

**Potomac River Pound-Net Survey
Summers 1996-1997**

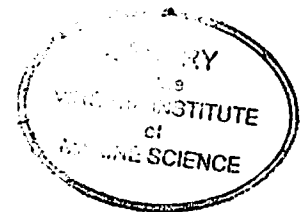
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And most importantly,.....

We recognize that the results of scientific study or monitoring programs, while benefitting the fish stocks, and therefore the watermen in the long run, are not always beneficial in the short run to those that make their daily living on the River after we have gone home. With this in mind, we extend our most sincere appreciation to the Potomac River pound-net fishermen and the owners and operators of the fish houses that gave of their space, time and knowledge. Without their assistance, cooperation, and most importantly their trust, there would not have been a study.

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) that time.

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 were reported previously (Austin et al 1997), 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 in 1996.

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 (Austin et al 1997), then again April to October 1997 (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 in 1996, and until the sampling protocol was established, only one house was used for convenience. Subsequently, in 1996, four houses, and in 1997 five, were visited on a regular basis. 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, 1996 with the passage of hurricanes *Bertha* (12 July) and *Fran* (4 September). Effort was reduced

through September and October, 1996 primarily due to a drop in prices and market demand, although some watermen ceased fishing after hurricane *Fran*. Fishing did not resume in 1997 until May 1997 due to cool spring water temperatures.

Efforts were made to visit the seafood houses at least weekly during mid-summer. 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 and 1997 seasons 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 both years as several fishermen sold their catch there. The other houses sampled in 1997 were Belvin's Seafood in Achilles, Jett Seafood, and Gaskins Seafood in Ophelia, VA (Tables 1 and 2).

No "at-sea" samples were secured until 2 July 1996, in the lower river (Austin et al 1997, 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. During 1997 no at-sea trips were scheduled as all fish were brought to the docks.

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 and not Maryland or Virginia tributaries to the Potomac. 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 4) and weight (Table 5) frequencies and length-weight curves (Appendix) for fish taken in fish houses. 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 most species for which sufficient data were collected to make graphing meaningful; and length-weight curves (Appendix) are presented for those species for which there were sufficient data.

Landings Data

Anguillidae - eels

American eel, *Anguilla rostrata* (Figs 4-6)

Eel were only taken in May (N=36) 1996, ranging from 326 to 870 mm (12.8 to 34 in). The average was 521 mm (20.5 in). In 1997 they were taken in June (N=8) and September through October (N=12), ranging 189 to 751 mm, and averaging 531 mm (20.9 inches).

There was no significant difference between average sizes the two years.

Clupeidae - herrings

Alewife and Blueback herring, *Alosa pseudoharengus* and *A. aestivalis* (Figs 7-9)

Blueback herring were only taken during April and May 1996, and May 1997. These fish were probably "down run" after having completed spawning (Loesch 1987). Bluebacks ranged in size from 175 to 254 mm, averaging 227 mm in 1996 and 229 mm in 1997 (Fig 8). The

alewife averaged 216 mm in 1997. While there are slight differences in growth rates, both by species and sex, fish averaging 220-230 mm (8-9 inches) are generally age four and have just completed their first spawn (Loesch 1987).

American shad, *Alosa sapidissima* (Figs 10-12)

One shad was measured in April, 23 in May, and 17 in June 1996. In 1997, 29 were taken from mid May through mid-June. American shad ranged 252 mm to 612 mm, averaging 382 mm (15 inches FL) in 1996 and 449 mm (17.6 inches FL) in 1997 (Fig 11). The 1996 fish would be 3-4 years old and the 1997, 4-5 years. 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 13-15)

Menhaden were the leading commercial species taken by pound-nets during 1996 (Fig 13) and were second to croaker in 1997. There were three modal length groups in April 1996 by visual inspection (Austin et al 1997, Fig 12). The smallest ranged between 130 and 200 mm (5 to 8 inches FL), the second from about 210 to 260 mm (8 to 10 inches FL), and the third from about 275 to 314 mm (10.7 to 12.3 inches 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 1996 a new year class recruited to the fishery. The size composition changed in 1997. No fish were measured in April, but in May there was a wide range in sizes (163-613 mm, 6.4 - inches) with only one mode (Fig 14) at about 300 mm, age 4 fish. In June there were two modes, at about 240-250 and 280-310, these were probably age 3 and 4 fish. The larger (>275 mm, age 4) fish were gone by September as the average fish were 235-250 mm; in October the age 3 fish disappeared, being replaced by larger 275-325 mm (11-13 inches) fish. The largest number of fish measured was in July both years, a reflection of their abundance in the catch.

Gizzard or mud shad, *Dorosoma cepedianum* (Figs 16-17)

Gizzard shad were collected from April through August 1996 and May-June and October 1997 although they were never common except during June (N=146). Lengths ranged from 187 to 450 mm, averaging 305 mm (12 inches) in 1996 and 322 mm (13 inches) in 1997. There was a wide range of weights with three fish weighing in excess of 750 gm (1.5 lb) during April and August 1996 and over 1375 gm (3 lb) in June.

Cyprinidae - carp

Carp, *Cyprinus carpio*

Too few carp were measured to graph. Five were taken in May 1996 and ranged 366-780 mm, the mean length was 562 mm (22 inches). Nine were measured in 1997, all taken in

June, and ranging 400-750 mm, average 644 mm (25 inches) (Table 4).

Ictaluridae - catfishes

Catfishes, *Ictalurus ssp* (Figs 18-20)

Catfish were not separated by species in 1996 although most were white and channel cats.

Catfish were first taken in May over a wide size range (230-630 mm, 9-24 inches). During June and July most ranged from 285-454 mm. They were not collected after July. In 1997 15 blue catfish and 10 channel catfish were taken in late June. Blue catfish averaged 300 mm (11.8 inches) and channel catfish, 373 mm (14.6 inches).

Serranidae - basses

White perch, *Morone americana* (Figs 21-23)

White perch were not collected until May 1996, were abundant through July, then all but disappeared. Most were 112 to 270 mm, averaging 190 mm (7.5 inches) and weighing 110-120 g (.25 lb). A similar temporal pattern was observed in 1997 as perch were available May through July, with a few (N=38) still measured in August. While the monthly average in 1996 was 189-192 mm, they ranged 200-208 mm in 1997 (Fig 22). 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). The "tight" modal class of 189-192 mm during May-July 1996 were probably of the 1992 year class, not a large year class (Speir, MdDNR, pers. comm). During 1997 the length distribution exhibited a wider range with more smaller fish from 175 mm to larger 250 mm

individuals. Only July 1997 showed a "tighter" distribution of lengths, averaging 200-210 mm, probably fish of the 1992 year class, but possibly fast growing fish of the 1993 year class.. Maryland DNR young-of-the-year survey data for the Potomac show that 1992 and 1993 were both "good" year classes (Speir, MdDNR, pers. comm).

Striped bass or rockfish, *Morone saxatilis* (Figs 24-26)

Striped bass were not collected until May 1996 and June 1997 and were never abundant in our samples, including the releases of under-sized fish and during the closed season. They were sporadic during July through September, then began to return to the River in October both years when they ranged 460-675 mm, averaging 541 mm (21.3 inches FL, 22.7 inches TL) in 1996 and 534-819 mm, averaging 643 in 1997 (Fig 25). The special pound-net samples collected in October 1996 by VIMS for the PRFC (Loesch, Personal communication) were included here, and compose the October 1996 striped bass length-weight data (Austin et al 1997).

Black Seabass, *Centropristis striata*

One hundred five black seabass were measured in 1997. Most were taken on a single day in late June. These fish ranged in size from 210 to 293 mm, and averaged 263 mm (10 inches).

Pomatomidae - bluefish

Bluefish, *Pomatomus saxatilis* (Figs 27-29)

Few bluefish were caught before July 1996 and none before June 1997. The few fish in May

1996 were generally larger (578 mm, 23 inches) than the more abundant but smaller (243-268 mm, 9.5-10.5 inches) summer fish. The large spring fish did not appear in 1997. The summer 1997 fish ranged 270 mm (June) to 370 mm (October) (Fig 28). 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 inches) resident during the summer are yearling fish which weigh around 200-300 g (0.5 lb). Length and weight frequencies did not demonstrate any growth the summer of 1996; but during 1997 they grew from an average length of 272 mm in June, to 370 mm in October, 100 mm in four months, 25 mm or 1 inch a month. Their weight increased from an average of 400 gm in June to 760 gm in October, a gain of 360 gm, or 0.80 pound.

Sciaenidae - drums

Weakfish, *Cynoscion regalis* (Fig 30-32)

Weakfish, or grey trout, were first taken in May of both 1996 and 1997. There was a wide size range in May both years (244-570 mm) with a mean of 340 mm (13.4 inches) in 1996 and 404 mm (15.9 inches) in 1997. The fish were smaller, 250 to 275 mm in July and August both years: and there was a distinct bi-modal distribution of around 250 mm and 320 mm in July 1996, but a single mode (275-280 mm) in July and August 1997 (Fig 31). In 1996 these two frequencies represent the age one and age two fish spawned in 1994 and 1995 (Lowerre-Barbieri et al 1994). The 275-280 mm fish in 1997 would be age one. 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.

By September and October 1997 the yearling fish were gone, or not landed, and the larger (> 400 mm, 16 inches) fish returned. Many of these larger fish weighed over one and a half pounds (> 600 gm, Fig 32).

Spot, Leiostomus xanthurus (Fig 33-35)

Spot were first taken during May and remained abundant in the catch through August. In May 1996 the mean size was 195 mm (7.5 inches FL, 8.2 inches TL), increasing to over 250 mm (10 inches FL, 10.6 inches TL) by August 1996. These fish were age one (Hata 1985). The length frequencies each month in 1997 were consistently 15-20 mm less than the 1996 landings for the same time periods. Fish taken in August 1996 (224.7 mm) were the same size as those in September 1997 (223.6 mm). Young-of-the-year spot began to recruit into the catch in August 1996 when they were 125-150 mm (5 inches FL). These young-of-the-year were the only spot collected in September 1996 (N=8), averaging 160 mm (6 in FL). No young-of-the-year were collected in 1997.

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

Atlantic Croaker, *Micropogonias undulatus* (Figs 36-38)

Atlantic croaker were abundant from May through September. In 1996 the May through July catch was composed entirely of age two fish (Barbieri et al 1994a) ranging in average length from 263 mm (10 inches) in May to 300 mm (12 inches) in August. The catch in August appeared 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 1996 that ranged 327 to 394 mm, averaging 362 mm (14 inches). According to Barbieri et al (1994a) these fish could range from 6 to 8 years in age. Age one croaker (225 mm, 8 inches) were only collected in August.

There was a wider age spread in 1997. The May and June catch was composed of not only age two fish, but of a number of larger-older fish (325-400 mm, 13-16 inches, Fig 37); and in July and August there was a spread of age one fish through older fish up to six years.

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 both years weighed 310-350 g (0.7 lb) and the large fish in September 533-760 g (1.2-1.5 lb).

Red drum, *Sciaenops ocellatus*

Red drum were only measured in early October 1997 (N=16). These fish ranged 95-427 mm,

averaging 376 mm (14.8 inches). The average weight was 686 g (1.5 lb).

Scombridae - mackerels

Spanish mackerel, *Scomberomorus maculatus* (Fig 39-40)

Spanish mackerel were first collected (N=11) in May 1996 and June 1997 (N=11), and then only in July 1996. They were taken June through October 1997 averaging 399-457 mm (15-17 inches). There were too few fish taken in May 1996 to develop any statistics, but most were larger (450-517 mm, 19 inches) age three fish (Gaichas and Chittenden 1997).

Bothidae - flounders

Summer flounder or fluke, *Paralichthys dentatus* (Fig 41-43)

Summer flounder were collected May through September 1996 and on into October 1997. The size range was 166 to 625 mm, averaging 354 mm (13 inches) in 1996 and 367 (14 inches) in 1997 (Fig 42). Most were over 325 mm (12.5 inches). Between June and September the modal, or most frequently occurring weight, went from 500 g (1.1 lb) to 600 g (1.3 lb) 1996, and from 500 g to 700 and 1200 g (1.1-2.5 lb) in 1997. Most flounder weighed over 450 g, or about a pound.

Stromateidae - butterfishes

Butterfish, *Peprilus triacanthus* (Fig 44-46)

There was a significant landing of butterfish in 1997. Ten large fish (223-275 mm) were measured in June, then over 400 in July through September, averaging 152-160 mm (6 inches) and weighing about a quarter of a pound.

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Table 1

Locations of Potomac River pound-nets sampled during Summer 1996-1997

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 sites and the associated dates visited, with the total number of fish processed.

Sample Site	Total	Freq.	STATION DATE																										
			May			June					July							August		September				October					
			6	12	13	10	17	18	24	26	1	2	8	9	10	15	16	21	29	4	6	5	12	14	30	3	10	24	
Belvin's	92	1	0	0	0	0	0	0	0	0	0	0	0	0	92	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bradley, George	210	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	210	0	
Gaskins	1196	5	0	0	0	0	145	0	0	0	0	163	0	0	0	0	0	757	0	0	0	0	0	114	0	0	0	17	
Jetts	2648	11	0	0	0	0	190	0	0	132	0	210	138	0	0	341	0	624	341	444	0	0	37	0	0	99	0	92	
O'Biers	3975	15	79	122	304	331	196	0	443	0	317	0	431	274	0	0	437	0	0	0	296	363	223	0	0	82	76	0	
Pride of Virginia	1272	7	0	0	0	0	0	144	189	0	100	0	131	131	0	0	445	0	0	0	0	0	0	132	0	0	0	0	
Total	9392	40	79	122	304	331	531	144	632	132	417	373	700	405	92	341	882	1381	341	444	296	363	260	132	114	181	286	109	

Table 3. Sampling Dates. Species of fish, and the dates of each month that fish were sampled from seafood houses of the Potomac River.

Species Name	Total	Freq.	1997 SAMPLING DATE																									
			MAY			JUNE					JULY							AUGUST		SEPTEMBER				OCTOBER				
			6	12	13	10	17	18	24	26	1	2	8	9	10	15	16	21	29	4	6	5	12	14	30	3	10	24
American eel	20	5	0	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	4	0	0	2	5	0	
American shad	29	2	0	0	19	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Atlantic croaker	1982	22	0	5	137	121	226	98	203	54	119	16	217	186	0	2	147	130	24	116	1	119	47	4	0	8	0	2
Atlantic herring	2	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Atlantic menhaden	1563	21	59	51	7	0	63	4	0	78	0	94	94	31	90	117	79	310	62	65	0	0	22	72	114	12	105	34
Atlantic spadefish	20	4	0	0	0	4	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	4	10	0	0	0	0	0
Florida pompano	24	8	0	0	0	3	0	0	2	0	0	1	3	0	0	1	1	0	0	2	11	0	0	0	0	0	0	0
Spanish mackerel	74	11	0	0	0	0	11	0	0	0	0	1	3	3	0	0	0	6	16	3	6	12	11	0	0	2	0	0
alewife	11	2	6	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
black drum	2	2	0	0	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
black seabass	105	2	0	0	0	0	8	0	97	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
blue catfish	15	1	0	0	0	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
blueback herring	24	2	8	16	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
bluefish	961	19	0	0	0	6	43	0	55	0	81	45	45	24	0	34	134	234	34	51	25	8	22	19	0	41	52	8
butterfish	494	9	0	0	0	0	10	0	0	0	90	0	55	47	0	0	108	0	0	31	62	0	89	2	0	0	0	0
channel catfish	10	1	0	0	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
cobia	2	1	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
common carp	9	3	0	0	0	5	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
gizzard shad	136	7	2	3	0	0	0	20	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	20	68	21	
harvestfish	37	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	37	0	0	0	0	0	0	0
hogchoker	14	2	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	0
oyster toadfish	13	3	0	0	0	0	0	0	0	0	0	3	6	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0
red drum	16	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	0	0	
scup	10	1	0	0	0	0	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
sheepshead	1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
spot	1544	18	0	3	0	153	21	1	199	0	11	146	163	91	0	80	198	238	56	89	25	64	5	0	0	1	0	0
spotted seatrout	1	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	1
striped bass	75	14	0	0	0	5	5	2	9	0	0	0	2	2	0	0	2	0	3	0	0	14	1	1	0	6	6	17
summer flounder	535	21	0	0	13	10	23	15	20	0	18	49	47	2	0	10	23	125	21	30	22	27	22	2	0	23	9	24
tautog	2	1	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
weakfish	1176	20	0	0	21	13	56	0	5	0	0	7	55	7	1	97	67	332	125	57	68	119	33	20	0	50	41	2
white catfish	5	2	0	0	0	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
white perch	481	12	4	39	108	0	41	4	11	0	96	0	8	8	1	0	123	0	0	0	38	0	0	0	0	0	0	0
Total	9393	221	79	122	305	331	531	144	632	132	417	373	700	405	92	341	882	1381	341	444	296	363	260	132	114	181	286	109

Table 4. Fish length information from the 1997 Potomac River Pound Net Survey.

NAME		Number of Fish	LENGTH STATISTICS				Standard Error
Common	Scientific		Maximum	Minimum	Range	Mean	
Atlantic croaker	<i>Micropogonias undulatus</i>	1,982	457	121	336	294.2	0.9
Atlantic menhaden	<i>Brevoortia tyrannus</i>	1,562	611	145	466	261.4	0.9
spot	<i>Leiostomus xanthurus</i>	1,544	275	132	143	198.8	0.4
weakfish	<i>Cynoscion regalis</i>	1,176	511	224	287	302.1	1.4
bluefish	<i>Pomatomus saltatrix</i>	961	795	174	621	299.6	1.6
summer flounder	<i>Paralichthys dentatus</i>	535	625	166	459	367.0	2.4
butterfish	<i>Pepilus triacanthus</i>	494	275	125	150	156.5	0.8
white perch	<i>Morone americana</i>	481	279	130	149	206.1	1.0
gizzard shad	<i>Dorosoma cepedianum</i>	136	450	187	263	322.4	3.8
black seabass	<i>Centropristis striata</i>	105	293	210	83	252.6	1.6
striped bass	<i>Morone saxatilis</i>	75	819	186	633	613.1	13.7
Spanish mackerel	<i>Scomberomorus maculatus</i>	74	547	341	206	418.0	5.5
harvestfish	<i>Pepilus alepidotus</i>	37	161	128	33	142.2	1.3
American shad	<i>Alosa sapidissima</i>	29	612	273	339	449.3	15.9
blueback herring	<i>Alosa aestivalis</i>	24	261	201	60	229.8	3.2
Florida pompano	<i>Trachinotus carolinus</i>	24	311	214	97	269.9	4.6
Atlantic spadefish	<i>Chaetodipterus faber</i>	20	557	380	177	471.5	10.4
American eel	<i>Anguilla rostrata</i>	20	751	189	562	531.6	42.1
red drum	<i>Sciaenops ocellatus</i>	16	427	332	95	376.8	6.1
blue catfish	<i>Ictalurus furcatus</i>	15	381	174	207	300.1	14.6
hogchoker	<i>Trinectes maculatus</i>	14	154	90	64	118.1	6.3
oyster toadfish	<i>Opsanus tau</i>	13	255	150	105	201.3	9.6
alewife	<i>Alosa pseudoharengus</i>	11	230	208	22	216.9	2.1
scup	<i>Stenotomus chrysops</i>	10	355	287	68	311.2	6.7
channel catfish	<i>Ictalurus punctatus</i>	10	500	278	222	373.4	21.3
common carp	<i>Cyprinus carpio</i>	9	745	400	345	644.6	33.9
white catfish	<i>Ictalurus catus</i>	5	693	249	444	447.4	77.4
Atlantic herring	<i>Clupea harengus</i>	2	240	233	7	236.5	3.5
black drum	<i>Pogonius cromis</i>	2	520	491	29	505.5	14.5
cobia	<i>Rachycentron canadum</i>	2	905	758	147	831.5	73.5
tautog	<i>Tautoga onitis</i>	2	457	341	116	399.0	58.0
sheepshead	<i>Archosargus probatocephalus</i>	1	504	504	0	504.0	.
spotted seatrout	<i>Cynoscion nebulosus</i>	1	421	421	0	421.0	.

9,392

Table 5. Fish weight information from the 1997 Potomac River Pound Net Survey.

SPECIES NAME		Number of Fish	WEIGHT STATISTICS				Standard Error
Common	Scientific		Maximum	Minimum	Range	Mean	
Atlantic menhaden	<i>Brevoortia tyrannus</i>	1,195	748.2	54.0	694.2	324.2	3.4
Atlantic croaker	<i>Micropogonias undulatus</i>	906	1311.5	31.4	1280.1	396.9	5.5
spot	<i>Leiostomus xanthurus</i>	666	372.6	40.1	332.5	155.8	1.5
weakfish	<i>Cynoscion regalis</i>	578	1318.5	110.2	1208.3	319.1	8.2
bluefish	<i>Pomatomus saltatrix</i>	561	5530.6	116.5	5414.1	463.6	16.3
summer flounder	<i>Paralichthys dentatus</i>	494	3478.5	2.7	3475.8	587.5	15.3
butterfish	<i>Peprius triacanthus</i>	270	474.7	47.2	427.5	134.0	3.7
white perch	<i>Morone americana</i>	177	487.6	38.9	448.7	169.3	5.1
gizzard shad	<i>Dorosoma cepedianum</i>	132	1375.0	102.7	1272.3	566.7	19.0
striped bass	<i>Morone saxatilis</i>	72	7037.2	912.0	6125.2	3233.4	179.9
Spanish mackerel	<i>Scomberomorus maculatus</i>	72	1227.8	302.4	925.4	696.2	26.1
harvestfish	<i>Peprius alepidotus</i>	37	106.9	61.1	45.8	80.5	1.7
blueback herring	<i>Alosa aestivalis</i>	24	219.6	88.6	131.0	149.8	6.5
Florida pompano	<i>Trachinotus carolinus</i>	24	666.0	226.7	439.3	460.3	23.2
black seabass	<i>Centropristis striata</i>	23	351.5	180.6	170.9	253.7	8.7
Atlantic spadefish	<i>Chaetodipterus faber</i>	19	4606.2	1778.5	2827.7	3413.1	182.7
American eel	<i>Anguilla rostrata</i>	16	1226.6	270.3	956.3	660.4	63.7
red drum	<i>Sciaenops ocellatus</i>	16	1009.5	503.0	506.5	686.5	35.1
blue catfish	<i>Ictalurus furcatus</i>	15	825.8	73.2	752.6	423.5	53.2
hogchoker	<i>Trinectes maculatus</i>	14	79.5	17.4	62.1	42.8	6.5
oyster toadfish	<i>Opsanus tau</i>	13	346.5	99.6	246.9	202.8	20.5
alewife	<i>Alosa pseudoharengus</i>	11	143.2	90.2	53.0	114.1	4.2
scup	<i>Stenotomus chrysops</i>	10	1034.7	584.2	450.5	718.9	44.0
channel catfish	<i>Ictalurus punctatus</i>	10	2233.5	252.6	1980.9	762.5	181.7
common carp	<i>Cyprinus carpio</i>	9	9837.6	1288.0	8549.6	5286.5	782.8
American shad	<i>Alosa sapidissima</i>	5	2082.9	733.8	1349.1	1394.5	229.1
white catfish	<i>Ictalurus catus</i>	5	5570.0	272.6	5297.4	2185.0	937.6
Atlantic herring	<i>Clupea harengus</i>	2	163.9	150.1	13.8	157.0	6.9
black drum	<i>Pogonius cromis</i>	2	2339.3	1720.5	618.8	2029.9	309.4
cobia	<i>Rachycentron canadum</i>	2	8553.1	4654.0	3899.1	6603.6	1949.6
tautog	<i>Tautoga onitis</i>	2	2248.0	951.5	1296.5	1599.8	648.3
sheepshead	<i>Archosargus probatocephalus</i>	1	2316.3	2316.3	0.0	2316.3	.
spotted seatrout	<i>Cynoscion nebulosus</i>	1	738.4	738.4	0.0	738.4	.

5,384

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

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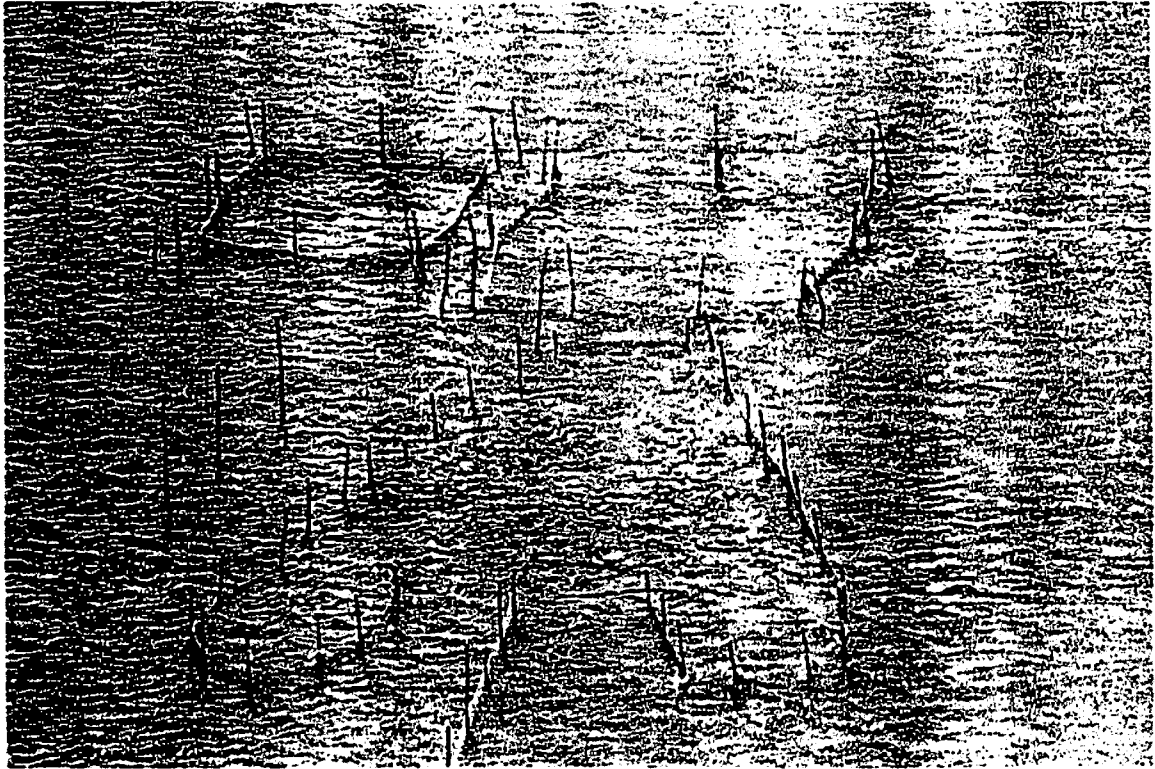
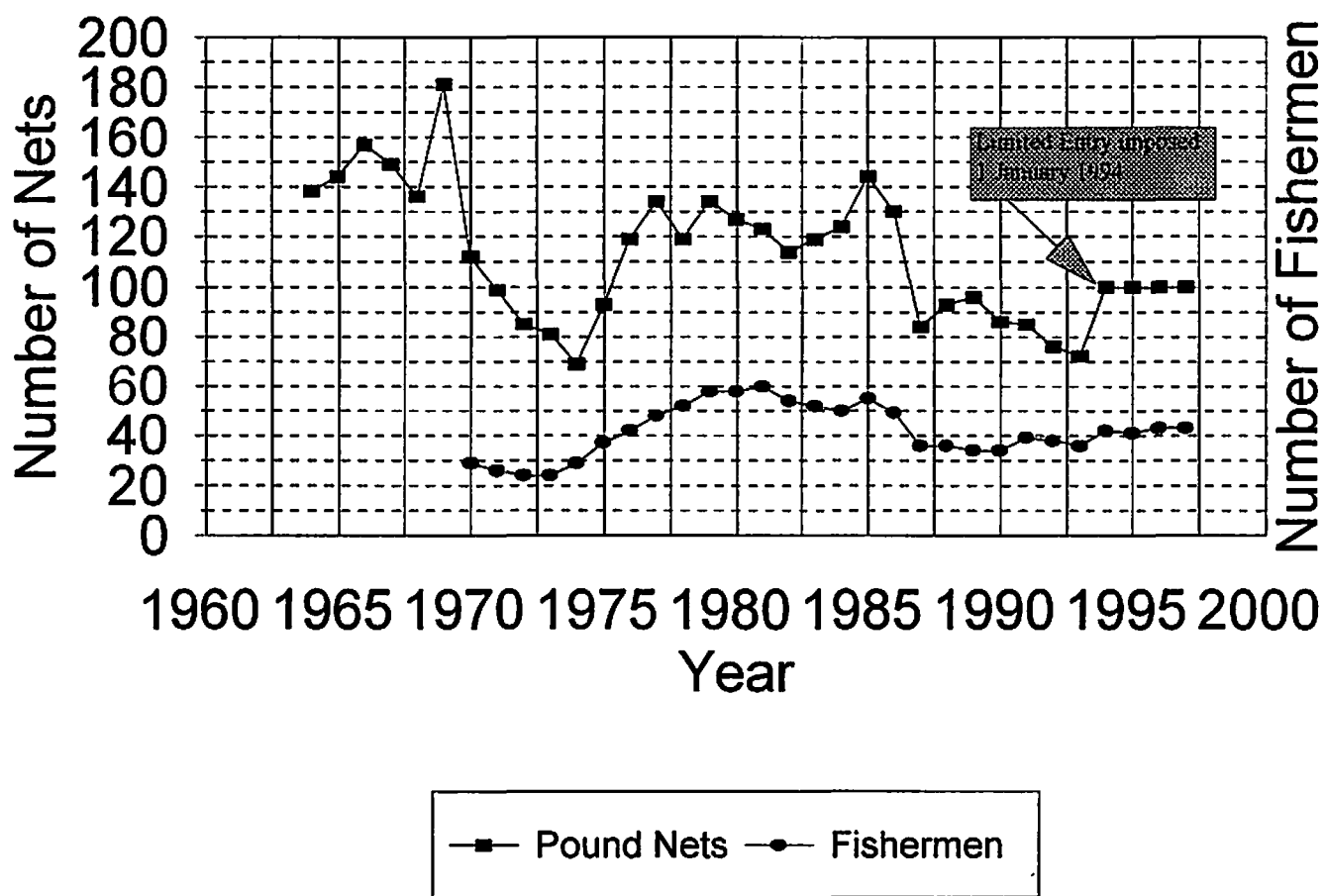


Figure 1. An aerial view of a pound net showing the leader (bottom of photo), heart (= bay), and trap (= head) - photo courtesy of M. Oesterling (VIMS).

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 1964-1997

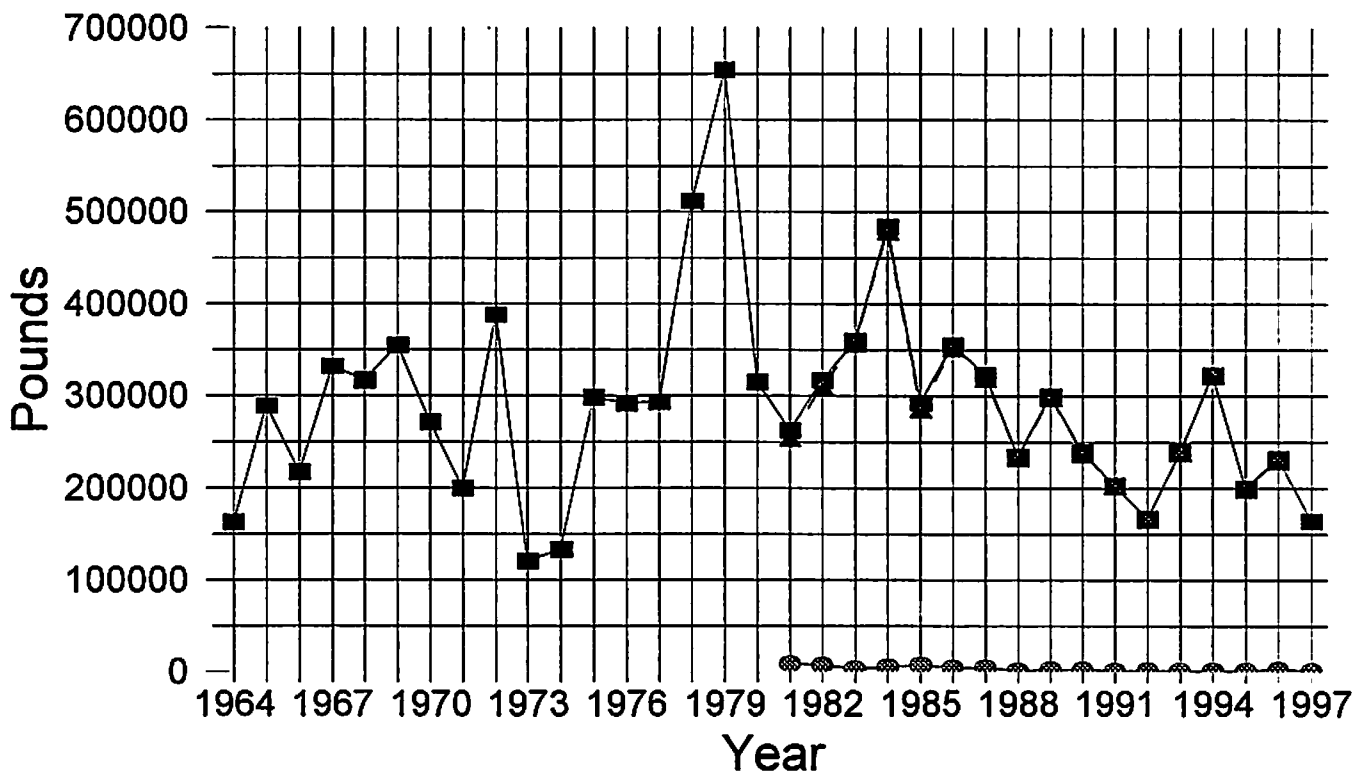


Potomac River Pound-Net Survey

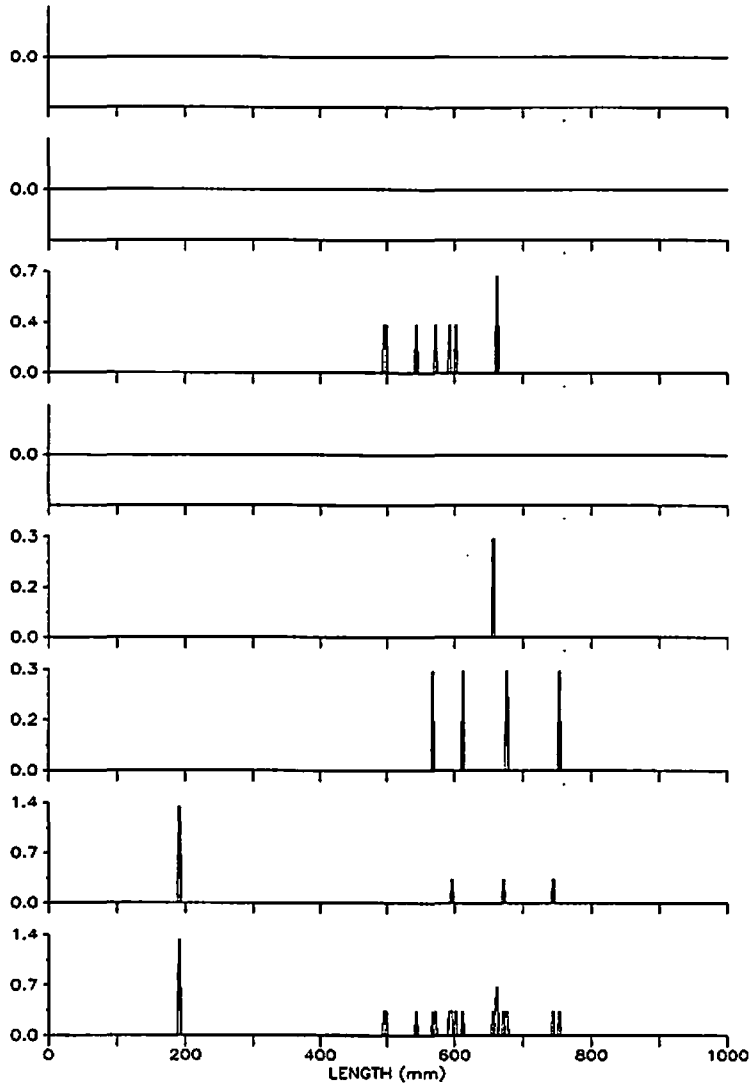


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Management and Policy

American Eel Potomac River Pound-Nets

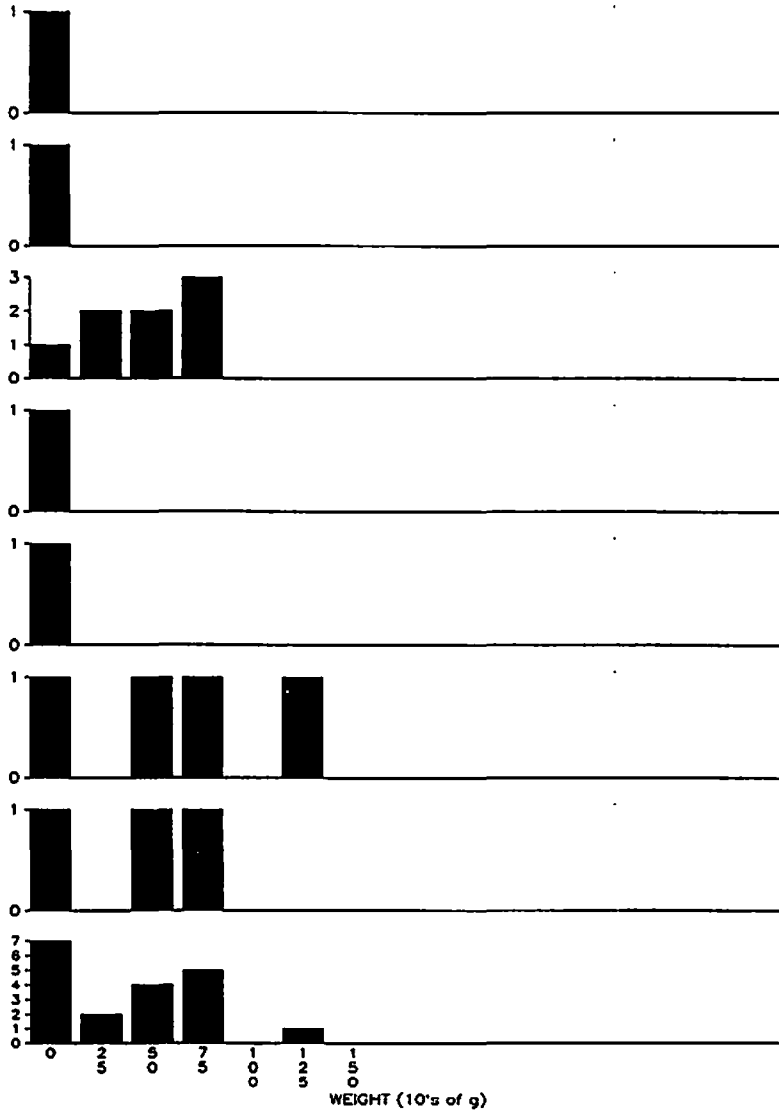


1997 Potomac River Pound Net Survey – American eel Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	0	MIN. SIZE	-	.	
CAT./SITE	.	MAX. SIZE	-	.	
MAY	970506	-	970513		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	3	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
JUNE	970610	-	970626		
NO. CGHT.	8	MEAN SIZE	-	576.5	
NO. MEAS.	8	S.E. SIZE	-	22.9	
NO. SITES	8	MIN. SIZE	-	493	
CAT./SITE	1	MAX. SIZE	-	660	
JULY	970701	-	970729		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	18	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
AUGUST	970804	-	970806		
NO. CGHT.	1	MEAN SIZE	-	655	
NO. MEAS.	1	S.E. SIZE	-		
NO. SITES	2	MIN. SIZE	-	655	
CAT./SITE	0.5	MAX. SIZE	-	655	
SEPTEMBER	970905	-	970930		
NO. CGHT.	4	MEAN SIZE	-	650.5	
NO. MEAS.	4	S.E. SIZE	-	40.3	
NO. SITES	5	MIN. SIZE	-	566	
CAT./SITE	0.8	MAX. SIZE	-	751	
OCTOBER	971003	-	971024		
NO. CGHT.	7	MEAN SIZE	-	394.6	
NO. MEAS.	7	S.E. SIZE	-	98.2	
NO. SITES	6	MIN. SIZE	-	189	
CAT./SITE	1.2	MAX. SIZE	-	742	
MAY-OCT	970506	-	971024		
NO. CGHT.	20	MEAN SIZE	-	531.6	
NO. MEAS.	20	S.E. SIZE	-	42.1	
NO. SITES	42	MIN. SIZE	-	189	
CAT./SITE	0.5	MAX. SIZE	-	751	

1997 Potomac River Pound Net Survey – American Eel Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-

MAY	970506	-	970513	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	0	MAX. WT	-

JUNE	970610	-	970626	
NO. CGHT.	-	8	MEAN WT	- 532.5
NO. WGHD.	-	7	S.E. WT	- 83.1
NO. SITES	-	8	MIN. WT	- 270.3
CAT./SITE	-	1	MAX. WT	- 790.3

JULY	970701	-	970729	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	18	MIN. WT	-
CAT./SITE	-	0	MAX. WT	-

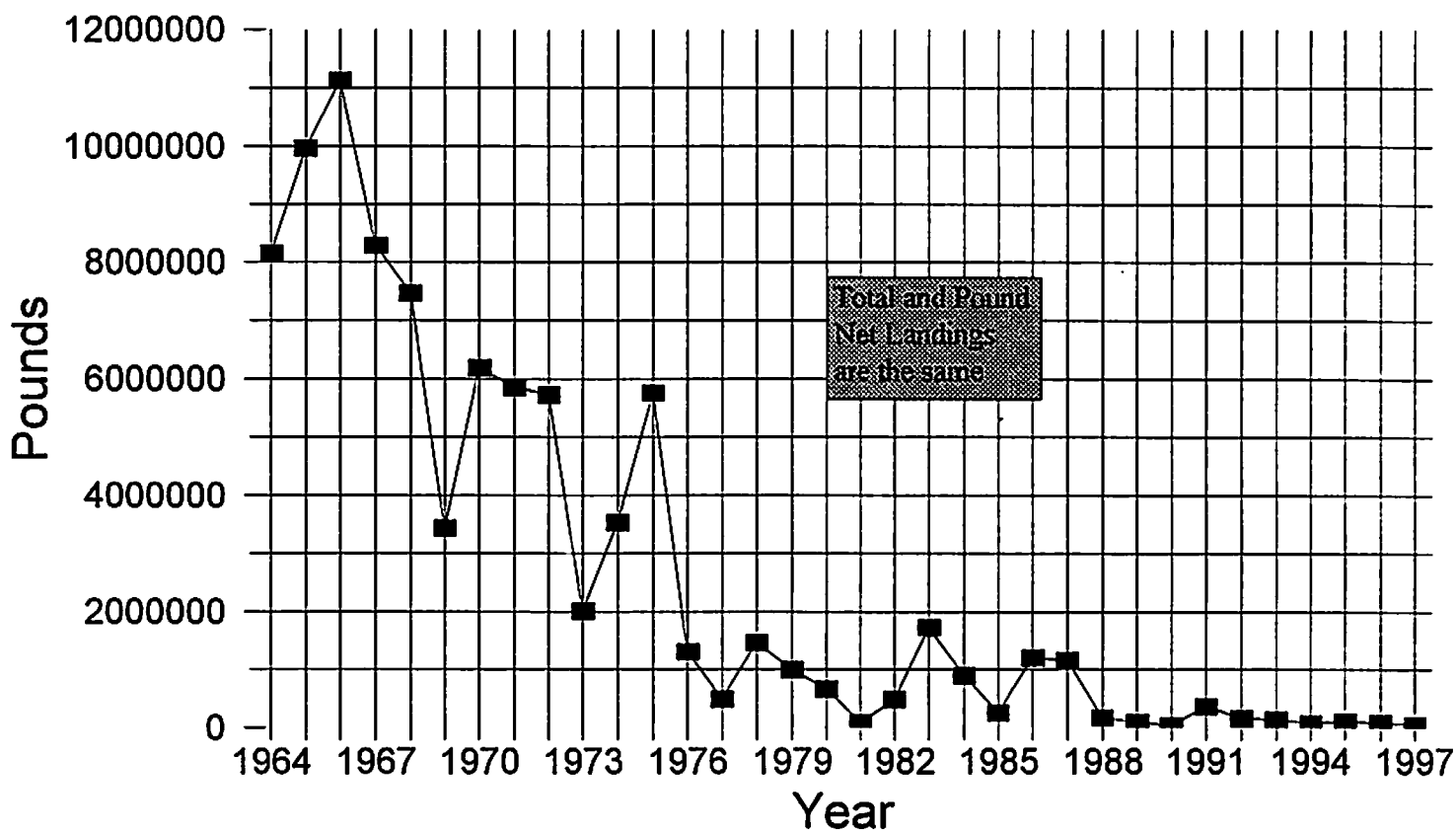
AUGUST	970804	-	970806	
NO. CGHT.	-	1	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	2	MIN. WT	-
CAT./SITE	-	0.5	MAX. WT	-

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	4	MEAN WT	- 816.7
NO. WGHD.	-	3	S.E. WT	- 243.2
NO. SITES	-	5	MIN. WT	- 385
CAT./SITE	-	0.8	MAX. WT	- 1226.6

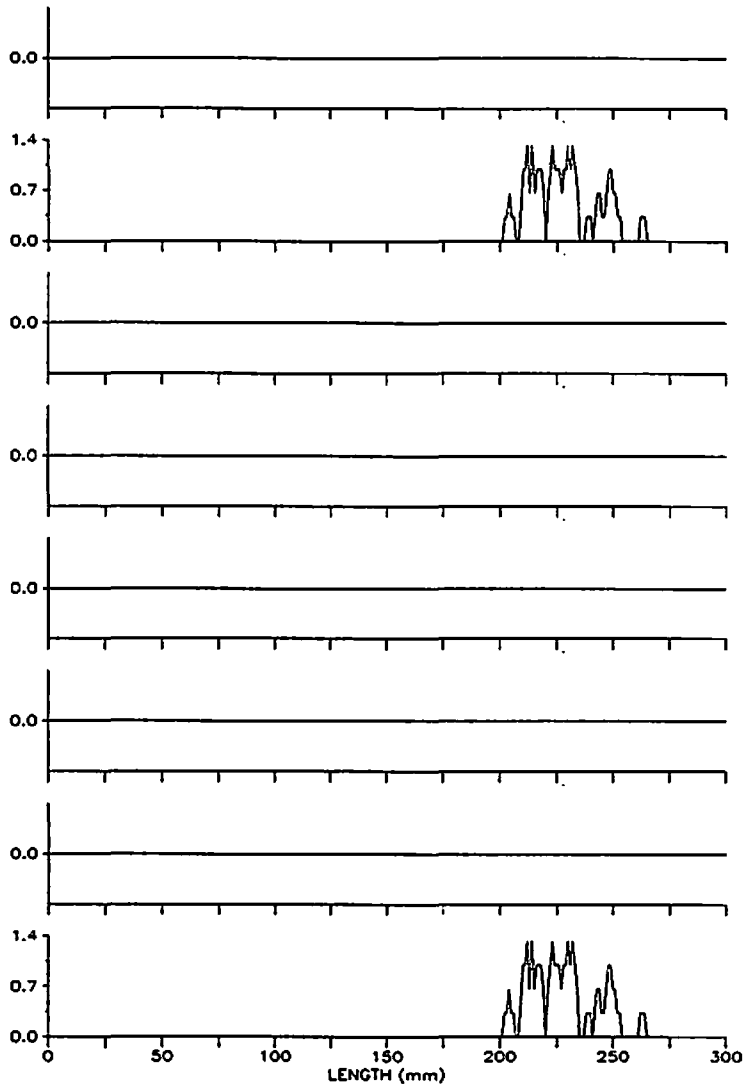
OCTOBER	971003	-	971024	
NO. CGHT.	-	7	MEAN WT	- 697.6
NO. WGHD.	-	2	S.E. WT	- 111.8
NO. SITES	-	6	MIN. WT	- 585.8
CAT./SITE	-	1.2	MAX. WT	- 809.3

MAY-OCT	970506	-	971024	
NO. CGHT.	-	20	MEAN WT	- 631.1
NO. WGHD.	-	12	S.E. WT	- 80.3
NO. SITES	-	42	MIN. WT	- 270.3
CAT./SITE	-	0.5	MAX. WT	- 1226.6

Herrings Potomac River Pound-nets

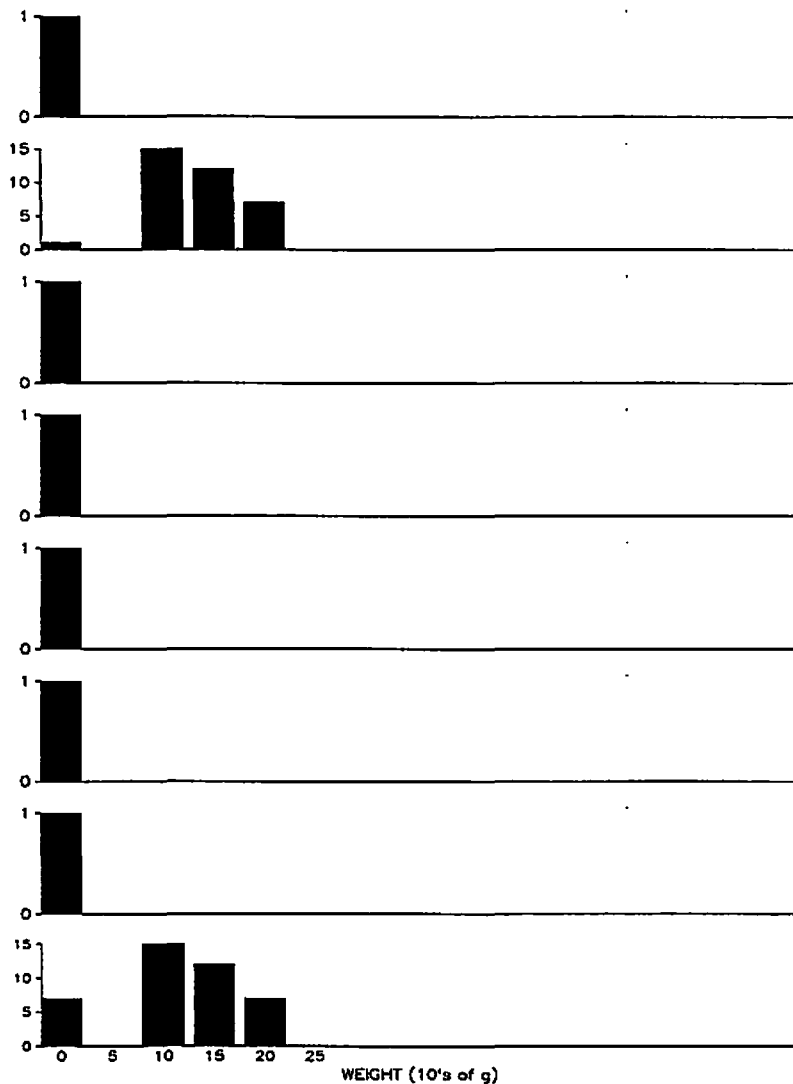


1997 Potomac River Pound Net Survey – Herring Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	35	MEAN SIZE	-	225.7
NO. MEAS.	-	35	S.E. SIZE	-	2.5
NO. SITES	-	3	MIN. SIZE	-	201
CAT./SITE	-	11.7	MAX. SIZE	-	261
JUNE	970610	-	970626		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	8	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
JULY	970701	-	970729		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	18	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
AUGUST	970804	-	970806		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	2	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	5	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
OCTOBER	971003	-	971024		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	6	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
MAY-OCT	970506	-	971024		
NO. CGHT.	-	35	MEAN SIZE	-	225.7
NO. MEAS.	-	35	S.E. SIZE	-	2.5
NO. SITES	-	42	MIN. SIZE	-	201
CAT./SITE	-	0.8	MAX. SIZE	-	261

1997 Potomac River Pound Net Survey – Herring Weights



APRIL	000000	-	000000		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	0		MIN. WT	-	.
CAT./SITE	.		MAX. WT	-	.

MAY	970506	-	970513		
NO. CGHT.	35		MEAN WT	-	139.8
NO. WGHD.	34		S.E. WT	-	5.5
NO. SITES	3		MIN. WT	-	88.6
CAT./SITE	11.7		MAX. WT	-	219.6

JUNE	970610	-	970626		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	8		MIN. WT	-	.
CAT./SITE	0		MAX. WT	-	.

JULY	970701	-	970729		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	18		MIN. WT	-	.
CAT./SITE	0		MAX. WT	-	.

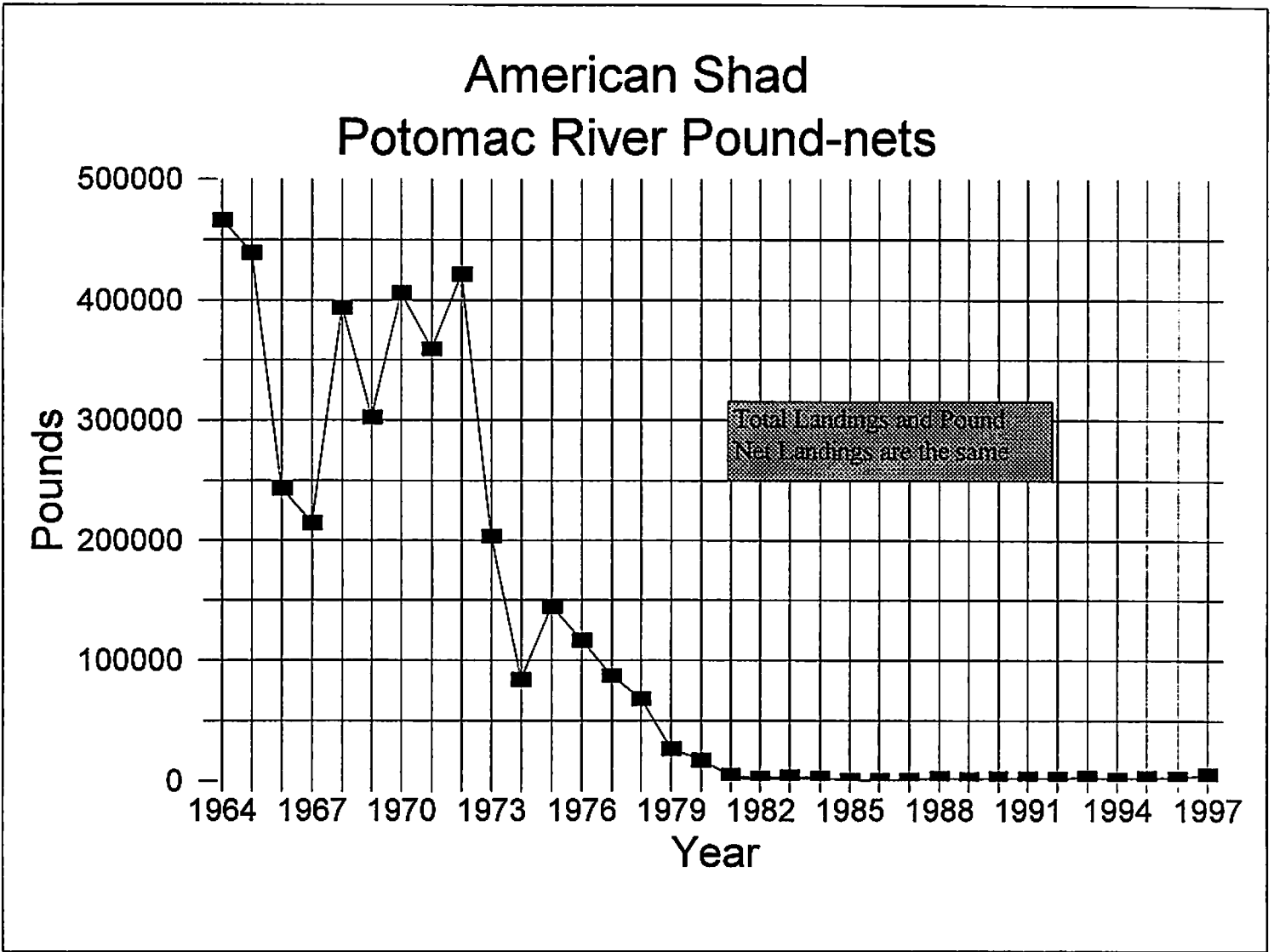
AUGUST	970804	-	970806		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	2		MIN. WT	-	.
CAT./SITE	0		MAX. WT	-	.

SEPTEMBER	970905	-	970930		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	5		MIN. WT	-	.
CAT./SITE	0		MAX. WT	-	.

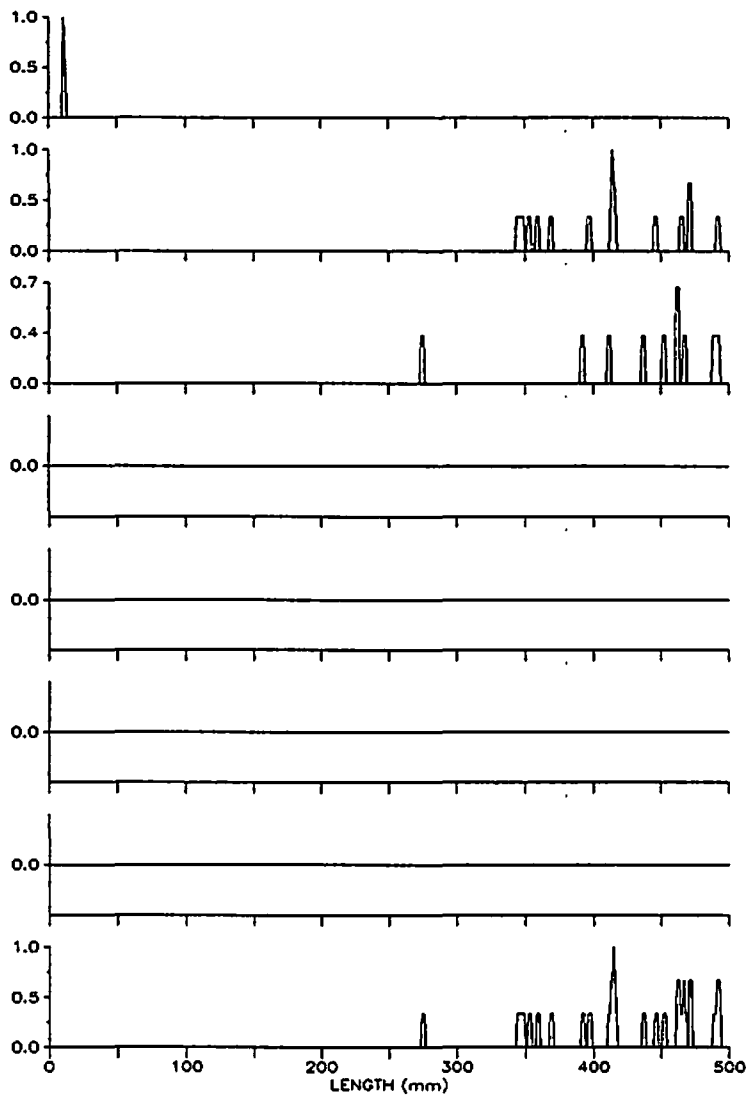
OCTOBER	971003	-	971024		
NO. CGHT.	0		MEAN WT	-	.
NO. WGHD.	0		S.E. WT	-	.
NO. SITES	6		MIN. WT	-	.
CAT./SITE	0		MAX. WT	-	.

MAY-OCT	970506	-	971024		
NO. CGHT.	35		MEAN WT	-	139.8
NO. WGHD.	34		S.E. WT	-	5.5
NO. SITES	42		MIN. WT	-	88.6
CAT./SITE	0.8		MAX. WT	-	219.6

Figure 10



1997 Potomac River Pound Net Survey – American Shad Length Frequency



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	0	MIN. SIZE	-
CAT./SITE	-	.	MAX. SIZE	-

MAY	970506	-	970513	
NO. CGHT.	-	19	MEAN SIZE	-
NO. MEAS.	-	19	S.E. SIZE	-
NO. SITES	-	3	MIN. SIZE	-
CAT./SITE	-	6.3	MAX. SIZE	-

JUNE	970610	-	970626	
NO. CGHT.	-	10	MEAN SIZE	-
NO. MEAS.	-	10	S.E. SIZE	-
NO. SITES	-	8	MIN. SIZE	-
CAT./SITE	-	1.3	MAX. SIZE	-

JULY	970701	-	970729	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	18	MIN. SIZE	-
CAT./SITE	-	0	MAX. SIZE	-

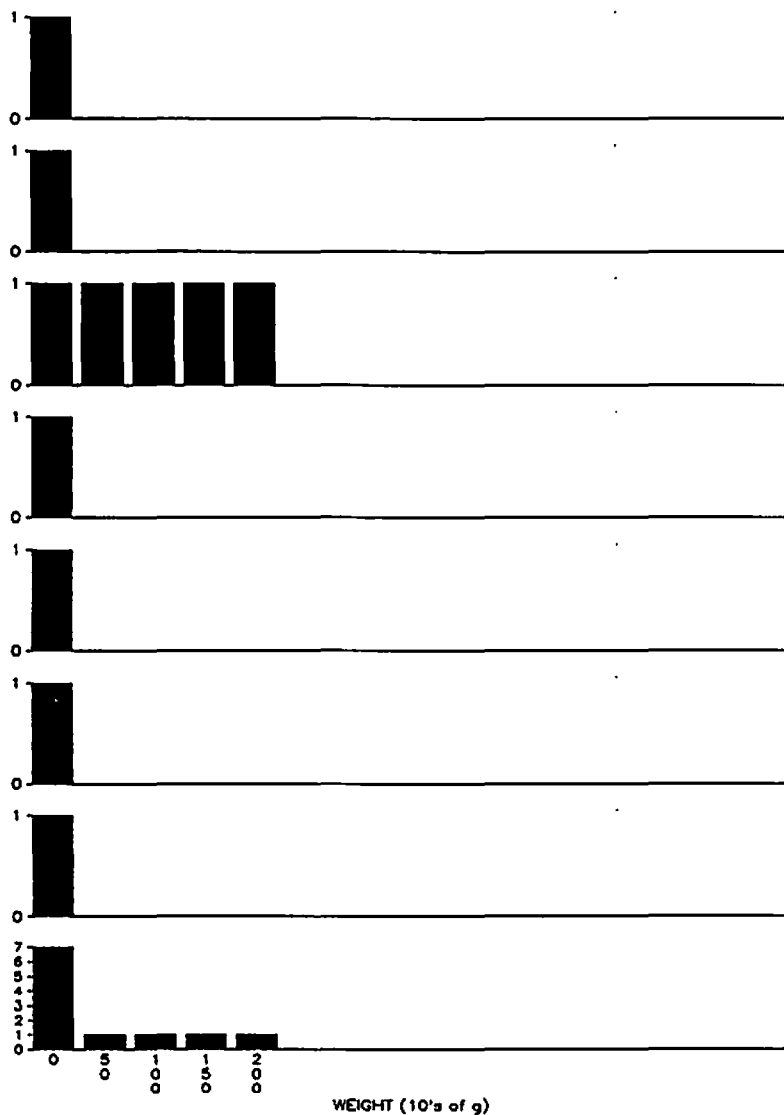
AUGUST	970804	-	970806	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	2	MIN. SIZE	-
CAT./SITE	-	0	MAX. SIZE	-

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	5	MIN. SIZE	-
CAT./SITE	-	0	MAX. SIZE	-

OCTOBER	971003	-	971024	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	6	MIN. SIZE	-
CAT./SITE	-	0	MAX. SIZE	-

MAY-OCT	970506	-	971024	
NO. CGHT.	-	29	MEAN SIZE	-
NO. MEAS.	-	29	S.E. SIZE	-
NO. SITES	-	42	MIN. SIZE	-
CAT./SITE	-	0.7	MAX. SIZE	-

1997 Potomac River Pound Net Survey – American Shad Weights



APRIL 000000 - 000000
 NO. CGHT. - 0 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 0 MIN. WT -
 CAT./SITE - . MAX. WT -

MAY 970506 - 970513
 NO. CGHT. - 19 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 3 MIN. WT -
 CAT./SITE - 6.3 MAX. WT -

JUNE 970610 - 970626
 NO. CGHT. - 10 MEAN WT -1349.2
 NO. WGHD. - 4 S.E. WT - 289.9
 NO. SITES - 8 MIN. WT - 733.8
 CAT./SITE - 1.3 MAX. WT -2082.9

JULY 970701 - 970729
 NO. CGHT. - 0 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 18 MIN. WT -
 CAT./SITE - 0 MAX. WT -

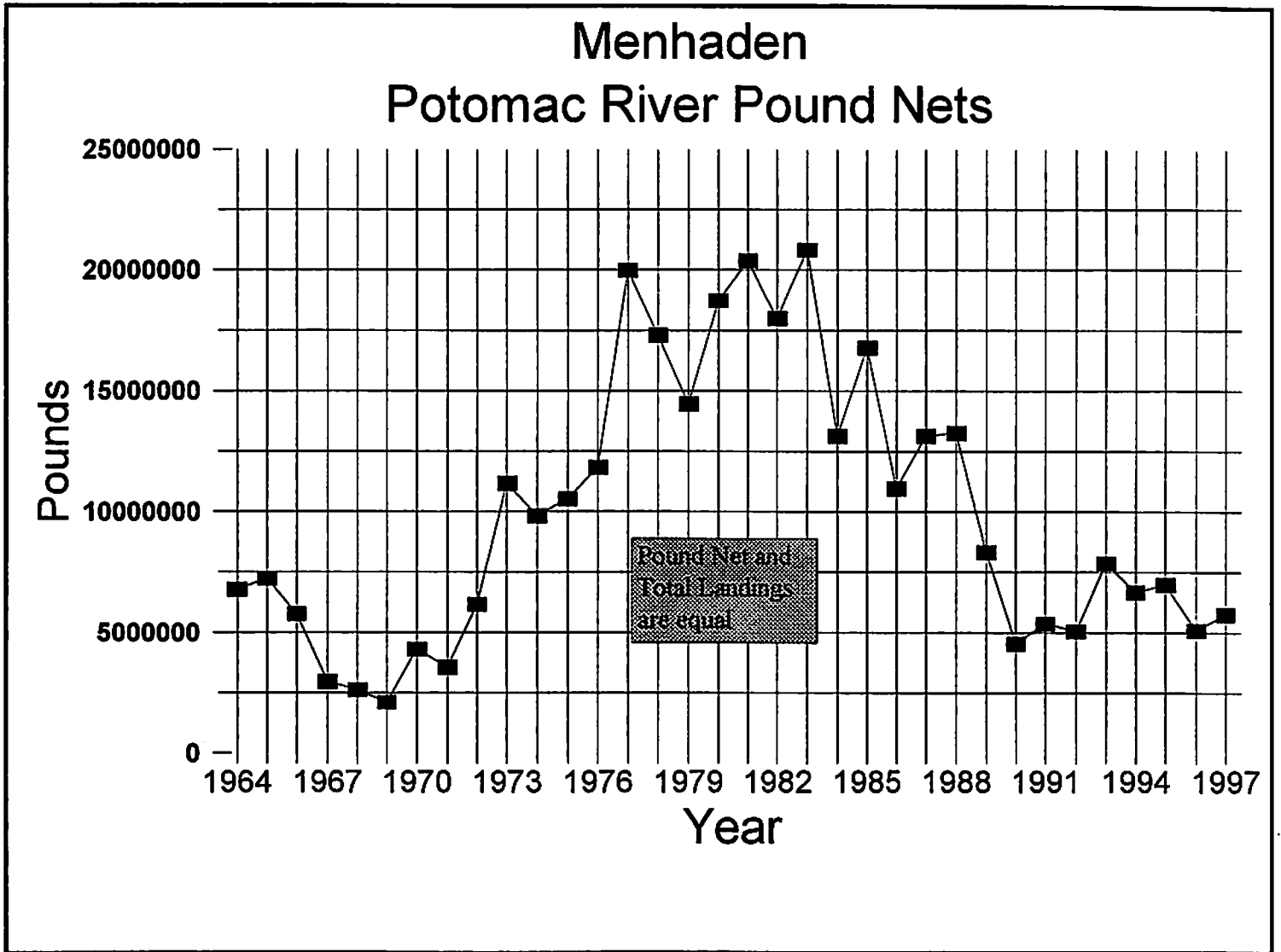
AUGUST 970804 - 970806
 NO. CGHT. - 0 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 2 MIN. WT -
 CAT./SITE - 0 MAX. WT -

SEPTEMBER 970905 - 970930
 NO. CGHT. - 0 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 5 MIN. WT -
 CAT./SITE - 0 MAX. WT -

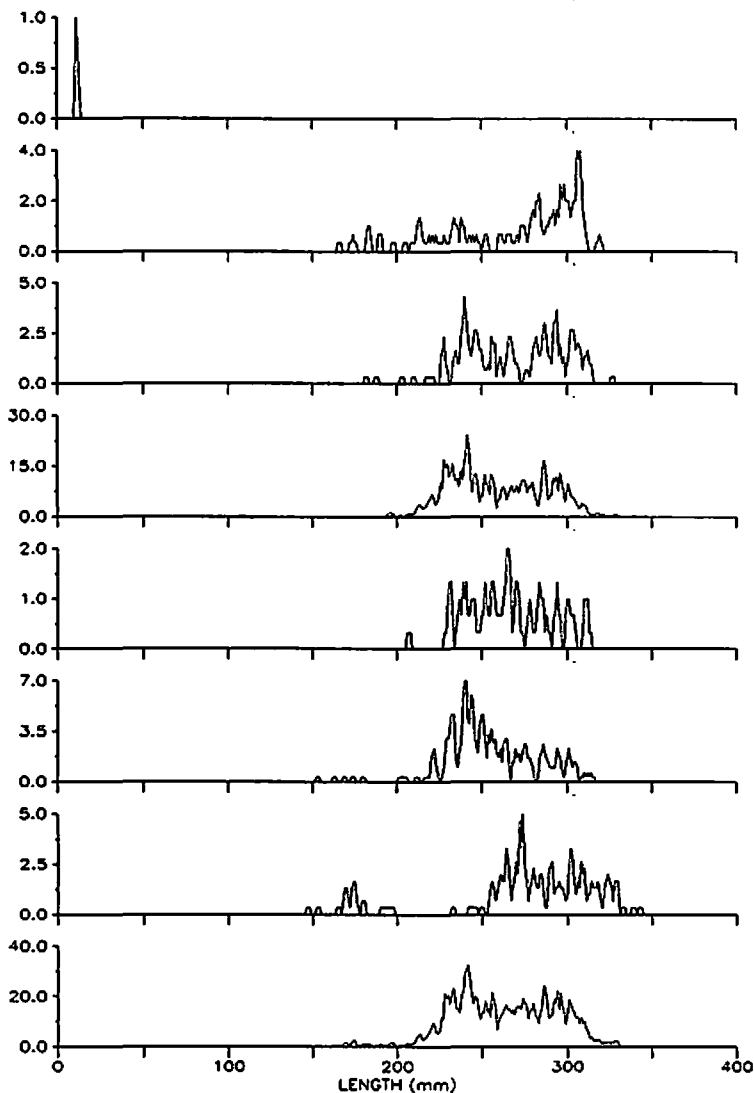
OCTOBER 971003 - 971024
 NO. CGHT. - 0 MEAN WT -
 NO. WGHD. - 0 S.E. WT -
 NO. SITES - 6 MIN. WT -
 CAT./SITE - 0 MAX. WT -

MAY-OCT 970506 - 971024
 NO. CGHT. - 29 MEAN WT -1349.2
 NO. WGHD. - 4 S.E. WT - 289.9
 NO. SITES - 42 MIN. WT - 733.8
 CAT./SITE - 0.7 MAX. WT -2082.9

Figure 13

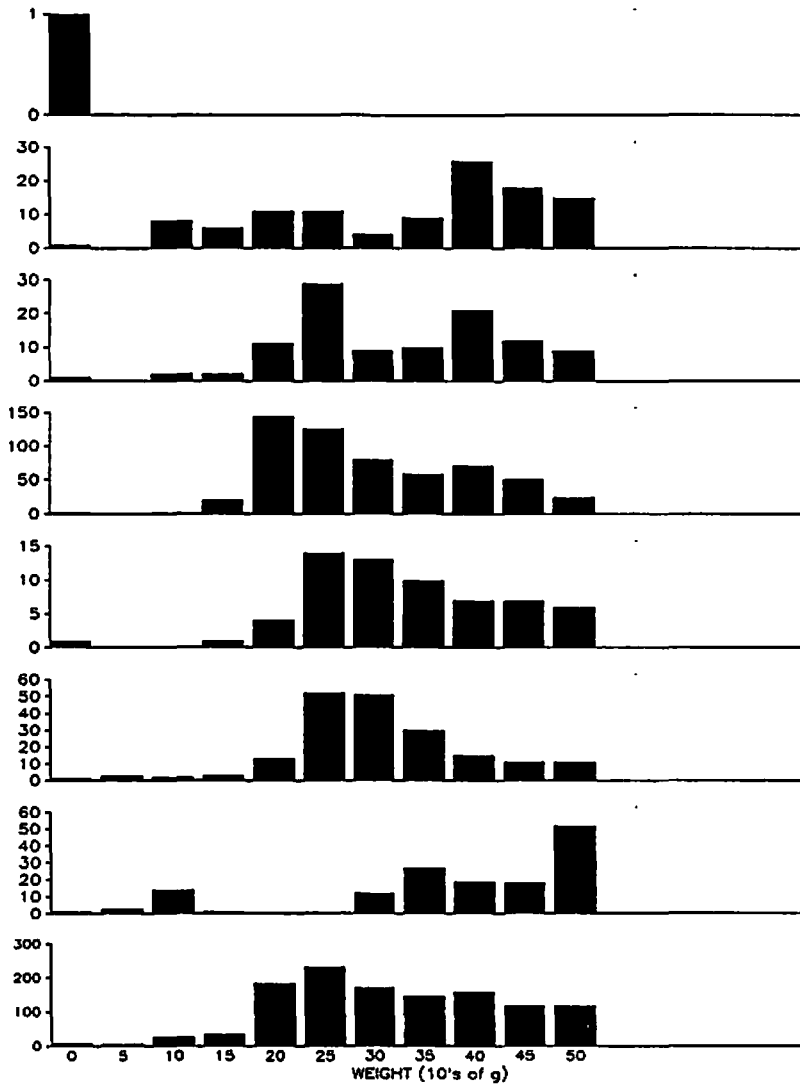


1997 Potomac River Pound Net Survey – Atlantic Menhaden Length Frequency



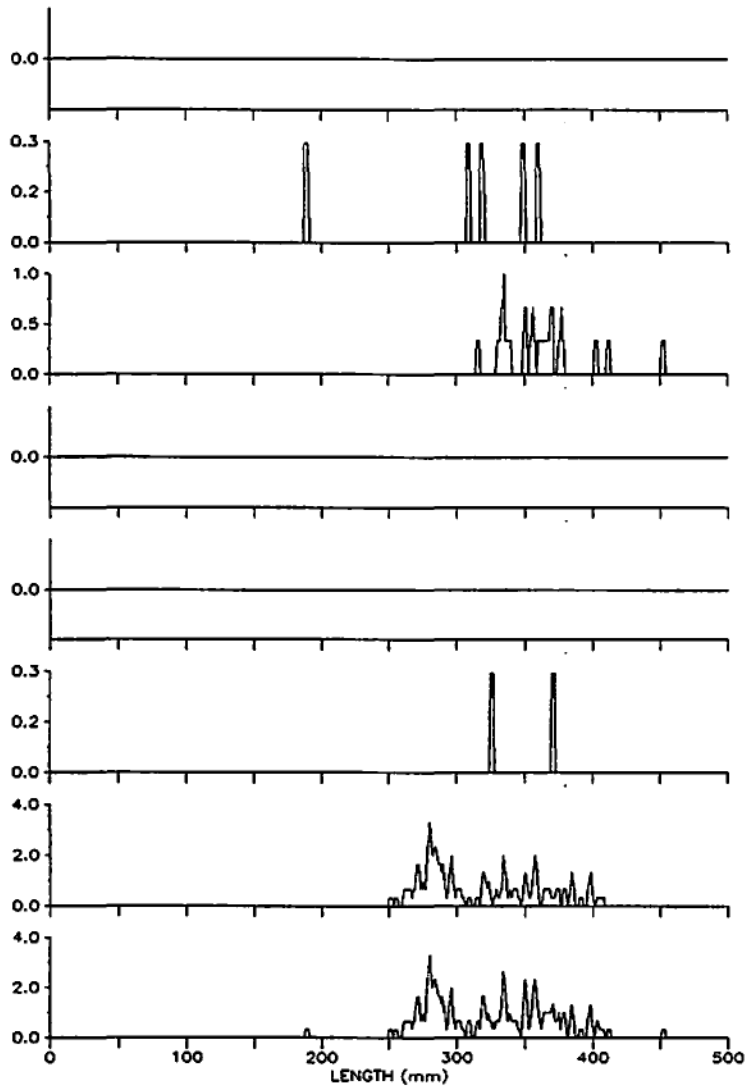
APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	117	MEAN SIZE	-	285.3
NO. MEAS.	-	117	S.E. SIZE	-	8
NO. SITES	-	3	MIN. SIZE	-	164
CAT./SITE	-	39	MAX. SIZE	-	613
JUNE	970610	-	970626		
NO. CGHT.	-	145	MEAN SIZE	-	266.3
NO. MEAS.	-	145	S.E. SIZE	-	2.4
NO. SITES	-	8	MIN. SIZE	-	180
CAT./SITE	-	18.1	MAX. SIZE	-	325
JULY	970701	-	970729		
NO. CGHT.	-	1807	MEAN SIZE	-	257.6
NO. MEAS.	-	877	S.E. SIZE	-	0.9
NO. SITES	-	18	MIN. SIZE	-	193
CAT./SITE	-	100.4	MAX. SIZE	-	327
AUGUST	970804	-	970806		
NO. CGHT.	-	65	MEAN SIZE	-	264.4
NO. MEAS.	-	65	S.E. SIZE	-	3.1
NO. SITES	-	2	MIN. SIZE	-	205
CAT./SITE	-	32.5	MAX. SIZE	-	311
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	208	MEAN SIZE	-	252.4
NO. MEAS.	-	208	S.E. SIZE	-	1.9
NO. SITES	-	5	MIN. SIZE	-	151
CAT./SITE	-	41.6	MAX. SIZE	-	313
OCTOBER	971003	-	971024		
NO. CGHT.	-	151	MEAN SIZE	-	273.8
NO. MEAS.	-	153	S.E. SIZE	-	3.5
NO. SITES	-	6	MIN. SIZE	-	145
CAT./SITE	-	25.2	MAX. SIZE	-	341
MAY-OCT	970506	-	971024		
NO. CGHT.	-	2493	MEAN SIZE	-	261.7
NO. MEAS.	-	1565	S.E. SIZE	-	1
NO. SITES	-	42	MIN. SIZE	-	145
CAT./SITE	-	59.4	MAX. SIZE	-	613

1997 Potomac River Pound Net Survey – Atlantic Menhaden Weights



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	0	MIN. WT	-	.
CAT./SITE	-	.	MAX. WT	-	.
MAY	970506	-	970513		
NO. CGHT.	-	117	MEAN WT	-	349.2
NO. WGHD.	-	108	S.E. WT	-	12.5
NO. SITES	-	3	MIN. WT	-	82.4
CAT./SITE	-	39	MAX. WT	-	595.7
JUNE	970610	-	970626		
NO. CGHT.	-	145	MEAN WT	-	328.9
NO. WGHD.	-	105	S.E. WT	-	10.2
NO. SITES	-	8	MIN. WT	-	106.9
CAT./SITE	-	18.1	MAX. WT	-	554.4
JULY	970701	-	970729		
NO. CGHT.	-	1807	MEAN WT	-	298.4
NO. WGHD.	-	576	S.E. WT	-	4
NO. SITES	-	18	MIN. WT	-	120.4
CAT./SITE	-	100.4	MAX. WT	-	612.9
AUGUST	970804	-	970806		
NO. CGHT.	-	65	MEAN WT	-	334.3
NO. WGHD.	-	62	S.E. WT	-	11.6
NO. SITES	-	2	MIN. WT	-	147.4
CAT./SITE	-	32.5	MAX. WT	-	508.8
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	208	MEAN WT	-	308.3
NO. WGHD.	-	191	S.E. WT	-	6.5
NO. SITES	-	5	MIN. WT	-	54
CAT./SITE	-	41.6	MAX. WT	-	553.6
OCTOBER	971003	-	971024		
NO. CGHT.	-	151	MEAN WT	-	414.1
NO. WGHD.	-	147	S.E. WT	-	13.7
NO. SITES	-	6	MIN. WT	-	55.5
CAT./SITE	-	25.2	MAX. WT	-	748.2
MAY-OCT	970506	-	971024		
NO. CGHT.	-	2493	MEAN WT	-	323.5
NO. WGHD.	-	1189	S.E. WT	-	3.4
NO. SITES	-	42	MIN. WT	-	54
CAT./SITE	-	59.4	MAX. WT	-	748.2

1997 Potomac River Pound Net Survey – Gizzard Shad Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	5	MEAN SIZE	-	303.2
NO. MEAS.	-	5	S.E. SIZE	-	30.5
NO. SITES	-	3	MIN. SIZE	-	187
CAT./SITE	-	1.7	MAX. SIZE	-	358
JUNE	970610	-	970626		
NO. CGHT.	-	20	MEAN SIZE	-	360.8
NO. MEAS.	-	20	S.E. SIZE	-	7.1
NO. SITES	-	8	MIN. SIZE	-	314
CAT./SITE	-	2.5	MAX. SIZE	-	450
JULY	970701	-	970729		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	18	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
AUGUST	970804	-	970806		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	2	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	2	MEAN SIZE	-	346.5
NO. MEAS.	-	2	S.E. SIZE	-	22.5
NO. SITES	-	5	MIN. SIZE	-	324
CAT./SITE	-	0.4	MAX. SIZE	-	369
OCTOBER	971003	-	971024		
NO. CGHT.	-	109	MEAN SIZE	-	315.9
NO. MEAS.	-	109	S.E. SIZE	-	4
NO. SITES	-	6	MIN. SIZE	-	249
CAT./SITE	-	18.2	MAX. SIZE	-	405
MAY-OCT	970506	-	971024		
NO. CGHT.	-	136	MEAN SIZE	-	322.4
NO. MEAS.	-	136	S.E. SIZE	-	3.8
NO. SITES	-	42	MIN. SIZE	-	187
CAT./SITE	-	3.2	MAX. SIZE	-	450

1997 Potomac River Pound Net Survey – Gizzard Shad Weights

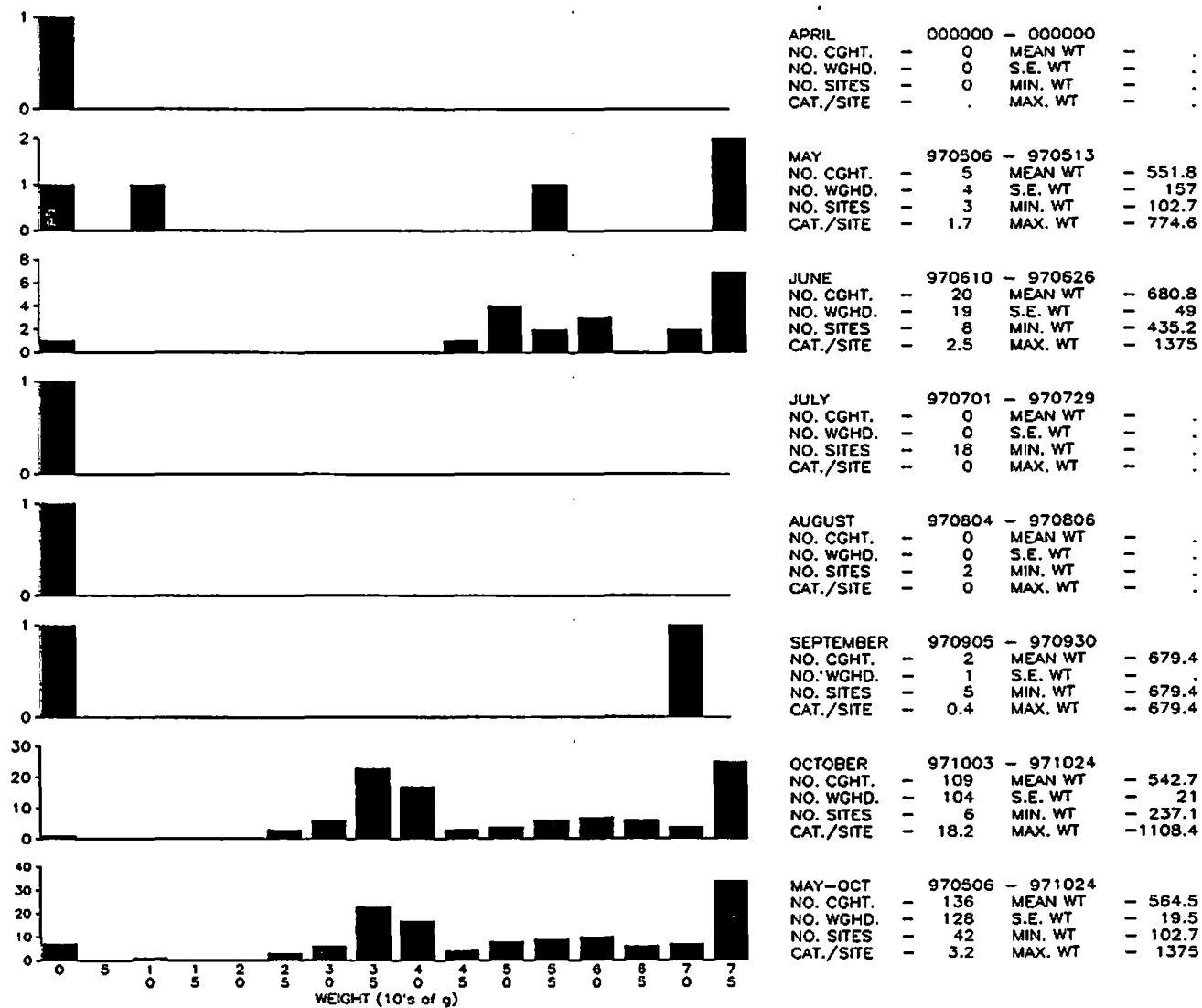
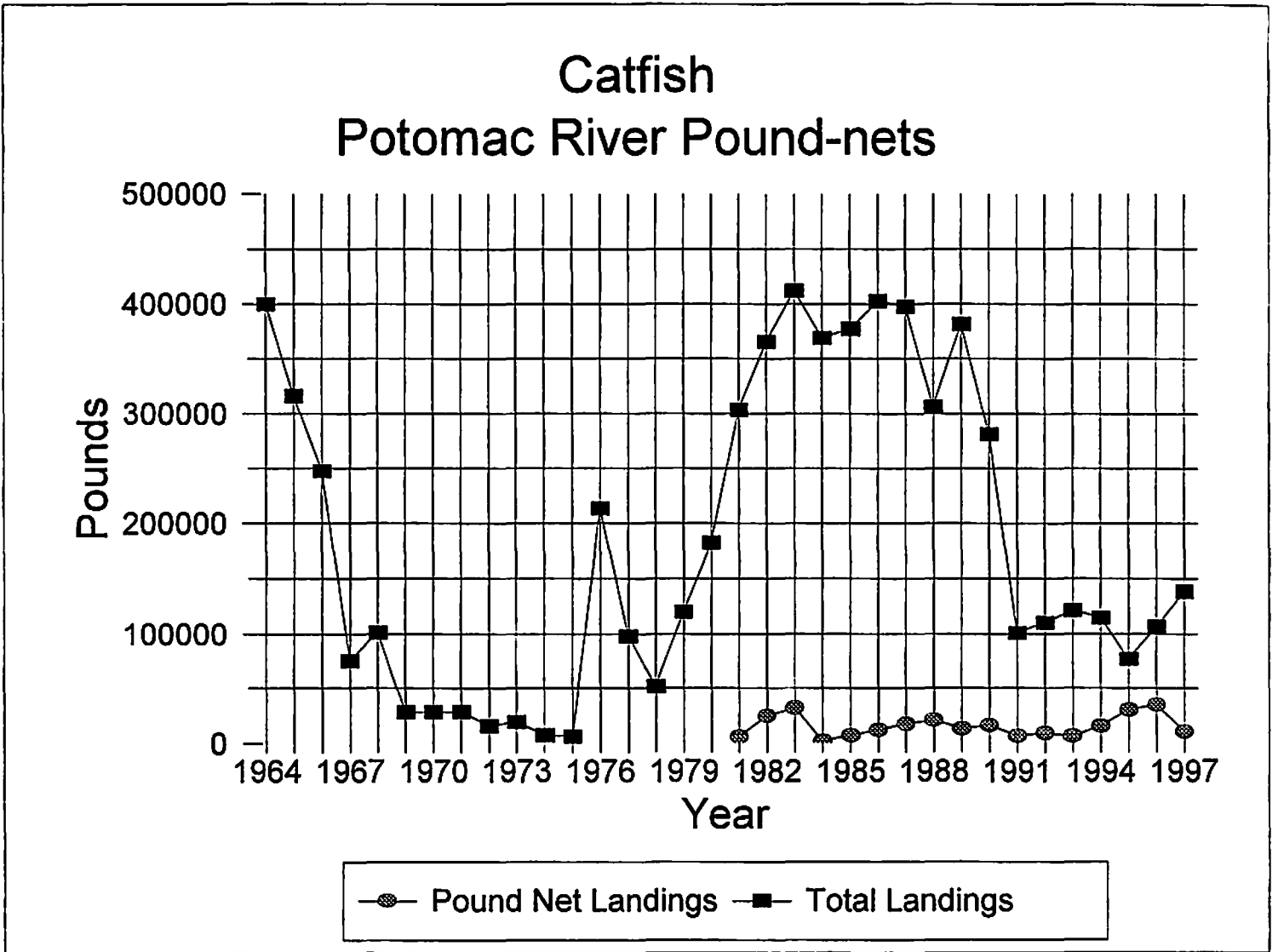
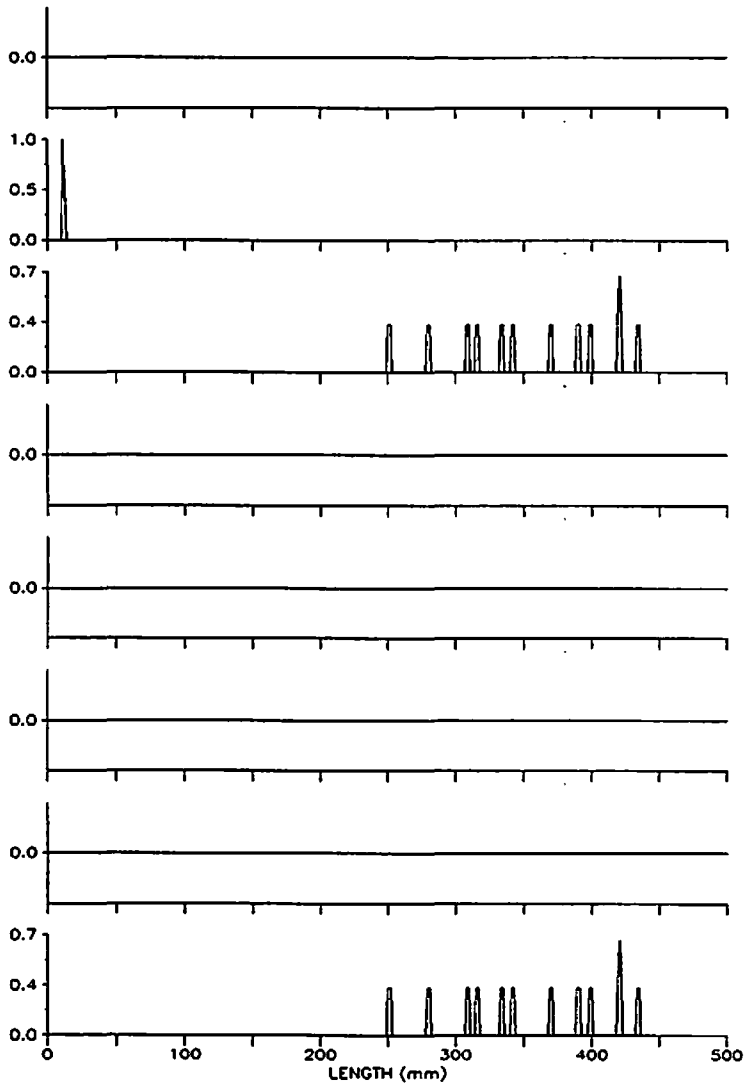


Figure 18

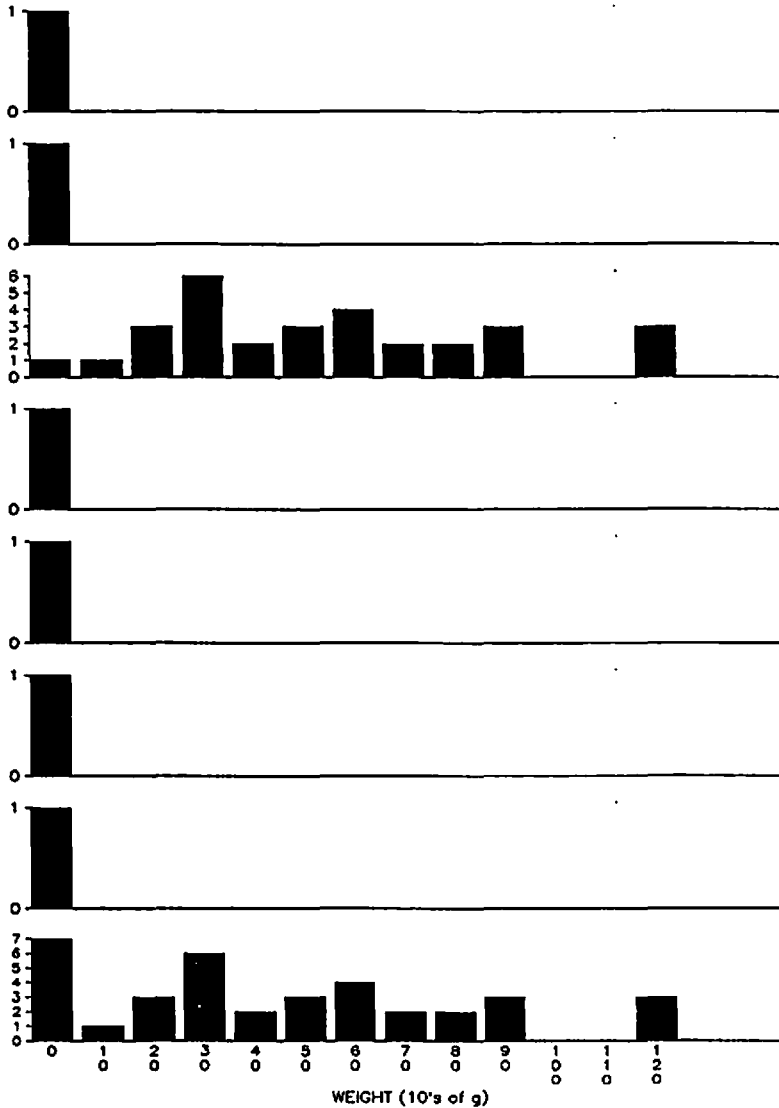


1997 Potomac River Pound Net Survey – Catfish Species Length Frequency



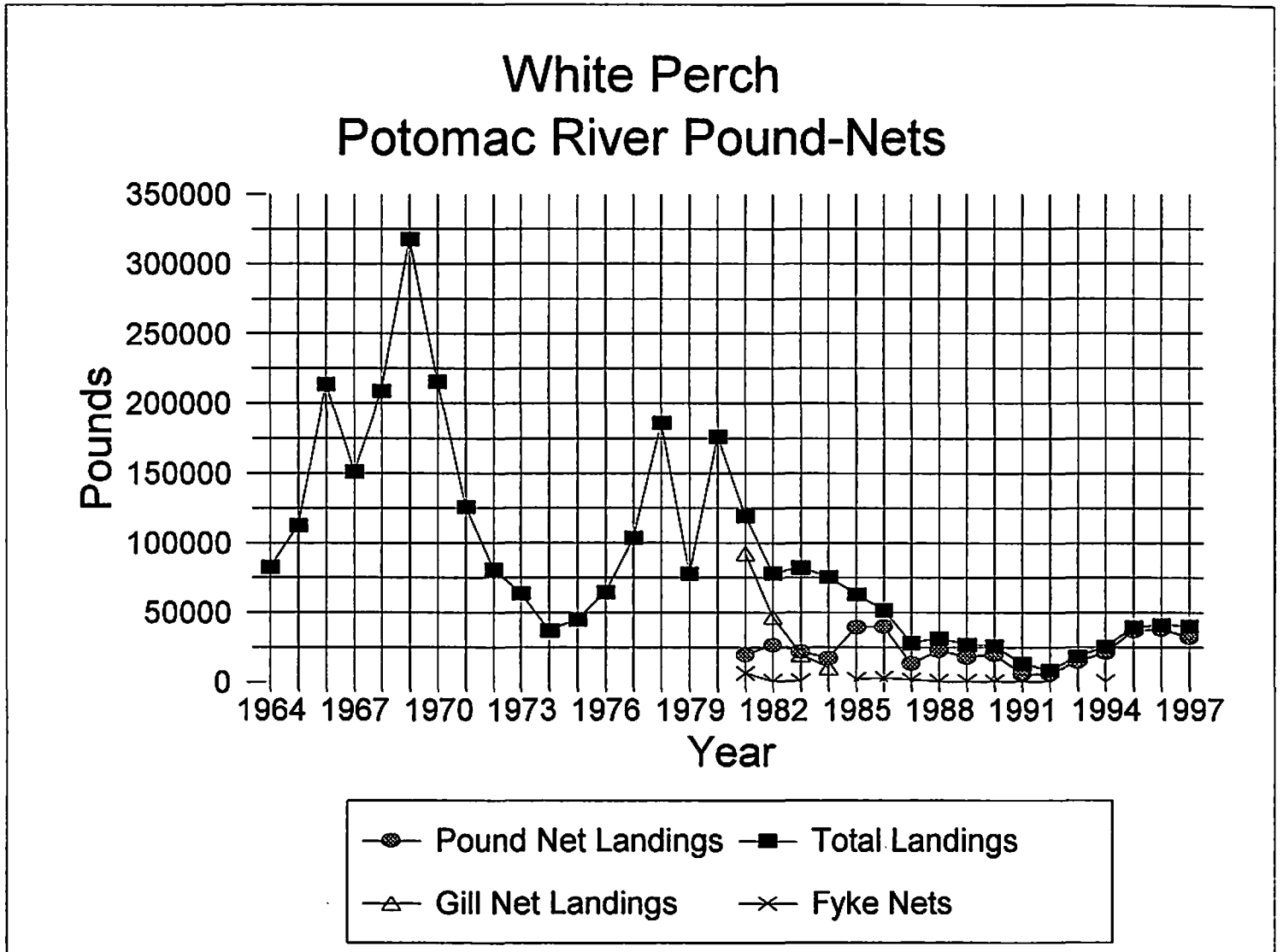
APRIL	000000	-	000000		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	0	MIN. SIZE	-	.	
CAT./SITE	.	MAX. SIZE	-	.	
MAY	970506	-	970513		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	3	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
JUNE	970610	-	970626		
NO. CGHT.	15	MEAN SIZE	-	398.1	
NO. MEAS.	15	S.E. SIZE	-	29.2	
NO. SITES	8	MIN. SIZE	-	249	
CAT./SITE	1.9	MAX. SIZE	-	693	
JULY	970701	-	970729		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	18	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
AUGUST	970804	-	970806		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	2	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
SEPTEMBER	970905	-	970930		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	5	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
OCTOBER	971003	-	971024		
NO. CGHT.	0	MEAN SIZE	-	.	
NO. MEAS.	0	S.E. SIZE	-	.	
NO. SITES	6	MIN. SIZE	-	.	
CAT./SITE	0	MAX. SIZE	-	.	
MAY-OCT	970506	-	971024		
NO. CGHT.	15	MEAN SIZE	-	398.1	
NO. MEAS.	15	S.E. SIZE	-	29.2	
NO. SITES	42	MIN. SIZE	-	249	
CAT./SITE	0.4	MAX. SIZE	-	693	

1997 Potomac River Pound Net Survey – Catfish Species Weights

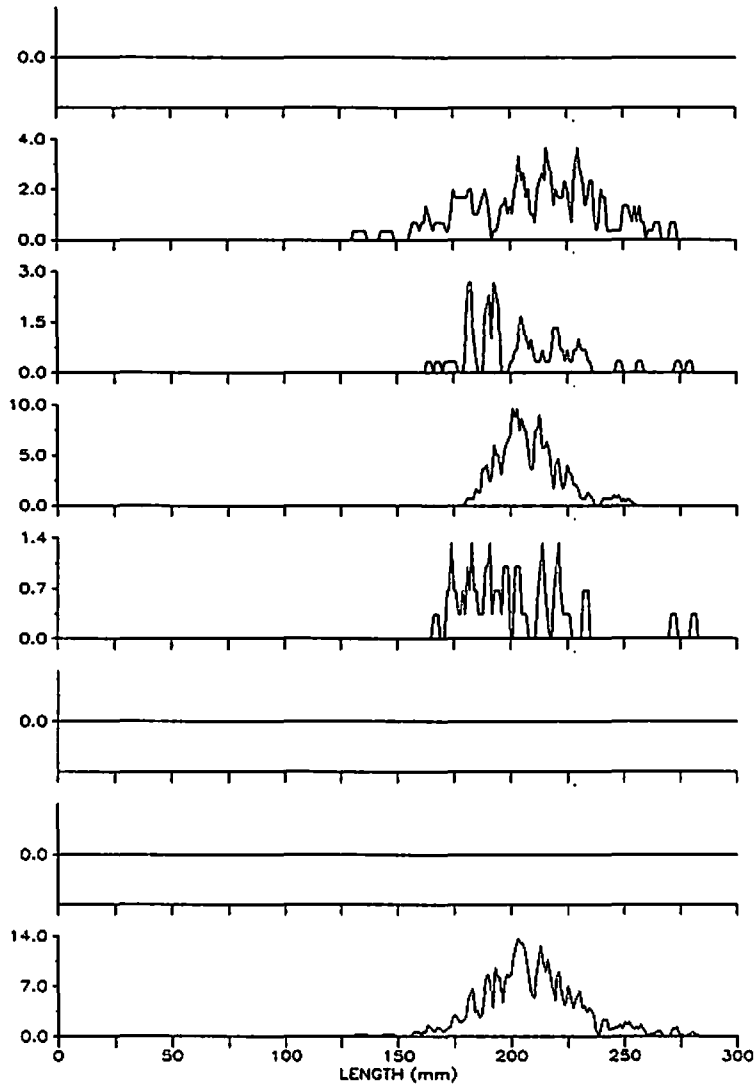


APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	0	MIN. WT	-	.
CAT./SITE	-	.	MAX. WT	-	.
MAY	970506	-	970513		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	3	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
JUNE	970610	-	970626		
NO. CGHT.	-	30	MEAN WT	-	768
NO. WGHD.	-	29	S.E. WT	-	190.6
NO. SITES	-	8	MIN. WT	-	73.2
CAT./SITE	-	3.8	MAX. WT	-	5570
JULY	970701	-	970729		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	18	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
AUGUST	970804	-	970806		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	2	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	5	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
OCTOBER	971003	-	971024		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	6	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
MAY-OCT	970506	-	971024		
NO. CGHT.	-	30	MEAN WT	-	768
NO. WGHD.	-	29	S.E. WT	-	190.6
NO. SITES	-	42	MIN. WT	-	73.2
CAT./SITE	-	0.7	MAX. WT	-	5570

Figure 21

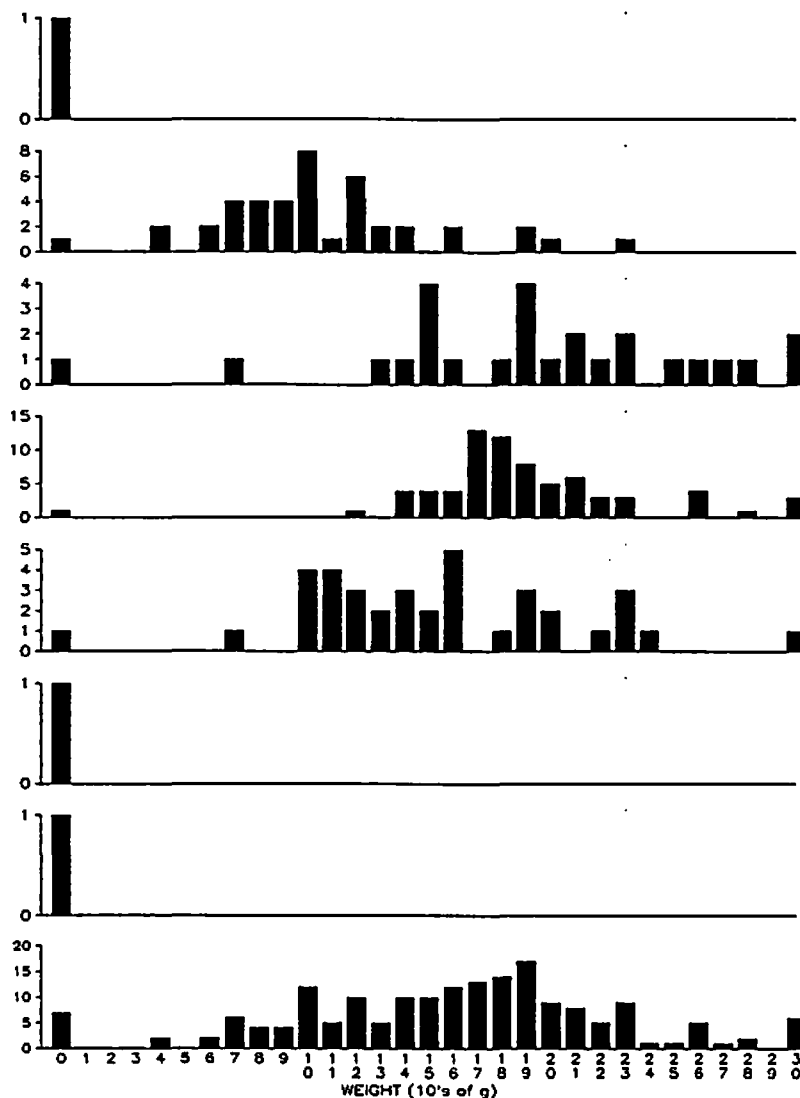


1997 Potomac River Pound Net Survey – White Perch Length Frequency



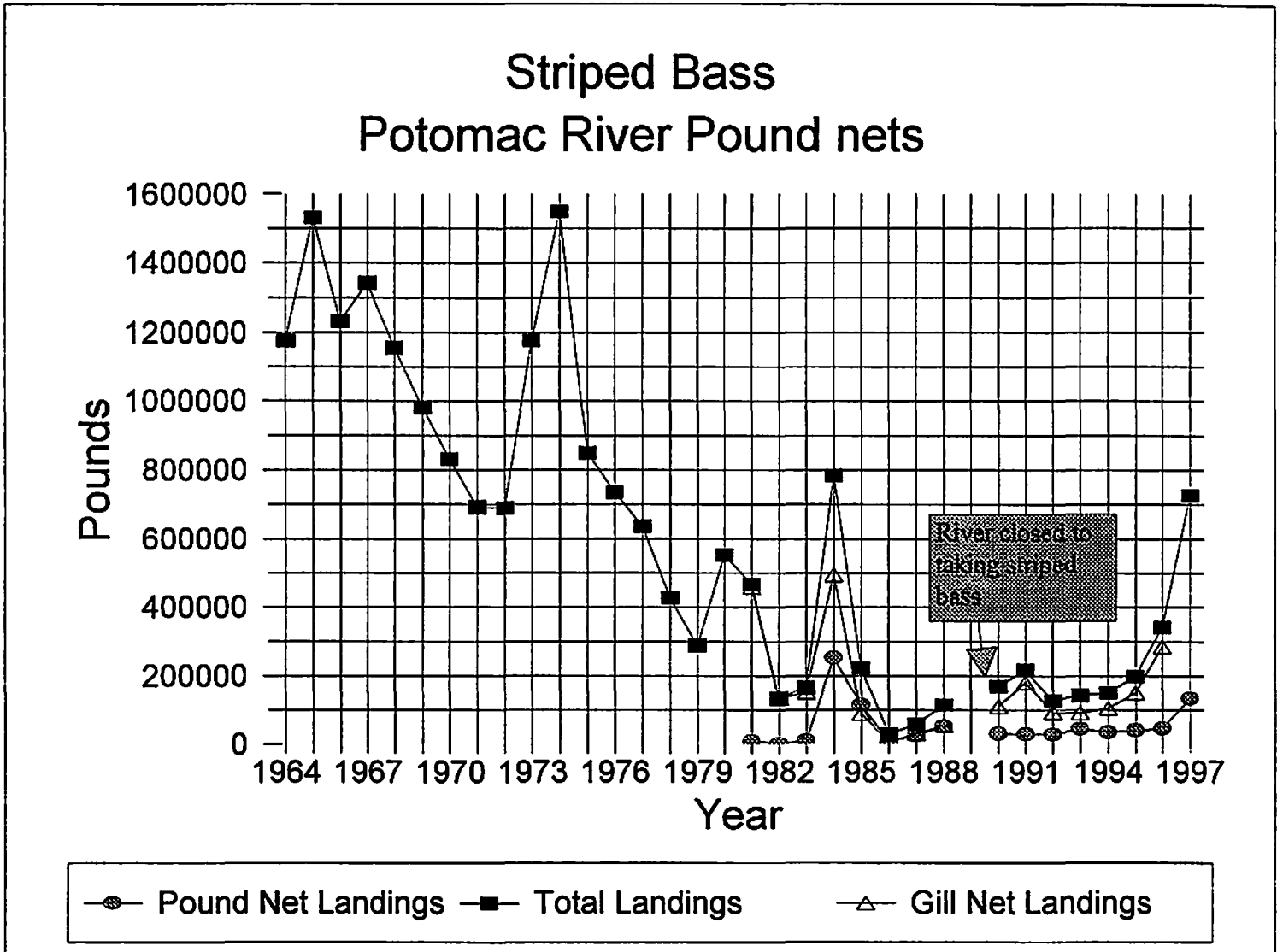
APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	151	MEAN SIZE	-	208.2
NO. MEAS.	-	151	S.E. SIZE	-	2.4
NO. SITES	-	3	MIN. SIZE	-	130
CAT./SITE	-	50.3	MAX. SIZE	-	270
JUNE	970610	-	970626		
NO. CGHT.	-	56	MEAN SIZE	-	203
NO. MEAS.	-	56	S.E. SIZE	-	3.3
NO. SITES	-	8	MIN. SIZE	-	162
CAT./SITE	-	7	MAX. SIZE	-	277
JULY	970701	-	970729		
NO. CGHT.	-	236	MEAN SIZE	-	206.5
NO. MEAS.	-	236	S.E. SIZE	-	0.9
NO. SITES	-	18	MIN. SIZE	-	179
CAT./SITE	-	13.1	MAX. SIZE	-	251
AUGUST	970804	-	970806		
NO. CGHT.	-	38	MEAN SIZE	-	200.2
NO. MEAS.	-	38	S.E. SIZE	-	4.1
NO. SITES	-	2	MIN. SIZE	-	165
CAT./SITE	-	19	MAX. SIZE	-	279
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	5	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
OCTOBER	971003	-	971024		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	6	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
MAY-OCT	970506	-	971024		
NO. CGHT.	-	481	MEAN SIZE	-	206.1
NO. MEAS.	-	481	S.E. SIZE	-	1
NO. SITES	-	42	MIN. SIZE	-	130
CAT./SITE	-	11.5	MAX. SIZE	-	279

1997 Potomac River Pound Net Survey – White Perch Weights

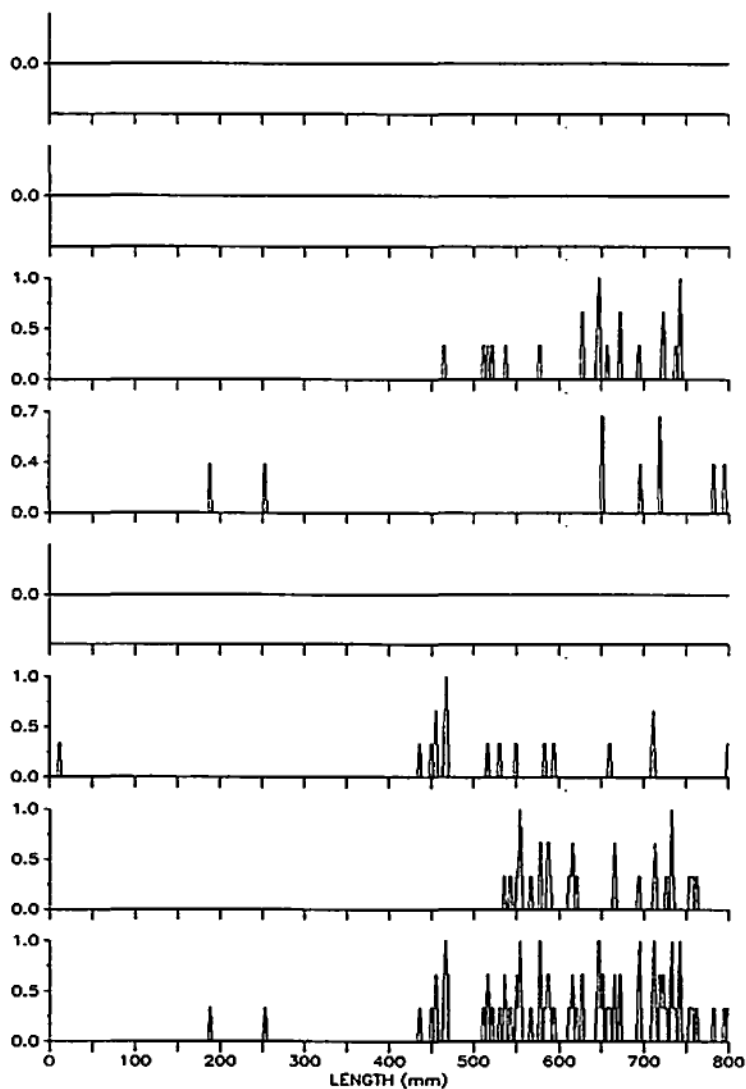


APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	0	MIN. WT	-	.
CAT./SITE	-	.	MAX. WT	-	.
MAY	970506	-	970513		
NO. CGHT.	-	151	MEAN WT	-	108.1
NO. WGHD.	-	41	S.E. WT	-	6.5
NO. SITES	-	3	MIN. WT	-	38.9
CAT./SITE	-	50.3	MAX. WT	-	225.6
JUNE	970610	-	970626		
NO. CGHT.	-	56	MEAN WT	-	207.3
NO. WGHD.	-	25	S.E. WT	-	14.9
NO. SITES	-	8	MIN. WT	-	73.5
CAT./SITE	-	7	MAX. WT	-	419.1
JULY	970701	-	970729		
NO. CGHT.	-	236	MEAN WT	-	193.1
NO. WGHD.	-	71	S.E. WT	-	4.9
NO. SITES	-	18	MIN. WT	-	120.5
CAT./SITE	-	13.1	MAX. WT	-	332.9
AUGUST	970804	-	970806		
NO. CGHT.	-	38	MEAN WT	-	161.2
NO. WGHD.	-	36	S.E. WT	-	12
NO. SITES	-	2	MIN. WT	-	67.5
CAT./SITE	-	19	MAX. WT	-	487.6
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	5	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
OCTOBER	971003	-	971024		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	6	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
MAY-OCT	970506	-	971024		
NO. CGHT.	-	481	MEAN WT	-	168.4
NO. WGHD.	-	173	S.E. WT	-	5
NO. SITES	-	42	MIN. WT	-	38.9
CAT./SITE	-	11.5	MAX. WT	-	487.6

Figure 24

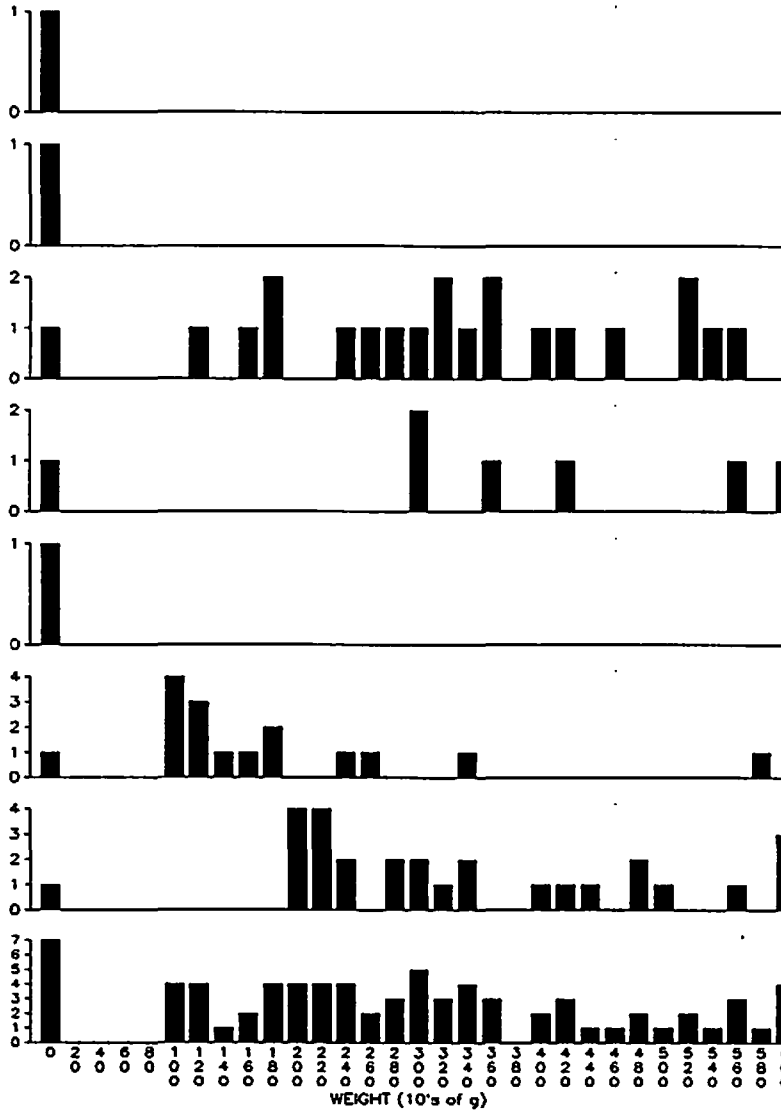


1997 Potomac River Pound Net Survey – Striped Bass Length Frequency



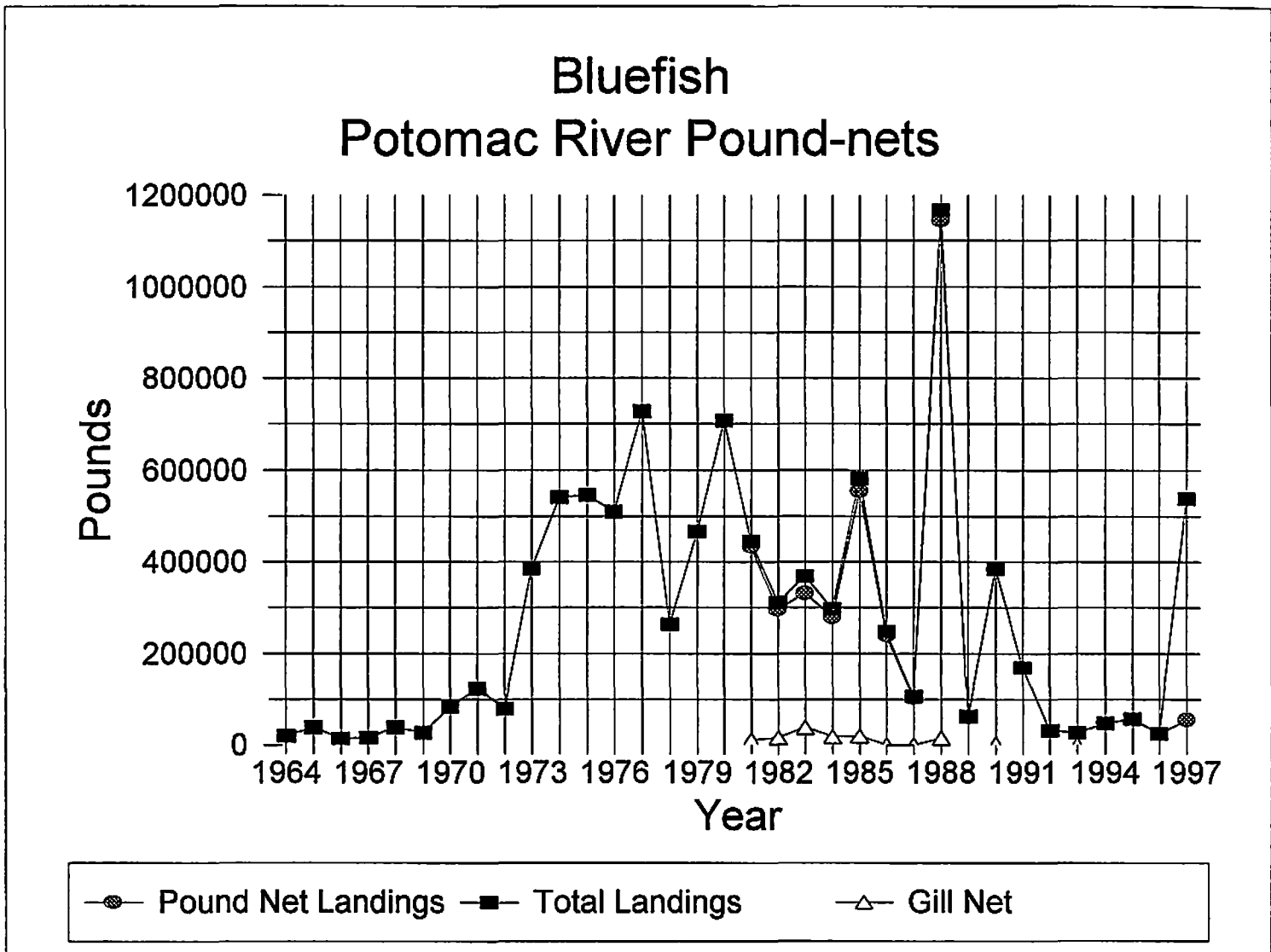
APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	3	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
JUNE	970610	-	970626		
NO. CGHT.	-	21	MEAN SIZE	-	637.8
NO. MEAS.	-	22	S.E. SIZE	-	18.1
NO. SITES	-	8	MIN. SIZE	-	463
CAT./SITE	-	2.6	MAX. SIZE	-	741
JULY	970701	-	970729		
NO. CGHT.	-	9	MEAN SIZE	-	604
NO. MEAS.	-	9	S.E. SIZE	-	74.9
NO. SITES	-	18	MIN. SIZE	-	186
CAT./SITE	-	0.5	MAX. SIZE	-	793
AUGUST	970804	-	970806		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	2	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	18	MEAN SIZE	-	546.5
NO. MEAS.	-	17	S.E. SIZE	-	27
NO. SITES	-	5	MIN. SIZE	-	434
CAT./SITE	-	3.2	MAX. SIZE	-	797
OCTOBER	971003	-	971024		
NO. CGHT.	-	29	MEAN SIZE	-	643.2
NO. MEAS.	-	29	S.E. SIZE	-	15.5
NO. SITES	-	6	MIN. SIZE	-	534
CAT./SITE	-	4.8	MAX. SIZE	-	819
MAY-OCT	970506	-	971024		
NO. CGHT.	-	75	MEAN SIZE	-	615.7
NO. MEAS.	-	77	S.E. SIZE	-	13.5
NO. SITES	-	42	MIN. SIZE	-	186
CAT./SITE	-	1.8	MAX. SIZE	-	819

1997 Potomac River Pound Net Survey – Striped Bass Weights

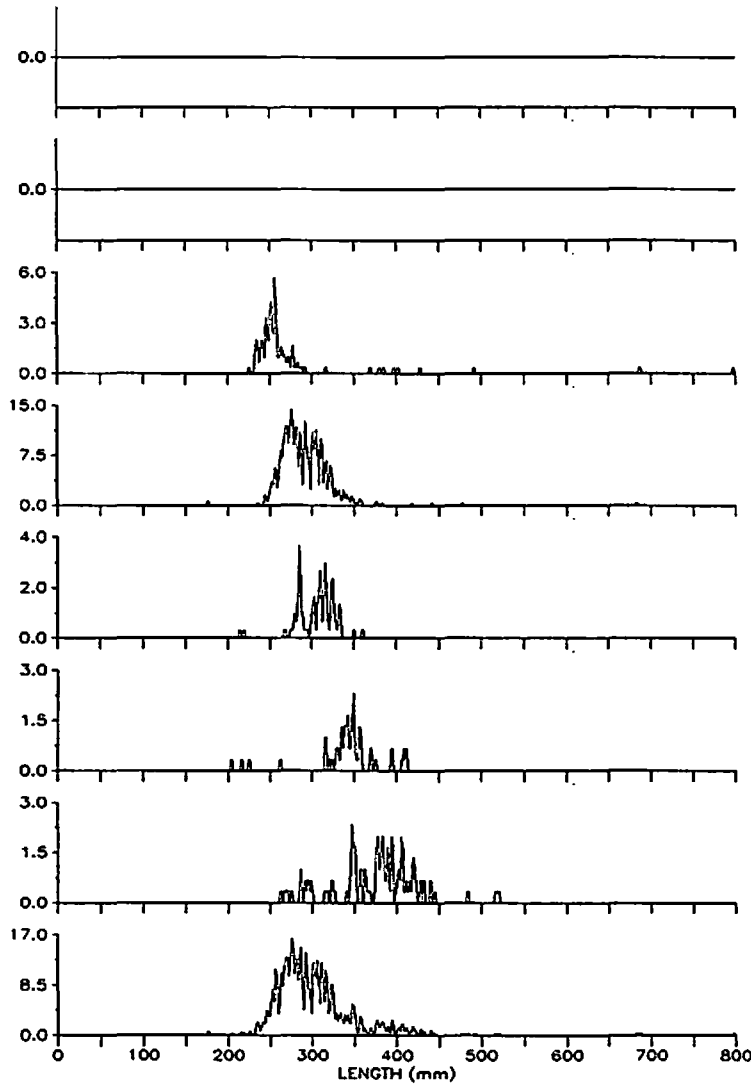


APRIL	000000	–	000000		
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	0	MIN. WT	–	.
CAT./SITE	–	.	MAX. WT	–	.
MAY	970506	–	970513		
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	3	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.
JUNE	970610	–	970626		
NO. CGHT.	–	21	MEAN WT	–	3414.3
NO. WGHD.	–	20	S.E. WT	–	294.6
NO. SITES	–	8	MIN. WT	–	1298.5
CAT./SITE	–	2.6	MAX. WT	–	5523.4
JULY	970701	–	970729		
NO. CGHT.	–	9	MEAN WT	–	4271.5
NO. WGHD.	–	6	S.E. WT	–	587.8
NO. SITES	–	18	MIN. WT	–	2941.9
CAT./SITE	–	0.5	MAX. WT	–	6421.5
AUGUST	970804	–	970806		
NO. CGHT.	–	0	MEAN WT	–	.
NO. WGHD.	–	0	S.E. WT	–	.
NO. SITES	–	2	MIN. WT	–	.
CAT./SITE	–	0	MAX. WT	–	.
SEPTEMBER	970905	–	970930		
NO. CGHT.	–	16	MEAN WT	–	1922.5
NO. WGHD.	–	15	S.E. WT	–	331.3
NO. SITES	–	5	MIN. WT	–	912
CAT./SITE	–	3.2	MAX. WT	–	5824.4
OCTOBER	971003	–	971024		
NO. CGHT.	–	29	MEAN WT	–	3525.8
NO. WGHD.	–	27	S.E. WT	–	285.1
NO. SITES	–	6	MIN. WT	–	1934.4
CAT./SITE	–	4.8	MAX. WT	–	7037.2
MAY–OCT	970506	–	971024		
NO. CGHT.	–	75	MEAN WT	–	3205.2
NO. WGHD.	–	68	S.E. WT	–	186.6
NO. SITES	–	42	MIN. WT	–	912
CAT./SITE	–	1.8	MAX. WT	–	7037.2

Figure 27

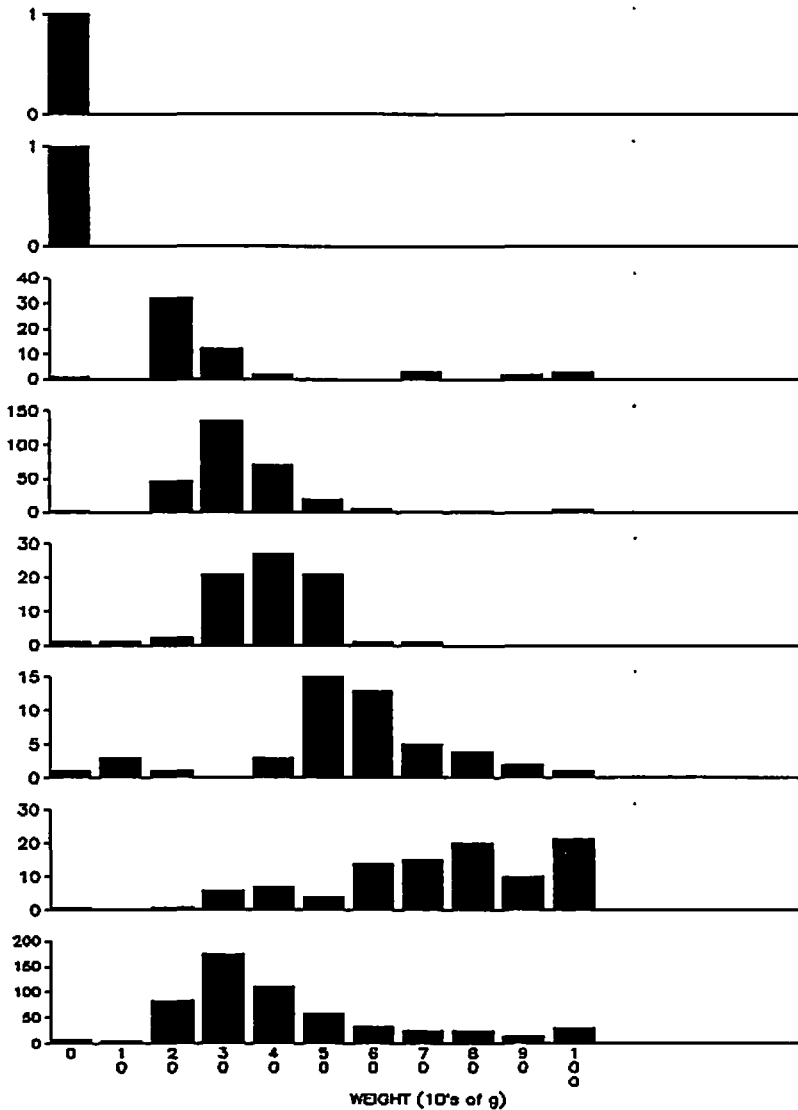


1997 Potomac River Pound Net Survey – Bluefish Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	3	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
JUNE	970610	-	970626		
NO. CGHT.	-	104	MEAN SIZE	-	272.7
NO. MEAS.	-	104	S.E. SIZE	-	7.7
NO. SITES	-	8	MIN. SIZE	-	223
CAT./SITE	-	13	MAX. SIZE	-	795
JULY	970701	-	970729		
NO. CGHT.	-	1333	MEAN SIZE	-	289
NO. MEAS.	-	631	S.E. SIZE	-	1.2
NO. SITES	-	18	MIN. SIZE	-	174
CAT./SITE	-	74.1	MAX. SIZE	-	681
AUGUST	970804	-	970806		
NO. CGHT.	-	76	MEAN SIZE	-	302.8
NO. MEAS.	-	76	S.E. SIZE	-	2.7
NO. SITES	-	2	MIN. SIZE	-	212
CAT./SITE	-	38	MAX. SIZE	-	358
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	49	MEAN SIZE	-	338.9
NO. MEAS.	-	49	S.E. SIZE	-	6.1
NO. SITES	-	5	MIN. SIZE	-	202
CAT./SITE	-	9.8	MAX. SIZE	-	410
OCTOBER	971003	-	971024		
NO. CGHT.	-	101	MEAN SIZE	-	372.1
NO. MEAS.	-	101	S.E. SIZE	-	4.9
NO. SITES	-	6	MIN. SIZE	-	260
CAT./SITE	-	16.8	MAX. SIZE	-	518
MAY-OCT	970506	-	971024		
NO. CGHT.	-	1663	MEAN SIZE	-	299.6
NO. MEAS.	-	961	S.E. SIZE	-	1.6
NO. SITES	-	42	MIN. SIZE	-	174
CAT./SITE	-	39.6	MAX. SIZE	-	795

1997 Potomac River Pound Net Survey – Bluefish Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-

MAY	970506	-	970513	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	0	MAX. WT	-

JUNE	970610	-	970626	
NO. CGHT.	-	104	MEAN WT	-
NO. WGHD.	-	54	S.E. WT	-
NO. SITES	-	8	MIN. WT	-
CAT./SITE	-	13	MAX. WT	-

JULY	970701	-	970729	
NO. CGHT.	-	1333	MEAN WT	-
NO. WGHD.	-	283	S.E. WT	-
NO. SITES	-	18	MIN. WT	-
CAT./SITE	-	74.1	MAX. WT	-

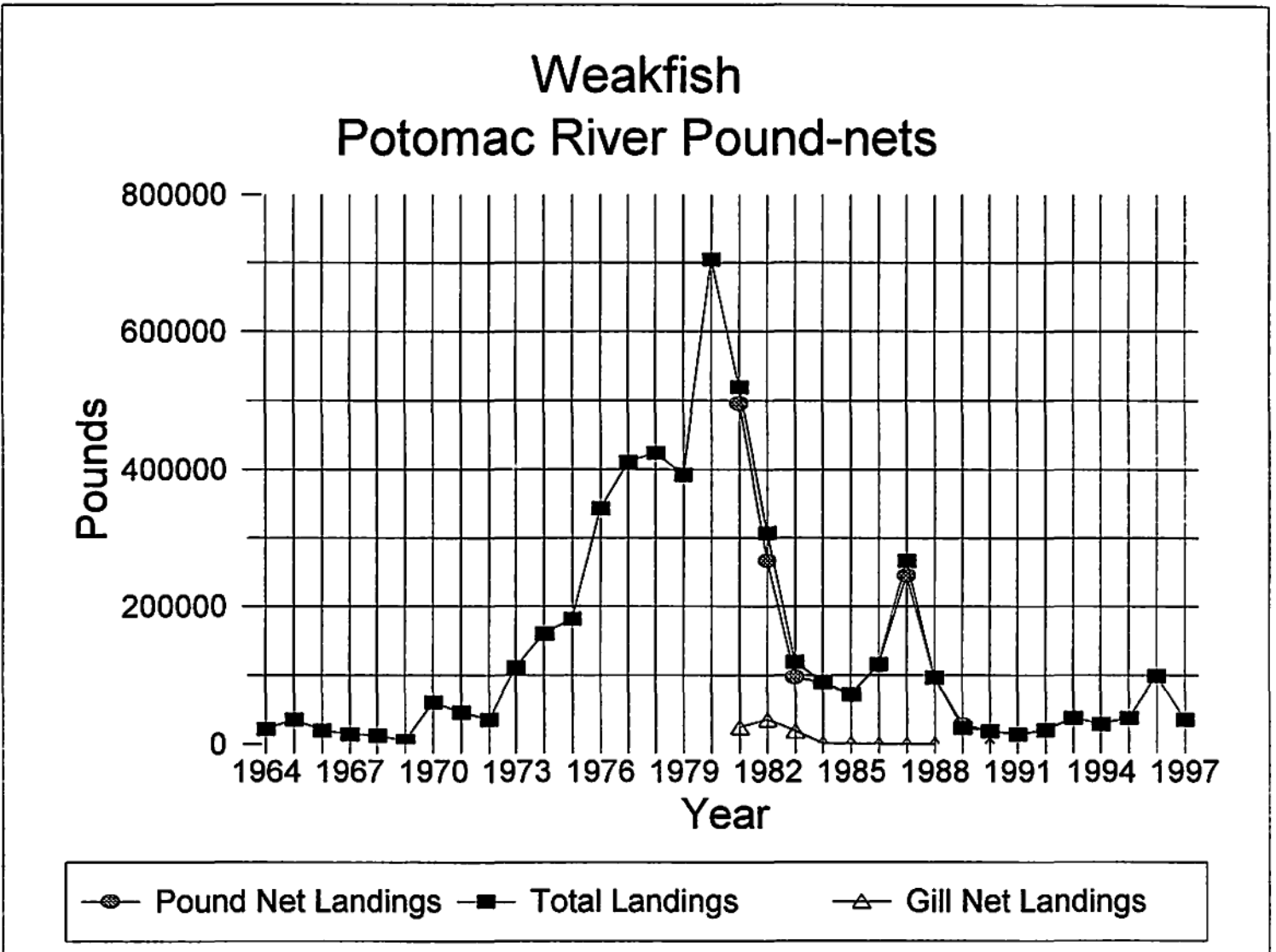
AUGUST	970804	-	970806	
NO. CGHT.	-	76	MEAN WT	-
NO. WGHD.	-	74	S.E. WT	-
NO. SITES	-	2	MIN. WT	-
CAT./SITE	-	38	MAX. WT	-

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	49	MEAN WT	-
NO. WGHD.	-	47	S.E. WT	-
NO. SITES	-	5	MIN. WT	-
CAT./SITE	-	9.8	MAX. WT	-

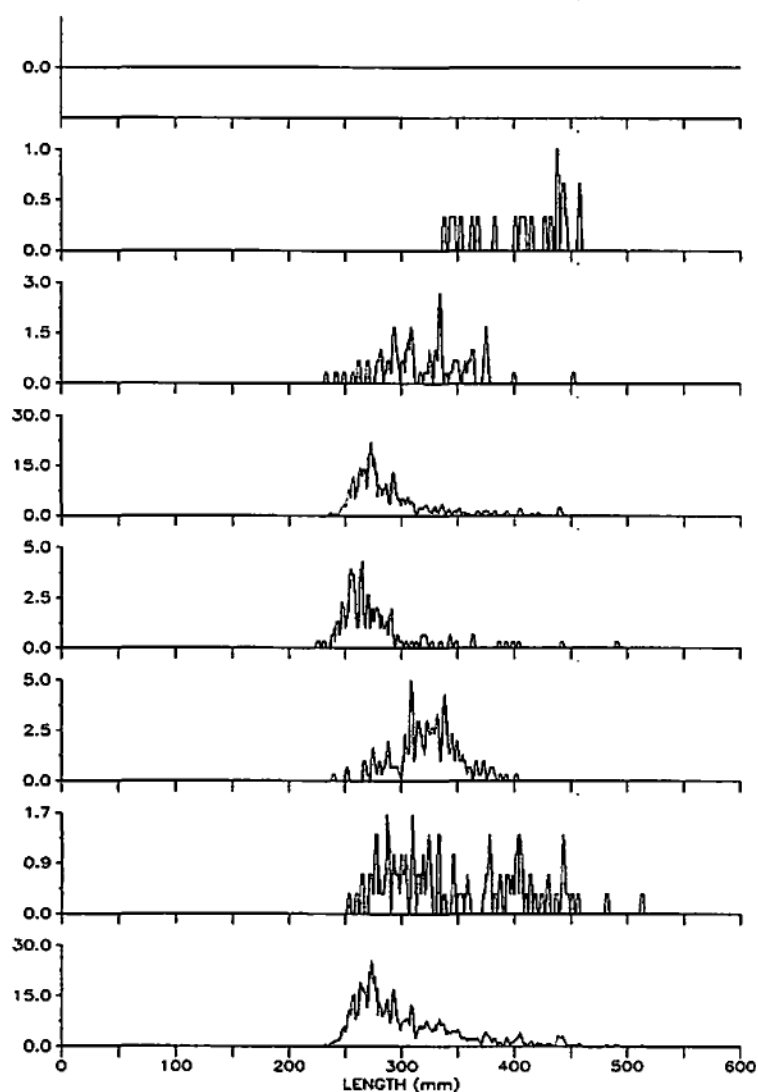
OCTOBER	971003	-	971024	
NO. CGHT.	-	101	MEAN WT	-
NO. WGHD.	-	98	S.E. WT	-
NO. SITES	-	6	MIN. WT	-
CAT./SITE	-	18.8	MAX. WT	-

MAY-OCT	970506	-	971024	
NO. CGHT.	-	1663	MEAN WT	-
NO. WGHD.	-	556	S.E. WT	-
NO. SITES	-	42	MIN. WT	-
CAT./SITE	-	38.8	MAX. WT	-

Figure 30

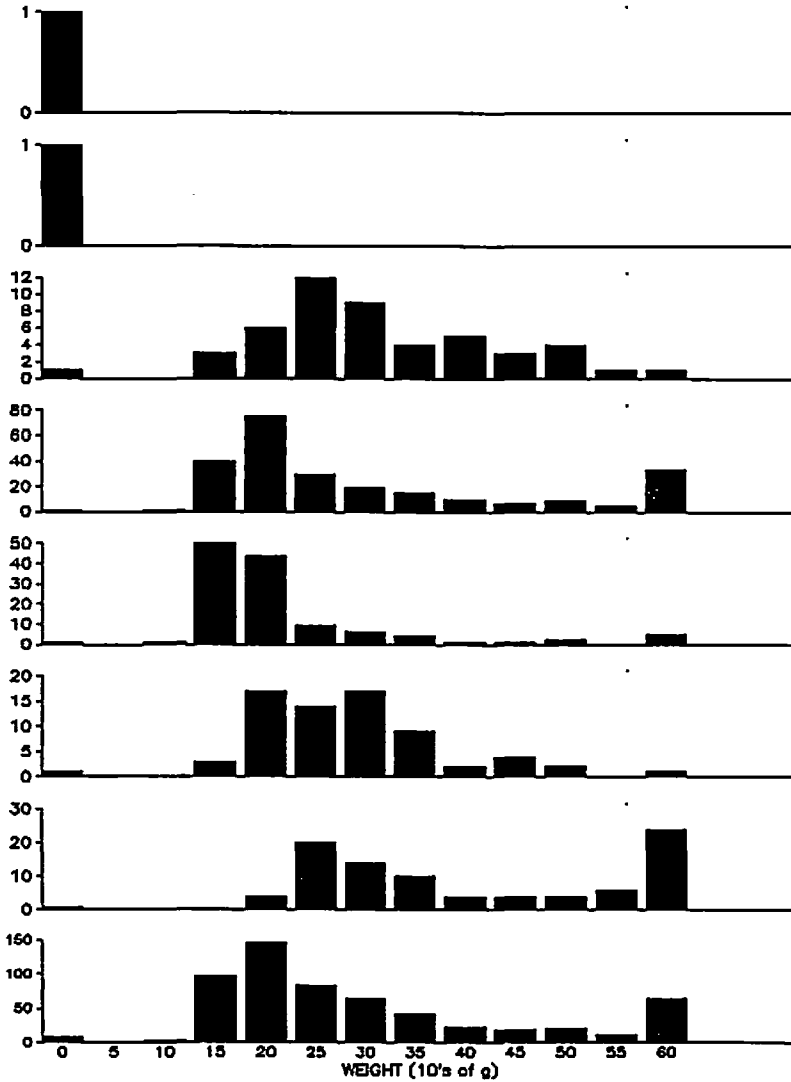


1997 Potomac River Pound Net Survey – Weakfish Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	21	MEAN SIZE	-	404.9
NO. MEAS.	-	21	S.E. SIZE	-	8.8
NO. SITES	-	3	MIN. SIZE	-	336
CAT./SITE	-	7	MAX. SIZE	-	456
JUNE	970610	-	970626		
NO. CGHT.	-	74	MEAN SIZE	-	317.8
NO. MEAS.	-	74	S.E. SIZE	-	4.6
NO. SITES	-	8	MIN. SIZE	-	231
CAT./SITE	-	9.3	MAX. SIZE	-	450
JULY	970701	-	970729		
NO. CGHT.	-	1687	MEAN SIZE	-	290.7
NO. MEAS.	-	691	S.E. SIZE	-	1.6
NO. SITES	-	18	MIN. SIZE	-	235
CAT./SITE	-	93.7	MAX. SIZE	-	488
AUGUST	970804	-	970806		
NO. CGHT.	-	125	MEAN SIZE	-	277.8
NO. MEAS.	-	125	S.E. SIZE	-	3.7
NO. SITES	-	2	MIN. SIZE	-	224
CAT./SITE	-	62.5	MAX. SIZE	-	489
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	172	MEAN SIZE	-	321.6
NO. MEAS.	-	172	S.E. SIZE	-	2.2
NO. SITES	-	5	MIN. SIZE	-	238
CAT./SITE	-	34.4	MAX. SIZE	-	400
OCTOBER	971003	-	971024		
NO. CGHT.	-	93	MEAN SIZE	-	347.2
NO. MEAS.	-	93	S.E. SIZE	-	6.3
NO. SITES	-	6	MIN. SIZE	-	251
CAT./SITE	-	15.5	MAX. SIZE	-	511
MAY-OCT	970506	-	971024		
NO. CGHT.	-	2172	MEAN SIZE	-	302.1
NO. MEAS.	-	1176	S.E. SIZE	-	1.4
NO. SITES	-	42	MIN. SIZE	-	224
CAT./SITE	-	51.7	MAX. SIZE	-	511

1997 Potomac River Pound Net Survey – Weakfish Weights



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	0	MIN. WT	-	.
CAT./SITE	-	.	MAX. WT	-	.

MAY	970506	-	970513		
NO. CGHT.	-	21	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	3	MIN. WT	-	.
CAT./SITE	-	7	MAX. WT	-	.

JUNE	970610	-	970626		
NO. CGHT.	-	74	MEAN WT	-	325.4
NO. WGHD.	-	48	S.E. WT	-	19
NO. SITES	-	8	MIN. WT	-	150.1
CAT./SITE	-	9.3	MAX. WT	-	865.2

JULY	970701	-	970729		
NO. CGHT.	-	1887	MEAN WT	-	323.5
NO. WGHD.	-	243	S.E. WT	-	13.3
NO. SITES	-	18	MIN. WT	-	110.2
CAT./SITE	-	93.7	MAX. WT	-	1037.9

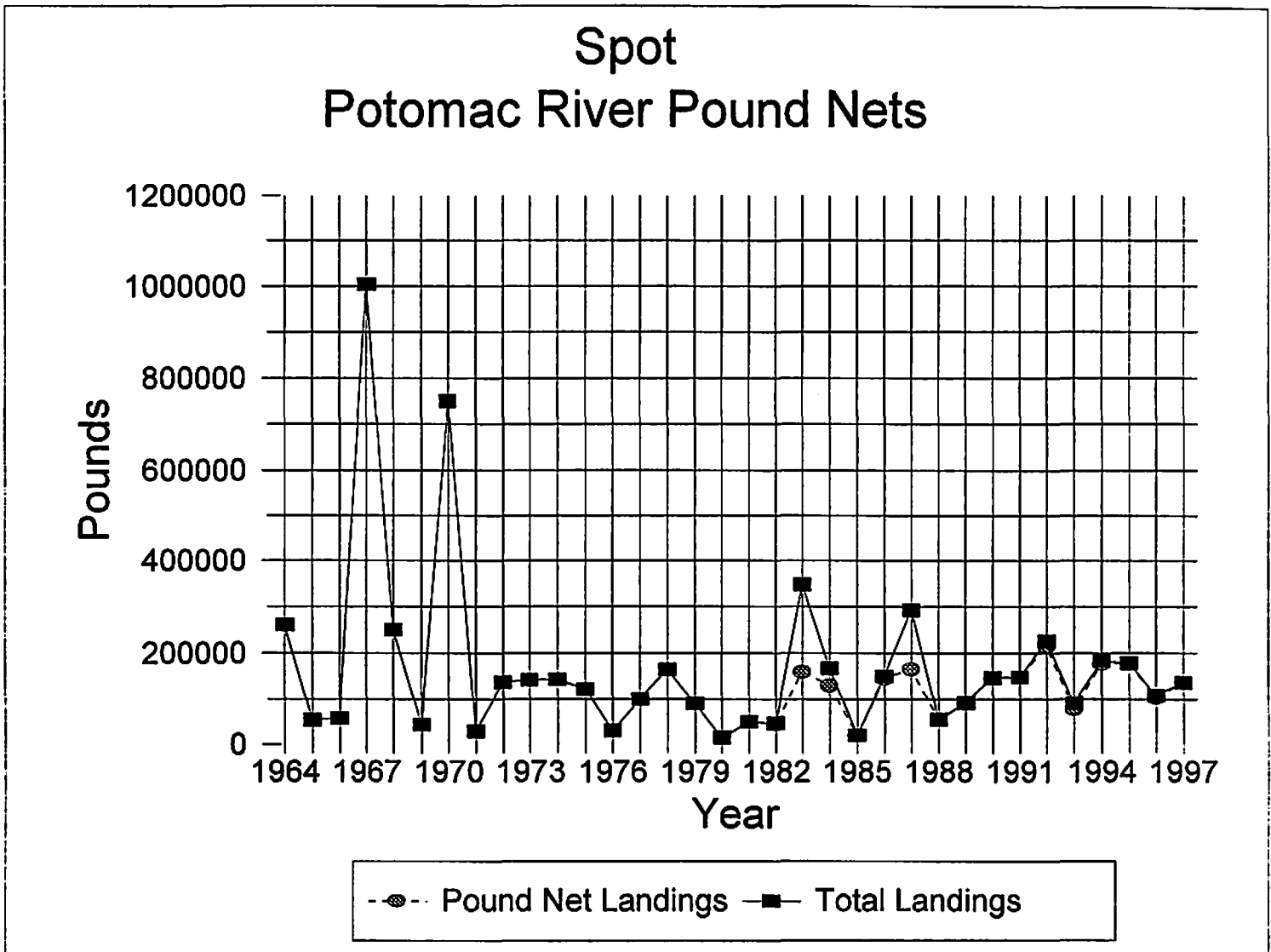
AUGUST	970804	-	970806		
NO. CGHT.	-	125	MEAN WT	-	224.9
NO. WGHD.	-	123	S.E. WT	-	13.1
NO. SITES	-	2	MIN. WT	-	118.7
CAT./SITE	-	62.5	MAX. WT	-	1163.5

SEPTEMBER	970905	-	970930		
NO. CGHT.	-	172	MEAN WT	-	287.9
NO. WGHD.	-	89	S.E. WT	-	10.7
NO. SITES	-	5	MIN. WT	-	141
CAT./SITE	-	34.4	MAX. WT	-	611.1

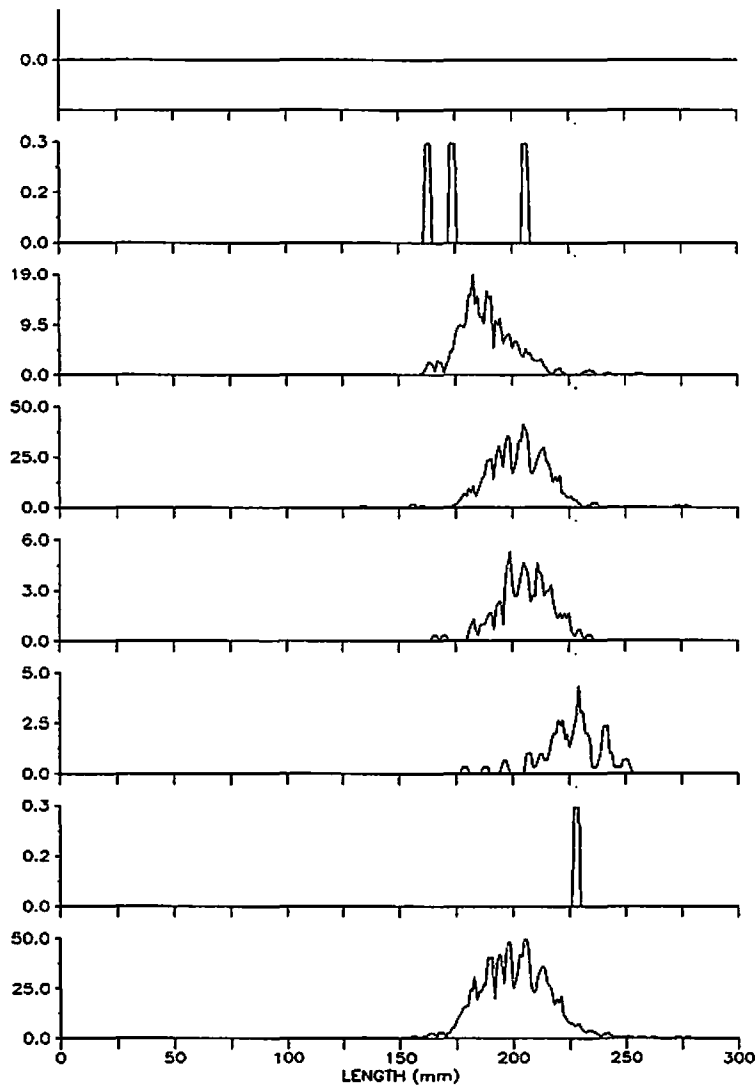
OCTOBER	971003	-	971024		
NO. CGHT.	-	93	MEAN WT	-	454
NO. WGHD.	-	90	S.E. WT	-	25.2
NO. SITES	-	6	MIN. WT	-	180.9
CAT./SITE	-	15.5	MAX. WT	-	1318.5

MAY-OCT	970506	-	971024		
NO. CGHT.	-	2172	MEAN WT	-	318.7
NO. WGHD.	-	573	S.E. WT	-	8.2
NO. SITES	-	42	MIN. WT	-	110.2
CAT./SITE	-	51.7	MAX. WT	-	1318.5

Figure 33

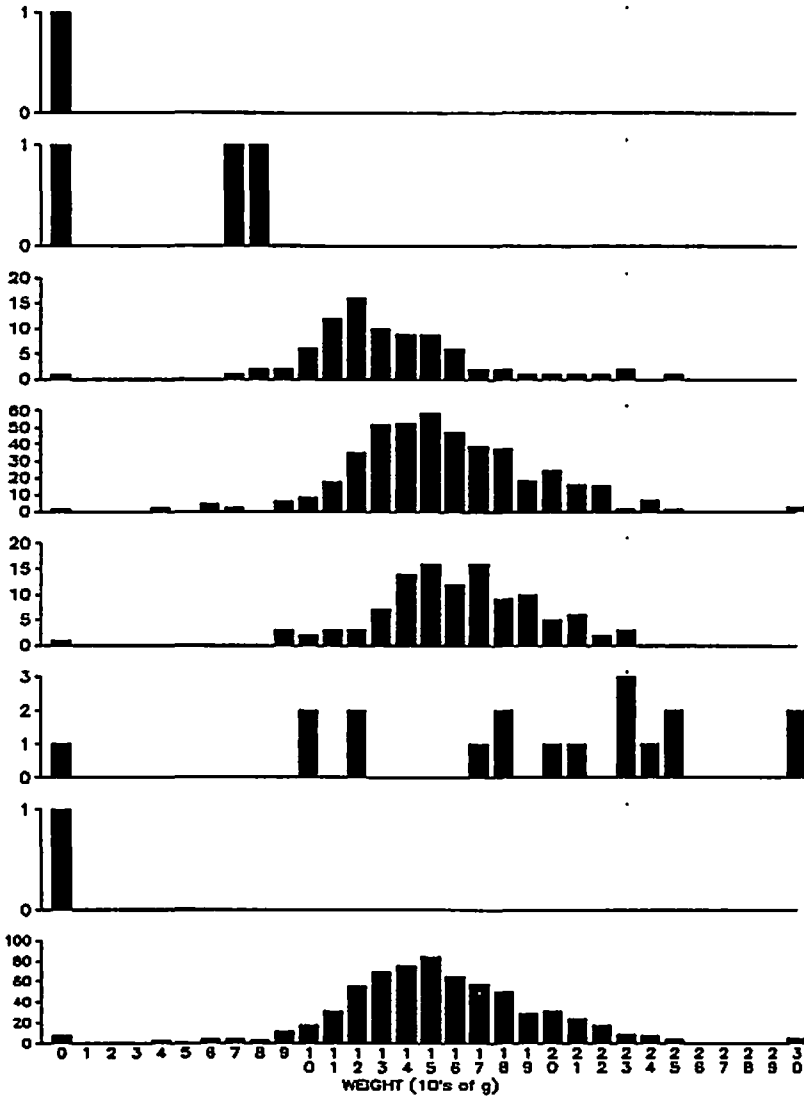


1997 Potomac River Pound Net Survey – Spot Length Frequency



APRIL	000000	-	000000	-	
NO. CGHT.	0	-	MEAN SIZE	-	.
NO. MEAS.	0	-	S.E. SIZE	-	.
NO. SITES	0	-	MIN. SIZE	-	.
CAT./SITE	.	-	MAX. SIZE	-	.
MAY	970506	-	970513	-	
NO. CGHT.	3	-	MEAN SIZE	-	179
NO. MEAS.	3	-	S.E. SIZE	-	12.9
NO. SITES	3	-	MIN. SIZE	-	161
CAT./SITE	1	-	MAX. SIZE	-	204
JUNE	970610	-	970626	-	
NO. CGHT.	374	-	MEAN SIZE	-	187.4
NO. MEAS.	374	-	S.E. SIZE	-	0.7
NO. SITES	8	-	MIN. SIZE	-	159
CAT./SITE	46.8	-	MAX. SIZE	-	254
JULY	970701	-	970729	-	
NO. CGHT.	1697	-	MEAN SIZE	-	200.9
NO. MEAS.	983	-	S.E. SIZE	-	0.4
NO. SITES	18	-	MIN. SIZE	-	132
CAT./SITE	94.3	-	MAX. SIZE	-	275
AUGUST	970804	-	970806	-	
NO. CGHT.	114	-	MEAN SIZE	-	203.5
NO. MEAS.	114	-	S.E. SIZE	-	1.1
NO. SITES	2	-	MIN. SIZE	-	164
CAT./SITE	57	-	MAX. SIZE	-	232
SEPTEMBER	970905	-	970930	-	
NO. CGHT.	69	-	MEAN SIZE	-	223.6
NO. MEAS.	69	-	S.E. SIZE	-	1.7
NO. SITES	5	-	MIN. SIZE	-	177
CAT./SITE	13.8	-	MAX. SIZE	-	249
OCTOBER	971003	-	971024	-	
NO. CGHT.	1	-	MEAN SIZE	-	226
NO. MEAS.	1	-	S.E. SIZE	-	.
NO. SITES	6	-	MIN. SIZE	-	226
CAT./SITE	0.2	-	MAX. SIZE	-	226
MAY-OCT	970506	-	971024	-	
NO. CGHT.	2258	-	MEAN SIZE	-	198.8
NO. MEAS.	1544	-	S.E. SIZE	-	0.4
NO. SITES	42	-	MIN. SIZE	-	132
CAT./SITE	53.8	-	MAX. SIZE	-	275

1997 Potomac River Pound Net Survey – Spot Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-

MAY	970506	-	970513	
NO. CGHT.	-	3	MEAN WT	-
NO. WGHD.	-	2	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	1	MAX. WT	-

JUNE	970610	-	970626	
NO. CGHT.	-	374	MEAN WT	-
NO. WGHD.	-	84	S.E. WT	-
NO. SITES	-	8	MIN. WT	-
CAT./SITE	-	46.8	MAX. WT	-

JULY	970701	-	970729	
NO. CGHT.	-	1697	MEAN WT	-
NO. WGHD.	-	446	S.E. WT	-
NO. SITES	-	18	MIN. WT	-
CAT./SITE	-	94.3	MAX. WT	-

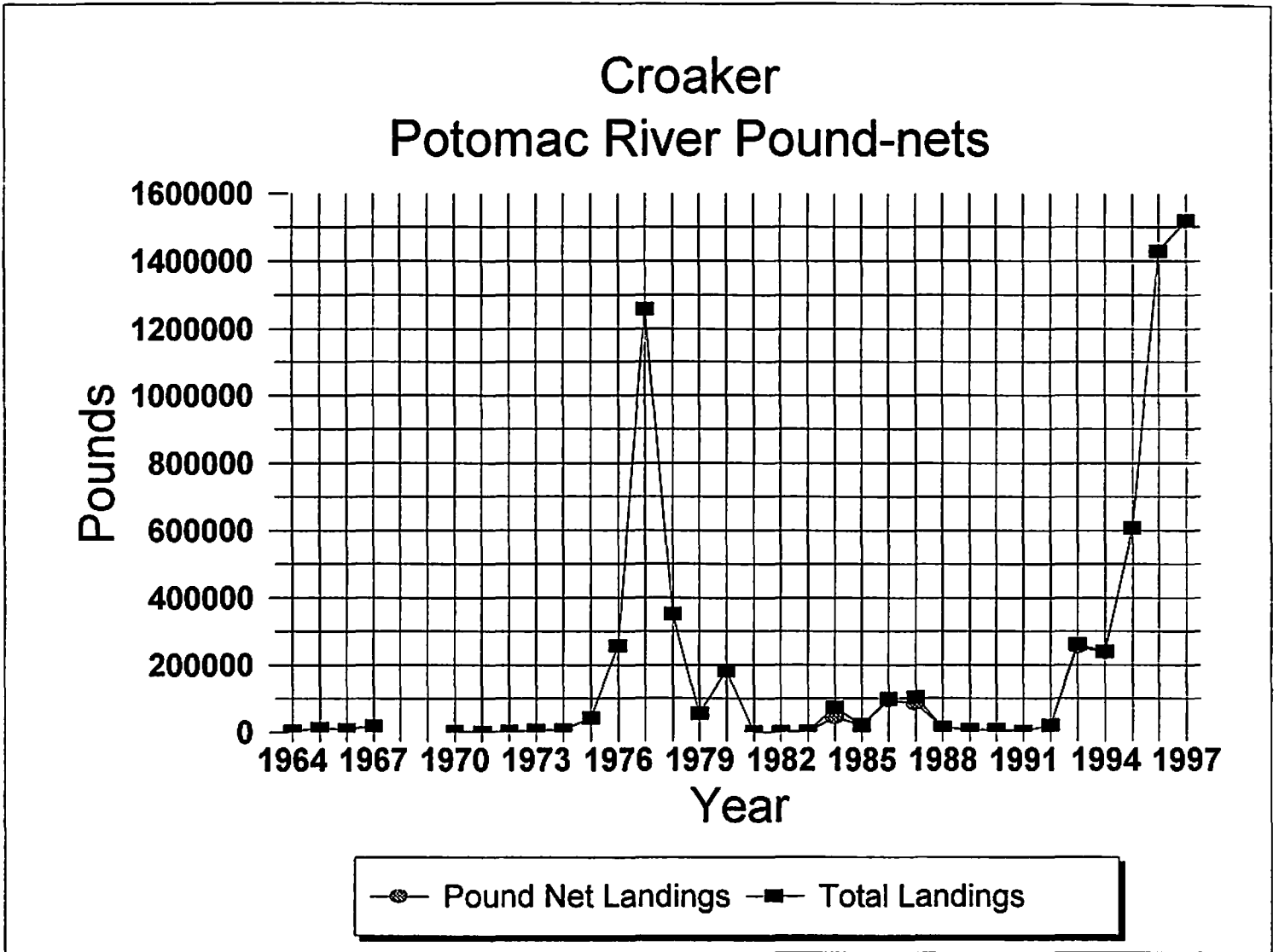
AUGUST	970804	-	970806	
NO. CGHT.	-	114	MEAN WT	-
NO. WGHD.	-	111	S.E. WT	-
NO. SITES	-	2	MIN. WT	-
CAT./SITE	-	57	MAX. WT	-

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	69	MEAN WT	-
NO. WGHD.	-	17	S.E. WT	-
NO. SITES	-	5	MIN. WT	-
CAT./SITE	-	13.6	MAX. WT	-

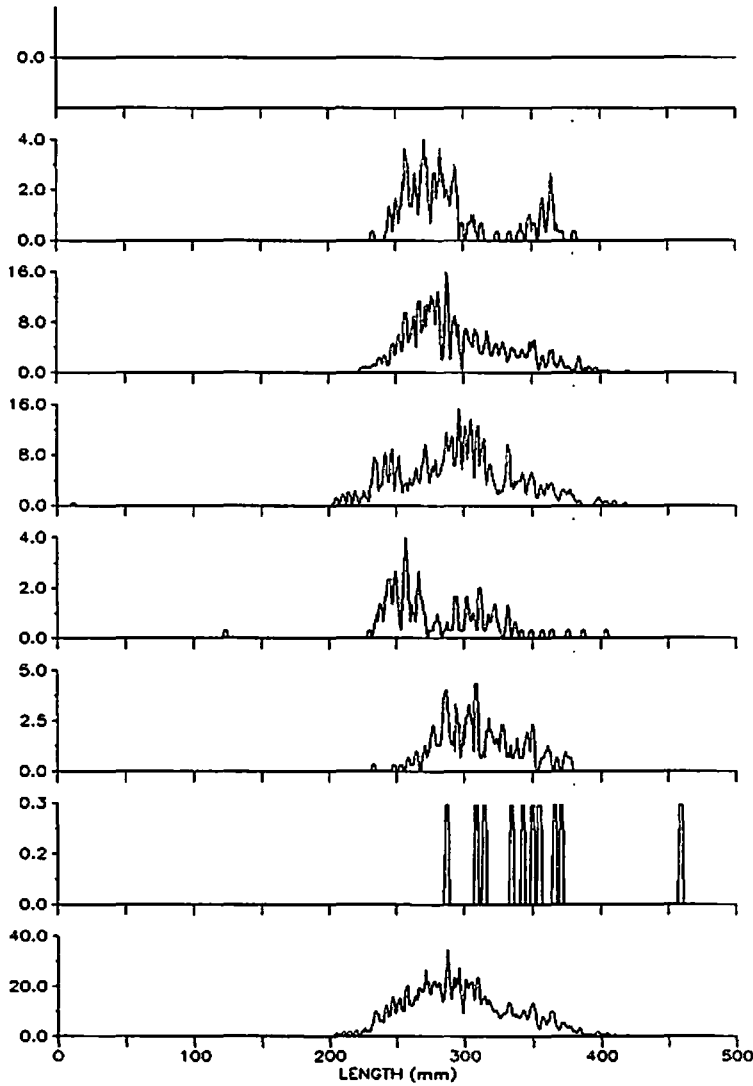
OCTOBER	971003	-	971024	
NO. CGHT.	-	1	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	6	MIN. WT	-
CAT./SITE	-	0.2	MAX. WT	-

MAY-OCT	970506	-	971024	
NO. CGHT.	-	2258	MEAN WT	-
NO. WGHD.	-	660	S.E. WT	-
NO. SITES	-	42	MIN. WT	-
CAT./SITE	-	53.8	MAX. WT	-

Figure 36

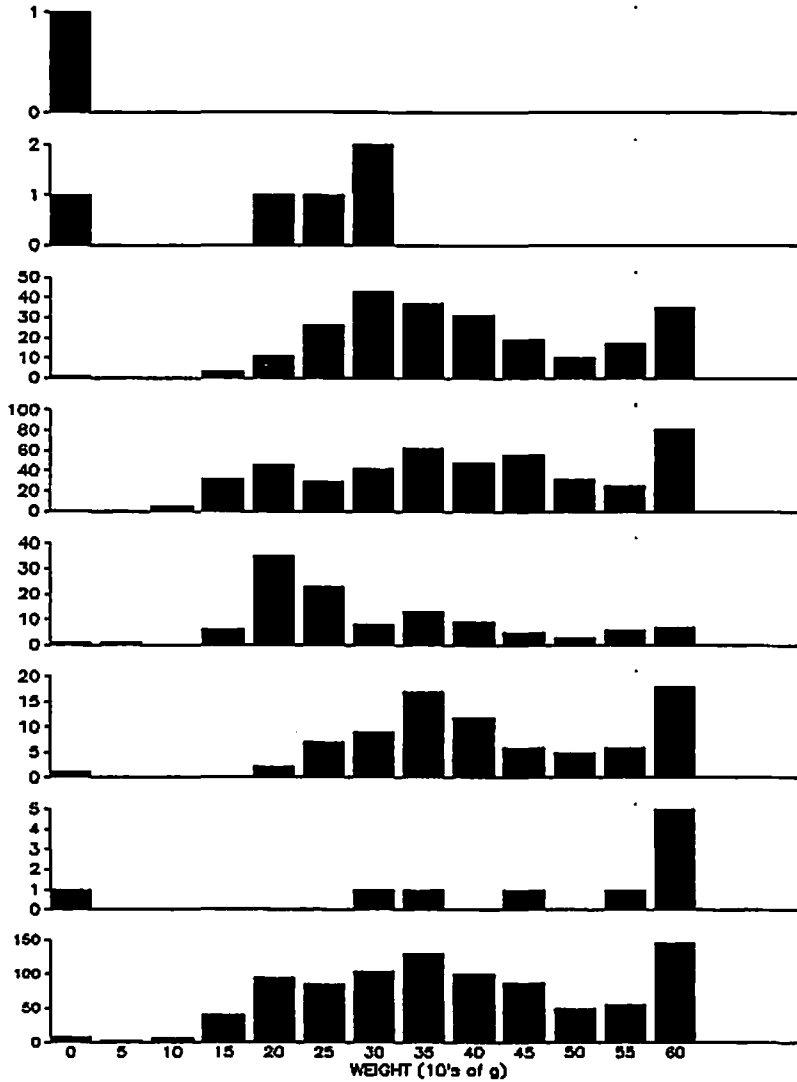


1997 Potomac River Pound Net Survey – Atlantic Croaker Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	142	MEAN SIZE	-	288.2
NO. MEAS.	-	142	S.E. SIZE	-	3
NO. SITES	-	3	MIN. SIZE	-	231
CAT./SITE	-	47.3	MAX. SIZE	-	379
JUNE	970610	-	970626		
NO. CGHT.	-	702	MEAN SIZE	-	293.9
NO. MEAS.	-	702	S.E. SIZE	-	1.4
NO. SITES	-	8	MIN. SIZE	-	222
CAT./SITE	-	87.8	MAX. SIZE	-	418
JULY	970701	-	970729		
NO. CGHT.	-	1231	MEAN SIZE	-	294.1
NO. MEAS.	-	842	S.E. SIZE	-	1.4
NO. SITES	-	18	MIN. SIZE	-	202
CAT./SITE	-	68.4	MAX. SIZE	-	416
AUGUST	970804	-	970806		
NO. CGHT.	-	117	MEAN SIZE	-	280.8
NO. MEAS.	-	118	S.E. SIZE	-	4.5
NO. SITES	-	2	MIN. SIZE	-	121
CAT./SITE	-	58.5	MAX. SIZE	-	586
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	170	MEAN SIZE	-	308.2
NO. MEAS.	-	170	S.E. SIZE	-	2.3
NO. SITES	-	5	MIN. SIZE	-	231
CAT./SITE	-	34	MAX. SIZE	-	376
OCTOBER	971003	-	971024		
NO. CGHT.	-	10	MEAN SIZE	-	347
NO. MEAS.	-	10	S.E. SIZE	-	14.8
NO. SITES	-	6	MIN. SIZE	-	285
CAT./SITE	-	1.7	MAX. SIZE	-	457
MAY-OCT	970506	-	971024		
NO. CGHT.	-	2372	MEAN SIZE	-	294.3
NO. MEAS.	-	1984	S.E. SIZE	-	0.9
NO. SITES	-	42	MIN. SIZE	-	121
CAT./SITE	-	56.5	MAX. SIZE	-	586

1997 Potomac River Pound Net Survey – Atlantic Croaker Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-

MAY	970506	-	970513	
NO. CGHT.	-	142	MEAN WT	-
NO. WGHD.	-	4	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	47.3	MAX. WT	-

JUNE	970610	-	970626	
NO. CGHT.	-	702	MEAN WT	-
NO. WGHD.	-	232	S.E. WT	-
NO. SITES	-	8	MIN. WT	-
CAT./SITE	-	87.8	MAX. WT	-

JULY	970701	-	970729	
NO. CGHT.	-	1231	MEAN WT	-
NO. WGHD.	-	457	S.E. WT	-
NO. SITES	-	18	MIN. WT	-
CAT./SITE	-	68.4	MAX. WT	-

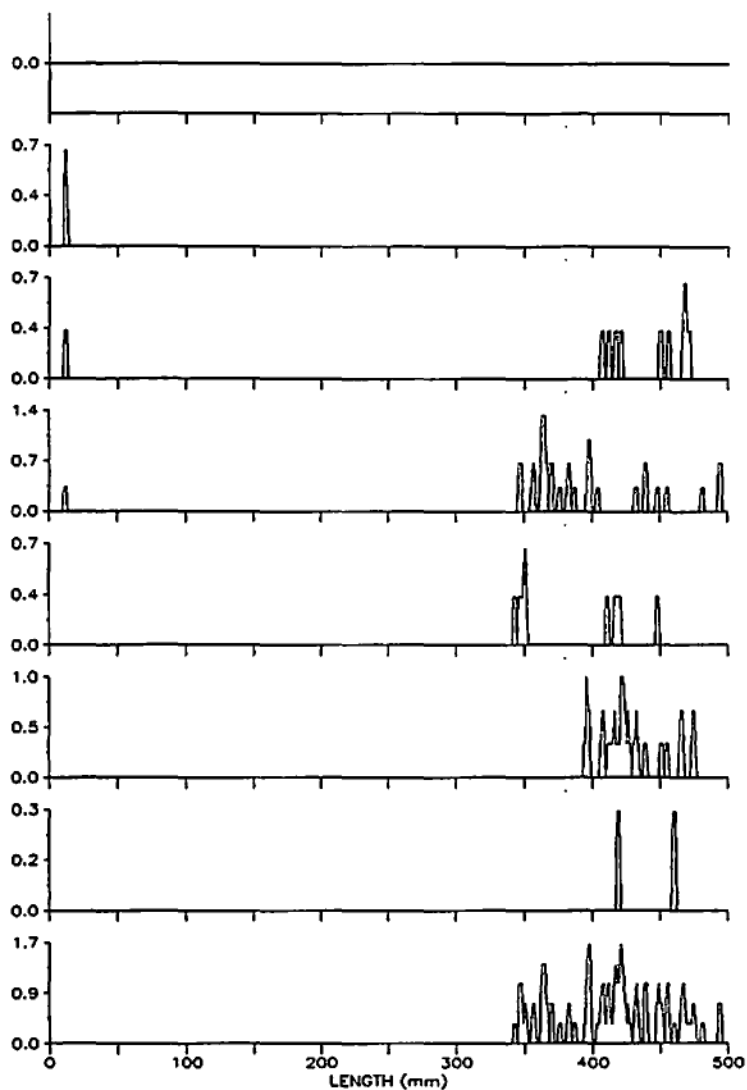
AUGUST	970804	-	970806	
NO. CGHT.	-	117	MEAN WT	-
NO. WGHD.	-	118	S.E. WT	-
NO. SITES	-	2	MIN. WT	-
CAT./SITE	-	58.5	MAX. WT	-

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	170	MEAN WT	-
NO. WGHD.	-	82	S.E. WT	-
NO. SITES	-	5	MIN. WT	-
CAT./SITE	-	34	MAX. WT	-

OCTOBER	971003	-	971024	
NO. CGHT.	-	10	MEAN WT	-
NO. WGHD.	-	9	S.E. WT	-
NO. SITES	-	6	MIN. WT	-
CAT./SITE	-	1.7	MAX. WT	-

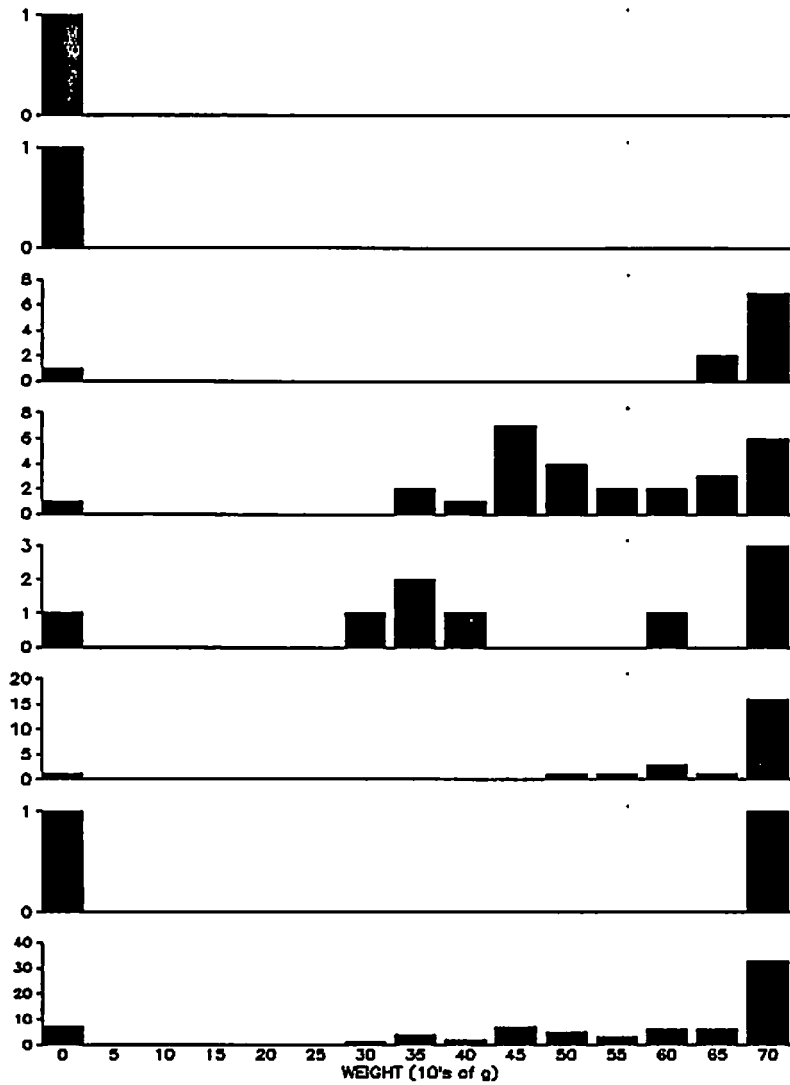
MAY-OCT	970506	-	971024	
NO. CGHT.	-	2372	MEAN WT	-
NO. WGHD.	-	900	S.E. WT	-
NO. SITES	-	42	MIN. WT	-
CAT./SITE	-	56.5	MAX. WT	-

1997 Potomac River Pound Net Survey – Spanish Mackerel Length Frequency



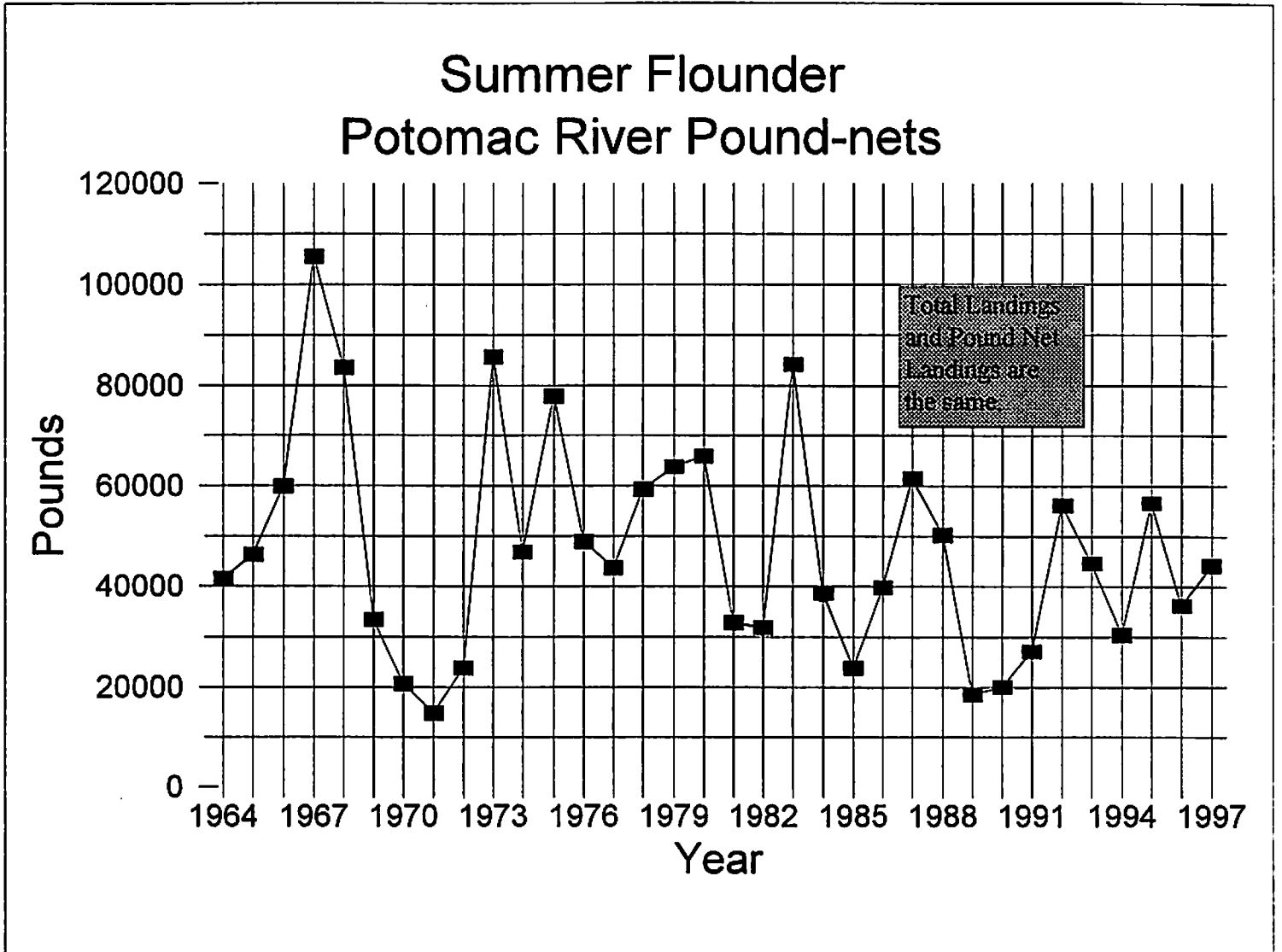
APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	0	MIN. SIZE	-
CAT./SITE	-	.	MAX. SIZE	-
MAY	970506	-	970513	
NO. CGHT.	-	0	MEAN SIZE	-
NO. MEAS.	-	0	S.E. SIZE	-
NO. SITES	-	3	MIN. SIZE	-
CAT./SITE	-	0	MAX. SIZE	-
JUNE	970610	-	970626	
NO. CGHT.	-	11	MEAN SIZE	- 457.6
NO. MEAS.	-	11	S.E. SIZE	- 14.4
NO. SITES	-	8	MIN. SIZE	- 405
CAT./SITE	-	1.4	MAX. SIZE	- 547
JULY	970701	-	970729	
NO. CGHT.	-	47	MEAN SIZE	- 399.9
NO. MEAS.	-	29	S.E. SIZE	- 9.1
NO. SITES	-	18	MIN. SIZE	- 345
CAT./SITE	-	2.6	MAX. SIZE	- 512
AUGUST	970804	-	970806	
NO. CGHT.	-	9	MEAN SIZE	- 399.6
NO. MEAS.	-	9	S.E. SIZE	- 20.5
NO. SITES	-	2	MIN. SIZE	- 341
CAT./SITE	-	4.5	MAX. SIZE	- 525
SEPTEMBER	970905	-	970930	
NO. CGHT.	-	23	MEAN SIZE	- 427.4
NO. MEAS.	-	23	S.E. SIZE	- 5.1
NO. SITES	-	5	MIN. SIZE	- 393
CAT./SITE	-	4.6	MAX. SIZE	- 473
OCTOBER	971003	-	971024	
NO. CGHT.	-	2	MEAN SIZE	- 437.5
NO. MEAS.	-	2	S.E. SIZE	- 20.5
NO. SITES	-	6	MIN. SIZE	- 417
CAT./SITE	-	0.3	MAX. SIZE	- 458
MAY-OCT	970506	-	971024	
NO. CGHT.	-	92	MEAN SIZE	- 418
NO. MEAS.	-	74	S.E. SIZE	- 5.5
NO. SITES	-	42	MIN. SIZE	- 341
CAT./SITE	-	2.2	MAX. SIZE	- 547

1997 Potomac River Pound Net Survey – Spanish Mackerel Weights

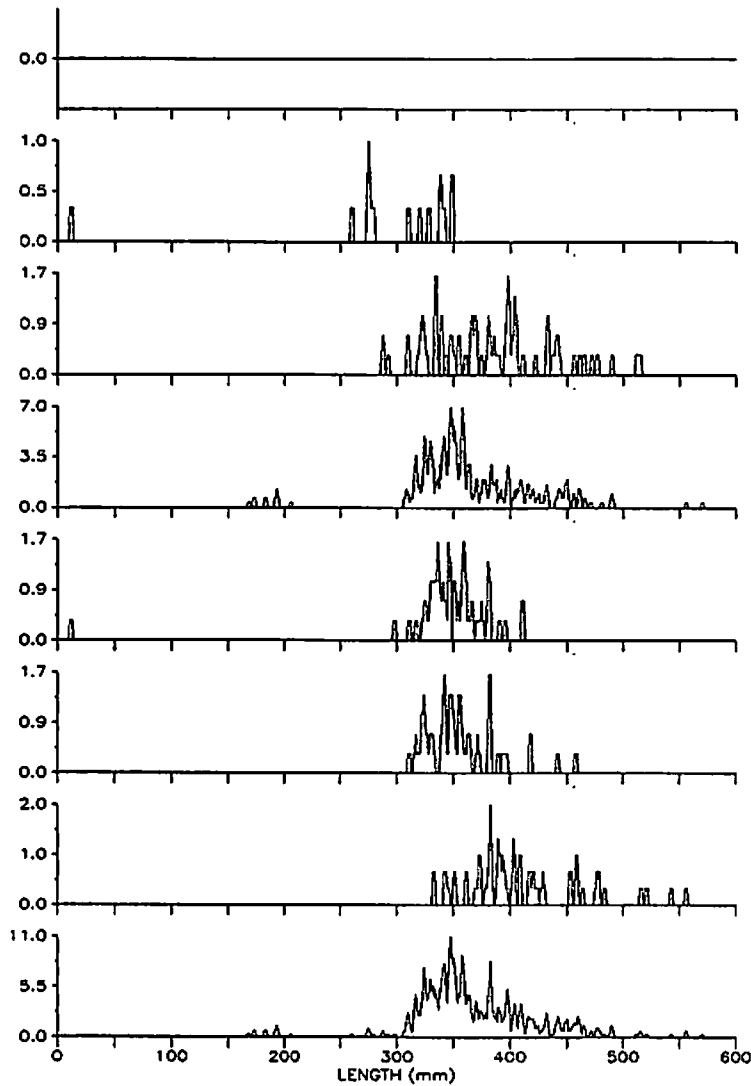


APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	0	MIN. WT	-	.
CAT./SITE	-	.	MAX. WT	-	.
MAY	970506	-	970513		
NO. CGHT.	-	0	MEAN WT	-	.
NO. WGHD.	-	0	S.E. WT	-	.
NO. SITES	-	3	MIN. WT	-	.
CAT./SITE	-	0	MAX. WT	-	.
JUNE	970610	-	970626		
NO. CGHT.	-	11	MEAN WT	-	862.8
NO. WGHD.	-	9	S.E. WT	-	59.9
NO. SITES	-	8	MIN. WT	-	640.9
CAT./SITE	-	1.4	MAX. WT	-	1227.8
JULY	970701	-	970729		
NO. CGHT.	-	47	MEAN WT	-	601.9
NO. WGHD.	-	27	S.E. WT	-	40.5
NO. SITES	-	18	MIN. WT	-	345.8
CAT./SITE	-	2.6	MAX. WT	-	1117.3
AUGUST	970804	-	970806		
NO. CGHT.	-	9	MEAN WT	-	581.4
NO. WGHD.	-	8	S.E. WT	-	99.4
NO. SITES	-	2	MIN. WT	-	302.4
CAT./SITE	-	4.5	MAX. WT	-	1076.9
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	23	MEAN WT	-	757.9
NO. WGHD.	-	22	S.E. WT	-	30.8
NO. SITES	-	5	MIN. WT	-	496.1
CAT./SITE	-	4.6	MAX. WT	-	999.8
OCTOBER	971003	-	971024		
NO. CGHT.	-	2	MEAN WT	-	812.3
NO. WGHD.	-	1	S.E. WT	-	.
NO. SITES	-	6	MIN. WT	-	812.3
CAT./SITE	-	0.3	MAX. WT	-	812.3
MAY-OCT	970506	-	971024		
NO. CGHT.	-	92	MEAN WT	-	688.9
NO. WGHD.	-	67	S.E. WT	-	26.4
NO. SITES	-	42	MIN. WT	-	302.4
CAT./SITE	-	2.2	MAX. WT	-	1227.8

Figure 41

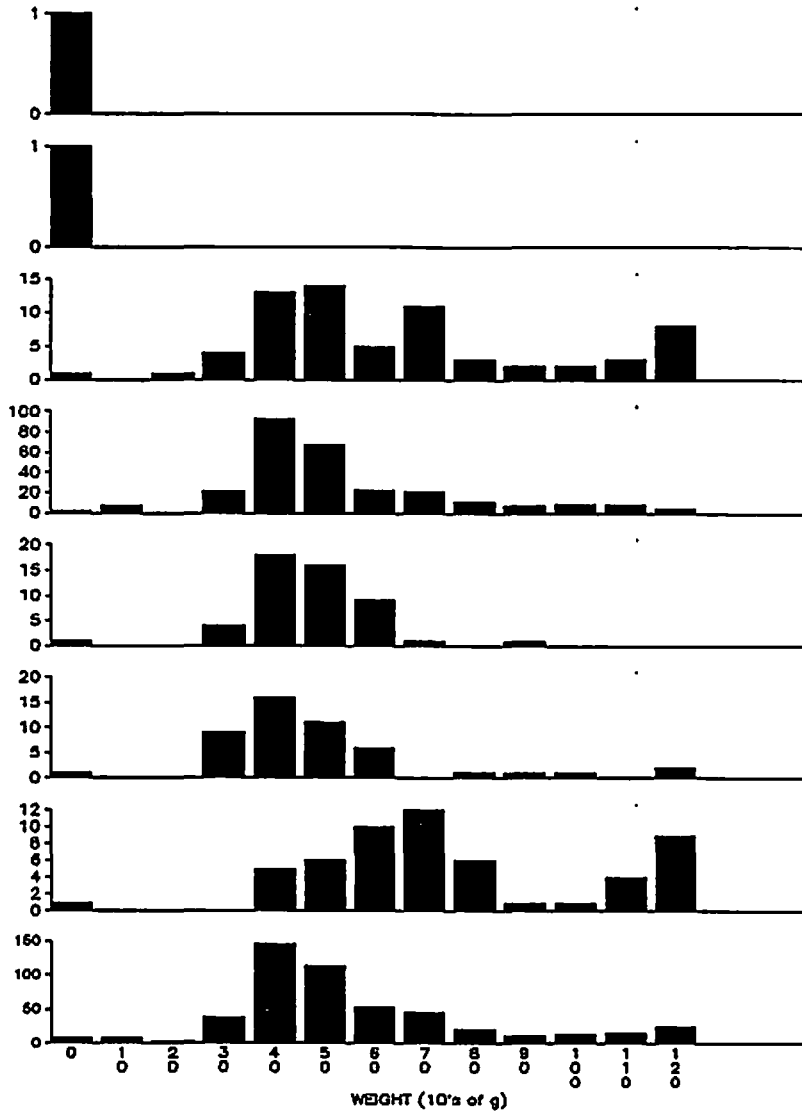


1997 Potomac River Pound Net Survey – Summer Flounder Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	13	MEAN SIZE	-	308.7
NO. MEAS.	-	13	S.E. SIZE	-	9.2
NO. SITES	-	3	MIN. SIZE	-	258
CAT./SITE	-	4.3	MAX. SIZE	-	347
JUNE	970610	-	970626		
NO. CGHT.	-	68	MEAN SIZE	-	383.7
NO. MEAS.	-	68	S.E. SIZE	-	7.4
NO. SITES	-	8	MIN. SIZE	-	285
CAT./SITE	-	8.5	MAX. SIZE	-	614
JULY	970701	-	970729		
NO. CGHT.	-	673	MEAN SIZE	-	361.2
NO. MEAS.	-	296	S.E. SIZE	-	3.2
NO. SITES	-	18	MIN. SIZE	-	166
CAT./SITE	-	37.4	MAX. SIZE	-	568
AUGUST	970804	-	970806		
NO. CGHT.	-	52	MEAN SIZE	-	349.9
NO. MEAS.	-	52	S.E. SIZE	-	3.3
NO. SITES	-	2	MIN. SIZE	-	296
CAT./SITE	-	26	MAX. SIZE	-	409
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	51	MEAN SIZE	-	360.3
NO. MEAS.	-	51	S.E. SIZE	-	6.9
NO. SITES	-	5	MIN. SIZE	-	309
CAT./SITE	-	10.2	MAX. SIZE	-	625
OCTOBER	971003	-	971024		
NO. CGHT.	-	56	MEAN SIZE	-	409.3
NO. MEAS.	-	56	S.E. SIZE	-	6.9
NO. SITES	-	6	MIN. SIZE	-	331
CAT./SITE	-	9.3	MAX. SIZE	-	554
MAY-OCT	970506	-	971024		
NO. CGHT.	-	913	MEAN SIZE	-	366.6
NO. MEAS.	-	536	S.E. SIZE	-	2.4
NO. SITES	-	42	MIN. SIZE	-	166
CAT./SITE	-	21.7	MAX. SIZE	-	625

1997 Potomac River Pound Net Survey – Summer Flounder Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-

MAY	970506	-	970513	
NO. CGHT.	-	13	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	4.3	MAX. WT	-

JUNE	970610	-	970626	
NO. CGHT.	-	68	MEAN WT	- 707.2
NO. WGHD.	-	66	S.E. WT	- 58.6
NO. SITES	-	8	MIN. WT	- 174.1
CAT./SITE	-	8.5	MAX. WT	- 3188.9

JULY	970701	-	970729	
NO. CGHT.	-	673	MEAN WT	- 536.9
NO. WGHD.	-	273	S.E. WT	- 15.4
NO. SITES	-	18	MIN. WT	- 2.7
CAT./SITE	-	37.4	MAX. WT	- 2034.4

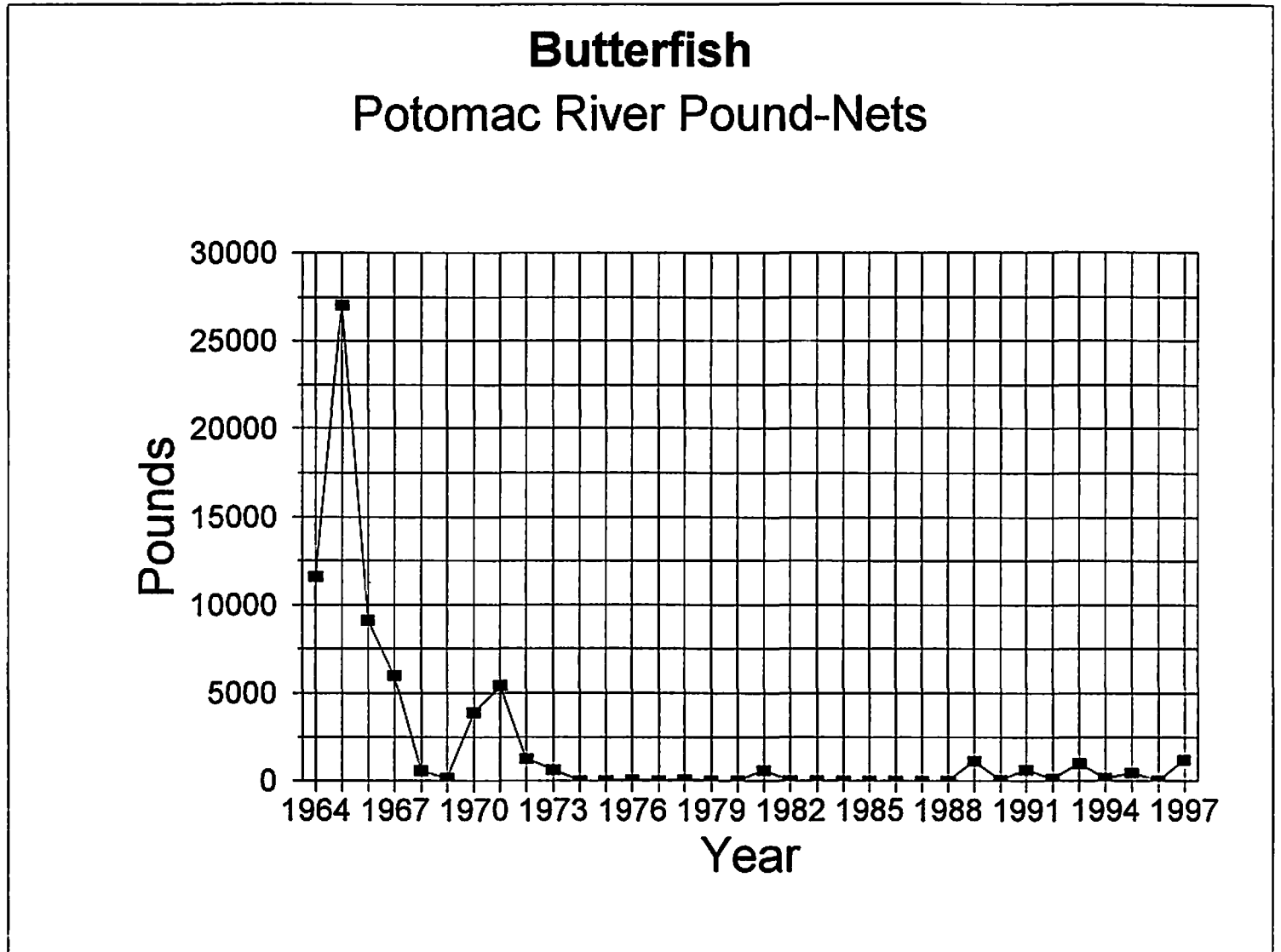
AUGUST	970804	-	970806	
NO. CGHT.	-	52	MEAN WT	- 479.7
NO. WGHD.	-	49	S.E. WT	- 15.5
NO. SITES	-	2	MIN. WT	- 300.6
CAT./SITE	-	26	MAX. WT	- 879.3

SEPTEMBER	970905	-	970930	
NO. CGHT.	-	51	MEAN WT	- 548.2
NO. WGHD.	-	47	S.E. WT	- 69.1
NO. SITES	-	5	MIN. WT	- 320.9
CAT./SITE	-	10.2	MAX. WT	- 3478.5

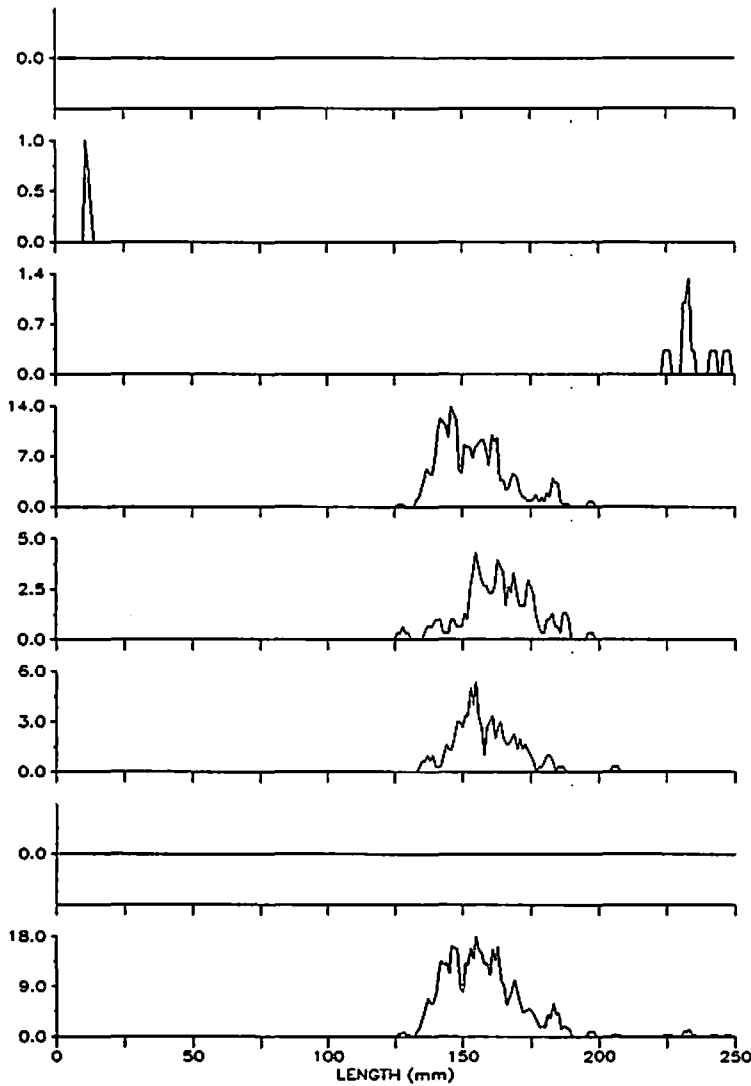
OCTOBER	971003	-	971024	
NO. CGHT.	-	58	MEAN WT	- 827.7
NO. WGHD.	-	54	S.E. WT	- 57.7
NO. SITES	-	6	MIN. WT	- 363.3
CAT./SITE	-	9.3	MAX. WT	- 2466.8

MAY-OCT	970506	-	971024	
NO. CGHT.	-	913	MEAN WT	- 587.3
NO. WGHD.	-	489	S.E. WT	- 15.5
NO. SITES	-	42	MIN. WT	- 2.7
CAT./SITE	-	21.7	MAX. WT	- 3478.5

Figure 44



1997 Potomac River Pound Net Survey – Butterfish Length Frequency



APRIL	000000	-	000000		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	0	MIN. SIZE	-	.
CAT./SITE	-	.	MAX. SIZE	-	.
MAY	970506	-	970513		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	3	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
JUNE	970610	-	970626		
NO. CGHT.	-	10	MEAN SIZE	-	243.6
NO. MEAS.	-	10	S.E. SIZE	-	5.9
NO. SITES	-	8	MIN. SIZE	-	223
CAT./SITE	-	1.3	MAX. SIZE	-	275
JULY	970701	-	970729		
NO. CGHT.	-	300	MEAN SIZE	-	152.1
NO. MEAS.	-	300	S.E. SIZE	-	0.7
NO. SITES	-	18	MIN. SIZE	-	125
CAT./SITE	-	16.7	MAX. SIZE	-	195
AUGUST	970804	-	970806		
NO. CGHT.	-	93	MEAN SIZE	-	161
NO. MEAS.	-	93	S.E. SIZE	-	1.4
NO. SITES	-	2	MIN. SIZE	-	125
CAT./SITE	-	46.5	MAX. SIZE	-	195
SEPTEMBER	970905	-	970930		
NO. CGHT.	-	91	MEAN SIZE	-	156.7
NO. MEAS.	-	91	S.E. SIZE	-	1.3
NO. SITES	-	5	MIN. SIZE	-	133
CAT./SITE	-	18.2	MAX. SIZE	-	204
OCTOBER	971003	-	971024		
NO. CGHT.	-	0	MEAN SIZE	-	.
NO. MEAS.	-	0	S.E. SIZE	-	.
NO. SITES	-	6	MIN. SIZE	-	.
CAT./SITE	-	0	MAX. SIZE	-	.
MAY-OCT	970506	-	971024		
NO. CGHT.	-	494	MEAN SIZE	-	156.5
NO. MEAS.	-	494	S.E. SIZE	-	0.8
NO. SITES	-	42	MIN. SIZE	-	125
CAT./SITE	-	11.8	MAX. SIZE	-	275

1997 Potomac River Pound Net Survey – Butterfish Weights



APRIL	000000	-	000000	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	0	MIN. WT	-
CAT./SITE	-	.	MAX. WT	-



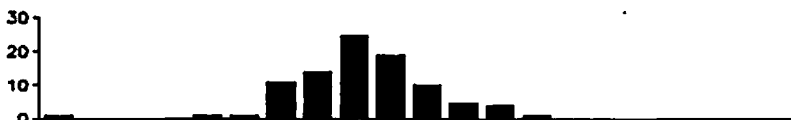
MAY	970506	-	970513	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	3	MIN. WT	-
CAT./SITE	-	0	MAX. WT	-



JUNE	970610	-	970626	
NO. CGHT.	-	10	MEAN WT	- 362.4
NO. WGHD.	-	7	S.E. WT	- 27.7
NO. SITES	-	8	MIN. WT	- 276.7
CAT./SITE	-	1.3	MAX. WT	- 474.7



JULY	970701	-	970729	
NO. CGHT.	-	300	MEAN WT	- 115.3
NO. WGHD.	-	82	S.E. WT	- 4.5
NO. SITES	-	18	MIN. WT	- 68.4
CAT./SITE	-	16.7	MAX. WT	- 207.2



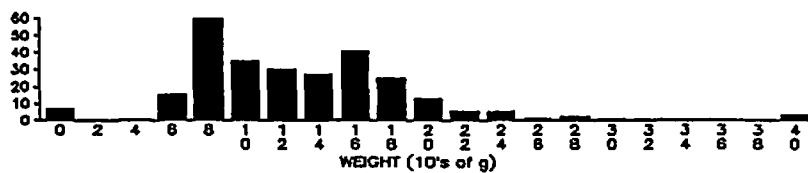
AUGUST	970804	-	970806	
NO. CGHT.	-	93	MEAN WT	- 166.9
NO. WGHD.	-	91	S.E. WT	- 3.6
NO. SITES	-	2	MIN. WT	- 87.5
CAT./SITE	-	48.5	MAX. WT	- 259



SEPTEMBER	970905	-	970930	
NO. CGHT.	-	91	MEAN WT	- 97.2
NO. WGHD.	-	86	S.E. WT	- 3.7
NO. SITES	-	5	MIN. WT	- 47.2
CAT./SITE	-	18.2	MAX. WT	- 279.1



OCTOBER	971003	-	971024	
NO. CGHT.	-	0	MEAN WT	-
NO. WGHD.	-	0	S.E. WT	-
NO. SITES	-	6	MIN. WT	-
CAT./SITE	-	0	MAX. WT	-



MAY-OCT	970506	-	971024	
NO. CGHT.	-	494	MEAN WT	- 133.6
NO. WGHD.	-	268	S.E. WT	- 3.7
NO. SITES	-	42	MIN. WT	- 47.2
CAT./SITE	-	11.8	MAX. WT	- 474.7

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 in 1998, 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. The closed seasons are 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.

Appendix

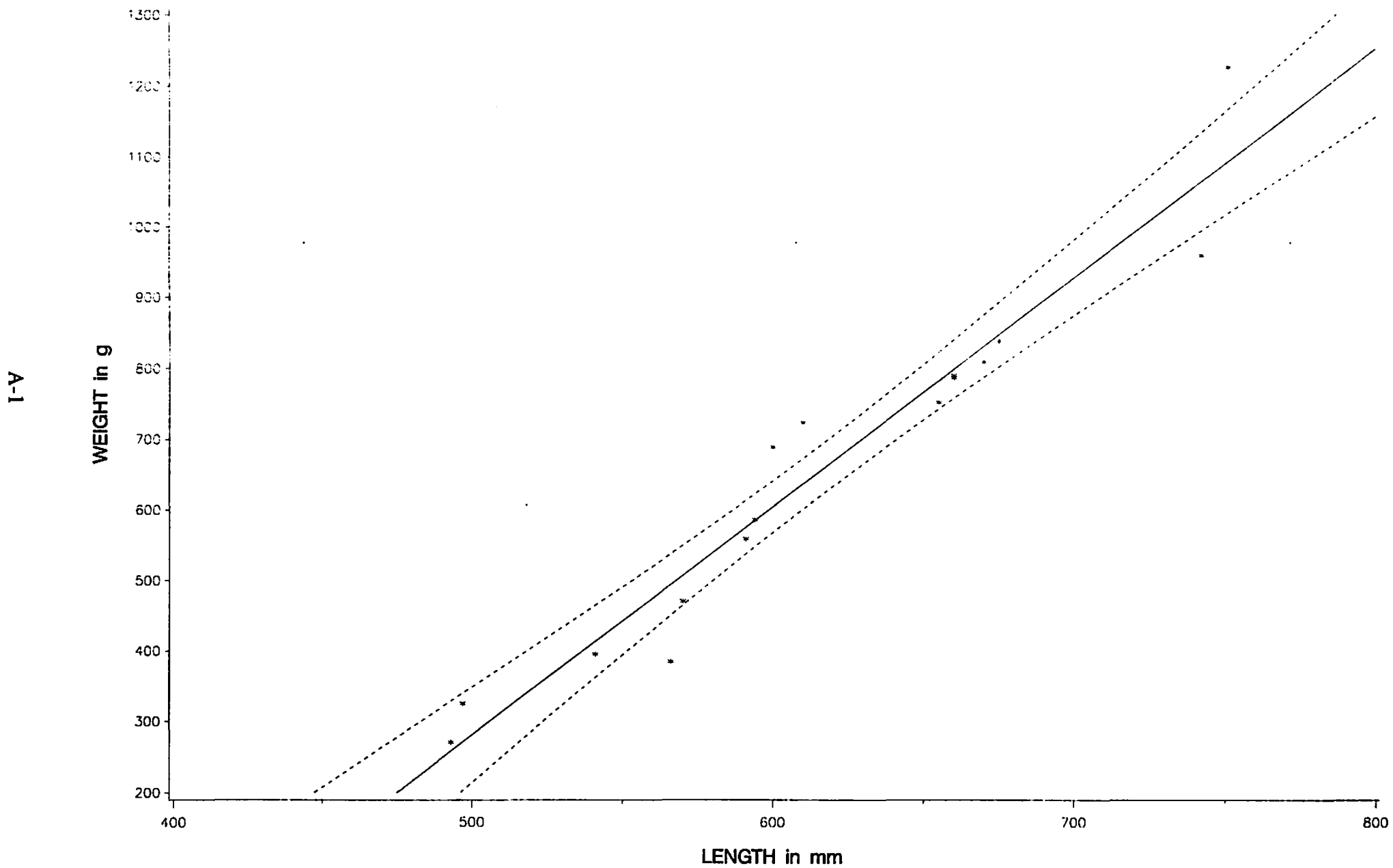
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1997 Potomac River Pound Net Survey

Length – Weight Regression

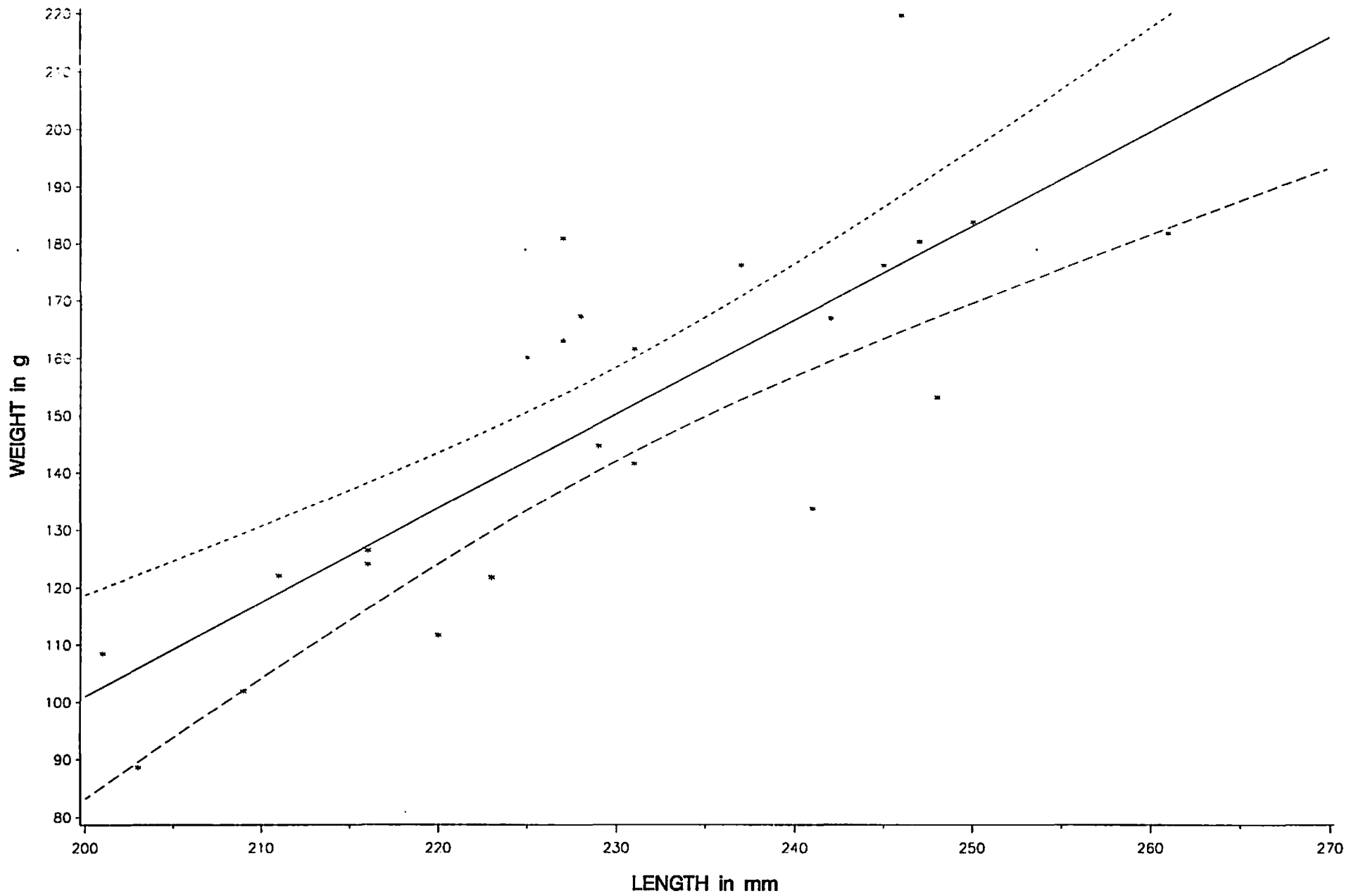
SPECIES NAME = American eel



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=blueback herring

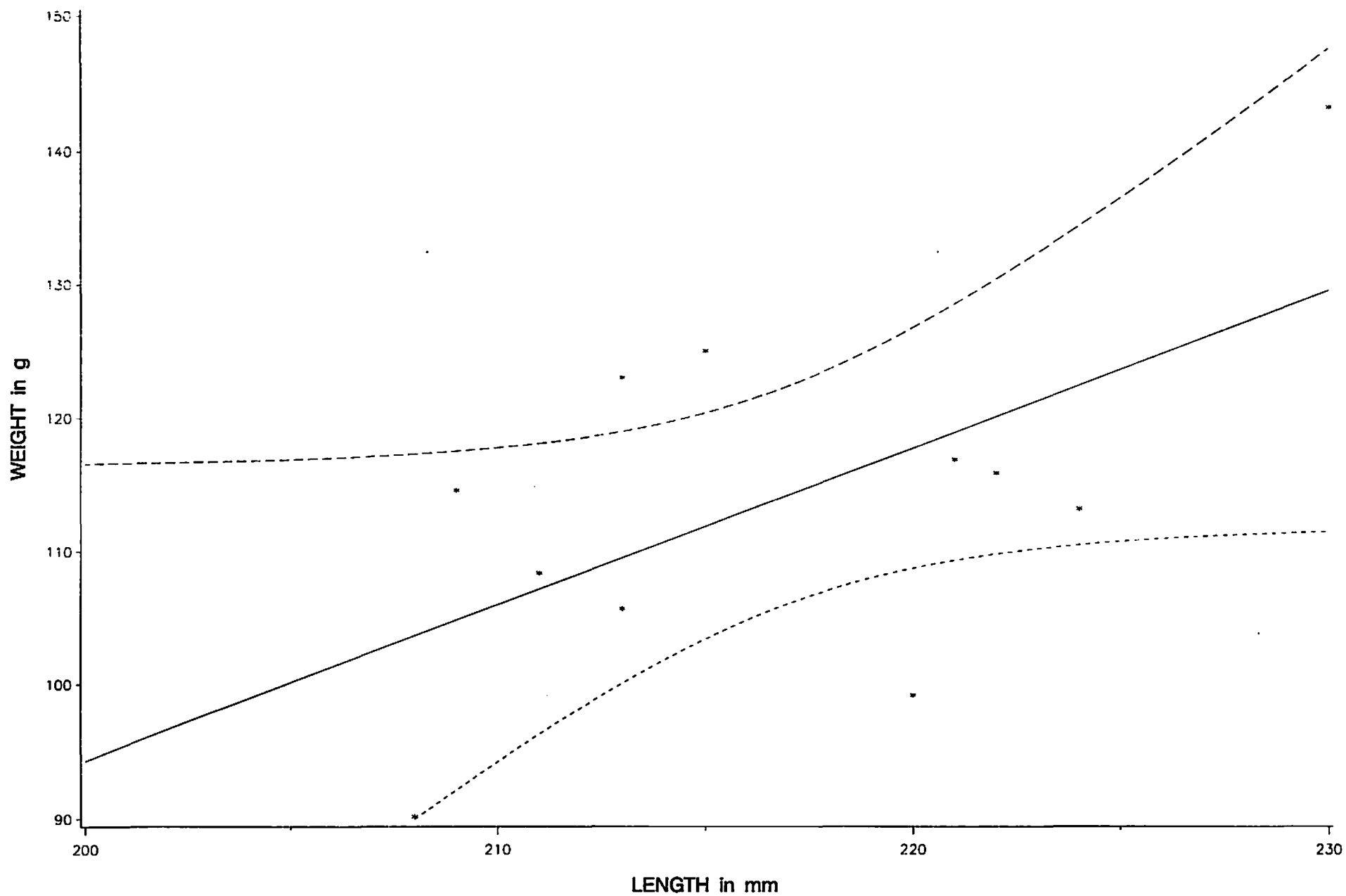


A-2

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME = alewife

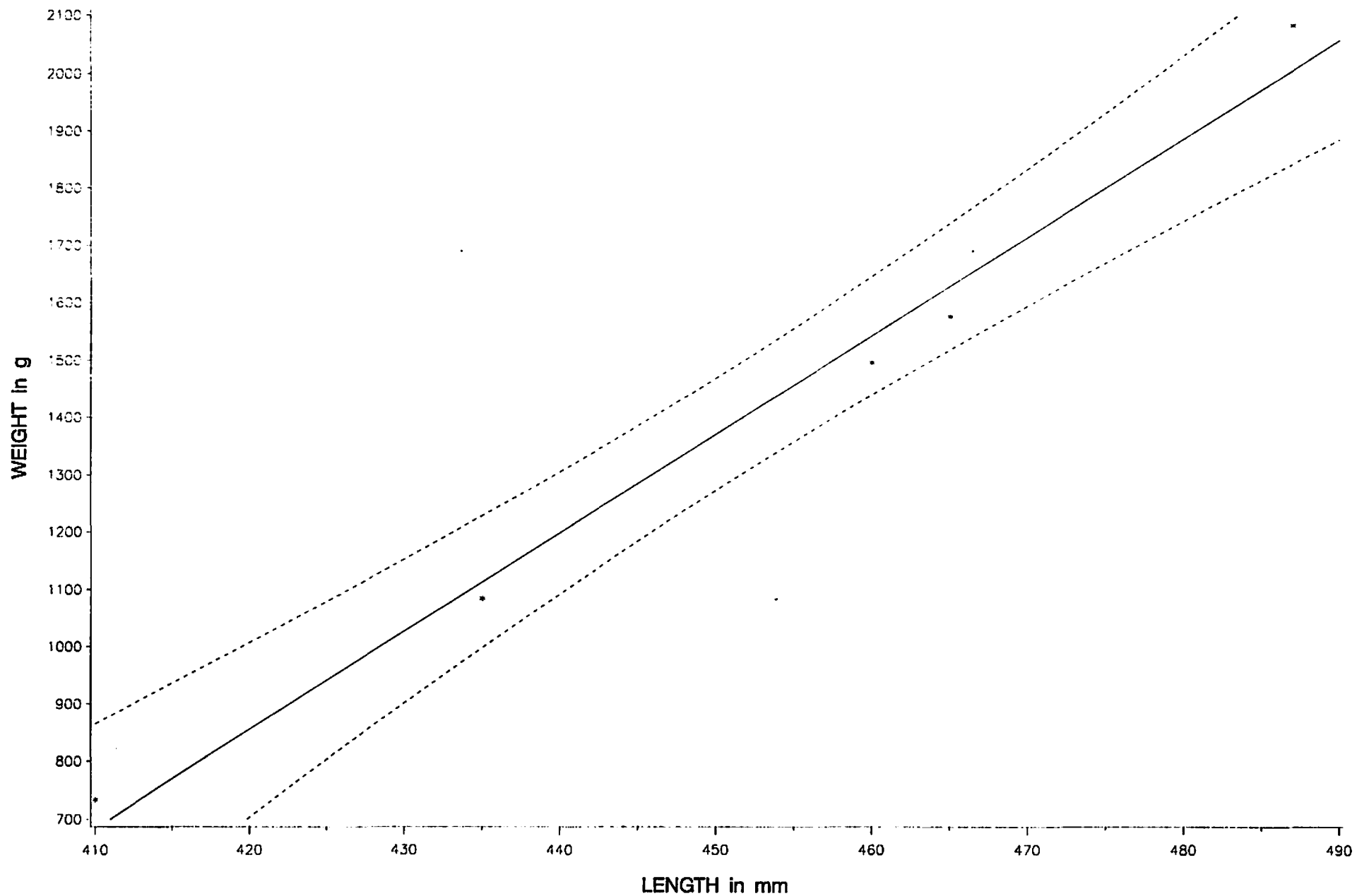


A-3

1997 Potomac River Pound Net Survey

Length-Weight Regression

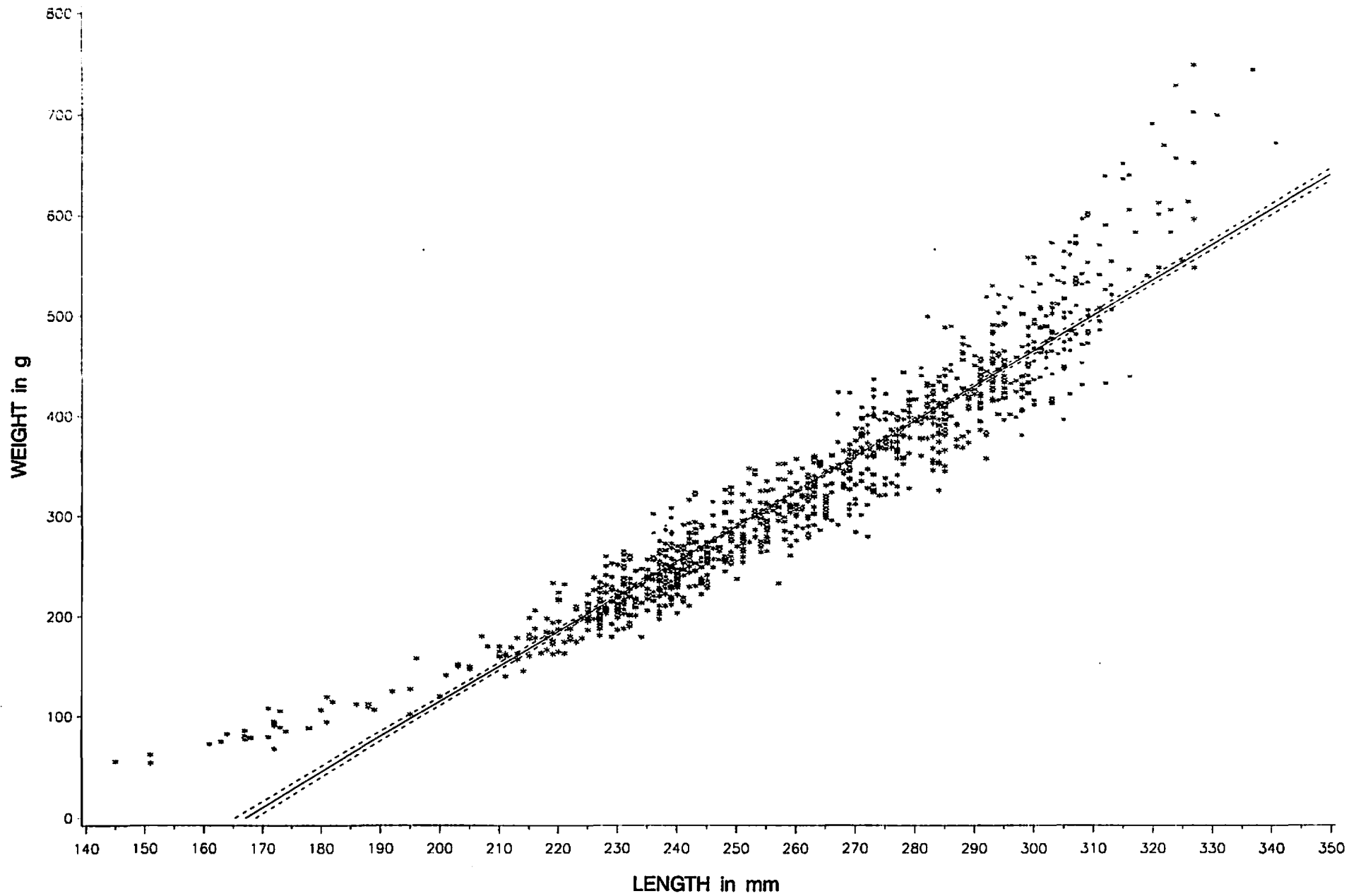
SPECIES NAME=American shad



1997 Potomac River Pound Net Survey

Length-Weight Regression

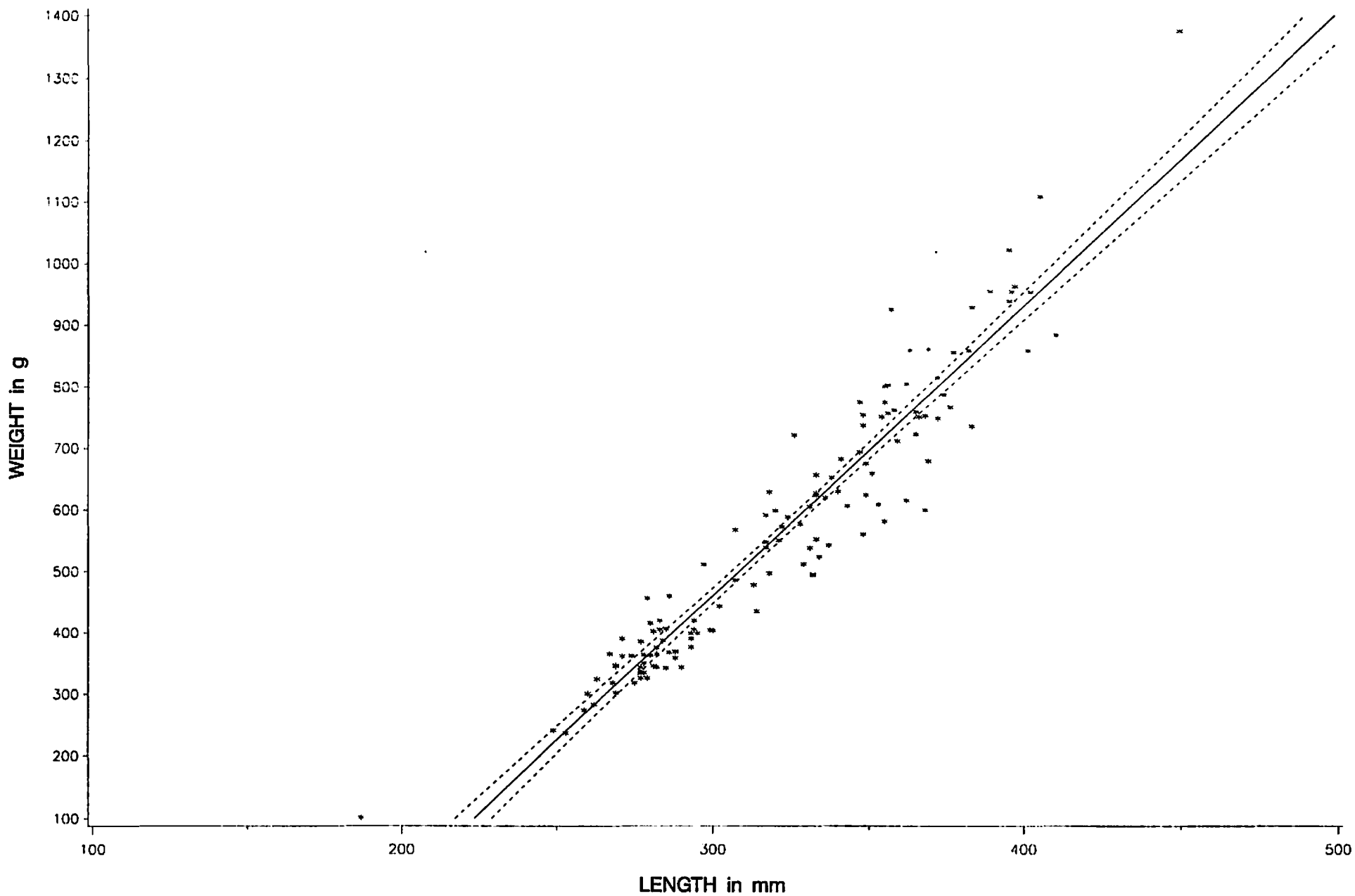
SPECIES NAME=Atlantic menhaden



1997 Potomac River Pound Net Survey

Length-Weight Regression

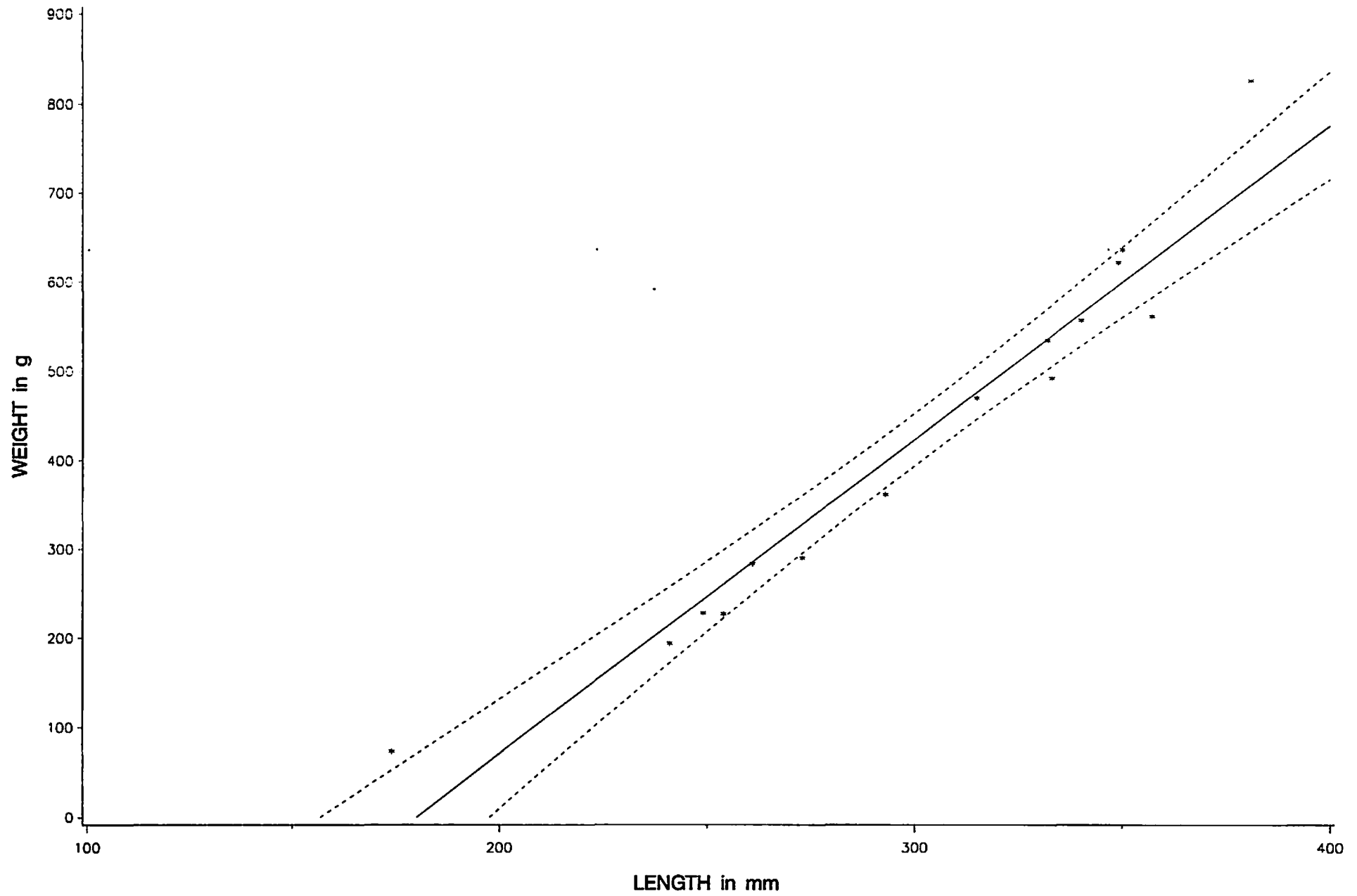
SPECIES NAME=gizzard shad



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=blue catfish

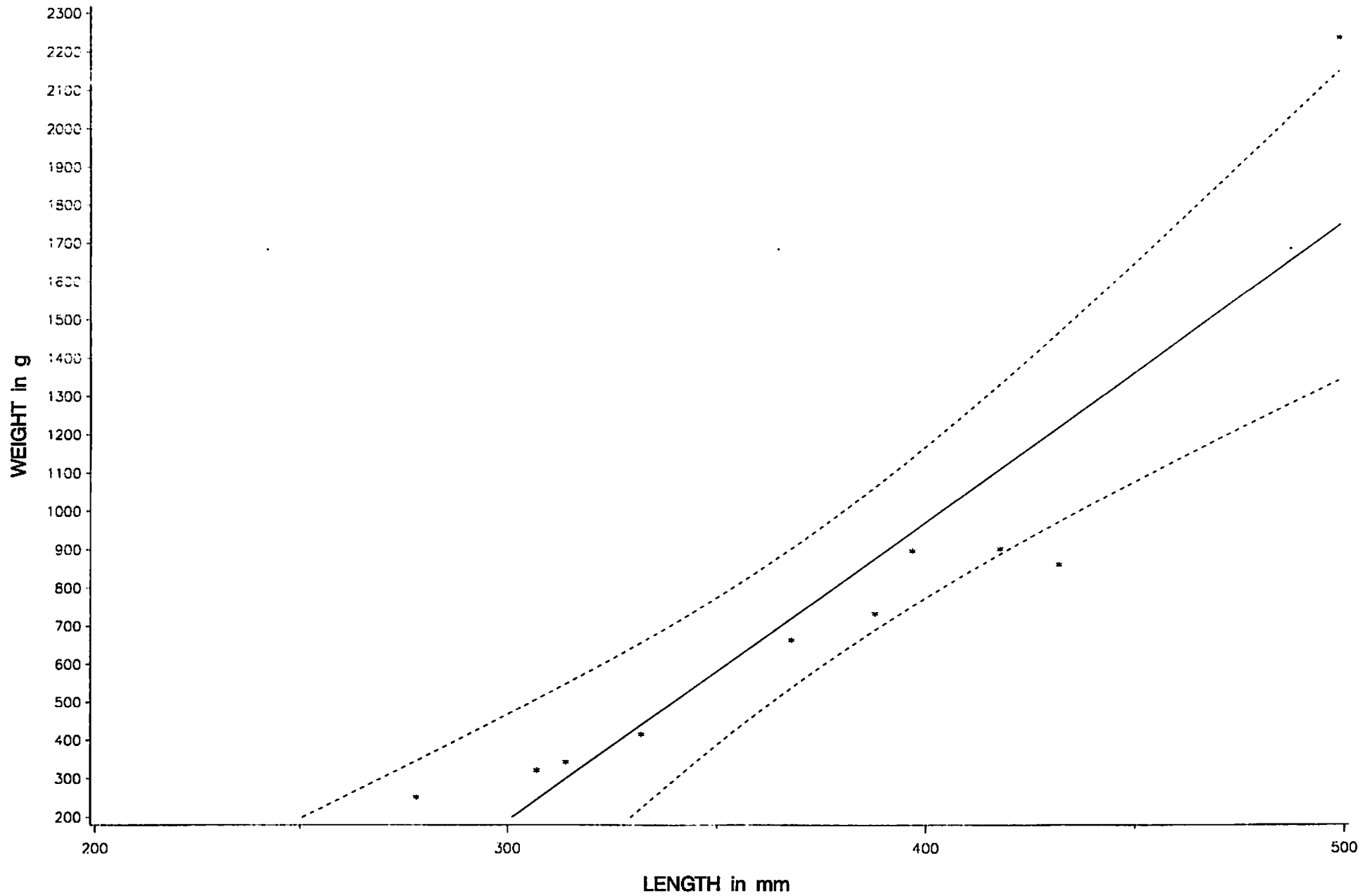


A-7

1997 Potomac River Pound Net Survey

Length-Weight Regression

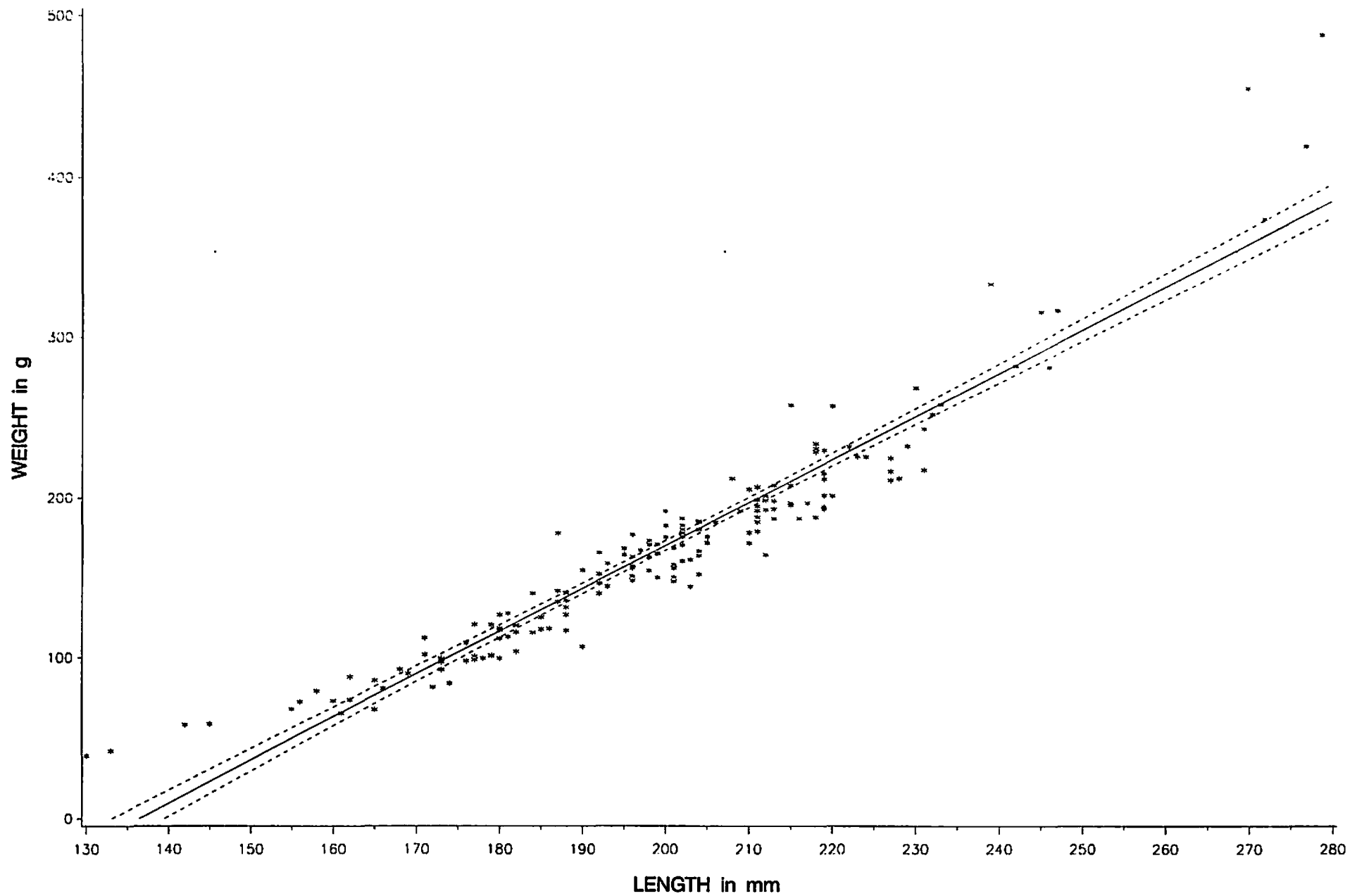
SPECIES NAME = channel catfish



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=white perch

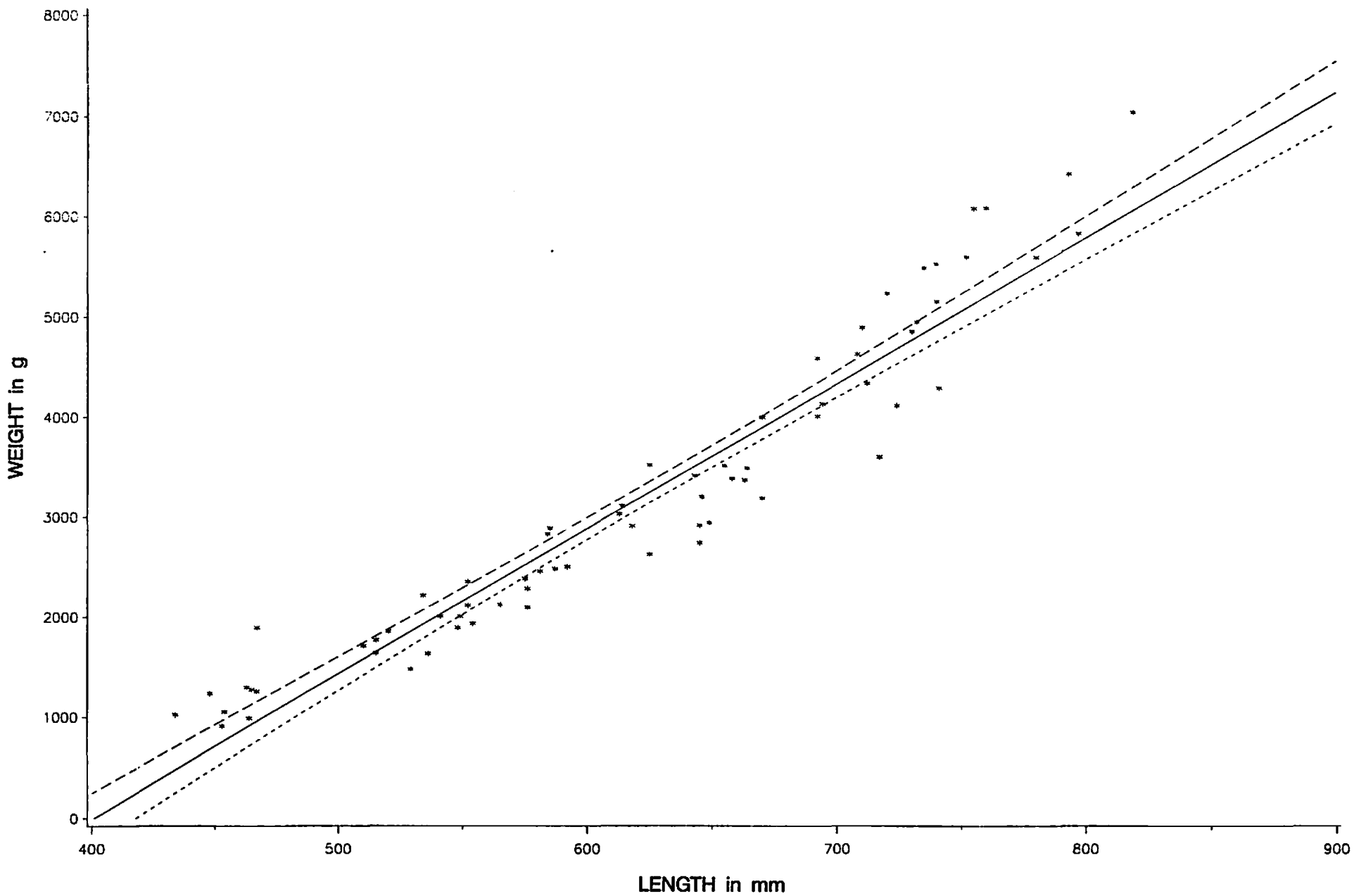


6-V

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=striped bass

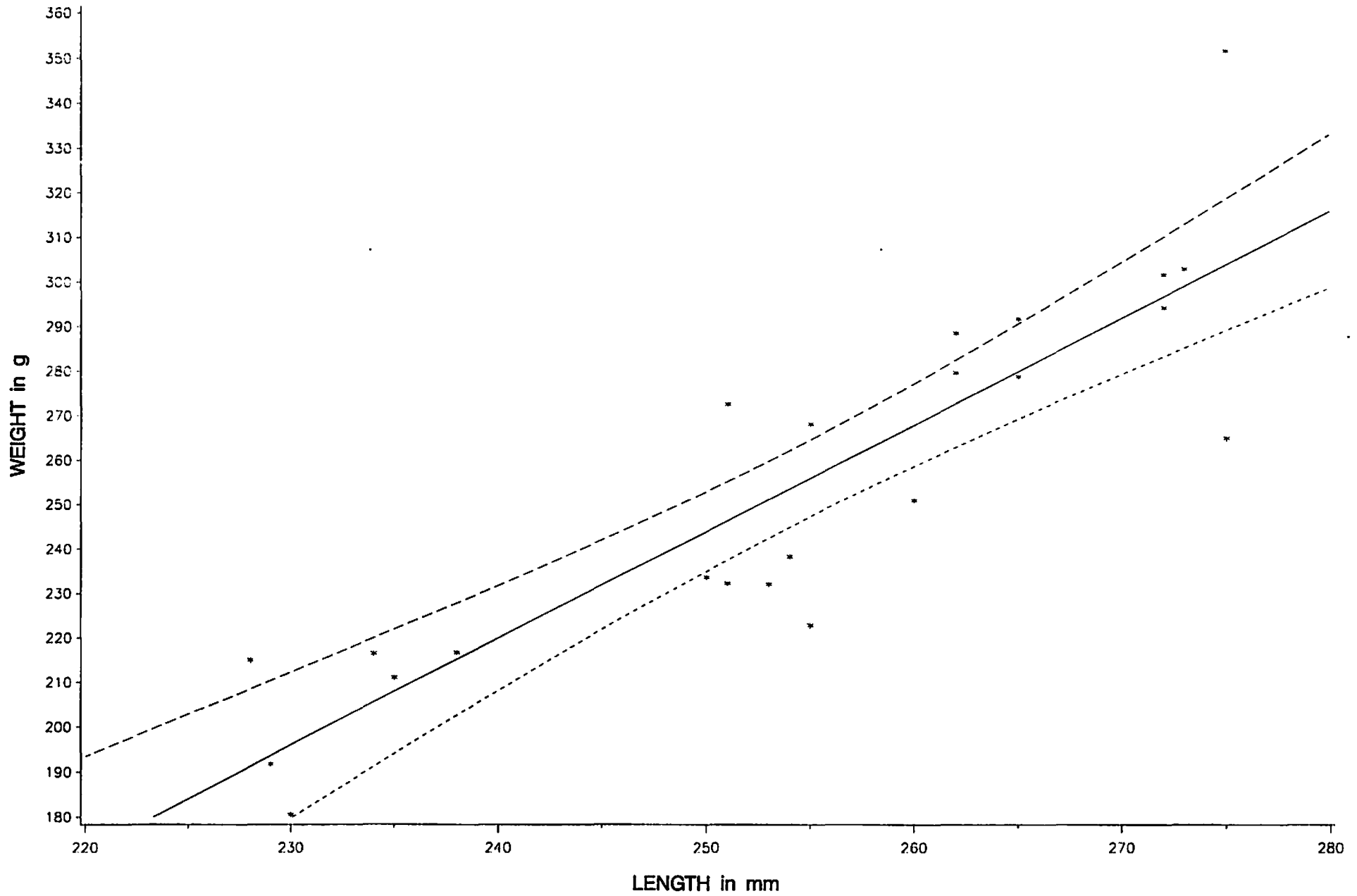


A-10

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=black seabass

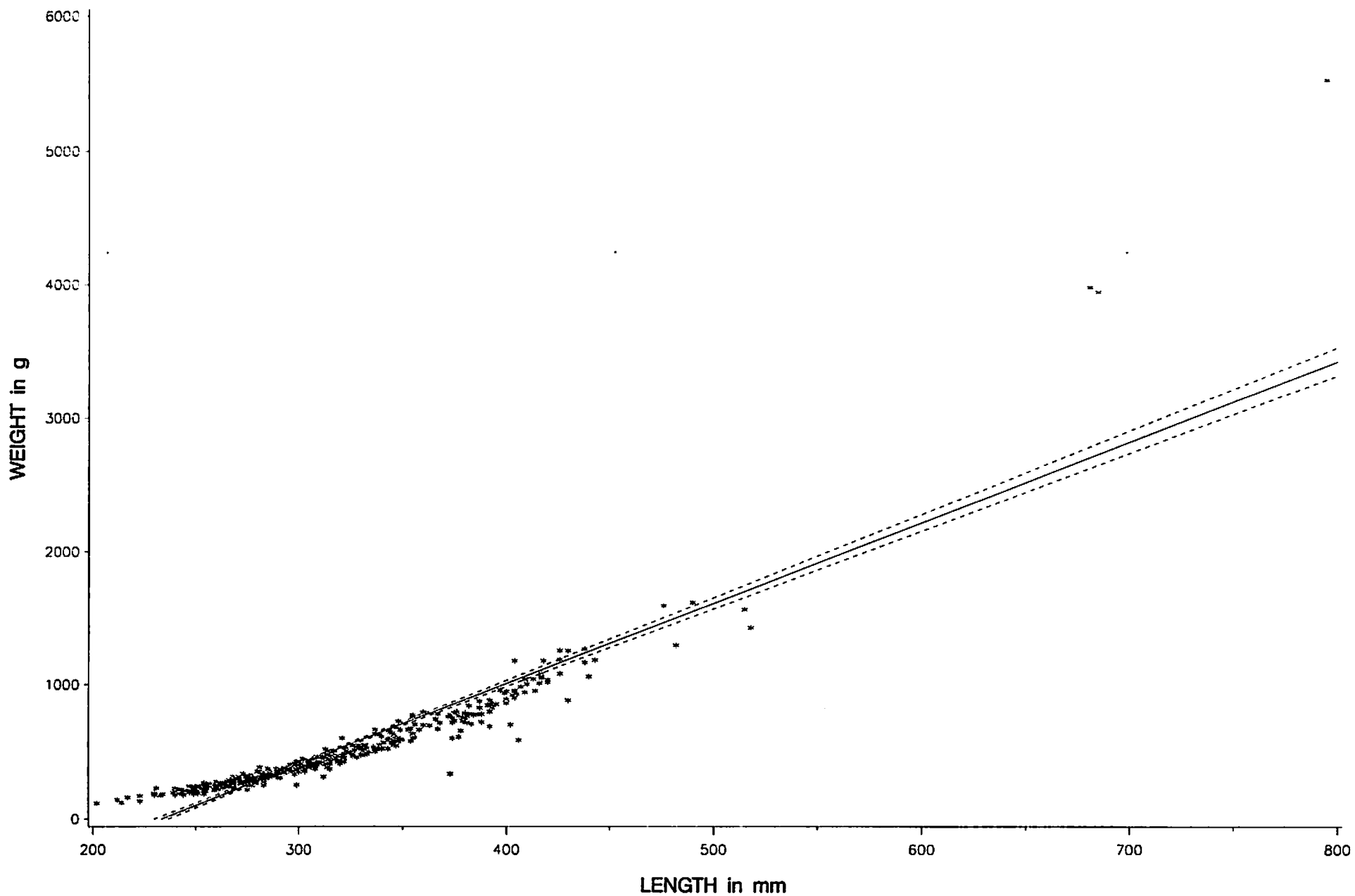


A-11

1997 Potomac River Pound Net Survey

Length-Weight Regression

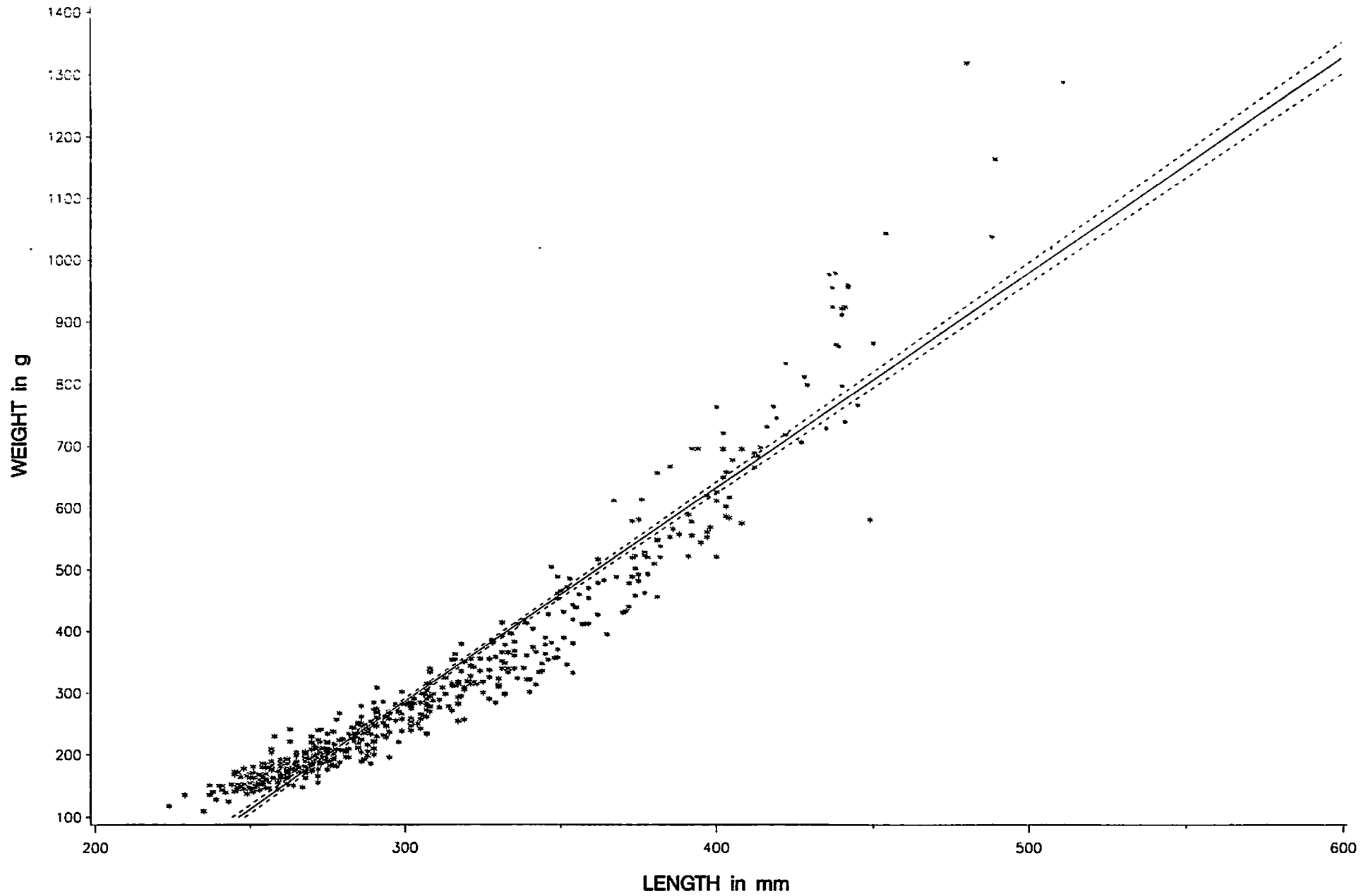
SPECIES NAME = bluefish



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME = weakfish

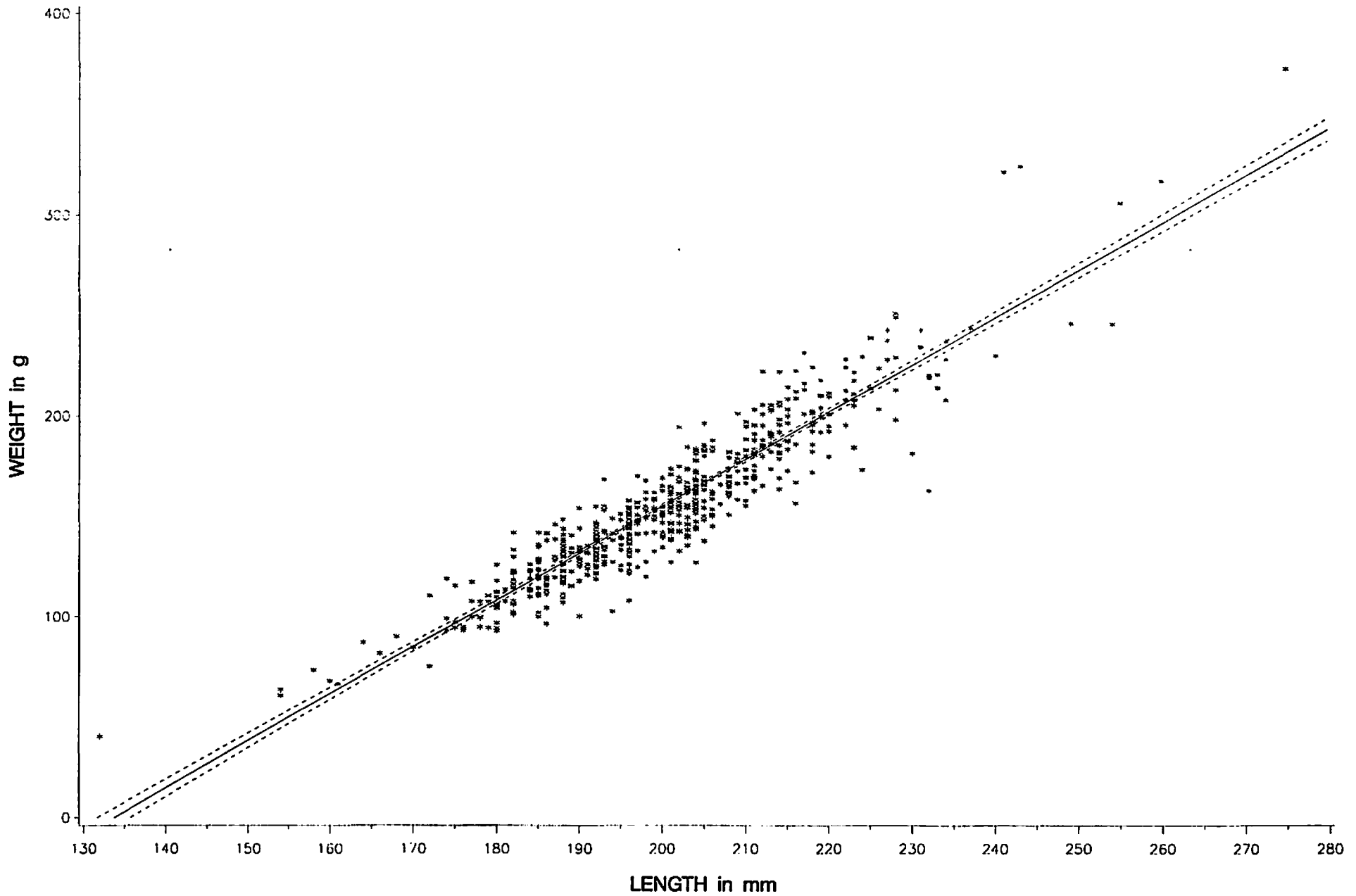


A-13

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=spot

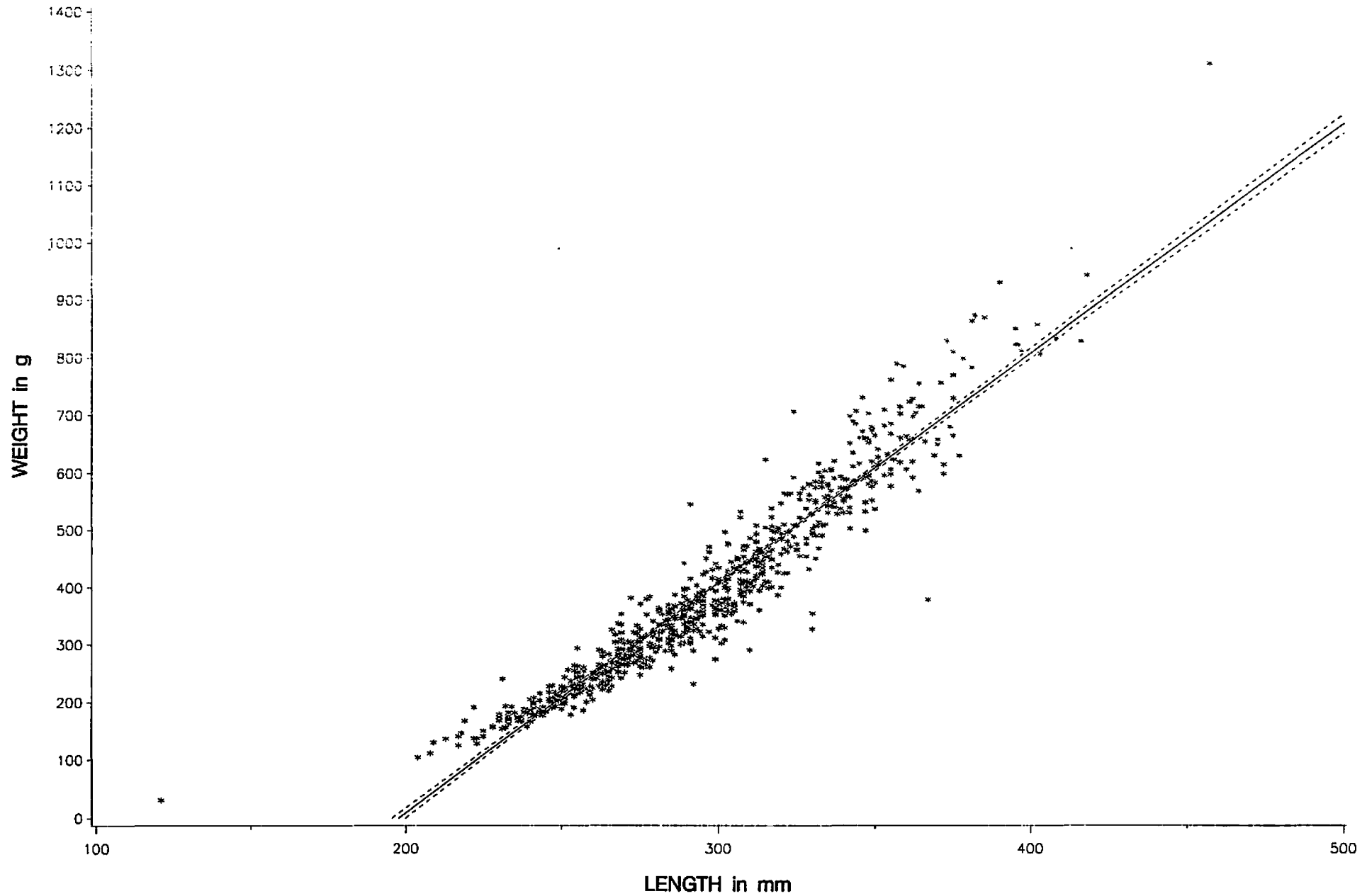


A-14

1997 Potomac River Pound Net Survey

Length-Weight Regression

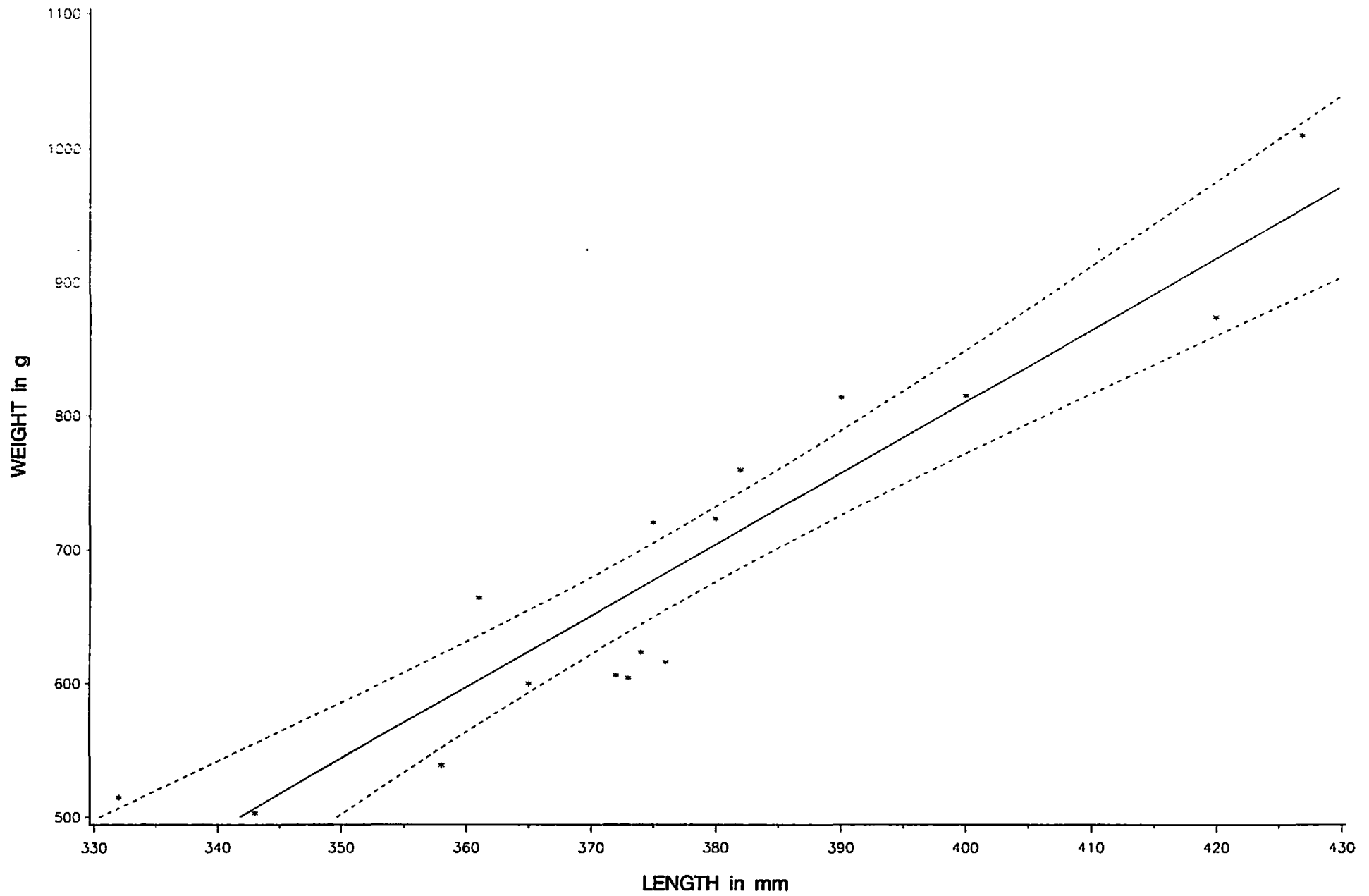
SPECIES NAME = Atlantic croaker



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=red drum

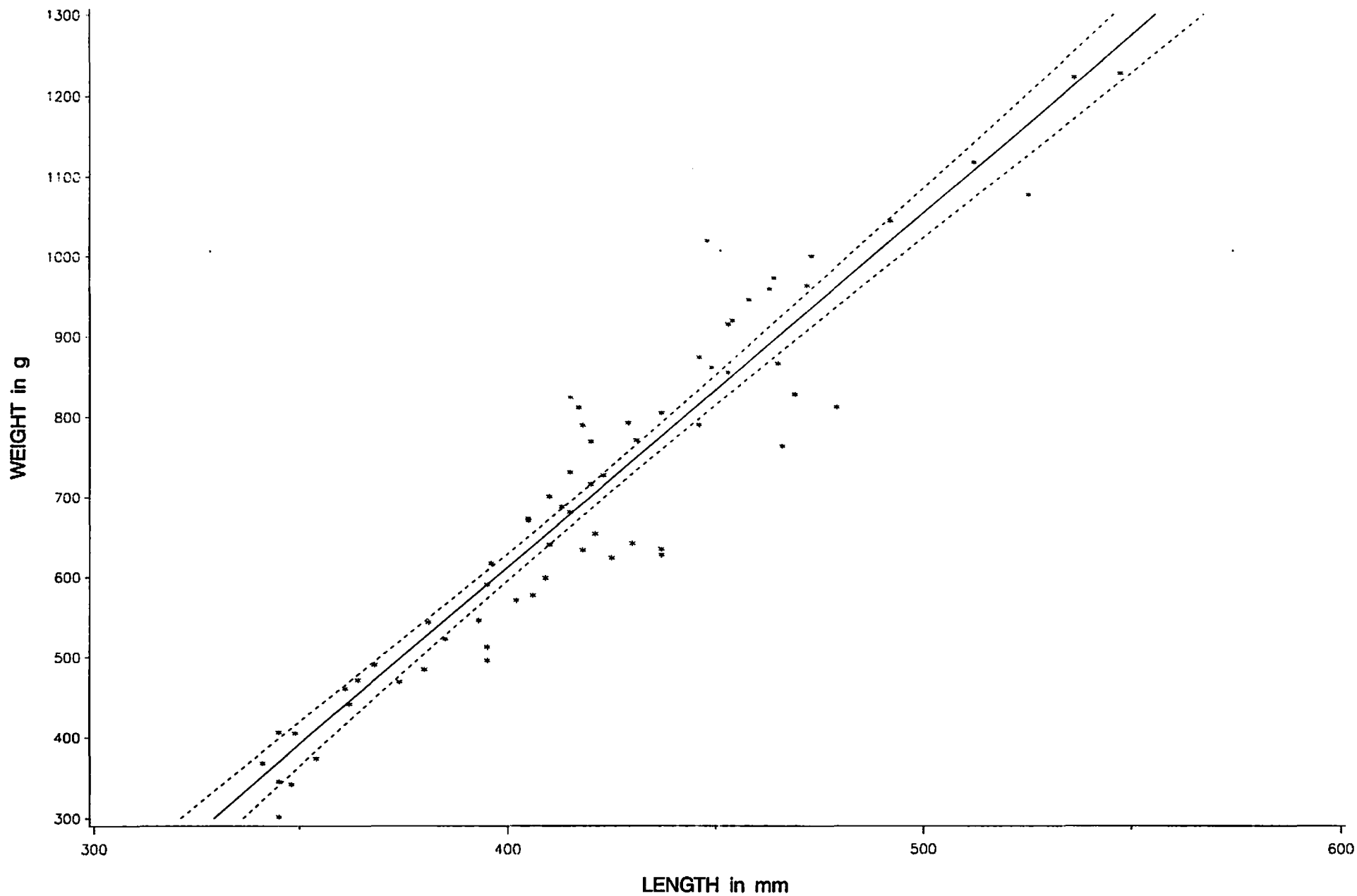


A-16

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME= Spanish mackerel

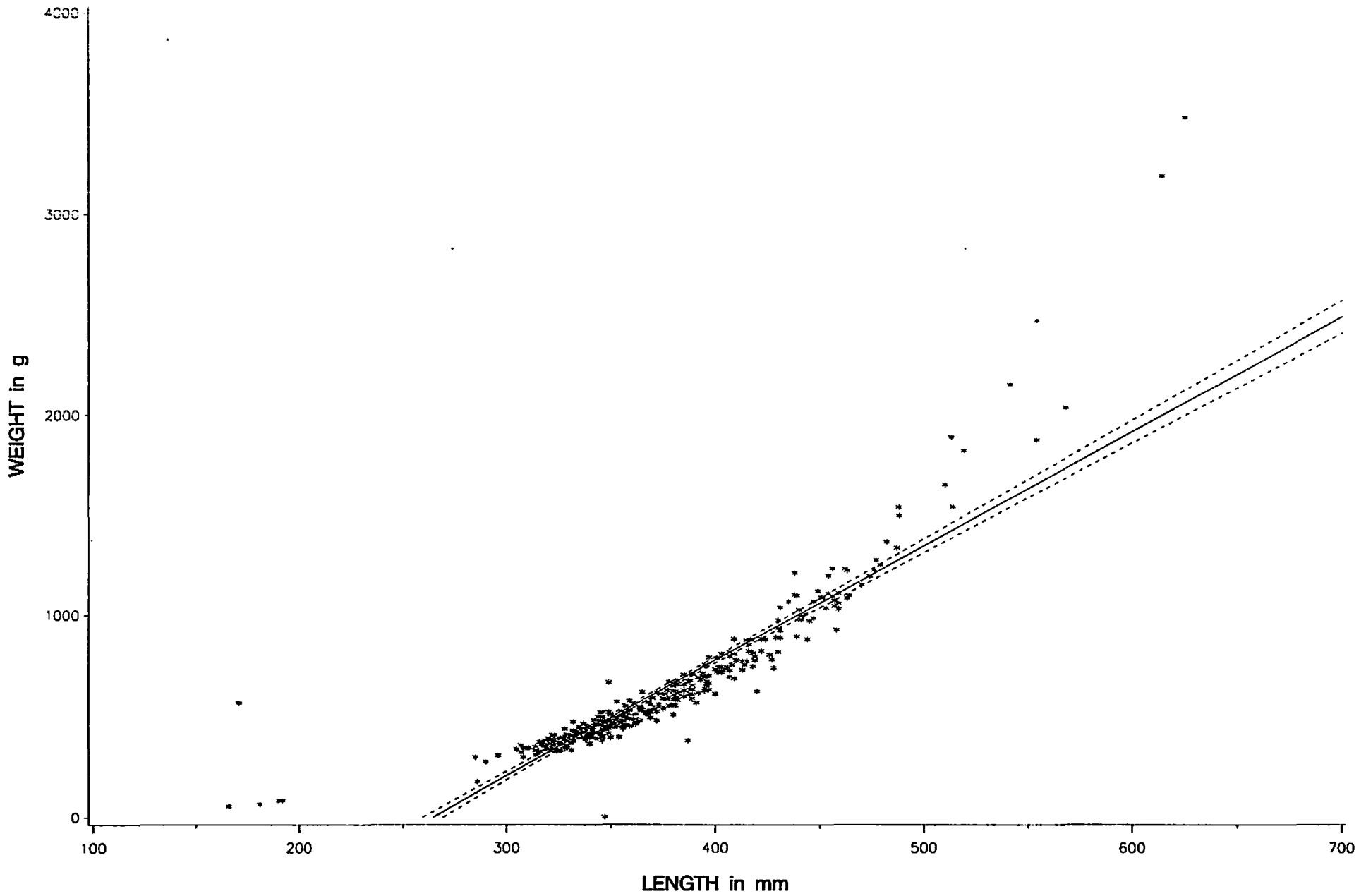


A-17

1997 Potomac River Pound Net Survey

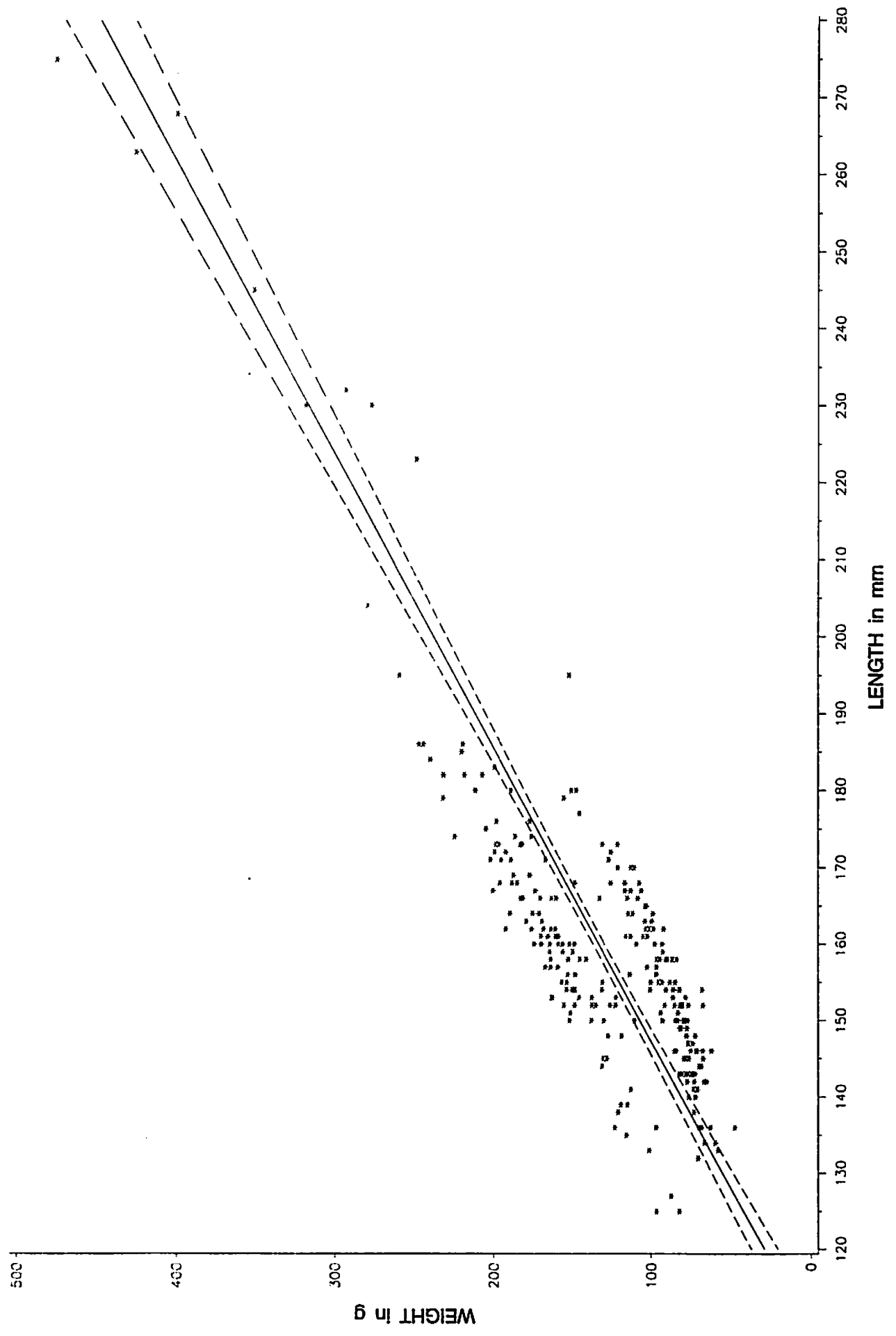
Length-Weight Regression

SPECIES NAME = summer flounder



1997 Potomac River Pound Net Survey

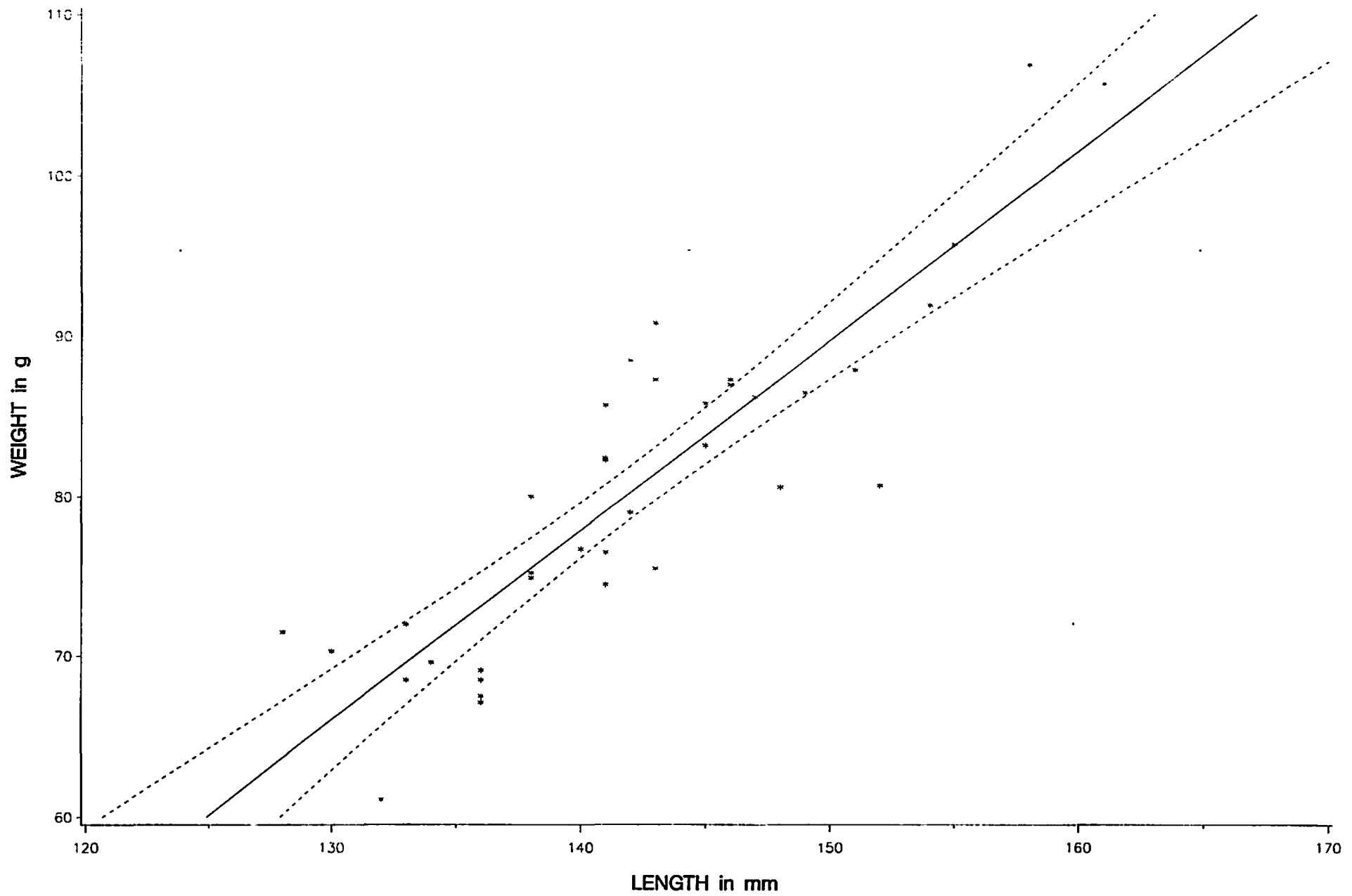
Length - Weight Regression
SPECIES NAME = butterfish



1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME = harvestfish

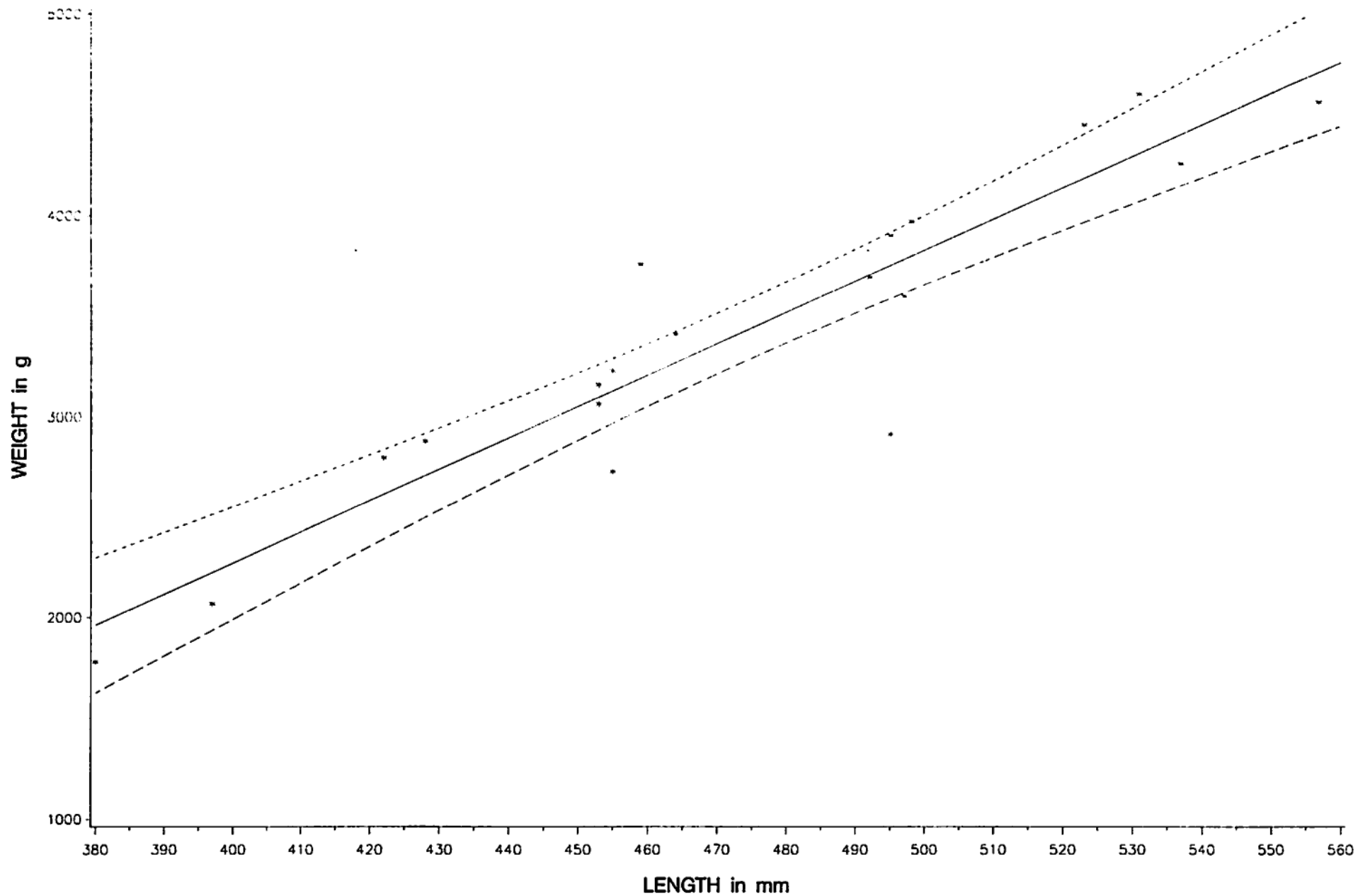


A-20

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME = Atlantic spadefish

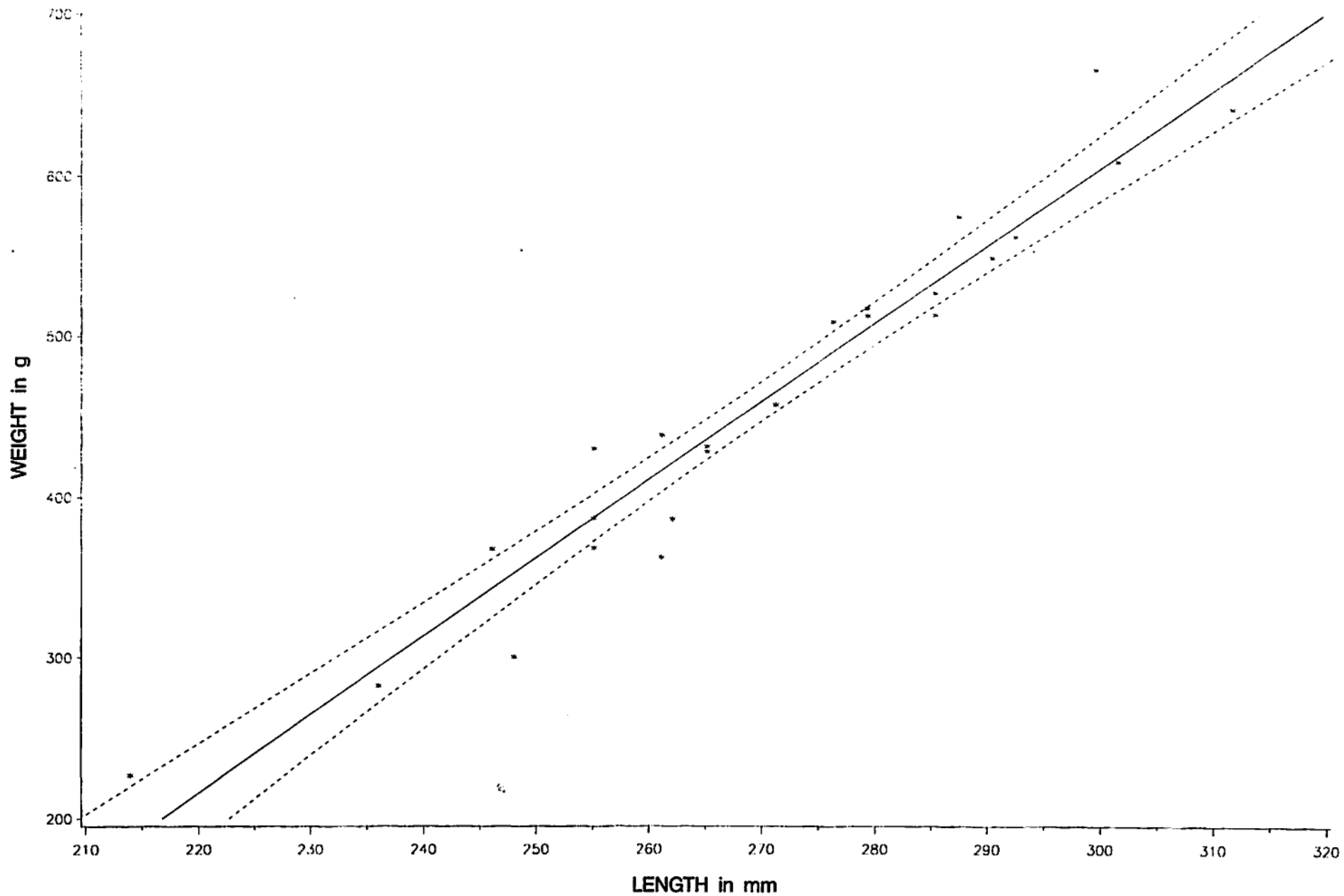


A-21

1997 Potomac River Pound Net Survey

Length-Weight Regression

SPECIES NAME=Florida pompano



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