

July 17.

July 18.

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**REVIEW OF SALT FISH MARKET.**

The New York market for domestic salt fish remains very quiet and without any feature of interest or movement says the Fishing Gazette. As stated in the "Maritime Merchant," a sale of new bank fish at \$4 and one of a cargo of old cure at \$3.80 have been reported. Local authorities in Halifax believe that according to the experience of years with heavy ice fields, the present summer ought to be a very productive one. The theory is that the low temperature of the ocean waters drives the fish towards the shores where a milder temperature prevails. So far, the fleet has not done much, but it is possible that the Lunenburg bankers may secure large catches, and thereby make up, to some extent, for the inevitable drop in prices from those of last year. It is evident, from cable advices, that the Norwegians are competing strongly in the West Indies and South America as well as in the United States, and, though they have not yet produced an article equal to Newfoundland No. 1, they are getting a lot of trade for the ordinary tropical run of goods.

The appearance of the bubonic plague at Porto Rico and Cuba, in addition to Trinidad, is another unfortunate feature of the present situation. It is understood that this disease is always more or less prevalent at Trinidad to which island it is brought by the foreign coolies who have made that place a stamping ground. It is hoped that the vigorous measures adopted by the United States government at home, and the assistance offered abroad, will stay the course of this insidious epidemic.

The market for codfish at San Francisco is weakening and the demand is light as stated by the "Pacific Fisherman." The Pacific coast codfish season began in April with the arrival of the sch. John D. Spreckels with 150,000 fish, and others of the fleet reported last month that good weather prevailed and that the prospects for the Bering Sea catches were good. Since then advices have come in from some of the stations that good spring seasons fishing had been secured. Unfortunately the Joseph Russ, of Anacortes, one of the schooners became a total loss at Chirikoff Island, but in spite of that, it is believed that the other boats will bring a supply of codfish equal to the ordinary demands of the coast together with a margin for shipping east in the fall.

**Portland Fishing Notes.**

Capt. F. H. Harty, agent for the New England Fish Co., has returned to Portland, after being in Newport, R. I., for six weeks attending to the mackerel business of the company there.

Another good lot of squid amounting to 2000 pounds was brought in Monday from the near-by traps and placed in the Portland Cold Storage Co.

Pollock have again made their appearance over Boothbay, but there seems to be no fishermen looking for them. Several schools of the fish have been reported there but the seiners and netters are to the westward.

Quite a lot of fish were landed at Commercial wharf Monday by the local fishermen. The schooner Lizzie May and the sloops Crusader, Rough Rider and Laconia each bringing in about 6000 pounds, the latter craft having in her catch over 3000 pounds of halibut, caught a short distance off Cape Elizabeth.

**Porto Rico Fish Market.**

The market for codfish is easier, and sales of Gloucester fish were made today at San Juan at \$28.75, say S. Ramirez & Co., under date of July 2. For a Lunenburg cargo, just arrived, \$30 has been asked with small chances of success. Although that shipment struck a depleted market the importers will not pay any more than \$29. The Mayaguez market continues to show very little life but shipments on the way are small and a better tone is noticed. Stocks of pollock and haddock are insignificant and the demand at San Juan is on the increase. We advise moderate shipments to San Juan Ponce and Mayaguez which will find ready sale at from \$17 to \$18 per drum net ex wharf.

**Big Stock.**  
Capt. Fred Thompson of sch. Gov. Foss is keeping up his record for big stocks, his recent 18 days halibuting trip realizing \$3060, from which the crew shared \$78.80 apiece, clear.

**Change of Skippers.**  
Capt. Christopher Carrigan has taken command of sch. Benj. A. Smith, mackerel seining, relieving Capt. George E. Heckman who at present is in Maine.

**Salt All Out.**  
Steamer Iser has completed the discharge of her cargo of salt and sailed this forenoon for New York to load case oil for Constantinople.

**Going Seining Again.**  
Sch. Lucania, Capt. Martin Welch, will sail on a mackerel seining trip this afternoon.

**Halibut at Portland.**  
One trip of halibut is at Portland this morning.

**Fishing Fleet Movements.**  
Sch. Mattie Winship was at Portland yesterday seeking bait.

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**PLAN TO CONDEMN THE HECKMAN**

Ottawa Advices Say  
Craft's Owners Can  
Make a Defense.

Details Leading to  
Seizure of Vessel  
Not Yet Known.

Just what course of action the Canadian government will finally pursue in the case of the sch. Hattie A. Heckman, seized at Shelburne, N. S., for infraction of the fisheries laws is a matter of conjecture at the present time, although condemnation proceedings have already begun and the craft's owners are anxiously awaiting further news relative to the seizure.

Ralph D. Marshall, manager for M. Walen & Son, owners, immediately got into communication with United States Council Foster at Ottawa, yesterday, asking for particulars relative to the seizure and what the firm should do. Last evening, Mr. Marshall received the following reply: "Plans are being made in court for the vessel's condemnation and in the interim you can do nothing but defend the action if you care to."

Just why Capt. Butler put into Shelburne is unknown unless it was to secure a supply of ice for fresh bait, which he might have taken on at Provincetown. When the Heckman left here, she baited with cockles.

**Had No License.**  
Capt. Charles Butler who is one of the younger skippers and recently took command of the Heckman is regarded as a capable skipper. He had no license to take on supplies at a Nova Scotia port, although the firm says that they would have purchased one, had they received word from the skipper that he needed it.

The firm is endeavoring to learn all the facts in the case and will present their side of the affair as it stands. Just what action contemplated before the admiralty court at Halifax is not definitely known, although in other cases the usual procedure has been a fine ranging from \$200 to \$500. From advices received last evening, however, the craft may not be let off with a fine.

**LIGHT RECEIPTS IN FIVE TRIPS.**

AND NEW FISH BROUGHT GOOD PRICES AT T WHARF THIS MORNING.

Fresh fish receipts at Boston this morning were in light quantity, the total haul from the five arrivals being only 130,000 pounds, mostly of the off-shore variety.

The largest trip is that of sch. Harriett with 68,000 pounds, mostly haddock and cod. Sch. Josie and Phoebe has 37,000 weight, and the steam trawler Swell, 14,000 pounds. There are also two trips from the shore boats, the Nettie Franklin having 7000 pounds and the Columbia, 4000 pounds. Yesterday afternoon, steamers Joanna and Charles A. Dyer landed 35 barrels and 130 barrels of porgies each.

Haddock sold at \$1.75 to \$3; large cod, \$3.50 to \$6.10; market cod, \$2.50 to \$4; hake, \$1.50 to \$2.50; pollock, \$2; cusk, \$1.50 and halibut, 6 cents a pound for white and gray.

**Boston Arrivals.**  
The fares and prices in detail are:  
Sch. Nettie Franklin, 2000 haddock, 4500 cod, 500 hake.  
Str. Spray, 10,000 haddock, 3000 cod, 1000 hake.

Sch. Josie and Phoebe, 27,000 haddock, 3900 cod, 7000 hake.

Sch. Columbia, 1000 cod, 3000 pollock.

Sch. Harriett, 35,000 haddock, 15,000 cod, 8000 hake, 9000 cusk, 1000 halibut.

Str. Ivanna, 35 bbls. porgies.

Str. Charles A. Dyer, 130 bbls. porgies.

Haddock, \$1.75 to \$3 per cwt.; large cod, \$3.50 to \$6.10; market cod, \$2.50 to \$4; hake, \$1.50 to \$2.50; pollock, \$2; cusk, \$1.50; halibut, 6 cents for white and gray.

**SMALL BOATS DOING WELL**

FOUR MORE IN AT NEWPORT TODAY WITH GOOD CATCHES OF MACKEREL.

The small boats are making some good catches down off Newport and in a dispatch to the Times this forenoon, information comes that prospects are good for the small crafts only.

The arrivals reported are as follows:

Sch. Alice, 36 barrels fresh mackerel.

Sch. Wood and Mack, 24 bbls. fresh mackerel.

Sch. Cora T., 22 barrels fresh mackerel.

Sloop Thomas Congdon, 26 barrels fresh mackerel.

During the past four days the Alice has done well, landing 127 barrels of fish in that time.

**Mackerel off Portland.**

Mackerel have shown up again off Portland and the fishermen are hoping this time they have come to stay. About 2500 pounds of tinkers were brought from Harpswell Tuesday and taken out at Willard's on Central wharf. It is believed the larger sized fish will follow the tinkers, and although mackerel are very uncertain the outlook is favorable for a good catch later in the season. Quite a lot of squid is brought in daily from the Oleson traps at Richmond Island and finds a ready market for baiting purposes.

**Fishing Fleet Movements.**

Sch. Ingomar was at Lunenburg, N. S., last Monday and cleared for fishing.

Sch. Pythian was at Mulgrave, N. S., Sunday last.

**DORY HANDLINER HAS SMALL FARE**

CAPT. CLARK BRINGS POOR REPORT OF DOINGS OF REST OF FLEET.

Sch. Harry A. Nickerson, the first of the dory handliners of the season is home after a three months' and a half trip to the eastward with 60,000 pounds of salt cod.

Capt. Clark has been all over the grounds, but found fish scarce, like others of the fleet, the first part of the season in particular being very poor. Judging from the present outlook, the season of the dory handliners will not be a highly prosperous one.

One of the dandy shack trips of the year is that of sch. Valerie, Capt. George Nelson in here this morning with 140,000 pounds of salt cod. The Valerie left here on June 11 and fished on Grand Bank where the Richard, Capt. William J. Corkum and Thomas S. Gorton, Capt. William H. Thomas recently secured their trips.

The splitters had a few fish this morning, three trips aggregating about 120,000 pounds being down from Boston. They are schs. Belbina P. Domingoes, Mary DeCosta and Juno with 40,000 pounds apiece.

**Today's Arrivals and Receipts.**  
The arrivals and receipts in detail are:

Sch. Valerie, shacking 140,000 lbs. salt cod.

Sch. Harry A. Nickerson, dory handlining, 60,000 lbs. salt cod.

Str. Yankee, seining, 40 bbls. bluebacks.

Str. Gertrude, seining, 40 bbls. bluebacks.

Sch. Belbina P. Domingoes, via Boston, 40,000 lbs. fresh fish.

Sch. Mary DeCosta via Boston, 40,000 lbs. fresh fish.

Sch. Juno, via Boston, 40,000 lbs. fresh fish.

**Vesse's Sailed.**

Sch. Lucania, seining.

Sch. Leonora Silvera, haddocking.

Sch. Marsala, Georges handlining.

Sch. Elk, halibuting.

Sch. Mystery, halibuting.

Sch. Rita A. Vistor, swordfishing.

Sch. Oliver F. Kilham, shacking.

**TODAY'S FISH MARKET.**

**Salt Fish.**

Trawl bank cod, large, \$3.25; medium, \$2.87½; snappers, \$2.00.

Handline Georges codfish, large, \$4 per cwt.; medium, \$3.50; snappers \$2.50.

Eastern halibut codfish, large, \$3.25; mediums, \$2.87½; snappers, \$2.00.

Georges halibut codfish, large, \$4.12½; mediums, \$3.50.

Drift codfish, large, \$3.75; mediums, \$3.37½.

Haddock, \$1.50.

Pollock, \$1.25.

Cusk, large, \$2.50; medium, \$1.75; snappers \$1.25.

Hake, \$1.25.

Cape Shore salt mackerel, \$11 per barrel.

Fledged halibut, 8 cts. per lb.

**Fresh Fish.**

Haddock, 70c per cwt.

Peak and Cape North cod, large, \$1.75; medium, \$1.50; snappers, 75c.

Western cod, large, \$2; mediums, \$1.65; snappers 75c.

All codfish not gilled, 10c per 100 pounds less than the above.

Hake, 70c.

Cusk, large, \$1.80; medium, \$1.00; snappers, 50c.

Dressed pollock 80c. round 70c.

Bank halibut 7c per lb. for white 5 cents for gray, and 4 cents for chicken.

Fresh mackerel, 30c for large, 20c for medium.

Fresh shad, \$3.50 per bbl., fresh; \$2.50 per bbl., to salt; \$3 per bbl., to freezer.

Fresh bluebacks \$2.50 per bbl.

Fresh porgies, \$1.25 per bbl. for bait; 75c per bbl. for oil.

Fresh herring, \$1.50 per bbl. to freezer; \$2.50 per bbl. for bait.

July 18.

No. 1

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# BEAM TRAWLING,



An interesting and very comprehensive outline of the beam trawling industry, a matter in which every fisherman of this city as well as those on the New England and Nova Scotia coasts are deeply concerned on account of the invasion and depletion to which the prolific sources of our fisheries are threatened has been written by J. Manuel Marshall, Esq., who represented the local anti-beam trawling committee at the hearing recently held in Washington on the Gardner resolution, relative to an investigation of steam and otter trawling by the government.

Mr. Marshall has put in considerable effort and study into the subject going into statistics and legislation which has been adopted by foreign countries, dating back to the inception of the beam and otter trawler on the other side. The result of his researches and investigations have been furnished Congressman Gardner, who is fighting tooth and nail for the cause of the fishermen, and the latter has found the date to be of much value to him. Through the courtesy of Mr. Marshall, a summary of the subject has been kindly written for the Times, which we vouch to say will be of great interest to our many readers, as follows:

The invasion of our fishing grounds by otter trawlers has agitated the minds of many of those interested in our fisheries and Congress has been asked to investigate and to determine, if possible whether this method of fishing if continued, will deplete our waters and destroy the food-fish supply of the country.

There has already been considerable discussion on both sides of the question. It is the purpose of this article to point out certain features to which reference has not yet been made and to mention some of the important legislative steps taken on the other side of the water to check this style of fishing, where it originated and has been in operation for many years.

From a time nearly three hundred years ago, when the Dorchester company attracted by the glowing accounts of the abundance of fish off the shore of Cape Ann, first began fishing operations in Massachusetts Bay, our waters then accounted the finest fishing grounds in the world, have continued to yield a bountiful supply of fish, particularly cod, hake and haddock.

This prolific source of supply has provided sustenance and employment to our people and revenue to our nation. But now modern methods and invention threaten their ruin.

Owing to the enormous development of steam trawling and the impoverishment of the older fishing grounds there is general feeling among responsible authorities in Europe that the piscatorial resources of the North Sea are fast becoming exhausted. With the exception of Professor McIntosh and Professor D'Arcy Thomson there seems to be no scientific investigators of note who claim that the resources of the sea are inexhaustible. That beam trawling and otter trawling have been the cause of this decline is not surprising. Experts have computed that the aggregate fishing capacity of the modern fleets is approximately 14,000 of the old sailing vessels or four times as great, and that the area of the sea daily swept by their trawl nets is 2000 square miles.

## Destruction of Small Fish.

It is agreed that the wasteful destruction of immature fish by trawlers cannot be obviated by regulating the size of the mesh nor by returning the under sized fish caught to the sea. The only feasible method is to close the fishing grounds or prohibit the landing of the fish as the Scottish Fishery Board did in the Moray Firth.

by otter trawlers on the other side of the water, particularly the North Sea, once considered the great source of food-fish supply of Great Britain and other countries bordering on those waters, but now much depleted.

The combined area of fishing grounds usually visited by our fishing vessels from the Jersey coast to the coast of Labrador, including the Channel, Georges Bank, Brown Bank, Western Bank, LaHave, Quero, Gulf of St. Lawrence, Grand Bank and Baccelleau Bank is about 200,000 square miles or one-fifth larger than the North Sea alone, with an area of 150,000 square miles and is compared to about 800,000 square miles of fishing area available to and covered by the otter trawlers of Great Britain, divided in regions as White Sea, coast of Norway, Baltic Sea, North of Scotland or Orkney and Shetland, west coast of Scotland, Iceland, Faroe, Rockall, west of Ireland, Irish Sea, southward of Ireland, Bristol Channel, English Channel, west of France, north of Spain, coast of Portugal, coast of Morocco, Canary Islands and Grand Banks.

It being the contention of our fishermen that as the North Sea particularly the part known as the Dogger Bank, once considered the most prolific source of food fish supply on the other side of the water, has through intensity of fishing and the wasteful destruction of immature fish by the beam and otter trawlers become practically exhausted, so likewise will our fishing grounds, whose total area is but little greater than that of the North Sea, become depleted, if otter trawling is to be allowed to go on here.

## Beam Trawling Defined.

The beam trawl is so called from the beam employed to keep the net open. The net is the shape of a long triangular bag, the upper side of the mouth being laced to a beam supported on iron "heads" or runners which raise it above the ground. The lower side is fastened to a ground rope which drags along the bottom.

The otter trawl is a net formed on exactly the same principle but in this case, the beam is dispensed with and the mouth of the net is kept open by means of two boards measuring about five or six feet in width and ten feet in length, attached to both ends of the mouth of the net, from fifty to one hundred feet apart, according to the size of the net. The two ropes by which the steamer drags the net are fastened one to each board, and are so adjusted that as the vessel steams ahead, the pressure of the water on the inner face of the boards causes the board to diverge from one to another, and run along edgewise on the bottom. By this means the head rope to which the upper side of the mouth of the net is laced is stretched to its fullest extent and at the same time is raised above the bottom. The use of the otter board enables the cumbersome trawl beam to be dispensed with and allows the area of the mouth of the net to be twice as large, thus doubly increasing the catching power of the otter trawl over the beam trawl. The otter trawl has the further advantage that it can be operated in much greater depths. Otter trawls are now operated in depths of from 200 to 300 fathoms.

## Otter Trawling First Introduced.

The otter trawl was first introduced on the other side of the water in 1888 although mention was made of it some years previous. Beam trawling began about the year 1837 in England and Scotland. About 32 years ago, steam trawlers were introduced in Europe. Previous to that time, trawling was carried on by sailing vessels. Beam trawling and otter trawling from its first introduction in Great Britain has caused a wide divergence of opinion between those

on beam trawling, the commissioners reported: "Beam trawling in the open sea is not a wastefully destructive mode of fishing, but is one of the most copious and regular sources of the supply of eminently wholesome and nutritious fish. Any restrictions upon this mode of fishing would be equivalent to a diminution of the supply of food fish to the people; while there is no reason to expect present or future benefit from that restriction."

## Increase of Trawlers.

The trawlers continued to increase rapidly both in number and size. Fresh outbreaks occurred between the line fishermen and trawlers. Complaints to Parliament began to multiply and in 1878 a second Royal commission was appointed to inquire into the use of beam trawls and seine nets, whether beam trawling involved the wasteful destruction of immature fish and fish spawn and whether in consequence thereof the supply of fish on the coast of England and Wales was decreasing and whether this mode of fishing injuriously interfered with other modes of fishing.

The commissioners reported: That there was no evidence that the beam trawl or any other mode of fishing involved the wasteful destruction of fish or spawn. That there was no evidence that the supply of fish generally on the coasts of England and Wales was decreasing. That in those cases in which the supply was decreasing there was no evidence that the decrease was due to wasteful fishing or overfishing. That considerable injury was done by trawlers both to drift net fishermen and line fishermen. That the injury had increased since the introduction of steam trawling.

The commissioners recommended: That the secretary of state should have power after inquiry by some competent person to issue a provisional order prohibiting the use of the trawl net or beam trawl in any of the territorial seas such order to come into force only after its approval by Parliament.

The extension to the sea fisheries of the powers of inspectors of salmon fisheries.

The collection by such inspectors of statistics annually and to report generally to Parliament.

The commissioners recognizing that those complaints were well founded and the demands for remedial legislation worthy of some recognition took a conservative course and recommended that the secretary of state be authorized to issue a provisional order prohibiting the use of the trawl net or beam trawl in any of the territorial waters. This was an opening wedge, the complainants gained courage and continued their complaints with renewed vigor.

## Legislation by Parliament.

Three years later (1881) they succeeded in getting Parliament to pass the clam and bait act. Under this act the board of trade were empowered by a provisional order to restrict or prohibit the use of beam trawls within any area in the territorial waters, providing they were satisfied that any injury was being done to any clam or bait bed. In 1882 an act was passed creating the Scottish Fishery Board.

In the Spring of 1883 another petition was presented to Parliament by line fishermen asking for protection against injury to their person and fishing gear by beam trawlers.

Thereupon Parliament in 1884 passed an act that set out a convention entered into between Great Britain, Germany, Denmark, France and the Netherlands, for the purpose, among others of regulating the police of the fisheries of the North Sea outside of territorial waters and providing for the imposition of a fine not exceeding 50 pounds to any person belonging to any British Sea fishing boat convicted of assaulting anyone belonging to another sea-fishing boat or to any property

mission that as a result of overfishing and the destruction of immature fish by the trawlers, the fishing grounds in the North Sea had become exhausted. Professor McIntosh, who had been appointed by the commissioner to make observations reported that there was a great diminution in the number of haddock and whiting and in the size of flat fishes in the inshore waters in Aberdeen Bay, St. Andrew's Bay, the Firth of Forth and Scarborough."

## Scotch Fishermen Opposed to Beam Trawls.

In Scotland at this time the great bulk of all fish caught were caught by line fishermen who were deeply concerned because of injuries suffered to their person and fishing gear. Through the insistent complaints made by these fishermen although ostensibly for the purpose of scientific investigations, the British Parliament in 1883 passed an act, called the sea fisheries (Scotland) amendment act, applying to Scotland only, empowering the Scottish Board to make by-laws to restrict or prohibit beam trawling in any part of the exclusive fishery limits of Great Britain in the seas adjoining Scotland where such fishing is considered injurious to any kind of sea fishing, within that part, as recommended in the Dalhousie report.

The line fishermen of Scotland were making frequent complaints to the Fishery Board, and in 1886 the Board passed its first by-law and closed the Firth of Forth, St. Andrew's Bay, the Firth of Tay and the waters off the coast of Aberdeen inside of a straight line drawn from the outermost points of that coast against beam trawling with a penalty of 100 pounds or 60 days imprisonment for violation thereof. In the following year, June 27th, 1887, the board passed its second by-law, closing the territorial waters in the Moray Firth against beam trawlers from the Ord of Carthness to Kirmnaird Head light-house including the Darnoch, Cromarty and Inverness Firths. In December, 1887, the board appointed a committee to consider the question of closing the whole of the territorial waters on the east coast to trawling and the committee made a report May 1st, 1888, which was adopted and presented to Parliament. As a result of this report a bill was introduced in Parliament, and became a law in 1889. By section six, beam or otter trawling was prohibited on any part of the Scottish coast, except within waters specified and permitted by the Scottish Fishery Board.

## London International Conference.

In July, 1890, an international conference was held in London in relation to the destruction of immature fish and to a report in part three of the annual report for 1899 page 10. In September, 1892 the board received a petition signed by more than 7000 Moray Firth fishermen, protesting against beam trawling in the Moray Firth, saying that it destroyed immature fish and also spawning grounds. By section seven, the Fishery Board were empowered to make by-laws prohibiting beam or otter trawling in any area or areas within a line drawn from Daucanshy Head in Caithness to Rattray Point in Aberdeenshire and from time to time make, alter or revoke by-laws for the purpose of this section.

Section Eight reads: "It shall not be lawful to land or to sell in Scotland, any fish caught in contravention of this act or of any by-laws made thereunder, and all superintendents and others employed in the execution of the herring fishery (Scotland) Acts, are hereby empowered and required to prevent the landing or sale of any fish so caught. The foregoing sections of the Act 1889, are the most important of all the laws and regulations ever passed against trawling in Great Britain in that they have given rise to all the present troubles between British and foreign trawlers over the Moray Firth question.

Under powers of the 1889 Act the

The opportunity for action is at hand. If we defer the more difficult will become the problem. The trawlers will multiply, their influence will increase, the cry of vested interest will be raised as in England, and what seems comparatively an easy task now might become impossible of performance. The history of all attempts for legislation in Great Britain emphasises this fact.

There is really but one vital point worthy of serious consideration which is whether trawling, if allowed to continue and increase will exhaust the fishing grounds off our coast. For all damage done to fishing gear, the Admiralty Courts afford ample relief. Nor can the argument of some that otter trawling destroys haddock and cod spawn carry weight, for the simple reason that demersal or ground fish have pelagic spawn which floats on or near the surface of the water, and are transported by the tides or currents, while pelagic or surface swimming fish, such as herring or mackerel have demersal spawn which are usually deposited on the bottom of inshore waters where otter trawlers do not operate.

#### Flounder Fishing Not Aimed At

At the outset it might be well to state that it is not the intention of the petitioners for this proposed legislation to restrict beam trawlers fishing for flounders and some fish of like specie for it has been well demonstrated that the flounder owing to its small sized mouth cannot take the hook commonly used by our fishermen and therefore cannot be obtained in commercial quantities except by the use of the beam trawl.

It has often been stated by the advocates of otter trawling that owing to the immense area of our fishing grounds the number of these trawlers that could profitably be operated, could never produce any marked effect in diminishing the supply. But they probably have never compared the size of our fishing grounds with the size of fishing grounds covered

who approve and those who condemn it.

In 1839 or two years after the introduction of beam trawling in Great Britain, owing to the complaints made by line fishermen and drift net fishermen that trawlers were interfering with their fishing and destroying their fishing gear a convention was held in Paris between representatives of France and Great Britain and articles were adopted for the regulation of the fisheries and the guidance of the fishermen in the seas lying between the coasts of the two countries, defining the exclusive limit or territorial waters of either country as that within three geographical miles from low water mark; permitting beam trawl fishing at all seasons, in the seas lying between the fixed limits of the two countries; forbidding beam trawl fishing in all places where there were boats engaged in herring or mackerel drift net fishing and providing that trawlers shall keep at a distance of three miles from all fishing boats fishing for herring or mackerel with drift nets.

Representatives of both countries again met in 1868 and revised the Articles of the 1839 convention, but no change was made concerning trawling. In 1864 Parliament issued a commission authorizing certain Commissioners to inquire into the sea fisheries of the United Kingdom and to ascertain amongst other things: whether the supply of fish from such fisheries was increasing, stationary or diminishing and whether any of the methods of catching fish in use in such fisheries involved a wasteful destruction of fish or spawn, and if so, whether it was probable that any legislative restrictions upon such method of fishing would result in an increase of the supply of fish. The Committee made their report in 1866.

No reply whatever was given by the commissioners to the first question, as to whether the supply of fish was increasing, stationary or diminishing, but

on board thereof, or belonging thereto and to the exclusive fishing limits of each country as defined in the Franco-British Convention of 1839-1868 were agreed to and extended to all the coasts of the British Islands including the Channel Islands. A similar, though not so broad a provision with reference to punishment for acts of violence and damage to property at sea, was contained in the sea fisheries act of 1868.

In 1883 Parliament appointed a third royal commission, this commission was presided over by William Earl of Dalhousie, and is known as the Dalhousie commission. The commissioners appointed Professor McIntosh of St. Andrews University, Scotland, to conduct observations upon the result of the use of the beam trawl-net on the various fishing grounds. The commissioners held 17 days hearings extending over a period of three months. They reported to Parliament in 1885 as follows: "After carefully considering the whole evidence, upon the question of the decrease of fish, we are of the opinion that as regards territorial water, the principal fisheries carried on in the inshore waters of the North Sea are the haddock, whiting, flat-fish, etc. On many fishing grounds from the Moray Firth to Girmsby there has been a falling off of the takes of flat fish, both as regards quality and quantity. There has also been a decrease in the catch of haddock in certain places, chiefly in bays and estuaries."

"The complaints made as regards the inshore fisheries related chiefly to the decrease both in quantity and quality of haddock, soles, plaice and other flat fish. The fishermen were almost unanimous in stating that the decrease of haddock and flat fish had been contemporaneous with trawling and that it had become more marked since the introduction of beam trawling. Twenty-four witnesses, including fishermen, officers of the fishery board and others engaged in the fishing business testified before that com-

Scottish Fishery Board passed by-law six which permits under section six of the act, beam trawling in the Firth of Clyde from August 1st to April 30th, provided that the vessel is propelled by sails only, and it is of not more than eight tons burden.

By-law number seven passed in 1890 with the same authority as that mentioned in the previous by-law, permitting beam or otter trawling in the Solway Firth within three miles of the shore for scientific purposes only, by persons having a written authority of the board.

By-law eight, dealing with the Moray Firth was passed in 1890 under powers of the Acts of 1889-1890, section seven declares that beam or otter trawling shall not be carried on inside of a straight line drawn from the Ord of Caithness to Craifhead near Bickel, thereby closing about half of the area of the Firth to trawlers. The act of 1890 added the confiscation of every trawl net, set or attempted to be set in contravention of the board's by-laws to the penalties already mentioned. The closed area of the Moray Firth is 90 miles wide at its mouth and running 60 miles in length to its narrowest point of 10 miles.

The Moray Firth to the line fishermen of Scotland, is what the Channel and Georges Banks are to our own fishermen, a bountiful source of supply within easy reach. Indeed the Moray Firth has this in its favor, it is handy, well sheltered and can be fished in all weather and seasons, and was considered a nursery for many kinds of fish.

#### Great Nursery Grounds Destroyed

The trawlers took advantage of this, they fished it night and day. The effect may easily be imagined. The waters were exhausted and the grounds denuded. The fishermen by insistent demands succeeded in getting Parliament to pass the Act of 1889 under which Act the Scottish Fishery Board in 1892 made a by-law 10, prohibiting beam and otter trawling in the Moray Firth, under penalty of five pounds

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for the first offense and not exceeding 20 pounds for the second and subsequent offences, with confiscation. But this small fine did not deter the trawlers as they found it more profitable to pay the fine than desist from fishing. Accordingly the board in 1896 passed by-law 10 and raised the penalty to 100 pounds or 60 days imprisonment as before. This had the desired effect of keeping out British trawlers and renewing the supply of fish. But the trawlers found a way of circumventing this by-law, they organized companies in Norway, sailed their steamers under the Norwegian flag and Norwegian captains. As section eight of the Scotch Fisheries Act, 1889, prohibiting the landing or sale in any part of Scotland of fish caught in the Moray Firth, did not apply to England, the foreign trawlers so called, found a convenient market for their fish in Grimsby. The English trawling interests were jubilant over the manner in which they had outwitted their canny Scotch neighbors, and this gave them a splendid excuse for appealing to the government for equal rights to British trawlers, sailing under the British flag. Their joy soon turned to grief—their steamers were seized and their captains imprisoned and fined.

The Norwegian ambassador made representation to the British Foreign Office for the liberation of the imprisoned masters, on the grounds that they were Norwegian subjects and fishing in extra territorial waters, and without jurisdiction of the British Courts. Thereupon in 1903 a bill was presented in Parliament by representatives of the Moray Firth line fishermen seeking to make it illegal to land or sell fish in England as well in Scottish ports, caught in contravention of the Scottish Fishery Board's by-laws.

The trawling interest fought desperately against the bill and offered a resolution in the House of Lords calling on the government to suspend the Scottish Fishery Board by-laws dealing with the Moray Firth. This resolution was afterwards withdrawn and the bill passed in 1909 making it unlawful to land or sell fish in England as well as Scotland, taken from the waters of the Moray Firth in violation of the by-laws of the Scottish Fishery Board.

In addition to the investigations by commissioners appointed by Parliament in 1864, 1878 and 1883 a select committee of the House of Commons was appointed in 1893 to consider the expediency of adopting measures for the preservation and improvement of the sea fisheries in the seas around the British Isles, including the prohibition of the capture, landing or sale of undersized sea fish and other like regulations, international and otherwise.

It was found that the professional and trade evidence with regard to the decrease in the quantity and size of fish caught in the North Sea was conflicting. One section said that there was a decided diminution in the average size of flat fish caught in the North Sea, especially plaice and that the total quantity of fish landed had only been maintained by a large increase in the catching power. The witnesses were chiefly concerned with North Sea steam trawling, but included officers of the fisheries department of the Board of Trade of England and of the Lancashire Sea Fisheries committee.

The other section held that there was little or no decrease in either quantity or size of the fish caught. The witnesses who held this view consisted mainly of salesmen and owners connected with trawlers.

**Depletion of North Sea Fisheries.**  
The naturalists of the Marine Biological Association expressed a belief in the very decided depletion of the North Sea Fisheries. In 1900 the House of Commons appointed a second select committee on the sea fisheries bill designed like that of the Sea Fisheries Bill of 1893 to place restrictions upon the landing or sale of

the distance to which they can go, is constantly increasing. The substitution of steam for sailing trawlers, the adoption of the otter trawl and the increased length of the beam of the beam trawl, the discovery of extensive fishing grounds off the coast of Iceland, and the Faroe Islands, leave no room for comparison of the catch formerly made in nearer waters by the old fashioned boats.

**International Agreement Helpful.**  
That the ideal manner of protecting the fishing grounds of the North Sea most frequented at certain seasons of the year, by young and immature fish, would be by an international agreement between all the powers, whose fishermen fish that sea, but up to the present time little disposition has been shown by the Governments of those nations to enter into a convention for this purpose. The committee venture to express a hope that His Majesty will not relax their efforts to secure such a convention.

The International Council for the study of the sea as now composed, consisting of two representatives each from Germany, Sweden, Great Britain, Denmark, Finland, Norway, Russia, The Netherlands and France, held various meetings at Copenhagen, Hamburg, Amsterdam and London.

This council was formed as a result of conferences held at Copenhagen and Christiania in 1899 and 1901 by invitation of the Swedish Government. In the programmes of both conferences the objects aimed at may be briefly summarized as follows: To obtain an accurate knowledge of the seasonal and other periodic changes in the water. To determine the variations in character and abundance of food supply for fish. To determine the variations in character and abundance of food supply for fish. To determine the variations in the abundance and distribution of food fishes. To determine the cause and extent of these variations.

At its first meeting held at Copenhagen in 1902 the council recommended to at once investigate the migration of the most important food fishes of the North Sea, especially the herring and cod, and the question of over-fishing in the parts of the North Sea most frequented by British, Dutch, German and other trawlers, with special regard to plaice, the sole and other flat fish, and the haddock.

The second meeting of the council was held at Copenhagen in 1903. At the third meeting of the council held at Hamburg in 1904 the following resolution was adopted:

"The council considers it highly desirable that full and careful statistics be collected at the chief ports of entry on the question of the destruction of small fish, with special reference to the size, place and season of capture of young plaice and other flat fish."

The fourth meeting of the International Council was held at Copenhagen in 1905. The fifth meeting of the International Council was held at Amsterdam in March 1906. British delegates were instructed to bring to the notice of the council, resolutions to the following effect: "That with a view of enabling the council to reach conclusions as to the influence of the present method of the fishing on the cod, haddock and plaice fisheries and as to whether any measure could be adopted for increasing such productiveness, the participating states should be asked to supply the evidence in their possession in time for the next annual meeting of the council and that meantime at this meeting the council should suggest draft forms or schedules on which such information should be tabulated."

**German Line Fisheries Disappeared.**  
The sixth meeting of the International Council was held at London in June, 1907. At the seventh meeting of the council held at Copenhagen in July, 1908, the delegates from Germany, proposed the following resolutions: "In consequence of the very great increase in the trawl fisheries in the North Sea, none of the fishery methods

The committee reported in 1903 that "notwithstanding what has been done, the committee accept the evidence submitted to them almost without conflicting voice by official witnesses, scientific witnesses, members of local committees, representatives of every branch of the trade, and practical fishermen, that investigations of the widest scope are still required in the interests of the fishing industry. The most practical questions relate to the fluctuations in the movements of migratory fish, the depletion of the fishing areas, the effects of the operation of man, the taking of immature fish, the possibilities of improving the fishing supply by hatcheries, translocation or otherwise and the possible extension of areas on which commercial fishing is practicable. In view of the complexity of the conditions of marine life, however, the committee believe that results even with regard to such special problems can be attained only by investigations of a wide character and organized on a continuous basis." In substance the committee say that further investigations are necessary in order to determine all these questions.

**Diminution Due to Otter Trawling.**  
Professor H. Henking, a representative from Germany to the international council of sea fisheries investigation in expressing his opinion of the decline of the fisheries of the North Sea, said: "After the exhaustive data provided by M. Garstang, professor of geology in the University of Leeds, England, concerning the result of the trawl fisheries of Great Britain, it could no longer be doubted that a constant diminution in the production of the fisheries in question has taken place during the last decade. The result of statistics, renders it possible to corroborate this observation of the fall in the catch. The reduction in the catch has continued constantly since 1894 in spite of the fact that a very substantial increase in the catching power took place during 1895 and 1896 when the otter trawl was brought into use on steam trawlers. Although for different reasons I would prefer to avoid the expression "over-fishing" nevertheless there can be no doubt that the rapid diminution in the amount of the catch constitutes serious danger and deserves the more careful consideration.

The following three propositions with reference to the fisheries in the North Sea are therefore permissible. The catch must yield marketable produce and that in sufficient quantities to render fishing operation a profitable business. There must be a sufficient replenishment, i. e. by either transplantation or growth, to balance the quantity of marketable produce annually fished out. The number of steamers or other fishing vessels ought not to exceed a certain maximum.

**Alarming Increase of Steamers.**  
An indication that the number of steamers in the North Sea has already exceeded a critical point can be recognized in the fact that the steamers disperse in ever increasing numbers toward the more distant regions. The annual replenishment of the stock of ground fish in the North Sea from the point of view of marketable produce must be regarded as insufficient, according to the date, at present available inasmuch as the proceeds are falling off. The notion of what is marketable and what is unmarketable changes in the course of time. Already many species of fish are brought to market in large quantities and sold which only a few years ago would have received no attention, for example many species of skate and rhy. The smaller fishes now, also realize better than formerly. As the maximum size of fishes has continued with increasing rarity, the market acquires a tendency of lowering the minimum sizes. In England this as is well known, is beginning to rise to the lively complaints which have been raised against the destruction of under-sized fish, especially flat fishes, and which have already lead several times to the formulation of different legislative proposals.