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ANNUAL AND AVERAGE MONTHLY TRENDS IN CATCH OF LARGE PELAGIC SPECIES IN HAWAII 1949–78

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INTRODUCTION

Guidelines for the preparation of fishery management plans under the Magnuson Fishery Conservation and Management Act call for a basic description of the fishery covered by the plan. This data summary (estimates of catch and value for billfishes, mahimahi, wahoo, and sharks) was prepared for the Pelagic Species Plan Development Team from the monthly reports of commercial fish landings prepared by the Hawaii Division of Aquatic Resources (HDAR). Estimates for tunas are also included for comparative purposes.

ANNUAL TRENDS

The data have been summarized to show annual historical trends over the years 1949-78; data for 1979 seem to be incomplete while those for more recent years have not been released by HDAR. The tables include reported catch (actual landings) in thousands of pounds and metric tons, reported revenue in thousands of dollars, deflated revenue in thousands of dollars (adjusted to 1967 base year prices using the Consumer Price Index), and adjusted revenue in thousands of dollars (inflated to December 1981 Consumer Price Index for Honolulu).[1] Figure 1 presents catch in thousands of pounds (C) and adjusted revenue in thousands of dollars (R). For total billfishes (Table 1-A and Figure 1-A), there is an obvious downward trend in catches, and this is confirmed by a simple linear regression with a negative slope and an "F" value of 46.9 which is significant at the 0.0001 probability level. There is also a significant quadratic component indicating that the trend is concave upwards. There was a significant linear trend for black, blue, and striped marlins, swordfish, and mahimahi (Figures 1-B, 1-C, 1-F, 1-G, and 1-H, respectively. That concave shape, a significant quadratic effect, was apparent for blue marlin and mahimahi. Wahoo (Figure 1-I) exhibited a significant positive linear trend. In contrast to the billfish, only bigeye tuna and "combined tunas" (Figures 1-O and 1-L, respectively) exhibit a significant negative linear trend. There is a significant quadratic effect for yellowfin tuna and kawakawa (Figures 1-P and 1-R, respectively); the quadratic effect was borderline for bigeye tuna. The increase of ika shibi fishing in the late 1970's probably contributed to the increased catches of yellowfin and bigeye tunas.

MONTHLY TRENDS

Seasonal variation is shown in monthly averages over the 1949-78 period. Table 2 contains reported catch (actually landings) in thousands of pounds and metric tons, as well as reported revenue, deflated revenue, and adjusted revenue in thousands of dollars. Figure 2 presents catch in thousands of pounds (C) and reported revenue in thousands of dollars (R).

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[1]The tables and figures were prepared by Wesley Higuchi, Mathematics Aid, under the direction of Samuel G. Pooley, Industry Economist, in the Fishery Management Program.

The monthly trend indicates that all billfishes (Figure 2-A) are nearly equally abundant except for January when there is a marked low. However, the individual species show considerable variation. Black marlin (Figure 2-B) shows a peak in May while blue marlin (Figure 2-C) catches increase in May, peak in August, and all disappear by November. Swordfish (Figure 2-G) shows a similar pattern but the peak occurs earlier, in May and June. Sailfish, shortbill spearfish, and striped marlin (Figures 2-D, 2-E, and 2-F, respectively) show high catches in late winter and spring, and lowest catches in the summer. Mahimahi (Figure 2-H) exhibits a bimodal seasonal pattern with peaks in March-April and October. Wahoo (Figure 2-I) catches peak in the summer.

The catch of total tunas (Figure 2-L) peaks in the summer and is primarily due to skipjack and yellowfin tunas (Figures 2-M and 2-P, respectively). Albacore (Figure 2-Q) seems to have a regular seasonal cycle: the catch peaks in September. Bigeye tuna (Figure 2-O) follows a pattern of a peak in the midwinter period. Kawakawa (Figure 2-R) catches seem to be highest in the winter, but as with many of the species there is a low point in January.

Table 1-A.--Billfishes. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	1020.6	462.9	397.36	570.10	1446.91
1950	1286.7	583.5	324.05	484.39	1229.37
1951	1138.7	516.4	342.75	482.75	1225.21
1952	957.7	434.3	309.87	423.90	1075.85
1953	983.2	445.9	226.74	307.66	780.83
1954	1063.0	482.1	184.18	247.55	628.29
1955	787.2	357.0	184.72	244.99	621.79
1956	753.4	341.7	169.76	222.20	563.93
1957	628.7	285.1	168.64	213.47	541.80
1958	724.9	328.7	164.12	198.21	503.06
1959	678.3	307.6	181.43	215.47	546.86
1960	584.7	265.2	167.84	194.49	493.61
1961	541.7	245.7	148.50	167.61	425.38
1962	511.9	232.2	134.59	148.55	377.02
1963	554.3	251.4	159.25	171.97	436.47
1964	717.4	325.3	187.19	201.50	511.41
1965	590.0	267.6	169.77	179.46	455.46
1966	512.0	232.2	161.42	165.90	421.05
1967	580.2	263.1	197.02	197.02	500.03
1968	546.9	248.0	226.39	218.10	553.53
1969	488.2	221.4	266.47	245.60	623.33
1970	583.2	264.5	291.84	255.55	648.58
1971	310.4	140.8	147.17	123.77	314.14
1972	229.2	103.9	114.59	93.32	236.84
1973	230.9	104.7	108.89	84.87	215.40
1974	323.1	146.5	121.88	85.89	218.00
1975	347.2	157.5	148.33	95.69	242.87
1976	418.6	189.9	175.68	107.91	273.89
1977	520.8	236.2	284.52	165.61	420.32
1978	740.8	336.0	441.95	239.15	606.96
AVERAGE	645.1	292.6	210.23	225.09	571.27

Table 1-B. Black marlin. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	10.8	4.9	1.97	2.94	7.46
1951	10.1	4.6	2.87	4.04	10.24
1952	8.2	3.7	2.36	3.23	8.19
1953	10.1	4.6	2.10	2.85	7.24
1954	11.3	5.1	1.41	1.89	4.80
1955	18.5	8.4	3.22	4.28	10.86
1956	15.7	7.1	3.37	4.41	11.20
1957	18.2	8.2	4.10	5.19	13.18
1958	27.2	12.3	5.46	6.60	16.75
1959	18.1	8.2	3.88	4.61	11.69
1960	9.5	4.3	2.58	2.99	7.59
1961	16.2	7.4	4.91	5.54	14.07
1962	21.0	9.5	5.87	6.48	16.44
1963	1.4	0.6	0.58	0.63	1.59
1964	6.0	2.7	2.14	2.31	5.85
1965	3.4	1.6	1.15	1.21	3.08
1966	12.4	5.6	4.52	4.65	11.79
1967	4.9	2.2	1.83	1.83	4.65
1968	4.5	2.0	2.91	2.81	7.13
1969	1.5	0.7	0.94	0.87	2.20
1970	1.5	0.7	1.01	0.89	2.25
1971	4.0	1.8	1.64	1.38	3.51
1972	0.5	0.2	0.01	0.01	0.03
1973	1.4	0.7	0.52	0.40	1.03
1974	0.9	0.4	0.99	0.70	1.77
1975	0.6	0.3	0.42	0.27	0.69
1976	.	.	.	.	.
1977	8.0	3.6	2.56	1.49	3.78
1978	1.4	0.6	0.43	0.23	0.60
AVERAGE	8.8	4.0	2.35	2.67	6.77

Table 1-C.--Blue marlin. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	534.9	242.6	154.05	230.27	584.43
1951	599.7	272.0	189.17	266.44	676.22
1952	526.3	238.7	179.17	245.10	622.06
1953	577.4	261.8	135.48	183.83	466.55
1954	806.7	365.9	137.20	184.41	468.03
1955	472.1	214.1	108.88	144.40	366.50
1956	471.0	213.6	102.96	134.77	342.04
1957	327.3	148.4	80.94	102.45	260.02
1958	304.5	138.1	67.48	81.49	206.83
1959	379.3	172.0	100.94	119.88	304.26
1960	317.4	143.9	90.46	104.82	266.02
1961	271.0	122.9	75.33	85.02	215.79
1962	183.0	83.0	49.97	55.15	139.98
1963	190.3	86.3	56.16	60.65	153.92
1964	174.6	79.2	47.91	51.57	130.89
1965	171.8	77.9	44.58	47.13	119.61
1966	147.4	66.9	43.97	45.19	114.69
1967	145.3	65.9	40.69	40.69	103.28
1968	104.8	47.5	36.95	35.60	90.36
1969	149.3	67.7	57.92	53.39	135.49
1970	222.3	100.8	68.96	60.39	153.26
1971	111.2	50.4	21.88	18.40	46.71
1972	55.2	25.0	0.34	0.28	0.70
1973	83.6	37.9	12.89	10.05	25.49
1974	124.8	56.6	22.89	16.13	40.94
1975	104.8	47.5	24.47	15.79	40.07
1976	191.2	86.7	52.30	32.13	81.54
1977	366.2	166.1	109.51	63.75	161.79
1978	537.3	243.7	206.10	111.52	283.05
AVERAGE	298.3	135.3	79.98	89.68	227.60

Table 1-D.--Sailfish. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	1020.6	462.9	397.36	570.10	1446.91
1950	114.6	52.0	27.76	41.49	105.31
1951	71.9	32.6	23.68	33.35	84.65
1952	21.4	9.7	6.38	8.73	22.15
1953	19.8	9.0	4.49	6.09	15.47
1954	11.3	5.1	1.78	2.40	6.09
1955	6.3	2.9	1.16	1.54	3.90
1956	9.7	4.4	1.47	1.92	4.87
1957	7.8	3.6	1.50	1.91	4.84
1958	16.9	7.6	2.61	3.15	8.00
1959	18.2	8.3	2.36	2.80	7.11
1960	9.1	4.1	1.98	2.30	5.83
1961	4.6	2.1	0.82	0.92	2.34
1962	5.7	2.6	0.90	1.00	2.54
1963	5.9	2.7	0.93	1.01	2.56
1964	11.3	5.1	1.57	1.69	4.29
1965	10.9	4.9	1.73	1.83	4.65
1966	16.2	7.3	2.58	2.65	6.73
1967	19.4	8.8	3.35	3.35	8.51
1968	12.6	5.7	2.49	2.40	6.09
1969	6.2	2.8	2.54	2.34	5.94
1970	2.7	1.2	0.49	0.43	1.08
1971	1.0	0.5	0.31	0.26	0.67
1972	1.0	0.4	0.34	0.28	0.71
1973	1.5	0.7	0.45	0.35	0.89
1974	0.9	0.4	0.21	0.15	0.38
1975	0.2	0.1	0.11	0.07	0.18
1976	1.7	0.8	0.45	0.28	0.71
1977	1.2	0.6	0.95	0.55	1.40
1978	0.3	0.1	0.07	0.04	0.10
AVERAGE	47.7	21.6	16.43	23.18	58.83

Table 1-E.--Shortbill spearfish. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	.	.	.	.	.
1951	.	.	.	.	.
1952	.	.	.	.	.
1953	.	.	.	.	.
1954	.	.	.	.	.
1955	.	.	.	.	.
1956	.	.	.	.	.
1957	.	.	.	.	.
1958	.	.	.	.	.
1959	.	.	.	.	.
1960	.	.	.	.	.
1961	.	.	.	.	.
1962	.	.	.	.	.
1963	.	.	.	.	.
1964	.	.	.	.	.
1965	.	.	.	.	.
1966	.	.	.	.	.
1967	.	.	.	.	.
1968	.	.	.	.	.
1969	.	.	.	.	.
1970	.	.	.	.	.
1971	.	.	.	.	.
1972	.	.	.	.	.
1973	.	.	.	.	.
1974	.	.	.	.	.
1975	6.8	3.1	2.81	1.81	4.60
1976	13.7	6.2	7.37	4.53	11.49
1977	12.8	5.8	6.37	3.71	9.41
1978	24.7	11.2	19.71	10.66	27.06
AVERAGE	14.5	6.6	9.06	5.18	13.14

Table 1-F.--Striped marlin. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	566.4	256.9	126.12	188.52	478.47
1951	380.6	172.6	107.55	151.48	384.46
1952	363.0	164.6	110.99	151.83	385.35
1953	357.9	162.3	81.82	111.01	281.75
1954	204.9	92.9	39.20	52.69	133.72
1955	242.3	109.9	63.05	83.62	212.23
1956	224.5	101.8	55.54	72.70	184.52
1957	244.4	110.9	76.25	96.52	244.98
1958	348.6	158.1	84.78	102.39	259.86
1959	242.6	110.0	70.09	83.24	211.27
1960	217.8	98.8	66.57	77.13	195.76
1961	226.7	102.8	63.03	71.14	180.54
1962	276.6	125.5	73.77	81.43	206.66
1963	334.4	151.7	97.64	105.44	267.62
1964	501.8	227.6	131.60	141.65	359.52
1965	385.0	174.6	118.29	125.05	317.37
1966	318.3	144.4	105.96	108.90	276.40
1967	398.1	180.6	148.72	148.72	377.45
1968	413.6	187.6	181.76	175.11	444.43
1969	317.2	143.9	202.37	186.52	473.38
1970	344.8	156.4	217.86	190.77	484.18
1971	191.3	86.8	122.51	103.03	261.50
1972	171.8	77.9	113.71	92.60	235.01
1973	141.8	64.3	94.48	73.64	186.89
1974	196.2	89.0	97.56	68.75	174.50
1975	234.1	106.2	120.24	77.57	196.88
1976	209.0	94.8	113.96	70.00	177.66
1977	91.3	41.4	97.21	56.58	143.60
1978	147.0	66.7	174.65	94.51	239.87
AVERAGE	285.9	129.7	108.87	108.36	275.03

Table 1-G.--Swordfish (broadbill). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	28.7	13.0	6.92	10.34	26.25
1951	38.0	17.2	10.28	14.48	36.76
1952	26.2	11.9	7.03	9.62	24.41
1953	11.6	5.3	1.56	2.12	5.39
1954	11.2	5.1	1.51	2.03	5.14
1955	37.7	17.1	6.08	8.06	20.47
1956	29.2	13.3	5.84	7.65	19.40
1957	27.8	12.6	5.03	6.37	16.16
1958	25.5	11.6	3.52	4.26	10.80
1959	19.6	8.9	4.04	4.80	12.17
1960	29.3	13.3	6.16	7.13	18.10
1961	22.7	10.3	4.34	4.90	12.44
1962	25.5	11.5	4.04	4.46	11.32
1963	21.7	9.8	3.88	4.19	10.63
1964	23.7	10.8	3.98	4.28	10.86
1965	18.8	8.5	3.92	4.14	10.51
1966	16.2	7.4	4.01	4.12	10.45
1967	12.4	5.6	2.42	2.42	6.14
1968	10.6	4.8	1.94	1.87	4.75
1969	13.8	6.3	2.56	2.36	6.00
1970	11.8	5.4	3.51	3.08	7.81
1971	2.3	1.1	0.80	0.67	1.70
1972	.	.	.	.	.
1973	0.5	0.2	.	.	.
1974	0.0	0.0	0.01	0.00	0.01
1975	.	.	.	.	.
1976	2.5	1.1	1.20	0.74	1.88
1977	41.2	18.7	67.93	39.54	100.35
1978	30.1	13.7	40.99	22.18	56.29
AVERAGE	20.0	9.1	7.83	6.76	17.16

Table 1-H.--Mahimahi. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	170.7	77.4	58.29	83.63	212.26
1950	276.1	125.2	81.70	122.13	309.96
1951	211.4	95.9	69.51	97.90	248.47
1952	187.1	84.9	70.04	95.82	243.19
1953	162.6	73.7	66.73	90.54	229.79
1954	235.8	106.9	77.23	103.81	263.47
1955	265.5	120.4	85.66	113.60	288.33
1956	183.6	83.2	68.43	89.57	227.33
1957	209.8	95.2	72.00	91.14	231.31
1958	149.0	67.6	57.83	69.85	177.28
1959	108.7	49.3	49.12	58.33	148.05
1960	90.6	41.1	50.17	58.13	147.53
1961	116.4	52.8	47.75	53.90	136.79
1962	109.0	49.4	46.63	51.46	130.61
1963	127.2	57.7	52.00	56.16	142.53
1964	85.4	38.7	46.56	50.12	127.20
1965	91.3	41.4	48.05	50.79	128.92
1966	85.4	38.7	41.36	42.51	107.88
1967	72.1	32.7	42.07	42.07	106.78
1968	73.5	33.4	49.29	47.49	120.53
1969	58.5	26.5	53.70	49.49	125.60
1970	76.1	34.5	54.82	48.00	121.83
1971	114.8	52.1	73.77	62.05	157.47
1972	175.2	79.5	115.01	93.65	237.69
1973	114.4	51.9	94.29	73.50	186.53
1974	111.4	50.5	108.27	76.30	193.64
1975	117.5	53.3	115.19	74.32	188.62
1976	139.1	63.1	178.40	109.58	278.12
1977	150.3	68.2	223.80	130.27	330.62
1978	130.8	59.3	217.45	117.67	298.64
AVERAGE	140.0	63.5	80.50	76.79	194.90

Table 1-I.--Ono (wahoo). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	49.0	22.2	15.98	22.93	58.19
1950	48.6	22.0	10.58	15.82	40.15
1951	38.8	17.6	10.48	14.75	37.45
1952	49.1	22.2	11.74	16.06	40.76
1953	50.8	23.0	11.17	15.15	38.46
1954	34.8	15.8	7.20	9.68	24.56
1955	38.8	17.6	8.13	10.79	27.37
1956	30.2	13.7	7.42	9.71	24.66
1957	31.3	14.2	7.23	9.15	23.22
1958	39.2	17.8	7.68	9.28	23.55
1959	30.1	13.7	6.40	7.60	19.28
1960	23.9	10.8	5.72	6.63	16.83
1961	25.4	11.5	5.07	5.72	14.53
1962	24.4	11.0	4.60	5.08	12.90
1963	29.8	13.5	5.47	5.91	15.00
1964	33.1	15.0	6.43	6.92	17.57
1965	31.0	14.1	6.09	6.43	16.33
1966	22.3	10.1	4.94	5.08	12.89
1967	39.2	17.8	8.60	8.60	21.82
1968	28.2	12.8	6.64	6.39	16.23
1969	35.2	15.9	9.27	8.54	21.68
1970	44.4	20.1	12.13	10.62	26.95
1971	39.2	17.8	12.02	10.11	25.67
1972	52.9	24.0	17.51	14.26	36.20
1973	75.7	34.4	30.91	24.09	61.15
1974	72.6	32.9	32.81	23.12	58.68
1975	114.4	51.9	67.05	43.26	109.79
1976	169.6	76.9	127.29	78.19	198.45
1977	223.4	101.3	203.81	118.64	301.10
1978	195.0	88.4	225.26	121.90	309.37
AVERAGE	57.3	26.0	29.85	21.68	55.03

Table 1-J.--Shark. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	28.8	13.1	4.61	6.90	17.51
1951	9.9	4.5	1.48	2.08	5.28
1952	15.8	7.2	2.83	3.87	9.82
1953	15.8	7.2	2.34	3.18	8.07
1954	0.2	0.1	0.02	0.02	0.05
1955	0.0	0.0	.	.	.
1956	.	.	.	.	.
1957	.	.	.	.	.
1958	.	.	.	.	.
1959	.	.	.	.	.
1960	.	.	.	.	.
1961	.	.	.	.	.
1962	.	.	.	.	.
1963	.	.	.	.	.
1964	.	.	.	.	.
1965	.	.	.	.	.
1966	.	.	.	.	.
1967	.	.	.	.	.
1968	.	.	.	.	.
1969	.	.	.	.	.
1970	.	.	.	.	.
1971	.	.	.	.	.
1972	.	.	.	.	.
1973	.	.	.	.	.
1974	.	.	.	.	.
1975	.	.	.	.	.
1976	.	.	.	.	.
1977	1.5	0.7	0.14	0.08	0.21
1978	22.2	10.1	1.50	0.81	2.06
AVERAGE	11.8	5.3	1.85	2.42	6.14

Table 1-K.--Tunas and billfishes. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	12157.8	5513.7	2382.53	3418.27	8675.57
1950	13227.9	5999.1	2403.51	3592.70	9118.26
1951	16875.0	7653.1	2914.07	4104.33	10416.78
1952	11378.2	5160.2	2337.41	3197.55	8115.37
1953	16564.5	7512.3	2752.07	3734.15	9477.27
1954	18421.3	8354.3	2763.24	3714.03	9426.21
1955	13141.9	5960.0	2137.78	2835.25	7195.88
1956	14534.8	6591.7	2245.60	2939.26	7459.85
1957	8873.7	4024.4	1709.86	2164.37	5493.18
1958	9622.0	4363.7	1812.98	2189.59	5557.19
1959	13507.2	6125.7	2199.41	2612.12	6629.57
1960	9609.0	4357.8	1906.40	2209.04	5606.55
1961	12948.7	5872.4	2135.67	2410.46	6117.75
1962	11574.9	5249.4	2056.14	2269.47	5759.91
1963	10062.0	4563.3	1917.01	2070.20	5254.17
1964	11123.4	5044.6	2096.18	2256.38	5726.70
1965	18040.5	8181.6	2835.48	2997.34	7607.24
1966	11208.9	5083.4	2273.41	2336.49	5930.01
1967	9844.2	4464.5	2180.32	2180.32	5533.64
1968	10896.6	4941.8	2481.85	2391.00	6068.35
1969	7650.3	3469.5	2443.93	2252.47	5716.78
1970	9154.1	4151.5	2813.19	2463.39	6252.08
1971	15032.8	6817.6	4003.21	3366.87	8545.11
1972	12531.0	5683.0	4327.07	3523.68	8943.09
1973	12223.2	5543.4	4661.49	3633.28	9221.25
1974	9380.2	4254.1	4535.64	3196.36	8112.36
1975	7592.7	3443.4	4548.54	2934.54	7447.87
1976	12650.8	5737.3	6561.93	4030.67	10229.84
1977	11047.9	5010.4	7253.43	4222.02	10715.49
1978	10890.4	4939.0	9077.34	4911.98	12466.61
AVERAGE	12058.9	5468.9	3192.22	3005.25	7627.33

Table 1-L.--Tunas. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	11137.2	5050.9	1985.18	2848.17	7228.66
1950	11941.3	5415.5	2079.46	3108.31	7888.89
1951	15736.4	7136.7	2571.32	3621.58	9191.57
1952	10420.5	4725.8	2027.54	2773.65	7039.53
1953	15581.3	7066.3	2525.33	3426.50	8696.44
1954	17358.3	7872.2	2579.06	3466.48	8797.93
1955	12354.7	5603.0	1953.06	2590.26	6574.09
1956	13781.4	6250.1	2075.84	2717.07	6895.91
1957	8245.0	3739.2	1541.21	1950.90	4951.38
1958	8897.1	4035.0	1648.86	1991.38	5054.13
1959	12828.8	5818.1	2017.98	2396.65	6082.71
1960	9024.3	4092.7	1738.56	2014.56	5112.94
1961	12407.0	5626.7	1987.17	2242.86	5692.37
1962	11063.0	5017.2	1921.55	2120.92	5382.89
1963	9507.7	4311.9	1757.76	1898.23	4817.70
1964	10406.0	4719.3	1908.99	2054.88	5215.29
1965	17450.5	7914.0	2665.71	2817.88	7151.78
1966	10696.9	4851.2	2111.98	2170.59	5508.96
1967	9264.0	4201.4	1983.30	1983.30	5033.62
1968	10349.7	4693.8	2255.47	2172.90	5514.82
1969	7162.1	3248.1	2177.46	2006.87	5093.45
1970	8570.9	3887.0	2521.35	2207.84	5603.49
1971	14722.4	6676.8	3856.04	3243.10	8230.98
1972	12301.8	5579.0	4212.48	3430.36	8706.25
1973	11992.3	5438.7	4552.60	3548.40	9005.85
1974	9057.1	4107.5	4413.75	3110.47	7894.37
1975	7245.5	3285.9	4400.22	2838.85	7205.00
1976	12232.1	5547.5	6386.25	3922.76	9955.95
1977	10527.1	4774.2	6968.91	4056.41	10295.17
1978	10149.6	4603.0	8635.39	4672.83	11859.65
AVERAGE	11413.7	5176.3	2981.99	2780.16	7056.06

Table 1-M.--Aku (skipjack tuna). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	9066.3	4111.7	1254.64	1800.06	4568.55
1950	9310.3	4222.3	1316.50	1967.86	4994.42
1951	12877.1	5840.0	1727.80	2433.53	6176.29
1952	7229.1	3278.5	1052.23	1439.44	3653.29
1953	12059.4	5469.1	1593.74	2162.47	5488.36
1954	14021.5	6358.9	1760.97	2366.90	6007.19
1955	9694.5	4396.6	1114.63	1478.29	3751.89
1956	11132.2	5048.6	1261.78	1651.55	4191.64
1957	6130.2	2780.1	794.13	1005.23	2551.28
1958	6834.5	3099.6	899.41	1086.24	2756.89
1959	11104.1	5035.9	1321.34	1569.29	3982.86
1960	7359.9	3337.8	1001.02	1159.93	2943.89
1961	10894.3	4940.7	1306.74	1474.87	3743.23
1962	9415.4	4270.0	1173.99	1295.79	3288.72
1963	8099.3	3673.2	1089.82	1176.91	2987.00
1964	9023.6	4092.3	1221.70	1315.07	3337.65
1965	16157.3	7327.6	2013.86	2128.82	5402.94
1966	9384.5	4256.0	1403.62	1442.57	3661.25
1967	8039.7	3646.1	1263.12	1263.12	3205.79
1968	9319.7	4226.6	1539.62	1483.25	3764.50
1969	5963.3	2704.4	1245.20	1147.65	2912.74
1970	7351.1	3333.8	1496.92	1310.79	3326.78
1971	13340.8	6050.3	2752.71	2315.15	5875.84
1972	10917.4	4951.2	2949.37	2401.77	6095.69
1973	10751.1	4875.8	3203.25	2496.68	6336.58
1974	7436.2	3372.4	2676.04	1885.86	4786.32
1975	5054.0	2292.1	2282.17	1472.37	3736.86
1976	9796.2	4442.7	3826.87	2350.66	5965.97
1977	7750.3	3514.9	3707.38	2157.97	5476.92
1978	6794.1	3081.2	4358.43	2358.46	5985.77
AVERAGE	9410.3	4267.7	1820.30	1719.95	4365.24

Table 1-N.--Ahi (yellowfin tuna, bigeye tuna, and miscellaneous). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	2013.1	913.0	715.10	1025.97	2603.90
1950	2539.4	1151.6	745.04	1113.67	2826.49
1951	2788.8	1264.8	826.02	1163.41	2952.73
1952	3035.5	1376.7	940.42	1286.49	3265.10
1953	3447.8	1563.6	918.21	1245.88	3162.03
1954	3285.0	1489.8	809.24	1087.69	2760.56
1955	2599.3	1178.8	827.13	1096.99	2784.17
1956	2574.9	1167.7	800.06	1047.20	2657.80
1957	2015.9	914.2	730.89	925.18	2348.11
1958	2004.3	909.0	739.38	892.97	2266.36
1959	1699.4	770.7	691.37	821.10	2083.95
1960	1651.3	748.9	734.04	850.56	2158.73
1961	1497.0	678.9	675.98	762.96	1936.39
1962	1617.6	733.6	741.10	817.99	2076.07
1963	1333.1	604.6	654.91	707.25	1795.00
1964	1338.4	607.0	678.34	730.19	1853.22
1965	1271.5	576.6	648.37	685.38	1739.49
1966	1265.3	573.8	698.06	717.44	1820.85
1967	1148.8	521.0	705.87	705.87	1791.49
1968	978.2	443.6	702.74	677.01	1718.26
1969	1132.5	513.6	909.82	838.55	2128.23
1970	1182.1	536.1	1008.99	883.53	2242.41
1971	1329.6	603.0	1085.21	912.71	2316.46
1972	1329.9	603.1	1244.20	1013.19	2571.48
1973	1177.9	534.2	1313.83	1024.03	2598.99
1974	1566.7	710.5	1713.88	1207.81	3065.41
1975	2052.1	930.7	2036.51	1313.88	3334.62
1976	2284.4	1036.0	2495.85	1533.08	3890.95
1977	2600.7	1179.5	3159.66	1839.15	4667.76
1978	2582.6	1171.2	3745.36	2026.71	5143.79
AVERAGE	1911.4	866.9	1123.19	1031.79	2618.69

Table 1-0.--Ahi (bigeye tuna). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	1821.2	826.0	546.04	816.20	2071.51
1951	2034.0	922.4	600.94	846.40	2148.15
1952	2188.6	992.6	682.55	933.72	2369.78
1953	2826.2	1281.7	761.25	1032.91	2621.51
1954	2759.2	1251.3	672.15	903.43	2292.92
1955	2153.6	976.7	687.28	911.51	2313.42
1956	2270.9	1029.9	713.54	933.96	2370.38
1957	1632.9	740.6	619.93	784.72	1991.63
1958	1596.4	724.0	622.26	751.52	1907.36
1959	1214.7	550.9	537.50	638.36	1620.16
1960	1295.6	587.6	581.54	673.86	1710.26
1961	1037.4	470.5	507.56	572.87	1453.94
1962	1220.8	553.6	598.07	660.13	1675.40
1963	948.3	430.0	501.73	541.82	1375.14
1964	838.3	380.2	492.86	530.53	1346.47
1965	773.9	351.0	471.07	497.96	1263.82
1966	762.6	345.8	483.15	496.56	1260.26
1967	647.1	293.5	475.52	475.52	1206.86
1968	563.9	255.7	498.56	480.31	1219.03
1969	709.8	321.9	673.46	620.70	1575.34
1970	476.8	216.3	510.01	446.60	1133.47
1971	472.6	214.3	568.13	477.82	1212.70
1972	504.0	228.6	683.84	556.88	1413.35
1973	408.5	185.3	688.35	536.51	1361.67
1974	412.9	187.3	730.82	515.02	1307.13
1975	346.3	157.0	673.03	434.22	1102.04
1976	433.0	196.4	823.33	505.73	1283.55
1977	546.0	247.6	1121.80	652.97	1657.23
1978	460.4	208.8	1273.51	689.13	1749.01
AVERAGE	1150.2	521.6	648.27	652.34	1655.64

Table 1-P.--Ahi (yellowfin tuna). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	2013.1	913.0	715.10	1025.97	2603.90
1950	712.7	323.2	197.34	294.99	748.67
1951	754.8	342.3	225.08	317.01	804.58
1952	846.9	384.1	257.87	352.77	895.32
1953	621.7	281.9	156.96	212.97	540.52
1954	525.8	238.4	137.09	184.26	467.64
1955	445.8	202.2	139.85	185.48	470.75
1956	304.0	137.9	86.52	113.25	287.42
1957	383.0	173.7	110.96	140.46	356.48
1958	407.9	185.0	117.12	141.45	359.00
1959	484.7	219.8	153.87	182.74	463.79
1960	355.6	161.3	152.49	176.70	448.47
1961	459.6	208.5	168.42	190.09	482.44
1962	396.8	179.9	143.03	157.87	400.67
1963	384.9	174.5	153.19	165.43	419.86
1964	500.1	226.8	185.49	199.66	506.74
1965	497.6	225.7	177.30	187.42	475.67
1966	502.7	228.0	214.91	220.88	560.59
1967	501.7	227.6	230.35	230.35	584.62
1968	414.3	187.9	204.18	196.70	499.23
1969	422.7	191.7	236.36	217.84	552.89
1970	705.3	319.9	498.98	436.94	1108.94
1971	857.0	388.7	517.09	434.89	1103.76
1972	825.9	374.5	560.36	456.32	1158.13
1973	769.4	348.9	625.49	487.52	1237.32
1974	1153.8	523.2	983.06	692.78	1758.29
1975	1705.9	773.6	1363.47	879.66	2232.58
1976	1851.4	839.7	1672.52	1027.34	2607.40
1977	2054.7	931.8	2037.86	1186.18	3010.53
1978	2122.2	962.5	2471.85	1337.58	3394.78
AVERAGE	799.4	362.5	496.47	401.12	1018.03

Table 1-Q.--Ahipalaha (albacore). Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	.	.	.	.	.
1950	60.9	27.6	11.75	17.57	44.58
1951	56.0	25.4	14.10	19.86	50.41
1952	104.3	47.3	23.73	32.46	82.38
1953	49.4	22.4	8.55	11.60	29.45
1954	28.7	13.0	4.79	6.44	16.34
1955	20.7	9.4	4.22	5.59	14.19
1956	13.4	6.1	3.67	4.81	12.20
1957	9.6	4.4	2.64	3.35	8.49
1958	16.2	7.4	3.54	4.28	10.85
1959	9.5	4.3	2.10	2.50	6.34
1960	8.9	4.0	2.60	3.01	7.63
1961	13.6	6.1	4.08	4.60	11.69
1962	16.7	7.6	4.03	4.45	11.29
1963	15.0	6.8	4.68	5.05	12.82
1964	9.5	4.3	3.11	3.34	8.49
1965	6.7	3.1	1.75	1.85	4.70
1966	19.1	8.7	6.38	6.55	16.64
1967	26.5	12.0	8.94	8.94	22.69
1968	22.6	10.3	8.21	7.91	20.08
1969	27.4	12.4	12.36	11.39	28.92
1970	20.0	9.1	10.64	9.32	23.64
1971	23.4	10.6	11.08	9.32	23.64
1972	18.0	8.2	11.74	9.56	24.26
1973	30.7	13.9	27.64	21.54	54.68
1974	19.5	8.8	14.89	10.49	26.63
1975	73.6	33.4	65.56	42.30	107.35
1976	60.1	27.3	40.31	24.76	62.85
1977	79.4	36.0	72.90	42.43	107.69
1978	694.4	314.9	493.31	266.94	677.50
AVERAGE	53.6	24.3	30.46	20.77	52.70

Table 1-R.--Kawakawa. Annual figures from 1949 to 1978.

YEAR	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
1949	57.8	26.2	15.44	22.15	56.21
1950	30.7	13.9	6.16	9.22	23.39
1951	14.4	6.5	3.39	4.78	12.14
1952	51.5	23.4	11.16	15.27	38.76
1953	24.6	11.2	4.82	6.54	16.60
1954	23.2	10.5	4.06	5.45	13.84
1955	40.1	18.2	7.08	9.39	23.83
1956	60.9	27.6	10.32	13.50	34.27
1957	89.2	40.5	13.54	17.14	43.50
1958	42.0	19.1	6.53	7.89	20.03
1959	15.8	7.2	3.17	3.76	9.55
1960	4.2	1.9	0.91	1.06	2.68
1961	2.1	0.9	0.37	0.42	1.07
1962	13.3	6.0	2.43	2.69	6.82
1963	60.2	27.3	8.35	9.02	22.88
1964	34.5	15.7	5.83	6.28	15.94
1965	14.9	6.8	1.73	1.83	4.65
1966	27.9	12.7	3.92	4.03	10.22
1967	49.1	22.3	5.38	5.38	13.65
1968	29.2	13.2	4.90	4.72	11.98
1969	38.9	17.6	10.07	9.28	23.55
1970	17.6	8.0	4.80	4.20	10.66
1971	28.6	13.0	7.04	5.92	15.03
1972	36.6	16.6	7.17	5.84	14.82
1973	32.5	14.7	7.88	6.14	15.59
1974	34.8	15.8	8.95	6.31	16.01
1975	65.8	29.8	15.98	10.31	26.17
1976	91.4	41.4	23.22	14.26	36.19
1977	96.7	43.9	28.97	16.86	42.80
1978	78.5	35.6	38.29	20.72	52.59
AVERAGE	40.2	18.2	9.06	8.35	21.18

Table 2-A.--Billfishes. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	26.6	12.1	10.34	10.95	27.80
FEBRUARY	44.4	20.2	16.04	17.50	44.42
MARCH	46.7	21.2	20.19	22.16	56.25
APRIL	49.6	22.5	18.55	19.92	50.56
MAY	65.2	29.6	19.00	19.64	49.85
JUNE	63.8	29.0	16.38	16.78	42.60
JULY	59.8	27.1	15.04	16.43	41.71
AUGUST	64.2	29.1	17.15	19.72	50.05
SEPTEMBER	52.0	23.6	14.87	16.99	43.12
OCTOBER	55.2	25.1	17.06	18.61	47.24
NOVEMBER	58.1	26.4	19.09	19.73	50.08
DECEMBER	59.4	26.9	26.52	26.64	67.61
AVERAGE	53.8	24.4	17.52	18.76	47.61

Table 2-B.--Black marlin. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	0.8	0.4	0.29	0.32	0.81
FEBRUARY	0.7	0.3	0.24	0.29	0.72
MARCH	0.9	0.4	0.32	0.36	0.93
APRIL	0.9	0.4	0.27	0.29	0.73
MAY	1.9	0.9	0.43	0.50	1.27
JUNE	1.0	0.5	0.22	0.26	0.65
JULY	1.1	0.5	0.27	0.31	0.79
AUGUST	1.1	0.5	0.30	0.34	0.87
SEPTEMBER	1.0	0.5	0.24	0.29	0.74
OCTOBER	1.1	0.5	0.25	0.28	0.71
NOVEMBER	1.2	0.5	0.34	0.38	0.96
DECEMBER	0.8	0.4	0.29	0.31	0.79
AVERAGE	1.0	0.5	0.29	0.32	0.82

Table 2-C.--Blue marlin. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	8.0	3.6	2.40	2.51	6.37
FEBRUARY	10.7	4.8	3.30	3.61	9.17
MARCH	12.5	5.7	4.66	5.29	13.41
APRIL	16.0	7.2	4.81	5.47	13.89
MAY	21.5	9.7	5.36	5.99	15.21
JUNE	26.6	12.1	6.00	6.30	15.99
JULY	40.7	18.5	9.68	10.71	27.18
AUGUST	50.8	23.0	13.53	15.68	39.79
SEPTEMBER	40.6	18.4	11.11	12.77	32.41
OCTOBER	32.3	14.7	8.38	9.65	24.48
NOVEMBER	23.1	10.5	6.96	7.68	19.50
DECEMBER	15.4	7.0	5.74	6.20	15.73
AVERAGE	24.9	11.3	6.80	7.63	19.36

Table 2-D.--Sailfish. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	2.8	1.3	1.16	1.64	4.15
FEBRUARY	7.5	3.4	2.26	3.21	8.16
MARCH	6.3	2.9	2.40	3.37	8.55
APRIL	6.5	2.9	2.30	3.23	8.19
MAY	6.4	2.9	1.61	2.28	5.79
JUNE	1.5	0.7	1.08	1.53	3.89
JULY	4.0	1.8	1.33	1.88	4.77
AUGUST	5.4	2.5	1.91	2.72	6.91
SEPTEMBER	3.9	1.8	1.52	2.15	5.46
OCTOBER	4.8	2.2	1.78	2.50	6.35
NOVEMBER	3.8	1.7	1.12	1.57	3.99
DECEMBER	4.2	1.9	1.15	1.61	4.09
AVERAGE	4.7	2.1	1.63	2.30	5.82

Table 2-E.--Shortbill spearfish. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	1.4	0.6	0.71	0.40	1.00
FEBRUARY	2.1	1.0	1.52	0.84	2.14
MARCH	1.4	0.6	1.14	0.64	1.62
APRIL	2.1	1.0	1.65	0.97	2.46
MAY	2.1	1.0	1.08	0.62	1.59
JUNE	1.5	0.7	0.61	0.36	0.91
JULY	1.0	0.5	0.33	0.19	0.47
AUGUST	0.7	0.3	0.21	0.12	0.31
SEPTEMBER	0.5	0.2	0.18	0.11	0.27
OCTOBER	0.5	0.2	0.37	0.21	0.54
NOVEMBER	0.8	0.4	0.61	0.35	0.88
DECEMBER	1.6	0.7	1.48	0.84	2.14
AVERAGE	1.3	0.6	0.81	0.46	1.17

Table 2-F.--Striped marlin. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	15.7	7.1	6.97	7.07	17.95
FEBRUARY	27.6	12.5	10.88	11.25	28.54
MARCH	28.9	13.1	13.64	14.21	36.08
APRIL	26.6	12.1	11.40	11.35	28.81
MAY	33.3	15.1	10.12	10.12	25.68
JUNE	31.6	14.3	7.63	7.82	19.84
JULY	14.0	6.3	3.70	3.78	9.58
AUGUST	8.9	4.1	2.50	2.35	5.97
SEPTEMBER	7.9	3.6	2.83	2.76	7.02
OCTOBER	18.6	8.4	7.20	6.83	17.35
NOVEMBER	31.9	14.5	11.74	11.30	28.68
DECEMBER	40.8	18.5	20.25	19.52	49.54
AVERAGE	23.8	10.8	9.07	9.03	22.92

Table 2-G.--Swordfish (broadbill). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	0.4	0.2	0.18	0.21	0.52
FEBRUARY	0.5	0.2	0.16	0.22	0.55
MARCH	0.7	0.3	0.20	0.24	0.60
APRIL	2.1	0.9	0.62	0.67	1.69
MAY	6.9	3.1	2.93	2.32	5.88
JUNE	7.1	3.2	2.73	2.10	5.32
JULY	2.6	1.2	1.12	0.91	2.30
AUGUST	0.8	0.4	0.22	0.22	0.56
SEPTEMBER	0.7	0.3	0.22	0.26	0.67
OCTOBER	0.4	0.2	0.13	0.13	0.34
NOVEMBER	0.9	0.4	0.26	0.32	0.81
DECEMBER	0.4	0.2	0.14	0.16	0.41
AVERAGE	2.0	0.9	0.78	0.67	1.71

Table 2-H.--Mahimahi. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	3.5	1.6	3.07	2.66	6.76
FEBRUARY	6.3	2.8	4.58	4.37	11.09
MARCH	11.9	5.4	7.64	7.47	18.97
APRIL	20.4	9.2	10.51	10.00	25.39
MAY	19.9	9.0	8.78	8.70	22.08
JUNE	12.4	5.6	5.53	5.56	14.11
JULY	11.1	5.0	5.85	5.82	14.77
AUGUST	9.9	4.5	6.07	5.90	14.96
SEPTEMBER	10.6	4.8	6.87	6.39	16.21
OCTOBER	14.3	6.5	9.08	8.27	20.99
NOVEMBER	12.6	5.7	7.49	6.97	17.68
DECEMBER	7.1	3.2	5.03	4.68	11.88
AVERAGE	11.7	5.3	6.71	6.40	16.24

Table 2-I.--Ono (wahoo). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	1.6	0.7	0.81	0.64	1.61
FEBRUARY	1.7	0.8	0.90	0.71	1.79
MARCH	2.4	1.1	1.55	1.14	2.88
APRIL	4.5	2.0	2.63	1.87	4.75
MAY	6.7	3.0	3.52	2.43	6.17
JUNE	7.6	3.5	3.53	2.52	6.40
JULY	8.8	4.0	3.99	2.89	7.34
AUGUST	7.5	3.4	3.71	2.73	6.94
SEPTEMBER	6.1	2.8	2.89	2.26	5.73
OCTOBER	4.4	2.0	2.54	1.82	4.61
NOVEMBER	2.8	1.3	1.85	1.29	3.27
DECEMBER	3.2	1.4	1.93	1.39	3.52
AVERAGE	4.8	2.2	2.49	1.81	4.59

Table 2-J.--Shark. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	1.7	0.8	0.27	0.36	0.92
FEBRUARY	0.8	0.4	0.13	0.15	0.39
MARCH	0.6	0.3	0.05	0.05	0.13
APRIL	1.1	0.5	0.08	0.07	0.18
MAY	2.0	0.9	0.23	0.18	0.46
JUNE	1.9	0.9	0.26	0.35	0.89
JULY	2.0	0.9	0.31	0.44	1.12
AUGUST	2.2	1.0	0.34	0.50	1.28
SEPTEMBER	2.7	1.2	0.39	0.55	1.41
OCTOBER	1.9	0.9	0.25	0.34	0.87
NOVEMBER	0.9	0.4	0.12	0.15	0.39
DECEMBER	1.3	0.6	0.21	0.29	0.73
AVERAGE	1.6	0.7	0.22	0.29	0.73

Table 2-K.--Tunas and billfishes. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	455.2	206.4	171.01	151.30	383.99
FEBRUARY	421.6	191.2	174.06	159.84	405.68
MARCH	467.7	212.1	178.32	172.93	438.90
APRIL	712.1	323.0	217.04	206.37	523.76
MAY	1308.6	593.5	307.32	289.44	734.61
JUNE	1823.1	826.8	365.74	348.95	885.64
JULY	2027.3	919.4	393.62	381.73	968.83
AUGUST	1705.7	773.6	350.03	341.31	866.25
SEPTEMBER	1085.7	492.4	255.00	244.41	620.32
OCTOBER	836.0	379.1	239.32	225.33	571.89
NOVEMBER	608.1	275.8	225.20	202.72	514.50
DECEMBER	607.7	275.6	315.57	280.91	712.95
AVERAGE	1004.9	455.7	266.02	250.44	635.61

Table 2-L.--Tunas. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	428.6	194.4	160.67	140.35	356.20
FEBRUARY	377.2	171.1	158.02	142.34	361.27
MARCH	421.0	190.9	158.13	150.77	382.66
APRIL	662.6	300.5	198.48	186.45	473.20
MAY	1243.4	563.9	288.32	269.80	684.76
JUNE	1759.2	797.8	349.36	332.17	843.05
JULY	1967.5	892.3	378.58	365.30	927.12
AUGUST	1641.5	744.5	332.88	321.59	816.21
SEPTEMBER	1033.7	468.8	240.13	227.42	577.20
OCTOBER	780.7	354.1	222.26	206.72	524.64
NOVEMBER	550.0	249.4	206.12	182.99	464.42
DECEMBER	548.4	248.7	289.05	254.27	645.34
AVERAGE	951.1	431.4	248.50	231.68	588.00

Table 2-M.--Aku (skipjack tuna). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	314.4	142.6	88.04	74.30	188.56
FEBRUARY	218.9	99.3	66.72	57.72	146.48
MARCH	283.0	128.3	77.49	71.48	181.42
APRIL	500.6	227.0	119.33	109.83	278.75
MAY	1076.8	488.4	197.05	187.07	474.77
JUNE	1585.3	719.0	264.89	256.34	650.60
JULY	1792.3	812.8	291.22	287.50	729.68
AUGUST	1491.8	676.6	247.32	245.82	623.88
SEPTEMBER	878.3	398.3	153.74	149.97	380.63
OCTOBER	603.3	273.6	120.36	114.55	290.74
NOVEMBER	374.8	170.0	95.43	83.59	212.15
DECEMBER	290.7	131.8	98.72	81.78	207.57
AVERAGE	784.2	355.6	151.69	143.33	363.77

Table 2-N.--Ahi (yellowfin tuna, bigeye tuna, and miscellaneous). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	110.3	50.0	71.38	65.02	165.01
FEBRUARY	153.9	69.8	90.00	83.50	211.93
MARCH	132.8	60.2	79.04	77.80	197.44
APRIL	157.5	71.4	77.93	75.41	191.39
MAY	162.9	73.9	89.95	81.67	207.28
JUNE	168.1	76.2	82.67	74.30	188.56
JULY	163.3	74.1	82.29	74.35	188.70
AUGUST	137.4	62.3	80.10	72.08	182.95
SEPTEMBER	139.6	63.3	78.94	72.58	184.21
OCTOBER	168.1	76.3	97.61	89.04	225.99
NOVEMBER	168.4	76.4	107.37	97.00	246.19
DECEMBER	249.1	113.0	185.91	169.04	429.03
AVERAGE	159.3	72.2	93.60	85.98	218.22

Table 2-O.--Ahi (bigeye tuna). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	71.1	32.3	42.16	43.05	109.27
FEBRUARY	103.8	47.1	57.30	57.92	147.00
MARCH	100.6	45.6	57.76	60.00	152.28
APRIL	117.1	53.1	54.51	56.39	143.13
MAY	103.1	46.8	54.22	53.68	136.24
JUNE	63.7	28.9	28.92	29.79	75.61
JULY	45.8	20.8	21.25	22.90	58.12
AUGUST	45.5	20.6	26.22	27.45	69.66
SEPTEMBER	73.8	33.5	40.25	41.74	105.93
OCTOBER	116.2	52.7	64.56	63.31	160.69
NOVEMBER	124.4	56.4	72.97	71.16	180.60
DECEMBER	187.5	85.0	129.14	125.97	319.70
AVERAGE	96.1	43.6	54.18	54.52	138.37

Table 2-P.--Ahi (yellowfin tuna). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	41.5	18.8	30.62	23.40	59.38
FEBRUARY	53.5	24.3	34.61	27.51	69.83
MARCH	35.6	16.1	23.21	19.79	50.24
APRIL	44.2	20.0	25.18	20.81	52.82
MAY	63.2	28.7	37.54	29.78	75.59
JUNE	108.6	49.3	55.68	46.49	117.99
JULY	119.0	54.0	61.74	52.21	132.52
AUGUST	93.5	42.4	54.75	45.55	115.60
SEPTEMBER	68.3	31.0	40.04	32.23	81.81
OCTOBER	55.8	25.3	35.20	27.84	70.66
NOVEMBER	48.1	21.8	36.83	28.21	71.61
DECEMBER	67.9	30.8	61.07	47.27	119.98
AVERAGE	66.6	30.2	41.37	33.43	84.84

Table 2-Q.--Ahipalaha (albacore). Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	1.3	0.6	0.89	0.58	1.47
FEBRUARY	0.8	0.4	0.55	0.38	0.95
MARCH	0.4	0.2	0.28	0.24	0.61
APRIL	1.0	0.5	0.42	0.44	1.12
MAY	1.7	0.8	1.01	0.75	1.90
JUNE	4.5	2.0	1.57	1.31	3.32
JULY	9.8	4.5	4.84	3.14	7.98
AUGUST	9.9	4.5	5.17	3.36	8.53
SEPTEMBER	13.1	5.9	7.01	4.40	11.16
OCTOBER	5.4	2.5	3.54	2.51	6.37
NOVEMBER	3.0	1.4	2.59	1.73	4.38
DECEMBER	4.2	1.9	3.48	2.62	6.64
AVERAGE	5.1	2.3	2.91	1.98	5.03

Table 2-R.--Kawakawa. Monthly figures from 1949 to 1978.

MONTH	CATCH IN THOUSANDS OF POUNDS	CATCH IN METRIC TONS	REVENUE IN THOUSANDS OF DOLLARS	DEFLATED REVENUE IN THOUSANDS OF DOLLARS	ADJUSTED REVENUE IN THOUSANDS OF DOLLARS
JANUARY	3.1	1.4	0.69	0.67	1.69
FEBRUARY	3.9	1.8	0.94	0.89	2.26
MARCH	5.1	2.3	1.49	1.40	3.55
APRIL	3.9	1.7	0.97	0.94	2.39
MAY	2.2	1.0	0.44	0.41	1.05
JUNE	1.7	0.8	0.33	0.31	0.78
JULY	2.4	1.1	0.41	0.40	1.03
AUGUST	2.7	1.2	0.47	0.45	1.13
SEPTEMBER	3.0	1.4	0.67	0.62	1.56
OCTOBER	4.0	1.8	0.87	0.69	1.76
NOVEMBER	3.9	1.8	0.81	0.73	1.84
DECEMBER	4.5	2.0	1.06	0.92	2.33
AVERAGE	3.4	1.5	0.76	0.70	1.77

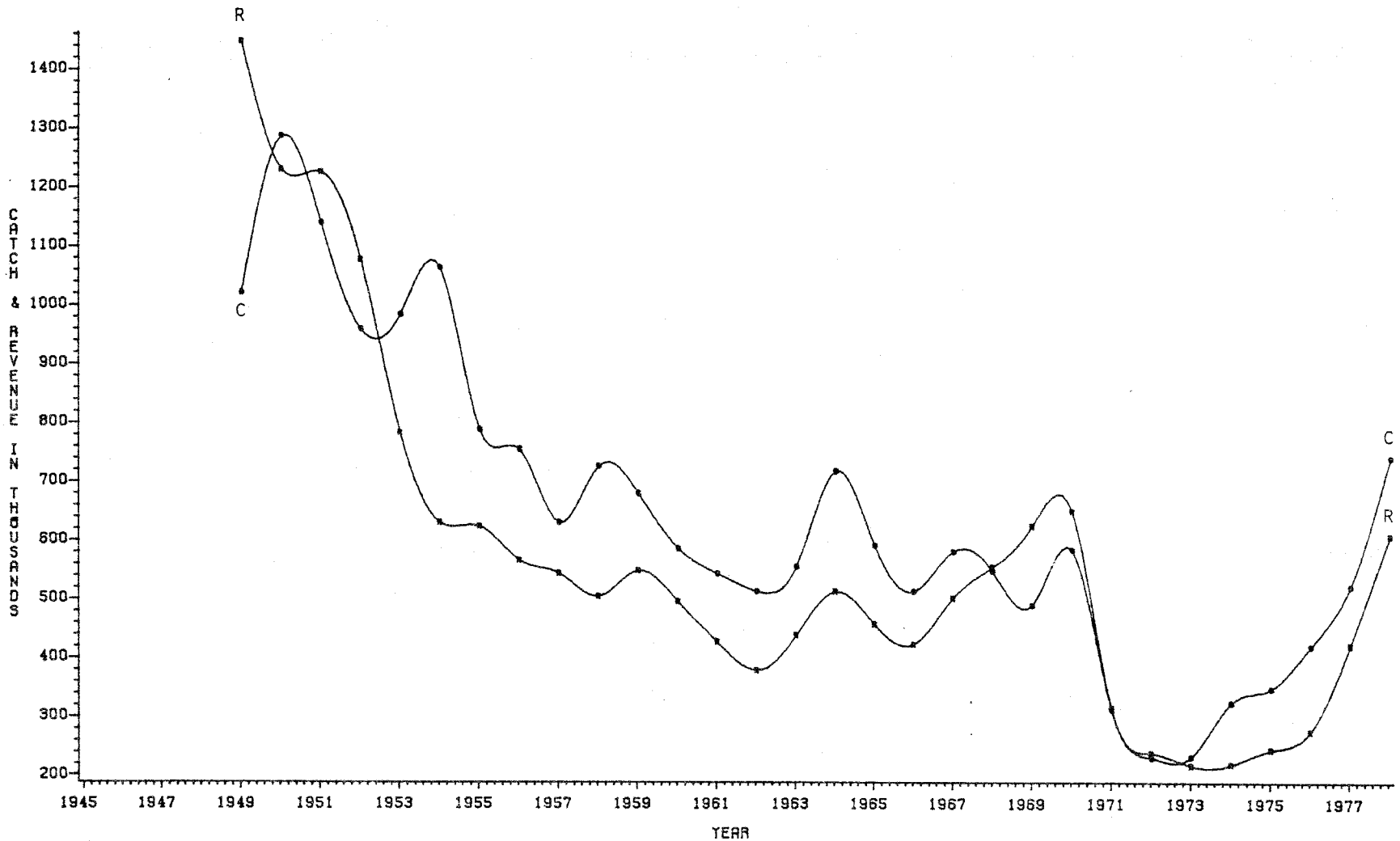

Figure 1-A.--Billfishes. Plot of revenue in 1981 dollars and catch by year.

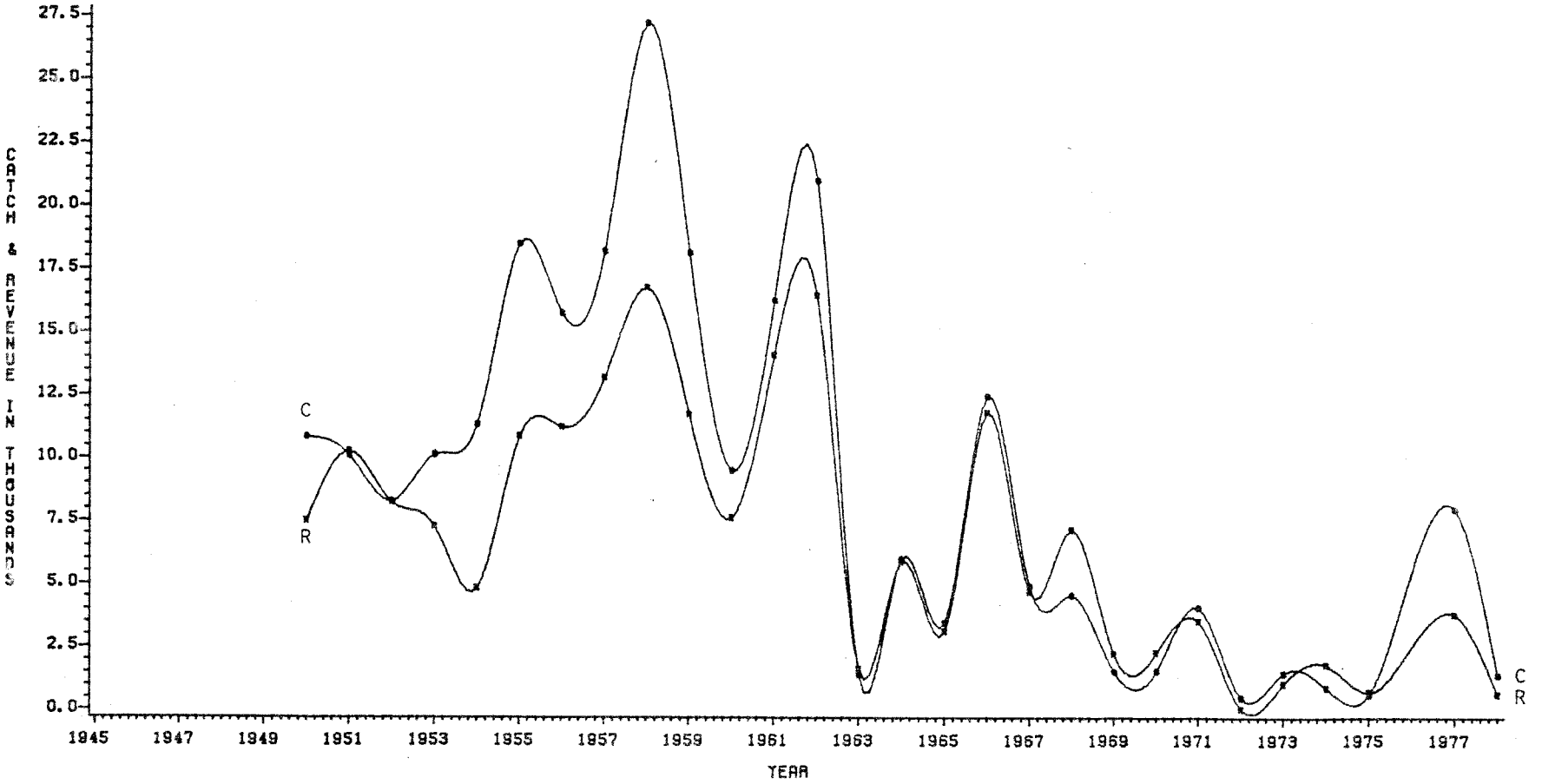

Figure 1-B.--Black marlin. Plot of revenue in 1981 dollars and catch by year.

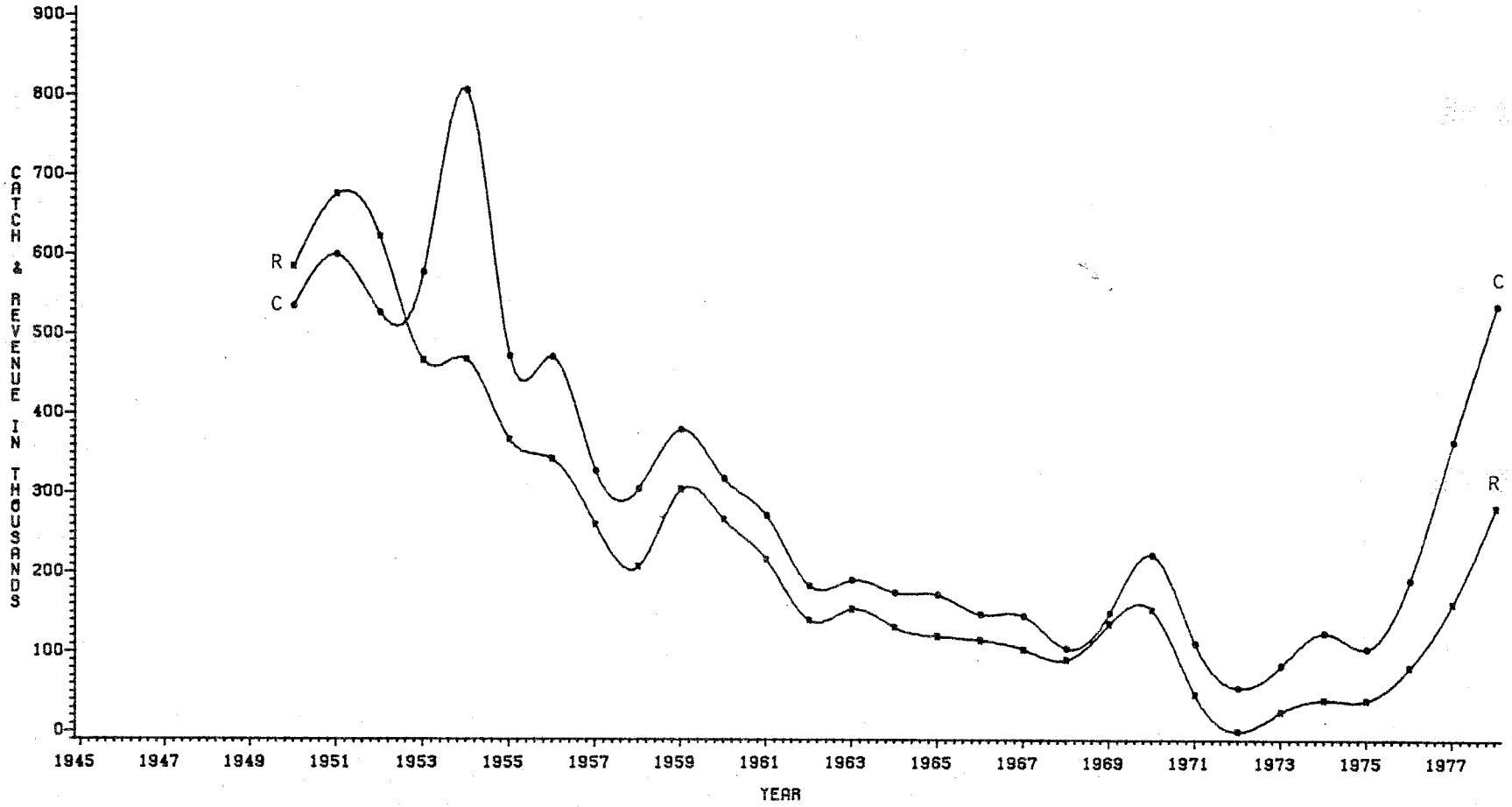

Figure 1-C.--Blue marlin. Plot of revenue in 1981 dollars and catch by year.

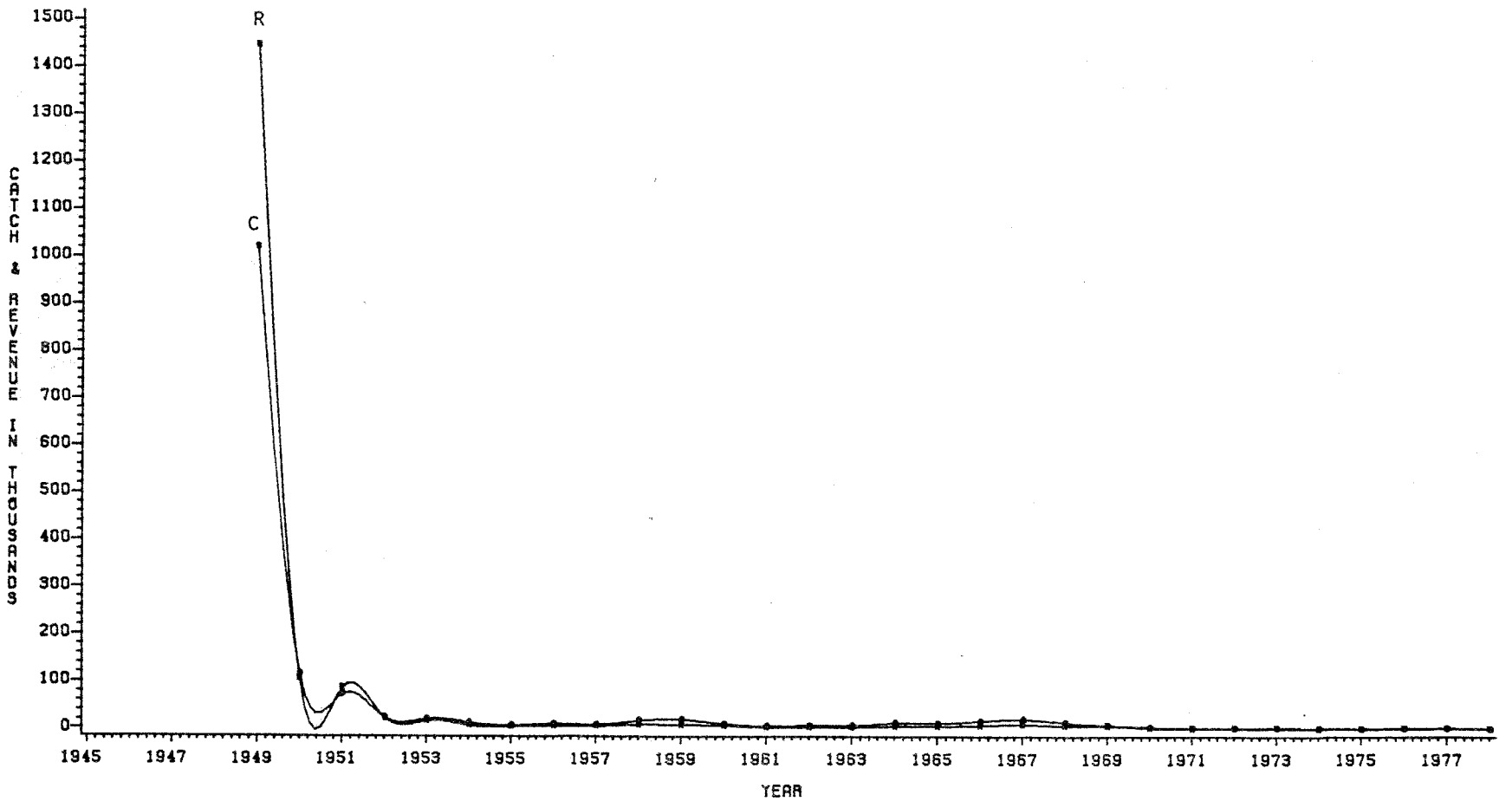

Figure 1-D.--Sailfish. Plot of revenue in 1981 dollars and catch by year.

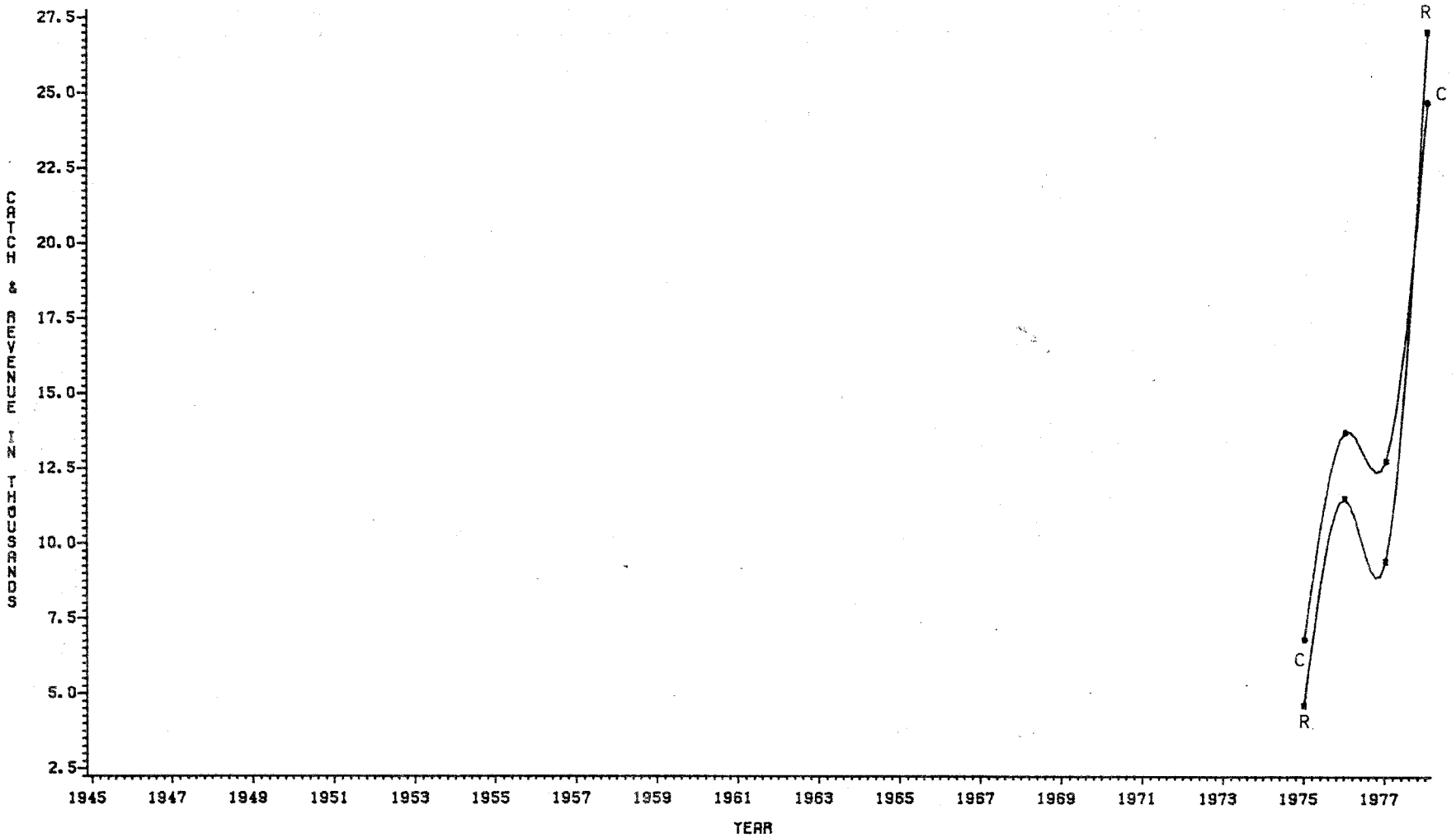

Figure 1-E.--Shortbill spearfish. Plot of revenue in 1981 dollars and catch by year.

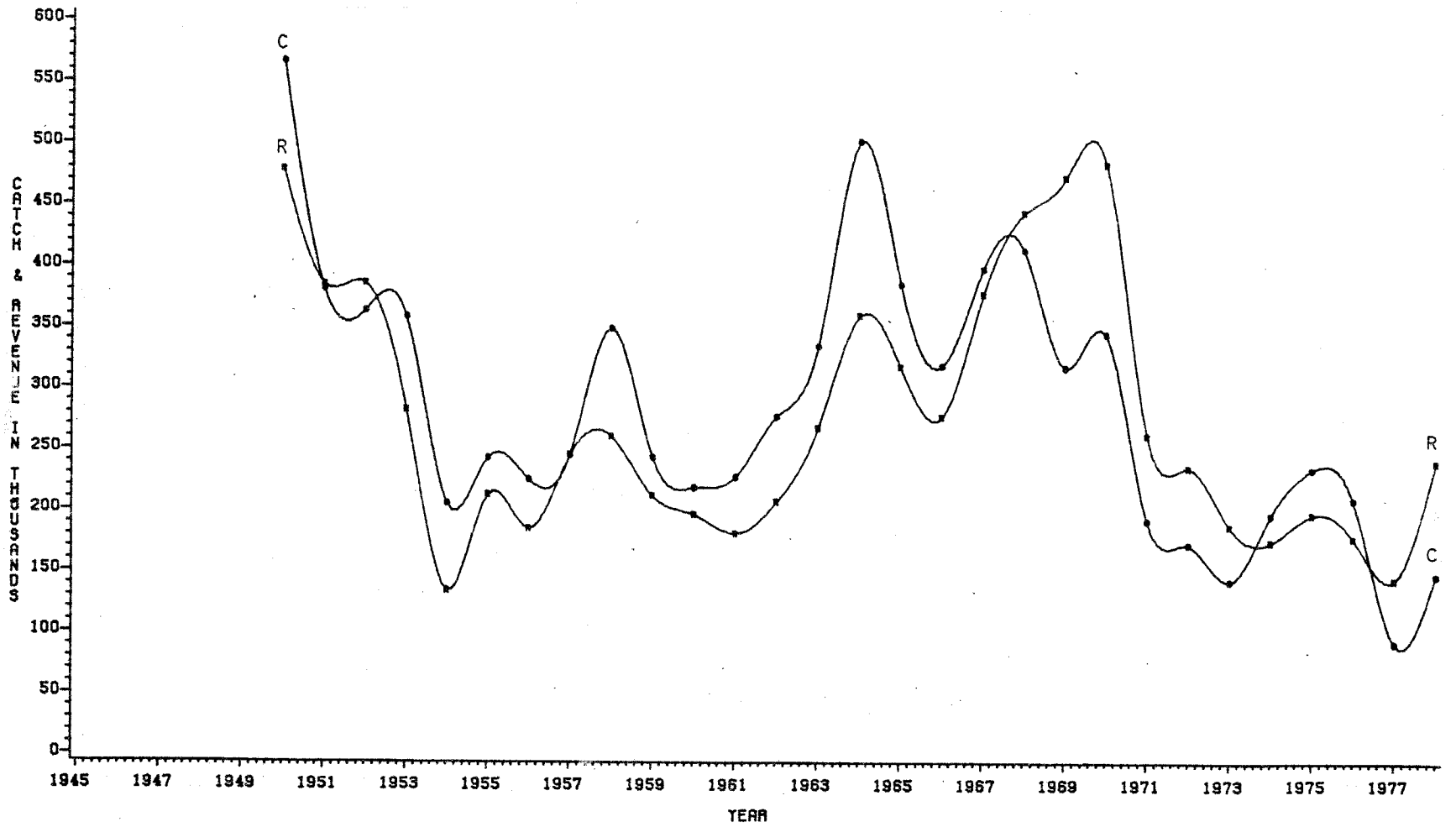

Figure 1-F.--Striped marlin. Plot of revenue in 1981 dollars and catch by year.

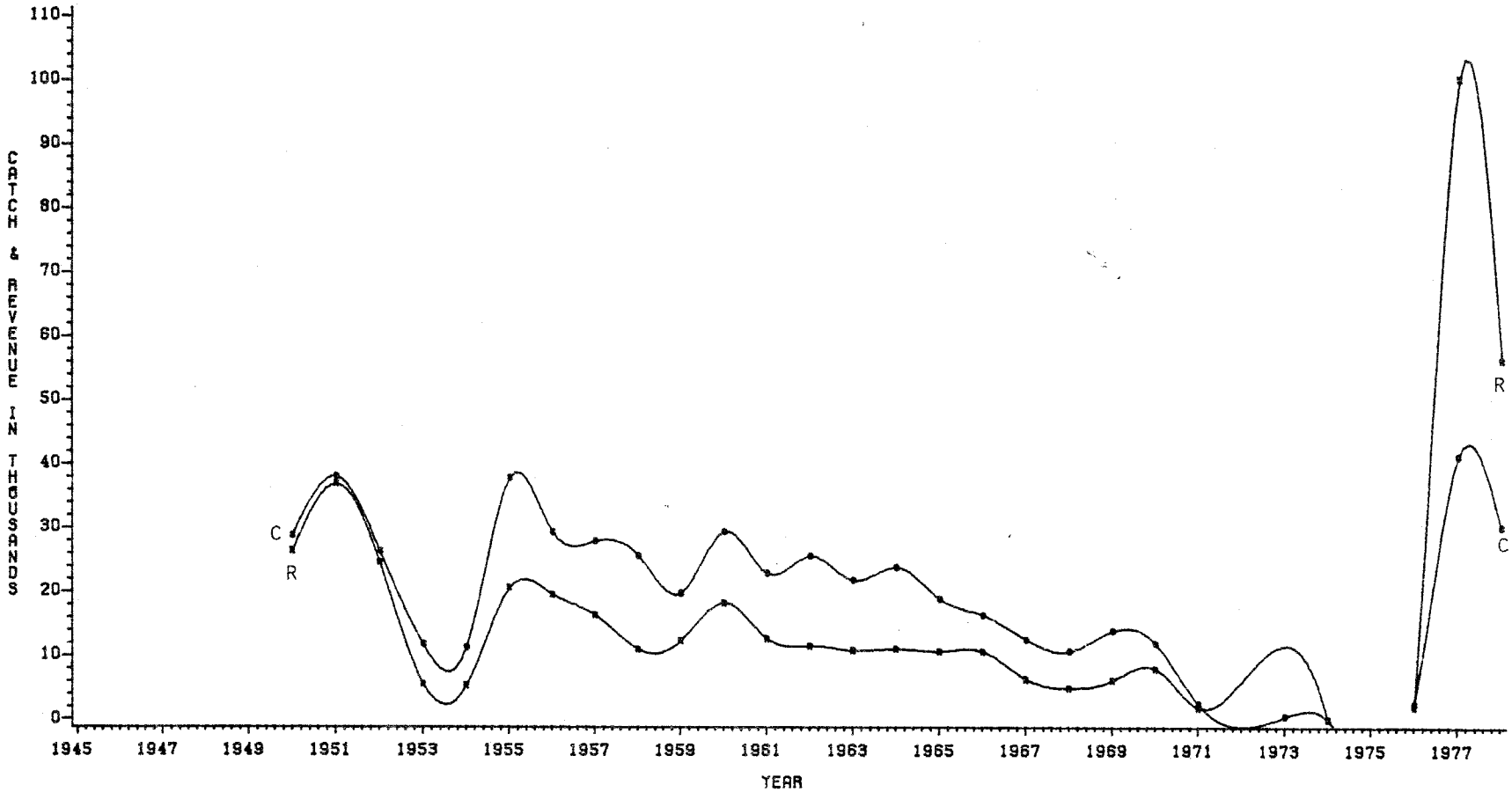

Figure 1-G.--Swordfish (broadbill). Plot of revenue in 1981 dollars and catch by year.

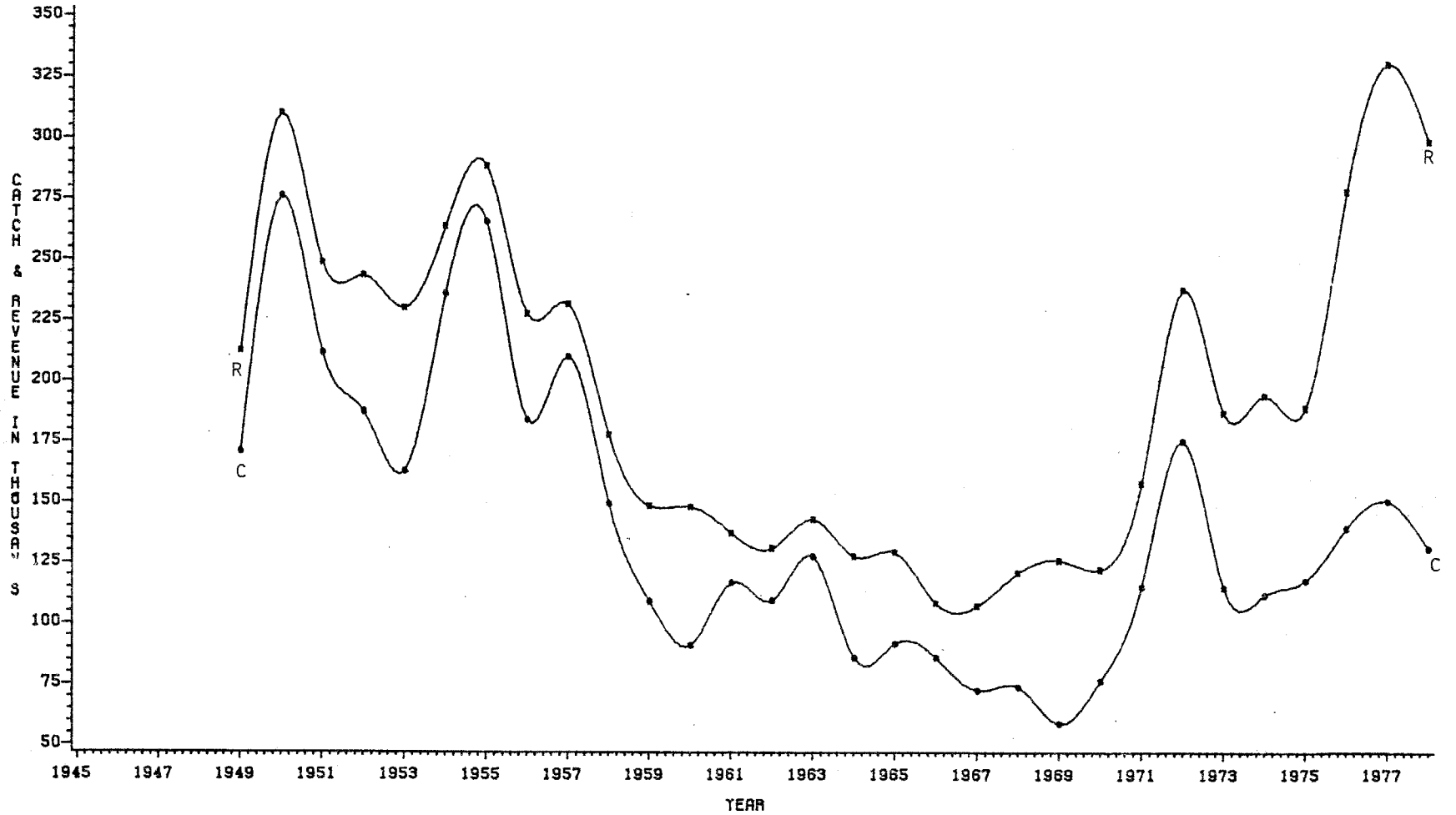

Figure 1-H.--Mahimahi. Plot of revenue in 1981 dollars and catch by year.

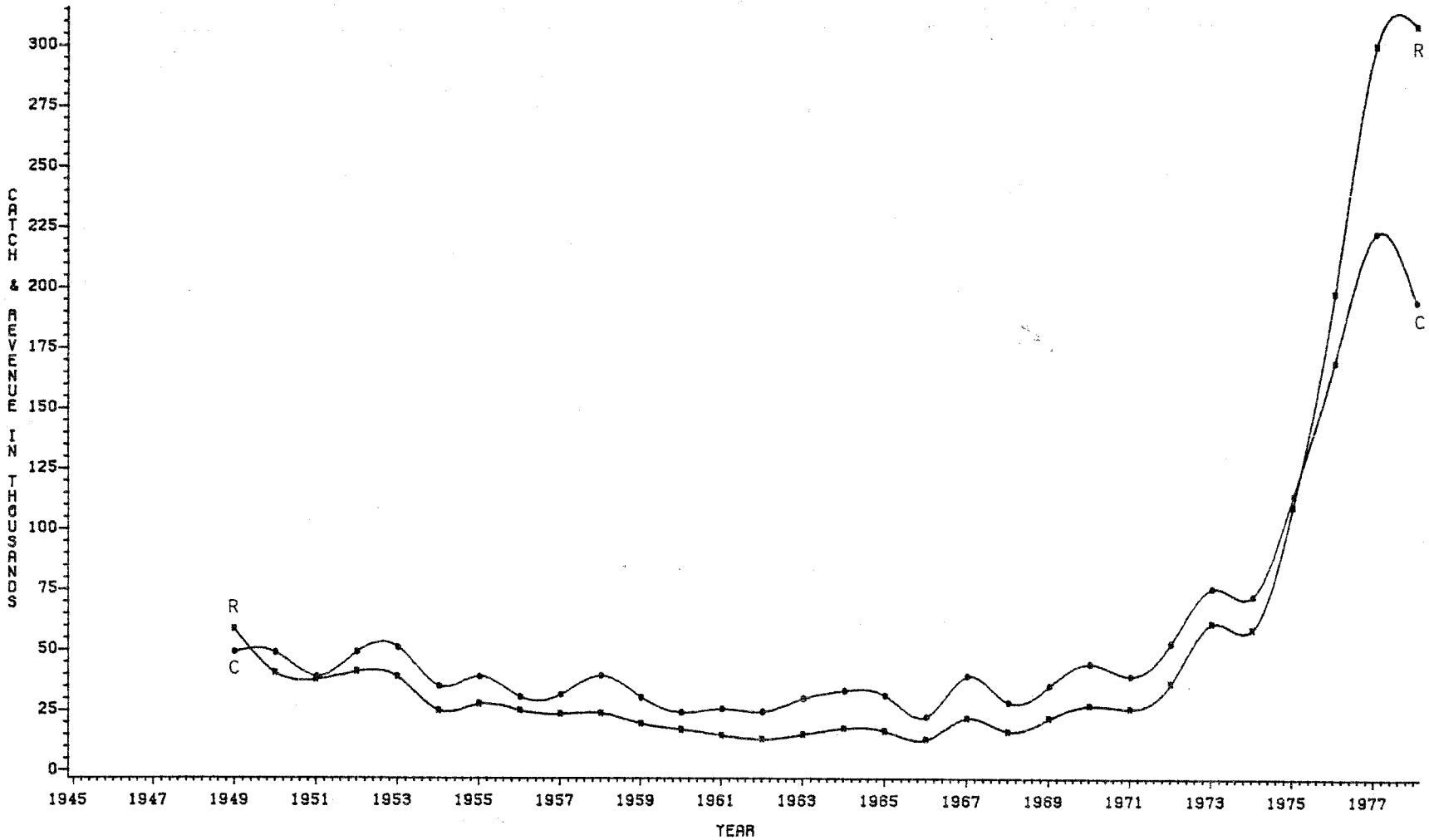

Figure 1-I.--Ono (wahoo). Plot of revenue in 1981 dollars and catch by year.

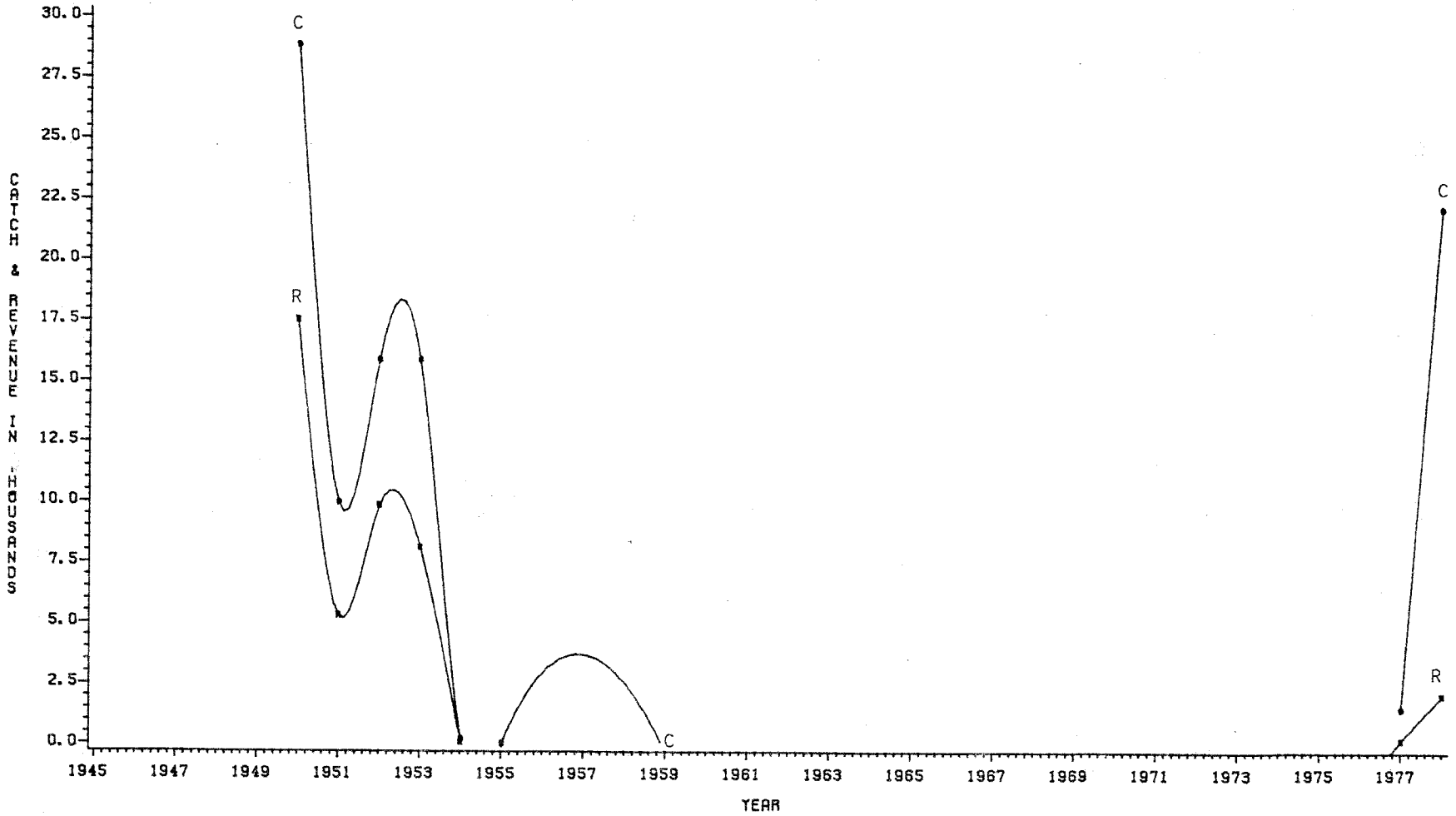

Figure 1-J.--Shark. Plot of revenue in 1981 dollars and catch by year.

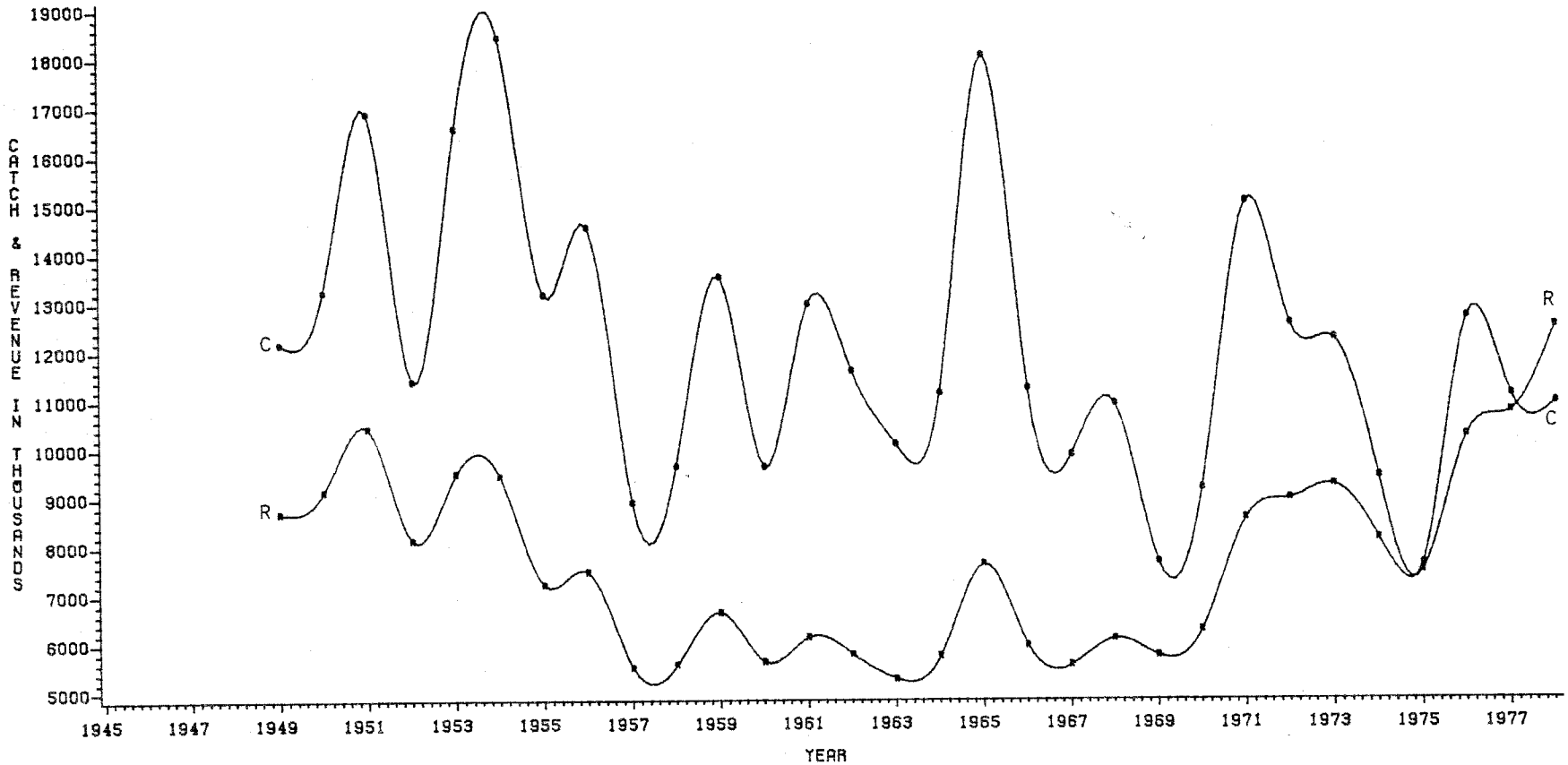

Figure 1-K.--Tunas and billfishes. Plot of revenue in 1981 dollars and catch by year.

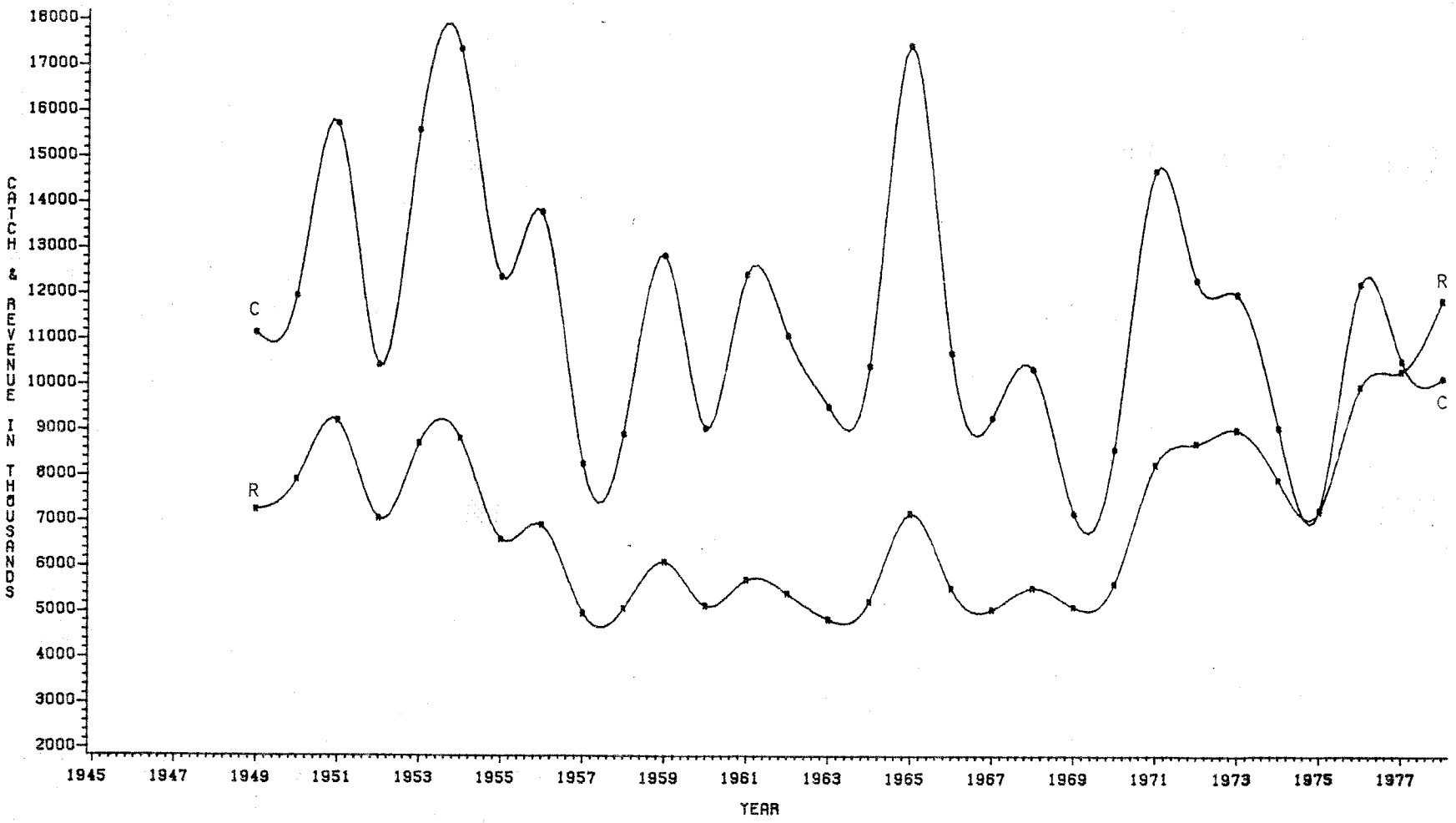

Figure 1-L.--Tunas. Plot of revenue in 1981 dollars and catch by year.

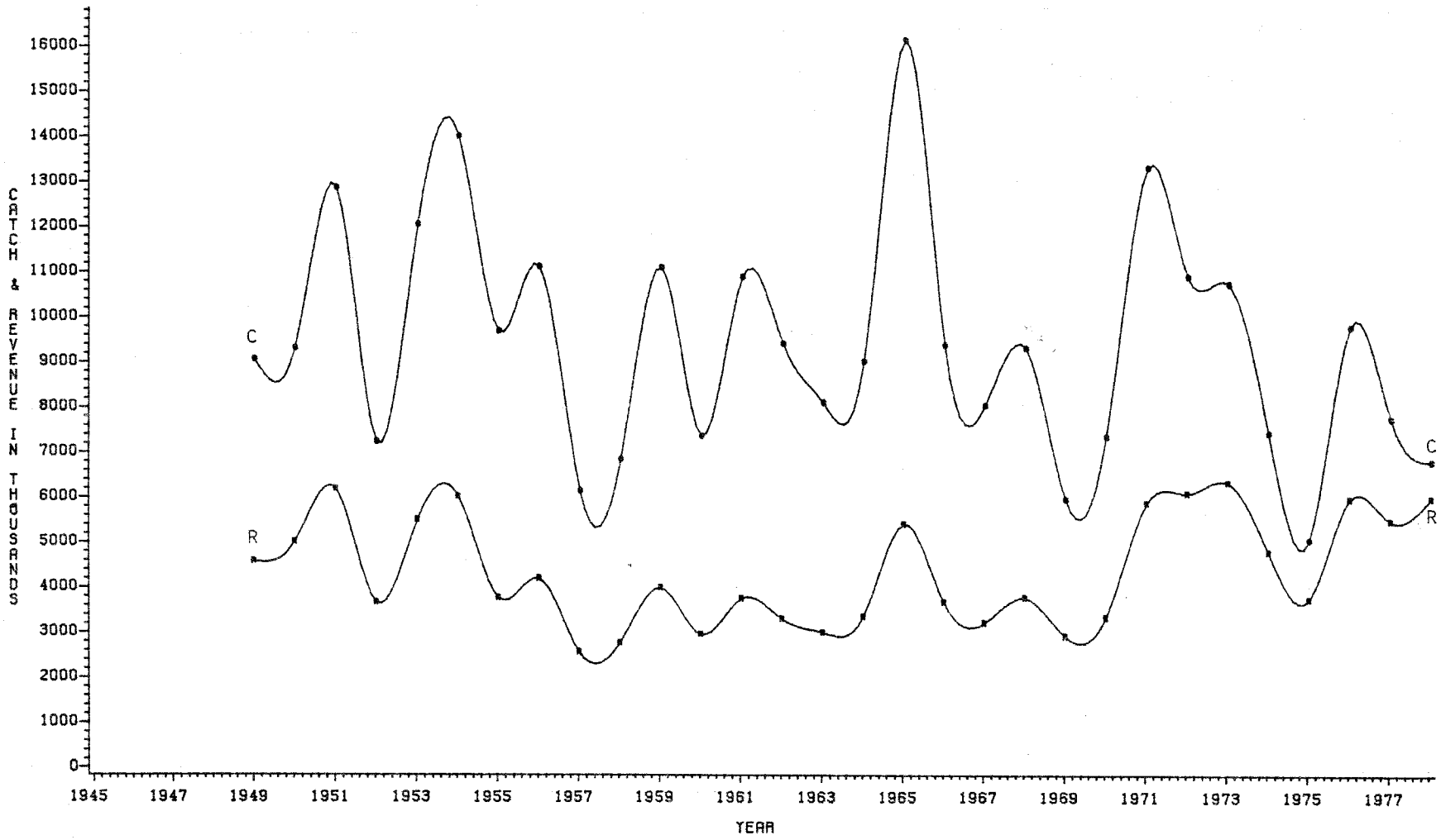

Figure 1-M.--Aku (skipjack tuna). Plot of revenue in 1981 dollars and catch by year.

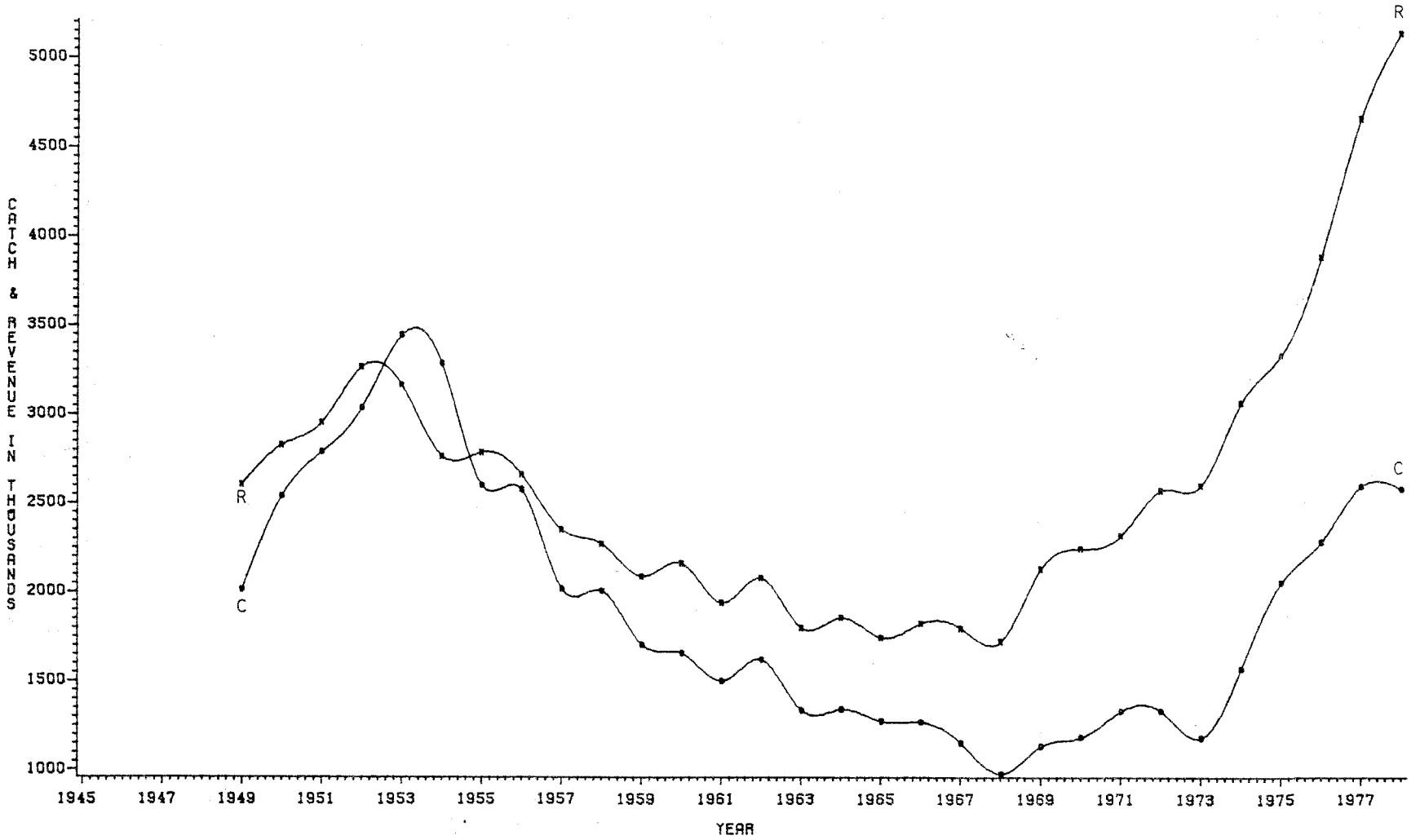

Figure 1-N.--Ahi (yellowfin tuna, bigeye tuna, and miscellaneous). Plot of revenue in 1981 dollars and catch by year.

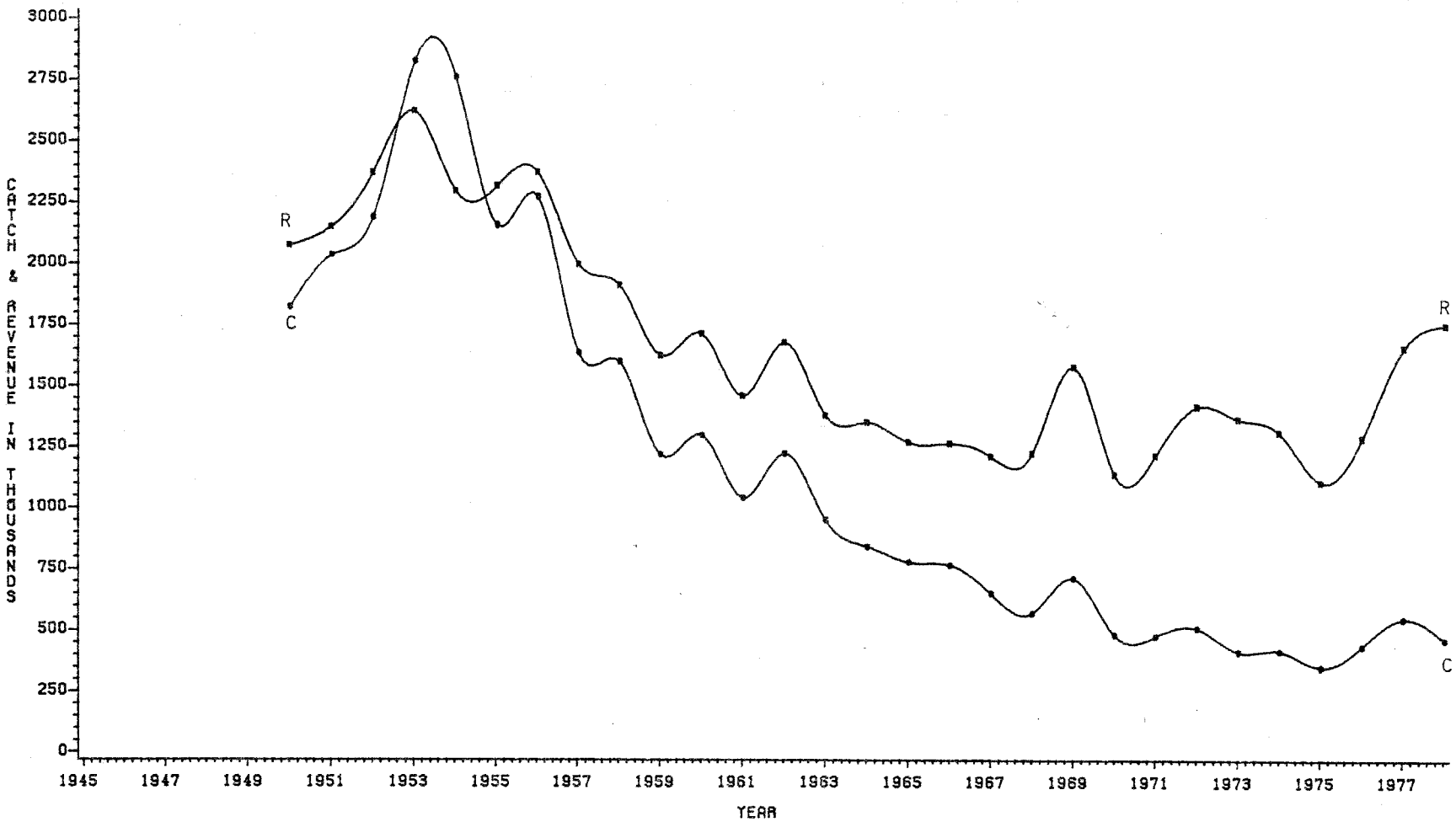

Figure 1-O.--Ahi (bigeye tuna). Plot of revenue in 1981 dollars and catch by year.

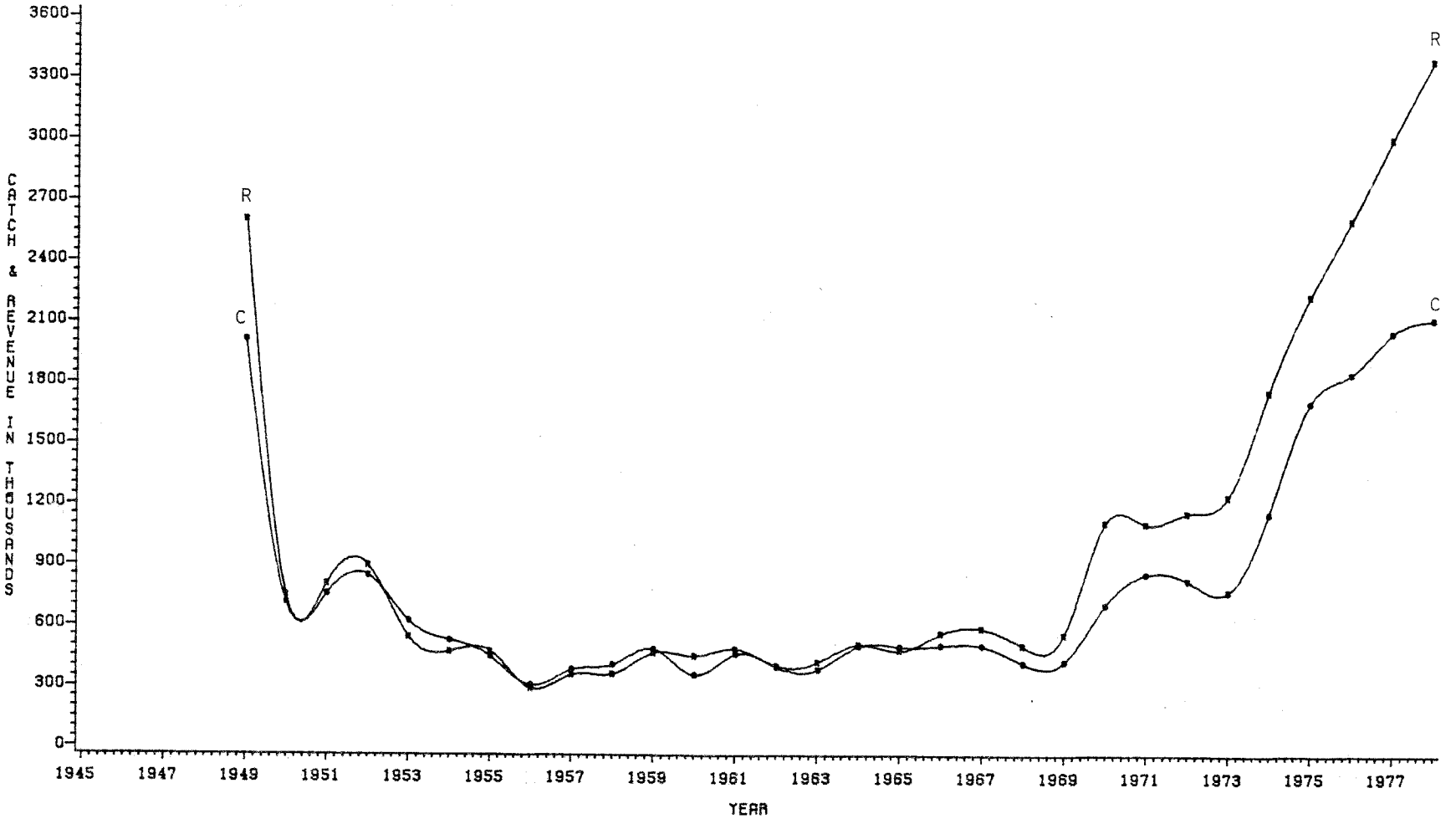

Figure 1-P.--Ahi (yellowfin tuna). Plot of revenue in 1981 dollars and catch by year.

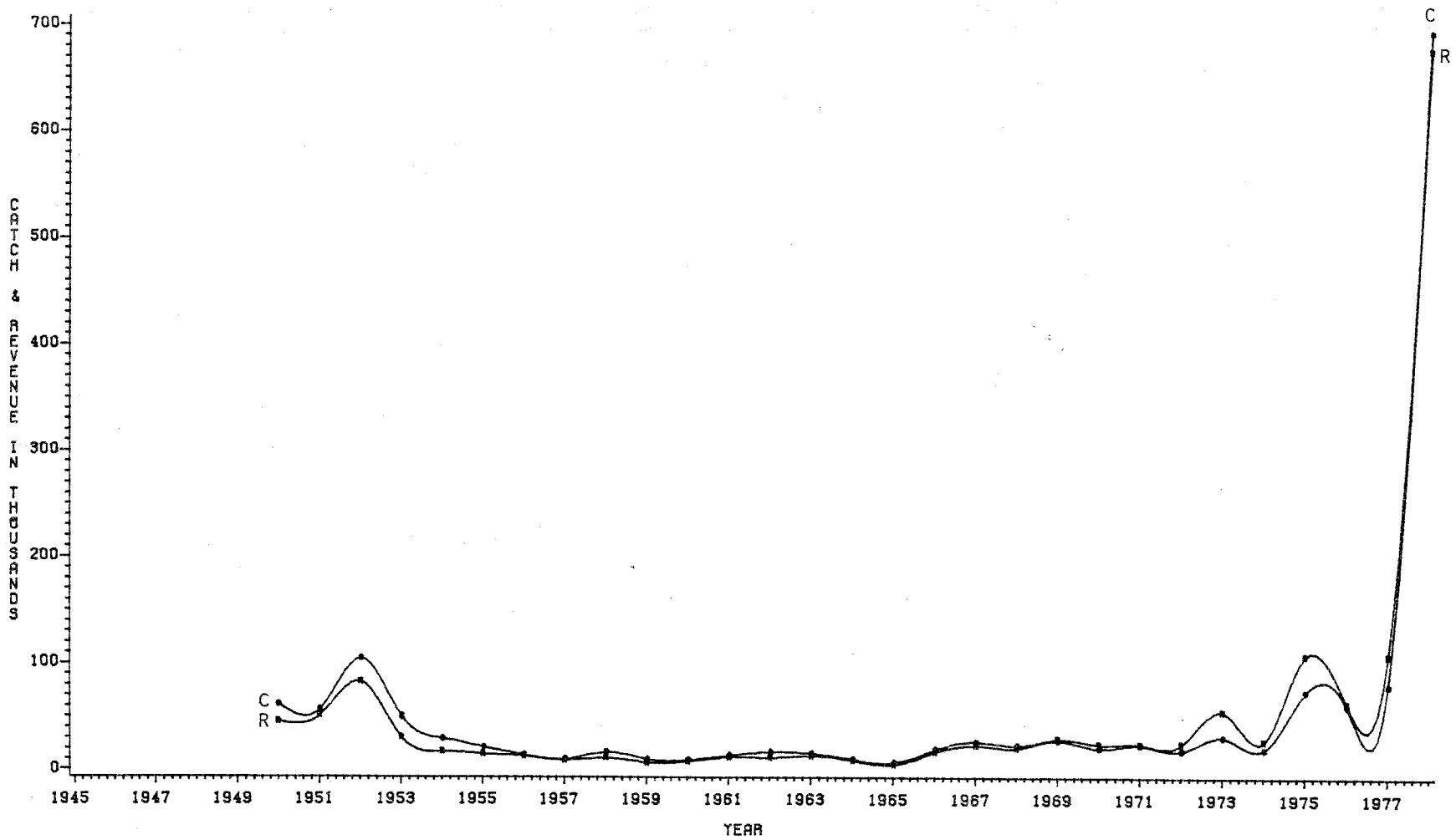

Figure 1-Q.--Ahipalaha (albacore). Plot of revenue in 1981 dollars and catch by year.

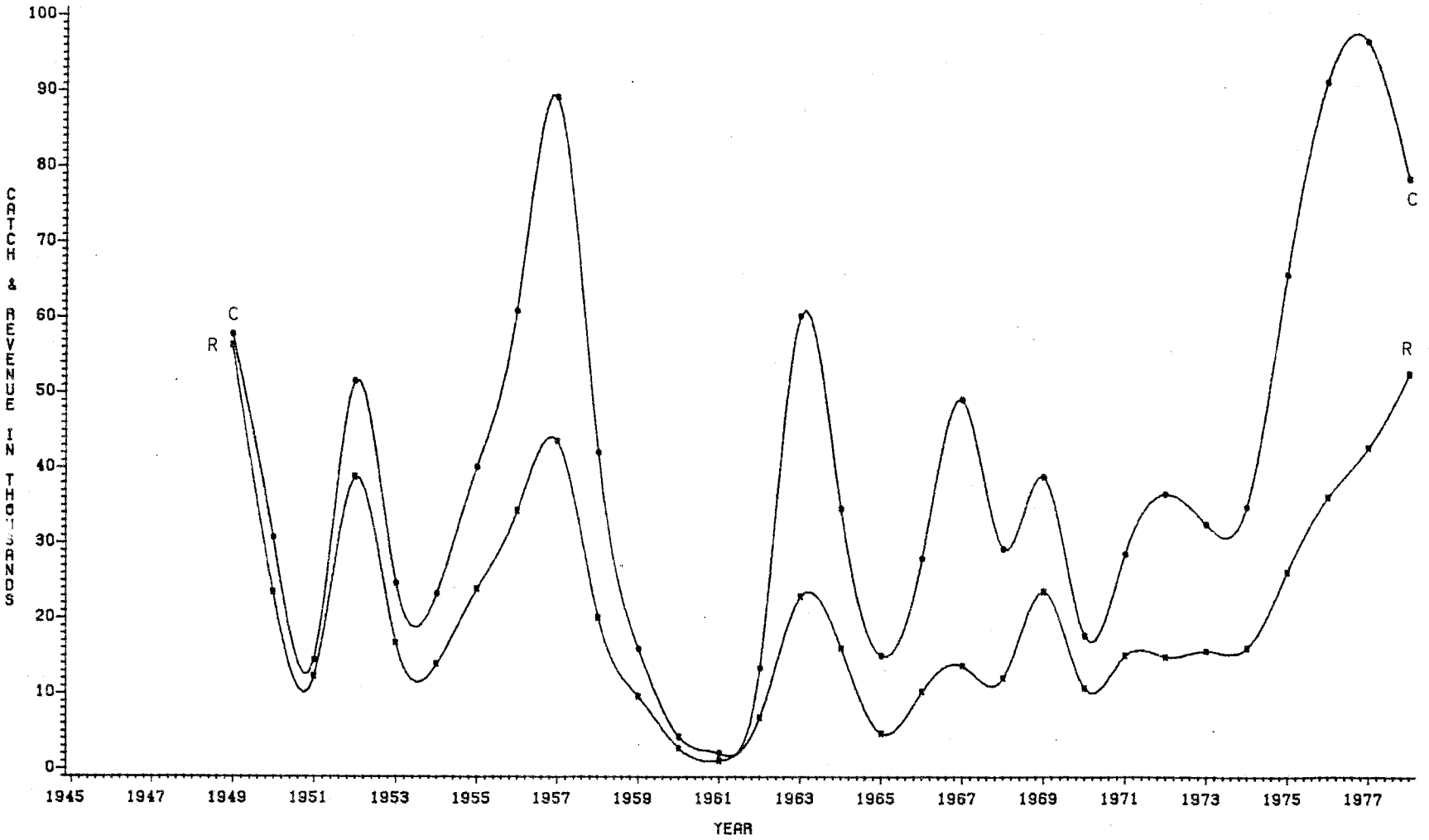

Figure 1-R.--Kawakawa. Plot of revenue in 1981 dollars and catch by year.

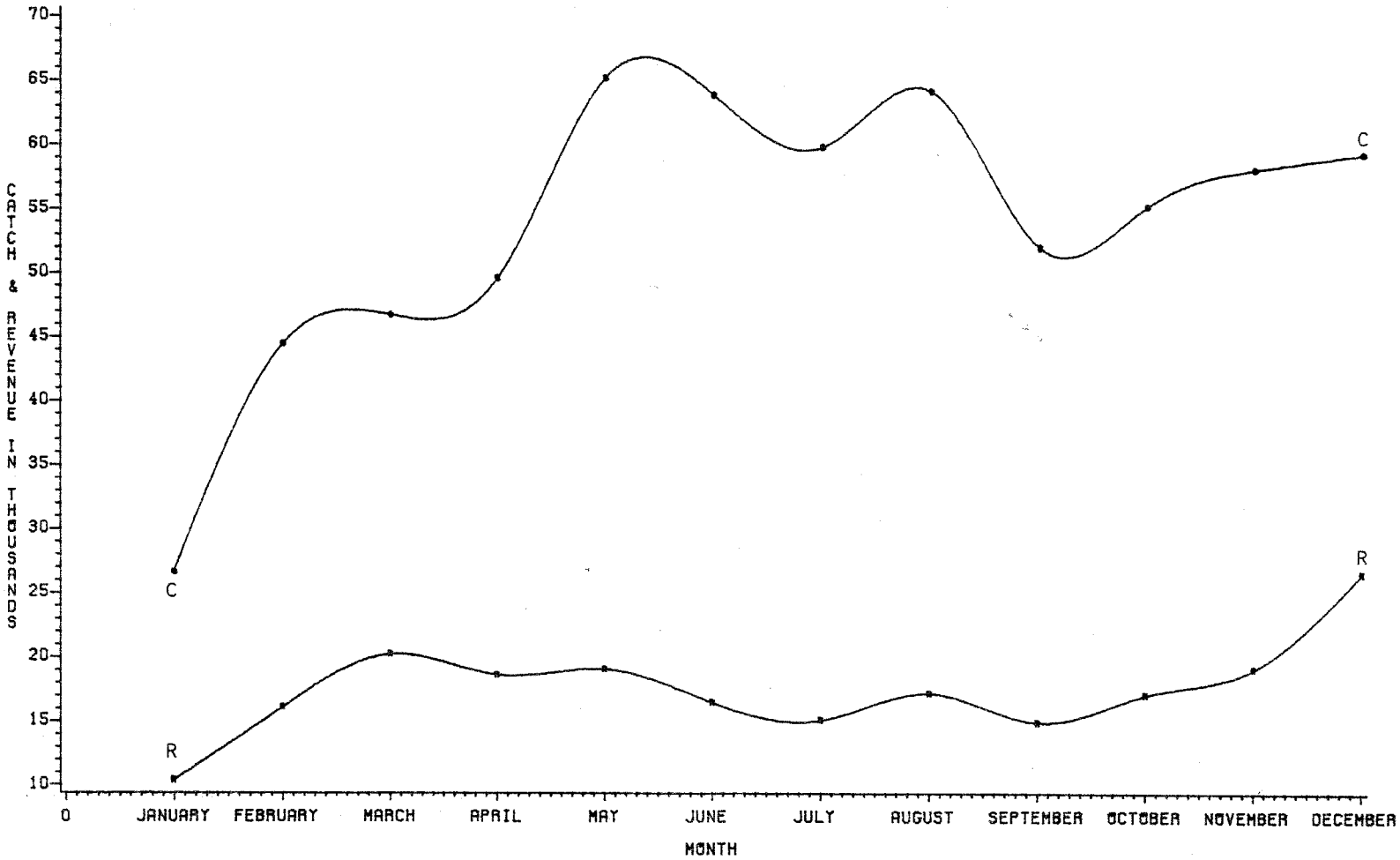

Figure 2-A.--Billfishes. Plot of revenue and catch by month (1949-78).

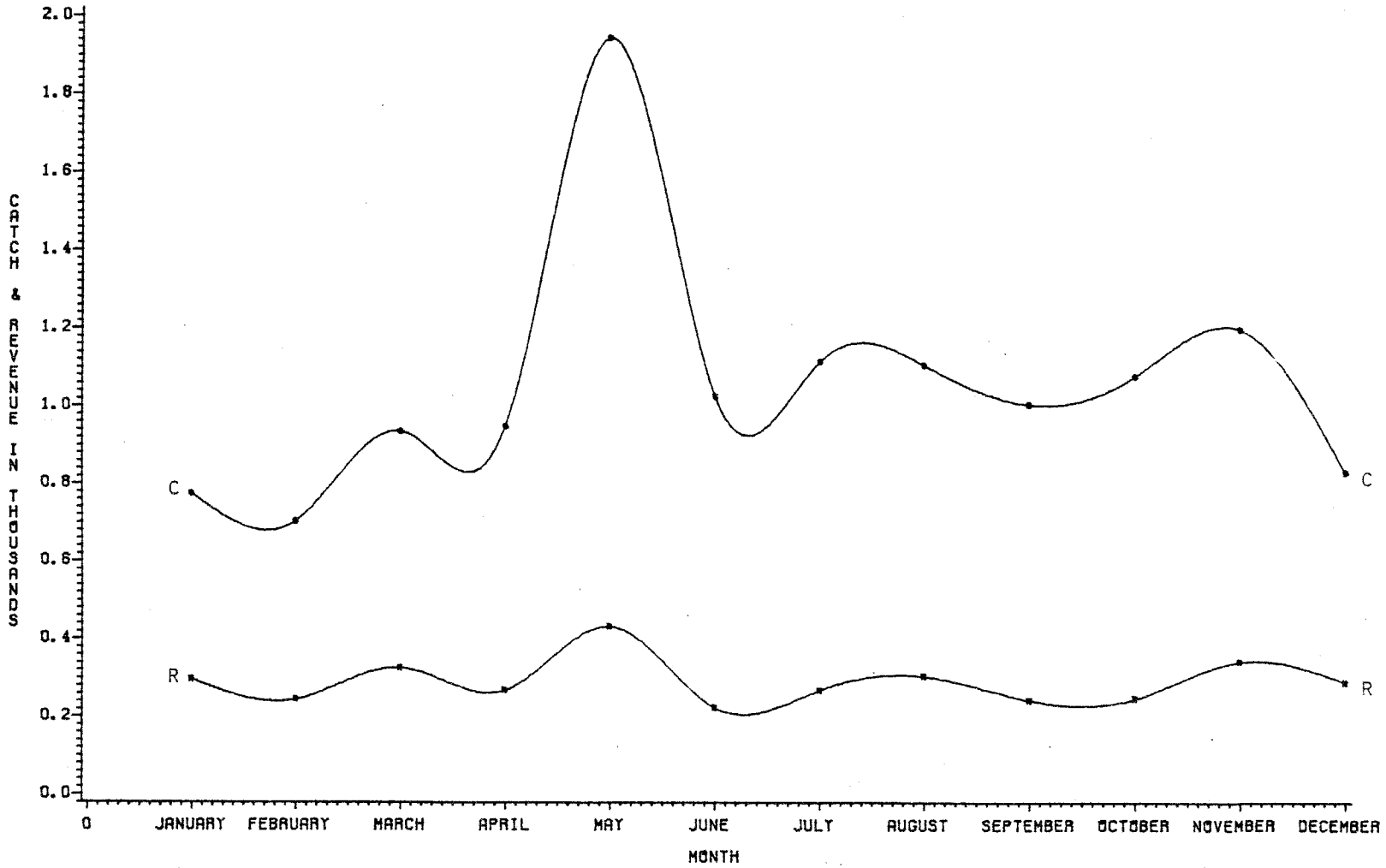

Figure 2-B.--Black marlin. Plot of revenue and catch by month (1949-78).

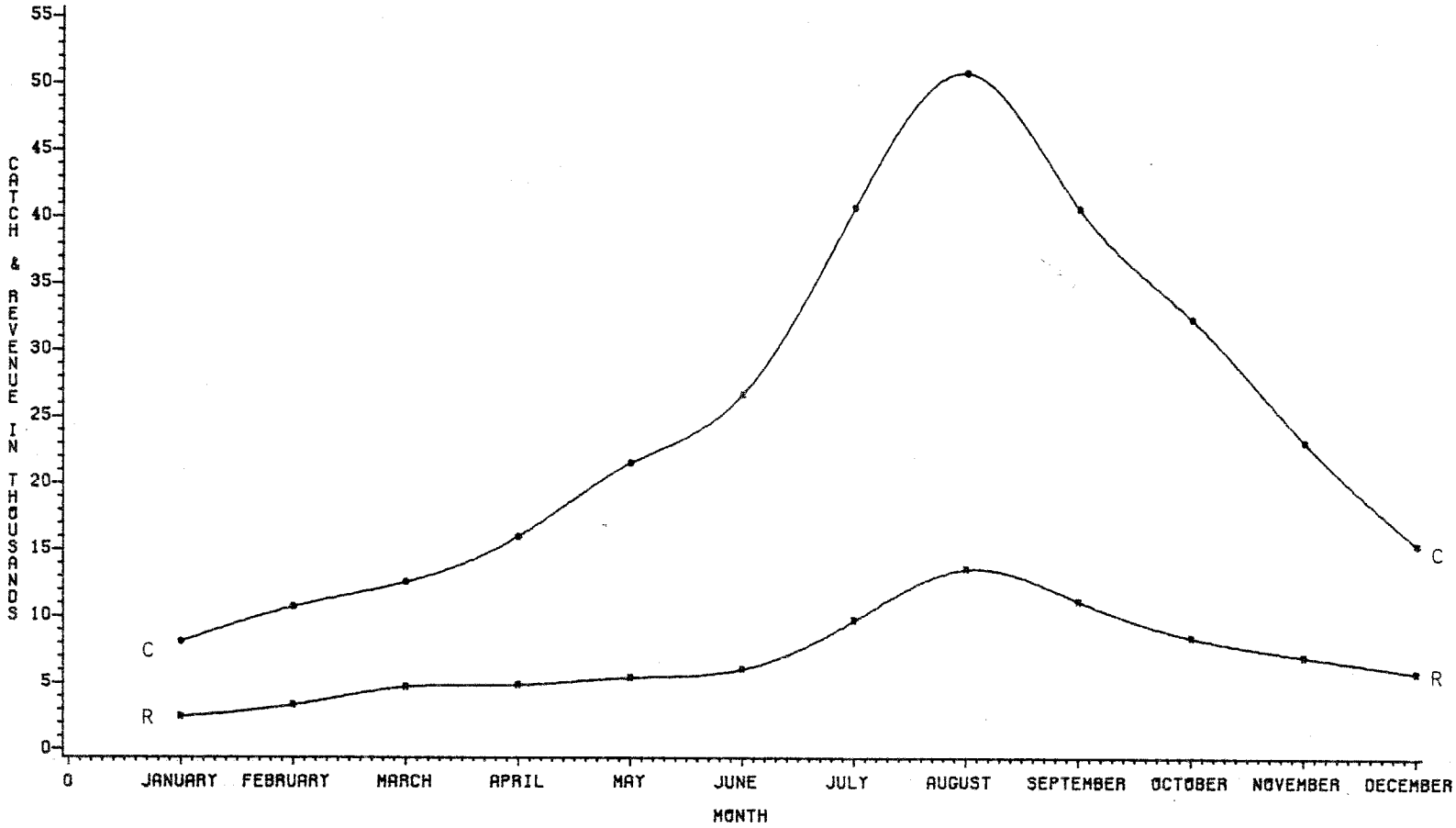

Figure 2-C.--Blue marlin. Plot of revenue and catch by month (1949-78).

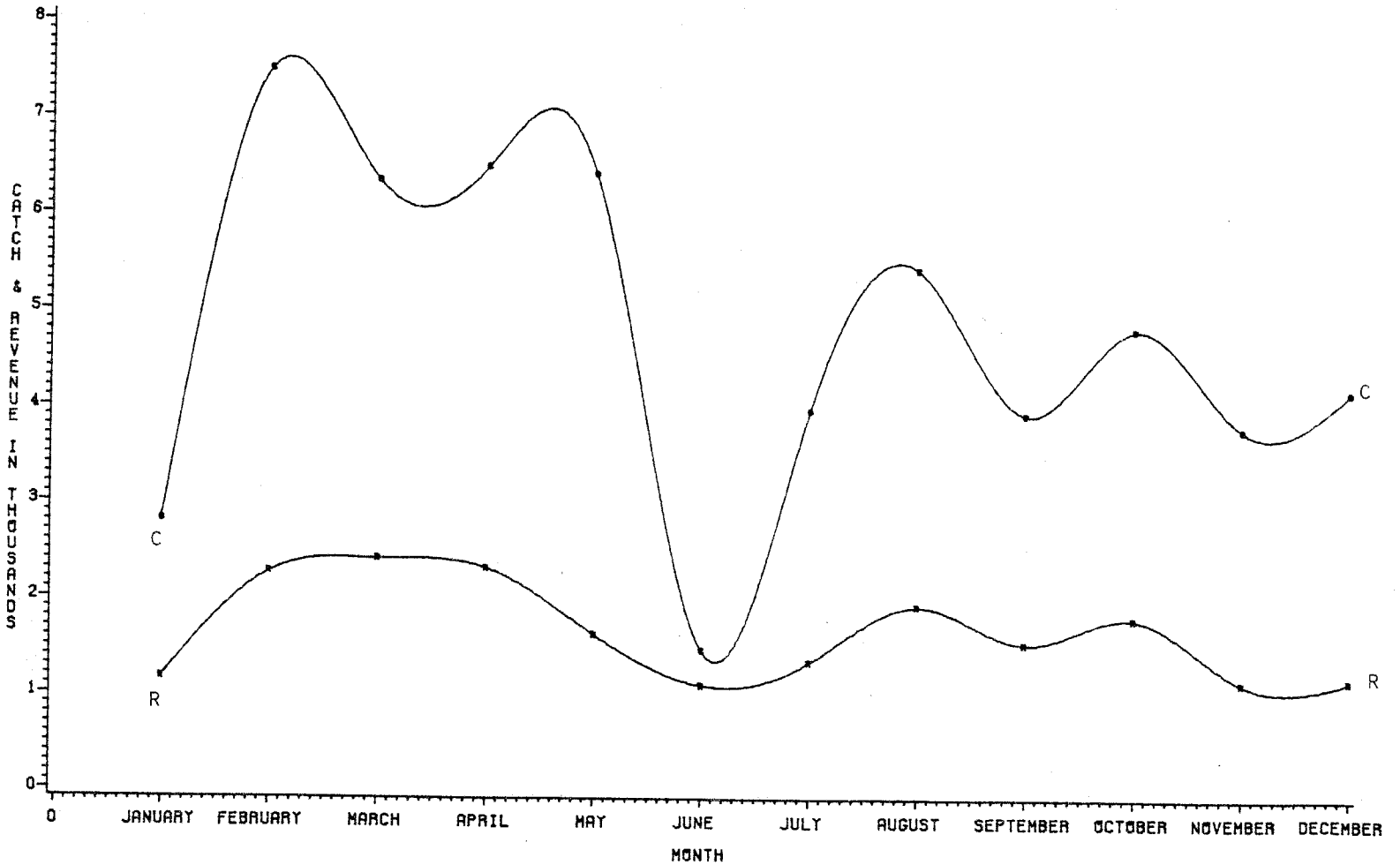

Figure 2-D.--Sailfish. Plot of revenue and catch by month (1949-78).

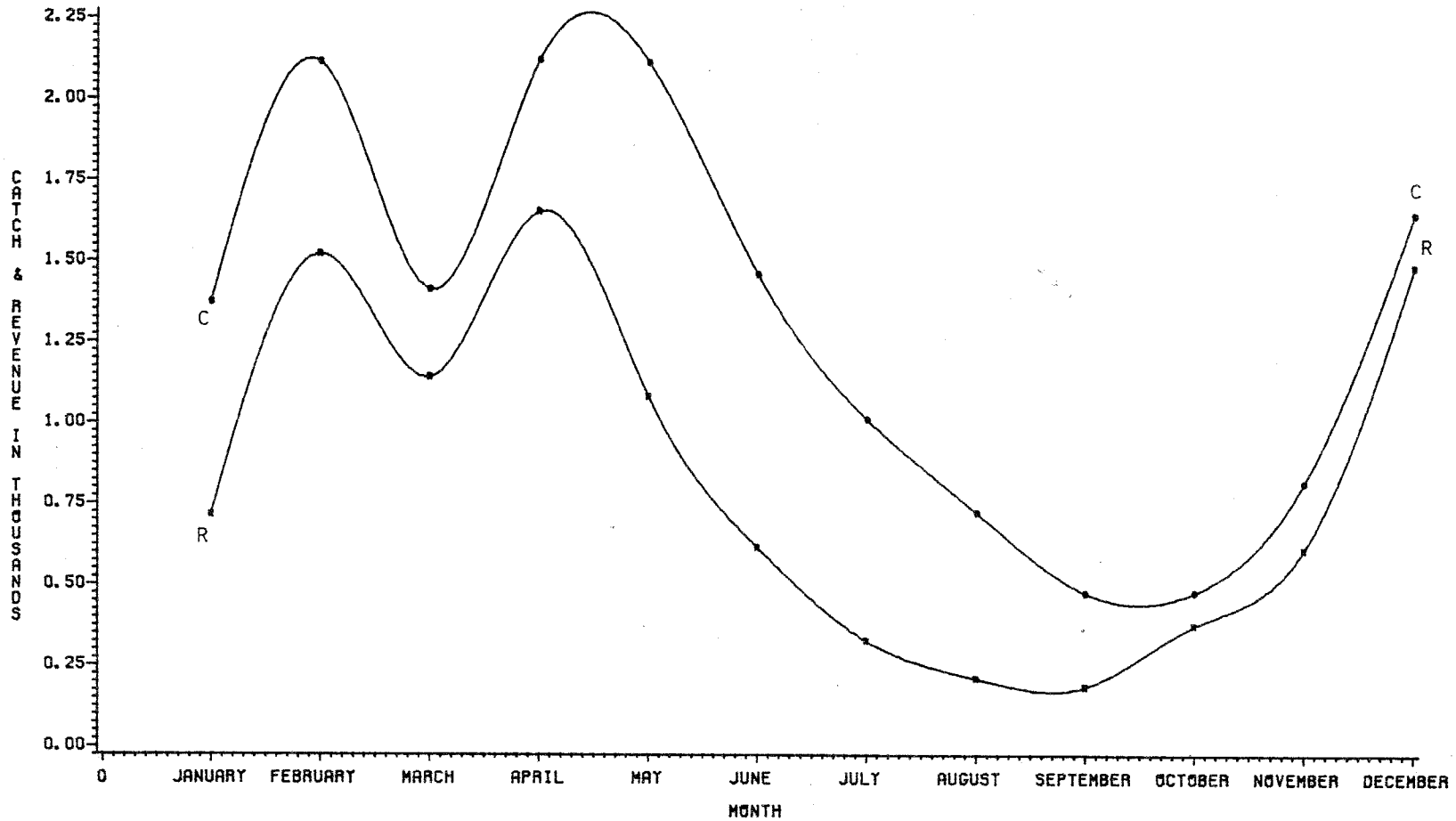

Figure 2-E.--Shortbill spearfish. Plot of revenue and catch by month (1949-78).

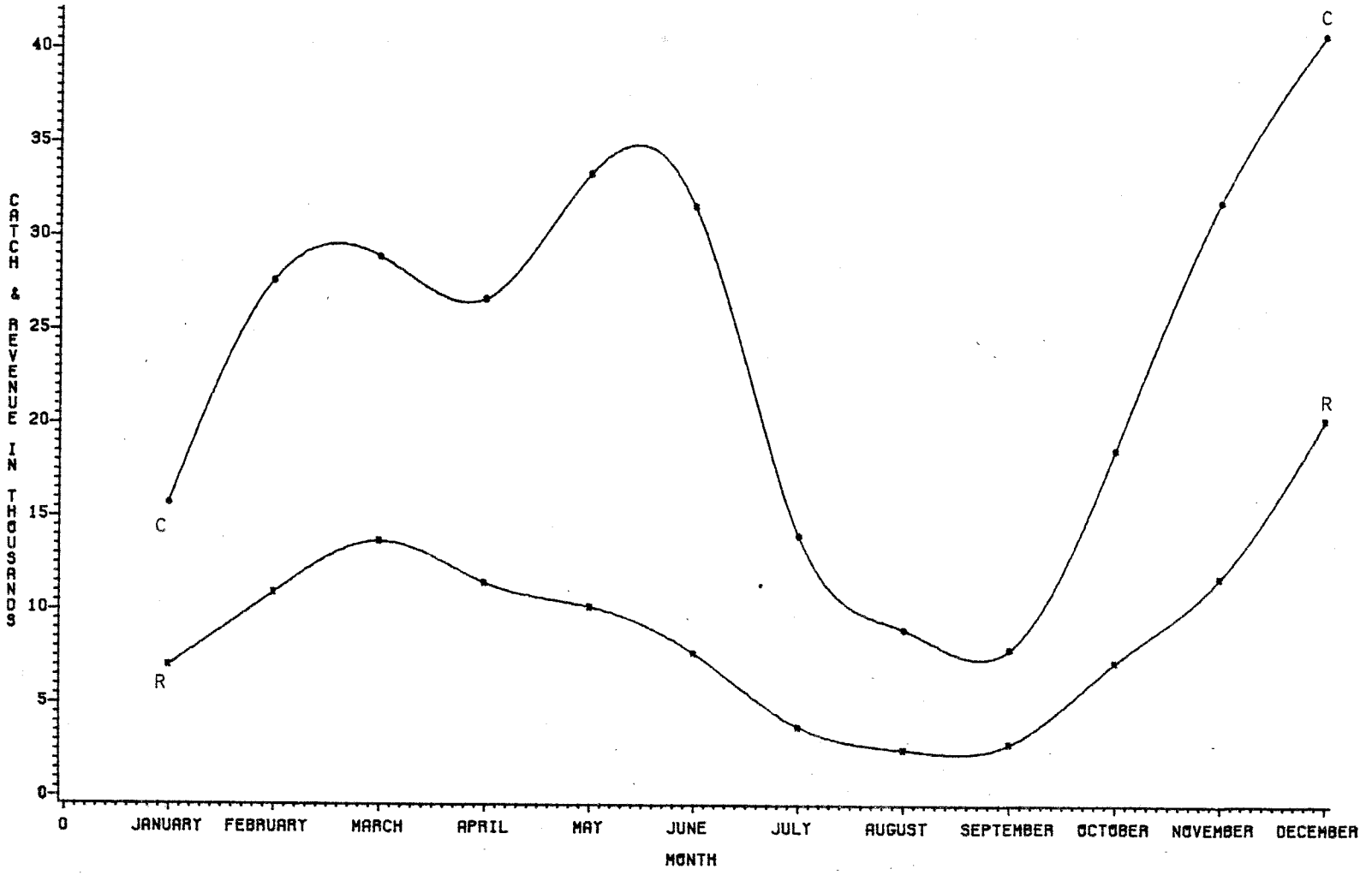

Figure 2-F.--Striped marlin. Plot of revenue and catch by month (1949-78).

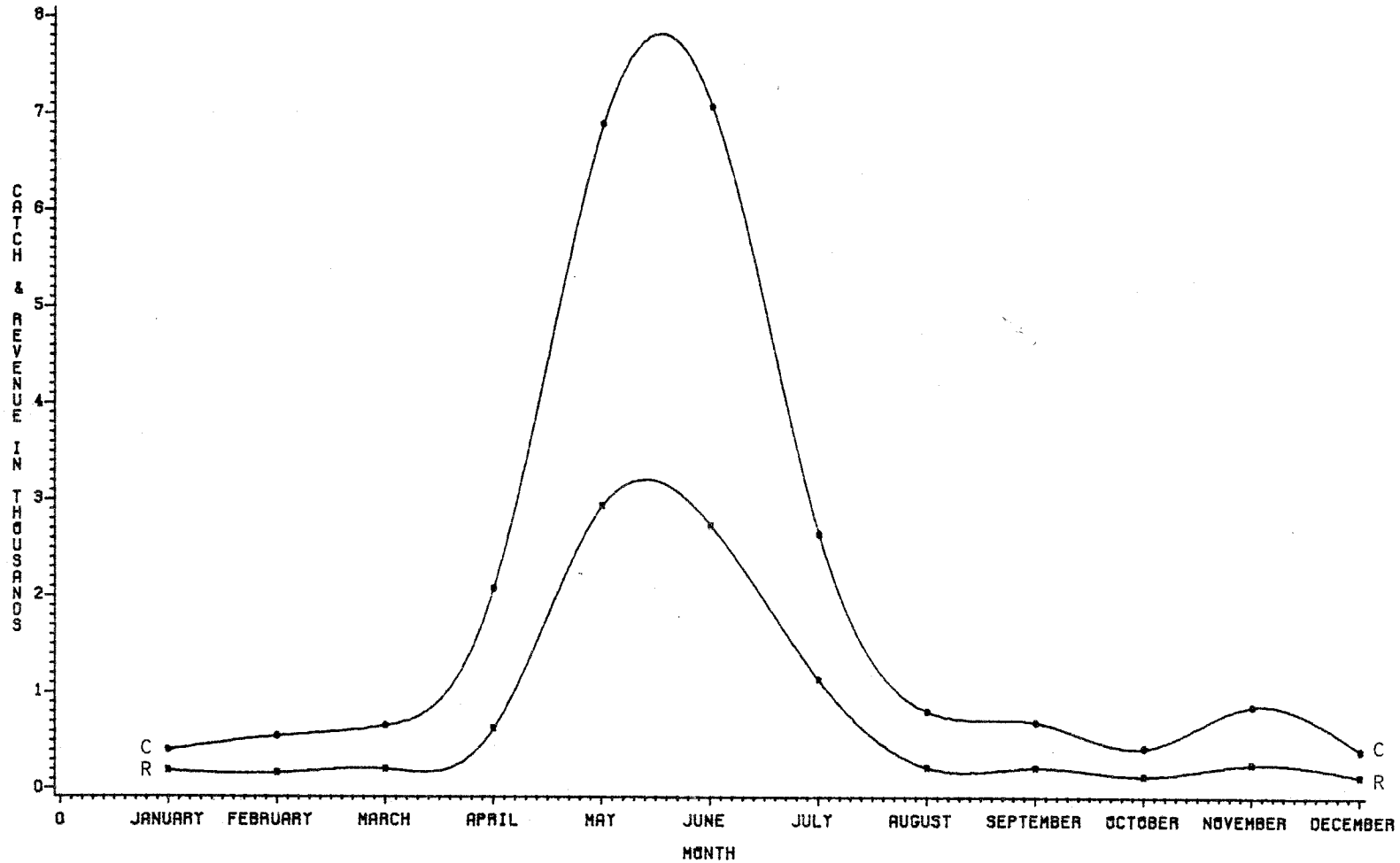

Figure 2-G.--Swordfish (broadbill). Plot of revenue and catch by month (1949-78).

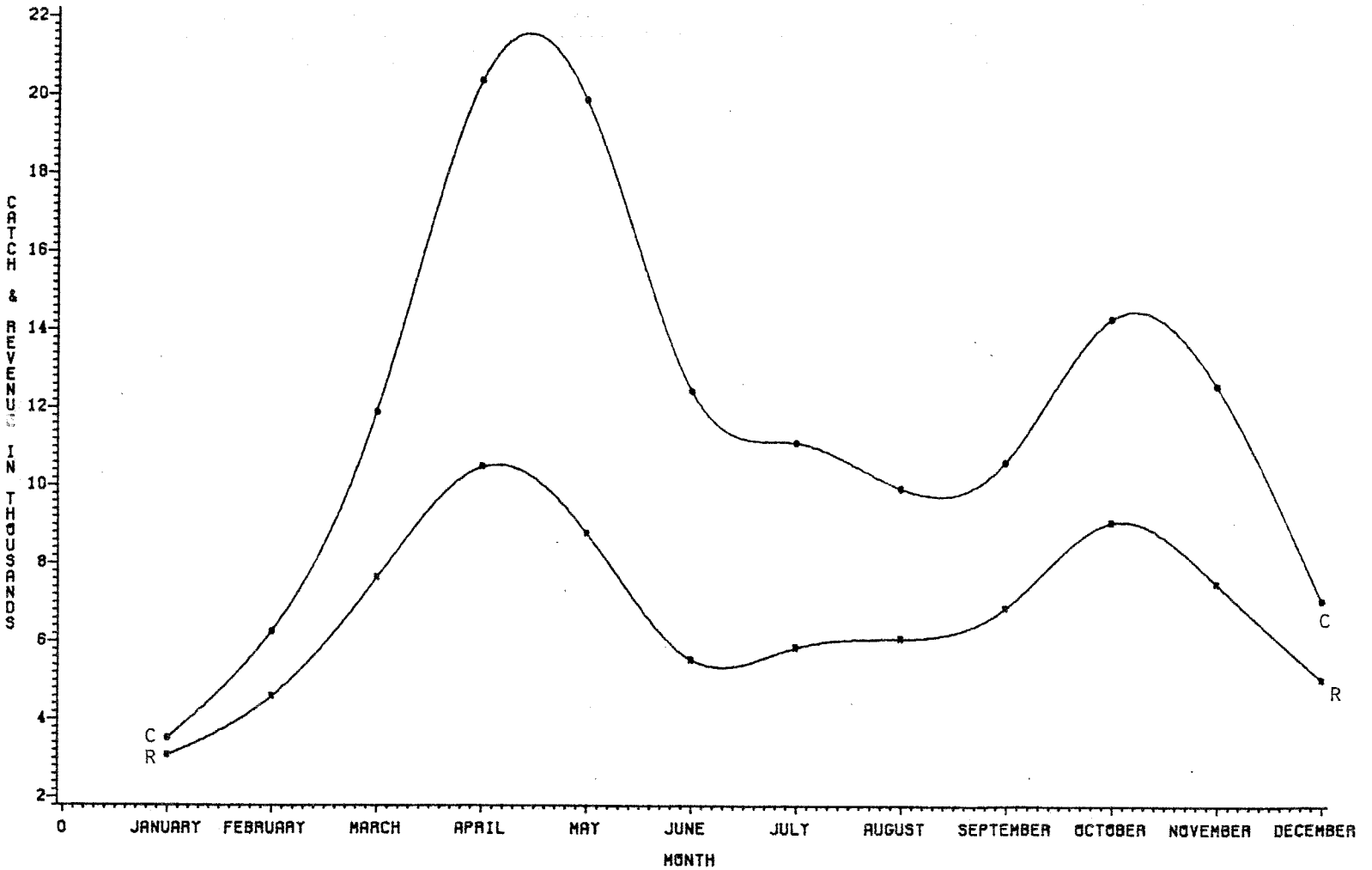

Figure 2-H.--Mahimahi. Plot of revenue and catch by month (1949-78).

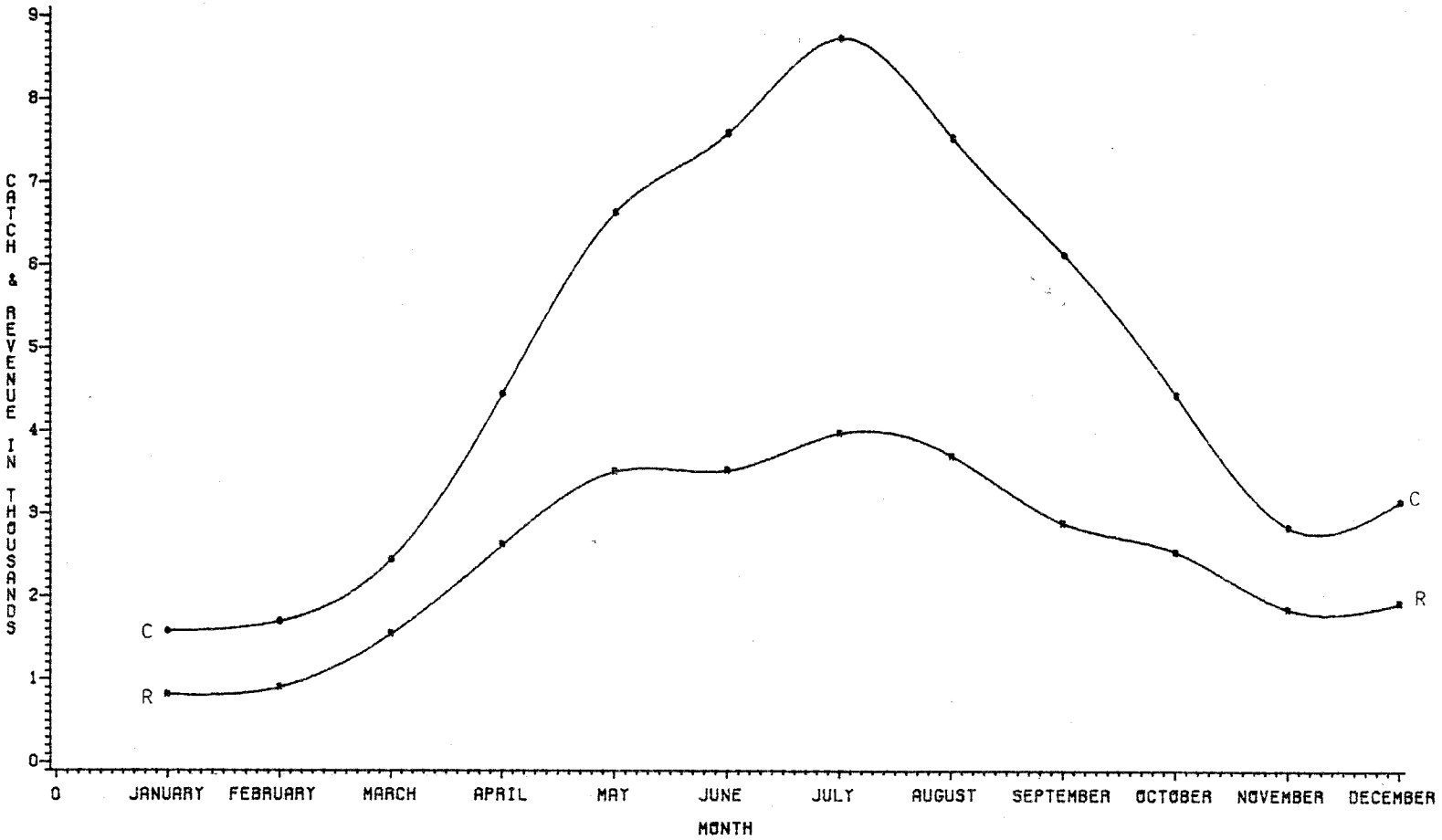

Figure 2-I.--Ono (wahoo). Plot of revenue and catch by month (1949-78).

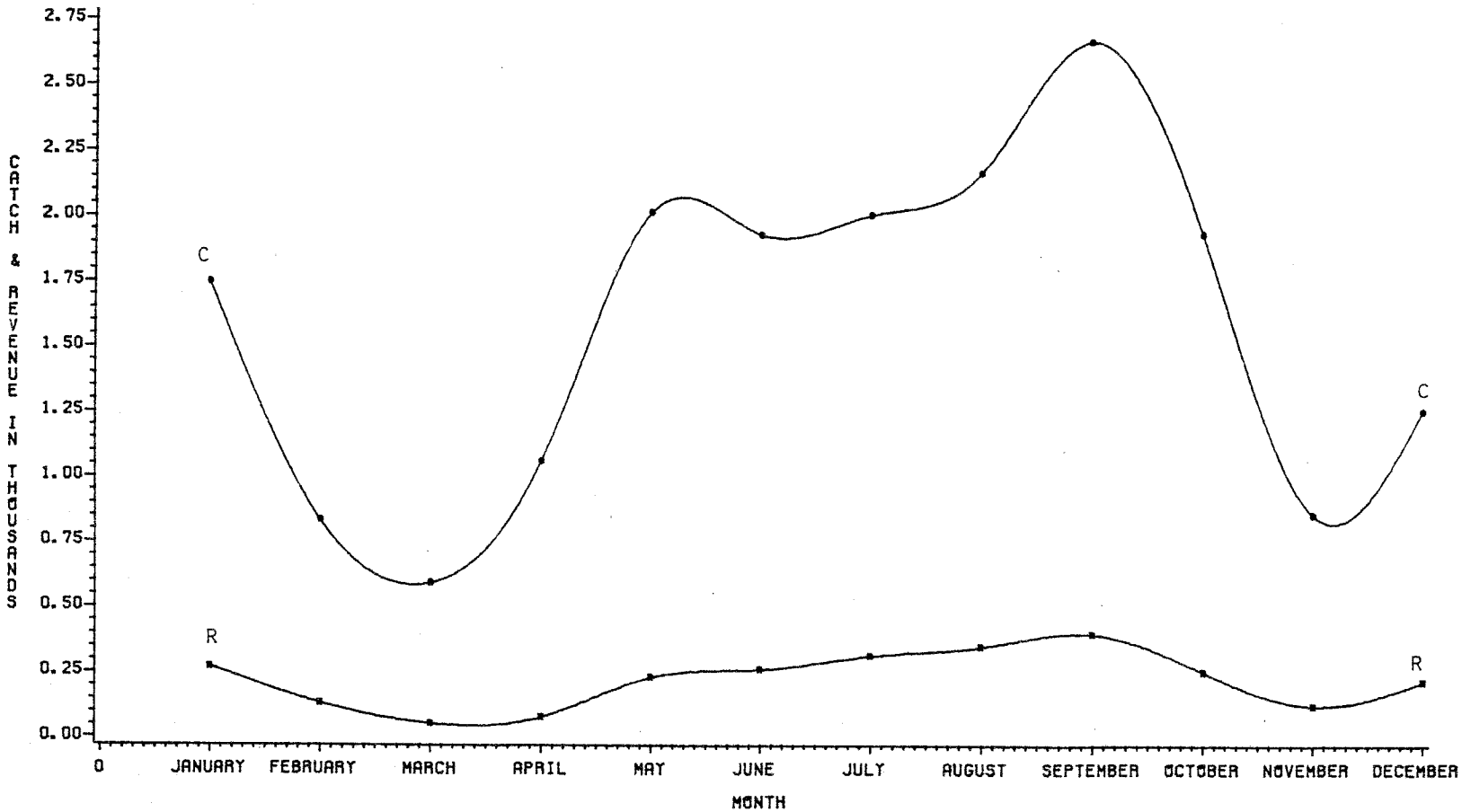

Figure 2-J.--Shark. Plot of revenue and catch by month (1949-78).

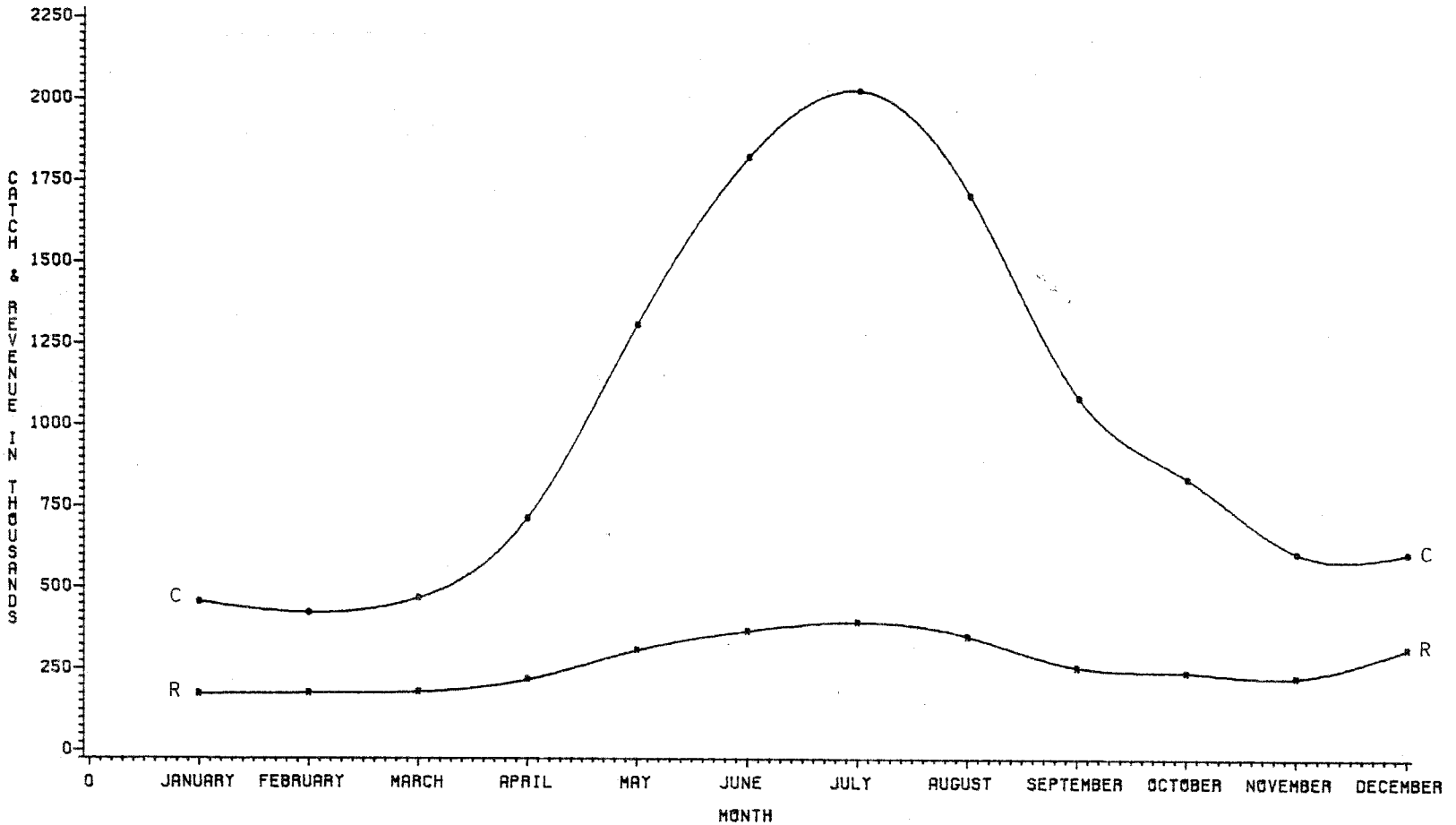

Figure 2-K.--Tunas and billfishes. Plot of revenue and catch by month (1949-78).

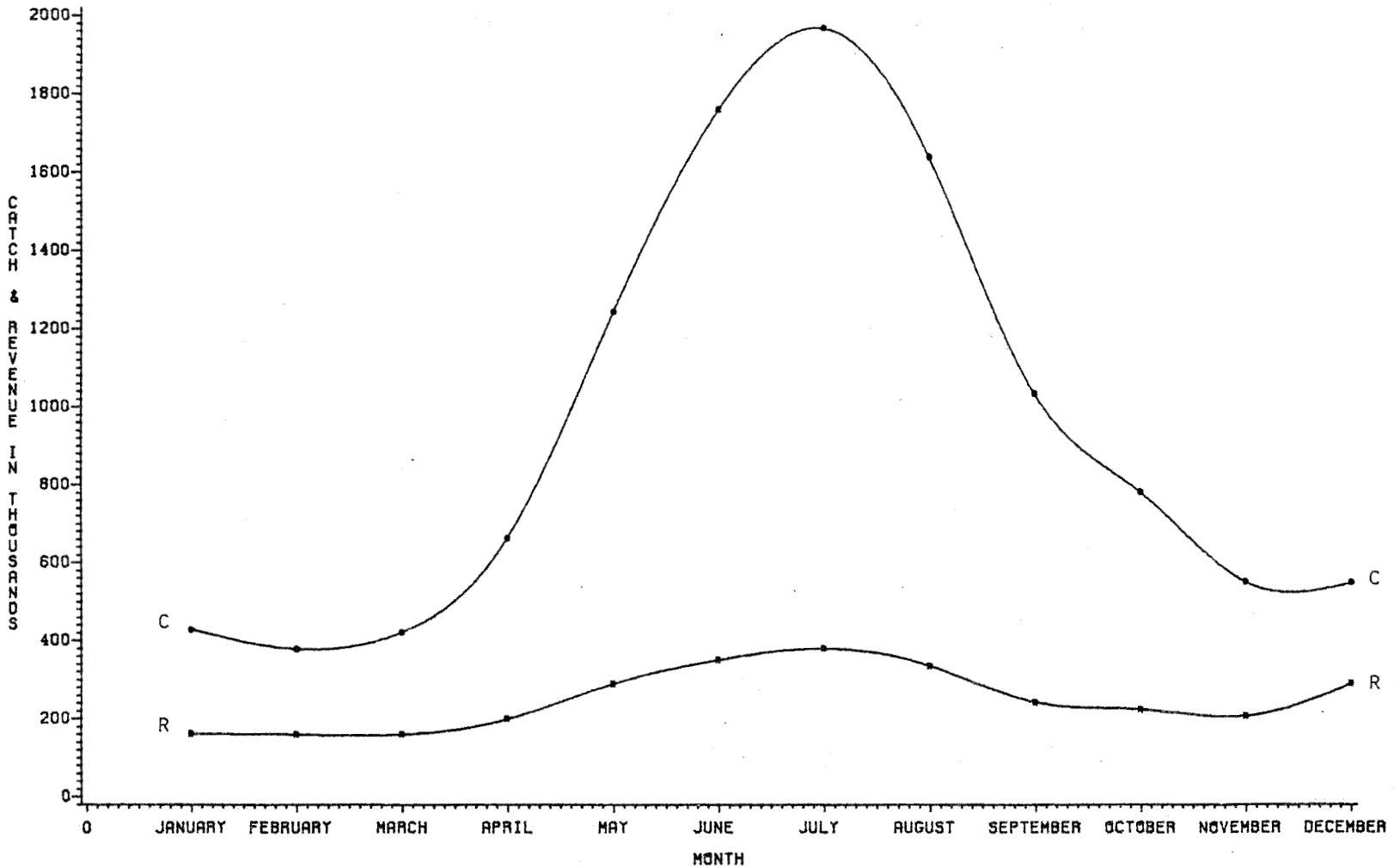

Figure 2-L.--Tunas. Plot of revenue and catch by month (1949-78).

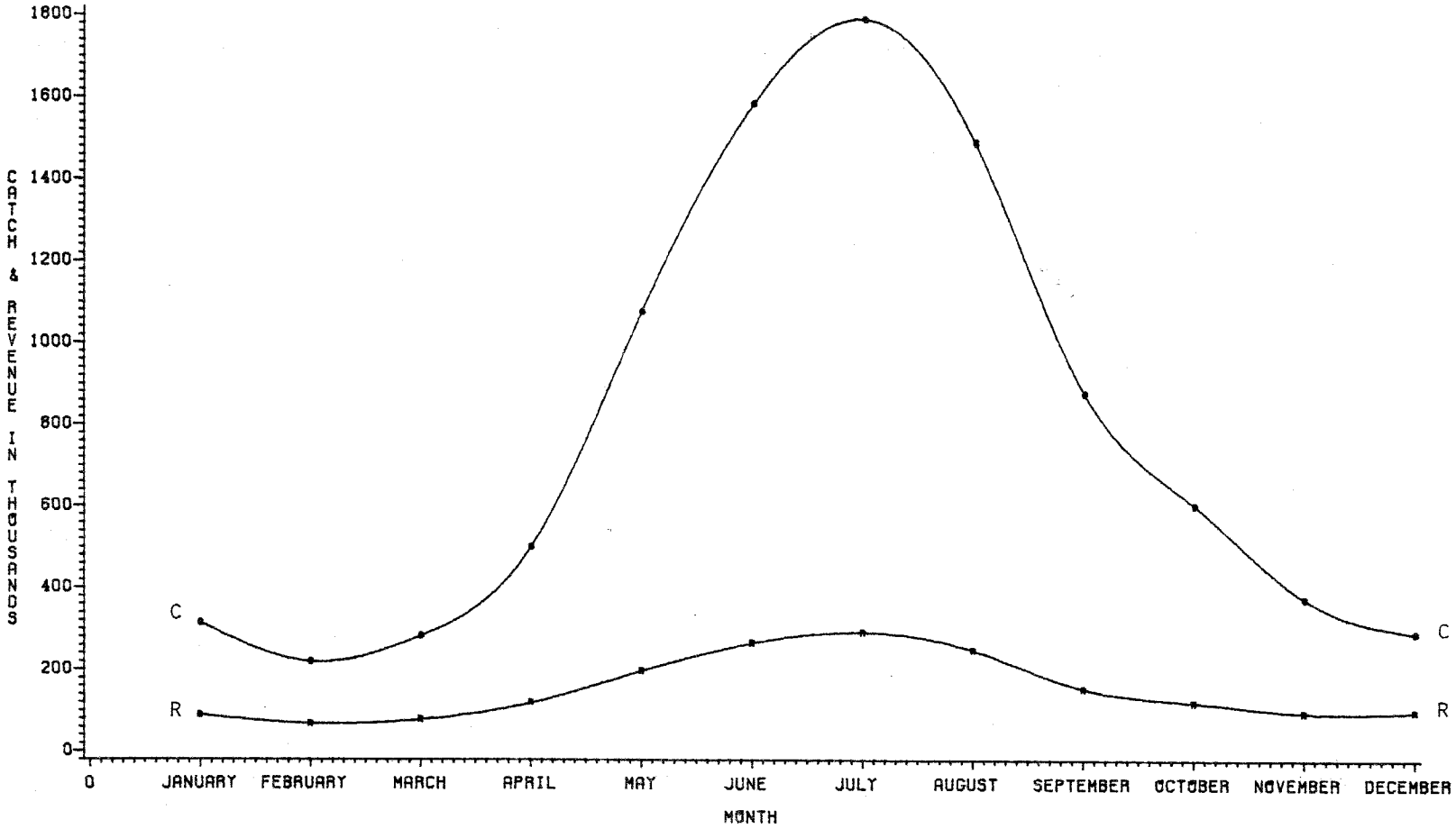

Figure 2-M.--Aku (skipjack tuna). Plot of revenue and catch by month (1949-78).

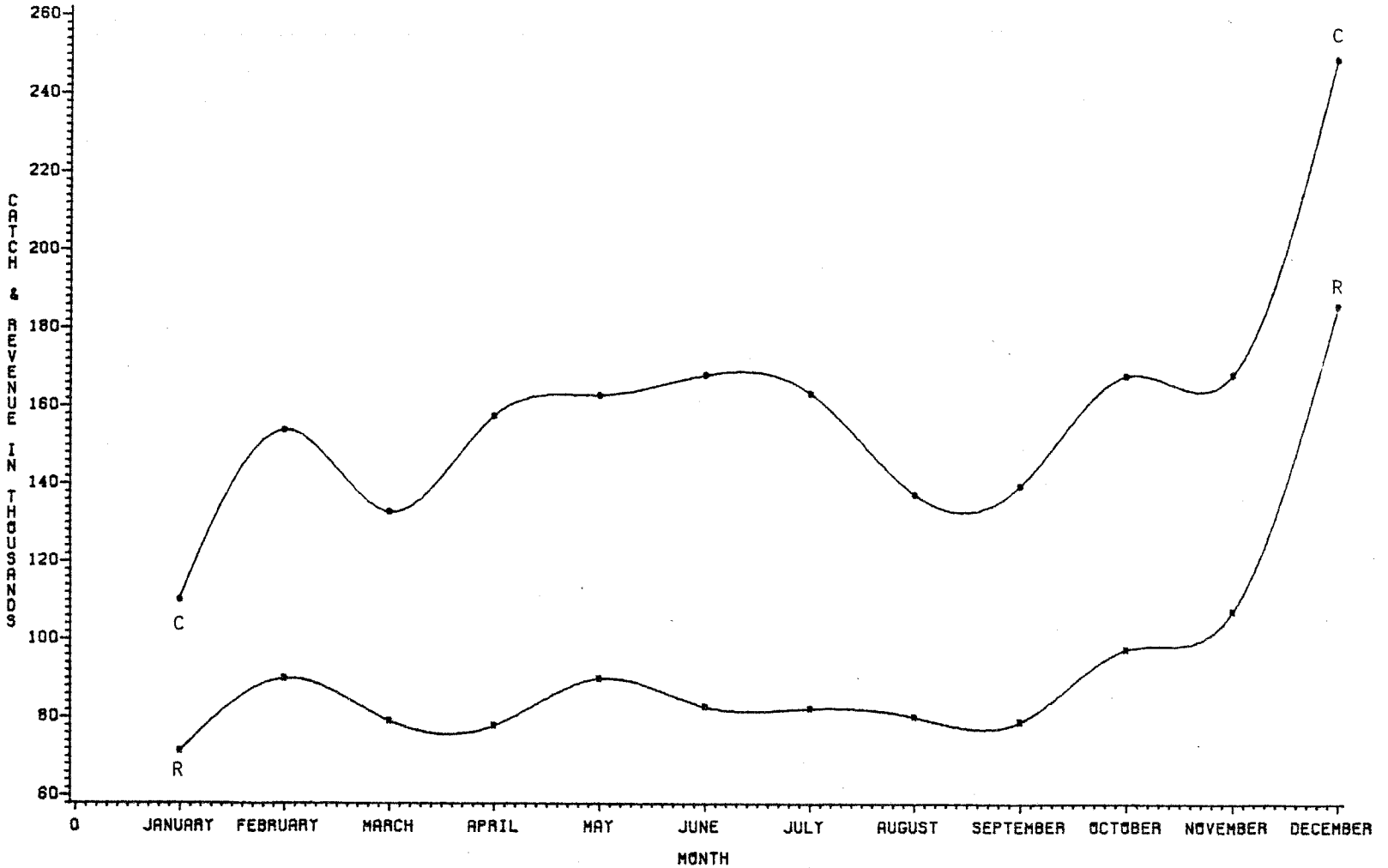

Figure 2-N.--Ahi (yellowfin tuna, bigeye tuna, and miscellaneous. Plot of revenue and catch by month (1949-78).

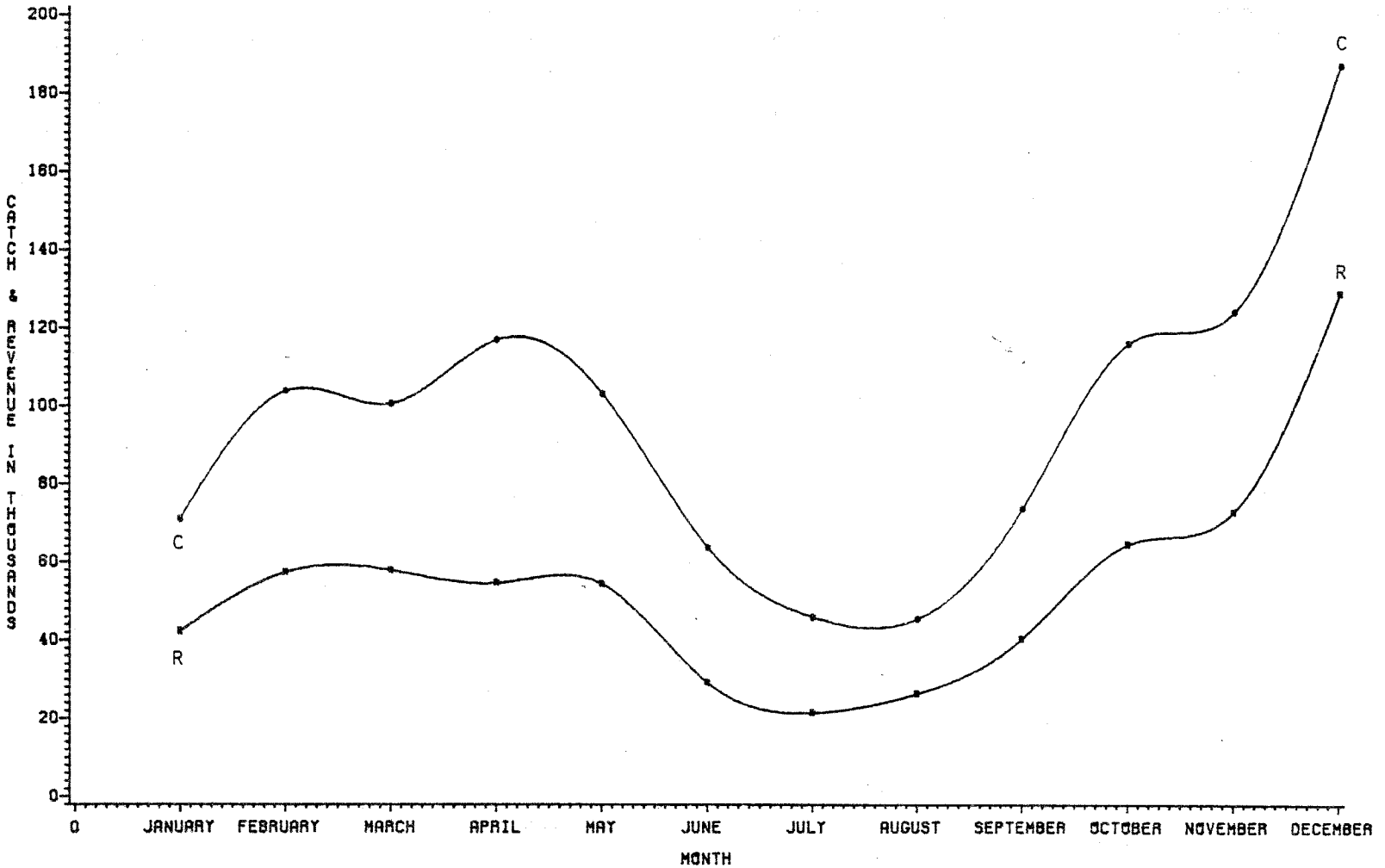

Figure 2-O.--Ahi (bigeye tuna). Plot of revenue and catch by month (1949-78).

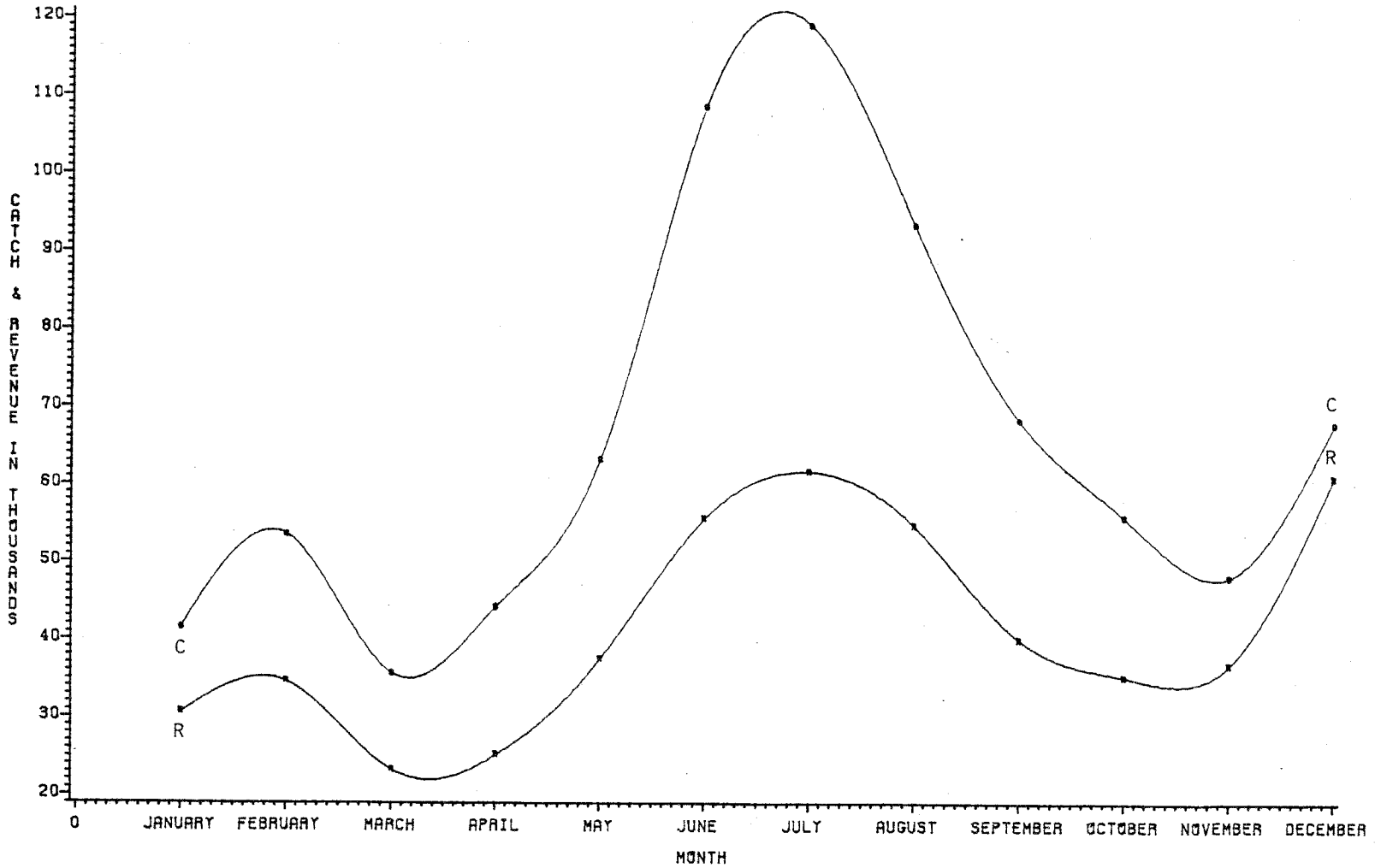

Figure 2-P.--Ahi (yellowfin tuna). Plot of revenue and catch by month (1949-78).

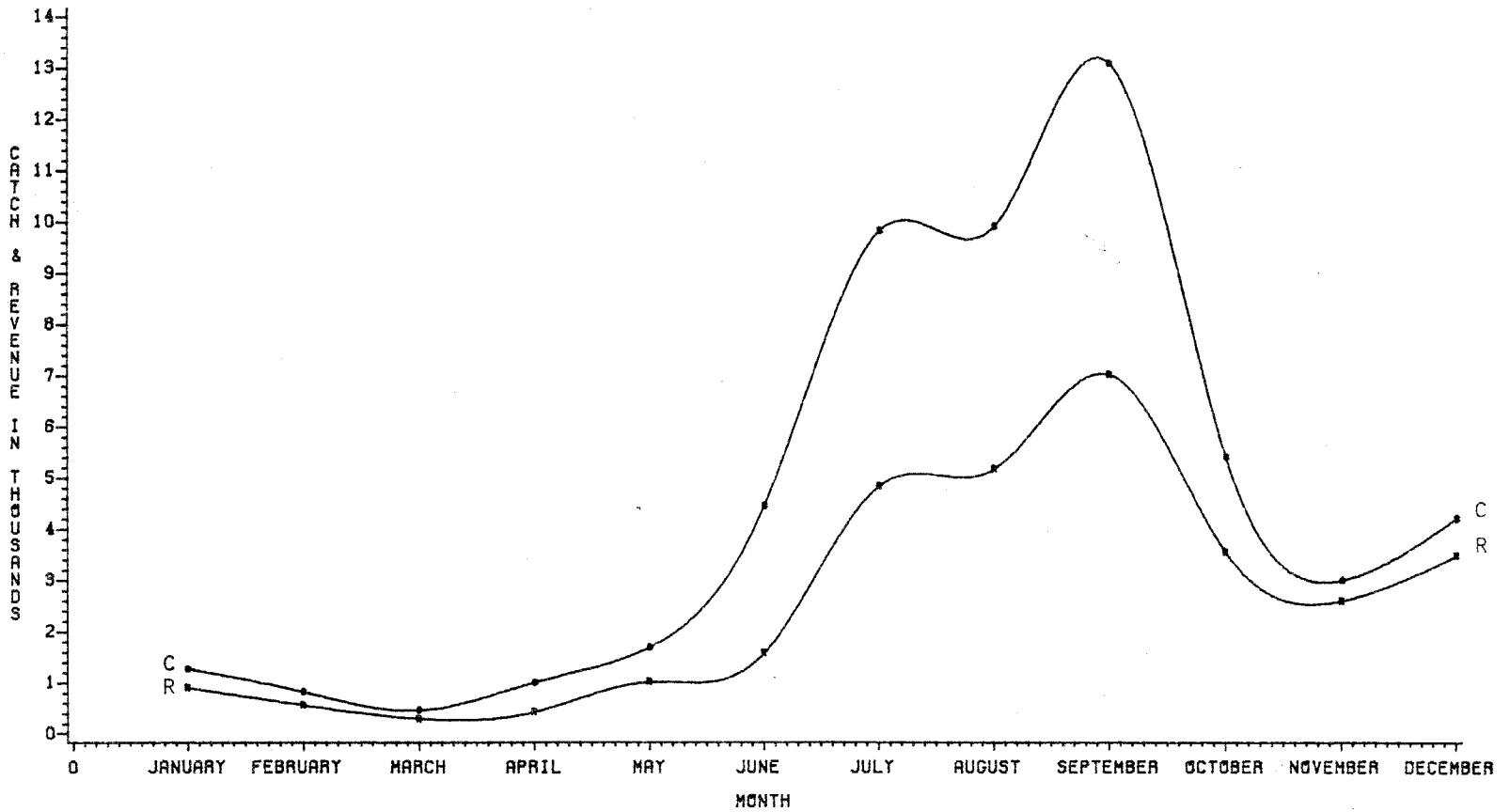

Figure 2-Q.--Ahipalaha (albacore). Plot of revenue and catch by month (1949-78).

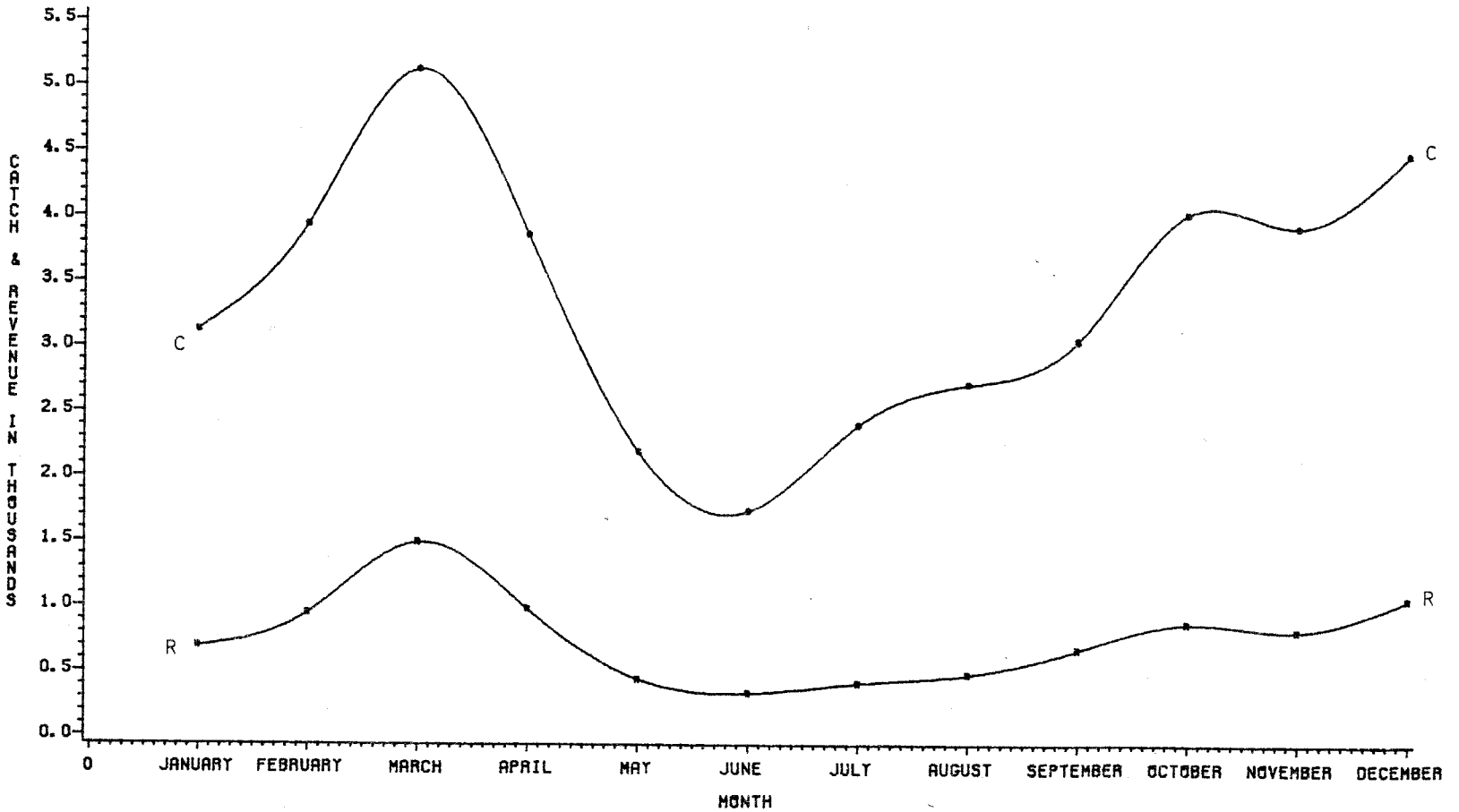

Figure 2-R.--Kawakawa. Plot of revenue and catch by months (1949-78).