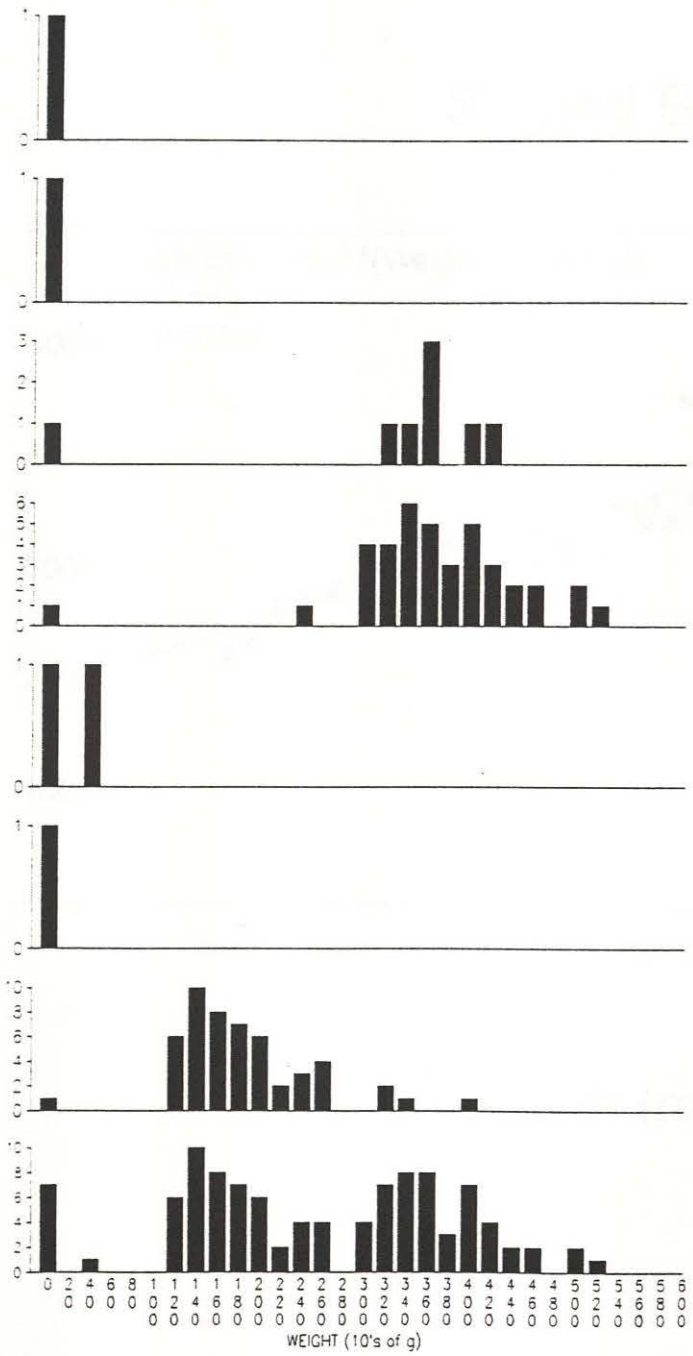
AUGUST		960805 – 960820			
NO. CGHT.	–	2	MEAN SIZE	–	317.5
NO. MEAS.	–	2	S.E. SIZE	–	5.5
NO. SITES	–	3	MIN. SIZE	–	312
CAT./SITE	–	0.7	MAX. SIZE	–	323

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	8	MEAN SIZE	–	600.8
NO. MEAS.	–	8	S.E. SIZE	–	11.3
NO. SITES	–	1	MIN. SIZE	–	562
CAT./SITE	–	8	MAX. SIZE	–	650

OCTOBER		961028 – 961028			
NO. CGHT.	–	51	MEAN SIZE	–	541.8
NO. MEAS.	–	51	S.E. SIZE	–	7.3
NO. SITES	–	1	MIN. SIZE	–	460
CAT./SITE	–	51	MAX. SIZE	–	675

MAY–OCT		960417 – 961028			
NO. CGHT.	–	155	MEAN SIZE	–	568.9
NO. MEAS.	–	155	S.E. SIZE	–	8.2
NO. SITES	–	39	MIN. SIZE	–	292
CAT./SITE	–	4	MAX. SIZE	–	770

1996 Potomac River Pound Net Survey – Striped Bass Weights



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY		960514 – 960530			
NO. CGHT.	–	49	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	8.2	MAX. WT	–	.

JUNE		960601 – 960627			
NO. CGHT.	–	37	MEAN WT	–	3646.5
NO. WGHD.	–	7	S.E. WT	–	124.4
NO. SITES	–	14	MIN. WT	–	3193.9
CAT./SITE	–	2.6	MAX. WT	–	4161.2

JULY		960701 – 960725			
NO. CGHT.	–	8	MEAN WT	–	3750.8
NO. WGHD.	–	38	S.E. WT	–	101.2
NO. SITES	–	12	MIN. WT	–	2346
CAT./SITE	–	0.7	MAX. WT	–	5196.7

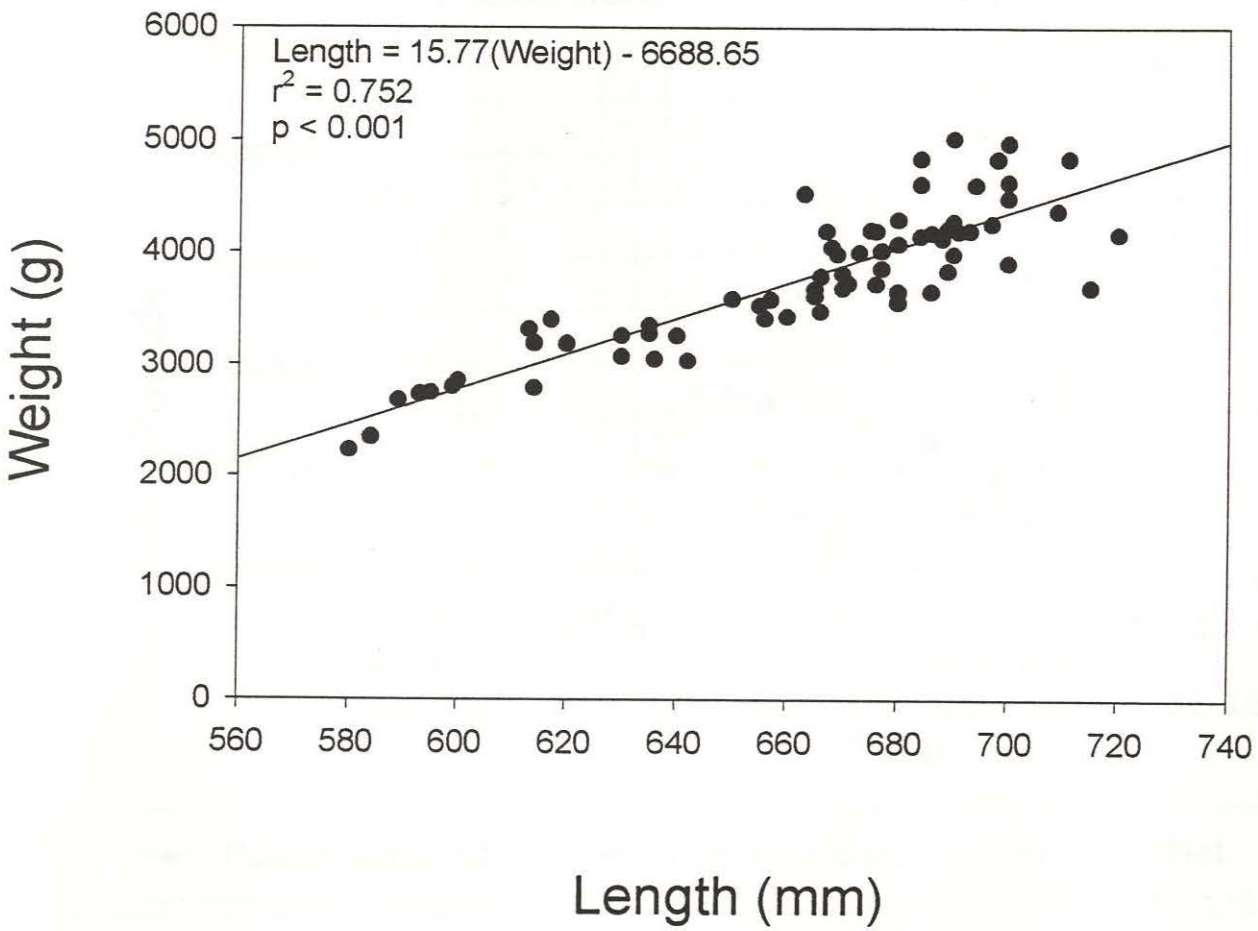
AUGUST		960805 – 960820			
NO. CGHT.	–	2	MEAN WT	–	366.8
NO. WGHD.	–	1	S.E. WT	–	.
NO. SITES	–	3	MIN. WT	–	366.8
CAT./SITE	–	0.7	MAX. WT	–	366.8

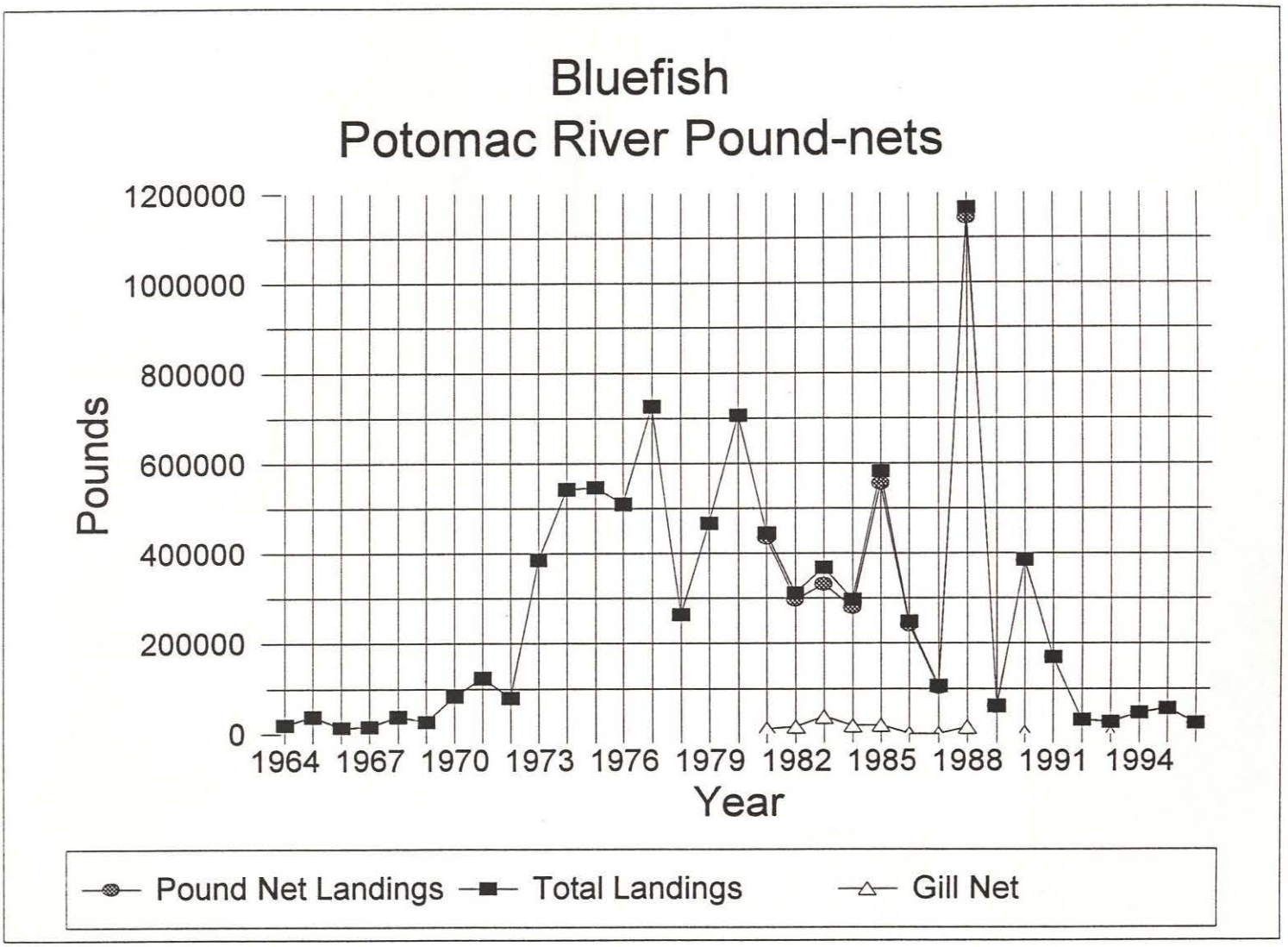
SEPTEMBER		960903 – 960903			
NO. CGHT.	–	8	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	8	MAX. WT	–	.

OCTOBER		961028 – 961028			
NO. CGHT.	–	51	MEAN WT	–	1889.2
NO. WGHD.	–	50	S.E. WT	–	89.3
NO. SITES	–	1	MIN. WT	–	1171.6
CAT./SITE	–	51	MAX. WT	–	4099.9

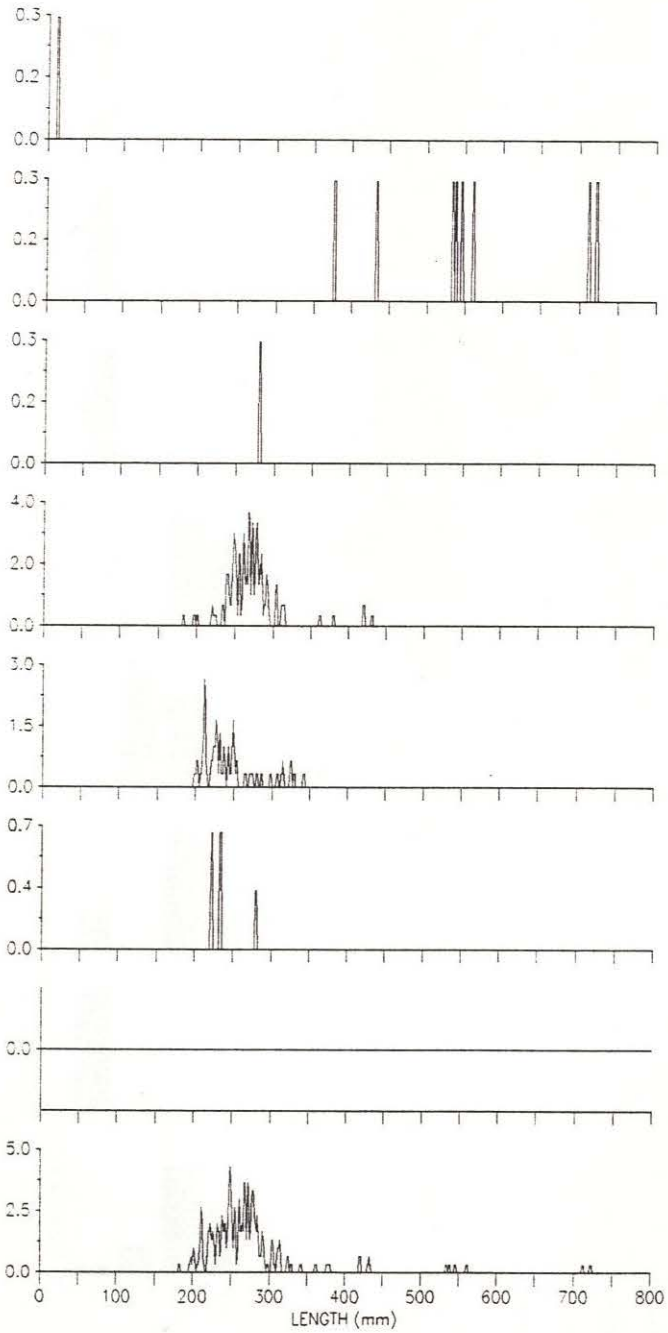
MAY–OCT		960417 – 961028			
NO. CGHT.	–	155	MEAN WT	–	2738.4
NO. WGHD.	–	96	S.E. WT	–	115.2
NO. SITES	–	39	MIN. WT	–	366.8
CAT./SITE	–	4	MAX. WT	–	5196.7

Striped Bass




Bluefish
Potomac River Pound-nets
1200000
1000000
800000
600000
400000
200000
0
Pounds
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings
Gill Net

Potomac River Pound Net Survey – Bluefish – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	2	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY		960514 – 960530			
NO. CGHT.	–	9	MEAN SIZE	–	578.6
NO. MEAS.	–	9	S.E. SIZE	–	46.4
NO. SITES	–	6	MIN. SIZE	–	375
CAT./SITE	–	1.5	MAX. SIZE	–	800

JUNE		960601 – 960627			
NO. CGHT.	–	1	MEAN SIZE	–	278
NO. MEAS.	–	1	S.E. SIZE	–	.
NO. SITES	–	14	MIN. SIZE	–	278
CAT./SITE	–	0.1	MAX. SIZE	–	278

JULY		960701 – 960725			
NO. CGHT.	–	122	MEAN SIZE	–	268.8
NO. MEAS.	–	122	S.E. SIZE	–	3.2
NO. SITES	–	12	MIN. SIZE	–	181
CAT./SITE	–	10.2	MAX. SIZE	–	429

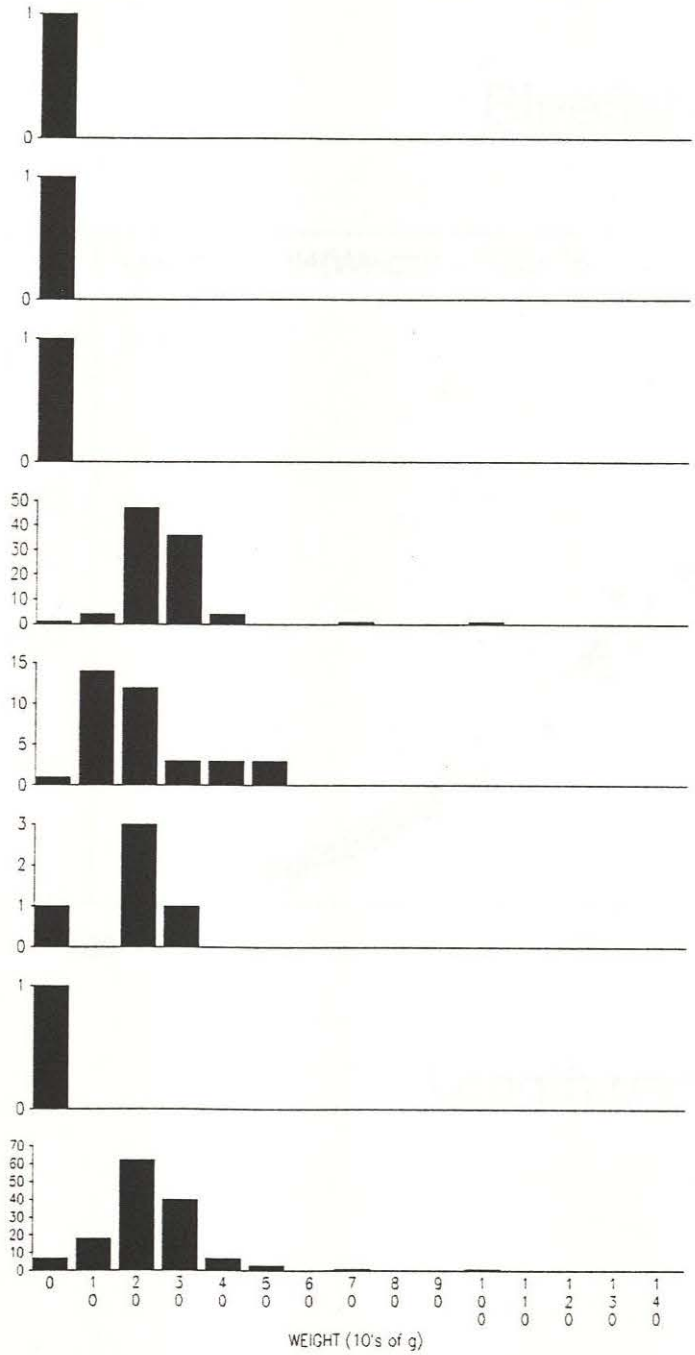
AUGUST		960805 – 960820			
NO. CGHT.	–	55	MEAN SIZE	–	243
NO. MEAS.	–	55	S.E. SIZE	–	5
NO. SITES	–	3	MIN. SIZE	–	197
CAT./SITE	–	18.3	MAX. SIZE	–	340

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	5	MEAN SIZE	–	236.6
NO. MEAS.	–	5	S.E. SIZE	–	10.7
NO. SITES	–	1	MIN. SIZE	–	220
CAT./SITE	–	5	MAX. SIZE	–	278

OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	192	MEAN SIZE	–	275.2
NO. MEAS.	–	192	S.E. SIZE	–	5.9
NO. SITES	–	39	MIN. SIZE	–	181
CAT./SITE	–	4.9	MAX. SIZE	–	800

1996 Potomac River Pound Net Survey – Bluefish Weights



APRIL 960417 – 960430

NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY 960514 – 960530

NO. CGHT.	–	9	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	1.5	MAX. WT	–	.

JUNE 960601 – 960627

NO. CGHT.	–	1	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	14	MIN. WT	–	.
CAT./SITE	–	0.1	MAX. WT	–	.

JULY 960701 – 960725

NO. CGHT.	–	122	MEAN WT	–	254.9
NO. WGHD.	–	93	S.E. WT	–	11.4
NO. SITES	–	12	MIN. WT	–	75.6
CAT./SITE	–	10.2	MAX. WT	–	1048

AUGUST 960805 – 960820

NO. CGHT.	–	55	MEAN WT	–	207.5
NO. WGHD.	–	35	S.E. WT	–	19.6
NO. SITES	–	3	MIN. WT	–	101.5
CAT./SITE	–	18.3	MAX. WT	–	500.3

SEPTEMBER 960903 – 960903

NO. CGHT.	–	5	MEAN WT	–	195.3
NO. WGHD.	–	4	S.E. WT	–	29.2
NO. SITES	–	1	MIN. WT	–	159.8
CAT./SITE	–	5	MAX. WT	–	282.6

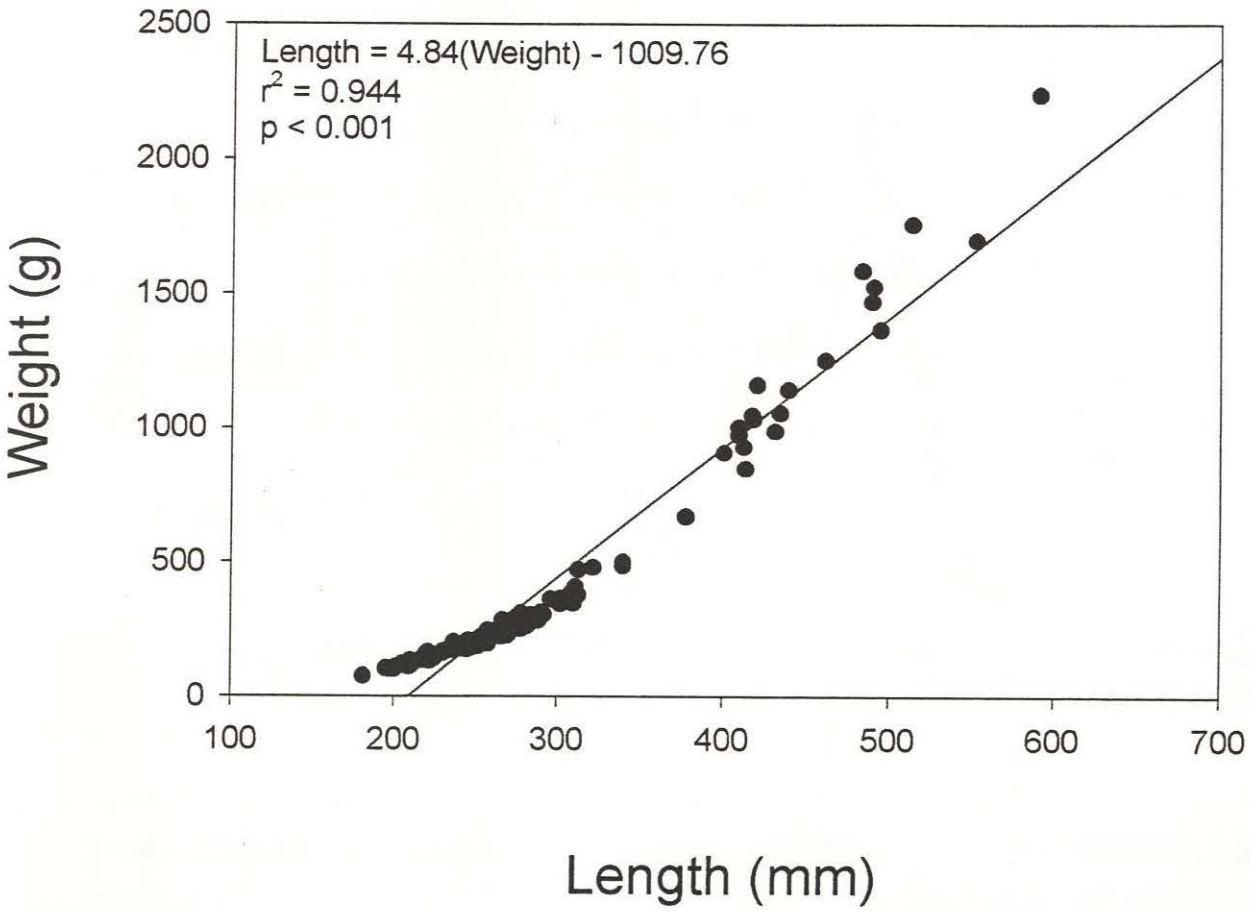
OCTOBER 961028 – 961028

NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT 960417 – 961028

NO. CGHT.	–	192	MEAN WT	–	240.5
NO. WGHD.	–	132	S.E. WT	–	9.7
NO. SITES	–	39	MIN. WT	–	75.6
CAT./SITE	–	4.9	MAX. WT	–	1048

Bluefish


Length = 4.84(Weight) - 1009.76
r2 = 0.944
p < 0.001
Weight (g)
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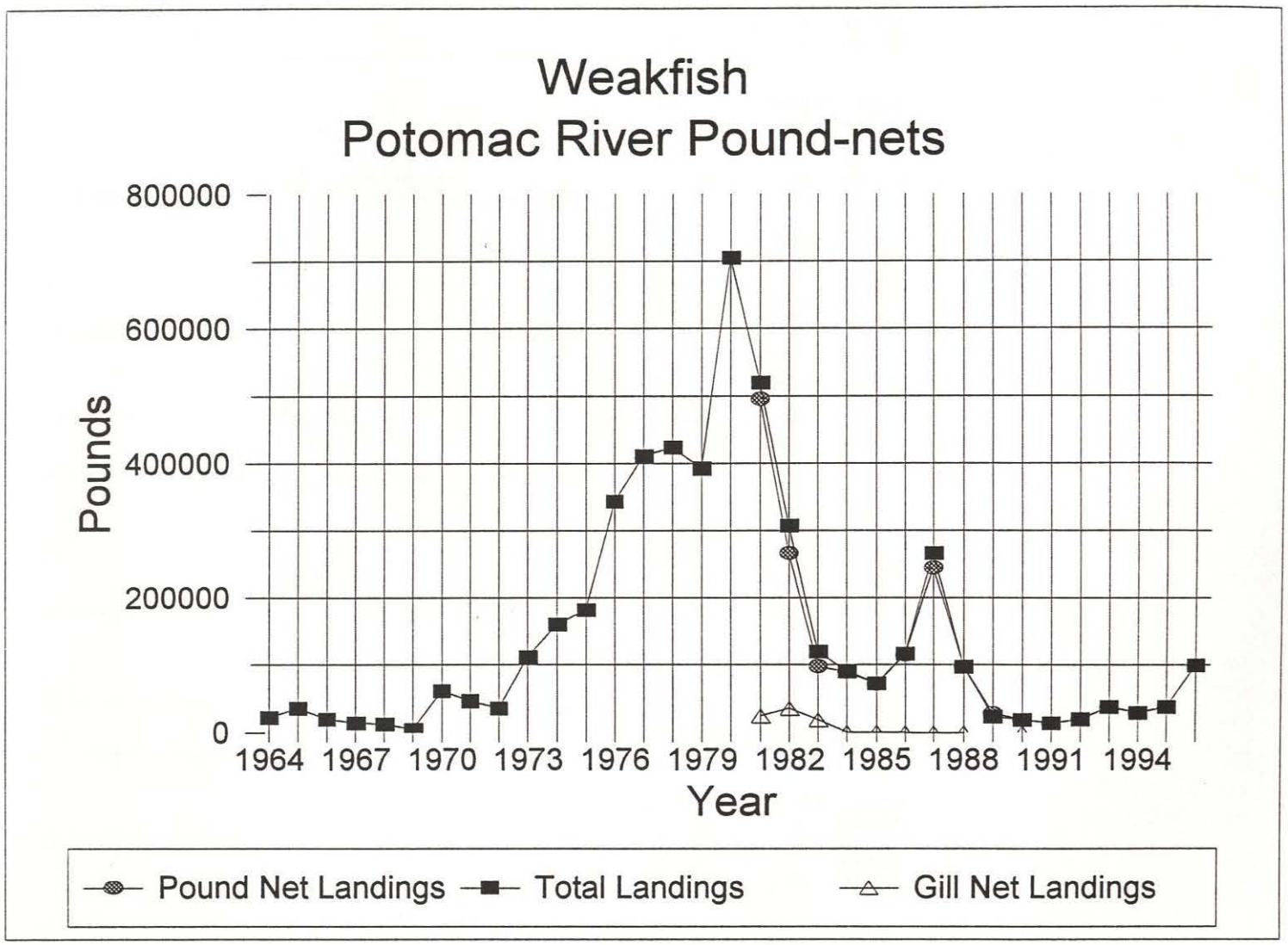
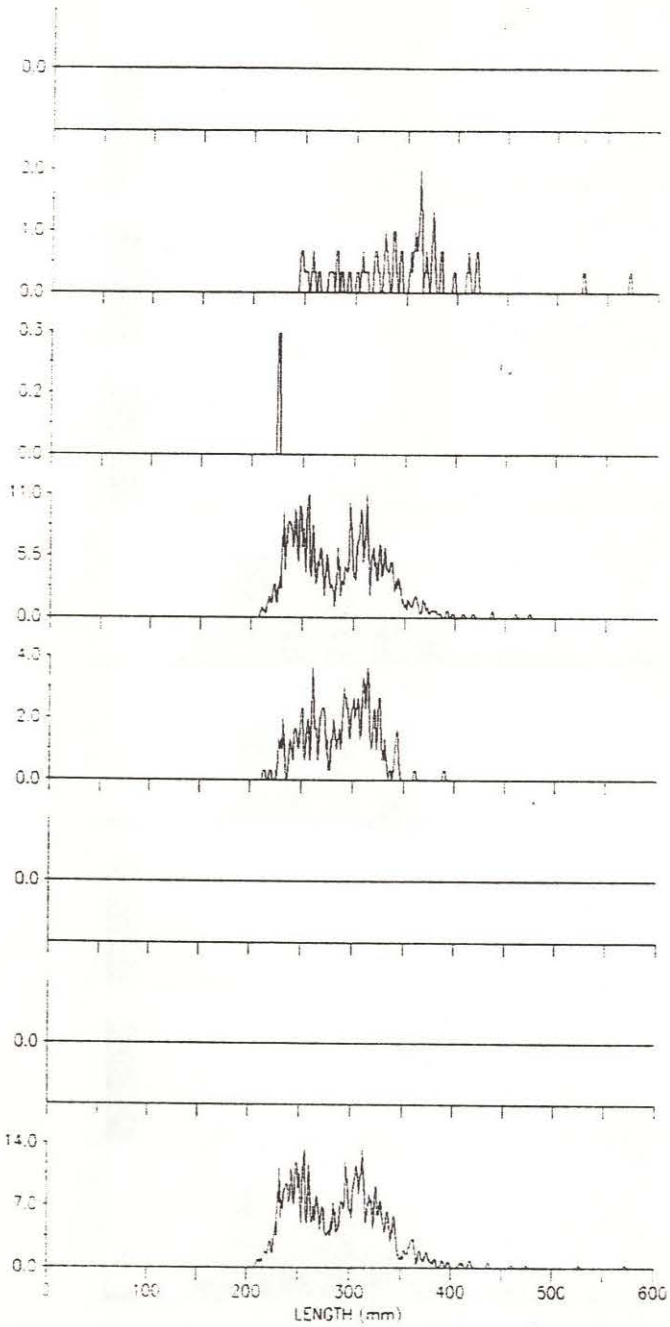
2000
1500
1000
500
0
100
200
300
400
500
600
700
Length (mm)


Weakfish
Potomac River Pound-nets
800000
600000
400000
200000
0
Pounds
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings
Gill Net Landings

Potomac River Pound Net Survey - Weakfish - 1996



APRIL		960417 - 960430			
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	2	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

MAY		960514 - 960530			
NO. CGHT.	-	57	MEAN SIZE	-	339.9
NO. MEAS.	-	57	S.E. SIZE	-	8.1
NO. SITES	-	6	MIN. SIZE	-	244
CAT./SITE	-	9.5	MAX. SIZE	-	570

JUNE		960601 - 960627			
NO. CGHT.	-	1	MEAN SIZE	-	224
NO. MEAS.	-	1	S.E. SIZE	-	.
NO. SITES	-	16	MIN. SIZE	-	224
CAT./SITE	-	0.1	MAX. SIZE	-	224

JULY		960701 - 960725			
NO. CGHT.	-	724	MEAN SIZE	-	283.7
NO. MEAS.	-	724	S.E. SIZE	-	1.6
NO. SITES	-	12	MIN. SIZE	-	208
CAT./SITE	-	60.3	MAX. SIZE	-	472

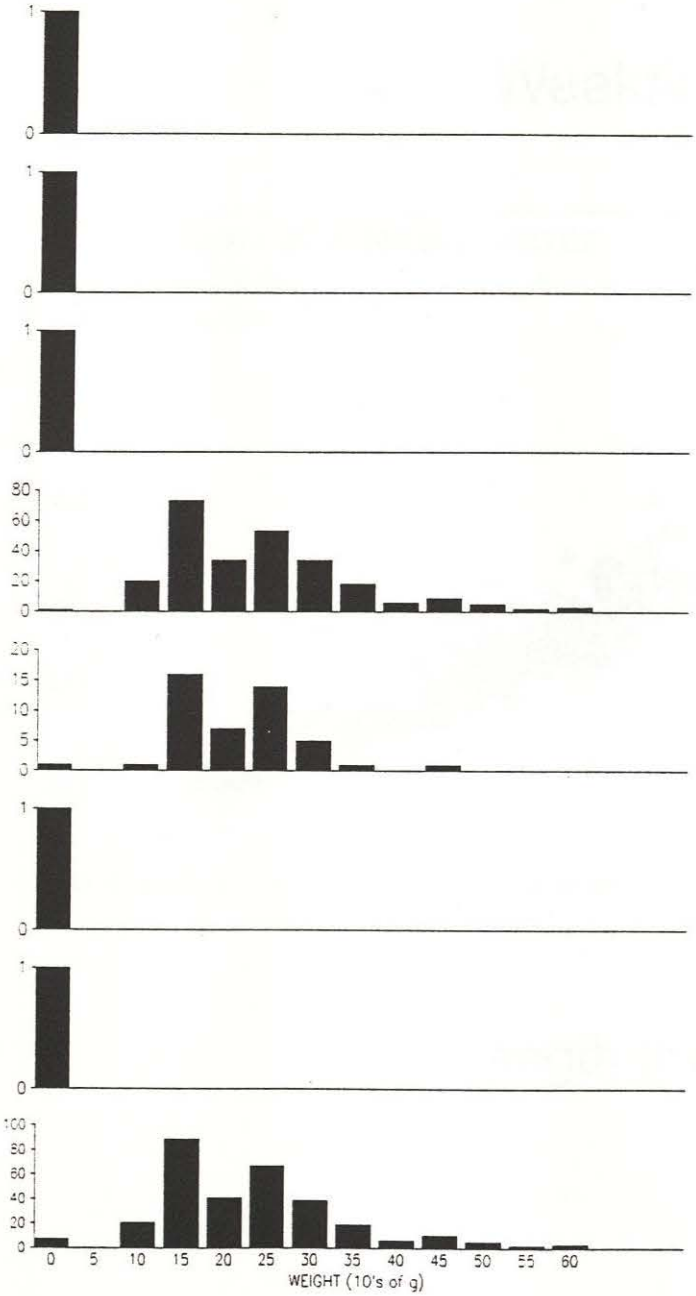
AUGUST		960805 - 960820			
NO. CGHT.	-	190	MEAN SIZE	-	285.2
NO. MEAS.	-	190	S.E. SIZE	-	2.3
NO. SITES	-	3	MIN. SIZE	-	212
CAT./SITE	-	63.3	MAX. SIZE	-	388

SEPTEMBER		960903 - 960903			
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	1	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

OCTOBER		961028 - 961028			
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	1	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.

MAY-OCT		960417 - 961028			
NO. CGHT.	-	972	MEAN SIZE	-	287.2
NO. MEAS.	-	972	S.E. SIZE	-	1.4
NO. SITES	-	41	MIN. SIZE	-	208
CAT./SITE	-	23.7	MAX. SIZE	-	570

1996 Potomac River Pound Net Survey – Weakfish Weights



APRIL	960417 – 960430				
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY	960514 – 960530				
NO. CGHT.	–	57	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	9.5	MAX. WT	–	.

JUNE	960601 – 960627				
NO. CGHT.	–	1	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	16	MIN. WT	–	.
CAT./SITE	–	0.1	MAX. WT	–	.

JULY	960701 – 960725				
NO. CGHT.	–	724	MEAN WT	–	242.1
NO. WGHD.	–	257	S.E. WT	–	7.1
NO. SITES	–	12	MIN. WT	–	96.5
CAT./SITE	–	60.3	MAX. WT	–	927

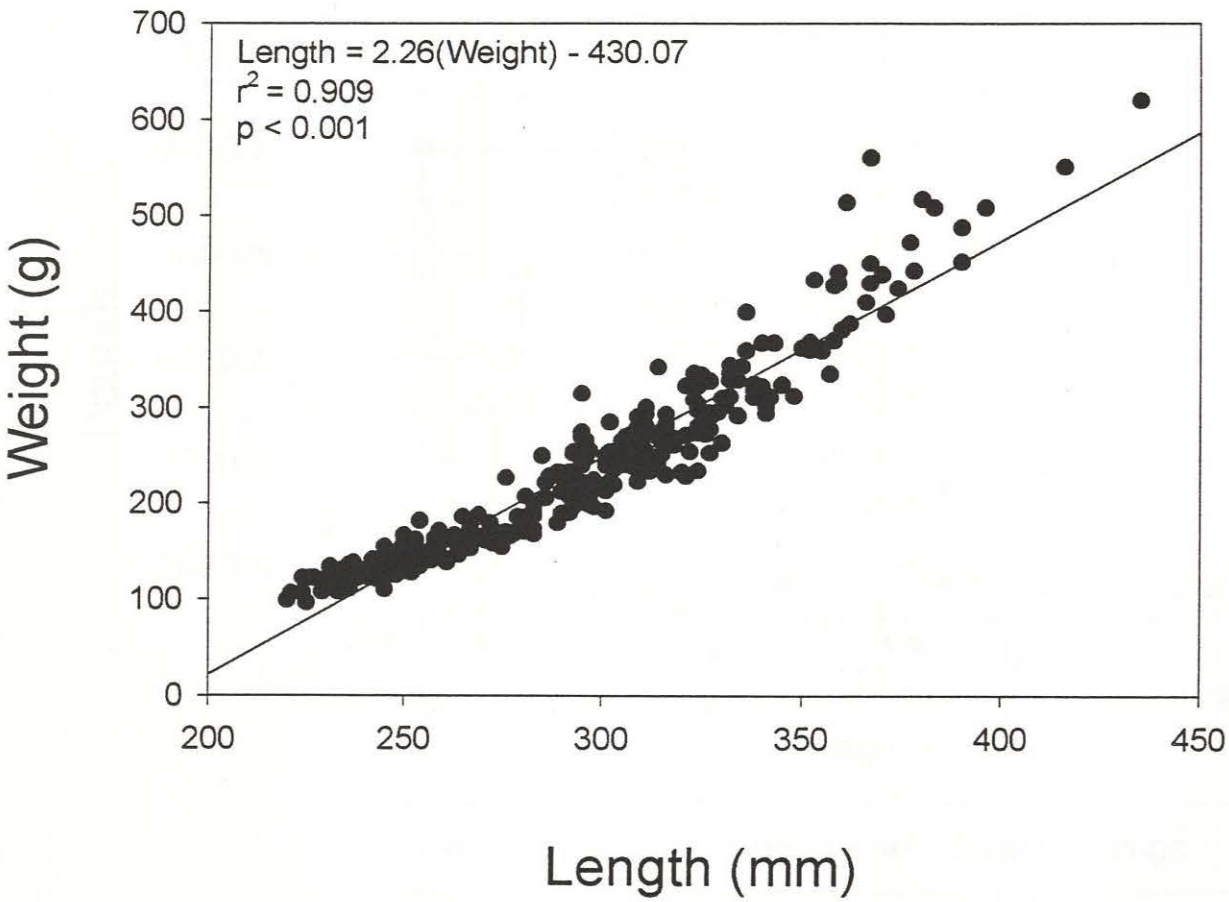
AUGUST	960805 – 960820				
NO. CGHT.	–	190	MEAN WT	–	215.6
NO. WGHD.	–	45	S.E. WT	–	9.7
NO. SITES	–	3	MIN. WT	–	121.9
CAT./SITE	–	63.3	MAX. WT	–	430

SEPTEMBER	960903 – 960903				
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

OCTOBER	961028 – 961028				
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT	960417 – 961028				
NO. CGHT.	–	972	MEAN WT	–	238.1
NO. WGHD.	–	302	S.E. WT	–	6.2
NO. SITES	–	41	MIN. WT	–	96.5
CAT./SITE	–	23.7	MAX. WT	–	927

Weakfish


Length = 2.26(Weight) - 430.07
r^2 = 0.909
p < 0.001
Weight (g)
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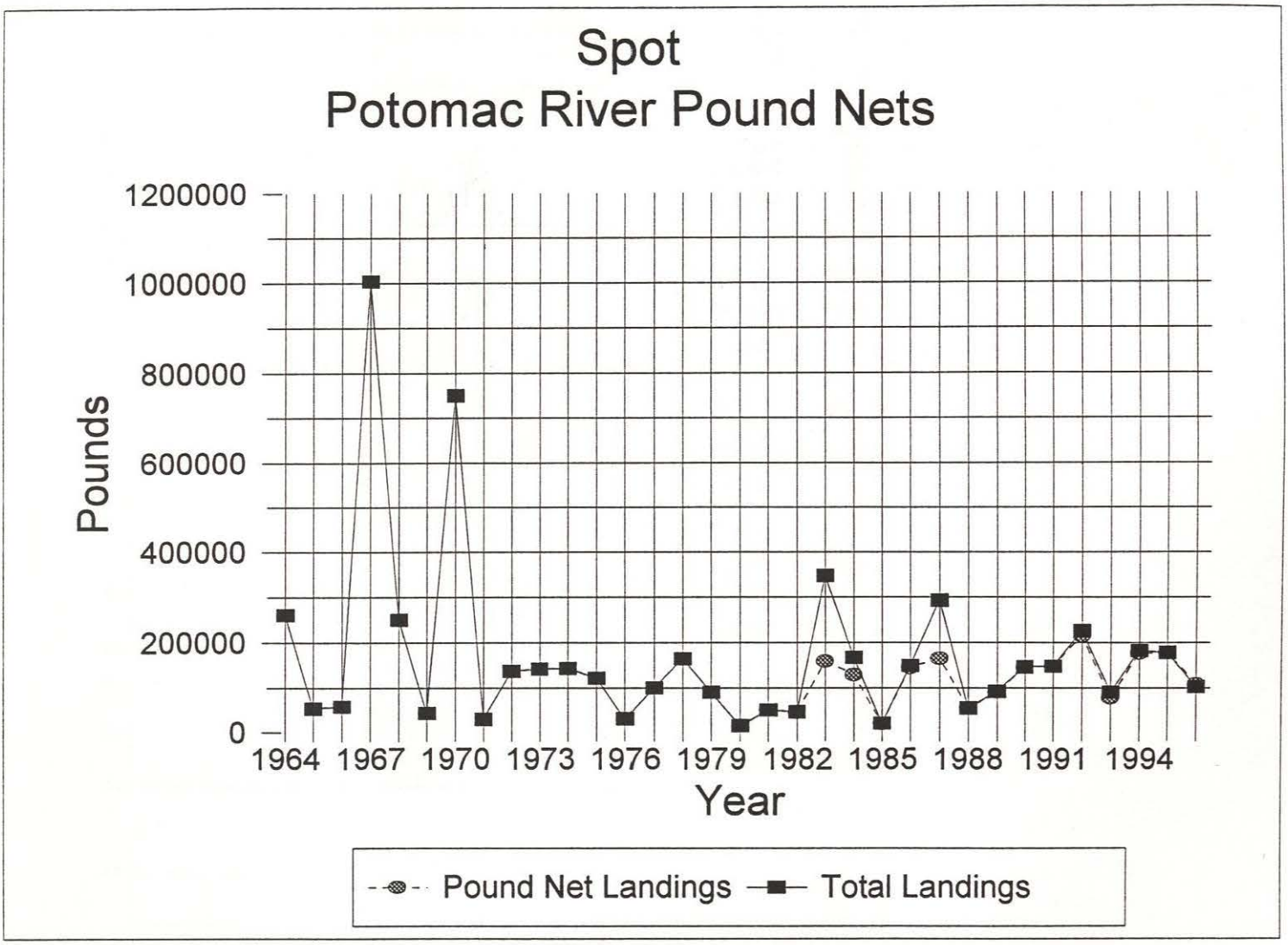
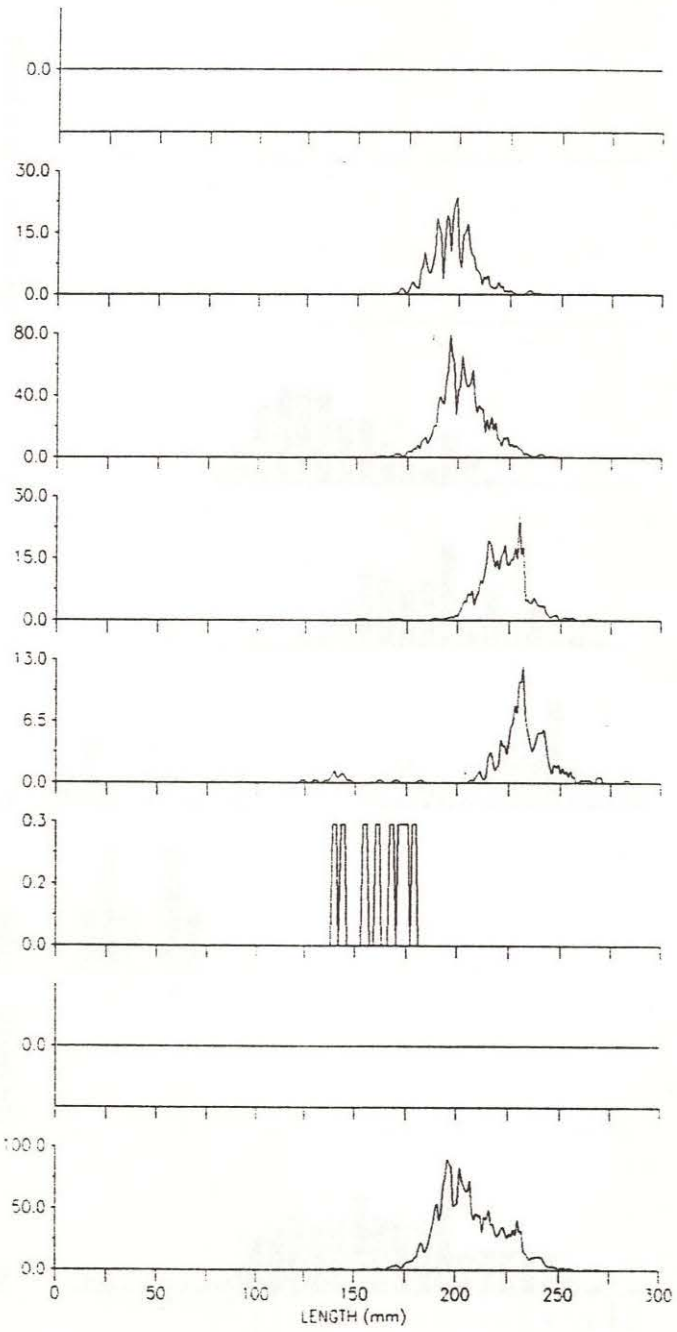
600
500
400
300
200
100
0
200
250
300
350
400
450
Length (mm)


Spot
Potomac River Pound Nets
Pounds
1200000
1000000
800000
600000
400000
200000
0
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings

Potomac River Pound Net Survey – Spot – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	2	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY		960514 – 960530			
NO. CGHT.	–	401	MEAN SIZE	–	195.2
NO. MEAS.	–	401	S.E. SIZE	–	0.5
NO. SITES	–	6	MIN. SIZE	–	166
CAT./SITE	–	66.8	MAX. SIZE	–	236

JUNE		960601 – 960627			
NO. CGHT.	–	1474	MEAN SIZE	–	200.2
NO. MEAS.	–	1474	S.E. SIZE	–	0.3
NO. SITES	–	16	MIN. SIZE	–	159
CAT./SITE	–	92.1	MAX. SIZE	–	244

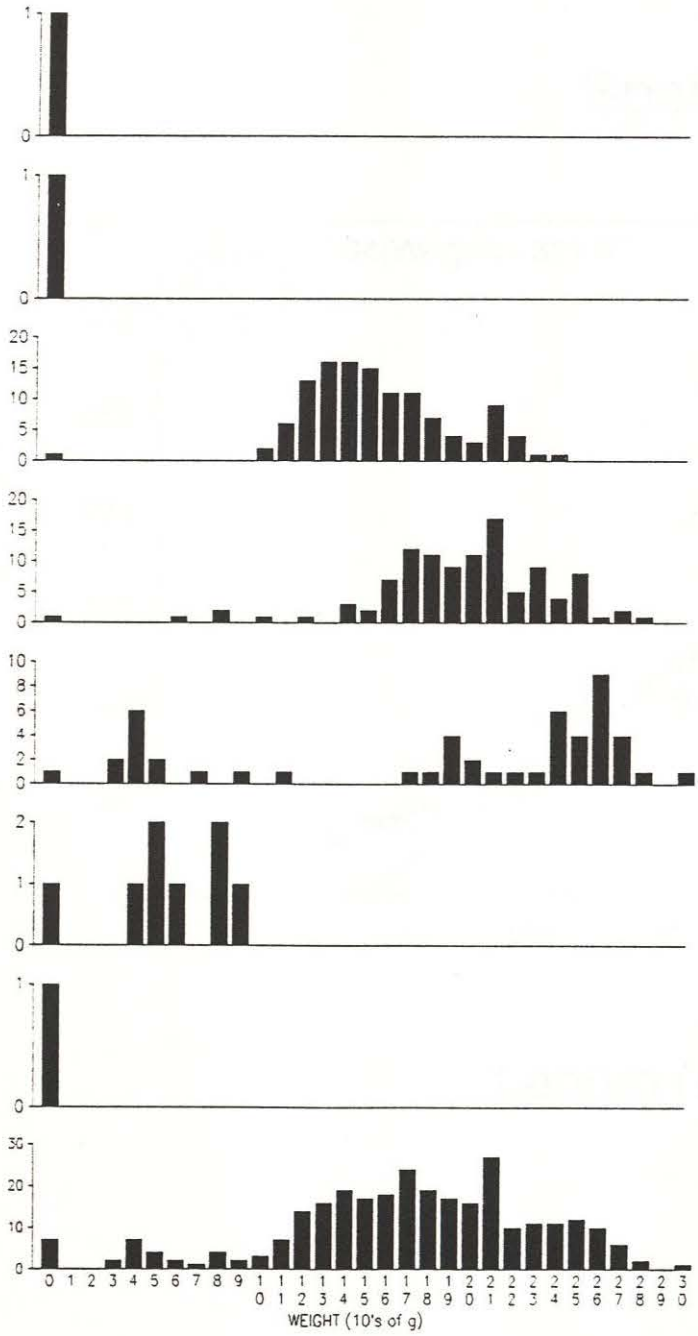
JULY		960701 – 960725			
NO. CGHT.	–	452	MEAN SIZE	–	219.6
NO. MEAS.	–	452	S.E. SIZE	–	0.6
NO. SITES	–	12	MIN. SIZE	–	149
CAT./SITE	–	37.7	MAX. SIZE	–	263

AUGUST		960805 – 960820			
NO. CGHT.	–	194	MEAN SIZE	–	224.7
NO. MEAS.	–	194	S.E. SIZE	–	1.8
NO. SITES	–	3	MIN. SIZE	–	122
CAT./SITE	–	64.7	MAX. SIZE	–	281

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	8	MEAN SIZE	–	159.8
NO. MEAS.	–	8	S.E. SIZE	–	5.1
NO. SITES	–	1	MIN. SIZE	–	138
CAT./SITE	–	8	MAX. SIZE	–	177

MAY–OCT		960417 – 960903			
NO. CGHT.	–	2529	MEAN SIZE	–	204.6
NO. MEAS.	–	2529	S.E. SIZE	–	0.3
NO. SITES	–	40	MIN. SIZE	–	122
CAT./SITE	–	63.2	MAX. SIZE	–	281

1996 Potomac River Pound Net Survey – Spot Weights



APRIL	960417 – 960430		
NO. CGHT.	0	MEAN WT	.
NO. WGHD.	0	S.E. WT	.
NO. SITES	2	MIN. WT	.
CAT./SITE	0	MAX. WT	.

MAY	960514 – 960530		
NO. CGHT.	401	MEAN WT	.
NO. WGHD.	0	S.E. WT	.
NO. SITES	6	MIN. WT	.
CAT./SITE	66.8	MAX. WT	.

JUNE	960601 – 960627		
NO. CGHT.	1474	MEAN WT	155.4
NO. WGHD.	119	S.E. WT	2.9
NO. SITES	16	MIN. WT	103.6
CAT./SITE	92.1	MAX. WT	235.1

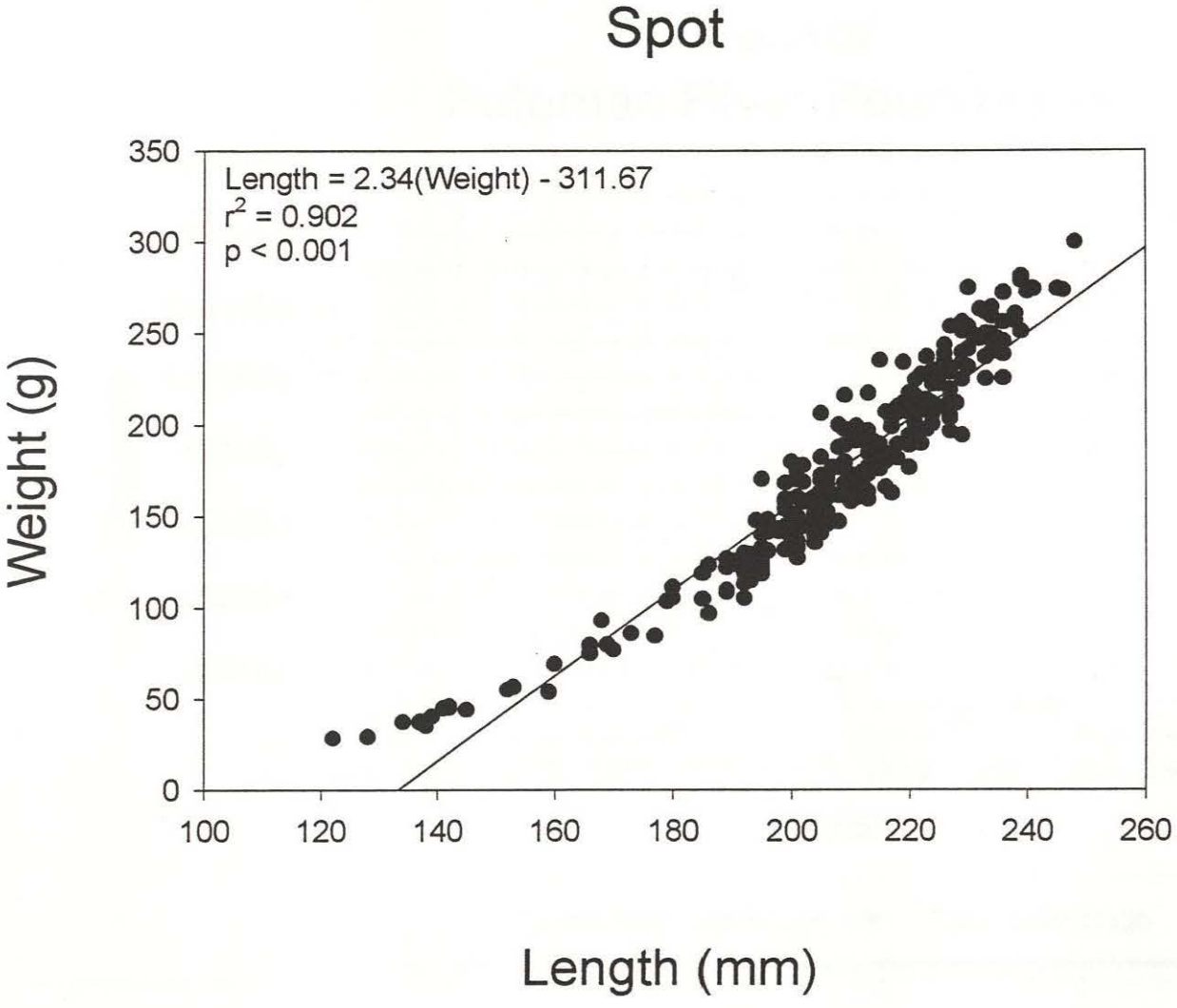
JULY	960701 – 960725		
NO. CGHT.	452	MEAN WT	195.8
NO. WGHD.	107	S.E. WT	3.8
NO. SITES	12	MIN. WT	55.2
CAT./SITE	37.7	MAX. WT	281.1

AUGUST	960805 – 960820		
NO. CGHT.	194	MEAN WT	189.5
NO. WGHD.	49	S.E. WT	12.8
NO. SITES	3	MIN. WT	28.5
CAT./SITE	64.7	MAX. WT	299.8

SEPTEMBER	960903 – 960903		
NO. CGHT.	8	MEAN WT	62.8
NO. WGHD.	7	S.E. WT	7.3
NO. SITES	1	MIN. WT	37.7
CAT./SITE	8	MAX. WT	86.1

OCTOBER	961028 – 961028		
NO. CGHT.	0	MEAN WT	.
NO. WGHD.	0	S.E. WT	.
NO. SITES	1	MIN. WT	.
CAT./SITE	0	MAX. WT	.

MAY–OCT	960417 – 961028		
NO. CGHT.	2529	MEAN WT	174.3
NO. WGHD.	282	S.E. WT	3.3
NO. SITES	41	MIN. WT	28.5
CAT./SITE	61.7	MAX. WT	299.8


Spot
Length = 2.34(Weight) - 311.67
r2 = 0.902
p < 0.001
Weight (g)
Length (mm)
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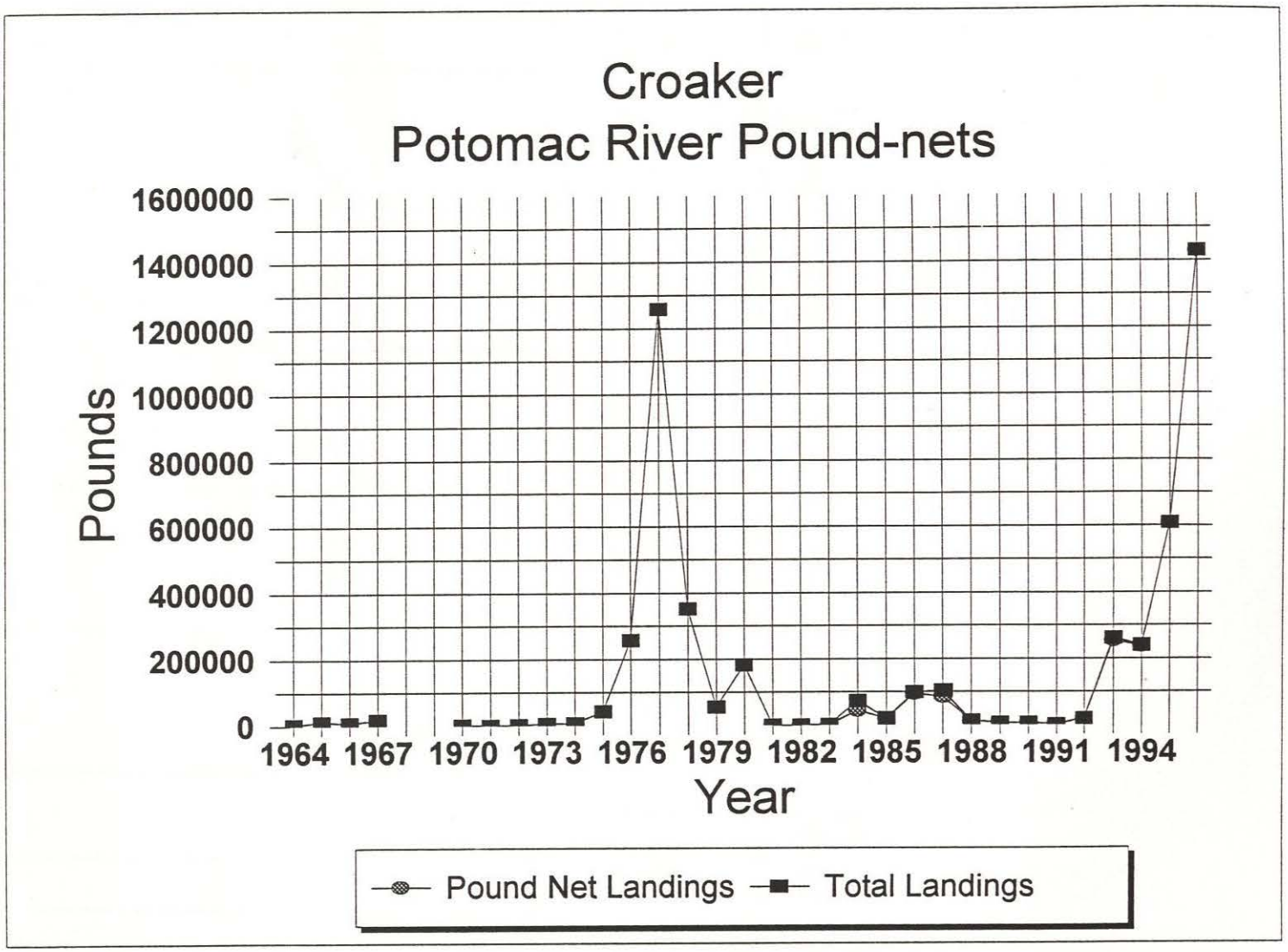
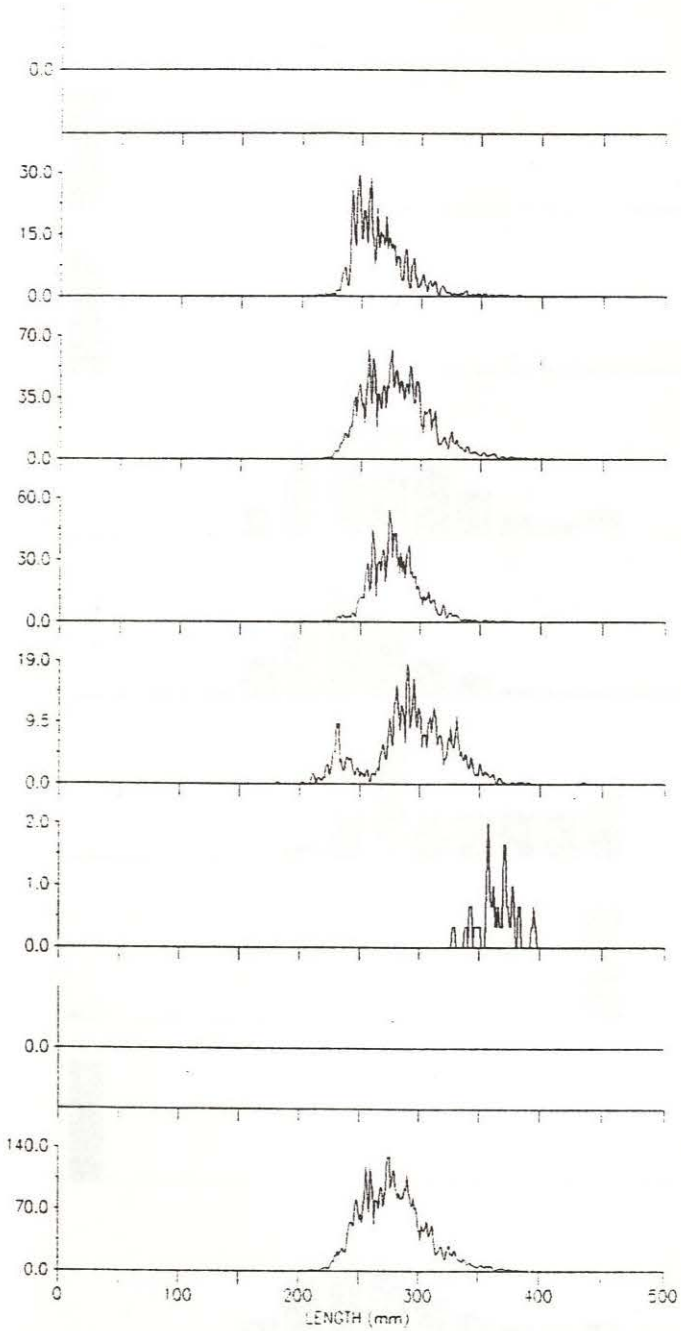
50
100
150
200
250
300
350
100
120
140
160
180
200
220
240
260


Croaker
Potomac River Pound-nets
Pounds
1600000
1400000
1200000
1000000
800000
600000
400000
200000
0
1964 1967 1970 1973 1976 1979 1982 1985 1988 1991 1994
Year
Pound Net Landings
Total Landings

Potomac River Pound Net Survey – Atlantic Croaker – 1996



APRIL	960417 – 960430				
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	2	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY	960514 – 960530				
NO. CGHT.	–	914	MEAN SIZE	–	263.8
NO. MEAS.	–	914	S.E. SIZE	–	0.8
NO. SITES	–	6	MIN. SIZE	–	212
CAT./SITE	–	152.3	MAX. SIZE	–	379

JUNE	960601 – 960627				
NO. CGHT.	–	3159	MEAN SIZE	–	278.5
NO. MEAS.	–	3159	S.E. SIZE	–	0.5
NO. SITES	–	16	MIN. SIZE	–	216
CAT./SITE	–	197.4	MAX. SIZE	–	406

JULY	960701 – 960725				
NO. CGHT.	–	1744	MEAN SIZE	–	277.5
NO. MEAS.	–	1744	S.E. SIZE	–	0.5
NO. SITES	–	12	MIN. SIZE	–	201
CAT./SITE	–	145.3	MAX. SIZE	–	373

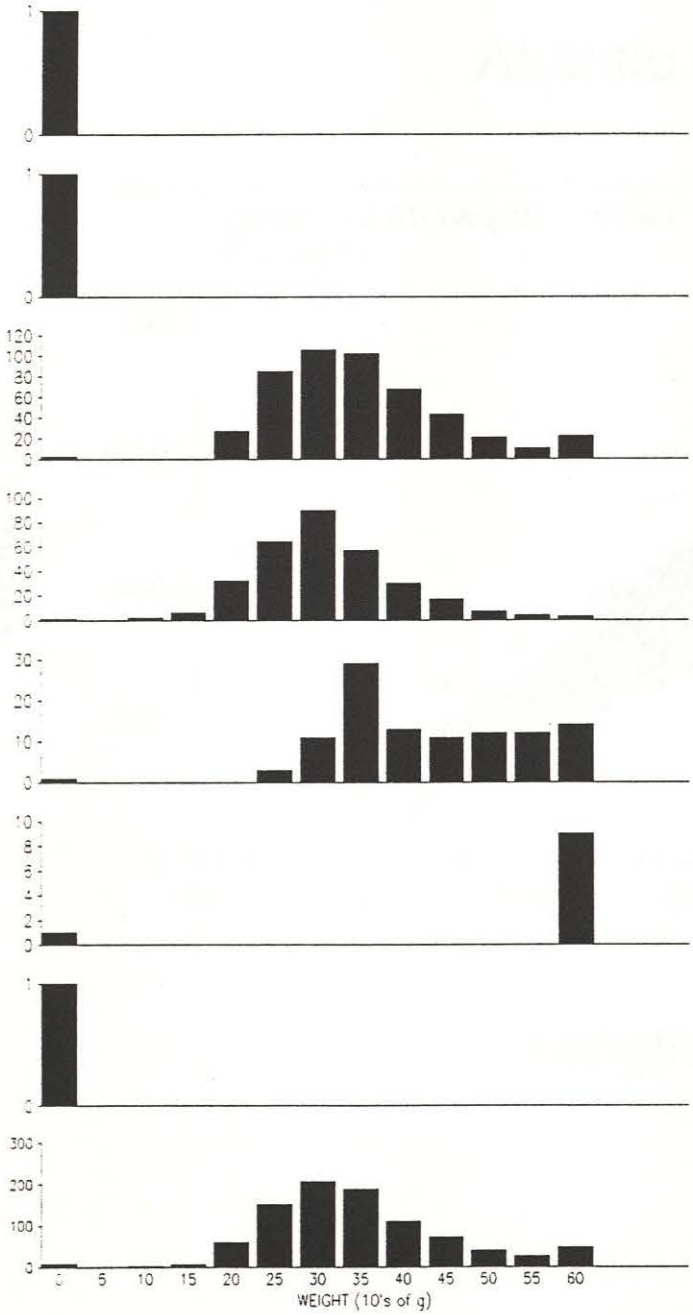
AUGUST	960805 – 960820				
NO. CGHT.	–	820	MEAN SIZE	–	290.4
NO. MEAS.	–	820	S.E. SIZE	–	1.2
NO. SITES	–	3	MIN. SIZE	–	180
CAT./SITE	–	273.3	MAX. SIZE	–	433

SEPTEMBER	960903 – 960903				
NO. CGHT.	–	31	MEAN SIZE	–	362.6
NO. MEAS.	–	31	S.E. SIZE	–	2.8
NO. SITES	–	1	MIN. SIZE	–	327
CAT./SITE	–	31	MAX. SIZE	–	394

OCTOBER	961028 – 961028				
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY–OCT	960417 – 961028				
NO. CGHT.	–	6668	MEAN SIZE	–	278.1
NO. MEAS.	–	6668	S.E. SIZE	–	0.3
NO. SITES	–	41	MIN. SIZE	–	180
CAT./SITE	–	162.6	MAX. SIZE	–	433

1996 Potomac River Pound Net Survey – Atlantic Croaker Weights



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY		960514 – 960530			
NO. CGHT.	–	914	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	152.3	MAX. WT	–	.

JUNE		960601 – 960627			
NO. CGHT.	–	3159	MEAN WT	–	351.2
NO. WGHD.	–	485	S.E. WT	–	4.7
NO. SITES	–	16	MIN. WT	–	0.2
CAT./SITE	–	197.4	MAX. WT	–	732.5

JULY		960701 – 960725			
NO. CGHT.	–	1744	MEAN WT	–	313.2
NO. WGHD.	–	312	S.E. WT	–	4.9
NO. SITES	–	12	MIN. WT	–	99.5
CAT./SITE	–	145.3	MAX. WT	–	698.7

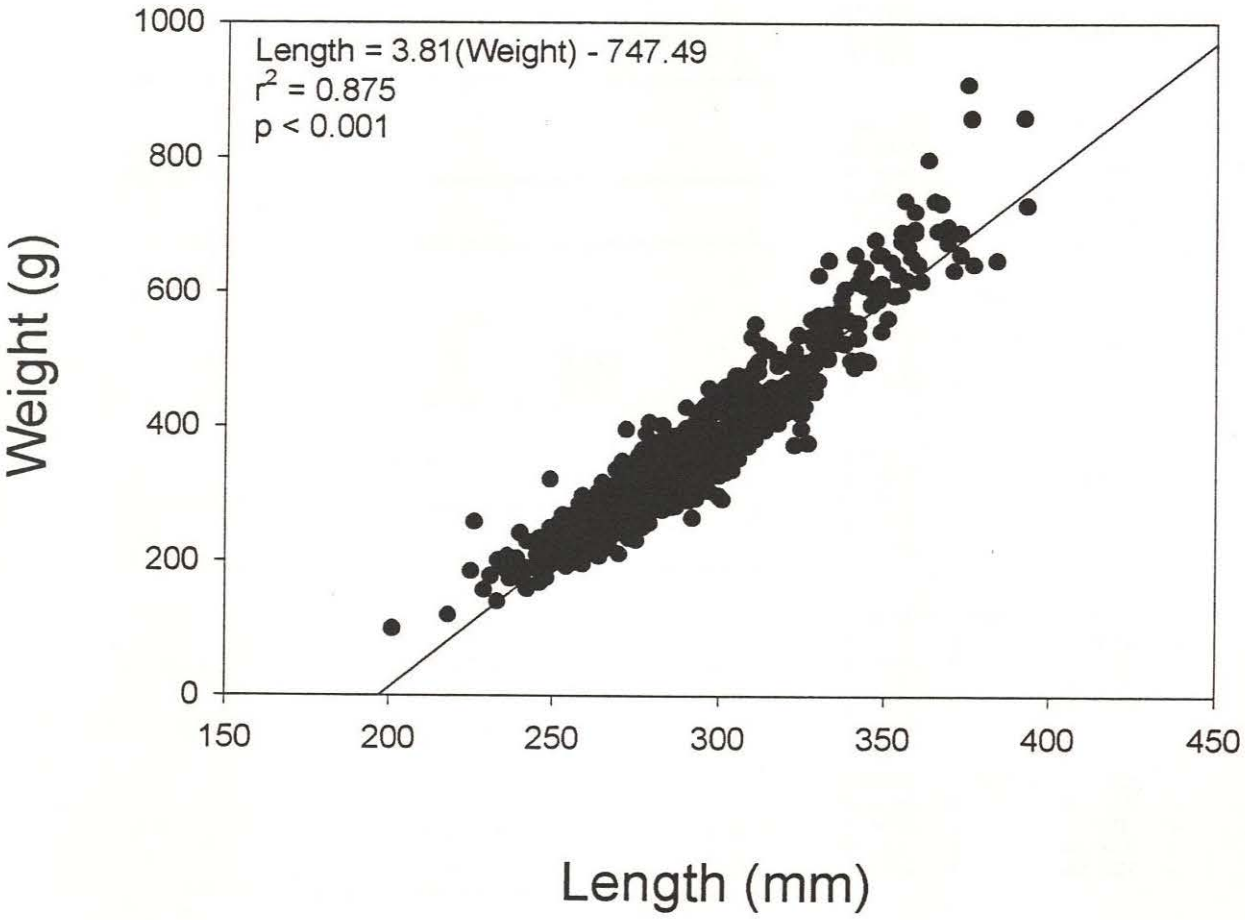
AUGUST		960805 – 960820			
NO. CGHT.	–	820	MEAN WT	–	435
NO. WGHD.	–	105	S.E. WT	–	10.8
NO. SITES	–	3	MIN. WT	–	241.5
CAT./SITE	–	273.3	MAX. WT	–	678

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	31	MEAN WT	–	760.3
NO. WGHD.	–	9	S.E. WT	–	30.6
NO. SITES	–	1	MIN. WT	–	656.2
CAT./SITE	–	31	MAX. WT	–	909

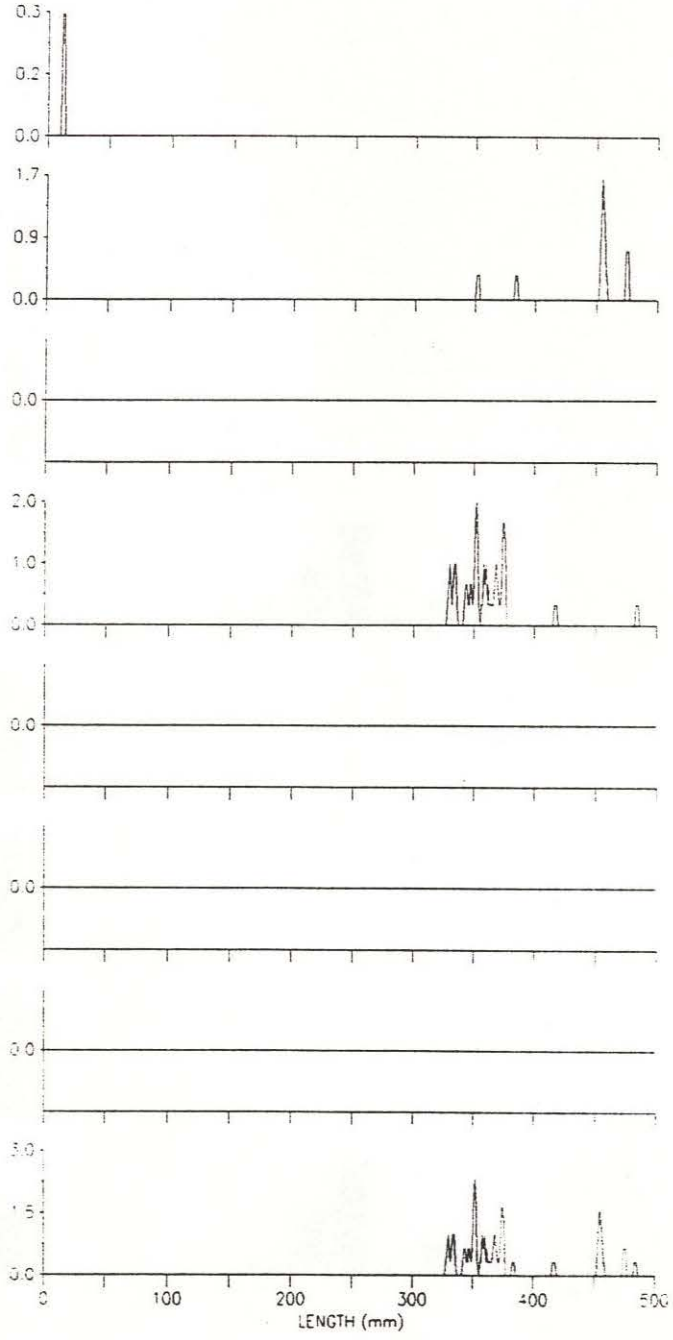
OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	6668	MEAN WT	–	351.9
NO. WGHD.	–	911	S.E. WT	–	3.7
NO. SITES	–	41	MIN. WT	–	0.2
CAT./SITE	–	162.6	MAX. WT	–	909

Atlantic Croaker



Potomac River Pound Net Survey – Spanish Mackerel – 1996



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	2	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY		960514 – 960530			
NO. CGHT.	–	11	MEAN SIZE	–	446.5
NO. MEAS.	–	11	S.E. SIZE	–	13.5
NO. SITES	–	6	MIN. SIZE	–	350
CAT./SITE	–	1.8	MAX. SIZE	–	517

JUNE		960601 – 960627			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	16	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

JULY		960701 – 960725			
NO. CGHT.	–	33	MEAN SIZE	–	358.7
NO. MEAS.	–	33	S.E. SIZE	–	5
NO. SITES	–	12	MIN. SIZE	–	327
CAT./SITE	–	2.8	MAX. SIZE	–	482

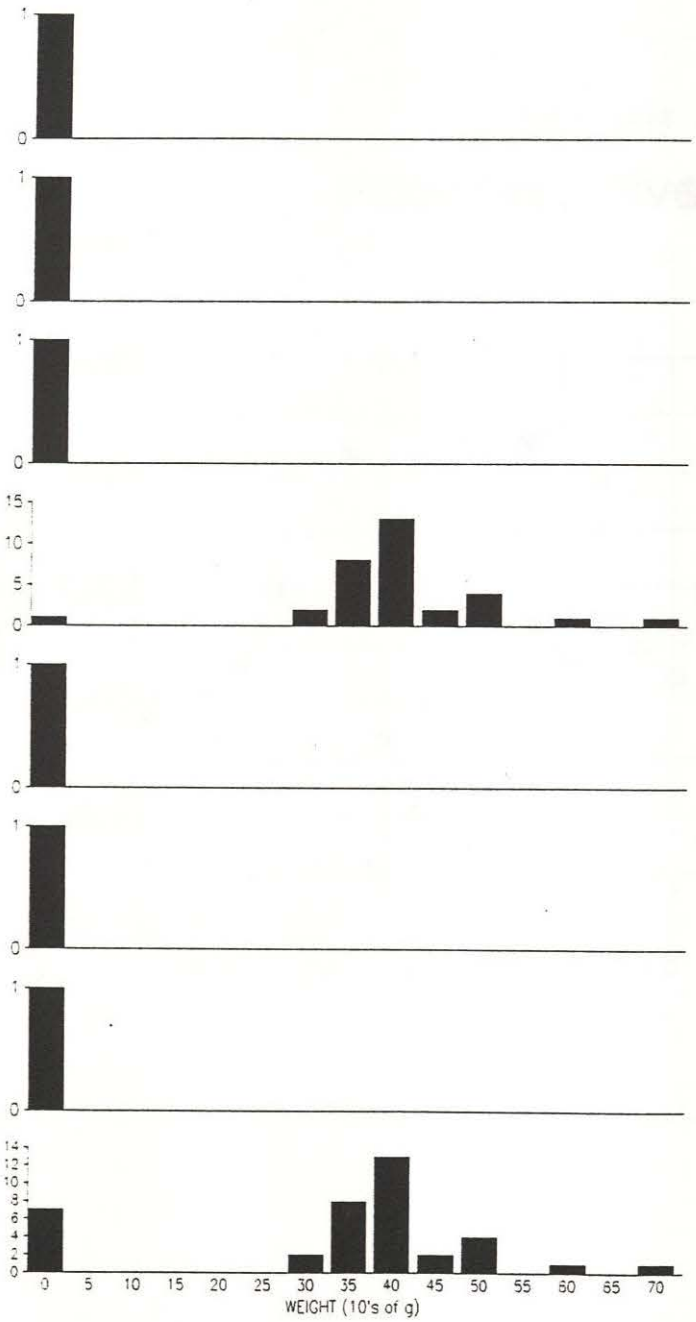
AUGUST		960805 – 960820			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	3	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN SIZE	–	.
NO. MEAS.	–	0	S.E. SIZE	–	.
NO. SITES	–	1	MIN. SIZE	–	.
CAT./SITE	–	0	MAX. SIZE	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	44	MEAN SIZE	–	380.7
NO. MEAS.	–	44	S.E. SIZE	–	7.6
NO. SITES	–	41	MIN. SIZE	–	327
CAT./SITE	–	1.1	MAX. SIZE	–	517

1996 Potomac River Pound Net Survey – Spanish Mackerel Weights



APRIL	960417 – 960430		
NO. CGHT.	0	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	2	MIN. WT	–
CAT./SITE	0	MAX. WT	–

MAY	960514 – 960530		
NO. CGHT.	11	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	6	MIN. WT	–
CAT./SITE	1.8	MAX. WT	–

JUNE	960601 – 960627		
NO. CGHT.	0	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	16	MIN. WT	–
CAT./SITE	0	MAX. WT	–

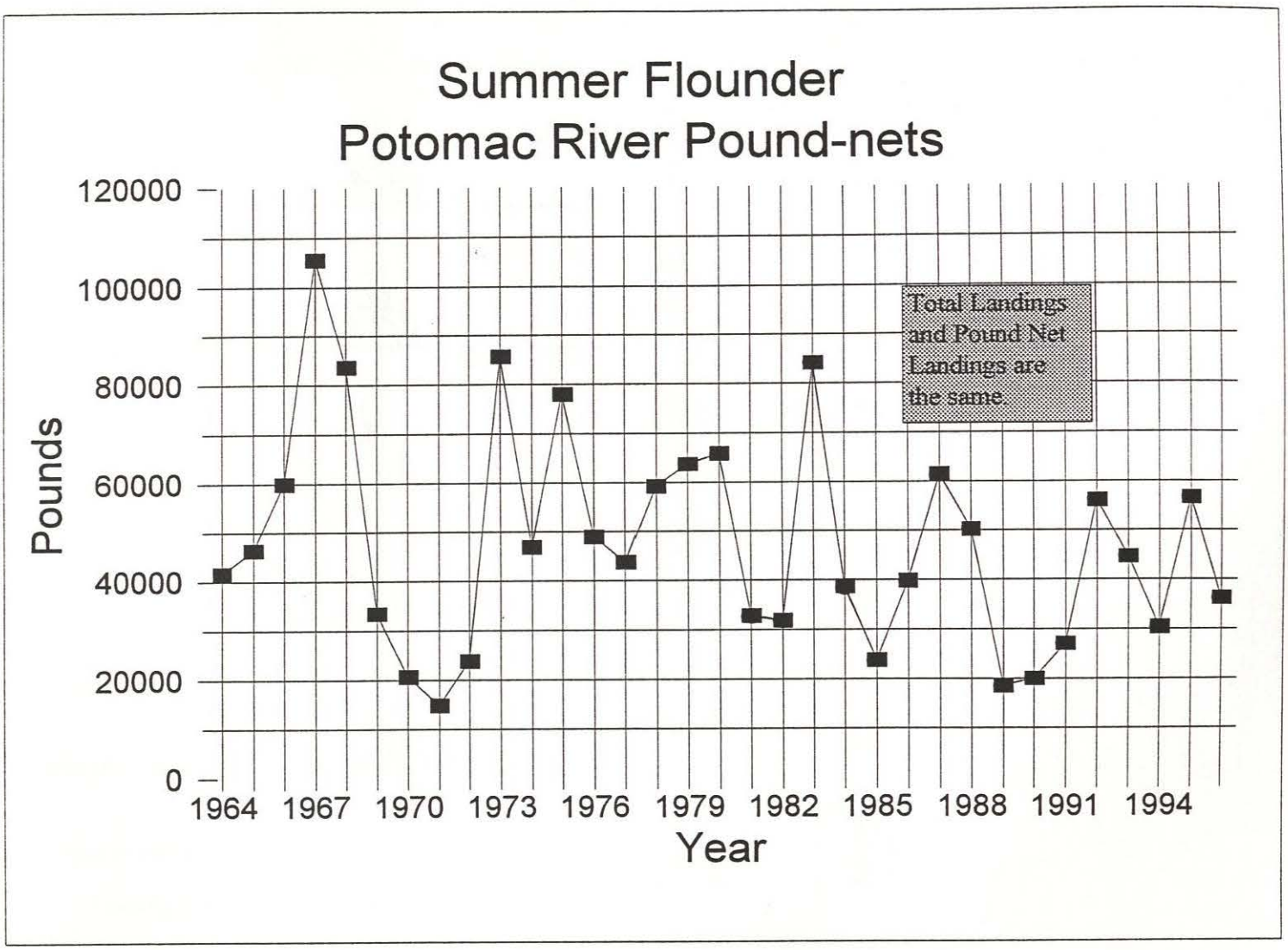
JULY	960701 – 960725		
NO. CGHT.	33	MEAN WT	– 417.6
NO. WGHD.	31	S.E. WT	– 19.4
NO. SITES	12	MIN. WT	– 301.9
CAT./SITE	2.8	MAX. WT	– 899.6

AUGUST	960805 – 960820		
NO. CGHT.	0	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	3	MIN. WT	–
CAT./SITE	0	MAX. WT	–

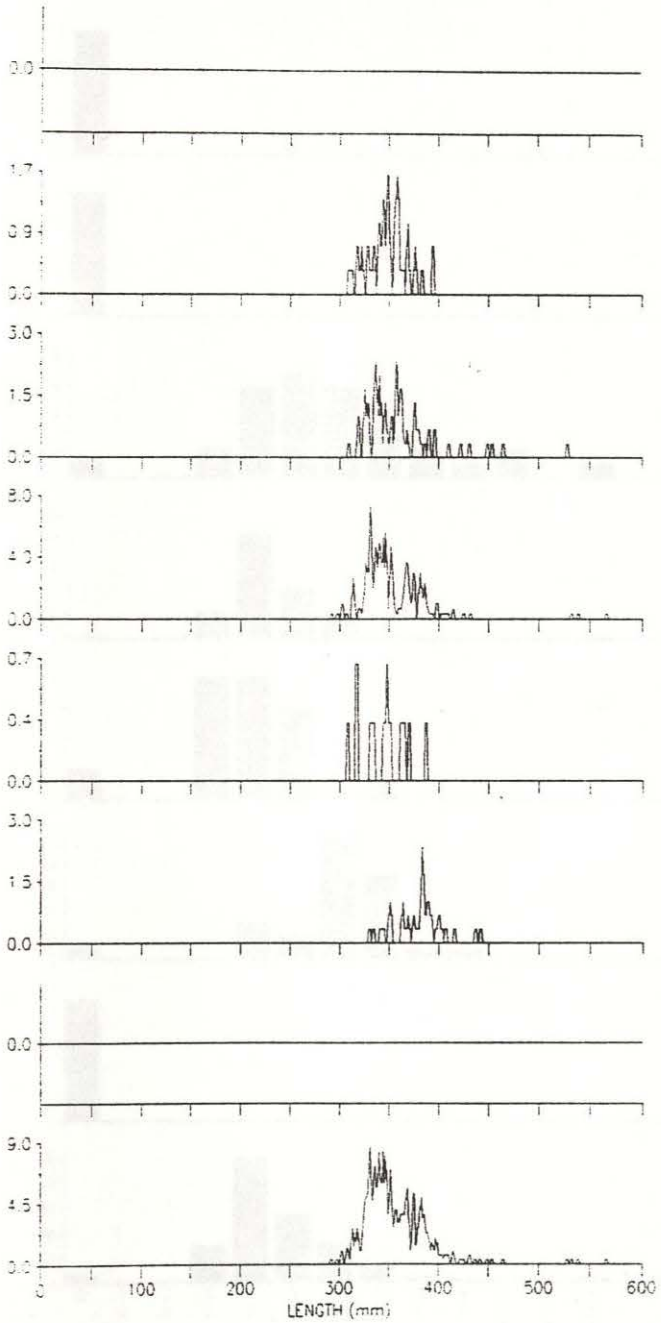
SEPTEMBER	960903 – 960903		
NO. CGHT.	0	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	1	MIN. WT	–
CAT./SITE	0	MAX. WT	–

OCTOBER	961028 – 961028		
NO. CGHT.	0	MEAN WT	–
NO. WGHD.	0	S.E. WT	–
NO. SITES	1	MIN. WT	–
CAT./SITE	0	MAX. WT	–

MAY–OCT	960417 – 961028		
NO. CGHT.	44	MEAN WT	– 417.6
NO. WGHD.	31	S.E. WT	– 19.4
NO. SITES	41	MIN. WT	– 301.9
CAT./SITE	1.1	MAX. WT	– 899.6


Summer Flounder
Potomac River Pound-nets
120000
100000
80000
60000
40000
20000
0
Pounds
1964
1967
1970
1973
1976
1979
1982
1985
1988
1991
1994
Year
Total Landings and Pound Net Landings are the same.

Potomac River Pound Net Survey – Summer Flounder – 1996



APRIL		960417 – 960430		
NO. CGHT.	–	0	MEAN SIZE	– .
NO. MEAS.	–	0	S.E. SIZE	– .
NO. SITES	–	2	MIN. SIZE	– .
CAT./SITE	–	0	MAX. SIZE	– .

MAY		960514 – 960530		
NO. CGHT.	–	44	MEAN SIZE	– 346.8
NO. MEAS.	–	44	S.E. SIZE	– 3
NO. SITES	–	6	MIN. SIZE	– 307
CAT./SITE	–	7.3	MAX. SIZE	– 392

JUNE		960601 – 960627		
NO. CGHT.	–	72	MEAN SIZE	– 358.4
NO. MEAS.	–	72	S.E. SIZE	– 4.4
NO. SITES	–	16	MIN. SIZE	– 307
CAT./SITE	–	4.5	MAX. SIZE	– 526

JULY		960701 – 960725		
NO. CGHT.	–	206	MEAN SIZE	– 350.9
NO. MEAS.	–	206	S.E. SIZE	– 2.4
NO. SITES	–	12	MIN. SIZE	– 290
CAT./SITE	–	17.2	MAX. SIZE	– 564

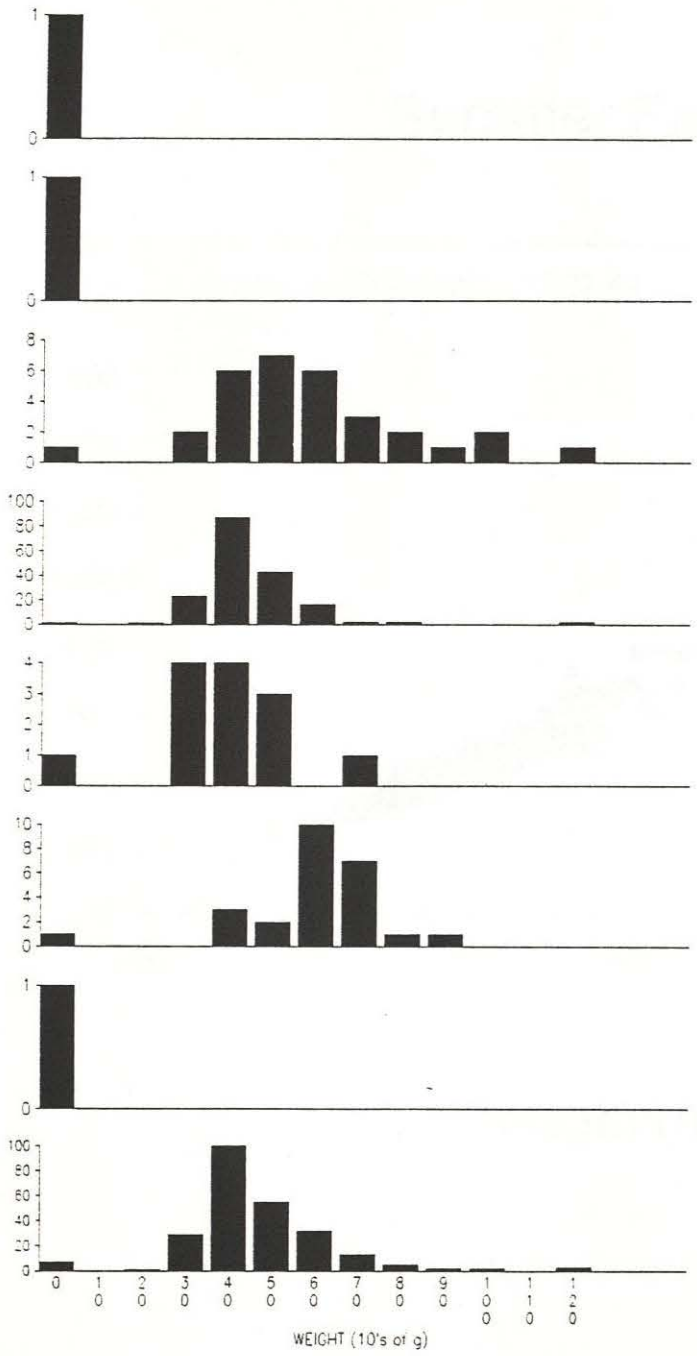
AUGUST		960805 – 960820		
NO. CGHT.	–	13	MEAN SIZE	– 342.7
NO. MEAS.	–	13	S.E. SIZE	– 6.4
NO. SITES	–	3	MIN. SIZE	– 306
CAT./SITE	–	4.3	MAX. SIZE	– 385

SEPTEMBER		960903 – 960903		
NO. CGHT.	–	39	MEAN SIZE	– 377.5
NO. MEAS.	–	39	S.E. SIZE	– 4
NO. SITES	–	1	MIN. SIZE	– 328
CAT./SITE	–	39	MAX. SIZE	– 440

OCTOBER		961028 – 961028		
NO. CGHT.	–	0	MEAN SIZE	– .
NO. MEAS.	–	0	S.E. SIZE	– .
NO. SITES	–	1	MIN. SIZE	– .
CAT./SITE	–	0	MAX. SIZE	– .

MAY–OCT		960417 – 961028		
NO. CGHT.	–	374	MEAN SIZE	– 354.4
NO. MEAS.	–	374	S.E. SIZE	– 1.7
NO. SITES	–	41	MIN. SIZE	– 290
CAT./SITE	–	9.1	MAX. SIZE	– 564

1996 Potomac River Pound Net Survey – Summer Flounder Weights



APRIL		960417 – 960430			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY		960514 – 960530			
NO. CGHT.	–	44	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	6	MIN. WT	–	.
CAT./SITE	–	7.3	MAX. WT	–	.

JUNE		960601 – 960627			
NO. CGHT.	–	72	MEAN WT	–	600.1
NO. WGHD.	–	30	S.E. WT	–	47.2
NO. SITES	–	16	MIN. WT	–	337.1
CAT./SITE	–	4.5	MAX. WT	–	1603.1

JULY		960701 – 960725			
NO. CGHT.	–	206	MEAN WT	–	448.6
NO. WGHD.	–	176	S.E. WT	–	11.7
NO. SITES	–	12	MIN. WT	–	243.7
CAT./SITE	–	17.2	MAX. WT	–	1727.5

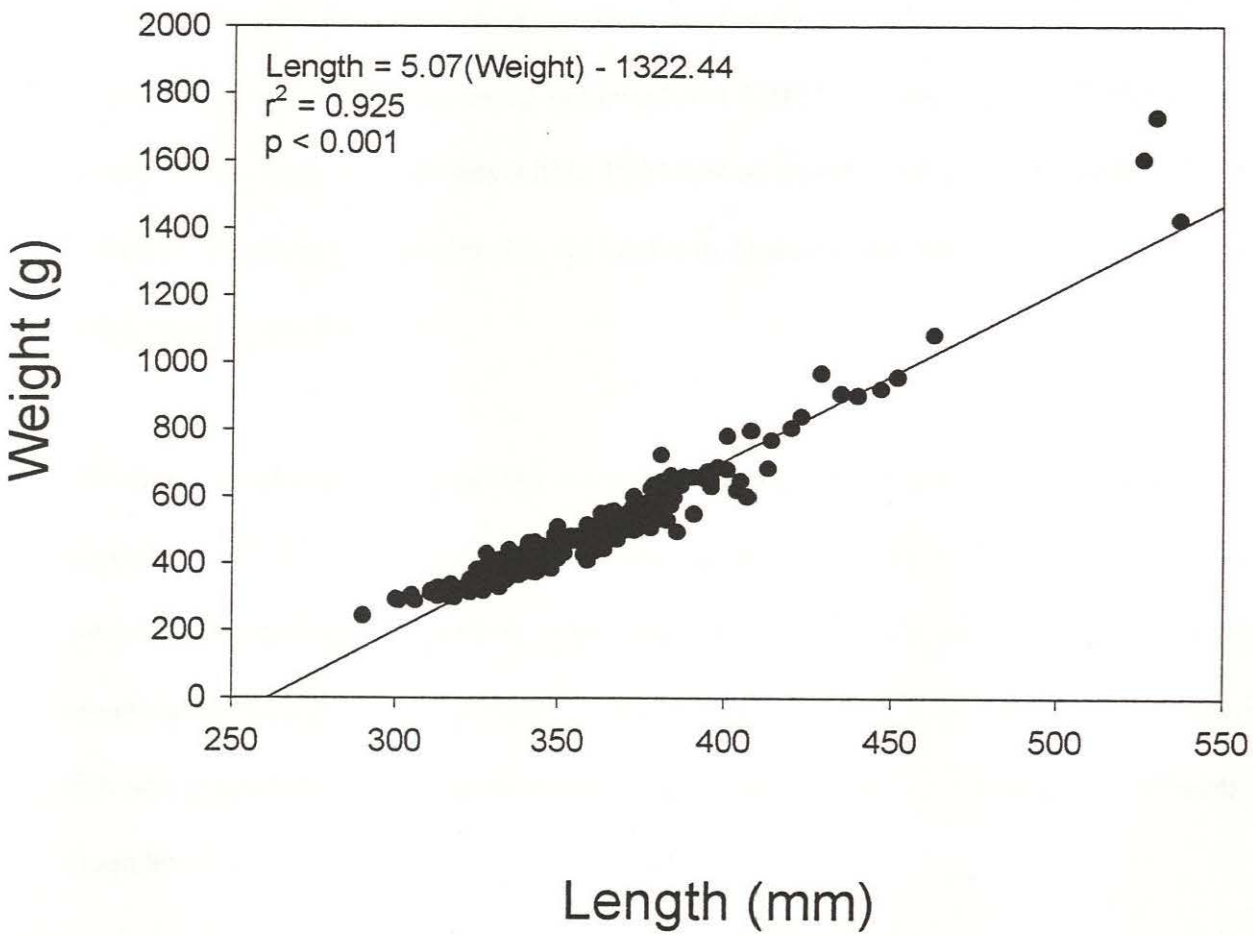
AUGUST		960805 – 960820			
NO. CGHT.	–	13	MEAN WT	–	410.2
NO. WGHD.	–	12	S.E. WT	–	29.3
NO. SITES	–	3	MIN. WT	–	288.3
CAT./SITE	–	4.3	MAX. WT	–	650.9

SEPTEMBER		960903 – 960903			
NO. CGHT.	–	39	MEAN WT	–	614.8
NO. WGHD.	–	24	S.E. WT	–	22.8
NO. SITES	–	1	MIN. WT	–	408.5
CAT./SITE	–	39	MAX. WT	–	906.4

OCTOBER		961028 – 961028			
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	1	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.

MAY–OCT		960417 – 961028			
NO. CGHT.	–	374	MEAN WT	–	481.9
NO. WGHD.	–	242	S.E. WT	–	11.5
NO. SITES	–	41	MIN. WT	–	243.7
CAT./SITE	–	9.1	MAX. WT	–	1727.5

Summer Flounder



Management Considerations

The Commission asked for an evaluation of the management implications of these pound-net data following a presentation of the draft results at the February 1997 regular quarterly meeting.

The primary management measures in place for the pound net fishery are limited entry licenses (currently 100), maximum net lengths of 1200 feet, minimum mesh size of 1 1/2 inches in the pound (except nets within 1000 feet of shore), and a fishing season of February 15 through December 15. In addition, most species have minimum size limits and some have closed seasons.

The effectiveness of the regulations currently in place range from 100 % protection to approximately 50 % protection. Closed seasons were effective for striped bass, but were relatively ineffective for weakfish. Generally, minimum size limits were not an effective means of protecting undersized fish in a pound-net fishery as no at-sea culling of undersized fish was practiced in the Potomac River. This is particularly true of weakfish, croaker, and flounder.