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MARINE RESOURCES REPORT 83-9

Virginia Institute of Marine Science
School of Marine Science
College of William and Mary
Gloucester Point, Virginia

September 1983

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The major portion of this report presents the historical records of annual landings of blue crabs in Virginia and Maryland from 1929 through 1981 and annual fishing effort from 1929 through 1979. Data through 1976 were published under the titles "Fisheries Industries of the United States" (U. S. Bureau of Fisheries) and "Fisheries Statistics of the United States" (U. S. Fish and Wildlife Service and the National Marine Fisheries Service). Records for 1977 through 1981 were obtained from the National Marine Fisheries Service Office of Science and Environment, Resource Statistics Division. No data are available for 1943, when no surveys were conducted. We prefer the term "landings" instead of "catch" since "landings" represents the difference between the catch and the portion discarded at sea and is the quantity reported at the ports where off-loading occurred.

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Separate records are shown for each type of gear, for hard crabs and for soft and peeler crabs. The values of these fisheries are not presented.

Those familiar with the kinds of data reported in Statistical Digests will realize that some units of effort are not included in our report. This was not our original choice, but the result of a pre-selection by others of gear types and units and made available to us on punched cards. We would have preferred alternative lists of effort data that we consider to be more meaningful and could be compared with licenses issued by Virginia and Maryland. Subsequently we added vessel and boat counts to the effort list.

Assembling these data was a monumental task, a project begun many years ago by the senior author (WAVE) in collaboration with Frank J. Wojcik. There were many others who helped throughout the years and recently, and we extend our sincere appreciation to

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The effects of man's fishing on the resource have never been fully explored, principally because of the large variety of fishing gear, the inadequacy of measures of fishing effort and the uncertainty of the quality of landings data for each type of gear, all of which are characteristic of any complex fishery.

A summary of the federal survey and reporting procedures was reported by Rothschild, Jones and Wilson (1981). While they did not comment on the accuracy of estimates of landings and effort, they were concerned that landings and effort data were not being assembled and reported quickly enough for use in management decisions and that effort data were imprecise for studies of the effects of fishing on the stocks.

The accuracy of the landings estimates is uncertain, in our opinion. The estimates are putatively based on interviews and records of watermen, buyers and processors. Since Virginia watermen have never been required to report landings or effort data, information from them would be subject to their degree of cooperation and recollection.

Probably there have been too few field agents to completely canvass all activities of the fishery. As an example, we are uncertain of the percentage of sales of live crabs by watermen directly to restaurants, seafood bars and the public that has been accounted for in the last 15 or more years. Also, little is known of the Virginia recreational catch.

The accuracy of the Maryland data must be exposed to the same scrutiny. Legislation requiring Maryland licensed commercial fishermen to submit records of landings did not become effective until 1944. The accuracy of Maryland estimates made before and since then is as uncertain as Virginia estimates, in our opinion. A new method of assessing Maryland's landings, a randomized sampling survey, was initiated in 1981, statistically designed to obtain data with an accuracy of the estimate being within +/- 20 %.

Hard crab landings by commercial crab pots and trotlines increased in 1981 by 57 and 549 % over estimates made in 1980 by the older method, while soft and peeler crab landings by scrapes, which were not covered by the random sampling survey, decreased 91 %. Total commercial hard crab landings were 227 % larger for 1981 than for 1980. An evaluation of the accuracy of estimates for 1981 has not yet been made.

It is interesting to note that the random sampling survey included recreational (sports) crabbers in Maryland, who landed about 13 % of the total hard, soft and peeler crabs in 1981. None of these sports landings was included in the estimate of Maryland landings for 1981 provided by NMFS, which included only commercial landings data.

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The number of Virginia licenses for each gear have been retabulated from monthly records, first on a calendar year (annual) basis, and secondly for an "effort year." Since many licenses issued in December are advance sales for the succeeding year's fishing, and if included in the calendar year's series would indicate effort not intended to be applied, an "effort year" tabulation was made which included licenses issued from December through November. For the 4-month winter dredge fishery, which begins December 1 unless opened earlier by action of the Commission, an accurate record of effort for most years is a tabulation of licenses issued from November through March. However, in some years licenses for the following winter were obtained in June in anticipation of a license fee increase in July, while prior to 1954 they were obtained for some unknown reason in April or May after the dredge season concluded. For these reasons we have established an "effort year" for the dredge fishery which encompasses June through May licenses.

It is apparent to us that management of the Chesapeake Bay blue crab stocks requires more than estimates of landings and effort. As stated by Rothschild et al. (1981) and Van Engel et al. (1982) we need to know how the population would react to changes in fishing effort, to alterations in minimum size of crabs, and to changes in gear types and mesh sizes. Basic information is required on the biology and population dynamics of the blue crab and the effects of variations in the quality of the environment on these characteristics.

Records of commercial blue crab landings were first collected in 1880 and fishing effort in 1897, but surveys were conducted at infrequent and irregular intervals until 1929 when annual surveys were initiated. For this review we have included

only landings and effort data reported by the federal government since 1929, and licenses issued by Virginia since 1921 and by Maryland since 1916.

DESCRIPTION OF THE FISHERY

In the 100-year history of the blue crab fishery of the Chesapeake Bay, many types of gear have been tried for catching hard, soft and peeler crabs. Hand-dip trotlines and pots have been preferred by most watermen for taking hard crabs from spring through fall and dredges for taking hard crabs in winter. Scrapes, crab pound nets and dip nets have been the gears most widely used for taking soft and peeler crabs. Watermen's preferences have been determined by the amount of labor involved in fishing, the cost of materials and the the magnitude of the catch, and affected by laws and regulations, and have varied over the years and from season to season.

TROTLINES

Hand-dip trotlines were the preferred gear for taking hard crabs in summer in Virginia until the early 1940's (Tables 3,7,8; Figs. 5-7, 108, 109, 130, 131). The exact number used will probably never be known. Since 1916, hand-dip trotlines were included in a general "ordinary license" along with peeler crab rakes and scrapes. Since 1937, rakes and scrapes were included only if they were not pushed or pulled by boat. Dip nets were exempted from licensing until 1952 but since then have been included in the "ordinary license." The ordinary license is now being obtained by persons who are casual crabbers and do not want to be limited to one bushel of crabs a day, which is the limit that can be caught without a license.

Patent-dip trotlines, introduced before 1920, have never been widely used in Virginia. In addition to being less costly, patent-dips are more maneuverable than crab pots: they can be more quickly relocated. They catch large quantities of crabs in October and November when crabs tend to school. At other times of the year, the patent-dip license holder fishes crab pots.

Users of patent-dip trotlines were not always required to obtain licenses for them. Holders of picking or crating house licenses and sometimes dredge boat license holders could fish patent-dip trotlines without additional license. From 1944 to 1962 holders of a crab pot license could fish a patent-dip without securing a trotline license, and vice versa.

During the economic depression of the early 1930's, many Virginia watermen replaced their trotlines with dip nets, for which no license and little expense were required, and caught peeler crabs instead of hard crabs. A temporary return to trotlines occurred in the mid-1930's but watermen soon adopted the crab pot which was introduced in the late 1930's.

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The numbers of trotlines reported in the federal Statistical Digests and the numbers licensed by Virginia are different: the federal numbers refer to lines used, while the state numbers refer to licenses (Tables 3,7,8; Figs. 5, 108, 109, 130, 131). However, trotline vessels and boats reported in the federal record are in good agreement with the numbers of "ordinary crabbers" licensed in Virginia since 1929 (Tables 3, 7, 8; Figs. 7, 108). We have little confidence in the number of lines reported and none in the numbers of baits as measures of effort. Lines are not uniform in length and the "biting-rate" of crabs, which determines the distance apart that baits are set, varies seasonally and with the habitat.

Since 1916, a general "crabbers" license in Maryland has permitted the use of a trotline, peeler crab scrape, dip net, crab haul seine or crab pound net (Table 11). Between 1931 and 1940 some of these gears were reported separately, although included in the "crabbers" license summary, and show that approximately half the "crabbers" licenses were for the use of trotlines (Tables 4, 11; Figs. 8-10). The decline since 1938 is the result of the replacement of trotlines with pots.

An abrupt rise in the number of trotlines occurred in 1955, shown as an increase in lines in the federal records and as "crabbers" licenses in the state record, and resulted from a new Maryland law requiring licenses for all trotlines over 100 yards in length. This increase was enacted to tax casual (recreational, sports) crabbers, whose effort had not been previously reported. The rapid increase in sports trotlining has continued to the present, comprising over 94 % of all trotlines licensed in 1982 (Chris Bonzek, personal communication).

Patent-dip trotlines have never been used in Maryland, to our knowledge.

Trends in trotline landings in Virginia and Maryland are superficially similar, showing high levels of landings before the mid-1940's and uneven declines since then (Figs 1-4). The precipitous rise in 1981 in Maryland was an outcome of the random sampling survey.

Striking differences between Virginia and Maryland in measures of effort and in CPUEs have occurred throughout the 51-year NMFS record (Figs. 5-22). As the numbers of lines, vessels and boats decreased in Virginia, CPUE remained reasonably uniform. The rise of CPUE in the 1950's could be a reflection of the use of trotlines more often than customary during the spring and summer, to take advantage of high levels of abundance of crabs - there are no data to prove this comment.

Although the estimates of CPUE for hard crabs based on NMFS effort data appear different from the estimates based on VMRC data, the differences are illusions created by the scale of the vertical axis (Figs. 11, 110, 132): most values fall between 10 and 20 thousand pounds. Both graphs show large CPUEs in 1962 and

1966. Soft and peeler crab CPUE is similar for NMFS and VMRC data (Figs. 17, 112, 134).

Opposite trends have occurred in Maryland: effort has been increasing, while landings and CPUE are decreasing. The fall in CPUE is undoubtedly a reflection of the increase in sports trotliners whose landings are appreciably smaller than those of commercial trotliners. The similarity of the estimates of CPUE using trotline bait data to estimates of CPUE using other effort data is unexpected, but we believe meaningless: the mean value is only 20 pounds.

CRAB POTS

The crab pot has been the major fishing gear for taking hard crabs in Virginia since 1944 and in Maryland since 1956. Although an early model of the pot was introduced in 1928, the pot did not achieve acceptance until a modified version was produced in the mid-1930's. More costly to construct and operate than the hand-dip and patent-dip trotlines, the pot was quickly demonstrated to be a less labor-intensive gear. By 1960, Virginia trotline landings were less than 10 % of pot landings (Table 1; Figs. 1,23).

Replacement of trotlines by pots was slower in Maryland. Landings by trotlines were 70 % or more of pot landings through 1973 and then began to plummet to less than 20 % in 1980 (Table 2; Figs. 3, 25).

Two measures of effort in the crab pot fishery that have been reported in the federal Statistical Digests are included in our review: estimates of the number of pots being fished and the number of vessels and boats in use (Tables 3, 4; Figs 27-30). While the actual number of pots fished by all the watermen would be the most reliable measure of effort and preferred for estimating CPUE, NMFS estimates of units have been based on the numbers legally allowed rather than on a survey of actual numbers in use. Virginia watermen were limited to 35 and later to 50 pots per man until 1956, but no limits have been imposed since then. Curiously, since 1956 the annual mean number of pots used per man has been estimated at 100-125.

Revision of the Virginia law in 1956 was based on observations that there was no evidence that the crab stocks were being depleted, that pots were a less labor-intensive gear than trotlines, that most watermen were using more than the number allowable by law and that no inspection system was capable of determining the number being used. It was often remarked that the removal of the limit on pots would "make honest watermen of all crab potters." Since 1962, potters working alone or with one or more assistants needed separate licenses (Tables 7, 8). A "potters helper" (supplement) license could be obtained if a potter working alone wished to hire one or more assistants.

The total number of potters licensed by VMRC and an estimate of the number of pots in use are included in this review for comparison with NMFS data (Tables 3, 7, 8; Figs. 27, 28, 115, 116). NMFS estimates of pots are larger than VMRC estimates in almost every year for which data are available (1935-1955). Also, NMFS estimates of vessels and boats used by potters are larger than the total number of potters licensed by VMRC, except in 1968-1973 when VMRC potters were more numerous.

Missing from NMFS and VMRC effort data are estimates of peeler pots, an important gear for taking peeler crabs. Virginians who have hard crab pot licenses are not required to purchase another license to fish peeler pots. Hard crab pots and peeler pots differ in mesh size and type of bait used. Further, hard crab pots are used almost everywhere in Virginia, but peeler pots are restricted to habitats where juvenile crabs are more abundant.

Minimum mesh size was 1-inch until 1941. From 1941 to 1944 1-inch mesh was allowed in Chesapeake and Mobjack bays, but 1-1/2 inch mesh was required in all other waters. The minimum mesh has been 1-1/2 inches in all waters of the Commonwealth since 1944.

The pot was introduced in Maryland in 1939 and then outlawed from 1941 to 1944. Numbers of pots were limited to 35 until 1947, 50 until 1959 and 100 since then. The minimum mesh size is 1-inch.

Landings of hard crabs caught by pots have been substantially larger in Virginia than in Maryland, excluding the 1981 Maryland estimate (Tables 1, 2; Figs. 23, 25). Part of the difference in landings is due to the longer portion of the year that Virginians are able to catch hard crabs, undoubtedly due to early warming and later cooling of the water.

CPUEs for hard crabs, based on the estimated number of pots, are similar in magnitude and trend in Virginia and Maryland (Figs. 31, 33). Larger CPUEs are shown for Virginia when the unit of effort was vessels and boats (Tables 5, 6; Figs. 32, 34) or when the unit of effort was the VMRC estimate of crab potters (Tables 9, 10; Figs. 118, 140).

The decline in CPUE in Virginia from 1972 to 1980 (vessels, boats and potters) is similar to changes in CPUE that occurred from 1948 to 1959. In Maryland, there is a parallel between the irregular decline (less easily identified) from 1947 to 1955 and the decline from 1965 to 1980. We interpret these changes as a result of decreases in the availability of crabs, a decrease in abundance, not as evidence of overfishing. Effort in both Virginia and Maryland in the earlier periods, whether measured by pot units, potters or the number of vessels and boats was 1/4 to 1/2 of the more recent levels of effort.

Because the hard crab pot is not the principal gear for taking soft and peeler crabs, and no estimate of peeler pot

numbers has been provided by NMFS or VMRC, the trends in landings and CPUE have no particular meaning (Figs. 35-38, 120, 121, 142, 143).

TO BE CONTINUED

TABLE I
 VIRGINIA BLUE CRAB LANDINGS DATA
 ANNUAL LANDINGS IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1981
 SOURCE: NATIONAL MARINE FISHERIES SERVICE

YEAR	TROT LINES		CRAB POTS		DREDGES		CRAB SCRAPES		CRAB POUND NETS		FISH POUND NETS		CRAB DIP NETS	
	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT
1929	21452	.	.	.	7073	.	1439	1278	.	.	.	.	390	422
1930	20113	.	.	.	7494	.	1024	1984	.	.	.	.	308	897
1931	21355	.	.	.	7214	.	350	1109	.	.	.	.	44	603
1932	18302	.	.	.	8211	.	69	147	.	.	115	.	327	1373
1933	17047	.	.	.	6555	.	117	129	.	.	.	.	193	1939
1934	16862	.	.	.	5597	.	6	11	.	.	.	.	46	1360
1935	14686	.	48	8	4792	.	6	33	12	6	62	.	156	1281
1936	19354	194	100	41	6260	.	29	257	42	37	14	.	331	1311
1937	22303	30	438	52	4903	.	74	455	82	287	115	.	12	1346
1938	22434	506	252	.	5392	.	280	542	50	206	101	.	172	677
1939	21002	434	1083	162	4088	.	647	1079	80	151	67	.	.	652
1940	14129	450	5038	61	3534	.	244	567	59	242	13	.	.	435
1941	7548	371	5707	79	2117	.	176	394	130	207	.	.	39	457
1942	7594	311	7997	43	2665	.	152	336	82	253	.	.	154	358
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	10256	384	10983	224	2178	.	325	421	104	407	40	.	32	520
1945	2964	42	13065	274	2258	2	6	500	85	298	416	.	17	425
1946	6404	45	16742	132	3573	.	9	546	56	500	47	.	14	253
1947	9048	51	21742	270	3435	.	12	620	40	1245	.	45	7	142
1948	11074	96	26993	328	4518	.	13	738	49	1257	41	.	6	145
1949	8869	79	25178	257	6407	.	13	887	31	909	16	.	4	116
1950	8254	87	30157	368	7682	.	23	1337	87	1133	169	.	8	115
1951	5835	64	22947	252	8672	20	19	2580	35	959	65	.	7	95
1952	5309	53	20533	165	7613	.	24	1035	38	862	14	.	5	80
1953	5446	44	19683	165	7099	.	19	1441	39	892	17	.	6	63
1954	5227	48	20925	174	6232	.	18	940	32	851	19	.	6	64
1955	4350	43	17242	182	5172	.	23	581	46	905	14	.	8	68
1956	3583	26	14900	93	7177	.	36	423	33	1034	2	.	13	176
1957	3161	27	18852	132	2801	.	22	406	32	965	.	.	9	66
1958	1869	17	13392	174	2271	.	.	213	213	854	.	.	7	47
1959	1700	20	14653	285	4644	.	.	174	142	701	.	.	9	37
1960	1650	32	26949	494	10545	.	.	200	119	789	.	.	7	37
1961	3065	21	31605	361	9082	.	55	178	131	878	.	.	37	97
1962	3564	29	36955	272	13033	.	.	204	192	777	.	.	27	37
1963	1959	19	27471	239	16525	.	.	106	154	500	.	.	29	63
1964	2588	21	35580	369	13134	.	2	140	225	375	.	.	39	73
1965	1894	13	38264	420	9434	.	3	39	335	560	.	.	28	45
1966	5337	27	41063	365	15244	.	10	156	1851	419	35	.	139	61

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TABLE 1 (CONT'D)
 VIRGINIA BLUE CRAB LANDINGS DATA
 ANNUAL LANDINGS IN THOUSANDS OF POUNDS

YEAR	TROT LINES		CRAB POTS		DREDGES		CRAB SCRAPES		CRAB POUND NETS		FISH POUND NETS		CRAB DIP NETS	
	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT
1967	1840	12	36079	288	14978	.	57	211	1718	661	.	.	152	29
1968	2569	34	30976	319	9873	.	115	150	1253	274	7	.	48	15
1969	2014	59	22929	1074	7695	.	.	500	960	267	7	.	35	50
1970	2536	35	28120	394	10559	.	.	316	1150	132	.	.	44	23
1971	1124	.	35250	369	10962	.	.	100	460	222	.	.	11	.
1972	155	.	36012	391	12349	.	.	247	39	214	.	.	.	.
1973	18	.	27718	615	8881	.	.	196	12	167	.	5	.	.
1974	.	.	32713	553	8083	.	.	80	.	173	.	.	.	.
1975	53	.	30226	405	4462	.	56	100	1	249	.	.	.	.
1976	.	.	19670	345	6091	.	.	54	1	361	.	.	.	.
1977	.	.	31004	476	6124	.	.	16	34	204	16	.	.	.
1978	6	.	29437	329	6606	.	.	43	6	231	.	.	.	.
1979	33	.	32682	453	7106	.	8	110	.	489	.	.	.	.
1980	.	.	28167	327	9443	.	.	.	3	306	.	.	.	.
1981	.	.	31708	352	10294	.	27	56	.	175	.	.	.	.

TABLE 2
 MARYLAND BLUE CRAB LANDINGS DATA
 ANNUAL LANDINGS IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1981
 SOURCE: NATIONAL MARINE FISHERIES SERVICE

YEAR	TRDTLINES		CRAB POTS		DREDGES		CRAB SCRAPES		CRAB POUND NETS		FISH POUND NETS		CRAB DIP NETS	
	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT
1929	24014	.	.	.	.	.	939	1611	.	.	.	.	503	1008
1930	30316	.	.	.	.	.	1220	3200	.	.	.	.	90	2065
1931	29016	.	.	.	.	.	538	2097	.	.	.	.	377	1726
1932	27072	17	.	.	.	.	659	631	.	.	.	.	1669	2741
1933	25544	.	.	.	.	.	1016	741	.	.	.	.	88	2441
1934	13011	.	.	.	.	.	607	719	.	.	.	.	4	1364
1935	17014	283	.	.	.	.	243	1102	.	.	.	.	8	1054
1936	13229	270	.	.	.	.	65	1205	.	.	.	.	.	673
1937	16051	263	.	.	.	.	.	1488	.	.	.	.	148	701
1938	20529	250	20	28	.	.	100	1826	.	2	.	6	50	716
1939	23903	298	.	.	.	.	113	2253	20	21	.	2	27	562
1940	14737	171	212	.	.	.	32	1284	50	11	.	.	.	291
1941	11625	156	350	.	.	.	.	527	.	.	.	.	.	146
1942	13808	59	200	57	.	.	40	1325	.	.	.	.	.	190
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	13913	141	3217	30	.	.	25	830	.	.	.	.	.	104
1945	12234	105	6199	80	.	.	10	923	.	.	.	.	17	584
1946	19543	207	5879	57	.	.	30	2058	.	.	.	.	5	251
1947	18153	358	7337	106	26	.	42	2303	.	.	.	.	9	215
1948	14585	145	5724	64	213	.	91	1519	.	.	.	.	8	135
1949	15465	159	5276	78	293	.	86	1941	.	.	.	.	11	154
1950	18349	215	8807	169	203	.	127	2343	.	.	.	.	36	172
1951	14899	131	12026	94	138	.	78	1668	.	.	.	.	34	128
1952	15799	136	11154	98	306	.	224	1254	.	.	.	.	16	101
1953	14304	120	11565	101	256	.	130	1586	.	.	.	.	13	98
1954	9598	82	9263	86	87	.	107	846	.	.	.	.	19	96
1955	7772	84	7278	90	72	.	91	938	.	.	.	.	19	89
1956	8415	72	11911	85	75	.	775	1583	.	.	.	.	31	89
1957	10748	196	15925	935	98	.	1514	2226	.	.	.	.	83	112
1958	11070	163	15661	686	104	.	220	2318	.	.	.	.	40	98
1959	9063	80	11887	232	58	.	160	1623	.	.	.	.	19	38
1960	11222	94	15446	329	193	.	184	2324	.	.	.	.	23	41
1961	12597	94	13954	257	12	.	168	2303	.	.	.	.	27	38
1962	12573	118	14883	334	10	.	176	3398	.	.	.	.	18	42
1963	8321	122	8480	198	30	.	97	1783	.	.	.	.	5	6
1964	10362	154	12060	265	25	.	88	3067	.	.	.	.	6	12
1965	14254	137	17592	338	5	.	82	1994	58	212	.	.	7	14
1966	14051	135	16188	190	.	.	87	1358	41	189	.	.	6	12

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TABLE 2 (CONT'D)
 MARYLAND BLUE CRAB LANDINGS DATA
 ANNUAL LANDINGS IN THOUSANDS OF POUNDS

YEAR	TRDTLINES		CRAB POTS		DREDGES		CRAB SCRAPES		CRAB POUND NETS		FISH POUND NETS		CRAB DIP NETS	
	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT	HARD	SOFT
1967	11634	164	12834	255	.	.	73	1559	.	.	36	190	12	19
1968	4264	100	5003	123	.	.	72	724	.	50	.	.	5	5
1969	9812	110	13053	162	.	.	129	1741	6	203	.	.	12	35
1970	10496	64	14233	103	.	.	134	1212	6	167	.	.	16	33
1971	10549	61	15394	156	.	.	107	1171	5	107	.	.	20	35
1972	9640	53	13725	107	.	.	91	1275	9	113	.	.	17	27
1973	7944	42	11476	127	.	.	96	1194	8	126	.	.	15	26
1974	9091	58	15449	101	.	.	97	1438	8	194	.	.	16	29
1975	8499	48	15649	154	.	.	93	1232	8	200	.	.	15	21
1976	6425	52	12918	157	.	.	68	1074	7	175	.	.	11	16
1977	6441	46	13630	81	.	.	70	873	9	151	.	.	10	13
1978	3799	72	12731	286	.	.	43	381	9	120	.	.	9	11
1979	4961	66	19802	411	.	.	55	330	10	130	.	.	8	10
1980	3610	75	21602	613	.	.	62	335	17	112	.	.	10	12
1981	23414	669	33889	1640	.	.	41	30	.	.	.	.	.	.

TABLE 3
 VIRGINIA BLUE CRAB EFFORT DATA
 ANNUAL FISHING EFFORT
 CALENDAR YEARS 1929 THROUGH 1979
 SOURCE: NATIONAL MARINE FISHERIES SERVICE

YEAR	TROT- LINES	TROTLINE BAITS	TROTLINE V&B	CRAB POTS	CRAB V&B	POT DREDGES	DREDGE V&B	CRAB SCRAPES	SCRAPE V&B	CRAB PD NETS	CRAB PD NET V&B	FISH PD NETS	CRAB DIP NETS
1929	1064	494500	1074	.	.	124	62	593	254	.	.	2190	405
1930	1336	622440	1377	.	.	102	51	618	256	.	.	2262	712
1931	1094	472260	1084	.	.	112	56	388	179	.	.	2208	745
1932	994	580385	994	.	.	126	63	80	30	.	.	2019	1349
1933	1075	499610	1077	.	.	130	65	41	41	.	.	1880	1675
1934	1437	1075280	1337	.	.	200	105	4	4	.	.	1810	2391
1935	1304	684700	1302	46	4	211	127	8	8	12	4	2000	1966
1936	2140	1174520	2101	275	15	232	107	47	47	45	18	1902	1495
1937	1962	1023610	1962	1060	56	198	99	114	74	277	72	1656	1440
1938	1603	928900	1603	740	42	296	148	170	117	408	149	1871	954
1939	1590	746000	1390	1120	90	182	91	226	113	299	72	1932	658
1940	1269	678150	1269	7190	337	160	80	72	36	388	81	1626	543
1941	844	418800	844	9409	389	134	192	70	40	538	110	1515	314
1942	558	255400	558	12001	455	100	50	58	29	479	95	1146	397
1943	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	542	319190	542	25550	597	105	55	120	75	242	43	1363	1174
1945	227	142150	227	37800	769	168	85	77	46	319	58	1332	1332
1946	511	300650	511	42300	854	208	112	80	61	593	138	1311	759
1947	493	306300	493	37900	748	265	140	124	85	634	115	1401	508
1948	586	375500	586	46650	933	288	151	152	100	809	149	1490	504
1949	634	389450	634	51400	1028	339	177	163	112	1051	192	1293	419
1950	465	309450	465	61500	1230	268	150	188	135	1406	280	1323	503
1951	465	302200	465	58650	1173	293	156	332	239	1447	295	1208	530
1952	457	294600	457	51350	1027	297	161	261	183	1332	254	936	483
1953	485	317650	485	55850	1118	283	155	238	160	1453	281	858	422
1954	331	224150	331	53100	1062	294	156	200	137	1592	292	782	412
1955	299	194300	299	49250	995	401	211	197	112	1793	341	720	429
1956	236	147100	236	45400	902	392	214	183	102	1783	303	604	395
1957	241	152800	241	88255	1030	359	181	156	84	2182	352	685	368
1958	252	152800	252	82130	896	303	168	113	65	2441	382	664	308
1959	255	156400	257	98385	1031	275	149	144	82	2535	388	753	262
1960	248	149900	248	137075	1295	337	184	101	59	2550	391	778	183
1961	210	129600	210	113995	1042	450	146	140	82	2787	414	643	190
1962	117	71700	117	115183	1011	384	214	121	75	2787	395	666	174
1963	145	83710	145	132100	1152	406	224	160	92	2799	440	711	248
1964	130	79450	130	120680	1319	362	201	120	71	2839	436	921	214
1965	94	56330	94	138816	1301	324	178	63	39	2477	397	966	213
1966	72	42650	72	130972	1231	298	156	60	33	2605	392	1000	118

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TABLE 3 (CONT'D)
 VIRGINIA BLUE CRAB EFFORT DATA
 ANNUAL FISHING EFFORT

YEAR	TROT- LINES	TROTLINE BAITS	TROTLINE V&B	CRAB POTS	CRAB POT V&B	DREDGES	DREDGE V&B	CRAB SCRAPES	SCRAPE V&B	CRAB PD NETS	CRAB PD NET V&B	FISH PD NETS	CRAB DIP NETS
1967	60	36100	60	114903	1097	283	154	212	106	2798	411	836	99
1968	75	35300	74	138805	1179	320	201	153	79	2098	270	640	62
1969	47	27900	45	153045	1207	300	175	160	90	2279	329	714	106
1970	66	33800	65	168275	1328	324	191	111	61	1940	276	795	88
1971	134	.	138	133450	1066	285	179	112	96	1436	179	334	4
1972	146	.	146	140475	1110	273	169	95	79	1548	229	325	.
1973	6	.	6	136785	1083	320	211	105	89	1134	139	346	.
1974	.	.	.	123024	1599	158	154	148	127	3122	253	386	.
1975	6	.	6	153534	1562	173	163	104	96	2265	299	408	4
1976	5	.	.	160357	1581	231	119	85	84	1976	300	374	.
1977	4	.	4	166740	1702	247	128	97	97	2718	314	.	.
1978	66	.	14	196911	2003	308	155	86	86	2561	332	.	.
1979	29	.	29	212108	2180	319	160	104	103	2543	331	.	.

TABLE 4
 MARYLAND BLUE CRAB EFFORT DATA
 ANNUAL FISHING EFFORT
 CALENDAR YEARS 1929 THROUGH 1979
 SOURCE: NATIONAL MARINE FISHERIES SERVICE

YEAR	TROT- LINES	TROTLINE BAITS	TROTLINE V&B	CRAB PQTS	CRAB POT V&B	DREDGES V&B	DREDGE V&B	CRAB SCRAPES	SCRAPE V&B	CRAB PD NETS	CRAB PD NET V&B	FISH PD NETS	CRAB DIP NETS
1929	1408	789764	1306	.	.	.	.	1102	536	.	.	780	1180
1930	1510	977035	1441	.	.	.	.	1232	584	.	.	692	1393
1931	1560	1039560	1529	.	.	.	.	1098	539	.	.	721	1776
1932	1227	792370	1217	.	.	.	.	956	369	.	.	655	1523
1933	1547	938350	1301	.	.	.	.	642	321	.	.	690	1458
1934	1531	945000	1259	.	.	.	.	582	286	.	.	531	1321
1935	1731	1241400	1416	.	.	.	.	708	304	.	.	529	1215
1936	1881	1344000	1577	.	.	.	.	708	280	.	.	531	991
1937	1586	1005750	1365	.	.	.	.	632	296	.	.	455	863
1938	1763	1214800	1458	55	9	.	.	614	307	.	.	548	670
1939	1851	961200	1523	.	.	.	.	548	274	31	8	526	484
1940	1695	986350	1329	515	18	.	.	448	224	97	17	469	449
1941	1296	727040	1041	575	17	.	.	195	98	.	.	505	341
1942	1128	598900	813	270	12	.	.	212	142	.	.	514	253
1943	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	1078	799170	1078	5530	151	.	.	346	188	.	.	679	1230
1945	1520	1173500	1505	7365	216	.	.	200	122	.	.	598	1186
1946	1413	1031300	1418	8470	242	.	.	282	186	.	.	622	891
1947	1209	799700	1209	9655	279	30	15	347	251	.	.	641	705
1948	1168	750000	1168	19400	388	60	30	362	278	.	.	617	707
1949	1137	732300	1127	19100	391	30	17	354	275	.	.	585	757
1950	1131	734700	1123	24030	463	.	.	408	313	.	.	592	711
1951	990	641900	990	28550	571	39	23	401	297	.	.	576	778
1952	1022	720100	1022	20900	419	67	44	379	268	.	.	534	751
1953	1042	718180	1042	26650	533	45	45	512	270	.	.	508	689
1954	975	684800	975	35550	711	39	39	602	303	.	.	485	635
1955	2195	1008400	2195	45400	923	36	34	550	289	.	.	575	617
1956	2678	1162700	2678	50152	916	58	29	566	283	.	.	584	615
1957	2367	1084200	2306	45680	642	57	30	564	282	.	.	480	620
1958	2352	1088300	2349	47300	668	67	35	498	249	.	.	384	451
1959	2236	942000	2225	71160	645	45	28	442	221	.	.	343	284
1960	1983	830270	1938	58000	502	11	7	462	231	.	.	316	252
1961	2332	894575	2208	61275	558	4	4	475	240	.	.	296	226
1962	2296	906175	2160	73081	718	8	8	475	240	.	.	275	218
1963	2160	850675	2047	59983	589	1	1	454	230	6	2	264	167
1964	2212	821000	2091	63915	616	4	4	459	230	.	.	236	160
1965	2641	962150	2500	78660	748	1	1	351	176	210	35	238	107
1966	2904	993425	2643	82750	805	.	.	313	157	210	35	237	59

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TABLE 4 (CONT'D)
 MARYLAND BLUE CRAB EFFORT DATA
 ANNUAL FISHING EFFORT

YEAR	TROT- LINES	TROTLINE BAITS	TROTLINE V&B	CRAB PCTS	CRAB V&B	POT. DREDGES	DREDGE V&B	CRAB SCRAPES	SCRAPE V&B	CRAB PD NETS	CRAB PD NET V&B	FISH PD NETS	CRAB DIP NETS
1967	3080	1044900	2570	88685	843	.	.	110	55	.	.	229	59
1968	3005	1002100	2772	73785	779	.	.	202	101	70	20	207	51
1969	3216	1011445	2818	77150	843	.	.	188	188	52	18	200	86
1970	5583	1393115	4941	86160	1013	.	.	86	86	50	18	169	110
1971	7848	.	6326	94030	1102	.	.	316	136	40	15	186	115
1972	7984	.	6300	94795	1002	.	.	315	315	40	15	154	155
1973	7987	.	5775	84415	913	.	.	305	305	47	6	74	159
1974	9272	.	7626	109650	1278	.	.	280	280	46	8	188	150
1975	9958	.	8082	110932	1223	.	.	267	267	73	18	175	152
1976	11362	.	8711	105225	1326	.	.	258	258	140	27	150	143
1977	14299	.	15681	142415	1512	.	.	248	248	162	29	125	141
1978	17063	.	9622	177470	1714	.	.	150	150	249	31	.	134
1979	16207	.	13572	198325	1771	.	.	160	160	258	28	.	123

TABLE 5
 VIRGINIA BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1979

YEAR	HARD CRABS TROTLINE			SOFT AND PEELERS TROTLINE			HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		DREDGES HARD CRABS		DREDGES SOFT AND PEELERS	
	UNITS	BAITS	V&B	UNITS	BAITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B
1929	20.1617	0.0434	19.9739	.	.	.	.	.	.	.	57.0403	114.0807	.	.
1930	14.5115	0.0323	14.5064	.	.	.	.	.	.	.	73.4706	146.9412	.	.
1931	19.5201	0.0452	19.7002	.	.	.	.	.	.	.	64.4107	128.8214	.	.
1932	18.4125	0.0315	13.4125	.	.	.	.	.	.	.	65.1667	130.3333	.	.
1933	15.3577	0.0341	15.3282	.	.	.	.	.	.	.	50.4231	100.8461	.	.
1934	11.7342	0.0157	12.6118	.	.	.	.	.	.	.	27.9850	53.3048	.	.
1935	11.2623	0.0214	11.2736	.	.	.	1.0435	12.0000	0.1739	2.0000	22.7109	37.7323	.	.
1936	9.0439	0.0155	9.2118	0.0907	0.0002	0.0923	0.3636	6.6667	0.1491	2.7333	26.9828	58.5047	.	.
1937	11.3675	0.0213	11.3675	0.0153	0.0000	0.0153	0.4132	7.8214	0.0491	0.9286	24.7626	49.5252	.	.
1938	13.9950	0.0242	13.9950	0.3157	0.0005	0.3157	0.3405	6.0000	.	.	18.2162	36.4324	.	.
1939	15.1094	0.0281	15.1094	0.3122	0.0006	0.3122	0.9670	12.0333	0.1446	1.8000	22.4615	44.9231	.	.
1940	11.1340	0.0208	11.1340	0.3546	0.0007	0.3546	0.7007	14.9496	0.0085	0.1810	22.0875	44.1750	.	.
1941	8.9431	0.0180	8.9431	0.4396	0.0009	0.4396	0.6065	14.6710	0.0084	0.2031	15.7985	11.0260	.	.
1942	13.6093	0.0297	13.6093	0.5573	0.0012	0.5573	0.6664	17.5758	0.0036	0.0945	26.6500	53.3000	.	.
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	18.9225	0.0321	18.9225	0.7035	0.0012	0.7035	0.4299	18.3970	0.0088	0.3752	20.7429	39.6000	.	.
1945	13.0573	0.0209	13.0573	0.1850	0.0003	0.1850	0.3456	16.9896	0.0072	0.3563	13.4405	26.5647	0.0119	0.0235
1946	12.5323	0.0213	12.5323	0.0821	0.0001	0.0821	0.3959	19.6112	0.0031	0.1546	17.1779	31.9018	.	.
1947	18.3529	0.0295	18.3529	0.1034	0.0002	0.1034	0.5737	29.0668	0.0071	0.3610	12.9623	24.5357	.	.
1948	18.3976	0.0295	18.3976	0.1638	0.0003	0.1638	0.5786	28.9314	0.0070	0.3516	15.6875	29.9205	.	.
1949	13.9890	0.0223	13.9890	0.1246	0.0002	0.1246	0.4898	24.4922	0.0050	0.2500	18.8997	36.1977	.	.
1950	17.7505	0.0267	17.7505	0.1871	0.0003	0.1871	0.4904	24.5179	0.0060	0.2992	28.6642	51.2133	.	.
1951	12.5484	0.0193	12.5484	0.1376	0.0002	0.1376	0.3913	19.5627	0.0043	0.2148	29.5973	55.5897	0.0683	0.1282
1952	11.6171	0.0190	11.6171	0.1160	0.0002	0.1160	0.3999	19.9932	0.0032	0.1607	25.6330	47.2857	.	.
1953	11.2289	0.0171	11.2289	0.0907	0.0001	0.0907	0.3524	17.6055	0.0030	0.1476	25.0813	45.7935	.	.
1954	15.7915	0.0233	15.7915	0.1450	0.0002	0.1450	0.3941	19.7034	0.0033	0.1638	21.2177	39.9872	.	.
1955	14.5435	0.0224	14.5435	0.1438	0.0002	0.1438	0.3501	17.5046	0.0037	0.1848	12.8978	24.5118	.	.
1956	15.1822	0.0244	15.1822	0.1102	0.0002	0.1102	0.3282	16.5188	0.0020	0.1031	18.3087	33.5374	.	.
1957	13.1162	0.0207	13.1162	0.1120	0.0002	0.1120	0.2136	18.3029	0.0015	0.1282	7.8022	15.4751	.	.
1958	7.4167	0.0122	7.4167	0.0675	0.0001	0.0675	0.1631	14.9464	0.0021	0.1942	7.4950	13.5179	.	.
1959	6.6667	0.0109	6.6143	0.0784	0.0001	0.0778	0.1489	14.2124	0.0029	0.2764	16.8873	31.1678	.	.
1960	6.6532	0.0110	6.6532	0.1290	0.0002	0.1290	0.1966	20.8100	0.0036	0.3815	31.2908	57.3098	.	.
1961	14.5952	0.0236	14.5952	0.1000	0.0002	0.1000	0.2772	30.3311	0.0032	0.3464	20.1822	62.2055	.	.
1962	30.4615	0.0497	30.4615	0.2479	0.0004	0.2479	0.3200	36.4540	0.0024	0.2690	33.9401	60.9019	.	.
1963	13.5103	0.0234	13.5103	0.1310	0.0002	0.1310	0.2080	23.8464	0.0018	0.2075	40.7020	73.7723	.	.
1964	19.9077	0.0326	19.9077	0.1615	0.0003	0.1615	0.2948	25.9750	0.0031	0.2798	36.2818	65.3433	.	.
1965	20.1439	0.0326	20.1439	0.1393	0.0002	0.1333	0.2800	29.8724	0.0030	0.3228	29.1173	53.0000	.	.
1966	74.8194	0.1263	74.8194	0.3750	0.0006	0.3750	0.3135	33.3574	0.0028	0.2965	51.1544	97.7179	.	.

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TABLE 5 (CONT'D)
 VIRGINIA BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS TROTLINE			SOFT AND PEELERS TROTLINE			HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		DREDGES HARD CRABS		DREDGES SOFT AND PEELERS	
	UNITS	BAITS	V&B	UNITS	BAITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B
1967	30.6657	0.0510	30.5667	0.2000	0.0003	0.2000	0.3140	32.8838	0.0025	0.2625	52.9258	97.2597	.	.
1968	34.2533	0.0728	34.7162	0.4533	0.0010	0.4595	0.2232	26.2731	0.0023	0.2706	30.8531	49.1194	.	.
1969	42.8511	0.0722	44.7556	1.2553	0.0021	1.3111	0.1498	18.9967	0.0070	0.8898	25.6500	43.9714	.	.
1970	38.4242	0.0750	39.0154	0.5303	0.0010	0.5385	0.1671	21.1747	0.0023	0.2967	32.5895	55.2827	.	.
1971	8.3881	.	8.1449	.	.	.	0.2641	33.0675	0.0028	0.3462	38.4632	61.2402	.	.
1972	1.0515	.	1.0616	.	.	.	0.2564	32.4432	0.0028	0.3523	45.2344	73.0710	.	.
1973	3.0000	.	3.0000	.	.	.	0.2026	25.5937	0.0045	0.5679	27.7531	42.0900	.	.
1974	.	.	.	.	.	.	0.2659	20.4584	0.0045	0.3458	51.1582	52.4870	.	.
1975	8.3333	.	8.3333	.	.	.	0.1969	19.3508	0.0026	0.2593	25.7919	27.3742	.	.
1976	.	.	.	.	.	.	0.1227	12.4415	0.0022	0.2182	26.3680	51.1849	.	.
1977	.	.	.	.	.	.	0.1859	18.2162	0.0029	0.2797	24.7935	47.8437	.	.
1978	0.0909	.	0.4286	.	.	.	0.1495	14.6965	0.0017	0.1643	21.4481	42.6194	.	.
1979	1.1379	.	1.1379	.	.	.	0.1541	14.9917	0.0021	0.2078	22.2759	44.4125	.	.

TABLE 5 (CONT'D)
 VIRGINIA BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1979

YEAR	HARD CRABS CRAB SCRAPES		SOFT AND PEELERS CRAB SCRAPES		HARD CRABS CRAB POUND NETS		SOFT AND PEELERS CRAB POUND NETS		HARD CRABS FISH PD DIP NET		SOFT AND PEELERS FISH PD DIP NET	
	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	UNITS	UNITS	UNITS
1929	2.4266	5.6554	2.1551	5.0315	.	.	.	.	.	0.9630	.	1.0420
1930	1.6570	4.0000	3.2104	7.7500	.	.	.	.	.	0.4326	.	1.2598
1931	0.9021	1.9553	2.8592	6.1955	.	.	.	.	.	0.0591	.	0.8094
1932	0.8625	2.3000	1.8375	4.9000	.	.	.	.	0.0570	0.2424	.	1.0178
1933	2.8537	2.8537	3.1463	3.1463	.	.	.	.	.	0.1152	.	1.1576
1934	1.5000	1.5000	2.7500	2.7500	.	.	.	.	.	0.0192	.	0.5688
1935	0.7500	0.7500	4.1250	4.1250	1.0000	3.0000	0.5000	1.5000	0.0310	0.0793	.	0.6516
1936	0.6170	0.6170	5.4681	5.4681	0.9333	2.3333	0.8222	2.0556	0.0074	0.2214	.	0.8769
1937	0.6491	1.0000	3.9912	6.1486	0.2960	1.1389	1.0361	3.9861	0.0694	0.0083	.	0.9347
1938	1.5471	2.3932	3.1882	4.6325	0.1225	0.3356	0.5049	1.3826	0.0540	0.1803	.	0.7096
1939	2.8628	5.7257	4.7743	9.5497	0.2676	1.1111	0.5050	2.0972	0.0347	.	.	0.9909
1940	3.3839	6.7773	7.3750	15.7500	0.1521	0.7284	0.6237	2.9877	0.0080	.	.	0.8011
1941	2.5143	4.4000	5.6286	9.2500	0.2416	1.1818	0.3848	1.8818	.	0.1242	.	1.4554
1942	2.6207	5.2414	5.7931	11.5862	0.1712	0.8632	0.5282	2.6632	.	0.3879	.	0.9019
1943	.	.	.	.	.	.	.	.	.	.	.	.
1944	2.7083	4.3333	3.5083	5.6133	0.4298	2.4186	1.6818	9.4651	0.0293	0.0273	.	0.4429
1945	0.0779	0.1304	5.4935	10.8696	0.2665	1.4655	0.9342	5.1379	0.3123	0.0128	.	0.3191
1946	0.1125	0.1475	5.8250	8.9508	0.0944	0.4058	0.8432	3.6232	0.0359	0.0184	0.0031	0.3333
1947	0.0968	0.1412	0.0000	7.2941	0.0631	0.3478	1.9537	10.8261	.	0.0138	0.0321	0.2795
1948	0.0855	0.1300	4.8552	7.3800	0.0506	0.3289	1.5538	8.4362	0.0275	0.0119	.	0.2877
1949	0.0798	0.1161	5.4417	7.9196	0.0295	0.1615	0.8649	4.7344	0.0124	0.0095	.	0.2768
1950	0.1223	0.1704	7.1117	9.9037	0.0619	0.3107	0.8058	4.0464	0.1277	0.0159	.	0.2286
1951	0.0572	0.0795	7.7711	10.7950	0.0242	0.1186	0.6628	3.2508	0.0538	0.0132	.	0.1792
1952	0.0920	0.1311	3.9655	5.6557	0.0285	0.1496	0.6471	3.3937	0.0150	0.0104	.	0.1656
1953	0.0793	0.1137	6.0546	9.0062	0.0268	0.1388	0.6139	3.1744	0.0198	0.0142	.	0.1493
1954	0.0900	0.1314	4.7000	6.8613	0.0201	0.1096	0.5345	2.9144	0.0243	0.0146	.	0.1553
1955	0.1168	0.2054	2.0492	5.1875	0.0257	0.1349	0.5047	2.6540	0.0194	0.0186	.	0.1585
1956	0.1967	0.3529	2.3115	4.1471	0.0185	0.1071	0.5799	3.3571	0.0033	0.0329	.	0.4456
1957	0.1410	0.2619	2.6026	4.3333	0.0147	0.0909	0.4423	2.7415	.	0.0245	.	0.1793
1958	.	.	1.8850	3.2769	0.0873	0.5576	0.3499	2.2356	.	0.0227	.	0.1526
1959	.	.	1.2083	2.1220	0.0560	0.3660	0.2765	1.8067	.	0.0344	.	0.1412
1960	.	.	1.9802	3.3898	0.0467	0.3043	0.3094	2.0179	.	0.0383	.	0.2022
1961	0.3929	0.6707	1.2714	2.1707	0.0470	0.3164	0.3150	2.1208	.	0.1947	.	0.5105
1962	.	.	1.6860	2.7200	0.0689	0.4861	0.2788	1.9671	.	0.1552	.	0.2126
1963	.	.	0.6625	1.1522	0.0550	0.3500	0.1786	1.1364	.	0.1169	.	0.2540
1964	0.0157	0.0282	1.1567	1.9718	0.0793	0.5161	0.1321	0.8601	.	0.1822	.	0.3411
1965	0.0476	0.0769	0.6190	1.0000	0.1352	0.8438	0.2261	1.4106	.	0.1315	.	0.2113
1966	0.1657	0.3030	2.6000	4.7273	0.7106	4.7219	0.1608	1.0689	0.0350	1.1780	.	0.5169

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TABLE 5 (CONT'D)
 VIRGINIA BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS CRAB SCRAPES		SOFT AND PEELERS CRAB SCRAPES		HARD CRABS CRAB POUND NETS		SOFT AND PEELERS CRAB POUND NETS		HARD CRABS FISH PD DIP NET		SOFT AND PEELERS FISH PD DIP NET	
	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	UNITS	UNITS	UNITS
1967	0.2639	0.5377	0.9953	1.9906	0.6140	4.1800	0.2362	1.6083	.	1.5354	.	0.2929
1968	0.7516	1.4557	0.9804	1.8987	0.5972	4.6407	0.1306	1.0148	0.0109	0.7742	.	0.2419
1969	.	.	3.1250	5.5556	0.4212	2.9179	0.1172	0.8116	0.0098	0.3302	.	0.4717
1970	.	.	2.3468	5.1803	0.5923	4.1657	0.0680	0.4783	.	0.5000	.	0.2614
1971	.	.	0.8429	1.0417	0.3203	2.5698	0.1546	1.2402	.	2.7500	.	.
1972	.	.	2.5000	3.1256	0.0252	0.1703	0.1382	0.9345	.	.	.	.
1973	.	.	1.8667	2.2022	0.0106	0.0363	0.1473	1.2014	.	.	0.0145	.
1974	.	.	0.5405	0.5299	.	.	0.0554	0.5838	.	.	.	.
1975	0.5335	0.5833	0.9615	1.0417	0.0004	0.0033	0.1099	0.8328	.	.	.	.
1976	.	.	0.5353	0.6429	0.0005	0.0033	0.1827	1.2033	.	.	.	.
1977	.	.	0.1649	0.1649	0.0125	0.1083	0.0751	0.6497	.	.	.	.
1978	.	.	0.5000	0.5000	0.0023	0.0181	0.0368	0.6958	.	.	.	.
1979	0.0769	0.0777	1.0577	1.0630	.	.	0.1923	1.4773	.	.	.	.

TABLE 6
 MARYLAND BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1979

YEAR	HARD CRABS TROTLINE			SOFT AND PEELERS TROTLINE			HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		DREDGES HARD CRABS		DREDGES SOFT AND PEELERS	
	UNITS	BAITS	V&B	UNITS	BAITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B
1929	17.0554	0.0304	18.3874	.	.	.	.	.	.	.	.	.	.	.
1930	20.0768	0.0310	21.0382	.	.	.	.	.	.	.	.	.	.	.
1931	18.6000	0.0279	18.9771	.	.	.	.	.	.	.	.	.	.	.
1932	22.0636	0.0342	22.2449	0.0139	0.0000	0.0140	.	.	.	.	.	.	.	.
1933	16.5120	0.0272	19.8241	.	.	.	.	.	.	.	.	.	.	.
1934	8.4934	0.0138	10.3344	.	.	.	.	.	.	.	.	.	.	.
1935	9.3290	0.0137	12.0155	0.1635	0.0002	0.1999	.	.	.	.	.	.	.	.
1936	7.0330	0.0098	8.3781	0.1435	0.0002	0.1710	.	.	.	.	.	.	.	.
1937	10.1204	0.0160	11.7590	0.1558	0.0003	0.1927	.	.	.	.	.	.	.	.
1938	11.6246	0.0169	14.0802	0.1416	0.0002	0.1715	0.3636	2.2222	0.5091	3.1111	.	.	.	.
1939	12.9136	0.0249	15.5947	0.1510	0.0003	0.1957	.	.	.	.	.	.	.	.
1940	8.6944	0.0149	11.0888	0.1009	0.0002	0.1287	0.4117	11.7778	.	.	.	.	.	.
1941	8.3699	0.0160	11.1671	0.1204	0.0002	0.1499	0.6087	20.5882	.	.	.	.	.	.
1942	12.2411	0.0231	16.9840	0.0523	0.0001	0.0726	0.7407	16.6667	0.2111	4.7500	.	.	.	.
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	12.9063	0.0174	12.9063	0.1303	0.0002	0.1308	0.5817	19.9814	0.0054	0.1863	.	.	.	.
1945	3.0487	0.0104	8.1289	0.0691	0.0001	0.0698	0.8417	28.6991	0.0109	0.3704	.	.	.	.
1946	13.7821	0.0189	13.7821	0.1460	0.0002	0.1460	0.6941	24.2934	0.0067	0.2355	.	.	.	.
1947	15.0149	0.0227	15.0149	0.2961	0.0004	0.2961	0.7599	26.2975	0.0110	0.3799	0.8667	1.7333	.	.
1948	12.4872	0.0194	12.4872	0.1241	0.0002	0.1241	0.2951	14.7526	0.0033	0.1649	3.5500	7.1000	.	.
1949	13.6016	0.0211	13.7223	0.1398	0.0002	0.1411	0.3286	16.0511	0.0041	0.1995	9.7667	17.2353	.	.
1950	16.2237	0.0250	16.3392	0.1901	0.0003	0.1915	0.3665	19.0216	0.0070	0.3650	.	.	.	.
1951	15.0495	0.0232	15.0495	0.1323	0.0002	0.1323	0.4212	21.0613	0.0033	0.1546	3.5385	6.0000	.	.
1952	15.4589	0.0219	15.4589	0.1331	0.0002	0.1331	0.5337	26.6842	0.0047	0.2344	4.5672	6.9545	.	.
1953	13.7274	0.0199	13.7274	0.1152	0.0002	0.1152	0.4377	21.8856	0.0038	0.1895	5.6889	5.6889	.	.
1954	9.3441	0.0140	9.3441	0.0841	0.0001	0.0841	0.2606	13.0291	0.0024	0.1210	2.2308	2.2308	.	.
1955	3.5408	0.0077	3.5408	0.0383	0.0001	0.0383	0.1603	7.8852	0.0020	0.0975	2.0000	2.1176	.	.
1956	3.1423	0.0072	3.1423	0.0269	0.0001	0.0269	0.2375	13.0033	0.0017	0.0928	1.2931	2.5862	.	.
1957	4.5408	0.0099	4.6609	0.0828	0.0002	0.0850	0.3486	24.8053	0.0205	1.4564	1.7193	3.2667	.	.
1958	4.7066	0.0102	4.7126	0.0693	0.0001	0.0694	0.3311	23.4446	0.0145	1.0269	1.5522	2.9714	.	.
1959	4.0532	0.0096	4.0733	0.0358	0.0001	0.0360	0.1670	18.4295	0.0033	0.3597	1.2889	2.0714	.	.
1960	5.5591	0.0135	5.7905	0.0474	0.0001	0.0485	0.2663	30.7689	0.0057	0.6554	17.5455	27.5714	.	.
1961	5.4018	0.0141	5.7052	0.0403	0.0001	0.0426	0.2261	24.8280	0.0042	0.4606	3.0000	3.0000	.	.
1962	5.4760	0.0139	5.3208	0.0514	0.0001	0.0546	0.2037	20.7284	0.0046	0.4652	1.2500	1.2500	.	.
1963	3.3523	0.0093	4.0650	0.0565	0.0001	0.0596	0.1414	14.3973	0.0033	0.3362	30.0000	30.0000	.	.
1964	4.5844	0.0126	4.9555	0.0696	0.0002	0.0736	0.1887	19.5779	0.0041	0.4302	6.2500	6.2500	.	.
1965	5.3572	0.0148	5.7016	0.0519	0.0001	0.0548	0.2236	23.5187	0.0043	0.4519	5.0000	5.0000	.	.
1966	4.3385	0.0141	5.3163	0.0465	0.0001	0.0511	0.1956	20.1093	0.0023	0.2360

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TABLE 6 (CONT'D)
 MARYLAND BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS TROTLINE			SOFT AND PEELERS TROTLINE			HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		DREDGES HARD CRABS		DREDGES SOFT AND PEELERS	
	UNITS	BAITS	V&B	UNITS	BAITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B
1967	3.7773	0.0111	4.5262	0.0532	0.0002	0.0638	0.1447	15.2242	0.0029	0.3025	.	.	.	.
1968	1.4190	0.0043	1.5382	0.0333	0.0001	0.0361	0.0678	6.4223	0.0017	0.1579	.	.	.	.
1969	3.0510	0.0097	3.4919	0.0342	0.0001	0.0390	0.1692	15.4840	0.0021	0.1922	.	.	.	.
1970	1.8800	0.0075	2.1243	0.0115	0.0000	0.0130	0.1659	14.0997	0.0012	0.1017	.	.	.	.
1971	1.3442	.	1.6676	0.0079	.	0.0096	0.1637	13.9691	0.0017	0.1416	.	.	.	.
1972	1.2074	.	1.5302	0.0066	.	0.0084	0.1448	13.6976	0.0011	0.1068	.	.	.	.
1973	0.9946	.	1.3756	0.0053	.	0.0073	0.1359	12.5695	0.0015	0.1391	.	.	.	.
1974	0.9805	.	1.1921	0.0063	.	0.0076	0.1409	12.0884	0.0009	0.0790	.	.	.	.
1975	0.3535	.	1.0516	0.0048	.	0.0059	0.1410	12.7956	0.0014	0.1259	.	.	.	.
1976	0.5655	.	0.7376	0.0046	.	0.0060	0.1228	9.7421	0.0015	0.1184	.	.	.	.
1977	0.4505	.	0.4108	0.0032	.	0.0029	0.0957	9.0145	0.0006	0.0536	.	.	.	.
1978	0.2226	.	0.3948	0.0042	.	0.0075	0.0717	7.4277	0.0016	0.1669	.	.	.	.
1979	0.3061	.	0.3655	0.0041	.	0.0049	0.0998	11.1813	0.0021	0.2321	.	.	.	.

TABLE 6 (CONT'D)
 MARYLAND BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1979

YEAR	HARD CRABS CRAB SCRAPES		SOFT AND PEELERS CRAB SCRAPES		HARD CRABS CRAB POUND NETS		SOFT AND PEELERS CRAB POUND NETS		HARD CRABS FISH PD		SOFT AND PEELERS FISH PD	
	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	DIP NET UNITS	UNITS	DIP NET UNITS
1929	0.8521	1.7519	1.4619	3.0056	.	.	.	.	.	0.4263	.	0.8542
1930	0.9903	2.0890	2.5974	5.4795	.	.	.	.	.	0.0646	.	1.4824
1931	0.4900	0.9981	1.9098	3.8905	.	.	.	.	.	0.2123	.	0.9718
1932	0.5893	1.7859	0.6600	1.7100	.	.	.	.	.	1.0959	.	1.7997
1933	1.5826	3.1651	1.1542	2.3084	.	.	.	.	.	0.0604	.	1.6742
1934	1.0430	2.1224	1.2354	2.5140	.	.	.	.	.	0.0030	.	1.0326
1935	0.3432	0.7993	1.5565	3.6250	.	.	.	.	.	0.0066	.	0.8675
1936	0.0918	0.2321	1.7020	4.3036	.	.	.	.	.	.	.	0.6791
1937	.	.	2.3544	5.0270	.	.	.	.	.	0.1715	.	0.8123
1938	0.1629	0.3257	2.9739	5.9479	.	.	.	.	.	0.0746	0.0109	1.0587
1939	0.2052	0.4124	4.1113	8.2226	0.6452	2.5000	0.6774	2.6250	.	0.0558	0.0038	1.1612
1940	0.0714	0.1429	2.8661	5.7321	0.5155	2.9412	0.1134	0.6471	.	.	.	0.6481
1941	.	.	2.7026	5.3776	.	.	.	.	.	.	.	0.4282
1942	0.1887	0.2817	6.2500	9.3310	.	.	.	.	.	.	.	0.7510
1943	.	.	.	.	.	.	.	.	.	.	.	.
1944	0.0722	0.1330	2.3988	4.4149	.	.	.	.	.	.	.	0.0846
1945	0.0500	0.0820	4.6150	7.5656	.	.	.	.	.	0.0143	.	0.4924
1946	0.1064	0.1613	7.2979	11.0645	.	.	.	.	.	0.0056	.	0.2817
1947	0.1210	0.1673	6.6369	9.1753	.	.	.	.	.	0.0128	.	0.3050
1948	0.2514	0.3273	4.1961	5.4640	.	.	.	.	.	0.0113	.	0.1909
1949	0.2429	0.3127	5.4831	7.0582	.	.	.	.	.	0.0145	.	0.2034
1950	0.3113	0.4058	5.7426	7.4856	.	.	.	.	.	0.0506	.	0.2419
1951	0.1945	0.2626	4.1596	5.6162	.	.	.	.	.	0.0437	.	0.1645
1952	0.5910	0.3358	3.3087	4.6791	.	.	.	.	.	0.0213	.	0.1345
1953	0.2539	0.4815	3.0977	5.8741	.	.	.	.	.	0.0189	.	0.1422
1954	0.1777	0.3531	1.4053	2.7921	.	.	.	.	.	0.0299	.	0.1512
1955	0.1655	0.3149	1.7055	3.2457	.	.	.	.	.	0.0308	.	0.1442
1956	1.3693	2.7385	2.7962	5.5936	.	.	.	.	.	0.0504	.	0.1447
1957	2.6844	5.3588	3.9468	7.3936	.	.	.	.	.	0.1339	.	0.1806
1958	0.4418	0.8835	4.6546	9.3092	.	.	.	.	.	0.0887	.	0.2173
1959	0.3620	0.7240	3.6719	7.3439	.	.	.	.	.	0.0669	.	0.1338
1960	0.3983	0.7965	5.0307	10.0606	.	.	.	.	.	0.0913	.	0.1627
1961	0.3537	0.7000	4.3484	9.5953	.	.	.	.	.	0.1195	.	0.1681
1962	0.3705	0.7333	7.1537	14.1583	.	.	.	.	.	0.0826	.	0.1927
1963	0.2137	0.4217	3.9273	7.7522	.	.	.	.	.	0.0299	.	0.0359
1964	0.1917	0.3826	6.6812	13.3348	.	.	.	.	.	0.0375	.	0.0750
1965	0.2336	0.4651	3.6809	11.3295	0.2752	1.6571	1.0095	6.0571	.	0.0654	.	0.1308
1966	0.2780	0.5541	4.3367	8.6497	0.1952	1.1714	0.9000	5.4000	.	0.1017	.	0.2034

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TABLE 6 (CONT'D)
 MARYLAND BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS CRAB SCRAPES		SOFT AND PEELERS CRAB SCRAPES		HARD CRABS CRAB POUND NETS		SOFT AND PEELERS CRAB POUND NETS		HARD CRABS FISH PD DIP NET		SOFT AND PEELERS FISH PD DIP NET	
	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	V&B	UNITS	UNITS	UNITS	UNITS
1967	0.6636	1.3273	14.1727	28.3455	.	.	.	.	0.1572	0.2034	0.8297	0.3220
1968	0.3564	0.7129	3.5842	7.1683	.	.	0.7143	2.5000	.	0.0980	.	0.0980
1969	0.6862	0.6862	9.2606	9.2606	0.1154	0.3333	3.9038	11.2778	.	0.1395	.	0.4070
1970	1.5581	1.5581	14.0930	14.0930	0.1200	0.3333	3.3400	9.2778	.	0.1455	.	0.3000
1971	0.3386	0.7868	3.7057	8.6103	0.1250	0.3333	2.6750	7.1333	.	0.1739	.	0.3043
1972	0.2889	0.2889	4.0476	4.0476	0.2250	0.6000	2.8250	7.5333	.	0.1097	.	0.1742
1973	0.3148	0.3148	3.9148	3.9148	0.1702	1.3333	2.6809	21.0000	.	0.0943	.	0.1635
1974	0.3464	0.3464	5.1357	5.1357	0.1739	1.0000	4.2174	24.2500	.	0.1067	.	0.1933
1975	0.3483	0.3483	4.6142	4.6142	0.1096	0.4444	2.7397	11.1111	.	0.0987	.	0.1382
1976	0.2636	0.2636	4.1628	4.1628	0.0500	0.2593	1.2500	6.4815	.	0.0769	.	0.1119
1977	0.2823	0.2823	3.5202	3.5202	0.0556	0.3103	0.9321	5.2069	.	0.0709	.	0.0922
1978	0.2867	0.2867	2.5400	2.5400	0.0361	0.2903	0.4819	3.8710	.	0.0672	.	0.0821
1979	0.3437	0.3437	2.0625	2.0625	0.0388	0.3571	0.5039	4.6429	.	0.0650	.	0.0813

TABLE 7
 VIRGINIA BLUE CRAB EFFORT DATA
 ANNUAL LICENSES
 CALENDAR YEARS 1921 THROUGH 1982
 SOURCE: VIRGINIA MARINE RESOURCES COMMISSION

YEAR	TOTAL CRABBERS	ORDINARY LICENSES	PATENT TROTLINE	POT UNITS	TOTAL POTTERS	POTTERS ALONE	POTTERS W/HELP	POTTERS HELPER	CRAB DREDGE	CRAB SCRAPE	POUND NET	MISCEL- LANEOUS
1921	1859*	1819#	2*	0	0	0	0	0	27#	11#	0	0
1922	2166	2135	2	0	0	0	0	0	26	3	0	0
1923	1927	1865	8	0	0	0	0	0	53	1	0	0
1924	2178	2065	47	0	0	0	0	0	55	11	0	0
1925	2958*	2858	25	0	0	0	0	0	59	16	0	0
1926	2825	2711	48	0	0	0	0	0	60	6	0	0
1927	2775	2568	40	0	0	0	0	0	64	3	0	0
1928	2261	2139	43	28#	1#	0	0	0	67	11	0	0
1929	1563	1408	36	144	38	0	0	0	67	14	0	0
1930	1643	1537	48	0	0	0	0	0	52	6	0	0
1931	1573	1464*	44*	0	0	0	0	0	61	4	0	0
1932	1183	1051	67	0	0	0	0	0	60	5	0	0
1933	1212	1066	54	0	0	0	0	0	54	38	0	0
1934	1787	1610	69	0	0	0	0	0	70*	38*	0	0
1935	1895	1698	62	23#	1*	0	0	0	92	42	0	0
1936	1756	1601	52	113	3	0	0	0	87	13	31#	0
1937	1957	1677	62	164	8	0	0	0	105	101	93	4*
1938	2041	1699	70	886	73	0	0	0	80	115	32	4
1939	1666	1255	77	1125	109	0	0	0	79	146	283	0
1940	1770	1261	46	7834	349	0	0	0	96	18	400	0
1941	1637	945	60	16660	476	0	0	0	70	136	527	0
1942	1498	771	33	18375	525	0	0	0	63	106	440	0
1943	1334	737	46	15540	444	0	0	0	54	53	341	0
1944	1401	601	55	22365	600	0	0	0	64	81	250	0
1945	1476	535	37	37000	740	0	0	0	70	87	322	7*
1946	1436	440	67	35450	709	0	0	0	77	141	615	2
1947	1423	427	62	36300	726	0	0	0	78	130	694	0
1948	1527	442	38	42450	849	0	0	0	99	99	837	0
1949	1595	436	58	44200	884	0	0	0	107	110	1166	0
1950	1468	298	55	45600	912	0	0	0	109	94	1150	0
1951	1628	272	70	48800	976	0	0	0	122	188	1155	0
1952	1532	279	61	45050	901	0	0	0	128	163	1290	0
1953	1741	306	89	51900	1038	0	0	0	150	158	1425	0
1954	1481	214	86	47150	943	0	0	0	85	153	1722	0
1955	1739	193	66	53850	1077	0	0	0	146	249	1831	8*
1956	1468	166	57	.	977	0	0	0	73	189	2087	6
1957	1544	152	74	.	1051	0	0	0	120	139	2223	8
1958	1424	173	62	.	958	0	0	0	98	133	2343	0

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TABLE 7 (CONT'D)
VIRGINIA BLUE CRAB EFFORT DATA
ANNUAL LICENSES

YEAR	TOTAL CRABBERS	ORDINARY LICENSES	PATENT TROTLINE	POT UNITS	TOTAL POTTERS	POTTERS ALONE	POTTERS W/HELP	POTTERS HELPER	CRAB DREDGE	CRAB SCRAPE	POUND NET	MISCEL- LANEOUS
1959	1512	157	69	.	1072	0	0	0	105	108	2731	1*
1960	1803	124	116	.	1291	0	0	0	118	151	2404	3
1961	1512	92	46	.	1118	0	0	0	122	132	2433	2
1962	1499	164	26	.	999	176#	27#	62*	194	116	2330	0
1963	1721	297	36	.	1093	866*	227*	88	179	116	2413	0
1964	1822	266	25	.	1237	897	340	274	159	135	2742	0
1965	1806	239	12	.	1307	966	341	55	143	105	2530	0
1966	1739	224	17	.	1159	929	240	80	223	106	2893	0
1967	1558	192	20	.	1066	861	205	30	154	126	2688	0
1968	1801	173	20	.	1300	1043	257	75	221	87	2641	0
1969	2337	276	39	.	1721	1335	386	88	167	134	2504	0
1970	1715	165	21	.	1290	1049	241	51	174	65	2391	0
1971	1831	186	21	.	1351	1022	329	37	183	90	2423	0
1972	1676	129	14	.	1288	944	344	41	144	101	2598	0
1973	1821	118	7	.	1453	988	465	63	170	73	2584	0
1974	2026	118	10	.	1612	1107	505	50	163	123	2682	0
1975	1943	97	16	.	1548	1039	509	34	150	132	2556	0
1976	1813	72	5	.	1498	1027	471	27	131	107	2641	0
1977	1965	63	9	.	1529	1064	465	43	169	195	2823	0
1978	2262	45	9	.	1847	1190	657	44	139	222	2977	0
1979	2482	44	9	.	1989	1208	781	50	219	221	3036	0
1980	2200	50	4	.	1738	1138	600	64	221	187	3023	0
1981	2633	100	9	.	2043	1254	789	71	236	245	2894	0
1982	2722	71	5	.	2151	1261	890	77	209	286	2879	0

Number of licenses estimated from revenues received.

* Number of licenses actually issued.

*,# are shown only for the first year of record;
no change in method of estimation of numbers
occurs until the next symbol is shown.

TABLE 7 (CONT'D)
 VIRGINIA BLUE CRAB EFFORT DATA
 ANNUAL LICENSES
 CALENDAR YEARS 1921 THROUGH 1982
 SOURCE: VIRGINIA MARINE RESOURCES COMMISSION

YEAR	TOTAL HOUSES	PICKING HOUSE	CANNING HOUSE	SHEDDING HOUSE	ALL BUYERS	BUYERS TRUCK	BUYERS BUSINESS
1921	51*	49*	2*	0	69*	0	0
1922	53	51	2	0	131	0	0
1923	64	62	2	0	77	0	0
1924	54	52	2	0	96	0	0
1925	72	70	2	0	126	0	0
1926	77*	75	2	0	131*	0	0
1927	86	84	2	0	130	0	0
1928	73	71	2	0	111	0	0
1929	68	66	2	0	93	0	0
1930	77	75	2	0	97	0	0
1931	62	60*	2*	0	115	0	0
1932	51	48	3	0	102	0	0
1933	61	59	2	0	108	0	0
1934	66	66	0	0	132	0	0
1935	70	70	0	0	122	0	0
1936	74	74	0	0	131	0	0
1937	77	76	1*	0	122	0	0
1938	71	70	1	0	141	0	0
1939	73	77	1	0	122	0	0
1940	85	85	0	0	138	0	0
1941	92	92	0	0	108	0	0
1942	79	79	0	0	76	0	0
1943	79	79	0	0	78	0	0
1944	73	73	0	0	64	0	0
1945	81	81	0	0	62	0	0
1946	99	99	0	0	69	0	0
1947	91	91	0	0	78	0	0
1948	89	89	0	0	87	0	0
1949	88	83	0	0	94	0	0
1950	95	95	0	0	115	0	0
1951	97	97	0	0	107	0	0
1952	83	83	0	0	107	0	0
1953	98	93	0	0	98	0	0
1954	80	80	0	0	71	0	0
1955	85	85	0	0	96	0	0
1956	76	76	0	0	81	0	0
1957	76	76	0	0	81	0	0
1958	81	81	0	0	90	0	0

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TABLE 7 (CONT'D)
VIRGINIA BLUE CRAB EFFORT DATA
ANNUAL LICENSES

YEAR	TOTAL HOUSES	PICKING HOUSE	CANNING HOUSE	SHEDDING HOUSE	ALL BUYERS	BUYERS TRUCK	BUYERS BUSINESS
1959	80	80	0	0	97	0	0
1960	92	92	0	0	116	0	0
1961	84	84	0	0	103	0	0
1962	84	84	0	0	116	0	0
1963	93	93	0	0	129	0	0
1964	103	101	0	7*	111	0	0
1965	116#	40	0	76	86	0	0
1966	118	44	0	74	104	0	0
1967	107	34	0	73	92	0	0
1968	100	28	0	72	99	0	0
1969	111	103	0	8	116	0	0
1970	82	24	0	58	115	0	0
1971	.	.	.	.	250	0	0
1972	.	.	.	.	185	0	0
1973	.	.	.	.	186	0	0
1974	.	.	.	.	209	0	0
1975	.	.	.	.	243	93#	61#
1976	.	.	.	.	383	204*	179*
1977	.	.	.	.	428	241	187
1978	.	.	.	.	417	211	206
1979	.	.	.	.	483	244	239
1980	.	.	.	.	488	255	233
1981	.	.	.	.	512	256	256
1982	.	.	.	.	539	267	272

Number of licenses estimated from revenues received.

* Number of licenses actually issued.

*,# are shown only for the first year of record;
no change in method of estimation of numbers
occurs until the next symbol is shown.

TABLE 8
 VIRGINIA BLUE CRAB EFFORT DATA
 EFFORT YEAR (DECEMBER-NOVEMBER) LICENSES
 EFFORT YEARS 1921 THROUGH 1982
 SOURCE: VIRGINIA MARINE RESOURCES COMMISSION

YEAR	TOTAL CRABBERS	ORDINARY LICENSES	PATENT TROTLINE	POT UNITS	TOTAL POTTERS	POTTERS ALONE	POTTERS W/HELP	POTTERS HELPER	CRAB DREDGE**	CRAB SCRAPE	POUND NET	MISCEL- LANEDUS
1921	1870*	1825*	2*	0	0	0	0	0	32*	11*	0	0
1922	2166	2129	2	0	0	0	0	0	32	3	0	0
1923	1925	1865	8	0	0	0	0	0	51	1	0	0
1924	2180	2067	47	0	0	0	0	0	55	11	0	0
1925	2361*	2860	25	0	0	0	0	0	60	16	0	0
1926	2829	2713	48	0	0	0	0	0	62	6	0	0
1927	2761	2657	40	0	0	0	0	0	61	3	0	0
1928	2271	2147	43	23*	1*	0	0	0	69	11	0	0
1929	1560	1411	35	144	38	0	0	0	62	14	0	0
1930	1646	1536	49	0	0	0	0	0	55	6	0	0
1931	1563	1453*	44*	0	0	0	0	0	62	4	0	0
1932	1190	1060	67	0	0	0	0	0	58	5	0	0
1933	1204	1063	54	0	0	0	0	0	49	38	0	0
1934	1754	1586	54	0	0	0	0	0	76*	38*	0	0
1935	1923	1722	73	23*	1*	0	0	0	95	42	0	0
1936	1760	1607	54	113	3	0	0	0	86	10	31*	0
1937	1958	1676	64	164	8	0	0	0	102	104	93	4*
1938	2043	1699	68	886	73	0	0	0	84	115	32	4
1939	1650	1252	78	1125	109	0	0	0	65	146	283	0
1940	1784	1265	44	7764	347	0	0	0	110	18	400	0
1941	1689	945	63	16730	478	0	0	0	70	133	527	0
1942	1498	771	33	18375	525	0	0	0	61	108	440	0
1943	1333	737	45	15505	443	0	0	0	55	53	341	0
1944	1402	601	56	22400	601	0	0	0	63	81	250	0
1945	1479	535	37	37000	740	0	0	0	72	88	320	7*
1946	1433	439	67	35400	708	0	0	0	76	141	617	2
1947	1417	426	62	36300	726	0	0	0	74	129	694	0
1948	1518	444	38	42450	849	0	0	0	94	93	837	0
1949	1609	436	57	44250	885	0	0	0	114	117	1166	0
1950	1461	298	56	45550	911	0	0	0	103	93	1150	0
1951	1624	272	70	48850	977	0	0	0	116	189	1155	0
1952	1538	279	61	45000	900	0	0	0	135	163	1290	0
1953	1707	304	88	51950	1039	0	0	0	118	158	1425	0
1954	1523	216	87	47150	943	0	0	0	124	153	1722	0
1955	1677	193	66	53350	1077	0	0	0	107	226	1831	8*
1956	1519	165	56	.	977	0	0	0	110	205	2087	6
1957	1541	153	75	.	1051	0	0	0	109	145	2223	8
1958	1426	173	62	.	958	0	0	0	104	129	2343	0

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TABLE 8 (CONT'D)
 VIRGINIA BLUE CRAB EFFORT DATA
 EFFORT YEAR (DECEMBER-NOVEMBER) LICENSES
 EFFORT YEARS 1921 THROUGH 1982
 SOURCE: VIRGINIA MARINE RESOURCES COMMISSION

YEAR	TOTAL HOUSES	PICKING HOUSE	CANNING HOUSE	SHEDDING HOUSE	ALL BUYERS	BUYERS TRUCK	BUYERS BUSINESS
1921	56*	52*	4*	0	59*	0	0
1922	52	50	2	0	129	0	0
1923	65	63	2	0	79	0	0
1924	54	52	2	0	96	0	0
1925	72	70	2	0	126	0	0
1926	77*	75	2	0	130*	0	0
1927	86	84	2	0	131	0	0
1928	73	71	2	0	111	0	0
1929	68	66	2	0	93	0	0
1930	77	75	2	0	97	0	0
1931	62	60*	2*	0	115	0	0
1932	50	48	2	0	102	0	0
1933	61	58	3	0	108	0	0
1934	67	67	0	0	131	0	0
1935	70	70	0	0	122	0	0
1936	74	74	0	0	131	0	0
1937	77	76	1*	0	122	0	0
1938	71	70	1	0	141	0	0
1939	78	77	1	0	123	0	0
1940	85	85	0	0	138	0	0
1941	92	92	0	0	108	0	0
1942	79	79	0	0	76	0	0
1943	79	79	0	0	78	0	0
1944	73	73	0	0	64	0	0
1945	81	81	0	0	62	0	0
1946	99	99	0	0	69	0	0
1947	91	91	0	0	78	0	0
1948	89	89	0	0	87	0	0
1949	88	88	0	0	94	0	0
1950	95	95	0	0	115	0	0
1951	96	96	0	0	106	0	0
1952	84	84	0	0	107	0	0
1953	93	92	0	0	92	0	0
1954	85	85	0	0	78	0	0
1955	81	81	0	0	90	0	0
1956	80	80	0	0	87	0	0
1957	76	76	0	0	81	0	0
1958	81	81	0	0	90	0	0

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TABLE 8 (CONT'D)
 VIRGINIA BLUE CRAB EFFORT DATA
 EFFORT YEAR (DECEMBER-NOVEMBER) LICENSES

YEAR	TOTAL CRABBERS	ORDINARY LICENSES	PATENT TROTLINE	POT UNITS	TOTAL POTTERS	POTTERS ALONE	POTTERS W/HELP	POTTERS HELPER	CRAB DREDGE**	CRAB SCRAPE	POUND NET	MISCEL- LANEUS
1959	1514	157	68	.	1072	0	0	0	109	107	2729	1*
1960	1738	124	117	.	1289	0	0	0	98	157	2406	3
1961	1534	92	46	.	1120	0	0	0	144	130	2433	2
1962	1420	164	26	.	998	175#	27#	61*	115	117	2330	0
1963	1676	295	36	.	1092	866*	226*	89	139	113	2413	0
1964	1819	267	24	.	1239	898	341	274	157	132	2453	0
1965	1835	239	13	.	1307	966	341	55	169	107	2797	0
1966	1705	224	17	.	1169	929	240	80	186	109	2893	0
1967	1573	192	20	.	1065	861	204	30	170	126	2702	0
1968	1750	173	20	.	1290	1035	255	75	178	89	2598	0
1969	2381	276	39	.	1717	1332	385	88	215	134	2497	0
1970	1712	165	21	.	1303	1059	244	51	158	65	2436	0
1971	1827	186	21	.	1353	1023	330	37	177	90	2436	0
1972	1694	129	14	.	1288	944	344	41	162	101	2580	0
1973	1803	117	7	.	1450	985	465	63	156	73	2600	0
1974	2043	118	10	.	1511	1107	504	50	181	123	2674	0
1975	1953	97	16	.	1546	1036	510	34	162	132	2551	0
1976	1822	72	5	.	1495	1029	466	27	143	107	2636	0
1977	1934	63	9	.	1527	1058	469	43	140	195	2788	0
1978	2287	45	9	.	1842	1190	652	44	169	222	2917	0
1979	2445	44	9	.	1991	1210	781	50	180	221	3131	0
1980	2191	50	4	.	1743	1141	602	64	207	187	2974	0
1981	2614	99	9	.	2039	1249	790	71	222	245	2940	0
1982	2735	72	5	.	2149	1262	887	77	223	286	2889	0

Number of licenses estimated from revenues received.

* Number of licenses actually issued.

*,# are shown only for the first year of record;
 no change in method of estimation of numbers
 occurs until the next symbol is shown.

** Crab dredge effort is tabulated for the period June through May.

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TABLE 8 (CONT'D)
 VIRGINIA BLUE CRAB EFFORT DATA
 EFFORT YEAR (DECEMBER-NOVEMBER) LICENSES

YEAR	TOTAL HOUSES	PICKING HOUSE	CANNING HOUSE	SHEDDING HOUSE	ALL BUYERS	BUYERS TRUCK	BUYERS BUSINESS
1959	80	80	0	0	94	0	0
1960	91	91	0	0	114	0	0
1961	85	85	0	0	103	0	0
1962	82	82	0	0	114	0	0
1963	93	93	0	0	115	0	0
1964	107	101	0	6*	104	0	0
1965	115#	40	0	75	105	0	0
1966	112	37	0	75	92	0	0
1967	108	34	0	74	87	0	0
1968	104	32	0	72	95	0	0
1969	107	99	0	8	121	0	0
1970	91	33	0	58	121	0	0
1971	.	.	.	.	243	0	0
1972	.	.	.	.	200	0	0
1973	.	.	.	.	174	0	0
1974	.	.	.	.	191	0	0
1975	.	.	.	.	199	44#	15#
1976	.	.	.	.	332	209*	173*
1977	.	.	.	.	405	216	189
1978	.	.	.	.	445	238	207
1979	.	.	.	.	437	227	210
1980	.	.	.	.	478	250	228
1981	.	.	.	.	523	267	256
1982	.	.	.	.	544	275	269

Number of licenses estimated from revenues received.

* Number of licenses actually issued.

*,# are shown only for the first year of record;
 no change in method of estimation of numbers
 occurs until the next symbol is shown.

TABLE 9
 VIRGINIA (VMRC) BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS
 CALENDAR YEARS 1929 THROUGH 1981

YEAR	HARD CRABS TROTLINE		SOFT AND PEELERS TROTLINE		HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		HARD DREDGES UNITS	S & P DREDGES UNITS	HARD SCRAPES UNITS	S & P SCRAPES UNITS	HARD PD NET UNITS	S & P PD NET UNITS
	ORDINARY	PATENT	ORDINARY	PATENT	UNITS	POTTERS	UNITS	POTTERS						
1929	15.2358	595.8888	.	.	.	.	.	.	105.5672	.	102.7857	91.2857	.	.
1930	13.0859	419.0208	.	.	.	.	.	.	144.1153	.	170.6666	330.6666	.	.
1931	14.5867	485.3409	.	.	.	.	.	.	118.2623	.	87.5000	277.2500	.	.
1932	17.4139	273.1641	.	.	.	.	.	.	136.8500	.	13.8000	29.4000	.	.
1933	15.9916	315.6852	.	.	.	.	.	.	121.3889	.	3.0789	3.3947	.	.
1934	10.4733	244.3768	.	.	.	.	.	.	79.9571	.	0.1579	0.2895	.	.
1935	8.6490	236.8709	.	.	2.0370	48.0000	0.3478	8.0000	52.0870	.	0.1429	0.7857	.	.
1936	12.0887	372.1922	0.1212	3.7308	0.8350	33.3333	0.3628	13.6667	71.9540	.	2.2308	19.7692	1.3548	1.1935
1937	13.2993	359.7257	0.0179	0.4839	2.6707	54.7500	0.3171	6.5000	46.6952	.	0.7327	4.5049	0.8817	3.0860
1938	13.2042	320.4856	0.2978	7.2286	0.2344	3.4521	.	.	67.4000	.	2.4348	4.7130	1.5525	6.4375
1939	16.7347	272.7532	0.3458	5.6364	0.9527	9.9358	0.1440	1.4862	51.7468	.	4.4315	7.3904	0.2827	0.5336
1940	11.2046	307.1521	0.3569	9.7826	0.6431	14.4355	0.0078	0.1748	36.8125	.	13.5556	31.5000	0.1475	0.6050
1941	7.9873	125.8000	0.3926	6.1833	0.3426	11.9895	0.0047	0.1660	30.2429	.	1.2941	2.8971	0.2467	0.3928
1942	9.8495	230.1212	0.4034	9.4242	0.4352	15.2324	0.0023	0.0819	42.3016	.	1.4340	3.1698	0.1864	0.5750
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	17.0649	186.4727	0.6389	6.9818	0.4911	18.3050	0.0100	0.3733	34.0312	.	4.0123	5.1975	0.4160	1.6280
1945	5.5402	80.1081	0.0785	1.1351	0.3531	17.6554	0.0074	0.3703	32.2571	0.0286	0.0690	5.7471	0.2540	0.9255
1946	14.5545	95.5821	0.1023	0.6716	0.4724	23.6220	0.0037	0.1862	46.4026	.	0.0638	3.8723	0.0911	0.8130
1947	21.1897	145.9354	0.1194	0.8226	0.5990	29.9477	0.0074	0.3719	44.0385	.	0.0923	4.7692	0.0576	1.7939
1948	25.0543	291.4210	0.2172	2.5263	0.6359	31.7939	0.0077	0.3863	45.6364	.	0.1313	7.4545	0.0585	1.5018
1949	20.3417	152.9138	0.1812	1.3621	0.5596	28.4819	0.0058	0.2907	59.8785	.	0.1182	8.0636	0.0266	0.7796
1950	27.6980	150.0727	0.2919	1.5818	0.6513	33.0669	0.0081	0.4035	70.4771	.	0.2447	14.2234	0.0757	0.9852
1951	21.4522	83.3571	0.2353	0.9143	0.4702	23.5113	0.0052	0.2582	71.0820	0.1639	0.1011	13.7234	0.0303	0.8303
1952	19.0287	87.0328	0.1900	0.8689	0.4558	22.7891	0.0037	0.1831	59.4766	.	0.1472	6.3497	0.0295	0.6682
1953	17.7974	61.1910	0.1438	0.4944	0.3792	18.9624	0.0032	0.1590	47.3200	.	0.1203	9.1203	0.0274	0.6260
1954	24.4252	60.7791	0.2243	0.5581	0.4438	22.1898	0.0037	0.1845	73.3882	.	0.1176	6.1438	0.0186	0.4942
1955	22.5389	65.9091	0.2228	0.6515	0.3202	16.0093	0.0034	0.1690	35.4247	.	0.0924	2.3333	0.0251	0.4943
1956	21.5843	62.8596	0.1566	0.4551	.	15.2508	.	0.0952	98.3151	.	0.1905	2.2381	0.0158	0.4954
1957	20.7961	42.7162	0.1776	0.3649	.	17.9372	.	0.1256	23.3417	.	0.1583	2.9209	0.0144	0.4341
1958	10.8035	30.1452	0.0983	0.2742	.	13.9791	.	0.1816	23.1735	.	.	1.6015	0.0909	0.3645
1959	10.8280	24.6377	0.1274	0.2899	.	13.6688	.	0.2659	44.2286	.	.	1.6111	0.0520	0.2567
1960	13.3065	14.2241	0.2581	0.2759	.	20.8745	.	0.3826	89.3644	.	.	1.3245	0.0495	0.3282
1961	33.3152	66.6304	0.2283	0.4565	.	28.2692	.	0.3229	74.4426	.	0.4167	1.3485	0.0538	0.3609
1962	21.7317	137.0769	0.1768	1.1154	.	36.8919	.	0.2723	67.1804	.	.	1.7586	0.0824	0.3335
1963	6.5960	54.4167	0.0640	0.5278	.	25.1336	.	0.2187	92.3184	.	.	0.9138	0.0638	0.2072
1964	9.7293	103.5200	0.0789	0.8400	.	28.7631	.	0.2983	82.6038	.	0.0148	1.0370	0.0821	0.1368
1965	7.9247	157.8333	0.0544	1.0833	.	29.7353	.	0.3213	65.9720	.	0.0286	0.3714	0.1324	0.2213
1966	24.0491	316.8823	0.1205	1.5882	.	35.1266	.	0.3122	68.3587	.	0.0943	1.4717	0.6398	0.1448

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TABLE 9 (CONT'D)
 VIRGINIA (VMRC) BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 ANNUAL CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS TROTLINE		SOFT AND PEELERS TROTLINE		HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		HARD DREDGES UNITS	S & P DREDGES UNITS	HARD SCRAPES UNITS	S & P SCRAPES UNITS	HARD PD NET UNITS	S & P PD NET UNITS
	ORDINARY	PATENT	ORDINARY	PATENT	UNITS	POTTERS	UNITS	POTTERS						
1967	9.5833	92.0000	0.0625	0.6000	.	33.8452	.	0.2702	97.2597	.	0.4524	1.6746	0.6391	0.2459
1968	14.8497	128.4500	0.1965	1.7000	.	23.8277	.	0.2454	44.6742	.	1.3218	1.7241	0.4744	0.1037
1969	7.2971	51.6410	0.2138	1.5128	.	13.3231	.	0.6241	46.0778	.	.	3.7313	0.3834	0.1066
1970	15.3697	120.7619	0.2121	1.6667	.	21.7984	.	0.3054	60.6839	.	.	4.8615	0.4810	0.0552
1971	6.0430	53.5238	.	.	.	26.0918	.	0.2731	59.9016	.	.	1.1111	0.1898	0.0916
1972	1.2016	11.0714	.	.	.	27.9596	.	0.3036	85.7569	.	.	2.4455	0.0150	0.0824
1973	0.1525	2.5714	.	.	.	19.0764	.	0.4233	52.2412	.	.	2.6849	0.0046	0.0646
1974	.	.	.	.	.	20.2934	.	0.3431	49.5890	.	.	0.6504	.	0.0645
1975	0.5464	3.3125	.	.	.	19.5258	.	0.2616	29.7467	.	0.4242	0.7576	0.0004	0.0974
1976	.	.	.	.	.	13.1308	.	0.2303	46.4962	.	.	0.5047	0.0004	0.1367
1977	.	.	.	.	.	20.2773	.	0.3113	36.2367	.	.	0.0821	0.0120	0.0723
1978	0.1333	0.6667	.	.	.	15.9377	.	0.1781	47.5252	.	.	0.1937	0.0020	0.0776
1979	0.7500	3.6667	.	.	.	16.4314	.	0.2278	32.4475	.	0.0362	0.4977	.	0.1611
1980	.	.	.	.	.	16.2066	.	0.1881	42.7285	.	.	.	0.0010	0.1012
1981	.	.	.	.	.	15.5203	.	0.1723	43.6186	.	0.1102	0.2286	.	0.0505

TABLE 10
 VIRGINIA (VMRC) BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 EFFORT YEAR CPUE IN THOUSANDS OF POUNDS
 EFFORT YEARS 1929 THROUGH 1981

YEAR	HARD CRABS TROTLINE		SOFT AND PEELERS TROTLINE		HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		HARD DREDGES UNITS	S & P DREDGES UNITS	HARD SCRAPES UNITS	S & P SCRAPES UNITS	HARD PD NET UNITS	S & P PD NET UNITS
	ORDINARY	PATENT	ORDINARY	PATENT	UNITS	POTTERS	UNITS	POTTERS						
1929	15.2034	612.9142	.	.	.	.	.	.	114.0807	.	102.7857	91.2857	.	.
1930	13.0944	410.4693	.	.	.	.	.	.	136.2545	.	170.6666	330.6666	.	.
1931	14.6972	485.3409	.	.	.	.	.	.	116.3548	.	87.5000	277.2500	.	.
1932	17.2660	273.1641	.	.	.	.	.	.	141.5689	.	13.8000	29.4000	.	.
1933	16.0367	315.6852	.	.	.	.	.	.	133.7755	.	3.0789	3.3947	.	.
1934	10.6318	312.2592	.	.	.	.	.	.	73.6447	.	0.1579	0.2895	.	.
1935	8.5285	201.1781	.	.	2.0370	48.0000	0.3478	8.0000	50.4421	.	0.1429	0.7857	.	.
1936	12.0436	358.4073	0.1207	3.5926	0.8350	33.3333	0.3628	13.6667	72.7907	.	2.9000	25.7000	1.3548	1.1935
1937	13.3073	348.4844	0.0179	0.4687	2.6707	54.7500	0.3171	6.5000	48.0686	.	0.7115	4.3750	0.8817	3.0860
1938	13.2042	329.9117	0.2978	7.4412	0.2344	3.4521	.	.	64.1905	.	2.4348	4.7130	1.5625	6.4375
1939	16.7748	269.2564	0.3466	5.5641	0.9527	9.9358	0.1440	1.4862	62.8923	.	4.4315	7.3904	0.2827	0.5336
1940	11.1692	321.1136	0.3557	10.2273	0.6489	14.5187	0.0079	0.1758	32.1273	.	13.5556	31.5000	0.1475	0.6050
1941	7.9873	119.8095	0.3926	5.8889	0.3411	11.9393	0.0047	0.1653	30.2429	.	1.3233	2.9624	0.2467	0.3928
1942	9.8495	230.1212	0.4034	9.4242	0.4352	15.2324	0.0023	0.0819	43.6885	.	1.4074	3.1111	0.1864	0.5750
1943	.	.	.	.	.	.	.	.	.	.	.	.	.	.
1944	17.0649	183.1428	0.6389	6.8571	0.4903	18.2745	0.0100	0.3727	34.5714	.	4.0123	5.1975	0.4160	1.6280
1945	5.5402	80.1081	0.0785	1.1351	0.3531	17.6554	0.0074	0.3703	31.3611	0.0278	0.0682	5.6818	0.2656	0.9313
1946	14.5877	95.5821	0.1025	0.6716	0.4731	23.6554	0.0037	0.1864	47.0132	.	0.0638	3.8723	0.0908	0.8104
1947	21.2394	145.9354	0.1197	0.8226	0.5990	29.9477	0.0074	0.3719	46.4189	.	0.0930	4.8062	0.0576	1.7939
1948	24.9414	291.4210	0.2162	2.5263	0.6359	31.7939	0.0077	0.3863	48.0638	.	0.1398	7.9355	0.0585	1.5018
1949	20.3417	155.5965	0.1812	1.3860	0.5590	28.4497	0.0058	0.2904	56.2018	.	0.1111	7.5812	0.0266	0.7796
1950	27.6980	147.3928	0.2919	1.5536	0.6521	33.1032	0.0081	0.4040	74.5825	.	0.2473	14.3763	0.0757	0.9852
1951	21.4522	83.3571	0.2353	0.9143	0.4597	23.4872	0.0052	0.2579	74.7586	0.1724	0.1005	13.6508	0.0303	0.8303
1952	19.0287	87.0328	0.1900	0.8689	0.4563	22.8144	0.0037	0.1833	56.3926	.	0.1472	6.3497	0.0295	0.6682
1953	17.9145	61.8864	0.1447	0.5000	0.3789	18.9442	0.0032	0.1588	60.1525	.	0.1203	9.1203	0.0274	0.6260
1954	24.1991	60.0805	0.2222	0.5517	0.4438	22.1898	0.0037	0.1845	50.3064	.	0.1176	6.1438	0.0186	0.4942
1955	22.5389	65.9091	0.2228	0.6515	0.3202	16.0093	0.0034	0.1690	48.3364	.	0.1018	2.5708	0.0251	0.4943
1956	21.7152	63.9821	0.1576	0.4643	.	15.2508	.	0.0952	65.2455	.	0.1756	2.0634	0.0158	0.4954
1957	20.6601	42.1467	0.1765	0.3600	.	17.9372	.	0.1256	25.6972	.	0.1517	2.8000	0.0144	0.4341
1958	10.8035	30.1452	0.0983	0.2742	.	13.9791	.	0.1816	21.8365	.	.	1.6512	0.0909	0.3645
1959	10.8280	25.0000	0.1274	0.2941	.	13.6688	.	0.2659	42.6055	.	.	1.6262	0.0520	0.2569
1960	13.3065	14.1026	0.2581	0.2735	.	20.9069	.	0.3832	107.6020	.	.	1.2739	0.0495	0.3279
1961	33.3152	66.6304	0.2283	0.4565	.	28.2188	.	0.3223	63.0694	.	0.4231	1.3692	0.0538	0.3609
1962	21.7317	137.0769	0.1768	1.1154	.	36.9289	.	0.2725	113.3304	.	.	1.7436	0.0824	0.3335
1963	6.6182	54.4167	0.0642	0.5278	.	25.1566	.	0.2189	118.8849	.	.	0.9381	0.0638	0.2072
1964	9.6929	107.8333	0.0787	0.8750	.	28.7167	.	0.2978	83.6560	.	0.0152	1.0606	0.0917	0.1529
1965	7.9247	145.6923	0.0544	1.0000	.	29.7353	.	0.3213	55.8225	.	0.0280	0.3645	0.1198	0.2002
1966	24.0491	316.8823	0.1205	1.5882	.	35.1266	.	0.3122	81.9570	.	0.0917	1.4312	0.6398	0.1448

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TABLE 10 (CONT'D)
 VIRGINIA (VMRC) BLUE CRAB CATCH PER UNIT EFFORT (CPUE)
 EFFORT YEAR CPUE IN THOUSANDS OF POUNDS

YEAR	HARD CRABS TROTLINE		SOFT AND PEELERS TROTLINE		HARD CRABS CRAB POTS		SOFT AND PEELERS CRAB POTS		HARD DREDGES UNITS	S & P DREDGES UNITS	HARD SCRAPES UNITS	S & P SCRAPES UNITS	HARD PD NET UNITS	S & P PD NET UNITS
	ORDINARY	PATENT	ORDINARY	PATENT	UNITS	POTTERS	UNITS	POTTERS						
1967	9.5833	92.0000	0.0625	0.6000	.	33.8770	.	0.2704	88.1059	.	0.4524	1.6746	0.6358	0.2446
1968	14.8497	128.4500	0.1965	1.7000	.	24.0124	.	0.2473	55.4663	.	1.2921	1.6854	0.4823	0.1055
1969	7.2971	51.6410	0.2138	1.5128	.	13.3541	.	0.6255	35.7907	.	.	3.7313	0.3845	0.1069
1970	15.3697	120.7619	0.2121	1.6667	.	21.5810	.	0.3024	66.8291	.	.	4.8615	0.4721	0.0542
1971	6.0430	53.5238	.	.	.	26.0532	.	0.2727	61.9322	.	.	1.1111	0.1888	0.0911
1972	1.2016	11.0714	.	.	.	27.9596	.	0.3036	76.2284	.	.	2.4455	0.0151	0.0829
1973	0.1538	2.5714	.	.	.	19.1159	.	0.4241	56.9295	.	.	2.6849	0.0046	0.0642
1974	.	.	.	.	.	20.3060	.	0.3433	44.6575	.	.	0.6504	.	0.0647
1975	0.5464	3.3125	.	.	.	19.5511	.	0.2620	27.5432	.	0.4242	0.7576	0.0004	0.0976
1976	.	.	.	.	.	13.1572	.	0.2308	42.5944	.	.	0.5047	0.0004	0.1369
1977	.	.	.	.	.	20.3039	.	0.3117	43.7429	.	.	0.0821	0.0122	0.0732
1978	0.1333	0.6667	.	.	.	15.9810	.	0.1786	39.0888	.	.	0.1937	0.0021	0.0792
1979	0.7500	3.6667	.	.	.	16.4149	.	0.2275	39.4778	.	0.0362	0.4977	.	0.1562
1980	.	.	.	.	.	16.1601	.	0.1876	45.6184	.	.	.	0.0010	0.1029
1981	.	.	.	.	.	15.5508	.	0.1726	46.3694	.	0.1102	0.2286	.	0.0595

Figure 1
 Hard Blue Crab Landings
 Virginia, crab trotlines
 1929 - 1981

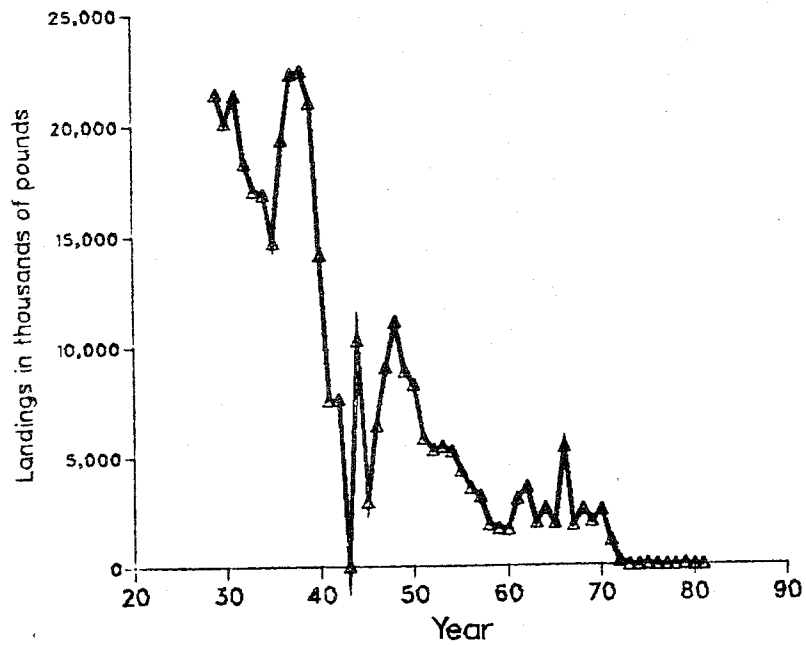


Figure 2
 Soft and Peeler Blue Crab Landings
 Virginia, crab trotlines
 1929 - 1981

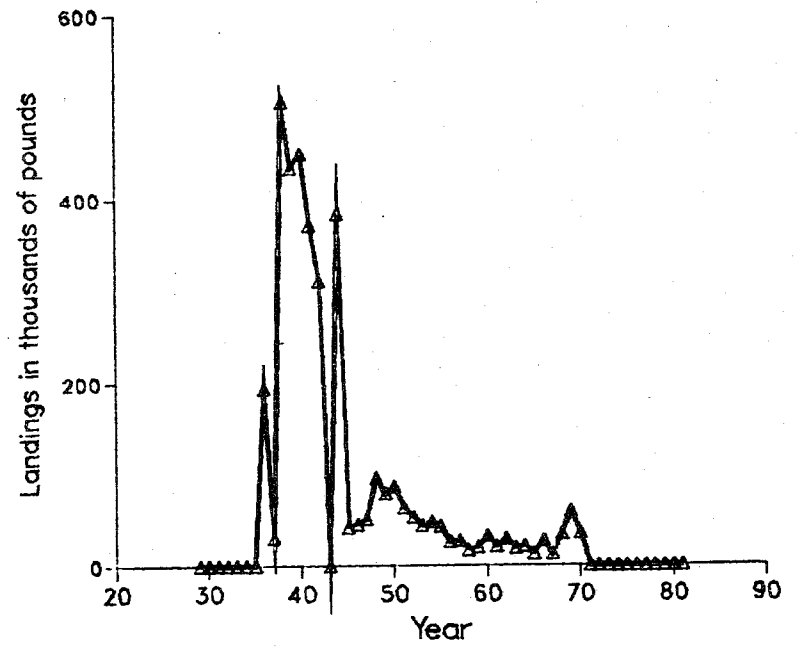


Figure 3
 Hard Blue Crab Landings
 Maryland, crab trotlines
 1929 - 1981

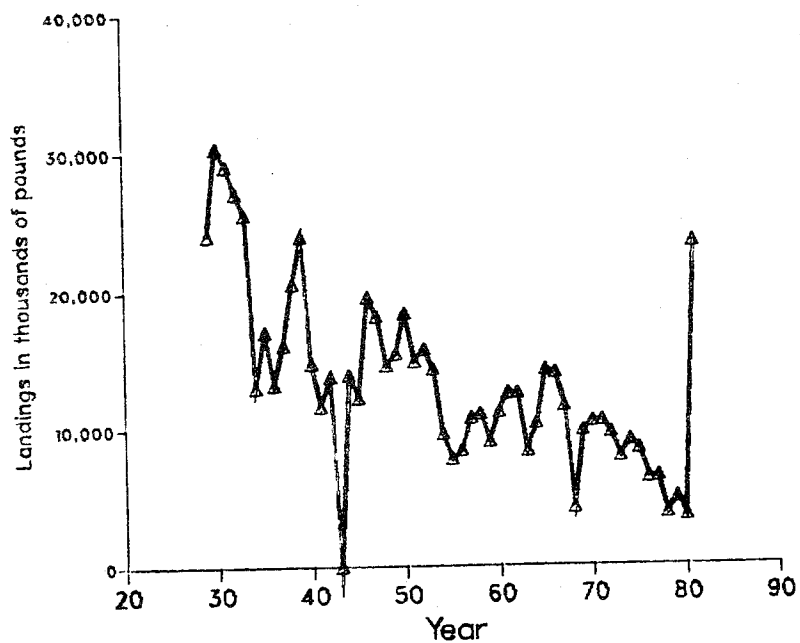


Figure 4
 Soft and Peeler Blue Crab Landings
 Maryland, crab trotlines
 1929 - 1981

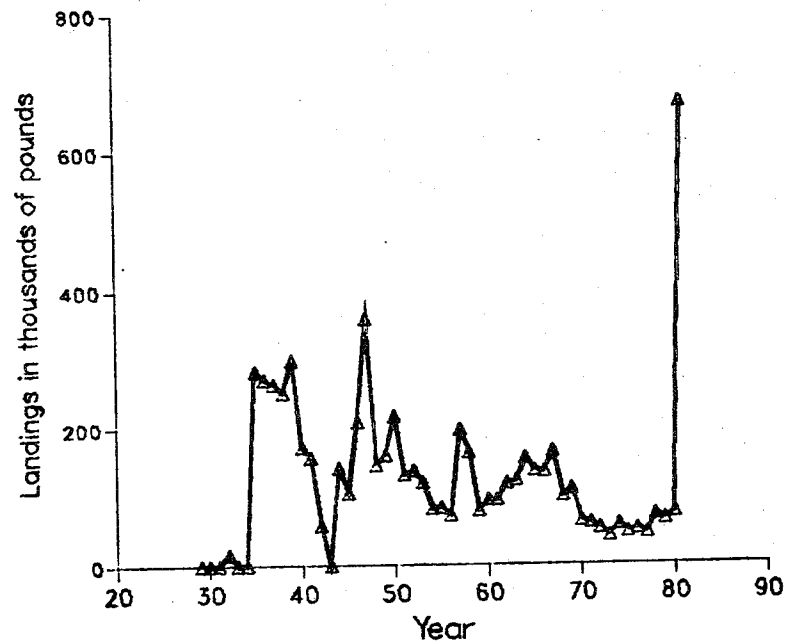


Figure 5
Blue Crab Fishing Effort
Virginia, trotlines
1929 - 1979

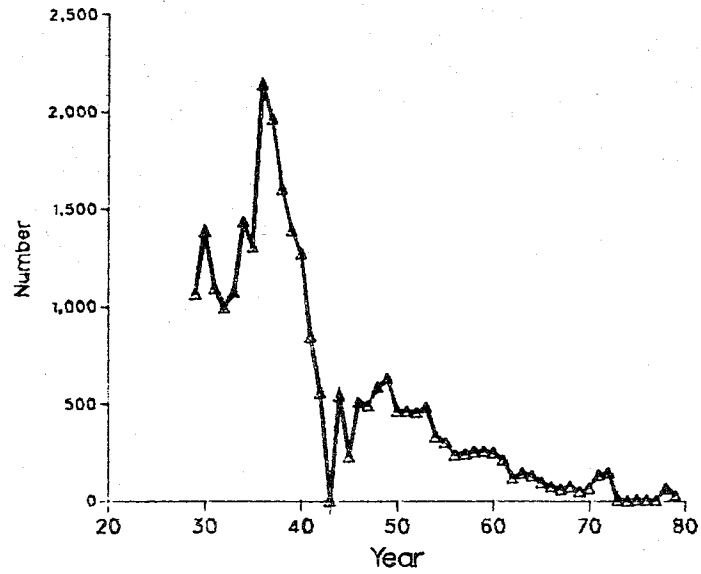


Figure 6
Blue Crab Fishing Effort
Virginia, trotline baits
1929 - 1979

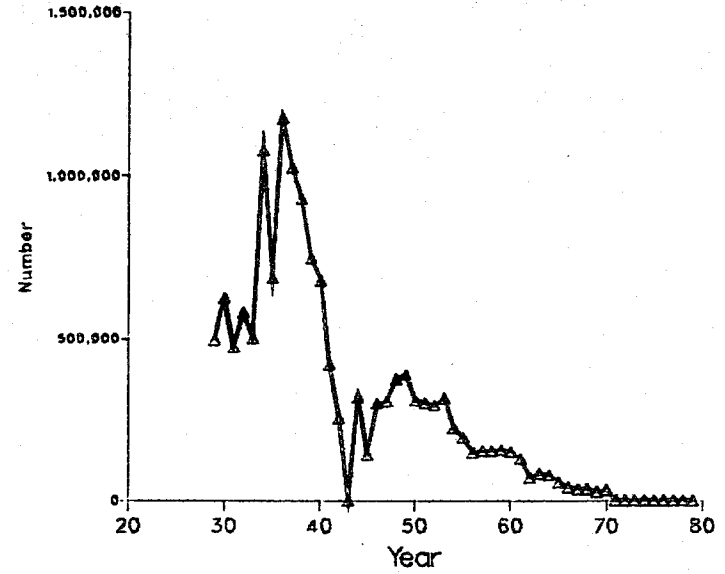


Figure 7
Blue Crab Fishing Effort
Virginia, trotline vessels and boats
1929 - 1979

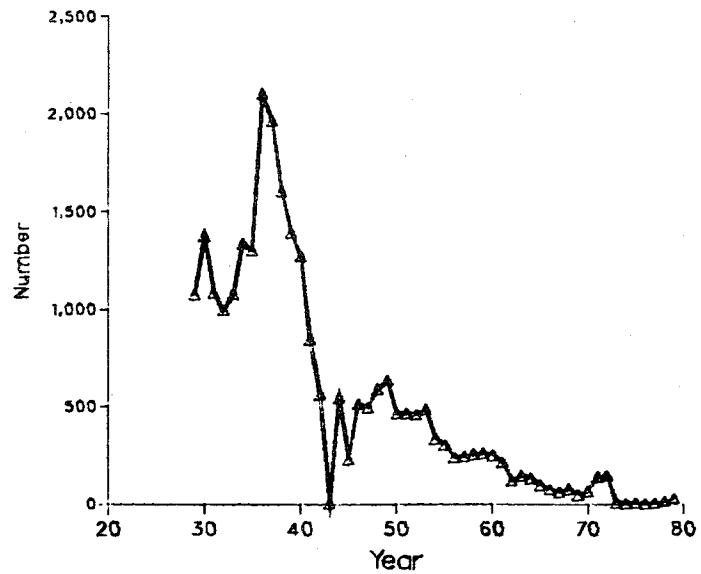


Figure 8
Blue Crab Fishing Effort
Maryland, trotlines
1929 - 1979

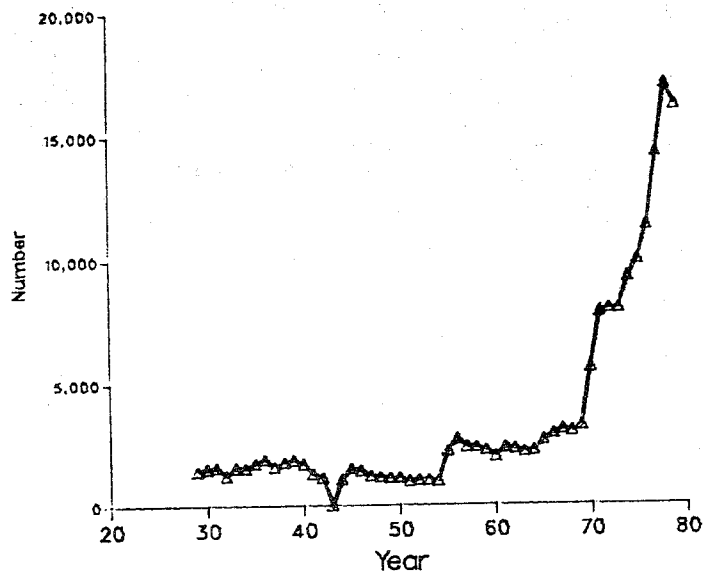


Figure 9
Blue Crab Fishing Effort
Maryland, trotline baits
1929 - 1979

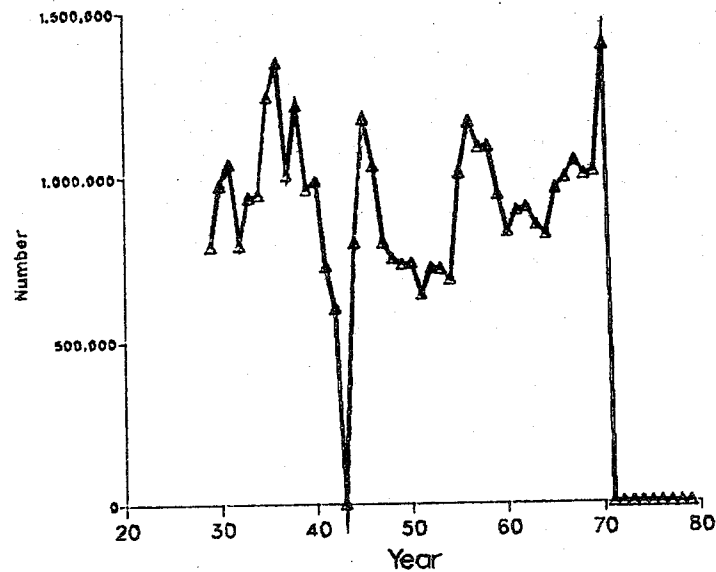


Figure 10
Blue Crab Fishing Effort
Maryland, trotline vessels and boats
1929 - 1979

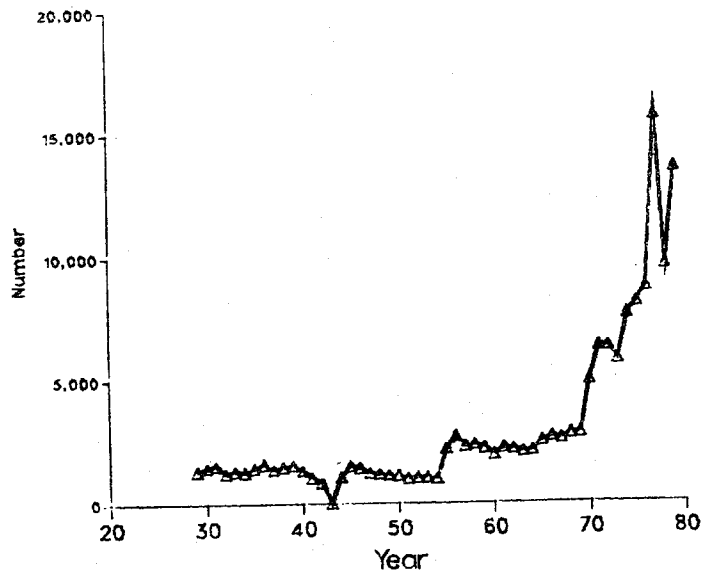


Figure 11
 Hard Blue Crab CPUE
 Virginia, crab trotlines
 1929 - 1979

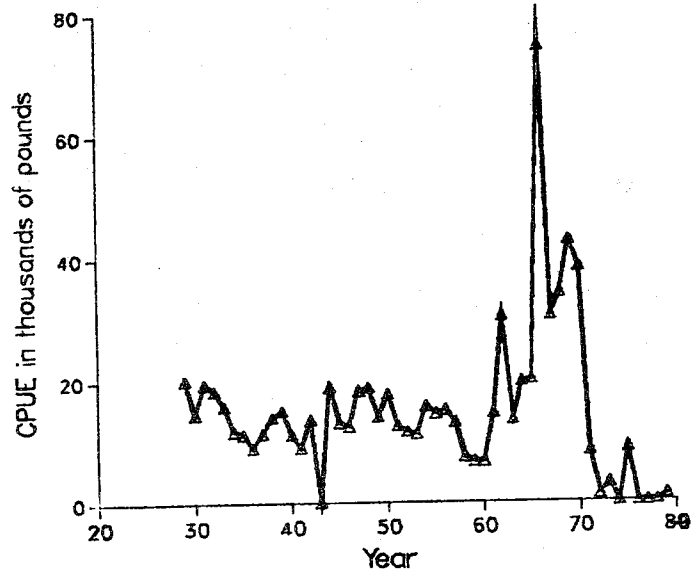


Figure 12
 Hard Blue Crab CPUE
 Virginia, crab trotline baits
 1929 - 1979

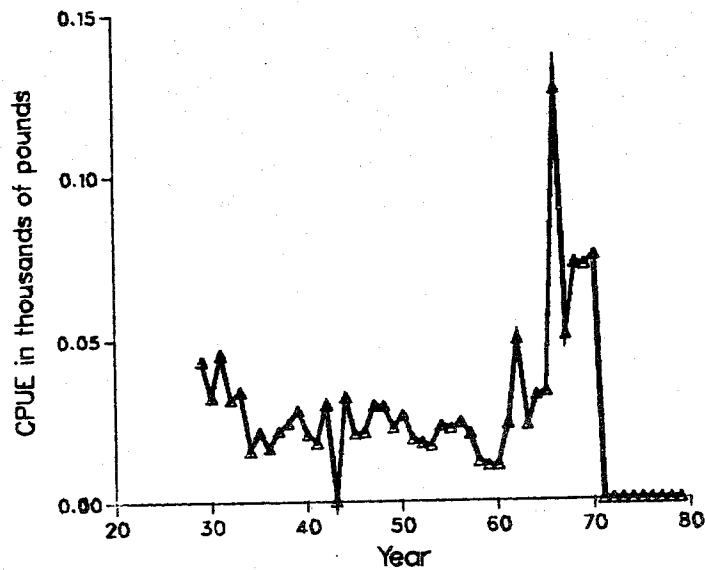


Figure 13
 Hard Blue Crab CPUE
 Virginia, crab trotline vessels and boats
 1929 - 1979

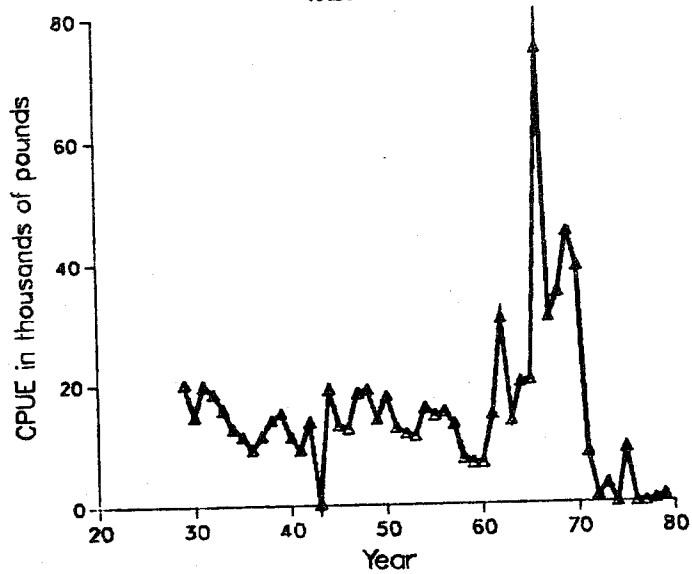


Figure 14
 Hard Blue Crab CPUE
 Maryland, crab trotlines
 1929 - 1979

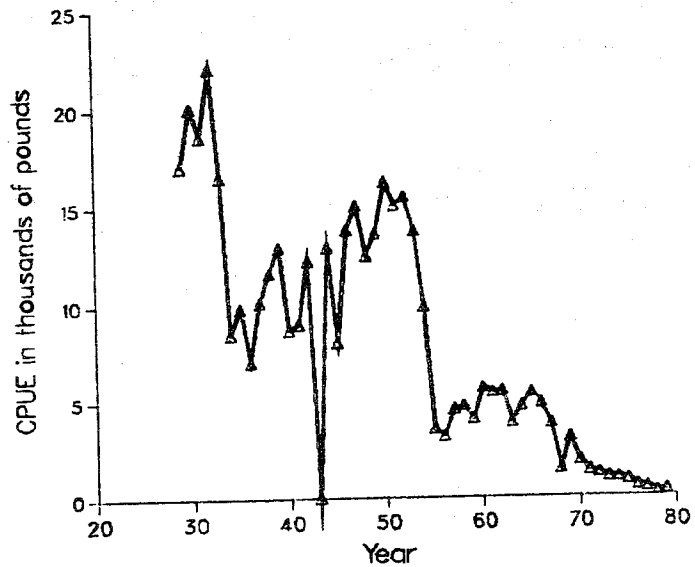


Figure 15
 Hard Blue Crab CPUE
 Maryland, crab trotline baits
 1929 - 1979

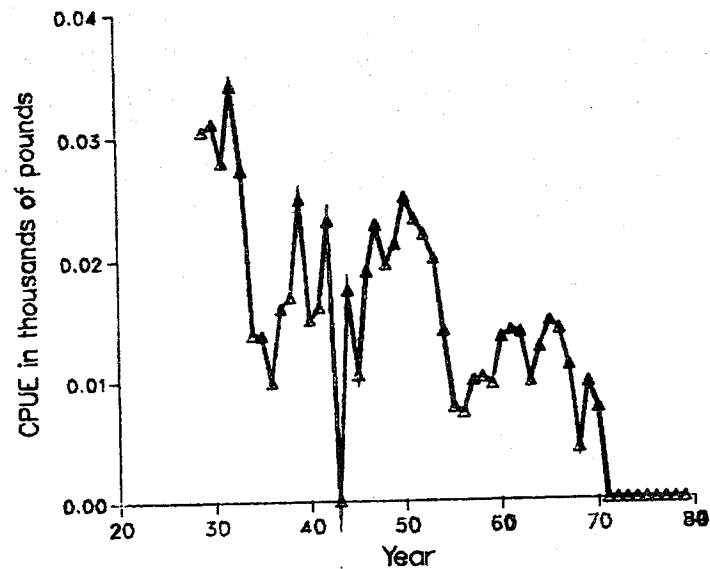


Figure 16
 Hard Blue Crab CPUE
 Maryland, crab trotline vessels and boats
 1929 - 1979

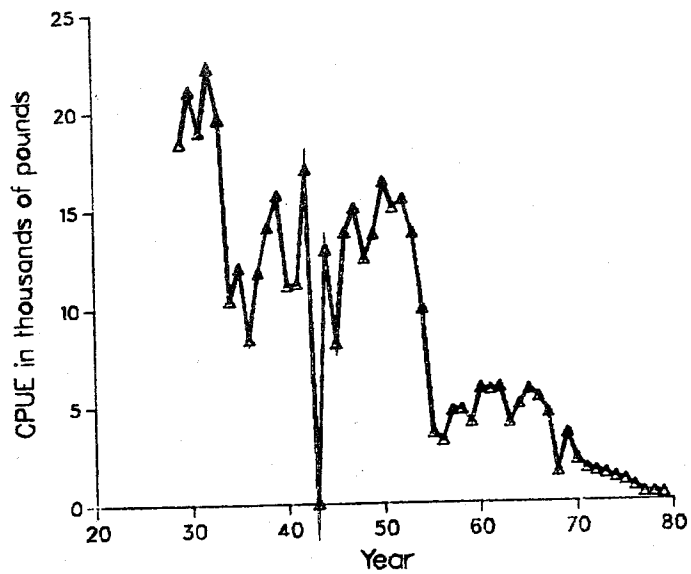


Figure 17
Soft and Peeler Blue Crab CPUE
Virginia, crab trotlines
1929 - 1979

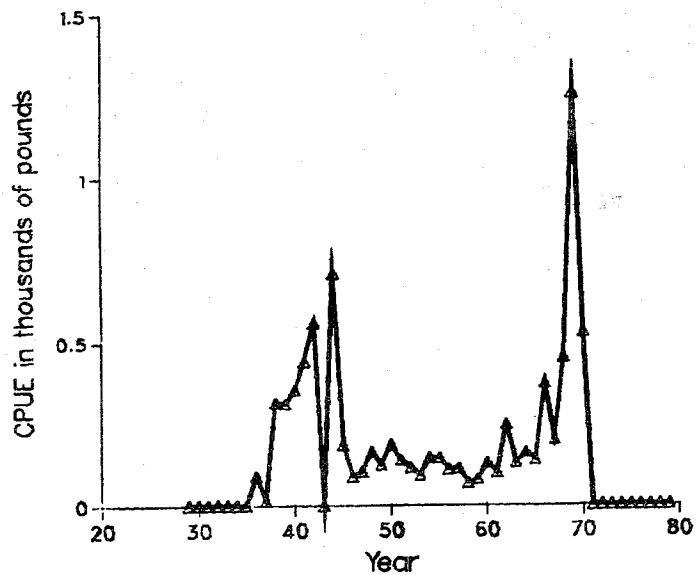


Figure 18
Soft and Peeler Blue Crab CPUE
Virginia, crab trotline baits
1929 - 1979

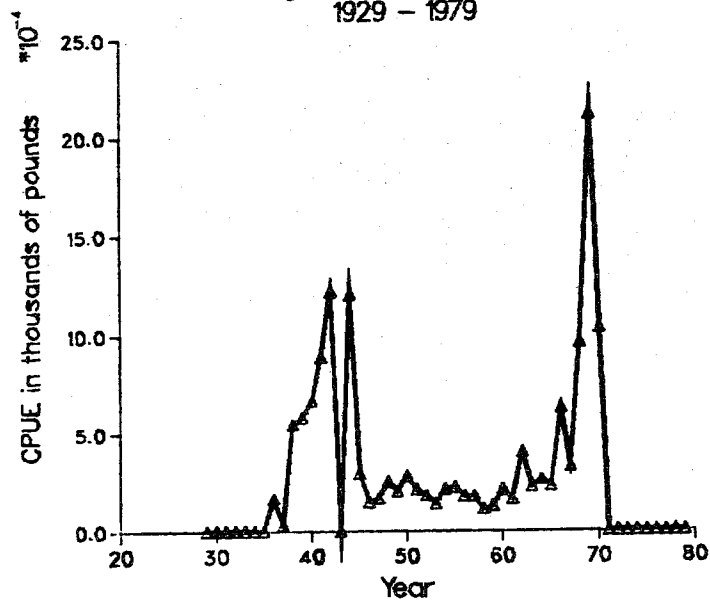


Figure 19
Soft and Peeler Blue Crab CPUE
Virginia, crab trotline vessels and boats
1929 - 1979

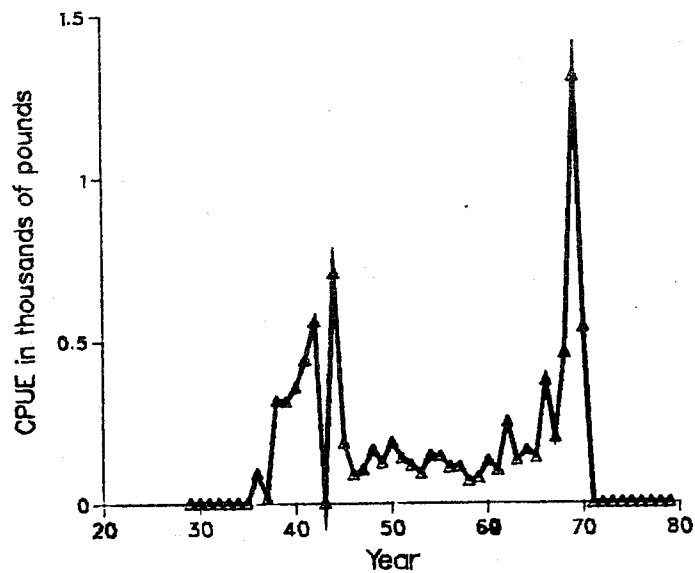


Figure 20
Soft and Peeler Blue Crab CPUE
Maryland, crab trotlines
1929 - 1979

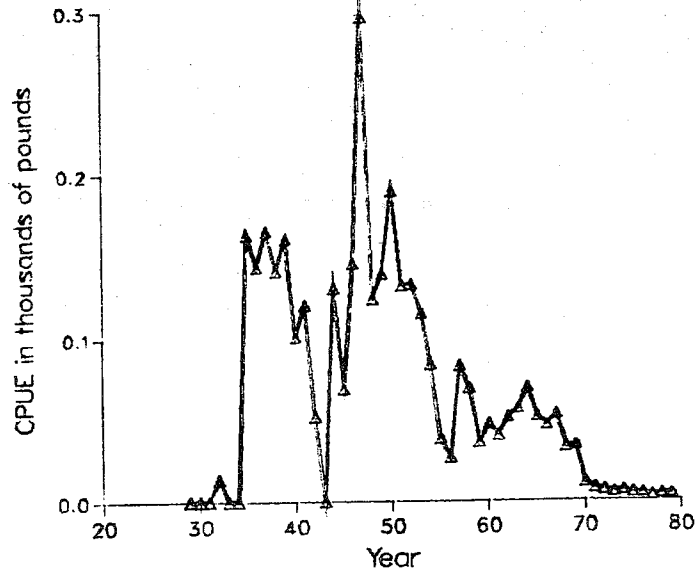


Figure 21
Soft and Peeler Blue Crab CPUE
Maryland, crab trotline baits
1929 - 1979

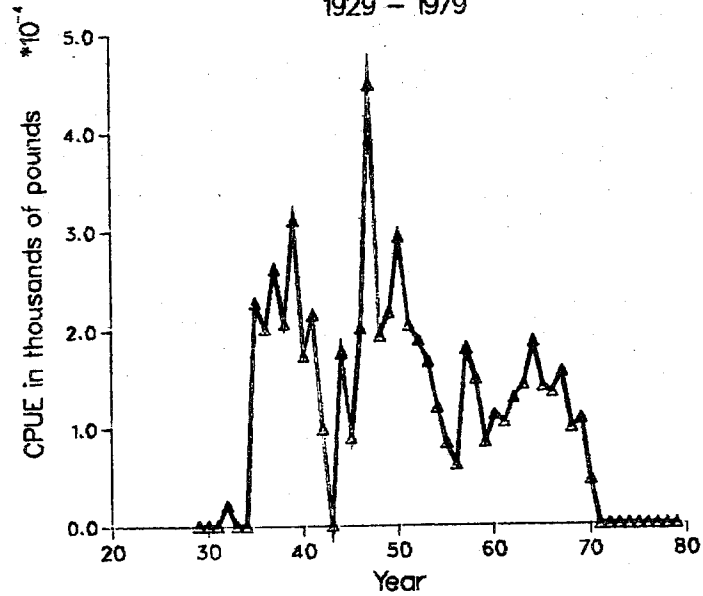


Figure 22
Soft and Peeler Blue Crab CPUE
Maryland, crab trotline vessels and boats
1929 - 1979

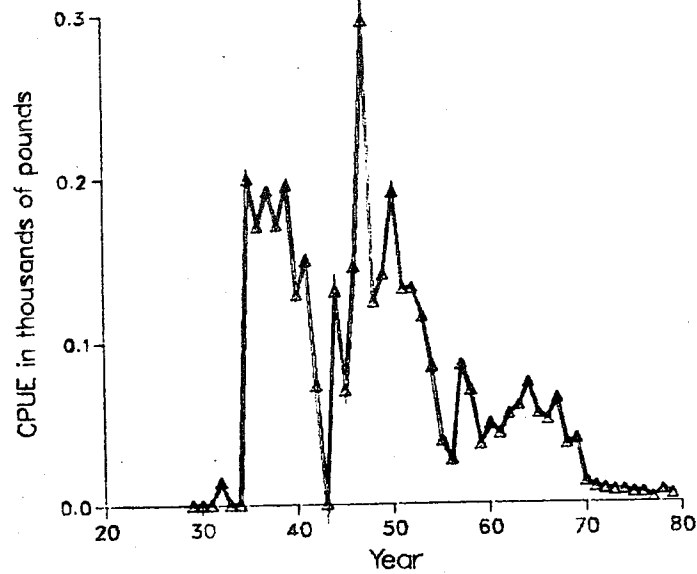


Figure 23
Hard Blue Crab Landings
Virginia, crab pots
1929 - 1981

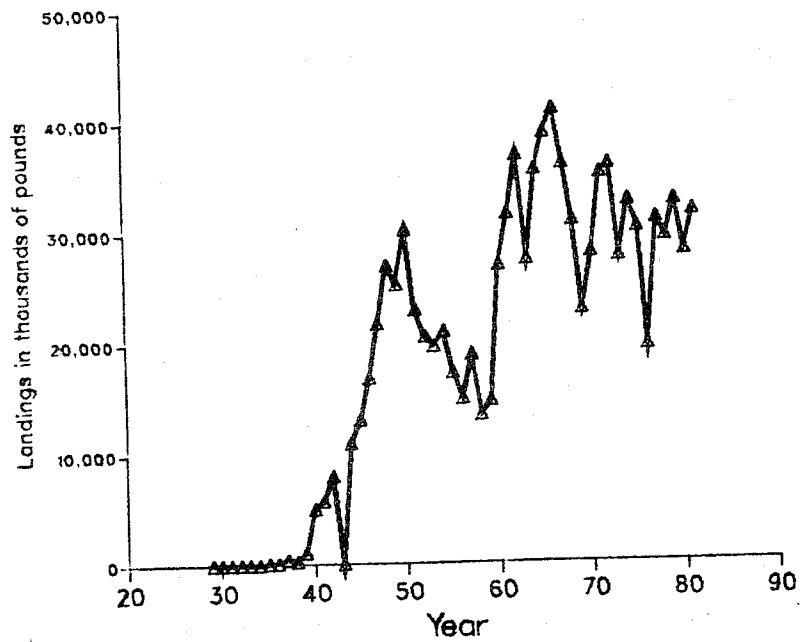


Figure 24
Soft and Peeler Blue Crab Landings
Virginia, crab pots
1929 - 1981

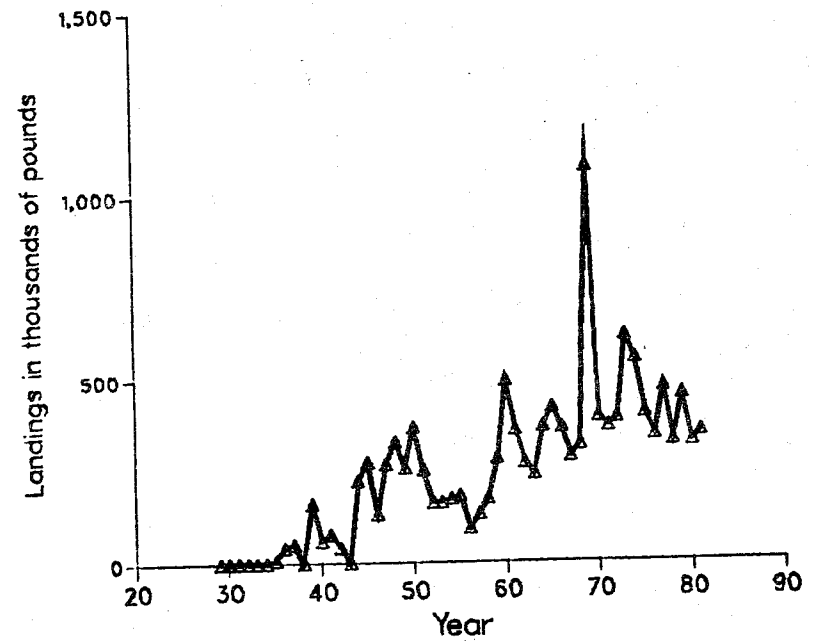


Figure 25
 Hard Blue Crab Landings
 Maryland, crab pots
 1929 - 1981

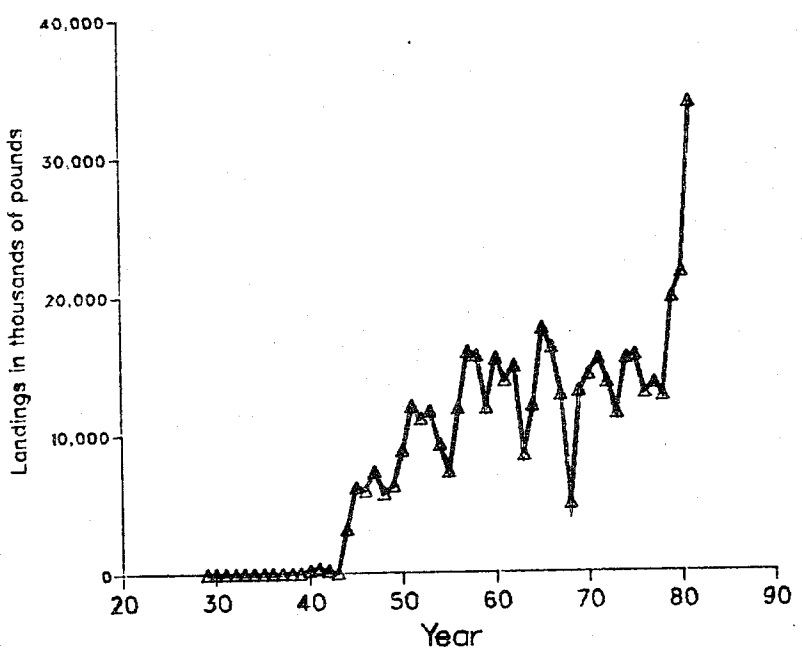


Figure 26
 Soft and Peeler Blue Crab Landings
 Maryland, crab pots
 1929 - 1981

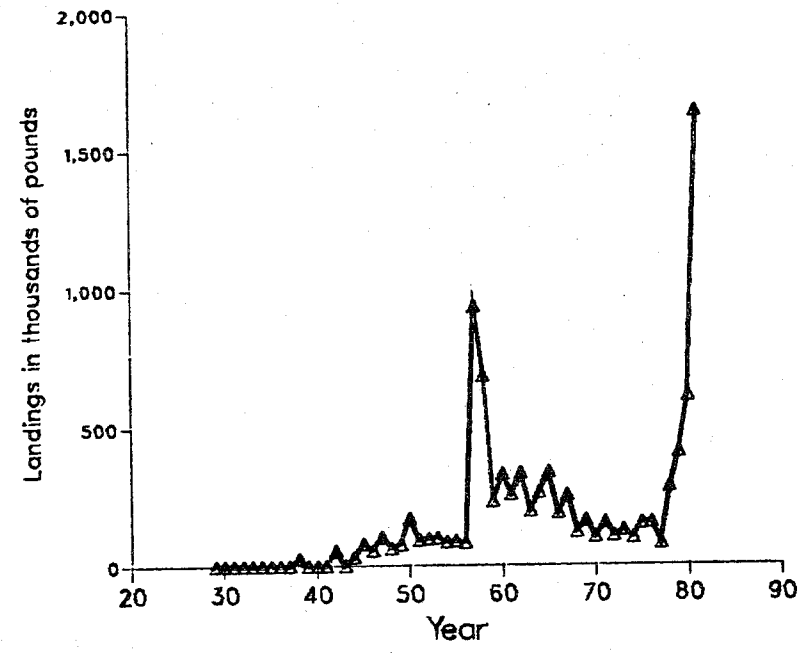


Figure 27
Blue Crab Fishing Effort
Virginia, crab pots
1929 - 1979

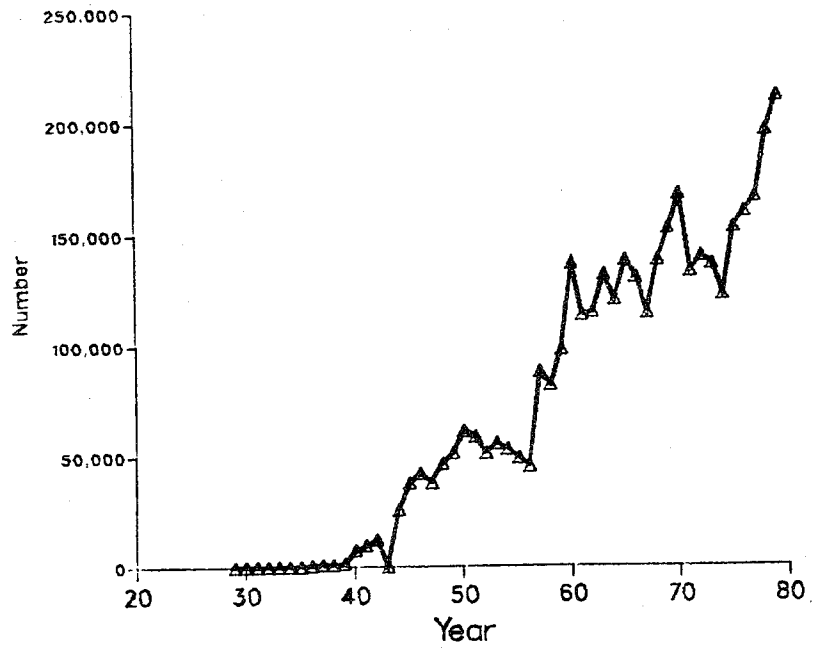


Figure 28
Blue Crab Fishing Effort
Virginia, crab pot vessels and boats
1929 - 1979

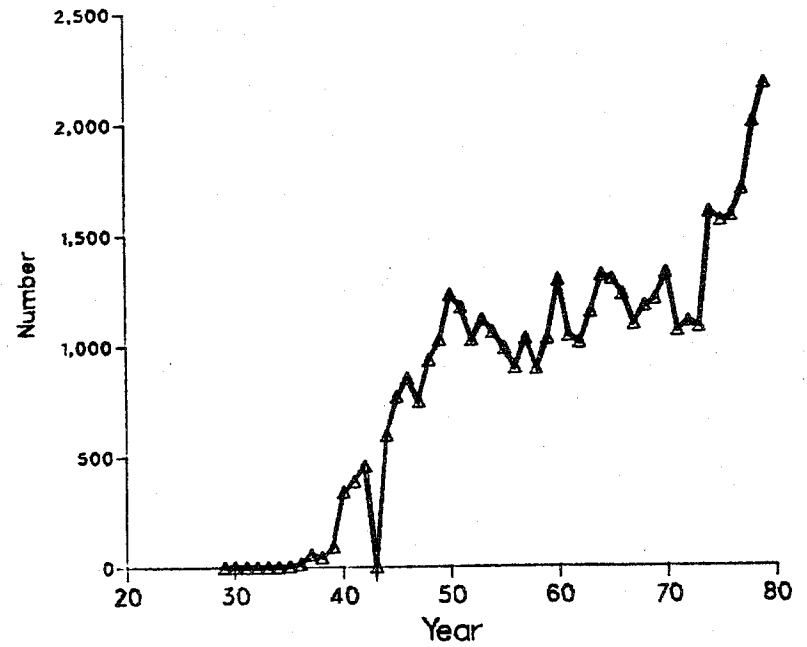


Figure 29
Blue Crab Fishing Effort
Maryland, crab pots
1929 - 1979

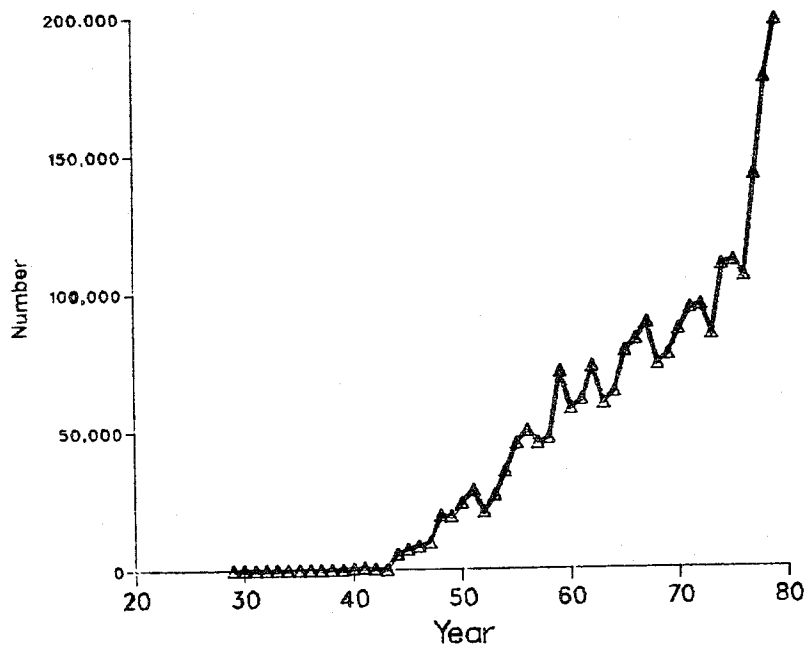


Figure 30
Blue Crab Fishing Effort
Maryland, crab pot vessels and boats
1929 - 1979

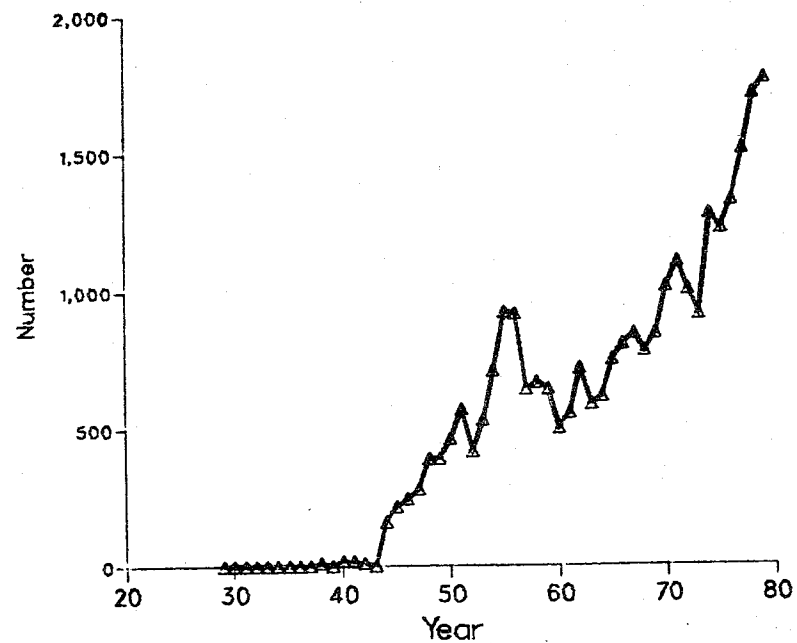


Figure 31
 Hard Blue Crab CPUE
 Virginia, crab pots
 1929 - 1979

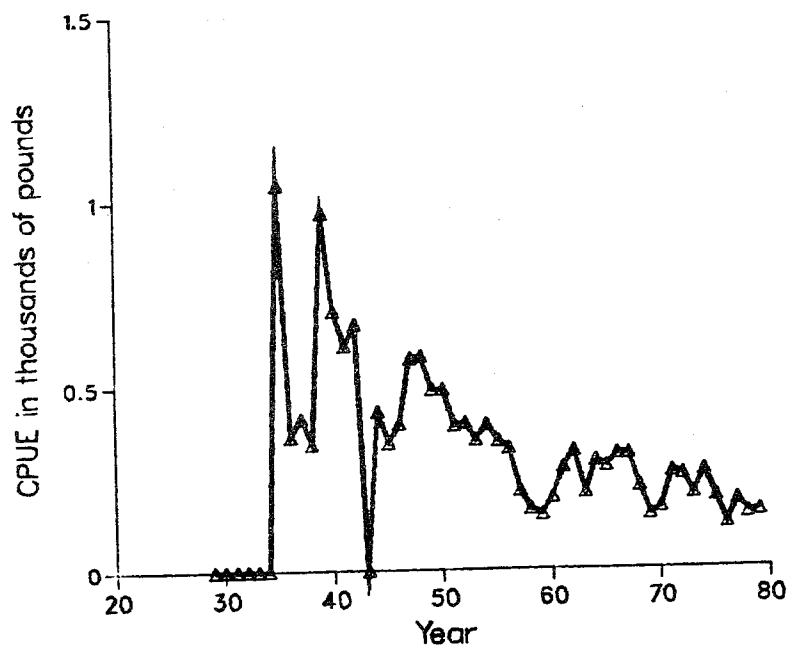


Figure 32
 Hard Blue Crab CPUE
 Virginia, crab pot vessels and boats
 1929 - 1979

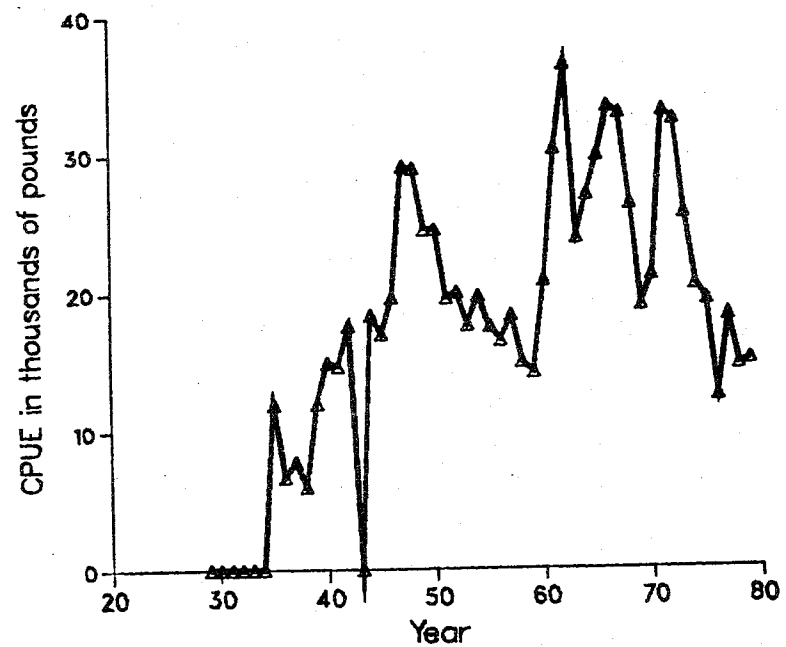


Figure 33
 Hard Blue Crab CPUE
 Maryland, crab pots
 1929 - 1979

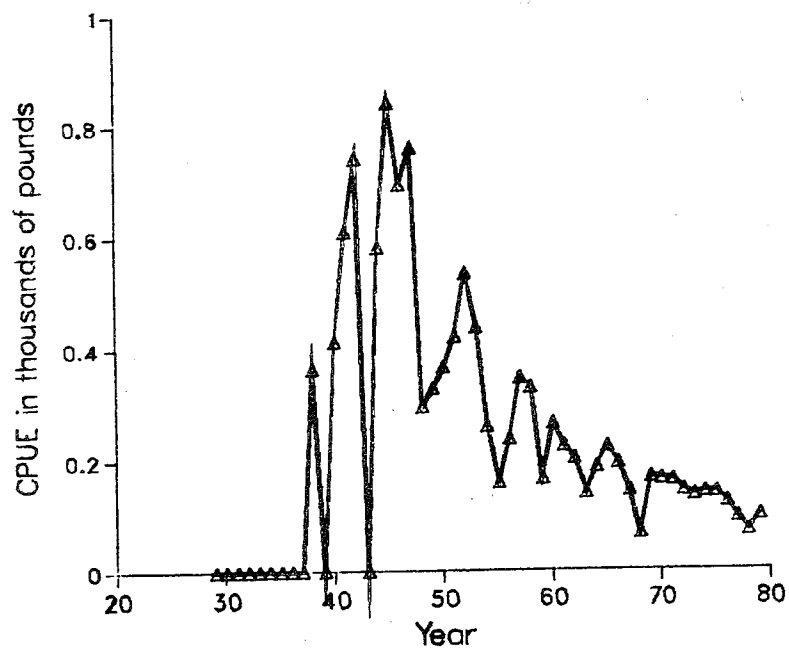


Figure 34
 Hard Blue Crab CPUE
 Maryland, crab pot vessels and boats
 1929 - 1979

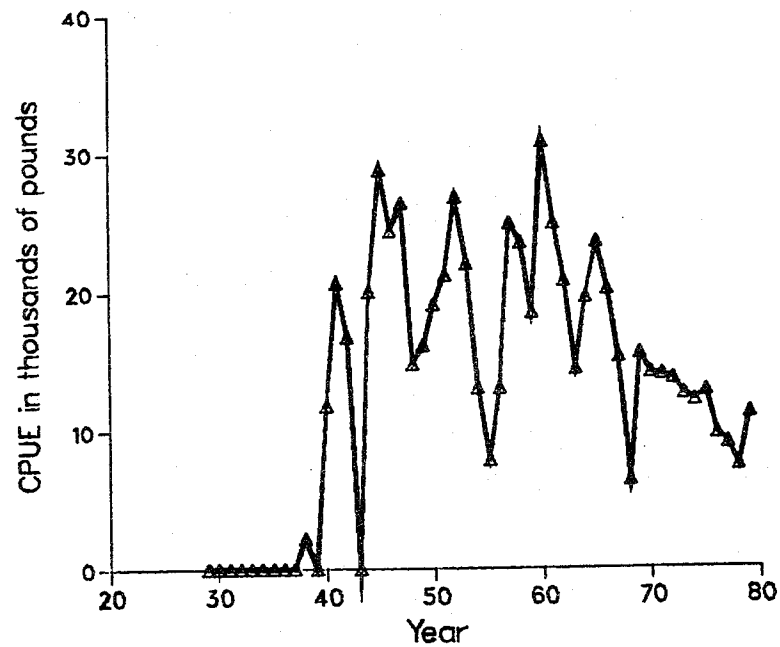


Figure 35
Soft and Peeler Blue Crab CPUE
Virginia, crab pots
1929 - 1979

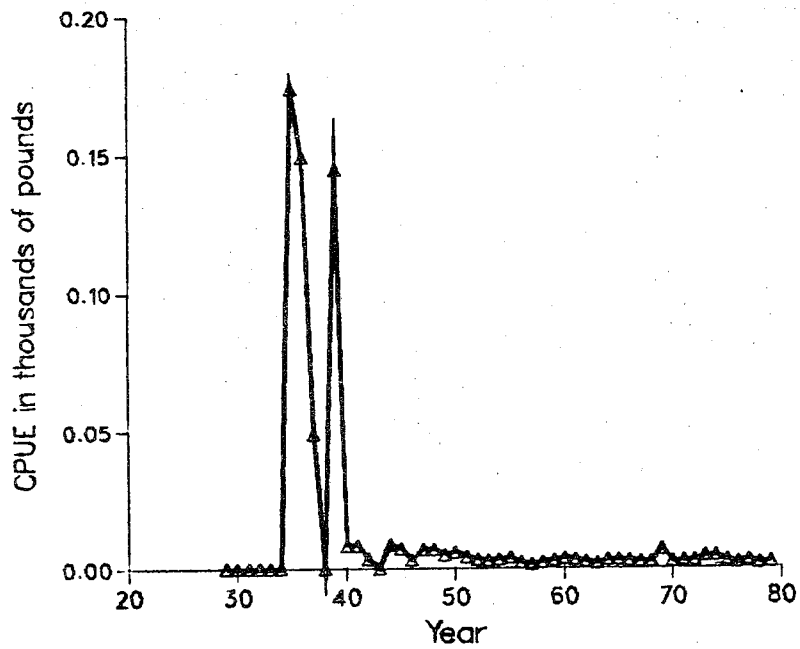


Figure 36
Soft and Peeler Blue Crab CPUE
Virginia, crab pot vessels and boats
1929 - 1979

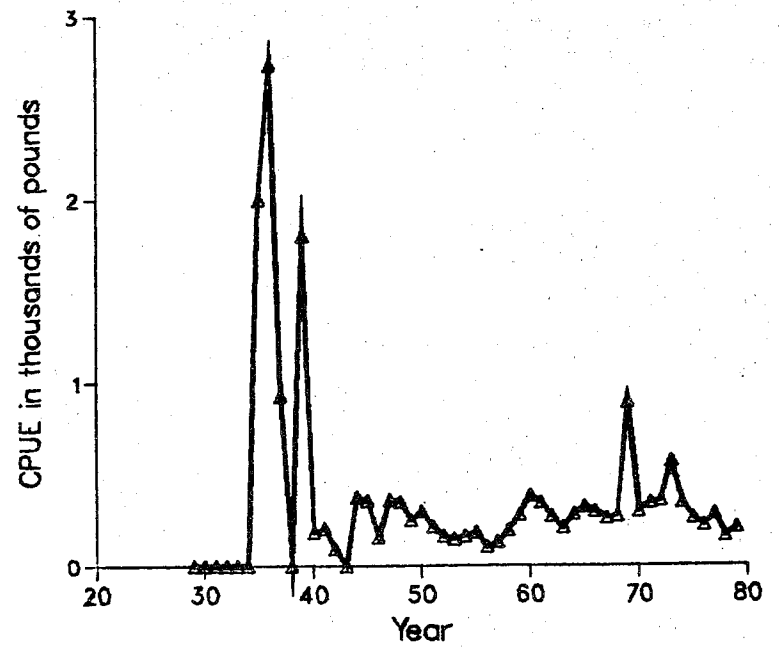


Figure 37
Soft and Peeler Blue Crab CPUE
Maryland, crab pots
1929 - 1979

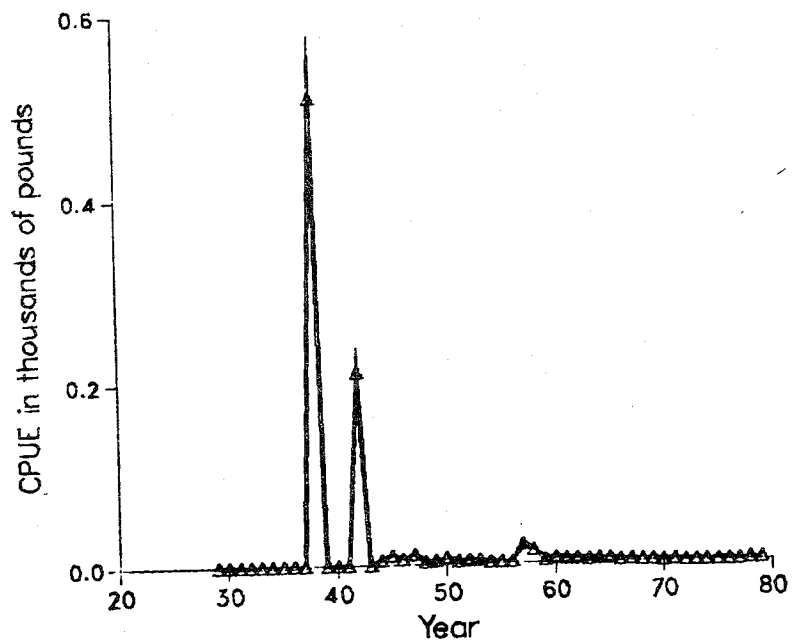


Figure 38
Soft and Peeler Blue Crab CPUE
Maryland, crab pot vessels and boats
1929 - 1979

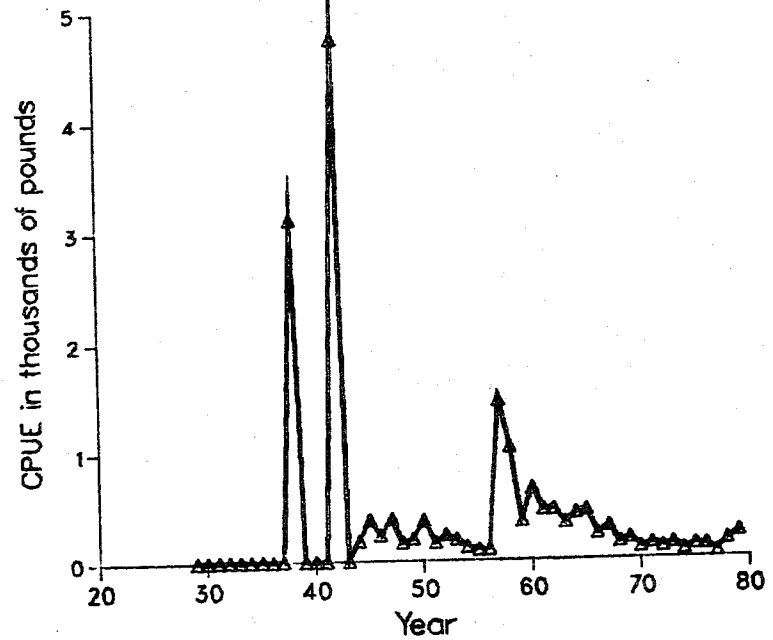


Figure 39
Hard Blue Crab Landings
Virginia, crab dredges
1929 - 1981

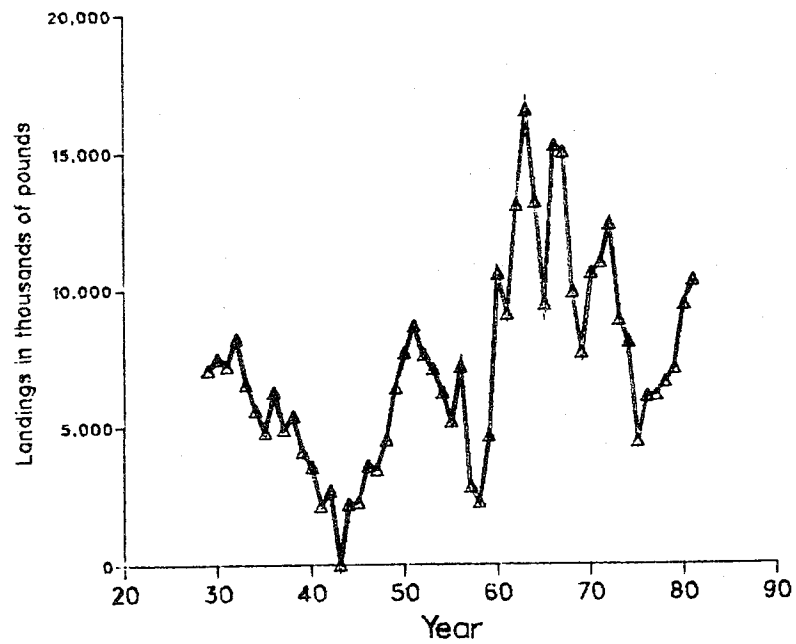


Figure 40
Soft and Peeler Blue Crab Landings
Virginia, crab dredges
1929 - 1981

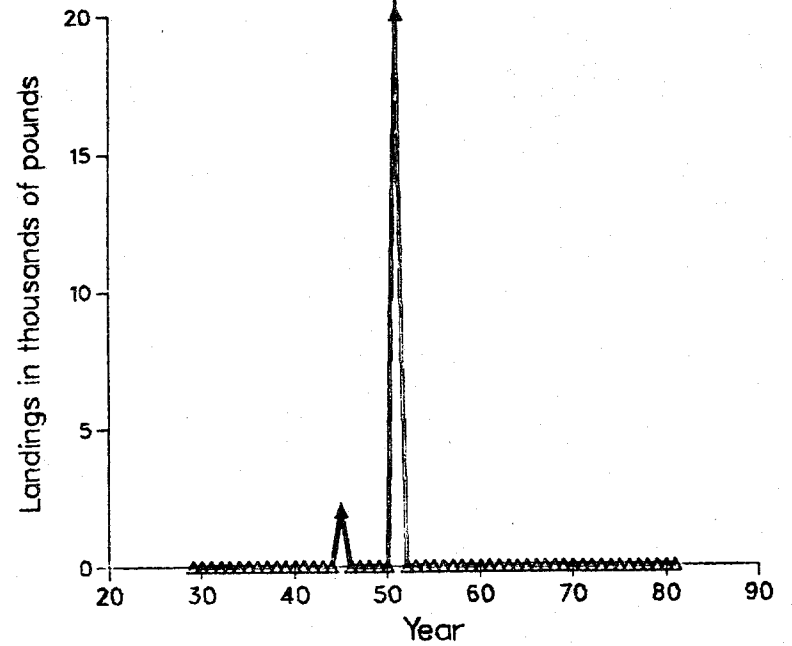


Figure 41
Hard Blue Crab Landings
Maryland, crab dredges
1929 - 1981

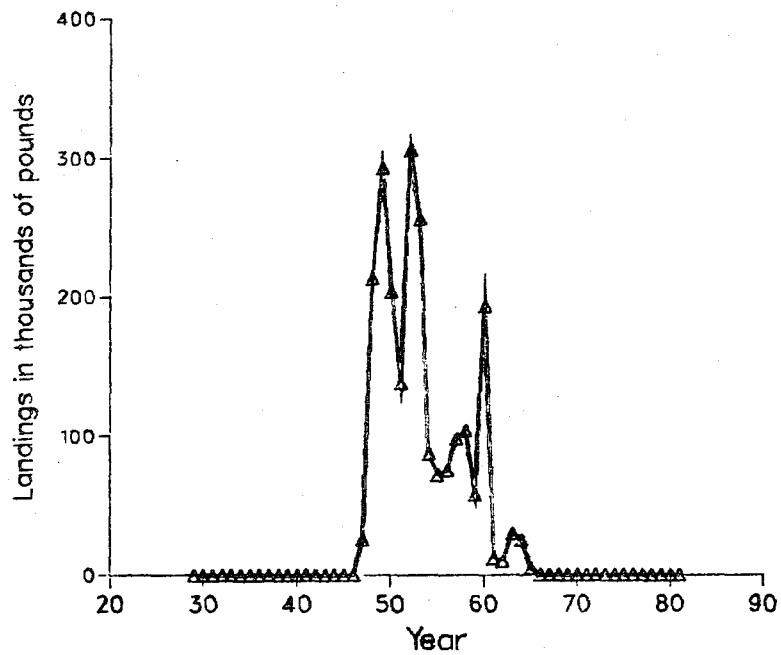


Figure 42
Soft and Peeler Blue Crab Landings
Maryland, crab dredges
1929 - 1981

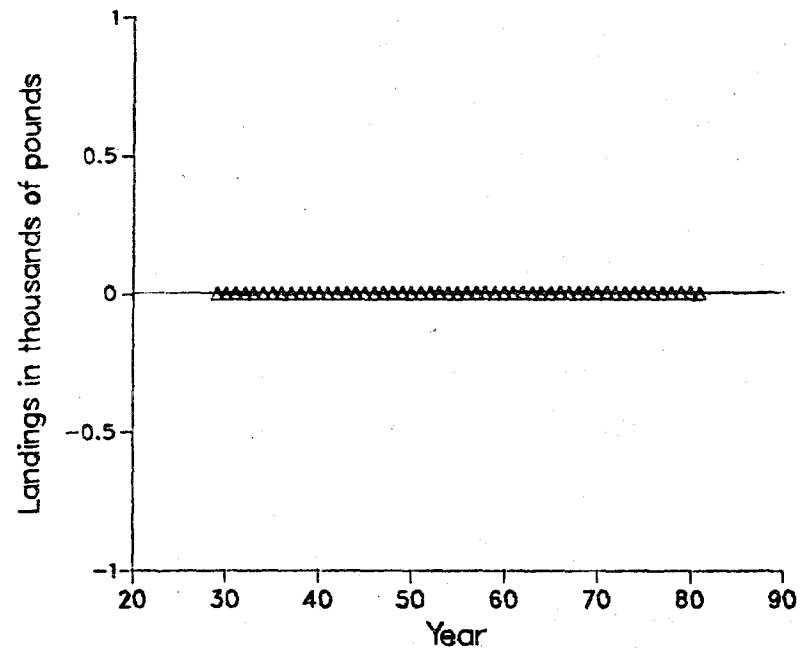


Figure 43
Blue Crab Fishing Effort
Virginia, crab dredges
1929 - 1979

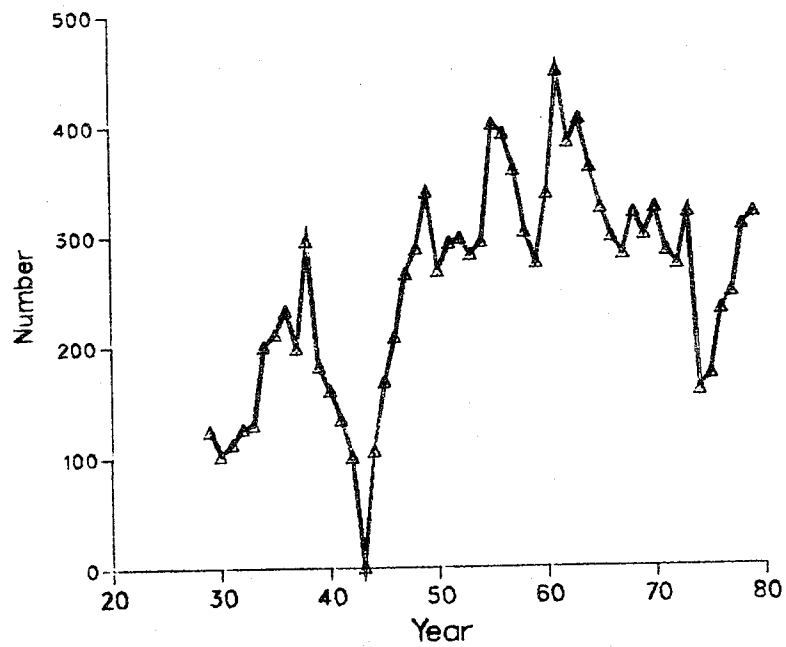


Figure 44
Blue Crab Fishing Effort
Virginia, crab dredge vessels and boats
1929 - 1979

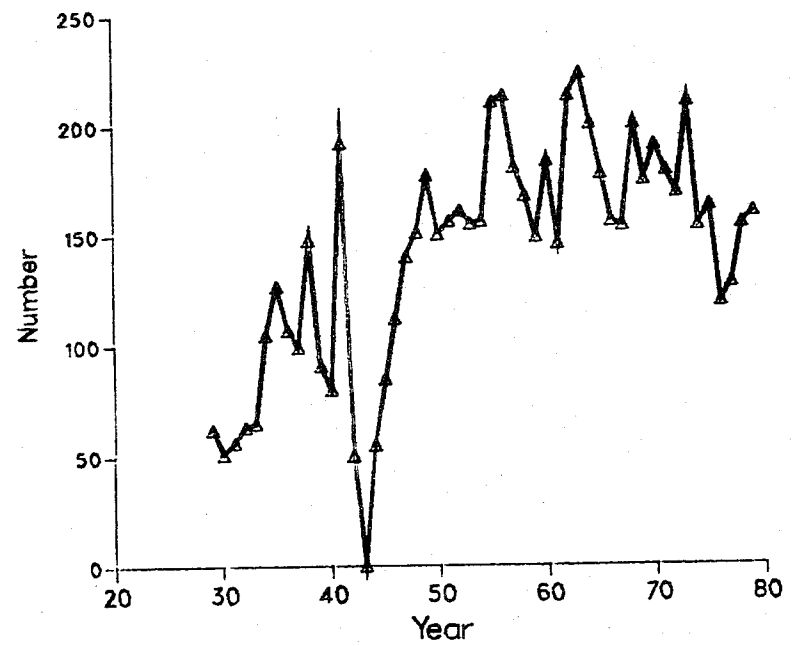


Figure 45
Blue Crab Fishing Effort
Maryland, crab dredges
1929 - 1979

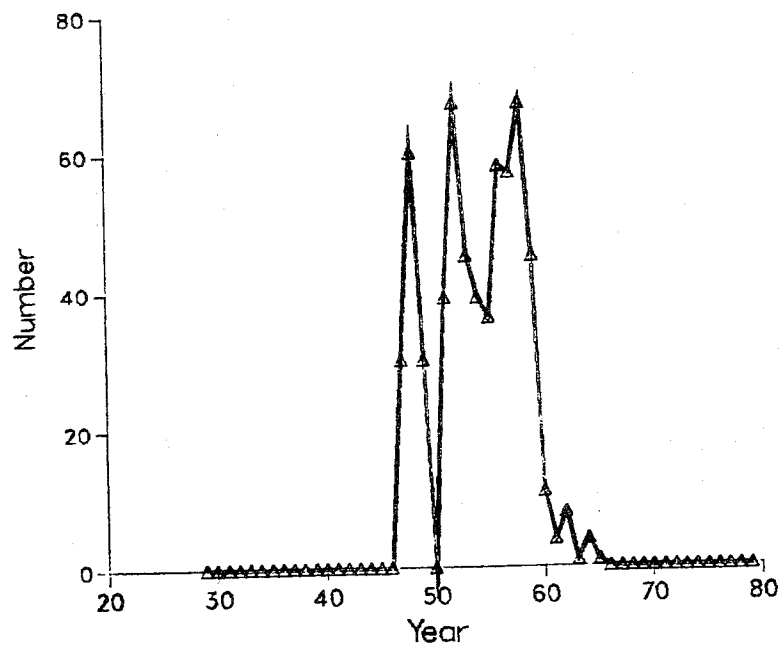


Figure 46
Blue Crab Fishing Effort
Maryland, crab dredge vessels and boats
1929 - 1979

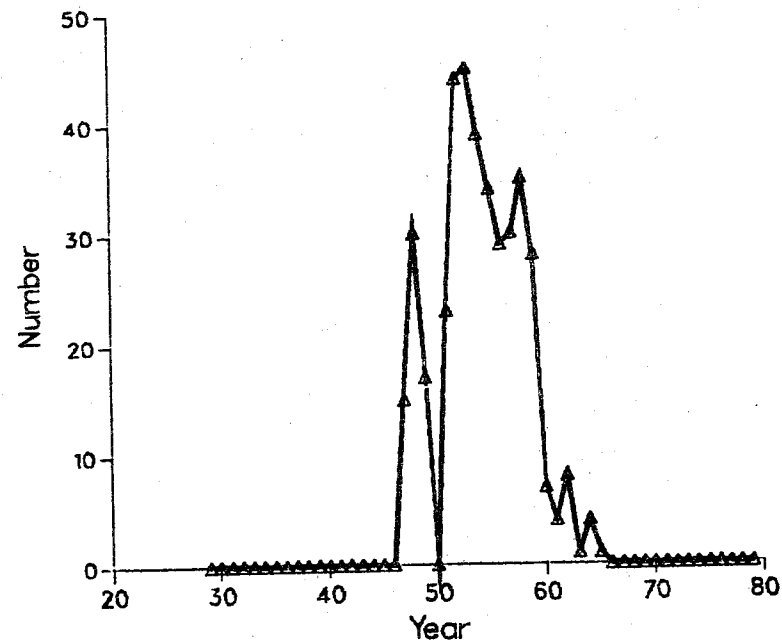


Figure 47
Hard Blue Crab CPUE
Virginia, crab dredges
1929 - 1979

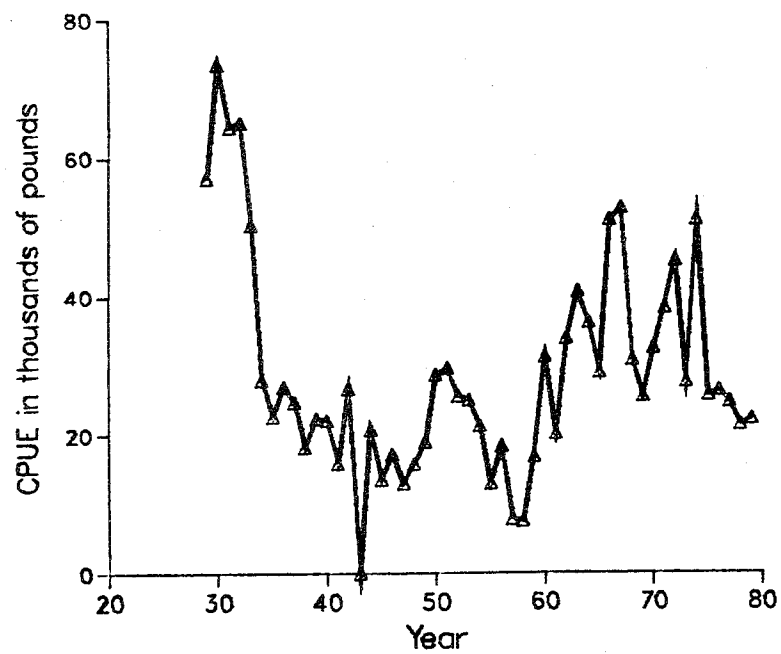


Figure 48
Hard Blue Crab CPUE
Virginia, crab dredge vessels and boats
1929 - 1979

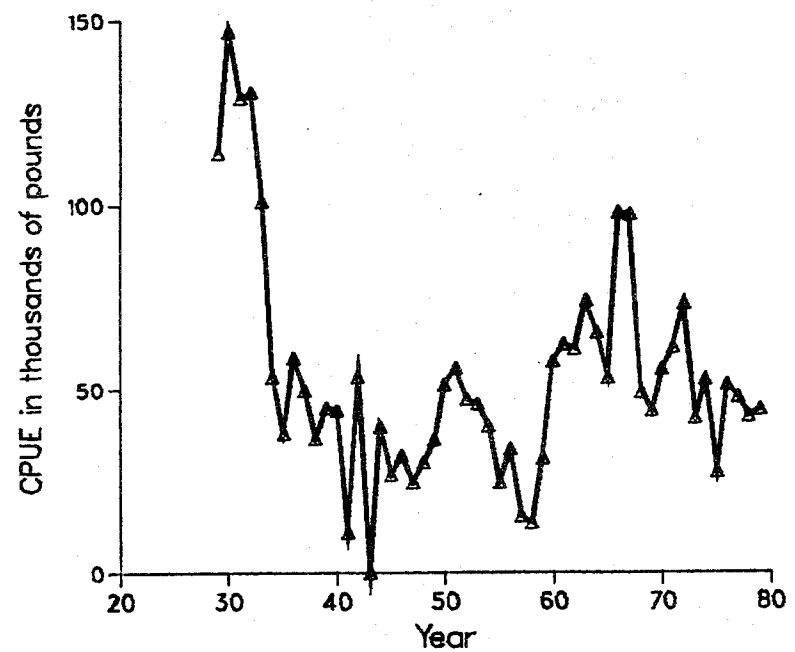


Figure 49
Hard Blue Crab CPUE
Maryland, crab dredges
1929 - 1979

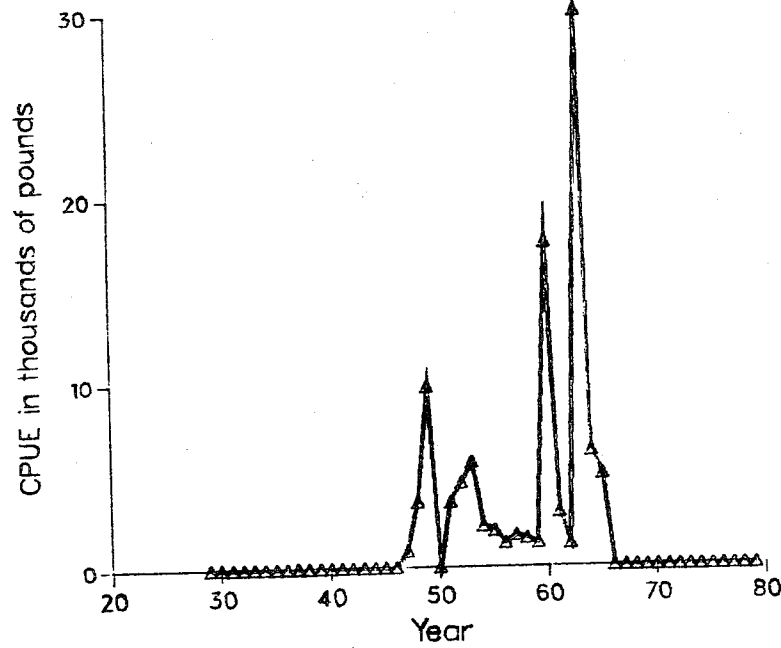


Figure 50
Hard Blue Crab CPUE
Maryland, crab dredge vessels and boats
1929 - 1979

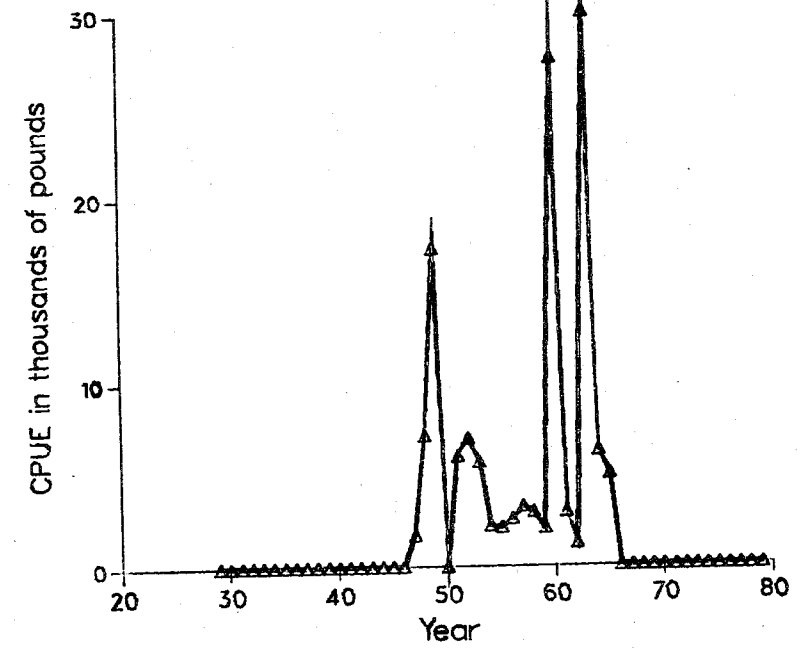


Figure 51
Soft and Peeler Blue Crab CPUE
Virginia, crab dredges
1929 - 1979

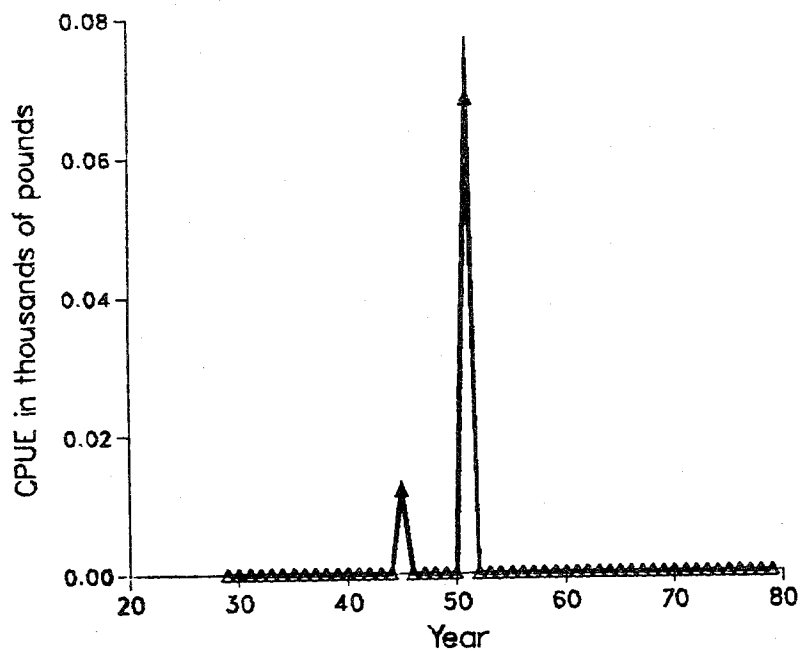


Figure 52
Soft and Peeler Blue Crab CPUE
Virginia, crab dredge vessels and boats
1929 - 1979

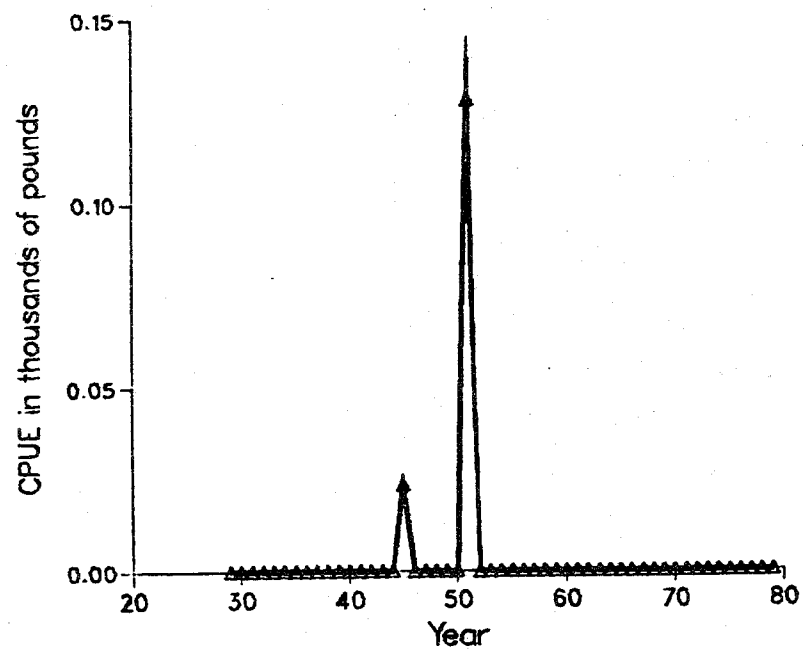


Figure 53
Soft and Peeler Blue Crab CPUE
Maryland, crab dredges
1929 - 1979

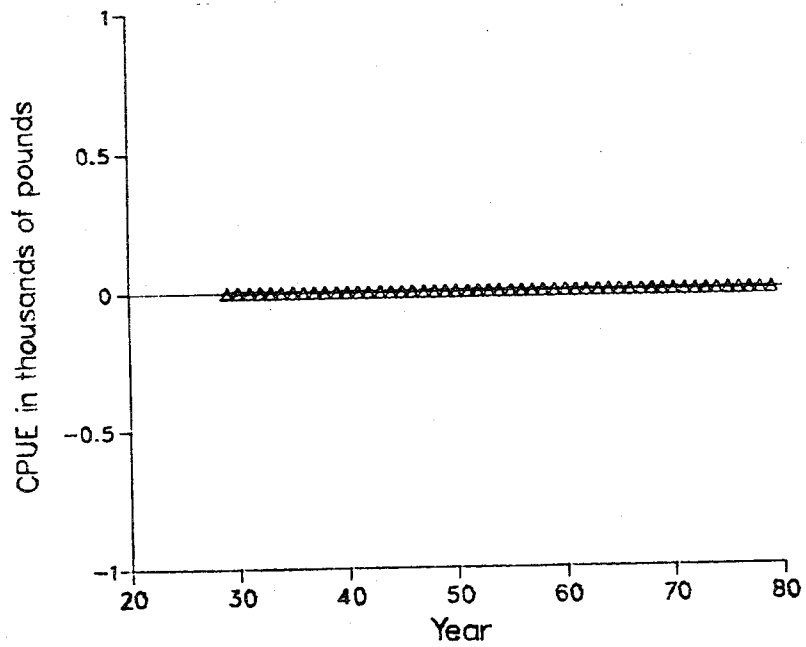


Figure 54
Soft and Peeler Blue Crab CPUE
Maryland, crab dredge vessels and boats
1929 - 1979

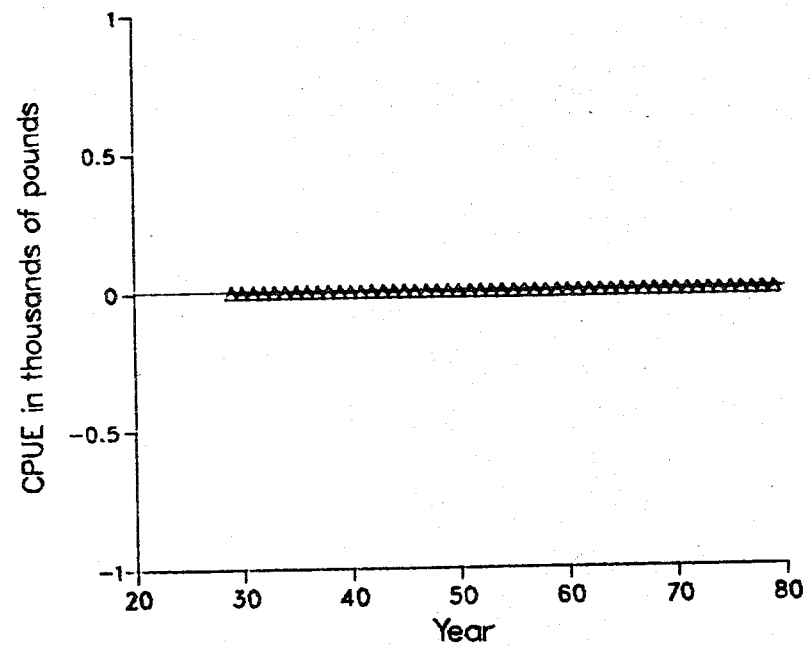


Figure 55
 Hard Blue Crab Landings
 Virginia, crab scrapes
 1929 - 1981

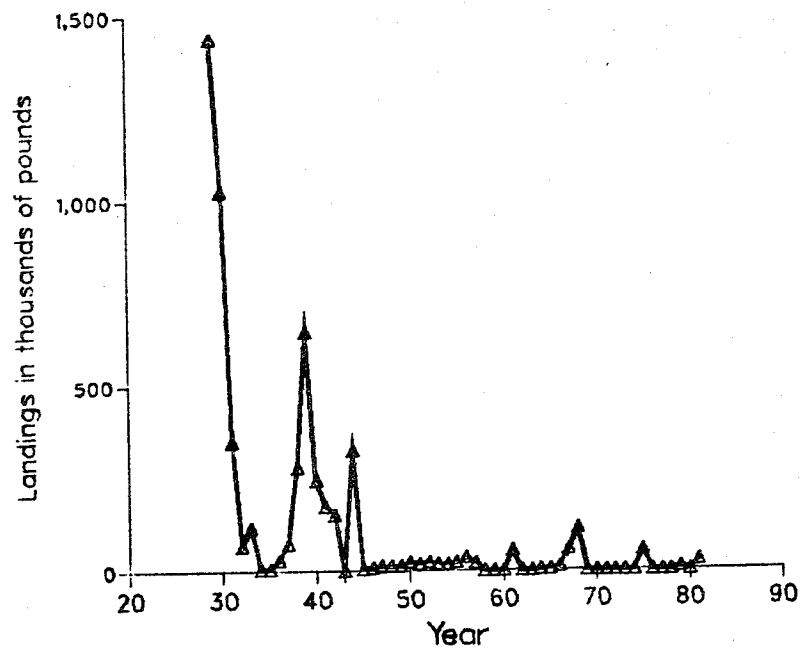


Figure 56
 Soft and Peeler Blue Crab Landings
 Virginia, crab scrapes
 1929 - 1981

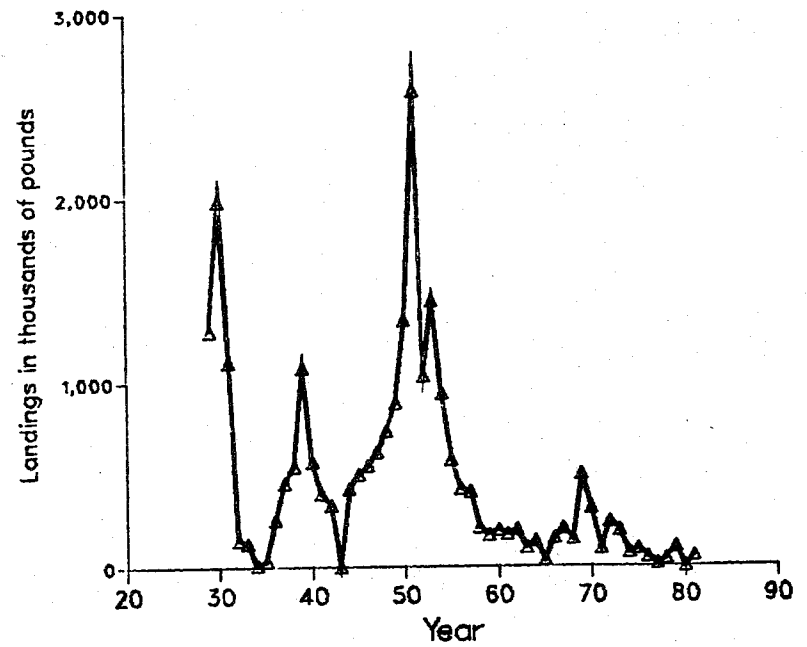


Figure 57
Hard Blue Crab Landings
Maryland, crab scrapes
1929 - 1981

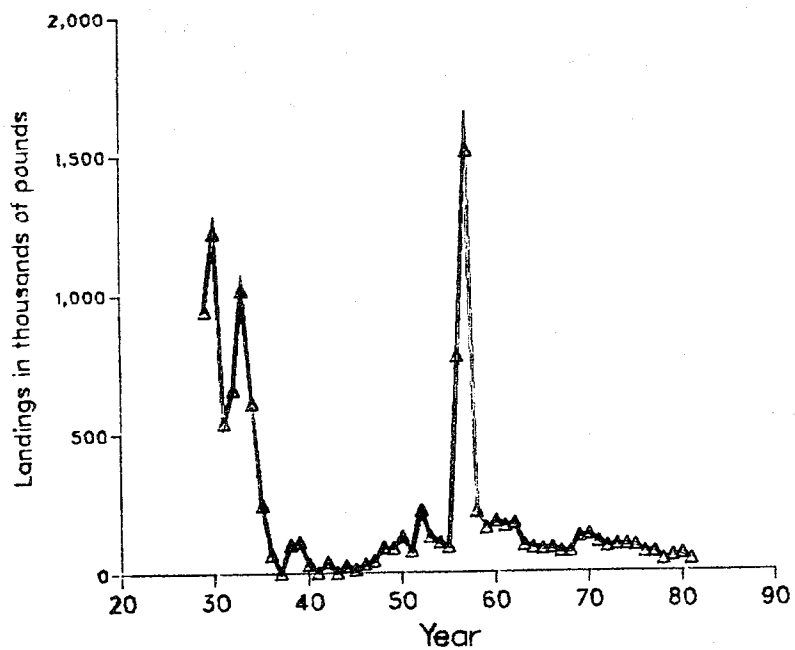


Figure 58
Soft and Peeler Blue Crab Landings
Maryland, crab scrapes
1929 - 1981

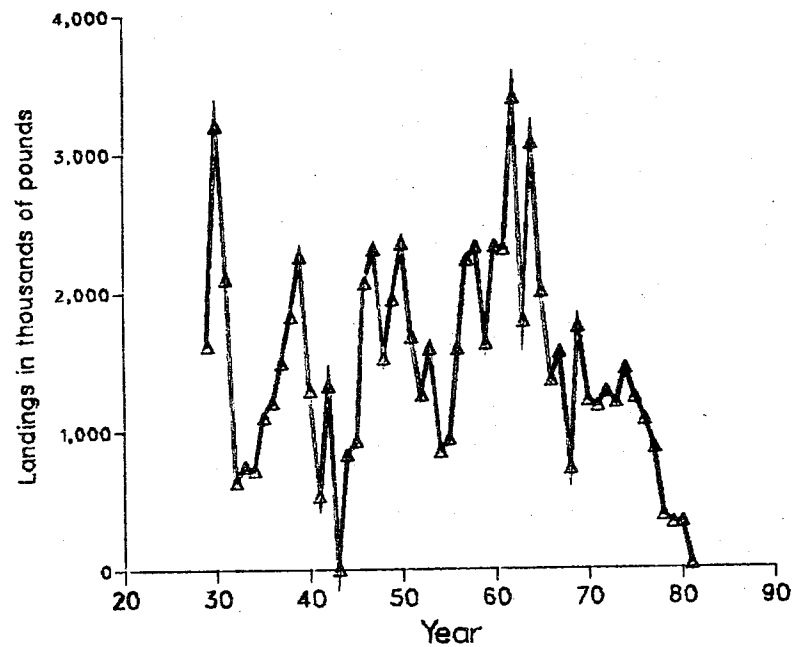


Figure 59
 Blue Crab Fishing Effort
 Virginia, crab scrapes
 1929 - 1979

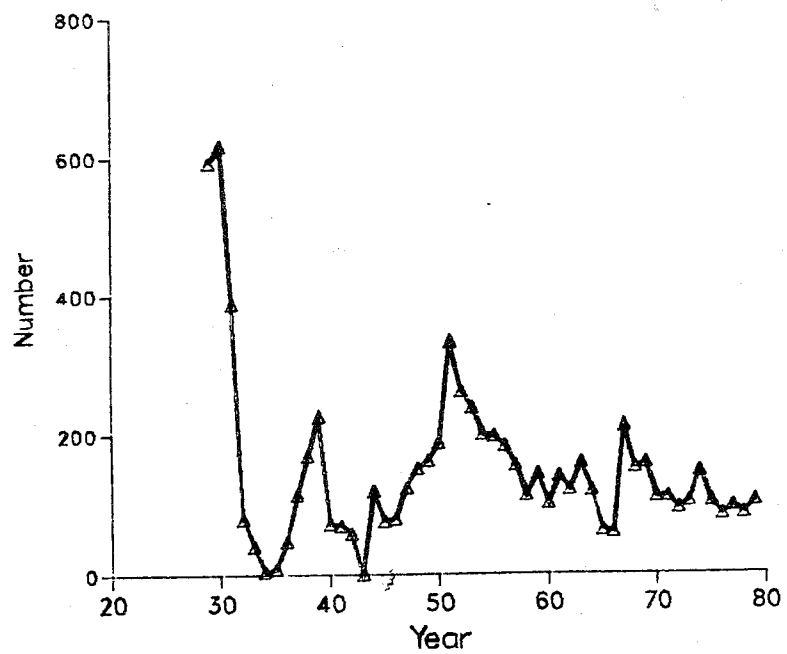


Figure 60
 Blue Crab Fishing Effort
 Virginia, crab scrape vessels and boats
 1929 - 1979

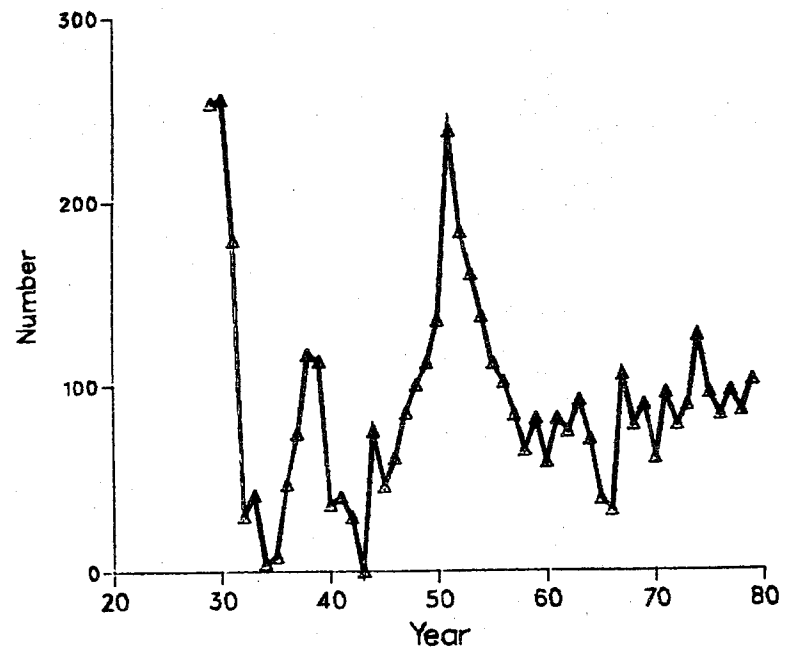


Figure 61
 Blue Crab Fishing Effort
 Maryland, crab scrapes
 1929 - 1979

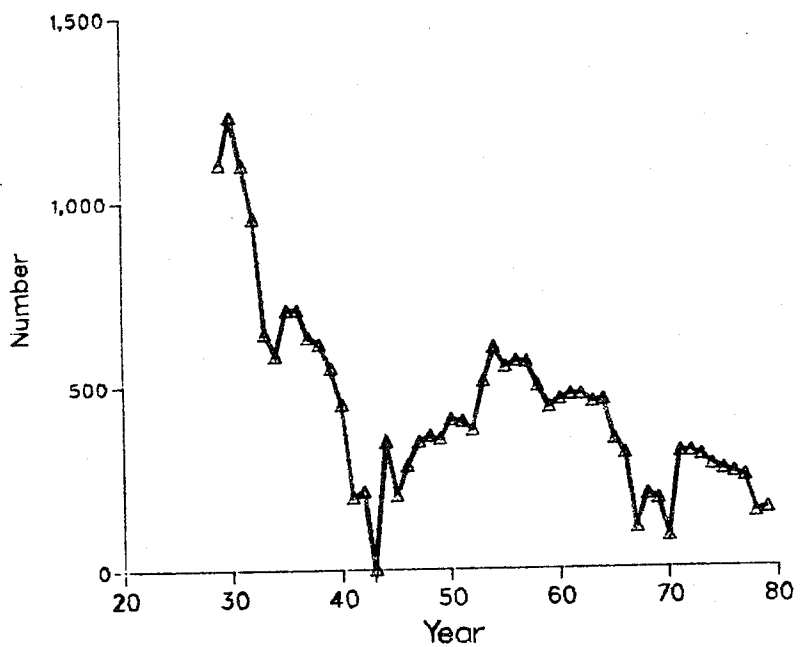


Figure 62
 Blue Crab Fishing Effort
 Maryland, crab scrape vessels and boats
 1929 - 1979

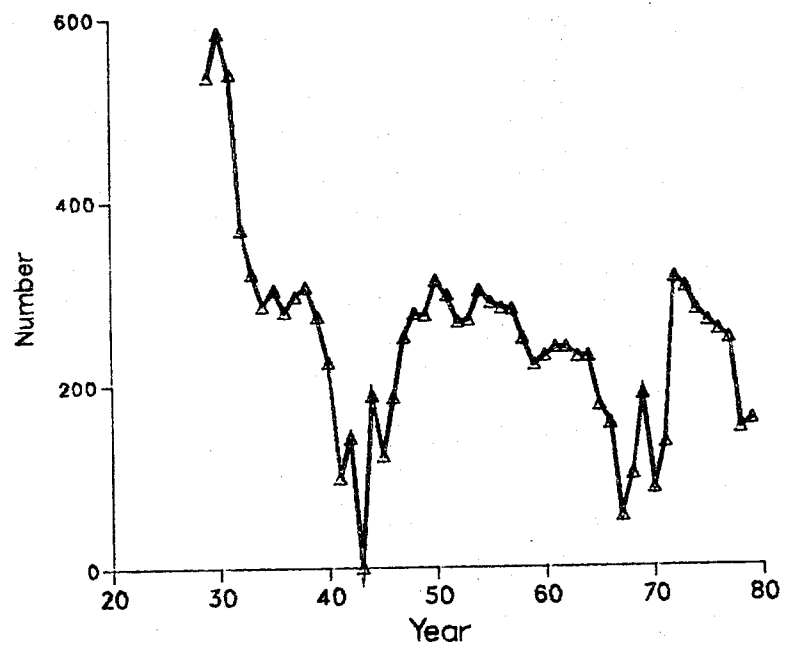


Figure 63
Hard Blue Crab CPUE
Virginia, crab scrapes
1929 - 1979

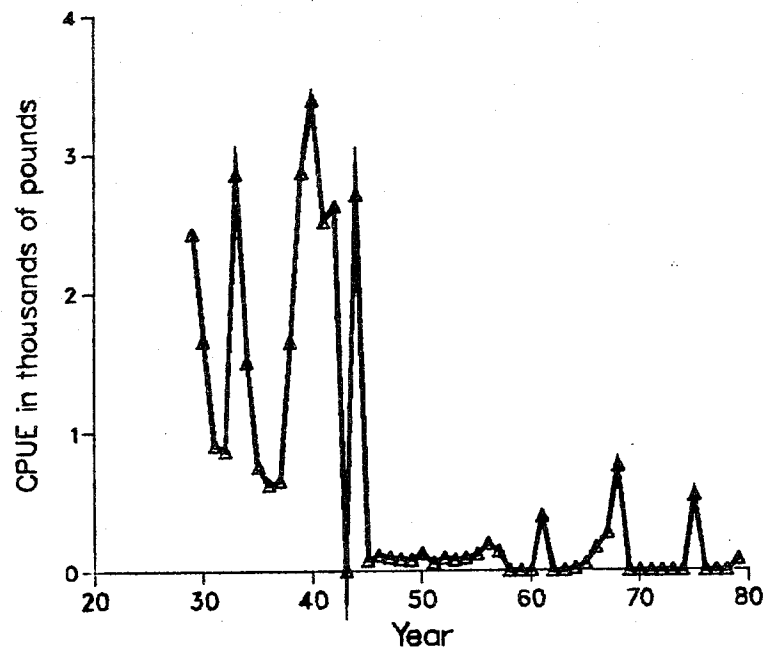


Figure 64
Hard Blue Crab CPUE
Virginia, crab scrape vessels and boats
1929 - 1979

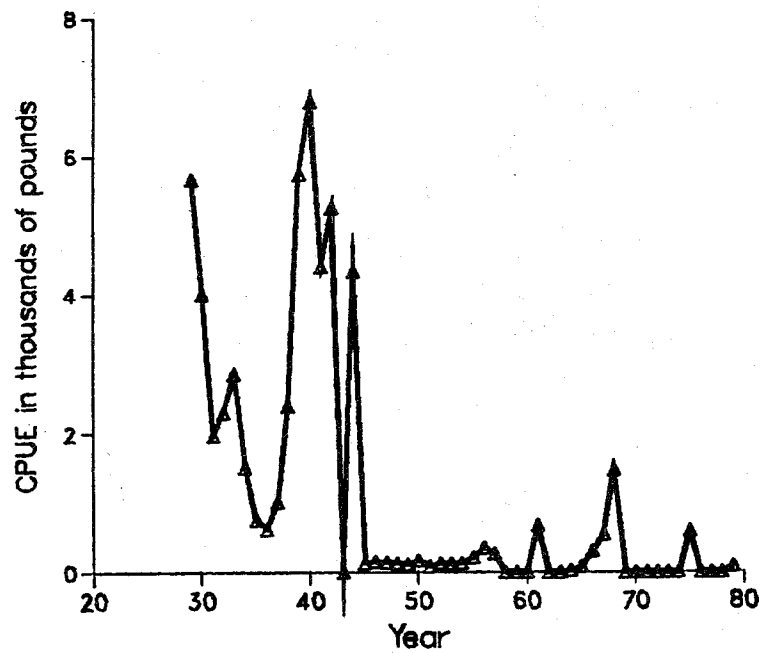


Figure 65
Hard Blue Crab CPUE
Maryland, crab scrapes
1929 - 1979

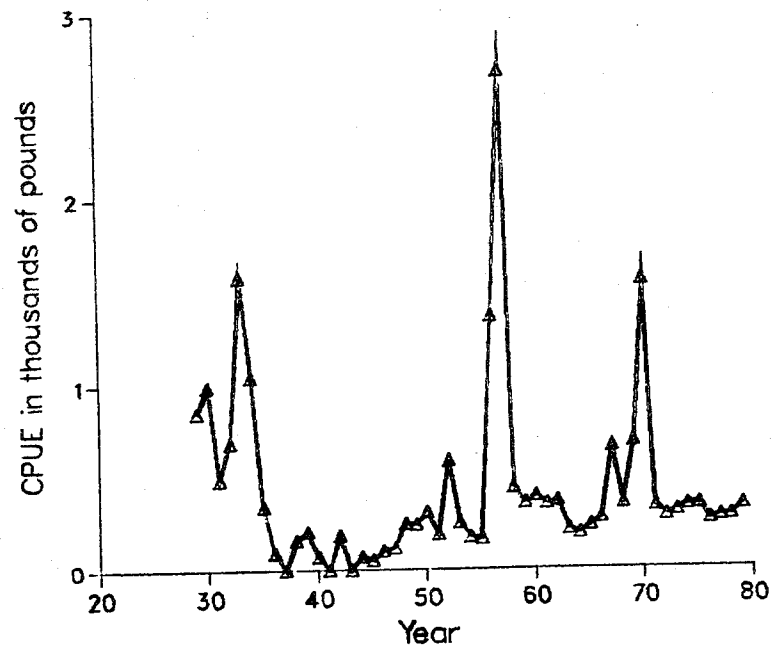


Figure 66
Hard Blue Crab CPUE
Maryland, crab scrape vessels and boats
1929 - 1979

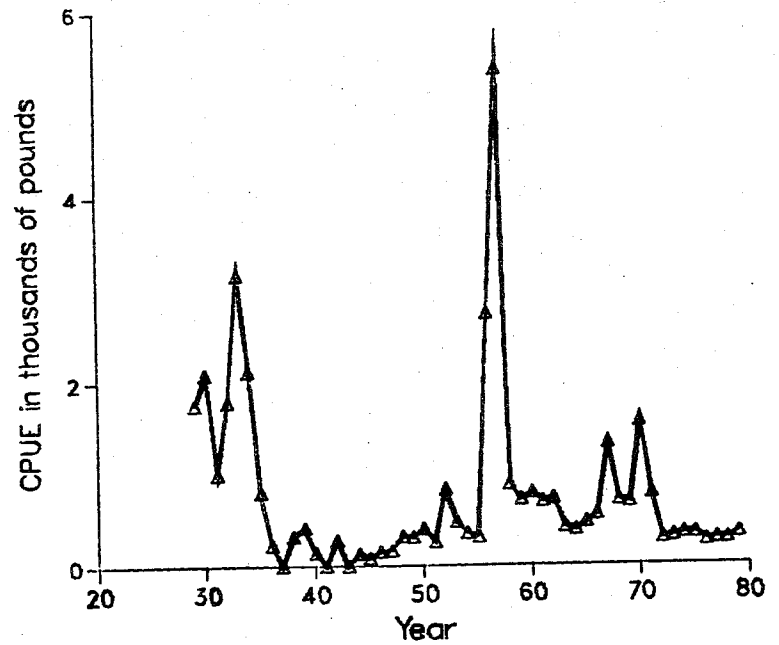


Figure 67
Soft and Peeler Blue Crab CPUE
Virginia, crab scrapes
1929 - 1979

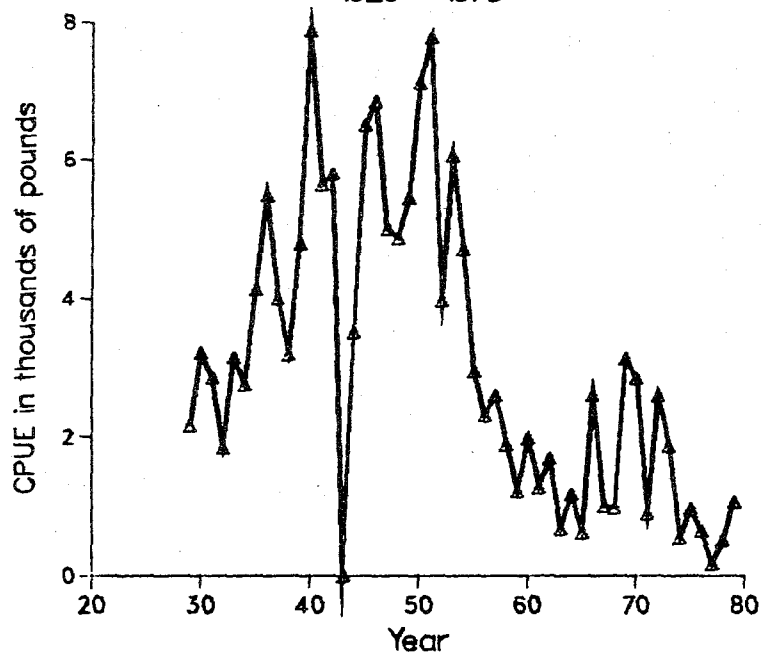


Figure 68
Soft and Peeler Blue Crab CPUE
Virginia, crab scrape vessels and boats
1929 - 1979

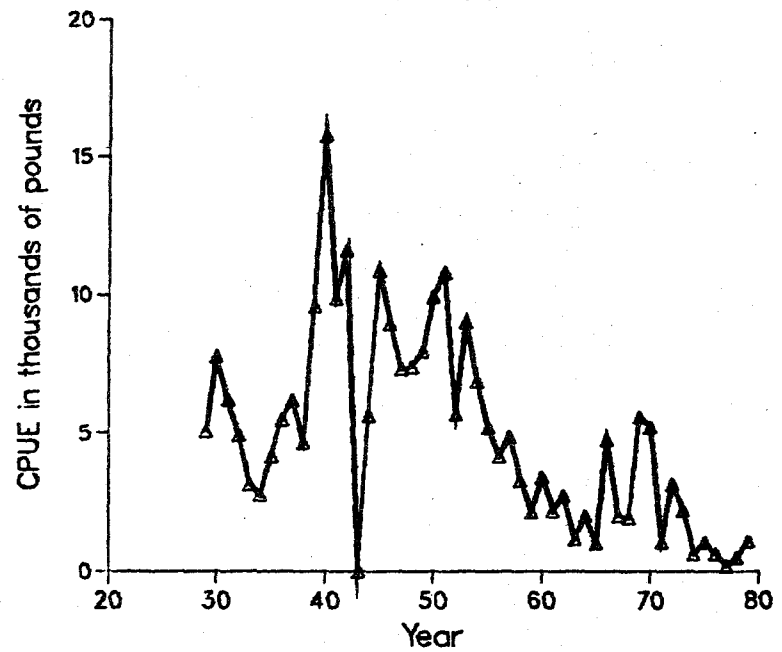


Figure 69
Soft and Peeler Blue Crab CPUE
Maryland, crab scrapes
1929 - 1979

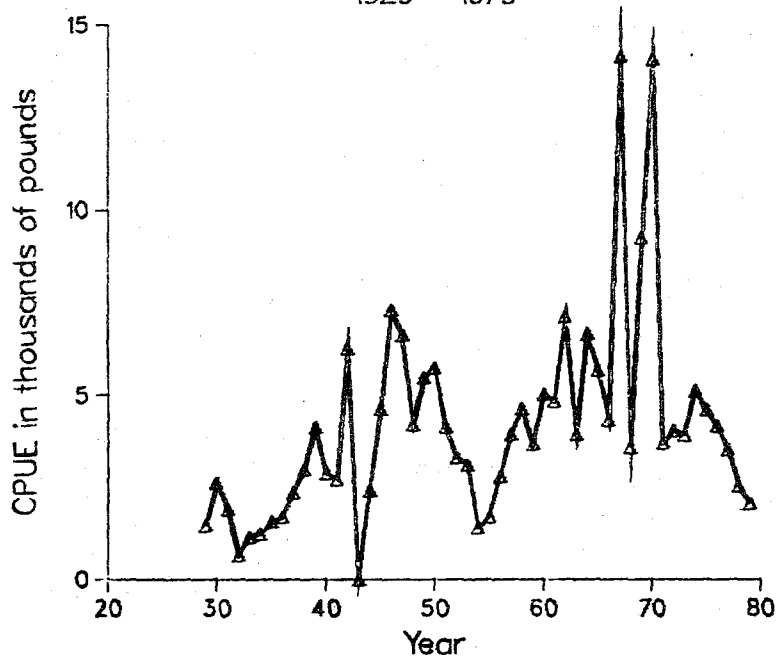


Figure 70
Soft and Peeler Blue Crab CPUE
Maryland, crab scrape vessels and boats
1929 - 1979

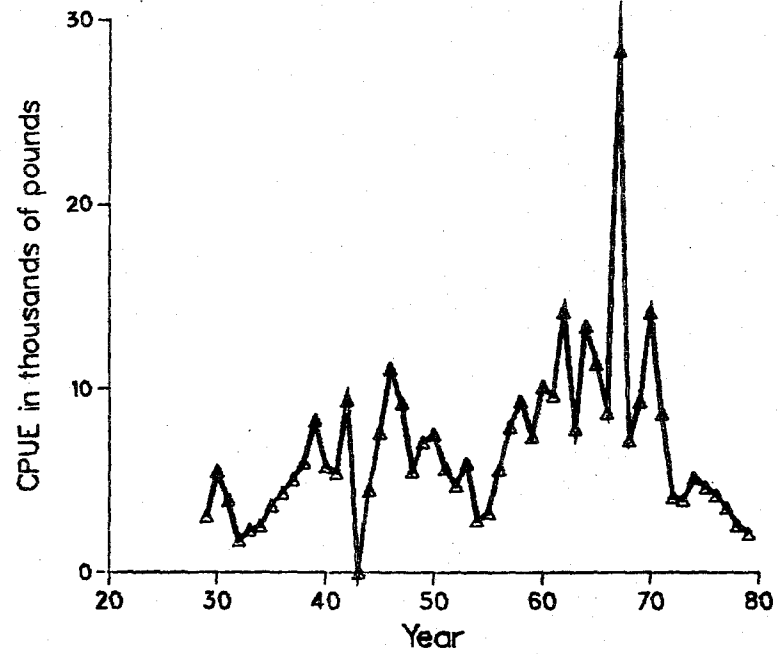


Figure 71
 Hard Blue Crab Landings
 Virginia, crab pound nets
 1929 - 1981

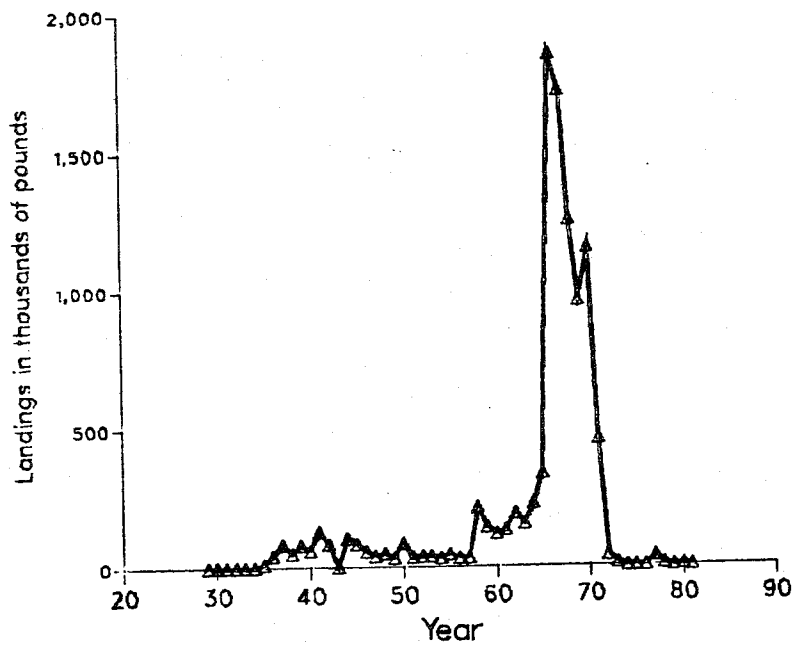


Figure 72
 Soft and Peeler Blue Crab Landings
 Virginia, crab pound nets
 1929 - 1981

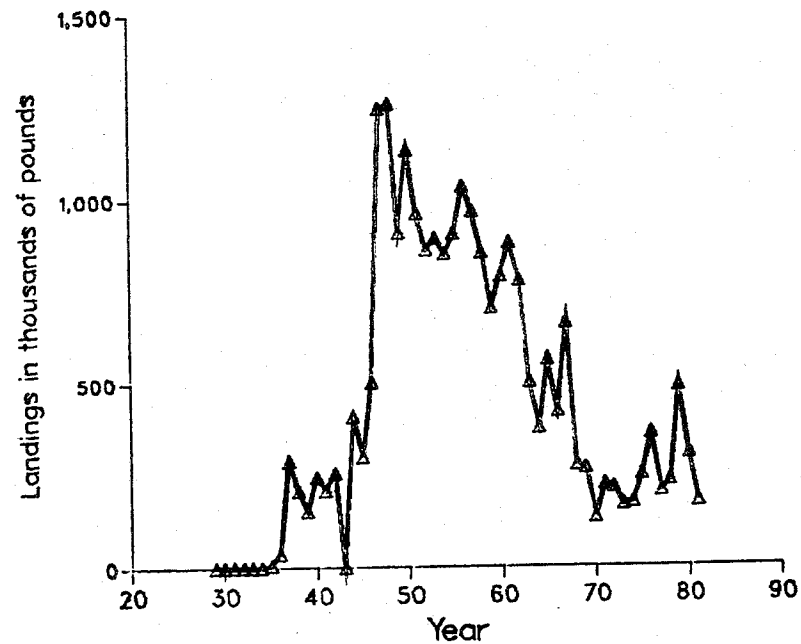


Figure 73
 Hard Blue Crab Landings
 Maryland, crab pound nets
 1929 - 1981

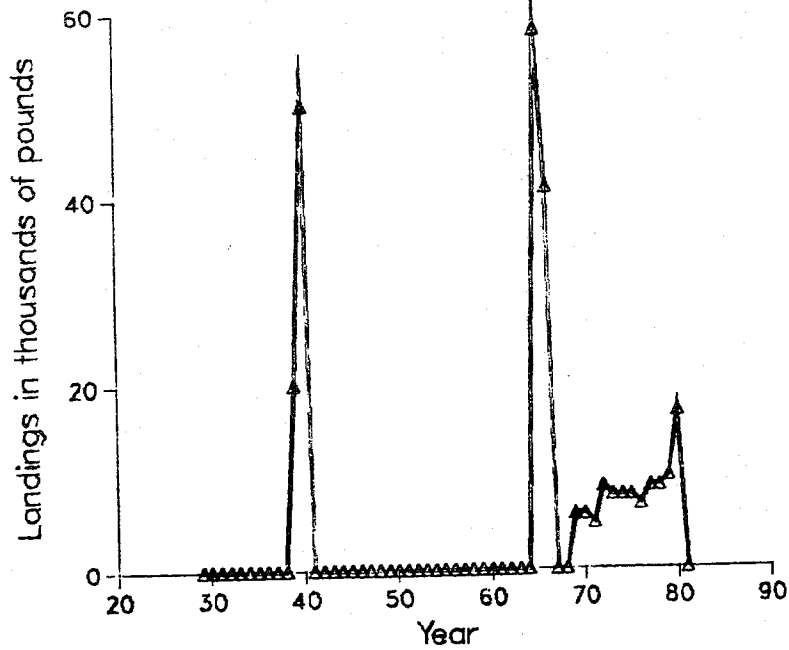


Figure 74
 Soft and Peeler Blue Crab Landings
 Maryland, crab pound nets
 1929 - 1981

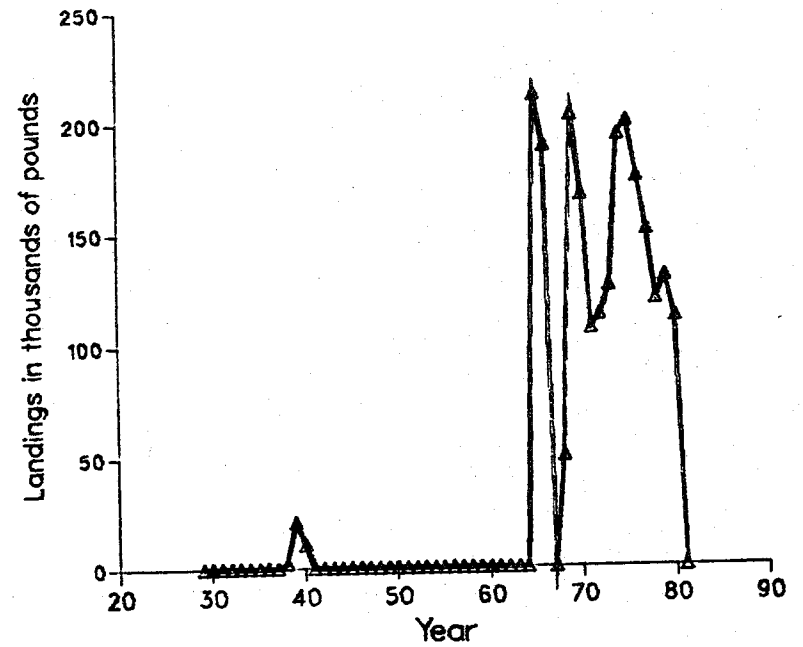


Figure 75
Blue Crab Fishing Effort
Virginia, crab pound nets
1929 - 1979

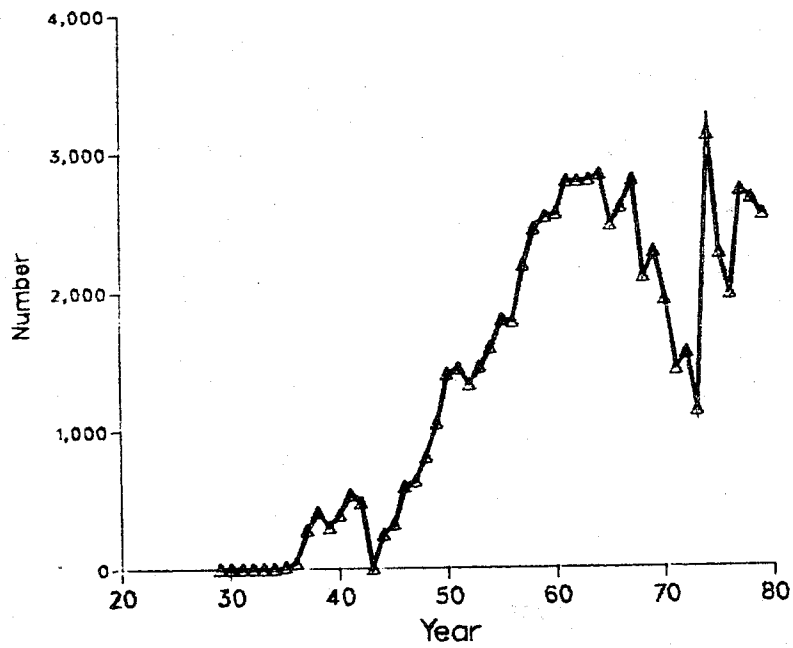


Figure 76
Blue Crab Fishing Effort
Virginia, crab pound net vessels and boats
1929 - 1979

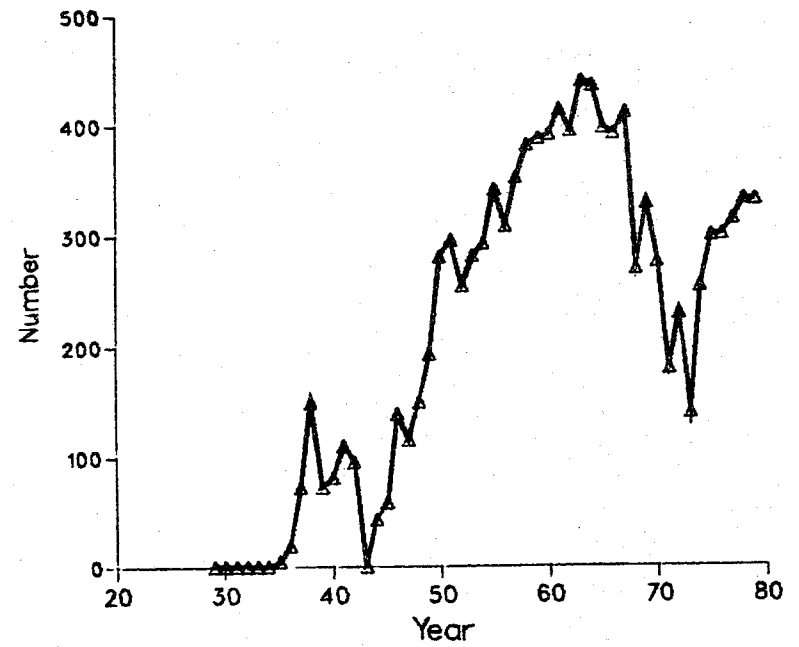


Figure 77
 Blue Crab Fishing Effort
 Maryland, crab pound nets
 1929 - 1979

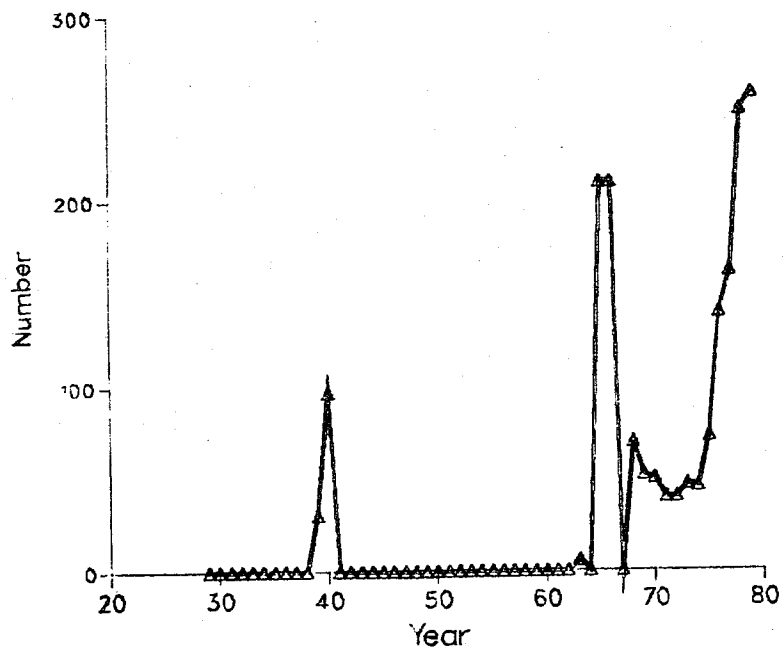


Figure 78
 Blue Crab Fishing Effort
 Maryland, crab pound net vessels and boats
 1929 - 1979

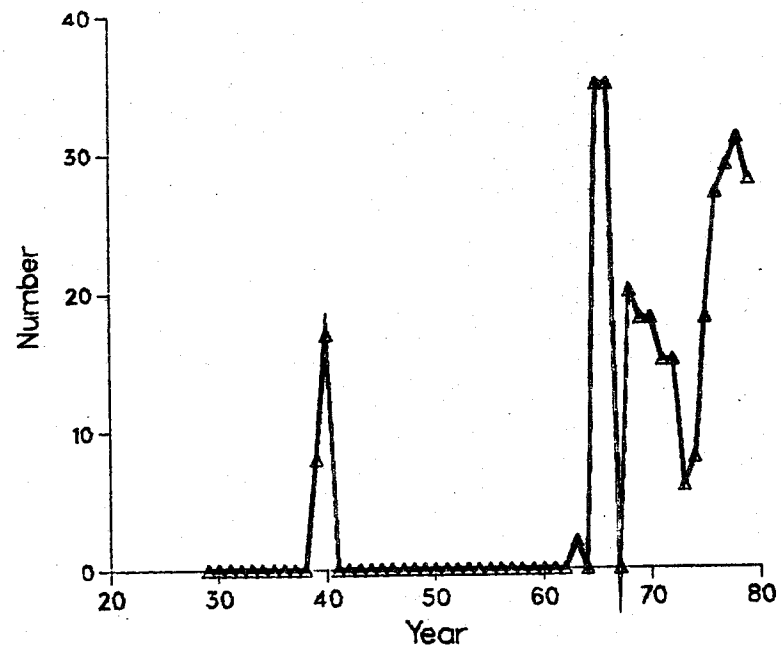


Figure 79
 Hard Blue Crab CPUE
 Virginia, crab pound nets
 1929 - 1979

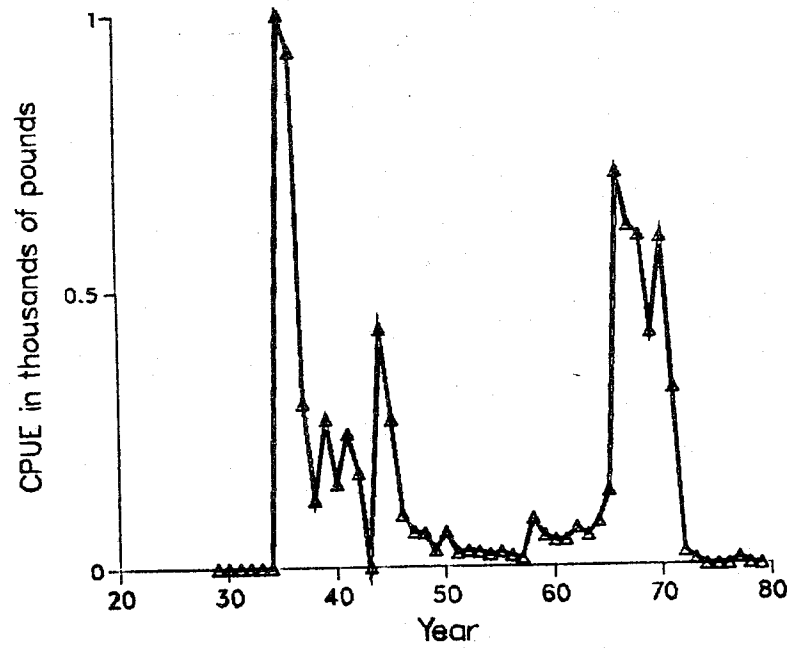


Figure 80
 Hard Blue Crab CPUE
 Virginia, crab pound vessels and boats
 1929 - 1979

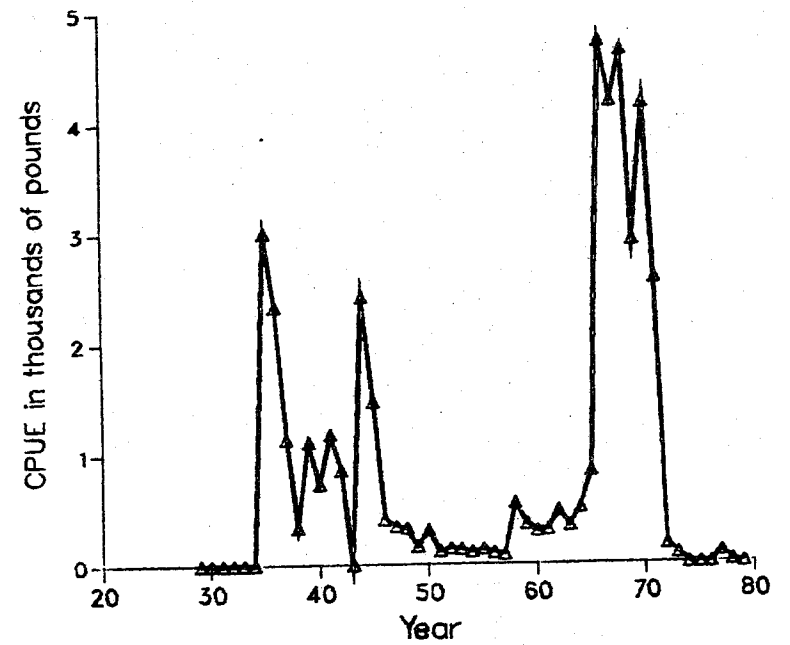


Figure 81
 Hard Blue Crab CPUE
 Maryland, crab pound nets
 1929 - 1979

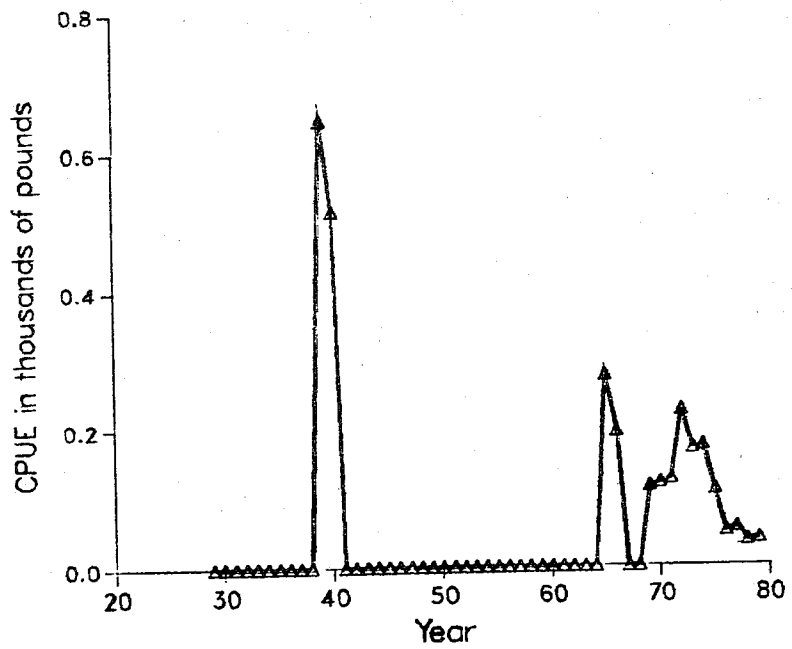


Figure 82
 Hard Blue Crab CPUE
 Maryland, crab pound vessels and boats
 1929 - 1979

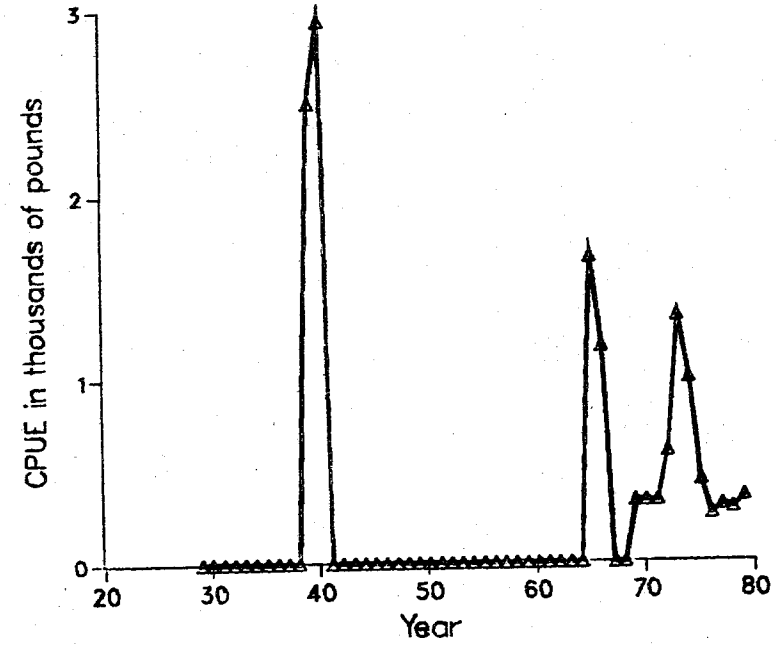


Figure 83
Soft and Peeler Blue Crab CPUE
Virginia, crab pound nets
1929 - 1979

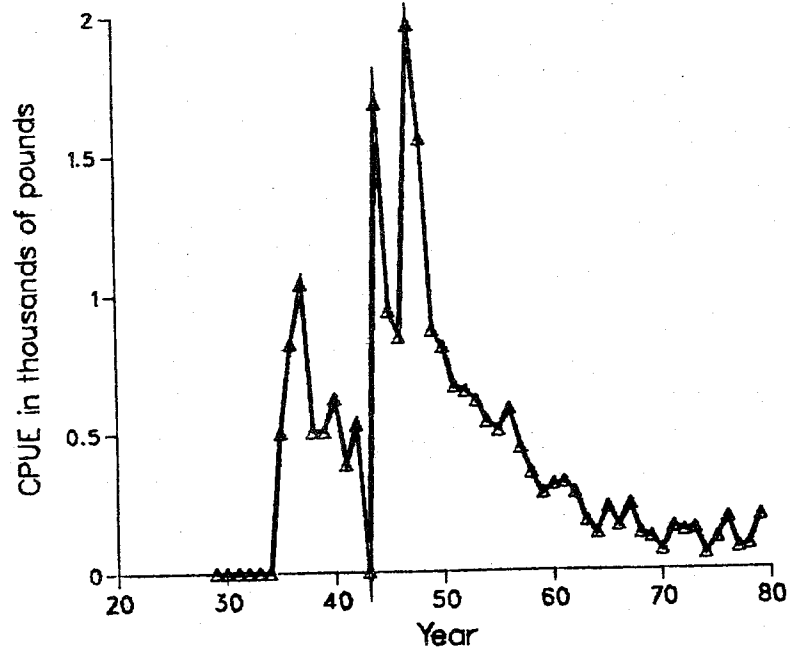


Figure 84
Soft and Peeler Blue Crab CPUE
Virginia, crab pound vessels and boats
1929 - 1979

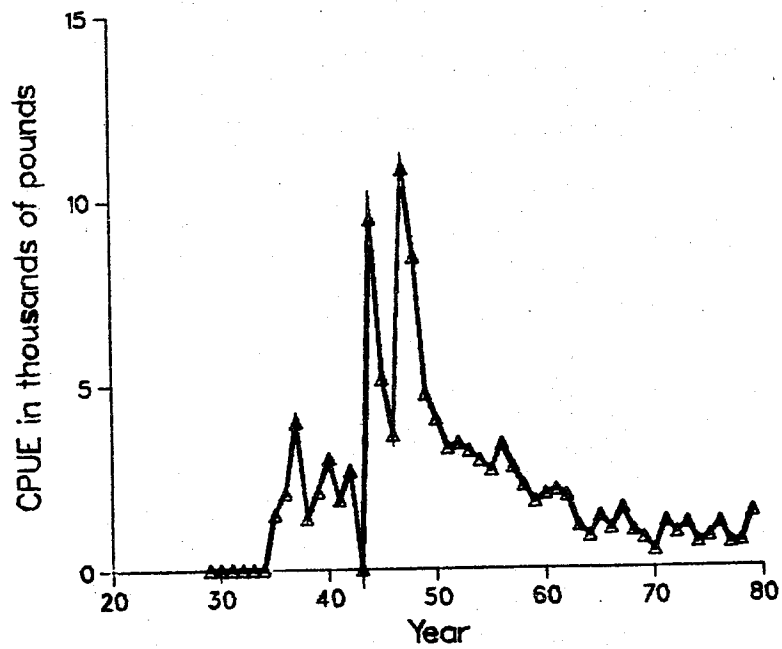


Figure 85
Soft and Peeler Blue Crab CPUE
Maryland, crab pound nets
1929 - 1979

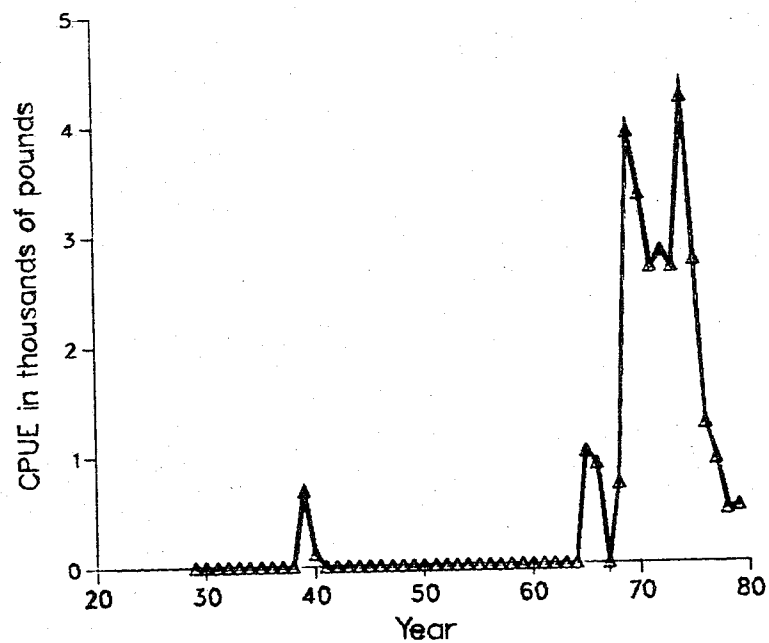


Figure 86
Soft and Peeler Blue Crab CPUE
Maryland, crab pound vessels and boats
1929 - 1979

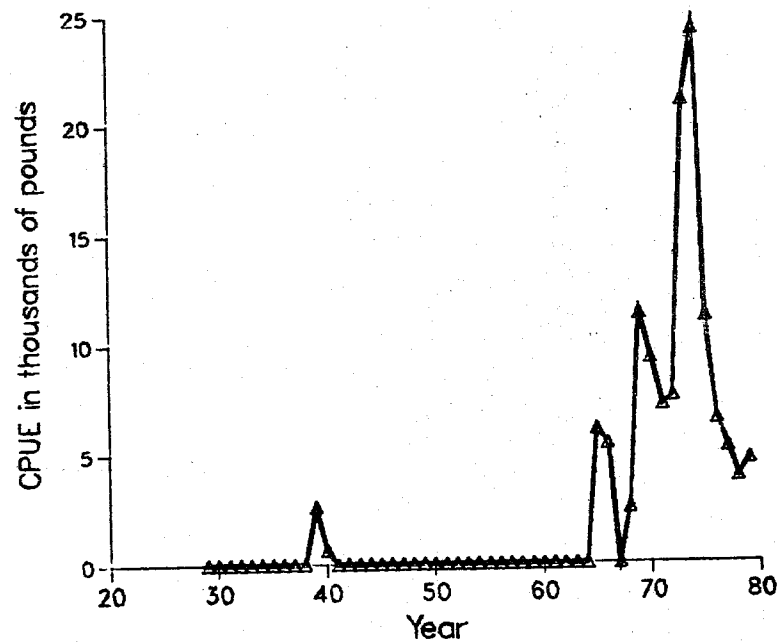


Figure 87
Hard Blue Crab Landings
Virginia, fish pound nets
1929 - 1981

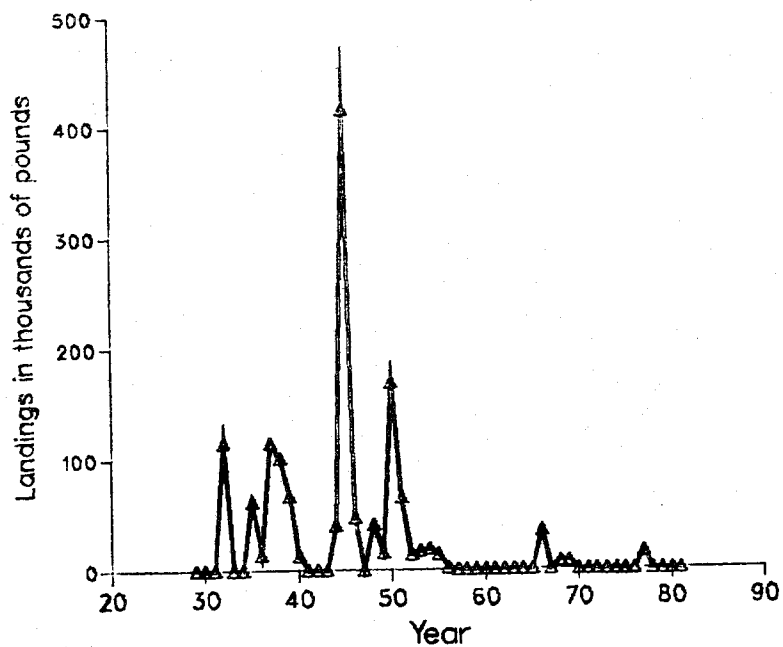


Figure 88
Soft and Peeler Blue Crab Landings
Virginia, fish pound nets
1929 - 1981

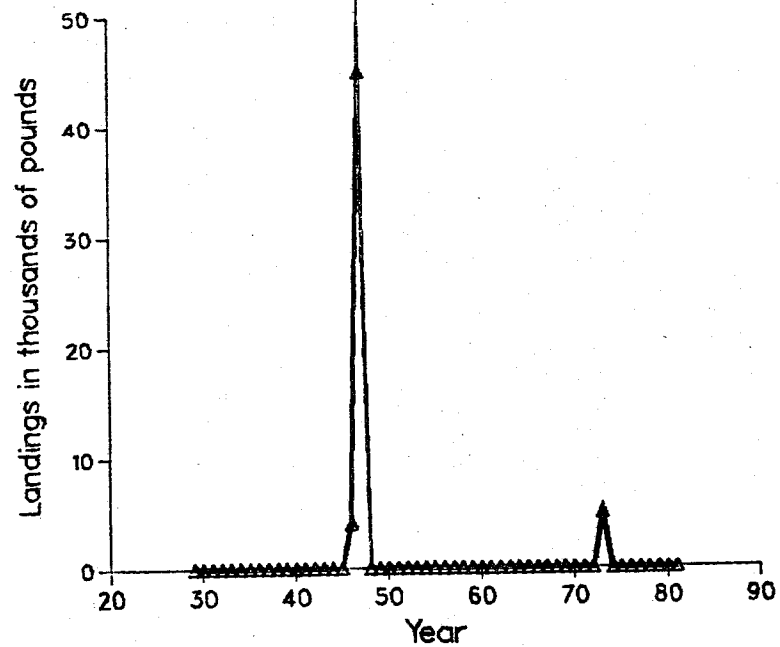


Figure 89
Hard Blue Crab Landings
Maryland, fish pound nets
1929 - 1981

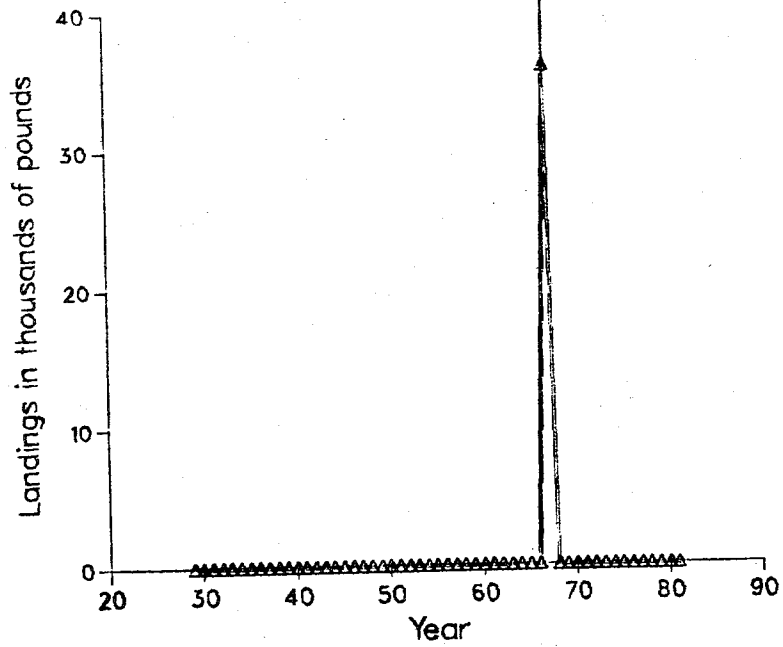


Figure 90
Soft and Peeler Blue Crab Landings
Maryland, fish pound nets
1929 - 1981

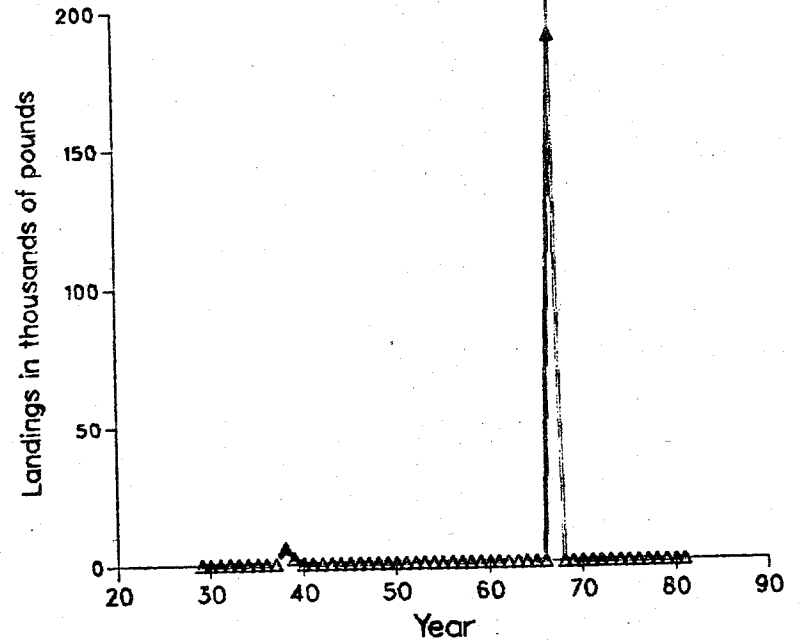


Figure 91
Hard Blue Crab Landings
Virginia, crab dip nets
1929 - 1981

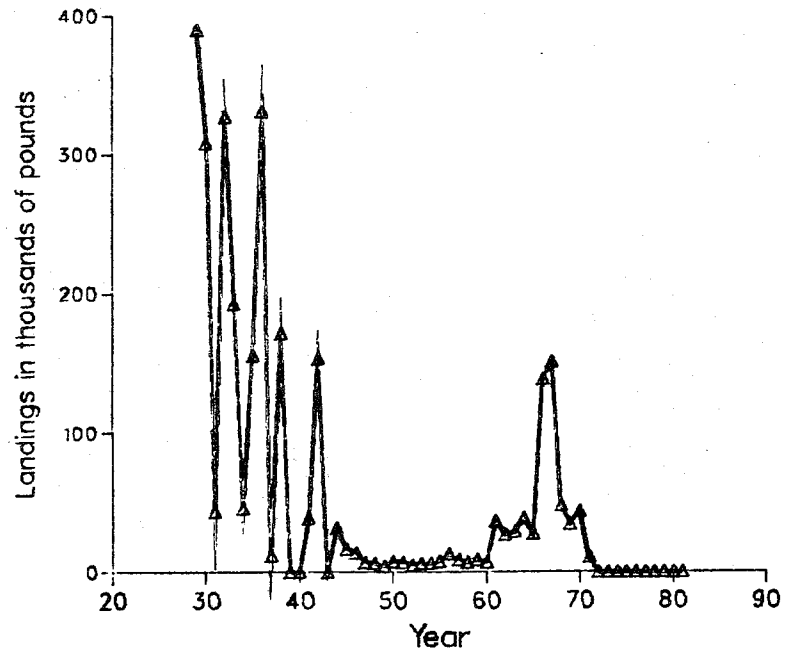


Figure 92
Soft and Peeler Blue Crab Landings
Virginia, crab dip nets
1929 - 1981

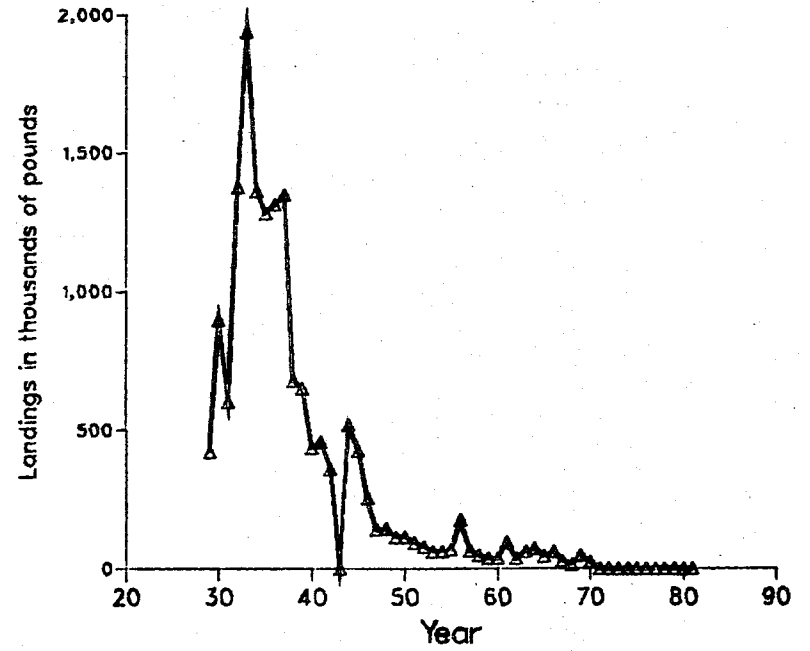


Figure 93
Hard Blue Crab Landings
Maryland, crab dip nets
1929 - 1981

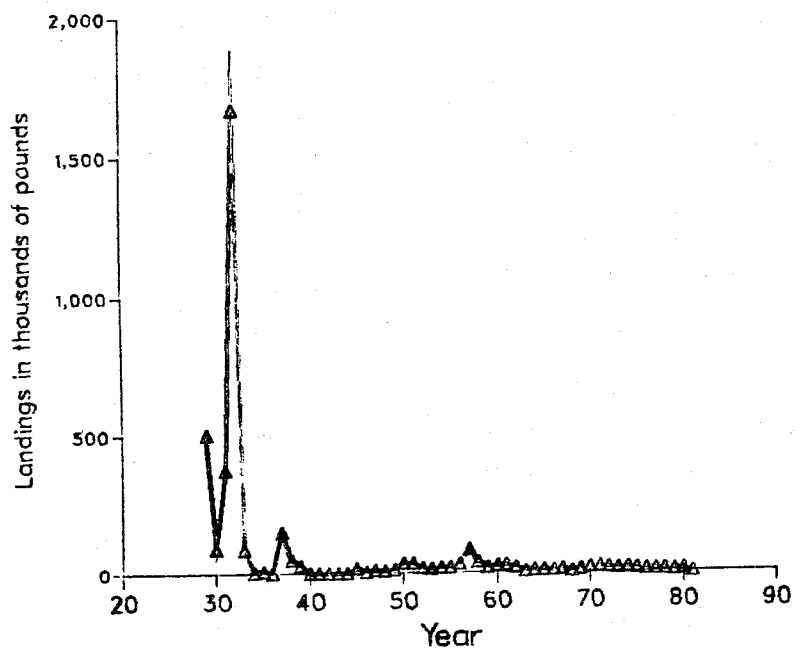


Figure 94
Soft and Peeler Blue Crab Landings
Maryland, crab dip nets
1929 - 1981

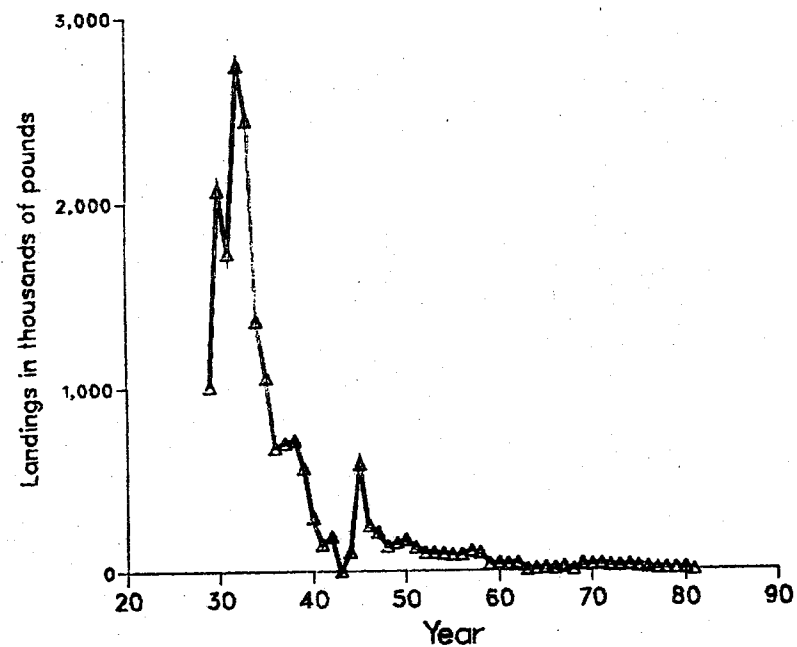


Figure 95
Blue Crab Fishing Effort
Virginia, fish pound nets
1929 - 1979

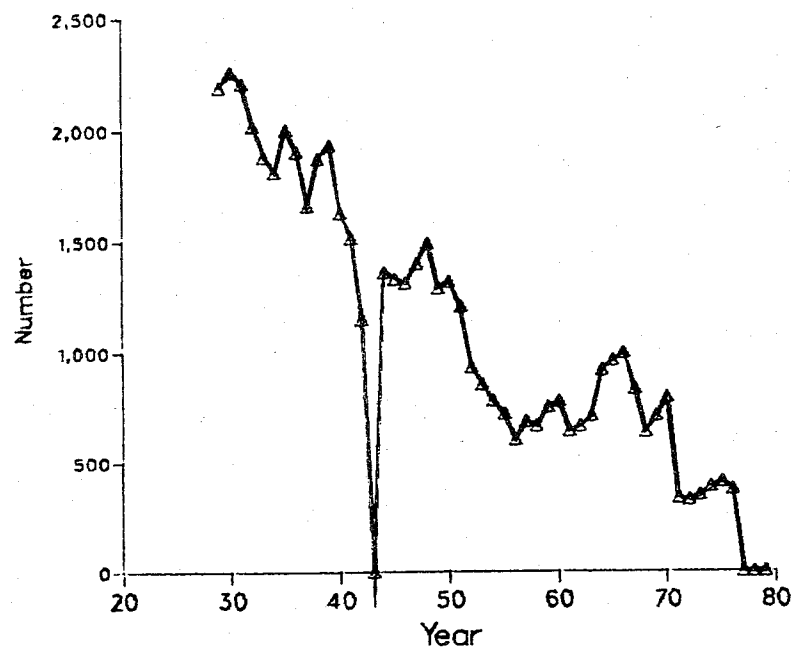


Figure 96
Blue Crab Fishing Effort
Virginia, crab dip nets
1929 - 1979

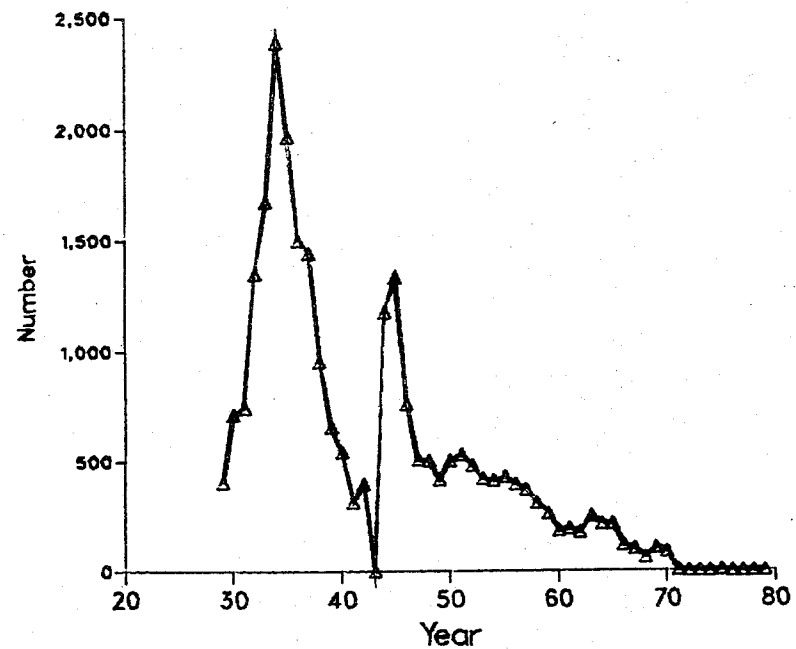


Figure 97
Blue Crab Fishing Effort
Maryland, fish pound nets
1929 - 1979

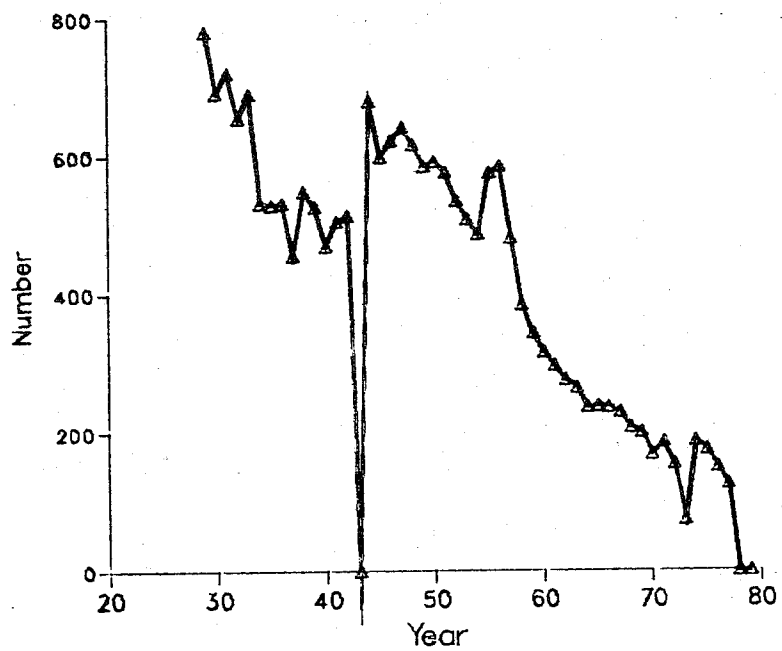


Figure 98
Blue Crab Fishing Effort
Maryland, crab dip nets
1929 - 1979

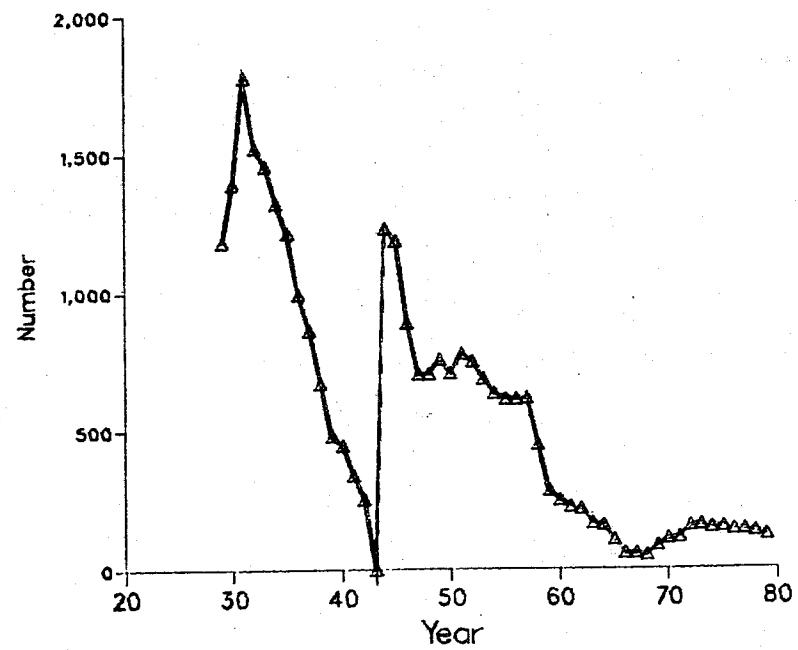


Figure 99
Hard Blue Crab CPUE
Virginia, fish pound nets
1929 - 1979

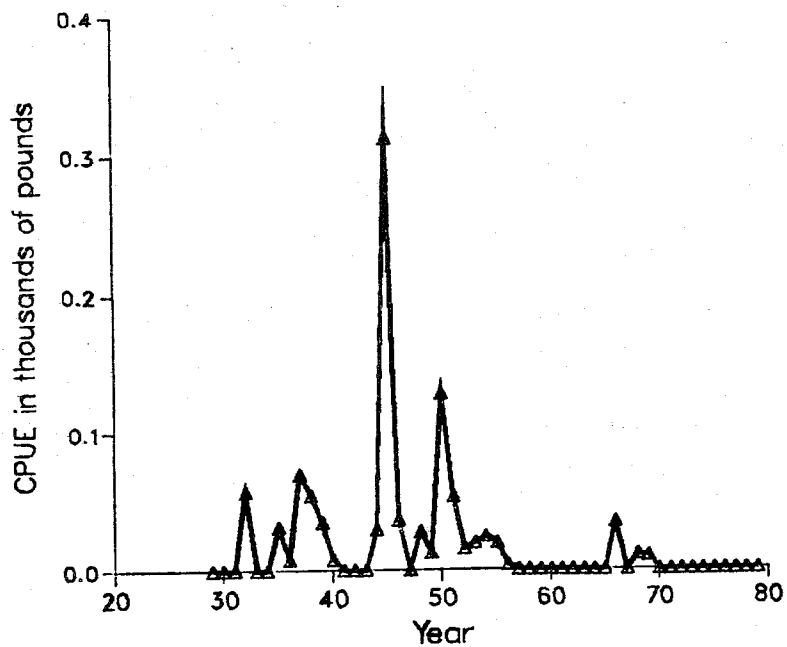


Figure 100
Hard Blue Crab CPUE
Virginia, crab dip nets
1929 - 1979

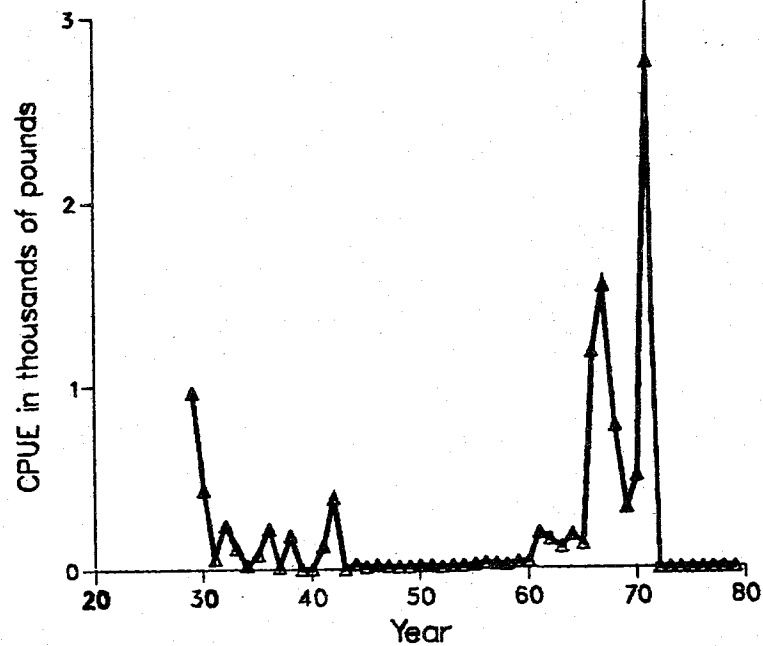


Figure 101
Hard Blue Crab CPUE
Maryland, fish pound nets
1929 - 1979

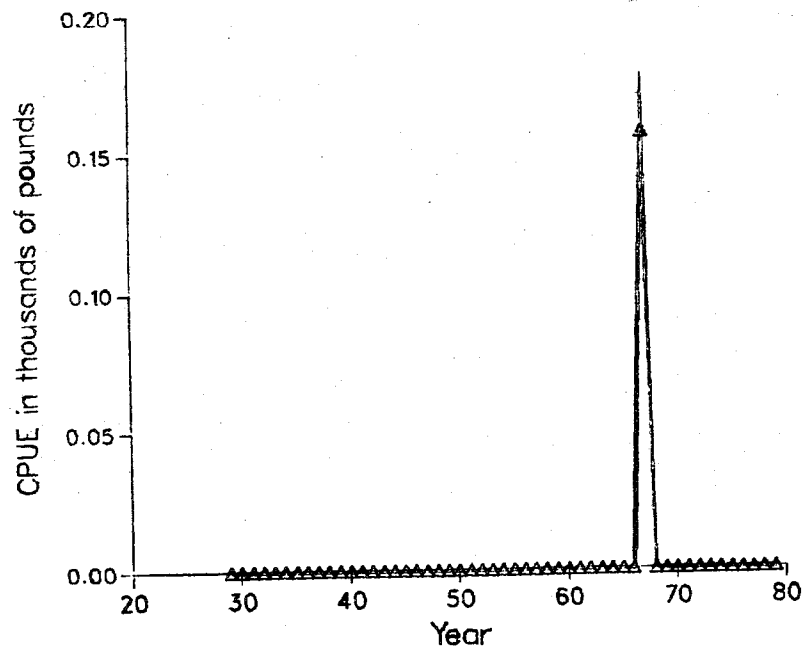


Figure 102
Hard Blue Crab CPUE
Maryland, crab dip nets
1929 - 1979

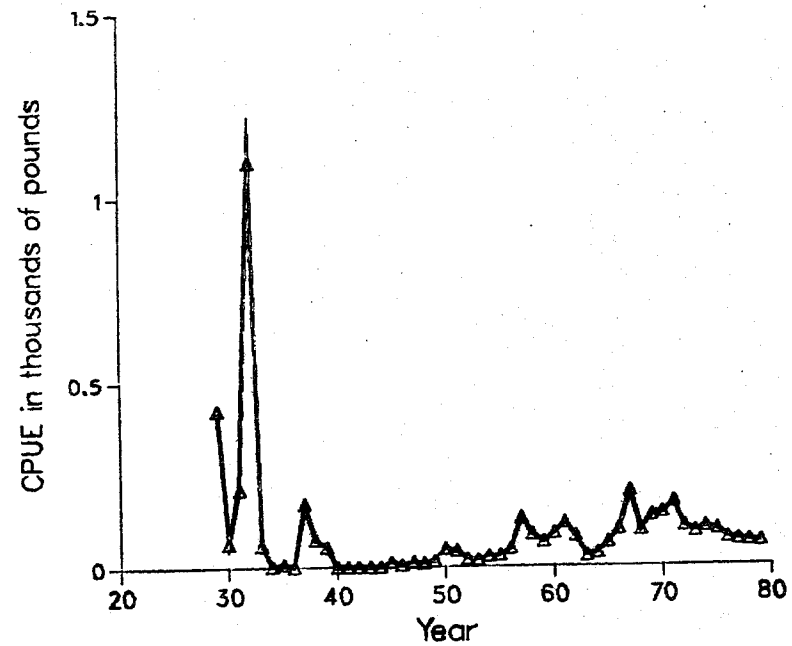


Figure 103
Soft and Peeler Blue Crab CPUE
Virginia, fish pound nets
1929 - 1979

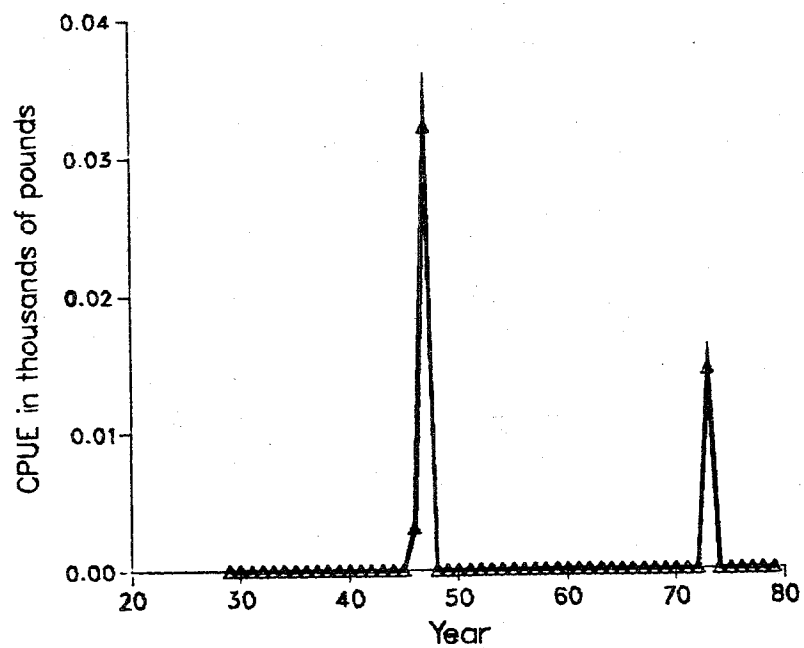


Figure 104
Soft and Peeler Blue Crab CPUE
Virginia, crab dip nets
1929 - 1979

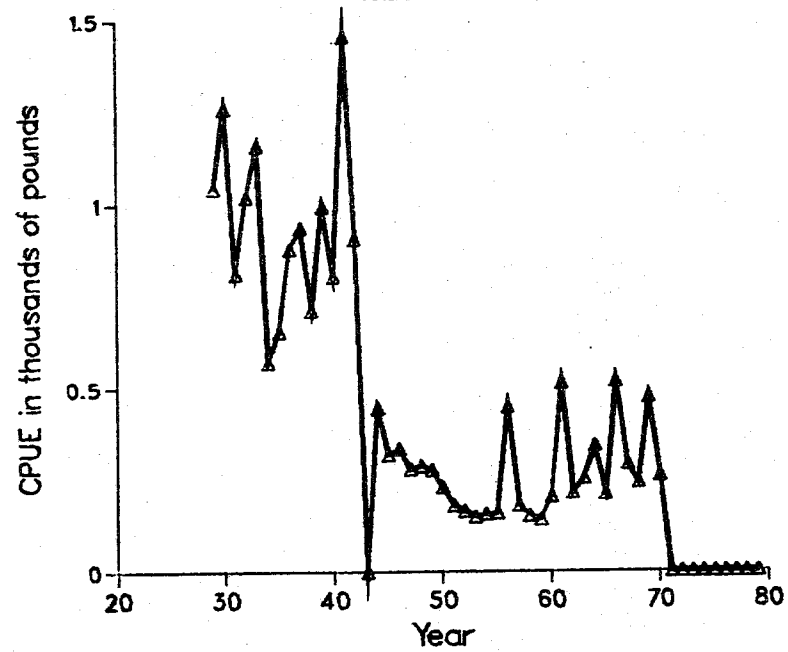


Figure 105
Soft and Peeler Blue Crab CPUE
Maryland, fish pound nets
1929 - 1979

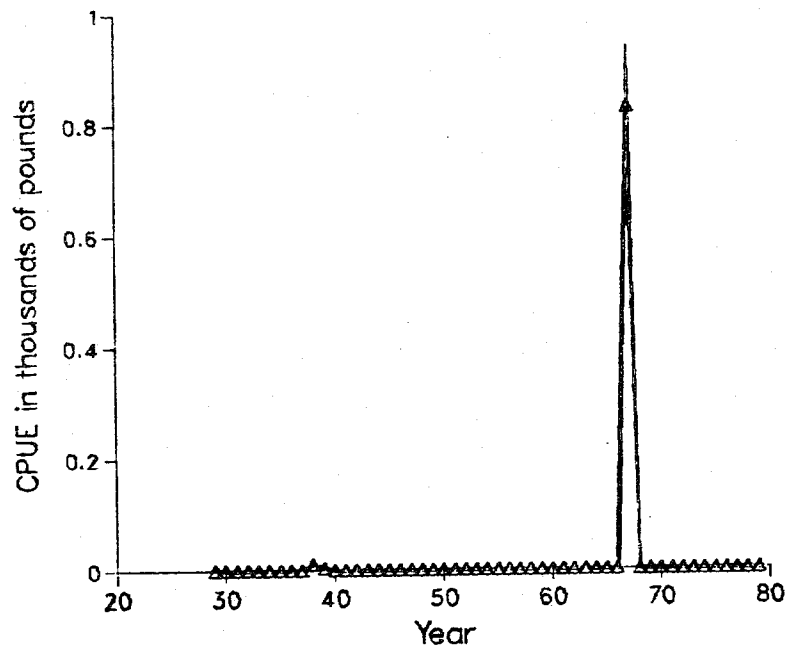


Figure 106
Soft and Peeler Blue Crab CPUE
Maryland, crab dip nets
1929 - 1979

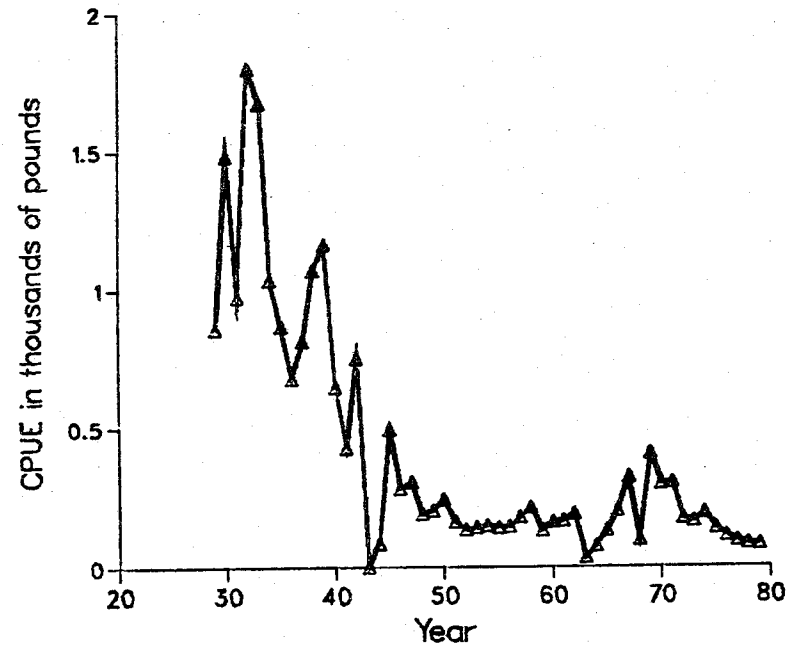


Figure 107
Blue Crab Fishing Effort
Virginia (VMRC), total crabbers
Annual 1921 - 1982

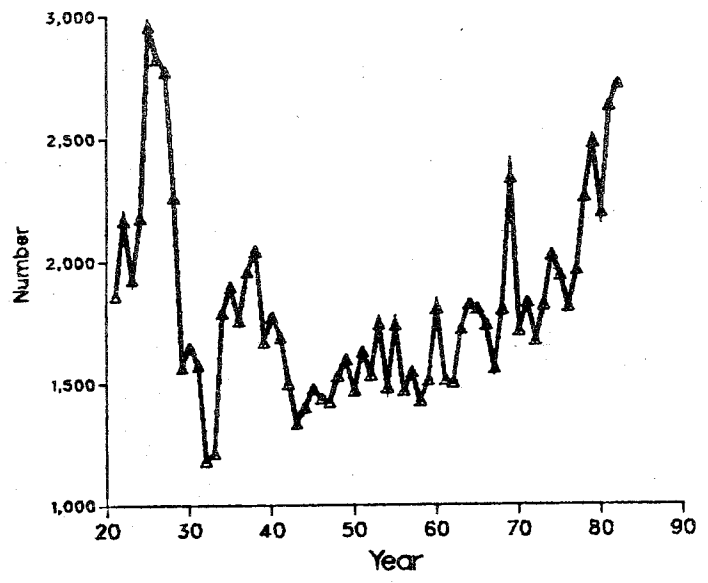


Figure 108
Blue Crab Fishing Effort
Virginia (VMRC), ordinary licenses
Annual 1921 - 1982

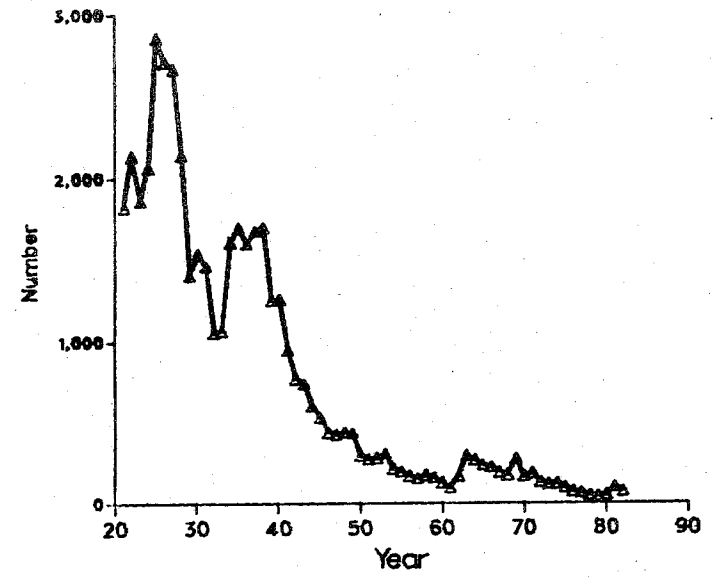


Figure 109
Blue Crab Fishing Effort
Virginia (VMRC), patent trollines
Annual 1921 - 1982

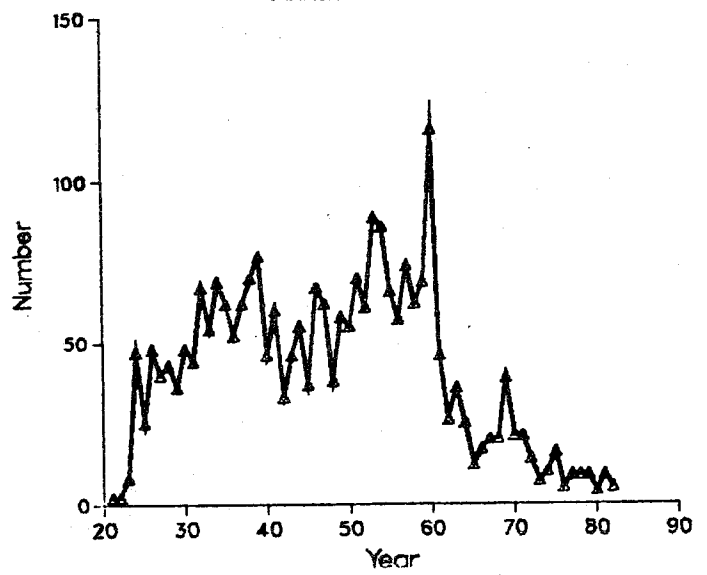


Figure 110
 Hard Blue Crab CPUE
 Virginia (VMRC), ordinary licenses
 Annual 1921 - 1982

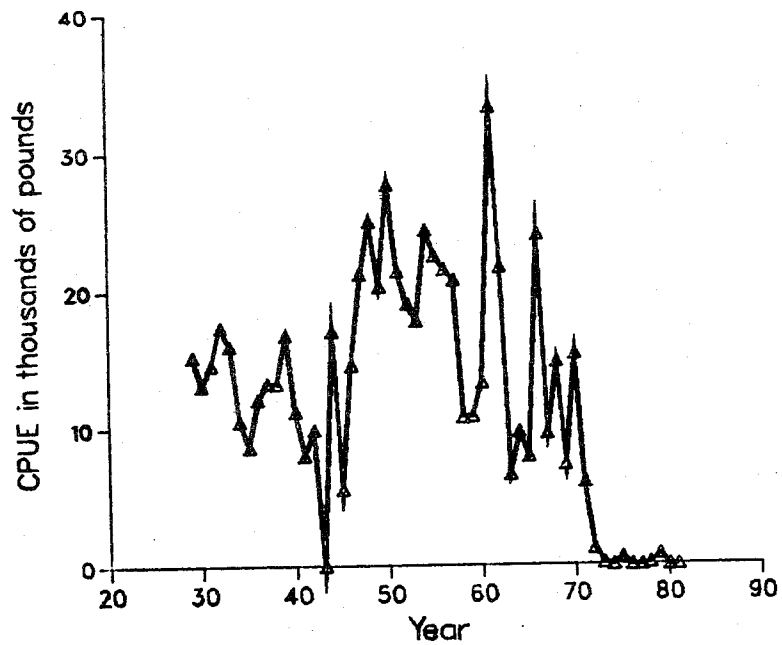


Figure 111
 Hard Blue Crab CPUE
 Virginia (VMRC), patent trollines
 Annual 1921 - 1982

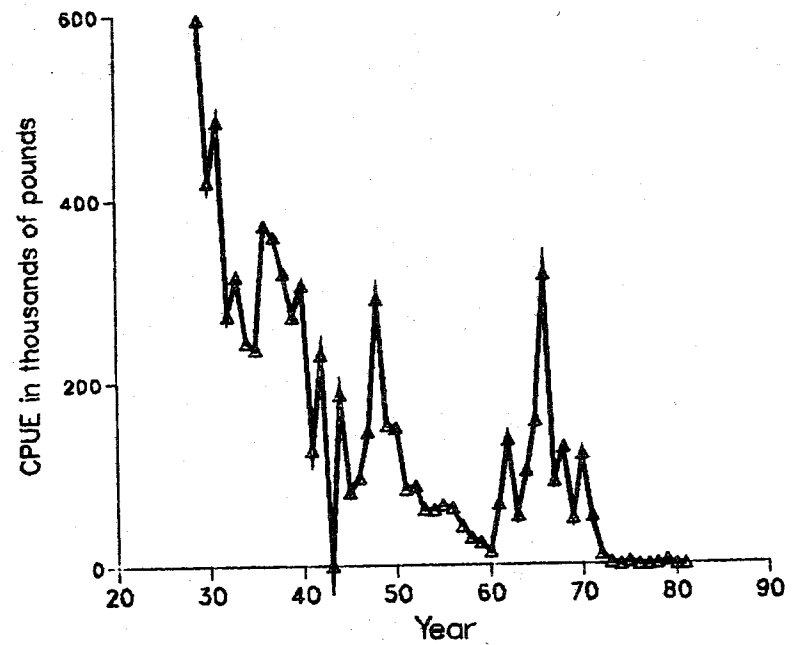


Figure 112
 Soft and Peeler Blue Crab CPUE
 Virginia (VMRC), ordinary trotlines
 Annual 1921 - 1982

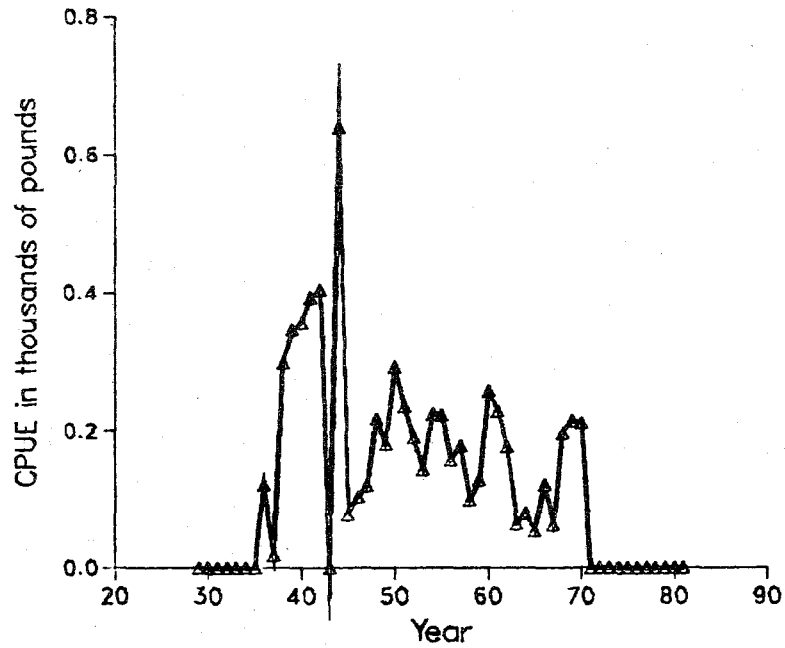


Figure 113
 Soft and Peeler Blue Crab CPUE
 Virginia (VMRC), patent trotlines
 Annual 1921 - 1982

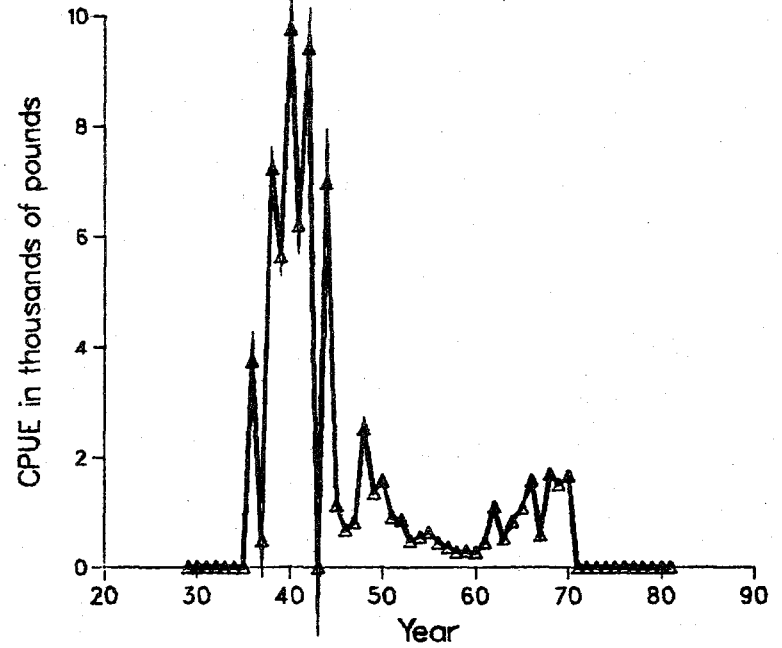


Figure 114
Blue Crab Fishing Effort
Virginia (VMRC), crab dredges
Annual 1921 - 1982

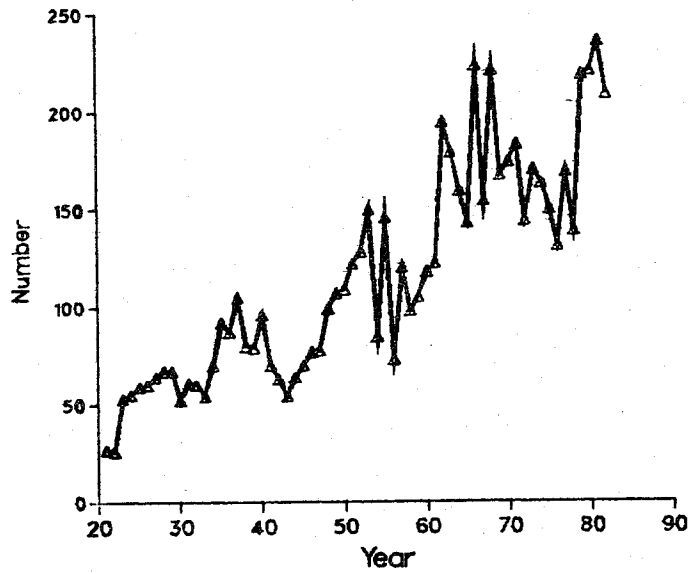


Figure 115
Blue Crab Fishing Effort
Virginia (VMRC), crab pots
Annual 1921 - 1982

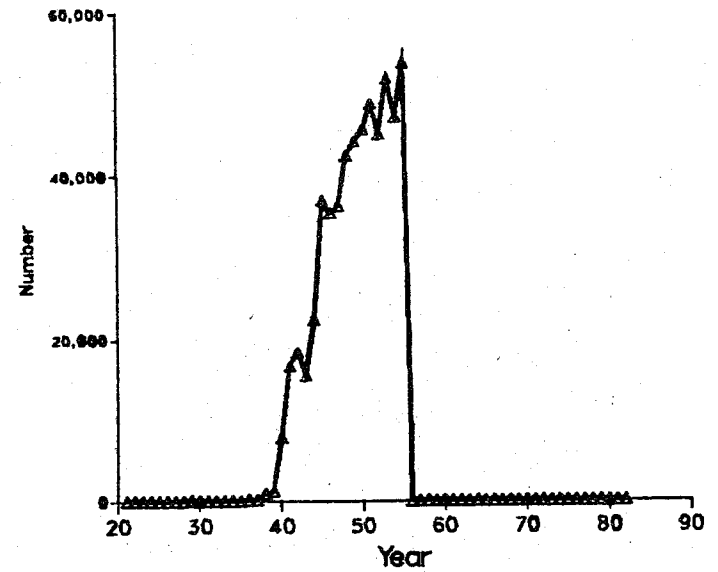


Figure 116
Blue Crab Fishing Effort
Virginia (VMRC), total potters
Annual 1921 - 1982

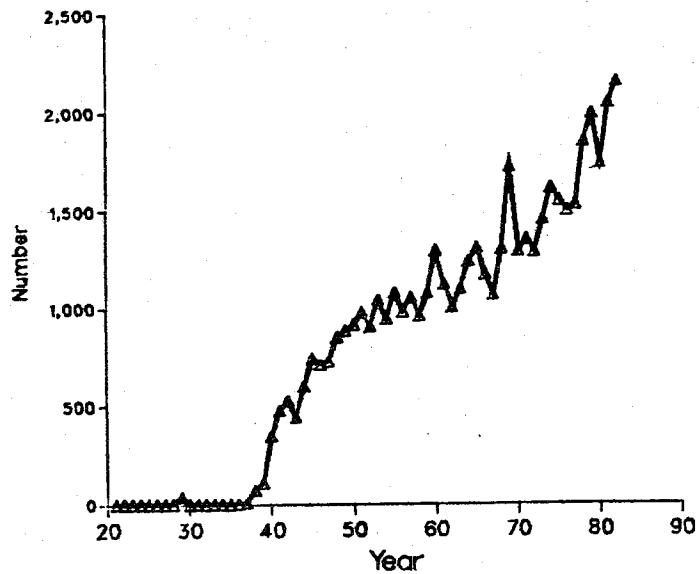


Figure 117
 Hard Blue Crab CPUE
 Virginia (VMRC), crab pots
 Annual 1921 - 1982

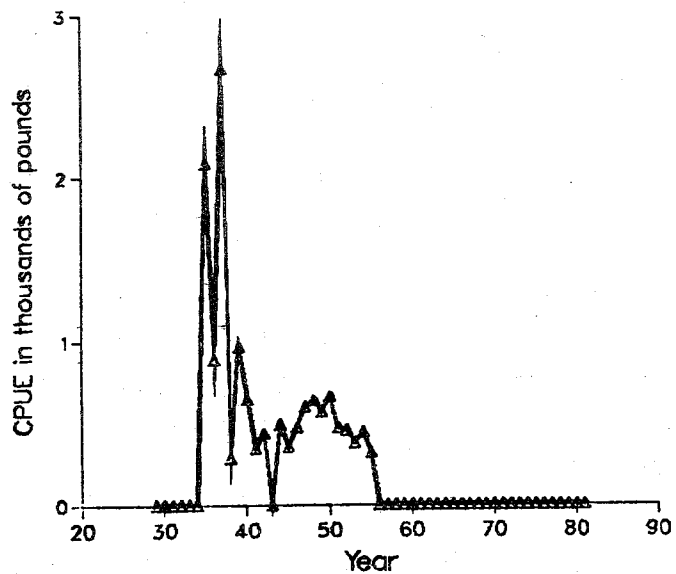


Figure 118
 Hard Blue Crab CPUE
 Virginia (VMRC), total potters
 Annual 1921 - 1982

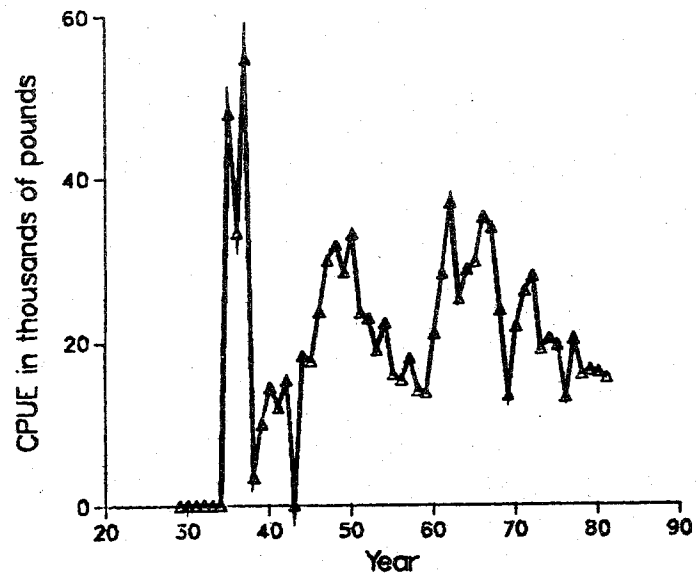


Figure 119
 Hard Blue Crab CPUE
 Virginia (VMRC), crab dredges
 Annual 1921 - 1982

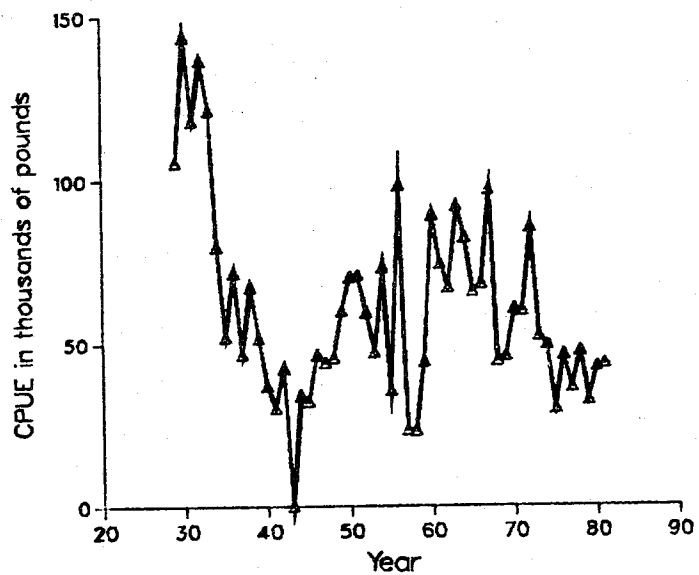


Figure 120
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab pots
Annual 1921 - 1982

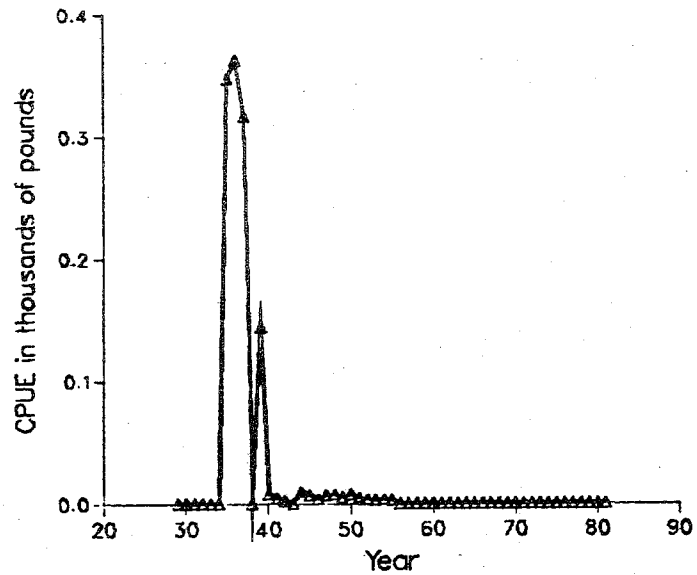


Figure 121
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), total potters
Annual 1921 - 1982

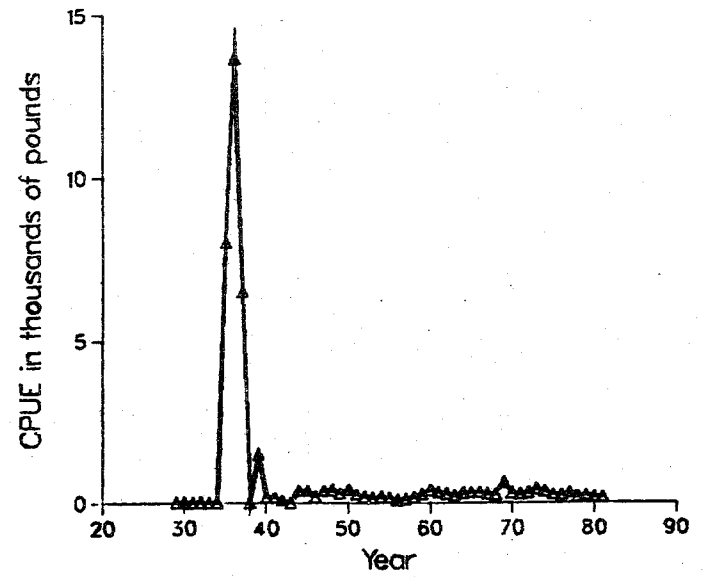


Figure 122
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab dredges
Annual 1921 - 1982

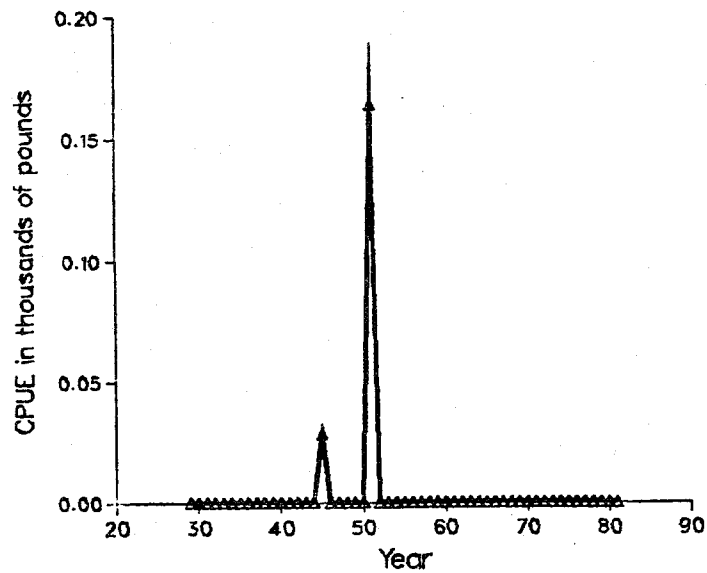


Figure 123
Blue Crab Fishing Effort
Virginia (VMRC), crab scrapes
Annual 1921 - 1982

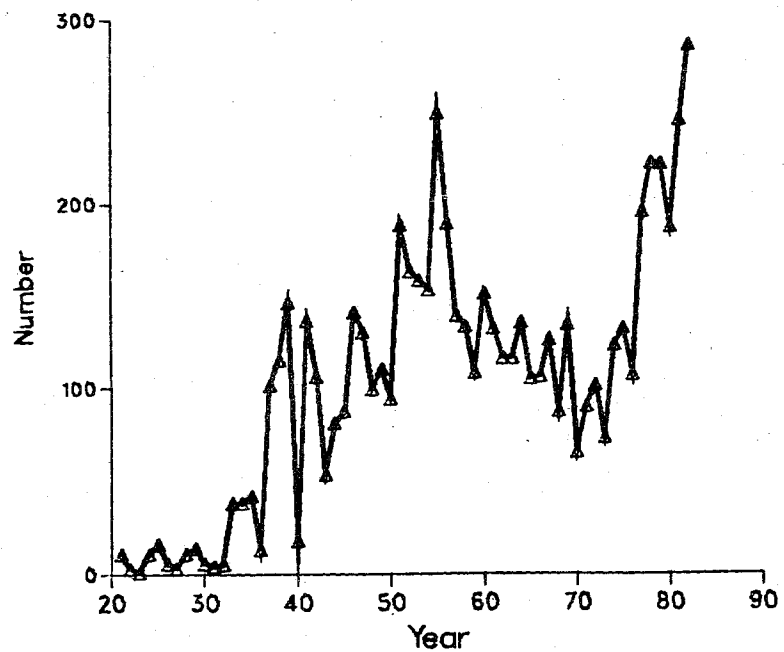


Figure 124
Blue Crab Fishing Effort
Virginia (VMRC), crab pound nets
Annual 1921 - 1982

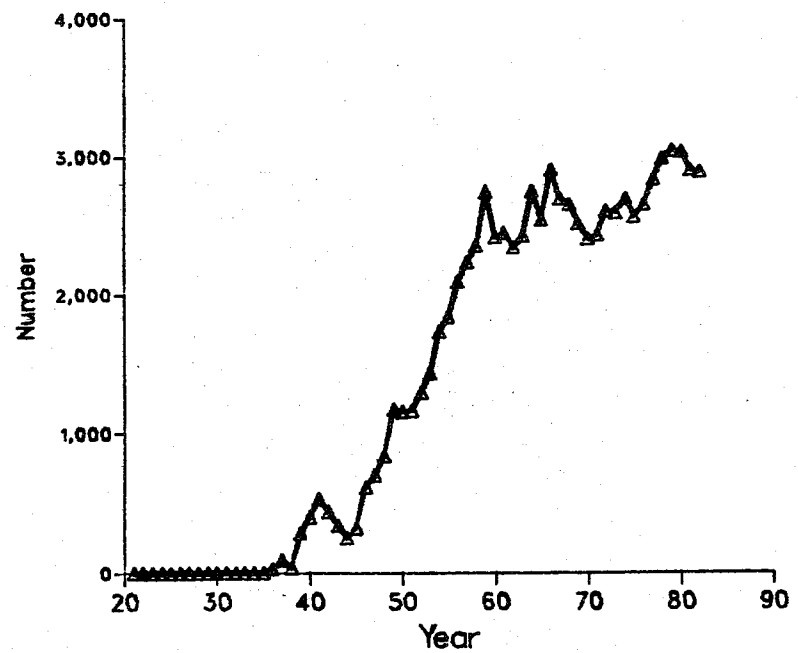


Figure 125
Hard Blue Crab CPUE
Virginia (VMRC), crab scrapes
Annual 1921 - 1982

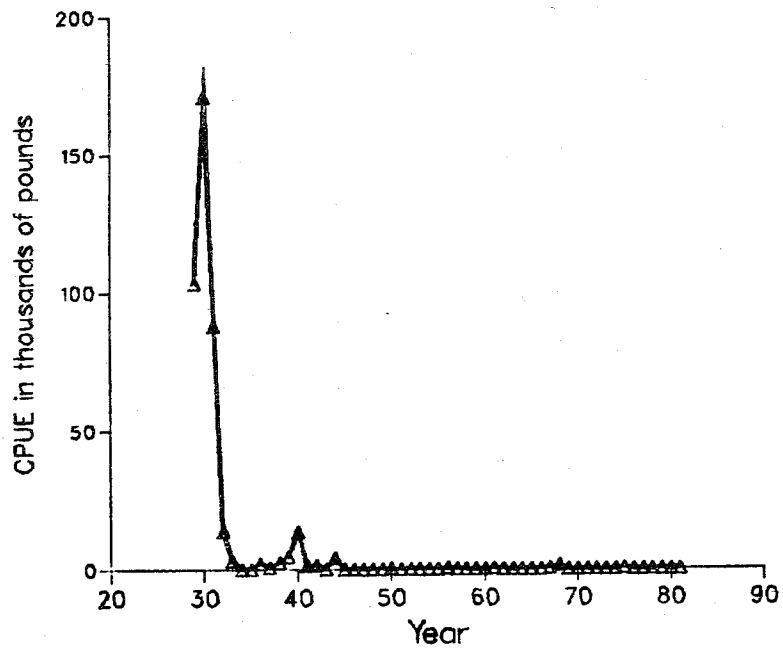


Figure 126
Hard Blue Crab CPUE
Virginia (VMRC), crab pound nets
Annual 1921 - 1982

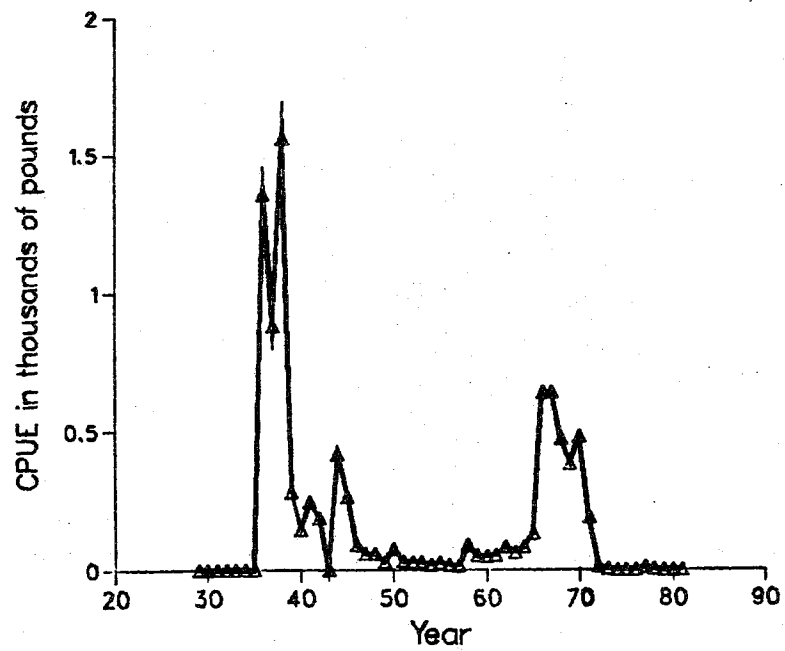


Figure 127
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab scrapes
Annual 1921 - 1982

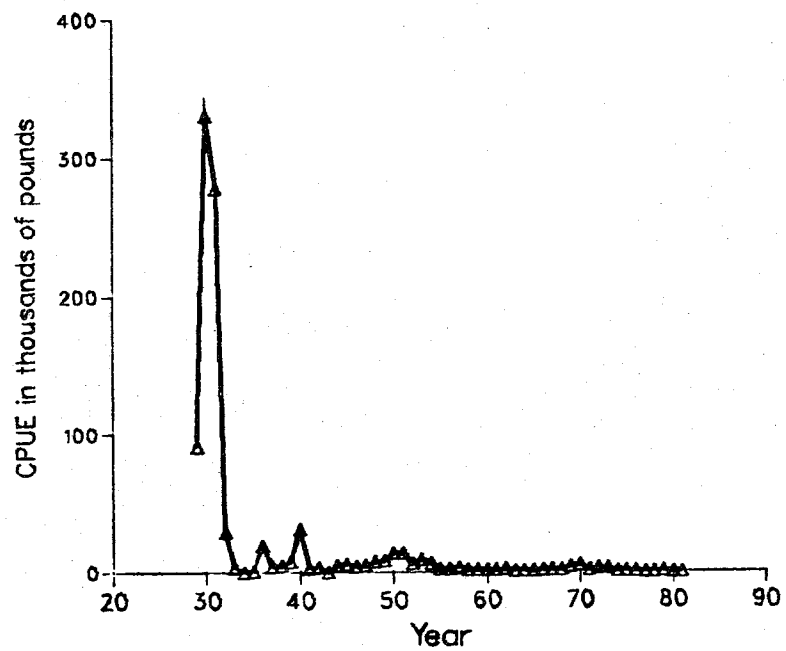


Figure 128
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab pound nets
Annual 1921 - 1982

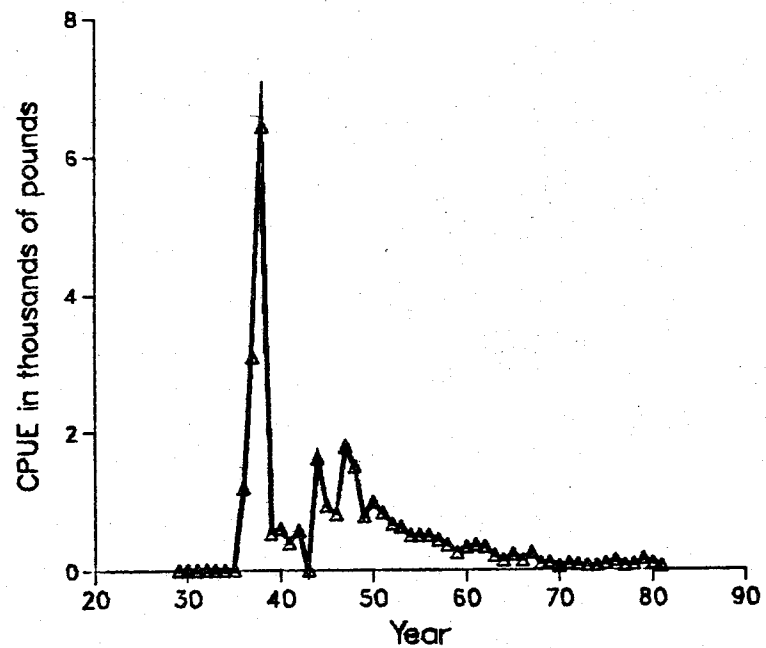


Figure 129
Blue Crab Fishing Effort
Virginia (VMRC), total crabbers
Effort Year 1921 - 1982

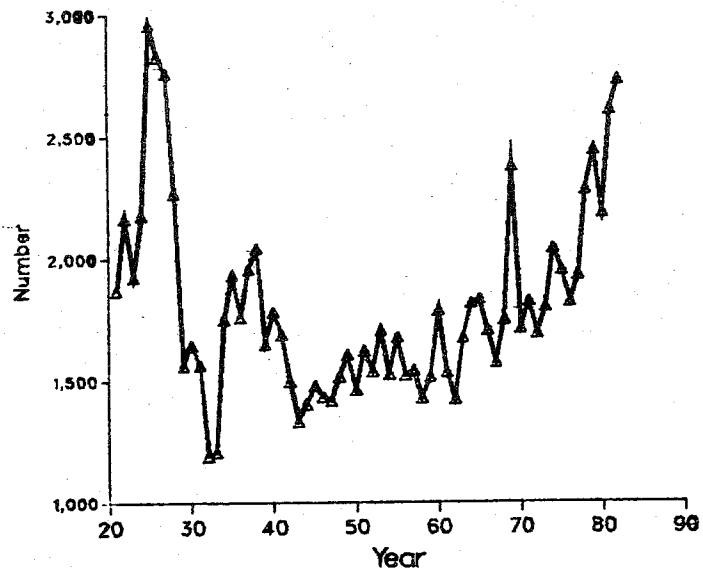


Figure 130
Blue Crab Fishing Effort
Virginia (VMRC), ordinary licenses
Effort Year 1921 - 1982

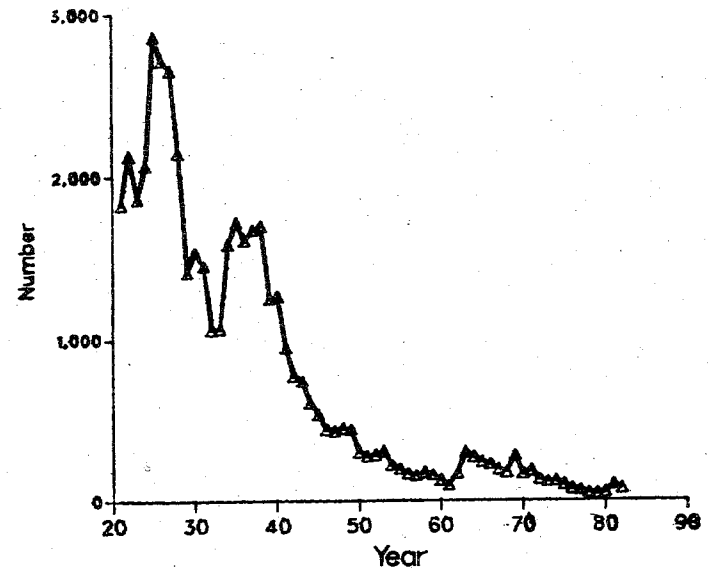


Figure 131
Blue Crab Fishing Effort
Virginia (VMRC), patent trollines
Effort Year 1921 - 1982

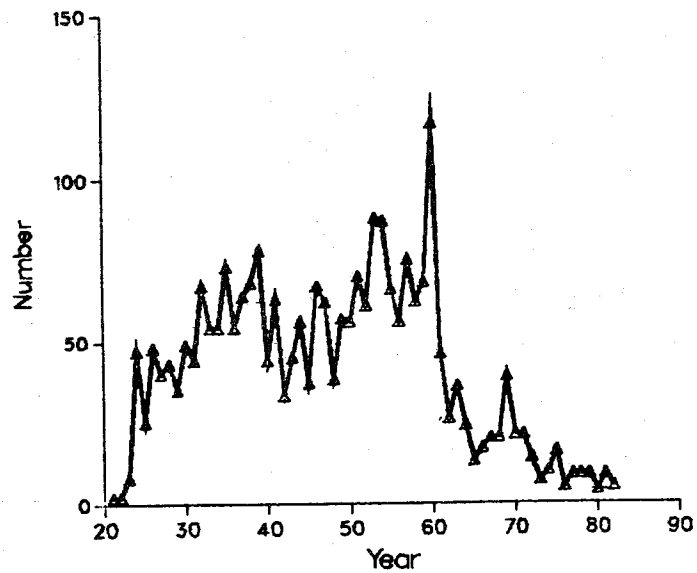


Figure 132
Hard Blue Crab CPUE
Virginia (VMRC), ordinary licenses
Effort Year 1921 - 1982

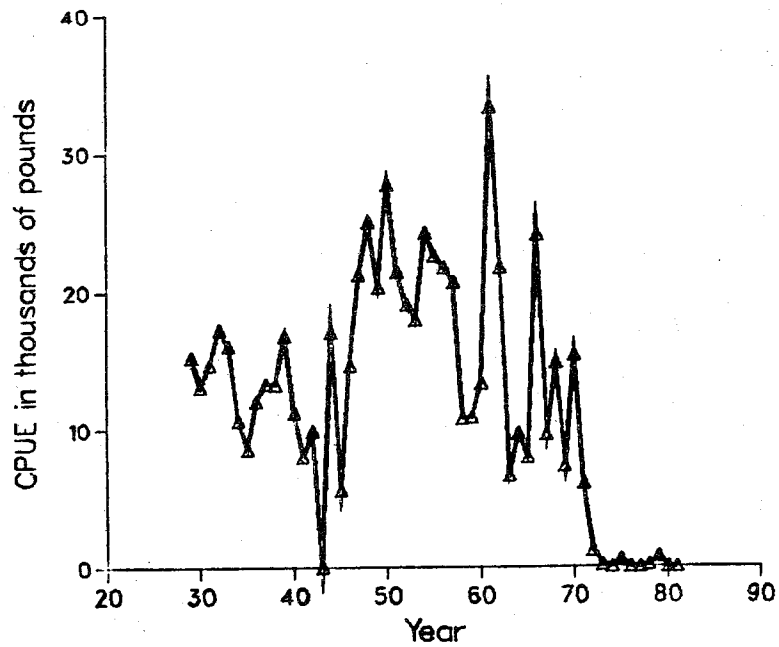


Figure 133
Hard Blue Crab CPUE
Virginia (VMRC), patent trollines
Effort Year 1921 - 1982

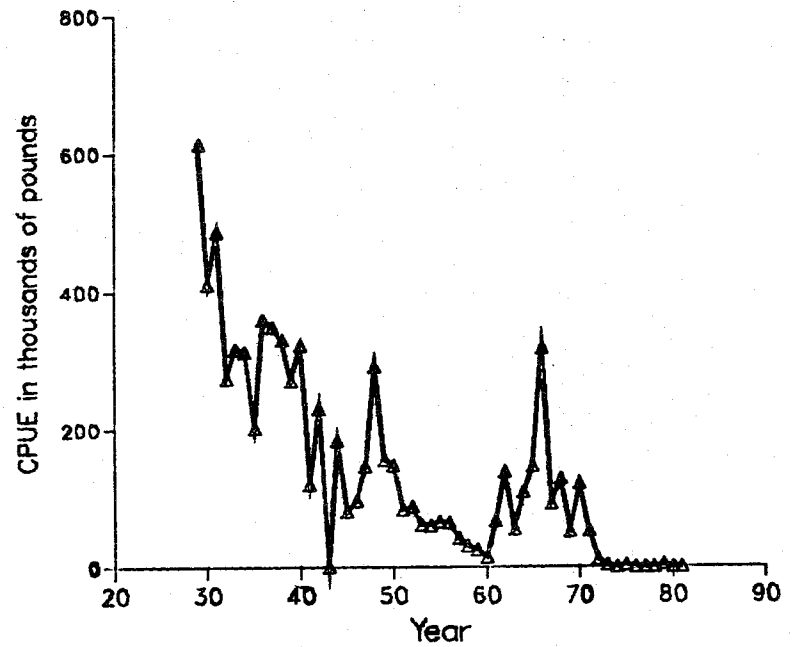


Figure 134
 Soft and Peeler Blue Crab CPUE
 Virginia (VMRC), ordinary trotlines
 Effort Year 1921 - 1982

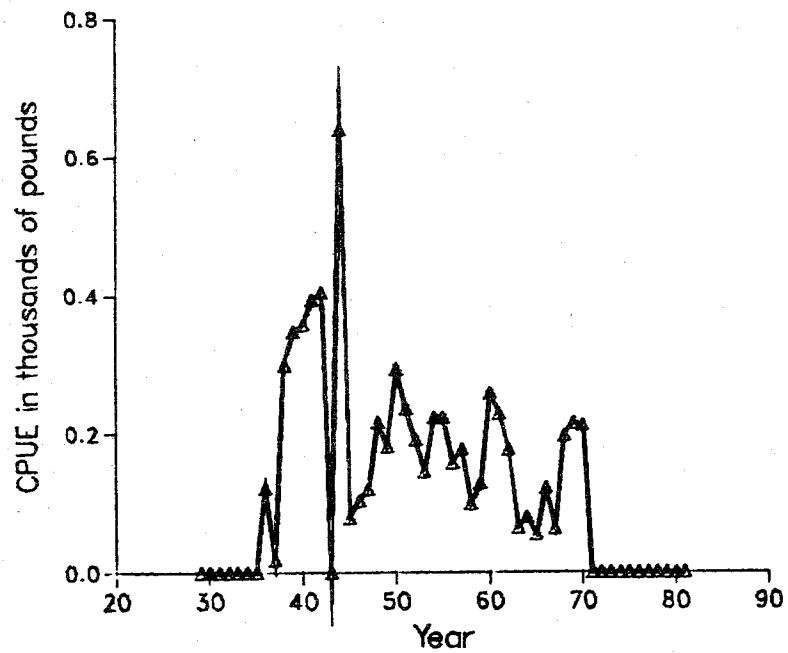


Figure 135
 Soft and Peeler Blue Crab CPUE
 Virginia (VMRC), patent trotlines
 Effort Year 1921 - 1982

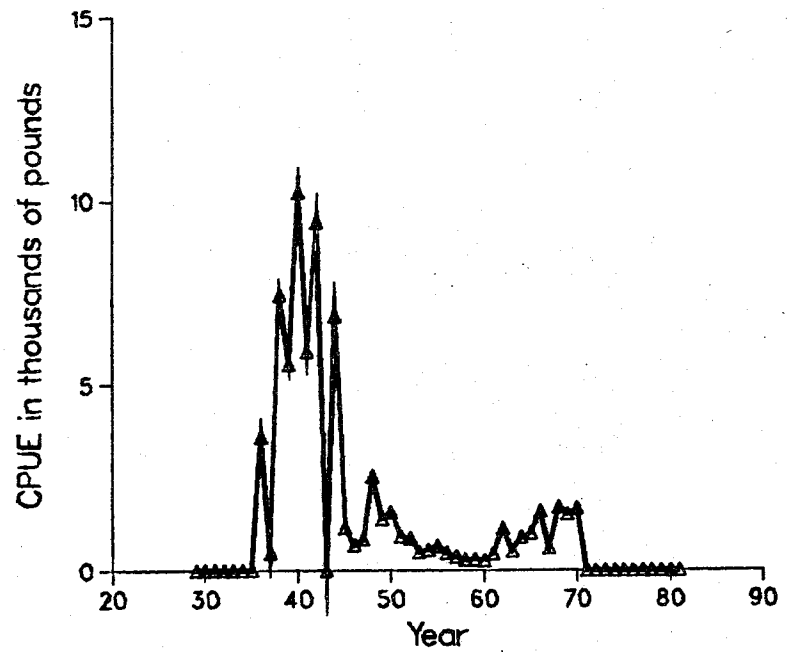


Figure 136
 Blue Crab Fishing Effort
 Virginia (VMRC), crab dredges
 Effort Year 1921 - 1982

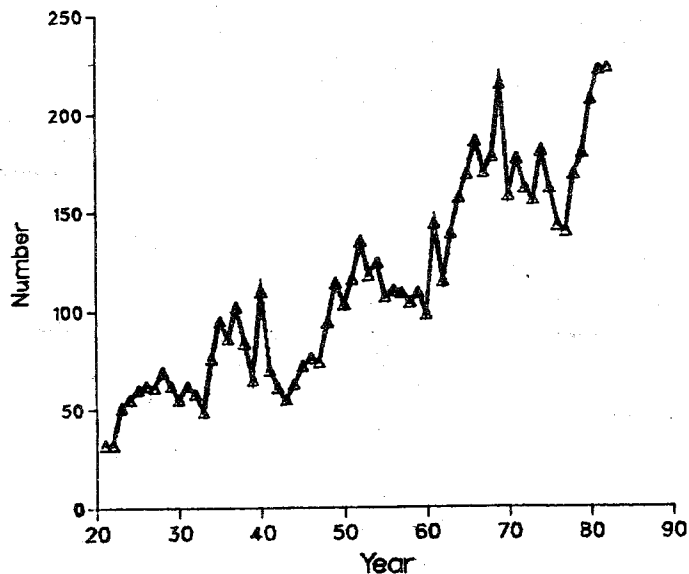


Figure 137
 Blue Crab Fishing Effort
 Virginia (VMRC), crab pots
 Effort Year 1921 - 1982

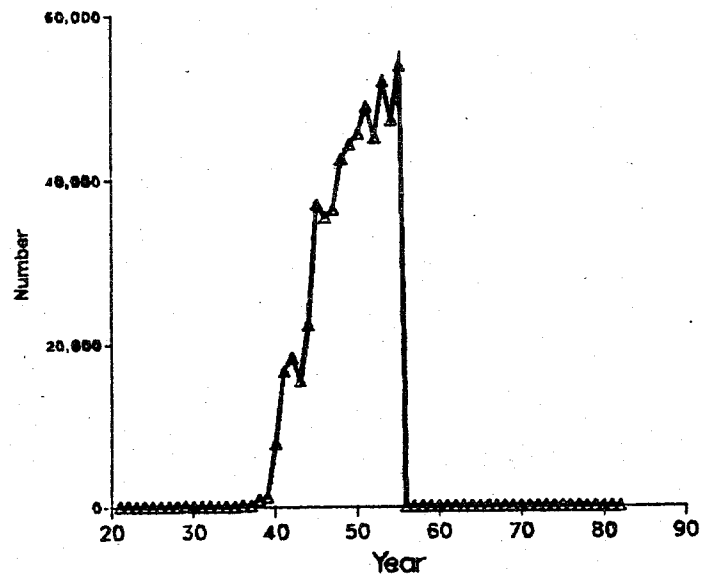


Figure 138
 Blue Crab Fishing Effort
 Virginia (VMRC), total potters
 Effort Year 1921 - 1982

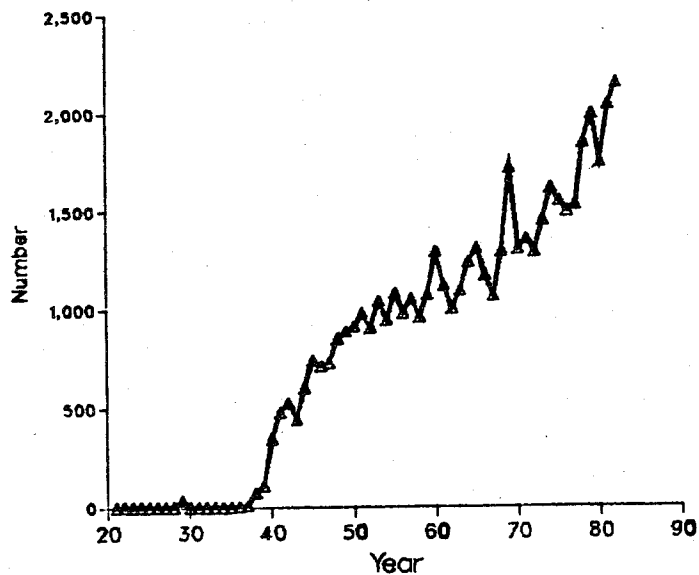


Figure 142
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab pots
Effort Year 1921 - 1982

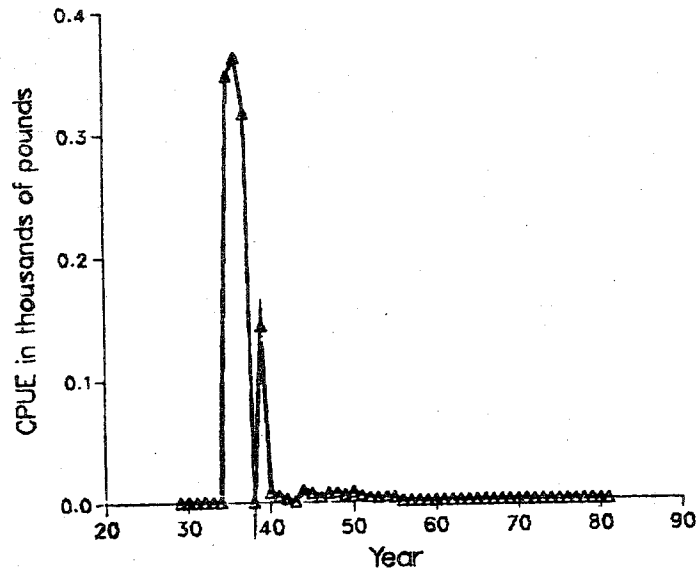


Figure 143
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), total potters
Effort Year 1921 - 1982

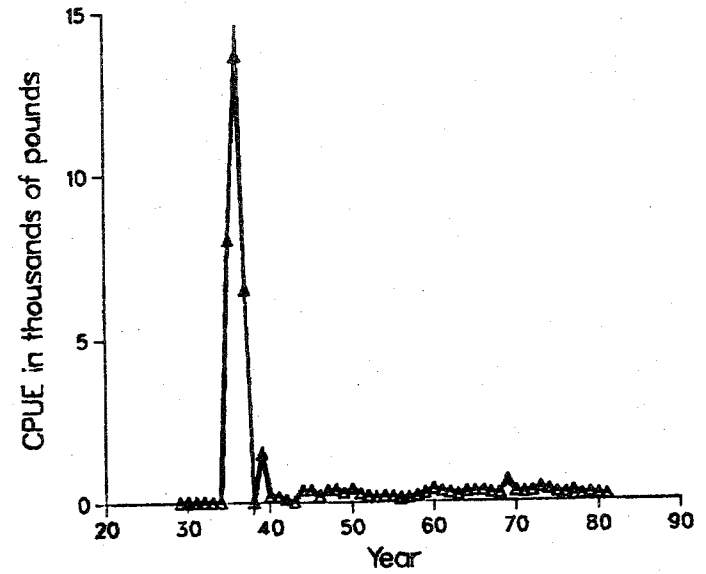


Figure 144
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab dredges
Effort Year 1921 - 1982

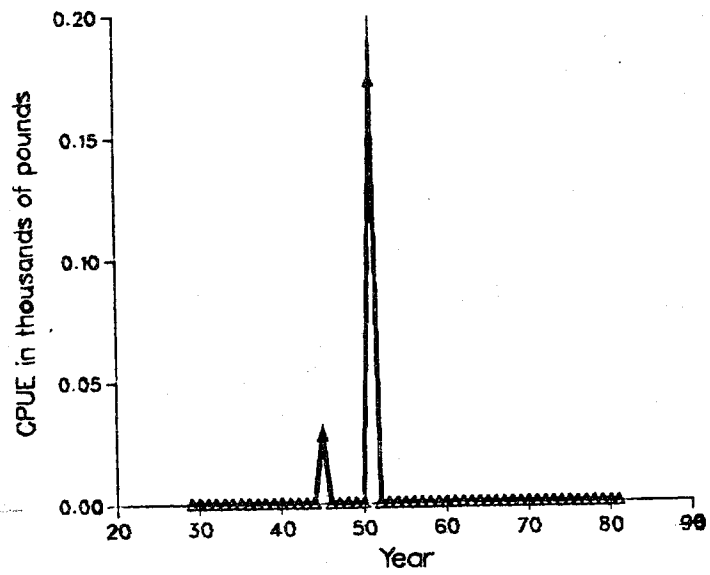


Figure 145
 Blue Crab Fishing Effort
 Virginia (VMRC), crab scrapes
 Effort Year 1921 - 1982

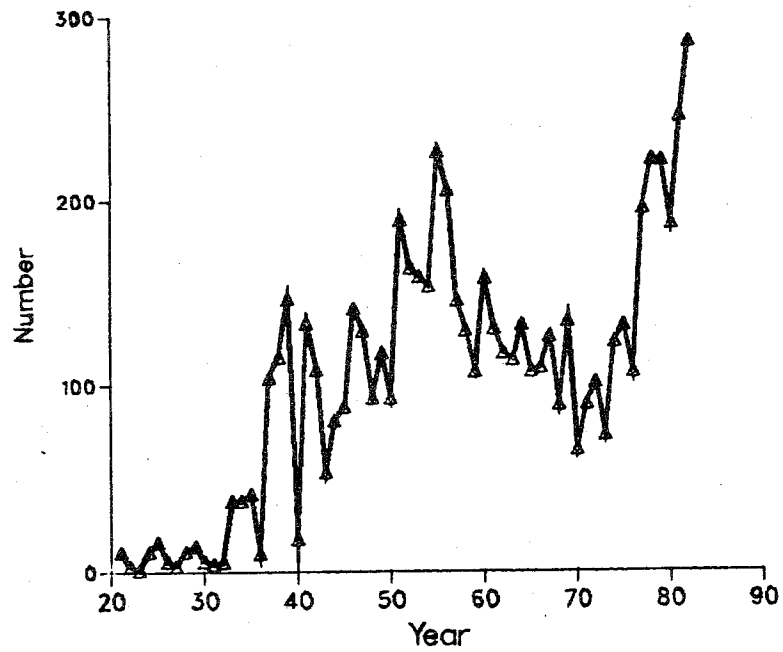


Figure 146
 Blue Crab Fishing Effort
 Virginia (VMRC), crab pound nets
 Effort Year 1921 - 1982

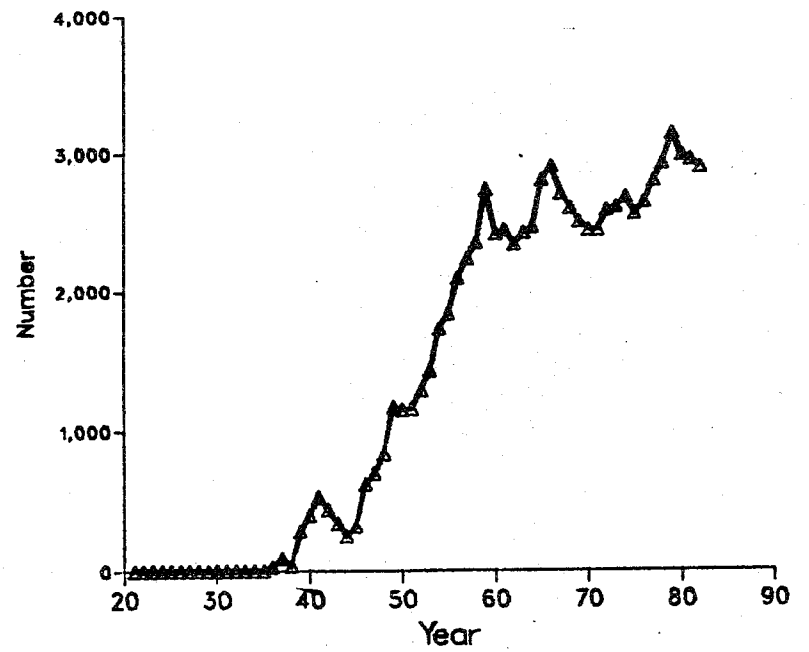


Figure 147
Hard Blue Crab CPUE
Virginia (VMRC), crab scrapes
Effort Year 1921 - 1982

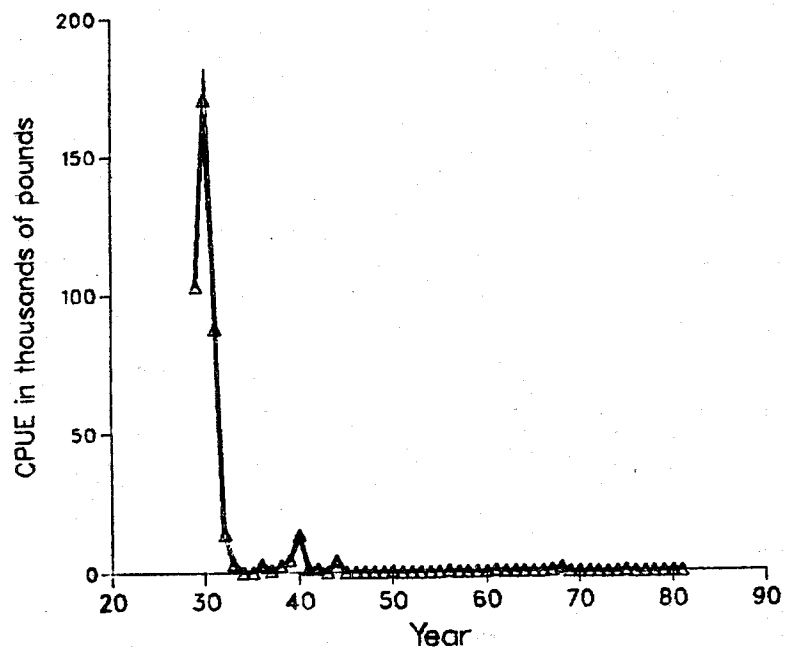


Figure 148
Hard Blue Crab CPUE
Virginia (VMRC), crab pound nets
Effort Year 1921 - 1982

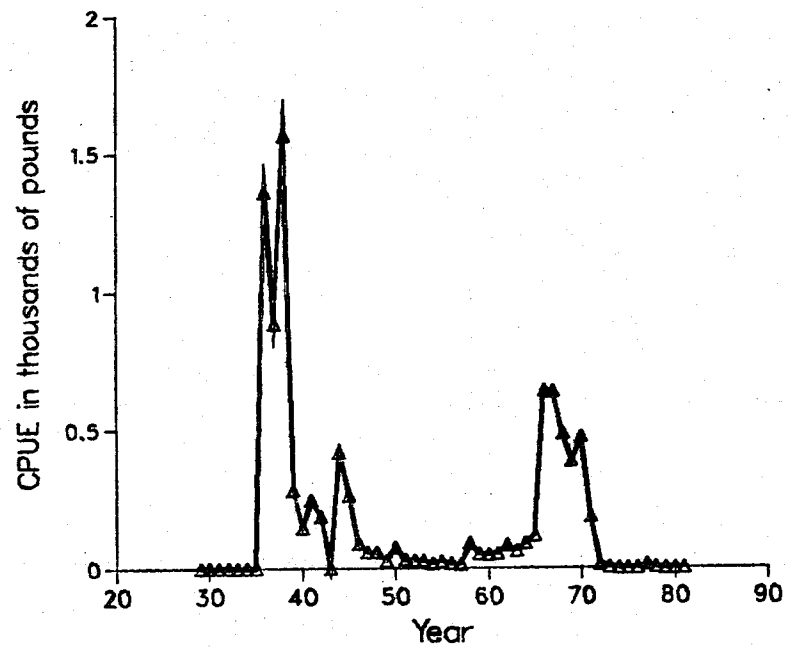


Figure 149
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab scrapes
Effort Year 1921 - 1982

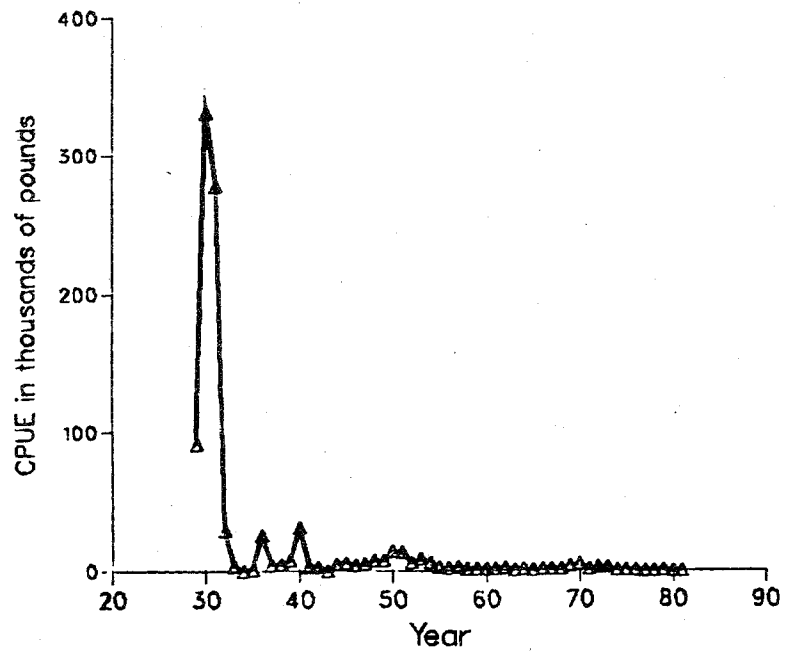


Figure 150
Soft and Peeler Blue Crab CPUE
Virginia (VMRC), crab pound nets
Effort Year 1921 - 1982

