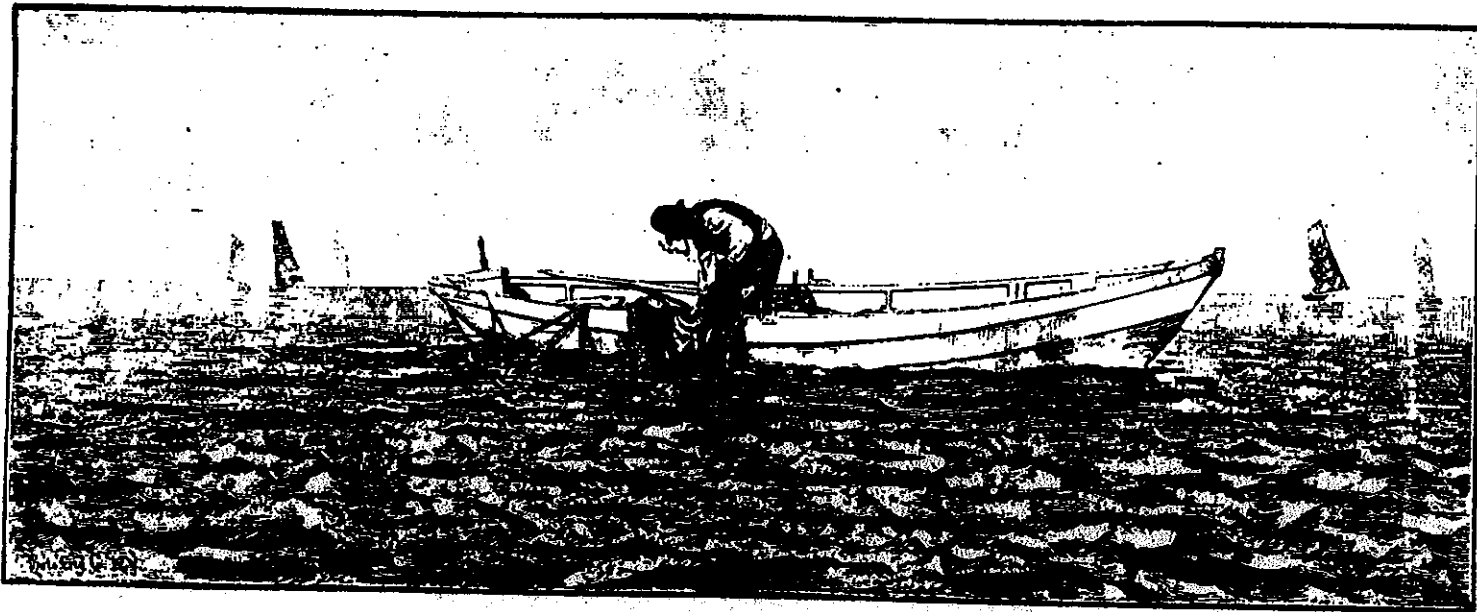


COMMERCIAL FINFISH AND CRUSTACEAN  
LANDINGS FROM PECONIC AND  
GARDINERS BAY, NEW YORK  
1980-1992



prepared by

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***Introduction***

The Peconic and Gardiners Bay estuary has been the site of an important commercial finfish fishery for over two hundred years. Early historical accounts of commercial fishing in New York's marine waters are concerned almost entirely with descriptions of industrial fisheries such as the Atlantic menhaden and whaling fleets, significant parts of which were based in the eastern Long Island ports of Sag Harbor, Greenport, and Amagansett (Reeves, 1885; Goode, 1887). Aside from these industrial fisheries, which will not be included in this report, the commercial foodfish fishery in eastern Long Island seems to have first appeared in the mid-1700's. A review of the historical development of commercial fishing in New York's marine waters reported that as early as 1750 Gardiners Bay was 'well established as a fishing center' (Dickinson, 1939). Dickinson described the existence of a 'growing inshore and bay fishery' on the east end of Long Island by the year 1798. Originally comprised of local farmers looking to augment their income by occasional fishing, these fisheries continued to expand into the 1800's in response to the increasing demand for food by a growing New York City (Reeves, 1885; Gabriel, 1921).

By the mid-1800's, extensive pound net, seine, fyke net, eel pot and spear fisheries were operating inside Peconic and Gardiners Bays. The predominant species taken by these fisheries included bluefish, spanish mackerel, eels, weakfish, flatfish, scup, butterfish, and striped bass (Goode, 1887). A later survey of Long Island's marine fisheries reported that by 1938 the Peconic and

Gardiners Bay area accounted for more than 23 per cent of the total New York landings of finfish<sup>1</sup> (Moore, 1939). This survey identified butterfish, scup, winter flounder, boston (Atlantic) mackerel, squid and weakfish as the primary species landed and pound nets, otter trawls and haul seines as the main gear types used to harvest these fish.

During the last 50 years, Peconic and Gardiners Bays landings have continued to play an important role in New York's commercial foodfish fisheries. This report summarizes recent commercial landings data from finfish and crustacean fisheries in the Peconic and Gardiners Bay estuary. It includes landings data on more than 55 species of finfish<sup>2</sup> and crustacea reported taken in Peconic and Gardiners bays during the years 1980 through 1992, and includes information on those gear types that are presently being used to commercially harvest these species. In addition, this report provides some background information on the fisheries laws and regulations that affect these landings.

### *Methods*

Recent commercial fisheries landings data for New York have been collected and compiled by the United States Department of Commerce, National Marine Fisheries Service (NMFS) or its predecessor, the United States Department of Interior's Fish and Wildlife Service (Bureau of Commercial Fisheries). NMFS employs port agents who identify landings made at major ports and other important landing sites using 'weighout' slips and interviews with vessel operators to obtain landings information. 'Weighout' records are copies of receipts that fishermen receive from buyers when they sell their fish, which includes information such as the date of purchase, species, pounds and value. Dockside interviews with vessel operators provide additional information on the fishing location, area of capture, gears fished, and fishing effort. A complete description of the NMFS commercial fisheries statistics data collection program is available in Burns et al. (1983).

Since landings data collected under this system depend to a large extent on the voluntary cooperation of fishermen and buyers, they are often susceptible to bias and inaccuracy. Problems with recall over time, intentional under and over reporting, insufficient coverage of some locations, direct purchase by restaurants, and consignment shipping that goes unreported-- all of these limit the reliability of this information. As a result, the commercial fisheries data in this report should almost

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<sup>1</sup>Excluding menhaden taken by purse seine.

<sup>2</sup>NYS Environmental Conservation Law (Section 11-0101 1b) defines "foodfish" as all species of edible fish and squid (cephalopoda); therefore, for the purposes of this report, the catch of squid was included. Purse seine landings of menhaden are not included. Landings of 'terrapins', presumably the diamondback terrapin (*Malaclemys centrata concentrica*) were also included as part of this report.

always be considered minimum estimates of actual landings. While for many reasons the absolute value of the landings data may be questionable, most fishery managers believe the data accurately reflects trends in the fishery.

Summary landings data for this report were obtained from two sources. New York commercial landings data for the years 1970 through 1992 were provided by the NMFS Data Management Support Unit<sup>3</sup>. Historical landings data for the years 1950 through 1970 were obtained by the authors directly from New York State Department of Environmental Conservation (NYSDEC) files. Commercial landings data for these earlier years were collected by the U.S. Department of the Interior's Fish and Wildlife Service (Bureau of Commercial Fisheries) in cooperation with the New York State Conservation Department's Bureau of Marine Fisheries.

Commercial fisheries landings data for New York are reported by county, species, water body, gear, pounds and value. For the purposes of this report, landings data for the Peconic and Gardiners Bay area were requested by water body codes. Since neither Peconic Bay nor Gardiners Bay has its own separate water body code, landings from Peconic and Gardiners bays have historically been combined and reported together under one single water body code.

It is important to note that the numerical codes used to identify the water body that includes Peconic and Gardiners bays have changed several times during the last few years. For 1980 through 1985, for example, the NMFS water body code for Peconic/Gardiners Bay area was 036; for 1989 through 1992, the NMFS water body code for Peconic/Gardiners area was changed to 148. Even more significantly, commercial landings data for the Peconic/Gardiners Bay area were not separately compiled or reported by NMFS for the years 1986 through 1988. During these three years, landings in Peconic and Gardiners Bay were lumped into water body code 611, which includes all of Long Island Sound. Therefore, commercial landings data specific to Peconic/Gardiners Bay are not available for the years 1986 through 1988.

In addition to changing the numerical designation of the Peconic/Gardiners Bay water body code in 1989, NMFS also modified the boundary lines for this area. For 1980 to 1985, the eastern boundary of Peconic/Gardiners Bay (water body code 036) was delineated as a line running generally southward from the west end of Fishers Island to the east side of Napeague Harbor (Goff Point). The northern boundary of this water body code ran from the east end of Plum Island heading due east for approximately four miles until it intersected with the eastern boundary line described above. For 1989 to 1992, the eastern boundary of Peconic/Gardiners Bay (water body code 148) was redefined and

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<sup>3</sup>Joan Palmer, Data Management Support, NMFS Woods Hole, Ma.

moved to a point starting at the east end of Plum Island running generally southeasterly to Montauk Point (see Figure 1). These boundary changes should be taken into consideration when comparing trends in historic landings data for this area.

### *Historical perspective.*

Historic commercial landings data collected by the National Marine Fisheries Service (or its predecessor agency) indicate that Peconic and Gardiners Bay estuary has produced an average of 2.1 million pounds annually of finfish and crustacean landings since 1950. Landings data depicted in Figure 2 show that beginning in 1950, Peconic/Gardiners Bay landings steadily increased through the early 1960's, peaking at almost 4 million pounds in 1963, then dropping off again until 1970. After 1970, landings increased rapidly until peaking again at a record high of 4.6 million pounds in 1973, followed by a gradual decrease in landings over the next decade to just under 2 million pounds in 1985. Prior to 1985, Peconic/Gardiners Bay area consistently contributed a minimum of least one million pounds of finfish and crustacean landings each year. In 1989, Peconic/Gardiners Bay landings dropped to the lowest on record, with reported landings of only 337,000 pounds. Landings for the last four years (1989-1992) average approximately 660,000 pounds, and include the three lowest years on record for this water body.

Landings data by species for the past forty years shows that certain species have consistently been important contributors to the commercial landings of Peconic and Gardiners Bays. Table 1 shows the general trend in total landings, top species, and gear type by decade, since the 1950's. The table indicates that both scup and Atlantic menhaden have consistently been in the top five commercially landed species (by weight) over the past forty years in Peconic/Gardiners Bay. In the 1950's and 1960's, swellfishes (northern puffer), winter flounder and butterfish were also taken in large amounts, but in more recent years, weakfish, bluefish and squid have for the most part replaced these species in total poundage.

Table 1 also shows a shift in the major gear types that has occurred in Peconic and Gardiners Bays over the last several decades. Pound nets, which had previously accounted for more than half of the total landings taken in the bays, now land only 34 per cent of the total catch. Catch by otter trawls increased from 14 per cent in the 1970's, to 20 per cent in the 1980's, and then dropped to only 5 per cent of the total catch in the last few years. Gill nets and haul seines have increased dramatically over the last twenty years and now each of these gears accounts for about 25 per cent of the total catch.

## ***Results and Discussion***

Table 2 lists the annual commercial landings, in pounds, of finfish, crustacea, and marine turtles reported taken in the Peconic/Gardiners Bay area for the years 1980 to 1992. These landings data indicate that Peconic/Gardiners Bay contributed 6.3 per cent of the total commercial landings of finfish and crustacea in New York during this time period. Since the 1980's, total landings in this water body have displayed an overall declining trend, starting with a high of 2.9 million pounds in 1980, and dropping to less than 340,000 pounds in 1989. However, recent landings appear to show that a slight recovery may be underway, with total landings on the rise during the last few years (Figure 3).

While the overall landings data clearly indicate a declining trend since 1980, a closer look at the annual landings data depicted in Figure 3 shows a dramatic difference in total landings since the mid-1980's. Prior to 1986, the average annual landings reported for the Peconic/Gardiners Bay area were 2.4 million pounds per year, which represented 9.4 per cent of the total New York landings. Since 1989 however, the average annual landings reported taken in Peconic/Gardiners Bay dropped to 658,000 pounds per year, a decline of almost 73 per cent. Total Peconic/Gardiners Bay landings for the years 1989 through 1992 (the most recent years available) accounted for only 2.2 per cent of the total New York landings. Since landings data for the intervening years (1986-1988) are not available, it is uncertain whether the reported decrease in landings was a sudden drop or a gradual decline.

The cause of the decline in landings in Peconic/Gardiners Bay is also unknown. One of the contributing factors may be the outbreak of the 'brown tide' organism (*Aureococcus anophagefferens*), which has reoccurred several times since first reported in Peconic Bay in 1985. While the 'brown tide' has been shown to have a devastating effect on shellfish stocks (Casper et al, 1987; Bricelj and Kuenster, 1989), its effect on finfish or crustacean resources is less well known (Castro and Cowen, 1989; Colvin and Koetzner, 1989; Dugay et al 1989; Mahoney, 1989; and Shima and Cowen, 1989). Other factors that may have contributed to fishery declines include a decrease in water quality, the loss of suitable habitat, shifts in fishing effort, changes in fish distribution or migratory patterns, implementation of fisheries laws and regulations that restrict catch and effort, or the collapse of overfished stocks. While it is likely that some combination of all these contributed to the observed decline, many of the species that have historically contributed to the commercial landings in Peconic and Gardiners Bay are now considered fully or over exploited. Recent reports on the status of coastal fishery resources indicate that the stocks of striped bass and longfin squid are fully exploited, and scup, bluefish, winter flounder, weakfish, summer flounder, Atlantic sturgeon, black sea bass and American lobster are overexploited species (ASMFC, 1994; NMFS, 1995).

### *Landings by species.*

For the years 1980 through 1992, total finfish and crustacean landings in Peconic/Gardiners Bay averaged 1.7 million pounds annually, of which 1.4 million pounds (83% by weight) were finfish species. The top five species by weight were scup or porgies (*Stenotomus chrysops*), Atlantic menhaden (*Brevoortia tyrannus*), bluefish (*Pomatomus saltatrix*), the longfin squid (*Loligo pealii*) and grey sea trout or weakfish (*Cynoscion regalis*). These five species accounted for more than 71 per cent of the total landings reported for the Peconic/Gardiners Bay area during the years 1980 through 1992. In addition to these five species, significant landings of Atlantic mackerel (*Scomber scombrus*), butterfish (*Peprilus triacanthus*), striped bass (*Morone saxatilis*), blackback or winter flounder (*Pleuronectes americanus*), and American lobster (*Homarus americanus*) were also reported taken during these years.

Figures 4 through 13 depict the trends in reported landings in the Peconic/Gardiners Bay area for each of the 10 species mentioned above for the years 1980 through 1992. Other species that have occasionally been reported taken in relatively large amounts (>50,000 pounds in any single year) in this water body include summer flounder (*Paralichthys dentatus*), swellfish or northern puffer (*Sphaeroides maculatus*), launces or sandlaunce (*Ammodytes americanus*) and silversides (*Menidia menidia*). Commercial landings for these species are depicted in Figures 14 through 17.

For certain species, the relative contribution (by weight) of Peconic/Gardiners Bay landings to the total New York landings of these species is significant. For example, for the years 1980 through 1992, over 58 per cent of the total New York landings of swellfishes or northern puffer was reported taken in Peconic/Gardiners Bay. Likewise, 52 per cent of the launces, 43 per cent of the menhaden, 26 per cent of the grey sea trout (weakfish), and 22 per cent of the silversides were reported harvested from the Peconic/Gardiners Bay area as well during these years.

### *Landings by gear.*

National Marine Fisheries Service landings data indicate 16 different gear categories were used to commercially harvest finfish and crustacea in the Peconic/Gardiners Bay area. Table 3 summarizes the percent contribution of each of these gear types to the total Peconic and Gardiners Bay landings during 1980 through 1992. Over 48 per cent of the reported landings were taken in pound or trap nets, 18 per cent by otter trawls, 16 per cent by gill nets, 9 per cent by hand line (commercial hook and line), and 6 per cent by haul seines. The remaining two per cent was taken by a variety of gear types, primarily lobster, eel and fish pots, spears, and fyke nets.

For pound nets, gill nets, haul seines and hand lines, the Peconic and Gardiners Bay estuary is an important location for the use of these gears (Table 4). Peconic and Gardiners Bay pound nets, for

example, account for over 56 per cent of the total pound net landings in New York since 1980. In addition, 20 per cent of all gill net landings and 12 per cent of all haul seine landings in New York are reported taken in Peconic/Gardiners Bays.

### *State fisheries laws and regulations*

Fisheries laws that affect New York State's marine finfish and crustaceans resources are found in Articles 11 and 13 of the Environmental Conservation Law of New York. Regulations that apply to New York's marine finfish and crustacean fisheries can be found in the Title 6 of the Codes, Rules and Regulations of the State of New York (NYCRR) Sections 11, 40 and 44. While some laws and regulations (such as minimum size limits, season closures, gear restrictions and trip and possession limits) affect fisheries throughout the marine district, there are several laws in place that are specific to the Peconic and Gardiners Bay area. In general, these laws prohibit the use of trawls<sup>4</sup> and gill nets in Peconic Bays and adjacent bays and harbors west of Shelter Island; prohibit the use of haul seines on weekends in those same areas; limit the length and minimum mesh size of haul seines that can be used in Peconic Bays; and require a special NYSDEC permit for each fish pound or trap net operated in Peconic Bays. The specific state laws that apply to the Peconic and Gardiners bay area fisheries have been excerpted from Article 13 of the Environmental Conservation Law of New York and are included in Appendix A. Although it is difficult to quantify the effects of these laws and regulations, it is likely that the increasingly restrictive laws and regulations that have been implemented in Peconic and Gardiners Bays over the last few decades have contributed to the overall decline in landings and the observed shifts in landings by gear type described in this report.

### *Participants*

Since 1988, New York State has required a commercial fishing license for all fishermen who take and land foodfish for commercial purposes from the waters of the marine and coastal district. An average of 1,390 New York State Resident Commercial Foodfish licenses were issued annually for the years 1988 through 1991. Based on information obtained as part of the license application, almost one third of New York's commercial fishermen reported that they fished in the waters of Peconic or Gardiners Bay during these years. Table 5 shows an annual breakdown of NYS Commercial Foodfish License holders by area fished, and indicates that the number of commercial fishermen that fish

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<sup>4</sup>This prohibition on trawling west of Shelter Island was originally a seasonal ban which prohibited trawling from April 15 to the first Monday in October. The NYS Legislature enacted the year-round prohibition on trawling in Peconic Bays on June 19, 1994.

Peconic/Gardiners Bay has been on the increase the last few years.

*Summary*

The Peconic and Gardiners Bay estuary has historically provided significant contributions to the marine foodfish landings of New York State. This estuary currently supports important commercial fisheries for more than thirty species of finfish and crustacea, harvested by over four hundred licensed fishermen using a wide variety of gear types. Recent landings data has documented an overall decline in the total catch of fish and crustacea within the estuary, particularly during the last few years. While the cause of this downward trend is uncertain, it is likely that coastal overfishing, habitat degradation, and the outbreak of the 'brown tide' have all contributed to the observed declines. Efforts directed at improving habitat protection, enhancing interstate and interjurisdictional management of fishery resources, and preventing future outbreaks of the 'brown tide' organism could be expected to provide significantly increased economic benefits associated with the harvest and sale of the marine fishery resources of the Peconic and Gardiners Bay estuary.

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**Table 1. Trends in total landings, top species, and gear types for Peconic/Gardiners Bay.**

		1950's	1960's	1970's	1980's	1990's (thru 1992)
<b>Average Annual Landings in Peconic/Gardiners Bay (pounds)</b>		2,233,634	2,576,952	3,090,330	1,364,255	765,702
<b>Top Five Species in Peconic/Gardiners Bay (by weight)</b>	1	scup	scup	scup	scup	menhaden
	2	swellfishes	swellfishes	menhaden	squid (loligo)	bluefish
	3	menhaden	winter flounder	weakfish	bluefish	squid (loligo)
	4	winter flounder	menhaden	bluefish	menhaden	lobster
	5	butterfish	butterfish	striped bass	weakfish	scup
<b>Landings By Gear Types in Peconic/Gardiners Bay (by % landings)</b>	Pound net	n/a	n/a	55%	51%	34%
	Otter trawl	n/a	n/a	14%	20%	5%
	Haul seine	n/a	n/a	12%	3%	25%
	Hand line	n/a	n/a	6%	10%	1%
	Gill net	n/a	n/a	6%	15%	23%

Table 2. Commercial landings, in pounds, of finfish, crustacea, and marine turtles in Peconic/Gardiners Bay area, 1980-1992\*.  
Source: NMFS Fishery Statistics

Species	1980	1981	1982	1983	1984	1985 //	1988	1990	1991	1992
Alewives	100	0	1,400	0	0	0	0	0	0	0
Anglerfish	900	500	8,000	0	1,300	300	0	0	0	8,151
Bluefish	266,900	222,800	286,300	347,400	358,800	506,200	0	79,700	80,100	245,842
Bonito	9,200	11,500	12,000	13,500	14,300	4,100	0	0	0	15,200
Butterfish	122,900	172,300	74,500	122,400	176,300	138,700	0	22,500	8,000	24,342
Carp	0	0	0	0	0	0	3,800	0	0	0
Cod, atlantic	0	0	0	0	0	0	3,500	0	0	8,321
Crevalla	0	0	0	400	0	0	0	0	0	3,260
Cunner	0	0	0	0	100	0	0	0	0	0
Eels, common	18,100	24,800	10,100	7,100	28,500	7,900	0	0	2,400	970
Eels, conger	500	0	0	100	0	700	0	3,800	0	3,718
Finfish, unc, bait	0	0	0	0	0	0	3,000	0	0	0
Flounder, blackback	107,500	76,200	56,000	91,700	124,200	97,600	5,100	6,200	5,800	27,844
Flounder, fluke	15,400	11,200	13,500	35,100	54,600	44,400	0	4,600	7,300	17,600
Flounder, sand	0	0	800	100	400	200	0	0	0	0
Flounder, yellowtail	0	0	0	0	0	0	2,500	0	700	0
Hake, rd	500	200	300	100	0	0	0	0	0	2,260
Herring, sea	3,700	4,700	3,100	200	0	0	1,000	0	0	2,458
Herring, unc	0	0	4,200	1,000	2,600	0	0	0	0	0
King mackerel	0	0	0	0	0	0	0	0	0	940
King whiting	14,500	100	200	0	0	0	0	0	0	0
Launces	44,300	3,900	13,400	10,100	6,700	0	51,700	97,500	300	0
Mackerel, atlantic	155,200	98,500	292,900	238,800	104,100	61,700	0	700	2,300	27,273
Menhaden, atlantic	744,300	297,200	184,100	61,000	300,900	305,000	60,000	127,000	103,500	303,050
Mullet, black	600	200	0	0	0	0	0	0	0	0
Mullet, striped	0	0	2,100	3,500	500	1,600	0	0	0	0
Salmon	0	0	0	0	200	300	0	0	0	0
Scups or porgies	586,000	694,300	680,100	590,000	427,400	247,300	0	52,400	45,300	38,139
Sea basses, black	2,500	6,100	1,600	0	0	300	0	0	400	1,935
Sea robins	200	1,600	800	1,200	3,300	3,500	0	0	400	2,050
Sea trout, grey	271,300	300,000	401,300	392,300	134,000	74,300	0	0	11,200	45,107
Shad	1,000	1,200	3,200	2,000	100	800	900	2,800	4,200	13,486
Sharks, dogfish	19,900	4,500	35,100	14,300	11,700	19,300	0	2,300	800	19,755
Sharks, unc	200	0	0	0	0	0	0	0	0	0
Silversides	29,700	9,200	6,200	200	1,800	0	65,000	0	6,100	0
Skates	5,900	1,600	3,400	200	200	0	0	0	0	20,048
Spanish mackerel	100	400	700	300	100	0	0	0	26,800	13,080
Spot	1,100	0	0	0	0	0	0	0	0	0
Striped bass	131,300	144,000	144,200	76,700	36,800	100,000	0	18,600	13,600	26,115
Sturgeons, common	0	0	2,600	0	100	0	0	1,600	2,800	4,176
Swellfishes	300	4,700	7,800	6,500	8,000	101,100	0	1,600	0	31,800
Tautog	32,400	13,100	25,600	21,900	27,000	17,700	0	4,500	6,600	5,100
Toadfish, oyster	0	0	0	0	0	0	0	0	0	9,000
Tomcods	700	100	1,000	100	300	100	0	0	0	0
Tuna, albacore	0	0	0	500	0	0	0	0	0	5,313
Tuna, bluefin	0	23,100	0	0	0	0	0	0	0	0
Tuna, little	500	18,900	1,300	14,500	1,800	8,000	0	0	600	0
Tuna, yellowfin	0	0	0	0	0	400	0	0	0	0
White perch	1,700	200	2,400	1,600	2,700	2,800	3,900	0	0	0
Whiting	2,500	4,000	600	200	1,400	1,300	2,700	1,800	5,300	24,068
Crabs, blue	0	600	0	0	0	0	0	400	13,300	28,840
Crabs, green	0	0	0	0	0	0	0	0	2,800	0
Horseshoe crabs	0	0	2,500	0	0	0	0	0	0	0
Lobster, american	1,600	700	900	100	0	0	109,000	2,350	142,100	40,935
Mantis shrimp	0	0	0	0	0	0	0	0	0	3,000
Squid, short finned	7,400	0	0	0	0	0	0	0	0	0
Squid, long finned	321,400	145,200	155,200	819,300	433,600	157,600	25,000	224,900	52,800	62,792
Terrapin	0	300	0	100	2,500	0	0	0	0	0
<b>Total</b>	<b>2,902,300</b>	<b>2,297,900</b>	<b>2,427,400</b>	<b>2,674,500</b>	<b>2,264,300</b>	<b>1,903,200 //</b>	<b>337,200</b>	<b>665,250</b>	<b>655,900</b>	<b>1,085,867</b>
<b>Total finfish</b>	<b>2,571,900</b>	<b>2,151,100</b>	<b>2,288,800</b>	<b>2,055,000</b>	<b>1,828,200</b>	<b>1,745,600 //</b>	<b>203,200</b>	<b>427,600</b>	<b>344,900</b>	<b>950,390</b>
<b>Total crustaceans</b>	<b>1,600</b>	<b>1,300</b>	<b>3,400</b>	<b>100</b>	<b>0</b>	<b>0 //</b>	<b>109,000</b>	<b>2,750</b>	<b>158,200</b>	<b>72,775</b>
<b>Total squid</b>	<b>328,800</b>	<b>145,200</b>	<b>155,200</b>	<b>819,300</b>	<b>433,600</b>	<b>157,600 //</b>	<b>25,000</b>	<b>224,900</b>	<b>52,800</b>	<b>62,792</b>
<b>Total turtles</b>	<b>0</b>	<b>300</b>	<b>0</b>	<b>100</b>	<b>2,500</b>	<b>0 //</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>

\*Note: No data available for 1986 through 1988.

**Table 3. Peconic/Gardiners Bay landings by gear, 1980-1992. Source: NMFS Fishery Statistics**

Gear Type	Average Annual Landings (pounds)	%
Pound net	817,361	48.7
Otter trawl, fish	308,961	18.4
Gill net, other	203,320	12.1
Hand line	156,797	9.3
Haul seine	97,091	5.8
Gill net, sink	43,497	2.6
Gill net, runaround	21,650	1.3
Pots, lobster	17,519	1.0
Pots, eel	4,140	0.2
Spears	3,540	0.2
Fyke nets	2,860	0.2
Pots, fish	900	0.1
Pots, crab	500	0.0
Longline	430	0.0
Dredge, crab	40	0.0
Diving gear	8	0.0

**Table 4. Contribution of Peconic/Gardiners Bay landings to total New York landings, by gear 1980-1992. Source: NMFS Fishery statistics**

Gear Type	Average annual Peconic/Gardiners Bay landings (pounds)	Average annual New York landings (pounds)	Per Cent Contribution (%)
Pound net	817,361	1,455,578	56.2%
Otter trawl, fish	308,961	20,015,756	1.5%
Gill net	268,467	1,349,563	19.9%
Hand line	156,797	1,173,657	13.4%
Haul seine	97,091	826,731	11.7%
Pots, eel	4,140	109,156	3.8%
Fyke nets	2,860	37,186	7.7%

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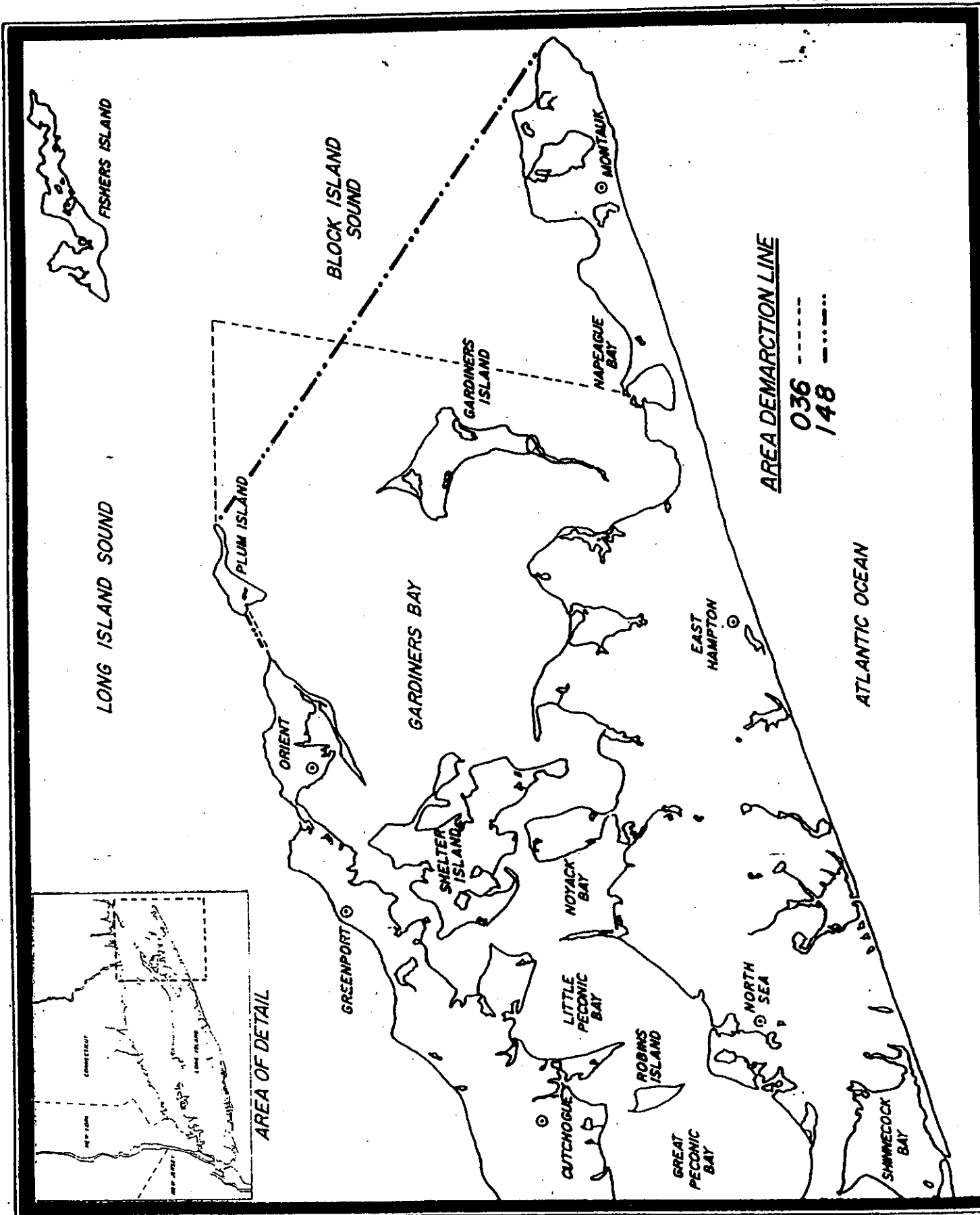
**Table 5. New York State Resident Commercial Foodfish Licenses, by area fished\* (from Salz, 1988, 1989, 1991 and Jones and Salz, 1990).**

	<b>1988</b>	<b>1989</b>	<b>1990</b>	<b>1991</b>
<b>Total Number of Licenses Sold:</b>	<b>1,574</b>	<b>1,232</b>	<b>1,347</b>	<b>1,406</b>
<b>Area Reported Fished:</b>				
<b>Long Island Sound</b>	625	499	498	557
<b>Atlantic Ocean</b>	1,889	1,270	1,381	1,428
<b>Block Island Sound</b>	572	404	401	450
<b>Peconic/Gardiners Bay</b>	427	312	375	401
<b>South Shore Bays</b>	420	248	267	305
<b>Jamaica Bay, NY Harbor</b>	136	65	98	95
<b>Hudson River</b>	26	21	22	25

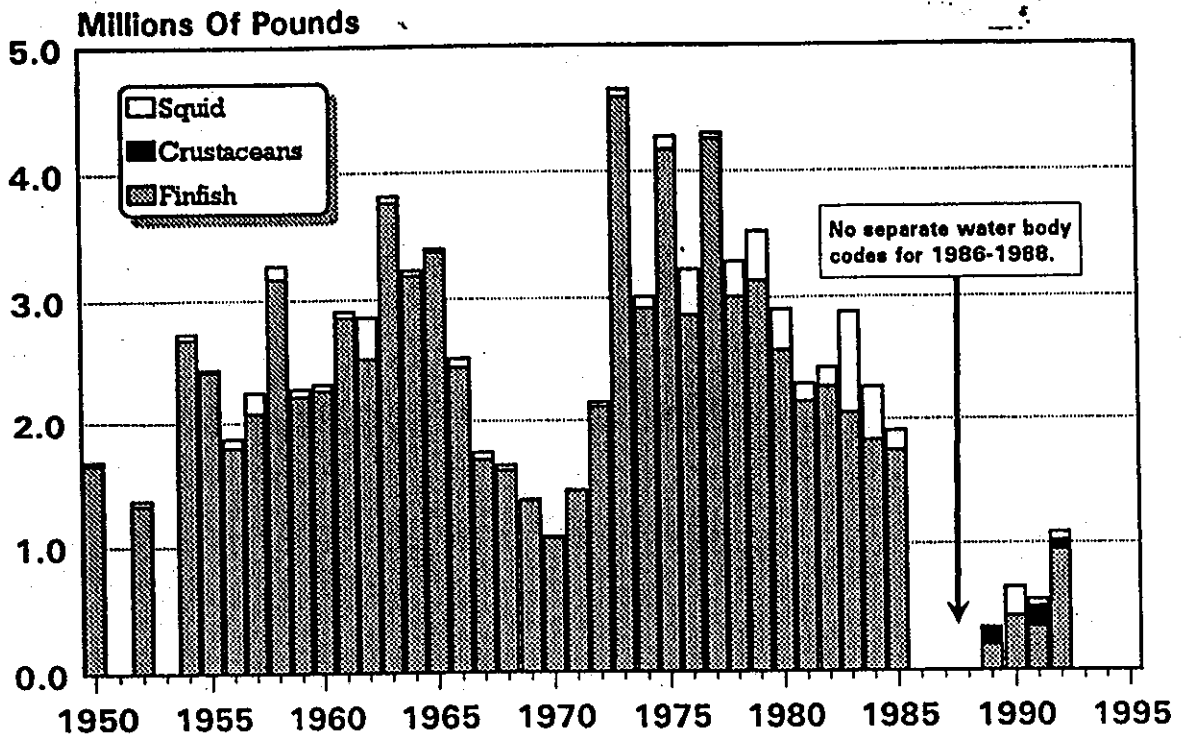
*\*Note: Since some fishermen fish multiple areas, totals do not add up.*

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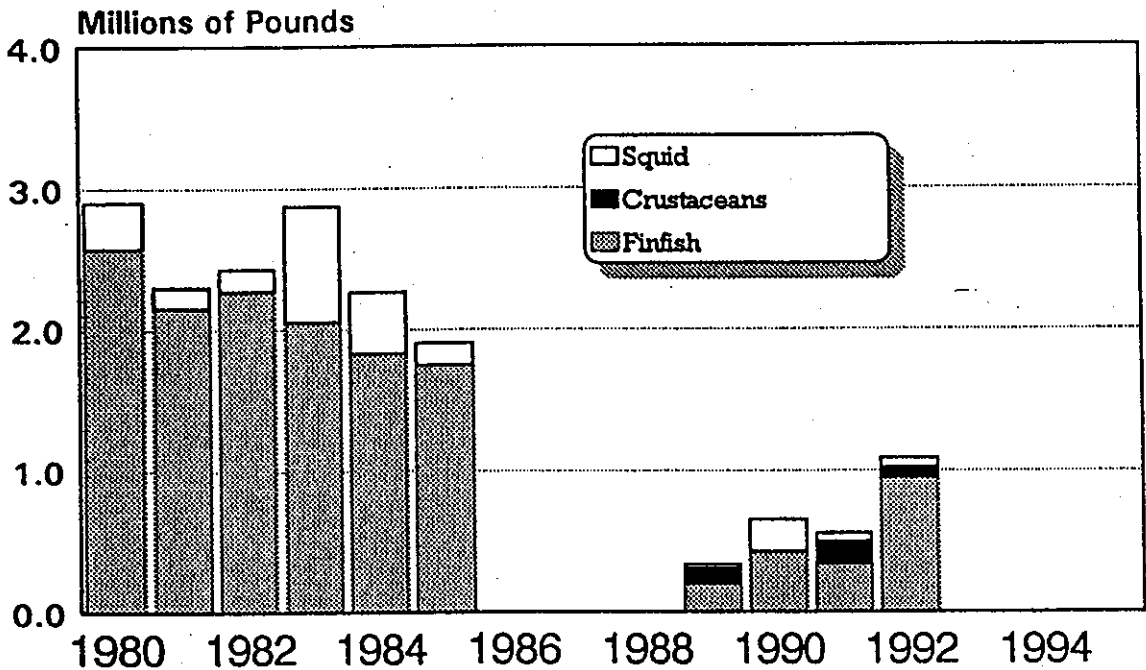
FIGURE 1



**Figure 2. Historic commercial landings of finfish, crustacea, and squid\* in the Peconic/Gardiners Bay area, 1950-1992.**



**Figure 3. Recent commercial landings of finfish, crustacea, and squid\* in the Peconic/Gardiners Bay area, 1980-1992.**

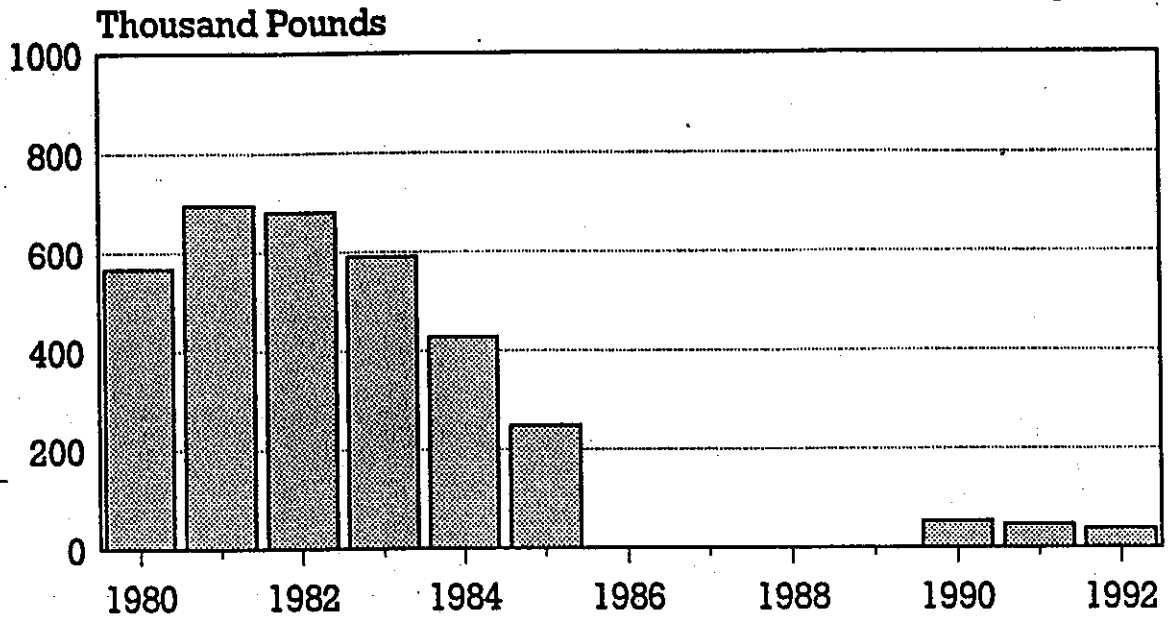


\*Note: 1. As reported by NMFS commercial landings data.  
 2. Does not include menhaden purse seine landings.

## *Scup Commercial Landings*

Peconic/Gardiners Bay 1980-1992

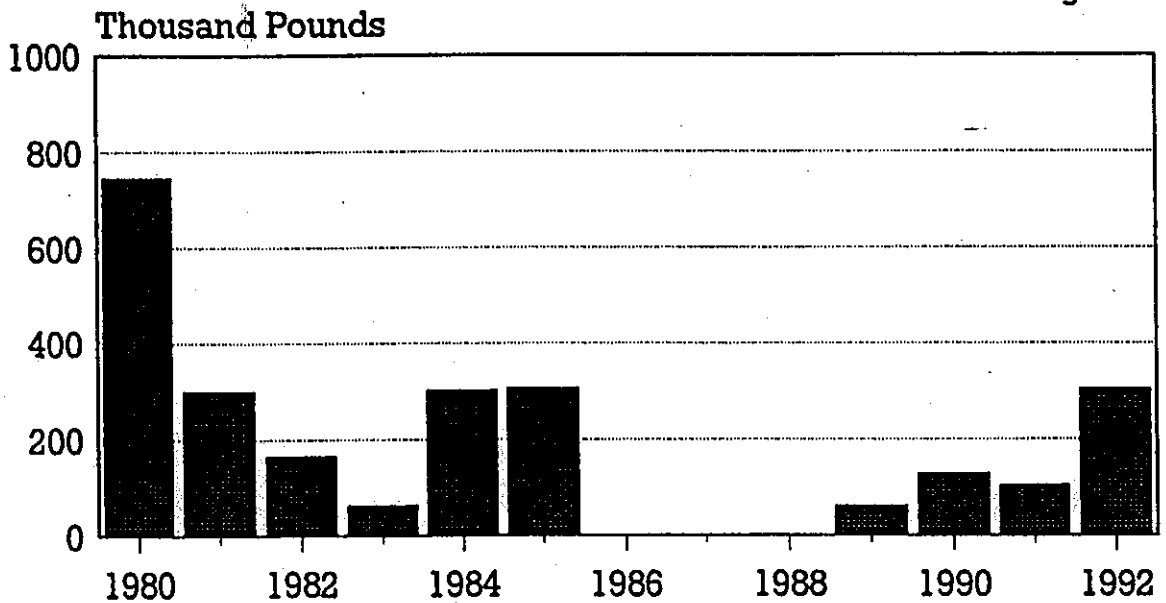
Figure 4



## *Menhaden Commercial Landings*

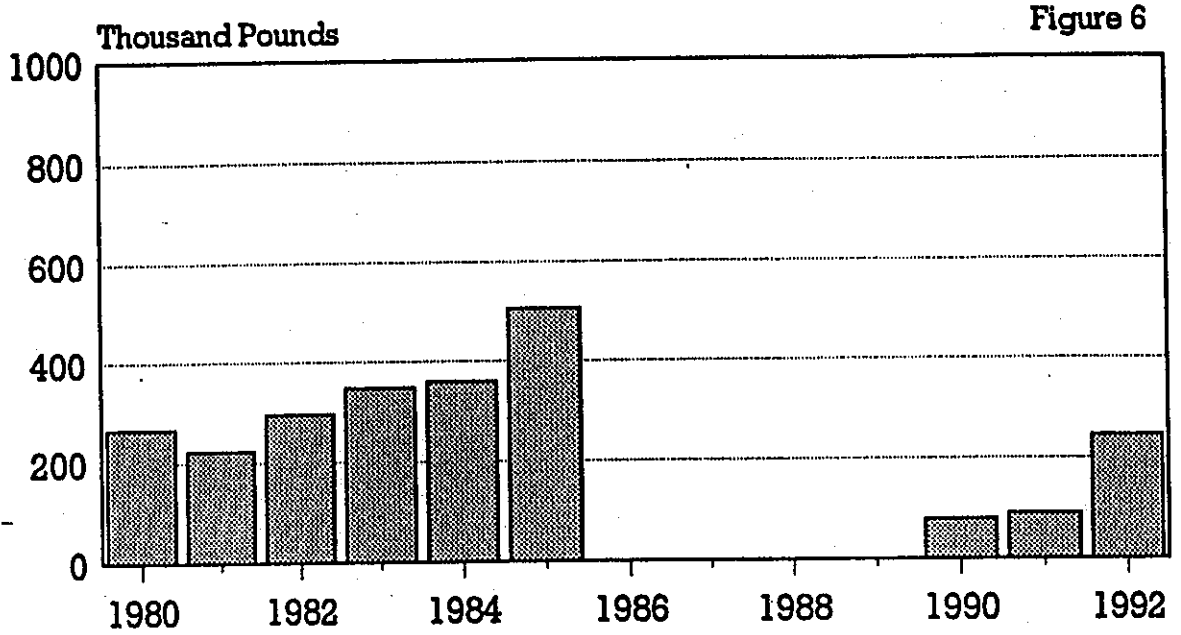
Peconic/Gardiners Bay 1980-1992

Figure 5



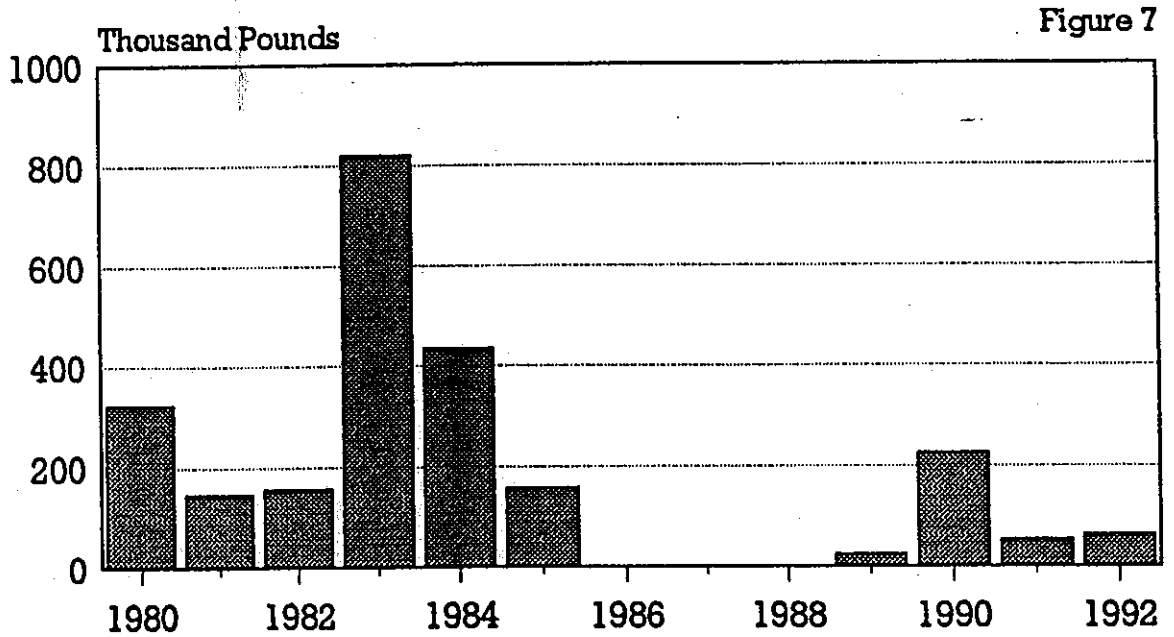
## *Bluefish Commercial Landings*

Peconic/Gardiners Bay 1980-1992



## *Long-finned Squid Commercial Landings*

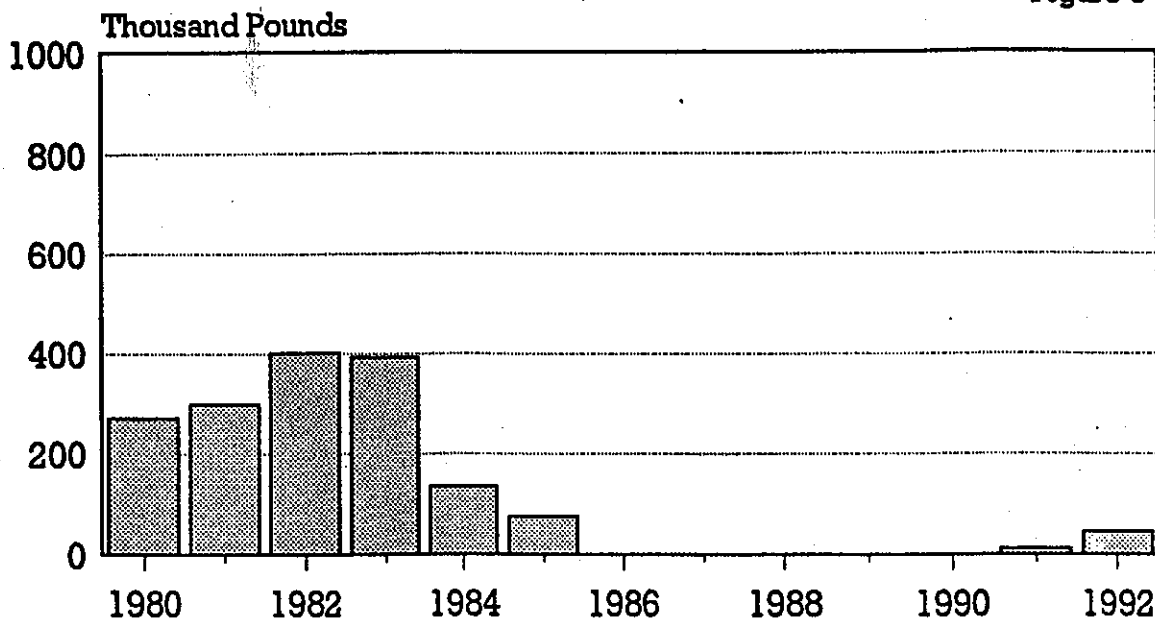
Peconic/Gardiners Bay 1980-1992



# Grey Sea Trout (Weakfish) Commercial Landings

Peconic/Gardiners Bay 1980-1992

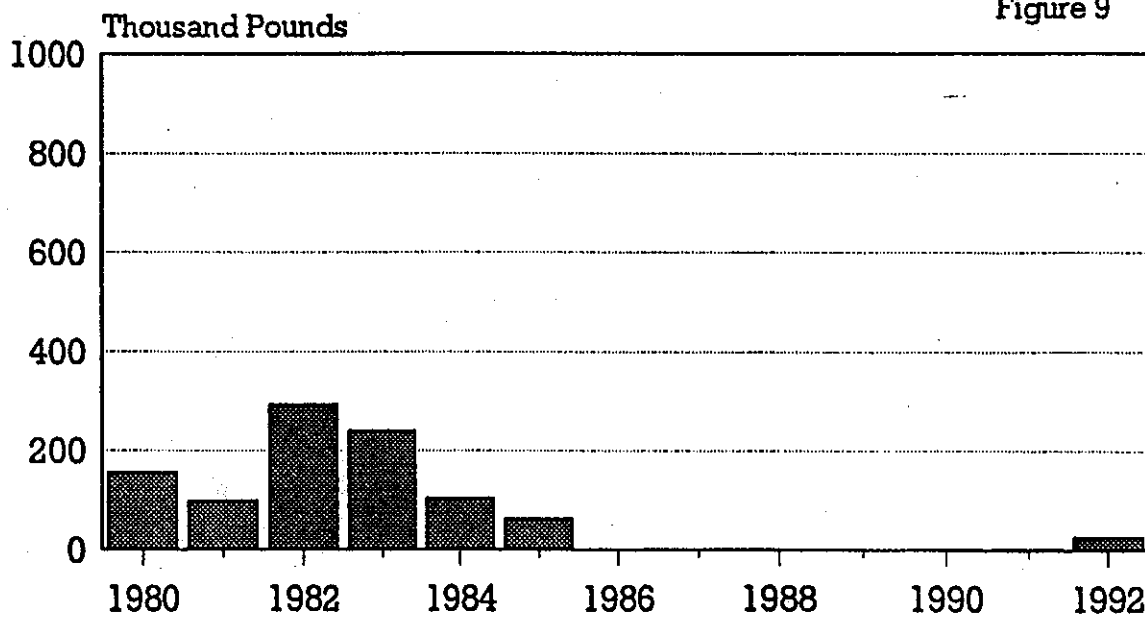
Figure 8



# Atlantic Mackerel Commercial Landings

Peconic/Gardiners Bay 1980-1992

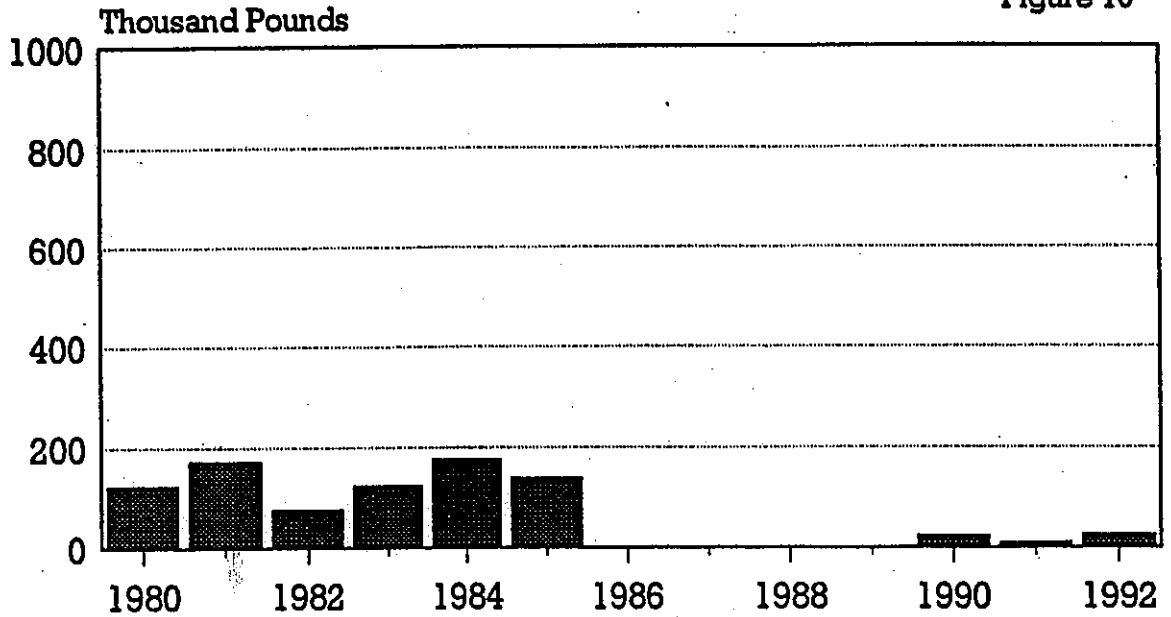
Figure 9



## *Butterfish Commercial Landings*

Peconic/Gardiners Bay 1980-1992

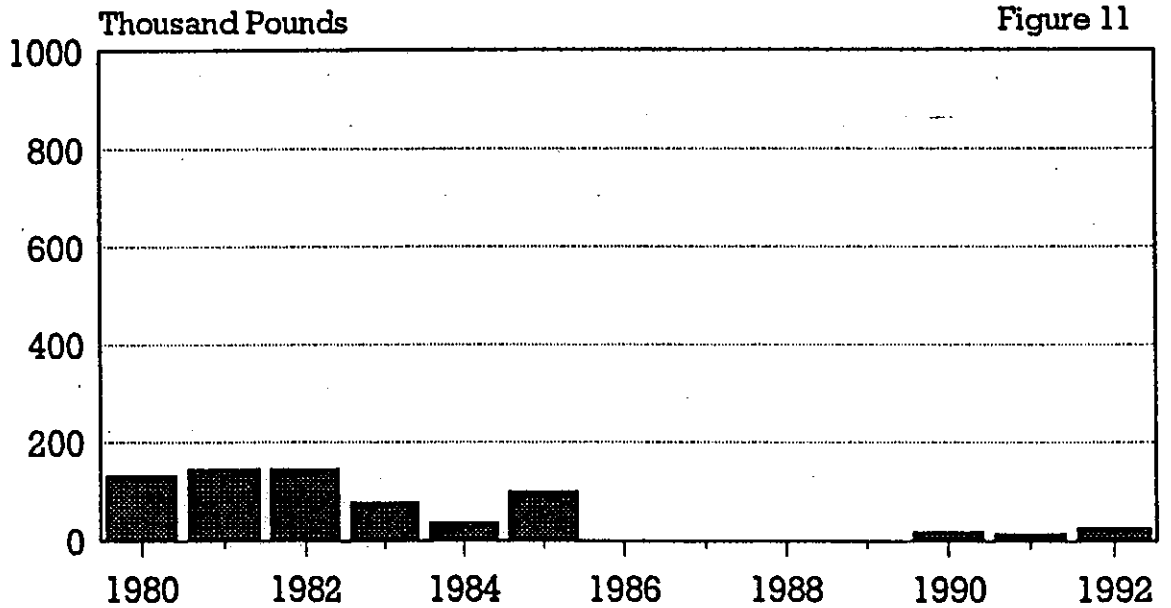
Figure 10



## *Striped Bass Commercial Landings*

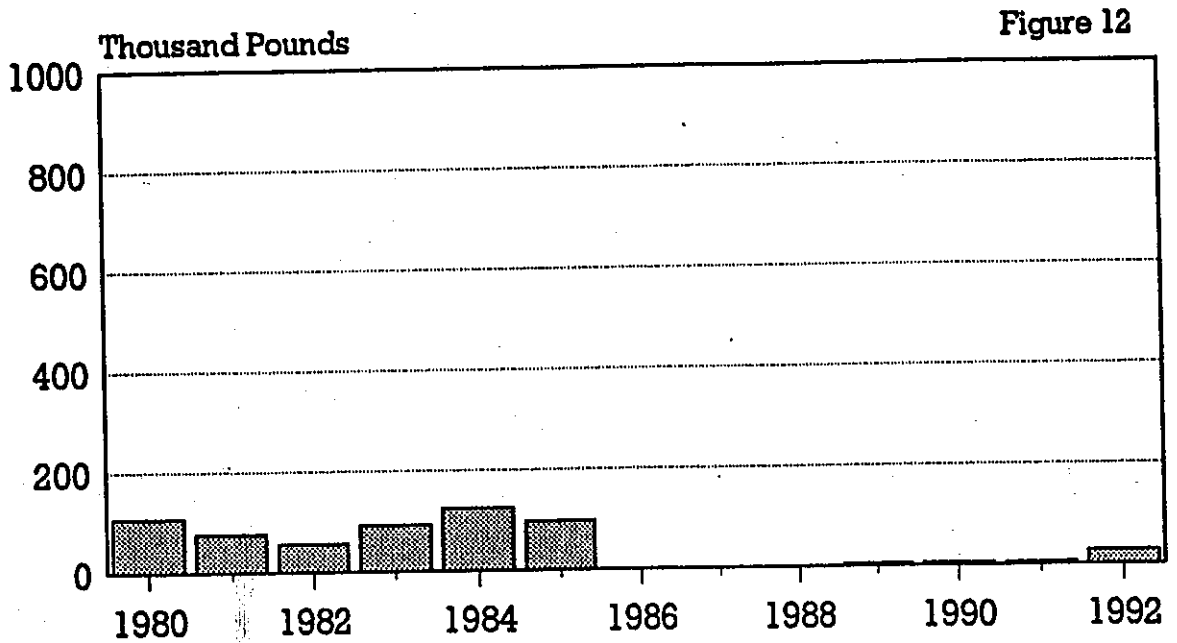
Peconic/Gardiners Bay 1980-1992

Figure 11



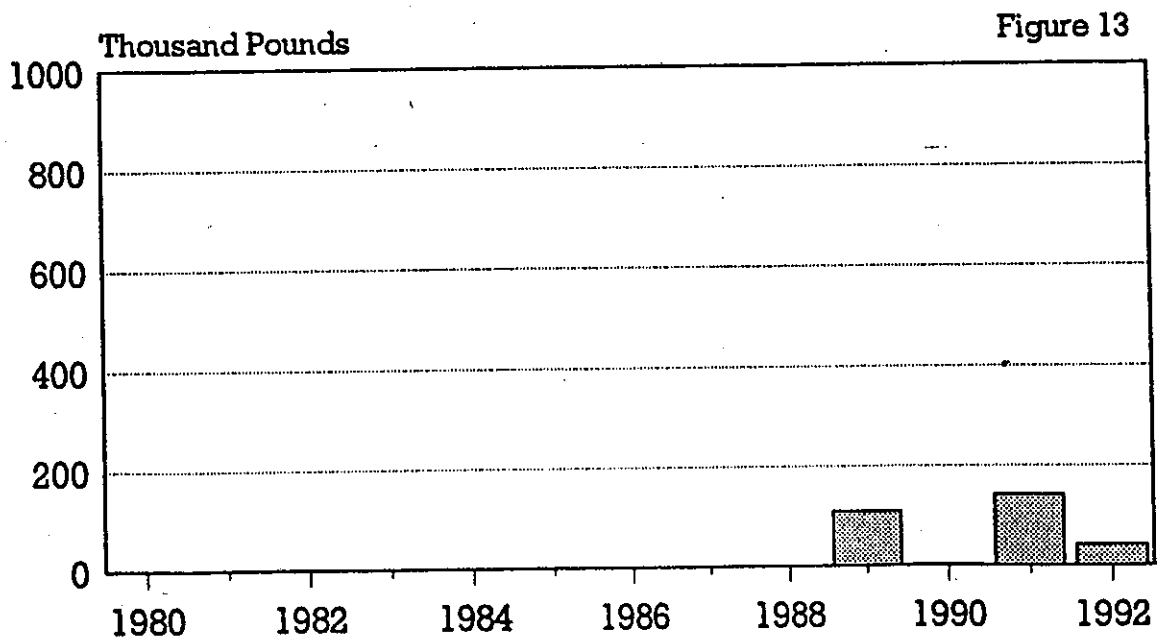
## *Blackback (Winter) Flounder Commercial Landings*

Peconic/Gardiners Bay 1980-1992



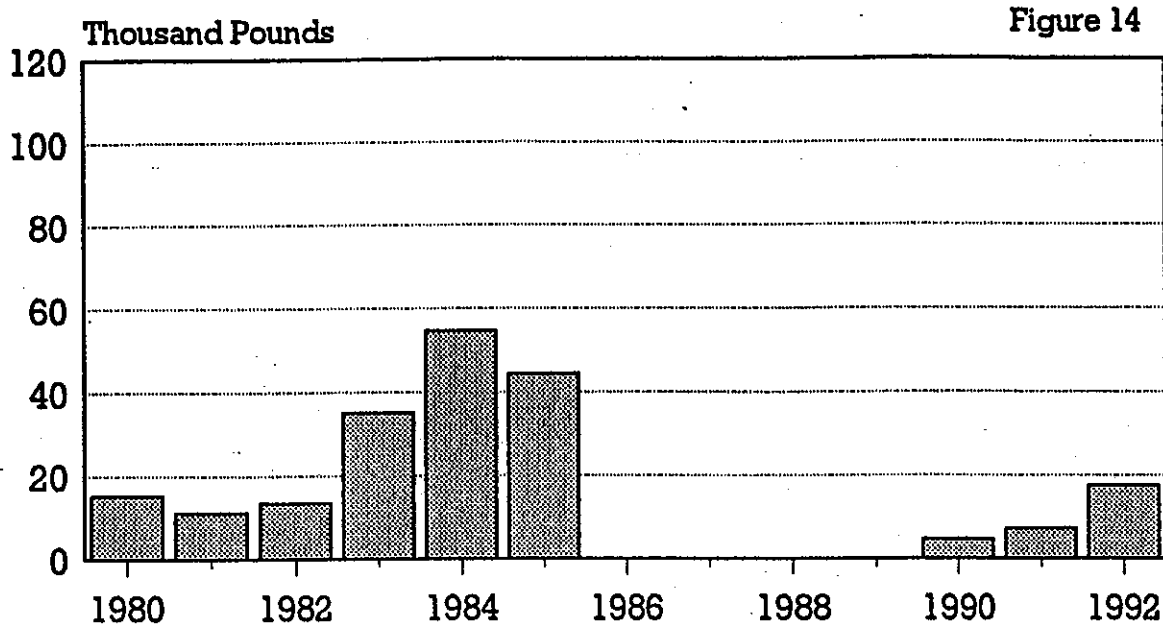
## *American Lobster Commercial Landings*

Peconic/Gardiners Bay 1980-1992



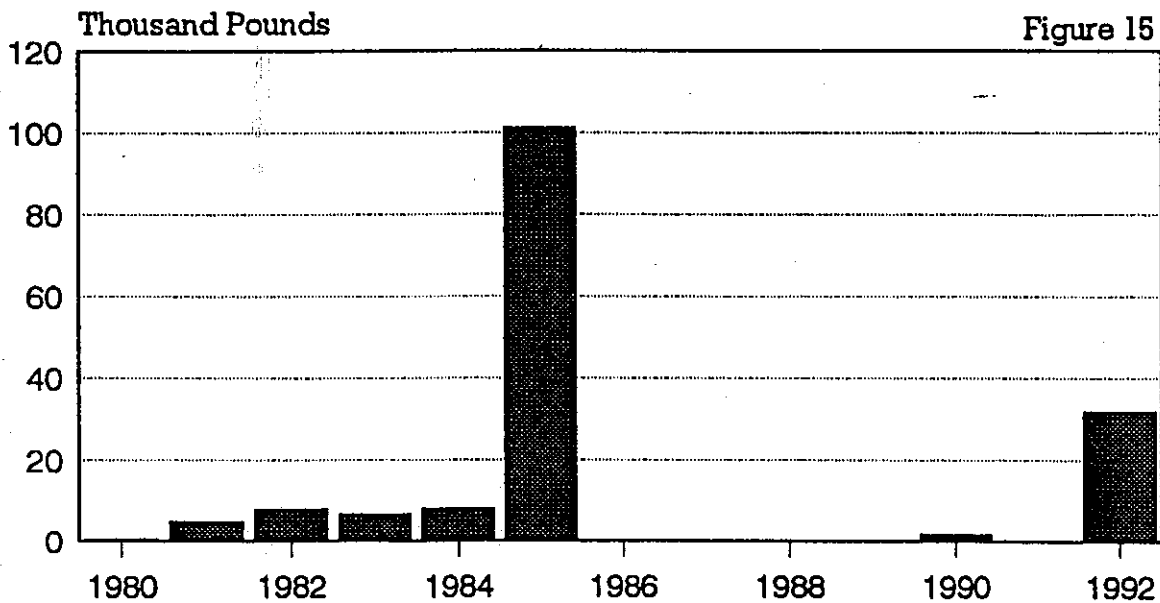
# Summer Flounder (Fluke) Commercial Landings

Peconic/Gardiners Bay 1980-1992



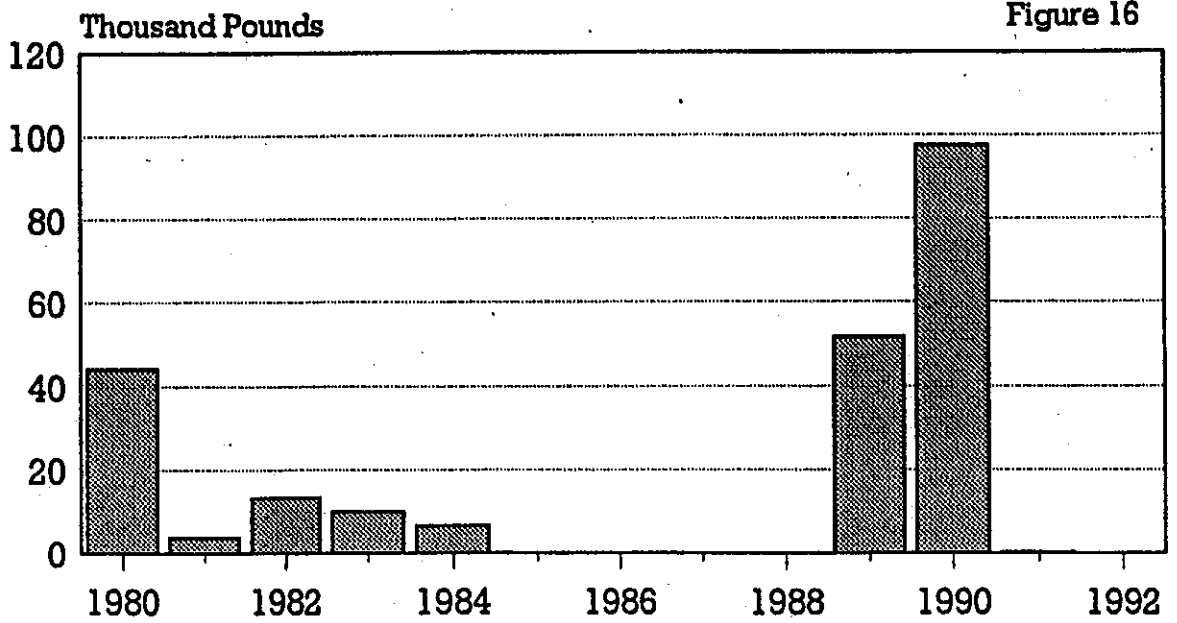
# Swellfishes (Northern Puffer) Commercial Landings

Peconic/Gardiners Bay 1980-1992



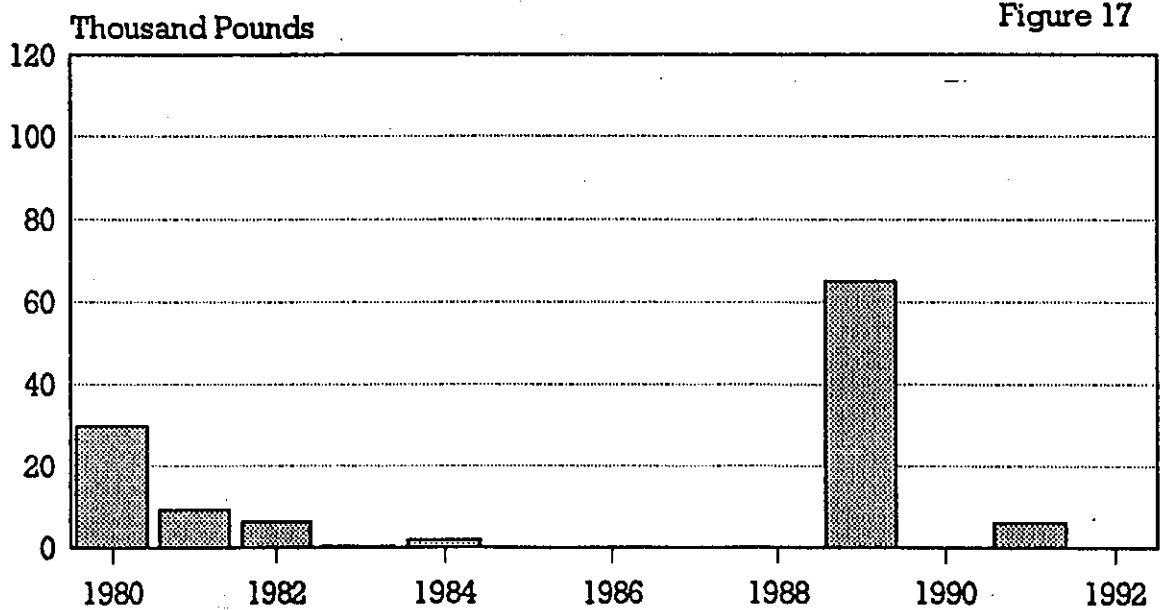
# *Launces (Sandlaunce) Commercial Landings*

Peconic/Gardiners Bay 1980-1992



# *Silversides Commercial Landings*

Peconic/Gardiners Bay 1980-1992



**Appendix A. New York State Department of Environmental Conservation Law, Article 13 Excerpts.**

**§13-0341. Trawls; use prohibited in certain waters.**

...Trawls shall not be set or used in the water areas of the marine district described in the following subdivisions:

5. In Flanders Bay, Great Peconic Bay, Little Peconic Bay, Noyac Bay and Shelter Island Sound, including all waters forming a part thereof or tributary thereto, lying westerly of an imaginary line extending from the most southerly point of Orient State Park to the most easterly point of Shelter Island, also known as Ram Head, and from this point in a generally southerly direction to the most northerly point of Cedar Point, including all of Orient Harbor, Hallock Bay, and Northwest Harbor.

6. In the county of Suffolk in the waters lying westerly of an imaginary line extending in a southerly direction from the most easterly end of Plum Island to the most northerly end of Gardiners Island and westerly of Gardiners Island, and westerly of a line extending in a southerly direction from the most southerly end of Gardiners Island to Goff Point; provided, however, that vessels and motorboats owned and operated by citizens who are residents of the state may be used in such waters in connection with the operation of trawls and other types of nets towed by such boats and vessels. Nothing in this subdivision shall be construed as legalizing the operation of any trawls in the waters described in subdivision 5 of this section.

**§13-0343. Nets other than trawls; restrictions on use of nets and trawls.**

1. Nets other than trawls shall not be placed, maintained or used in any of the following waters, except:  
(a) as permitted by this section.

14. In the county of Suffolk.

a. In the waters lying westerly of an imaginary line extending in a general southerly direction from Leaves Point in Southold town to Hay Beach Point in Shelter Island, and a line extending in a general northeasterly direction from Mashomack Point in Shelter Island to Cedar Point at the eastern entrance to Sag Harbor.

(1) haul seines shall not be used measuring over one hundred fifty fathoms in length, attached to which may be two wings, each measuring not more than one hundred fifty fathoms in length with a stretched mesh size including knot of not less than three and one-quarter inches in one wing and three and one-half inches in the other wing;

(2) the use of haul seines is prohibited from midnight Thursday to 6:00 P.M. Sunday;

(3) when permitted by the commissioner, pound or trap nets may be used in the waters described in paragraph a of this subdivision provided they do not obstruct navigation or the carrying out of shellfish culture as provided in this chapter. Any such pound or trap nets shall be marked in accordance with requirements prescribed by the commissioner.