Director McKernan Leaves BCF for State, November 1; Crowther His Successor

Donald L. McKernan, Director of the Bureau of Commercial Fisheries since 1956, has been named Special Assistant to the Secretary of State for Fisheries and Wildlife, and will leave BCF about November 1. He succeeds William C. Herrington, who is retiring after 15 years with State.

Secretary of the Interior Stewart L. Udall announced that BCF Deputy Director Harold E. Crowther will replace Mr. McKernan.

Donald L. McKernan

Secretary Udall said that the past 10 years have been significant ones for the Nation's commercial fishing industry. "Major developments have occurred in government efforts in the commercial fisheries during Mr. McKernan's tenure as Director," he said, citing as examples the enactment by Congress of financial assistance programs, the launching of the National Oceanographic Program in which the Bureau plays a key role, and the Bureau's increasing efforts to resolve the myriad problems arising out of international use of the fishery resources of the high seas.

In his new role, Mr. McKernan will advise the Secretary of State on policy matters in the field of fisheries and wildlife. He will represent State in meetings with the fishing industry, fish and wildlife conservation organizations--and the United States in meetings with representatives of other governments on fish and wildlife matters.

When appointed Director in 1956, Mr. McKernan was the Administrator, Territory of Alaska. Before that, for $3\frac{1}{2}$ years, he was Assistant Director of the Fish and Wildlife Service's Pacific Oceanic Fishery Investigations in Honolulu, Hawaii. He was born in Eugene, Oregon, and attended schools in Seattle, Washington. He has a BS from the University of Washington and has completed his course requirements for a Ph. D. from that school. From 1945-1952, he was Director of Research for the Oregon Fish Commission. During that period, he had a special Army assignment to study the freshwater fisheries and shellfish resources of Japan.

President Eisenhower appointed him in 1957 a member of the United States section of the Great Lakes Fishery Commission, and member and chairman of the United States section of the Passamaquoddy Fisheries Board of the International Joint Commission. In 1961, he was elected chairman of FAO's First World Conference of Fish in Nutrition, held in Washington. And, in 1962, Mr. McKernan was awarded the Fisheries Service Award of the National Fisheries Institute "in recognition of long and devoted service to the American Fishing Industry."

CROWTHER TO TAKE HELM

In selecting Mr. Crowther, Secretary Udall cited his 30 years' experience in fisheries research and administration in many parts of the Nation. "Half this time," the Secretary said, "was in the fishing industry, and the remainder in the Bureau of Commercial Fisheries and its parent agency, the Fish and Wildlife Service, in positions of increasing responsibility, which eminently qualify him for this position."

Harold E. Crowther

Born in Laurel, Maryland, Mr. Crowther received his BA in 1933 and his MS in 1935 from the University of Maryland. In 1936, he was employed by a private company to conduct research on fishery products. In 1943, he joined the Marine Corps and served as an officer in the South Pacific. From 1946 to 1949, and from 1953 to 1956, he was employed in the fishing industry in Massachusetts. At first, he was a research scientist; and later an executive. In 1949, he entered Govern-

merservice. For 4 years he served as Chief, Exploratory Fishing Section, and Chief, Technology Section, Fish and Wildlife Service. He came back to the Fish and Wildlife Service in April 1956 as BCF's Coordinator of the Saint-Kennedy Program. In November 1958 he was promoted to Chief, Division of Industrial Research and Services; in June 1960 he became Assistant Director (now Deputy Director).

In 1961, President Eisenhower appointed him U. S. Commissioner of the International Pacific Halibut Commission and he continues to serve in that capacity. He has served too in international fisheries conferences.

Gerald Howard Appointed BCF Pacific Southwest Regional Director

Gerald V. Howard has been appointed Director of the Pacific Southwest Region. He succeeds Donald R. Johnson, who left to take over the Bureau's Pacific Northwest Region in Seattle.

Howard headed BCF's Tuna Resources Laboratory at La Jolla, Calif., and now moves to Region headquarters at nearby Terminal Island. The Pacific Southwest Region includes California, Nevada, Utah, Colorado, Arizona, and New Mexico.

Howard will direct research efforts to locate and catch tuna off the West Coast--and to study the relationship between ocean circulation and fish populations. Changes in abundance of Pacific sardines and anchovies hold particular interest for his office.

McVey is New Attache in Copenhagen

Robert W. McVey, a BCF Foreign Fisheries Specialist, has been named Assistant Regional Fisheries Attaché (Europe) for the Department of State. He will take up his post in Copenhagen about November 1. He is expected to return to BCF after completing his Copenhagen tour.

McVey obtained his MA in fisheries at the University of Missouri in 1955, then worked for the Missouri Conservation Commission two years before joining BCF in Juneau, Alaska, as research biologist.

"SEAFOOD SLIMMERS," A NEW BCF RECIPE BOOKLET

"Seafood Slimmers," a new, 16-page, full-color, diet booklet prepared by the U. S. Department of the Interior's Bureau of Commercial Fisheries is available for distribution.

This 4-color sales document on the preparation of low-calorie fish and shellfish dishes will be released in connection with the Bureau-industry promotional program for the October "Fish and Shellfish Parade."

Called Fishery Market Development Series #7, it may be purchased from the Superintendent of Documents, U. S. Government Printing Office, Washington, D. C. 20402, for 25 cents a copy.

UNITED STATES -- EVENTS AND TRENDS

Industrial Fishery Products

MIDYEAR PRODUCTION OF FISH MEAL, OIL, AND SOLUBLES DECLINES FROM 1965 FIGURES

During July 1966, 29.2 million pounds of marine animal oils and 32,469 tons of fish meal were produced in the United States, the Bureau of Commercial Fisheries reports. Compared with July 1965, this was a decrease of about 12.4 million pounds of marine animal oils and 17,615 tons of fish meal and scrap. Fish solubles production amounted to 13,438 tons--a decrease of 5,181 tons compared with July 1965.

Product	July 1/1966	July 1965	Jan.-July 1/1966	Jan.-July 1965	Total 1965
	(Short Tons)				
Fish Meal and Scrap:					
Groundfish	1,030	1,966	6,354	7,411	10,696
Herring	2,799	4,297	4,877	6,731	12,932
Menhaden 2/	24,124	39,286	70,543	105,930	175,959
Tuna and mackerel	2,907	2,790	17,539	13,815	25,399
Unclassified	1,609	1,745	5,927	11,075	17,360
Total 3/	32,469	50,084	105,240	144,962	242,346
Fish Solubles:					
Menhaden 2/	11,040	16,254	33,639	42,013	73,181
Unclassified	2,398	2,365	13,232	12,130	21,658
Total	13,438	18,619	46,871	54,143	94,839
	(1,000 Pounds)				
Oil, body:					
Groundfish	225	603	1,060	1,689	2,441
Herring	2,354	4,017	3,332	5,052	8,543
Menhaden 2/	25,024	35,930	80,434	107,960	175,202
Tuna and mackerel	527	582	2,537	2,164	4,793
Unclassified (inc. whale)	1,027	435	2,594	1,929	4,521
Total oil	29,157	41,567	89,957	118,794	195,500

1/Preliminary data.
2/Includes a small quantity of other species.
3/Does not include a small quantity of shellfish and marine animal meal and scrap because production data are not available monthly.

* * * * *

PRODUCTION 1/ BY AREAS, AUGUST 1966

Area	Meal	Oil	Solubles
	Short Tons	1,000 Lbs.	Short Tons
August 1966:			
East & Gulf Coasts	23,642	19,400	9,943
West Coast 2/	3,075	743	1,775
Total	26,717	20,143	11,718
Jan.-Aug. 1966 total	131,957	110,100	58,589
Jan.-Aug. 1965 total	194,873	156,574	72,133

1/Does not include crab meal, shrimp meal, and liver oils.
2/Includes American Samoa and Puerto Rico.

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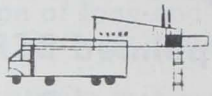
Can Shipments Rise Slightly

A total of 1,485,577 base boxes of steel and aluminum was consumed to make cans shipped to fish and shellfish canning plants in January-June 1966. This compares with 1,447,386 base boxes used during same period in 1965.

Note: Statistics cover all commercial and captive plants known to be producing metal cans. A "base box" is an area of 31,360 square inches, equivalent to 112 sheets 14" x 20" size. Tonnage figures for steel (tinplate) cans are derived by use of the factor 23.7 base boxes per short ton of steel.
Source: U. S. Department of Commerce, Bureau of the Census.



Wholesale Prices and Indexes for Edible Fish and Shellfish, August 1966

The August 1966 wholesale price index for edible fishery products (fresh, frozen, and canned) was down 0.2 percent from July. August prices were somewhat mixed. At 129.5 percent of the 1957-59 average, the overall index was 13.3 percent higher than August 1965--and, with very few exceptions, prices were higher for nearly all items.

The subgroup index for drawn, dressed, or whole finfish dropped 2.8 percent from July--caused largely by a sharp drop in prices at Boston for ex-vessel large haddock (down 23.5 percent). Also, prices were slightly lower at New York City for fresh and frozen western dressed halibut and fresh salmon--but higher for Great Lakes fresh fish. Compared with August 1965, prices were sharply lower for haddock (down 25.6 percent) because of better supplies, and slightly lower for halibut (down 5.0 percent). As a result, the subgroup index this August was down 1.2 percent from 1965. But August 1966 prices were substantially higher for yellow pike (up 27.1 percent) and whitefish (up 15.7 percent).

The August 1966 subgroup index for fresh processed fish and shellfish rose 0.6 percent from July. Prices were higher for fresh haddock fillets (up 2.3 percent) at Boston and South Atlantic fresh shrimp (up 0.9 percent) at New York City. Prices remained unchanged

Wholesale Average Prices and Indexes for Edible Fish and Shellfish, August 1966 with Comparisons

Group, Subgroup, and Item Specification	Point of Pricing	Unit	Avg. Prices 1/ ($)		Indexes (1957-59=100)			
			Aug. 1966	July 1966	Aug. 1966	July 1966	June 1966	Aug. 1965
ALL FISH & SHELLFISH (Fresh, Frozen, & Canned)					129.5	129.7	127.2	114.3
Fresh & Frozen Fishery Products:					133.5	133.3	128.3	117.4
Drawn, Dressed, or Whole Finfish:					131.8	135.6	121.5	133.4
Haddock, lge., offshore, drawn, fresh	Boston	lb.	.14	.18	109.9	143.6	94.8	147.7
Halibut, West., 20/80 lbs., drsd., fresh or froz.	New York	lb.	.48	.49	142.0	144.2	142.7	149.4
Salmon, king, lge. & med., drsd., fresh or froz.	New York	lb.	.98	.96	136.2	134.5	131.3	127.5
Whitefish, L. Superior, drawn, fresh	Chicago	lb.	.74	.63	109.7	94.0	79.8	94.8
Yellow pike, L. Michigan & Huron, rnd., fresh	New York	lb.	.89	.70	145.7	114.6	99.9	114.6
Processed, Fresh (Fish & Shellfish):					130.9	130.1	132.4	108.8
Fillets, haddock, sml., skins on, 20-lb. tins	Boston	lb.	.46	.45	111.8	109.3	99.6	99.6
Shrimp, lge. (26-30 count), headless, fresh	New York	lb.	1.11	1.10	130.1	128.9	134.7	100.8
Oysters, shucked, standards	Norfolk	gal.	8.00	8.00	134.9	134.9	134.9	120.2
Processed, Frozen (Fish & Shellfish):					131.5	128.0	125.5	104.8
Fillets: Flounder, skinless, 1-lb. pkg.	Boston	lb.	.43	.43	109.0	109.0	109.0	98.8
Haddock, sml., skins on, 1-lb. pkg.	Boston	lb.	.40	.40	115.8	115.8	114.3	111.4
Ocean perch, lge., skins on 1-lb. pkg.	Boston	lb.	.33	.33	114.0	114.0	114.0	108.7
Shrimp, lge. (26-30 count), brown, 5-lb. pkg.	Chicago	lb.	1.20	1.15	142.3	136.3	132.8	100.8
Canned Fishery Products:					122.9	123.8	125.6	109.4
Salmon, pink, No. 1 tall (16 oz.), 48 cans/cs.	Seattle	cs.	28.50	28.50	124.2	124.2	124.2	106.8
Tuna, lt. meat, chunk, No. 1/2 tuna (6-1/2 oz.), 48 cans/cs.	Los Angeles	cs.	12.95	13.20	115.0	117.2	121.5	102.6
Mackerel, jack, Calif., No.1 tall (15 oz.), 48 cans/cs.	Los Angeles	cs.	8.00	8.00	135.6	135.6	135.6	120.9
Sardines, Maine, keyless oil, 1/4 drawn (3-3/4 oz.), 100 cans/cs.	New York	cs.	10.25	10.25	131.5	131.5	131.5	131.5

1/Represent average prices for one day (Monday or Tuesday) during the week in which the 15th of the month occurs. These prices are published as indicators of movement and not necessarily absolute level. Daily Market News Service "Fishery Products Reports" should be referred to for actual prices.

Source: U. S. Department of Labor, Bureau of Labor Statistics.

for standard shucked oysters. Compared with August 1965, the subgroup index was up 20.3 percent because of substantially higher prices for all items. August 1966 fresh shrimp prices were up 29.1 percent from August 1965, and were higher for small haddock fillets (up 12.2 percent), and oysters (up 12.2 percent).

The subgroup index for processed frozen fish and shellfish rose 2.7 percent from July to August solely because of higher prices at Chicago for frozen shrimp (up 4.4 percent); for other items in the subgroup, there was no change. The index was 25.5 percent higher than August 1965. Prices were higher than in 1965 for all items in the subgroup--substantially higher for frozen shrimp (up 41.2 percent) and flounder fillets (up 10.3 percent).

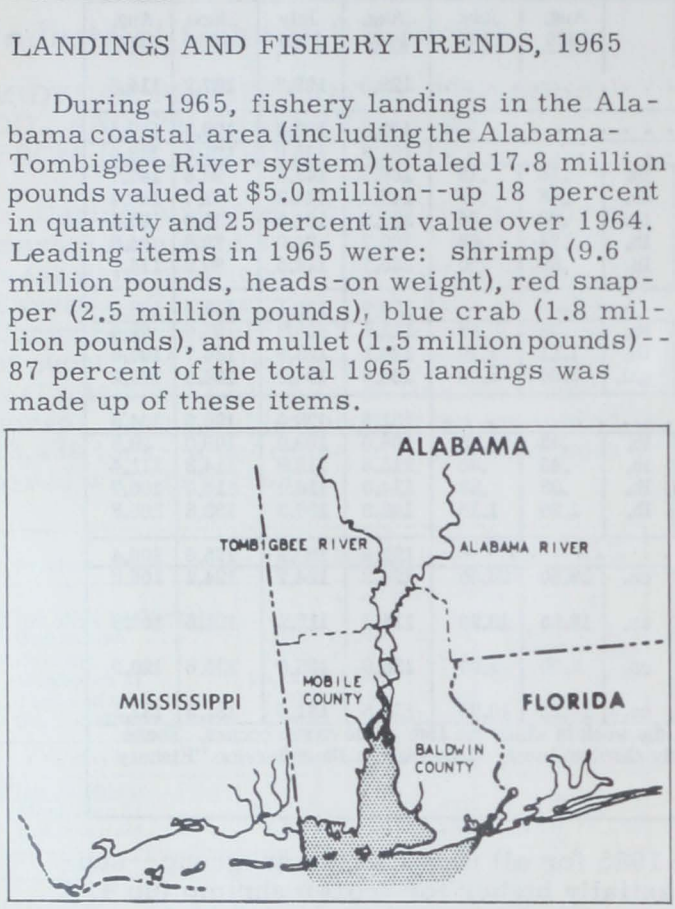
The only change in August 1966 prices for canned fishery products was in canned tuna--down 1.9 percent from July. As a result, the subgroup index dropped 0.7 percent. But compared with August 1965, the index was up 12.3 percent. Prices were higher than in August 1965 for canned pink salmon (up 16.3 percent), California jack mackerel (up 12.2 percent), and canned tuna (up 12.1 percent). Prices for canned Maine sardines remained unchanged during July and August 1966. (U. S. Department of the Interior, Bureau of Commercial Fisheries, Fishery Market News Service.)

STATES

Alabama

LANDINGS AND FISHERY TRENDS, 1965

During 1965, fishery landings in the Alabama coastal area (including the Alabama-Tombigbee River system) totaled 17.8 million pounds valued at $5.0 million--up 18 percent in quantity and 25 percent in value over 1964. Leading items in 1965 were: shrimp (9.6 million pounds, heads-on weight), red snapper (2.5 million pounds), blue crab (1.8 million pounds), and mullet (1.5 million pounds)--87 percent of the total 1965 landings was made up of these items.



Shrimp: The 1965 shrimp landings of 9.6 million pounds (heads-on weight) valued at $3.6 million were up 2.4 million pounds from the previous year; the ex-vessel value was up $1.0 million, or 39 percent. Brown shrimp made up 80 percent of the landings, white, 19 percent, and pink, 1 percent. Ex-vessel shrimp prices were high through May with few fluctuations except for minor price increases for the larger sizes. Prices declined on all sizes during June after the brown shrimp season opened. Gradual price increases began in late August 1965 and continued through the end of the year.

Oysters: The 1965 oyster landings of 492,000 pounds of meats were valued at $207,000. Landings were down 51 percent from 1964, the decline due to pollution of oyster reefs in the western portion of Mobile Bay during the spring season. The demand for shucked oysters was very strong during the fall season after hurricane "Betsy" disrupted the harvesting of oysters in Louisiana and Mississippi waters.

Crab: Landings of hard blue crab in 1965 were about 1.8 million pounds with an ex-vessel value of $153,000, only a slight increase from 1964, but the value was up 39 percent. The value increase was due to a greater quantity of pot-caught crabs. Crabs taken by pots command higher prices than those caught by otter trawls incidental to shrimp fishing.

Alabama Landings, 1965 and 1964

Species	1965		1964	
	Quantity	Value	Quantity	Value
	Lbs.	$	Lbs.	$
Fish				
Bluefish	5,401	508	10,973	69
Buffalofish	100,285	11,968	67,695	6,93
Catfish	38,578	10,168	45,253	11,42
Croaker	15,219	1,258	3,195	27
Drum:				
Black	3,079	212	17,312	1,429
Red or redfish	3,658	553	19,295	3,041
Flounder	300,669	46,651	162,088	24,836
Grouper	388,622	42,664	304,542	43,524
Jewfish	134,049	13,399	118,450	11,747
King whiting or kingfish	607,741	36,772	574,759	28,892
Mullet	1,508,490	69,188	1,071,981	55,620
Paddlefish or spoonbill cat	16,552	2,069	9,962	1,270
Pompano	1,677	934	1,645	827
Sea catfish	19,286	1,322	12,801	684
Sea trout:				
Spotted	53,769	13,866	64,601	16,472
White	108,055	6,840	65,120	3,264
Sheepshead:				
Fresh-water	9,550	1,378	15,401	2,319
Salt-water	15,578	1,182	34,711	2,374
Snapper, red	2,494,945	707,302	2,392,875	685,133
Spanish mackerel	14,326	1,782	74,139	8,351
Spot	14,892	744	13,659	70
Other fish	261	19	485	3
Total fish	5,854,682	970,779	5,080,942	909,84
Shellfish				
Crabs, blue, hard	1,812,338	153,409	1,761,725	110,33
Shrimp, heads-on	9,619,542	3,654,173	7,214,738	2,629,81
Oysters	492,498	206,685	1,005,260	324,12
Squid	6,034	516	4,168	35
Total shellfish	11,930,412	4,014,783	9,985,891	3,064,62
Grand total	17,785,094	4,985,562	15,066,833	3,974,46

Note: Landings are round weight for all species except oysters which are in pounds of meats (8.75 pounds per gallon).

Finfish: Landings of finfish (salt- and fresh-water) at Alabama ports during 1965 were about 15 percent higher than in 1964 due to increased catches of nearly all major species. Red snapper was the leading species accounting for 43 percent of the total finfish landings and 73 percent of the value. Fresh-water fish species caught in the Tombigbee, Alabama, and Mobile river systems were landed in larger quantities than in 1964. Except for mullet, prices for most species were relatively high with little price fluctuations during the year. Heavy mullet landings on occasions resulted in lower prices.

Local shipyards operated at capacity during 1965, and there was a trend to construct

more steel vessels of greater horsepower. Ideal shipyards built 14 new vessels for the Alabama fishing fleet during 1965.

Alaska

KING SALMON FISHING EXCELLENT IN SOUTHEASTERN ALASKA

The Alaska Department of Fish and Game in July 1966 extended fishing periods in many areas of southeast Alaska in order to harvest the bountiful run of pink salmon. The best fishing spot at that time was Frederick Sound, where purse seiners were enjoying excellent catches.

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KODIAK SALMON CANNERIES AT PEAK ACTIVITY

Kodiak has been experiencing one of the best salmon seasons on record. As of July 31 1966, the pack had reached 443,000 cases. In comparison the 1962 pack, which was the highest in over 20 years (711,900 cases), amounted to only 346,000 cases by July 31 of that year. If the salmon run were to hold up, it was believed that 1966 could just be the best season since 1939.

California

1966 SHRIMP FISHING SEASON OFF NORTHERN CALIFORNIA CLOSES

Commercial shrimp fishing in Area A, extending from False Cape, Calif., to the Oregon-California border, was closed by the California Department of Fish and Game effective August 8, when the catch quota of 250,000 pounds for the 1966 season was reached.

The Fish Commission of Oregon cooperated with California by making it unlawful to land or have in possession shrimp taken from the waters of the Pacific Ocean south of 42° north latitude (Oregon-California boundary line) from midnight August 10, 1966, to May 1, 1967.

The closure to shrimp fishing off the California coast had no effect on shrimp fishing off the Oregon coast. Oregon's 1966 shrimp season was not scheduled to close until October 31, 1966. (Oregon Fish Commission, August 8, 1966.)

Note: See Commercial Fisheries Review, October 1965 p. 48.

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SURVEYS PELAGIC FISH POPULATION

For 3 weeks in June, the Department of Fish and Game's research vessel M/V Alaska explored the coastal waters off southern California and northern Baja California, Mexico--from San Martin Island to Point Conception and seaward to the 1,000-fathom depth contour. Objectives: (1) To survey schooling fish of pelagic environment in California Current System using echo sounder and midwater trawl; (2) to develop techniques for making this type of survey routine.

During the cruise, echo sounder transect lines were traversed from shore to the 1,000-fathom contour; hourly fixes were plotted, and the number of schools detected were entered between fixes; records were kept of visual "breezing" schools during day and "fireball" schools at night; a small midwater trawl was fished for species identification and sampling, and hourly sea surface temperature records were kept, together with fish school counts and vessel location.

The echo sounder covered 1,910 miles and detected 752 northern anchovy (Engraulis mordax), 17 jack mackerel (Trachurus symmetricus), 9 Pacific hake (Merluccius productus), and one Pacific bonito (Sarda chiliensis) schools; 134 other anchovy schools were seen.

Northern Anchovies: Anchovies were by far the most abundant and widely distributed species. They appeared as "plumes" on the echo sounder at depths from 5 to 80 fathoms, with most schools at 8 to 14 fathoms. Sightings, compared with echo traces from the same school, indicated some schools probably contained 15 or more tons.

In northern Baja California waters, echo sounding traversed 416 miles and detected 52 anchovy schools. Fish were very scarce except in Todos Santos and Soledad Bays. In Soledad Bay extremely large concentrations were present. During night-time visual scouting,

72 large "fireball" schools were observed. Midwater trawl tows sampled small and medium size fish (95-125 millimeters, or 8.7 to 4.9 inches).

In southern California waters 1,494 miles were covered and 700 anchovy schools detected. An additional 62 "breezing" schools were visually observed. The population bulk was distributed 25-80 miles offshore near the outer northern Channel Islands (includes Santa Rose, Santa Cruz, San Miguel, and San Nicolas). The center of abundance was Santa Cruz Basin, where up to 62 schools were detected in 45 minutes. Many large schools were also found south of San Miguel Island. No schools were found more than 80 miles offshore.

Fish were quite scarce in coastal waters from San Diego to Point Conception. The few schools detected were located much deeper than offshore fish. Samples consisted of predominately small fish 90-110 millimeters (3.5 to 4.3 inches) long compared to offshore fish which averaged about 130 millimeters (5.1 inches).

JACK MACKEREL: Most of the 17 jack mackerel schools detected were located over rocky shoal areas on Tanner and Cortes Banks. Identification was made by hook and line fishing and observation of purse seiner catches. Attempts to sample with midwater trawl failed because fish avoided net.

PACIFIC HAKE: All but one of the 9 hake schools detected were located in northern Baja California. The other school was located near San Miguel Island in southern California.

For nearly 3 weeks in July, the M/V Alaska surveyed the smaller pelagic fish of the California current system for distribution and density. It sought to determine size and age composition of these species and to develop better survey methods. It operated in the coastal waters of central California from Point Reyes to Point Arguello from shore to the 1,000-fathom depth contour.

An echo sounder operated continuously over transect lines spaced about 20 miles apart perpendicular to the coast. Schools appearing on the echo sounder were identified by midwater trawl sampling or echo trace characteristics, and a record was also kept of visually observed schools. All work was conducted during daylight hours except for two nights.

The echo sounder traversed 933 miles and detected 102 anchovy (Engraulis mordax), 73 whitebait smelt (Allosmerus elongatus), 7 rockfish (Sebastodas sp.), 2 Pacific hake (Merluccius productus), and 55 unidentified schools. Night visual scouting accounted for 29 anchovy schools. Many small scattered echo traces of hake, whitebait smelt, and visual anchovy scatters were also recorded but were too small or dispersed to be counted as schools. The inshore areas were most productive in marine life. Most fish schools, birds, and porpoises were located within 15 miles offshore.

ANCHOVIES: Anchovies were found from Pigeon Point to Point Arguello. Their distribution was patchy, with no extensive areas of heavy concentration found in southern California in June. Most school groups covered less than 3 linear miles and contained from 2 to 6 schools. The largest numbers of schools were recorded off Cape San Martin and Point Sal, where 19 and 22 schools were logged, respectively, per 10 miles of transect. The only evidence of a continuous distribution was between Point Buchon and Point Arguello. There, schools were distributed over an area extending 30 miles offshore. All visual sightings and surface scatters were found there along with many birds, porpoises, and sea lions. A smaller area of concentration was found 10 miles off Cape San Martin. No other concentrations of fish were detected.

Anchovy echo traces were considerably larger than those of previous surveys in southern California. All schools were located within 20 fathoms of the surface and appeared as "plumes." Most fish sampled were large adults ranging from 125 to 150 millimeters (4.9 to 5.9 inches) long.

WHITEBAIT SMELT: Locally abundant near mouth of San Francisco Bay--73 small schools plus uncountable scattered echo traces were detected. Fish were easily sampled by midwater trawl with catches of up to 100 pounds per 20-minute tow.

ROCKFISH: Schools were detected over many shallow rocky areas of Monterey Bay and Point Sal. Midwater trawl tows at Point Sal produced small shortbelly (Sebastodes jordani), juvenile chilipepper (S. goodei) and

a few vocaccio (S. paucispinus). Many of the 55 unidentified echo-sounder schools were probably rockfish.

PACIFIC HAKE: Found in close association with whitebait smelt usually 1 to 2 fathoms of bottom. They appeared as small groups spaced irregularly from 20 to 50 yards apart. A series of these groups was counted as a school. One school covered over a mile near San Francisco Light Vessel; a smaller one was found off Halfmoon Bay. Many isolated groups not counted as schools were found near mouth of San Francisco Bay. Trawl samples contained large adults.

Adverse weather conditions lasting one week hampered operations in Monterey Bay area. A brief survey of outer Channel Islands and Santa Cruz Basin was made in southern California while the vessel was returning to port. The heavy concentrations of anchovies found there in June had disappeared. Only scattered schools were detected and no signs of fish were present.

Note: See Commercial Fisheries Review, August 1966 p. 19.

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ALBACORE LANDINGS DOWN IN CALIFORNIA, UP IN OREGON

Landings of albacore tuna in southern California in July dropped to record low of 630 tons, 235 tons below July 1965 figure, the previous record postwar low since 1945. Conversely, the Pacific Northwest experienced one of the best early albacore seasons since 1959. Oregon landings through July would have exceeded estimated 262 tons but brief price dispute in mid-July stopped the fishing.

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ANCHOVY REGULATIONS SET

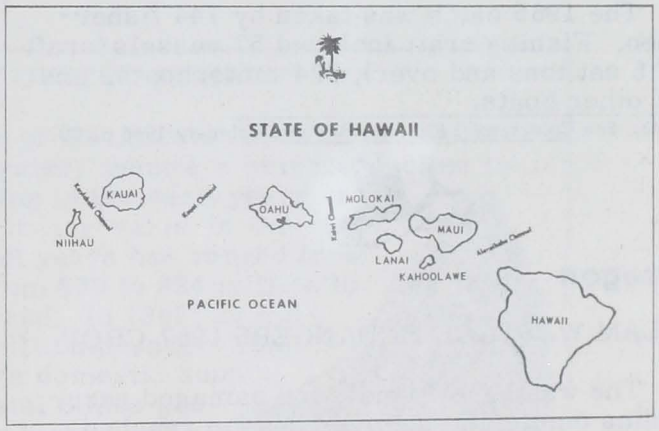
The Fish and Game Commission has continued the experimental commercial fishery for the take and reduction of anchovies. The season runs from October 1, 1966, through April 30, 1967, or until the quota of 75,000 tons is reached. The quota is the same as last year's, the first year of the experimental fishery, when only 17,000 tons were landed. If the quota of 35,000 tons is reached in the offshore zone ("zone four"), fishermen may come to the Commission and ask for an additional quota.

The Department of Fish and Game will check the catch continously, estimate date quota will be reached, and give 48 hours' notice on the closing date. The Commission may close the season, after 48 hours' notice, any time it determines the anchovy resource is in danger of depletion or waste.

Hawaii

1965 FISHERY LANDINGS

Commercial landings of fish and shellfish in 1965 totaled 19.6 million pounds valued at $3.6 million. Compared with 1964, this was a gain of about $6.9 million pounds, up 54.3 percent in quantity, and $754,434, up 26.5 percent in value. Tuna (albacore, bigeye, bluefin, little tuna, skipjack, and yellowfin) accounted for 89.1 percent of quantity and 74.0 percent of value.

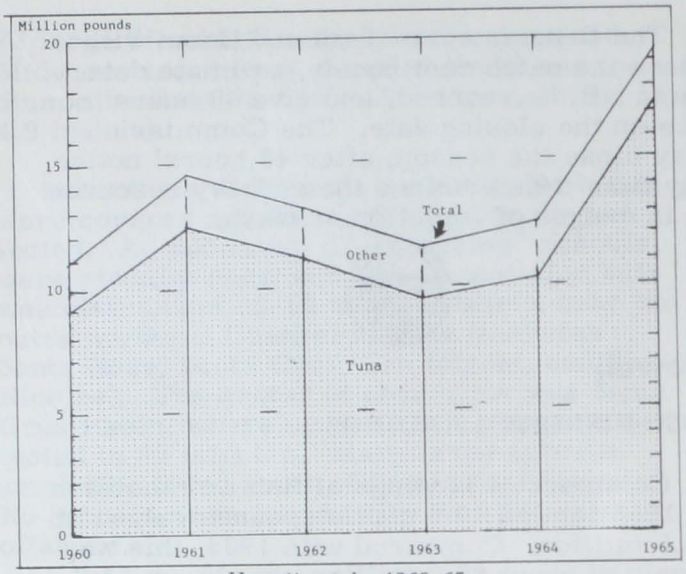


Skipjack tuna is the major item of the fishery. The catch in 1965 totaled 16.2 million pounds valued at $2.0 million compared with 9.0 million pounds worth $1.2 million in 1964.

The higher valued bigeye and bluefin tuna landings amounted to 773,872 pounds with ex-vessel value of $471,006 in 1965--down somewhat from 1964 landings of 839,485 pounds valued at $493,568.

The 1965 Hawaiian landings also included 497,626 pounds of yellowfin tuna, 449,571 pounds of bigeye scad, 384,955 pounds of striped marlin, 233,530 pounds of snapper, 190,047 pounds of jack mackerel, and 171,753 pounds of black marlin.

Oahu led the Hawaiian Islands with 15.6 million pounds, 79.7 percent of the total. The



Hawaii catch, 1960-65.

Island of Hawaii was next with 2.8 million pounds, followed by Maui with 957,000 pounds. The remainder was landed on Islands of Molokai, Kauai, and Lanai.

The 1965 catch was taken by 744 fishermen. Fishing craft included 57 vessels (craft of 5 net tons and over), 324 motorboats, and 23 other boats.

Note: See Commercial Fisheries Review, February 1966 p. 20.

Oregon

CLAM WASTAGE ENDANGERS 1967 CROP

The wastage of small and damaged razor clams during the summer season reached staggering proportions and endangers next year's crop, reports the Fish Commission. During the tide series, July 16-22, about 115,000 clams were wasted. Many of them were damaged in digging and were discarded illegally by diggers seeking to avoid the chore of cleaning crushed clams. But most were under 3 inches and were therefore discarded.

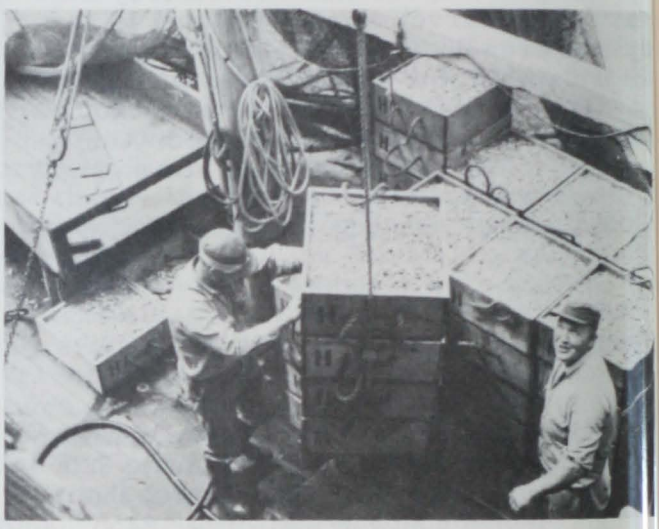
Small clams in their first year are especially abundant about mid-August and usually are less than 3 inches long. Serious damage at this age will result in fewer good-sized clams the following year when they average $4\frac{1}{2}$ inches.

The Fish Commission has circulated a questionnaire explaining the problem, suggesting total beach closure from Tillamook Head to the Columbia River from July 15 to August 31, and asking the opinions of diggers. The closure would reduce the harvest of small clams and resulting wastage by at least 50 percent, the Commission says.

Texas

FISHERY LANDINGS, 1965

During 1965, fish and shellfish landings at Texas ports amounted to 154.2 million pounds, valued at $35.6 million. This was 9.3 million pounds (6.3 percent), and $6.1 million (20.4



Unloading shrimp.

Texas Fisheries Landings, 1964-1965

Species	1965		1964	
	Quantity	Value	Quantity	Value
	Lbs.	$	Lbs.	$
Fish				
Menhaden	61,865,800	1,121,624	66,686,400	822,024
Snapper, red	2,211,800	628,137	2,249,800	631,203
Sea trout, spotted	1,176,200	320,859	977,700	251,681
Drum:				
Black	1,470,000	136,039	1,409,300	124,503
Red (redfish)	532,500	137,872	446,900	111,793
Other fish	1,454,300	148,991	1,245,600	154,303
Total fish	68,710,600	2,493,522	73,015,700	2,095,514
Shellfish				
Crabs, blue	3,622,200	286,036	2,484,800	175,552
Lobster (Bulldozer)	100	30	-	-
Oysters	4,835,500	1,538,482	3,357,100	1,092,582
Shrimp (heads-on): 1/				
Brown and pink	62,698,000	25,539,809	47,432,400	18,969,673
White	14,229,700	5,692,838	18,617,100	7,173,287
Other	100,700	8,058	3,600	1,151
Squid	23,900	2,390	23,500	2,350
Total shellfish	85,510,100	33,067,643	71,918,500	27,414,595
Grand total	154,220,700	35,561,165	144,934,200	29,510,109

1/Does not include bait shrimp.

Note: Oysters are reported in pounds of meats (8.75 pounds per gallon). All other species are shown in round weight. The weight of heads-on shrimp was determined by multiplying heads-off weight by the following factors: brown, 1.61; pink, 1.60; white, 1.54; royal red, 1.80; and sea bobs, 1.53.

percent) above 1964. The increase was due mainly to larger catches of shrimp. Other valuable fishery landings were menhaden, red snapper, sea trout, and drum.

Tennessee

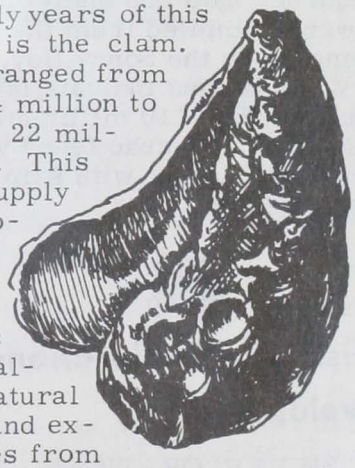
MUSSEL HARVEST UP IN 1965

The 1965 mussel shell harvest in the Tennessee River totaled 2,418 tons, worth $346,000 to mussel fishermen, TVA reports. Although somewhat larger than the 2,100 tons harvested in 1964, it was much smaller than the peak harvests of the late 1940s and early 1950s, which usually totaled over 10,000 tons. Of the 1965 harvest, 1,978 tons came from Kentucky Reservoir and the tail-water below Kentucky Dam, 246 tons from north Alabama reservoirs, and 194 tons from Chicamauga Reservoir. Since the mid-1950s, nearly all the mussel shells have been exported to Japan, where cores cut from them are put into oysters for production of cultured pearls.

A final report on TVA's 3-year study of causes and possible solutions for the declining mussel harvests is expected soon.

MIDDLE ATLANTIC OYSTER FISHERY

The most valuable fishery resource of the Middle Atlantic region (N. Y., N. J., Del., Penn., Md., and Va.) is the oyster, despite a serious decline in its abundance along the Atlantic Coast beginning in the early years of this century. Its closest competitor in total dollar value is the clam. The annual oyster harvest, which in recent years has ranged from 28 to 34 million pounds of meats worth from $20 to $24 million to the oystermen, continues its downward trend. In 1962, 22 million pounds were harvested; in 1963, 19 million pounds. This region produces nearly half of the Nation's domestic supply of oysters despite the fact that all 20 coastal States produce oysters--and its oysters command a higher price on the market than those from other regions.



The eastern oyster is a single commercial species found from Canada to the Texas border. It grows in shallow water, but sometimes in depths of 20 to 30 feet. Natural oyster beds are depleted in many parts of the region; and except in Maryland, where most of the harvest still comes from public grounds, the major part of the oysters are taken from private, leased beds. In Virginia, New Jersey, and Delaware, most "seed" oysters for private industry are grown on natural seed beds managed by the State. Oysters are harvested with dredges, tongs, and by hand.

--Conservation Bulletin 17, The Big Bite (Commercial Fisheries of the Middle Atlantic Coast), U. S. Fish and Wildlife Service, Washington, D. C.

BUREAU OF COMMERCIAL FISHERIES PROGRAMS

Alaska Fishery Investigations

KING CRAB TAGGING IN BERING SEA AND NORTH PACIFIC

The Bureau of Commercial Fisheries research vessel John R. Manning was in the Shumagin Islands-Alaska Peninsula region tagging king crab during July 1966. Despite marginal weather conditions, 4,731 tags were released by the middle of that month. Eleven tags were returned to the Bureau's Auke Bay Biological Laboratory for processing during July. Six tags released in 1964, 3 released in 1963, and 1 Russian tag were included in the returns.

The vessel Sonny Boy completed in July the planned station pattern in the Bering Sea. The vessel occupied 90 stations, resulting in the release of 1,150 tagged male king crab. Upon completion of the station pattern, the Sonny Boy intensified the tagging portion of the program in an attempt to release an additional 4,000 tagged male crab.

Size frequency data and shell condition information were compiled from the first 60 stations sampled by the Sonny Boy. These preliminary tabulations indicate large quantities of crab less than 110 millimeters (4.3 inches) in length. The crab found were primarily recent molt crab, with skip-molt crab occurring frequently.

Alaska Fisheries Explorations and Gear Development

BOTTOMFISH EXPLORATIONS OFF SOUTHEAST ALASKA

The research vessel Commando, chartered by the U. S. Bureau of Commercial Fisheries, left Juneau on July 18, 1966, for a 52-day exploratory bottomfish survey. Explorations during late July were conducted along the continental slope and shelf (70-150 fathoms) off Southeastern Alaska between Cape Spencer and Cape Ommaney. Primary objectives were to locate trawlable fishing grounds and commercial concentrations of Pacific ocean perch (Sebastodes alutus).

* * * * *

PRELIMINARY GEAR STUDIES CONCLUDED

The first phase of experimental fishing with standard and modified shrimp try-nets by the Bureau's Alaska Exploratory Fishing Base was concluded this past July. Plans were being formulated for phase two which will test the standard and modified shrimp try-nets in the Kachemak Bay area. Operations will be conducted out of the Bureau's Auke Bay Biological Laboratory field station at Kasitsna Bay.

Note: See Commercial Fisheries Review, September 1966 p. 10.

Central Pacific Fisheries Investigations

FIND RARE BIGEYE TUNA OFF HAWAII

Fishermen aboard BCF's R/V Charles H. Gilbert caught and landed alive in Honolulu 89 young bigeye tuna. They were about 20 inches long--under a year old. These small ones are rarely seen and are not harvested.

Researchers aboard R/V Townsend Cromwell saw the fish playing around flotsam. A hurried message brought up the Gilbert, the Honolulu laboratory's other research vessel.

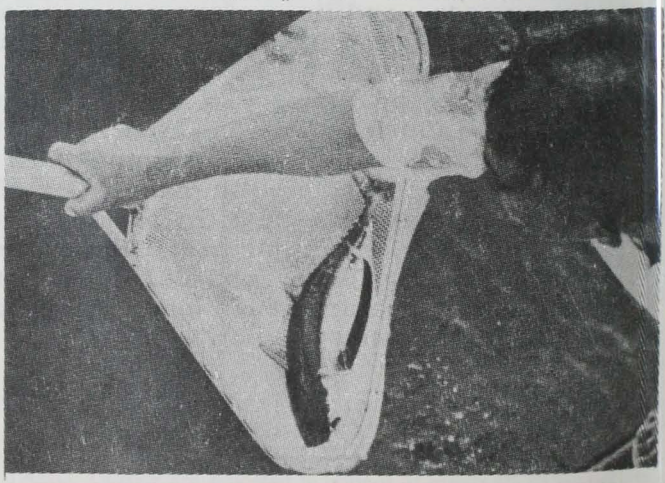
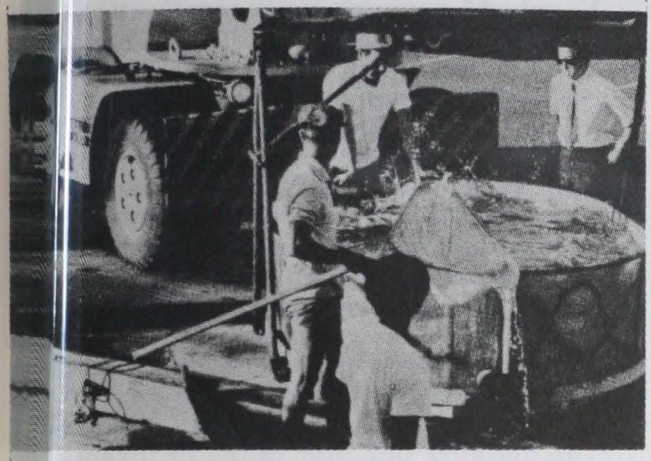


Fig. 1 - A technician descends into the baitwell to net the young bigeye tuna.

wh is better equipped to transport live fish. Th igeye were taken by pole and line. Bigey una have oversized eyes and long, slende ectoral fins sweeping back in a pro- no ed curve almost to the tail.

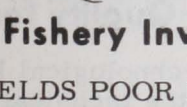


FI – Ashore netted tuna being transferred to portable tank. ish will be kept in the portable tank ready for transporta- to larger tanks where they will be kept and used in several es of tuna physiology and behavior.

ureau scientists believe the bigeye can in- se the information obtained from studies her tunas--about vision, hearing, use of tion in food search, and how they main- swimming depth. Bigeye have swim blad- yellowfin have much smaller one; skipjack e.

arge and old bigeye tuna, caught at 400- feet throughout the tropical Pacific, make bout 20 percent of Japan's annual tuna ngs. In recent years, heavy catches made southeast of Hawaiian Islands. ye are a premium food fish.

he most substantial U.S. catch of bigeye Hawaii, where long-line fleet took 336 in 1965. These were older fish caught . Bigeye command good prices. Small tities are caught by the California fleet.



eat Lakes Fishery Investigations

KE ERIE YIELDS POOR HATCH OF LLEYES, YELLOW PERCH

The 1966 hatch of yellow pike (walleyes) yellow perch in Lake Erie was the sec- lowest average recorded in 10 years, s BCF's regional office in Ann Arbor, ch. This preliminary evaluation is based relative distribution and abundance of young-of-the-year fish collected in the western basin. Trawling data through the end of 1966 may change estimate slightly--but outlook is discouraging. The "northeaster" that pounded lake shoreline in late April 1966 during peak spawning period apparently had tremendous adverse effect on walleyes and yellow perch.

Trawl samplings reveal fairly good hatch of white bass and channel catfish. Only sheepshead among commercial species are enjoying an exceptionally good year.

Forage fish--including alewives, gizzard shad, spottails, and emerald shiners--are at about same levels of abundance in recent years.

North Pacific Fisheries Explorations and Gear Development

SURVEYS HAKE POPULATION

The BCF research vessel M/V John N. Cobb returned to Seattle in August after 4 weeks of exploratory fishing off the Pacific Coast between southern Vancouver Island, B.C., and northern Oregon.

Its primary objective was to determine distribution and availability of Pacific hake (Merluccius productus). Secondary objectives: (1) to assist commercial vessels in locating hake schools, (2) obtain biological data on hake, and (3) get additional data on availability of hake to Cobb pelagic trawl.

Echo-sounding transects were made to locate hake schools. When a school was located, it was fished with the Cobb pelagic trawl to determine the availability of hake, then sounded out to determine the school's dimensions. This information was passed on to commercial boats.

No large schools were found, but small ones were located, fished, and sounded. Most yielded less than 200 pounds of hake per-hour haul, but two produced catches of 1,870 and 5,278 pounds an hour. Both schools were located off Willapa Bay: the first in deep water along the 73- to 100-fathom depth contour covering an area of about 15 square miles; the second was found in shallower water along the 37- to 38-fathom contour and covered about 5

square miles. A third concentration was sounded out after commercial vessels located it on La Perouse Bank off Barkely Sound, B.C., near the 60-fathom depth contour. It covered about 8 square miles.

During the survey, Soviet vessels including BMRT's (stern trawlers), SRT's (side trawlers), and freezerships were observed. The larger freezerships were anchored between the 40- and 50-fathom contour between Point Granville and Destruction Island during the first part of the cruise; the SRT's worked west of them. During the latter part of the cruise, the Soviet fleet moved southward off Grays Harbor.

Note: See Commercial Fisheries Review, August 1966 p. 39.

Salmon

SALMON CAN PERPETUATE THEMSELVES IN NEW ENVIRONMENT

The results of a 12-year BCF experiment on the Wind River in southwest Washington show that adult spring chinook salmon of unknown origin can be captured on the Columbia River while returning to their birthplaces to spawn, be transferred to a tributary, and there establish a new "run" of salmon that will perpetuate themselves.

The experiment involved trapping salmon at Bonneville Dam on the Columbia each year from 1955-1963 and trucking them 30 miles to the Carson National Fish Hatchery on the Wind River. The fish were spawned artificially at the hatchery and 2 years later released into the river to start the long migration to the ocean. From 1959-1966, increasing numbers of salmon fought their way back upstream to their hatchery birthplace.

The information gained from the experiment will help to preserve and enhance the anadromous fish population in the Pacific Northwest and other areas.

U. S. Fishing Vessels

APPROVE 63% OF REQUESTS FOR VESSEL CONSTRUCTION SUBSIDY

Nearly 63 percent of the applications for subsidies under the U. S. Fishing Fleet Improvement Act from August 30, 1964, to July 31, 1966, have been approved, reports BCF Branch of Loans and Grants.

The Act provides for paying construction differential subsidies to help build fishing vessels of advanced design. The vessels must be capable of fishing in expanded areas and using newly developed gear. They must not be operated in a fishery if they will cause economic hardship to vessel operators already there.

The subsidy is equal to the difference in cost of building vessel in U. S. shipyard and estimated cost in foreign yard. The maximum subsidy is 50 percent of domestic cost.

The Act provides for public hearings before approval of application. The Maritime Administrator and Defense Secretary must approve it.

Applications Processed or Being Processed Between August 30, 1964, and July 31, 1966

Item	No.	Subsidy Amount 1/
		$
Applications received . . .	70	16,987,000
Applications withdrawn before hearing	11	2,382,500
Hearings held	54	-
Applications approved after hearing	44	9,921,500
Applications withdrawn or dismissed after hearing .	5	697,500
Vessels under construction .	6	941,529
Vessels completed	2	273,029

1/ The amount of subsidy listed is an estimated amount in all cases except for completed vessels.

Study Fish Oil Quality for Paints

The Seattle Technological Laboratory is cooperating with the technical committee of the Pacific Northwest Society for Paint Technology to expand the acceptability and use of fish oils in protective coatings, the field of

the largest single domestic use. The committee, called the Paint Club, will explore the application of several different fish oils in manufacturing alkyd resins. The resins then will be used as vehicles to formulate different paints--which will be tested and evaluated against a standard acceptable to the paint industry.

Methyl esters of menhaden, hake, herring, and albacore oils have been prepared for fatty acid analysis by gas chromatography. The data and other routine analyses pertinent to the project, will be given the Paint Club. The researchers are trying to relate fish oil quality to formulation of the paint. The industry periodically suffers serious losses when, for no apparent reason, a particular lot of fish oil fails during paint manufacture. If the problem can be related to quality by lot analysis, the paint industry would accept fish oil much more readily.

Study Container for Air Shipping Fresh Fish

Scientists of the Gloucester Technological Laboratory met with officials of Trans World and United airlines to discuss problems in air shipping fishery products and the potential value to the fresh fish industry of expanded air shipments. Both airlines have promoted this in areas where salt water fish previously were unavailable and report good market possibilities. More promotion may be necessary, particularly in the far Midwest.

Both airlines have tried to develop a container system for fresh fillets without very satisfactory results. BCF can help here. It has already given them data on the thermal performance of insulated containers packed with gel refrigerant and the effects of temperature upon quality. A complication in the container system design is that fillet tins leak. Although this is intolerable for air freight, the New England industry has not yet adopted a substitute--the flexible polyethylene bags used in the Northwest.

United has offered to make its facilities available to the Gloucester staff at no cost to conduct any project work involving air shipping.

Interest Rate on Fishery Loans Raised to 6 Percent

The Department of the Interior raised the interest rate on fishery loans from $5\frac{1}{2}$ percent to 6 percent effective October 1, 1966. Secretary Stewart L. Udall said the increase was required by law to make the rate at least equal to the average market yield on other public loans of comparable maturity.

Director Donald L. McKernan said the loan program was established by a section of the Fish and Wildlife Act of 1956, which authorizes the Secretary of the Interior to make loans for financing and refinancing operations of commercial fishing vessels and their gear.

Another provision of the loan fund legislation states that the purchaser of a new vessel must not cause economic injury to efficient vessel operators working in the area where the new vessel will be used.

Director McKernan said the loan program has filled the credit gap for fishermen. It has insured continued operation of their vessels and it is helping to upgrade and modernize the commercial fishing fleet of the United States.

FEDERAL ACTIONS

Department of the Interior

ADOPTS YELLOWFIN TUNA REGULATIONS

The Department of the Interior has adopted regulations to carry out recommendations of the Inter-American Tropical Tuna Commission (IATTC) designed to conserve the yellowfin tuna resources of the eastern tropical Pacific Ocean.

The IATTC, meeting in Guayaquil, Ecuador, April 19-20, 1966, recommended a total catch of 79,300 short tons during calendar 1966. It believes this limit will restore the stock to a maximum sustainable yield of about 91,000 tons annually within 3 years.

Interior's regulations became effective September 15, 1966, and the season closed on that date. Vessels that departed on fishing voyages after September 15 may not have on board or land yellowfin tuna in excess of 15 percent by weight of all tuna taken on the trip. The yellowfin season will reopen on January 1, 1967.

The regulations include restrictions applicable to fishing and cargo vessels and purchasers, reports and recordkeeping, persons and vessels exempted, and Fish and Wildlife Service and State officers designated as enforcement agents. The regulations appear in the Federal Register, September 10, 1966, pp. 11938-11944.

Note: See Commercial Fisheries Review, June 1966 p. 103.

* * * * *

HELPS ATLANTIC COAST OYSTER INDUSTRY

Interior Department has acted to help restore the hard-hit oyster beds of Virginia, Maryland, Delaware, New Jersey, and New York. Secretary Stewart L. Udall said about $100,000 of Federal money is available under P.L. 88-309 of 1964 for research and such other activities that may be necessary to develop and propagate disease-resistant strains of oysters. The States must share one-third the cost of the projects. The 1964 law provides that the Secretary may give up to $400,000 to aid the industry when he determines that a commercial fishery failure was due to a resource disaster.

Secretary Udall said: "The oyster mortality problem, due to natural and undetermined causes, presents a continuing threat to the economic stability of the remaining oyster industry in the five States involved."

The oyster problem began in 1957 and virtually wiped out stocks in Delaware Bay and Lower Chesapeake Bay. The disease-related deaths extended to oysters in other parts of Chesapeake Bay and to the Great South Bay of New York in 1965. These areas, Secretary Udall said, "face the prospect of an inadequate supply of marketable oysters for the 1967-1968 period."

* * * * *

APPLICATIONS FOR FISHING VESSEL LOANS

The following applications were received for loans from the U. S. Fisheries Loan Fund to help finance the purchase of fishing vessels:

Samuel Martin, Box 104, Seldonia, Alaska 99663, for a used vessel to fish for salmon, halibut, and crab. BCF published notice of application in Federal Register, August 20, 1966.

Richard N. Johnson, 14911 Washington St. SW., Tacoma, Wash. 98498, for a used 37-foot registered length wood vessel to fish for salmon, albacore, and Dungeness crab. Notice published September 3, 1966.

Levi McKinley, 1300 No. 2-A West Ninth, Juneau, Alaska 99801, for a used 34.7-foot registered length vessel to fish for halibut, salmon, and black cod. Notice published September 8, 1966.

Regulations and procedures governing fishery loans have been revised and no longer require an applicant for a new- or used-vessel loan to replace an existing vessel (Public Law 89-85; Fisheries Loan Fund Procedures--50 CFR Part 250, revised August 11, 1965).

Note: See Commercial Fisheries Review, September 1966 p. 78.

* * * * *

APPLICATIONS FOR VESSEL CONSTRUCTION SUBSIDY

The following firms have applied for fishing vessel construction differential subsidies:

[illegible] Seafarer, Inc., New Bedford, Mass., a 98-[illegible]oot overall wooden vessel, for scallops, gro[illegible]fish, flounder, and lobster. BCF pub-lis[illegible] notice of hearing in Federal Register, Sep[illegible]ber 3, 1966.

[illegible]olas Rosa, 5207 Avenue T, Brooklyn, N. [illegible]1223, a 50-foot overall length alumi-num [illegible]ssel to fish for lobster and crabs. No[illegible] of hearing published September 17, 1966.

[illegible]le R. Potter, Belhaven, N. C., 86-foot ov[illegible]l steel vessel, for butterfish, flounder, po[illegible]s, sea bass, sea trout, swordfish, lob-ste[illegible]scallops, and shrimp, including royal re[illegible]hrimp. Notice of hearing published Se[illegible]mber 3, 1966.

[illegible]lan Truitt Murphy, Davis, N. C., 86-fo[illegible]verall length steel vessel to fish for flo[illegible]er, sea trout, porgies, king whiting, sw[illegible]fish, croaker, shrimp (including royal re[illegible]hrimp), scallops, and lobster. Notice of he[illegible]ng published September 8, 1966.

* * * * *

NI[illegible] ANADROMOUS FISH P[illegible]RAM CLARIFIED

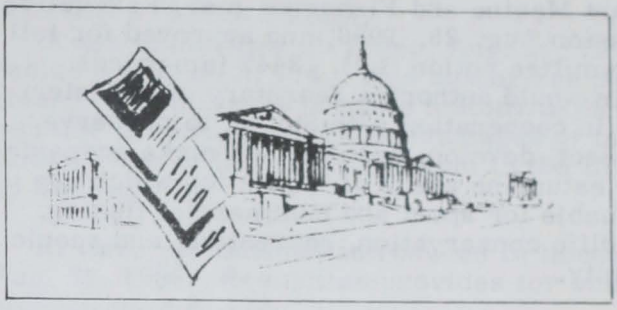
[illegible]e proposed regulations for a new Fed-er[illegible]rogram to conserve and develop the N[illegible]'s anadromous fish resources were cl[illegible]ied and published in the Federal Regis-ter [illegible]eptember 10, 1966, the effective date.

[illegible]ey set forth the procedures the Interior Se[illegible]tary will use when he provides financial a[illegible]ther assistance, through cooperative a[illegible]ments, to State agencies and other non-F[illegible]al interests. The purpose of the assist-a[illegible]is to conserve, develop, and enhance th[illegible]ommercial and sport anadromous fish r[illegible]rces of the Nation--and Great Lakes fi[illegible]hat ascend streams to spawn.

N[illegible] See Commercial Fisheries Review, July 1966 p. 105.

[illegible]ty-Ninth Congress ([illegible]ond Session)

[illegible]eported below are public bills and reso-l[illegible]ns that may directly or indirectly affect th[illegible]isheries and allied industries. Introduc-



tion, referral to committees, pertinent legislative actions by the House and Senate, and signature into law or other final disposition are covered.

COMMERCIAL FISHERY RESOURCES SURVEY

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries held hearing on S. J. Res. 29, Aug. 24, 1966, to authorize and direct Secretary of the Interior to survey coastal and fresh-water commercial fishery resources of the United States, its territories, and possessions. Commissioner C. F. Pautzke testified.

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries, Sept. 1, 1966, met in executive session and deferred further action on S. J. Res. 29, to authorize and direct the Secretary of the Interior to conduct a survey of the coastal and fresh-water commercial fishery resources of the United States.

COMMODITY PACKAGING AND LABELING

House Committee on Interstate and Foreign Commerce, Aug. 16-17 and 23-24, 1966, continued hearings on H.R. 15440 and related bills. Purpose of bills: to regulate interstate and foreign commerce by preventing use of unfair or deceptive methods of packaging or labeling of certain consumer commodities. Testimony from public witnesses.

House Committee on Interstate and Foreign Commerce, Sept. 7, 1966, continued hearings on H. R. 15440, and related bills, the proposed Fair Packaging and Labeling Act. Harold E. Crowther, Deputy Director, BCF, testified.

ESTUARINE AREAS--NATIONAL SYSTEM OF ESTUARINE AREA

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Mer-

chant Marine and Fisheries met in executive session Aug. 25, 1966, and approved for full committee action H. R. 13447 (amended). This would authorize Secretary of the Interior, in cooperation with States, to preserve, protect, develop, restore, and make accessible estuarine areas of the Nation which are valuable for sport and commercial fishing, wildlife conservation, recreation, and scenic beauty.

FISHERMEN'S COOPERATIVE ASSOCIATION BANK

S. 3743 (Magnuson) introduced in Senate Aug. 18, 1966. It would, primarily, provide credit facilities for fishermen's cooperative associations by establishing a Bank for Fishermen's Cooperative Association; to Committee on Commerce. Sen. Magnuson said that present provisions of the fisheries loan fund regulations are of only limited value in assisting the financial operation of fishery cooperatives. Similar to H. R. 8922.

FISHERY PERMIT FEES

S. 3793 (Kuchel) introduced in Senate Sept. 1, 1966. Purpose: to authorize Secretary of the Interior to reimburse part of certain fishery permit fees paid to foreign countries by U.S. fishermen; to Committee on Commerce.

Sen. Kuchel (Congressional Record, Sept. 1, 1966, pp. 20642-20643) stated he proposed this following consultation with representatives of fishing industry. Would authorize Interior Secretary to reimburse citizens of United States for part of fishery permit fees they paid any foreign country during employment of American vessels in a traditional fishery of the United States. The cost of this payment would be financed from gross receipts of custom duties collected on fish and fisheries products entering the United States.

FISHING LIMIT OF 12 MILES

H. R. 17046 (Rep. Hansen of Wash.) introduced it in House, Aug. 15, 1966, to establish fishing zones of the United States beyond its territorial seas, and for other purposes; to Committee on Merchant Marine and Fisheries.

Sen Magnuson spoke in Senate (Congressional Record, Aug. 29, 1966, pp. 20245-20247), on need for 12-mile fishery zone. He has asked Departments of State and Interior to reexamine their positions of last May in light of new realities. He stated that the 12-mile fishery legislation is late--but it can still be in time to save thousands of tons o valuable marine resources and to reserve 12,000 square miles of potential fishery a as part of our American heritage.

Rep. Pelly spoke in House (Congressio Record, Aug. 30, 1966, p. 20408), on Asso ated Press dispatch indicating Korean Go ernment wanted to establish fishing right before entering into agreements with othe nations (including United States, Canada, pan). He said 49 nations have established 12-mile fishery jurisdictions. Only 15 na tions, including the U. S., still claim 3 mil Ten nations claim more than 3 but less tha 12--and 17 nations, including Korea, clain more than 12. Pelly said 12-mile fishery zone is needed to protect our coastal fishe ies and give American fishermen some pr tection against foreign fishing vessels. He predicted a 12-mile fishing zone bill will b reported favorably by House Committee on Merchant Marine and Fisheries.

In Senate, Sept. 6, Sen. Magnuson spoke objections by segments of American fishin industry that 12-mile bill before Congress will adversely affect present relations wit South American nations off whose shores they presently fish. He said that taking a strong position in behalf of America's fish ermen by reserving this additional 9-mile protective and conservation zone will assi immeasurably in our international negotia tions on fisheries questions.

FISH PROTEIN CONCENTRATE PLANTS

H. R. 16619 (Downing) July 28, to autho ize Secretary of the Interior to develop, through experiment and demonstration pla practicable and economic means for produ tion by commercial fishing industry of fis protein concentrate; to Committee on Mer chant Marine and Fisheries.

The Subcommittee on Fisheries and Wil life Conservation of House Committee on Merchant Marine and Fisheries held heari Aug. 16, 1966, on H. R. 12269, and related bills, regarding fish protein concentrate (FPC). D. L. McKernan, Director, BCF, testified. Said FPC can prove to be a valu able and practicable means of supplementi our foreign policy; of increasing protein in take of our citizens and improving the over all health of our Nation; and of fostering growth of our fish industry. He stated this bill is similar to Senate-passed S. 2720.

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries met in executive session Aug. 30, 1966, and continued consideration of H. R. 12269, and related bills.

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries met in executive session Aug. 31, 1966, and approved for full committee action S. 2720 (amended).

FOREIGN FISHING OFF U. S. COASTS

Sen. Morse spoke in Senate, Congressional Record, Aug. 16, 1966 (pp. 18694-18696), an article in July 20 Portland Oregonian concerning the boarding of two Soviet fishing vessels off Washington State by Coast Guard. The text is printed in Record.

FUR SEAL CONSERVATION AND PRIBILOF ISLANDS ADMINISTRATION

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries held hearing Aug. 24, 1966, on H. R. 9602 and S. 2102. Purpose of bills: to protect and conserve North Pacific fur seals and to administer Pribilof Islands for conservation of fur seals and other wildlife.

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries met in executive session Aug. 30, 1966--considered but deferred action on H. R. 9602, and related bills.

GATT TRADE NEGOTIATIONS

Rep. Curtis spoke in House on Kennedy Round of trade negotiations now in progress under General Agreement on Tariffs and Trade (GATT) in Geneva.

JELLYFISH-CONTROL ELIMINATION IN COASTAL WATERS OF U. S.

S. 3744 (Brewster) introduced in Senate Aug. 18, 1966, to provide for control or elimination of jellyfish and other such pests in coastal waters to Committee on Commerce. Senator Brewster noted in Congressional Record, Aug. 18, 1966 (p. 18937), that this is companion bill to H. R. 11475.

Subcommittee on Fisheries and Wildlife Conservation of House Committee on Merchant Marine and Fisheries met in executive session Aug. 25, 1966, and approved for full committee action H. R. 11475 (amended).

METRIC SYSTEM STUDY

House Committee on Rules, Aug. 25, 1966, denied a rule on S. 774. This authorizes Secretary of Commerce to make a study to determine advantages and disadvantages of increased use of the metric system in the United States.

H. Res. 998 (Miller) introduced in House Aug. 31, 1966. Resolution provides for consideration of S. 774.

MINIMUM WAGE

Hearing before Committee on Rules, House of Representatives, on H. R. 13712. This is a bill to amend Fair Labor Standards Act of 1938 to extend protection to additional employees, raise minimum wage, etc. Part III, Apr. 26, 1966, 75 pp., printed. Contents include statement by congressman and discussion by committee members.

S. Rept. 1487, Fair Labor Standards Amendments of 1966 (Aug. 23, 1966, report from Committee on Labor and Public Welfare, U. S. Senate, to accompany H. R. 13712), 80 pp., printed. Committee reported favorably with an amendment. Discusses background, purpose, major provisions, section-by-section analysis, and changes in existing law.

Senate Committee on Labor and Public Welfare in executive session, ordered favorably reported, with an amendment in the nature of a substitute, H. R. 13712.

Senate Aug. 26, 1966, passed H. R. 13712, to amend Fair Labor Standards Act of 1938. The Senate rejected Amendment No. 771 by Sen. Thurmond, which would add to existing exemptions individuals in shelling of shellfish such as oysters and crabs.

House Aug. 30, 1966, disagreed with Senate amendments to H. R. 13712, agreed to conference with Senate; appointed conferees.

Conferees met in executive session Aug. 31, 1966, to resolve differences between the Senate- and House-passed versions of H. R. 13712.

Conferees in executive session Sept. 1, 1966, agreed to file conference report on differences between Senate- and House-passed versions of H. R. 13712.

OCEANOGRAPHY

Rep. Rogers spoke in House (Congressional Record, Aug. 18, 1966, p. 19040) on remarks of Vice President Humphrey, Aug. 17, as Chairman of the National Council on Marine Resources and Engineering Development. The Vice President stated he plans to visit all of the Nation's oceanographic centers.

Sen. Jackson inserted in Congressional Record, Aug. 25, 1966 (pp. 19705-19706), article from July 30, 1966, issue of the Marin magazine describing progress by Geological Survey and Bureau of Mines in establishing the foundation for future marine mining industry.

Rep. Sickles spoke in the House (Congressional Record, Aug. 30, 1966, pp. 20430-20431), concerning oceanography. Said that since 1959, with release of the National Academy of Science's key report, "Oceanography 1960 to 1970," Congress has been keenly interested. He hopes there will soon be new and amazing breakthroughs in this science.

OIL POLLUTION OF THE SEA

Senate Aug. 17, 1966, reported (S. Rept. 1479) on H. R. 8760, to implement provisions of International Convention for the Prevention of the Pollution of the Sea by Oil.

Senate Aug. 19, 1966, passed without amendment and cleared for President H. R. 8760.

RESEARCH CONTRACTS

The Senate Committee on Interior and Insular Affairs in executive session Aug. 23, 1966, ordered favorably reported with amendment S. 3460, a bill to authorize Secretary of the Interior to enter into contracts for scientific and technological research.

Committee on Interior and Insular Affairs, Aug. 25, 1966, reported (S. Rept. 1523), with amendments, on S. 3460.

Senate Aug. 29, 1966, passed with amendment, S. 3460. The text printed in Congressional Record, Aug. 29, 1966 (pp. 20160-20161), with excerpt from committee report (No. 1523) explaining purposes.

SEA GRANT COLLEGES

Hearing before subcommittee on Oceanography of House Committee on Merchant Marine and Fisheries, June 13, 1966, on H. R. 15192, H. R. 15471, and H. R. 15569. These are bills to amend title II of Merchant Marine Act, 1936, to authorize establishment and operation of Sea Grant Colleges and certain education, training, and research programs.

House Committee on Rules, Aug. 23, granted an open rule with 1 hour of debate on H.R. 16559.

House Aug. 24, 1966, reported (H. Rept. 1881), H. Res. 982, a resolution providing for consideration of H.R. 16559.

Extending his remarks, Rep. Wydler inserted in Congressional Record, Sept. 8, 1966 (p. A4713), editorial of WHLI (a radio station on Long Island) on Sea Grant College bill (H. R. 16559).

WATER POLLUTION CONTROL ACT

Introduced in House H. R. 17067 (O'Neill of Mass.) Aug. 15, 1966, H. R. 17082 (Cahill) Aug 16, and H. R. 17369 (Horton) Aug. 26, to amend the Federal Water Pollution Control Act in order to improve and make more effective certain programs pursuant to such act; to Committee on Public Works.

House Committee on Public Works met in executive session Aug. 18, 1966, and ordered reported favorably to the House H. R. 16070 (amended).

WATER RESOURCE PROPOSALS--FEASIBILITY INVESTIGATIONS

Conferees met in executive session Aug. 15, 1966, to resolve differences between the Senate- and House-passed versions of S. 3034. This authorizes feasibility studies of certain water resource development proposals. No final agreement. To meet again Aug. 16.

Committee on Conference, Aug. 23, 1966, filed a conference report (H. Rept. 1865) on S. 3034, printed in Congressional Record, Aug. 23, 1966 (pp. 19473-19476), with House managers' explanation of significant differences between the two Houses.

House, Aug. 24, 1966, adopted the conference report on S. 3034.

Sept. 7, 1966, the President signed into law S. 3034 (P. L. 89-561).

WORLD HUNGER

Senate Committee on Agriculture and Forestry in executive session Aug. 24, 1966, or-

dered favorably reported, with amendment in the nature of substitute bill, H. R. 14929. Bill is designed to promote international trade in agricultural commodities--to combat hunger and further economic development. As approved by committee, bill would authorize $1.9 billion for each of calendar years 1967 and 1968 for sales in foreign currency, and $600 million for each year for donations.

Committee on Agriculture and Forestry, Aug. 25, 1966, reported (S. Rept. 1527, with amendments) on H. R. 14929.

Senate, Aug. 26, 1966, began consideration of H. R. 14929. Text of bill reported by Committee on Agriculture and Forestry printed in Congressional Record, Aug. 26, 1966 (pp. 19995-19999). As reported by Senate, bill will be known as Food for Peace Act rather than Food for Freedom Act. It includes fishery products under definition of agricultural commodities.

Senate, Aug. 29, 1966, continued consideration of H.R. 14929, the proposed Food for Peace Act of 1966. Sen. Bartlett spoke in Senate, Congressional Record, Aug. 29, 1966 (pp. 20242-20244), expressing satisfaction that fish is included.

Senate, Aug. 31, 1966, passed after adoption of committee amendment (in the nature of a substitute as amended) H. R. 14929, proposed Food for Peace Act of 1966. Senate insisted on its amendments to the bill; asked for conference with House and appointed conferees.

House, Sept. 8, 1966, disagreed with Senate amendments to H. R. 14929, agreed to a conference, and appointed conferees.

REPORT ON FISHERY ACTIONS IN 89TH CONGRESS

The U. S. Department of the Interior's Bureau of Commercial Fisheries has prepared a leaflet on status of most legislation of interest to commercial fisheries at the end of 1st session, 89th Congress. For copies of MNL-3, "Legislative Actions Affecting Commercial Fisheries, 89th Congress, 1st Session 1965," write to Fishery Market News Service, Bureau of Commercial Fisheries, 1815 N. Fort Myer Drive, Rm. 510, Arlington, Va. 22209.

MECHANICAL FISH TO AID OCEANOGRAPHERS

A mechanical fish, designed for taking deep-water samples by oceangoing vessels while underway has been developed by the Instrumentation Center of the U. S. Naval Oceanographic Office, Suitland, Md. The apparatus is devised especially for use by commercial ships employed to collect oceanographic data without interference to their normal activities.

In operation, the mechanical fish will be dropped over the side of a moving ship in a manner permitting it to attain great depth. As the vehicle falls, a temperature depth record will automatically be plotted on the deck via a standard low-cost steel cable. On the way up, the fish can be activated to gather a sample at any given point.

The sampling device contains a plastic bottle, of about two-quart capacity, with spring-loaded valves at each end. The valves are held in the open position against spring pressure by a one-fourth watt resistor. Upon receiving an electric impulse along the tow cable, the internal capacitor is discharged through this resistor, breaking it, and releasing the valves. Electronic components consist of temperature and pressure probes, their respective oscillators, and a mixer-line drive amplifier. A resonant-reed relay is used to sense the command signal from the deck thereby activating the sampling device.