as the basis for lectures at several training centers. The present book is based on the experience gained at those centers and many parts have been updated to include the most recent developments and techniques. The large and international list of contributions gives an indication of the extent of this revision. This book will be a valuable asset to any fishery scientist and biological state engaged in population dynamics.

Monthly Fishery Market Review

July '73: Tightening Supplies and Higher Prices

The overall situation in the U.S. fishing industry during July was one of tightening supplies and generally higher prices. Only the major groundfish species supplies (Table 1) were significantly above the previous year. As a result of the shortening supplies, prices (Table 2) rose during the month for many species of fish and shellfish.

Table 1.—Groundfish supplies (fillet weight, in million pounds), July 1973. Groundfish include cod, flounder, haddock, and ocean perch.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - Million Pounds - - -				Percent	Million Pounds		Percent
Beginning Inventory	31.1	34.5	42.6	17.8	+ 139	52.4	45.0	+ 16
Landings, Total	6.7	6.7	4.6	6.2	− 25	37.9	41.0	− 8
Imports	25.4	33.9	25.9	25.6	+ 1	174.1	146.0	+ 19
Total Supply	63.2	75.1	73.1	49.6	+ 47	264.4	232.0	+ 14
Ending Inventory	34.5	42.6	47.5	27.0	+ 76	47.5	27.0	+ 76
Consumption	28.7	32.5	25.6	22.6	+ 13	216.9	205.0	+ 6

Table 2.—Groundfish prices (wholesale, FOB Boston, Gloucester, and New Bedford), July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - Cents Per Pound - - -				Percent	Cents Per Pound		Percent
COD								
Ex-vessel[1]	13.1	14.3	18.9	17.3	+ 9	19.9	20.0	—
Wholesale								
1 lb. Canadian	62.0	66.1	68.1	56.4	+21	61.3	54.9	+ 12
5 lb. Canadian	59.6	63.5	64.0	55.9	+ 14	57.0	54.1	+ 5
Retail[2]	174.5	170.6	170.0	124.0	+37	178.4	130.1	+37
FLOUNDER								
Ex-vessel								
Yellowtail	18.30	15.78	19.90	17.64	+ 13	23.97	20.06	+ 19
Lemonsole	24.84	28.57	52.00	39.09	+33	43.25	38.47	+ 12
Greysole	19.08	19.17	29.17	22.93	+27	29.11	25.57	+ 14
Blackback	17.91	18.48	30.02	25.07	+20	27.36	28.01	− 2
Wholesale								
5 lb. domestic	95.7	85.6	87.5	95.0	− 8	94.4	88.7	+ 6
5 lb. Canadian	80.2	80.0	81.8	66.3	+23	79.7	58.8	+36
Retail[2]	224.0	216.6	219.4	170.3	+29	189.5	162.7	+ 16
HADDOCK								
Ex-vessel[1]								
Large	44.5	40.8	49.5	42.4	+ 17	45.8	41.3	+ 11
Scrod	32.2	21.3	22.9	32.3	−29	27.2	33.3	− 18
Wholesale								
5 lb. Canadian	79.5	79.9	83.7	73.4	+ 14	79.3	62.6	+27
Retail[3]	128.7	132.2	133.6	105.3	+27	125.0	103.7	+21
OCEAN PERCH								
Ex-vessel[1]	7.5	7.5	7.6	5.7	+33	7.4	5.4	+37
Wholesale								
5 lb. domestic	63.0	59.3	58.0	46.3	+25	59.2	39.2	+51
5 lb. Canadian	55.4	55.5	55.8	43.1	+29	53.8	38.7	+39
Retail[3]	96.9	99.6	99.8	75.2	+33	94.3	73.6	+28

[1] Quotes taken at Boston, MA
[2] New York Consumer Market Reports
[3] Bureau of Labor Statistics—average of 36 U.S. cities.

BLOCKS, STICKS, AND PORTIONS

Fish sticks and portions producers continue to face a serious block shortage; even astronomical prices have not succeeded in attracting greater imports (Tables 3 and 4). Producers appear to be trying to build inventories of blocks in the absence of additional imports by cutting back severely on summer production of sticks and portions (Tables 5 and 6). Supplies of raw material are, nevertheless, well below last year and replacement prices for blocks are soaring—up to 69 cents per pound for cod in July with no signs of letting up.

With the price freeze over, producers are in a position to pass on block price increases; thus, we expect to see a sudden bulge in stick and portion prices when the blocks purchased this summer at higher costs go into production. U.S. production of blocks has risen sharply since last year, but this still represents a minute percentage of U.S. block requirements. The outlook for increased production of sticks and portions this fall, given the current block shortage, is bleak.

GROUNDFISH FILLETS

Supplies of major groundfish fillets (cod, flounder, haddock, and ocean perch) are still well above last year, although the contribution of imports to this increase fell off during July (Tables 7, 8, 9, and 10). Cold storage holdings built up again in July for the fourth consecutive month as consumption seasonally declined. Even though U.S. catches are not faring too well this year with all major species below year ago harvests, total supplies are still more than adequate to support a healthy increase in fourth quarter consumption over 1972. Retail prices for all species were at least a fourth higher than July a year ago. Most ex-vessel and wholesale prices have exhibited similar increases; however, this price situation does not appear to have significantly deterred consumption. A decline in consumption from June to July is normal for this time of year.

CANNED SALMON

Alaska packers turned out slightly more than 1 million standard cases in 1973; poorest on record. The smaller can sizes were packed in greater quantities this year instead of the one-pounders as packers were apparently trying to spread their fixed costs over a greater number of units. Most supplies available for consumption appear already committed so that many markets are nearly void of product, even with prices held to ceiling levels. The price regulations have encouraged some cultivation of export markets where prices are not controlled. There will be no relief from the short supply situation until next year's canning season, and even then, prospects for a heavy pack are not good.

SHRIMP

The situation in the shrimp fishery during July was one of tightening supplies, rising prices, and reduced consumption (Tables 11 and 12). Supplies of shrimp totaled only 93 million pounds during the month—down a whopping 24 percent from the same month in 1972. With sup-

Table 3.—Supplies of blocks and slabs, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - Million Pounds - - -				Percent	Million Pounds		Percent
Beginning Inventory	32.4	32.3	33.1	62.9	−47	75.8	62.7	+ 21
Production	0.4	0.4	0.3	0.2	+50	2.8	1.2	+133
Imports	29.8	31.3	27.4	33.8	−19	171.2	215.4	− 21
Total Supply	62.6	64.0	60.8	96.9	−37	249.8	279.3	− 11
Ending Inventory	32.3	33.1	48.8	77.0	−63	48.8	77.0	− 63
Consumption	30.3	30.9	12.0	19.9	−40	201.0	202.3	− 1

Table 4.—Prices of blocks and slabs, July 1973.

		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG
		- - - - - - - - - - Cents Per Pound - - - - - - - - - -							
Cod	1972	46.5	47.0	47.0	47.0	45.6	46.5	47.0	47.0
	1973	48.6	52.4	56.6	58.5	61.1	66.7	68.9	
Flounder	1972	43.5	44.4	45.3	49.2	51.7	53.3	55.6	57.0
	1973	59.5	59.6	60.0	60.0	60.0	62.0	63.0	
Haddock	1972	47.1	47.5	47.5	47.9	50.3	52.8	54.4	57.0
	1973	60.2	60.5	61.4	63.3	64.9	69.0	73.3	
Ocean perch	1972	38.5	38.5	38.7	39.5	39.5	39.8	41.6	45.0
	1973	51.2	53.1	53.9	54.0	54.8	53.9	54.0	
Pollock	1972	32.3	32.0	32.0	32.1	31.2	31.5	31.5	31.0
	1973	29.0	30.1	33.0	34.0	35.2	39.8	43.1	
Whiting	1972	33.0	33.5	33.0	33.0	33.2	31.5	31.5	31.5
	1973	34.6	35.8	37.5	3.75	37.5	39.4	41.1	
Wolffish	1972	49.3	50.0	50.0	50.0	50.3	50.5	51.0	51.5
	1973	51.0	50.0	54.5	52.0	52.0	52.0	52.0	

Table 5.—Supplies of fish sticks and portions, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	rcent ange
	- - - Million Pounds - - -				Percent	Million Pounds		Percent
Beginning Inventory	24.3	27.5	31.6	24.8	+27	34.4	23.2	+48
Production:								
Sticks	10.9	8.6	N.A.	5.2	—	N.A.	64.1	—
Portions	26.1	22.5	N.A.	12.8	—	N.A.	147.9	—
Total	37.0	31.1	N.A.	18.0	—	N.A.	212.0	—
Imports	0.2	0.2	0.1	0.1	—	1.0	0.9	+11
Total Supply	61.5	58.8	N.A.	42.9	—	N.A.	212.9	—
Ending Inventory	27.5	31.6	28.2	21.7	+30	28.2	21.7	+30
Consumption	34.0	27.2	N.A.	21.2	—	N.A.	191.2	—

Table 6.—Prices of fish sticks and portions, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - - - - - - - - - - - - - - - - - Cents Per Pound - - - - - - - - - - - - - -							
Wholesale[1]								
Cod portions	67.0	67.0	67.0	60.5	+11	65.2	58.9	+11
Haddock	69.5	69.5	72.0	65.0	+11	69.6	63.6	+ 9
Cod sticks	78.0	78.0	87.0	77.0	+13	79.3	75.1	+ 6
Haddock sticks	80.0	80.0	80.0	79.2	+ 1	80.0	77.3	+ 3

[1] Weekly average prices.

plies becoming short, prices have risen rapidly. Prices at all levels were well above the previous year; as much as 67 percent higher for 51-65 count shrimp at dockside. The rise in prices this year has apparently met some resistance. Sales of shrimp were off 20 percent during July and three percent for the January-July period.

SCALLOPS

Based on doubled beginning inventories, supplies of sea scallops (Table 13) in July were 55 percent above the same month in 1972. Landings were up somewhat during the month, but that gain was more than nullified by a 12 percent drop in imports. Although prices at all levels have been declining in recent months, retail prices in July (Table 14) were well above the previous year; a marked difference from ex-vessel and wholesale prices which were 28 and 25 percent below the previous year, respectively. As a result, sales have not improved over those in 1972, and inventories continued to seasonally build.

Table 7.—Cod supplies (fillet weight, in million pounds), July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - - - - Million Pounds			- - - - - -	Percent	Million Pounds		Percent
Beginning Inventory	13.3	14.7	15.7	9.2	+71	16.2	6.1	+166
Landings, Total	1.8	1.5	1.0	1.1	− 9	8.5	8.5	—
Imports	6.4	9.4	5.8	10.7	−46	54.5	63.8	− 15
Total Supply	21.5	25.6	22.5	21.0	+ 7	79.2	78.4	+ 1
Ending Inventory	14.7	15.7	14.7	13.7	+ 7	14.7	13.7	+ 7
Consumption	6.8	9.9	7.8	7.3	+ 7	64.5	64.7	—

Table 8.—Flounder supplies (fillet weight, in million pounds), July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - - - - Million Pounds			- - - - - -	Percent	Million Pounds		Percent
Beginning Inventory	5.2	6.0	8.4	3.0	+180	8.6	9.3	− 8
Landings, Total	2.9	2.9	2.1	2.6	− 19	16.4	17.4	− 6
Imports	7.3	11.0	6.6	5.5	+ 20	53.7	35.0	+ 53
Total Supply	15.4	19.9	17.1	11.1	+ 54	78.7	61.7	+ 28
Ending Inventory	6.0	8.4	9.6	3.5	+174	9.6	3.5	+174
Consumption	9.4	11.5	7.5	7.6	− 1	69.1	58.2	+ 19

Table 9.—Haddock supplies (fillet weight, in million pounds), July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - - - - Million Pounds			- - - - - -	Percent	Million Pounds		Percent
Beginning Inventory	8.4	8.3	8.3	2.1	+295	9.8	8.9	+ 10
Landings, Total	0.3	0.5	0.3	0.4	− 25	2.1	2.7	− 22
Imports	3.6	4.0	3.3	3.3	—	24.6	17.2	+ 43
Total Supply	12.3	12.8	11.9	5.8	+105	36.5	28.8	+ 27
Ending Inventory	8.3	8.3	8.8	3.5	+151	8.8	3.5	+151
Consumption	4.0	4.5	3.1	2.3	+ 35	27.7	25.3	+ 9

Table 10.—Ocean perch supplies (fillet weight, in million pounds), July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN — JULY 1973	JAN — JULY 1972	Percent Change
	- - - - - - Million Pounds			- - - - - -	Percent	Million Pounds		Percent
Beginning Inventory	4.2	5.5	10.2	3.5	+191	17.8	20.7	− 14
Landings, Total	1.7	1.8	1.2	2.1	− 43	10.9	12.4	− 12
Imports	8.1	9.5	10.2	6.1	+ 67	41.3	30.0	+ 38
Total Supply	14.0	16.8	21.6	11.7	+ 85	70.0	63.1	+ 11
Ending Inventory	5.5	10.2	14.4	6.3	+129	14.4	6.3	+129
Consumption	8.5	6.6	7.2	5.4	+ 33	55.6	56.8	− 2

AMERICAN LOBSTER

Both Maine landings and imports of American lobsters were well below the previous year during the month (Table 15). Maine landings were very good during the first half of 1973 (up 57 percent); however, they slumped by 11 percent in July. This may have been the result of the start of the shedding season, a period in which the lobsters are relatively inactive.

As in June, July imports from Canada were again below the previous year. Total shipments received during the month were off a fourth from 1972, causing the quantity received during January-July to be down 12 percent. The recent declines can partially be attributed to the low wholesale prices (Table 16) during the year —off 7 to 12 percent during the month. In light of a slight rise in Canadian landings during the first half of the year, some supplies may have been withheld from the U.S. market because of the lower 1973 prices.

SPINY LOBSTER TAILS

Supplies of spiny lobsters on the U.S. market (Table 17) continue to be below the previous year as imports were again off. Imports were down 20 percent with the Republic of South Africa, usually a leading supplier, recording no shipments during the month. Local regulation of the resource and marketing of spiny lobsters in that country is apparently further limiting its ability to supply the United States.

Table 11.—Shrimp supplies, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN-JUN 1973	JAN-JUN 1972	Percent Change
	------ Million Pounds ------				Percent	Million Pounds		Percent
Beginning Inventory	58.2	54.2	50.6	64.1	−21	92.7	69.9	+ 33
Landings								
Total	14.0	27.8	25.7	34.7	−26	108.3	123.8	− 12
Gulf	8.0	17.5	14.5	20.2	−28	57.6	74.1	− 22
Northeast	.7	1.0	.6	.6	—	10.4	12.2	− 15
Pacific	5.3	7.6	9.0	12.0	−25	36.5	32.2	+ 13
South Atlantic		1.7	1.6	1.9	−16	3.8	5.3	− 28
Imports	16.4	15.4	17.0	23.6	−28	117.3	142.7	− 18
Total Supply	88.6	97.4	93.3	122.4	−24	318.3	336.4	− 5
Ending Inventory	54.2	50.6	51.5	69.2	−26	51.5	69.2	− 26
Exports								
Total	4.2	4.5	3.1	3.0	+ 3	32.2	22.1	+ 46
Domestic Fresh & Frozen	3.1	2.7	2.7	2.2	+22	23.6	18.3	+ 29
Transshipments	1.1	1.8	.4	.8	−50	8.6	3.8	+126
Gulf Canned Pack	1.8	8.0	2.2	5.1	−57	12.8	17.1	− 25
Fresh & Frozen Consumption	28.4	34.3	36.5	45.1	−20	221.8	228.0	− 3

Table 13.—Scallop supplies, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN-JULY 1973	JAN-JULY 1972	Percent Change
	------ Thousand Pounds -----				Percent	Thousand Pounds		Percent
Beginning Inventory	2,954	3,001	3,159	1,012	+212	3,736	1,585	+136
Landings, Total	694	578	700	603	+ 16	4,123	3,856	+ 7
Imports	2,175	1,638	1,780	2,032	− 12	11,378	9,563	+ 19
Total Supply	5,823	5,217	5,639	3,647	+ 55	19,237	15,004	+ 28
Ending Inventory	3,001	3,159	3,429	1,408	+144	3,429	1,408	+144
Consumption	2,822	2,058	2,210	2,239	− 1	15,808	13,596	+ 16

Table 15.—American lobster supplies, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN-JULY 1973	JAN-JULY 1972	Percent Change
	---Thousand Pounds ---				Percent	Thousand Pounds		Percent
Maine Landings	1,280	914	1,425	1,612	−11	4,667	3,674	+27
Imports	3,517	5,309	3,267	4,322	−24	18,249	20,699	−12
Consumption	4,797	6,223	4,692	5,934	−21	22,916	24,373	− 6

Table 17.—Spiny lobster tail supplies, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change	JAN-JULY 1973	JAN-JULY 1972	Percent Change
	--- Million Pounds ---				Percent	Million Pounds		Percent
Beginning Inventory	7.4	6.9	7.3	7.6	− 4	8.9	4.7	+89
Imports	2.6	2.9	2.0	2.5	−20	19.7	24.0	−18
Total Supply	10.0	9.8	9.3	10.1	− 8	28.6	28.7	0
Ending Inventory	6.9	7.3	6.7	8.0	−16	6.7	8.0	−16
Consumption	3.1	2.5	2.6	2.1	+24	21.9	20.7	+ 6

Wholesale prices (Table 18) continued to rise to new records during the month. At $4.88 per pound, 6 - 8 ounce cold-water lobster tails were 10 percent above the high prices set in July, 1972. A record high of $5.08 was quoted during the month for 4-6 ounce tails from Australia.

Table 12.—Shrimp prices, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change
	--- Dollars Per Pound ---				
Ex-vessel					
15-20 count	2.14	2.12	2.24	2.01	+11
31-35	1.84	1.70	1.77	1.34	+32
51-65	1.34	1.30	1.42	.85	+67
Wholesale					
15-20 count	2.28	2.34	2.38	2.30	+ 4
31-35	1.99	2.06	1.98	1.63	+22
51-65	1.54	1.58	1.58	.96	+65
Retail					
15-25 count	3.01	2.94	2.94	2.92	+ 1
31-42	2.28	2.38	2.49	2.09	+19

Table 14.—Scallop prices, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change
	--- Dollars Per Pound ---				
Ex-vessel	1.44	1.44	1.48	2.05	−28
Wholesale	1.82	1.64	1.63	2.18	−25
Retail	3.08	3.03	2.80	2.66	+ 5

Table 16.—American lobster prices, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change
	--- Dollars Per Pound ---				
Ex-vessel	1.29	1.37	1.46	1.45	—
Wholesale					
2 lb.	1.92	1.97	2.16	2.32	− 7
1½	1.87	1.96	2.16	2.43	−11
1¼	1.80	1.93	2.16	2.45	−12
1⅛	1.77	1.90	2.12	2.32	− 9
chix	1.76	1.89	2.12	2.41	−12

Table 18.—Spiny lobster tail prices, July 1973.

	MAY 1973	JUNE 1973	JULY 1973	JULY 1972	Percent Change
	--- Dollars Per Pound ---				
Wholesale Price					
6-8 oz. tail					
Cold-water	4.71	4.83	4.88	4.42	+10
Warm-water	3.65	3.82	4.00	3.74	+ 7