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UNITED STATES LOBSTER AND SPINY LOBSTER PRODUCTION (1921-49) AND IMPORTS (1920-49)

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ABSTRACT

UNITED STATES PRODUCTION AND IMPORTS OF LOBSTERS AND SPINY LOBSTERS ARE DISCUSSED IN THIS ARTICLE FOR THE PERIOD 1921-49. THE PRINCIPAL LOBSTER FISHERY IN THE UNITED STATES IS IN THE NEW ENGLAND AREA. ALTHOUGH SOME SPINY LOBSTERS ARE PRODUCED IN FLORIDA AND CALIFORNIA, THE AMOUNT IS NEGLIGIBLE AS COMPARED WITH THE TOTAL PRODUCTION OF LOBSTERS AND SPINY LOBSTERS. THERE HAS BEEN A LARGE INCREASE IN THE UNITED STATES LOBSTER CATCH SINCE 1950, BUT THE INCREASE IN THE IMPORTS OF LOBSTER AND SPINY LOBSTERS HAS BEEN EVEN GREATER. SINCE THERE ARE NO GREAT UNEXPLOITED AREAS IN WHICH TO INITIATE NEW LOBSTER FISHERIES, FURTHER INCREASE IN DOMESTIC PRODUCTION IS DEPENDENT ON THE BIOLOGICAL PRODUCTIVITY OF THE STOCKS IN THE NORTH ATLANTIC REGION. GREATER IMPORTS ARE ANTICIPATED IN THE FUTURE, SINCE EXPANSION OF THE UNITED STATES MARKET FOR LOBSTERS AND SPINY LOBSTERS IS INDICATED.

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INTRODUCTION

United States production and imports of lobsters and spiny lobsters have increased markedly within the last several decades. Several accounts of the magnitude of lobster and spiny lobster imports into this country have been prepared. In 1940 and 1941, at the request of the North Atlantic Lobster Conference (an organization formed by the representatives of government and industry in the various lobster-producing states) the senior author prepared several unpublished reports on lobster imports and their relation to the domestic fishery. Chace and Dumont (1949) discussed the recent trends in the spiny lobster fisheries of the world, and presented data on the imports of these crustaceans. It is the purpose of this article to bring up to date the recent developments in the consumption of lobsters and spiny lobsters in the United States.

The references to "lobster" pertain to the North Atlantic species Homarus americanus and H. vulgaris, the common or northern lobsters of North America and Europe. References to "spiny lobsters" include the crustaceans also known as sea crawfish or sea crayfish. The principal species of spiny lobsters imported into this country are Panulirus argus from the Caribbean area, P. interruptus from the Pacific coasts of Mexico and Central America, P. longipes from Australia, and Jasus lalandei from Africa, Australia, and New Zealand.

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DOMESTIC LOBSTER PRODUCTION

Northern lobsters in the United States are caught in commercial quantities along the Atlantic seaboard from the offshore waters of North Carolina and Virginia north to the Canadian boundary. Table 1 and Figure 1 show the landings of lobsters in these States since 1921. Note that no statistics are given for northern lobsters caught south of Delaware. The quantities of northern lobsters captured in the waters adjacent to the southern limit of their range is less than 100,000 pounds a year--insignificant in comparison to the total United States production. In 1949, the total U. S. production of northern lobsters amounted to 24,656,000 pounds, valued at \$8,903,000 to the fishermen.

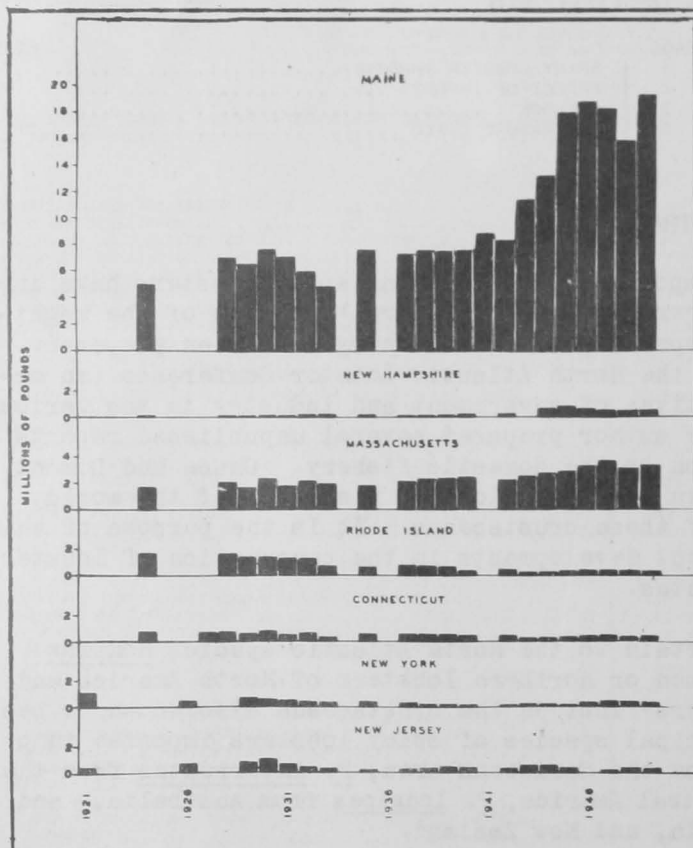


MAINE LOBSTER FISHERMAN SETTING OUT HIS "POTS" OR TRAPS.

The most striking feature of these data is the

great increase in the lobster catch since 1940 when the total United States yield of the lobster fishery was less than 12 million pounds. In 1947, by comparison,

almost 24 million pounds were landed in the New England and Middle Atlantic States alone. Landings dropped to about 21 million pounds in 1948, but the 1949 catch was reported as 24.7 million pounds.



Maine is the greatest producer of lobsters in this country, and the almost spectacular increase in the United States catch has been largely a reflection of the status of the fishery in that State. According to the records, the 1949 catch of over 19 million pounds was the largest since 1889 when 25 million pounds were caught. Both New Hampshire and Massachusetts have shown similar increases in catches since 1940. While lobster production in southern New England and in the Middle Atlantic States has fluctuated considerably since 1921, the production there is too small to significantly affect the totals.

FIG. 1 - NEW ENGLAND AND MIDDLE ATLANTIC LOBSTER CATCH BY STATES FOR THE YEARS IN WHICH STATISTICAL SURVEYS WERE MADE.

Table 1 - New England and Middle Atlantic Lobster Production, 1921-49^{1/2}

Year	N E W E N G L A N D											
	Maine		New Hampshire		Massachusetts		Rhode Island		Connecticut		Total	
	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)
1921	-	-	-	-	-	-	-	-	-	-	-	-
1922	-	-	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-	-	-
1924	5,513,002	1,772,165	125,600	40,000	1,679,601	557,437	1,696,346	462,000	701,647	240,809	9,716,196	3,072,411
1925	-	-	-	-	-	-	-	-	-	-	-	-
1926	-	-	-	-	-	-	-	-	-	-	-	-
1927	-	-	-	-	-	-	-	-	673,010	257,720	-	-
1928	7,100,332	2,013,451	130,099	40,785	2,042,331	761,561	1,637,659	357,103	693,558	240,981	11,603,979	3,413,381
1929	6,620,615	1,954,346	125,198	41,684	1,630,531	591,227	1,353,515	341,568	592,607	203,373	10,322,466	3,132,198
1930	7,750,632	2,007,343	180,587	40,363	2,338,234	625,946	1,353,107	313,550	734,712	230,266	12,357,322	3,217,468
1931	7,166,310	1,633,684	143,289	50,151	2,245,753	627,198	1,259,173	269,231	497,494	138,168	11,312,019	2,718,432
1932	6,056,932	1,090,741	219,303	44,479	2,146,371	433,404	1,257,204	203,255	589,309	141,148	10,270,119	1,913,027
1933	5,897,635	1,000,094	216,929	48,230	1,928,616	381,649	708,095	113,933	336,800	64,135	9,088,125	1,608,041
1934	-	-	-	-	-	-	-	-	-	-	-	-
1935	7,687,200	1,767,498	194,400	49,523	1,905,300	449,327	619,000	132,690	546,400	122,136	10,852,300	2,520,224
1936	-	-	-	-	-	-	-	-	-	-	-	-
1937	7,348,500	1,387,436	155,800	37,511	2,134,900	560,291	773,300	173,083	522,900	140,712	10,935,900	2,304,033
1938	7,659,200	1,310,013	170,200	37,272	2,315,100	499,410	709,700	159,876	553,600	136,047	11,407,800	2,142,613
1939	7,570,800	1,208,924	178,900	32,868	2,337,800	472,102	635,800	124,504	588,200	125,115	11,311,500	1,963,513
1940	7,643,000	1,291,228	235,800	44,802	2,438,500	467,177	372,600	86,494	475,400	110,865	11,165,300	2,000,566
1941	8,937,182	1,582,719	-	-	-	-	-	-	-	-	-	-
1942	8,403,800	1,320,262	292,200	60,159	2,254,000	628,174	432,700	108,177	408,300	115,536	11,791,500	2,740,308
1943	11,468,000	2,934,303	455,000	136,500	2,513,700	791,080	292,400	82,592	230,800	83,081	14,964,900	4,027,556
1944	13,250,100	3,313,368	686,400	171,950	2,741,200	928,989	234,200	117,100	291,500	116,125	17,203,400	5,147,532
1945	17,988,200	7,361,748	823,700	347,954	2,873,900	1,309,546	266,700	133,350	314,400	154,771	22,266,900	9,307,369
1946	18,779,000	7,186,325	610,000	273,900	3,284,100	1,408,979	359,900	162,325	400,900	192,583	23,433,800	9,224,112
1947	18,277,200	6,816,196	520,000	213,200	3,671,400	1,289,513	392,700	180,701	455,100	217,956	23,316,400	8,717,566
1948	15,923,000	6,439,467	401,500	248,630	3,211,600	1,379,076	384,600	176,864	305,600	151,870	20,226,300	8,395,907
1949	19,272,700	6,696,961	415,900	166,560	3,563,000	1,405,385	354,600	155,859	388,300	169,058	23,994,500	8,593,623

Year	M I D D L E A T L A N T I C								New England and Middle Atlantic Total	
	New York		New Jersey		Delaware		Total		Pounds	Value (\$)
	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)	Pounds	Value (\$)		
1921	1,037,395	196,762	397,841	88,588	10,400	2,500	1,445,636	287,950	-	-
1922	-	-	-	-	-	-	-	-	-	-
1923	-	-	-	-	-	-	-	-	-	-
1924	-	-	-	-	-	-	-	-	-	-
1925	-	-	-	-	-	-	-	-	-	-
1926	455,218	130,716	643,286	193,649	20,640	6,202	1,119,144	330,567	-	-
1927	-	-	-	-	-	-	-	-	-	-
1928	-	-	-	-	-	-	-	-	-	-
1929	647,061	173,589	765,567	198,882	12,600	3,790	1,425,228	376,251	11,747,694	3,508,449
1930	536,391	136,692	1,010,579	230,110	11,750	2,620	1,558,720	369,422	13,916,042	3,586,990
1931	483,846	121,887	653,634	167,687	11,250	2,814	1,148,730	292,388	12,460,749	3,010,820
1932	397,081	70,157	470,130	92,755	11,050	2,763	878,261	165,675	11,148,380	2,079,702
1933	346,496	67,256	364,220	67,629	12,840	2,568	723,556	137,453	9,811,681	1,745,494
1934	-	-	-	-	-	-	-	-	-	-
1935	420,500	87,167	218,300	50,754	4,100	1,025	643,400	138,946	11,495,700	2,659,170
1936	-	-	-	-	3,530	825	-	-	-	-
1937	366,800	75,693	268,800	56,073	4,300	1,290	639,900	133,061	11,575,800	2,437,094
1938	244,400	53,297	326,900	47,578	3,100	927	574,400	101,802	11,982,200	2,244,220
1939	233,500	47,743	432,900	65,103	5,900	1,840	672,300	114,691	11,983,800	2,079,204
1940	191,100	48,113	401,900	81,047	1,200	420	594,200	129,580	11,759,500	2,130,146
1941	-	-	-	-	-	-	-	-	-	-
1942	156,800	38,648	346,900	72,507	3,300	825	507,000	111,980	12,293,500	2,352,288
1943	205,000	73,285	563,200	131,079	4,500	1,125	772,700	205,489	15,737,600	4,233,045
1944	195,200	70,227	525,300	156,808	4,500	1,350	725,000	228,385	17,928,400	4,430,302
1945	140,100	58,630	315,600	93,680	4,500	1,350	460,200	153,660	22,727,100	9,461,029
1946	309,700	133,661	-	-	-	-	-	-	-	-
1947	417,300	203,442	191,800	69,290	-	-	603,100	272,732	23,925,500	8,990,298
1948	361,400	161,285	397,300	169,977	-	-	758,700	331,262	20,985,000	8,727,169
1949	344,100	160,835	315,200	148,165	300	75	659,600	309,075	24,654,100	8,902,698

^{1/2} FROM DATA PUBLISHED BY THE U.S. FISH AND WILDLIFE SERVICE AND THE FORMER U.S. BUREAU OF FISHERIES, EXCEPT FOR THE MAINE FIGURES, WHICH HAVE BEEN COMPILED BY THE MAINE DEPARTMENT OF SEA AND SHORE FISHERIES.

LOBSTER IMPORTS FROM CANADA AND NEWFOUNDLAND

In Canada and Newfoundland, the yield of the lobster fisheries has been much greater than in the United States. Table 2 and Figure 2 present the catch of Newfoundland and of the four Canadian lobster-producing provinces since 1920. It is obvious that, during the past few decades, the production there has not increased as markedly as in the United States. The 1945 catch showed an increase of 34 percent over that of 1940, but this augmented figure is much less than the increase of 93 percent in the United States.

While the Canadian and Newfoundland catches have not increased at the same rate as those in this country, the trend each year has been towards larger exports to the United States. Figure 3, based on the data in Table 3, illustrates this trend. In the decade 1920 to 1929, imports from Canada were about 58 million pounds, in the next decade (1930 to 1939), about 96 million pounds, and in 1940 to 1949 over 156 million pounds. During the same decades, "not canned"^{1/} lobster imports from Newfoundland rose from a ten-year total of 57 thousand pounds to about 2 million pounds, and finally in the last decade to over 11 million pounds. In 1949, the imports from Canada were the greatest in history. The recorded imports to this country from Newfoundland have declined in the last few years. This apparent decrease has occurred because Newfoundland has been shipping greater quantities of her lobsters to the United States via Canada. When this occurs, the imports are considered by the United States Bureau of Customs as originating in Canada, rather than in Newfoundland.

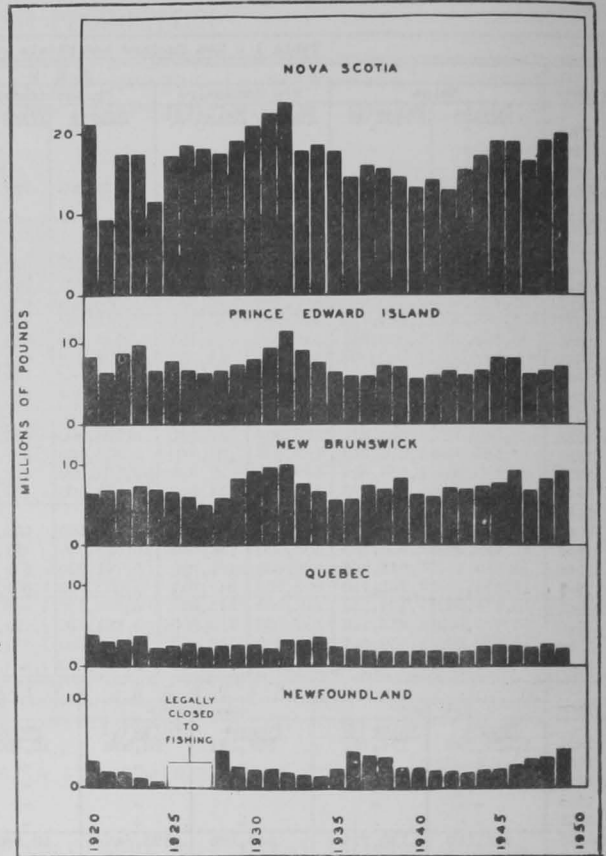


FIG. 2 - CANADIAN (INCLUDING NEWFOUNDLAND) LOBSTER LANDINGS BY PROVINCES.

There are several reasons for the increasing importance of the United States as a market for Canadian and Newfoundland lobsters. The great decline in the overseas markets has been caused principally by monetary restrictions in other countries, particularly in Northern Europe. Because of the augmented demand for

Table 2 - Canadian and Newfoundland Lobster Production, 1920-49^{1/}

Year	Prince Edward Island		Nova Scotia		New Brunswick		Quebec		Newfoundland		Totals	
	Pounds	Value (C\$)	Pounds	Value (C\$)	Pounds	Value (C\$)	Pounds	Value (C\$)	Pounds	Value (C\$)	Pounds	Value (C\$)
1920	8,319,400	703,924	21,393,500	2,768,777	6,434,600	683,585	3,851,000	400,863	3,220,120	-	43,218,620	-
1921	6,381,600	255,264	9,311,500	1,622,680	6,846,500	101,398	3,031,100	123,633	1,950,960	-	27,521,660	-
1922	8,758,300	651,449	17,370,600	1,953,848	6,955,400	825,919	3,308,200	193,564	1,965,861	-	38,358,361	-
1923	9,745,600	378,797	17,272,000	2,239,187	7,368,000	921,831	3,776,400	339,172	1,284,820	-	39,447,620	-
1924	6,583,300	564,750	11,527,500	1,367,097	6,830,300	750,495	2,274,200	283,899	789,460	-	27,990,760	-
1925	7,857,000	681,095	17,069,800	2,140,228	6,589,400	801,949	2,567,600	210,054	2/	-	31,083,800	-
1926	6,629,800	610,757	18,431,600	2,496,006	5,961,100	797,819	2,935,800	251,321	2/	-	33,958,300	-
1927	6,280,000	617,057	17,967,300	2,433,107	4,975,200	694,212	2,460,600	217,696	2/	-	31,683,100	-
1928	6,561,700	553,120	17,240,900	2,210,160	5,797,000	632,556	2,644,500	216,126	4,626,121	-	36,869,821	-
1929	7,359,000	621,467	19,003,500	2,156,776	8,186,200	853,690	2,733,300	215,063	2,763,282	-	40,045,282	-
1930	8,682,000	539,730	20,820,100	2,204,153	9,056,700	717,526	2,767,700	216,303	2,401,078	-	43,127,578	-
1931	9,415,000	553,676	22,364,900	1,846,037	9,498,800	736,000	2,270,300	119,474	2,416,212	-	45,965,212	-
1932	11,457,000	551,731	23,773,000	1,780,026	9,872,200	614,051	3,246,600	164,046	1,999,420	-	50,348,220	-
1933	9,154,700	396,248	17,685,800	1,223,980	7,494,000	514,579	3,157,100	161,318	1,793,746	-	39,285,346	-
1934	7,658,200	536,012	18,459,000	1,821,419	6,507,300	587,658	3,574,700	264,936	1,580,122	-	37,779,322	-
1935	6,287,600	467,804	17,683,600	1,913,774	5,483,100	592,409	2,442,600	196,981	2,417,958	-	34,414,758	-
1936	5,928,600	544,365	14,509,100	1,992,170	5,649,900	692,125	2,239,700	223,473	4,523,457	-	32,250,757	-
1937	5,823,800	524,847	15,896,100	2,304,302	7,258,600	713,801	2,016,500	206,668	4,140,844	-	35,135,844	-
1938	7,121,300	458,762	15,540,500	1,770,722	6,847,400	497,320	1,929,300	137,266	3,885,601	267,923	34,324,101	3,131,993
1939	6,997,700	464,429	14,491,300	1,648,483	8,126,200	692,664	1,851,600	128,378	2,756,481	204,516	34,222,981	3,138,670
1940	5,559,900	353,917	13,193,500	1,457,279	6,122,500	542,495	1,923,200	117,867	2,679,703	161,732	29,472,803	2,653,340
1941	5,995,100	469,153	14,073,400	1,676,447	5,885,000	634,544	1,848,800	131,761	2,372,343	276,201	30,180,643	3,188,106
1942	6,445,400	694,816	12,847,100	2,039,954	6,953,000	978,235	1,779,500	175,709	2,136,733	278,775	30,161,733	4,167,489
1943	5,971,900	999,930	15,374,300	3,087,766	6,854,500	1,421,915	1,908,500	334,364	1,899,716	245,372	32,008,916	6,089,347
1944	6,577,700	1,149,683	17,141,000	4,137,573	7,200,000	1,611,620	2,431,500	430,597	2,292,747	313,936	35,642,947	7,843,409
1945	8,115,800	1,503,647	18,894,500	5,819,077	7,585,500	1,940,120	2,584,300	520,130	2,330,112	623,626	39,510,212	10,406,600
1946	7,948,700	1,982,689	18,669,500	6,177,435	9,185,800	2,589,057	2,354,500	615,356	2,790,363	956,466	41,098,863	12,321,503
1947	6,094,000	1,010,000	16,564,000	5,232,000	6,690,000	1,544,000	2,305,000	389,000	3,408,945	550,103	38,058,945	9,025,103
1948	6,513,000	1,418,000	19,030,000	5,774,000	8,057,000	2,097,000	2,665,000	529,000	3,717,551	953,963	39,942,551	10,771,963
1949	7,031,000	1,388,000	19,928,000	6,226,000	9,110,000	2,108,000	2,096,000	389,000	4,000,000 ^{2/}	1,000,000 ^{2/}	42,167,000	11,111,000

^{1/} DATA NOT AVAILABLE.
^{2/} THE 1920-46 STATISTICS FOR PROVINCES OTHER THAN NEWFOUNDLAND OBTAINED FROM ANNUAL FISHERIES STATISTICS OF CANADA AND THOSE FOR 1947-49 TAKEN FROM THE MONTHLY REVIEW OF CANADIAN FISHERIES STATISTICS. THE NEWFOUNDLAND STATISTICS FOR 1920-39 OBTAINED FROM TEMPLEMAN 1941, NEWFOUNDLAND GOVERNMENT RESEARCH BULLETIN NO. 11 (FISHERIES), AND THOSE FROM 1940-48 TAKEN FROM ANNUAL REPORTS OF NEWFOUNDLAND FISHERIES BOARD.
^{3/} NO FISHING BY GOVERNMENT ORDER.

^{1/} NOT CANNED COMMON OR SPINY LOBSTERS ARE THOSE WHICH ARE SHIPPED INTO THIS COUNTRY NOT HERMETICALLY SEALED IN CANS. COMMON LOBSTERS SO DESIGNATED ARE MAINLY LIVE LOBSTERS, WHILE SPINY LOBSTERS ARE PREDOMINANTLY FROZEN OR COOKED FROZEN MEAT OR TAILS. CANNED COMMON OR SPINY LOBSTERS ARE ALMOST EXCLUSIVELY COOKED MEAT HERMETICALLY SEALED IN CANS.

Table 3 - U.S. Imports of Lobster and Spiny Lobster, Not Canned, 1920-49

Year	C O U N T R Y											Total
	Canada	Newfoundland & Labrador	Cuba	British West Indies	British Honduras	Mexico	Union of South Africa ^{2/}	Australia	New Zealand	Other countries		
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	
1920	5,081,901	7	-	440	-	1,107,698	-	-	-	-	3,134	6,193,180
1921	8,138,151	8,130	-	-	-	1,313,064	-	-	-	-	10,296	9,469,641
1922	4,932,934	3,360	13,295	200	-	829,693	-	200	-	-	5,853	5,785,535
1923	5,088,518	7,247	25,777	-	-	876,503	9,600	-	-	-	34,236	6,349,981
1924	4,418,215	6,081	36,075	-	-	829,967	14,248	-	-	-	7,428	5,312,014
1925	5,810,344	570	25,791	160	15,059	1,065,092	6,000	5,280	-	-	2,741	6,931,037
1926	5,690,798	72	45,181	-	15,655	779,520	-	-	-	-	5,862	6,537,088
1927	5,358,352	-	4,580	2,000	-	1,003,970	-	-	-	-	490	6,369,392
1928	5,770,878	18,429	5,720	-	5,067	734,390	2,640	-	-	-	668	6,537,792
1929	7,537,885	13,442	4,620	-	1,200	1,070,921	-	608	-	-	150	8,628,826
1930	8,830,648	11,926	15,668	-	-	972,633	-	298	56	-	-	9,831,229
1931	8,823,442	9,919	75,502	-	-	1,071,560	-	-	-	-	3,401	9,983,824
1932	10,928,761	2,319	27,626	70,436	-	665,100	-	-	-	-	100	11,694,342
1933	9,900,603	4,960	14,000	81,745	-	621,035	-	-	200	-	-	10,622,543
1934	8,989,954	-	37,905	285,202	-	843,766	1,020	-	-	-	541	10,158,388
1935	8,363,914	340	76,554	491,389	-	936,334	131,595	-	400	-	19,513	10,020,039
1936	8,812,361	766	161,778	572,348	-	934,353	574,198	-	-	-	65,729	11,121,533
1937	10,708,460	3,036	207,372	1,071,668	19,777	899,632	1,694,487	-	-	5,231	101,931	14,711,594
1938	9,974,170	778,874	122,164	999,855	52,273	941,061	1,288,464	-	-	15,274	82,114	14,254,249
1939	10,459,121	1,086,913	156,774	812,209	-	886,798	1,587,270	1,728	-	-	46,902	15,037,615
1940	11,929,091	1,646,728	121,463	711,362	-	894,377	1,928,330	-	-	-	40,941	17,272,292
1941	12,531,922	1,330,618	938,076	759,545	-	1,181,377	2,751,911	600	-	-	-	19,494,049
1942	12,034,835	466,755	256,694	815,195	-	758,172	1,140,547	-	1,650	-	-	15,473,848
1943	12,549,097	263,400	560,922	981,700	-	915,530	462,800	-	-	-	-	15,733,449
1944	14,602,168	577,740	571,729	1,164,571	-	827,827	-	-	-	-	-	17,744,035
1945	18,642,500	1,042,994	353,881	1,487,634	-	1,072,935	433,600	-	-	-	-	23,033,544
1946	18,168,887	1,454,512	250,100	1,275,177	79,220	1,671,234	2,564,345	-	-	-	7,004	25,470,479
1947	16,138,143	2,262,784	425,201	1,438,664	157,538	1,920,442	2,236,780	97,482	29,256	-	8,918	24,715,208
1948	19,058,921	1,791,250	1,150,792	1,207,056	136,263	2,052,531	2,657,178	514,290	30,410	-	8,654	28,607,325
1949	20,794,570	528,225	1,449,217	1,386,897	27,960	2,053,779	2,384,516	1,644,151	394,252	-	15,280	30,678,847

- NONE REPORTED.
 1/ FROM PUBLISHED RECORDS OF U.S. BUREAU OF THE CENSUS.
 2/ INCLUDES SOUTH-WEST AFRICA.

lobsters in the United States, due principally to the relatively prosperous conditions prevailing here, Canada and Newfoundland have been encouraged to export

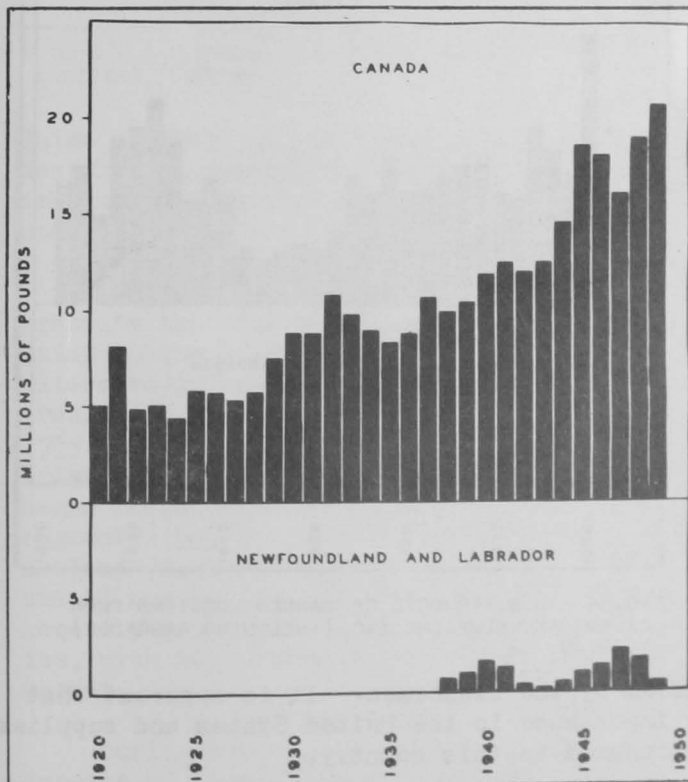


FIG. 3 - U.S. LOBSTER IMPORTS, NOT CANNED, FROM CANADA AND NEWFOUNDLAND (INCLUDING LABRADOR), 1920-49.

greater quantities to this country. This commerce has been encouraged further by modern transportation methods. The use of large refrigerated trucks and trailers has enabled the Canadians and Newfoundlanders to ship live lobsters to the United States market with relatively small losses. Since the demand for live lobsters is much greater and generally more profitable than that for the canned product, the bulk of the production is sent to the coastal cities in the New England States where the lobsters are marketed or are reshipped to other points in the country. Rockland and Portland in Maine, and Gloucester and Boston in Massachusetts are the principal ports to which the live lobsters are shipped. These cities contain extensive facilities for handling the crustaceans.

The imports of canned lobsters from Canada and Newfoundland have not shown the same trend as those not canned. Figure 4 illustrates the yearly fluctuations in the can-

Table 4 - U.S. Imports of Canned Lobster and Spiny Lobster, 1920-49^{1/}

Year	C O U N T R Y									
	Canada	Newfoundland & Labrador	Cuba	British West Indies	British Honduras	Japan	Union of South Africa ^{2/}	United Kingdom	Other Countries	Total
	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.	Lbs.
1920	3,056,222	103,945	-	-	-	14,786	43,296	6,140	372	3,224,761
1921	1,490,196	41,588	-	-	-	17,004	8,000	30,610	507	1,587,905
1922	1,741,851	34,016	10,201	-	-	162,984	54,260	389	80,465	2,084,166
1923	2,020,791	15,175	22,912	-	3,460	-	57,800	5,300	21,428	2,146,946
1924	1,204,316	2,484	64,463	-	9,900	156	125,512	3,482	11,266	1,421,579
1925	1,274,064	2,060	12,251	-	65,297	200	51,500	11,444	33,781	1,450,597
1926	1,586,596	560	35,768	-	40,309	-	72,120	28,978	27,907	1,792,288
1927	1,579,512	915	14,532	4,560	56,938	-	100,620	8,215	14,951	1,780,293
1928	1,473,150	42,551	20,476	-	12,600	-	49,686	1,997	5,526	1,605,986
1929	1,304,164	126,376	15,340	-	240	-	43,258	816	-	1,490,194
1930	1,270,800	32,857	12,822	-	-	1,500	25,200	1,505	473	1,345,157
1931	1,648,818	22,390	1,640	-	-	106	21,760	237	7,770	1,702,721
1932	1,257,550	19,764	5,803	-	-	-	1,278	7,493	15,190	1,307,078
1933	1,441,982	16,214	7,073	705	175	-	766	766	628	1,468,614
1934	830,967	9,430	63,631	-	-	80	13,673	512	-	918,293
1935	636,697	4,220	104,122	7,751	-	-	116,707	3,086	25,054	897,637
1936	683,507	16,675	106,741	10	-	240	48,810	2,250	6,682	864,915
1937	591,138	17,020	82,214	16,219	-	14,950	103,222	1,567	8,086	834,416
1938	505,164	8,526	101,878	23,351	-	89	84,787	1,538	2,065	727,398
1939	643,142	20,006	212,361	40,907	-	-	25,023	-	5,024	946,463
1940	1,231,177	10,868	314,027	35,962	-	-	56,137	-	5,140	1,653,311
1941	1,424,082	5,328	140,034	220,475	-	-	121,250	-	-	1,911,169
1942	1,165,181	1,197	321,190	271,340	-	-	64,544	-	-	1,823,452
1943	1,809,957	7,652	396,686	58,982	-	-	-	-	-	2,273,277
1944	2,300,339	56,351	532,077	21,576	-	-	-	-	2,475	2,912,818
1945	1,987,627	88,587	459,375	-	-	-	-	-	-	2,535,589
1946	1,850,074	120,747	461,529	-	-	-	-	-	25	2,432,375
1947	982,751	88,950	122,359	-	-	-	1,325	-	18,541	1,213,926
1948	1,541,026	97,884	294,449	-	-	-	722,151	-	36,412	2,711,922
1949	1,370,730	38,805	166,248	-	-	-	526,004	-	3,821	2,105,658

^{1/} NONE REPORTED.
^{2/} FROM PUBLISHED RECORDS OF THE U.S. BUREAU OF THE CENSUS.
^{2/} INCLUDES SOUTH-WEST AFRICA.

ned lobster imports, and the data in Table 4 show the imports of both canned lobster and spiny lobster. Comparing the past three decades, we find that 17 million pounds were imported in 1920 to 1929; less than 10 million pounds in 1930 to 1939; and 16 million pounds in 1940 to 1949. The trend has been downward since 1944.

DOMESTIC PRODUCTION OF SPINY LOBSTERS

The United States fisheries for spiny lobsters are carried on in the southern parts of Florida and California. Table 5 and Figure 5 show the available statistics of the landings in these two states since 1920. Like the data for the domestic catch of North Atlantic lobsters, the amounts represent the poundages of whole crustaceans, live or cooked, landed by the fishermen. It is apparent that the spiny-lobster fishery is of minor importance in the United States and supplies only a small part of these shellfish consumed in this country.

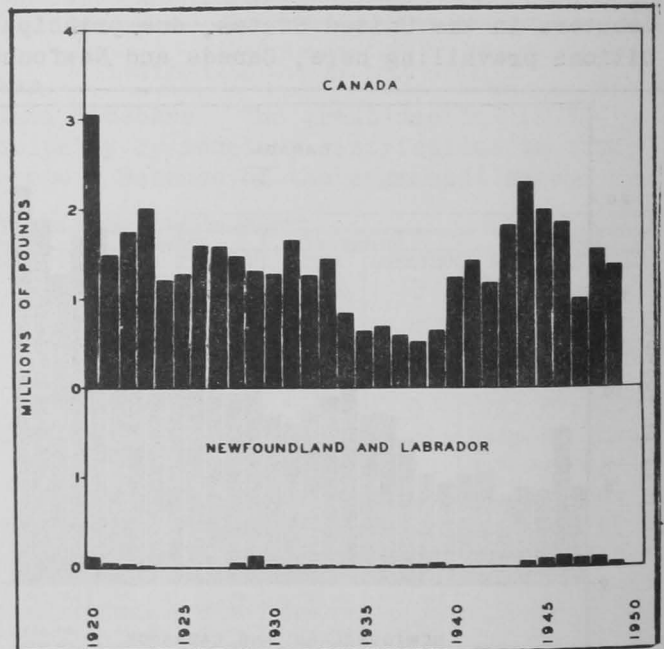


FIG. 4 - U.S. IMPORTS OF CANNED LOBSTERS FROM CANADA AND NEWFOUNDLAND (INCLUDING LABRADOR), 1920-49.

It is apparent that the spiny-lobster fishery is of minor importance in the United States and supplies only a small part of these shellfish consumed in this country.

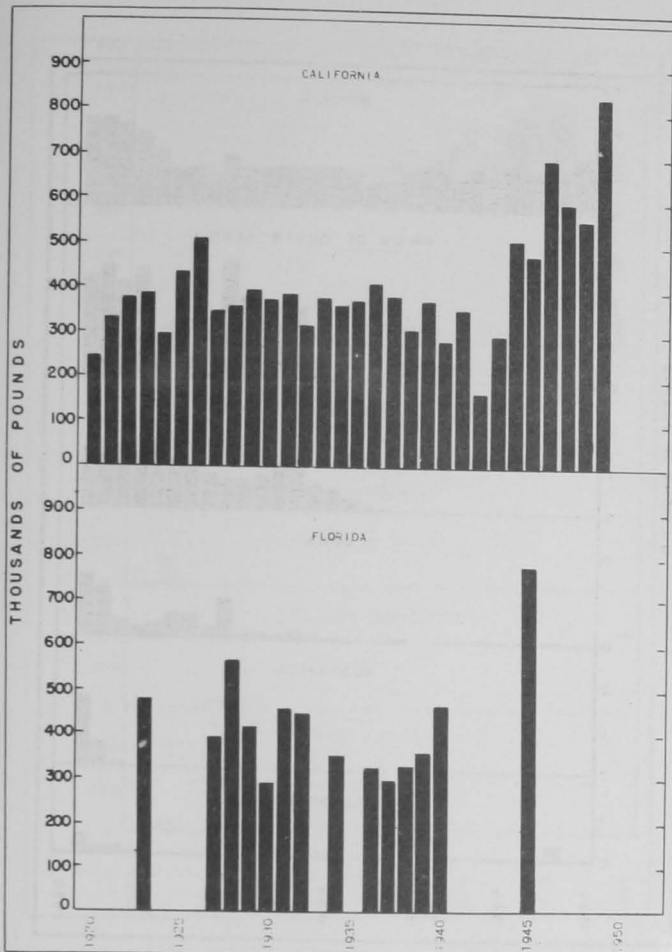


FIG. 5 - CALIFORNIA AND FLORIDA LANDINGS OF SPINY LOBSTERS, 1920-49.

Union of South Africa, Mexico, Cuba, British West Indies, Australia, New Zealand, and British Honduras consist entirely of spiny lobsters.

Figure 6, based on the data in Table 3, presents the yearly imports of "not canned" spiny lobsters from the five principal suppliers to the United States. A remarkable increase can be noted in the shipments since 1935 from the Union of South Africa, from the British West Indies, and from Cuba. Australia began marketing here in 1927 and has greatly augmented her shipments since that time. New Zealand (included with "all others" in Figure 6) has followed Australia's lead and has recently developed her spiny lobster fisheries, with the United States as the primary market.

During the decade 1920 to 1929 the total imports of live, frozen, or cooked spiny lobsters from the five principal sources (Mexico, Union of South Africa, British West Indies,

SPINY LOBSTER IMPORTS

Tables 3 and 4 give the imports of both the lobsters and the spiny lobsters. Since there is no distinction made in the import records between these two crustaceans, it is impossible to separate the two groups with certainty, at least from those countries which have well-developed foreign commerce and, therefore, may import for export lobsters or spiny lobsters from other countries in which both types of crustaceans are found. Thus, the imports from United Kingdom, Netherlands, Sweden, Belgium, Denmark, Germany, Norway, France, Spain, Portugal, etc., could be either common or spiny lobsters. Fortunately, most imports can be separated with fair accuracy. Imports from Canada, Newfoundland, and Labrador are almost exclusively, if not entirely, the common lobsters, while those from

Table 5 - Landings of Spiny Lobsters by United States Fishermen, 1920-49

Year	California		Florida	
	Pounds	Value (\$)	Pounds	Value (\$)
1920	247,156	-	-	-
1921	334,271	-	-	-
1922	376,310	-	-	-
1923	384,381	76,876	477,210	27,685
1924	294,356	60,375	-	-
1925	432,059	89,207	-	-
1926	508,123	99,129	-	-
1927	346,421	71,898	391,253	31,707
1928	355,800	75,919	564,162	44,522
1929	396,774	90,610	413,266	36,681
1930	374,450	74,234	288,309	26,731
1931	382,611	62,532	455,907	41,530
1932	319,307	45,061	445,547	32,078
1933	380,475	53,353	-	-
1934	366,600	58,349	351,300	17,166
1935	371,600	64,542	-	-
1936	414,200	68,153	326,600	20,090
1937	385,900	71,991	292,500	21,621
1938	308,400	60,916	328,400	23,377
1939	376,900	71,968	359,200	24,382
1940	281,100	50,368	463,500	31,501
1941	357,300	63,549	-	-
1942	168,600	40,736	-	-
1943	298,400	93,247	-	-
1944	512,400	136,551	-	-
1945	479,100	114,812	777,100	157,427
1946	691,800	234,140	-	-
1947	593,400	189,372	-	-
1948	563,500	229,104	-	-
1949	834,300	283,325	-	-

- NOT AVAILABLE.
 1/ FROM DATA PUBLISHED BY THE U.S. FISH AND WILDLIFE SERVICE AND THE FORMER U.S. BUREAU OF FISHERIES.

Cuba, and Australia) were about 10 million pounds; in the next decade, the imports rose to 19 million pounds; and in 1940 to 1949, they were over 49 million pounds. In 1949, these five countries shipped about 9 million pounds to this country--almost as much as in the entire decade 1920 to 1929. As the fisheries for these crustaceans are developed in more areas, particularly in the Southern Hemisphere, a further increase in imports may be anticipated.

As Chace and Dumont (1949) have pointed out, the spiny lobster imports from Union of South Africa, Australia, and New Zealand are tails, which represent about one-third the weight of a live animal. Imports from Mexico, British West Indies, Cuba, and British Honduras include both tails and whole lobsters. Therefore, an increase in the poundages of the recorded imports of spiny lobsters from South Africa, Australia, and New Zealand represents a greater contribution of edible food than a similar increase in the imports of mixed whole crawfish and crawfish tails from countries in the Western Hemisphere.



MAINE LOBSTER FISHERMEN BAITING LOBSTER POTS AT SEA.

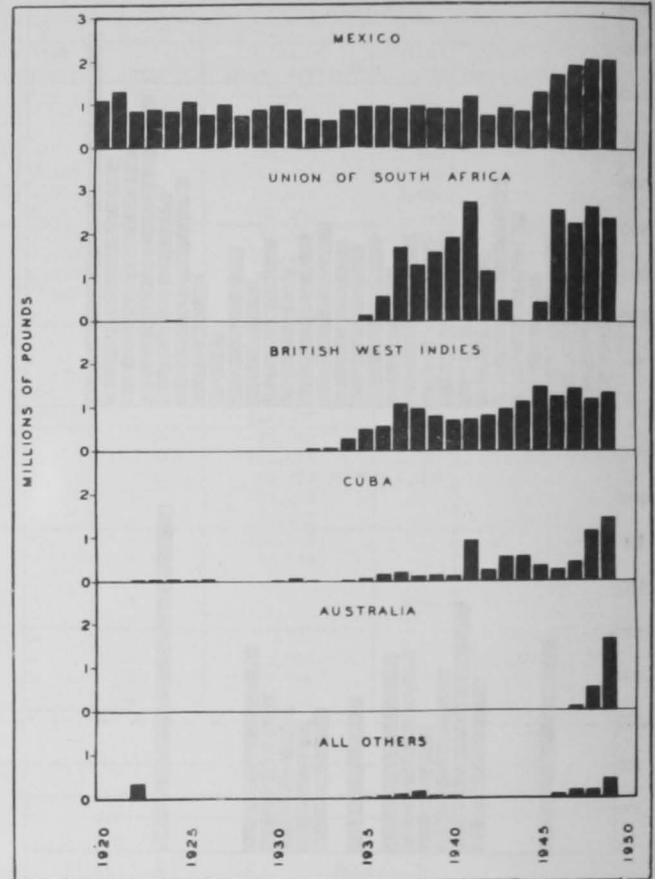


FIG. 6 - U.S. IMPORTS OF SPINY LOBSTERS, NOT CANNED, BY PRINCIPAL COUNTRIES OF ORIGIN, 1920-49.

Imports of canned spiny lobsters have also increased during the last thirty years. The principal sources of our imports of canned spiny lobsters have been Cuba, Union of South Africa, and the British West Indies. As shown in Table 4, a total of about 800,000 pounds was imported in the decade 1920 to 1929, increasing in the next decade to a total of 1,200,000 pounds; and increasing again in the period 1940 to 1949 to 5,300,000 pounds (see Figure 7). The increase of imports from Cuba between 1934 and 1944 and the decrease thereafter are also shown. The dominant position of South Africa since 1948 as the principal supplier of their product on the United States market is evident. The yearly totals of imported canned spiny lobsters

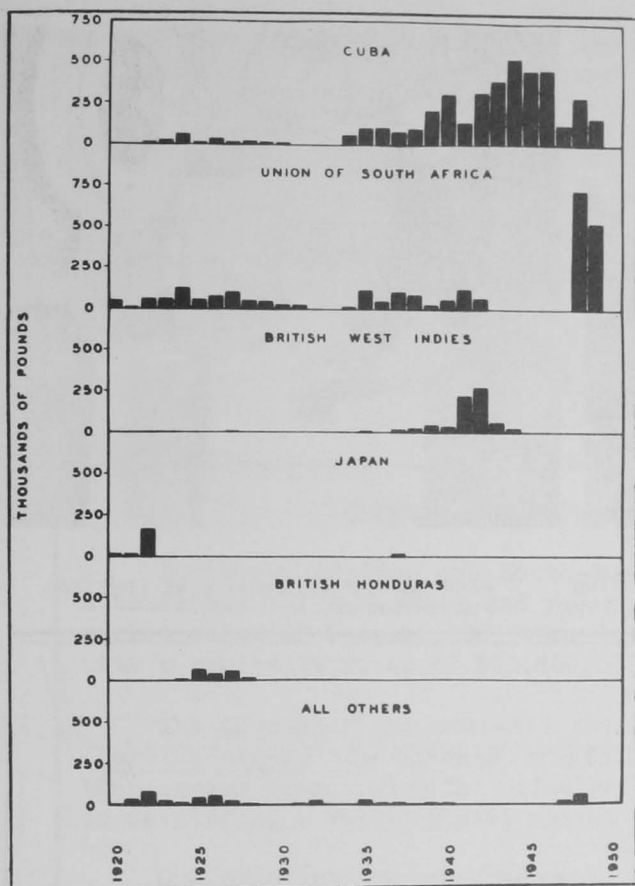


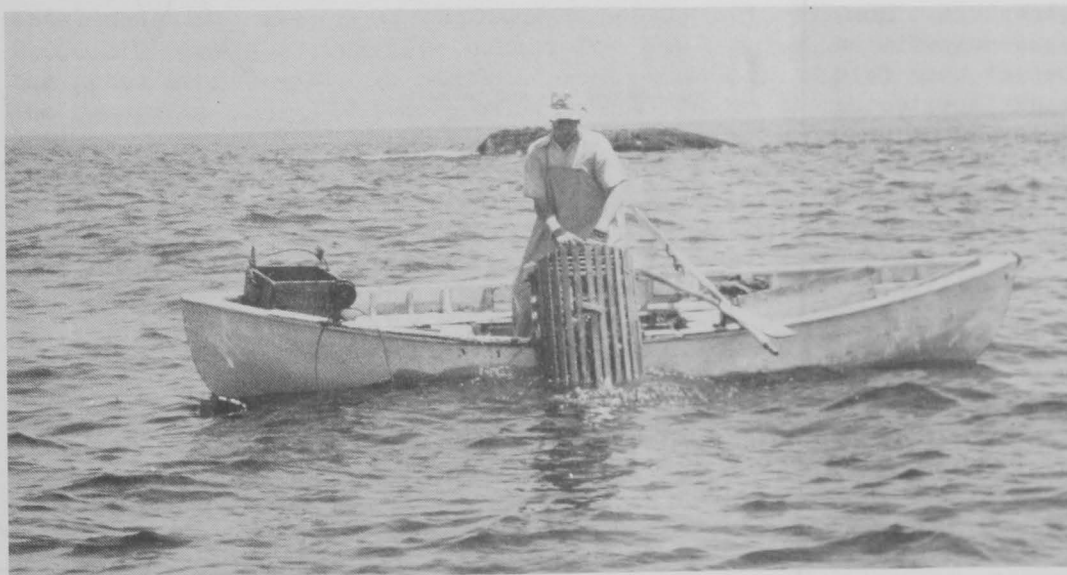
FIG. 7 - U.S. IMPORTS OF CANNED SPINY LOBSTERS BY PRINCIPAL COUNTRIES OF ORIGIN, 1920-49.

are much less than the "not-canned" product, which the American public seems to prefer. With the increasing popularity of frozen foods, the foreign spiny lobster industries are increasing their processing facilities. The canning of these crustaceans will, of course, continue to supply those markets without refrigeration.

EFFECT OF IMPORTS

Many lobstermen, particularly those in New England, believe that the prices which they receive for their catches are greatly influenced by the imports of lobsters, especially those from Canada and Newfoundland. There can be no doubt that the increasing imports of lobsters from these two regions do affect prices. Fortunately, because of the high level of prosperity in the United States, the great quantities of imports and the large domestic production have been absorbed placing undue economic hardships on the New England lobster fishermen. Figure 8 reveals that the estimated total United States production and imports of lobsters and spiny lobsters have risen from a low of about 19 million pounds in 1924 to a high of over 59 million pounds in 1949.

Most New England fishermen are not concerned very much about the spiny lobster imports, since relatively few are marketed in New England. The spiny lobsters, how-



USING A DOUBLE-ENDED ROWBOAT, A MAINE LOBSTER FISHERMAN IS HAULING IN A LOBSTER "POT" OR TRAP.



LOBSTER FISHERMAN OFF THE COAST OF MAINE MEASURING A LOBSTER TO SEE WHETHER OR NOT IT COMES WITHIN THE LEGAL-SIZE LIMIT.



PACKING AND WEIGHING LIVE LOBSTERS FOR SHIPMENT.

ever do compete with the common or northern lobster, particularly in restaurants in which various dishes can be prepared from either. Because the frozen spiny-lobster meat or tails can be purchased much more cheaply than the whole northern lobsters or their meat, restaurants are using greater quantities of spiny lobsters. However, the competition has not yet been felt to any great extent in New England where most of the North Atlantic lobsters are marketed. The public has accepted the spiny lobsters, not necessarily as a substitute for the northern lobster, but rather as a new form of sea food.

OUTLOOK

Further increases in the domestic production of lobsters are dependent upon the biological productivity of the lobster

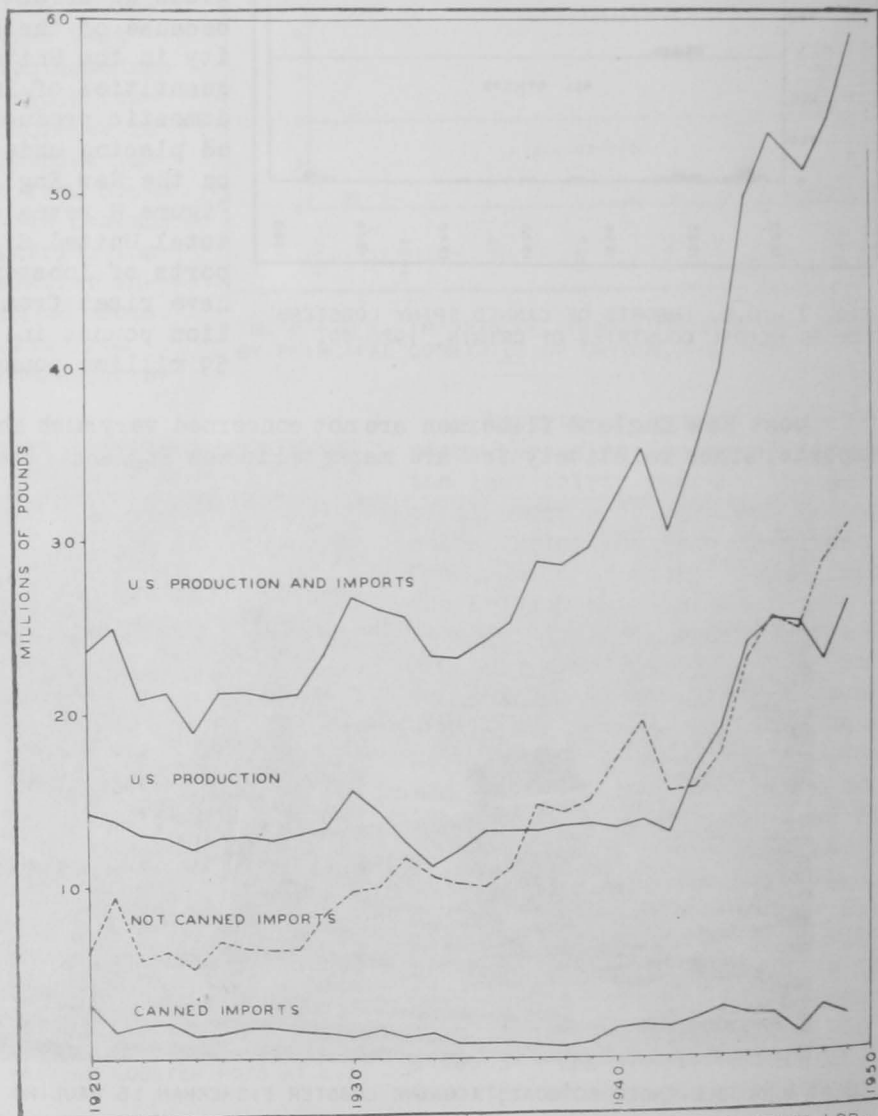


FIG. 8 - U.S. PRODUCTION AND IMPORTS OF LOBSTERS AND SPINY LOBSTERS, CANNED AND NOT CANNED, 1920-49.

populations in the North Atlantic region, for there are no great unexploited areas in which to initiate new fisheries. The spiny lobster fisheries outside the United States, however, are capable of expansion. If our market for these crustaceans continues to develop, we may anticipate greater imports in the future.

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GROWTH OF SOUTH AFRICAN FISHERIES

The South African and South-West African fishing industries have a total capital investment and reserves of \$21,260,000, having a current market value of \$40,440,000, based on an approximate total annual catch with a wholesale value of \$13,800,000.

The growth of the over-all catch has been significant. Pilchards (Sardina sagax) now outrank crayfish (Jasus lalandii) and stockfish (Merluccius capensis) as the principal catch and local firms are interested in developing a United States market for them.

The crayfish (spiny lobster), third in volume of fish caught in South African waters, is perhaps of most importance to the United States, which has been the major market (over 90 percent of South African crayfish since 1941). Under conservation regulations there is a quota of 6,000,000 pounds of crayfish tails which may be canned or frozen annually for export. The Fisheries Development Corporation estimates that the tail of the South African crayfish is on the average 1/3 of the total weight, which means that the 6,000,000-pound export quota involves a total catch for export of 18,000,000 pounds of crayfish. A further 2,000,000 pounds of crayfish caught for the local market thus brings the gross annual catch in South African waters to 20,000,000 pounds, the remaining 5,000,000 pounds being caught off the shores of South-West Africa.

The South-West African crayfish grounds are being developed rapidly. Four canneries at Luderitz today produce 100,000 24-tonsof offal, valued at \$100,000. A fifth cannery with a cold-storage plant and a fish-oil plant are being erected.

There are currently established by official edict six sanctuaries where the catch of crayfish is prevented--four in the Cape Peninsula area, one at Saldanha Bay, and another at St. Helena Bay. There are also conservation regulations forbidding the taking of soft-shell specimens, of females "in berry," and of crayfish with a carapace-length of less than $3\frac{1}{2}$ inches. The growth of the crayfish industry may be seen in the increase in annual catch from 15,000,000 pounds in 1932 to 25,000,000 pounds in 1947 and the growth of exports of canned and frozen tails from 3,566,000 pounds in 1924 to 6,000,000 pounds in 1947.