Trade News

October, 1964

DEPARTMENT OF FISHERIES OF CANADA • OTTAWA

Trade News

PUBLISHED MONTHLY BY THE DEPARTMENT OF FISHERIES OF CANADA

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VOL. 17 NO. 4

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CANADIAN FISHERIES NEWS

FISHERIES NEWS FROM ABROAD

COVER PHOTOGRAPH: Pacific coast fishermen hoist their salmon purse seine net aboard off San Juan, British Columbia.

The scene after nine million cubic yards of earth had shifted on the river bank.

The Chilcotin River Slide

By BRUCE WOODLAND

NEWFOUNDLANDERS have coined the perfect phrase to depict a situation where trouble produces its own antidote.

"It's a good job", they say, "out of a bad one."

This concisely -- and precisely -- sums up the aftermath of a massive landslide that spilled into British Columbia's Chilcotin River in late August.

The Chilcotin River is the salmon's highway from the Fraser River mainstem to the Chilko River, one of the major sockeye producing streams of the Fraser system.

A landslide at any time spells trouble in a river, but this slide occurred just as hundreds of thousands of sockeye salmon were starting to move up the Chilcotin River.

This was the setting for a disaster of major proportions.

Sometime during the evening of August 19 -- no-one saw it happen -- an immense wedge of sloping river bank shifted, then thundered down and across the Chilcotin River. An estimated nine million cubic yards of earth - enough to fill 2,000,000 standard dump trucks - were moved in the slide. It stretched a third of a mile along the river, extended 1250 feet back and to a height of 600 feet.

A 70-foot high wall of earth spewed across the Chilcotin forming a dam that created a lake three miles long holding 650 million gallons of water.

The dam held firm until water spilled over the crest and began the corrective process of erosion.

Another view of the area showing the extent of the landslide.

At a rate of a foot a day, the river cut through the mass of earth, carving a new channel running in a sweeping curve that is at one point 200 feet from its original path. The stream carried away two million cubic yards of sand and gravel creating a silt flow that could be traced as far downstream as New Westminster, nearly 300 miles away.

Meanwhile, the hordes of Chilko sockeye arriving at the Chilcotin caused great concern. Biologists, engineers and fisheries administrators of the Department of Fisheries of Canada and the International Salmon Fisheries Commission sped to the scene to study the effects of the monstrous slide.

Frequent inspections of the heavily-silted Chilcotin in the week after the slide failed to locate the main body of the Chilko sockeye run. Adding to the concern was the discovery of Chilko sockeye - identified through scale analysis - in the Indian fishery catches at Chimney Creek 23 miles up the Fraser River from the confluence of the Fraser and Chilcotin.

SALMON NEGOTIATE AREA

It was not until August 29 that the fish were sighted - but it was a reassuring scene that greeted Department of Fisheries and Salmon Commission biologists who were making a survey of the Chilcotin by helicopter. The salmon were observed moving through the slide area, apparently without trouble, and the front of the migration run had reached a point roughly seven miles above the slide area.

Careful checks along the stream and downstream from the slide failed to produce evidence of fish mortality. The slide had delayed the salmon by several days but the damage had not been great.

Also encouraging were indications that an abundance of spawners of an important chinook salmon run had already moved upstream. This was borne out by excellent chinook catches by Indians in Farwell Canyon previous to the slide.

By early September, on-the-spot observations revealed that thousands of sockeye were moving through the slide area each hour. Later in the month, 250,000 or more fish had reached the spawning grounds. They appeared to be in good condition, although scientists noted a high percentage showed scarred noses. A detailed examination is to be made of the success of the spawning and all aspects of the physical condition of the sockeye will be investigated by a specially assigned team of experts.

Extensive surveys are also underway to determine causes and effects of the slide and possible future developments. No major difficulties are anticipated in the slide area but small slides still occur and the erosion of the newly-created river banks continues.

Only Nature could have provided the remedy to this massive landslide in time to save the important Chilko run. That it was saved was indeed "a good job out of a bad one"! ✔

Harpoon gun in the bow of the "Haroyfjord". Crewmen wait for action.

Canadian Whaling Venture

By G.J. GILLESPIE

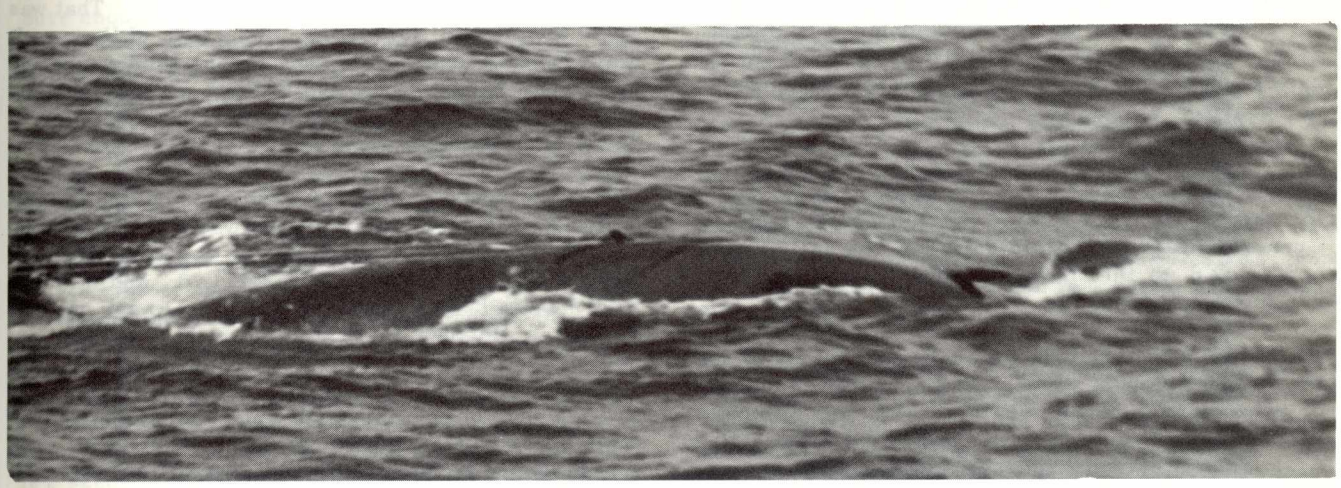
Oh, the rare old whale, mid storm and gale,

In his ocean home will be

A giant in might, where might is right

And King of the boundless sea

SOMEHOW, the verse from that old Nantucket whaling song I read somewhere a long time ago kept edging into my thoughts as I stood on the bridge of the Norwegian whaling vessel "Haroyfjord", outward bound from New Harbor, Lunenburg County, N.S., to the whale-hunting grounds.



Whale shown just after being harpooned from the "Haroyfjord".

We were on a hunt for the giant finback whale, a leviathan measuring up to 70 feet and weighing 40 tons or more. Since the season's hunt had commenced earlier in the past summer, the "Haroyfjord" had been singularly successful. During good weather, the vessel had killed up to four whales in seven days, and that within Nova Scotia coastal waters only a few miles offshore.

While the element of luck was present, there is more to successful whaling than that. Take it from Capt. Torodd Huse, the handsome 31-year-old Viking who is master of the 100-foot vessel. "I have been hunting whales for about 17 years and it's always a gamble. The weather has to be almost ideal to spot whales and once you spot one there's no guarantee you're going to get him."

CO-OPERATION GIVEN

The whaling experiment -- and it can be called that -- is being conducted by the Norwegian ship through the co-operation of both the Department of Fisheries of Canada and the Nova Scotia Department of Fisheries. The Canadian Government gave permission to the Norwegian vessel to hunt whales out of Nova Scotia and land them there. Money was also provided through the federal department of fisheries to provide observers aboard the whaler to watch operations and record necessary data.

Brian Meagher, Deputy Minister of Fisheries for Nova Scotia, has been encouraged by results so far. "We think whaling will develop into another interesting phase of our fisheries. We plan to seek federal permission to have the 'Haroyfjord' continue the experiment next year. It takes two or three years to properly evaluate the potential of whaling in our waters. Once it is established that whale-hunting is feasible, I think our own fishery will get into the act very fast."

It was just before sun-up when the "Haroyjford" cast lines from the whaling station in snug New Harbor. In less than an hour's steaming, and as the eastern horizon was being brightened by another dawn, the lookout's voice echoed down from the crowsnest 50 feet above deck, "There she blows off starboard."

There was a quiver of excitement among the crew. Captain Huse, from the bridge, manoeuvred the ship in the direction pointed by the lookout. Gunner Knute Huse left his coffee on the galley stove and raced to the muzzle-loading 60-mm harpoon gun mounted on the bow.

The whale surfaced again and you could see the vertical blow of vapour off port. For a second or two a portion of the whale's back was blotched black in the shimmering sea lighted by the rising sun. Then it disappeared. Meanwhile, Captain Huse had changed the course of the vessel toward the general direction of the last blow. At the bow Gunner Huse's gun was loaded with its five-foot harpoon and its attached nylon line, 40 fathoms long.

Watching the sea with eyes used to looking distances, Captain Huse took time to observe that it was easier to judge the course of a whale in deeper water. The monsters swam a straighter course in deep water, said the skipper, explaining that in the relatively shallow water in which we were then sailing, the movements of the whale became more unpredictable.

Nine or ten more seconds went by. This time the fountain of vapour was closer to the ship. On the bow the gunner was tense behind his gun, and in the crowsnest the lookout was joined by another crewman and two pairs of eyes were now scanning the sea from the high vantage point.

It was another five minutes before the whale was seen again. This time it was within striking distance. But Gunner Huse did not fire. The captain quickly explained. It was a finback all right, but it was a mother whale with its calf along as company. Such a killing is prohibited by international whaling regulations and, besides, as Captain Huse said, "After you have hunted whales for a long time you gain a respect for these animals and you like to do the sporting thing." And so the "Haroyfjord" sailed on to keep another rendezvous somewhere in the sprawling waste of sea spread before us.

In the interlude, on the bridge and in the mess room of the 140-ton whaler, I talked with Captain Huse and his seven-man crew of whalers. And interesting it was, too. There, in an aroma of tobacco smoke and coffee, one can learn much of the ways of whales and the men who hunt them.

LONG EXPERIENCE

Captain Huse's own story is not without the flavor of adventure. As a boy of 14 he sailed with his father on his first whaling voyage. That was from the ancient Norwegian island port of Haroy. It was from the same port that, a thousand years and more ago, bands of bearded Vikings with horned helmets set sail to harass mainland Europe and the islands of Britain and Ireland.

The young skipper of Haroy has hunted whales in the Arctic beyond Spitzbergen and in the Antarctic thousands of miles south of the equator. He has seen many hundreds of them killed, and in those cold waters he has witnessed sights almost unsurpassed in Herman Melville's immortal story of Moby Dick.

Under polar stars and under polar sun he has seen killer whales attack whales of their own size and larger. To quote Melville, the killer whale is "very savage -- a sort of Feegee fish. He sometimes takes the great Folio Whale, and hangs there

like a leech, till the mighty brute is worried to death. The killer is never hunted."

Captain Huse described a battle between a killer whale and a bottlenose whale. The battle was a short one and within minutes the 20-foot long bottlenose was being eaten by its attacker. The killer whale is the only whale which eats other whales. It eats seals, too. It also eats fish and scavenges around ships for offal. The killer is a hardy animal and remains in cold waters until driven out by ice. They are common in the Canadian Atlantic during the summer and fall.

Like killer whales, bottlenose whales appear to travel in family groups. Captain Huse said bottlenoses appear to have a protective instinct, as he had seen larger ones of a family group protect smaller ones from attack by killers.

SUPERSTITIONS LINGER

In common with seafarers the world over, whalers have superstitions. Some of them reminded the writer of taboos held by many fishermen sailing out of the port of Lunenburg. For instance, an unwelcome guest aboard a whaler is a person carrying an umbrella. "I don't know why it is, but an umbrella just seems to bring bad luck," mused Captain Huse. The same can be said of a person wearing red mittens or a person whistling on deck. All this is part of sealore that is common with whalers and fishermen alike.

As the "Haroyfjord" sailed through almost placid sea and the captain recounted his adventures in arctic whaling grounds, the "spouts" of surfacing whales could be seen from time to time. It was not, however, until mid-afternoon that the vessel was able to come within killing distance.

About four o'clock came the familiar cry from the lookout -- "There she blows off starboard." Sure enough, the geyser of vapour was visible within 50 yards of the ship. Gunner Huse was ready. He fired. One could follow the trajectory of the harpoon with its attached nylon line as it sped to its target.

The harpoon struck the whale near the head. There was tremendous threshing and white water eddied and swirled like boiling milk in a cauldron. This lasted for a second or two and then the tail of the whale rose vertically in the sea and the animal plunged into a deep dive. It dove under the ship and the nylon line parted as it scraped against the keel. The whale escaped but he was mortally wounded.

In a matter of a minute or two the whale surfaced and blew. This time it was a half mile off port. He submerged again and again surfaced in a few seconds. The "Haroyfjord" closed in on its prey. Gunner Huse fired again. It was the coup de grace.

Whale being lashed to vessel before being towed to port.

In contrast with sperm whales, which usually float when dead, the finback usually sinks and has to be inflated with air to keep at the surface. For that purpose, there is a compressed air outlet on deck and about 100 feet of hose leading to a giant hypodermic needle. When the dead whale is hauled alongside, the needle is mounted on a length of pipe and jabbed into the whale, allowing air to run into the body cavity.

While the Haroyfjord can accommodate smaller animals such as minke and bottlenose whales on deck, it is too small to handle 60-footers such as the finback in question. Thus, the whale has to be towed to port. In this case, the huge animal, weighing about 40 tons, was lashed to the starboard side and the vessel proceeded to New Harbor less than 25 miles distant. The catch took place within eight miles of the coastline.

Hunting whales is like stalking big game. It may take hours of following blows before the ship is within range of the whale. The shooting technique is simple. The gunner loads the harpoon gun, coils the nylon line on the rack under the muzzle, crouches behind the gun and tries to anticipate where the whale will surface next.

When the whale surfaces within 50 yards he fires the harpoon toward the region of the flippers and waits to see if the line goes with the whale. If it slowly trails off astern then the harpoon has missed and it is pulled back aboard.

What happens after a whale is hit depends on the individual whale. In general, hundreds of feet of line are let out, the line is then let from the stern and the boat circles up on the whale to harpoon it again. In one case last summer, the whale took the line a short distance, lost its air in great bubbles and then sank to the bottom. When it was winched to the surface the head was covered with mud and the whale was dead. A chest shot had killed it instantly. When the whale is brought to the shore station, it is flensed. The blubber is rendered into oil and the meat is cut into large pieces, frozen and shipped to Canadian and American points as animal food.

Actually, the meat of the finback and minke whales is good eating. It is common on the menu aboard the "Haroyfjord." To the writer, who enjoyed a whale-burger, the meat tasted much like moose meat. In fact, the sponsors of the whaling operation, Karlsen Shipping Co., Ltd., Halifax, hope to encourage the use of minke and finback whale meat for human consumption.

The whale hunt was thrilling, but to the writer it had a degree of depression. As the "Haroyfjord" steamed slowly to port with its huge cargo in tow, one could not help but be reminded of the verse written long ago:

A mariner sat in the shrouds one night,

The wind was piping free;

Now bright, now dimmed, was the moonlight pale,

And phosphorous gleamed in the wake of the whale

As it floundered in the sea.

Mactaquac Salmon Project

Fish protective facilities for Atlantic salmon and trout as recommended by the federal Department of Fisheries for the proposed high dam at Mactaquac on the Saint John River, have been accepted in total by the New Brunswick government, according to a joint announcement by federal Fisheries Minister H.J. Robichaud and Chairman D.A. Riley of the New Brunswick Electric Power Commission. A new combination of facilities will provide for the truck transport of adult salmon and trout past the dam and for hatching and rearing young salmon at the dam site.

Fish passage and maintenance problems at the Mactaquac hydro-electric installation have been the subject of co-operative meetings and studies by technical staffs of the New Brunswick Electric Power Commission and the federal Department of Fisheries for over a year. Discussions by the two interests were brought to a successful conclusion at a meeting between the Honourable H.J. Robichaud, the Honourable H.G. Crocker, provincial Minister of Lands and Mines, the Honourable R.E. Richard, provincial Minister of Fisheries, and the Honourable D.A. Riley, Chairman of the New Brunswick Electric Power Commission. The senior provincial officials approved in principle the proposal for fisheries protection and agreed to recommend its acceptance by their government.

The fisheries proposal was developed by Department of Fisheries biologists and engineers, who were responsible for recommending the most effective arrangement of facilities to maintain runs of fish, particularly salmon, to the Saint John River following the construction of the Mactaquac project. A number of combinations of fish protective facilities and techniques including various fish lifting devices, trucking and hatcheries were considered. The approved scheme is the only one considered capable of providing adequate protection for both the important commercial and angling salmon fisheries.

It is proposed to trap upstream migrating salmon and trout below the Mactaquac installation. A sufficient number of these salmon to provide 500,000 smolts will be retained and later spawned at the on-site hatchery establishment. The surplus salmon plus the migrating trout will be truck-transported to prearranged release sites in the upper river. The annual production of 500,000 smolts was calculated to be the average annual smolt output for the upper Saint John River system.

The establishment of salmon production hatcheries at hydro-power dam sites is a new approach to the salmon maintenance problem in this country. The technique has been used successfully for many years in Sweden where an important commercial salmon fishery is entirely dependent on the output of smolts from a number of these hydro-power river hatcheries. It is expected that the Mactaquac fisheries proposal will be capable of producing a sufficient number of salmon to maintain populations at a level equal to present day Saint John River runs. This new development is a promising advance in Canadian methods of maintaining or increasing runs of salmon.

CANADIAN SUMMER FISHERIES 1964

MORE THAN any other indicator, the value of its exports measures prosperity in the Canadian fishing industry. In 1962 these shipments reached a value which was a record at that date. In 1963 they improved upon that record by 10 per cent, bringing $172 million into the country. At the end of July this year they were $16 million ahead of the same date last year. So far in this decade, therefore, the industry is achieving marked success.

Items meeting the strongest percentage increases this year in export demand are canned sardines and lobsters; blocks and slabs of cod fillets; fresh scallops; and herring oil. The following also have increased in dollar volume: canned salmon, fresh fish, live lobsters, herring meal and salt cod. As the United States is by far the most important customer, a seven per cent decline in American landings during the first half of this year had a strong tendency to increase Canadian exports. Sharply reduced landings of menhaden in their middle Atlantic area reduced their output of meal and oil; small catches of halibut increased their imports of both halibut and swordfish; and scarcity of redfish added to their demands for frozen groundfish.

In Canada expansion is strongest on the Atlantic coast, where new large freezing plants are coming into production and where the fishermen, in this year's spring and summer fisheries, earned nearly $59 million, about $6 million more than last year and $12 million more than the five-year average of 1959-63.

Comparison with last year is not valid on the Pacific coast because the fleets were tied up for three weeks in the middle of summer 1963 by a strike. But by the end of summer this year the fishermen had pocketed $38 million, which was $8 million more than the 1959-63 average for the same date.

MARITIMES

Expansion was the keynote in the three Maritime Provinces. Their overall economy throughout the year has reflected Canada's general upward trend, with industrial employment at a higher level than last year, a marked strengthening in forest industries, development of new mining operations, growing employment opportunities in service industries and a particularly lively tourist season. Although the resulting tight labour market has been felt in the fisheries, they have not lagged behind. The June opening of the big new plant at Lunenburg led the way in a marked expansion of fish processing facilities. Spring fisheries improved upon the good results of the previous year and, in spite of a late start in cold windy weather, summer fisheries continued along the same line. Landings increased in most areas, prices and demand were good, exports showed highly satisfactory gains. By the end of August the 1964 catch amounted to 542 million pounds valued at over $39 million compared with the previous three years' average of 448 million pounds valued at $30 million, a thirty per cent increase in the fishermen's gross income.

May 1, the starting date of lobster fishing in the Gulf of St. Lawrence, is regarded as the opening of summer fisheries in general. This year, however, the opening was only on the calendar, not on the fishing grounds. Ice prevented fishing in the Gulf, was a serious threat in Cabot Strait and entirely closed the harbour of Glace Bay; while high winds and heavy seas held inshore boats in their winter shelters throughout the three provinces. It was mid-month before the Gulf began to clear but all its ports were open by the first of June. Intermittent bad weather continued throughout the summer in the area off west Cape Breton and around the eastern half of Prince Edward Island, interfering with groundfish receipts at Souris and Cheticamp and hampering Prince Edward Island lobstermen. But farther north the Shippegan and Caraquet draggers were out in force by mid-June. They were joined by trawlers returning to their home ports in the Gulf after fishing all winter in southern Nova Scotia. The reinforced fleets found some good cod and flounder fishing in the Gulf and returned from their early trips with full loads and surplus loads on deck.

Groundfishing was urgently pushed throughout the Maritimes to keep up with the expanded needs of the freezing industry. The effort was successful largely due to the addition of big new trawlers to the fleets. The first steel draggers to be built in Nova Scotia were getting into production. The many modern vessels which have come off the ways in the past two or three years demonstrated their fishing capacity throughout the season. The summer's groundfish catch was heavier than last year by 23 million pounds: and all but three million pounds of the increase was landed by the larger class of offshore vessels.

Haddock were plentiful throughout the summer on the banks west of Halifax, especially Brown's and Georges. Pollock were so abundant on Banquereau and on several inshore grounds that after increasing their production of pollock blocks by more than fifty per cent the freezers still had a considerable surplus of this fish, which they passed on to salting plants. There was more ice on Grand Bank and it lasted longer than in any other recent summer but heavy fishing in July produced good landings of cod and flounders.

Overall catches of cod, redfish and halibut declined, however, and it was noted that all species in the groundfish catch were running to smaller sizes. Concern over these facts was often coupled in local reports with comments on the number of large foreign trawlers on the banks.

The three million pound increase in the inshore groundfish catch also was due to greater effort, resulting from uniformly high prices offered to fishermen. Individual catches were often smaller than usual and last year's excellent results with gillnets were not maintained. A large proportion of the cod trap catch was pollock and after June much of the haddock taken inshore was scrod. In Fundy groundfish were scarcer than they have been for many years, while heavy rain and gales cut into the fishing time. Salting plants in the area had to depend mainly on pollock receipts and many produced only about one-quarter their normal output of salt fish. Good early results in the Gulf declined as the fish became small and, by August, scarce. Prince Edward Island had a smaller groundfish catch than in the previous summer, only partly due to a slow market for canned chicken haddies (hake).

Overall, however, the freezing industry went ahead in leaps and bounds. To the end of August its 1964 output of frozen sea fish, excluding shellfish, was sixteen per cent greater than in 1963 and its sales were so satisfactory that stocks on hand were smaller by eighteen per cent. Export sales of cod blocks alone increased in value by more than three million dollars.

The lobster catch, already behind last year at the end of April, was further behind at the end of August, when landings totalled about 26 million pounds, one million less than a year earlier. Because of growing demand and higher unit prices, however, lobstermen's gross earnings were higher by two million dollars and many reported the most profitable season they had ever had.

With the exception of upper Northumberland Strait, all lobster grounds in the Maritimes were open by the middle of May. Southern Nova Scotia, the main producing area, closed May 31, after a six-month season rated by lobstermen as "the best ever." The short but important two-month season in the Gulf of St. Lawrence was hampered by bad weather, especially in the area between Cape Breton and Prince Edward Island, but landings were heavy enough to keep many plants working overtime. As last year, special protection crews were organized to prevent poaching. They had little trouble and the increased number of large lobsters in the catch attested the value of last year's precautions. The summer catch for all areas was a little smaller than last year but, with prices very high on a seller's market, its dockside value increased by two million dollars to $15.7 million.

The scallop industry continued its phenomenal expansion with a summer catch of over eight million pounds valued at between three and four million dollars, a million dollars more than in the previous summer. The market was particularly good for the fresh (unfrozen) pack. Fishermen in the Maritimes now earn twice as much from scallop dragging as from herring and sardine fishing.

A summer-long glut of large herring resulted in heavy output of cured herring products, also plentiful herring bait for summer lobstering with a surplus laid by for the fall. The big runs appeared first in the Gulf, where smoke houses were overflowing with bloaters by early June. The fish produced a high-quality product but, as the entire summer was wet and the output was heavy getting it packed off was a problem and bloaters were still hanging in some plants late in August. Fundy canneries put up kippered snacks and "ovals in tomato sauce" until their storage space began to run out, first trucking in herring from the Gulf but soon getting more than enough from their own boats. The fish appeared in June in the Shelburne area in such quantities as had not been seen in living memory. The new plant at Lunenburg rushed its smoking facilities into operation, turning out kippers. As the big runs spread to Fundy, marinating plants on the French Shore went into capacity production. Landings outstripped all sectors of industry capacity, however, and when even the meal plants stopped buying in August the fishermen had no choice but to dump their last catches and take the nets up.

Sardine canneries on the other hand were short of small herring throughout the season, most of them operating only intermittently, although their warehouse stocks were at a low level. Charlotte County weirs yielded steady small amounts of fish which packed four and five to the can but smaller sizes had to be brought in from Maine until July, when both the seine fleet and the local weirs took excellent catches in St. Mary's Bay.

The swordfish catch continued its sharp climb in quantity and value. By the end of August the fishermen had earned nearly two million dollars on this year's operation. One reason was that with better organization of landings they avoided the sudden gluts which last year upset their markets and tumbled prices. Salmon fishing also improved, especially in New Brunswick.

Adding their spring and summer operations together, fishermen in the Maritimes found themselves ahead of 1963 by nearly seven million dollars, having sold their catch for more than $39 million.

QUEBEC

Fishermen in Quebec were not so fortunate. After an excellent spring, with good catches of cod, halibut, herring and even smelts, their summer operations were not so successful. Lobstering yielded poorly in the unseasonably cold waters of the Gulf. Although they got excellent catches of redfish in July, they were short of cod, haddock and plaice all summer. Abundance of herring in the Gulf and improvement in the relatively small salmon and mackerel fisheries could not make up for the decline in groundfish landings and they reached the end of August with a considerably smaller catch and a slightly lower money return than at the same date in 1963.

The freezing plants did well with ocean perch fillets, dressed salmon and fresh mackerel but could not share fully in the ready market for blocks of frozen cod and flounders, while the growing popularity of Nova Scotia swordfish seemed to cut into halibut sales. The curing plants had a good season with bloaters and pickled mackerel but gained little from the improved demand and better prices for salt cod.

NEWFOUNDLAND

In Newfoundland, where the industry is so largely dependent on cod and the biggest catches are secured in June and July in traps set on the east coast, fishing suffered from the weather, since from northern Labrador to well south of St. John's that coast was under ice attack from spring breakup to the latter part of June. Later trap catches were only a little below average and continued well into August but it was impossible to make up for the earlier losses and the province's overall cod catch, which was 15 million pounds ahead of 1963 at the end of the spring season, was 45 million pounds behind at the end of summer, when it totalled just a little more than 300 million pounds.

This was in spite of the fact that both the other inshore codfisheries and offshore groundfishing were pushed to the utmost. Freezing plants were offering an unprecedented four cents per pound for cod and salt cod prices also were at record levels. The south coast dragger fleet found cod plentiful in the Scatari area and flounders abundant on several grounds but other groundfish were scarce. Trawl fishermen did well in Placentia Bay early in the summer. The longline fleet of the southwest coast, besides fishing intensively with its usual gear, experimented with danish seining in an effort to increase its effectiveness. Collector boats scoured the south and west coasts but, as lobstering was even more profitable than cod fishing for the small-boat men, they had scant pickings until after the lobster season closed in July. South coast freezers in the end managed to increase their output by three million pounds, which more than offset the inevitable decline in frozen production on the east coast.

Here the plants had no regular receipts until late in June and a longshoremen's strike in St. John's threw shipments into confusion for a time. Even after all traps were in the water, catches were disappointing, increasingly so to the northward. Bonavista longliners and Labrador and Avalon trawl fleets had plenty of squid bait and good fishing but these are small efforts compared with the trap fishery. Gillnetting, recently so popular with cod fishermen, did not come up to expectations. East coast frozen production declined by 1.5 million pounds. Thanks to south coast gains, however, the freezing industry's 1964 output reached a record 61.3 million pounds by the end of summer, compared with 59.8 million pounds at the same time last year.

Markets were good throughout the season with the sharpest increase in demand for cod blocks and slabs. Shipments of all frozen groundfish products exceeded those of the previous summer by about 1.5 million pounds. Stocks, too low for comfort at mid-year, were restored by the end of August to a little above the 1963 level.

Production of salt cod declined much more than did the cod catch. This was due to intensification and northward expansion of freezer-plant buying. Steepest declines were in White Bay and Labrador, where in many outports collector boats from southern freezing plants appeared for the first time and where this year's trap catch was particularly disappointing. Fifty vessels, seven more than last year, had carried their traps to Labrador but few came back with full loads. The longshoremen's strike at St. John's had a particularly adverse effect in the salt fish trade because it delayed incoming materials needed for operations already drastically belated and for a time closed the main saltfish shipping port.

The recent trend from heavy-salted to light-salted production continued. Through May and June less than one-third of the meagre cod catch was salted but, thanks to lively fishing in Placentia Bay, light-salted output ran ahead of last year at the expense of dried heavy-salted fish, which declined sharply. With last year's production cleaned out and new supplies slow to come in, stocks of all salt fish at mid-year were down to 1.8 million pounds, less than half as much as a year earlier. The West Indies were buying normally and some European importers were increasing their orders. Conse-

quently when it became apparent that wet-salted supplies from Labrador would be small, prices paid to fishermen by exporters started a climb that continued throughout the summer. At August 31, with the year's salt fish production at only 55 million pounds, compared with 73 million at the same time last year, and stocks down one-third from the previous end-of-summer level, fishermen were getting up to $24 per draft for heavy-salted cod and $22 per quintal for light-salted. The price rise was levelling off, however, due to belief among exporters that there was a significant amount of fish still in hands of fishermen holding out on a seller's market.

The lobster season had opened April 20 with good catches in sheltered St. Mary's Bay but poor results elsewhere. Landings improved on some grounds as soon as bad weather subsided and the water warmed, but remained low throughout the season in other areas, notably the Avalon Peninsula. Spot checks indicated heavier fishing than in any previous season and, at 60 and 70 cents per pound, closing prices were at record levels, but the catch was the same size as last year, 4.4 million pounds. Its value to the fishermen increased by $200,000, however, to just under $2 million.

Salmon licenses sold like hotcakes in April but until July the fish were so scarce that many men hauled their nets. July results were excellent and, with high prices, very profitable to those who remained in the operation. Landings dropped again early in August and the season closed with a smaller and less valuable overall catch than last year.

Herring were almost as scarce through the summer as in the spring. The bait problem was solved by large landings of squid; and pickling plants eked out their small production with mackerel and turbot. The summer's turbot catch was twice as heavy, mackerel three times as heavy, as last year.

Newfoundland fishermen's gross income for 1964 stood at the end of August at $15.5 million. This compared well with the previous three-year average of $14.4 million at the same date but did not quite equal last year's record end-of-summer high, which was $16.3 million.

PACIFIC

British Columbia had a good summer and it was doubly welcome after a rather poor spring this year and a strike-bound summer last year. By August 31 this year's catch had reached a value of more than $38 million, nearly $8 million more than at the same date last year. The salmon fishery, interrupted for three weeks in July last year by the strike, yielded $6 million of this increase. Summer markets were good for canned and frozen salmon and for herring meal and oil. Labour and price disputes between the processors and the fishermen's union were adjusted in July with both sides accepting a four per cent increase recommended by conciliation boards for shoreworkers and tendermen; with the companies further guaranteeing their annual contributions to the fishermen's welfare fund; and with a compromise on this year's landed prices to fishermen for net-caught salmon. Still in dispute were several smaller questions of holiday pay, seniority, etc.

The salmon catch was better than expected. The biggest surprise was on the Skeena, where sockeye landings doubled the predicted figure and nearly equalled the record. Sockeye were plentiful also in Smith Inlet and the Fraser. Heavy rains carried so much silt down the Fraser that the fish would not enter that river for a time and the fishery extended well into August. Another pleasant surprise was that, although a scarcity of pinks had been predicted for the Namu-Bella Coola area after the phenomenal runs of the past two years, two million pounds were taken there in July. Fishing was severely limited in the Johnstone Strait area through the latter half of July to protect pinks returning to streams in mid Vancouver Island but they also arrived in larger quantities than expected. The salmon pack already exceeded one million cases at the end of August with large supplies still coming in regularly. It consisted mainly of pinks and sockeye. More chums were canned than usual, possibly because drastic closures were expected to curtail the fishery for fall chums.

Troll fishing for spring salmon for the frozen fish market yielded well throughout the season. In May and June, springs constituted most of the salmon catch. In July the troll boats sold their springs for a million dollars and a further half million dollars' worth turned up in the net catch. Even in August receipts continued good. Coho were rather scarce until July but plentiful from then to the end of August. Most of this fish also was, as usual, sold fresh or frozen but, in addition, 112,000 cases were canned.

Results Gratifying

Scientists of the Department of Fisheries were gratified by the summer's good salmon runs and especially by the unexpected abundance of sockeye in the Skeena, which appear to justify their belief that the potential of this system warrants the rehabilitation program planned for it. Until about ten years ago the chief method used to increase future salmon runs was to cut down on fishing and even that was not always effective. There was alarm in August this year when a cliff fell to block the Chilcotin River, up which an important sockeye run was moving to its spawning ground in Chilko Lake. The fish were delayed for a week but flood waters piling up behind the blockade then broke it, the sockeye went through and, according to its own later report, the entire B.C. fishing industry breathed a sigh of relief.

Halibuting opened as usual in March in Bering Sea and moved south in May to the Gulf of Alaska and British Columbia waters. About thirty Canadian vessels fished last spring in the Bering Sea area but most of them got only fair to poor catches, partly because sea lions were extremely numerous north of the Aleutians and often stripped a quarter or half of the catch from the gear before it could be hauled. South of the Aleutians the weather was unusually rough even for that stormy area and catches were light there too. Consequently when the season opened May 1 in more southern waters, halibut stocks were smaller than anticipated and opening prices were a cent or two per pound higher than last year. The pattern thus established continued throughout the season.

The men fished eighteen days longer than last year to approximate the catch quotas and this of course increased costs and cut into fishing profits. By July unit prices were averaging four cents above last year. When the season closed August 19 landings were three per cent below last year but their value had increased from $7 million to $7.6 million. The percentage decline in landings was even greater in the American fleet so Canadian vessels landed more of their fish at ports south of the border, mainly at the expense of receipts at Prince Rupert.

Rigid limitations on halibuting in Bering Sea have been forecast for next year.

An active summer herring fishery laid the basis for what now bids fair to be a record season for production of herring meal and oil in British Columbia. Landings amounted to 106 million pounds, the biggest summer catch in recent years, and by the end of August the reduction plants had turned out 8600 tons of meal and 1.4 million gallons of oil, which is very heavy for summer output. Demand and prices were excellent, mainly because the world market continued firm for both products after a year of rapid expansion in 1963, but partly also because supplies of anchovita fluctuated sharply this year at some South American reduction plants, upsetting their production schedules.

The summer trawler fishery was characterized by heavy grey cod landings. One high-liner established a record by discharging a quarter-million pounds of this fish on July 1. Ling cod was also plentiful throughout the summer. Heavy June landings of trash fish for mink feed overstocked that market for a time.

The crab fishery was active in northern waters with a particularly heavy catch in the Queen Charlottes. Most of the shrimp men were salmon fishing in July and August. Oyster receipts were small until July.

INLAND

The decline in freshwater fisheries was due to smaller catches and consequently smaller output, especially of high-priced products such as fresh whole whitefish and pickerel, also whitefish fillets.

Fears have been expressed that pollution may have passed the point of no return in Lake Erie, which yields heavier catches to Canadian fishermen than any other lake. Certainly the whitefish and lake trout have departed but smelts held their own this year and, although the perch catch dropped very sharply, it brought more money to the fishermen, as they were able to demand much higher per pound prices. In fact the total Ontario catch reached about the same value as in 1963 although its volume declined 27 per cent, mainly because summer weather was unfavourably hot in July and wet in August.

Pickerel catches were poor throughout Northern Ontario and Manitoba but Lake Winnipeg produced 1.3 million pounds of whitefish, 30 per cent more than last summer and the happiest result in this summer's lake fisheries.

Ice broke up early on the prairies and open-water fishing made a good early start but, with hot weather, forest fires became critical and, avoiding or fighting them, the men had scant time for fishing. Lesser Slave produced so poorly that local fishermen's interests turned to talk of trapping. Landings on Great Slave were way down, with the sharpest decline in the major catch. whitefish. Plants were behind in filling their orders, especially for block fillets, but pioneering continued in products and markets. Output of cooked items increased in Alberta; and Winnipeg was shipping frozen whitefish and tullibee to Denmark and England.

Pacific Salmon Tagging

A salmon tagging program launched by the Washington State Department of Fisheries is expected to yield information of value to the Department of Fisheries of Canada.

The program involves coho, chinook and chum salmon in the vicinity of West Beach, Whidbey Island and throughout the San Juan Islands area.

Large numbers of the Petersen tags used in this program are expected to be recovered in Canadian waters by Canadian fishermen. The Washington State Department of Fisheries has requested the help and co-operation of Canadian fishermen who might find the tags.

Tags may be returned to Fishery Officers on the lower mainland, at Vancouver Island points or direct to the Department's headquarters at 1155 Robson Street, Vancouver. Tags collected will be passed on to the Washington State department.

Pacific Fisheries Under Discussion at Ottawa Meeting

Fisheries Minister H.J. Robichaud, second from right, discusses a point with representatives of the three member countries of the INPFC at the opening of the Ottawa meeting. The others are, left to right, Dr. A.W.H. Needler, Deputy Minister of Fisheries of Canada; Hon. Benjamin A. Smith, Chief of the United States delegation, and Makoto Matsuoka, Director of The Fisheries Agency, Japan.

The Third Meeting of the Parties to the International Convention for the High Seas Fisheries of the North Pacific Ocean which began on September 9, 1964, came to a close October 1 in the Conference Rooms in the West Block of the Parliament Buildings, Ottawa.

The present Convention and the modifications of this Convention which have been under discussion during the three meetings have the primary objective of promoting co-operation among the three Parties in developing and applying effective conservation measures and procedures for North Pacific stocks of fish of common interest.

The earlier meetings which were held in Washington, D.C. in June 1963 and in Tokyo in September 1963 had provided an opportunity for the delegations from Canada, Japan and the United States to present and clarify their views concerning revision of the Convention, and the third meeting concentrated on consideration of the principles and details to be included in a revised Convention.

During the course of the meeting the Japanese delegation submitted a draft Convention including accompanying protocols which incorporated various modifications of the draft Convention discussed at the Tokyo meeting. This new draft took into consideration certain important suggestions made by each delegation at the earlier meetings.

The delegations examined and discussed the new draft Convention and protocols and presented constructive modifcations for further consideration.

It was generally agreed that the form and content of the Articles of the Convention under consideration could be made acceptable to the three delegations by means of revisions which were mainly of a drafting nature. However, because of certain problems which could not be resolved at this time it was not possible to reach full agreement on the salmon and halibut protocols which form an integral part of the Convention.

Throughout the Meeting the delegations exchanged views in a frank manner and studied various concrete proposals in efforts to resolve the remaining differences, particularly with regard to the contents of the protocols. As the result of these constructive and conciliatory efforts considerable progress was made but it was finally decided that complete agreement could not be reached at this time. The delegations therefore concluded that the meeting should adjourn and recommend to the Governments that a fourth meeting be convened at some later date for the purpose of reaching final agreement. In this connection the United States delegation expressed the hope of its Government that the next meeting might be held in the United States at a time and place to be determined by the three Governments.

A. D. Wymbs Retires

A. D. "Peter" Wymbs, Chief Treasury Officer to the Department of Fisheries and Honorary Treasurer of the Fisheries Research Board of Canada since October, 1952, retires from Government service on December 1, at the end of a 45-year career in a variety of responsible posts, interrupted only by active service overseas in World War 1.

Of his years with Fisheries, Deputy Minister A. W. H. Needler paid the following tribute: "Peter Wymbs has been associated with the Department and the Research Board for the past 12 years, during which time he has earned the gratitude of us all for his help and understanding.

"We have benefited greatly from the wealth of his experience, gained during 45 years in the financial field. His relationship with us has been a most pleasant one and we are sorry that it has come to an end. We hope, however, that it is the beginning of a happy and rewarding period for him, and that he obtains full enjoyment from a well-earned retirement. He carried with him the good wishes of the entire Department and Board."

Mr. Wymbs

Mr. Wymbs was born in Cobden, Ont. in 1897, and was educated in Ottawa. During World War I he volunteered for active service and served overseas for two and one-half years. Upon his return he joined the Civil Service and was appointed to the Accounting Department of the Soldiers' Settlement Board, serving in Ottawa from 1919 until early in 1921, when he was posted to Saint John, N. B., and later to Sherbrooke, Quebec.

In 1922 he was appointed to the Internal Audit and Inspection Staff of the Soldiers' Settlement Board, a post which necessitated travel across Canada, auditing and inspecting District Offices in all provinces.

In 1932, while on loan from the Board to the Treasury Office, Indian Affairs Branch, he made a complete review of the sale of surrendered Indian Lands, which were sold at auction for farming purposes. He later became Assistant Chief Treasury Officer to the Indian Affairs Branch and, during World War II, was Special Assistant to the Chief Treasury Officer of the Department of National Defence. In 1947, on loan to the Veterans' Land Act, he assessed costs of project housing in the Toronto area. Appointed Chief Treasury Officer of the Special Project Branch of the Department of Mines and Resources in 1948, Mr. Wymbs set up a complete accounting system for the Trans Canada Highway, and also set up a commercial accounting system for the Northwest Territories Power Commission, later the Northern Canada Power Commission.

Canadian Aid

A Canadian fishery adviser sent to Uganda for six months under External Aid Office arrangements is being given credit there for devising a means of turning a fish liability into an asset.

This is Dr. Stanley A. Beatty, of Madoc, Ontario, now retired from the Fisheries Research Board of Canada. During his recent service in Uganda working with the Fisheries Department there, Dr. Beatty started a new way of processing the Nkeje, also called the Haplochromis. These sardine-sized fish swarm in their millions in the 27,000 square miles of Lake Victoria. While they are too small and boney to be a popular table dish, they also eat so much food they keep down the lake's population of more edible fish.

Dr. Beatty's processing method, according to the "Uganda Argus", the principal newspaper in the country, "could give Uganda's fish industry a real fillip and step up production by thousands of tons."

Fishery Figures For August

SEAFISH: LANDED WEIGHT AND LANDED VALUE

	May-August 1963		May-August 1964	
	'000 lbs	$'000	'000 lbs	$'000
CANADA - TOTAL	1,038,838	69,242	1,119,726	81,203
ATLANTIC COAST - Total	871,337	43,517	870,171	47,264
Cod	455,870	15,174	386,258	13,444
Haddock	30,117	1,613	39,867	2,222
Pollock, Hake & Cusk	47,321	1,473	46,488	1,481
Rosefish	31,449	846	26,781	753
Halibut	2,385	740	2,103	598
Plaice & Other Flatfish	60,230	1,924	74,202	2,357
Herring & Sardines	159,545	1,960	190,015	1,990
Mackerel	6,630	284	13,482	550
Alewives	11,189	175	10,277	146
Salmon	3,998	1,805	4,124	1,962
Smelts	115	15	154	20
Swordfish	5,713	1,217	6,764	1,818
Other Fish	15,661	319	15,788	417
Lobsters	30,945	13,378	30,267	15,696
Clams & Quahaugs	1,928	93	2,271	116
Scallops	6,863	2,465	8,178	3,430
Other Shellfish	1,378	36	13,152	264
PACIFIC COAST - Total	167,501	25,725	249,555	33,939
Pacific Cods	4,160	352	8,648	641
Halibut 1/	29,568	6,497	28,488	7,150
Soles & Other Flatfish	2,778	176	3,013	184
Herring	31,898	353	106,400	1,279
Salmon	92,649	17,897	95,670	23,977
Other Fish	1,716	52	2,002	68
Shellfish	4,732	398	5,334	640
BY PROVINCES				
British Columbia	167,501	25,725	249,555	33,939
Nova Scotia	206,888	15,933	260,322	19,055
New Brunswick	140,569	5,468	142,765	6,236
Prince Edward Island	22,646	3,198	24,286	4,386
Quebec	104,263	4,244	95,294	4,171
Newfoundland	396,971	14,674	347,504	13,416

1/ - Includes halibut landed in U.S. ports by Canadian Fishermen.

MID-MONTH WHOLESALE PRICES - Aug., 1964

		Montreal	Toronto
		$	$
Cod fillets, Atl. fresh, unwrapped	lb.	.315	.373
Cod fillets, Atl. frozen, cello 5's	lb.	.272	.323
Cod fillets, smoked	lb.	.370	.423
Haddock fillets, fresh, unwrapped	lb.	.418	.477
Herring, kippered, Atl.	lb.	.242	.303
Mackerel, frozen, round	lb.	.192	.250
Lobsters, canned, Fancy	case 48-½s	61.653	62.533
Sardines, canned	case 100-¼s	8.947	9.292
Halibut, frozen, dressed	lb.	.428	.443
Silverbright, frozen, dressed	lb.	.498	.553
Coho, frozen, dressed	lb.	.690	.727
Sockeye, canned, Gr. A.	case 48-½s	26.780	27.700
Pink, canned, grade A	case 48-½s	14.530	15.200
Whitefish, fresh	lb.	1/.395	.370
Lake Trout, frozen	lb.	.337	.460

1/ - Dressed

PRICES PER CWT. PAID TO FISHERMEN
(Week ending August 15th)

	1963	1964
	$	$
Halifax		
Cod Steak	4½	4½
Market Cod	4	4
Haddock	7	6½
Plaice	4	4
Yarmouth		
Haddock	7	7
Black's Harbour		
Sardines	2	2
St. John's, Nfld.		
Cod	3	3
Haddock	2½	2 3/4
Rosefish	2	-
Vancouver		
Ling Cod	10-14	9-10
Gray Cod	7	5½-7
Soles	5-9	6-9
Salmon (Redspring)	39-80	45-83

Fishery Figures For August

FROZEN FISH STOCKS AS AT END OF AUGUST

	1963 '000 lbs.	1964 '000 lbs.
TOTAL - Frozen Fish, Canada	103,332	111,375
Frozen - Fresh, Sea Fish - Total	82,539	81,555
Cod Atlantic, fillets & blocks	31,181	23,007
Haddock, fillets &blocks	4,251	4,891
Rosefish, fillets & blocks	2,934	3,404
Flatfish, (excl. Halibut), fillets & blocks	4,653	6,560
Halibut, Pacific, dressed & steaks	14,691	13,199
Other Groundfish, dressed &steaks	994	2,143
Other Groundfish, fillets & blocks	4,172	4,640
Salmon, Pacific, dressed & steaks	11,002	14,264
Herring, Atlantic & Pacific	1,175	894
All other Sea Fish, all forms	5,034	5,693
Shellfish	2,452	2,860
Frozen - Fresh, Inland Fish - Total	5,614	5,632
Perch, round or dressed	132	73
Pickerel (Yellow & Blue)fillets	227	477
Sauger, round or dressed	135	112
Tullibee, round or dressed	139	71
Whitefish, round or dressed	1,799	1,728
Whitefish, fillets	221	220
Other, all forms	2,961	2,951
Frozen - Smoked Fish - Total	2,308	2,376
Cod Atlantic	1,218	1,322
Sea Herring, kippers	682	581
Other, all forms	408	473
Frozen for Bait and Animal Feed	12,871	21,812

SALT FISH STOCKS AS AT END OF AUGUST

Salted and Pickled Fish, Atl. Coast		1963 '000 lbs	1964 '000 lbs
Wet-salted - Total		36,791	29,394
Cod		26,351	21,994
Other		10,440	7,400
Dried - Total		8,088	5,966
Cod		6,996	4,426
Other		1,092	1,540
Boneless - Total		1,040	950
Cod		959	902
Other		81	48
Pickled - Total	(barrels)	26,934	29,994
Herring	"	13,948	9,675
Mackerel	"	3,416	10,904
Alewives	"	9,070	7,659
Turbot	"	500	1,756
Bloaters	(18 lb. boxes)	202,316	233,532
Boneless Herring	(10 lb. boxes)	13,631	3,915

CANADIAN EXPORT VALUE OF FISHERY PRODUCTS, MAY-JUNE

(Value in Thousands of Dollars)

			1963	1964
Total Exports			47,182	50,018
By Markets:				
United States			36,476	38,764
Caribbean Area			4,325	4,015
Europe			5,555	6,339
Other Countries			826	900
By Forms:				
Fresh and Frozen			33,423	36,297
Whole or Dressed	8,996		9,957	
Salmon, Pacific	1,633		2,516	
Halibut, Pacific	2,142		1,522	
Cod, Haddock, Pollock, etc.	94		112	
Swordfish	953		1,525	
Other Seafish	1,142		1,211	
Whitefish	1,140		1,061	
Pickerel	718		742	
Other Freshwater Fish n.o.p.	1,174		1,268	
Fillets	11,051		12,724	
Cod, Atlantic	4,420		5,301	
Haddock	1,270		1,705	
Rosefish, Hake, Pollock, etc.	925		551	
Flatfish	1,905		2,212	
Pickerel	601		670	
Other	1,930		2,285	
Shellfish	13,376		13,616	
Lobster (Alive & Meat)	11,200		10,683	
Other	2,176		2,933	
Cured			5,349	3,956
Smoked	413		410	
Herring	280		288	
Other	133		122	
Salted, Wet & Dried	4,456		3,126	
Cod	3,951		2,600	
Other	505		526	
Pickled	480		420	
Herring	312		248	
Mackerel	93		57	
Other	75		115	
Canned			4,990	6,169
Salmon	3,374		3,524	
Sardines	726		1,007	
Lobsters	633		1,407	
Other	257		231	
Miscellaneous			3,420	3,596
Meal	2,522		2,596	
Oil	97		184	
Other	801		816	

Norway

NORWEGIAN EXPORTS BY TYPES OF PRODUCTS, 1963-1964

Quantity in Thousand Pounds — Value in Thousand Kroners

	Jan.-June 1964		Jan.-June 1963	
	Q.	V.	Q.	V.
GRAND TOTAL	-	516,599	-	422,874
Fresh or Iced Herring and Sprat (brisling)	12,341	3,833	16,343	5,110
Fresh or Iced Fish, n.o.p.	24,548	33,630	21,801	26,804
Sweden	7,284	13,255	6,001	9,993
United Kingdom	9,101	9,076	8,763	8,076
Other Countries	8,163	11,299	7,037	8,735
Frozen Herring and Sprat (brisling) except fillets	28,955	10,981	31,620	12,176
U.S.S.R.	13,168	5,157	1,378	550
Frozen Fish, n.o.p. - except fillets	19,004	23,315	22,011	26,441
Italy	2,850	4,012	5,187	6,830
United Kingdom	2,906	5,972	1,969	5,406
Other Countries	13,248	13,331	14,855	14,205
Frozen Fillets of Fish	54,222	74,040	49,015	71,324
Sweden	3,975	7,106	4,802	8,401
France	3,221	6,716	3,922	8,125
United Kingdom	8,624	13,501	6,510	10,551
West Germany	3,340	3,815	4,731	5,292
United States	7,458	10,947	9,883	13,752
U.S.S.R.	9,636	10,045	-	-
Other Countries	17,968	21,910	19,167	25,203
Salted Herring and Sprat (brisling)	10,262	7,067	9,048	7,176
Salted Fish, n.o.p.	4,028	5,016	5,459	6,337
Dried Fish (stockfish)	18,858	40,444	25,845	53,831
Nigeria	14,630	29,437	20,606	41,105
Salted and Dried Fish (klipfish)	28,131	55,432	28,702	45,841
Dominican Republic	2,954	4,453	4,107	5,673
Brazil	8,230	16,069	13,047	20,616
Cuba	6,570	12,869	-	-
Other Countries	10,377	22,041	11,548	19,552
Crustaceans and Molluscs, not canned	7,690	37,515	7,440	29,976
Sweden	2,213	10,902	2,368	10,976
United Kingdom	3,477	19,709	2,394	12,649
Other Countries	2,000	6,904	2,678	6,351
Other Fish Oils, excluding waste and brown oils	17,939	12,728	15,315	7,708
Fish, prepared or preserved -				
In airtight containers	30,013	64,285	28,259	59,733
United Kingdom	7,509	15,932	5,152	9,839
United States	10,377	25,576	12,271	29,349
Other Countries	12,127	22,777	10,836	20,545
Fish, prep. or pres. In non-airtight containers	11,468	20,311	8,157	11,679
France	2,434	5,151	520	1,127
Crustaceans and Molluscs, prep. or pres.	1,863	8,868	1,689	8,346
United Kingdom	1,263	5,657	1,043	4,961
Herring Meal	230,742	105,372	87,110	40,032
France	40,644	18,340	11,283	5,241
Poland	14,237	6,690	4,850	2,220
United Kingdom	100,979	45,730	44,956	20,632
West Germany	14,824	6,740	6,215	2,792
Other Countries	60,058	27,872	19,806	9,147
Other Meals	19,275	7,957	11,843	4,708
All Other Products	4,910	5,805	5,447	5,652

NORWEGIAN EXPORTS BY COUNTRIES, 1963-1964

Quantity in Thousand Pounds — Value in Thousand Kroners

	Jan.-June 1964		Jan.-June 1963	
	Q.	V.	Q.	V.
GRAND TOTAL	-	516,599	-	422,874
United States	22,430	42,627	27,509	49,440
Frozen Fillets of Fish	7,458	10,947	9,883	13,752
Fish, prep. or pres. In airtight containers	10,377	25,576	12,271	29,349
Other Products	4,595	6,104	5,355	6,339
Brazil	8,230	16,069	13,047	20,616
Salted and Dried Fish, (klipfish)	9,230	16,069	13,047	20,616
Dominican Republic	3,404	4,821	4,352	5,896
Salted and Dried Fish, (klipfish)	2,954	4,453	4,107	5,673
Cuba	6,570	12,869	-	-
Salted and Dried Fish (klipfish)	6,570	12,869	-	-
United Kingdom	139,879	119,841	78,585	75,488
Fresh or Iced Fish, n.o.p.	9,101	9,076	8,763	8,076
Frozen Fish, n.o.p. - except fillets	2,906	5,972	1,969	5,406
Frozen Fillets of Fish	8,624	13,501	6,510	10,551
Crustaceans and Molluscs, not canned	3,477	19,709	2,394	12,649
Fish, prep. or pres. In airtight containers	7,509	15,932	5,152	9,839
Crustaceans and Molluscs, prep. or pres.	1,263	5,657	1,043	4,961
Herring Meal	100,979	45,730	44,956	20,632
Other Products	6,020	4,264	7,798	3,374
France	50,507	36,873	22,147	21,871
Frozen Fillets of Fish	3,221	6,716	3,922	8,125
Fish, prep. or pres. In non-airtight containers	2,434	5,151	520	1,127
Herring Meal	40,644	18,340	11,283	5,241
Other Products	4,208	6,666	6,422	7,378
Sweden	34,227	48,599	25,014	41,117
Fresh or Iced Fish, n.o.p.	7,284	13,255	6,001	9,993
Frozen Fillets of Fish	3,975	7,106	4,802	8,401
Crustaceans and Molluscs, not canned	2,213	10,902	2,368	10,976
Other Products	20,755	17,336	11,843	11,747
Italy	14,685	16,188	15,860	20,466
Frozen Fish, n.o.p. - except fillets	2,850	4,012	5,187	6,830
Poland	16,135	7,600	7,504	3,321
Herring Meal	14,237	6,690	4,850	2,220
West Germany	35,981	26,988	32,911	24,062
Frozen Fillets of Fish	3,340	3,815	4,731	5,292
Herring Meal	14,824	6,740	6,215	2,792
Other Products	17,817	16,433	21,965	15,978
Nigeria	14,630	29,437	20,606	41,105
Dried Fish (stockfish)	14,630	29,437	20,606	41,105
U.S.S.R.	31,236	19,235	1,378	550
Frozen Herring & Sprat (brisling) except fillets	13,168	5,157	1,378	550
Frozen Fillets of Fish	9,636	10,045	-	-
Other Products	8,432	4,033	-	-
All Other Countries	146,335	135,452	126,191	118,942

Current Reading

"Investigation, Utilization and Regulation of the Halibut in Southeastern Bering Sea", by Henry A. Dunlop, F. Heward Bell, Richard J. Myhre, William H. Hardman and G. Morris Southward. (Report of the International Pacific Halibut Commission, No. 35, Seattle, Wash., U.S.A.).

The original convention for the preservation and development of the halibut fishery of the northern Pacific Ocean and Bering Sea, signed in 1923 by Canada and the United States, specifically included Bering Sea, as halibut were known to occur there. Halibut in minor quantities were often taken incidentally by United States fishermen while handlining for cod, an industry that had been conducted in Bering Sea since 1864. Though the first consequential setline fishing commenced in 1930, an occasional United States halibut vessel fished the region prior to that time.

The 1923 convention, which came into force upon exchange of ratifications on October 21, 1924, established the International Fisheries Commission, subsequently renamed the International Pacific Halibut Commission. It provided for a cessation of fishing between November 16 and February 15 each year and required the Commission to make a scientific investigation into the life history of the Pacific halibut and to recommend regulatory measures for the preservation and development of the halibut fishery of the northern Pacific Ocean including Bering Sea.

A broad program of research was initiated in 1925 and by 1930 it extended into southeastern Bering Sea. Management in Bering Sea under the successive halibut treaties of 1930, 1937 and 1953 has followed the regulatory principles and procedures used in the halibut fishery on other parts of the Pacific coast.

EXTENT OF REPORT

This report reviews the regulations applied to the Bering Sea fishery and presents the halibut catch statistics for the southeastern portion of the region. It also summarizes the results of exploratory fishing and of biological investigations including information on the life history, habits and ecology of the Pacific halibut which are pertinent to an understanding of the productivity of the halibut in southeastern Bering Sea and of their relationship to halibut elsewhere.

Southeastern Bering Sea is defined in this report to include all waters of Bering Sea east of 170° West longitude and south of a line from 170° West longitude through St. Paul Island to Cape Newenham. This encompasses most of the waters where United States and Canadian setline vessels have fished, and where the Commission has conducted most of its Bering Sea investigations.

"Life History and Present Status of British Columbia Herring Stocks", by F. H. C. Taylor. (Bulletin No. 143 of the Fisheries Research Board of Canada, Ottawa, Ont. $1.75).

In British Columbia the catch of Pacific herring ranks first in landed weight, and second to salmon in landed value. While the herring catch in recent years has averaged about three times the weight of the salmon catch, it has been only about one-quarter as valuable. However, the salmon catch includes five distinct kinds of fish, so in some years herring is the most valuable single species.

Herring have been fished commercially in British Columbia waters since 1877, when a catch of about 75 tons was made. In 1962-63 there was a catch of 263,240 tons. In general, says the introduction to this bulletin, the trend has been toward expansion of the fishery, primarily in response to market conditions.

Increased exploitation of southern British Columbia stocks during the middle 1930's coincided with a decline in population abundance, and this aroused fears of overfishing. As a result, catch quotas were imposed on stocks on the east and west coasts of Vancouver Island, originally as an experiment to last for five years. The quotas were subsequently renewed, with the size of the catches modified, and they were extended to other regions. Immediately after World War II, a large-scale experiment was begun, in which quotas were removed on the west coast of Vancouver Island while on the lower east coast of the island a rigid (but increased) quota was maintained, the idea being to compare the two regions under the two systems of management. After 1951-52 a more flexible policy of quota extensions was introduced, and greater utilization of many stocks became possible in years of abundance.

However, recent large catches have again aroused fears among herring fishermen that the stocks may become overfished. Other fishermen stress that herring are required in large numbers as food for other important fishes, particularly salmon. To allay such fears and provide a forum for the discussion of all herring problems, a Herring Management Committee with an associated Industry Advisory Group was formed in 1959. One of the first tasks of this Committee was to discuss with the Industry Advisory Group the present status of the stocks and the scientific background of the current system of management. The purpose of this Bulletin is to make the information discussed more widely available.

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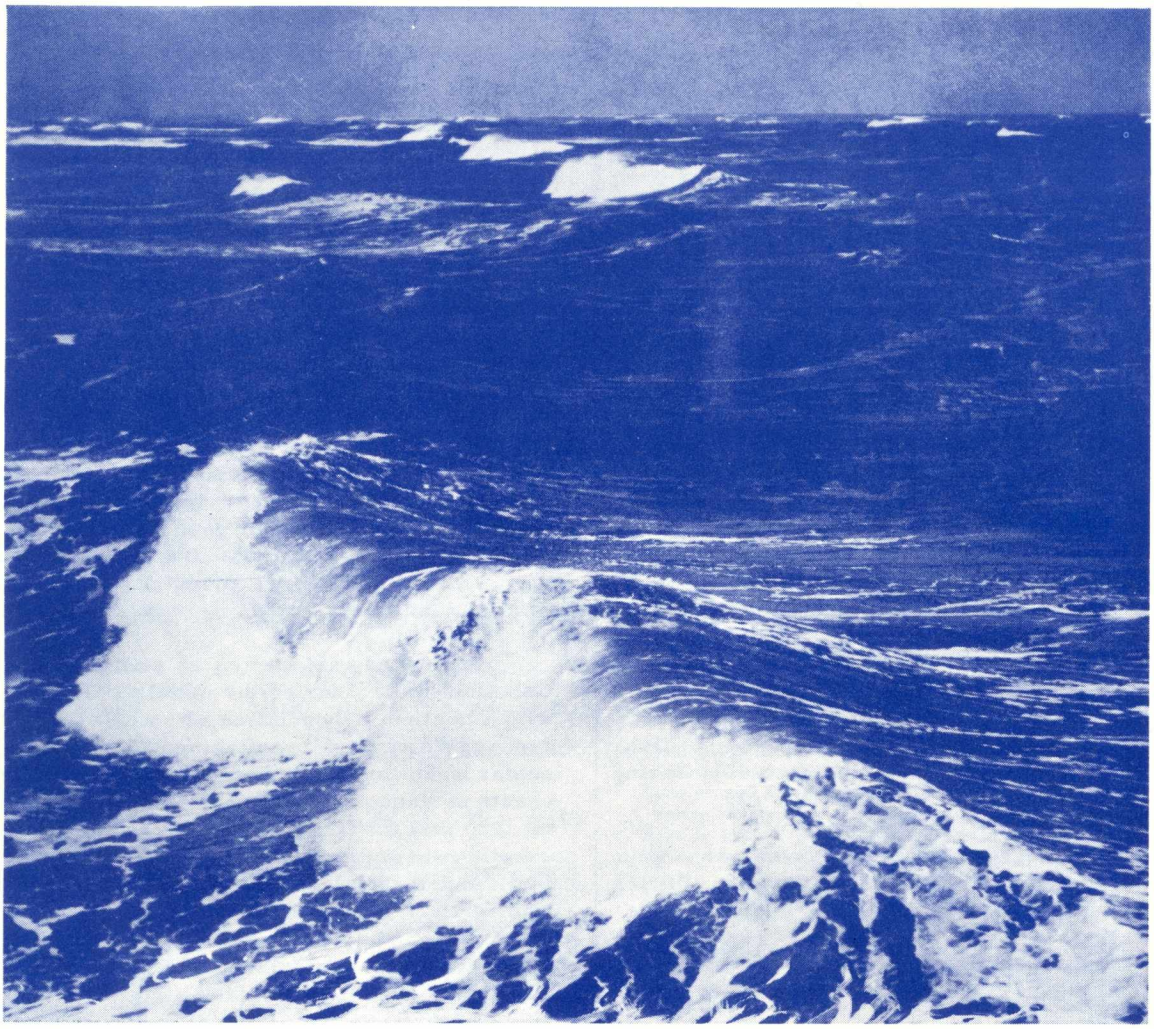

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The Department of Fisheries is vitally concerned with conservation and development of stocks of fish on which the future of the industry depends.

Canada's membership on seven international commissions helps to ensure a sound approach to these problems, based on scientific research and international cooperation.

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Ottawa, Canada

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F2-64

ROGER DUHAMEL, F.R.S.C., Queen's Printer and Controller of Stationery, Ottawa, 1964