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OF THE

# FISHERY BOARD FOR SCOTLAND

Being for the Year 1921.

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Presented to Parliament by Command of His Majesty.

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THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

1960

PHYSICS 309

LECTURE NOTES

BY

ROBERT H. DICK

PHYSICS DEPARTMENT, UNIVERSITY OF CHICAGO

These notes are based on lectures given by the author in the Physics 309 course at the University of Chicago during the fall semester of 1960. The author is indebted to the following persons for their helpful discussions: J. J. Sakurai, R. P. Feynman, and R. H. Dicke.

1960

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# FORTIETH ANNUAL REPORT.

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TO THE RIGHT HONOURABLE  
ROBERT MUNRO, K.C., M.P.,

*His Majesty's Secretary for Scotland.*

FISHERY BOARD FOR SCOTLAND,  
EDINBURGH, 1st May 1922.

Sir,—

In terms of the Act 45 and 46 Vict., c. 78, we, the Fishery Board for Scotland, have the honour to present this, our Fortieth Annual Report, being for the year 1921 :—

## CHAPTER I.

### INTRODUCTION.

We regret to have to record that the year 1921 was again one of acute depression in practically every branch of the fisheries.

This depression is due to complex causes. In the case of the herring fishery, it will be recalled that in both 1919 and 1920 the Government came to the rescue of the industry by granting financial support in the shape of a guarantee to take over such portion of the season's cure as the curers were unable to dispose of themselves. Last year, however, for the first time since the termination of the war, the industry was thrown back on its own resources, not because the difficulties confronting it had diminished, or were not fully realised by the Government, but mainly on account of the urgent need for national economy.

The outlook at the beginning of the year was one little calculated to inspire confidence. The Russian market, which formerly used to absorb the greater part of the Scottish herring cure, was still closed; the purchasing power of Germany and the Baltic States continued to be below the normal standard, and such trade as was possible with these countries was restricted by the depreciated and fluctuating rates of exchange; while not only were large stocks of 1920 herrings on hand in this country, held chiefly on Government account, but other herring-producing countries and Germany itself also held large stocks of old cure, which would all require to be cleared—conditions which naturally affected adversely the demand for the new season's

cure. That the lot of our principal rivals—Norway and Holland—was as bad, if not worse, was poor consolation, as their competition was therefore all the keener. It is true that the first signs of a downward trend in working expenses had become manifest, but the fall was insignificant as compared with the drop in the prices realised for herrings, while as the result of the continued depression the financial resources of the industry were appreciably reduced.

Fresh difficulties arose as the season advanced, and except at Shetland, and to a less degree in the Firth of Clyde, the season's operations can only be described as a failure. To begin with, the coal dispute, which lasted throughout the second quarter of the year, held up the steam drifters during the early summer fishing and retarded operations and increased costs generally; while to make matters worse, it was found, when it was possible to conduct operations on a normal scale, that herrings were very scarce and in extremely poor condition. This state of matters appears to have been associated with abnormal hydrographical conditions in the North Sea, to which further reference is made later. The shortage in the catch, it is true, stimulated competition and so increased prices, but this was insufficient to recompense fishermen for the short supply, while it practically destroyed what little chance curers had of realising a profit.

The East Anglian fishing, which in 1920 to some extent compensated Scottish fishermen for the poor season in home waters, unfortunately also proved a failure last year, being characterised by the same features of scarcity of herrings and poorness of quality as the Scottish fishing.

The white-fishing industry was in little better case, and although it had not to contend with such a combination of adverse factors as the herring industry, the results of the year's operations were the reverse of satisfactory. In common with the latter industry, it suffered severely during the protracted coal dispute owing to the difficulty of obtaining bunkers, and the excessively high price which had to be paid for such supplies as were available. In contra-distinction to that industry, it is dependent mainly upon the home demand, and the general depression in trade and the resulting unemployment naturally affected that demand. The prices received by the fishermen for white fish have now fallen almost to pre-war level, but working expenses have not responded in anything like the same ratio, with the result that the proceeds of a fishing trip too frequently are insufficient to cover the outlay for wages, fuel, ice, upkeep, etc., and it is understood that at the great trawling port of Aberdeen only one-third of the vessels at work succeeded in clearing expenses. A contributing factor was the preponderance of small and immature fish in the landings of haddocks and whittings. The abundance of these small fish throughout the year was very striking, as, in addition to

those brought to market, large quantities had to be thrown overboard weekly by Aberdeen trawlers during the summer months. From the point of view of its effect upon the stock of fish in the sea, this feature may not necessarily be an evil, as the thinning out may benefit the stock by reducing overcrowding and thus lessening the competition for food. The possibility of this wholesale destruction of immature fish being ultimately harmful to the fisheries cannot, however, be disregarded, and although up to the present there is no evidence that any depletion has resulted, the matter will continue to be closely watched. Further reference to this feature of the fisheries will be found under Chapter X.

One result of the ill-success attending other methods of fishing during the year was the introduction of the "snurrevaad" or Danish seine net, which has been developed and perfected in Denmark, and which is peculiarly effective under certain conditions. During the coal dispute a large number of Danish motor boats using this net landed good catches at English ports, and even after bunkers for trawlers became available these smaller vessels proved able to compete successfully in the market. The Danish net was therefore rapidly adopted at first by a number of English vessels and immediately thereafter by Scottish steam drifters and motor boats, a number of which were fitted out when at the East Anglian herring fishing. The length of the net including the two wings is about 80 yards, but it is hauled in by means of two warps which may each be as much as a mile long. Warps and net are laid out so as to embrace as great an area as possible, and both warps are hauled in simultaneously by mechanical power. The warps in the process of hauling are understood to perform an important secondary function by stirring up the ground and shepherding the fish into the net. As the fishing vessel is at anchor except when setting the net, working expenses are much less than in steam trawling; but, so far as experience in Scottish waters shows, the method is apparently best suited for shallow water, smooth ground, and comparatively still weather. There are said to be three types of net, for the capture of flat fish, haddocks and cod respectively, but during the year only the first two were in use in Scottish waters.

This method of fishing, since it involves the dragging of gear over the bottom, is prohibited by the existing byelaws of the Board within the Scottish exclusive fishery limits. A petition to modify this restriction in the inshore waters of the Moray Firth was the subject of a local enquiry by a Committee appointed by the Board, who took evidence in this connection at public meetings at Macduff, Buckie, Lossiemouth and Golspie early in December. The line fishermen who work regularly in the waters in question were found strongly opposed to the petition, and the Board, after considering the Committee's report, decided to make no change.

At the close of the year the prospects of the industry were but little brighter than at the beginning. In the white-fishing section the inimical conditions referred to above remained unchanged, while in the herring fishery the only encouraging feature—albeit an important one—lay in the fact that stocks of cured herrings had been practically cleared, and that in consequence a brisker demand might reasonably be expected during 1922. On the other hand, the nets owned by the fishermen were in many cases worn out, and it was very problematical whether it would be possible to take advantage of any revival in the industry, owing to the lack of funds with which to purchase fresh equipment. The essentials necessary to a revival of the industry are the re-opening of the Russian market for cured herrings, the stabilisation of the Continental exchanges, and in this country a reduction in the cost of production and distribution; and until these conditions have been fulfilled little hope of any material improvement can be entertained.

The results of the Scottish fisheries during the past decade are summarised in the following table:—

SUMMARY OF MEANS OF CAPTURE AND RESULTS.

Year.	Number of Vessels.	Value of Boats and Gear.	Total Catch.*	
			Quantity (excluding shell fish).	Value (including shell fish).
		£	Cwts.	£
1912 - -	9,290	5,777,102	8,117,826	3,518,423
1913 - -	8,991	6,035,952	7,267,328	3,805,736
1914 - -	8,869	6,297,745	6,926,241	3,036,245
1915 - -	4,653	1,668,765	2,319,009	2,109,022
1916 - -	4,650	1,827,346	3,412,030	3,206,550
1917 - -	4,609	1,902,167	3,079,768	3,704,789
1918 - -	4,614	3,038,592	3,313,228	6,066,588
1919 - -	6,534	9,223,456	5,968,866	6,147,945
1920 - -	8,177	11,916,468	6,325,939	6,626,829
1921 - -	7,648	7,907,467	5,200,229	5,012,956

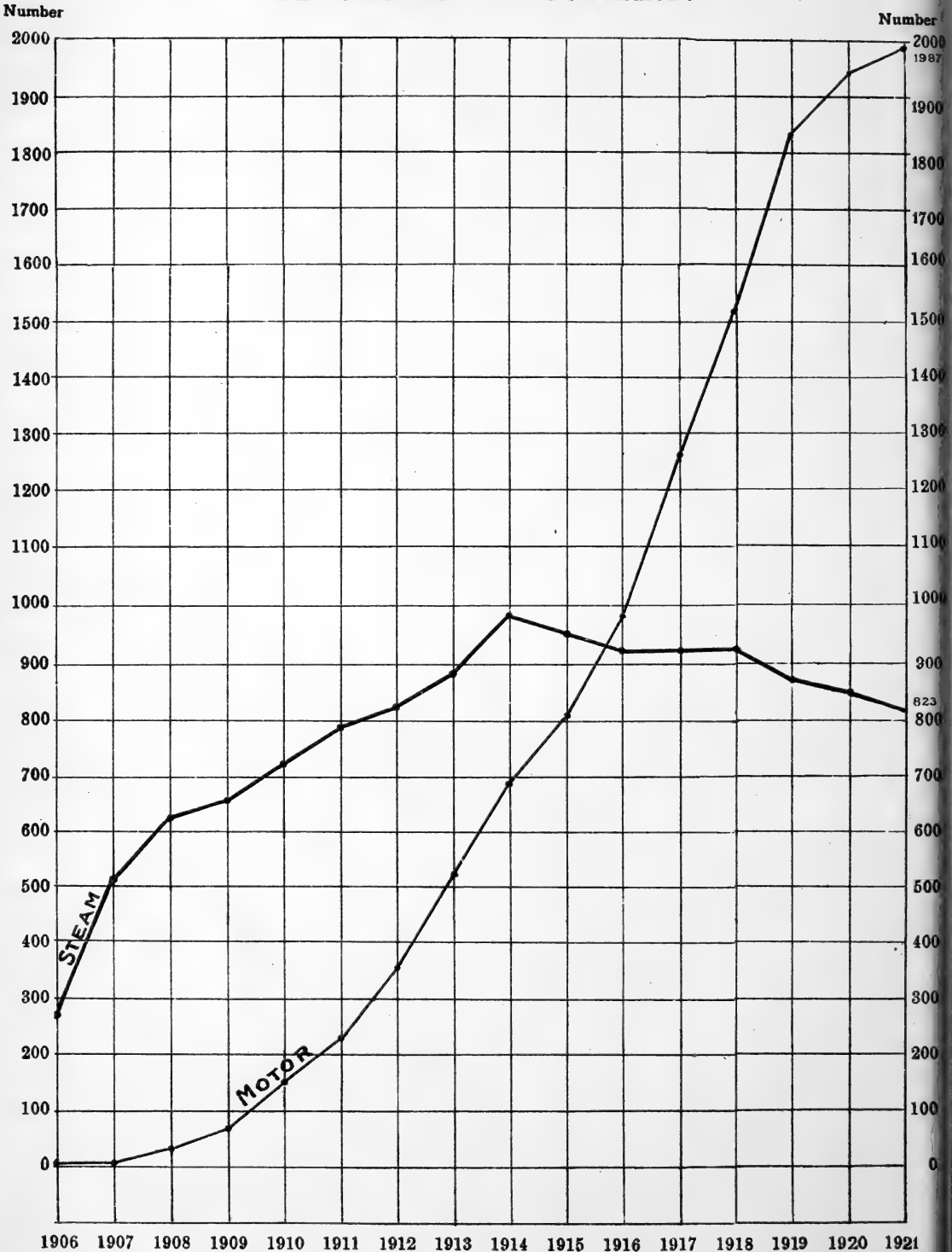
\* Exclusive of landings by foreign fishing vessels. For totals inclusive of such landings see Table B.—No. III. (p. 120).

We deeply regret to have to record the loss during the year of a valued colleague in Mr. Duncan MacIver, J.P., Stornoway, who died suddenly on 6th November.





# CHART SHOWING THE INCREASE OF STEAM DRIFTERS AND LINERS AND MOTOR BOATS BELONGING TO SCOTLAND.



## CHAPTER II.

## MEANS OF CAPTURE AND PERSONS ENGAGED.

Owing to the depressed state of the fisheries there was no inducement in 1921 to increase the means of production, but the fleet engaged in catching fish, other than herrings, in Scottish waters during the year possessed greater catching power than that which operated during the previous year. The coal dispute and other adverse factors, however, restricted operations, particularly those of the larger sized trawlers.

Few non-Scottish vessels took part in the Scottish herring fishery during the season, principally on account of the precarious outlook in the industry, while much of the gear employed was old and worn, which resulted in a diminished and less efficient fleet than in 1920.

All fishing vessels, gear and men belonging to Scotland, together with vessels, etc. fishing from Scottish ports although owned in other parts of the United Kingdom, are shown in Table A.—No. I. (pp. 3-15), but the following figures, showing the total number of fishing vessels actually belonging to Scotland in the various years, indicate the changes which have occurred in the composition of the fishing fleet, as does also the chart opposite showing the increase in the number of motor boats as compared with steam drifters and liners:—

Year.	Steam Trawlers.	Steam Drifters or Liners.	Motor Boats.	Sail Boats.	Total.
1921 .	391	823	1987	4367	7568
1920 .	354	854	1947	4658	7813
1919 .	324	872	1844	5084	8124
1913 .	298	884	523	6807	8512

The bulk of the fishing fleet is owned on the East Coast, including practically all the steam vessels, over a half by number but four-fifths by gross tonnage of the motor boats mainly engaged in herring fishing, and practically all those chiefly employed in the white-fish fishing, and more than a third both by number and gross tonnage of the sailing fleet.

The only steam trawler constructed in Scotland during the year was built at Aberdeen to the order of a Fleetwood firm, but the trawling fleet was augmented by the addition of ex-Admiralty trawlers and drifters fitted for trawling and the conversion into trawlers of a number of drifters. The indifferent results obtained by the converted vessels, however, discouraged the more general adoption of trawling by drifters. The total strength of the trawling fleet at work from Scottish ports was 418, against 385 for the previous year and 332 in the first half of 1914, but apart from the restriction of operations incidental to the coal dispute many vessels, especially those of the larger type, were laid up during the summer months on account of heavy working expenses and unremunerative fish prices.

The number of steam drifters and liners belonging to Scotland showed a further decrease, being less by 31 and 61 respectively than in the years 1920 and 1913. The reduction would have been greater

but for the acquisition of several ex-Admiralty vessels by fishermen. Increased attention was paid to great lining, and the largest steam line fleet ever based on Aberdeen was at work during the early summer. Large liners which were converted into trawlers during the war had all resumed great lining by 1921.

The number of motor boats was well maintained, but the fleet was not fully employed during the year. The sailing fleet, particularly in Orkney and Shetland and on the West Coast, was considerably reduced, chiefly owing to the cancellation of the registry of old large sized boats, and of a number of smaller boats which operated during the war only.

The total value of fishing vessels amounted to £6,226,818, making with gear valued at £1,680,649 a total of £7,907,467, which figures show a substantial decrease from those of the previous year.

The decline in values was common to all classes of vessels, but was specially pronounced as regards trawlers of the "Strath" type, which were acquired during the year at a third of their original value. During the war steam trawlers and drifters which had been rejected for war service were eagerly acquired for fishing, but with the return to more normal conditions their operations proved unremunerative and they cannot now be sold. Difficulty was also experienced in disposing of motor boats even at half their purchase prices.

There was a marked decline in the value of herring drift net gear, due not so much to the fall in prices of gear which occurred during the year, as to the failure of the fishermen to maintain their stocks at the accustomed standard. The straitened financial position of the fishermen as a result of poor fishings in recent years, and the bleak prospects of the industry in the immediate future, are at the root of the decline, and have produced a grave problem in the Scottish drifter ports. As already stated the Danish seine net or snurrevaad was introduced to Scottish waters during the year, and the total extent of the new gear in use at its close amounted to 281,400 square yards, valued at £7998.

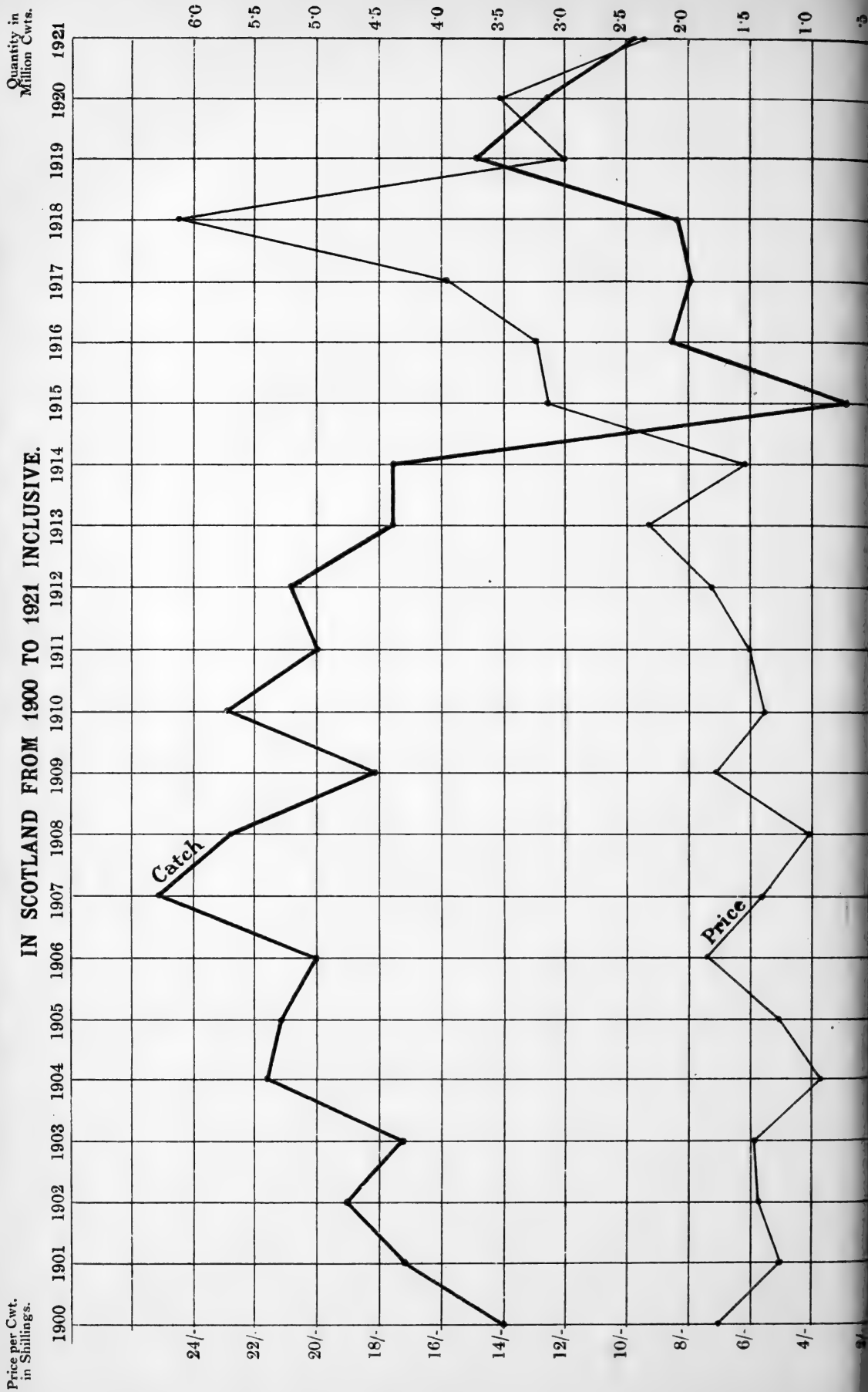
During the year 93 boats valued at £82,564 were totally wrecked or otherwise lost, and in addition 773 vessels sustained damage estimated at £49,652, making the total loss on boats £132,216 as compared with £147,220 for the previous year. The loss on fishing material, chiefly in respect of damage to trawl gear, was £210,686, being £71,117 less than in the previous year. The losses sustained by Scottish vessels at the English and Irish fishings are not included in the foregoing figures.

The numbers of fishermen employed on the different types of boat are shown in Table A.—No. I. (pp. 3-15), and at the different creeks to which they belong in Table A.—No. II. (pp. 16-51), while the number of persons engaged in the various other branches of the Scottish fishing industry appears in Table F.—No. I (pp. 134-135). In the various tables, fishermen are now classified as regularly or partially employed instead of as resident or non-resident. The total number of fishermen was 32,183, being less by over 4000 and 6000 respectively than in 1920 and 1913. The shortage is largely due to a reduction in the number of English drifters visiting Scotland for the summer herring fishing, as the number of Scottish fishermen only fell off by 1250 and 2100 as compared with those years.



# DIAGRAM SHOWING THE RISE AND FALL IN THE CATCH AND PRICE OF HERRINGS

## IN SCOTLAND FROM 1900 TO 1921 INCLUSIVE.



It is regretted that 28 fishermen lost their lives during the year. The casualties occurred chiefly through the foundering of vessels at sea or by men falling overboard.

The total number of persons engaged in all branches of the industry, including fishing, shows a falling off of 5650, being 65,327 as against 70,983 in 1920 (90,710 in 1913), the decrease being largely in respect of drift-net fishermen. The majority of the persons engaged in curing operations are women herring gutters and packers, and the number employed during the year was 8733 as compared with 9403 in 1920. Employment in the manufacture of herring barrels was restricted owing to the adverse markets for cured herrings, and only 1462 coopers were engaged during the fishing season as compared with 1738 in 1920. High costs of labour and material discouraged more general employment, and the situation was rendered even more unfavourable as the year advanced by the failure of the summer herring fishing, and by labour disputes arising out of a proposal to effect a further reduction in coopers' wages. During the year 535,902 barrels and 153,824 half-barrels were manufactured, as against 1,055,750 and 145,480 respectively in 1920. Employment in other subsidiary industries was also restricted, and of quarter cran baskets for instance only 12,460 were produced against 30,426 in the previous year.

---

### CHAPTER III.

#### THE HERRING FISHERY.

##### 1. GENERAL.

The total catch of herrings in Scotland in 1921 amounted to 2,463,306 cwts. valued at £1,174,388, as compared with 3,155,165 cwts. and £2,244,680 in the preceding year. The falling off cannot be attributed to any particular season, as the winter, early summer, and great summer and autumn fishings alike show decided decreases in both quantity and value. The proportions of the year's catch landed by steam, motor and sail vessels respectively were roughly 43 per cent., 48 per cent. and 9 per cent., as compared with 66 per cent., 29 per cent. and 5 per cent. in 1920. The quantities of herrings taken monthly in each of the fishery districts during the past year are summarised in the following table, while the accompanying diagram shows the quantities of herrings landed and the average price per cwt. for each of the years 1900 to 1921.

RETURN showing the Quantity of HERRINGS landed in each Fishery  
District in Scotland in each Month of the Year 1921.

District.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Eyemouth	9,863	10,084	7,122	..	4,204	3,045	4,995	12,173	3,245	..	..	..	54,731
Leith	11,464	16,325	3,923	781	407	190	288	2,141	853	..	53	549	83,974
Anstruther	36,587	32,400	18,138	371	..	55	85	266	273	..	..	28	88,203
Montrose	203	354	94	4	167	..	56	139	108	..	..	..	1,125
Stonehaven	..	..	..	..	..	42	..	..	..	..	..	..	42
Aberdeen	2,711	150	369	573	2,240	2,160	865	14,135	7,475	93	395	..	31,166
Peterhead	6,650	4,056	697	..	123	18,490	80,710	90,706	1,428	..	..	..	202,860
Fraserburgh	24,483	9,181	336	..	..	33,360	158,714	124,456	1,599	..	35	..	352,164
Banff	2,184	854	..	1	472	3,577	7,984	10,622	10	..	87	..	25,741
Buckie	22,869	5,929	537	14	63	3,008	2,904	3,371	..	..	70	382	89,144
Findhorn	1,084	439	42	..	2	33	283	171	105	1,451	1,338	2,303	7,751
Cromarty	..	..	10	..	..	..	63	..	14	24	..	..	48
Helmsdale	..	..	..	8	..	50	..	187	154	..	..	..	463
Lybster	..	..	..	..	..	91	7	231	245	..	..	..	574
Wick	81,855	59,585	6,659	..	1,505	16,042	108,332	62,594	10,990	1,274	245	4,802	353,883
Orkney	105	144	231	..	..	1,372	44,559	24,301	28	..	..	..	71,240
Shetland	522	501	1,036	..	10,528	103,706	295,102	173,749	421	..	..	..	590,565
Stornoway	34,605	21,797	1,837	88	3,307	9,940	19,389	13,331	6,556	829	863	17,901	135,543
Barra	10	378	35	..	1,189	6,245	17,747	44,154	125	10	..	80	69,973
Loch Broom	612	21	21	..	135	228	38	479	469	7	854	2,996	5,860
Loch Carron and Skye	11,925	3,236	1,113	..	375	1,080	263	914	3,669	737	2,413	4,953	30,678
Fort-William	36,572	24,087	3,294	140	1,761	11,168	3,243	21,661	1,001	115	3,393	5,348	116,783
Campbeltown	28,231	11,074	5,225	6,951	6,923	7,098	676	5,848	7,210	6,704	942	2,916	89,798
Inveraray	1,799	..	..	..	2,016	10,304	3,199	1,523	3,081	2,594	23,933	49,675	98,124
Rothsay	2,377	172	..	245	276	1,211	145	732	630	346	2,189	2,309	11,132
Greenock	161	252	..	378	706	2,461	1,764	53	241	766	1,288	2,353	10,423
Ballantrae	580	12,327	892	6,540	10,114	5,903	411	566	276	94	500	115	38,318
Totals 1921	317,952	213,346	51,711	16,094	46,513	240,859	756,720	619,053	50,206	15,044	39,098	96,710	2,463,306
Totals 1920	365,186	316,513	42,311	12,940	63,845	300,485	1,109,702	623,532	89,722	24,207	59,238	137,434	3,155,165

## 2. WINTER FISHING.

In view of the circumstances to which reference has been made in the introductory chapter, it is not a matter for surprise that at the opening of the year a number of owners of first class boats who had just emerged from the previous year with heavy losses decided to leave their boats out of commission, and that the reduced fleet which commenced the winter fishing in January did so in a very half-hearted manner. This fishing, which covers the period from 1st January to 31st March, began well, however. A few crews who had left their vessels at West Coast ports and at Wick over the New Year holidays returned about the first week of January, and it was not long before considerable fleets were at work on the North Coast and in the Minch. As in the previous year the North Coast grounds were the more productive. Early in January a heavy catch of herrings of excellent quality was landed at Wick and Scrabster, and met with a brisk demand for freshing and kippering. Although heavy landings continued, prices ranged from 60s. to 120s. per cran, and even reached 144s. owing to a good demand in the English markets, which, however, unfortunately proved only temporary. The quality of the herrings varied, and there appeared to be two distinct shoals on the North Coast. The heaviest catches were taken 8 to 12 miles west of Cape Wrath and from the waters in the vicinity of the Orkneys, as well as to the west of Dunnet Head. Wick and Scrabster, owing to their proximity to the grounds, received most of the landings, but on account of their limited railway facilities they were occasionally unable to cope satisfactorily with the heavy arrivals, and, when



prices began to fall, many boats proceeded to Buckie, Fraserburgh, Peterhead, Aberdeen, and even as far south as North Shields.

The fleet operating from Stornoway and other West Coast ports was considerably smaller than in the previous winter fishing. Owing to scarcity of herrings and the fluctuating prices at these ports, many vessels which started fishing on the West Coast transferred their activities to the North Coast when the fishing there developed, hoping at the same time to secure better prices and more adequate and cheaper supplies of coal at East Coast ports. Operations were, however, regularly pursued between Tiumpan Head and the Butt of Lewis and also off Bulgie Island, where the best results were obtained. The quality was seldom satisfactory, as in addition to the fish being in poor condition the shoals contained a large percentage of small fish, and when prices fell in February and several kippering firms closed down fishermen saw that to continue fishing would simply involve them in debt, and the fleet therefore gradually dispersed.

An improvement in the price of kippers, however, took place after many of the boats had gone home from both the North and West Coast fishings, and those who remained to the end of the season were well rewarded.

During the winter fishing, when prices came within the reach of curers, considerable quantities were cured and despatched to German, French and Dutch ports, but met with little or no demand. The experience of kipperers and freshers was not much better. Owing to the comparatively high prices paid at the ports of landing, sharp losses were sustained on a number of consignments to the southern markets which arrived when these were overstocked. Fishermen's earnings for the fishing varied greatly, drifters grossing from £230 to £1420, and motor boats £160 to £670, while the average working expenses amounted to £460 and £240 respectively.

The winter fishing in the Firth of Forth continued from the beginning of the year to the first week in April. The results in January were very satisfactory, but from February onwards the shoals were sporadic and earnings irregular. The number of heavy shots landed was exceptional for the season of the year, and certain crews did remarkably well. The total catch for Eyemouth, Leith and Anstruther districts up to the end of March amounted to the very satisfactory total of 145,956 cwts. valued at £84,137, as against 31,557 cwts. and £28,427 for the corresponding period in 1920.

### 3. SUMMER FISHING.

Under ordinary conditions a general start would probably have been made at herring fishing in the North Sea in the month of May, but owing to the scarcity of coal and the uncertainty as to whether fishing could be conducted profitably apart from Government aid, only a small fleet was at work in that month. A voluntary close time was generally recognised on the East Coast except at Eyemouth until the last week of May, when a number of steam liners began to dispose of surplus herring bait to kipperers and freshers, and this induced a few additional boats to proceed to sea. During the first week of the same month, however, several large motor and sail boats from the East Coast ports proceeded to the West Coast, and landings

began to be made at Stornoway, Mallaig, Kyle and Oban. Good catches were also made at Lerwick and Scalloway by local boats, and on some occasions the supply exceeded the demand. A fairly successful fishing was obtained by the fleet working off Eyemouth and on the North East of England.

At the end of June the total fleet operating in Scottish waters (excepting the Firth of Clyde) numbered only 760 vessels, of which 160 were steam drifters, whereas a fleet of 1750 vessels, including 1100 steam drifters, was at work at the corresponding date in 1920. At this time operations were being conducted from Peterhead, Fraserburgh, Wick, Stronsay (Orkney), and Lerwick, and on a smaller scale from Stornoway, Castlebay, Mallaig and Oban, and Eyemouth.

A good steady fishing was secured at Lerwick from the end of May, and for the motor and sail boats, mostly belonging to the Islands, which worked continuously in Shetland waters the season proved most satisfactory. Prices at Lerwick were comparatively good right up to the end of July, when they began to fall in sympathy with the depreciation of the mark and a contraction of the German demand, and when the majority of the steam drifters had begun fishing the best of the season had passed. Unfortunately most of the herrings were of inferior quality, lacking fat, and presenting a starved or shrivelled appearance after being roused, but the August fish were better developed. The gross earnings at Shetland ranged from £1300 to £1800 for steam vessels, £1100 to £2200 for motor boats, and £500 to £1170 for sail boats.

At Orkney and on the East Coast results were much poorer, as in no area could herrings be taken in remunerative quantities. The quality at Orkney was fair, but prices averaged only 20s. per cran, which to fishermen was unremunerative. The moderate curing staffs provided at Stronsay, however, were hardly sufficient to deal with the landings. On the East Coast the catch was very light throughout the season, never equalling curers' requirements, while the quality was exceptionally poor. The demand by curers, especially when it was evident that there would be a shortage, was keen, but both curers and fishermen suffered loss on the season's operations. The fishing came to a premature close about the end of August.

On the West Coast catches were disappointing except at Castlebay, but owing to the fairly extensive preparations which had been made to deal with large supplies, and to the good demand which for a time prevailed for early matjes at first in the German and later in the American market, and for kippers in this country, high prices were paid. The demand from America collapsed about the middle of August owing, it was said, to the inferior quality of the herrings, and the bulk of the cure thereafter was consigned to Germany.

#### 4. EAST ANGLIAN FISHING.

In spite of the doubtful prospects for the East Anglian autumn fishing, active preparations for it were carried on at most of the East Coast and Moray Firth drifter ports during September, and by the end of that month or beginning of October a large fleet of steam drifters and motor boats and a number of Scottish curing firms and their employees had arrived at Yarmouth and Lowestoft; the

numbers present were, however, not so large as in the previous year. Certain of the drifters which called at Grimsby and other ports with catches taken on their way south were so impressed by the results of Danish seine net fishing recently introduced there that they fitted their vessels with this type of gear, and returned home to fish with it. In view of the probability that supplies of herrings at East Anglia when landings were heavy would exceed the demand, it was voluntarily agreed to regulate fishing operations, and a committee representative of different sections of the industry was set up for that purpose, and the directions of this committee were for the most part loyally observed. Some of the Scottish fleet began operations about the middle of September, but as herrings were scarce on the usual fishing grounds and vessels were not earning sufficient to clear working expenses, a number of crews remained in harbour for two or three weeks. About the middle of October shoals of herrings were struck at some distance off and for a week the landings were very good, but thereafter they gradually became lighter and more partial. The season as a whole proved a failure. The herrings were generally of poor quality; the shoals to begin with were located 80 to 100 miles off, which entailed much heavier working costs than usual, while the total landings were much less than those of the previous year and prices were lower. Fishermen in many cases did not earn sufficient to clear expenses, and crews began to return home by the end of October. Fishcurers had also an unsuccessful season, as not only were the landings short, but the demand for cured herrings was poor owing to the depreciation of the mark and the general instability of the Continental markets.

The following statement shows the number of Scottish fishing boats employed, and the quantity and value of herrings landed by them at the English and Irish fishings for the whole year:—

STATEMENT showing the number of Scottish Fishing Boats employed, and the quantity and value of Herrings landed by them at the English and Irish fishings.

Scottish Districts to which Boats Belong.	PARTICULARS OF FISHING ON THE COASTS OF ENGLAND.								
	Steam.			Motor.			Total.		
	Vessels.	Quantity.	Value.	Vessels.	Quantity.	Value.	Vessels.	Quantity.	Value.
	No.	Cwts.	£	No.	Cwts.	£	No.	Cwts.	£
Eyemouth	21	41,020	10 550	25	26,964	5,778	46	67,984	16,328
Leith	..	..	..	17	18,200	4,062	17	18,200	4,062
Anstruther	52	69,650	18,408	37	31,689	7,696	89	101,339	26,104
Montrose	2	2,625	641	4	2,328	999	6	4,953	1,640
Aberdeen	7	8,960	2,155	..	..	..	7	8,960	2,155
Peterhead	102	154,053	40,714	2	1,876	484	104	155,929	41,198
Fraserburgh	84	115,248	28,812	38	32,680	8,170	122	147,928	36,982
Banff	82	157,440	39,360	15	22,799	5,700	97	180,239	45,060
Buckie	240	432,845	105,120	90	103,765	25,200	330	536,610	130,320
Findhorn	109	166,064	40,330	5	5,148	1,250	114	171,212	41,580
Wick	13	12,229	3,101	15	13,440	3,408	28	25,669	6,509
Orkney	..	..	..	1	574	172	1	574	172
Shetland	10	11,665	3,500	9	4,445	1,270	19	16,110	4,770
Stornoway	8	7,521	1,936	..	..	..	8	7,521	1,936
<b>Total 1921</b>	<b>730</b>	<b>1,179,320</b>	<b>294,627</b>	<b>258</b>	<b>263,908</b>	<b>64,189</b>	<b>988</b>	<b>1,443,228</b>	<b>358,816</b>

Scottish Dis- tricts to which Boats Belong.	PARTICULARS OF FISHING ON THE COASTS OF IRELAND.								
	Steam.			Motor.			Total.		
	Vessels.	Quantity.	Value.	Vessels.	Quantity.	Value.	Vessels.	Quantity.	Value.
	No.	Cwts.	£	No.	Cwts.	£	No.	Cwts.	£
Peterhead -	1	504	438	..	..	..	1	504	438
Fraserburgh -	2	336	340	..	..	..	2	336	340
Findhorn -	22	13,244	9,460	..	..	..	22	13,244	9,460
<b>Total 1921</b>	<b>25</b>	<b>14,084</b>	<b>10,238</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>25</b>	<b>14,084</b>	<b>10,238</b>
<b>Grand Total 1921</b>	<b>755</b>	<b>1,193,404</b>	<b>304,865</b>	<b>258</b>	<b>263,908</b>	<b>64,189</b>	<b>1,013</b>	<b>1,457,312</b>	<b>369,054</b>
<b>Grand Total 1920</b>	<b>786</b>	<b>1,716,770</b>	<b>1,115,479</b>	<b>295</b>	<b>421,127</b>	<b>270,314</b>	<b>1,081</b>	<b>2,137,897</b>	<b>1,385,793</b>
<b>Decrease in 1921</b>	<b>31</b>	<b>523,366</b>	<b>810,614</b>	<b>37</b>	<b>157,219</b>	<b>206,125</b>	<b>68</b>	<b>680,585</b>	<b>1,016,739</b>

### 5. WEST COAST LOCH FISHING.

A light irregular fishing commenced in Lochs Inchar and Laxford about the second week of November, but the quality was poor and the results only fair, and most of the boats proceeded to the Skye Lochs, where fairly good earnings were made up to the end of the month. Dense shoals were located on the Tolsta Sands, north of Stornoway, in December, but here also the quality was far from satisfactory, and as the fishing gradually fell away the fleet crossed to Loch Inchar, where good catches of better quality were secured; some of the vessels ran to Stornoway with their catches, but the majority disposed of their herrings at the mainland ports. Mackerel were abundant on the Tolsta grounds, but the demand was poor and large quantities had to be dumped. Unfortunately the loss of gear was heavy through weight of fish and other causes, while frequent delays in reaching port through bad weather tended to reduce prices.

The total landings in the north-west of Scotland for the months of October, November and December amounted to only 40,409 cwts. against 106,520 cwts. in the corresponding period in 1920.

### 6. CLYDE FISHING.

On the departure of the herrings from Loch Fyne, during the month of January, on their way to the spawning grounds off the Ayrshire Coast, a very successful fishing was secured by the Firth of Clyde motor seine net boats at the entrance to the Kyles of Bute and in the Kilbrannan Sound. An interesting feature was the capture of heavy catches in the middle of the Sound between Davaar and Arran, where seining or "ringing" had not been practised for about 25 years during winter, at which season operations are usually confined to the coastal waters. For a time the landings were very heavy and prices fell to as low as 6s. per cran, while on one occasion 1300 baskets had to be thrown back into the sea. The winter fishing on the Ballantrae Banks and at Stranraer, which is frequently very successful, proved an entire failure owing to adverse weather.

About the end of April shoals began to make their appearance in the Kilbrannan Sound and fair catches were secured in May. Transport facilities by steamer, on which the Clyde area is so dependent, were, however, completely disorganised by the coal dispute and a sympathetic strike by Glasgow dockers, and as the herrings were in poor condition and prices were low, large quantities had frequently to be dumped. Except for some good catches secured in the vicinity of Skipness Point and Tarbert in June and July, the fishing throughout the summer was very light. Large shoals had evidently settled in the deep waters at the mouth of Loch Fyne, but although a vigilant fleet were on the grounds all the time they were unable to meet with any success until the shoals commenced to move up to the shallower waters in the vicinity of Ardrishaig and Otter Ferry, where very heavy catches were secured in November and December, especially on two occasions when shots of 250 to 300 crans were common, and the total landings amounted to over 5000 and 6000 crans respectively for about 80 pairs of boats.

#### 7. TRAWLING FOR HERRINGS.

Encouraged by the success of herring trawling in 1920, several Aberdeen vessels fitted with special trawls, and others with their ordinary nets adapted by means of lacing, began fishing for herrings in the North Sea about the first week in August, a fortnight earlier than in 1920, and for a time landed good catches from the Fladden grounds 90 to 100 miles from Aberdeen. The quality of the herrings was much inferior to that of the previous year, and fishing on the whole was very partial, catches ranging from a few to 214 crans, and a number of the vessels were obliged to complete their voyages in quest of whitefish on other grounds. This added considerably to working costs and several finished up in debt. The most successful vessel grossed £3078 for 8 weeks, but for the majority the season was far from satisfactory.

A few Leith trawlers operated on the Dogger Bank in the autumn, but met with no success, the total landings amounting to 2894 cwts., valued at £2081. In October a Fleetwood trawler which had been fishing off the Welsh coast landed 721 cwts. of herrings of good quality at Glasgow, but as fair supplies of Loch Fyne herrings were then on the market and prices were not satisfactory this venture was not repeated.

The total landings of trawled herrings in Scotland during the year amounted to 18,772 cwts., valued at £11,954, as compared with 41,415 cwts. and £40,429 in 1920.

As in 1920, a number of German vessels visited the Fladden grounds, and the majority are understood to have had a successful season. One vessel using a special trawl fitted with a third otter board is reported to have landed over 700 crans in three trips, and the innovation is regarded by the Germans as having proved successful.

#### 8. SEASONAL PRICES.

The average prices of herrings per cwt. on the East Coast, Orkney and Shetland, West Coast, and all Scotland, for each season

in 1921 are shewn in the following table ; figures for the year 1920 are also given for purposes of comparison :—

## SCOTTISH HERRING FISHING, 1921.

	WINTER.	EARLY SUMMER.	GREAT SUMMER AND AUTUMN.	YEAR.
	1st January— 31st March.	1st April— 30th June.	1st July— 31st December.	
	Price per cwt.	Price per cwt.	Price per cwt.	Price per cwt.
	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>	<i>s.</i> <i>d.</i>
East Coast . . . . .	10 6	13 6	8 6	9 6
Orkney and Shetland .	7 9	10 5	6 0	6 9
West Coast . . . . .	11 11	13 0	13 0	12 7
Whole of Scotland (1921)	11 0	12 2	8 6	9 6
Do. (1920)	13 11	15 1	14 2	14 3

## 9. DISPOSAL OF HERRING CATCH.

Of the total quantity of herrings landed in Scotland last year 1,852,254 cwts. or 75·2 per cent. were preserved in one way or another, while 611,052 cwts. or 24·8 per cent. were consumed fresh.

Details of the quantities of herrings cured in each of the fishery districts are given in Table D.—No. I. (a) (p. 122), which shows also that the quantities dealt with by each method of cure were substantially less than in the preceding year. The quantity used or despatched fresh was also less, although not to the same extent. As usual the greater part of the herrings cured were pickled gutted, almost exclusively for export, the quantity so treated representing about half of the total herring catch, as was also the case in 1920, against about four-fifths in pre-war years. Curing in pickle is the backbone of the herring fishing industry, and on the demand for the produce in the overseas markets the success or failure of the fishery depends.

The outlook for curing at the commencement of the season was not bright, as large stocks of the previous year's produce remained in this country and the chief markets on the Continent were still in a very unsatisfactory state, while on the other hand the stave-wood and other materials held by curers had been purchased at high prices. With characteristic optimism, curers nevertheless engaged sufficient staffs of workers for dealing with almost a normal catch, but unfortunately events did not justify their expectations. Herrings appeared to be exceptionally scarce on the fishing grounds, while the coal dispute prevented most of the steam drifters from going to sea early in the season, so that landings were very limited at the time when the demand was best. Curers were practically obliged to pay higher prices for herrings than the state of the cured markets justified, and at the same time were unable to provide regular employment for their workers, which inevitably raised the cost per barrel for curing, especially in the case of herrings purchased in the early summer.

Very little curing was carried on during the winter season. The first consignments of the summer cure, sent to Hamburg from Castlebay and Lerwick towards the end of May, met, however, with a ready demand at a net return of about £3 per barrel, which gave an impetus to the industry and caused prices for fresh herrings at Castlebay, for instance, to jump from 15s. to 50s. per cran. The American demand was also brisk for a time, but a drop took place before the season was far advanced, owing to the fact that the quality of the herrings was not up to the usual high standard. Curers therefore sent most of their consignments to Germany, although the demand there also fell off considerably.

During the summer fishing curing was conducted at the usual centres, chiefly Lerwick, Stronsay (Orkney), Wick, Fraserburgh and Peterhead. The German demand for cured herrings was on the whole steady, but suffered through the continued depression of the mark, and the prices obtainable, when converted into sterling, barely covered the curers' outlay.

Throughout the year it was observed that, contrary to pre-war experience, the smaller selections of herrings, such as matties and matfulls, were in the best demand on the Continent, perhaps on account of the greater number of fish per barrel, with all that this implies for the retail trade.

The quantity of cured herrings exported during 1921 amounted to 716,036½ barrels, as against 342,056½ barrels in 1920. The increase represents largely the 264,485 barrels of Government stocks of 1920 cure, which were handed over to the Disposals Board at the beginning of 1921, and which were nearly all sold, although at greatly reduced prices, during the year. The destinations of the herrings exported are shown on Tables E.—No. II., and E.—No. III. (pp. 129-130). About five-ninths of the year's exports went, in the first instance at least, to Germany. Exports to Danzig for Poland show an increase, but do not occupy so relatively prominent a position as in the previous year. In pre-war years our best customers for cured herrings were Russia, Germany and Austria, which countries then took over 90 per cent. of our exports.

The total stocks of cured herrings on hand in Scotland on 31st December 1921 amounted to 26,716 barrels, as compared with 278,327 barrels at 31st December 1920.

For the home markets kippering is the most popular form of preservation. A total of 610,729 cwts. or 25 per cent. of the landings was so treated last year, but this was less by about a third than the quantity kippered in 1920. The firms engaged were kept busy throughout the fishing seasons, but, on the whole year's working, business was far from satisfactory. The demand was occasionally good, but the markets seemed unable to absorb more than very limited supplies. The inferior quality of the herrings and the abnormal amount of unemployment further militated against success, as did also the excessive heat experienced during the year. When bunker coals became available in July, and supplies of herrings were more plentiful, Scottish kipperers at the more northern ports found it impossible to compete with those nearer the southern markets.

The total quantity of herrings tinned, chiefly with tomato sauce,

was only 17,353 cwts., as compared with 133,857 cwts. in the previous year, as owing to the lack of demand practically all the 1920 produce was still on hand.

The 35,126 cwts. of herrings made into bloaters or reds were for the most part herrings pickled ungutted at East Anglia and subsequently smoked at Aberdeen.

Considerable quantities of herrings sprinkled in ice and salt were sent to several of the German and French ports and realised fair prices when supplies were scarce, but the return received on most occasions was not encouraging.

Four Swedish firms were engaged during the summer in the "spicing" of herrings at Lerwick, two ashore and two afloat. One of the firms caught their own herrings, but the others depended on local landings. Powdered salt, sugar, spices and bay leaves were used in the spicing process, and the fish were put into barrels and exported to Sweden, where they were subsequently tinned for consumption in that country. The quantity dealt with amounted to 2168 barrels.

Owing to the unremunerative results of curing operations during the winter and summer herring fishings in Scotland, the usual autumn exodus of curers and their employees to East Anglia was on a considerably smaller scale than in normal years. As the fishing was light the number of barrels cured was less than usual, but, owing to a further fall in the German exchange, it appeared at first as though it would not be possible to dispose of even the limited quantity cured except at a heavy loss. The demand, however, improved later, but prices were very unremunerative.

Particulars of the quantities and selections of cured herrings accepted under the Crown brand are detailed in Table E.—No. I. (p. 128). The brand, which had been largely in abeyance since 1913, owing at first to the interruption of the Continental trade and in 1919 and 1920 to the operation of the guarantee schemes, was again in fair demand during the year.

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## CHAPTER IV.

### FISHERIES OTHER THAN HERRING.

#### 1. GENERAL.

The total quantity of demersal\* fish landed in Scotland in 1921 amounted to 2,698,496 cwts., valued at £3,753,329, as compared with 3,069,415 cwts., valued at £4,238,032 in 1920. Details will be found in Table B.—No. II. (pp. 56-119). The average price per cwt. over all was 27s. 10d., as against 27s. 7d. in 1920.

The decrease in landings as compared with 1920 is wholly attributable to trawling, the produce of which fell off by 23 per cent.

\* *I.e.*, fish which live and feed mainly near the sea bottom, thus excluding herrings, sprats, sparlings and mackerel.



in quantity and 19 per cent. in value, whereas the landings by line vessels increased by 19 per cent. and 6 per cent., and by vessels using nets other than trawls by 31 per cent. and 29 per cent. in quantity and value respectively. The increased landings by net and line vessels are doubtless due in part to the poor results and prospects of the herring fishery, which caused fishermen to devote more attention to white-fishing, not from choice but from urgent necessity.

Haddocks constituted over one-third of the quantity and value of the total white fish catch, followed at no great distance by cod and codling, as was the case in 1920. Before the war cod predominated, but the foreign trawl landings which brought this about were of little account during the year.

The principal fishing ground for Scottish fishing vessels is the northern North Sea. Local vessels and medium and larger sized East Coast vessels work off the West Coast, while the largest trawlers and liners extend their operations from the West of Ireland to Iceland. A summary of the year's landings according to the areas of capture is given in the following table:—

Description of Fish.	North Sea (E. of 4° W. and S. of 62° N.)	Faroe.	Iceland.	Western Grounds.	Irish Grounds.	Mixed Grounds	Total.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Cod and Codling	564,766	78,189	21,526	97,163	60	9,912	771,616
Ling . . . .	78,276	6,225	1,313	52,805	2,406	3,602	144,627
Torsk . . . .	5,009	5,700	151	4,599	38	628	16,125
Saithe . . . .	84,634	3,257	1,874	26,533	3	1,948	118,249
Haddocks . . . .	833,515	7,491	7,830	87,389	3	12,590	948,818
Whitings . . . .	170,267	57	120	6,427	4	1,195	178,070
Conger Eels . . . .	1,268	1	1	12,994	25	63	14,352
Gurnards . . . .	5,613	...	...	594	...	14	6,221
Catfish . . . .	19,089	676	1,102	271	...	271	21,409
Monks . . . .	24,972	91	13	971	3	286	26,336
Hake . . . .	19,367	7	...	4,711	24	366	24,475
Turbot . . . .	7,482	1	1	294	...	45	7,823
Halibut . . . .	25,538	18,537	1,132	25,497	1,398	3,663	75,765
Lemon Soles . . . .	38,591	415	118	1,798	...	349	41,271
Plaice . . . .	74,580	342	511	12,777	...	854	89,064
Brill . . . .	596	...	...	86	...	4	686
Dabs . . . .	9,055	15	13	345	...	13	9,441
Whitches . . . .	6,989	1	211	221	1	63	7,486
Megrims . . . .	9,621	11	18	987	16	239	10,892
Skates . . . .	107,281	5,940	377	52,420	1,001	4,837	171,856
Squids . . . .	288	...	...	15	1	...	304
Other kinds . . . .	4,803	170	55	8,276	98	208	13,610
<b>Total . . . .</b>	<b>2,091,600</b>	<b>127,126</b>	<b>36,366</b>	<b>397,173</b>	<b>5,081</b>	<b>41,150</b>	<b>2,698,496</b>

The landings may also be classified according to fishery districts and months. In the following table the predominance of Aberdeen, followed by Leith, which is the other chief trawling district; the adverse influence of the stormy weather in the winter months; and the falling off in landings during the coal dispute are all discernible.

RETURN showing the Quantity of WHITE (*i.e.* DEMERSAL) FISH landed in each Fishery District in Scotland in each Month of the Year 1921.

Districts.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Eyemouth	1,154	623	230	1,164	626	511	289	373	310	869	846	990	7,985
Leith	29,363	41,532	44,972	37,581	16,438	13,671	26,877	43,931	47,715	48,014	37,813	33,619	426,526
Anstruther	2,400	1,951	1,145	2,172	2,817	2,738	2,252	2,498	2,482	2,127	2,486	2,511	27,579
Montrose	9,312	9,493	6,219	10,102	11,454	14,471	13,232	13,601	14,632	12,957	10,662	11,382	137,517
Stonehaven	1,200	708	293	824	2,167	2,044	1,910	1,778	1,286	1,610	1,296	1,264	16,330
Aberdeen	113,638	154,165	124,384	164,485	130,809	144,721	127,952	139,634	163,741	169,340	125,263	127,312	1,690,944
Peterhead	2,441	2,368	930	2,551	2,844	1,802	2,270	1,662	1,092	963	323	1,192	20,438
Fraserburgh	2,962	4,091	2,161	4,223	5,330	3,416	2,497	1,652	1,935	1,586	1,411	1,390	32,654
Banff	3,242	5,726	2,527	1,559	4,455	4,331	3,024	2,145	2,805	3,001	3,992	5,261	42,068
Buckie	2,389	14,928	7,948	1,301	1,021	1,520	1,286	1,282	1,241	3,408	4,000	3,028	43,352
Findhorn	2,459	7,160	4,327	1,896	3,193	4,523	3,407	3,838	3,054	3,096	4,669	3,987	45,609
Cromarty	845	1,025	577	808	996	1,172	964	1,016	1,374	1,207	1,681	1,150	12,815
Helmsdale	1,929	1,798	1,048	1,254	1,140	1,382	1,373	1,195	2,207	1,746	1,605	1,678	18,355
Lybster	857	724	184	272	111	48	45	44	401	492	808	4,028	
Wick	2,536	4,814	2,603	1,837	1,892	1,691	2,551	1,852	1,574	1,160	2,874	1,813	27,197
Orkney	320	316	210	350	626	1,038	1,134	976	574	567	439	287	6,837
Shetland	4,715	3,088	504	2,116	1,696	2,953	3,530	2,310	985	5,409	2,217	3,295	32,818
Stornoway	1,424	4,238	1,829	1,149	1,971	3,112	2,992	2,166	1,563	1,566	1,254	1,524	24,888
Barra	246	280	332	293	407	718	358	261	128	282	383	168	3,856
Loch Broom	364	651	339	583	218	580	462	433	390	315	421	319	5,875
Loch Carron and Skye	793	2,491	873	588	150	229	162	198	132	152	154	165	6,087
Fort-William	3,123	13,522	9,575	3,409	906	636	269	294	348	479	586	834	34,031
Campbeltown	431	825	1,285	1,036	190	212	217	366	438	463	366	116	5,945
Inveraray	34	57	53	132	14	..	..	..	..	..	..	..	295
Rothesay	134	262	243	190	63	49	35	32	114	123	146	97	1,488
Greenock	32	169	34	287	64	19	57	81	100	42	62	51	993
Ballantrae	1,335	6,162	4,930	3,061	1,093	582	614	530	923	717	1,226	808	21,981
Totals 1921	194,678	283,217	220,260	245,523	192,691	208,219	199,756	224,149	251,187	261,600	206,667	210,549	2,698,496
Totals 1920	168,442	222,197	278,098	319,401	332,341	349,016	281,235	233,701	238,182	227,824	188,330	230,643	3,069,415

In view of recurring controversy regarding the retail prices of fish, a note of the average wholesale prices per lb. realised by the fishermen at the ports of landing for a number of the chief species and classes of white fish throughout the past year may be of interest. These were:—

Haddocks	2·9d.	Cod and Codling	2·9d.	Whitings	1·7d.
Ling	1·6d.	Saithe	1·0d.	Total round fish	2·6d.
Plaice	7·0d.	Halibut	9·4d.	Lemon soles	9·3d.
Total flat fish	7·7d.	Skates and Rays	1·4d.	Total white fish	3·0d.

The present rail freight per passenger train from Scottish ports to London, for instance, just exceeds  $\frac{3}{4}$ d. per lb. As this rate, however, is charged on the gross weight, *i.e.* the weight of the box and the ice as well as the fish, the actual rate per lb. of fish is appreciably higher, and it is also necessary to add costs of handling and cartage, the upkeep of packages and overhead charges, as well as wholesale and retail dealers' profits, before the prices charged to the public are reached. Apart from the question whether or not these have been reasonable, it is beyond doubt that it would be in the interests of the industry if public demand could be stimulated by cheaper supplies; but it will readily be appreciated from the above figures that there is little margin for any substantial reduction on the first cost of the fish.

## 2. TRAWLING.

Although the fleet of trawl vessels was greater than ever before, their catch was much less than in 1920, chiefly as the

result of the protracted coal dispute. Financial results were most discouraging, owing on the one hand to the high level of working expenses, accentuated during and after the coal dispute, and on the other to the comparatively low wholesale prices for fish ruling throughout the year. Prices it is true were on the whole slightly better than in 1920, and expenses latterly were falling, so that prospects improved; but at the same time trawlers' earnings were even poorer than in 1920, and it is estimated that at least a third of the fleet failed to clear expenses. The catches taken on the nearer grounds in the North Sea were of inferior quality, containing throughout the year a large proportion of small haddocks and whittings, which, except when supplies were short, never realised remunerative prices and not infrequently proved unsaleable. In the latter part of the year this want of success was partially redeemed by good takes of lemon soles, which species as an exception shows a pronounced increase in the trawl landings as compared with 1920. Long voyage trawlers suffered especially from the heavy expenditure incurred for fuel, etc., while they derived little or no benefit from the better prices obtained in the more unsettled weather, as owing to the prolongation of their voyage at such times their expenses were increased and their catches landed in inferior condition.

Comparatively few trawlers visited Faroe or Iceland. During the spring and early summer months, when fishing in those waters is usually most remunerative, the enhanced prices then prevailing were in many cases insufficient to offset the heavy expenditure on coal due to the dispute. At that time vessels which were fortunate in making quick trips realised good earnings, but others incurred losses, especially towards the end of the period, when prices of fish fell.

The total landings of white fish by steam trawlers amounted to 1,765,336 cwts. valued at £2,461,576, against 2,290,628 cwts. and £3,041,332 in 1920. In addition motor trawlers landed 1546 cwts. valued at £5093, and sailing trawlers, which work only from Annan, 2014 cwts. valued at £2014. The motor and sail landings consisted chiefly of plaice. Of the total quantity landed by steam trawlers 74 per cent. was landed at Aberdeen, 22 per cent. at Granton, 4 per cent. at Dundee (including a few landings at Montrose), and the balance of less than  $\frac{1}{2}$  per cent. at Peterhead, Buckie and various other ports.

A number of trawlers of the drifter type, owned by share fishermen belonging chiefly to Moray Firth ports, worked from their home ports or from Aberdeen, but with no great success. During the year trawling for white fish was probably more profitable than herring fishing, but the future prospects of this type in more normal conditions are doubtful.

### 3. GREAT LINING.

Great line fishing, like trawling, is based chiefly on the port of Aberdeen, where during the year 88 per cent. of the total catch by steam line vessels was landed. The other centres from which great lining is conducted, although more intermittently, are principally Oban and Mallaig, with Campbeltown and Stranraer, on the

West Coast, and Wick, Fraserburgh, Peterhead, Montrose and Newhaven on the East. The vessels which work on the more distant grounds, and which of recent years have had much the best results, are large sized steamers comparable with the largest trawlers. Halibut is the principal object of their operations, although incidentally other kinds of fish, chiefly cod and skate, are taken in large quantities. In the North Sea vessels of the herring drifter type fish for cod, and on the nearer grounds off the West Coast for cod and for conger eels, ling, roker and hake. Great lining is also occasionally followed by large or medium sized motor boats off the East Coast and in the Firth of Clyde.

In the statistical tables appended landings by great liners are not separately distinguished, but the great bulk of the catch is landed by steam vessels. The landings by such vessels show an increase on the previous year's catch, corresponding to the larger fleet at work. Liners which were converted for trawling during the war had all been refitted for lining by 1921; while more drifters than usual followed line fishing on account of the difficulties confronting herring fishing. In addition some 30 trawlers were temporarily equipped as liners during the summer months. On the whole results were less successful than in 1920, largely owing to the interruption and increased expenditure caused by the coal dispute. The total quantity of halibut taken by line during the year constituted a record, and the value, as in 1920, represented more than half the total value of the steam line catch. The chief halibut grounds were off the Faroes, Rockall and St. Kilda, and on Lousy Bank. The grounds off the west of Ireland, where in 1920 splendid shots were obtained, could not be fished at the height of the 1921 season owing to the prevalence of dog fish. A few very successful Iceland trips made late in the season by a large liner are likely to be followed up this year by other vessels of the same type.

Operations in the North Sea were begun in March and extended as herring bait became available. The fishing was continued with fair results until July, when the incursion of shoals of dog fish caused the fishermen to cease operations. Most of the vessels engaged, although belonging to other ports, worked from Aberdeen, where they are assured of a regular market. Some 20 drifters and a few motor boats belonging to Eyemouth District worked from North Shields from about April, at first with great success, but the expenses of the long trips to the grounds in the North Sea on which they were operating were found too heavy when catches fell off, and the fishing was abandoned in May.

#### 4. SMALL AND HAND LINING.

Fishing by means of small and hand lines, which had shown a slight decline from the activity of war time, recovered to some extent during the year. This was, however, not due to any conspicuous success attained,—as often only a bare living could be earned by these methods of fishing, while the work involved in baiting lines is laborious both to the fishermen themselves and to their families,—but to the fact that line fishing could be counted on to yield a steady if meagre return, and to many of the fishermen in present circumstances this is becoming a first consideration. The

expense and labour of baiting and, at times, difficulty in obtaining bait are the chief drawbacks, and a number of fishermen, especially in Peterhead District, therefore adopted "ripper" fishing, in which a lure of burnished lead takes the place of bait. This outfit has the additional advantage of involving less initial outlay, which has also become an important consideration. The greater part of the small and hand line catch was, however, as heretofore, landed by the fishermen of districts such as Montrose, Banff and Shetland, where lining is regularly prosecuted as the chief means of livelihood of a large number of able-bodied fishermen. Haddocks and codlings are the principal kinds of fish taken, and catches by motor boats continue to predominate. Including great line shots, which, as indicated above, are not distinguished, the total catch by motor and sail liners amounted to 480,096 cwts. valued at £604,337, in which, however, are included, 55,871 cwts., valued at £42,879, landed by foreign fishing vessels, chiefly cod partly cured at sea brought to Aberdeen by Faroese fishing smacks (*vide* Table B.—No. II., p. 116). It was found that practically all the herring fishermen who had taken up small and hand lining reverted to their usual occupation during the summer fishing, in the hope, which unfortunately was not realised, of securing more remunerative results.

#### 5. COD NET FISHING.

Fishing for cod by means of anchored nets is prosecuted during the spawning season, or from the end of January to the beginning of April, chiefly in the Moray Firth, but also in the lower reaches of the Firth of Clyde and off the western coast of Ross-shire. A similar method of fishing for codling is also employed in the Firth of Forth and in Montrose District. In 1921 the Moray Firth season closed earlier than usual, owing to scarcity of fish and loss of and damage to nets. The nets are left unattended in the sea, and it was alleged that much of the damage had been caused by foreign trawlers at work in the Firth. Prices realised for cod ruled low, and considering the heavy loss of gear results were very disappointing. The total catch for the season amounted to 40,151 cwts., valued at £41,836, against 35,055 cwts. and £49,419 in 1920. In the former year the maximum fleet engaged numbered 14 steam, 146 motor and 10 sail vessels, against 34 steam, 159 motor and 21 sail last year. The Western Ross fishing was a pronounced failure, while results off the Ayrshire coast were only moderate, chiefly on account of low prices.

#### 6. DANISH SEINE NET FISHING.

This method of fishing, the introduction of which into Scottish waters has already been described, was mainly confined to the Moray Firth. English vessels which landed at Aberdeen had disappointing results and soon abandoned the fishing, but Moray Firth crews, probably on account of their knowledge of the grounds, fared much better. In all 783 landings were made by steam vessels and 114 by motor boats, totalling 15,200 cwts., valued at £38,084, mostly plaice, haddocks and lemon soles.

## 7. FLOUNDER SEINE NET FISHING.

The total quantity of fish taken by the ordinary flounder seine net was 28,712 cwts., valued at £56,918, against about 15,000 cwts., valued at £40,000 in 1920. Practically all was landed by motor boats, and considerably more than half in Montrose District. An additional inshore area in the vicinity of Peterhead was opened to this method of fishing during the year, but did not yield the results expected. The coastal waters specially opened to flounder seine net fishing now extend on the East Coast from Rattray Head in Aberdeenshire to Babbet Ness in Fifeshire, and off the south shore of the Firth of Forth from Gullane Ness to Cramond Island, and in the Firth of Clyde within the line from the Mull of Cantyre to Corsewall Point.

## 8. SPRATS, SPARLINGS AND MACKEREL.

Sprat fishing is confined to Inverness Firth, where it is carried on in conjunction with drift net fishing for small herrings, and to the Firths of Tay and Forth. The season extends from about October to March, so that the landings for a calendar year represent the second part of one season and the first part of the next. In 1921 the total catch was 44,633 cwts., valued at £5446, or 2s. 5d. per cwt. Owing to the plentiful supply of larger fish the demand for sprats for home consumption, which was considerable during the war, has almost disappeared, and a large proportion of the year's catch was disposed of for manure, although over one-fourth was cured for export.

Sparlings, which are taken in estuaries, are landed in such small quantities as to be of little importance commercially.

The demand for mackerel, as for sprats, has greatly fallen off since the war, and the majority of those landed are taken incidentally in the course of drift-net fishing for herrings. For the total catch of 53,805 cwts. the average price was 8s. 6d. per cwt. The quantity utilised for curing was less than 10,000 cwts.

## 9. CRUSTACEANS AND SHELL FISH.

As in the preceding year creel fishing for lobsters and crabs received considerable attention, and the landings of both again show increases. Lobsters are taken for the most part in the crofting areas, chiefly around the Minch and in Orkney, and catches during the past year were as a rule very satisfactory. The exceptionally warm weather experienced, however, frequently caused a heavy mortality in consignments, which tended to discourage operations when conditions were most suitable for fishing; while as winter approached fishermen began to consider the risk to gear greater than was warranted by the prices realised, and fishing was restricted. Crabs are taken chiefly on the East Coast from Montrose District southwards, where also a considerable number of lobsters are taken by small boats.

The total value of oysters taken was only £1541. With the exception of small quantities from West Loch Tarbert, Argyll, all were from the Loch Ryan beds.

The quantities of mussels and clams taken show increases, reflecting the increase in small lining, as bait for which both kinds are chiefly used. Only in the Solway area are mussels taken for human consumption, being despatched thence to English towns.

#### 10. DISPOSAL OF CATCH.

The quantity of fish other than herrings cured shows a considerable decrease from the preceding year, totalling only 392,205 cwts. as against 652,993 cwts. (Table D.—No. I. (b), page 123). The decrease was common to all kinds of white fish, but sprats and mackerel show increases. Sprats were cured pickled at the Firth of Forth and Inverness Firth fishings, chiefly for export to Sweden, where, it is understood, they are subsequently tinned. Mackerel curing (chiefly tinning) was carried on mainly at Fraserburgh, where the fish were obtained cheaply during the summer herring fishing. Nearly two-thirds of the white fish cured consisted of haddocks smoked for the home markets, representing more than half of the haddock catch for the year. Haddock smoking is understood, however, not to have yielded very satisfactory returns, owing largely to the general financial stringency and the resulting difficulty in obtaining prompt settlement from retailers. The competition of such ports as Hull and Grimsby in the English markets is now also more keenly felt, owing to the increased disadvantage which the higher railway rates impose on Scottish produce. The demand for dried cod, etc. was poor, which is attributable to the decreased purchasing power of the consuming countries and the keen competition of Norway, Iceland and Newfoundland, whose fisheries, being more dependent on the export trade, were apparently in a position even worse than our own. Discrimination by Spain and Portugal against the products of Norway and Iceland in retaliation against the prohibitionist policy of these countries, however, favoured Scottish trade. Very little tinning of white fish was done during the year, as large stocks of the previous year's output remained on hand.

The curing of white fish is very largely centralised at Aberdeen. Haddock smoking, and to a less extent the drying and smoking of cod, are, however, carried on on a much smaller scale at other East Coast ports and at Lerwick. The total cure on the West Coast did not amount to 1000 cwts. The new tinning factory at Stornoway, although completed, did not come into operation during the year.

The total quantity of each kind of fish marketed fresh, arrived at by deducting the quantities used for curing from the total quantities landed, is shown in Table C. (p. 121).

#### 11. WHALING.

Owing to the depression in the market for oil, which forms the chief product of the whaling industry, no whaling operations were conducted from any of the stations in Scotland during the year.

**CHAPTER V.****TRANSPORT AND DISTRIBUTION.**

The problem of transport and distribution continues to exercise the minds of those engaged in the Scottish fishing industry, Scotland being, as compared with England, seriously handicapped by the distance of the principal fishing ports from the important centres of consumption, and being moreover confronted with peculiar difficulties of communication. The railway system is subject to exposure to severe weather conditions, causing delays and breakdowns; there are many steep gradients throughout the country, and several of the principal ports are served by single lines only; while as regards the fishing ports situated in the various islands, the extra handling involved in a steamer and rail connection, and delays in sea transit owing to fogs and storms, constitute further handicaps.

The principal points of the problem in Scotland may be briefly outlined as follow :—

- (1) The organisation of a regular and efficient service for conveying fish in the shortest possible time from the ports of landing to the morning markets in the large centres of distribution. Expedition in the running of trains has in some cases resulted in a later hour of despatch from the ports being arranged, and this has proved a valuable concession.
- (2) The running, at short notice, of special fish trains wherever justified by the traffic.
- (3) The restoration of pre-war steamer services between the Mainland and Outer Islands. This is of special importance in the case of Stornoway, where a strong demand exists for a daily service all the year round.
- (4) The provision of convenient loading accommodation and of sufficient rolling stock in all respects suitable and in proper condition for carrying the different classes of fish traffic.
- (5) Satisfactory arrangements for the delivery of coal, stores, fishing gear, etc. at the various outlying ports; also the prompt return of empty boxes.
- (6) The granting of special travelling concessions to fishworkers proceeding to and from the curing centres.
- (7) The running of fast goods services of which the trade generally could take more advantage.
- (8) Revision of rates for fish (including mussels for bait).

Various complaints and suggestions, with regard to these and other matters affecting the fishing industry, which were received by or came to the notice of the Board during the year were carefully investigated, and every effort was made to remove difficulties and to improve the transport facilities. In this connection the Board continued to keep in close touch with the railway and steamship authorities, who have been found at all times most willing to assist wherever possible—this remark applying equally to the period



during which the railways were under Government control and the period which has elapsed since the control was removed.

In the Board's report for the year 1920 reference was made to the marked all-round improvement which had been gradually effected in the course of that year in the railway facilities for the transport of fish from Scotland to the English markets.

During the period now under review this improvement was steadily continued, arrangements being made so far as possible to speed up the running of the special fish trains, and to ensure their arrival in time for the opening of the southern morning markets. It is observed that the first effects of the introduction of the grouping system has been to stimulate competition, canvassing for fish traffic being now very active between the Eastern and Western Groups, and this should certainly tend to benefit the fishing industry.

The year 1921 was marked by a considerable increase in the employment of motor road transport for fish, and it seems probable that the competition between rail and motor transport will become keener as time goes on. In many cases, of course, the motor lorry is merely serving as the necessary link between the port of landing and the nearest railway station, but on occasion this form of transport has been introduced by way of experiment to compete with the railways for the fish traffic, and here the relative cost, on which the success of the venture must chiefly depend, can only be ascertained by actual trial over a prolonged period. It is perhaps unnecessary to emphasise the importance, in the interests of both the trade and the public, of reducing to a minimum every expense in the handling of fish from the time of capture until delivery to the consumer, and this can be effected to some extent by greater co-operation.

The increased producing capacity now existing calls for greater efficiency in the organisation of distribution to the consumer. The industry is passing through difficult times, and while the improvement of the means of distribution is primarily a matter for the wholesale and retail traders themselves, there may be found in some cases scope for municipal enterprise, for example in the provision of markets or improvement of existing accommodation, with a view to ensuring that the local supply of fish may be ample, regular and obtainable at the lowest price possible.

During the period under review there was no appreciable extension of the "small parcel" (by post) system or addition to the number of hawkers and fish-frying establishments, both of which would help materially in increasing the consumption of fish. Fish hawking at the present time is rendered extremely difficult, as the class for which it caters has little money to spend on fish, while the initial cost and running expenses of the outfit are still heavy, and in some cases the hawker has been compelled to turn for the time being to other means of livelihood. It is hoped that with a revival of trade generally, and with less unemployment and distress in the country, rapid improvement may be seen in the directions indicated.

As regards the question of railway rates, Scottish ports are naturally handicapped in the matter of access to southern markets by reason of their geographical position, which also has the effect of restricting the use that can be made of goods trains for the conveyance of fish traffic from the ports. The high cost of carriage in

the year 1921 as compared with that in pre-war days has undoubtedly had a prejudicial effect on the Scottish fishing industry, and the Board, while appreciating that there is some force in the contention of the railway companies that railway rates can only be reduced after there has been a revision of the wages and general working conditions of their employees, and a substantial reduction in running costs, attach great importance to the urgent necessity for lowering the cost of carriage at the earliest possible moment.

During the early part of 1921 the Aberdeen Fish Trade Association petitioned the Minister of Transport for reconsideration of the railway rates on fish, and at the same time circularised Members of Parliament and other interested parties. The Board were approached in the matter and submitted their views thereon to the responsible authorities.

Throughout the year complaints from many Scottish fishing ports on the subject of railway rates were received by the Board, who have continued to give the matter their close attention.

The Joint Committee which was appointed in June 1920 from the various Government Departments concerned, the fishing industry, and the railway companies, in order to consider the question of the transport of fish, and on which the Board were represented, duly issued their Report at the beginning of 1921, showing the range of their inquiries and the directions in which satisfactory results had been obtained. The Committee were then adjourned *sine die*, the representatives of the Government Departments forming a standing Sub-Committee to consider fresh questions, with power to call a meeting, if necessary, of the full Committee.

The meetings of the Edinburgh Standing Conference, consisting of representatives of the Board of Agriculture for Scotland, the Fishery Board for Scotland, the Scottish Board of Health, the Board of Trade and the Scottish Office, which was constituted in July 1920 for the purpose of considering all proposals for new or improved inland transport facilities in Scotland and reporting thereon to the Development (Scotland) Committee for submission to the Ministry of Transport, were suspended in March 1921, the Minister of Transport having intimated that, in view of the urgent need for the restriction of public expenditure and its bearing on development, he was unable to recommend any expenditure out of monies voted by Parliament in the financial year 1920-21 for the purpose of developing transport, and that he would not be in a position to make provision for expenditure under this head in the Estimates for the year 1921-22. The Edinburgh Standing Conference has therefore been in abeyance since March 1921, one meeting only having been held during the period under review, at which the question of the possibility of improved steamer services to the Western Islands was discussed with the representatives of the steamship companies.

Before leaving this subject, the Board wish to place on record their appreciation of the efficient manner in which the Scottish railway and steamship companies, often under conditions of great difficulty, continued throughout the prolonged coal dispute of 1921 to provide transport facilities, not only for marketing the fish landed at the various ports, but also for delivering the coal and stores required by the fishing fleets in the prosecution of their work; and

although the service during this period was necessarily curtailed in some instances, the Board found the companies at all times most willing and ready to assist the trade in every way possible.

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## CHAPTER VI.

### DEVELOPMENT.

#### 1. DISPOSAL OF ADMIRALTY DRIFTERS TO EX-SERVICE FISHERMEN.

With the exception of six wooden drifters returned to the Admiralty as unsaleable, all the vessels—75 in number—taken over by the Board for disposal under this scheme have now been sold.

The prices originally fixed for these vessels were as follow:—£6500 for new and £6000 for re-conditioned steel vessels, plus £500 if equipped for trawling, and £5000 for new and £4500 for re-conditioned wooden vessels, but in consequence of the depression in the industry and the great fall in the value of fishing vessels a petition was received from the purchasers in the course of the year praying that a substantial reduction be made on the original prices. This petition was strongly supported by the Board, and H.M. Treasury ultimately sanctioned a reduction of 25 per cent.

After allowing for this reduction the value of the vessels sold is in round figures £310,000, and of this sum about £40,000 had been repaid up to the end of 1921, while a further sum of £5000 had been received by way of interest.

Owing to the serious crisis through which the industry has passed since the scheme was inaugurated, only five crews have succeeded in clearing their indebtedness to the Board. The majority of them are in debt, and in eight cases it has unfortunately been found necessary to foreclose the mortgages over the vessels.

#### 2. LOANS TO FISHERMEN FOR THE PURCHASE OF MOTOR FISHING BOATS AND THE INSTALLATION OF MOTOR ENGINES INTO EXISTING SAILING BOATS.

In the annual report for 1920 it was stated that the applications for loans for the purchase of motor fishing boats and the installation of motor engines into existing sailing boats, for which the Board had succeeded in obtaining an advance from the Development Fund, had been much less numerous than was anticipated.

The scheme was continued during the year, but only a very small number of applications was received, and in no case were the applicants able to comply with the revised conditions on which loans could be granted.

The total number of loans advanced is eight, amounting in all to £1835, over boats and engines costing £2575.

The scheme has now been discontinued.

### 3. LOBSTER FISHERY DEVELOPMENT.

During the year the lobster investigations were actively pursued, although, owing to the curtailment of the funds placed at the Board's disposal for this purpose, operations were conducted on a less comprehensive scale than was originally contemplated. The Board's expert has visited many of the localities in which lobster fishing is pursued, and with the aid of local observers has collected much useful information regarding this crustacean. Large numbers of lobsters have been weighed, measured and examined, and the results, together with other data and material collected, have been placed at the disposal of the scientific staff at Aberdeen, where the life history of the lobster is being investigated (*vide* also p. 49).

In the course of the year the lobster expert visited the principal lobster fishing ports on the East Coast in order to enlighten the fishermen as to the best methods of fishing and the possibilities of development there.

### 4. OYSTER FISHERY DEVELOPMENT.

The operations contemplated for the year under review in connection with the Board's scheme for the resuscitation of the Scottish oyster fisheries, to which reference was made in the last annual report, had to be very considerably curtailed owing to the necessity for restricting expenditure, while they were still further hampered by unexpected difficulties which were encountered in the course of the year. It had been arranged, pending a supply of brood oysters becoming available from the Conway oyster breeding station, to obtain a stock from France, but delay occurred in consequence of a serious mortality amongst French oysters, and subsequently difficulties of transport incident on the coal dispute rendered it impossible to secure a supply from that source in the extremely hot weather which prevailed. Ultimately a stock was obtained by sea from Holland, and despite the hot weather conditions, the bulk of them were successfully laid. These Dutch oysters went to supplement a stock of native oysters which had previously been transplanted from Skye waters in the course of surveys of various grounds on the West Coast for the purpose of studying the temperature and specific gravity of the waters and other natural conditions. Later on, when the oysters began to spawn, efforts were made to collect the fall of spat, but these efforts were frustrated owing to difficulties in obtaining proper collectors and other materials required, and to the prevalence of stormy weather.

It is hoped that greater success will be achieved in this direction during the summer of 1922, although in the absence of any means of impounding it a considerable loss of spat seems to be inevitable. An artificial breeding station in Scotland would have been invaluable as a means of eliminating adverse natural conditions, and plans therefor were drawn up, but had to be abandoned as too costly in existing circumstances.

By arrangement with the Development Commissioners and the Ministry of Agriculture and Fisheries, the Board's expert in ostraculture gave his assistance in connection with the breeding experiments being conducted at Conway.

It is recognised that during the present financial stringency it is impossible to devote more than a bare minimum of public funds to oyster development, but the Board trust that it may eventually be possible to carry out the scheme on the full scale originally contemplated.

#### 5. USE OF AIRCRAFT FOR LOCATING FISH SHOALS.

As stated in the last annual report the Board, in 1920, approached the Air Ministry with a view to testing the utility of aircraft for the detection of shoals of fish in Scottish waters.

The matter was pursued in 1921, and eventually after considerable difficulty, owing to reductions in the Air Service, an airship flight over the North Sea was arranged to start from Pulham in July with a member of the Board's scientific staff and one of their fishery officers on board to act as observers. Unfortunately, owing to a mishap to another airship, necessitating sudden and drastic alterations in the Air Ministry's general programme of flights, the cruise had to be cancelled at the last moment, and no other airship being available efforts were made to obtain the use of an aeroplane, seaplane or flying boat, but without success.

The Air Ministry have indicated that the Board may rely on their continued co-operation, and it is hoped that a flight may be arranged during the summer of 1922.

Meanwhile the Board are keeping the question under general observation and reports of experiments have been obtained from various sources, including official accounts of a trip made in August over a portion of the waters adjoining the West Coast of France, by a dirigible of the French Air Service, and of observations made by the Ministry of Agriculture and Fisheries from an aeroplane during the East Anglian herring fishing. So far the tests, while demonstrating the feasibility of air observations, cannot be regarded as conclusively showing their practical application for fishery purposes, and it is hoped that further light will be thrown on this aspect of the matter by later experiments.

#### 6. WIRELESS COMMUNICATION FOR FISHING VESSELS.

The development of wireless communication as applied to fishing vessels is being kept under observation. The Board understand from the Postmaster-General that the matter is forming the subject of further experiment and investigation, the results of which will be communicated to the Board.

#### 7. INTELLIGENCE.

As is well known, the herring fishery is the most important branch of the fishing industry in Scotland, and owing to the highly perishable nature of the herring and the fact that the fishery is prosecuted at remote and widely scattered ports, the dissemination of reliable and prompt intelligence as to its progress is of vital importance to all branches of the industry.

Recognising this fact, the Board in the year 1895 established a system of official telegraphic information between ports at which herring fishing is in progress, and last year the number of telegrams issued was about 3500.

The telegrams are despatched daily at noon by the Board's Fishery Officers from their own ports to every other port at which herring fishing is then going on, and upon receipt they are exhibited at the fish markets and other public places, where they are available for consultation by all concerned.

The points on which the telegrams give information are (1) number of arrivals of herring boats, (2) average catch per boat, (3) quality of the fish, (4) range of prices, (5) position of chief fishing grounds, and (6) nature of wind and weather.

The cost of the service is practically only that of the telegrams sent (which last year amounted to less than £350), but it has been of great and acknowledged value to the industry by assisting in securing the best distribution of the herring fishing fleet, and the stabilisation of prices in a business which, owing to its dependence in large measure upon the system of consignment to Continental and other foreign markets, would otherwise be highly speculative.

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## CHAPTER VII.

### MARINE SUPERINTENDENCE.

#### 1. GENERAL.

The protection and regulation of the fisheries in Scottish waters is carried out by the Board's fleet of five fishery cruisers, with the assistance of the Admiralty trawler "Exe," which is chiefly employed in the Moray Firth area for the purpose of dealing with foreign trawlers.

In England and Wales the duty is performed by the Admiralty, and to a small extent by the local fishery district committees for the enforcement of the regulations made by such committees, but in Scotland it has always been regarded as the proper function of the central fishery authority. In the early years of last century two naval vessels were assigned to act under the instructions of the Board's predecessors, but in 1818 the Department acquired a vessel of their own and shortly thereafter the number of naval vessels was reduced to one. Under the long series of herring fishery Acts various powers were conferred and duties imposed on the Board in regard to marine superintendence, the officers commanding the vessels employed being appointed "Superintendents of the Fishery," and with the development of other methods of fishing and the extension of national and international regulations affecting fishing vessels, those duties have been greatly extended by more recent statutes, and the fleet of fishery cruisers was gradually increased to its present number.

Prior to 1899 the cost of the service was borne on the annual estimates voted by Parliament, but since that year it has been met out of an annual grant of £15,000 under the Local Taxation Account (Scotland) Act, 1898. With the great increase of costs consequent on the war, the annual grant is insufficient to meet the expenditure involved in maintaining the fleet, and it is with the utmost difficulty, and only by encroaching on a rapidly diminishing reserve fund, that it is possible to carry on the service efficiently.

The Board's cruisers were employed mostly on the stations best suited to their seagoing capacity. The services of the drifter "Maelstrom" were utilised until September 1921, when the new boiler of the "Brenda" was completed and that vessel resumed duty on the East Coast station. The "Maelstrom" gave useful service, although her lack of speed and the want of an electric searchlight detracted from her efficiency.

In carrying out their duties the fishery cruisers, despite the restrictions on their movements during the coal mining dispute, steamed about 58,394 knots, and effected 75 detections of illegal fishing. Numerous cases of such fishing reported by private individuals were investigated by the officers of the cruisers, and assistance was given on many occasions in fixing the *loci* of cases observed and reported.

The following table gives details of the work performed by the respective cruisers during the year:—

PARTICULARS.	"Norna."	"Freya."	"Minna."	"Brenda" or "Mael- strom."	"Vigilant."
Number of days at sea -	235	200	170	199	191
Number of knots steamed	18,745	11,212	9,950	9,317	9,170
Detections of illegal trawling (including seine-net fishing) -	13	19	10	28	5
Detections of illegal fishing other than trawling	...	...	...	...	...
Boats detained for marking - - -	5	61	57	1	113
Boats cautioned for lighting - - -	4	14	...	9	112
Foreign trawlers observed	24	21	...	...	2
Number of occasions seen	41	34	...	...	2
Number of craft assisted	1	3	...	...	3

In addition to the detections effected by the Board's cruisers, coastguardsmen detected 18 cases, and fishermen and other private individuals 76.

Illegal fishing was most prevalent in the Moray Firth, where there were 60 detections during the year. Next in order came the East Coast area with 36, followed by the Firth of Clyde with 26, West Coast with 24, Firth of Forth with 15 and the North Coast with 8.

The coal dispute during the spring and summer months, in addition to restricting the patrol work, led to increased trawling on the inshore grounds by the reduced trawling fleet at work, while

the additions to the number of trawlers of the drifter type at work during the year also added to the responsibilities of the patrol fleet, as vessels of this class are not large enough or powerful enough for regular deep sea trawling under bad weather conditions in the open waters round Scotland. The introduction of the Danish seine-net led to very heavy calls on the cruisers, as encroachments on the waters closed to this method of fishing were very numerous during the latter part of the year, particularly in the Moray Firth. The majority of the detections in the Moray Firth area had reference to this method of fishing.

## 2. PROSECUTIONS FOR ILLEGAL TRAWLING.

During the year 132 prosecutions were instituted for illegal trawling (including ordinary seine and Danish seine net fishing) round the Scottish coasts. Convictions were obtained in 122 cases; in 5 cases verdicts of "not proven" were given, in 3 cases the defendants were found "not guilty," and 2 cases were dropped. No foreign vessels were detected illegally fishing.

The fines imposed in the 122 convictions ranged from 10s. to £100, with an average of £42 for each conviction.

## 3. PROSECUTIONS FOR OTHER OFFENCES.

The number of prosecutions of masters of fishing vessels for offences other than illegal trawling was 33, and in all 31 convictions were secured. Of the total number of prosecutions 28 were tried in conjunction with illegal fishing offences. Particulars of the offences are as follow:—contraventions of the Regulations for Preventing Collisions at Sea and Rules as to Signals of Distress—15; contraventions of the Regulations for the Registry, Lettering and Numbering of British Sea Fishing Boats—12; breaches of the weekly close time for herring fishing on the West Coast—4; refusal to comply with the orders of a Sea Fishery Officer—1; and failure to carry the ship's register on board—1.

The fines imposed in the above cases ranged from £1 to £100.

## 4. TRAWLING IN PROHIBITED AREAS PREVENTION ACT, 1909.

This Act, which was passed with a view to excluding foreign trawlers from working in waters *intra fauces* of Scotland, extended to the whole of the United Kingdom those provisions of the Herring Fishery (Scotland) Act, 1889, which rendered illegal the landing or selling in Scotland of any fish taken by trawlers in prohibited areas. The administration of the Act is vested conjointly in the Board and the Customs authorities.

The Moray Firth is the largest and most important area coming within the operation of the Act, and the following table gives (1) particulars of the number of different foreign trawlers reported as having been observed working in the Firth, and (2) the number of



separate occasions on which those trawlers were observed, for the fourteen years ending 19th October last:—

NATIONALITY OF TRAWLERS.	BEFORE ACT IN OPERATION.				AFTER ACT IN OPERATION.															
	1907-8.		1908-9.		1909-10.		1910-11.		1911-12.		1912-13.		1913-14.		1918-19.		1919-20.		1920-21.	
	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.	Trawlers.	Occasions.
Norwegian - -	16	171	13	112	7	103	8	141	7	84	6	112	6	87	..	..	..	..	..	..
Swedish - -	1	3	..	..	1	1	1	8	8	23	2	7	..	..	..	..	..	..	..	..
Danish - -	8	25	16	99	9	60	1	10	2	14	4	47	5	44	..	..	..	..	..	..
Total Scandinavian }	25	199	29	211	17	164	10	159	17	126	12	166	11	131	..	..	..	..	..	..
German - -	1	2	1	1	5	12	16	33	23	55	15	21	15	27	..	..	1	1	4	10
Dutch - -	2	2	6	8	7	15	11	15	10	24	13	29	21	58	..	..	5	7	13	34
Belgian - -	8	27	10	19	9	26	3	6	5	18	6	16	15	58	1	1	9	21	13	38
Total - -	11	31	17	28	21	53	30	54	43	97	34	66	51	143	1	1	15	29	30	82
Grand Total -	36	230	46	239	38	217	40	213	60	223	46	232	62	274	1	1	15	29	30	82

It will be seen that the number of foreign trawlers which resorted to the Moray Firth during the year 1920-21 was considerably greater than in the previous year, but was still much below the pre-war figures.

The Firth of Clyde is the only other closed area in Scottish waters which has been frequented by foreign trawlers, and trawling there practically ceased with the passing of the Act. On 8th July last 2 Dutch trawlers appeared in the Firth of Clyde, these being the first observed there for many years.

Fish landed in contravention of the Act is liable to confiscation by the Customs Authorities.

## CHAPTER VIII.

### MISCELLANEOUS.

#### 1. BYE-PRODUCTS.

The manufacture of commercial products from fish offal suffered from the general depression in industry, more especially at the chief herring fishing centres, where the offal obtained from herring pickling and kippering establishments is converted into manure and oil. Stocks of these commodities from 1920 were still on hand at the beginning of the year, which discouraged production, and even at the end of the year part of the 1920 and 1921 produce remained unsold, while at more than one factory a proportion of the offal collected during the year was still lying to be worked up.

The price generally realised for manure was £7 per ton, against £10 in the previous year, and for oil £14 against £28. The manure was disposed of to agents for despatch, it was understood, to the Continent, probably Spain, while a market for the oil was found in

Liverpool. Prices paid for herring offal were very low, usually about 3d. or 4d. per barrel when collected by the factories. The process of extracting the oil by means of benzine, instead of expressing it mechanically, was further extended during the year.

The working up of white fish offal, including unsaleable—usually small—white fish and livers, is largely centralised at Aberdeen. Oil from the livers is the most valuable product, as it includes a proportion of prime quality for medicinal purposes and a second quality for stock feeding, although the greater part, like the herring oil, is used in industrial processes, such as soap and paint manufacture, leather making, and the tempering of steel. The other bye-products from white fish are fish meal, used for stock feeding, manure and fish glue. The demand for fish meal and manure fell off very much during the summer, and for a time subsequent to the resumption of work after the coal dispute no payment was made for offal collected. Thereafter the demand improved, and 5s. per ton was being paid against £1 per ton at the beginning of the year. The export trade in fish meal to Germany, which was the best market before the war, has not so far been re-established, and practically the whole output was disposed of in the south of Scotland, in England and in Ireland.

The total quantity of raw material used during the year was 34,000 tons, or rather more than half that used in the previous year. The products totalled 2400 tons or about 600,000 gallons of oil, valued at over £50,000, 2700 tons of meal valued at £40,000, and 2600 tons of manure valued at £26,000.

## 2. PREVENTION OF DAMAGE BY TRAWLERS TO SUBMARINE CABLES.

The inspection of trawl gear at the principal trawling ports—Aberdeen, Granton, Dundee—was carried out during the year by the Board's officers, and as hitherto the officers were given every facility in their rounds of inspection. The defects discovered, which were all remedied before the vessels left for sea, were relatively few in number, and consisted mostly of broken and loose otter board keels.

During the year 146 new sets of trawl boards were bought to replace those unfit for use and considered dangerous to submarine telegraph cables. No case of damage to a cable attributable to Scottish trawlers came under notice.

The following return shows the number of inspections of the trawl gear of Scottish and English trawlers during 1921. No gear of foreign trawlers was inspected.

Port.	No. of Inspections.		Cases in which gear found defective.	
	Scottish.	English.	Scottish.	English.
Aberdeen - - -	4,135	59	271	...
Granton - - -	839	1	5	...
Dundee - - -	84	...	7	...

### 3. ORNITHOLOGY.

Meetings of the Ornithological Advisory Committee for Scotland, appointed by the Secretary for Scotland in accordance with the recommendation of the Report of the Departmental Committee on the Protection of Wild Birds, were attended by a representative of the Board. The position as regards birds considered to be harmful to the sea and freshwater fisheries is being kept under observation, in view of the possibility of the introduction of further legislation on the subject.

### 4. TELEGRAPH AND TELEPHONE SERVICES IN THE HIGHLANDS AND ISLANDS.

The question of the retention of certain telegraph and telephone lines erected during the war for naval and military purposes in the Highlands and Islands continued to receive attention throughout the year. Various conferences of the Government Departments concerned were held and were attended by a representative of the Board.

Interruptions in the telegraph services to the Outer Islands caused considerable inconvenience during the year, but it is satisfactory to note that provision has been made for the use of wireless communication with the Islands when the necessity arises.

### 5. THE COAL STOPPAGE AND THE FISHING INDUSTRY.

On the 1st April 1921 a general stoppage of work at the coal mines commenced throughout the country. Profiting by the experience of the previous year, the Shipping Sub-Committee in London appointed by the Coal Mines Department, on which the Board were again represented, at once took in hand the regulation of bunker supplies to the various fishing fleets around the coasts. Both herring fishing and trawling were affected on this occasion, and the claims of the industry as an essential food-producing one received every consideration.

The Sub-Committee, after considering the coal requirements of the fishing fleets and the coal stocks available at the various ports and throughout the country, decided that the supply to fishing vessels should not exceed 50 per cent. of their normal consumption. Local Committees were again set up at the fishing ports in order to regulate the bunker supplies in accordance with the Shipping Sub-Committee's instructions. The local Fishery officers, as before, represented the Board on these Committees.

On the 13th April 1921, in view of the increasing gravity of the situation and following a warning issued by the Sub-Committee, the supply of bunker coal to fishing vessels was further limited to an amount representing altogether 25 per cent. of their normal requirements, and this allowance remained in force until the 2nd July 1921, when normal conditions were resumed.

In spite of all obstacles, however, fishing was energetically pursued around the Scottish coasts on the modified scale rendered necessary by the rationing order, and a good supply of fresh fish at reasonable prices was maintained throughout the country. It is interesting to

note that during the rationing period one ton of fish was landed at Aberdeen for every 2 tons of coal supplied.

Questions affecting fishery interests were continually being brought before the Sub-Committee, who were kept regularly advised by the Board's representative of the daily position at each port, and in every case matters were adjusted to the best advantage. The services of the Board's Inspector of Fish Distribution who represented them on the Sub-Committee were the subject of a special letter of appreciation from the Coal Controller.

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## CHAPTER IX.

### HARBOURS.

#### 1. IMPROVEMENT SCHEMES.

Reference has been made in previous reports to the necessity for State assistance in order that the accommodation at fishery harbours might be increased and the harbours otherwise adapted or improved to meet modern requirements.

The restriction of fishing operations during the war and the subsequent depression in the industry have so decreased the revenues of the harbour authorities that it has been impossible for them to keep the harbours in a proper state of repair, much less to effect improvements, and consequently State assistance has become even more vitally necessary if the accommodation is to be made suitable for the requirements of the fishing fleet.

The pressing need for the reduction of expenditure from National funds has, however, called for a restriction of advances from the Development Fund and the Ministry of Transport, and as the only other source from which grants for the improvement of fishery harbours may be made is the Board's Piers or Quays Fund, little progress in the matter of harbour improvement was possible during the year under review.

The Board's fund is derived from an annual grant made in terms of an Act passed in 1824, the normal amount of the grant being £3000. Since the institution of the Development Fund advances therefrom have to some extent relieved the Board's fund, but there are many cases, in which Government assistance is essential to the preservation of harbours and to the continued existence of the communities dependent on them, which do not fall within the scope of the Development Fund, and which can look only to the Board's fund for assistance. Many harbours round the coast have benefited from this fund, but the amount available is now totally inadequate to meet the requirements of the situation, and unless it is increased or continues to be supplemented by advances from the Development Fund or some other source, the position will become serious.

Advances in respect of harbour schemes were sanctioned from the Development Fund during the year as follow, viz. :—

1. *Macduff*.—A further loan of £6000 to complete the improvement scheme and a loan of £20,000 to provide slipway accommodation.

- 2 *Buckie*.—A further loan of £56,500 to complete the improvement scheme.
3. *Eyemouth*.—An advance of £1300, one-third by way of grant and the remainder by way of loan, in addition to former advances of £3700 and £7200 respectively.

In addition to the above the Treasury intimated to the Fraserburgh Harbour Commissioners that they were prepared to make a loan of £33,250 to enable part of the improvement scheme at that harbour to be carried out, provided that repayment of the loan was guaranteed by the Town Council.

The Treasury were also prepared to sanction an advance of £5450 from the Development Fund, one half by way of grant and one half by way of loan, towards the completion of the Boat Shelter at Lossiemouth, on condition that the Town Council guaranteed repayment of the loan, but the Town Council have not seen their way to comply with the condition.

From the Board's annual grant for the improvement of fishery harbours a sum of £495 was granted for the repair of the North Spur and other works at Findochty Harbour, and a grant of £1200 was sanctioned for the repair of the harbour at Pittenweem. The improvement of the pier at Buchanhaven, for which a grant was made in 1920, was partly carried out during the year.

The following statement gives particulars of the grants and loans made for the improvement of Scottish fishery harbours since the institution of the Development Fund:—

	Advances from Development Fund.		Contributed from Board's Funds.	Total.
	Grants.	Loans.		
Berwick-on-Tweed - - -	£4,000	£7,000	...	£11,000
Eyemouth - - - - -	1,633	10,567	...	12,200
Stonehaven - - - - -	6,500	7,000	...	13,500
Fraserburgh - - - - -	20,000	20,000	£5,000	45,000
Gardenstown - - - - -	4,000	4,000	...	8,000
Macduff - - - - -	15,500	45,500	5,000	66,000
Cullen - - - - -	2,300	2,300	1,700	6,300
Portknockie - - - - -	3,200	2,800	...	6,000
Findochty - - - - -	1,500	1,500	995	3,995
Buckie * - - - - -	8,000	96,250	15,000	119,250
Lossiemouth - - - - -	2,000	10,000	1,000	13,000
Cromarty - - - - -	750	1,500	...	2,250
Wick - - - - -	...	36,260	...	36,260
Whitehall (Stronsay) -	10,000	...	...	10,000
Lerwick - - - - -	7,500	...	...	7,500
Ullapool † - - - - -	2,000	1,850	...	3,850
	£88,883	£246,527	£28,695	£364,105

\* In addition to the grants and loans shown above, a grant of £33,000 was made by the Treasury, and a loan of £55,500 was procured from the Public Works Loan Board.

† In addition a grant of £1500 and loans amounting to £1850 were made from the funds of the Board of Agriculture for Scotland.

## DREDGING OF FISHERY HARBOURS.

The Dredger "Dragon," for the purchase of which the Treasury in 1920 sanctioned an advance from the Development Fund, completed dredging operations at Buckie and Macduff Harbours, and was engaged at Fraserburgh Harbour at the close of the year.

While many of the Scottish fishery harbours are in urgent need of dredging, work of this nature having been greatly restricted during the war, few, if any, of the harbour authorities are in a position financially to meet the cost involved owing to the depressed condition of the fishing industry. The primary condition of the scheme is that a harbour authority should pay the cost of the dredging carried out on its behalf, but in the special circumstances prevailing at the present time, the Board recommended to the Development Commissioners and the Treasury that the terms on which the services of the vessel were given should be relaxed. Their Lordships have been pleased to sanction an arrangement by which, where harbour authorities are not in a position to pay the full cost immediately, one half of the cost may be regarded as a deferred loan not repayable for a period of 5 years, and bearing interest at 6 per cent., which will be allowed to accumulate and will be added to the principal sum at the end of the 5 years' period. Where any harbour authority is unable to pay the other half the Board will consult the Development Commissioners, who will decide (having regard to the finances and prospects of the harbour authority) whether payment of the whole or part of this half may be waived.

A report for the year by Mr. R. Gordon Nicol, O.B.E., M.Inst. C.E., the Board's Consulting Engineer, on the work on improvement schemes for fishery harbours will be found under Appendix I., page 55.

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**CHAPTER X.****SCIENTIFIC INVESTIGATIONS.****1. GENERAL.**

During the year 1921 steady progress was made in the re-organisation of the Board's scientific staff and increased activity in scientific research was made possible as the result of a more generous recognition of the value of research to the fishing industry. Several factors, beyond the control of the Board, have rendered progress in this direction slow, but it is confidently expected that during the coming year the Board will be in a position to contribute to the general investigation of fishery problems on a scale more commensurate with the national importance of the industry.

In 1920 an Admiralty trawler was purchased by means of a grant from the Development Fund for adaptation as a fishery research vessel in place of the "Goldseeker," but it was not until the close of the year now under review that tenders could be obtained within

the sum available for effecting the necessary alterations. The work was then at once put in hand, and it is hoped that the new vessel, which is named the "Explorer," will be in commission in May 1922.

Plans were obtained for an extension of the laboratory at the Bay of Nigg, Aberdeen, to provide accommodation urgently required for the adequate housing of the whole of the increased staff and the efficient prosecution of the investigations. These plans were under consideration at the close of the year.

In continuation of the procedure suggested by the Development Commissioners, meetings of the Interdepartmental Conference, at which the Board were represented, were held in April, October and November at Dublin, London and Lowestoft respectively. At these meetings progress in the research work of the fishery departments is reviewed, and the programme of future work discussed with the object of maintaining close co-operation between the various staffs engaged on fishery research, an economical allocation of the work between the departments, and an exchange of views and early information as to unpublished results.

Further meetings in June and November at London and Lowestoft, attended by representatives of the fishing industry, were held to discuss the proposed schemes for the protection of the plaice fisheries, without, however, any definite conclusion being arrived at.

The annual meeting of the International Council for the Exploration of the Sea was held at Copenhagen during July. Delegates from Belgium, Denmark, Finland, France, Great Britain, Norway, Holland and Sweden were present, and representatives from Czechoslovakia, Esthonia, Lettonia, Poland and Portugal also attended by invitation.

The whole range of fishery research was discussed in great detail, and each section of the Council, composed of members and experts interested in a particular branch of research, drew up a definite programme of work and a statement as to what portion of that programme each country was able and willing to undertake. The methods and apparatus used in fishery research were also carefully considered with a view to the adoption of standard methods, so that the results obtained by different workers might be more readily correlated. Marine fishery research is essentially international in character, and the meetings of the International Council afford the opportunity for international co-operation and exchange of views; further, by bringing the workers of the various countries together, the basis of the investigations is broadened by a mutual understanding and sympathy such as can never be gained from printed reports alone.

## 2. FISHERY INVESTIGATIONS ON THE "GOLDSEEKER."

During the year seven cruises were made by the research vessel "Goldseeker" in the months of February, March, July, August, September, October and November, the ship being laid up in January for the annual refit and in April, May and June on account of the coal dispute. In all, 128 hauls were made with the trawl, resulting in a catch of 260,800 fish, practically all of which were measured. As described below, cruises were made in August and September to inves-

tigate conditions in the North Sea with special reference to the herring problem.

At the end of October the "Goldseeker" proceeded to Lowestoft with the object of trawling for black soles (*Solea vulgaris*) for transplantation to Scottish waters in order to ascertain whether it would be possible to establish this valuable fish in those waters. After considerable delay owing to stormy weather, 762 of these soles were captured, but during the passage north very rough weather was again encountered and the fish were badly damaged by the heavy motion, and also by the accumulation of mud, slime, etc. in the tanks on board. By the time the Firth of Forth was reached only 39 soles survived, and these were marked and liberated to the westward of May Island. The severity of the conditions of transport can be judged by the fact that in the control experiments with plaice and dabs none of the fish survived, although the transplantation of these species is comparatively easy under normal conditions. It is hoped to make a further trial under more favourable circumstances.

The remainder of the cruises were occupied in working on the fixed stations in the Moray Firth and off the Aberdeenshire coast, comprising trawling, the collection of plankton, and taking of water samples and temperatures, the results of which are dealt with more specifically under the various sections below.

During the year 1450 fish, chiefly lemon soles, plaice and dabs, were marked and liberated.

### 3. HERRING.

About one-third of the total value of fish landed in Scotland is attributable to the herring, and this fish is, therefore, of the utmost importance to the Scottish fisheries, and as such is one of the chief subjects of the Board's investigations.

Being a pelagic fish, *i.e.*, a fish that swims freely about the open sea at all depths from the surface to the bottom, and being dependent for its food on the minute floating or plankton organisms which drift with the tides and currents, the herring presents a problem which is quite distinct from that of the demersal or bottom-living and feeding species. After maturity, the herring frequents the bottom in order to deposit its spawn, but except during the period of spawning and perhaps in the earlier stages of growth, it would appear that dependence on the nature of the bottom or the depth of water is not a factor in its life history. Its habits are reflected in the methods used for its capture, of which by far the most important is the drift-net; and in order that large catches may be made the nets must be shot in a position where large shoals are swimming at just the right depth to strike the nets; and it cannot be insisted upon too strongly that when a "scarcity" of herring is spoken of it may only mean that these conditions were not fulfilled.

Scientists have evolved various methods of approaching this problem. If the scale of a herring be examined, it will be seen that it is marked by a series of more or less concentric hoops or rings. It is held that these marks are due to the slower growth of the fish during the winter, and that the clearer space between the rings is consequent upon the rapid growth during the summer months. By



an examination of these rings, therefore, it is held to be possible to determine the age of a particular fish, and if a sufficiently large sample of herrings from a particular shoal is thus examined, the percentage composition of the shoal as to age can be ascertained.

The practical value of this theory can be shown by a purely hypothetical illustration:—if, in a certain area, we know from past experience that the bulk of any catch will consist of herrings, say, six years old, and it has been shown during the routine of the investigations that the herrings which will be six years old next year were hatched in a bad spawning year or for other reasons are scarce, then it can be predicted that next year large catches will not be made at this particular area. The practical importance to the industry of such prediction will be at once apparent. The actual problem is, unfortunately, never so simple as this, but the illustration given will show the trend of the idea.

The validity of the theory indicated above of determining age by scale reading has not passed unchallenged, and the scientific staff in collaboration with certain mathematical and statistical experts are making a very careful survey of the premises on which it is founded.

The summer of 1921, like that of 1920, was a disastrous one for the great herring fishing on the East Coast of Scotland, and in view of reports as to abnormal "marine growths" found on certain of the grounds, the alleged poor quality of the herrings caught, and the successful operations of the herring trawling fleets on the grounds beyond the range of the drift-net fishermen, a comprehensive hydrographic survey of the area was made both in August and September.

That conditions were unusual at this period of the year was indicated by the presence of enormous numbers of jelly-like forms (*Salpæ*, and more particularly *Salpa fusiformis*) floating in the different water layers. These organisms, some of which reach a length of  $3\frac{1}{2}$  inches, are not to be confused with jellyfish; although much like them in general appearance, they are a much more highly organised form of life. They may readily be distinguished from ordinary jellyfish, if found adhering to the meshes of the drift-net, by their barrel-shaped form—many are pointed at both ends—and by the presence in their centre of a red and orange body about the size of a pea. The point of importance, however, is that these passively floating forms belong to the Atlantic, and their presence in the North Sea, at any time, is an indication that the warmer water masses in which they live have been transferred from the Atlantic to the North Sea. The accompanying chart shows concisely the general conditions prevailing on the Scottish east coast during August 1921; it will also serve to illustrate the area flooded by these forms in August 1920, although the character of the invasions in the different years was not precisely similar. The broken line shows the eastern boundary of the area invaded by Salps.

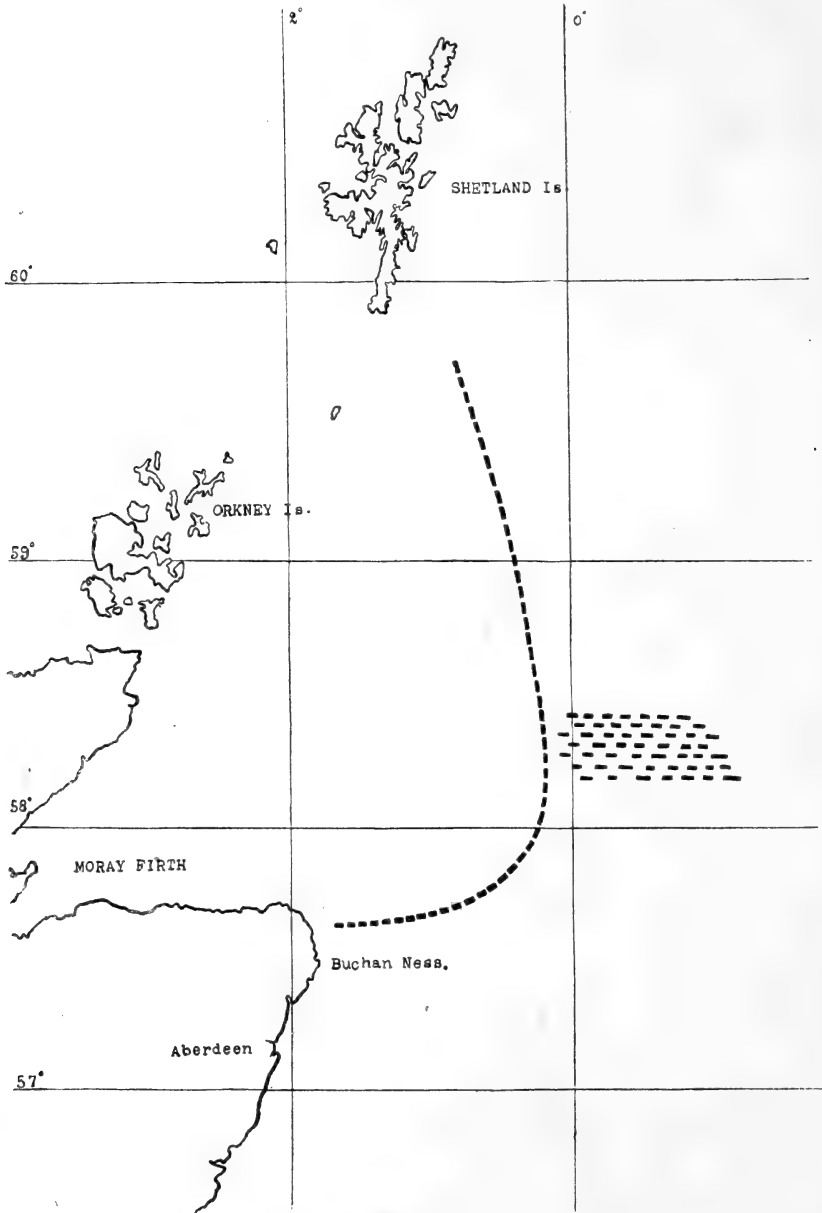


Chart showing the eastern boundary of the area invaded by Salps in August 1921.  
The position of the herring trawling fleet is indicated by the hatched area.

Now, as a rule the annual increase in the volume or flow of the Atlantic Stream penetrating the North Sea causes a gradual displacement of the water of the previous year. The resultant water masses are then cooled down during the winter months and fill the bottom layers of the northern North Sea, to be replaced again the following year. But only on three occasions since the inception of the International Investigations, viz. in 1905, 1920 and 1921, have the magnitude and direction of flow of this invading warm water of high

salinity been favourable for the incursion of Salps. In other words, *the presence of Salps* within the Scottish area of the North Sea *is an indication of unusual* hydrographic conditions.

With regard to the magnitude of the invasions of the Salps in 1920 and 1921, it may be stated that they could easily be seen in numbers, from the deck of the ship, floating passively in the water, and hauls at all depths with a net, the mouth of which was only one yard in diameter, yielded enormous numbers. Indeed, in the main line of the invasion the area was flooded by these forms almost to the entire exclusion of all other forms, and there was a marked absence of the normal crustacean fauna on which herring very largely feed, a fact which may account for the reported poor condition of the herrings caught in the drift-nets.

While it cannot be asserted that the poor results of the fishing in 1920 and 1921 were due entirely to the abnormal hydrographic conditions, it is significant that the area invaded by the Salps coincided very closely with that usually fished by the drifter fleet. It will also be noted that in 1921 the successful operations of the trawler fleet fishing for herrings were conducted beyond the boundary of the Salp-invaded area where the cooled down Atlantic water of the previous year had not then been displaced by the invading water masses. The position of the trawler fleet, including a large number of German boats, is indicated on the chart by a dotted area. The temperature of the bottom water to the eastward of the broken line on the chart was everywhere less than 8° C. (46° F.), and to the westward of the line, within the invaded area, greater than 9° C. (48° F.).

In order to carry out an investigation on the younger stages of the herring, the motor boat "Enid," with two naturalists on board, was stationed at Inverness Firth early in December. A systematic examination of all classes of herring from the areas of the Inverness Firth and Beaully basin was commenced and continued throughout the winter. Attention was also given to the very young stages, about which a great deal is still unknown. The very small herrings are extremely difficult to catch, and experiments are being made with various types of nets and gear with the object of facilitating their capture.

#### 4. HADDOCK.

By agreement with the Ministry of Agriculture and Fisheries, it has been arranged that the Board shall be entirely responsible for the share of the United Kingdom in the international investigations on the haddock, and the English department for the investigations on the cod. Material is, therefore, exchanged in conformity with this arrangement.

Large fluctuations in the stock of small haddocks from year to year are a characteristic phenomenon in this particular branch of the fisheries, and the year 1921 was, as in 1906, marked by a great abundance of small fish.

The trawling investigations carried out by the research vessel included the capture of a very large number of haddocks, all of which were measured, and definite information was obtained as to the size frequencies of fish caught on the inshore grounds by an otter trawl. These catches are directly comparable with those of the inshore

trawlers which were working on the same grounds and landing at Aberdeen market, except that none of the fish in the experimental hauls was discarded.

At the end of July, 23,300 haddocks were caught in 21 hours actual trawling, giving an average of 1100 per hour. The sizes ranged from 16 cm. to 56 cm. ( $6\frac{1}{4}$  to 22 in.), the mean length being 20.6 cm. (8 in.), but what is much more significant is that half the total number of fish caught were between 19.7 cm. ( $7\frac{3}{4}$  in.) and 22.1 cm. ( $8\frac{3}{4}$  in.), and less than a quarter of the number were over 23 cm. (9 in.). Early in September similar hauls yielded 23,500 haddock in 9 hours, giving an average of 2570 per hour. The mean size had then increased to 21.6 cm. ( $8\frac{1}{2}$  in.), due to the growth of the fish in a period of less than 5 weeks. Half the total catch were between 20.7 cm. ( $8\frac{1}{4}$  in.) and 22.5 cm. ( $8\frac{3}{4}$  in.), and less than a quarter were over 23 cm. (9 in.), and a haddock only 9 inches in length is a very small haddock indeed from the point of view of the market. The very large majority of each total catch was of the same age, belonging to the year-class spawned in the spring of 1920.

Further hauls by the "Goldseeker" in mid-November showed that there had been a considerable increase of larger and older haddocks on these grounds, and that fish as a whole were scarcer. In 38 hours' trawling 15,989 haddocks were caught, giving an average of only 420 per hour. The mean length was 25.6 cm. (10 in.), and half the fish were between 24 cm. ( $9\frac{1}{2}$  in.) and 28.4 cm. (11 in.). The increase in size for the fish given here compared with that for those taken earlier in the year is due to the admixture of the larger fish. By an examination of the scales, as in the case of the herring, it is possible to sort out the catch into separate year-classes. An examination of this catch by these methods showed that the 1920 year-class, to which the bulk of the previous catches belonged, had now grown to an average length of 25 cm. ( $9\frac{3}{4}$  in.).

A very large number of these small haddocks were captured by commercial vessels and thrown overboard as not worth bringing to market. In this connection it appears a matter for consideration whether the size of the mesh of the trawls commonly used is not smaller than is consistent with the true interests of the industry.

Although it would be premature to make any definite forecast, it may perhaps be remarked that it would be in conformity with previous experience if the catches of haddock in the next 2 or 3 years showed an increase in the percentage of the larger sizes.

##### 5. PLAICE.

The more intensive investigations on the plaice have now come to an end, and definite recommendations have been made by the International Council as to the policy which should be followed for the preservation of this fishery. Work on this species is however being continued on a reduced scale, more particularly with regard to the apparent difference in the rate of growth between the younger year classes in the Moray Firth and on the East Coast of Scotland. It is found that the average length of a four year old plaice from the Moray Firth is 23.5 cm. ( $9\frac{1}{4}$  in.) and off the Aberdeenshire coast 29.5 cm. ( $11\frac{1}{2}$  in.), and to ascertain whether the difference in growth rate

may be due to the presence of a better food supply, a careful examination of the bottom fauna of the various grounds is being made with the object of arriving at a quantitative estimate of the stocks of food on different areas and their relation to the stock of fish.

The introduction of the Danish seine-net or snurrevaad into Scottish waters has given an added interest to the plaice investigations. Several trips were made by the fish measurers on the Board's staff in boats using this type of net. In each case every fish captured was measured, and out of a total of 3000 plaice the smallest was 18 cm. (7 in.) while 75 per cent. were over 31.5 cm. (12 in.). It is interesting to compare the results of fishing on the same grounds with an otter trawl. The "Goldseeker," working at the same time of year as the records were obtained from the vessels using the snurrevaad, captured 8000 plaice, half of the total catch being between 18 and 32 cm. (7 to 12½ in.), whereas the corresponding half of the total catch of 3000 fish measured on the boats using the seine-net was between 32 and 44 cm. (12½ to 17 in.), a very marked difference in size. In each case 25 per cent. of the catch was smaller and 25 per cent larger than the limits stated.

Special investigations as to the effect on the stock of plaice of this newly introduced method of fishing have been carried out by the research vessel and will be continued.

## 6. LOBSTERS AND CRABS.

The investigations into the lobster fisheries of the West Coast continued throughout the year, and the motor boat "Enid" did useful service in this connection. The difficulty experienced by many classes of fishermen in making an adequate living by line or net has induced an increasing number to take up the lobster pot as a means of livelihood. In view of the fact that the necessity for legislation may arise in the near future, as it has done in most other lobster fisheries, the statistical information being gathered should prove invaluable to the Board in arriving at any decision. In common with other branches of fishery research, unless results from a series of years are considered as a whole, most misleading deductions may be made, but it is hoped that it will be possible to continue this work, which also includes a general investigation into the life history of the lobster.

The catches of crabs on the Scottish coasts vary very much from year to year. Former experiments have shown that the crab may wander long distances from one area to another, and it is desirable to know the law which governs these movements, in what direction the crabs are likely to travel, to what extent the crabs of one fishing-region are likely to leave it, and how many will be expected to reach another region. The number of crabs which, in the autumn, leave the inshore waters where they have been living during the summer seems to be very large, and only a small proportion of these are subsequently captured by the fishermen. Some individuals return again to their home waters, while a few may be found to have travelled considerable distances.

Further experiments have been initiated in which crabs have been labelled and set free at different places on the East Coast of Scotland, and many interesting recaptures have been made. As a rule, the crabs which migrated more than 10 miles were found to the

north, and it has been possible to show the existence of a continuous procession of crabs northwards along the coast. But these do not by any means account for the crabs that disappear altogether from any particular fishery. Two-thirds of the labelled crabs are never recovered, which fact points to a very great destruction in the stock through natural agencies. The majority of the crabs that provide the catch in any one year are crabs that have cast their shells during the previous twelve months.

#### 7. FISH SURPLUSES.

Mention has already been made of the large quantity of small haddocks thrown overboard as not being worth gutting and bringing to market and of the amount of valuable foodstuff which is wasted owing to a variety of causes, such as gluts in the market and lack of transport facilities. Neither the industry nor the country can afford such waste, and a practical method of utilising these surpluses is urgently required, and should prove a profitable channel for commercial development.

Experiments have been carried out in the Board's laboratories with the object of discovering new or improved methods:—

- (1) In the preservation of fresh fish, which cannot be disposed of as such, for human food.
- (2) In the manufacture of fish meal from surplus fish, heads, guts, skins and other fish wastes for feeding cattle, pigs, poultry, etc., and for use as manure.
- (3) In the manufacture of fish meal from the invertebrate debris inseparable from trawling operations.

One of the great difficulties to be overcome in dealing with fish surpluses is the extremely offensive nature of the smell arising from processes such as are commonly used in the manufacture of guano or similar products. For this reason the factories engaged are strictly regulated, and the necessary licence is not easily obtained. During the investigations now being conducted considerable progress has been made in the elimination of the offensive odour hitherto associated with this branch of the industry, and it is hoped that further research may result in the discovery of improved methods which will be more generally acceptable and equally if not more efficient.

The Board is indebted to Dr. J. B. Orr, Director of the Nutrition Research Institute, Bucksburn, for carrying out a series of experiments in feeding animals with the products of these investigations.

#### 8. DRIFT BOTTLES.

The extensive liberation of surface and bottom drift bottles made in co-operation with the Ministry of Agriculture and Fisheries to ascertain the direction of drift of the water masses of the North Sea was completed in September. During the year 4800 surface and 4760 bottom drift bottles were liberated from the following stations—Bell Rock Lighthouse, off Buchanness, off Clyth Ness, off Fair Isle, and off Balta Island Lighthouse, and up to the end of the year 38 per cent. of the surface bottles and 22 per cent. of the bottom drifters had been recovered.

The surface drift bottles liberated at the end of 1920 were all carried in a northerly direction, being found on the Scottish and Norwegian coasts, many as far north as the Lofoten Islands. Of these, two are deserving of special mention, having been picked up on the northern coast of Norway, after journeys of 1000 and 1170 miles, 167 and 178 days respectively after the date of liberation. Early in 1921 a reversal to the normal direction of the current took place, and practically all the bottles recovered were found on the coasts of Denmark, Sweden and southern Norway, the majority coming from Denmark, and these conditions continued throughout the year.

As was to be expected from their nature, the number of bottles adjusted so as to trail along the bottom of the sea which have been recovered was not so great as in the case of the surface drifters. The direction of drift of the deeper water differs from that at the surface, and no sign of any reversal has been detected. Bottles liberated off Fair Isle have travelled to the south, from Clyth Ness towards Tarbet Ness, off Macduff round Buchaness, off Aberdeen to the south and shorewards, and from the Bell Rock Lighthouse the bottles have been much scattered and show no very definite direction.

#### 9. METEOROLOGY.

The Scottish Advisory Meteorological Committee, on which the Board is represented, held a meeting in November 1921, under the chairmanship of the Director of the Meteorological Office, Air Ministry. At this meeting the question of co-operation with the scientific staff of the Board was raised, chiefly with a view to the supply of meteorological data in connection with the fishery investigations, and as a result data are being prepared by the staff of the Meteorological Office with a view to the possible correlation of the meteorology of the Atlantic and the unusual hydrographical conditions found in the North Sea during the summer.

#### 10. REPORTS.

During the year the following scientific report was published:—  
*Alexander Bowman, D.Sc.*: The Distribution of Plaice Eggs in the northern North Sea—II. Fisheries, Scotland, Scientific Investigations, 1921, No. 1, pp. 33, one chart, 1921.

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### CHAPTER XI.

#### SALMON FISHERIES.

##### 1. GENERAL.

The season of 1921 showed a remarkable recovery from the depressed condition which has been reported for some years. The total weight of salmon and sea trout carried by rail and sea as disclosed by the returns kindly supplied by railway and steamship companies amounted to 2731 tons, a figure which has been exceeded only twice since the Board's records commenced, viz. in 1895 and 1896. As compared with the last quinquennial average it shows an advance of 1080 tons. At the average price of 2s. 10d. per lb.

ruling at Billingsgate during the year the catch represents a value of £866,637, and the catch in excess of the average for the period 1914-18 represents a value of £342,720.

All parts of the coast appear to have participated in the increase to a greater or less extent, with the exception of places dependent upon the take of grilse, but the section from Berwick to Cairnbulg Point at the entrance of the Moray Firth shows the greatest improvement, as will be seen from the accompanying chart of curves. In Mr. Calderwood's Report (p. 91) will be found a chart representing the sum of the four lines here shown.

A table is given below with the figures representing the usual four divisions of the coast:—

District.	Average, 1894 to 1898.				Average, 1899 to 1903.				Average, 1904 to 1908.				Average, 1909 to 1913.				Average, 1914 to 1918.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
a Berwick to Cairnbulg Point	1,206	18	1	1	839	1	2	9	887	8	2	24	1,015	5	3	18	884	1	3	17
b Cairnbulg Point to Cape Wrath.	900	17	3	6	737	10	3	17	608	13	1	19	664	14	-	3	518	8	3	17
c Cape Wrath to Glasgow . . .	403	7	1	21	274	18	1	27	209	3	3	6	205	2	-	7	157	8	3	10
d Glasgow to the Border . . .	260	3	2	6	183	6	1	19	160	9	3	15	171	13	1	3	91	12	-	-
Totals . . .	2,771	7	-	6	2,034	17	1	16	1,865	15	3	8	2,056	15	1	3	1,651	11	2	16

District.	Year 1919.				Year 1920.				Year 1921.			
	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.	Tons.	Cwts.	Qrs.	Lbs.
a Berwick to Cairnbulg Point	1,027	13	2	12½	828	14	-	20	1,736	16	2	2
b Cairnbulg Point to Cape Wrath.	520	6	-	9	367	2	2	22	644	7	3	-
c Cape Wrath to Glasgow . . .	148	4	1	1	160	10	3	7	228	19	-	5
d Glasgow to the Border . . .	106	16	-	-	92	10	-	-	120	19	-	-
Totals . . .	1,802	19	3	21½	1,448	17	2	21	2,731	2	1	7

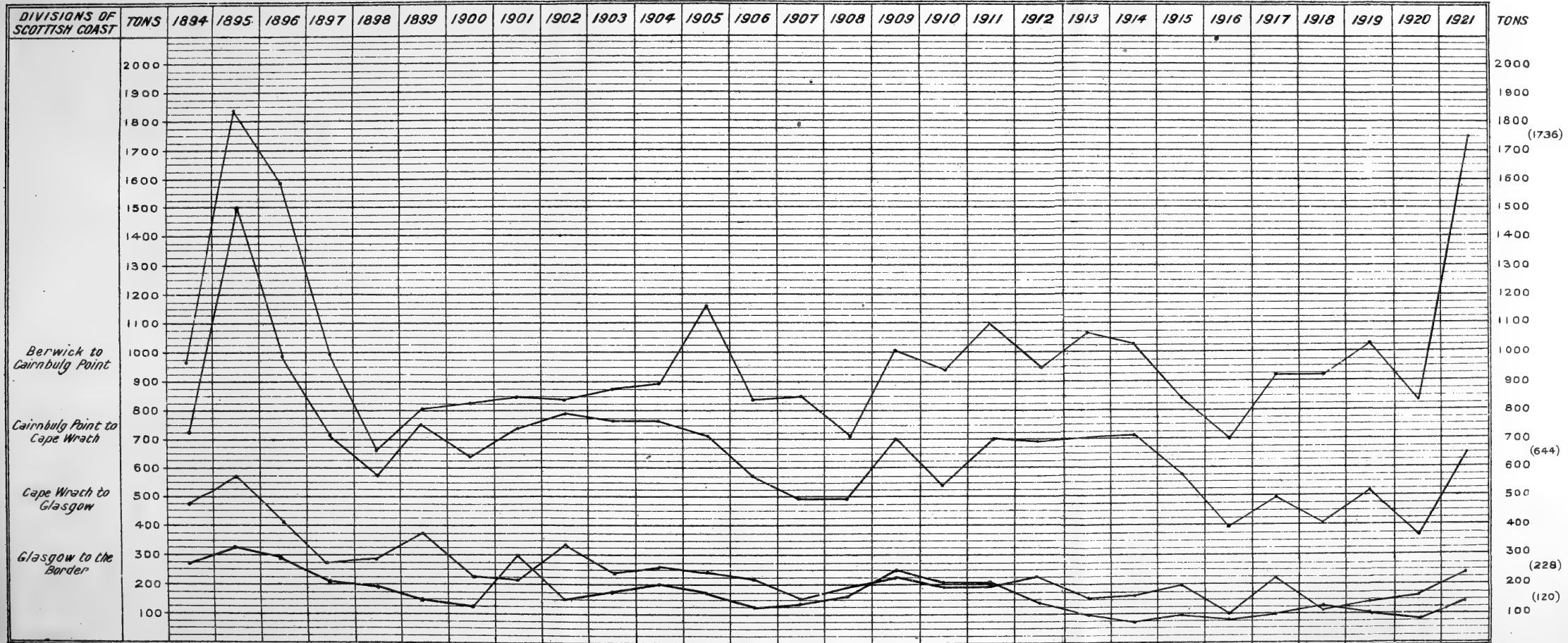
The outstanding features of the successful season have been the very steady supply of salmon during the spring months, the rather heavier weights of the spring fish, and the absence of grilse. The abundant spring fish were also found to be of very fine quality.

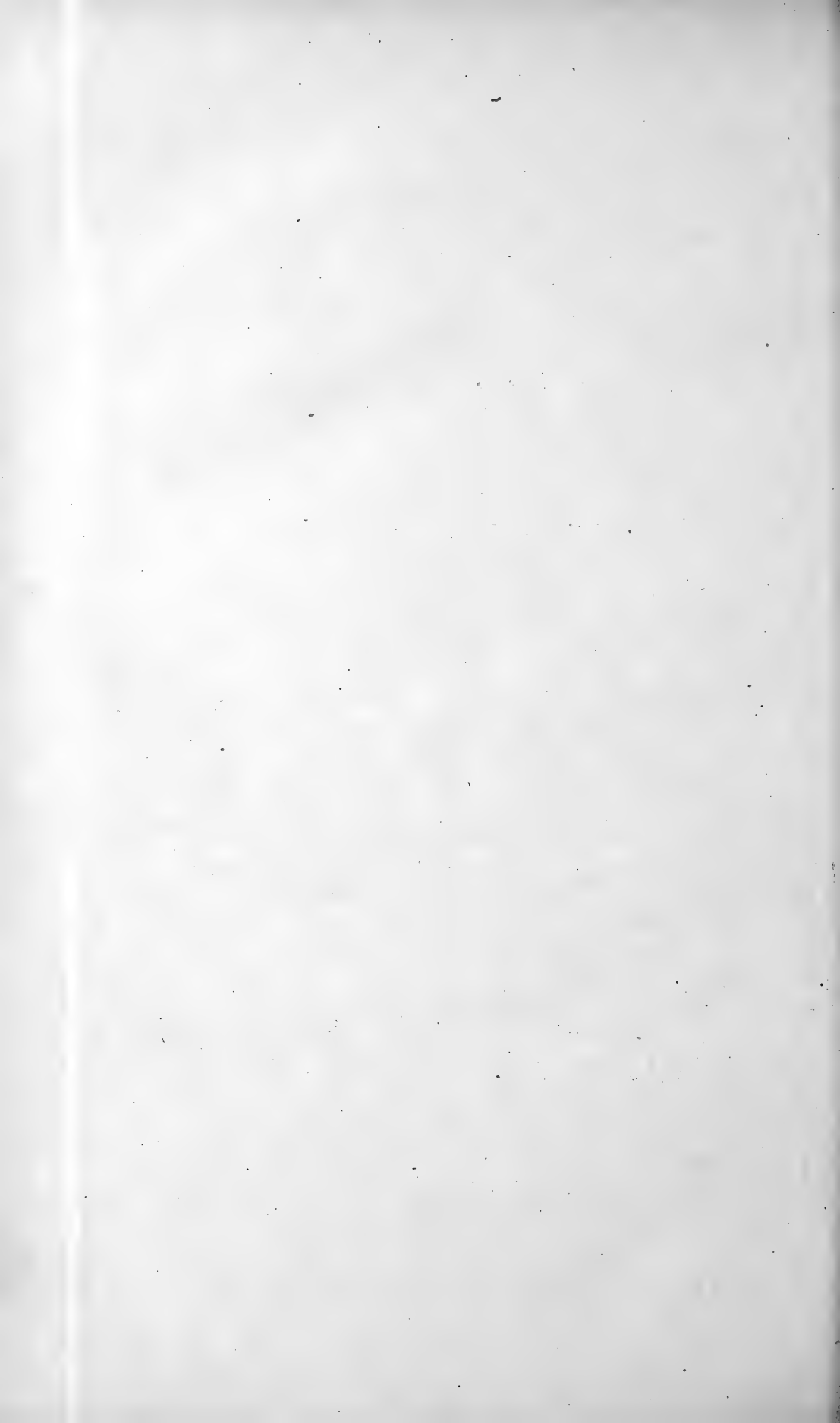
## 2. RIVER POLLUTIONS.

The serious menace to the salmon and fresh water fisheries seen in the slowly increasing pollutions, coupled with the abstraction of water for various purposes, has been repeatedly referred to in the Board's Annual Reports. On October 5th, 1921, a deputation on the subject was received in London by the Minister of Agriculture and Fisheries and the Secretary for Scotland, and as a result an enquiry has been set on foot with the view of ascertaining to what extent pollutions actually exist in Scotland. Steps are being taken by the Board to collect definite information on the subject through the medium of District Fishery Boards and Angling Associations,



CURVES SHOWING APPROXIMATELY THE TONS OF SALMON CARRIED BY  
SCOTTISH RAILWAYS & STEAMSHIPS SINCE 1894





while the Scottish Board of Health are obtaining similar information through the local authorities.

### 3. WATER POWER.

The Board are charged with the general superintendence of the salmon fisheries of Scotland, and in the interests of the conservation of the stock of fish schemes for the utilisation of the water power resources of Scotland are kept under close observation. Attention has been directed to the great extent and potential value of these resources in the Reports of the Water Power Resources Committee.

During 1921, in connection with the Lochaber Water Power Scheme, a meeting was held on 30th March in the Board's Offices between representatives of the promoters and of the salmon fishery interests concerned with the view of arranging or facilitating an agreement as to the measures necessary for the protection of the fishings. An agreement was not reached on that occasion, but the conflicting interests were subsequently adjusted and the scheme received the sanction of Parliament.

### 4. SALMON RESEARCH.

During the summer of 1921 salmon marking and measuring operations were conducted in the sea at Talmine, at the entrance to the Kyle of Tongue in North Sutherland, but on grounds of economy it has now been found necessary to discontinue this branch of research.

Scale reading operations also, which were conducted in Scotland by the Board's staff and which embraced the examination of scales from both the English and Irish Fishery Departments, have for the same reason been considerably curtailed. A large amount of material was collected from seven districts in Scotland, and is being worked up as opportunity offers with the reduced staff available.

In June 1921 an extraordinary mortality among salmon and trout in the North Esk was reported to the Board, who immediately set on foot an investigation as to the cause. The fish were apparently suffocated by a jelly-like organism identified as *Phæocystis ponchetti* which was present in enormous quantities in the water, but the reason for the peculiar concentration of the substance at Montrose could not be ascertained.

We have the honour to be,

SIR,

Your most obedient Servants,

DAVID T. JONES, *Chairman.*

W. LYON MACKENZIE, *Deputy-Chairman.*

D'ARCY W. THOMPSON.

JOHN H. IRVIN.

MALCOLM SMITH.

GEORGE HALL.

WILLIAM MILLER.

GEO. HOGARTH, *Assistant Secretary.*



# APPENDICES.

## APPENDIX I.

### HARBOUR IMPROVEMENT SCHEMES.

REPORT BY MR. R. GORDON NICOL, M.Inst.C.E.

I have the honour to submit, for the information of the Board, the following report on the Harbour Improvement Schemes which are being carried out under the supervision of the Board, and were in progress for the year ended 31st December 1921.

The following table gives a list of these harbours, along with the estimated cost of the schemes and the assistance in grants and loans that is to be provided from the funds at the disposal of the Development Commissioners and the Board.

Name of Harbour.	Estimated Cost of Scheme.	Assistance to be provided.		
		Free Grants.	Loans.	Total.
Eyemouth - - - -	£11,400	£1,633	£10,567	£12,200
Pittenweem - - - -	1,580	1,200	...	1,200
Buchanhaven (Pier) - - - -	1,800	1,200	...	1,200
Fraserburgh - - - -	45,000	25,000	20,000	45,000
Gardenstown - - - -	9,500	4,000	4,000	8,000
Macduff - - - -	56,850	20,500	25,500	46,000
Do. (Slipway) - - - -	20,000	...	20,000	20,000
Banff - - - -	8,000	5,750	...	5,750
Portknockie - - - -	8,000	3,200	2,800	6,000
Findochty - - - -	7,360	2,495	1,500	3,995
Buckie - - - -	276,500	23,000	96,250	119,250
Lossiemouth - - - -	17,000	3,000	10,000	13,000
Wick - - - -	36,200	...	36,260	36,260
Total - - - -	£499,250	£90,978	£226,877	£317,855

#### *Eyemouth Harbour.*

Work on the original scheme for the removal of rock from the entrance channel is still suspended. A payment of £2422 from the Development Fund has been made to the Trustees in connection with the settlement of the claim by the contractor for work executed during the progress of the scheme.

The later scheme for dredging the interior of the harbour is still suspended. Payment of sums amounting to £1918, 12s. 9d. has been made to the Trustees from the Development Fund for work completed in the previous year.

*Pittenweem Harbour.*

A scheme for the repair of the East Pier, which has become undermined, has been approved, the estimated cost of the repair being £1580. The Board has promised a contribution from its funds of three-fourths the cost of work up to a maximum of £1200.

Arrangements are in progress for commencing the work.

*Buchanhaven (Pier).*

This improvement scheme will provide berthing and landing accommodation for fishing boats at the lower states of the tide. It consists of an extension of the existing masonry pier by the construction of a sloping concrete platform 264 feet long by 10 feet wide founded on the rocks seaward of the end of the pier, the construction of a concrete stair 10 feet wide connecting the new concrete platform and the end of the existing pier, and the improvement of the landward approach to the pier.

The estimated cost of the scheme is £1800, and the Board has promised a grant in aid up to a maximum of £1200.

The work of construction was commenced in May and is almost completed. Payments by the Board amounting to £850 have been made to the Local Committee of Fishermen during the year.

*Fraserburgh Harbour.*

Throughout the year the Harbour Commissioners have been in communication with the Development Commissioners and the Board regarding the financial arrangements in connection with the scheme of proposed harbour improvements. In the course of these negotiations it has been agreed to consider certain of the proposed works as having priority over others, and latterly discussion has centred upon the extension of the South Breakwater. The negotiations are not completed, but it is believed that it may be possible to make an early start with the work.

The Harbour Commissioners applied to the Board for the services of the dredger "Dragon" to remove quantities of silt which had accumulated within the harbour basins, and the "Dragon" commenced work at Fraserburgh on 24th October last. Since then 8362 cubic yards of silt have been removed and this work is still in progress. The Board agreed to defray the cost of this work out of a sum earmarked for the assistance of Fraserburgh Harbour, the amount not to exceed £5000.

*Gardenstown Harbour.*

This improvement scheme is still in abeyance.

*Macduff Harbour.*

This improvement scheme, which consists of a large new harbour basin for the accommodation of herring drifters on the east side of the existing harbour, is practically completed.

During the year 1582 cubic yards of soft material and 770 cubic yards of rock were excavated and removed from the site of the new basin, the rock being drilled by pneumatic tools and displaced by explosives. The South Quay wall was extended for a length of 186 feet and the North Pier was completed.

The new harbour basin was formally opened and brought into use on 25th May, the opening ceremony being performed by H.R.H. Princess Royal.

The funds of the Town Council being exhausted the Treasury, on the recommendation of the Development Commissioners, agreed to advance a sum of £8000 by way of loan from the Development Fund, and the Board promised a grant of £1000 from their funds.

Payments amounting to £6000 by way of loan from the Development Fund and £1000 by way of grant from the funds of the Board were made to the Council during the year.

A commencement was made on the construction of the new slipway for fishing vessels at the east end of the new harbour basin by the excavation of 600 cubic yards of rock at the foot of the main slip and the formation of the concrete foundation for a length of 105 feet

The estimated cost of the slipway is £20,000, which the Treasury has agreed to advance by way of loan from the Development Fund.

No payment has been made this year from the Development Fund towards the cost of the slipway.

The dredger "Dragon" belonging to the Board was engaged removing silt from the old harbour basins and entrance channel during the summer months, the quantity of material dredged and deposited at sea amounting to 9840 cubic yards. The cost of this work has been charged against the Town Council.

#### *Banff Harbour.*

No works have been executed during the year.

A payment of £284, 17s. 4d., being the final instalment of the grant promised by the Board from their funds, has been made to the Trustees.

#### *Portknockie Harbour.*

The Harbour Commissioners have agreed upon a modified scheme of improvement works, and application has been made to the Secretary for Scotland for a Provisional Order to enable the works to be carried out.

#### *Findochty Harbour.*

This improvement scheme has been in abeyance during the year.

The Town Council arranged that a large quantity of silt and shingle which had accumulated within the harbour should be removed and this work is in progress, financial assistance being given through the Unemployment Grants Committee.

The spur end of the west pier has been undermined, and the Council have approved of a scheme of repair works estimated to cost £660. The Board have promised a grant from their funds of three-fourths of the cost of the works up to a maximum of £495. Arrangements are being made to commence the repair works.

#### *Buckie Harbour.*

Progress on this improvement scheme has been slow this year on account of stormy weather.

The concrete roadway of the North West Pier has been laid over an area of 1762 square yards, and the laying of the water main in this roadway has been completed; the new concrete protective apron of the pier has been constructed for a length of 84 feet, the defective joints of the blockwork have been cut out and repointed for a length of 102 feet of the sea wall; and a new gas tank in connection with the lighting system has been erected at the east end of the pier. A new concrete roadway has been laid on Jetty No. 1, and the walls of the jetty have been repaired. The South Quay has been laid with granite causeway setts over an area of 483 square yards.

The work of deepening the entrance channel and approaches to the harbour, to provide a depth of 12 feet at low water of ordinary spring tides, which was commenced in October of the previous year, has been practically completed. The reef of rock in the fairway of the channel was disintegrated by means of a Lobnitz patent rockbreaker and removed by dredging. The quantity of material dredged and deposited at sea this year amounted to 7828 cubic yards, of which 6549 cubic yards was broken rock and 1279 cubic yards consisted of sand and gravel. This material was removed by the dredger "Dragon" belonging to the Board, the dredging operations suffering prolonged delays through stormy weather. In addition to the material dredged, 409 cubic yards of rock lying close to the pier was removed by the aid of divers with drills and explosives.

As the expenditure on works has largely exceeded the estimates, the Town Council applied to the Treasury for further financial assistance, and the Treasury have agreed to advance a sum of £56,500 by way of loan from the Development Fund.

No payments have been made towards the cost of the scheme from the Development Fund this year.

#### *Lossiemouth Harbour.*

No progress has been made during the year on the improvement scheme, which is to provide wintering accommodation for fishing vessels in the estuary of the River Lossie.

The scheme, with the exception of the dredging of the harbour basin, is practically completed, and negotiations for the dredging work have been in progress for some time, but the matter is not yet settled.

#### *Nairn Harbour.*

This improvement scheme has remained in abeyance during the year. The Town Council submitted a scheme of harbour improvement works estimated to cost £147,000. On account of the state of the national finances, negotiations are proceeding with a view to the consideration of the more urgent portions of the scheme.

#### *Wick Harbour.*

Progress has been made with the reconstruction of the North River Pier, the debris of the overturned walls being removed and a new concrete wall being erected. The work has been seriously delayed on account of the extremely exposed nature of the site and the frequent occurrence of heavy gales. On several occasions the temporary works have been washed away.

The application by the Trustees for further financial assistance is still under consideration.

Payments amounting to £6013, 14s. 2d. by way of loan have been made to the Trustees from the Development Fund during the year.

#### *Bucket Dredger.*

The bucket dredger "Dragon" belonging to the Board completed the dredging at Buckie Harbour in the early part of the year, and removed 1279 cubic yards of sand and gravel and 6549 cubic yards of broken rock and boulders.

The Macduff Town Council applied for the services of the dredger, and the vessel started work on 9th May at Macduff Harbour. The



dredging consisted in the removal of silt from the Entrance Channel and older harbour basins, and 9840 cubic yards were dredged.

On the completion of this work the vessel began dredging at Fraserburgh Harbour, removing silt and sand which had accumulated within the harbour basins, and it was engaged upon this work at the end of the year, 8362 cubic yards having been dredged.

The total quantity of material dredged during the year has amounted to 26,030 cubic yards (including 6549 cubic yards of broken rock and boulders).

The cost of this work has been charged against the harbour authorities.

R. GORDON NICOL,  
*Consulting Engineer.*

*1st March 1922.*

## APPENDIX II.

EXTRACTS FROM ANNUAL REPORTS BY INSPECTORS OF  
SEA FISHERIES AND FISHERY OFFICERS.

INSPECTOR OF SEA FISHERIES.—In a review of the results of the Scottish Fisheries for the year 1921 there is little other than disappointment and failure to record. The causes were labour troubles—particularly the coal dispute—high working costs ashore and afloat, high freights and unremunerative prices for fresh fish, with the continued closure of some of the most important markets for cured fish and the instability of exchanges.

The winter herring fishing on the north and west coasts did well for some time, but owing to the poor demand for fresh and kippered herrings in the southern markets, herrings became almost unsaleable at the landing ports, and the season came to an early close. A few fortunate crews did well, but to the majority the results were most disappointing. On the Haddington and Berwick coasts and in the Firth of Forth a successful herring fishing was conducted throughout the early months of the year, and the fishermen engaged had fairly satisfactory earnings.

The summer herring fishing was commenced under somewhat discouraging conditions. For the first time since the conclusion of the Great War, the herring fishing and curing industry was put upon its own resources, as the Government had intimated at the end of the year 1920 that financial assistance such as was given in 1919 and 1920 would not be repeated, and the fact that large stocks of 1920 cured herrings had not been marketed made the outlook all the more unpromising. Fishermen and curers were therefore reluctant to commence operations, but the first of the season's cured herrings which were put upon the Hamburg market from Lerwick and Castlebay found a ready sale at satisfactory prices, and gave some stimulus to the industry.

Except at the port of Lerwick, the results of the summer herring fishing were most disappointing. Fish were generally scarce, and on the whole range of the East Coast from Shetland southwards the fish caught were of very poor quality, as if they had not been getting their usual amount of feeding.

Fishermen who conducted operations at Lerwick had a profitable season, and to many of the district crews it was one of the most lucrative fishings they have experienced, but at the other North Sea ports results were most disappointing to all concerned, as fishermen did not secure a sufficient supply of fish to make fishing remunerative, and curers had perforce to buy at too high a figure to realise a profit, while at the same time the unsatisfactory quality of the fish had an adverse influence on the whole industry.

Herrings were not suitable for the kippering trade, and when kippers were put upon the market they did not realise remunerative prices, so that firms engaged in this branch of the trade did not have a profitable season. There was little demand for tinning, as herring tanners had still large stocks of their previous year's goods on hand.

A recent development at Castlebay and Oban is the prosecution of the herring fishing for curing until well through August. A moderate

fleet, composed chiefly of East Coast craft, was employed last year. Fishermen had a fairly successful season, as they received high prices for their catches. The fish, however, were not of the usual quality caught upon the ground frequented, and curers did not always obtain the prices for the cured article that they anticipated.

During the last two months of the year a dense shoal of herrings was located in Loch Fyne and fishermen reaped a very rich harvest. On some parts of the West Coast, however, fishing was almost an entire blank, and where that occurred fishermen were in needy circumstances.

Towards the end of September the usual migration of Scottish fishermen, curers and fishworkers to the East Anglian ports took place. It was hoped that success would there be attained and the losses sustained on the Scottish coast made good, but these hopes were not realised. For the greater part of the season fish were scarce on the grounds, and when a body of fish was met with they were found to be of poor quality and did not realise good prices, and the season proved a great disappointment to all concerned.

Many fishermen have not succeeded in earning a livelihood. Fishing gear has been extremely high in price, and with the poor earnings it has been impossible to renew or maintain outfits, which are, therefore, becoming depleted, and fishermen are being placed in a very disadvantageous position. With the continued closure of the Russian markets and the unstable condition of the German Exchange, it appears as if the recovery of the herring industry is going to be a slow process, but the prospects are, on the whole, better than they were at the beginning of 1921.

The trawling industry passed through a very trying and generally unremunerative year. No doubt the effects of the prolonged coal dispute were among the worst troubles that had to be contended with. Working expenses were high in any case, but during the dispute they rose to an enormous extent, and owners were compelled to lay up for a time a good number of their boats.

The number of trawlers at work, which in 1920 was already in excess of pre-war times, was further considerably increased during the year, but landings and value show large decreases when compared with the previous year's figures. That, however, is not surprising, when the serious interruptions that took place are considered.

Herring trawling, which is usually prosecuted for some weeks about the close of the summer herring fishing season, was engaged in by a number of crews operating from the different trawling ports. The venture, however, was not attended with great success.

At some of the Moray Firth and East Coast ports a considerable number of steam drifters were equipped and utilised for otter trawling. On the whole, however, they were not very successful, as they were only suitable for operating on the more shallow grounds.

High railway rates constitute a question which causes a great amount of dissatisfaction amongst traders. Appeals to the Railway Companies did not result in any great redress, and there have been some suggestions to adopt road transport for fish distribution in opposition to the railway services. In some isolated cases it is already in operation and has been successful.

Great-lining was largely centred at Aberdeen, and the largest fleet on record was engaged, but operations were considerably interrupted by the coal dispute. While some vessels had fairly good earnings, results on the whole did not come up to expectations, but this branch of the industry is developing, and the outlook for it is much brighter than for trawling.

Owing to the critical condition of the herring industry an unusually large number of fishermen were compelled to devote their whole attention to small and hand-line fishing in conjunction with other minor fisheries conducted on the inshore grounds along the East Coast. By strict perseverance they did remarkably well in some districts, and tided over what was to many a very difficult year. In some districts, however, these fishings bring only a very bare livelihood to those engaged.

Lobster fishing was in general fairly successful, and in most of the districts where it is extensively prosecuted the landings were in excess of those of the previous year, although owing to a general falling off in prices the increased catch did not realise a correspondingly high value. In some of the more remote districts where there is a lack of good transport, lobsters are the only produce of the sea that can be marketed to advantage, as they are light and compact for their value and can be kept alive and fed for some time until a marketable quantity is obtained.

During the last quarter of the year the Danish seine net, which to Scottish fishermen was an entirely new mode of capture, was adopted and used extensively by Moray Firth crews. The results obtained varied greatly. Some crews met with considerable success, while others failed to make the method remunerative. The season of the year when work was commenced was perhaps not too advantageous, as daylight, good weather conditions and smooth ground are all essential to ensure success. The field of operations is naturally limited. No doubt this mode of fishing will be well tested before the close of another year.

EDINBURGH, 21st February 1922.

JAMES RITCHIE,  
*Inspector of Sea Fisheries.*

EYEMOUTH.—From a monetary point of view the fisheries of this District for the year proved a comparative failure to most concerned. Notwithstanding the efforts put forth, most of the crews found it difficult, and in many cases impossible, to keep themselves free from debt.

Fishing operations were carried on by District crews at places as far apart as Stranraer and Stornoway on the west coast and Yarmouth and Lowestoft on the east.

By the first week of the year 9 steam drifters had proceeded to the herring fishing at Stornoway, where they met with but indifferent results for the few weeks they were engaged.

Towards the middle of January, herrings were located between May Island and St. Abbs Head, and a successful fishing was carried on from Eyemouth till the middle of March. The number of heavy shots landed was exceptional for the season of the year, and some of the crews did remarkably well. The total landings amounted to 7734 crans valued at £14,076.

The summer herring fishing proved most unsatisfactory to fishermen and curers alike. Operations commenced at Eyemouth and North Shields in the second week of May, and soon after at the other stations on the Northumberland coast. The fleet engaged for the first few weeks was principally composed of motor boats, as most of the local steamers were at that time employed in great-line fishing. A number of English steam drifters arrived at North Shields by the beginning of June, after which the fleet gradually increased, ultimately reaching a total of 120 steamers and 58 motor boats for the District. Herrings were scarce and "spotty" and of poor quality throughout the season, which

was brought to a close in the second week of September, although quite a number of shots continued to be landed at North Shields till the end of the month by boats on passage to East Anglia. The greater part of the season's catch was landed at North Shields, the total for the Northumberland stations being 33,572 crans valued at £92,016, while 7903 crans valued at £19,577 were landed at Eyemouth.

The fishing grounds extended over a wide area, but the bulk of the catch was obtained from 10 to 15 miles off the Farne Islands and 15 to 50 miles from the Tyne.

The prosecution of the great-line fishing received rather more attention than usual from crews belonging to this district. In the beginning of January 7 motor boats equipped with great-lines and cod-nets proceeded to Stranraer, but the results of the voyage were barely sufficient to clear their working expenses.

Early in April 20 steam liners were fitted out for the great-line fishing with headquarters at North Shields. For a certain period these vessels made satisfactory progress, but latterly the catches fell off, and the heavy outlays incurred on their long trips to sea (as far as 280 miles) swallowed up the greater part of their earnings. A few motor boats also took part in this fishing, but with only moderate results.

Forty-six crews from this District participated in the herring fishing at East Anglia, where their gross total earnings amounted to £16,328 as compared with £61,030 for 42 vessels in the preceding year. The fishing proved an unprofitable one, and a number of crews found themselves in debt at the close of the season.

**LEITH.**—The principal features of the District fisheries during the year 1921 were the dislocation of the trawling branch of the industry by various labour troubles, the unusually large quantity of immature haddocks caught by trawlers, the poor prices ruling for fish, and the consequent unremunerative results to trawlowners. The coal dispute from the end of March until the first week of July put up the price of bunker coals and restricted supplies, while a dispute between trawlowners and crews regarding a proposed reduction of wages, which lasted from 1st May until 9th July, was the means of keeping the greater part of the fleet in harbour for two months. Another disagreement arose during April regarding the increased charges proposed by Newhaven fish salesmen for the use of boxes by buyers, as a consequence of which the latter refrained from buying fish there for a fortnight. Ultimately all these unfortunate matters were amicably adjusted, but not without having adversely affected the industry.

The local trawl fleet at the close of 1921 numbered 82 vessels, which is the highest figure it has attained and represents an increase as compared with 1920 of 8 vessels, the most of which were Admiralty drifters disposed of to ex-service fishermen through the Board. The chief feature as regards motor boats was the addition of a large new first class boat of 64 feet of keel. Sailing boats showed a reduction of 15. The most of the sailers are now old boats used by occasional fishermen at creeks on the north side of the Firth of Forth.

The trawling industry experienced a serious and anxious time throughout almost the whole of the year as a result of the labour troubles already referred to, the poor quality of the catches, and the moderate demand which ruled for fish, particularly during the last six months of the year. The heavy destruction of trawl gear caused by submerged wrecks was also a serious matter for owners. Haddocks formed about 54 per cent. of the year's catch, and during the latter half of the year about one-half of these fish consisted of "seed" haddocks.

The prospects for trawling are meantime none too bright, but working expenses are gradually becoming less, and the cost of vessels almost as low as before the war, but the landings of immature fish require to be reduced as much as possible before trawl-owners can expect high earnings.

The quantity of trawled fish dispatched direct from Granton to Glasgow, usually by special train every morning, was 182,222 cwts., as against 202,817 cwts. in the previous year. About one-half of the trawl catch is sent there daily, the remainder being disposed of at Newhaven market.

The winter herring fishing in the Firth of Forth was prosecuted from January to April by a fleet of about 100 motor yawls with better results than in 1920, and the bulk of the catch was brought to Newhaven, where the most of the buyers congregated. The largest part of the catch was secured by seine-net crews in the vicinity of Burntisland and St. David's. The quality of the herrings was similar to that of 1920, varying from good to mixed.

Sprat fishing was, in point of quantity, successfully prosecuted in the upper reaches of the Firth of Forth during the months of November and December, but owing to the small size of the fish there was only an indifferent demand for them. The result was that no less than 5211 crans had to be sold to farmers for manure at a nominal price at Alloa and Kincardine, where the heaviest catches were got. Owing to the poor market for sprats at Newhaven the local fishers agreed that daily landings should be restricted to 12 crans a boat, and that only portions of the fleet should fish alternately, while 10s. per cran should be demanded as a minimum price. This arrangement appeared to work with a fair measure of success from a fisherman's point of view. 2540 barrels of partially cured local sprats were exported, the most of which went to Gothenberg, where they are tinned and, it is said, subsequently sold as sardines.

Owing to the failure of the Scottish and English herring fishings line-fishing received rather more attention than it has done for two years, and during the coal dispute small-line crews reaped a rich harvest owing to the meagre supplies of trawled fish.

Flounder seine-net fishing was not so successfully engaged in as was the case in the previous year. Plaice are evidently becoming less plentiful in the waters where this mode of fishing is permissible. Only one small catch was landed by a crew using a Danish seine net.

Crab and lobster fishings were pursued with good results by crews from Cockburnspath, Dunbar and North Berwick, although the number taken of both classes of shell-fish was less than in 1920, which was a very prolific year.

**ANSTRUTHER.**—The winter herring fishing, which is the chief seasonal fishing carried on locally, was prosecuted from 4th January to 2nd April by a fleet of from 70 to 90 motor boats and 6 steam drifters. During January a good regular fishing was carried on, but from February onwards the shoals were spotty, and results were often disappointing. The season, however, was a great success as compared with the failures of the six previous years. The quality throughout was generally good, and prices ranged from 13s. to 135s. per cran with an average of 39s. 3d. per cran.

All the District steam drifters and about 40 of the first class motor boats annually prosecute the great-line fishing during the spring and early summer. The motor boats did fairly well last season, but not the drifters, because of the coal dispute. Some good catches were obtained

early in the season, however, and owing to the scarcity of fish prices were high, compensating to some extent for the high running expenses and irregular trips. In June bait and line fish were difficult to locate and dog-fish numerous, and the greater part of the fleet was laid up.

About half the fleet of motor boats and 2 of the steam drifters fitted out for the summer herring fishing from northern ports, but only a few of the most successful boats succeeded in clearing expenses.

Of the local fleet 52 steam drifters and 37 motor boats prosecuted the East Anglian herring fishing, but the season was disappointing and most of the vessels worked at a loss.

A regular small-line and hand-line fishing is carried on by the smaller class of motor and sail boats belonging to the creeks between Buckhaven and Kingsbarns, and during the seasons these boats also prosecute the herring, anchored net, and cod net fishings. Repeated attempts at cod net fishing met with such poor results that the fishermen took ashore their gear. The herring shoals never came to the usual inshore grounds during the year under review, so that very little was made off the anchored herring nets. The line-fishing was therefore the chief occupation carried on with these boats, but the average earnings of each boat were very small.

With the opening of St. Andrews Bay to flounder seine-net fishing, this method was generally adopted by the St. Andrews fishermen as their main occupation. During the summer months these fishermen were very successful, but on the approach of autumn and winter, with short periods of daylight and frequent storms, the results were disappointing. Cod net fishing was then prosecuted with a fair measure of success.

Sprat fishing was carried on from Newburgh, but there was no demand for sprats, and most of the 80 tons caught was sold for manure at £2 per ton.

During the year 3 first class and 1 second class motor boats were destroyed by fire. The fishing gear was salvaged in each case, the loss was covered by insurance, and, fortunately, no life was lost in connection with the accidents.

At the close of the year one of the local drifters was fitted out for trawling. If this proves successful, and the herring fishing shows no sign of improvement, one or two more vessels may probably be fitted out similarly during the ensuing year. None of the local vessels has yet been fitted out for Danish seine-net fishing.

Unfortunately two local fishermen lost their lives during the past year through falling overboard in English harbours.

**MONTROSE.**—In this District herring fishing has for a number of years been of practically no account, and—apart from trawling from the port of Dundee—the fishermen have gradually settled down to line, seine flounder net, and cod-net fishing during the whole year.

Throughout the year fish were landed always in good condition, but during the latter six months the higher priced kinds were scarce, and small haddocks and whittings were too plentiful for remunerative sales. The net results cannot be described as satisfactory to owners and fishermen, as the cost of production, although gradually decreasing, continued high and made wage earning difficult and dividend earning impossible; but, in view of the difficulties experienced in the Scottish fisheries in general, for the industry in this District to have held its own is no mean achievement.

The most productive branch of the industry was trawling, which was conducted principally from Dundee. Ten trawlers are owned

in Dundee although only 5 are registered there, and the landings of those were augmented by several belonging to other ports. The value of the trawl catch created a record for the District, but heavy loss of gear, and the still high cost of material and labour, left nothing for owners. Operations were conducted principally on the grounds extending from 5 to 60 miles E.S.E. and E.N.E. of the Bell Rock. Fish were fairly plentiful, but earnings were adversely affected by the large proportion of small haddocks and whittings, the former of which represented 45 per cent. and the latter 9 per cent. of the total catch.

The steam drifters made a start at the great summer herring fishing at Peterhead, but gave it up early and resorted to great-lining; while only 4 of the Arbroath motor boats taking part in the fishing at the same port were manned by local fishermen. The earnings of these ranged from £450 to £630 gross, averaging after the deduction of expenses £150 per crew. The same motor boat crews took part in the herring fishing at northern English ports, but, with one exception, did little more than clear expenses. Two steam drifters were at Yarmouth and earned sufficient to leave a small share to the fishermen. Five yawls belonging to Arbroath engaged in the Firth of Forth winter herring fishing and grossed from £40 to £150, the average being £74 each.

Very little was done at sprat fishing in the Tay Estuary, and all the fish landed were sold for manure.

With motor power at their command fishermen are now better able to time their work, and can follow several methods of fishing in one day. A number of crews fished crab and lobster creels and cod-nets and worked a fleet of small-lines all in one trip, and it was not uncommon for a crew to work both cod-nets and small-lines in the same day. Line-fishing was conducted during the whole year and the total catch was well maintained. The weather from April to October was favourable, enabling the crews to work all the known banks, but in the other months was stormy and interfered with the work.

Carnoustie and St. Andrews Bays were opened to seine flounder net fishing during the year, and this fishing was prosecuted by Montrose District crews throughout the whole year, at one time almost three-fourths of the motor fleet being engaged. Some very good catches were secured, totalling for September almost 3000 cwts. But the fish soon got scarce, and the bulk of the plaice landed were very small and earnings dwindled. There were 3701 arrivals, with an average catch of 3.6 cwts. of plaice and dabs valued at £6, 6s., and the increase in the total catch compared with that of 1920 was 9676 cwts.

During the first and last quarters of the year cod-net fishing on the inshore grounds off the two northern creeks produced a total of 4672 cwts.

Three steam liners engaged in deep sea great-lining from April to August and landed their fish at Aberdeen and English ports, and although hindered by the coal strike grossed an average of £1951 each.

Early in the year 11 motor yawls went to the west coast to engage in great-line fishing from Girvan and Campbeltown, but most did not earn sufficient to pay expenses.

Unfortunately three men lost their lives through the swamping of their boat while entering Arbroath harbour, and a young man belonging to Gourdon was dragged overboard by a seine-net and drowned in Carnoustie Bay.

STONEHAVEN.—Fish were on the whole very scarce during 1921, especially from March to June, but on account of the coal stoppage, good prices were invariably realised for the light catches landed during



that period, whereas otherwise the fishing would have been completely at a standstill.

The weather throughout the year was exceptionally good, and the number of arrivals made by fishing boats was unprecedented, totalling 6388 against 5201 for the preceding year, and had it not been for poor catches combined with unremunerative prices fishermen would have been oftener at sea. Boats never go to sea on Saturday, as buyers, who are mostly of the hawker class, refuse to buy fish on that day.

Motor boats costing over £900 have changed hands at £500, and shore owners would be glad to get clear of their boats at a loss.

Small-line fishing was carried on by 18 motor yawls with varying success. The most notable feature was the large quantity of whittings landed, which from July to October seldom realised more than from 6d. to 1s. 6d. per 6 stone box. Large haddocks were scarce and takes seldom exceeded 2 cwts. Boats' earnings ranged from £520 to £1210, averaging about £800. Expenses for oil averaged £184 and for mussel bait £132, making in all £316 per boat, leaving about £490, less the boat owner's share, to be divided amongst a crew of 4 men.

Some six small sail boats occasionally prosecuted the small-line fishing, and their earnings ran from £80 to £200, averaging £140 for two men. Fishing with the ripper for codlings was carried on when mussel bait was dear and difficult to get.

Occasional fishermen engaged during summer in hand-line fishing for mackerel and codlings did not do so well; mackerel in particular were scarce, and fishing was given up early.

The flounder seine-net fishing was tried repeatedly by 14 motor boats, but with little success, as the only suitable local grounds appear to be certain small areas between the harbour and Garron Point.

Two of the largest motor yawls made trials at the herring fishing for a fortnight in June, but were obliged to discontinue owing to the scarcity of herrings.

Crab fishing from Catterline and Shieldhill was fairly successful. Steady prices were received from the English markets, and the earnings of the small boats engaged, generally carrying two men, averaged about £280. Codling fishing with hand-lines was carried on in conjunction with crab fishing, the fish heads being used for the purpose of baiting creels.

The net factory at Stonehaven was busily employed in the manufacture of herring nets up to November, but has since been closed, and it is doubtful if it will be re-opened.

Stonehaven harbour is getting into a very dilapidated condition. The point of the breakwater is parted from the main structure, and may at any time settle into the fairway. The inner jetty is also badly in need of repair and liable to collapse, and should this happen it would block the entrance to the South Basin, which is the principal shelter for boats in rough weather.

**ABERDEEN.**—The weather throughout the year 1921 was remarkably good, and the various branches of the fisheries were conducted with exceptional regularity; yet operations were not financially successful, chiefly because of the coal dispute, which continued during April, May and June, the most profitable period of the year. The reduction of the bunker supply to a 25 per cent. ration made long voyages impracticable, and some 90 of the largest trawlers were laid up, as supplies were inadequate to enable them to work profitably even on the nearer grounds. Many vessels proceeded to Continental ports for coals, but these were so bad that the vessels often failed to raise sufficient steam for fishing.

Had it not been for 7000 tons of coals taken from northern ports and the Shetland whaling stations, fishing would have collapsed by the middle of May. Other adverse features were high railway rates, foreign competition in English markets, scarcity of fish at certain periods, the high cost of fishing gear, and high working expenses generally.

The average price realised for fish landed was 29s. 2d. per cwt. against 27s. 7d. in 1920. The quality of most kinds of round fish was poor, and cod and haddocks in particular were very thin up to October, when they began to improve.

Towards the close of the year there was a big drop in the value of fishing vessels. Admiralty trawlers of the "Strath" type were freely bought by Aberdeen owners at from £5000 to £6000, being only about a third of their value in 1918, when the majority of the vessels were built. The values of motor yawls employed at small-line and seine net fishing have likewise fallen considerably, and owners have difficulty in disposing of them even at a loss of 50 per cent. Trawling companies, floated when prices were at their maximum, have been obliged to write off large sums in respect of depreciation.

The fleet of trawlers engaged was greatly augmented, and exceeded the port's pre-war fleet. The best-fished vessel grossed £15,039 against £22,300 in 1920, and the average gross earnings would not exceed £7400 all over the fleet. It is computed that not more than one third of the vessels cleared their way, and that the rest finished up with a loss of from £300 to £2000 for the year's working. During the last three months of the year, however, working expenses were reduced by about 30 per cent.

Owing to the short supply of coals fishing at Faroe and Iceland was carried on for only about two months, and the landings from those grounds were small even as compared with the preceding year.

During the year 45 local vessels tried herring trawling, but 19 made only one and 12 two voyages each. Results were very partial, and until the end of August a number of vessels had to finish up their voyages off the Shetlands at white fishing. Several trawlers were not properly fitted out for herring fishing, and had proceeded rather in quest of cod to the Fladden grounds, where the herrings were being caught. The largest catch of 751 boxes, equal to 214 crans, was obtained in 63 hours' actual fishing. Prices were frequently unsatisfactory, and more certain results were obtained at ordinary trawling. The best-fished vessel grossed £3078 for eight weeks, and the total catch landed for that period amounted to 4271 crans, valued at £9575, giving an average price of 44s. 10d. per cran. All were kippered or freshed. It was generally allowed that German trawlers appeared to be more successful than local vessels, as they were seen leaving the Fladden grounds heavily laden. It is notable that no herrings of any account were got on these grounds prior to 1920, although several trawlers had fished there.

The great-line fishing was prosecuted by the largest fleet ever operating from this port. During the war all the regular liners were converted into trawlers, but they have now resumed line fishing. The fleet in the early spring and summer numbered 141 steam and motor boats, including 30 trawlers fitted out for the lining season, and stranger vessels. Insufficient supplies of bunkers handicapped vessels fishing on the far distant grounds. Fishing during July and August at Eagle Island and Porcupine Bank (off the west coast of Ireland), where valuable catches of halibut were secured in 1920, was a failure, on account of shoals of large sharks, which destroyed gear and made fishing impossible. The season's catch did not come up to expectations, and

vessels' earnings varied greatly, in some cases barely covering expenses. The best-fished vessel grossed £14,150, being £7850 less than the best in 1920, while for liners of the drifter class the highest earnings were £8349, which was £3800 less.

Cod and ling were very scarce until late in summer, when catches improved. Grounds frequented by large liners in search chiefly of halibut were Faroe, Rockall, St. Kilda, and Lousy Bank. One large liner made three voyages to Iceland during August, September and October with very successful results, and this fishing is likely to be developed, as several "Strath" vessels have been purchased from the Admiralty for that purpose. The drifter liners usually fished in the North Sea, and landed catches consisting mostly of cod and skate.

Small-line fishing was carried on by some 12 motor yawls and 15 sail boats, manned by old fishermen, who made a fair wage, although the cost of oil and bait was heavy.

English drifters which prosecuted Danish seine net fishing in the Moray Firth did not in most cases so much as clear expenses, as the ground was too rough for successful fishing, and the distance from Aberdeen was too great. Seven local drifters were fitted out with the necessary gear, but only one had the special winch installed and the others used their trawl winches. After a month's trial all the vessels gave up the venture, having contracted debt to the extent of from £80 to £400.

Shipbuilding was at a standstill, and only one trawler was built during the year, for a Fleetwood company. Barrel making was unusually slack; most of the coopers were idle for about six months, and the barrel factories were compelled to close down, as no orders for barrels were forthcoming.

**PETERHEAD.**—The small decrease recorded in the number of steam drifters would probably have been much greater but for the fact that a number of these vessels which were offered for sale failed to find purchasers. The movement in favour of the adoption of the drifter type of trawler, which was prominent during the previous year, received a check, owing to the unprofitable results obtained by this class of vessel. There was again, however, a comparatively large increase in the number of small motor craft, representing boats purchased from other districts, or previously propelled by sails only. Values of vessels and gear, although still considerably above the pre-war level, show a decrease.

When the herring fishing opened on 13th June only 26 vessels were engaged, and although the fleet was soon increased, the largest number employed at any time was only 137, compared with 262 in the previous year, being one of the smallest fleets which have worked from this port. Weather conditions were favourable and fishing suffered little interruption, although in the circumstances fishermen were easily deterred from going to sea. The results were very disappointing, and the total landings in any one week seldom equalled a day's requirements, even with the reduced working staff. The average catch per arrival by steam drifters was exactly the same as in the previous year, while the difference in the average by motor boats was insignificant. Steam drifters grossed from £300 to £1300 with an average of about £740, and motor boats from £170 to £650, averaging £400. The quality of the herrings was very unsatisfactory, but competition was at times very keen, particularly during the first fortnight, and also towards the close of the season, when it was manifest that there was to be a general shortage. Prices for fresh herrings ranged from 7s. to 110s., but for curing purposes mostly from 23s. to 34s. per cran.

There were 96 buyers at this port, or 2 buyers for every 3 vessels employed. To keep their workers even partially employed curers purchased herrings at prices much higher than current rates for cured herrings warranted, in the hope that the demand would improve, but unfortunately they lost on an average at least 8s. per barrel.

The kipper markets were also in a very depressed condition. No doubt poor quality was responsible for restricted sales, but high costs of production and transport also militated against remunerative business. Fifty per cent. of the kippering firms finished the season with considerable loss.

Freshing was not extensively engaged in. Early in the season a cargo consisting of about 190 crans of herrings sprinkled and iced was despatched to Altona for a German firm, but the venture was apparently unprofitable as it was not repeated.

Forty of the largest steam drifters belonging to the district were fitted out for great-line fishing during the spring months, and some continued operations throughout the summer. The season had almost reached its height when the coal stoppage took place, but fortunately local merchants had large stocks of coal on hand, and the time lost to fishing was much less than at other ports. The vessels used Peterhead merely as a bunkering port, however, as practically all fish were landed at Aberdeen, where the demand was then very keen. Operations were carried on mainly in the North Sea, but a few crews also fished the grounds north of the Shetlands. Gross earnings ranged from £750 for a period of 7 weeks to £4400 for a period of 22 weeks. Owing to the price of coal, working expenses were heavy, amounting in one case to about £1800 for 25 weeks.

As in previous years, the fleet of steam trawlers owned in the district made Aberdeen their headquarters. Motor trawling was carried on regularly by from 14 to 24 crews from March to September, when it was discontinued in favour of seine net fishing. Catches were, as a rule, light and irregular, but consisted almost exclusively of medium plaice, for which good prices were obtained. The results for the year compare very unfavourably with those of the previous year, and some of the more unfortunate crews barely cleared expenses.

The opening of local waters to seine net fishing was taken advantage of by about 30 crews, but with little success, as flat fish appeared scarce on the inshore grounds, the average catch per arrival being only 1·3 cwt. Later in the year a number of crews tried the Moray Firth grounds with no better results.

Any success in line fishing was attained chiefly early in the year. By the middle of January fully 150 crews, the largest number for many years, were employed, of which almost four-fifths operated with handlines, because of the heavy cost of small-line bait. As codlings were then plentiful from one to two miles off, operations were carried on vigorously until the end of February, when the fish appeared to be more off-shore. Landings thereafter were light until December when they improved slightly, and the number of crews at work again increased.

During the autumn 102 steam and 2 motor drifters from this district took part in the East Anglian herring fishing, when the results were the worst experienced since the advent of the steam drifter, and it is doubtful if 20 crews grossed sufficient to clear expenses, while loss of and damage to gear were heavy. Sixty curing firms also took part, but did only a limited business.

Employment at barrel making did not extend after May, by which time curers considered their stocks sufficient. Boatbuilders were occupied chiefly with repair work and only 4 small craft were built.

FRASERBURGH. — Compared with the average of the five years immediately preceding the war, last year's herring catch shows a decrease of 42 per cent. in quantity and 21 per cent. in value, while working expenses during the past year were at least double those of pre-war years.

During the past two years the value of steam fishing vessels and large motor boats has been gradually receding from the war inflated prices. A number of large motor boats were broken up as useless early in the year, but there was an increase in small motor and sail boats used for the inshore fisheries. The considerable reduction in the value of fishing gear is due not so much to the fall in prices as to the fact that, owing to the poor results during the past two years, fishermen were not in a position to purchase new gear, and that now in use is old and almost worn out. The decrease in the number of fishermen would have been greater but for the difficulty of obtaining employment in other industries.

The herring fishing commenced on the 14th June, but as coal supplies were unobtainable only motor boats were at first fitted out. The fleet then employed numbered 100, while the highest number of vessels employed was 240, against 515 in 1920. Herrings were scarce, although results were slightly better from the third week of July till the first week of August, and they were of poor quality, lacking during June and July the richness then normally characteristic of East Coast herrings.

As curers and others had made preparations for a normal catch, there was a fair demand for the short supplies and prices were higher than the cured market warranted, ranging from 5s. to 126s. per cran, and averaging 29s. 11d. compared with 5ls. 4d. in 1920. Average gross earnings of vessels were:—Steam drifters, £700; motor boats, £650; and sail boats £300; against £1100, £700, and £400 respectively in 1920. The gross earnings were mostly absorbed by working expenses, which indeed in not a few cases they were insufficient to meet. Most of the herrings cured were disposed of, although at considerable loss, and at the close of the year less than 3000 barrels, mostly large fulls and fulls, were on hand. The demand in Continental markets throughout the year was for the smaller brands, *i.e.* matfulls and matties. The home market for kippers was also unsatisfactory, and kipperers sustained a loss on the season's operations. As the markets for tinned herrings were overstocked, the quantity prepared in this way was small.

Owing to the poor herring fishing in 1920, a large number of crews of steam drifters and large motor boats prosecuted great-line fishing off this coast during the spring and summer of the past year when the results were fairly satisfactory, although steam vessels were handicapped by the coal stoppage. The landings were almost double those of the preceding year, although most of the best takes were landed at Aberdeen and other ports. A number of district crews also prosecuted great-line fishing on the West Coast with fair success.

More attention was also devoted to the inshore fisheries, especially small lining, but the results were less satisfactory than in 1920. The average catch for small motor boats was 2.26 cwts. against 3.16 cwts. Haddocks were scarce during the whole year on the usual fishing grounds.

One hundred and twenty-two crews belonging to this district participated in the English herring fishing during October and November. Unfortunately the season proved disastrous, as herrings at first were scarce, and later, when heavy catches were obtained, prices fell to a low level. The aggregate gross earnings of the district crews amounted to £36,982, while the ordinary working expenses, excluding cost of food

and wages to share fishermen, amounted to £38,654. It is estimated that, if allowance be made in respect of upkeep of vessels and gear and of a minimum wage to fishermen, the cost of production per cran was 45s. 5d., whereas the average price received was only 17s. 6d. Most of the district curers also carried on operations at the English stations, but owing to the collapse of the German exchange, there was little demand for cured herrings. After the close of the season, however, the demand improved, and while all the cure was not sold at the end of the year, the losses of the curers will not be so great as was anticipated.

Boatbuilding was limited to the construction of small motor and sail boats, and two of the largest building yards in the district remained closed throughout the year. Barrel-making was actively carried on during the first three months of the year. Coopers were generally able to find employment during the fishing seasons, but between the seasons, and again at the end of the year, most of the shore workers were unemployed.

**BANFF.**—The results of the year's operations can hardly be described as satisfactory, owing chiefly to the comparative failure of the herring fishing, on which a considerable number of the fishermen depend.

Cod-net fishing was carried on from the middle of January to the end of March by 12 motor and 5 small sailing boats belonging to Gardenstown. The catch and value show considerable increases, but the average price per cwt. was only 17s. 6d. as compared with 28s. 10d. in 1920. Anchored-net fishing for flat fish was prosecuted from Whitehills by 30 motor boats for the same period, but the results were very poor.

Small-line fishing, which accounts for the bulk of the fish landed in this district, is carried on from all the creeks except Banff during the year. The number of boats at work varies, being least during the summer and English herring fishings. The only landings by sail boats are made during the summer months; but owing to the poor results from herring fishing during the past year almost all the suitable motor boats were fitted out with small lines, and notwithstanding heavy expenses for paraffin and carriage on mussel bait, this fishing was the only one which enabled fishermen to make anything approaching fair wages.

About half of the local fleet of steam drifters was engaged in herring fishing on the north and west coasts during January and February, when earnings ranged from £400 to £1450, being the most satisfactory for any fishing engaged in by these vessels during the year.

At the beginning of the summer herring fishing the coal dispute held up the steam drifters, with the result that all the available motor boats were employed, several being manned by steam drifter crews. When the dispute ended, a few steam vessels started operations. On the whole the fleet did little more than clear their expenses. The earnings of steam drifters ranged from £250 to £650, and of motor boats from £200 to £550.

The principal fishing grounds during the early part of the season were 35 to 60 miles N.E. from Macduff, but in August good takes were got 2 to 4 miles off. The herrings from the offshore grounds were only of fair quality, but the quality of the inshore fish was excellent. Prices fluctuated considerably during the season, the range being from 7s. to 13s. per cran. The higher prices were given early in the season, when there was a good demand for bait.

During September the usual fleet, consisting of all the steam drifters

and a few motor boats, proceeded to prosecute the herring fishing in English waters. The earnings of steam drifters were from £350 to £800, and for motor boats from £200 to £450. It is estimated that the local craft would just clear their expenses.

A few steam drifters tried the loch fishing on the West Coast during December, but the heavy expenses absorbed all the earnings.

Four steam drifters are fitted out with the Danish seine net, and will give this method of fishing a further trial during the coming spring.

Unfortunately, three Gardenstown fishermen were drowned by the capsizing of their boat when engaged in hauling crab creels, and a Whitehills fisherman was drowned at Lowestoft through the sinking of his vessel in collision.

**BUCKIE.**—Fishcurers appreciate the steps taken towards securing new markets for cured herrings, but are convinced that little can be done to restore the industry until the political and economic conditions of Germany and Russia improve.

Seventy-five per cent. of the fishermen are now short of fishing gear, and, as they are unable to replace the old gear they are at present using, it is evident the industry cannot stand much further strain.

During the past year 5 steam drifters were converted into cargo boats, 1 was sunk, 1 wrecked, and 4 sold out of the district, while no new vessel was built. Quite a number were offered for sale, but failed to find purchasers. A number of motor boats were destroyed by fire, several were broken up as being unseaworthy, while 2 were converted into trading vessels.

In the early part of the year, twenty-four drifter crews decided to go in for trawling. Nineteen of their vessels were properly fitted out and fished until the end of the year, usually landing at Aberdeen, but the remaining five were only fitted with ordinary steam capstans, and as they did not earn sufficient to clear expenses, the trawl gear was taken ashore and the vessels prepared for the English herring fishing.

Most of the drift-net fishermen participated in the winter fishing on the West and North Coasts until about the end of February. For a week or two only a small fleet was employed and results were satisfactory, but about the middle of January the fleet was greatly increased, and as the home markets were glutted, prices fell to a low level. Late in January 5 steam drifters were chartered to convey part of the heavy landings to the Continent, and 1100 crans were sprinkled with salt and sent to Ymuiden, while 300 crans iced and salted were sent to Hamburg, but the venture proved unprofitable. On the 5th of February six catches of from 40 to 100 crans of indifferent quality had to be dumped at Buckie and the fishing collapsed.

Cod-net fishing was prosecuted from the middle of January to the first week in April by 15 steam, 72 motor and 16 sail vessels, compared with 5 steam, 58 motor and 6 sail in 1920. During the first few weeks stormy weather greatly hindered operations, but fairly good results were obtained later from the fishing grounds lying to the north side of the Moray Firth, although heavy loss of gear was caused by foreign trawlers.

The season's catch was 21,215 cwts., being 3177 cwts. better than in 1920, but the average value per cwt. was only 17s. 5d. as against 31s. 7d.

*Summer Herring Fishing.*—When after the coal dispute bunkers became available in July, 215 steam drifters and 110 motor boats proceeded to Shetland, Orkney, Wick and Fraserburgh. At Lerwick results were good, but crews operating from other centres had a most unprofitable season. Boats' earnings ranged from £300 to £1700, whilst the average gross earnings were about £550, but few crews had any

balance at the close of the season, and many finished in debt. The landings at Buckie were chiefly confined to vessels arriving home from other ports for week ends.

In the East Anglian herring fishing 240 steam drifters and 90 motor boats belonging to the district participated, but the results were the worst ever experienced at this fishing.

The average gross earnings for steam drifters amounted to only £438, and for motor boats to £280, while serious loss of netting was sustained through fouling submerged wrecks. Only 1 in 8 of the vessels cleared working expenses, while curers lost considerably.

At this fishing a Portgordon man fell overboard and was drowned.

During September a few English crews operated in the Moray Firth with the Danish seine net, landing splendid catches of flat-fish at Grimsby. Some local crews in the port on their way to the autumn fishing were so impressed that instead of proceeding to Lowestoft and Yarmouth they fitted out at Grimsby with seine net winch and gear and returned home, and by the end of October 25 steam and 2 motor boats belonging to the district had begun the new method of fishing, while by the end of November 40 steam and 2 large motor boats were fitted with the Danish net, and 2 second class motor boats with the ordinary seine net.

Operations were carried out chiefly in the Moray Firth, and were restricted by the nature of the bottom to certain areas. The most prolific grounds for plaice were in the upper reaches of the Firth. Fair catches of lemon soles and plaice were obtained 3 to 5 miles off, between Dunbeath and Noss Head, and good takes of haddocks in the vicinity of Smith Bank. The quality was excellent and no immature fish were landed. Most was landed at Buckie and realised good prices, but occasionally crews proceeded to Aberdeen with their best takes, although their hopes of better prices were not always realised.

**FINDHORN.**—Of the 78 steam and 8 motor vessels employed at the winter herring fishing on the west and north coasts of Scotland and on the north coast of Ireland, only a few were fairly successful. Gross earnings ranged from £60 to £1540, averaging £430 for steam drifters and £300 for motor boats.

Owing to the coal dispute steam drifters were unable to commence the summer herring fishing until July, but most of the motor boats began earlier. In all, 104 steam drifters and 20 motor boats participated, chiefly on the west coast, and at Lerwick, Wick and Fraserburgh. A number of crews obtained fair results at Lerwick and Castlebay, but at the other centres a number did not clear expenses. Earnings ranged from £200 to £1000, averaging for steam vessels £550 and for motor boats £450.

At the close of the summer herring fishing 109 steam and 5 motor vessels fitted out for the East Anglian fishing, but owing to the collapse of the German exchange, and the indifferent quality of the herrings, prices were unremunerative, and working expenses were commonly in excess of gross earnings. The latter ranged from £100 to £650, steamers averaging about £370 and motors £250. A number of Lossiemouth crews discontinued operations during October and returned to prosecute seine net fishing.

The poor results of the herring fishing, and the success of the Danish crews operating on the Dogger Bank with the seine net during the summer season, induced a number of the district crews to equip their vessels for this method of fishing in the Moray Firth during the winter and spring months, and on the Dogger Bank during the summer. Opera-



tions were commenced by a few steam drifters about the middle of October, and by the end of November 45 steam and 5 large motor vesels were equipped. To begin with results were good, but owing to the oversupply of the southern markets with Dutch and Danish plaice towards the end of November, operations proved unprofitable, and only 20 to 30 crews continued fishing from Lossiemouth. As this method of fishing requires a comparatively calm sea and a smooth bottom, operations were prosecuted in the more sheltered waters as closely as possible to the exclusive fishery limits. Two trips extending to about two days each were usually made weekly if weather permitted, and the average catch amounted to  $10\frac{1}{2}$  cwts. valued at £30, 10s. for steam, and 5·2 cwts. valued at £15 for motor vessels.

A few of the medium sized motor boats were equipped with flounder seine nets, but results were disappointing, and the crews reverted to line fishing.

Small-line fishing was more extensively prosecuted than during the previous year, particularly during the period of the coal strike, when from 70 to 90 boats, practically all equipped with motors, were employed.

Cod net fishing was prosecuted from the end of January to the end of March with rather poor results. The boats engaged numbered 18 steam and 17 motor, and their gross earnings ranged from £150 to £400. The whole of the catch was despatched in a fresh condition to the southern markets, but these were frequently heavily supplied and prices suffered accordingly. Considerable damage was caused by foreign trawlers to anchored nets left unattended.

Although small herrings and sprats were fairly plentiful in the Inverness and Beaully Firths during the last three months of the year, operations were very irregularly prosecuted, owing to the poor demand and unremunerative prices prevailing.

Owing to the poor prospects for herring fishing, six steam drifters were equipped early in the year for trawling; these landed their catches at Aberdeen, except towards the close of the year, when a number of landings were made at the home port. Only two of the six vessels had fair results. Three steam vessels, engaged in great-line fishing during the summer months, failed to clear expenses. Three steam drifters and a motor boat were converted to cargo boats during the year.

**CROMARTY.**—The number of fishermen has decreased considerably, as the young people are not taking up fishing as a means of livelihood, preferring other occupations. Haddocks taken by small-lines with mussel bait, and codling taken by small lines with "buckie" bait, or by "ripper," constitute the bulk of the District catch. Whittings were much more abundant than usual, but prices were only about half those received for haddocks. Cod-net fishing was practically a failure. There was an increase in the landings of flat-fish, chiefly plaice, all taken by lines with lugworm bait.

The sprat fishing prosecuted in the Beaully and Inverness Firths by Avoch crews towards the close of the year yielded good results as to quantity, but poor returns financially; indeed some of the catches proved unsaleable. At the beginning of the season a foreign vessel bought a fair quantity at 35s. to 40s. per cran, but after her departure sales fell off owing, it was said, to the excessive railway rates to the southern markets.

Smoking of haddocks and codlings was engaged in to a very limited extent, and the product was disposed of locally at remunerative prices.

About 120 fishermen, chiefly from Avoch, were absent as hired hands

at the various herring fishings for a considerable period of the year, and while a few made fair earnings, most returned with little or nothing. Formerly as many as 400 men used to be so engaged annually. Only about 50 women, chiefly from Avoch, went to the gutting stations on the East Coast, as against 240 in 1914.

A boat, with her crew of 4 men, was lost in a squall near the entrance to Cromarty Firth.

HELMSDALE.—On the whole the District fishermen have probably been more fortunate than those elsewhere dependent almost solely on herring fishing. Prior to the war the prosperity of the district was largely dependent on that fishing, but the dislocation of the herring industry by the war caused the district fishermen to devote their attention to the local fisheries, and they have therefore gradually increased the efficiency of their small-line vessels, chiefly by the installation of motor engines.

The number of sail boats is gradually getting less. Several large sailing vessels still owned in the district were laid up all year, and are not likely ever to be employed at herring fishing again.

Except at Embo small-line fishing is almost wholly prosecuted in motor boats. Small sailing craft at the other creeks are mainly used for hand-line fishing. The steam drifters previously owned in the district have all been sold.

Lobster fishing, owing to the success attained in 1920, was prosecuted by an increased number of boats, especially during April, May and June, but catches were considerably smaller, perhaps because too many boats were working in the limited areas.

Haddock fishing, which contributed 60 per cent of the landings, was carried on with great energy and perseverance, except in March and April, when fish were scarce. Earnings are usually best at Helmsdale, because the Helmsdale men work about four lines per man as compared with two at the other creeks. The use of so many lines entails a considerable amount of labour ashore, which is usually overtaken by the fisherman's own family, but where labour has to be paid for, there is a corresponding reduction in net earnings. In some instances fishermen without home assistance were, owing to poor earnings, compelled to devote their attention to hand-line fishing.

Hand-line fishing, which is confined to Helmsdale and Dunbeath, was engaged in throughout the year, but with practically no success except in April, when the price of fish rose owing to the coal stoppage.

Towards the end of January a commencement was made at the cod-net fishing, but, chiefly because of the destruction of so many cod-nets in 1920, only 22 boats participated, as compared with 34 in the previous year. This fishing was continued into April, but the majority of the boats ceased operations during the last week in March. Results were even more unsatisfactory than in 1920, while the damage to cod-nets was again considerable, and it is very improbable that those who were unfortunate enough to lose their nets will replace them. The chief centres of the fishing were Golspie and Helmsdale, but at each of the other creeks, except Embo, a few boats took part. At Embo, however, small-line fishing for plaice was engaged in successfully from January until May.

Occasional trials were made at the inshore herring fishing by small motor boats working from Helmsdale and Dunbeath. One large Dunbeath motor boat engaged in the summer herring fishing at Wick with fair results, while two small motor boats took part in the West Coast fishing, but without success. Several fishermen took part in the

East Anglian fishing in vessels belonging to other districts, but most returned home in debt.

The recent innovation of seine-net fishing in the Moray Firth is not approved by the district fishermen, who are unlikely to adopt this method to any extent.

**LYBSTER.**—From June to September fishermen devoted much time to inshore herring fishing between Clyth Ness and Latheron Bay, but without success, which was surprising, as in September a number of heavy shots were caught by large boats not more than eight miles from Clyth Ness.

Only two crews, one at Latheronwheel and another at Lybster, engaged in crab and lobster fishing in the spring.

Owing to the failure of the herring fishing little was done at the two fishcuring and kippering stations at Lybster, and the bulk of the herrings cured was brought from Wick to Lybster in motor lorries, which added considerably to the working expenses. The herrings cured gutted were chiefly disposed of in the district, and the kippers were railed to the south markets. In one of the curing yards, a small business was also carried on in the smoking of haddocks for the Glasgow market and in the curing of dried cod, which was sold locally at from 5s. to 7s. per stone.

In November Lybster harbour was gifted by the proprietor to the people of the district, who have applied to the Development Commissioners for a grant to enable them to carry out urgent improvements and repairs.

**WICK.**—A large number of buyers congregated at Wick to carry on freshing and kippering operations during the winter fishing season, when a large fleet of boats operated on the northern fishing grounds. During the first two weeks of the year many heavy shots were landed, and prices of 60s. to 120s. and even 144s. per cran indicated a keen demand in the southern markets. In the third week weather was stormy, and catches light. The landings were heavy during the next fortnight, but the markets had been over-supplied, and prices steadily fell until 5s. per cran was reached at Wick, while at Scrabster there was no bidding. Considerable loss of netting, caused by stormy weather, decided more than half the fleet to return home. Some crews, however, continued working till the end of March, receiving better prices owing to the reduced supply. The bulk of the herrings was caught off the North Coast to the west of Dunnet Head, but heavy catches were also secured from 8 to 12 miles west of Cape Wrath, on the Sule Skerry grounds, and off Auskerry and Copinsay, Orkney. The quality varied, especially on the North Coast grounds, where two distinct shoals were present. When herrings were cheap, small quantities were cured for export to French, Dutch and German markets, but very poor prices were realised.

The earnings of fishermen varied greatly, and while a few crews fared well, to others the season was ruinous. The gross earnings of the local steam drifters ranged from £1416 down to £231, and of the motor boats from £675 to £156, while average working expenses amounted to £463 and £238 respectively.

Only 5 local crews engaged in cod-net fishing, and these only for 5 weeks in February and March, and landings of net-caught cod at Wick were effected chiefly by stranger boats. The cod were of good quality and were despatched in a fresh state, chiefly to London and the Midlands.

A small fleet began herring fishing on 23rd May on the Whiten Head grounds, but two weeks' fishing yielded only a light catch. For the next

six weeks the principal grounds extended from 8 to 60 miles E.S.E. to E.N.E. from Wick, where also results were very disappointing, but on 16th June a motor boat arrived at Wick with a shot of 83 crans from the Sule Skerry grounds, where a number of heavy shots were immediately thereafter secured. The fleet then consisted of 10 steam, 52 motor and 2 sail boats, and operations were greatly restricted by scarcity of coal. In the week ended 25th June, owing to heavy supplies and excessive heat in London, prices of kippers fell to 3s. per box, causing heavy losses to kipperers. Up to 9th July practically all the herrings landed were bought at from 45s. to 146s. per cran for kippering. When coals became available and steam drifters arrived in the middle of July, landings improved, and curing for export was begun with limited staffs, but supplies of herrings were never adequate to requirements. Prices then ranged from 15s. to 37s. per cran. Herrings became scarce early in August and the fleet steadily decreased, but in the latter half of August a number of heavy shots ranging up to 141 crans were secured on the inshore grounds off Clyth Ness, and some very satisfactory results were also obtained on the Whiten Head grounds.

When the fishing was most successful the herrings were chiefly matfulls and matties of good quality, although somewhat deficient in fat. The herrings caught on the grounds off the North Coast were invariably of excellent quality, as were also those caught off Clyth Ness.

The season was unprofitable to the majority of the fishermen, especially crews of steam drifters, because of high working expenses.

All the Government herrings of 1920 cure were shipped by October, and at the close of the year only 2278 barrels of cured herrings remained on hand. At the ruling prices during the year, viz. fulls 40s. to 43s. per barrel, matfulls 30s. to 35s. and matties 30s. to 34s. f.o.b., curers sold at a considerable loss, which was unfortunately aggravated through depreciation of the exchange. Kipperers had practically no profits on their year's output.

From Wick District 15 steam and 12 motor drifters engaged in the Yarmouth herring fishing, but most failed to clear expenses.

In September and October from 8 to 12 small motor boats engaged in drift net fishing in Murkle Bay with considerable success. The herrings were landed at Thurso, and were chiefly bought for bait at 45s. to 65s. per cran.

An increase in the landings of line-caught fish was largely due to the quantity of hand-line cod and saithe (stoker fish) landed from vessels engaged in herring fishing.

A large number of local coopers were unemployed throughout the year, and many others had long spells of idleness.

In March a Wick fisherman, engaged in cod-net fishing, fell overboard and was drowned; and on 22nd June the motor drifter "Cairndhuna," W.K. 405, was lost in collision at the entrance to Wick harbour, but the crew were saved and the fishing gear recovered. A large quantity of fishing gear was lost, principally through stormy weather, and considerable damage was caused to small harbours on the North Coast on 17th December, when also a fish-house in the vicinity of Thurso containing fishery stores was swept into the river, and 2 small unregistered sail boats were washed from Island Roan.

A large number of the nets owned by the fishermen have become almost useless. If the quality of the nets had been up to the usual standard the catch at the summer fishing would have been at least 30 per cent. greater. The keeping of these nets in repair has been costly to fishermen, and how to replace them has now become a difficult problem.

ORKNEY.—The decrease in the number of boats belonging to the district is due mainly to the cancellation of third-class sailing boats, which are no longer employed in fishing for sale. One large sailing boat was sold out of the district, another was broken up, and a further reduction in the near future is inevitable, as several of those remaining are unseaworthy. Motor engines were installed into 5 small sail boats, and 2 small motor boats were built for local fishermen.

The herring fishery was carried on almost entirely by stranger fishermen and curers, and only seven local crews and a small number of shore workers took part. For a time it appeared improbable that operations would be carried on, but in June an enterprising East Coast curer guaranteed 20s. per cran for all herrings landed during a certain week by local sail boats, and by the middle of July ten stations were opened, employing 81 crews of gutters. At first the fishing fleet consisted entirely of sailing and motor boats, but after the coal stoppage steam drifters commenced working from Stronsay.

For five weeks the curing staffs were kept fully employed, and on several occasions vessels arriving late could not dispose of their takes and had to proceed to other centres, where a ready market was invariably obtained. After the first week of August, however, repeated trials on the same grounds yielded only meagre takes, and the season ended on 26th August. Prices ranged from 6s. to 30s., averaging 20s. per cran, at which figure fishing was certainly unremunerative. Many crews failed to clear expenses, while the net earnings of the remainder were poor indeed. In this respect the crews of sailing boats, whose outlays are small, were the more fortunate. Gross earnings of steam drifters ranged from £400 to £520, of motor boats from £350 to £650, and of sail boats from £215 to £420.

The quality of the herrings was unsatisfactory, as practically every catch contained a considerable proportion of thin, undeveloped fish, while the proportion of small fish was also large. The principal fishing grounds were from 18 to 40 miles E. by S. to S E. by S. from Stronsay, and the herrings, therefore, were generally landed early in the day and in good condition. Crown branded herrings were in demand, but the proportion branded was surprisingly small, probably owing to the difficulty in selecting. At 31st December no cured herrings remained on hand in the district. Although fresh herrings were purchased at reasonable figures, the prices received for the cured article left little or no profit for curers.

The line fisheries were carried on chiefly by the regular fishermen and by crofter fishermen belonging to the South Isles. The decreased catch may be attributed to stormy weather during winter and spring, when fishing was frequently suspended for lengthy periods. The average price received for line fish was 26s. 7½d. per cwt. against 28s. 10d. in 1920. The entire catch was consumed within the district, as were also occasional small landings from wind-bound trawlers.

Owing to lower prices in the southern markets the lobster fishery yielded less remunerative results than in 1920, but nevertheless was vigorously prosecuted by crofter fishermen, chiefly from April to October.

During the year 19 boats of 9 to 17 feet of keel were constructed, six for Orkney and the rest for the West Coast. The few coopers belonging to the district were fortunate in finding almost constant employment.

As a result of satisfactory returns from crofting during recent years, crofter fishermen, who form about seven-eighths of the district total, are less dependent on the fisheries than in pre-war years. Very few are now interested in the herring fishery, and the number participating in

the line fisheries is steadily diminishing. Lobster fishing, however, can be conveniently worked in conjunction with crofting, and receives considerable attention during summer and autumn. The local fishery interests, therefore, are not extensive, and Orkney is less seriously affected by the present depression than most other districts. The resumption of the herring fishing at Holm and Burray has not been possible owing to the continued presence of obstructions laid down by the Admiralty, notwithstanding numerous petitions for their removal.

**SHETLAND.**—A few crews commenced herring fishing in a half-hearted manner at the end of May, and one local curer had the enterprise to cure and consign to Hamburg a parcel of early June herrings, which realised 950 to 1000 marks when the mark stood at 250 to 280 to the pound sterling, and as a result a general commencement was soon made. The coal stoppage favoured the local motor and sail boats, for if steam drifters had frequented Lerwick as usual early in June overproduction and a deadlock would have resulted. Herrings were abundant on the grounds to the south-east, and the local fleet kept the market well supplied for the first few weeks. Shetland curers too had practically a monopoly of the Hamburg market in June, and a brisk trade in matjes was done. Contrary to expectations, the season proved one of the most lucrative ever experienced by the motor and sail crews belonging to the district. Moray Firth boats also shared in the success. By the time drifters were able to participate the German demand had lessened and the mark showed signs of depreciating. Prices therefore fell, until at the end of August spents realised only 5s. per cran when the fishing closed. Steam vessels grossed £1300 to £1800, motor boats £1100 to £2200, and sail £500 to £1170.

Early in June the average price exceeded 30s. per cran, and before the month closed as high as 54s. per cran was reached. When July commenced herrings were selling up to 49s. per cran, but prices gradually fell to 20s. and under in the closing weeks. The average for the season was 24s. per cran. The fishing was one of the most intensive ever experienced, and fishermen and shore workers were taxed to the utmost in handling the heavy daily catches. The herrings, however, had a starved appearance, and were so lacking in fat that on rousing they shrivelled up and looked like spents, although milt and roe were well advanced. Curers who opened stations at Scalloway, hoping to get rich matjes, were disappointed, as the west side herrings were no better, except a few catches from the vicinity of St. Magnus Bay. The season at Scalloway was of short duration, as the local boats left for Lerwick early in July. Curing stations were opened also at Baltasound, Hoswick and Whalsay, but only one curer operated at each place. Only one local boat fished from Baltasound, and the curer there was dependent on landings by steam drifters fishing from Lerwick.

Ten cargoes of "sprinkled" herrings were sent to Hamburg and Altona, being the first so exported since the war. The spicing of herrings was also resuscitated by Swedes, who operated both ashore and afloat. One firm had a motor hulk anchored in the bay, and obtained supplies of herrings from an accompanying steam drifter. The fishermen seemed unfamiliar with the Scottish drift nets and ruined them in a few weeks by omitting to shake the herrings out while hauling. The experience gained must have been costly, for the crew lost a second fleet in a breeze. Before export to Sweden for tinning, the herrings were gutted, and roused in a mixture of powdered salt, sugar, various spices and bay leaves, and then were usually thrown loosely into the barrels. One firm curing on shore packed after the Scottish fashion.

Swedish motor vessels also visited Lerwick to buy mackerel to cure on board, but they arrived too late to secure more than a small quantity.

Nineteen District crews, being a larger number than ever before, took part in the East Anglian fishing, but unfortunately most incurred rather serious losses.

The Burra Isle fishermen, with their fine fleet of motor boats, prosecuted line fishing vigorously during the spring and winter months. The produce was all sent to Aberdeen gutted and iced. At the close of the year catches of 20 to 40 cwts. were frequent, and prices were remunerative in contrast to those obtaining in the spring, when fishing had to be abandoned owing to meagre returns. Lerwick, Whalsay, and Skerries crews also landed considerable quantities of haddocks, the greater part of which was despatched to Aberdeen. Freights both for ice received and fish despatched were a heavy charge on proceeds, and to save on these Whalsay haddocks were mostly sent smoked.

A gloom was cast over the fishing community of Lerwick on the last days of the year by the drowning of two promising young fishermen, who were lost with a motor boat which they were bringing home after repair. Two Burra Isle motor boats dragged their anchors during a hurricane in December and sustained damage on the beach.

STORNOWAY.—Throughout the year the fishing industry of Stornoway district was more or less acutely depressed, chiefly through the failure of both the local winter and summer herring fishings. The earnings of the hired men at other centres were almost negligible, while those of the female fishworkers were about half those of previous years. The situation was aggravated by the discharge of considerable numbers of men, formerly dependent on fishing, who had for a year or two found employment in connection with Lord Leverhulme's schemes.

Owing to the scarcity of herrings and fluctuating prices the winter herring fishing was of short duration, and few crews were fortunate enough to clear expenses. The best catches were generally obtained near Bulgie Island, off the Sutherlandshire coast, but the shoals were isolated and difficult to locate. The quality of the herrings was seldom satisfactory, and most catches contained an unusually large proportion of very small, undeveloped fish. During the season the sending of sprinkled herrings and mackerel to Germany was inaugurated by a Lowestoft firm, who despatched three cargoes amounting to 1268 crans of herrings and 166 crans of mackerel. It was unfortunate that the first attempt to send sprinkled herrings from this district to the Continent should have coincided with such a poor season, when supplies were difficult to obtain at a moderate price.

Early in May, after the Railway Companies undertook to facilitate consignments, preparations were made for herring fishing, and a local carrier was chartered to convey kippers to Kyle. Owing to the coal scarcity no stranger steam drifters arrived until the second week of July, but the locally-owned boats operated with little interruption, notwithstanding that their fuel allowance was far below normal requirements. The fleet was augmented towards the end of May by motor and sail boats from East Coast ports. Kippering firms instituted a system of rationing, paying 50s. and latterly 70s. per cran. Ordinary competition was restored when the curers entered the field, but the herring fishing had then commenced on the East Coast and kippering was abandoned here. The rationing system undoubtedly saved the kippering firms from incurring considerable losses. From July onwards, owing to the poor demand, "mixed" herrings were selected into two classes by the fishermen, and the better selection frequently fetched up to 90s., while

the smaller herrings sold as low as 7s. per cran. On the whole more unsatisfactory quality was never landed in any previous summer season.

Curers had an unprofitable season, and although the demand for matje cured herrings was good for most of the season, it fell off towards the end, and at the close of the year several firms had still balances unsold. The general prices received for cured large matjes were from 90s. to 130s. per barrel and from 60s. to 80s. per barrel for the medium selection. The smaller selections, consigned to Germany, averaged 24s. per barrel.

The average gross earnings of local steam drifters amounted to £760. The best fished boat earned £1300, which allowed £33 to each share member of the crew, while the least successful earned only £324, which left each share man £12 in debt. Motor boats, mostly half-sized, grossed £220 to £800, averaging £460, and sail boats £173 to £521, averaging £330. Motor and sail boats yielded better settlements than drifters.

With the decline of white-fish curing for export great-line fishing has lost its importance. During the spring months occasional catches were landed by steam liners and small open boats, but not in sufficient quantity to satisfy local requirements.

Small-line fishing is practised chiefly at the creeks bordering on Broad Bay, and the catches are carried by the women to Stornoway. Haddocks were fairly plentiful, but dog-fish destroyed large numbers on the lines.

At out-lying creeks lobster fishing ensures a means of livelihood to fishermen, and this year catches were invariably good, but prices ruled low.

A hurricane of unusual severity, but fortunately of only two-and-a-half-hours' duration, occurred in March, causing much damage. Many small boats were wrecked or damaged. While returning to port in December the local steam drifter "Remembrance" foundered about 16 miles off, but the crew were saved, although their gear and other effects were lost. Two half-sized boats were badly damaged while effecting a landing at Portnaguran, and one motor boat was wrecked.

Lord Leverhulme's activities have now, with the exception of several works in Harris, been completely abandoned, and the only project completed in Lewis is the Canning Factory at Stornoway, although no attempt has been made to commence canning.

**BARRA.** — The District fisheries yielded a substantial increase, although less than was expected, and contrary to the general trend the average price of herrings increased 20s. per cran.

A decrease in the total tonnage of fishing vessels is largely in respect of second class boats, of which 20 were completely wrecked during a gale in March, being blown clean off the shore. Fishermen who have secured crofts on a new crofting settlement intend to use their small boats for inshore fishing, as well as for carrying peats from an adjacent island.

Owing to stormy weather during the first quarter of the year, herring boats were only three times at sea, and nearly the whole of their landings was sold fresh for local use.

Great preparations were made by curers for the early fishing of May and June. Thirteen curing stations were opened employing 82 crews of women, against 12 stations and 62 crews last year. The first landings of herrings were effected on 10th May and realised 15s. per cran for curing. Quality was bad, and the price continued at that figure until advices of sales, indicating a net return of over £3 per barrel, arrived from Hamburg, when it rose to 40s. per cran, and reached 50s. per



cran by the end of the month. Steam drifters were held up on the East Coast by the coal stoppage, and only the local motor boats and five sail boats were at work, averaging two to five crans daily from all over the Minch. Prices consequently advanced, reaching 122s. per cran at the end of June. Curing for Hamburg stopped at the end of May, but American buyers then took all the cure at 120s. to 130s. per two half barrels. The total cure to the end of June amounted to 2734 barrels, against 4463 barrels in the previous year. The boats in the six weeks' fishing did fairly well, as high prices compensated for light catches. The sail boats, which carry 60 nets, averaged £400, and the motor boats, which are smaller and carry 30 to 40 nets, about £200.

In July, on the termination of the coal stoppage, the steam drifters began to arrive, but mackerel and also salps had appeared on the grounds and herrings were scarce. Early in August herrings appeared in shoals in two different areas, 8 to 10 miles south of Barra Head and on Lochmaddy Bank. The best shot of 122 crans came from the latter and made 98s. per cran, which was about the average price for the first part of the month. In the middle of August the American market collapsed, and fresh prices fell to 15s. to 35s. per cran. Curers then consigned to Hamburg, but the German exchange fell, and the consignments had to be stored, and the ultimate outcome of the season was doubtful.

The steam drifters working at Castlebay averaged £745 for the six weeks' fishing. The local motor boats earned little in the late season, barely clearing expenses.

Four curing stations, employing 22 crews of women, were opened at Lochmaddy, where there had been no herring fishing since 1908. The total cure amounted to 4687 barrels. Owing to lack of coals and oil the fleet was very migratory. The opening of new stations at various creeks indicates that the collapse of the Continental markets is not seriously handicapping the industry in this district.

The cured herrings were transported from the stations to the cargo steamers by 5 flit-boats each manned by 3 men, whose individual earnings for the season of 16 weeks averaged £70, but the flitting charges were considered excessive.

Small-line fishing, chiefly for plaice, is prosecuted only for home use.

Lobster fishing was actively pursued, chiefly during summer. While transport was restricted during the coal stoppage, lobsters were stored in floating boxes, and after their long confinement very few withstood the journey to London, so that returns to fishermen at that time were almost *nil*, although they were much better later.

An increase recorded in "unclassified" shell-fish reflects an increase in the number of crofting families who are driven to gathering whelks, for which 6s. to 8s. per cwt. net is realised.

LOCH BROOM.—Herring fishing last year again proved an entire disappointment. Cod-net fishing, conducted chiefly from Badachro, was only apathetically prosecuted owing to depressed markets, scarcity of fish and stormy weather, and landings were much restricted. Line fish were often scarce, but the lobster fishery recorded fair results.

A motor boat was, unfortunately, wrecked while at anchor, but otherwise the decrease in the fishing fleet was entirely in sailing skiffs and yawls, which were mostly wrecked or destroyed by gales.

Crofter fishermen are reluctant to replace or repair lost or damaged boats despite the recent fall in prices, and many have either wholly or temporarily forsaken the sea. The low prices realised for fish have also led many others to devote greater attention to their crofts.

Herrings throughout the year were scarce and their movements erratic, which made operations desultory, and except at the end of the year, they were thin and dry, and not suitable for curing. The winter herring fishing opened towards the end of January with a catch from Loch Nedd.

In August the Badachro motor fleet proceeded to Lewis and Skye, and during November fishing commenced in Loch Inchar, which continued with intervals of slackness and stormy weather until the end of the year. The herrings, often in dense shoals, were caught by local yawls, and taken by steam drifters to Stornoway and Wick.

Fewer crews operated small and hand lines, while dogfish frequented the shores from October to December. This fishing, however, only supplies local needs, as consignments are now unremunerative. The lobster fishing was prosecuted on every available occasion, and despite much loss of gear and unfavourable weather, the results were not far short of the record landings of the previous year.

LOCH CARRON AND SKYE.—At first sight the reduction recorded in the district fleet would appear seriously to affect the catching power, but in reality it represents boats which, instead of being struck off the register gradually since 1914, were used so long as they would float, but are now unseaworthy.

Herring fishing operations were less extensive than in recent years. In January a small fleet of East Coast boats had good catches, but prices fluctuated from 7s. 6d. to 11s. per cran. Many buyers left Kyle on hearing of good results at East Coast ports, and the absence of competition caused crews to seek other markets. A slump in the kipper market at the end of the month further discouraged operations, and the total results of the winter fishing were poor.

Seine net boats had better results during the early summer, but prices were low, and a further decrease occurred later. Landings during the November-December fishing were also very short, owing to the non-arrival of East Coast crews. A few steam drifters commenced operations in December and had fair results, but demand was poor. The herring fishing results at outlying creeks were also very disappointing, but the shortage for the year occurred mainly at Kyle. The herrings caught during the latter part of the year were of poor quality and unsuitable for kippering, now that only superior kippers are again in demand.

Fixed ground net fishing was generally unremunerative, and fishermen stated that although fish, chiefly saithe, were abundant, it did not pay to catch them owing to the high railway rates and low prices realised.

Seine net fishing for herrings is becoming more popular amongst owners of motor boats, and eight additional crews adopted this type of gear. No other developments have taken place in the industry.

FORT-WILLIAM.—The winter herring fishing again commenced about the 1st of January, continuing until about the end of February. A fleet of 50 steam drifters and 15 motor boats operated from Mallaig and Oban. At Mallaig the steam drifters worked chiefly on the Stornoway grounds, and also off Bulgie Island and as far as Whiten Head, and the motor boats in the Skye lochs and on Coll Bank. The Oban boats operated off Skerryvore, Dhu Artach and Tiree, while a few drifters made trips to the grounds off the North of Ireland. This fishing, as is usual, was occasionally hindered by stormy weather, but it proved fairly successful during January, when heavy takes were landed, and as high as £7, 12s. per cran was obtained. During

February, owing chiefly to heavier fishings at all ports, prices were considerably lower. The quality of the herrings from the northern grounds was unsatisfactory, and in many cases the presence of a foul gut caused them to deteriorate rapidly, while owing to the long distance the herrings were often "overdays" when landed. The herrings caught on the grounds from Tiree to the Irish Coast were of good quality. Prices for the season ranged from 5s. to £7, 12s. per cran, averaging £2, 12s. 6d. The best gross earnings of steam drifters were about £1200, but for many the season was unprofitable. The bulk of the catch was despatched fresh to the English markets.

Great lining was carried on with good results from about the end of January to the 1st of April, when the coal stoppage interrupted fishing. About a dozen boats made Oban their headquarters and operated chiefly from Colonsay to the Mull of Kintyre, and about 20 boats with headquarters at Mallaig worked from the Butt of Lewis to off Ushinish Point. Good shots of cod, eels and roker were secured on all these grounds. Special mention might be made of the success of a few of the Mallaig boats fishing chiefly for hake off South Rona, where the fish were caught in a small patch of deep water. Prices were good, especially for hake, which often realised from £10 to £15, 7s. 6d. per score. The most successful liner grossed about £1200 and the earnings of the majority ranged from £700 to £1000. A few motor boats began herring fishing at Mallaig and Oban about the end of May and worked chiefly off Canna, Hyskeir and Muldoanich, and on Coll Bank, but steam drifters were unable to secure fuel and resume fishing until about July. The results were disappointing for the greater part of the season, but high prices enabled crews to work with a slight profit.

There was a good appearance of herrings throughout the season between Barra Head and Tiree, but fishing did not become general until the middle of August, when a number of heavy shots up to 128 crans were secured on these grounds, ranging in value from £200 to £500. Prices ruled high, chiefly owing to the keen demand for cured matjes. The herrings were of a fair size but lacked fat and flavour, and with heavier landings in August there was a sharp fall in prices. The top price paid was £7, 18s. and the average for the season £2, 16s. 9d. per cran. The majority of the boats had a successful fishing with gross earnings ranging up to £1700. The bulk of the catch was cured for export to the American markets, and as high as £6 per barrel was offered for cured matjes.

Herring fishing was re-commenced at Mallaig by a few motor boats in November, when the fleet operated chiefly in the Skye lochs, but herrings were found rather scarce and of poor quality, and prices ruled low, ranging from 5s. to 26s. per cran. Towards the end of December a few drifters landed shots ranging from 40 to 162 crans from the Stornoway grounds and from the vicinity of Loch Laxford, where the demand was better and prices reached 62s. 6d. per cran.

Several East Coast drifters operated with the Danish seine net from Mallaig during November and December, but for the most part with little success, owing apparently to the rocky nature of the sea bottom.

CAMPBELTOWN.—In the opening months of the year the winter herring fishing was extremely successful, whereas the summer and autumn fishings yielded but poor results in spite of fine weather, which enabled crews to prosecute them diligently. During the second week in January heavy catches were secured by "ringing" in the middle of the Sound between Davaar and Brown Head, Arran, where the seine net had

not been employed in winter for about 25 years, as operations are usually confined to the Bays on the coasts of the Sound. Stormy weather interrupted the fishing during the following week, but in the week ended 29th January the landings were the heaviest for the year. Unfortunately prices fell as low as 1s. 6d. per quarter cran basket, and 1300 baskets of good quality had to be thrown into the sea, which discouraged operations for the next fortnight. A few crews made a very unsuccessful trip to Stranraer, where the demand was no keener. Spawning herrings were secured in Kildalloig Bay from the end of February to the beginning of April, but the demand continued poor, otherwise the landings might have been much heavier. Shoals of spent herrings were then located along the Arran shore, but fishing was carried on only half-heartedly owing to poor markets until the last two weeks of the month, when fair catches were landed. During May transport was completely disorganised by the coal dispute and the Glasgow dockers' strike, and a number of local fishermen landed their catches at Ayr, but because of the impaired railway facilities they sometimes met with poor markets, and had on one or two occasions to "dump" their herrings.

Seven pairs of local boats went north at this time to the fishings at Canna and Raasay, and continued there until well into July, but only two pairs had good success.

The fishing was fair during June, catches being obtained all over the Sound, but during July was a failure. In the first fortnight of August some good catches were secured south of Arran and Kilbrannan Sound, but towards the end of the month landings were again very disappointing. Results during September were poor, but the fishermen reported the presence of herrings in the Sound although unable to secure good catches. October opened with good prospects, and fair catches were obtained in the first fortnight, after which rough weather interrupted the fishing.

In November and December most of the local boats were engaged in Loch Fyne, and all made fair wages, as when the fish struck the shallow water at the entrance to Upper Loch Fyne very heavy catches were secured. The only herrings landed in this district during those months were brought from Loch Fyne by local crews.

The long period of slack fishing during the summer proved very trying to many local crews, but the majority had a much better year than fishermen on the East Coast.

The usual fleet of East Coast motor great-line boats started here early in January, but catches were disappointing and markets unfavourable, and by the beginning of March the majority had gone home, leaving only four crews who continued, with better results, until the end of April.

The results of the cod fishing at Gigha were poorer than in 1920. Most of the cod landed was dried and sold to Glasgow and the Ayrshire ports by the fishermen themselves.

Herrings cured chiefly at Campeltown during the winter fishing were shipped *via* Glasgow to Leith, mainly for distribution to home centres, and the balance of the cure was sold locally. A small kipper house was erected at Carradale during the year, but as at Campbeltown, because of the poor summer fishing, kippering was almost confined to supplying district requirements.

Small-line fishing is engaged in chiefly by small sail and rowing boats, but a few motor boats worked from Campbeltown during the spring and early summer months, when some fine catches of whittings were secured.

Increased attention was paid to the gathering of shell-fish, chiefly winkles and cockles, and the fine weather during the spring and summer allowed more time than usual to be spent at this work.

One small sail boat was lost at Port Ellen and two Campbeltown motor boats were sunk, one by collision and the other by striking a submerged rock. Both the Campbeltown skiffs were raised and repaired and are again engaged in fishing.

It is understood that orders have been placed by a local fisherman for a pair of boats of a different type from the usual Clyde skiff, and of larger size, with a view to access to a wider market and to following the herring fishing more closely in the various districts. Although the fishing fleet is now numerically less than a year ago its catching power is greater.

INVERARAY.—Although a number of small boats have been struck off the register, there is an increase in the number of motor boats, and therefore in the catching power of the fleet. The total landings for the year are the highest since 1901, while the value is the highest since 1892.

The year opened with a very poor herring fishing in the Loch, but a number of local boats did better in the mouth of the Kyles and Kilbrannan Sound, where one pair had £700 for a fortnight's work, and the best fished pair grossed £800 for the month of January.

During February most of the Loch Fyne fleet operated with the Campbeltown crews in Kilbrannan Sound, and about six pairs worked from Girvan and Stranraer, but the fleet returned home at the end of the month, having failed in most cases to clear expenses.

March was also a very slack month, and most of the fleet remained ashore and had their annual overhaul in preparation for the summer fishing.

Little or nothing was done at herring fishing during April, but a few small boats were working lines and cod nets with poor results.

There was a slight improvement in May, and during June and July a good fishing was secured on the grounds between Skipness Point and Tarbert. The quality was good and prices ranged from 30s. 6d. to 106s. per cran.

At this time six pairs of boats proceeded to the herring fishing on the Canna grounds. They remained from two to five weeks and were fairly successful, earning from £50 to £400 per pair.

From then till the month of November the fleet was regularly in the Loch, and it is remarkable that although they sailed through large shoals of herrings nightly, as soon as the nets were put into the water the herrings sank out of reach. Drift nets were also tried with similar results. During this time the shoals never came inshore, but remained in the middle of the Loch in deep water.

In November, however, the shoals commenced moving up the Loch and to shallower water, at first off Ardrishaig and in Kilfinan Bay, and later further up in the vicinity of Otter, where very heavy catches were secured; but the heaviest fishing was secured at the beginning of December when the shoals moved to the shallow banks off Lochgair. Practically the whole of the Firth of Clyde fleet operated in the Loch at this time, and shots of 200 to 250 crans were common, while one pair "circled" about 500 crans. Out of this "ring" six boats were filled, and then the remainder of the catch had to be released. Nets were frequently burst by weight of fish. The oldest fishermen state that they cannot remember such heavy shoals of herrings in Loch Fyne before.

Unfortunately stormy weather set in, and the fleet had to remain in port for a number of days, and when fishing was resumed it was found that the herrings had left the Upper Loch, and only a few shoals were located between Tarbert and Laggan. The total catch for December was 14,193 crans valued at £13,917.

For herrings cured during November and December there was at first a keen demand for local consumption at from 48s. to 60s. per barrel, but this demand fell off at the close of the year, and the herrings were being offered at 40s. per barrel.

Mackerel again found their way into the Loch during the summer, but not in such dense shoals as in the previous year, and the catch shows a falling off.

Small-line fishing appears to be dying out, as there seem to be few fish, other than herring, in Loch Fyne.

A decrease in the catch of lobsters resulted indirectly from the coal stoppage, which rendered the transport of lobsters so uncertain that most of the fishermen in Luing gave up fishing and got employment in the slate quarries, and when the dispute was over a good many of them did not resume fishing.

ROTHESAY.—The results of the fisheries for the past year were most disappointing, being even worse than those of the very poor season of 1920.

Herrings appeared to be on the grounds, but the fishermen, for some unknown reason, were unable to take them. Only during the weeks ended 20th November and 17th December last year were heavy fishings landed, and even then, although quality was good, the earnings of the boats were very poor owing to the congestion in the markets. For the whole year the average gross earnings for motor and sail boats respectively were £93 and £38, and the average working expenses £90 and £14. As a result of the failure many regular fishermen had to seek other means of livelihood, and at Rothesay, for instance, a number with their boats were employed carrying sand and gravel for road repair work.

The quality of the herrings from Loch Fyne was invariably good, but from the Kyles of Bute and Kilbrannan Sound was usually poorer. Of the total landings four-fifths was taken by carrier steamers for sale in Glasgow Market, and the remainder was disposed of locally.

It is usual for the fishermen, when herring fishing is unpromising, to prosecute great-line fishing for a time, but this was not done to any extent during 1921, and the landings of white fish were light. During September the Lochs Long and Goil fishermen experienced considerable difficulty in finding a market for saithe.

Partially employed fishermen in this district are principally pleasure boat-hirers and members of crews of pleasure yachts during the holiday season.

GREENOCK.—The season was disappointing, and but for the herring fishing would have been a comparative failure. The larger class of motor boats as usual devoted their whole time to herring fishing, leaving the line, cod-net and flounder-net fishings to the smaller and less efficient sailing craft, and as these are decreasing in numbers a falling off in the landings of white fish is not surprising.

The District catch was considerably augmented by landings at Glasgow by two Aberdeen steam liners, which had been working off the West Coast, and found it not worth while to proceed home with the poor catches secured.

The bulk of the herring catch was landed at Fairlie, from which port admirable railway facilities are available. Although the herring fishing was then comparatively light, the heaviest landings occurred towards the end of May and beginning of June, owing chiefly to the inadequacy of carrying facilities from the fishing grounds during the coal stoppage.

The fishing grounds at the beginning of the year were between the Ayrshire coast and the south east of Arran, but the shoals gradually moved up the Kilbrannan Sound until Loch Fyne was reached towards the end of the year. Very heavy landings were then effected, and on two occasions catches were so heavy that the carriers were unable to cope with the supplies, and many vessels proceeded to Fairlie, Gourrock and Glasgow and there delivered their shots at comparatively low prices.

During October a Fleetwood trawler landed a shot of herrings of good quality at Glasgow from off the Welsh coast, but as Loch Fyne herrings were then on the market, prices for the trawled herrings were not remunerative.

The net and line fishing for white fish received very little attention, and the greater part of the landings was retailed locally.

**BALLANTRAE.**—During the year a very considerable number of boats changed hands within the district, while three of the best class motor boats were sold from Girvan to Campbeltown.

As heretofore the best class of boats from Ayr to Girvan devoted most of their time to herring fishing. During January operations were carried on in Kilbrannan Sound, but were much interrupted by stormy weather. Early in February herrings were located on the Ayrshire coast, and some fair results obtained for a short time. Later fishermen divided their time between Ballantrae Bank, where results were poor and partial owing to adverse weather, and the coastal grounds, on which a moderately successful fishing was secured. The herrings taken on the Bank were very ripe and unsuitable for long transit, while those taken on the coast were smaller and undeveloped in milt and roe. Herring fishing in Loch Ryan, although energetically followed for some weeks with seine and trammel nets, was unproductive, and the visiting fleet from Campbeltown and Loch Fyne had a very unprofitable voyage. Little was done during March, but in April dry spent herrings were located off the coast; the demand, however, was exceedingly limited, and prices frequently fell to 1s. per quarter cran basket, causing operations to be suspended for a day or so at a time. The quality thereafter improved, and as landings were fair a scheme of motor transport from Girvan to Glasgow was inaugurated. On the arrival of the boats late in the evening or very early in the morning, the catches were disposed of and despatched by motor lorries to Glasgow, reaching the market before 8 a.m., as against 10 a.m. or later by the first train. The venture proved successful and is likely to be repeated. Fair results were obtained until the end of June, except when prices fell on account of heavy landings. From July to September operations were energetically pursued but, results were poor, both then and in the following months when the local fleet operated mostly in other districts.

During February, March and April great-lining was prosecuted from Girvan and Stranraer, principally by East Coast motor boats.

At Stranraer 4 large and 2 small boats were engaged, mostly with very poor results. Later 2 steamers arrived and worked for a short period with better success, but the coal stoppage precipitated their departure. The best results were secured during the latter part of the season, when most of the motor boats had abandoned the venture. Financial results

to fishermen on motor boats were disastrous, as in the case of the only 2 boats able to clear expenses, the share per man worked out at £19 and £8 respectively for nearly a three months' voyage, while the others had debit balances ranging from £2 to £16 per man. All the motor boats working from Stranraer worked cod-nets and lines in conjunction. The 2 steamers had fair earnings, one, whose crew were familiar with the ground and tides, grossing over £800 for about five weeks' fishing.

Only two East Coast motor boats worked, more or less regularly, from Girvan, with very modest results. Generally fish were scarce on the local grounds, and the best results were obtained on the more distant grounds. When deliveries by great-line boats were good, and were augmented by landings from cod-net boats, prices for cod frequently reached a low level.

Immediately after the herring fishing on Ballantrae Bank, 20 to 30 boats from Girvan, Ballantrae and Stranraer shot their cod-nets on the Bank, securing some good catches, but prices were mostly low and earnings moderate. This method of fishing, however, continues to find favour with fishermen.

Good results were obtained at small-line fishing from Maidens and Dunure during March and April, but the Dunure fleet devoted less time to this fishing than usual, being attracted therefrom by herring fishing, which always commands first attention. During the autumn small-lining was a failure owing to scarcity of fish, and not until late November was there any distinct improvement.

During the year kippering was carried on at Stranraer and Girvan. The decreased output is probably attributable to the poor herring fishing at Girvan and Ayr during the summer months, when herrings had frequently to be imported from Glasgow.

Practically the whole catch from Ayr to Stranraer is now taken by motor boats, and sail boats participate only when a successful herring fishing is got in Loch Ryan.

Two fishermen lost their lives during the year, one while bringing a small boat single-handed from Maidens to Girvan, and the other while shrimping in the Solway.



## APPENDIX III.

## SALMON FISHERIES.

## MR. CALDERWOOD'S REPORT.

The season of 1921 was remarkably successful for the great majority of salmon netsmen, the catch, as revealed by the weight of salmon carried to market, being far in excess of the catch for any year since 1896. The figures for 1921 are given in the Board's Report (p. 52). A statement showing the number of packages of salmon delivered at or near Billingsgate Market during 1921 and the average prices per lb. has been kindly furnished by The Fishmongers' Company and is appended hereto.

The great increase was almost entirely confined to spring fish. The stations which did not participate in the good season were those where grilse and summer fish are chiefly relied upon. Some stations of this class are reported to have done very badly indeed, for grilse were chiefly conspicuous by their absence.

So far as river reports go, spring fish have been numerous, and angling in summer and autumn met with but little success. The exceptionally dry summer might sufficiently account for this, weather being a factor which always bulks largely in the sport of salmon angling. In all the smaller rivers also the continued drought reduced the flow to such an extent that the entrance of fish from the sea became difficult or impossible. In large rivers like the Tay, Dee and Spey, where the stock of fish is relatively high, the angling season was regarded as an average one all over, but both in Scotland and in England anglers have remarked for some years that spring fish appear to be increasing and autumn fish diminishing in numbers.

So far as the nets are concerned, the great spring run of 1921 was most marked in the section of the coast between Berwick and Inverness. In the north of Scotland the summer was not by any means a dry one. The rainfall was above the average, and in the north-west especially (where the Board's nets were fishing) the season was not only wet but cold. All along the north coast of the country as well as on the east of Caithness the salmon netting was poor, but it has to be recollected in this connection that this section of the coast is one where grilse are expected to be more numerous than salmon.

As an example of the difference between seasons 1920 and 1921, the combined total catches of two representative river districts, viz. the Tweed and the Findhorn, may be selected. The figures represent the netting results only, bag nets on the coast being shown separately from sweep nets in the mouths of the rivers.

	1920.	1921.
Bag nets . . . . .	12,036	23,233
Sweep nets . . . . .	18,561	30,187
	<u>30,597</u>	<u>53,420</u>

An increase of 22,823 fish in the total for 1921.

As showing the relative runs of salmon and grilse at the Aberdeen Harbour Commissioners' Fishings—where, in the past, very great numbers of grilse have been taken—I may state that 2588 salmon were taken in February, and that the total grilse take for the year amounted to only 2721. The monthly totals, which have been kindly supplied, show a gradual diminution from February to the end of July, and only a small rise of 30 fish in August.

As showing the relation between salmon and grilse for the last ten years in the Moray Firth area, I have been favoured with a table of percentages of grilse to salmon prepared by the Moray Firth Salmon Fisheries Co., Ltd.

1912 . . . . .	94·8	1917 . . . . .	94·1
1913 . . . . .	98·7	1918 . . . . .	69·8
1914 . . . . .	95·7	1919 . . . . .	121·1
1915 . . . . .	172·3	1920 . . . . .	60·7
1916 . . . . .	36·3	1921 . . . . .	56·7

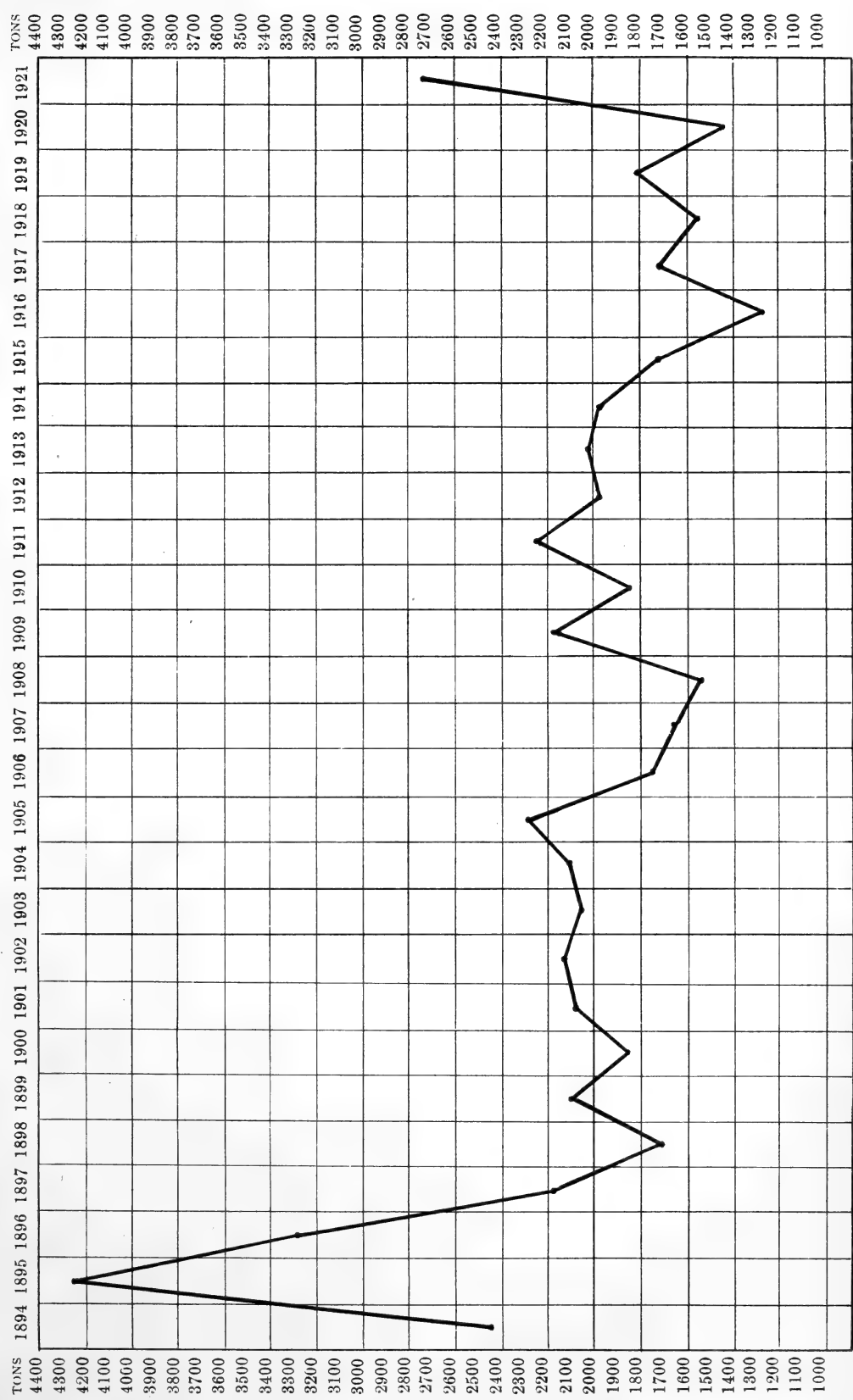
With regard to the total weight of salmon and grilse sent to market, which weight has been commonly charted in four lines representing four sections of the coast, I this year give a curve indicating the totals for the last 28 years in tons. The marked rise for 1921 is very evident, as also are the high totals of 1895 and 1896.

While it is the case that in the wet and cold part of the country the coast netting was poor, it by no means follows that in those parts of the country where dry weather prevailed all through the summer the good fishing season was due to the dry weather. I have already stated that the increase was chiefly in spring fish, and one has only to reflect that the dry weather did not really begin till after the success of the spring fishing had already been attained, to see that the direct cause, at least, was not the dry summer. Grilse showed up poorly all through the dry season, and were later than usual in some districts. All fish taken in 1921 were, however, of excellent quality, and the average weight of spring fish is reported to have been rather above the normal.

If we go a little further back in our consideration of the weather conditions, it may be that the factors which brought about the dry season of 1921 exercised their influence upon the life of the salmon in the sea, and induced a greater proportion of fish to come into the coast earlier than usual. Alternatively, there is the possibility that the early running fish are a separate race, and that this race is increasing at the expense of an autumn race. It seems extremely unlikely that the general stock of the country's salmon is becoming augmented. If it were so, we should surely have a better show of grilse and summer fish. The class of small spring fish, and the great majority of the large spring fish also, are those which have not come to the coast as grilse, but have continued to feed in the sea to a later stage in their life.

In this connection one may observe that, in the study of the fluctuations of the herring, upon which the scientific staff of the Board have been engaged for some years, it was noticed that in 1920 an unusual influx of Atlantic water was carried round the north of Scotland, and between the Orkneys and Shetlands, into the North Sea, and that the normal currents in the northern part of the North Sea were so upset as to be reversed in certain particulars. Coupled with the abnormality of the hydrographical conditions, there occurred a great abundance of the jelly-fish-like creature *Salpa*, a form belonging to the warmer Atlantic. The salps appear to have been in such abundance as to clog the fishermen's nets, and as they were carried into the Moray Firth,

CHART SHOWING, IN TONS, THE TOTAL WEIGHT OF SALMON SENT TO MARKET SINCE 1894.





the normal pelagic life, including the small crustaceans upon which the herring principally feed, disappeared. The herring subsequently were found at great distances from land.

The interest in this to the salmon fisher is that the herring is the chief food of the salmon, and that the salmon in following the herring through this abnormal period may have assumed, temporarily, different habits.

Then again it has been pointed out that in 1905 somewhat similar hydrographical conditions obtained, with a similar incursion of *salpæ*. If we refer to the curves showing the marketed salmon, we see that the weight of salmon sent to market between places on the coast from Berwick to the entrance to the Moray Firth rises to a high level in that year, though not to so high a level as in 1921. The three other curves in 1905 did not respond.

In the research observations we have been making recently, and more especially in the scale reading investigations, indications have been appearing, similar to those found by Mr. Hutton in the case of Wye fish in England, pointing to the conclusion that the nutrition and growth of parr and smolts in their early river life have a direct bearing upon the growth which may be expected in the sea, and to the time at which the fish may be expected to return to the river after their seaward migration.

During 1921 nearly 7000 scales from seven different Scottish districts were examined in an attempt to make a sufficiently wide comparative study of such matters as seasonal runs and local races. With every sample of scales the fish is measured at four different points, and particulars of weight, place and date of capture are also noted. We have now amassed a very large number of percentage calculations, and have been actively engaged in working out certain issues. Data from the Aberdeenshire Dee and the Spey bulk most largely in the calculations meantime, and the particulars from those two rivers are almost equally represented.

In the case of a specially interesting year such as that of 1921, in which, as I have already explained, there may be considerable abnormality of habit, the value of comparisons with other and more usual years is of great importance. It is greatly to be regretted, therefore, that for reasons of economy, involving the loss of two trained workers, these investigations have received an abrupt check. With a little clerical assistance we still hope to be able to work through the calculations, and even to continue the collection of more data in 1922, our desire being, if possible, to follow out the generation of the fish already dealt with. Otherwise the value of the great amount of scale reading and calculation already done will be much reduced.

The coast salmon marking work, recommenced in 1920 after the interruption due to the war and continued in 1921, has now had meantime to be entirely suspended.

#### POLLUTIONS.

It is remarkable that, although Salmon and Fresh Water Fisheries are most seriously affected by pollutions, the Fishery Board for Scotland has never been given any power to deal with the matter so as to protect the fisheries from this danger. It may be noticed, in consequence, that those suffering local injury to their fisheries have been recommended in the past, by Fishery Associations, to apply to the Local Government Board, now the Board of Health, or directly to the Secretary for Scotland.

The Public Health Scotland Act of 1897 contains three sets of provisions dealing with the subject. In section 16, if the pollution of a watercourse amounts to a nuisance—a term clearly capable of much dispute—or is injurious or dangerous to public health, the local authority is required to take proceedings. By section 116, the local authority is required in the same way to take action if distilleries, manufactories or works of other kinds discharge into any stream material dangerous to public health. And by section 127, a heavy penalty is instituted against any manufacturers who pollute streams used for domestic purposes, the reference being specially directed against the introduction of wastes from gas, naphtha, vitriol, paraffin and dye stuffs. The first section referred to has eleven sub-sections.

The provisions are not very applicable to fishery interests, and are not intended to be so, but none the less conscientious action by local authorities would do much to benefit the fisheries.

The Burgh Police Act of 1892 contains two provisions to prevent the throwing of rubbish into streams or on to the banks of streams, or to discharge offensive matter into streams within a burgh, instead of into the sewers. The offence of depositing rubbish seems generally to be got over in country districts by tipping outside the burgh boundaries, and so far as the fisheries are concerned, it matters little whether offensive matter comes into a river through sewers or not, if the contents of the sewers are not purified in any way.

The Rivers Pollution Prevention Acts, 1876 and 1893, were set up expressly for the purpose described in their title.

The 1876 Act has three sets of provisions dealing with pollution. Sections 3, 4 and 5 established as offences the discharge of sewage into streams, the discharge of manufacturing wastes, and the discharge of pit water respectively. In each case, however, there is the proviso that a person complained against shall not be deemed to have committed an offence if he shows to the satisfaction of the Court before whom he is tried "that he is using the best practicable and available means of rendering harmless" the discharge complained of. In addition, in clause 5, that referring to mines, an exception is made in respect of "water in the same condition as that in which it has been drained or raised from such mine." This last was exemplified very acutely some years ago, when water from a pit which had been closed down for sometime was pumped into a small burn, a tributary of the river Girvan. The water contained such a high percentage of iron sulphate that a bright orange precipitate was immediately created in the burn, forming a thick crust on the bed of the stream, while the river Girvan from the mouth of the burn downwards ran in a thick yellow flood, and every fish in the river died. This water was in the same condition as when raised from the mine. The pumping continued for months till the pit was emptied, and several seasons elapsed before a moderate stock of salmon could be re-established.

With regard to the best practicable or available means of purification, or the variant of the phrase "the best practicable and reasonably available means," it may be observed without fear of contradiction that great advances have been made in purification since 1876, but that even very moderate and easily available means are often conspicuous by their absence.

By section 12 a certificate may be granted by a qualified inspector showing that the means of purification employed "are the best or only practicable or available means under the circumstances of the particular case," and this in all proceedings will be held as conclusive evidence of the fact.

As an additional safeguard against undue interference with manufacturing and mining interest, section 6 enacts that proceedings shall only be taken at the instance of a Sanitary Authority with the consent of the Local Government Board (Board of Health). This was afterwards qualified by section 55 of the Local Government (Scotland) Act, 1889, which empowered County Councils to act in the same way and with the same powers as Sanitary Authorities. As members of County Councils are not infrequently concerned in the creation of pollutions, this clause has not proved of much use, while it may be said that the complications of procedure and the safeguards against interference with polluters have rendered the Rivers Pollution Prevention Acts of practically no use to those interested in the preservation of our fisheries.

In the Salmon Fisheries (Scotland) Act, 1862, there is another reference to pollutions, but it embodies the same sort of proviso as to "the best practicable means within a reasonable cost." This introduction of the element of cost is liable to be interpreted variously, and to mean in the main that any large cost cannot reasonably be contemplated. Modern purification plants cannot be erected without a fair amount of cost, and those interested in the fisheries are naturally inclined to the view that even a large cost, being the price of a pure river, is reasonable. Section 13 as amended by section 16 of the Salmon Fisheries (Scotland) Act, 1868—the very latest Act—reads as follows:—"Every person who causes or knowingly permits to flow, or puts or knowingly permits to be put, into any river containing salmon, any liquid or solid matter poisonous or deleterious to salmon, to an extent injurious to any salmon fishery, shall be liable to the following penalties." The weak point here is the expression "to an extent injurious to any salmon fishery," a phrase which originally had reference to the discharge of sawdust, but which when the reference to sawdust was deleted, was left in as if by an accident of drafting.

Procedure here is at the instance of a clerk to a District Fishery Board, and in practice it has been found that to prove injury it is necessary to produce salmon found dead, and to prove that they have been killed by pollution. Proof of this nature is exceedingly difficult to obtain, and the unfortunate fact is that by the time adult fish have been killed by pollution an infinite amount of harm has already been done to fry and to the food of fry, while the gravels forming the bed of the river may have been rendered quite unsuitable for salmon to spawn in.

Apart from Common Law rights, these are the statutory provisions dealing with Pollutions.

Recommendations have been made both by the Royal Commission on Salmon Fisheries, 1902, and the Sewage Disposal Commission in their exhaustive series of Reports.

The former in their Summary of Recommendations state (Report, p. 63):—"We are satisfied that much injury is done to the fisheries by pollution of rivers which might be prevented; and although some amendments of the law would be advisable, to which we have referred in our Report, that a better administration of the law is all-important. We therefore concur in the recommendation of the Sewage Disposal Commission for the creation of a Watersheds Board under a Supreme Rivers Authority in those waters, on the understanding that the recommendation of the Sewage Commission on the methods to be adopted for the purification of rivers and estuaries will cover the requirements of the fisheries, and that provision will be made for the protection of fishery interests by the Watersheds Board."

With further reference to the proposal for a Watersheds Board, I

may also quote from an earlier passage (p. 12):—"There are three great subjects for all of which, in our opinion, the watershed is the proper administrative area, *i.e.* Pollution, Water Supplies, and Fisheries. If it were possible to give adequate representation to all the interests concerned in one body, we should have a Board of great influence capable of interfering authoritatively in all matters affecting the district, while by the formation of separate committees the administration of each of the subjects above named might be left in the hands of representatives best qualified to carry it on. The Government alone can decide whether anything of this kind is practicable, but we have thought it right to make the suggestion to mark our sense of the interdependence of the different interests specially concerned in the preservation of the purity of our rivers."

The position advocated by the Sewage Disposal Commission may be indicated from the three first headings of their conclusions (Final Report, p. 11):—

- “(a) The law should be altered so that a person discharging sewage matter into a stream shall not be deemed to have committed an offence under the Rivers Pollution Prevention Act, 1876, if the sewage matter is discharged in a form which satisfies the requirements of the prescribed standard.
- “(b) The standard should be either the general standard or a special standard which will be higher or lower than the general standard as local circumstances require or permit.
- “(c) An effluent in order to comply with the general standard must not contain as discharged more than three parts per 100,000 of suspended matter, and with its suspended matters included must not take up at 65 F (18.3 C) more than 2.0 parts per 100,000 of dissolved oxygen in five days. This general standard should be prescribed either by statute or by order of the Central Authority, and should be subject to modifications by that Authority after an interval of not less than ten years.”

The decision to deal with the question by the establishment of standards of purity consisting of a general standard, with power to make special standards to suit special cases, was arrived at after mature consideration.

#### SALMON PASSES.

To test the success of the Tummel Pass, to which reference has repeatedly been made, the Tay District Board caused a trap to be inserted at the top of the pass for some weeks during the three last summers.

In 1919, from 10th June to 17th June, with a height of water ranging from 1 ft. 3 in. to 2 ft. 11 in., 83 fish ascended.

In 1920, from 6th to 30th June, in water falling from 2ft. 7 in. to 1 ft. 5 in., 47 fish ascended; 20 fish were also observed to ascend the fall.

In 1921, from 8th to 31st May, in a rising water from 2 ft. 2 in. to 3 ft. 3 in., 135 fish ascended, but on four days none was observed owing to an accident to the heck. The maximum daily number was 15, the minimum 3.

It would appear that when there is less than about 18 inches of water in the pass, the fish take the fall rather than the pass, but the experiment was sufficient to prove the value of the pass.



In the Conon district, blasting operations have been carried on in the Meig river by which the series of cascades which I inspected in 1913 have been successfully opened up to salmon. Attempts were also made to deal with the Orrin Fall by means of a built wooden structure, but heavy floods have put this pass out of action. In connection with the proposals for the carrying of electric power to Inverness from Loch Luichart, it seems possible to consider the erection of a pass at the large falls of Conon.

LOCH ABER WATER POWER ACT, 1921.

In connection with the adjustment of the Salmon fishery interests in the Lochy District, the Promoters of the above Act secured a settlement with the proprietors involved.

As regards the Spey District, the Board, at the request of the Promoters, convened a Conference on 30th March for the purpose of enabling the Promoters to explain their proposals to the representatives of the Spey District Board, their engineers and expert advisers. Although no final agreement was arrived at, the subject was elucidated to a considerable extent by the help of plans, and of a model of the weir which the Promoters proposed to throw across the upper Spey above Laggan Bridge. By the final terms of the Act arrived at by the Parliamentary Committee in London (Sec. 54) the Company agree not to divert any water from the Spey except by means of the weir referred to; and on any day during such time as the flow is less than 40,000,000 gallons in twenty-four hours, they are not entitled to abstract any water from the Spey or Mashie. When the flow exceeds the amount stated, however, they are entitled to abstract all or any part of the water. They are to provide and maintain a water gauge which shall be open to inspection at all times by the Spey District Board, and shall construct a suitable fish pass through or in connection with the weir.

W. L. CALDERWOOD.

*February 1922.*



APPENDIX IV.

ANNUAL CLOSE TIMES APPLICABLE TO THE SALMON RIVERS IN SCOTLAND.

N.B.—Observe that, in the following List, the days fixing the commencement and termination of the Annual Close Time for Net-fishing, and for Rod-fishing, respectively, are in all cases inclusive, as in the case of the Add, the first river in the List.

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Add . . . . .	From Sept. 1 to Feb. 15, both days inclusive.	From Nov. 1 to Feb. 15, both days inclusive.
Aline . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Alness . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Annan . . . . .	From Sept. 10 to Feb. 24.	From Nov. 16 to Feb. 24.
Applecross . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Arnisdale ( <i>Loch Hourn</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Awe . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Aylort ( <i>Kinloch</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ayr . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Baa and Goladoir . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Badachro and Kerry ( <i>Gairloch</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Balgay and Shieldag . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Beaully . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Berriedale . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Bervie . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Bladenoch . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Broom . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Brora . . . . .	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 10.
Carradale ( <i>in Cantyre</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Carron . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Clayburn, Finnisbay, Aven- nangeren, Strathgravat, North Lacastile, Scalla- dale, and Mawrig ( <i>East Harris</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Clyde and Leven . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Conon . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Jan. 25.
Cree . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Creed or Stornoway, and Laxay ( <i>Island of Lewis</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Creran ( <i>Loch Creran</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Croe and Shiel ( <i>Loch Duich</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Dee ( <i>Aberdeenshire</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Dee ( <i>Kirkcudbrightshire</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Deveron . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Don . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Doon . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Drummachloy or Glenmore ( <i>Isle of Bute</i> ) . . . . .	From Sept. 1 to Feb. 15.	From Oct. 16 to Feb. 15.
Dunbeath . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Earn . . . . .	From Aug. 21 to Feb. 4.	From Nov. 1 to Jan. 31.
Eckaig . . . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Esk, North . . . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Esk, South . . . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Ewe . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Fincastle, Meaveg, Ballanachist, South Lacastile, Borve, and Obb ( <i>West Harris</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Findhorn . . . . .	From Aug. 27 to Feb. 10.	From Oct. 11 to Feb. 10.
Fleet ( <i>Sutherlandshire</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Fleet ( <i>Kirkcudbrightshire</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Fors . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Forth . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Jan. 31.
Fyne, Shira, and Aray ( <i>Loch Fyne</i> ) . . . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Girvan . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Glenelg . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Gour . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Greiss, Laxdale, or Thunga . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Grudie or Dionard . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Gruinard and Little Gruinard . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Halladale, Strathy, Naver, and Borgie . . . . .	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 11.
Helmsdale . . . . .	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 10.
Hope and Polla or Strathbeg . . . . .	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 11.
Howmore . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Inchard . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Inner ( <i>in Jura</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Inver . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Iorsa ( <i>in Arran</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Irvine and Garnock . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Kannaireid . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kilchoan or Inverie ( <i>Loch Nevis</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kinloch ( <i>Kyle of Tongue</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kirkaig . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kishorn . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Kyle of Sutherland . . . . .	From Aug. 27 to Feb. 10.	From Oct. 1 to Jan. 10.
Laggan and Sorn ( <i>Island of Islay</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Laxford . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Leven . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Little Loch Broom . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Lochy . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Duich . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Luig . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Loch Roag . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Lossie . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Luce . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Lussa ( <i>Island of Mull</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Moidart . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Morar . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Mullanageren, Horasary, and Lochnaciste ( <i>North Uist</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Nairn . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Naver and Borgie, <i>see</i> Halladale . . . . .		
Nell, Feochan, and Euchar . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ness . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 1.
Nith . . . . .	From Sept. 10 to Feb. 24.	From Dec. 1 to Feb. 24.
Orkney Islands ( <i>River from Loch of Stenness, &amp;c.</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 24.
Ormsary ( <i>Loch Killisport</i> ). Loch Head, and Stornoway ( <i>Mull of Cantyre</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Pennygowan or Glenforsa, and Aros . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.

Name of River.	Annual Close Time for Net-fishing.	Annual Close Time for Rod-fishing.
Resort . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ruel . . . . .	From Sept. 1 to Feb. 15.	From Nov. 1 to Feb. 15.
Sanda . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Scaddle . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Shetland Islands ( <i>River of - Sandwater, &amp;c.</i> ) . . . . .	From Sept. 10 to Feb. 24.	From Nov. 16 to Jan. 31.
Shiel ( <i>Loch Shiel</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Sligachan, Broadford, and Portree ( <i>Isle of Skye</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Snizort, Orley, Oze, and Drynoch ( <i>Isle of Skye</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Spey . . . . .	From Aug. 27 to Feb. 10.	From Oct. 16 to Feb. 10.
Stinchar . . . . .	From Sept. 10 to Feb. 24.	From Nov. 15 to Feb. 24.
Tay (except Earn) . . . . .	From Aug. 21 to Feb. 4.	From Oct. 16 to Jan. 14.
Thurso . . . . .	From Aug. 27 to Feb. 10.	From Oct. 6 to Jan. 10.
Torridon, Balgay, and Shieldag . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Tweed . . . . .	From Sept. 15 to Feb. 14.	From Dec. 1 to Jan. 31.
Ugie . . . . .	From Sept. 10 to Feb. 24.	From Nov. 16 to Feb. 24.
Ullapool ( <i>Loch Broom</i> ) . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Urr . . . . .	From Sept. 10 to Feb. 24.	From Nov. 30 to Feb. 24.
Wick . . . . .	From Aug. 27 to Feb. 10.	From Nov. 1 to Feb. 10.
Ythan . . . . .	From Sept. 10 to Feb. 24.	From Nov. 1 to Feb. 10.

## APPENDIX V.

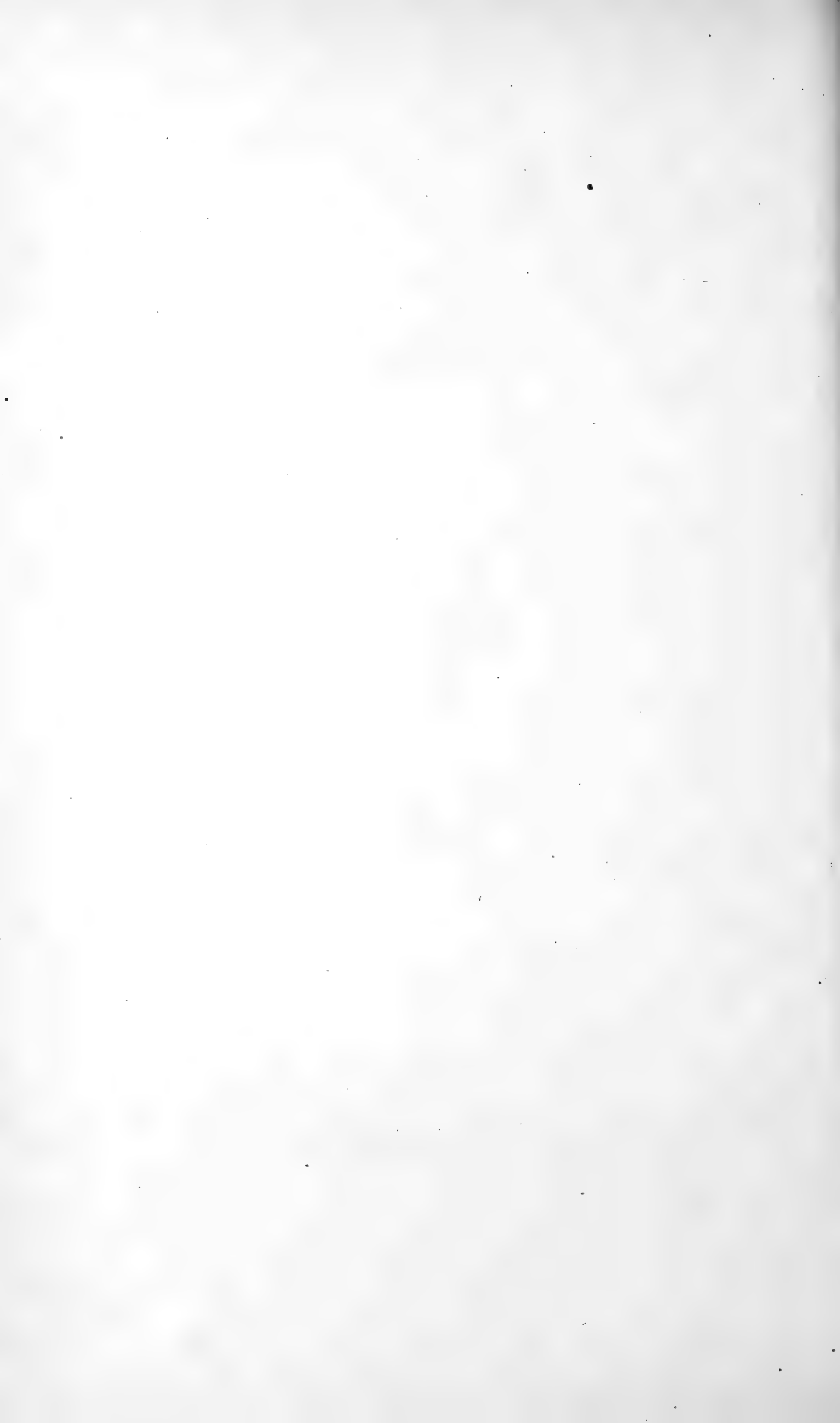
## LIST OF CHAIRMEN AND CLERKS OF SALMON FISHERY DISTRICT BOARDS IN SCOTLAND.

DISTRICT.	Name and Address of Chairman.	Name and Address of Clerk.
Alness . . .	Andrew Mackenzie, Esq., Dalmore House, Alness.	William J. Duncan, Solicitor, Dingwall.
Annan . . .	John T. M'Glasson, Esq., Newbie Villa, Annan.	David M'Jarrow, Solicitor, Lockerbie.
Ayr . . .	—	C. Young, W.S., County Buildings, Ayr.
Balgay . . .	C. R. Manners, Esq., C.E., 12 Lombard Street, Inverness.	Duncan Shaw, W.S., 15 High Street, Inverness.
Bervie . . .	David Scott Porteous, Esq., of Lauriston, as Mandatory of the Commissioners of Woods and Forests.	W. C. Walls, Solicitor, Montrose.
Broom . . .	W. Ewing-Gilmour, Esq., of Inverlael, per A. W. G. Aitken, Esq., S.S.C., Edinburgh.	W. R. T. Middleton, Solicitor, Dingwall.
Carron (W. Ross)	Baron von Schroder of Attadale.	Arthur H. Duncan, Solicitor, Dingwall.
Conon . . .	Brigadier-General Sir Walter Charteris Ross, K.B.E., C.B., C.M.G., Cromarty, Mandatory of Commissioners of Woods, etc.	W. R. T. Middleton, Solicitor, Dingwall.
Cree . . .	The Earl of Galloway, Cumloden, Newton-Stewart.	A. B. Matthews, Solicitor, Newton-Stewart.
Dee (Aberdeen)	The Lord Provost of Aberdeen.	Alex. Duffus, Advocate, Aberdeen.
Dee (Solway) .	Thomas Cross, Esq., Mandatory for Sir Charles Hope Dunbar, Bart., of St. Mary's Isle.	John Gibson, Solicitor, Kirkeudbright.
Deveron . . .	Wm. MacIntosh, Esq., Fife Lodge, Banff.	William Simpson, Solicitor, Banff.
Don . . .	George Davidson, Esq., Wellwood, Aberdeen.	Alex. Duffus, Advocate, Aberdeen.
Doon . . .	Marquis of Ailsa, Culzean Castle, Maybole.	C. Young, W.S., County Buildings, Ayr.
Dunbeath	Mandatory of Commissioners of Woods, etc., London.	D. W. Georgeson, Solicitor, Wick.
Esk (North) .	W. Douglas Johnston, Esq. (as Mandatory for Proprietors of Morphy Fishings), Montrose.	J. R. Findlay, Solicitor, Montrose.
Esk (South) .	W. Douglas Johnston, Esq., Montrose.	Alex. Middleton, Solicitor, Montrose.
Feochan . . .	The Marquis of Breadalbane, Taymouth Castle, Aberfeldy.	David Stewart, Solicitor, Oban.
Findhorn . . .	Viscount Novar, per J. J. Meiklejohn, Esq., factor.	C. Grant Mackenzie, Solicitor, Forres.
Forss . . .	Major. C. R. E. Radclyffe, Forss House, Thurso.	D. B. Keith, Solicitor, Thurso.
Forth . . .	Mandatory of Commissioners of Woods, etc., London.	Henry Robb, 11 Barnton Street, Stirling.
Girvan . . .	John Campbell Kennedy, Esq., of Dunure.	T. Gerald Tait, Solicitor, Girvan.
Gruinard and Little Gruinard	Alfred N. G. Aitken, Esq., S.S.C., Edinburgh, Factor and Commissioner for Hugh Mackenzie, Esq., of Dundonnell.	W. R. T. Middleton, Solicitor, Dingwall.
Kyle of Sutherland . . .	Sir Charles Lockhart Ross, Bart., of Balmagowan.	John M'Crone, Solicitor, Dornoch.
Little Broom .	Alfred N. G. Aitken, Esq., S.S.C., Edinburgh, Factor and Commissioner for Hugh Mackenzie, Esq., of Dundonnell.	W. R. T. Middleton, Solicitor, Dingwall.

APPENDIX V.—(continued)—LIST OF CHAIRMEN AND CLERKS OF SALMON FISHERY DISTRICT BOARDS IN SCOTLAND.

DISTRICT.	Name and Address of Chairman.	Name and Address of Clerk.
Lochy . . .	Factor and Mandatory for the Trustees of the late Lord Abinger, Inverlochy Castle, Fort-William.	N. B. Mackenzie, Jr., Solicitor, Fort William.
Nairn . . .	Brodie of Brodie, Brodie Castle, Forres.	H. T. Donaldson, Solicitor, Nairn.
Ness . . .	Major E. C. Ellice of Glengarry, Fort-Augustus.	Anderson, Shaw & Gilbert, Solicitors, Inverness.
Nith . . .	The Provost of Dumfries.	J. E. Blacklock, Solicitor, Irish Street, Dumfries.
Sligachan, Broadford, & Portree (Skye)	G. M. Fraser, Esq., Solicitor, Portree, Mandatory for Lord Macdonald.	(Vacant.)
Snizort, Orley, Oze, and Drynock (Skye)	G. M. Fraser, Esq., Solicitor, Portree, Mandatory for Lord Macdonald.	(Vacant.)
Spey . . .	The Duke of Richmond and Gordon, Gordon Castle, Fochabers, per George Muirhead, Esq., Commissioner.	T. R. Mackenzie and A. F. Macdonald, Solicitors, Elgin.
Stinchar . . .	The Earl of Stair, Lochinch, Wigtownshire.	Stair M'Harrie, Rephad, Stranraer.
Tay . . .	P. D. Malloch, Esq., Mandatory for the Tay Salmon Fisheries Co., Perth.	Condie, Mackenzie, & Co., Solicitors, Perth.
Thurso . . .	Peter Keith, Esq., Mandatory for Sir Archibald H. M. Sinclair, Bart., of Ulbster.	D. B. Keith, Solicitor, Thurso.
Torridon . . .	C. R. Manners, Esq., C.E., 12 Lombard Street, Inverness.	Duncan Shaw, W.S., 15 High Street, Inverness.
Tweed (Police Committee of the Commissioners)	The Duke of Roxburgh, K.T., Floors Castle, Kelso.	David W. B. Tait, W.S., Kelso.
Ugie . . .	Lieut.-Col. Ferguson, of Pitfour, Mintlaw.	David Troup, Solicitor, Peterhead.
Wick . . .	Mrs. Duff Dunbar, of Hempriggs, Acker-gill Tower, Wick.	D. W. Georgeson, Solicitor, Wick.
Ythan . . .	Earl of Errol, Slains Castle, Aberdeen-shire.	D. M. A. Chalmers, Advocate, Aberdeen.

NOTE.—In addition to the districts specified above, the Duke of Sutherland is joint proprietor of the Brora with Mr. Peter Haig-Thomas, and is joint proprietor, along with Mr. F. W. Wignall and Dr. T. H. Ward, of the Fleet. The Duke's Factor is Mr. A. N. Macaulay, Sutherland Estates Office, Golspie. Mr. V. W. Macandrew is proprietor of the Halladale, and Messrs. Birtwistle and Midwood of the Naver; Mr. Barnett is proprietor of the Borgie. The Duke of Westminster is sole proprietor of the Laxford, and Mr. Geo. Morrison of the Inchard. Sir Wm. Coats Cross and Captain Alex. Cross and Mr. Alex. Morrison are proprietors of the Kinloch. Mr. J. W. Stewart is sole proprietor in the Inver and Kirkaig districts (in charge of his factor, Mr. Murdo Kerr, Assynt Estate Office, Lochinver); The Board of Agriculture for Scotland are sole proprietors of the rivers Polla, Strathy, and Armadale, and part owners of the river Dionard with Mr. John Elliot of Balnakiel, Durness. Mr. J. D. Milburn is proprietor of the river Hope, and Lord Lovat of the river Beaully (under charge of his factor, Mr. J. T. Garrioch, Estates Office, Beaully); and the Countess of Cromarty is sole proprietrix of the Kannaird district (Mr. Alex. Taylor, factor, Cromarty Estate Office, Kildary).





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TABLE A.—No. I.

MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen engaged in the Scottish Fishing Industry in the Year 1921.

I. SAILING VESSELS.

No.	District.	Number of Vessels.	Total Gross Tonnage.	Value.			Fishermen.		
				Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed.	Total.
<b>EAST COAST.</b>				£	£	£			
1	Eyemouth . . . . .	29	86	454	461	915	56	...	56
2	Leith . . . . .	177	979	2,799	2,563	5,362	204	145	349
3	Anstruther . . . . .	139	679	2,333	2,289	4,622	198	...	198
4	Montrose . . . . .	123	568	2,423	1,511	3,934	198	...	198
5	Stonehaven . . . . .	63	83	740	1,080	1,820	69	...	69
6	Aberdeen . . . . .	52	78	570	1,210	1,780	90	...	90
7	Peterhead . . . . .	173	407	3,298	3,016	6,314	257	...	257
8	Fraserburgh . . . . .	263	350	3,825	2,770	6,595	267	35	302
9	Banff . . . . .	93	375	2,400	4,690	7,090	218	...	218
10	Buckie . . . . .	170	1,395	7,176	14,055	21,231	338	...	338
11	Findhorn . . . . .	25	138	625	1,109	1,734	68	...	68
12	Cromarty . . . . .	96	637	3,844	10,187	14,031	387	38	425
13	Helmsdale . . . . .	75	254	1,521	1,675	3,196	112	13	125
14	Lybster . . . . .	44	107	594	1,353	1,947	95	17	112
15	Wick . . . . .	180	416	1,917	4,527	6,444	332	113	445
East Coast Totals . . . . .		1,702	6,552	34,519	52,496	87,015	2,889	361	3,250
<b>Orkney and Shetland.</b>									
16	Orkney . . . . .	360	877	4,235	5,941	10,176	714	6	720
17	Shetland . . . . .	438	4,068	18,212	36,902	55,114	1,474	...	1,474
Orkney and Shetland Totals . . . . .		798	4,945	22,447	42,843	65,290	2,188	6	2,194
<b>WEST COAST.</b>									
18	Stornoway . . . . .	393	2,274	13,935	36,936	50,871	3,769	...	3,769
19	Barra . . . . .	241	595	2,729	4,151	6,880	784	...	784
20	Loch Broom . . . . .	335	737	5,364	10,980	16,344	605	...	605
21	Loch Carron & Skye . . . . .	276	594	3,800	8,770	12,570	570	...	570
22	Fort-William . . . . .	107	229	999	2,194	3,193	313	...	313
23	Campbeltown . . . . .	108	182	1,554	1,285	2,839	203	...	203
24	Inveraray . . . . .	71	99	757	896	1,653	45	34	79
25	Rothsay . . . . .	59	74	373	1,793	2,166	32	29	61
26	Greenock . . . . .	62	90	667	862	1,529	10	50	60
27	Ballantrae . . . . .	{ 175 *40	{ 314 199	{ 2,719 2,653	{ 3,897 1,304	{ 6,616 3,957	{ 80 80	{ 89 ...	{ 169 80
West Coast Totals . . . . .		1,867	5,387	35,550	73,068	108,618	6,491	202	6,693
Grand Totals for 1921 . . . . .		4,367	16,884	92,516	168,407	260,923	11,568	569	12,137
Grand Totals for 1920 . . . . .		4,658	18,897	114,979	239,935	354,914	12,927	482	13,409
Increase in 1921 . . . . .		...	...	...	...	...	...	87	...
Decrease in 1921 . . . . .		291	2,013	22,463	71,528	93,991	1,359	...	1,272

\* Sailing Trawlers.

TABLE A.—No. I.—  
MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen

## II. MOTOR

No.	District.	Engaged mainly in Herring Fishing.		Engaged mainly in White-Fish Fishing.		Total.	
		Number of Vessels.	Gross Tonnage.	Number of Vessels.	Gross Tonnage.	Number of Vessels.	Gross Tonnage.
<b>EAST COAST.</b>							
1	Eyemouth . . .	49	1,598	32	183	81	1,781
2	Leith . . .	72	1,811	59	261	131	2,072
3	Anstruther . . .	87	3,438	62	288	149	3,726
4	Montrose . . .	10	446	114	1,040	124	1,486
5	Stonehaven . . .	...	...	21	182	21	182
6	Aberdeen . . .	...	...	28	280	28	280
7	Peterhead . . .	15	656	63	268	78	924
8	Fraserburgh . . .	117	5,032	66	414	183	5,446
9	Banff . . .	53	1,796	82	485	135	2,281
10	Buckie . . .	112	4,912	14	85	126	4,997
11	Findhorn . . .	20	842	90	723	110	1,565
12	Cromarty . . .	20	94	...	...	20	94
13	Helmsdale . . .	1	36	44	201	45	237
14	Lybster . . .	...	...	5	12	5	12
15	Wick . . .	31	930	72	297	103	1,227
East Coast Totals .		587	21,591	752	4,719	1,339	26,310
<b>Orkney and Shetland.</b>							
16	Orkney . . .	...	...	62	210	62	210
17	Shetland . . .	71	1,513	...	...	71	1,513
Orkney and Shetland Totals .		71	1,513	62	210	133	1,723
<b>WEST COAST.</b>							
18	Stornoway . . .	25	411	...	...	25	411
19	Barra . . .	28	461	...	...	28	461
20	Loch Broom . . .	27	206	...	...	27	206
21	Loch Carron & Skye	76	671	...	...	76	671
22	Fort-William . . .	8	69	21	125	29	194
23	Campbeltown . . .	80	779	14	67	94	846
24	Inveraray . . .	73	658	...	...	73	658
25	Rothesay . . .	27	155	...	...	27	155
26	Greenock . . .	30	176	...	...	30	176
27	Ballantrae . . .	106	704	...	...	106	704
West Coast Totals		480	4,290	35	192	515	4,482
Grand Totals for 1921		1,138	27,394	849	5,121	1,987	32,515
Grand Totals for 1920		1,131	28,241	816	5,013	1,947	33,254
Increase in 1921 .		7	...	33	108	40	...
Decrease in 1921 .		...	847	...	...	...	739

continued.

engaged in the Scottish Fishing Industry in the Year 1921.

VESSELS.

Value.			Fishermen.			District.	No.
Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed.	Total.		
£	£	£					
<b>EAST COAST.</b>							
46,380	28,962	75,342	310	...	310	Eymouth . . .	1
56,380	37,979	94,359	709	...	709	Leith . . .	2
98,590	44,745	143,335	789	...	789	Anstruther . . .	3
58,950	22,347	81,297	475	...	475	Montrose . . .	4
9,110	3,043	12,153	76	..	76	Stonehaven . . .	5
12,020	4,085	16,105	115	...	115	Aberdeen . . .	6
25,180	12,021	37,201	205	4	209	Peterhead . . .	7
121,970	80,804	202,774	911	18	929	Fraserburgh . . .	8
63,000	46,612	109,612	608	...	608	Banff . . .	9
70,780	90,348	161,128	832	...	832	Buckie . . .	10
36,610	20,847	57,457	391	...	391	Findhorn . . .	11
7,250	1,990	9,240	80	...	80	Cromarty . . .	12
10,030	6,298	16,328	180	...	180	Helmsdale . . .	13
485	141	626	12	...	12	Lybster . . .	14
46,650	26,861	73,511	449	...	449	Wick . . .	15
663,385	427,083	1,090,468	6,142	22	6,164	East Coast Totals	
<b>Orkney and Shetland.</b>							
5,365	1,062	6,427	148	6	154	Orkney . . .	16
42,470	21,168	63,638	299	...	299	Shetland . . .	17
47,835	22,230	70,065	447	6	453	Orkney and Shetland Totals	
<b>WEST COAST.</b>							
10,500	7,661	18,161	134	...	134	Stornoway . . .	18
10,040	6,051	16,091	171	...	171	Barra . . .	19
5,670	3,120	8,790	106	...	106	Loch Broom . . .	20
22,700	16,418	39,118	292	...	292	Loch Carron & Skye	21
4,740	1,864	6,604	90	...	90	Fort-William . . .	22
31,360	11,087	42,447	414	...	414	Campbeltown . . .	23
24,050	7,337	31,387	288	...	288	Inveraray . . .	24
4,392	2,735	7,127	58	11	69	Rothsay . . .	25
5,355	2,073	7,428	56	14	70	Greenock . . .	26
31,880	11,918	43,798	285	...	285	Ballantrae . . .	27
150,687	70,264	220,951	1,894	25	1,919	West Coast Totals	
861,907	519,577	1,381,484	8,483	53	8,536	Grand Totals for 1921	
1,133,470	649,736	1,783,206	8,510	68	8,578	Grand Totals for 1920	
...	...	...	...	...	...	Increase in 1921	
271,563	130,159	401,722	27	15	42	Decrease in 1921	

TABLE A.—No. I.—  
MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen  
III. STEAM DRIFTERS

No.	District.	Scottish.							
		Number.	Tonnage.	Value.			Fishermen.		
				Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed.	Total.
	<b>EAST COAST.</b>			£	£	£			
1	Eyemouth . . .	20	694	48,000.	17,348	65,348	180	...	180
2	Leith . . .	3	102	7,500	2,673	10,173	24	...	24
3	Anstruther . . .	56	1,913	151,200	58,183	209,383	560	...	560
		*2	9	70	4	74	4	...	4
4	Montrose . . .	3	176	11,500	3,444	14,944	30	...	30
5	Stonehaven . . .	...	...	...	...	...	...	...	...
6	Aberdeen . . .	13	464	32,900	20,428	53,328	116	...	116
		†27	1,851	182,000	22,540	204,540	268	...	268
7	Peterhead . . .	122	4,182	269,250	121,700	390,950	712	29	741
8	Fraserburgh . . .	85	2,931	188,200	71,124	259,324	676	26	702
9	Banff . . .	82	2,741	229,600	73,951	303,551	574	...	574
10	Buckie . . .	255	8,673	714,000	251,003	965,003	2,262	36	2,298
11	Findhorn . . .	109	3,721	288,700	104,320	393,020	981	...	981
12	Cromarty . . .	1	31	2,800	750	3,550	9	...	9
13	Helmsdale . . .	...	...	...	...	...	...	...	...
14	Lybster . . .	...	...	...	...	...	...	...	...
15	Wick . . .	16	512	32,000	14,795	46,795	113	...	113
	<b>East Coast Totals .</b>	<b>794</b>	<b>28,000</b>	<b>2,157,720</b>	<b>762,263</b>	<b>2,919,983</b>	<b>6,509</b>	<b>91</b>	<b>6,600</b>
	<b>Orkney and Shetland.</b>								
16	Orkney . . .	...	...	...	...	...	...	...	...
17	Shetland . . .	12	433	31,125	8,734	39,859	91	...	91
	<b>Orkney and Shetland Totals .</b>	<b>12</b>	<b>433</b>	<b>31,125</b>	<b>8,734</b>	<b>39,859</b>	<b>91</b>	<b>...</b>	<b>91</b>
	<b>WEST COAST.</b>								
18	Stornoway . . .	17	1,190	34,000	17,270	51,270	153	...	153
19	Barra . . .	...	...	...	...	...	...	...	...
20	Loch Broom . . .	...	...	...	...	...	...	...	...
21	Loch Carron & Skye . . .	...	...	...	...	...	...	...	...
22	Fort-William . . .	...	...	...	...	...	...	...	...
23	Campbeltown . . .	...	...	...	...	...	...	...	...
24	Inveraray . . .	...	...	...	...	...	...	...	...
25	Rothsay . . .	...	...	...	...	...	...	...	...
26	Greenock . . .	...	...	...	...	...	...	...	...
27	Ballantrae . . .	...	...	...	...	...	...	...	...
	<b>West Coast Totals</b>	<b>17</b>	<b>1,190</b>	<b>34,000</b>	<b>17,270</b>	<b>51,270</b>	<b>153</b>	<b>...</b>	<b>153</b>
	<b>Grand Totals for 1921</b>	<b>823</b>	<b>29,623</b>	<b>2,222,845</b>	<b>788,267</b>	<b>3,011,112</b>	<b>6,753</b>	<b>91</b>	<b>6,844</b>
	<b>Grand Totals for 1920</b>	<b>854</b>	<b>30,223</b>	<b>2,889,890</b>	<b>1,101,433</b>	<b>3,991,323</b>	<b>6,977</b>	<b>110</b>	<b>7,087</b>
	<b>Increase in 1921 . . .</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
	<b>Decrease in 1921 . . .</b>	<b>31</b>	<b>600</b>	<b>667,045</b>	<b>313,166</b>	<b>980,211</b>	<b>224</b>	<b>19</b>	<b>243</b>

\* Mussel Dredgers.

† Liners only.

continued.

engaged in the Scottish Fishing Industry in the Year 1921.

OR LINERS.

Other than Scottish.								District.	No.
Number.	Tonnage.	Value.			Fishermen.				
		Vessels.	Fishing Gear.	total.	Regularly Employed.	Partially Employed.	Total.		
		£	£	£					
3	113	9,000	2,917	11,917	27	...	27	<b>EAST COAST.</b>	
...	...	...	...	...	...	...	...	Eyemouth . . . . . 1	
...	...	...	...	...	...	...	...	Leith . . . . . 2	
...	...	...	...	...	...	...	...	} Anstruther . . . . . 3	
...	...	...	...	...	...	...	...	Montrose . . . . . 4	
...	...	...	...	...	...	...	...	Stonehaven . . . . . 5	
...	...	...	...	...	...	...	...	} Aberdeen . . . . . 6	
†4	279	24,500	1,840	26,340	40	...	40	Peterhead . . . . . 7	
5	125	11,250	4,690	15,940	48	...	48	Fraserburgh . . . . . 8	
5	179	10,600	4,025	14,625	40	...	40	Banff . . . . . 9	
...	...	...	...	...	...	...	...	Buckie . . . . . 10	
...	...	...	...	...	...	...	...	Findhorn . . . . . 11	
...	...	...	...	...	...	...	...	Cromarty . . . . . 12	
...	...	...	...	...	...	...	...	Helmsdale . . . . . 13	
...	...	...	...	...	...	...	...	Lybster . . . . . 14	
10	350	37,500	9,050	46,550	99	...	99	Wick . . . . . 15	
27	1,046	92,850	22,522	115,372	254	...	254	East Coast Totals	
...	...	...	...	...	...	...	...	<b>Orkney and Shetland.</b>	
26	988	78,000	17,706	95,706	260	...	260	Orkney . . . . . 16	
...	...	...	...	...	...	...	...	Shetland . . . . . 17	
26	988	78,000	17,706	95,706	260	...	260	Orkney and Shetland Totals	
...	...	...	...	...	...	...	...	<b>WEST COAST.</b>	
...	...	...	...	...	...	...	...	Stornoway . . . . . 18	
...	...	...	...	...	...	...	...	Barra . . . . . 19	
...	...	...	...	...	...	...	...	Loch Broom . . . . . 20	
...	...	...	...	...	...	...	...	Loch Carron & Skye . . . . . 21	
...	...	...	...	...	...	...	...	Fort-William . . . . . 22	
...	...	...	...	...	...	...	...	Campbeltown . . . . . 23	
...	...	...	...	...	...	...	...	Inveraray . . . . . 24	
...	...	...	...	...	...	...	...	Rothesay . . . . . 25	
...	...	...	...	...	...	...	...	Greenock . . . . . 26	
...	...	...	...	...	...	...	...	Ballantrae . . . . . 27	
...	...	...	...	...	...	...	...	West Coast Totals	
53	2,034	170,850	40,228	211,078	514	...	514	Grand Totals for 1921	
333	12,200	1,222,250	326,565	1,548,815	3,324	...	3,324	Grand Totals for 1920	
...	...	...	...	...	...	...	...	Increase in 1921	
280	10,166	1,051,400	286,337	1,337,737	2,810	...	2,810	Decrease in 1921	

TABLE A.—No. I.—*continued.*

MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen engaged in the Scottish Fishing Industry in the Year 1921.

## IV.—STEAM TRAWLERS.

No.	District.	Number of Vessels.	Total Gross Tonnage.	Value.			Fishermen.		
				Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed.	Total.
	<b>EAST COAST.</b>			£	£	£			
1	Eyemouth . . .	...	...	...	...	...	...	...	...
2	Leith . . .	{ * 2	4,536 154	412,500 12,000	21,040 680	433,540 12,680	612 18	...	612 18
3	Anstruther . . .	...	...	...	...	...	...	...	...
4	Montrose . . .	26	2,097	228,000	9,640	237,640	255	...	255
5	Stonehaven . . .	...	...	...	...	...	...	...	...
6	Aberdeen . . .	{ 237	17,509	1,739,850	106,650	1,846,500	2,500	...	2,500
7	Peterhead . . .	{ * 25	2,008	185,400	11,300	196,700	273	...	273
8	Fraserburgh . . .	17	1,108	124,950	5,100	130,050	166	...	166
9	Banff . . .	...	...	...	...	...	...	...	...
10	Buckie . . .	19	711	76,000	4,750	80,750	171	...	171
11	Findhorn . . .	6	227	21,500	2,040	23,540	54	...	54
12	Cromarty . . .	...	...	...	...	...	...	...	...
13	Helmsdale . . .	...	...	...	...	...	...	...	...
14	Lybster . . .	...	...	...	...	...	...	...	...
15	Wick . . .	...	...	...	...	...	...	...	...
	<b>East Coast Totals . . .</b>	<b>407</b>	<b>28,350</b>	<b>2,800,200</b>	<b>161,200</b>	<b>2,961,400</b>	<b>4,049</b>	<b>...</b>	<b>4,049</b>
	<b>Orkney and Shetland.</b>								
16	Orkney . . .	...	...	...	...	...	...	...	...
17	Shetland . . .	...	...	...	...	...	...	...	...
	<b>Orkney and Shetland Totals . . .</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
	<b>WEST COAST.</b>								
18	Stornoway . . .	...	...	...	...	...	...	...	...
19	Barra . . .	...	...	...	...	...	...	...	...
20	Loch Broom . . .	...	...	...	...	...	...	...	...
21	Loch Carron and Skye . . .	...	...	...	...	...	...	...	...
22	Fort-William . . .	...	...	...	...	...	...	...	...
23	Campbeltown . . .	...	...	...	...	...	...	...	...
24	Inveraray . . .	...	...	...	...	...	...	...	...
25	Rothsay . . .	...	...	...	...	...	...	...	...
26	Greenock . . .	9	694	57,600	2,520	60,120	85	...	85
27	Ballantrae . . .	2	154	20,900	450	21,350	18	...	18
	<b>West Coast Totals . . .</b>	<b>11</b>	<b>848</b>	<b>78,500</b>	<b>2,970</b>	<b>81,470</b>	<b>103</b>	<b>...</b>	<b>103</b>
	<b>Grand Totals for 1921</b>	<b>418</b>	<b>29,198</b>	<b>2,878,700</b>	<b>164,170</b>	<b>3,042,870</b>	<b>4,152</b>	<b>...</b>	<b>4,152</b>
	<b>Grand Totals for 1920</b>	<b>385</b>	<b>27,744</b>	<b>4,020,650</b>	<b>217,560</b>	<b>4,238,210</b>	<b>3,921</b>	<b>...</b>	<b>3,921</b>
	<b>Increase in 1921 . . .</b>	<b>33</b>	<b>1,454</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>231</b>	<b>...</b>	<b>231</b>
	<b>Decrease in 1921 . . .</b>	<b>...</b>	<b>...</b>	<b>1,141,950</b>	<b>53,390</b>	<b>1,195,340</b>	<b>...</b>	<b>...</b>	<b>...</b>

\* Steam Trawlers other than Scottish.



TABLE A.—No. I.—continued.

MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen engaged in the Scottish Fishing Industry in the Year 1921.

V.—TOTAL STEAM FISHING VESSELS.

No.	District.	Number of Vessels.	Total Gross Tonnage.	Value.			Fishermen.		
				Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed.	Total.
	<b>EAST COAST.</b>			£	£	£			
1	Eyemouth . . .	23	807	57,000	20,265	77,265	207	...	207
2	Leith . . .	80	4,792	432,000	24,393	456,393	654	...	654
3	Anstruther . . .	58	1,922	151,270	58,187	209,457	564	...	564
4	Montrose . . .	29	2,273	239,500	13,084	252,584	285	...	285
5	Stonehaven . . .	...	...	...	...	...	...	...	...
6	Aberdeen . . .	306	22,111	2,164,650	162,758	2,327,408	3,197	...	3,197
7	Peterhead . . .	144	5,415	405,450	131,490	536,940	926	29	955
8	Fraserburgh . . .	90	3,110	198,800	75,149	273,949	716	26	742
9	Banff . . .	82	2,741	229,600	73,951	303,551	574	...	574
10	Buckie . . .	274	9,384	790,000	255,753	1,045,753	2,433	36	2,469
11	Findhorn . . .	115	3,948	310,200	106,360	416,560	1,035	...	1,035
12	Cromarty . . .	1	31	2,800	750	3,550	9	...	9
13	Helmsdale . . .	...	...	...	...	...	...	...	...
14	Lybster . . .	...	...	...	...	...	...	...	...
15	Wick . . .	26	862	69,500	23,845	93,345	212	...	212
	<b>East Coast Totals .</b>	<b>1,228</b>	<b>57,396</b>	<b>5,050,770</b>	<b>945,985</b>	<b>5,996,755</b>	<b>10,812</b>	<b>91</b>	<b>10,903</b>
	<b>Orkney and Shetland.</b>								
16	Orkney . . .	...	...	...	...	...	...	...	...
17	Shetland . . .	38	1,421	109,125	26,440	135,565	351	...	351
	<b>Orkney and Shetland Totals .</b>	<b>38</b>	<b>1,421</b>	<b>109,125</b>	<b>26,440</b>	<b>135,565</b>	<b>351</b>	<b>...</b>	<b>351</b>
	<b>WEST COAST.</b>								
18	Stornoway . . .	17	1,190	34,000	17,270	51,270	153	...	153
19	Barra . . .	...	...	...	...	...	...	...	...
20	Loch Broom . . .	...	...	...	...	...	...	...	...
21	Loch Carron & Skye . . .	...	...	...	...	...	...	...	...
22	Fort-William . . .	...	...	...	...	...	...	...	...
23	Campbeltown . . .	...	...	...	...	...	...	...	...
24	Inveraray . . .	...	...	...	...	...	...	...	...
25	Rothsay . . .	...	...	...	...	...	...	...	...
26	Greenock . . .	9	694	57,600	2,520	60,120	85	...	85
27	Ballantrae . . .	2	154	20,900	450	21,350	18	...	18
	<b>West Coast Totals</b>	<b>28</b>	<b>2,038</b>	<b>112,500</b>	<b>20,240</b>	<b>132,740</b>	<b>256</b>	<b>...</b>	<b>256</b>
	<b>Grand Totals for 1921</b>	<b>1,294</b>	<b>60,855</b>	<b>5,272,395</b>	<b>992,665</b>	<b>6,265,060</b>	<b>11,419</b>	<b>91</b>	<b>11,510</b>
	<b>Grand Totals for 1920</b>	<b>1,572</b>	<b>70,167</b>	<b>8,132,790</b>	<b>1,645,558</b>	<b>9,778,348</b>	<b>14,222</b>	<b>110</b>	<b>14,332</b>
	<b>Increase in 1921 . . .</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>
	<b>Decrease in 1921 . . .</b>	<b>278</b>	<b>9,312</b>	<b>2,860,395</b>	<b>652,893</b>	<b>3,513,288</b>	<b>2,803</b>	<b>19</b>	<b>2,822</b>

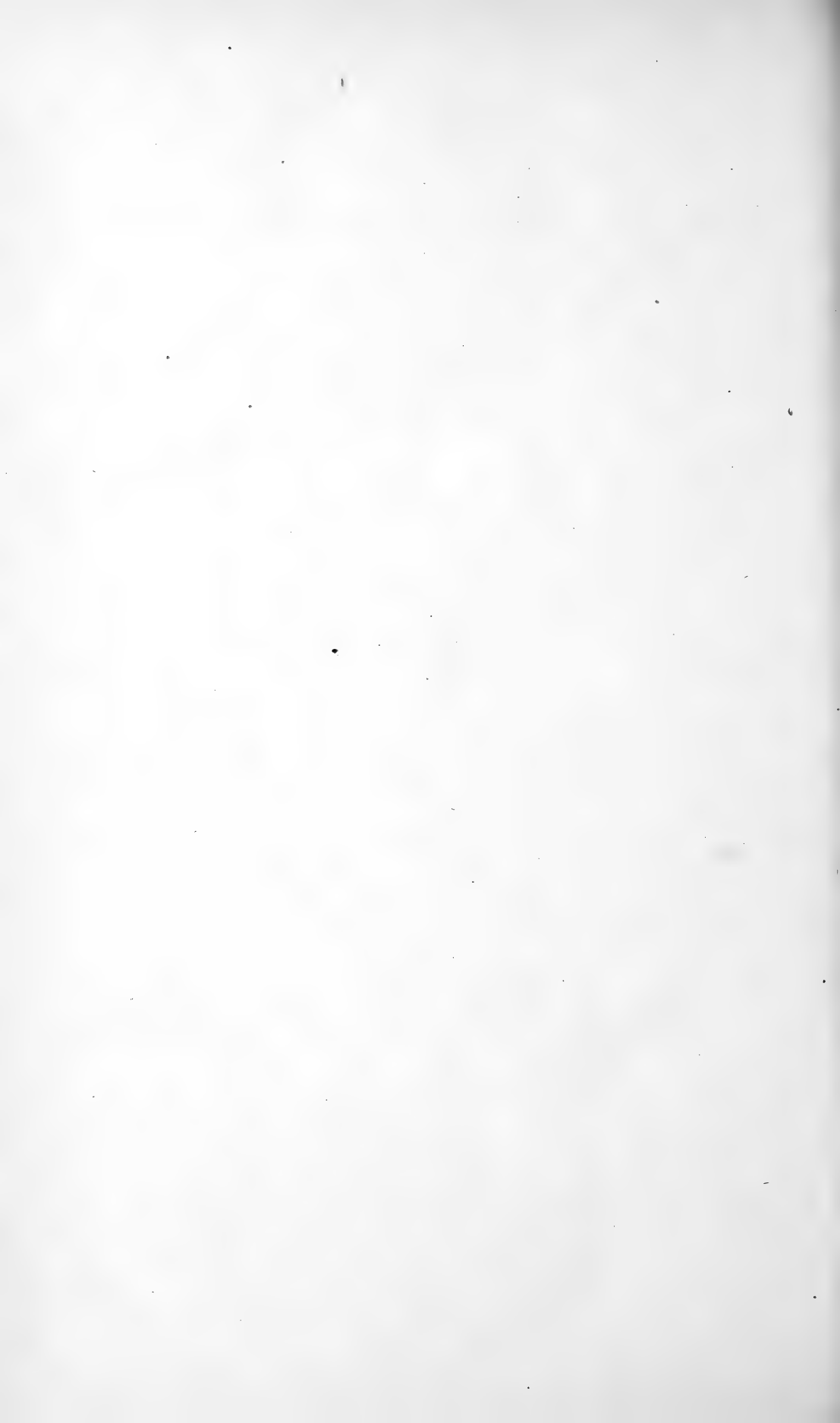


TABLE A.—No. I.—*continued.*

MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen engaged in the Scottish Fishing Industry in the Year 1921.

VI.—TOTAL FISHING VESSELS.

No.	District.	Number of Vessels.	Total Gross Tonnage.	Value.			Fishermen.		
				Vessels.	Fishing Gear.	Total.	Regularly Employed.	Partially Employed	Total.
				£	£	£			
<b>EAST COAST.</b>									
1	Eyemouth . . .	133	2,674	103,834	49,688	153,522	573	...	573
2	Leith . . .	388	7,843	491,179	64,935	556,114	1,567	145	1,712
3	Anstruther . . .	346	6,327	252,193	105,221	357,414	1,551	...	1,551
4	Montrose . . .	276	4,327	300,873	36,942	337,815	958	...	958
5	Stonehaven . . .	84	265	9,850	4,123	13,973	145	...	145
6	Aberdeen . . .	386	22,469	2,177,240	168,053	2,345,293	3,402	...	3,402
7	Peterhead . . .	395	6,746	433,928	146,527	580,455	1,388	33	1,421
8	Fraserburgh . . .	536	8,906	324,595	158,723	483,318	1,894	79	1,973
9	Bauff . . .	310	5,397	295,000	125,253	420,253	1,400	...	1,400
10	Buckie . . .	570	15,776	867,956	360,156	1,228,112	3,603	36	3,639
11	Findhorn . . .	250	5,651	347,435	128,316	475,751	1,494	...	1,494
12	Cromarty . . .	117	762	13,894	12,927	26,821	476	38	514
13	Helmsdale . . .	120	491	11,551	7,973	19,524	*292	13	305
14	Lybster . . .	49	119	1,079	1,494	2,573	*107	17	124
15	Wick . . .	309	2,505	118,067	55,233	173,300	*993	113	1,106
East Coast Totals .		4,269	90,258	5,748,674	1,425,564	7,174,238	19,843	474	20,317
<b>Orkney and Shetland.</b>									
16	Orkney . . .	422	1,087	9,600	7,003	16,603	*862	12	874
17	Shetland . . .	547	7,002	169,807	84,510	254,317	*2,124	...	2,124
Orkney and Shetland Totals .		969	8,089	179,407	91,513	270,920	2,986	12	2,998
<b>WEST COAST.</b>									
18	Stornoway . . .	435	3,875	58,435	61,867	120,302	*4,056	...	4,056
19	Barra . . .	269	1,056	12,769	10,202	22,971	*955	...	955
20	Loch Broom . . .	362	943	11,034	14,100	25,134	*711	...	711
21	Loch Carron & Skye	352	1,265	26,500	25,188	51,688	*862	...	862
22	Fort-William . . .	136	423	5,739	4,058	9,797	*403	...	403
23	Campbeltown . . .	202	1,028	32,914	12,372	45,286	*617	...	617
24	Inveraray . . .	144	757	24,807	8,233	33,040	*333	34	367
25	Rothesay . . .	86	229	4,765	4,528	9,293	90	40	130
26	Greenock . . .	101	960	63,622	5,455	69,077	151	64	215
27	Ballantrae . . .	323	1,371	58,152	17,569	75,721	463	89	552
West Coast Totals .		2,410	11,907	298,737	163,572	462,309	8,641	227	8,868
Grand Totals for 1921		7,648	110,254	6,226,818	1,680,649	7,907,467	*31470	713	32,183
Grand Totals for 1920		8,177	122,318	9,381,239	2,535,229	11,916,468	†35659	660	36,319
Increase in 1921 .		...	...	...	...	...	...	53	...
Decrease in 1921 .		529	12,064	3,154,421	854,580	4,009,001	4,189	...	4,136

\* Included in these figures are crofter fishermen numbering 9,197 in all.

† Includes 9,829 crofter fishermen.

TABLE A.—No. I.—

MEANS OF CAPTURE.—RETURN of Vessels, Gear, and Fishermen

VII.—FISHING GEAR.—

No.	District.	Nets.								
		Drift.	Herring Seine.	Danish Seine.	Cod.	Trammel.	Flounder (Seine).	Flounder (Set).	Other Kinds.	Total.
		Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.	Sq. Yards.
	<b>EAST COAST.</b>									
1	Eyemouth . . .	5,304,000	...	...	100,800	...	...	...	99,000	5,503,800
2	Leith . . .	3,267,000	44,400	...	...	...	7,000	...	100,800	8 419,200
3	Anstruther . . .	10,080,000	1,680	...	538,560	352,600	9,200	...	4,480	10,986,520
4	Montrose . . .	1,896,000	...	...	81,000	...	52,000	1,000	9,452	2,039,452
5	Stonehaven . . .	88,800	...	...	...	...	5,600	...	640	95,040
6	Aberdeen . . .	1,392,000	...	11,900	...	...	12,800	...	...	1,416,700
7	Peterhead . . .	16,392,000	...	4,200	63,900	...	24,000	...	...	16,484,100
8	Fraserburgh . . .	17,919,000	...	...	366,720	...	...	...	...	18,285,720
9	Banff . . .	12,900,000	...	2,800	1,641,600	...	...	...	...	14,544,400
10	Buckie . . .	42,600,000	...	123,200	2,028,600	...	2,800	...	...	44,754,600
11	Findhorn . . .	15,079,000	...	139,300	1,092,000	...	7,000	...	...	16,317,300
12	Cromarty . . .	922,000	...	...	165,600	...	...	...	...	1,087,600
13	Helmsdale . . .	330,000	...	...	386,400	...	700	...	...	717,100
14	Lybster . . .	211,250	...	...	...	...	...	...	...	211,250
15	Wick . . .	6,694,450	...	...	66,600	...	...	...	...	6,761,050
	<b>East Coast Totals</b>	<b>135,075,500</b>	<b>46,080</b>	<b>281,400</b>	<b>6,531,780</b>	<b>352,600</b>	<b>121,100</b>	<b>1,000</b>	<b>214,372</b>	<b>142,623,832</b>
	<b>Orkney and Shetland.</b>									
16	Orkney . . .	408,000	...	...	...	...	...	...	...	408,000
17	Shetland . . .	6,864,000	...	...	70,000	...	...	...	...	6,934,000
	<b>Orkney and Shetland Totals</b>	<b>7,272,000</b>	<b>...</b>	<b>...</b>	<b>70,000</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>7,342,000</b>
	<b>WEST COAST.</b>									
18	Stornoway . . .	6,131,800	...	...	...	...	360	...	...	6,132,160
19	Barra . . .	1,035,000	...	...	...	...	...	...	...	1,035,000
20	Loch Broom . . .	2,129,400	...	...	610,500	10,800	...	...	...	2,750,700
21	Loch Carron and Skye . . .	1,571,000	120,000	...	...	2,520	...	...	348,480	2,042,000
22	Fort-William . . .	379,000	1,600	...	45,760	...	...	...	12,160	433,520
23	Campbeltown . . .	93,360	988,000	...	...	3,600	1,280	...	14,320	1,100,560
24	Inveraray . . .	91,000	564,000	...	9,000	...	...	5,300	...	669,300
25	Rothsay . . .	359,000	162,000	...	...	...	...	...	186,000	707,000
26	Greenock . . .	153,000	94,500	...	...	...	...	...	65,100	312,600
27	Ballantrae . . .	1,025,000	312,000	...	257,840	172,000	49,400	16,500	1,200	1,833,940
	<b>West Coast Totals</b>	<b>12,967,560</b>	<b>2,242,100</b>	<b>...</b>	<b>923,100</b>	<b>188,920</b>	<b>51,040</b>	<b>21,800</b>	<b>627,260</b>	<b>17,021,780</b>
	<b>Grand Totals for 1921</b>	<b>155,315,060</b>	<b>2,288,180</b>	<b>281,400</b>	<b>7,524,880</b>	<b>541,520</b>	<b>172,140</b>	<b>22,800</b>	<b>841,632</b>	<b>166,987,612</b>
	<b>Grand Totals for 1920</b>	<b>187,710,400</b>	<b>2,162,220</b>	<b>...</b>	<b>7,076,820</b>	<b>266,620</b>	<b>97,800</b>	<b>136,500</b>	<b>1,082,400</b>	<b>198,532,760</b>
	<b>Increase in 1921</b>	<b>...</b>	<b>125,960</b>	<b>281,400</b>	<b>448,060</b>	<b>274,900</b>	<b>74,340</b>	<b>...</b>	<b>...</b>	<b>...</b>
	<b>Decrease in 1921</b>	<b>32,395,340</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>113,700</b>	<b>240,768</b>	<b>31,545,148</b>

continued.

engaged in the Scottish Fishing Industry in the Year 1921.

(a) QUANTITIES.

Lines.				Bush Ropes, Buoy Ropes, and Stoppers.	Crab and Lobster Creels.	District.	No.
Great.	Small.	Hand.	Total.				
Yards.	Yards.	Yards.	Yards.	Yards.	Number.	<b>EAST COAST.</b>	
864,000	453,600	12,160	1,329,760	375,150	2,640	Eyemouth . . .	1
180,000	717,080	13,500	910,580	164,560	1,920	Leith . . .	2
3,244,500	742,800	19,320	4,006,620	578,709	3,830	Anstruther . . .	3
596,100	1,957,600	41,700	2,595,400	288,080	2,105	Montrose . . .	4
80,640	420,160	10,200	511,000	88,660	950	Stonehaven . . .	5
2,328,960	473,280	5,880	2,808,120	273,440	200	Aberdeen . . .	6
1,592,640	1,200,720	184,560	2,977,920	783,530	164	Peterhead . . .	7
1,434,960	1,044,000	115,760	2,594,720	1,006,690	1,970	Fraserburgh . . .	8
561,600	1,900,800	59,520	2,521,920	680,320	960	Banff . . .	9
114,720	464,640	53,640	633,000	1,638,880	400	Buckie . . .	10
163,200	823,200	13,980	1,000,380	761,240	260	Findhorn . . .	11
...	288,960	7,080	296,040	34,675	180	Cromarty . . .	12
118,800	924,480	14,760	1,058,040	11,360	950	Helmsdale . . .	31
34,800	70,560	23,040	128,400	16,470	290	Lybster . . .	14
210,480	322,320	149,760	682,560	353,340	4,730	Wick . . .	15
11,525,400	11,804,200	724,860	24,054,460	7,055,154	21,549	East Coast Totals.	
63,360	132,480	104,040	299,880	153,660	11,220	<b>Orkney and Shetland.</b>	
666,720	1,079,280	132,600	1,878,600	620,710	135	Orkney . . .	16
						Shetland . . .	17
730,080	1,211,760	236,640	2,178,480	774,370	11,355	Orkney and Shet- land Totals.	
2,088,240	945,360	70,000	3,103,600	318,140	7,265	<b>WEST COAST.</b>	
198,000	92,200	35,760	325,960	119,060	6,460	Stornoway . . .	18
220,500	440,500	83,940	744,940	117,040	3,880	Barra . . .	19
						Loch Broom . . .	20
674,880	154,080	51,120	880,080	138,410	4,818	Loch Carron & Skye	21
141,440	39,240	24,240	204,920	32,230	2,530	Fort-William . . .	22
300,720	109,040	9,300	419,060	127,272	2,878	Campbeltown . . .	23
90,000	60,120	...	150,120	95,050	971	Inveraray . . .	24
140,000	54,000	3,600	197,600	52,960	180	Rothsay . . .	25
30,720	84,800	8,800	124,320	29,934	740	Greenock . . .	26
755,720	108,720	8,220	872,660	111,262	1,360	Ballantrae . . .	27
4,640,220	2,088,060	294,980	7,023,260	1,141,358	31,082	West Coast Totals.	
16,895,700	15,104,020	1,256,480	33,256,200	8,970,882	63,986	Grand Totals for 1921	
16,838,980	16,784,680	1,448,840	35,072,500	10,352,069	63,873	Grand Totals for 1920	
56,720	...	...	...	...	113	Increase in 1921	
...	1,680,660	192,360	1,816,300	1,381,187	..	Decrease in 1921	

TABLE A.—No. I.—

MEANS OF CAPTURE—RETURN of Vessels, Gear, and Fishermen

VII.—FISHING GEAR.—

No.	District.	Nets.								
		Drift.	Herring Seine.	Danish Seine.	Cod.	Trammel.	Flounder (Seine).	Flounder (Set).	Other Kinds.	Total.
	<b>EAST COAST.</b>	£	£	£	£	£	£	£	£	£
1	Eyemouth . . .	32,620	...	...	420	...	...	...	825	33,865
2	Leith . . .	30,500	990	...	...	...	360	...	1,100	32,959
3	Anstruther . . .	59,360	98	...	1,872	1,953	184	...	262	63,725
4	Montrose . . .	9,840	...	...	945	...	1,950	20	340	13,098
5	Stonehaven . . .	564	...	...	...	...	252	...	2	810
6	Aberdeen . . .	15,220	...	298	...	...	576	...	...	16,094
7	Peterhead . . .	101,970	...	120	373	...	960	...	...	103,423
8	Fraserburgh . . .	114,030	...	...	1,528	...	...	...	...	115,558
9	Banff . . .	86,000	...	80	6,840	...	...	...	...	92,920
10	Buckie . . .	280,000	...	3,520	9,660	...	80	...	...	293,260
11	Findhorn . . .	88,265	...	3,980	5,200	...	200	...	...	97,645
12	Cromarty . . .	8,580	...	...	1,380	...	...	...	...	9,960
13	Helmsdale . . .	1,650	...	...	1,840	...	20	...	...	3,510
14	Lybster . . .	813	...	...	...	...	...	...	...	813
15	Wick . . .	40,412	...	...	555	...	...	...	...	40,967
	<b>East Coast Totals</b>	<b>869,824</b>	<b>1,088</b>	<b>7,998</b>	<b>30,613</b>	<b>1,953</b>	<b>4,582</b>	<b>20</b>	<b>2,529</b>	<b>918,607</b>
	<b>Orkney and Shetland.</b>									
16	Orkney . . .	2,040	...	...	...	...	...	...	...	2,040
17	Shetland . . .	52,040	...	...	420	...	...	...	...	52,460
	<b>Orkney and Shetland Totals</b>	<b>54,080</b>	<b>..</b>	<b>...</b>	<b>420</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>54,500</b>
	<b>WEST COAST.</b>									
18	Stornoway . . .	39,560	...	...	...	...	17	...	...	39,577
19	Barra . . .	6,184	...	...	...	...	...	...	...	6,184
20	Loch Broom . . .	6,733	...	...	2,340	70	...	...	...	9,143
21	Loch Carron & Skye	11,961	2,100	...	...	35	...	...	3,881	17,977
22	Fort-William . . .	1,664	120	...	429	...	...	...	76	2,289
23	Campbeltown . . .	400	9,120	...	...	36	40	...	224	9,820
24	Inveraray . . .	285	6,530	...	30	...	...	26	...	6,871
25	Rothsay . . .	1,211	1,320	...	...	...	...	...	744	3,275
26	Greenock . . .	881	810	...	...	...	...	...	372	2,063
27	Ballantrae . . .	4,100	2,780	...	3,012	808	494	440	28	11,662
	<b>West Coast Totals</b>	<b>72,979</b>	<b>22,780</b>	<b>...</b>	<b>5,811</b>	<b>949</b>	<b>551</b>	<b>466</b>	<b>5,325</b>	<b>108,861</b>
	<b>Grand Totals for 1921</b>	<b>996,883</b>	<b>23,868</b>	<b>7,998</b>	<b>36,844</b>	<b>2,902</b>	<b>5,133</b>	<b>486</b>	<b>7,854</b>	<b>1,081,968</b>
	<b>Grand Totals for 1920</b>	<b>1,633,785</b>	<b>26,299</b>	<b>...</b>	<b>36,396</b>	<b>1,193</b>	<b>3,577</b>	<b>1,312</b>	<b>10,577</b>	<b>1,713,139</b>
	<b>Increase in 1921 . . .</b>	<b>...</b>	<b>...</b>	<b>7,998</b>	<b>448</b>	<b>1,709</b>	<b>1,556</b>	<b>...</b>	<b>...</b>	<b>...</b>
	<b>Decrease in 1921 . . .</b>	<b>636,902</b>	<b>2,431</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>...</b>	<b>826</b>	<b>2,723</b>	<b>631,171</b>

continued.

engaged in the Scottish Fishing Industry in the Year 1921.

(b) VALUES.

Lines.				Bush Ropes, Buoy Ropes, and Stoppers.	Crab and Lobster Creels.	Trawl Gear.	Total.	District.	No.
Great.	Small.	Hand.	Total.						
£	£	£	£	£	£	£	£	<b>EAST COAST.</b>	
3,600	1,104	28	4,732	10,299	792	...	49,688	Eyemouth . . .	1
300	2,613	35	2,948	6,741	576	21,720	64,935	Leith . . .	2
19,583	1,776	35	21,394	19,332	766	...	105,221	Anstruther . . .	3
2,800	4,463	72	7,335	5,235	632	10,645	36,942	Montrose . . .	4
360	1,764	34	2,158	909	238	...	4,123	Stonehaven . . .	5
23,876	1,972	25	25,873	8,056	80	117,950	168,053	Aberdeen . . .	6
7,246	3,567	253	11,066	26,577	41	5,420	146,527	Peterhead . . .	7
6,348	4,279	130	10,757	32,014	394	...	158,723	Fraserburgh . . .	8
2,520	7,920	91	10,531	21,562	240	...	125,253	Banff . . .	9
478	1,452	89	2,019	60,027	100	4,750	360,156	Buckie . . .	10
680	2,573	28	3,281	25,285	65	2,040	123,316	Findhorn . . .	11
...	1,204	20	1,224	1,689	54	...	12,927	Cromarty . . .	12
446	3,391	48	3,885	340	238	...	7,973	Helmsdale . . .	13
174	289	57	520	74	87	...	1,494	Lybster . . .	14
974	1,630	372	2,976	9,277	2,013	...	55,233	Wick . . .	15
<b>69,385</b>	<b>39,997</b>	<b>1,317</b>	<b>110,699</b>	<b>227,417</b>	<b>6,316</b>	<b>162,525</b>	<b>1,425,564</b>	<b>East Coast Totals.</b>	
<b>Orkney and Shetland.</b>									
220	368	220	808	1,355	2,800	...	7,003	Orkney . . .	16
2,763	4,497	225	7,485	24,541	24	...	84,510	Shetland . . .	17
<b>2,983</b>	<b>4,865</b>	<b>445</b>	<b>8,293</b>	<b>25,896</b>	<b>2,824</b>	<b>...</b>	<b>91,513</b>	<b>Orkney and Shetland Totals.</b>	
<b>WEST COAST.</b>									
6,932	3,048	175	10,155	9,955	2,180	...	61,867	Stornoway . . .	18
660	344	88	1,092	1,634	1,292	...	10,202	Barra . . .	19
661	1,762	140	2,563	1,613	781	...	14,100	Loch Broom . . .	20
2,989	667	109	3,765	1,840	1,606	...	25,188	Loch Carron & Skye	21
518	133	60	711	384	674	...	4,058	Fort-William . . .	22
527	250	23	800	789	963	...	12,372	Campbeltown . . .	23
300	150	...	450	669	243	...	8,233	Inveraray . . .	24
300	162	6	468	749	36	...	4,528	Rothsay . . .	25
100	159	26	285	403	184	2,520	5,455	Greenock . . .	26
2,836	527	33	3,396	469	288	1,754	17,569	Ballantrae . . .	27
<b>15,823</b>	<b>7,202</b>	<b>660</b>	<b>23,685</b>	<b>18,505</b>	<b>8,247</b>	<b>4,274</b>	<b>163,572</b>	<b>West Coast Totals.</b>	
<b>88,191</b>	<b>52,064</b>	<b>2,422</b>	<b>142,677</b>	<b>271,818</b>	<b>17,387</b>	<b>166,799</b>	<b>1,680,649</b>	<b>Grand Totals for 1921</b>	
<b>97,720</b>	<b>63,794</b>	<b>3,704</b>	<b>165,218</b>	<b>418,164</b>	<b>19,029</b>	<b>219,679</b>	<b>2,535,229</b>	<b>Grand Totals for 1920</b>	
...	...	...	...	...	...	...	...	<b>Increase in 1921 .</b>	
<b>9,529</b>	<b>11,730</b>	<b>1,282</b>	<b>22,541</b>	<b>146,346</b>	<b>1,642</b>	<b>52,880</b>	<b>854,580</b>	<b>Decrease in 1921 .</b>	

TABLE A.—

RETURN giving Particulars regarding the State of the Fisheries at each

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Seaworthy Boats Unemployed.	Fishermen and Boys.	
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Regularly Employed.		Partially Employed.	
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
<i>Eyemouth District.†</i>																	
North Shields (Northumberland)	148 12			3		7	3	1	1	75	4,021	14	484	6	530		
Cullercoats						2	33		9	44	148	7	20	4	54		
Blyth						2	2	1	1	6	17	3	8	1	12		
Newbiggin			2	1		3	58		18	82	273	2	30	8	42		
Cresswell							2		2	4	8		2	1	9		
Hauxley						2	1		3	6	17	3	12	2	12		
Amble						2	5		2	9	26	1	2	2	12		
Alnmouth						1	1		2	4	9		1	1	6		
Boulmer							18		2	20	54	2	3	5	20		
Craster						3	16		1	20	59		4	3	26		
Newton						2	12		7	21	54	4	10	2	18		
Beadnell						7	15		8	30	91	8	21	5	40		
North Sunderland		1	1	2		8	22		1	35	245	1	35	7	62		
Holy Island				1		6	8	1		15	65	5	23	2	35		
Spittal				2		2	2		2	8	41	2	11		24		
Berwick		2		1		2	6		1	12	107	6	19	3	30		
English Stations—Totals	60	3	3	10		48	204	3	60	301	5,235	30	579	52	932		
Burnmouth (Berwickshire)		2		8		1	14		9	34	149		1	4	82		
Eyemouth	20	35	1	3		1	2			62	1,924	2	114	6	409		

\* Drifters or Liners unless otherwise stated.

† Landings in English section not recorded by Board.

‡ Trawlers.



No. II.

Fishing Creek or Station on the Scottish Coasts during the year 1921.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Trawl and drift nets and lines.	The North Sea.	..	..	..	..	..	Herrings, haddocks, cod, and flat fish.	13	28,025 crans herrings landed, value £81,450. Decreases of 22,062 crans and £67,391 from previous year. Decrease also in the number of trawlers employed.
Lines and creels.	Inshore.	..	..	..	..	..	Codlings, haddocks, crabs and lobsters.	..	Decrease in landings.
"	"	..	..	..	..	..	Herrings, cod, haddocks, crabs and lobsters.	2	22 crans herrings landed, value £95, against 988 crans and £2,219 in previous year. Average white fishing.
"	"	..	..	..	..	..	"	1	15 crans herrings landed, value £79. Average line and crab fishing.
"	"	..	..	..	..	..	Codlings, haddocks, crabs and lobsters.	..	Average fishing.
"	"	..	..	..	..	..	"	..	Do. do.
"	"	..	..	..	..	..	"	..	Decrease in landings.
"	"	..	..	..	..	..	"	..	Average fishing.
"	"	..	..	..	..	..	"	..	Do. do.
"	"	..	..	..	..	..	Herrings, haddocks, codlings, crabs and lobsters.	3	General decrease. 947 crans herrings landed, value £1,984.
"	"	..	..	..	..	..	Haddocks, codlings, crabs and lobsters.	..	Average fishing.
Nets, lines, and creels.	2 to 20 miles offshore.	..	..	..	..	..	"	..	Decrease in landings.
"	"	..	..	..	..	..	Herrings, haddocks, codlings, plaice, crabs and lobsters.	3	General decrease. 2,655 crans herrings landed, value £4,874.
Lines and creels.	Inshore.	..	..	..	..	..	Codlings, haddocks, plaice, crabs and lobsters.	..	Average fishing.
"	"	..	..	..	..	..	Herrings, haddocks, codlings, plaice, crabs and lobsters.	4	Average line and crab fishing.
Nets, lines, and creels.	2 to 40 miles offshore.	..	..	..	..	..	"	5	
		..	..	..	..	..		36	Marked decrease in herrings. 1908 crans landed, value £3,534.
Nets, lines, and creels.	2 to 40 miles offshore.	..	..	2,796	3,387	7,458	Haddocks, codlings, crabs and lobsters.	..	Decrease in white fish and lobster returns; marked increase in crabs. Two local crews prosecuted summer herring fishing.
"	"	54,781	38,653	-5,460	6,723	98	Herrings, mackerel, haddocks, codlings and skate.	14	Decrease in line fish landed. Winter herring fishing exceptionally good, but poor results obtained from summer herring fishing. Forty-five crews prosecuted autumn herring fishing at Yarmouth, which proved unsatisfactory.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to CREEK.													Seaworthy Boats Unemployed.	Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Regularly Employed.	Partially Employed.	
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.		No.	Ton.					
	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No	Ton.	No.	No.	No.	
<i>Eyemouth District—contd.</i>																	
St Abbs (Berwickshire) - -	..	12	..	2	..	13	..	4	3	34	488	4	16	2	82	..	
Scottish Stations—Totals -	20	49	1	13	..	15	16	4	12	130	2,561	6	129	12	573	..	
English Stations—Totals -	60	3	3	10	..	48	204	3	60	391	5,235	30	579	52	932	..	
Grand Totals for District -	80	52	4	23	..	63	220	7	72	521	7,796	24	450	64	1,505	..	
<i>Leith District.</i>																	
Cove (Berwickshire) - -	..	..	..	..	..	3	5	..	..	8	23	1	3	3	21	..	
Dunbar (Haddingtonshire) -	..	..	..	1	..	6	17	..	2	26	85	..	11	4	72	..	
North Berwick ,, -	..	..	..	..	..	4	..	..	..	4	11	..	..	..	14	..	
Port Seton and Cockenzie (Haddingtonshire)	1	27	1	27	..	14	1	1	4	76	1,666	1	23	2	402	..	
Prestonpans ,, -	..	..	..	..	..	..	..	..	3	3	3	1	1	..	6	..	
Fisherrow (Midlothian) -	1	5	..	9	..	8	5	..	2	30	388	..	125	2	208	..	
Leith ,, -	15	..	..	..	..	..	..	..	..	15	714	9	294	..	117	..	
Newhaven ,, -	..	..	..	2	..	18	9	..	2	31	131	11	51	3	113	..	
Granton ,, -	{ 160 } 1	..	..	1	..	..	..	..	..	62	3,861	..	14	..	525	..	
Bo'ness (Linlithgowshire) -	..	..	5	..	2	..	1	..	1	9	193	..	..	..	9	8	
Alloa (Clackmannanshire) -	..	..	2	..	7	..	4	..	7	20	274	3	73	3	10	10	
Kincardine (Fifeshire) -	..	..	8	..	3	..	..	..	..	11	240	1	..	1	12	10	
Inverkeithing ,, -	..	..	..	..	..	..	..	..	3	3	3	..	..	..	2	4	
Aberdour ,, -	..	..	..	..	..	1	2	..	1	4	12	..	5	..	5	4	
Burntisland ,, -	..	..	..	..	..	..	..	..	16	16	13	3	2	1	12	14	
Kinghorn ,, -	..	..	..	..	..	..	2	..	4	6	6	3	3	..	5	5	
Kirkcaldy ,, -	..	..	..	..	..	4	3	..	32	39	41	2	1	1	24	60	
Dysart and Wemyss (Fifeshire)	..	..	..	..	..	..	4	..	19	23	25	..	1	1	10	30	
Totals - -	78	32	16	40	12	53	53	1	96	386	7,639	5	63	21	1,567	145	

\* Drifters or liners unless otherwise stated.

† Trawlers.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.	
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.				
		Cwts.	£	Cwts.	£	£				
Nets, lines and creels.	2 to 40 miles offshore.	..	..	405	452	2,593	Haddocks, codlings, crabs and lobsters.	..	Improvement in crab and lobster returns. Line fish mostly landed at Eyemouth. Eleven crews participated in summer herring fishing, and one in the autumn herring fishing at Lowestoft, both of which proved unremunerative.	
		54,731	33,653	8,661	10,562	10,149				14
		..	..	..	..	..				36
		..	..	..	..	..				50
Crab creels.	1 to 5 miles offshore.	..	..	735	352	1,452	Lobsters and crabs.	..	Decreased catch and value of crabs and lobsters.	
Creels and lines.	1 to 10 miles offshore.	2,145	1,222	2,802	4,693	3,177	Herrings, haddock and crabs.	2	Decrease in catch and value of crabs and lobsters, but increase in quantity of white fish.	
"	"	210	368	1,327	2,262	437	Haddock and lobsters.	..	Do. do. do.	
Nets and lines.	Adjacent waters.	..	..	19,617	41,046	918	Codling, haddock and plaice.	..	Increase in quantity and value due to more active prosecution of small line fishing.	
Lines.	1 to 5 miles offshore.	..	..	162	205	51	Codling and haddock.	..	Returns almost similar to those of 1920.	
Nets and lines.	Adjacent waters.	268	113	390	697	34	Herrings and codling.	..	Slight increase in quantity and value.	
Dredges.	"	..	..	..	..	133	Mussels.	8	Decrease in quantity of mussels dredged.	
Nets and line.	Firth of Forth	27,897	18,911	27,223	26,818	264	Herrings, codling and haddock.	10	Large increases in quantity and value attributable to greater success of herring and line fishings.	
Otter trawling.	North Sea.	2,894	2,081	385,058	454,638	..	Codling, haddock and flat fish.	..	Decreases in quantity and value of trawled fish due to various labour disputes.	
Bag-nets.	Upper reaches of Firth of Forth.	16	8	808	493	..	Codling.	..	Decreases in quantity and value.	
"	"	90	31	15,110	1,446	..	Sprat.	..	Large increase in quantity, but value about same as last year. Sprats were very plentiful but demand was poor.	
"	"	420	423	6,076	929	..	Herrings and sprats.	..	Increase in quantity, but value similar to that of 1920.	
Drift nets.	Foreshores.	781	479	..	..	..	Herrings.	..	Decreases in quantity and value.	
"	"	424	264	..	..	..	"	..	Returns about the same as last year.	
"	"	584	415	35	68	2	"	..	Decreases in quantity and value of herrings.	
Nets and lines.	"	735	471	324	504	..	Herrings and codling.	..	Increases in quantity and value.	
"	"	505	333	583	874	..	Herrings and haddock.	..	Do. do. do.	
Lines.	"	5	5	538	558	..	Codling and Haddock.	..	Returns about the same as last year.	
		36,974	25,124	460,783	535,583	6,468			15	

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)				2nd Class.		3rd Class.		Total.		No.	Ton.	No.			Ton.	No.	No.	Partially Employed.
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.												
<i>Anstruther District.</i>																			
Buckhaven	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.			
Buckhaven	..	..	..	1	..	10	9	..	12	32	84	8	21	1	41	..			
Methil and Leven	..	..	..	..	..	..	..	..	4	4	4	..	..	..	6	..			
Largo	..	..	..	..	..	..	5	..	8	13	22	..	..	1	26	..			
Elie and Earlsferry	..	..	..	..	..	1	..	..	6	7	8	..	..	..	4	..			
St. Monans	9	48	6	6	..	5	3	..	8	85	2,754	5	144	5	472	..			
Pittenweem	12	12	2	2	..	22	7	..	1	58	1,223	1	77	3	316	..			
Anstruther and Cellardyke	35	14	..	3	..	5	12	..	5	74	1,906	4	83	4	525	..			
Crail	..	..	..	..	..	8	10	..	7	25	69	4	9	4	48	..			
Kingsbarns	..	..	..	..	..	..	..	..	2	2	4	..	..	..	4	..			
St. Andrews	..	..	..	1	..	11	12	..	1	25	127	1	4	3	62	..			
River Eden	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..			
Tayport	†2	..	..	..	..	..	6	..	5	13	28	..	..	3	12	..			
Newburgh	..	..	..	..	8	..	..	..	..	8	98	2	28	..	30	..			
Totals	58	74	8	13	8	62	64	..	59	346	6,327	15	192	24	1,551	..			
<i>Montrose District.</i>																			
Dundee	‡5	..	..	..	14	..	..	..	..	19	468	2	22	4	82	..			
Broughty Ferry	..	..	1	..	3	..	13	..	6	23	148	3	39	3	50	..			
Westhaven	..	..	..	..	..	..	..	..	6	6	6	..	..	..	6	..			
Easthaven	..	..	..	..	..	..	..	..	4	4	7	..	..	..	8	..			
Arbroath	..	8	..	22	..	16	10	..	2	58	743	1	47	3	177	..			
Auchmithie	..	..	..	..	..	..	9	..	6	15	27	..	..	4	16	..			

\* Drifters or Liners unless otherwise stated.

† Mussel Dredgers.

‡ Trawlers.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets and lines.	Firth of Forth	171	68	3,188	6,889	392	Haddocks and codling.	..	Decreases of 11% in quantity and 17% in value as compared with 1920.
Lines and creels.	"	18	11	66	104	80	Plaice, codling, herring and haddocks.	..	Of no importance as a fishing station.
Nets and lines.	"	..	..	2,119	3,288	..	Haddock, codling, and plaice.	..	Increases of 17% in quantity and 49% in value, chiefly in haddocks and plaice.
"	"	1	1	117	167	6	Haddock, codling, and plaice.	..	Of no importance as a fishing station. Slight decreases in quantity and value.
"	Firth of Forth and North Sea.	32,637	19,623	1,123	2,195	..	Herring, codling and skate.	2	Very large increase in landings of herrings, due to revival of the winter fishing. Other kinds show slight decrease.
"	"	6,120	3,384	13,049	22,294	..	Haddocks, herring, codling, and plaice.	4	Do. Haddocks and plaice, slight increases in quantity and value.
Nets, lines and creels.	"	46,480	25,474	672	956	464	Herring, codling, and haddocks.	4	Do. Cod show decreases of 40% in quantity and 63% in value.
"	Along the coast to 10 miles off.	2,776	733	1,265	1,147	3,361	Herring, codling, and haddocks.	..	An increase of 80% in total quantity, but a decrease in the total value of 21% owing to the preponderance of herrings. A slight decrease in the value of shell fish.
Lines and creels.	Along the coast.	..	..	20	25	267	Codling, plaice and lobsters.	..	Of no importance as a fishing station.
Seine flounder nets, set nets and lines.	St. Andrews Bay and to Bell Rock.	..	..	5,843	7,725	10	Plaice, codling, and haddocks.	..	Very large increases in landings of plaice, due to the adoption of flounder seine nets, but corresponding decreases in landings of cod and haddocks.
Mussel Dredging.	River Eden.	..	..	..	..	1,353	Mussels.	..	Increase of £827 in value of mussels.
"	Estuary of Tay.	..	..	..	..	1,700	Mussels.	..	Increase of £143 in value of mussels.
Bag-Nets.	River Tay.	..	..	1,873	860	..	Sparlings, flounders, and sprats.	..	Decreases of 80% in quantity and 39% in value due to light landings of sprats.
		88,203	49,294	29,335	45,650	8,133		10	
Trawling and Bag-Nets.	River Tay and from 5 to 60 miles E. and E.S.E. from Bell Rock.	583	292	72,618	104,587	..	Haddock, cod and codling, whiting, sprats, and flat fish.	2	Increases in quantity and value of trawl fish landed, but large decrease in sprats.
Nets and lines.	Tay Estuary.	123	25	113	117	138	Herrings and codlings.	..	Decreases of 80% in quantity and 90% in value of white fish due to falling off in plaice and dabs.
Lines and creels.	Along coast.	..	..	56	27	60	Crabs.	..	Unimportant creek.
"	"	..	..	42	45	103	Crabs and lobsters.	..	Do.
Herring and seine nets, lines and creels.	Vicinity of Bell Rock and 1 to 30 miles off.	377	170	30,481	58,285	477	Haddocks, plaice, and codlings.	6	Increases of 45.5% in quantity and 34% in value of white fish due to successful seine net fishing; but decrease of 41% in value of shell fish.
Lines and creels.	Along coast.	..	..	248	246	..	Codlings.	..	White fish fishing similar to last year. Shell-fish fishing entirely neglected.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.			
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.								
	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
<i>Montrose District—contd.</i>																	
Usan (Forfarshire) - - -	..	..	..	..	..	..	..	..	2	2	3	2	3	..	8	..	
Ferryden ,, - - -	..	2	..	17	..	7	1	..	15	42	311	..	6	4	148	..	
Montrose ,, - - -	{ 3 120	..	1	..	..	..	..	..	6	30	1,976	..	5	1	242	..	
Milton (Kincardineshire) -	..	..	..	..	..	..	..	..	1	1	1	..	1	..	2	..	
Johnshaven ,, - - -	..	..	..	7	..	9	10	..	8	34	184	5	11	6	62	..	
Gourdon ,, - - -	†1	3	2	25	..	8	3	..	..	42	453	1	46	3	157	..	
<b>Totals - - -</b>	<b>29</b>	<b>13</b>	<b>4</b>	<b>71</b>	<b>17</b>	<b>40</b>	<b>46</b>	<b>..</b>	<b>56</b>	<b>276</b>	<b>4,327</b>	<b>8</b>	<b>44</b>	<b>28</b>	<b>958</b>	<b>..</b>	
<i>Stonehaven District.</i>																	
Shieldhill - - -	..	..	..	..	..	..	..	..	3	3	3	..	..	..	4	..	
Catterline - - -	..	..	..	..	..	2	3	..	6	11	19	..	..	..	14	..	
Stonehaven - - -	..	..	..	10	..	8	7	..	32	57	224	3	17	..	110	..	
Cowie - - -	..	..	..	..	..	..	1	..	5	6	8	2	4	..	8	..	
Skateraw - - -	..	..	..	..	..	1	1	..	5	7	11	..	1	..	9	..	
<b>Totals - - -</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>10</b>	<b>..</b>	<b>11</b>	<b>12</b>	<b>..</b>	<b>51</b>	<b>84</b>	<b>265</b>	<b>5</b>	<b>22</b>	<b>..</b>	<b>145</b>	<b>..</b>	
<i>Aberdeen District.</i>																	
Downies - - -	..	..	..	..	..	..	3	..	1	4	11	..	..	..	9	..	
Portlethen - - -	..	..	..	..	..	..	3	..	1	4	9	..	..	..	11	..	
Cove Bay - - -	..	..	..	..	..	1	6	..	3	10	19	1	1	..	16	..	
Aberdeen - - -	{ †237 ‡27 13	2	..	19	..	6	7	..	28	339	20,143	15	1,487	..	3,855	..	
<b>Totals - - -</b>	<b>277</b>	<b>2</b>	<b>..</b>	<b>19</b>	<b>..</b>	<b>7</b>	<b>19</b>	<b>..</b>	<b>33</b>	<b>357</b>	<b>20,182</b>	<b>14</b>	<b>1,486</b>	<b>..</b>	<b>3,891</b>	<b>..</b>	

\* Drifters or Liners unless otherwise stated.

† Trawlers.

‡ Liners.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Lines and creels. Herring and seine nets, lines and mussel dredging.	Along coast.	..	..	11	13	69	Crabs and lobsters.	..	Unimportant creek.
	1 to 25 miles off and South Esk river.	..	..	..	..	194	Mussels and whelks.	..	Fishermen land their catches at Montrose.
		42	19	14,169	21,242	2,298	Haddock, cod, codlings and plaice.	4	Steam trawlers operate from Aberdeen. A decrease in trawl landings is counterbalanced by an increase in line and net landings. Creek of no importance.
Lines and creels. Seine and cod nets, lines and creels.	Along coast.	..	..	84	95	110	Crabs and lobsters.	..	
" "	1 to 20 miles off.	..	..	3,220	5,719	570	Cod and codlings, plaice, crabs and lobsters.	..	Line and net fishing similar to last year, but decrease of 30% in value of shell fish.
	1 to 25 miles off.	..	..	21,792	22,799	637	Haddock, cod and codlings, whiting and crabs.	5	Slight increase in quantity, but decrease of £5,183 in value of white fish. Decrease of 33% in value of shell fish. The trawler operates from Aberdeen.
		1,125	506	142,834	213,175	4,656			17
Lines and crab creels.	1 to 3 miles offshore.	..	..	53	58	463	Codlings, crabs and lobsters.	..	Slight increases in both white fish and shell fish.
" "	1 to 6 miles offshore.	..	..	589	589	1,257	" "	..	Do. do. do.
Nets, lines, and crab creels.	1 to 60 miles offshore.	42	41	15,402	15,224	96	Haddocks, codlings, whittings, mackerel, and crabs.	5	Increases in quantity and value of white fish; decrease in herrings; shell fish, no change.
Lines and crab creels.	1 to 5 miles offshore.	..	..	94	79	50	Codlings and lobsters.	..	Decreases in both white fish and shell fish.
" "	" "	..	..	450	360	16	Haddocks, whittings, and lobsters.	..	Increases in both white fish and shell fish.
		42	41	16,588	16,310	1,882			5
Small and hand lines.	1 to 10 miles offshore.	..	..	643	603	16	Codlings, haddocks, and whittings.	..	Slight increases in both white fish and shell fish.
Lines and creels.	" "	..	..	1,091	1,010	66	Codlings, haddocks, whittings, and crabs.	..	Results similar to last year's.
" "	" "	..	..	1,179	1,134	214	" "	..	Slight increases in both white fish and shell fish.
Trawl, lines, and nets.	North Sea in Lat. 53° to 61° N. Orkney, Shetland, North-western Grounds, St. Kilda, Rockall, Flannan Isles, Butt of Lewis, West Coast of Ireland, Faroe, and Iceland.	31,166	17,066	1636024	2413240	6	Cod, haddocks, ling, saithe, whiting, hake, herring, halibut, lemon soles, plaice, skate, meg-rims, etc.	173	Large decreases in quantity and value of herrings. White fish also show considerable decreases, notwithstanding great increase in number of arrivals.
		31,166	17,066	1636937	2415987	302			173

Kipper curers (Tinnars & Co.) and white fish curers 162.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Seaworthy Boats Unemployed.	Regularly Employed.		Partially Employed.
	45 feet keel and upwards.		30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.							No.	Ton.	
<i>Peterhead District.</i>	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
Newburgh (Aberdeenshire)	..	..	..	..	..	..	..	..	2	2	4	..	..	..	6	..	
Collieston	..	..	..	..	..	..	..	..	10	10	8	1	4	2	13	..	
Whinnyfold	1	..	1	..	..	..	1	..	5	8	91	1	38	1	22	..	
Port Erroll	2	..	..	..	..	4	1	..	12	19	104	4	6	6	56	..	
Bullers o' Buchan	..	..	..	..	..	..	..	..	2	2	2	..	..	..	2	..	
Boddam	7	4	..	..	..	2	2	1	29	45	456	..	1	10	117	3	
Peterhead	{ 112 † 117	11	3	8	..	37	14	11	88	301	5,953	20	234	16	1,118	30	
Rattray	..	..	..	..	..	..	..	..	3	3	3	..	..	..	6	..	
Totals	139	15	4	8	..	43	18	12	151	390	6,621	16	207	35	1,340	33	
<i>Fraserburgh District.</i>																	
St. Combs and Charlestown	6	10	..	..	..	..	..	..	48	64	724	1	45	5	172	6	
Inverallochy	13	9	..	..	..	..	..	1	50	73	889	11	317	6	191	9	
Cairnbulg	6	15	..	..	..	1	..	1	60	83	946	11	11	6	205	8	
Fraserburgh	50	60	..	13	..	30	2	8	48	211	4,730	24	1,236	12	1,024	30	
Sandhaven	..	5	..	..	..	2	..	..	21	23	280	..	35	5	56	10	
Roseheartly	7	18	..	..	..	7	..	1	21	54	1,049	..	13	6	204	16	
Pennan	3	..	..	..	..	1	..	1	13	16	109	3	58	2	42	..	
Totals	85	117	..	13	..	41	2	12	261	531	8,727	2	923	42	1,894	79	

\* Drifters or liners unless otherwise stated.

† Trawlers.



No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Lines.	1 to 4 miles off.	..	..	24	30	535	Codlings, mussels.	..	Unimportant as fishing creek. Increase of 139% in output of mussels.
"	"	..	..	405	607	..	Codlings, haddocks, and whittings.	..	Only small lines employed. Results rather better than in 1920.
"	"	..	..	417	500	..	Codlings and whittings.	..	Considerable increase in landings, which were confined to small craft.
Flounder nets and lines.	"	..	..	952	1,412	1	"	..	Slight decreases in catch and value. Drift net fishermen operate from Peterhead and other herring fishing centres.
Lines.	1 to 2 miles off.	..	..	12	14	..	Codlings.	..	Of very little importance.
"	1 to 4 miles off.	..	..	931	1,312	9	Codlings and haddocks.	3	Catch and value show little change. Bulk of small line fish landed at Peterhead, while steam liners discharge principally at Aberdeen. Drift net fishermen operate from the various herring fishing centres.
Drift and flounder nets, motor trawling, and lines.	1 to 4 miles, and from 15 to 100 miles off.	202,860	92,691	24,626	29,463	220	Herrings, mackerel, cod, codling, haddocks, whittings, and plaice.	92	Decreases of 164,173 cwts. and £193,193 in quantity and value of herrings. A greatly reduced fleet took part in herring fishing while prices were lower than for some years past. The quantity and value of white fish show little change. Increase in number of small-sized craft.
Lines.	1 to 2 miles off.	..	..	104	126	..	Codling.	..	Of little importance. Operations confined mainly to summer months.
		202,860	92,691	27,471	33,469	765		95	
Nets, lines, and creels.	1 to 5 miles off.	..	..	4,291	4,243	839	Codlings and crabs.	..	More attention paid to hand-line and cod-net fishing, and to crab and lobster fishing. The catch shows a considerable increase.
"	"	..	..	5,543	4,955	1,056	Codlings, crabs, and lobsters.	..	Catch of white fish about the same as last year. Crabs and lobsters show an increase.
"	North Sea generally.	352,164	149,711	35,080	30,006	445	Herrings, cod, ling, haddocks and skate.	74	The catch shows a very large falling off, due to the partial failure of the summer herring fishing. The value of herrings shows a decrease of 55%. The quantity of white fish was about the same, but the value slightly less.
Lines and creels.	1 to 5 miles off.	..	..	232	255	293	Codlings and lobsters.	..	Slight increase in catch. Unimportant as a fishing station.
Nets, lines, and creels.	1 to 10 miles off.	..	..	3,598	4,803	472	Codlings, haddocks and whittings.	2	Catch about the same as in 1920. Codlings were more abundant, but haddocks and whittings scarcer. Most of the fishermen prosecute herring and great-line fishing at other stations during the greater part of the year.
"	Along the coast.	..	..	212	229	98	Haddocks and codlings.	..	Slight increase in the catch. Resident fishermen prosecute the fishing chiefly at other stations.
		352,164	149,711	48,956	44,496	3,203		76	

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.	
	1st Class. (Including Steam Trawlers).				2nd Class.		3rd Class.		Total.			Regularly Employed.	Partially Employed.				
	45 feet keel and upwards.		80 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.		No.	Ton.	No.					Ton.	
<i>Banff District.</i>	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
Crovie	2	..	..	..	..	6	..	..	19	27	131	1	6	3	89	..	
Gardenstown	17	10	..	6	..	6	..	2	16	57	1,164	1	23	2	275	..	
Macduff	33	13	2	12	..	8	1	..	9	78	1,847	2	91	5	400	..	
Banff	20	2	2	..	..	..	..	..	10	34	809	2	61	2	174	..	
Whitehills	2	9	1	4	..	35	1	..	10	62	719	1	25	1	257	..	
Portsoy	7	3	1	5	..	6	..	1	11	34	519	..	11	2	140	..	
Sandend	1	3	..	..	..	4	1	..	9	18	208	..	4	1	65	..	
Totals	82	40	6	27	..	65	3	3	84	310	5,397	1	187	16	1,400	..	
<i>Buckie District.</i>																	
Cullen	{ 25 †1	5	2	..	..	..	7	2	12	54	1,331	6	103	1	331	..	
Portknockie	{ 52 †12	7	4	..	..	..	9	..	21	95	2,447	1	183	2	612	..	
Findochty	27	38	..	..	..	1	6	..	29	101	2,600	5	302	5	615	..	
Portessie	27	17	2	..	..	1	2	1	3	53	1,791	12	427	4	371	13	
Buckie	{ 97 †13	36	8	7	..	1	38	..	5	205	5,932	..	64	10	1,290	23	
Portgordon	{ 27 †13	9	6	..	..	1	13	..	3	62	1,675	1	64	4	334	..	
Totals	274	112	22	7	..	4	75	3	73	570	15,776	21	732	26	3,603	36	
<i>Findhorn District.</i>																	
Lossiemouth	{ 40 †15	15	1	10	..	16	..	1	7	95	2,472	2	33	1	565	..	
Hopeman	{ 18 †1	3	..	7	..	12	..	..	..	41	991	3	20	..	280	..	
Burghead	24	1	..	5	..	11	..	1	4	46	1,010	3	53	1	276	..	
Findhorn	..	..	..	..	..	2	..	1	..	3	8	1	2	1	10	..	
Nairn	27	1	1	..	..	14	..	4	3	50	1,103	2	6	..	308	..	
Campbelltown	..	..	..	..	..	6	7	..	1	14	66	2	8	1	45	..	
Inverness	..	..	..	..	..	..	1	..	..	1	3	1	4	..	10	..	
Totals	115	20	2	22	..	61	8	7	15	250	5,651	4	8	4	1,494	..	

\* Drifters or Liners unless otherwise stated.

† Trawlers.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets, lines, and creels.	Moray Firth.	..	..	10,436	11,748	63	Haddocks, cod, and whittings.	5	The quantity of fish landed is similar to 1920, but the value shows a considerable decrease owing to lower prices. Decreases in quantity and value of herrings, but increases in other kinds. Little change. Fishermen engage in herring fishing at other centres. Decreases in quantity and value of herrings, but increases in other kinds. Decreases in quantity and value of all kinds. Considerable decreases in quantity and value of cod and haddocks.
"	"	25,105	13,624	12,113	18,147	103	Herrings, haddocks, cod, and whittings.	7	
Nets and lines.	"	..	..	63	80	..	Cod and haddocks.	..	
Nets, lines, and creels.	"	94	65	17,889	25,039	413	Haddocks, cod, and whittings.	4	
Nets and lines.	"	542	196	1,700	2,571	..	"	2	
"	"	..	..	1,425	2,213	..	"	1	
		25,741	13,885	43,626	59,798	579		19	
Nets and lines.	Moray Firth.	12	6	826	936	154	Haddock and codling.	1	The fishermen usually engage in herring fishing at other centres; few fish are landed locally. Do. do. do. Do. do. do. All fish are landed at Buckie. Large decreases in quantity and value of herrings; but marked increases in quantity and value of all kinds of flat fish, as result of introduction of the Danish seine net. Little doing at this creek. Fishermen prosecute fishing from other centres.
"	"	269	90	694	953	21	"	3	
"	"	..	..	757	751	15	"	3	
Trawl, nets, and lines.	"	38,863	16,112	39,037	57,961	134	Herrings, cod, haddocks, halibut, lemon soles, plaice, witches, skate, etc.	18	
Nets and lines.	"	..	..	2,481	3,067	77	Haddock and codling.	..	
		39,144	16,208	43,795	63,663	401		26	
Nets, lines, and creels.	Moray Firth.	1,190	545	21,289	37,578	565	Herrings, cod, haddock, whiting, soles, and plaice.	6	Fishermen engage largely in herring fishing at other centres; results proved exceptionally unremunerative. Large increase in landings of flat fish due to introduction of seine net fishing. Do. do. do. Do. do. do. Unimportant. Considerable increase in quantity of mussels. Fishermen largely dependent on the results of herring fishing. Increase in quantity of haddocks, but decrease in plaice. Quantity similar to last year, but decrease in value. Large decreases in quantity and value of herrings and sprats.
Nets and lines.	"	35	33	9,156	13,522	..	Cod, haddock, whiting, plaice.	2	
Lines.	"	95	29	8,061	13,409	..	Haddock, whiting, and mussels.	3	
Nets and lines.	"	63	21	4,599	7,430	2	Cod, haddock, whiting, plaice.	..	
"	"	..	..	1,248	2,269	..	"	..	
"	Inverness and Beaully Firths.	6,368	1,310	5,823	2,259	30	Herring, sprat, cod, and haddock.	3	
		7,751	1,938	50,897	77,278	906		14	

TABLE A.—

STATION or CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Seaworthy Boats Unemployed.	Fishermen and Boys.	
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.			Regularly Employed.	Partially Employed.
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.								
	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.		No.	
<i>Cromarty District.</i>																	
Avoch	1	..	7	..	..	8	37	..	4	57	607	1	5	..	296	15	
Cromarty, Invergordon, and Saltburn	..	..	..	..	..	1	1	..	23	25	56	2	1	2	54	14	
Shandwick, Balintore, and Hilton	..	..	..	..	..	7	3	..	11	21	56	..	2	3	84	5	
Rockfield and Portmahomack	..	..	..	..	..	4	2	..	6	12	37	..	..	2	34	4	
Inver	..	..	..	..	..	..	2	..	..	2	6	..	..	..	8	..	
Tain and Tarlogie	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Totals	1	..	7	..	..	20	45	..	44	117	762	1	8	7	476	38	
<i>Helmsdale District.</i>																	
Embo	..	..	2	..	..	4	11	..	10	27	133	1	21	9	80	..	
Golspie	..	..	1	2	..	10	..	1	4	18	105	2	16	5	54	..	
Brora	..	..	..	..	..	3	2	..	7	12	28	1	1	3	21	10	
Portgower	..	..	..	..	..	..	1	..	..	1	2	..	..	..	4	..	
Helmsdale	..	..	..	1	..	14	1	6	15	37	114	1	68	1	100	3	
Dunbeath	..	1	1	..	..	3	5	..	15	25	109	..	3	7	33	..	
Totals	..	1	4	3	..	34	20	7	51	120	491	1	77	25	292	13	
<i>Lybster District.</i>																	
Latheronwheel (Caithness-shire)	..	..	..	..	..	..	..	2	9	11	22	..	..	..	19	5	
Forse (Caithness-shire)	..	..	..	..	..	..	..	1	6	7	13	1	2	..	10	4	
Lybster	..	..	..	..	2	1	1	1	15	20	64	1	4	2	48	6	
Clyth	..	..	..	..	..	..	..	..	11	11	20	..	..	..	30	2	
Totals	..	..	..	..	2	1	1	4	41	49	119	2	2	2	107	17	

\* Drifters or Liners unless otherwise stated.  
† Including 57 crofter fishermen.

† Including 17 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Drift and cod nets, and small lines.	Inverness, Beaully, and Moray Firths.	..	..	346	468	170	Haddocks and codlings.	..	Most of the fishermen engaged in herring fishing on the east and west coasts from May to September, and thereafter in the small herring and sprat fishings in Inverness Firth. Decreases in quantity and value of white fish.
Drift nets, small and hand lines.	Cromarty and Dingwall Firths, and off the "Sutors" 1 to 8 miles.	43	32	3,439	4,982	104	Haddocks, plaice, and codlings.	..	Slight decreases in quantity and value. Importance of creeks declining.
Cod nets, small and hand lines.	2 to 12 miles E. by S.	..	..	6,194	7,829	143	"	..	Fair improvement in quantity and value of white fish, but marked decrease in lobsters.
"	Dornoch Firth, and 2 to 12 miles off Tarbat Ness.	..	..	2,747	3,179	252	"	..	Decreases in quantity and value of white fish; lobster fishing results similar to preceding years.
Small lines.	1 to 8 miles off the creek.	..	..	94	102	..	..	..	Of little importance as a fishing creek.
		..	..	..	..	339	Mussels.	..	Output of mussels considerably less.
		48	32	12,820	16,560	1,058			
Lines.	1 to 5 miles off.	..	..	4,361	6,197	438	Haddocks and plaice.	..	Considerable increases in quantity and value.
Lines and nets.	"	..	..	3,606	4,263	80	Cod, haddocks, and plaice.	2	Slight increases in quantity and value.
Nets, lines, and creels.	"	..	..	1,447	1,702	365	Codlings and haddocks.	1	Decrease in quantity, but value similar to last year's.
Lines.	"	..	..	..	..	..	Codlings.	..	Fish landed here are carted to Helmsdale and included in the Helmsdale landings.
Lines, nets, and creels.	1 to 12 miles off.	227	170	7,733	10,444	1,388	Haddocks, cod, and codlings.	2	Decreases in quantity and value of herrings, but considerable increases in other kinds.
"	"	236	137	1,212	1,465	86	Haddocks and codlings.	..	Considerable decreases in quantity and value.
		463	307	18,359	24,071	2,357		5	
Nets, lines, and creels.	1 to 6 miles off.	77	44	347	362	45	Herring and codling.	..	Decreases in quantity and value owing to failure of inshore herring fishing.
"	1 to 3 miles off.	483	252	3,487	3,179	39	{ Herring, codling, and haddock.	2	Do. In November Lybster harbour was gifted to the district by the proprietor.
"	1 to 6 miles off.								
Nets and lines.	1 to 3 miles off.	14	8	194	192	..	Codling.	..	An unimportant creek, Fishing shows a falling off.
		574	304	4,028	3,723	83		2	

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Seaworthy Boats Unemployed.	Regularly Employed.	Partially Employed.
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.								
	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
<i>Wick District.</i>																	
Whalgie and Sarclet (Caithness-shire)	..	..	..	..	..	..	..	..	8	8	16	..	..	..	30	10	
Wick	16	31	2	1	..	12	..	2	10	74	1,599	8	64	7	400	6	
<i>Boathaven and Slaxigoe (Caithness-shire)</i>																	
Ackerhill	..	..	..	..	..	4	..	2	6	12	38	..	..	1	22	9	
Keiss and Nybster	..	..	..	..	..	1	..	8	4	13	32	1	2	..	30	4	
Auckengil and Freswick (Caithness-shire)	..	..	..	..	..	..	..	..	19	19	38	1	2	..	20	15	
Stroma	..	..	..	..	..	3	..	12	20	35	75	3	8	..	60	8	
Duncansbay and Huna	..	..	..	..	..	..	..	1	12	13	27	1	1	..	30	9	
Gills and Mey	..	..	..	..	..	..	..	2	8	10	21	2	3	..	28	..	
Scarfskerry and Ham	..	..	..	..	..	..	..	..	13	13	26	1	2	..	18	..	
Brough and Dunnet	..	..	..	..	..	..	..	..	10	10	20	1	2	..	18	..	
Castletown and Murkle	..	..	..	..	..	..	..	..	2	2	4	1	2	..	4	..	
Thurso and Scrabster	..	..	..	7	..	2	..	6	10	25	113	4	14	3	70	10	
Crosskirk and Brims	..	..	..	..	..	..	..	..	3	3	6	..	..	..	6	..	
Sandside	..	..	..	..	..	2	..	..	1	3	10	..	..	..	4	2	
Portskerra (Sutherlandshire)	..	..	..	..	..	1	..	..	11	12	26	1	2	3	30	14	
Strathpoint and Armadale (Sutherlandshire)	..	..	..	..	..	..	..	..	6	6	12	1	2	..	10	5	
Kirtomy and Farr	..	..	..	..	..	..	..	..	2	2	4	..	..	..	11	5	
Skerry	..	..	..	..	..	..	..	..	4	4	8	2	4	..	18	2	
Scullony	..	..	..	..	..	..	..	..	1	1	2	..	..	..	4	..	
Island Roan	..	..	..	..	..	..	..	..	2	2	4	1	2	..	16	2	
Talmine and Portvasgo	..	..	..	..	..	..	..	..	6	6	12	..	..	..	28	6	
Erriboll and Rispond	..	..	..	..	..	..	..	..	14	14	28	..	..	..	28	6	
Totals	16	31	2	8	..	31	..	33	178	299	2,155	11	93	17	1903	113	
<i>Orkney District.</i>																	
North Ronaldshay	..	..	..	..	..	..	..	..	7	7	9	1	1	..	16	..	
Sanday	..	..	..	..	..	..	..	..	34	34	34	4	5	..	56	..	
Westray and Papa	..	..	1	..	..	1	..	2	65	69	127	11	10	10	132	..	

\* Drifters or Liners unless otherwise stated.

† Including 300 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Lines and creels.	1 to 4 miles off.	..	..	246	347	247	Codlings and crabs.	..	Improvement in results.
Drift net, cod nets, and lines.	1 to 7 miles off. Herring, (summer), 15 to 60 miles E. by N. to S. E.; (winter), 3 to 20 miles off north coast.	817,681	146,177	12,490	10,003	179	Herrings and cod.	60	Falling off in herrings landed; winter fishing failed through over-supply of markets and summer fishing through scarcity of herrings. Increase in other kinds.
Nets, lines, and creels.	1 to 7 miles off.	..	..	785	751	77	Codlings.	2	Considerable increases in quantity and value of line fish.
"	Sinclair Bay.	..	..	2,110	2,400	71	Haddock, cod, and plaice.	..	Do. do. but decrease in shell fish.
"	"	70	60	1,235	1,166	1,211	Codlings, crabs, and lobsters.	..	Improvement in line and shell fish fishings.
Lines.	1 to 3 miles off.	..	..	528	220	..	Codlings.	..	Results show a falling off.
Lines and creels.	1 to 4 miles off the coast of island.	..	..	1,251	673	325	Codlings and lobsters.	..	Increase in quantity of line fish, but considerable decreases in values of line fish and shell fish.
Hand lines and creels.	Pentland Skerries, 1 to 5 miles off.	..	..	438	548	57	"	..	Slight increase in line fish, but decrease in shell fish.
"	"	99	44	1,597	1,356	650	Codlings, crabs, and lobsters.	..	Increase in line fish, but decreases in herrings and shell fish.
Lines.	Dunnet Bay.	..	..	160	154	2	Haddock and saithe.	..	A slight increase.
Drift nets, lines, and creels.	2 to 20 miles off North Coast.	34,533	21,242	9,162	10,246	965	Herrings, cod, halibut, skate, and lobsters.	6	Large decreases in quantity and value of herrings, but increases in line fish and shell fish.
Lines and creels.	1 to 4 miles off.	..	..	61	35	142	Codling and lobsters.	..	A falling off.
"	Sandside Bay.	119	57	630	370	232	"	..	Results show a slight improvement.
Nets, lines, and creels.	1 to 4 miles off.	777	279	618	500	175	Herring, cod, and lobsters.	..	Increase in quantity, but decrease in value of landings.
"	"	..	..	..	..	..	"	..	"
Lines and creels.	"	12	8	25	21	110	Lobsters.	..	A slight increase.
"	"	218	94	424	400	348	Herrings, haddock, and lobsters.	..	A decrease in net and line fish, but an increase in shell fish.
Nets, lines, and creels.	Inshore.	70	40	83	43	265	Haddock and lobsters.	..	Do. do. do.
"	1 to 4 miles off.	91	25	1,018	480	319	"	..	A considerable increase.
"	"	213	73	209	170	1,051	Herrings, haddocks, lobsters, and unclassified shell fish.	..	A falling off in landings, due to stormy weather in latter half of year.
		353,883	168,099	33,070	29,883	6,426		68	
Creels and lines.	Inshore.	..	..	..	..	..	Lobsters.	..	Crofter fishermen. Lobster fishing actively prosecuted during summer and autumn. Decrease of 30% in the value of shell fish.
"	"	..	..	58	48	679	"	..	
"	North Sound and inshore.	..	..	170	163	1,085	Lobsters and cod.	..	

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Seaworthy Boats Unemployed.	Regularly Employed.	Partially Employed.
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.								
	Steam	Motor	Sail	Moto	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.	
<i>Orkney District—contd.</i>																	
Eday and Pharay	..	..	..	..	..	..	2	..	26	28	40	1	2	..	52	..	
Stronsay	..	..	1	..	..	..	..	1	9	11	54	5	67	1	26	..	
Shapinshay	..	..	..	..	..	..	..	1	10	11	12	6	6	..	28	..	
Rousay, Egilsay, etc.	..	..	..	..	..	..	..	..	11	11	18	3	9	..	21	..	
Evie and Birsay	..	..	..	..	..	..	..	3	26	29	33	6	5	5	64	..	
Kirkwall	..	1	..	2	..	5	1	2	7	18	113	1	22	..	30	12	
Tankerness and Deerness	..	..	1	..	..	..	1	2	10	14	83	4	..	1	23	..	
Holm	..	..	..	..	..	..	..	1	8	9	16	3	37	..	19	..	
Burray	..	..	5	..	..	..	..	5	14	24	256	4	10	1	66	..	
Orphir to Scapa	..	..	..	..	..	..	..	3	1	4	7	1	1	..	9	..	
Stromness	..	..	..	..	..	1	..	14	15	30	53	2	1	2	54	..	
Hoy and Graemsay	..	..	..	..	..	..	..	6	16	22	30	1	2	2	43	..	
Walls	..	..	1	..	..	1	..	..	30	32	87	3	5	3	52	..	
Flotta	..	..	..	..	..	..	..	..	16	16	22	1	1	..	40	..	
Phara and Cara	..	..	..	..	..	..	..	1	1	2	3	..	3	..	6	..	
Swona	..	..	..	..	..	1	..	..	3	4	11	1	2	..	9	..	
South Ronaldshay	..	..	..	..	..	3	2	6	36	47	84	1	4	..	111	..	
Totals	..	1	9	2	..	12	6	47	345	422	1,087	51	139	25	*862	12	
<i>Shetland District.</i>																	
Fair Isle	..	..	..	..	..	..	1	..	3	4	5	..	..	..	13	..	
Grutness	..	2	7	..	..	..	..	..	18	27	407	..	44	3	68	..	
Quendale	..	..	6	..	..	..	..	..	6	12	282	..	..	2	45	..	
Boddam	..	..	..	..	..	1	..	..	9	10	17	..	..	1	32	..	
Spiggie	..	..	1	..	..	..	..	..	2	3	37	1	1	..	28	..	
Levenwick	..	..	2	..	..	..	..	..	2	4	90	..	21	..	48	..	
Hoswick	2	5	9	..	..	..	..	..	6	22	707	1	25	2	131	..	
Sandsair	..	..	3	..	..	..	..	..	3	..	112	..	..	..	42	..	
Aithsvoe	..	..	3	..	..	1	..	..	2	6	105	..	..	1	38	..	

\* Including 725 crofter fishermen.



No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Creels and lines.	Inshore.	..	..	79	52	494	Lobsters and cod.	..	Crofter fishermen. Decrease in shell fish. Principal herring fishing station. Operations in summer on restricted scale, and results disappointing. Decrease of £41,232 in value of herrings landed. Slight decrease in value of lobsters.
Nets, lines, and creels.	5 to 60 miles E. by S. to S.S.E.	69,919	19,863	614	258	555	Herrings and lobsters.	17	
Lines and creels.	Inshore	}	..	188	216	879	Lobsters and cod.	..	Crofter fishermen. Lobster fishing is vigorously prosecuted throughout year. Slight decrease in value of shell fish.
"	"			400	409	300	Cod, haddock, and lobsters.	..	
"	Stronsay Firth and inshore.	802	333	1,938	3,200	1,070	"	4	Results of line fisheries as last year, but decrease in value of shell fish. No herrings cured.
"	Inshore.	..	..	157	223	482	"	..	Crofter fishermen. Decrease in line fish; slight increase in value of shell fish.
"	"	56	21	97	114	112	"	3	Herring fishing neglected since 1914; fisheries otherwise unimportant.
Nets, lines, and creels.	5 to 35 miles S.E. and inshore.	116	43	108	100	100	Herrings and cod.	3	Line and shell fisheries unimportant. Five crews took part in Stronsay herring fishing with moderate success.
Lines and creels.	Scapa Flow and inshore.	116	65	272	351	393	Haddock, cod, and lobsters.	..	Decrease in line fish. Lobster fishing successful throughout year.
"	1 to 10 miles S.W.	182	135	670	997	1,048	Cod, haddock, and lobsters.	..	
"	Inshore.	..	..	673	676	443	"	..	Crofter fishermen. Decrease of 28% in value of shell fish, but line fishing results similar.
"	Pentland Firth and inshore.	}	7	4	825	991	} Cod and lobsters.	..	Chiefly crofter fishermen. Line and lobster fisheries successful throughout year.
"	"			42	18	1,106		1,392	
"	"	..	..	..	..	..	"	..	Crofter fishermen. Line fishing successful, especially during summer, but decrease of £1,056 in value of shell fish.
		71,240	20,482	7,355	9,190	8,567			27
Lines.	Inshore.	}	..	704	609	..	} Cod, ling, saithe, haddocks, and halibut.	1	} Crofting district. Falling off in great line fishing owing to slack demand for drying. Men mostly employed at Lerwick herring fishing during summer.
Nets and lines.	1 to 60 miles off.			4,293	1,456	460		367	
"	"	..	..	20	14	..	Haddocks.	3	Crofting district. Little fishing carried on. Fishermen were employed at herring fishing at Lerwick.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)				2nd Class.		3rd Class.		Total.		No.	Ton.	No.			Ton.	No.	No.
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.											
<i>Shetland District.—contd.</i>	*Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.		
Bressay	..	..	..	..	..	..	..	..	5	5	5	2	2	..	26	..		
Lerwick	8	7	16	8	..	6	7	..	24	76	1,372	..	43	12	351	..		
Nesting	..	1	..	..	..	1	..	..	2	4	44	..	..	..	16	..		
Whalsay	1	1	14	3	..	2	1	..	12	34	801	..	..	2	134	..		
Skerries	..	1	2	1	..	..	4	..	2	10	154	..	..	..	25	..		
Vidlin	..	..	..	..	..	..	..	..	3	3	3	..	..	..	10	..		
West Sandwick	..	..	..	..	..	..	..	..	3	3	3	..	..	..	10	..		
Burravoe	..	..	..	..	..	..	..	..	3	3	3	..	..	..	9	..		
Gossaburgh	..	..	..	..	..	..	..	..	2	2	2	..	..	..	6	..		
Mid Yell	..	..	..	..	..	..	..	..	10	10	16	..	..	3	31	..		
Cullavoe and Gutcher	..	..	..	..	..	..	..	..	10	10	10	1	2	3	35	..		
Fetlar	..	..	..	..	..	..	..	..	3	3	3	..	..	..	8	..		
Westing and Snarravoe	..	..	..	..	..	..	..	..	6	6	6	..	..	1	16	..		
Uyasound	..	..	..	..	..	..	..	..	6	6	6	..	..	2	15	..		
Muness and Colvidale	..	..	..	..	..	..	..	..	3	3	3	..	..	..	9	..		
Baltasound	..	1	5	..	..	2	..	..	4	12	298	1	8	7	33	..		
Haroldswick	..	..	..	..	..	..	..	..	9	9	9	..	..	1	25	..		
Norwick	..	..	..	..	..	..	..	..	3	3	3	..	..	..	16	..		
Burrafirth	..	..	..	..	..	..	..	..	4	4	4	..	..	..	12	..		
Mossbank and Dalesvoe	..	..	..	..	..	..	1	..	4	5	10	..	..	1	18	..		
Ollaberry	..	..	..	..	..	..	..	..	12	12	12	2	2	5	24	..		
North Roe	..	..	..	..	..	..	1	..	7	8	11	..	..	2	22	..		
Fethaland and Sandvoe	..	..	..	..	..	..	..	..	4	4	4	..	..	..	12	..		
Ronasvoe	..	..	..	..	..	..	1	..	6	7	8	..	..	2	12	..		
Stennis	..	..	..	..	..	..	..	..	8	8	8	..	..	2	24	..		
Hillswick and Brae	..	..	..	..	..	1	..	..	28	29	30	3	3	6	49	..		
Voe and Papa	..	..	..	..	..	..	..	..	22	22	23	2	2	9	54	..		
Sandness	..	..	..	..	..	..	..	..	12	12	12	4	4	2	36	..		
Foula	..	..	..	..	..	1	..	..	16	17	20	..	..	4	39	..		
Vaila Sound	..	..	1	..	..	..	..	..	10	11	43	..	..	2	38	..		
Sand	..	..	..	..	..	..	..	..	4	4	4	..	..	..	18	..		
Skeld and Raewick	..	..	..	..	..	..	..	..	6	6	6	..	..	..	20	..		
Whiteness and Burwick	..	..	3	..	..	..	..	..	8	11	130	1	51	2	48	..		
Scalloway	1	4	1	6	..	3	..	..	6	21	339	2	19	4	71	..		
Burra Isle	..	6	11	3	..	6	..	..	9	35	754	3	5	4	100	..		
Oxna and Linga	..	..	2	..	..	..	..	..	4	6	83	1	..	1	14	..		
Trondra	..	..	..	..	..	..	..	..	4	4	8	1	1	..	14	..		
South Havera	..	..	..	..	..	..	..	..	2	2	2	..	..	..	6	..		
<b>Totals</b>	<b>12</b>	<b>28</b>	<b>86</b>	<b>21</b>	<b>..</b>	<b>22</b>	<b>18</b>	<b>..</b>	<b>334</b>	<b>521</b>	<b>6,014</b>	<b>23</b>	<b>41</b>	<b>86</b>	<b>1,854</b>	<b>..</b>		
<i>Stornoway District.</i>																		
<b>SOUTH LOCHS SECTION.</b>																		
Gravir, Colbost, Marvaig, Cromore, Garryvard to Keose	..	..	2	1	5	3	25	..	23	59	402	2	9	2	370	..		
<b>NORTH LOCHS SECTION.</b>																		
Luerbost, Crossbost, Ranish, Grimshader	..	..	7	1	1	..	2	..	14	25	314	3	30	2	283	..		

\* Drifters or liners unless otherwise stated.

† Including 1,374 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets and lines.	Inshore. 1 to 70 miles off.	572738	196,456	14,990	10,227	429	{ Herring, mackerel, cod, ling, tusk, saithe, haddock, whiting, halibut, and skate.	{ 9 39	Total increase in catch was 273,930 cwts. and decrease in value £25,589, chiefly referable to herrings, price of which was low owing to absence of Guarantee. Haddock catch shows increase, but value was less, and catch and value of halibut was down considerably.
"	Inshore. 1 to 60 miles off.	4,348	1,042	3,273	2,506	5	Herrings, haddock, halibut, and whittings.	{ .. 2 1 ..	The landings at Whalsay and Skerries show increases of 4,565 cwts. and £699, chiefly in herrings and haddocks. One herring curing station was open.
"	Inshore.								
"	"	..	..	566	275	..	Saithe, haddock, and whittings.	..	Crofting district. Increasing attention being devoted to agriculture.
"	"	..	..	98	60	..	Saithe and haddocks.	..	Do. do. do.
Nets and lines.	1 to 60 miles off.	2,174	603	890	482	..	Herrings, saithe, haddock, and halibut.	{ .. 9 .. .. ..	Single curing station open at Baltasound was dependent on chance arrivals by boats fishing from Lerwick. Local fishermen spend most time on their crofts.
Lines.	Inshore.								
"	"	..	..	535	295	..	Saithe and haddocks.	{ .. .. ..	Crofting district. Fishing almost neglected.
"	"	..	..	207	214	..	Saithe, haddock and halibut.	{ .. .. 1	Less attention paid to fishing than formerly, chiefly because of costly and irregular transport.
Nets and lines.	1 to 20 miles off.	28	6	506	295	39	Cod, ling, saithe and haddocks.	{ .. 1 .. ..	Results similar to 1920. Most of the men manned boats only during the summer herring fishing at Lerwick.
Lines.	Inshore.								
"	"	5,569	2,301	7,037	7,674	496	Herrings, cod, haddock, halibut and mussels.	{ .. 7 1 ..	A number of curing stations were opened at Scalloway in early summer, but season terminated when Lerwick fishing began. A good haddock fishing from Scalloway had to be discontinued when returns from Aberdeen fell away in spring. Increase in catch of herrings and haddocks, but decrease in net cod and line halibut; increase on whole of 1774 cwts. and £244.
"	"								
Lines.	Inshore.	..	..	..	..	..	..	..	..
		589,155	201,864	29,286	23,018	969		75	
Nets and lines.	The Minch and Sea Lochs.	..	..	1,797	731	..	Cod, ling, saithe, and haddocks.	..	Results similar to last year.
Nets, lines and creels.	"	1,420	532	922	758	206	Herrings, haddock, and lobsters.	..	Increase in herring landings, but white fish shows a decrease. Lobster fishing received increased attention.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		No.	Ton.	No.			Ton.	No.	No.	No.
	45 feet keel and upwards.		30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.												
<i>Stornoway District—contd.</i>																				
STORNOWAY SECTION. Stornoway, Sandwick, Holm, Melbost and Stenish . . . . .	17	3	1	1	2	1	..	..	3	28	1,389	2	94	6	218	..	..			
GARRABOST SECTION. Swordale and Knock, Bayble, Garrabost . . . . .	..	..	8	..	..	..	7	..	11	26	400	3	43	..	387	..	..			
PORTNAGURAN SECTION. Sheshader, Portvoller, Port- naguran, Shader . . . . .	..	..	3	2	..	..	9	..	9	23	223	3	80	1	272	..	..			
BACK SECTION. Tong, Coll, Vatisker, Back, Tolsta . . . . .	..	..	..	..	..	..	5	..	17	22	71	3	8	..	505	..	..			
NESS SECTION. Skegersta, Port of Ness, Borve, Shader—West . . . . .	..	..	..	..	..	..	12	..	20	32	137	1	7	..	538	..	..			
SHAWBOST SECTION. Barvas, Brue, Arnol, Bragar, Shawbost . . . . .	..	..	..	..	..	..	4	..	14	18	65	..	11	1	300	..	..			
CARLOWAY SECTION. Carloway, Tolstachuilish, Breasclete, Callanish . . . . .	..	..	..	..	3	..	9	..	2	14	115	..	18	2	271	..	..			
BERNERA SECTION. Tobson, Valsey, Breaclete and Hacklet, Kirkibost . . . . .	..	..	..	..	..	..	11	..	23	34	138	2	17	..	166	..	..			
VALTOS SECTION. Uigan and Arduig, Croulستا, Islivaig, Breanish, etc., Loch Hamnevy . . . . .	..	..	..	..	..	..	1	..	1	2	5	..	8	..	119	..	..			
NORTH HARRIS SECTION. Scadabay, Plockropool, Drin- nishader, Meavig, Derric- clate, Tarransay Island, Scarp Island, Ardhasig, Tarbert and Urgha, Kyles of Scalpay, Mollingamish, Rennigedle, Marvig and Ardvourlie . . . . .	..	..	..	..	2	1	19	..	25	47	130	1	17	3	268	..	..			
SCALPAY SECTION. Scalpay and Scotasay Islands	..	..	..	11	3	..	25	..	14	53	322	1	55	3	150	..	..			
SOUTH HARRIS SECTION. Stroud, Finsbay, Cudinish, Flodabay, Manish, Geo crab and Licisto, Stockin- ish and Lachlee . . . . .	..	..	..	1	..	..	30	..	21	52	164	11	67	2	209	..	..			
Totals . . . . .	17	3	21	17	16	5	159	..	197	435	3,875	20	298	22	14,056	..	..			
<i>Barra District.</i>																				
Boreray . . . . .	..	..	..	..	..	..	1	..	1	2	4	1	2	..	6	..	..			
Bernera . . . . .	..	..	..	..	..	1	14	..	2	17	61	1	2	..	68	..	..			

\* Drifters or liners unless otherwise stated.

† Including 3,783 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets and lines.	The Minch.	117,077	69,220	5,960	4,082	158	Herrings, cod, ling, and saithe.	27	Decreases of 53% in quantity and 60% in value of herrings as compared with 1920. Herrings were scarce and the quality the poorest within memory.
Nets, lines, and creels.	Broadbay.	649	247	2,356	1,984	911	Herrings, cod, ling, haddocks, and lobsters.	..	Decrease in quantity and value of white fish. Increase in number of lobsters landed.
"	"	1,631	904	1,717	1,351	140	Herrings, cod, ling, and haddocks.	..	Considerable increase in fish landed due to less frequent landings by local boats at Stornoway.
Nets and lines.	"	92	92	5,224	5,160	..	Haddocks.	..	This section ranks first for small line fishing. Landings show slight increase; the bulk was sold in Stornoway by hawkers.
"	The Minch and off the Butt.	1,609	718	1,896	2,554	..	Herrings, cod, ling, and haddocks.	..	Considerable decrease in quantity and value of herrings, which were exceptionally scarce off this section.
"	Atlantic side of the island.	..	..	431	449	24	Cod and ling.	..	Fishing conducted very spasmodically. Results show marked decrease.
"	Loch Roag.	98	53	842	559	..	"	..	Results similar to those of 1920. Most attention devoted to crofting.
Nets, lines, and creels.	"	1,070	535	331	195	540	Herrings, haddocks, and lobsters.	..	Quantity of herrings similar, but value increased. Lobster fishing of most importance, but decrease in catch owing to bad weather on exposed coast.
Nets and lines.	"	531	399	270	151	22	Herrings and haddocks.	..	Unimportant as fishing creeks.
Nets, lines, and creels.	The Minch and Sea Lochs.	1,349	617	981	1,299	1,005	Herrings and lobsters.	..	Decrease in herrings. Increase in white fish and lobsters.
"	"	9,077	8,457	784	650	2,035	"	6	Quantity of herring similar to 1920, but value almost doubled. Motor boats belong mostly to energetic Scalpay fishermen who have little crofting interests.
"	"	940	440	3,220	1,126	934	Herrings, saithe, and lobsters.	..	Decrease in herrings. Increase in lobsters caught, but prices slightly lower.
		135,543	82,214	26,731	21,049	5,975			33
} Lines and creels.	Off shore.	..	..	812	503	1,406	Plaice, flounders, and lobsters.	..	Slight decrease in quantity and value of white fish. Number of lobsters similar to last year, but value £300 less.

TABLE A.—

STATION or CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.				
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		No.	Ton.			No.	Ton.	No.	No.	No.
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.													
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.			No.	No.	No.	No.	
<i>Barra District—contd.</i>																				
Hougharry and Locheport	..	..	..	..	..	..	1	..	2	3	5	1	2	..	10	..	..			
Grimsay	..	..	..	..	..	..	13	..	6	19	47	7	16	..	65	..	..			
Heisker	..	..	..	..	..	..	6	..	..	6	14	2	5	..	18	..	..			
Benbecula	..	..	..	..	..	..	1	..	20	21	35	2	3	..	66	..	..			
Loch Carnan	..	..	..	..	..	..	12	..	22	34	69	3	19	..	104	..	..			
Loch Skipport	..	..	..	1	..	..	3	..	9	13	38	1	10	..	45	..	..			
Loch Boisdale	..	..	..	..	..	..	2	9	..	34	45	119	1	9	..	142	..			
Kriskay	..	..	..	8	..	2	14	..	14	38	249	2	1	..	155	..	..			
Bruernish	..	..	..	3	..	1	8	..	11	23	97	7	7	..	83	..	..			
Ault and Earsary	..	..	..	..	..	..	1	..	9	10	18	3	5	..	34	..	..			
Brevig and Skallary	..	..	1	..	..	..	..	..	10	11	47	2	24	..	41	..	..			
Castlebay	..	..	..	7	2	2	4	..	12	27	253	5	79	3	118	..	..			
Totals	..	1	..	19	2	8	87	..	152	269	1,056	12	148	3	*955	..	..			
<i>Loch Broom District.</i>																				
CAPE WRATH TO LAXFORD.																				
Poulin	..	..	..	..	..	..	..	..	4	4	9	..	..	..	9	..	..			
Oldshoremore and Oldshorebeg	..	..	..	..	..	..	..	..	11	11	27	1	3	..	16	..	..			
Kinlochbervie	..	..	..	..	..	..	..	..	9	9	15	..	3	..	22	..	..			
Badcall and Achriskill	..	..	..	..	..	1	..	..	9	10	25	1	3	..	23	..	..			
Ardmore	..	..	..	..	..	..	..	..	5	5	11	..	1	..	12	..	..			
Totals	..	..	..	..	..	1	..	..	38	39	87	..	4	6	82	..	..			
LAXFORD TO BADCALL.																				
Findlemore and Fanagmore	..	..	..	..	..	..	..	..	6	6	9	..	..	..	9	..	..			
Tarbert and Scourie	..	..	..	..	..	..	..	..	9	9	17	..	1	..	18	..	..			
Badcall	..	..	..	..	..	..	1	..	5	6	14	..	4	..	8	..	..			
Totals	..	..	..	..	..	..	1	..	20	21	40	..	3	7	35	..	..			
BADCALL TO DRUMBEG.																				
Unapool and Glendhu	..	..	..	..	..	1	..	..	2	2	3	..	..	..	6	..	..			
Ardvaar and Nedd	..	..	..	..	..	1	1	..	5	7	15	1	3	..	14	..	..			
Totals	..	..	..	..	..	1	1	..	7	9	18	1	3	..	20	..	..			

\* All crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
} Nets, lines, and creels.	Offshore and Dunvegan Bank.	13,518	13,503	377	168	2,193	Herring, cod, saithe, flounders, lobsters, and whelks.	4	Four curing stations were opened at Lochmaddy, whereas practically no herrings were landed in 1920. White fish a decrease. Lobsters show an increase in numbers but a decrease in value. Herrings decreased by over 50%, and lobsters by 30%. Similar to last year. Herrings decreased by 58%, and lobsters by 24%. Other fisheries increased. Increases in quantity and value. Herrings show an increase of 42% in quantity and 96% in value. Other fisheries show a slight decrease, principally in cod and ling. Lobsters show a 37% increase in value.
	Off shore.	121	60	136	44	507	Herrings, mackerel, cod, and lobsters.	..	
	Minch.	634	304	63	38	1,342	Lobsters.	3	
	Nets and lines.	..	..	700	575	..	Ling and flounders.	1	
	} Nets, lines, and creels.	..	55,700	56,097	2,274	720	1,673	Herrings, mackerel, cod, ling, saithe, plaice, flounders, lobsters, cockles, and whelks.	
		69,973	69,964	4,362	2,048	7,259		25	
} Nets, lines, and creels.	Inshore and Lochs Clash and Inchard.	..	..	..	..	..	Herrings, codling, haddocks, and lobsters.	..	A section of crofter and regular fishermen who operate chiefly for herrings and lobsters. Lobsters show a decrease. The herring fishing in Loch Inchard in the fall of the year was hindered by stormy weather. Herrings show an increase of 1,408 cwts.
		3,759	712	395	328	329		..	
} "	Inshore and Lochs Laxford and Cairnbawn.	..	..	..	..	..	Lobsters.	..	Crofter fishermen. The lobster fishery was successfully prosecuted, and increases of 2,905 and £139 are recorded. No large herring shoals were found in Loch Laxford.
		28	10	107	79	787		..	
} "	Lochs Glendhu and Cairnbawn.	..	..	..	..	..	Herrings, haddocks, and lobsters.	..	Crofter fishermen. Landings of herrings and lobsters show a marked decrease. No herring shoal in Loch Glendhu during autumn.
		402	201	922	489	618		..	

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		No.			Ton.	No.	No.	No.
	45 feet keel and upwards.			30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.										
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.			No.	Regularly Employed.	Partially Employed.	
<i>Loch Broom District—contd.</i>																			
<b>DRUMBEG TO CULKEIN.</b>																			
Drumbeg	..	..	..	..	..	..	1	..	1	2	5	..	1	..	6	..			
Culkein (Drumbeg)	..	..	..	..	..	..	1	..	8	9	22	..	..	..	17	..			
Clashnessie	..	..	..	..	..	..	1	..	2	3	10	..	1	..	9	..			
Achnacaron	..	..	..	..	..	..	..	..	1	1	3	..	..	..	2	..			
Totals	..	..	..	..	..	..	3	..	12	15	40	..	..	5	34	..			
<b>CULKEIN TO INVERPOLLY.</b>																			
Culkein (Stoer)	..	..	..	..	..	..	..	..	4	4	5	2	4	..	9	..			
Raffan and Balnacladich	..	..	..	..	..	..	1	..	5	6	12	4	9	..	14	..			
Clachtoll	..	..	..	..	..	..	..	..	12	12	23	1	1	..	21	..			
Achmelvich	..	..	..	..	..	..	..	..	12	12	15	1	1	..	20	..			
Lochinver and Strathan	..	..	..	..	..	..	2	..	9	11	31	1	1	..	16	..			
Badnaban and Inverkirkaig	..	..	..	..	..	..	..	..	7	7	13	..	1	..	12	..			
Totals	..	..	..	..	..	..	2	1	49	52	99	7	13	12	92	..			
<b>COIGACH AND TANERA.</b>																			
Achnahaird and Reif	..	..	..	..	..	..	1	..	5	6	11	1	2	..	10	..			
Altandhu	..	..	..	..	..	..	4	..	3	7	21	1	1	..	16	..			
Polbain and Tanera	..	..	..	..	..	..	9	..	9	18	60	1	1	..	30	..			
Achiltuibe and Badnescalloy	..	..	..	..	..	..	..	..	2	2	5	..	..	..	4	..			
Polglass and Culnacraig	..	..	..	..	..	..	1	2	6	9	30	1	2	..	24	..			
Totals	..	..	..	..	..	..	1	16	25	42	127	4	6	10	84	..			
<b>LOCH BROOM AND ISLEMARTIN.</b>																			
Islemartin and Ardmar	..	..	..	..	..	..	..	..	5	5	10	..	..	..	6	..			
Rhue and Morefield	..	..	..	..	..	..	..	..	4	4	6	..	..	..	5	..			
Ullapool	..	..	..	..	..	..	1	1	21	23	29	5	5	..	21	..			
Rheroy, Ardendrean, Letters, etc.	..	..	..	1	..	2	2	..	24	29	95	2	5	..	32	..			
Totals	..	..	..	1	..	3	3	..	54	61	140	7	..	24	64	..			
<b>ACHMORE AND LITTLE LOCH BROOM.</b>																			
Achmore and Scorraig	..	..	..	..	..	1	..	..	2	3	10	1	..	..	8	..			
Charnock and Badralloch	..	..	..	..	..	..	..	..	3	3	5	..	..	..	5	..			
Ardessie and Badcall	..	..	..	..	..	..	1	..	2	3	10	..	1	..	14	..			
Durnamuck and Badlurach	..	..	..	..	..	..	2	..	7	9	23	2	4	..	15	..			
Totals	..	..	..	..	..	1	3	..	14	18	48	3	3	5	42	..			
<b>GRUINARD TO AULTBEA.</b>																			
First and Second Coast	..	..	..	..	..	..	..	..	3	3	5	..	..	..	4	..			
Sand and Laid	..	..	..	..	..	..	2	..	5	7	18	..	..	..	16	..			
Achgarve and Udrigle	..	..	..	..	..	..	1	..	3	4	14	..	..	..	9	..			
Opinin and Mellon Charles	..	..	..	..	..	..	2	..	7	9	26	..	..	..	31	..			
Ormscaig and Balnaluib	..	..	..	1	..	1	..	..	9	11	30	..	1	..	17	..			
Tenefin and Aultbea	..	..	..	..	..	1	1	..	3	5	23	1	7	..	10	..			
Totals	..	..	..	1	..	1	7	..	30	39	116	1	6	11	87	..			



No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
}	Inshore and Loch Cairnbawn.	..	..	..	..	..	Herrings and lobsters.	..	Crofter fishermen. Many small boats wrecked by gales during past fourteen months have not been replaced, and many crofters have stopped fishing. A section of small importance.
		210	90	151	126	140			
}	M i n c h Lochinver, and Enard Bay.	..	..	..	..	..	Lobsters and codling.	..	Crofter and regular fishermen. Here also the loss of craft has compelled many crofters to stop fishing. The section is waning yearly. The regular fishermen chiefly prosecute the lobster fishing.
		112	47	173	197	453			
}	The Minch and Summer Isles.	..	..	..	..	..	Lobsters.	..	The most important lobster fishing section, with energetic crofter fishermen. The bad weather was detrimental to this fishing with a consequent decrease of 4,024 and £542.
		104	56	195	148	1,083			
}	Loch Broom, Ardair Bay, and Summer Isle grounds.	..	..	..	..	..	Haddock, cod, and saithe.	..	Once an important section, but continued scarcity of fish has driven fishermen to other employment. A general decrease. No herring shoal entered Loch Broom, and no curing done.
		95	45	1,161	966	32			
}	Gruinard Bay and Little Loch Broom.	..	..	..	..	..	Lobsters.	..	Crofter fishermen. Fishing irregularly prosecuted, and decrease in landings. Little but lobster fishing done.
		66	29	37	27	194			
}	Loch Ewe and Gruinard Bay.	..	..	..	..	..	Lobsters, herrings, and cod.	..	The crofter fishermen have mostly either stopped fishing, or fish on rare occasions, owing to scarcity of herrings. General decrease in landings except of lobsters.
		171	103	169	155	303			

TABLE A.

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek												Fishermen and Boys.			
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Seaworthy Boats Unemployed.	Regularly Employed.	Partially Employed.
	45 feet keel and upwards.		30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.								
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.	No.
<i>Loch Broom District—continued.</i>																
<b>AULTBEA TO MELVAIG.</b>																
Poolewe and Naast	..	..	..	..	..	..	2	..	7	9	16	1	6	..	12	..
Inverasdale	..	..	..	..	..	1	..	..	10	11	19	1	2	..	25	..
Cove	..	..	..	..	..	1	..	..	7	8	25	..	..	..	16	..
Totals	..	..	..	..	..	2	2	..	24	28	60	2	8	7	53	..
<b>MELVAIG TO FLOWERDALE.</b>																
Melvaig	..	..	..	..	..	..	..	..	8	8	15	1	1	..	12	..
North Erradale	..	..	..	..	..	..	..	..	1	1	1	..	..	..	2	..
Sand	..	..	..	..	..	2	4	..	2	8	31	2	11	..	17	..
Strath	..	..	..	..	..	1	..	..	2	3	23	..	1	..	13	..
Charlestown	..	..	..	..	..	..	..	..	1	1	2	..	..	..	2	..
Totals	..	..	..	..	..	3	4	..	14	21	72	1	9	3	46	..
<b>FLOWERDALE TO SOUTH POINT OF GAIRLOCH.</b>																
Badachro	..	..	..	..	..	5	3	..	3	11	49	1	6	..	37	..
Port Henderson	..	..	..	..	..	4	1	..	5	5	34	..	..	..	30	..
South Erradale	..	..	..	1	..	..	..	..	..	1	13	1	14	..	5	..
Red Point	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Totals	..	..	..	1	..	9	4	..	3	17	96	2	20	2	72	..
Totals for District	..	..	..	3	..	24	45	..	290	362	943	24	45	92	*711	..
<i>Loch Carron and Skye District.</i>																
Loch Torridon	..	..	..	1	..	4	2	..	4	11	64	6	30	..	40	..
Applecross	..	..	..	..	..	7	..	..	5	12	85	..	..	2	37	..
Kishorn	..	..	..	..	..	5	..	..	..	5	43	..	..	..	20	..
Loch Carron	..	..	..	2	..	7	3	..	4	16	111	1	4	2	57	..
Loch Alsh	..	1	..	..	..	1	..	1	..	3	62	1	10	..	12	..
Loch Hourn	..	..	..	..	..	..	..	..	11	11	16	1	1	1	18	..
Sleat	..	..	..	1	..	7	..	..	8	16	60	5	13	3	41	..
Kyleakin	..	..	..	2	..	6	..	1	..	9	69	1	18	1	26	..
Broadford	..	..	..	..	..	2	..	..	6	8	27	5	17	..	19	..
Scalpay Sound	..	..	..	..	..	1	..	..	27	28	55	3	4	2	39	..
Sconcer and Braes	..	..	..	..	..	1	..	..	28	29	57	1	2	6	43	..

\* Including 680 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets, lines, and creels.	Inshore and Loch Ewe.	..	..	..	..	..	..	..	Crofter fishermen. Landings show a slight decrease.
		136	74	717	608	21			
"	Inshore and Loch Gairloch.	..	..	..	..	..	Plaice and haddocks.	..	Crofter fishermen who land their catches of herrings and cod at Badachro.
		..	..	212	222	90			
"	Minch, Longa Island grounds, and Loch Gairloch.	..	..	..	..	..	Cod, herrings, plaice, haddocks and lobsters.	2	Regular and crofter fishermen. The spring cod-net season was a failure, owing to bad weather and poor markets, and the herring fishing was little better. The motor fleet had partial success in Lewis and Skye waters during the summer. Two curing firms operated in a very small way.
		777	310	1,675	912	198			
		5,860	1,677	5,914	4,257	4,243			
Nets, lines, and creels. Nets and lines.	Loch Torridon. Between Raasay and Applecross. Between Skye and mainland.	245	114	245	195	53	Herrings, cod, saithe. Herrings and codlings.	..	Improved landings of cod, otherwise general decrease. Herring fishing lighter, other kinds similar to last year.
		121	50	267	267	..			
		..	..	1,235	714	109			
"	"	26,053	17,715	4,152	3,591	24	Saithe and hake.	..	Large decrease in value, slight decrease in quantity.
"	"	..	..	1,235	714	109	Herrings, mackerel, saithe.	5	The war time boom has now passed, and Kyle shows much lighter landings.
Nets, lines, and creels.	Loch Hourn.	..	..	50	37	33	Saithe and lobsters.	..	Creek of very little importance.
"	Inshore grounds.	346	132	335	301	510	Shell fish, herrings, codling.	..	Improvements in quantity and value, shell fish slightly less.
Nets and lines.	Between Skye and mainland.	245	107	400	315	991	Shell fish, codling, herring.	..	Considerable decrease in quantity and value of herrings, slight increases in other kinds.
Nets, lines, and creels.	"	..	..	..	..	..	..	..	..
Nets, lines, and creels. Nets and lines.	Scalpay Sound. Scalpay and Raasay Sounds.	89	27	49	31	328	Shell fish and herrings.	..	Increase in shell fish, otherwise landings lighter.



TABLE A.

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.													Fishermen and Boys.				
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.			Seaworthy Boats Unemployed.	Regularly Employed.	Partially Employed.
	45 feet keel and upwards.		80 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.		No.		Ton.		No.					
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.			
<i>Loch Carron and Skye District—contd.</i>																		
Portree	..	..	..	2	..	1	2	2	33	40	102	7	18	..	70	..	..	
Staffin	..	..	..	1	..	2	18	..	4	25	58	..	1	2	63	..	..	
Loch Snizort	..	..	..	1	..	15	14	..	10	40	203	1	5	2	139	..	..	
Waternish	..	..	..	1	..	1	8	..	3	13	47	4	28	..	42	..	..	
Dunvegan	..	..	..	3	..	2	14	..	12	31	110	5	8	1	67	..	..	
Glendale and Bracadale	..	..	..	1	..	1	13	..	16	30	53	8	21	..	71	..	..	
Strathaird	..	..	..	..	..	..	..	..	10	10	21	4	6	1	20	..	..	
Lochs Slapin and Eyshort	..	..	..	..	..	..	..	..	7	7	10	3	6	2	22	..	..	
Isle of Soay	..	..	..	..	..	2	..	..	6	8	12	..	1	1	16	..	..	
Totals	..	1	..	13	1	58	81	4	194	352	1,265	52	145	26	*862	..	..	
<i>Fort William District</i>																		
Loch Nevis and North Morar	..	..	..	2	..	..	..	..	2	2	5	1	1	..	6	..	..	
Mallaig and South Morar	..	..	..	2	..	4	2	..	2	10	60	1	5	..	36	..	..	
Arisaig and Loch Aylort	..	..	..	..	..	..	1	..	2	3	7	..	..	..	12	..	..	
Sunisbury to Ockle Point	..	..	..	..	..	2	2	..	4	8	23	1	3	..	24	..	..	
Ockle Point to Loch Sunart	..	..	..	..	..	1	..	..	4	5	10	1	1	..	16	..	..	
Loch Sunart and Aline	..	..	..	..	..	..	..	..	21	23	34	1	..	..	36	..	..	
Loch Eil and Fort William	..	..	..	..	..	2	..	..	21	23	34	1	..	..	36	..	..	
North and South Corran	..	..	..	..	..	1	..	..	1	2	..	..	..	..	4	..	..	
Loch Leven and Kentallen	..	..	..	..	..	1	1	..	2	4	..	..	..	..	7	..	..	
Cuil, Appin and Creran	..	..	..	..	..	1	..	..	1	2	8	1	4	..	7	..	..	
Loch Etive and Oban	..	1	..	..	..	5	3	..	3	12	85	6	7	1	33	..	..	
Lismore	..	..	..	..	..	1	..	..	1	2	4	1	7	..	6	..	..	
Tobermory and Salen	..	..	..	..	..	2	2	1	3	8	14	1	3	..	23	..	..	
Lochs Don, Speive and Buie	..	..	..	..	..	1	..	..	2	3	6	1	3	..	10	..	..	
Carsaig to Kintra	..	..	..	..	..	..	..	..	4	4	6	..	..	..	10	..	..	
Lochs Lach and Scriddan	..	..	..	..	..	..	..	1	4	5	6	1	3	..	19	..	..	
Ulva, Lochs Na Kael and Tuadh	..	..	..	..	..	..	..	..	9	9	16	1	2	1	27	..	..	
Coll	..	..	..	1	..	1	..	..	5	7	32	1	9	..	23	..	..	
Three	..	..	..	..	..	1	2	1	13	17	26	1	4	1	68	..	..	
Iona	..	..	..	..	..	..	..	..	1	1	2	..	..	..	4	..	..	
Canna	..	..	..	..	..	1	2	..	1	4	9	..	..	..	13	..	..	
Rum, Muck, etc.	..	..	1	..	..	2	1	..	4	8	64	..	23	..	19	..	..	
Totals	..	1	1	3	..	21	20	4	86	136	423	11	4	5	†403	..	..	

\* Including 909 crofter fishermen.

† Including 370 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets, lines, and creels.	Between Skye and mainland.	197	90	694	364	1,521	Shell fish and mackerel.	1	Disappointing year at this creek.
	Loch Snizort.	300	96	14	14	400	LoBSTERS and herrings.	2	The fishing at this creek has been a failure for the year.
	Off Dunvegan.	924	284	..	..	1,615	..	2	Herring fishing much lighter, slight decrease in shell fish.
Creels.	Poolliel and Bracadale.	608	263	152	156	309	..	2	Considerable decrease in herring, improvement in other kinds, small decrease in shell fish.
	Lochs Scauwaig, Slapin and Eyshort.	1,550	561	598	434	239	Herrings, mackerel, shell.	..	General improvement in landings.
	Inshore.	..	..	..	..	639	LoBSTERS.	..	Better landings of lobsters, value similar to last year.
Totals		30,678	19,439	8,191	6,419	6,771	..	12	..
Lines, Nets, lines, and creels.	Loch Nevis.	10	5	237	109	..	Cod, saithe.	..	Little fishing carried on.
	North and South Minch.	73,200	56,416	20,167	20,906	1,080	Herrings, cod, ling, eels, skate, etc.	9	Large decrease in landings, owing to reduced fleet at winter fishing and coal strike in early summer.
	Inshore.	..	..	59	55	549	Haddock, plaice, lobsters.	..	Increase in shell fish.
Nets and lines.	Loch Eil.	115	81	444	390	..	Cod, haddock, plaice.	..	Marked decrease in net-caught cod.
	Loch Linnhe.	14	12	19	7	62	Cod, saithe.	..	Slight decrease in lobsters.
	Off Barra, Coll, Tiree, and North of Ireland.	43,311	38,920	18,912	15,160	175	Whelks, Herrings, cod, saithe, whittings.	10	Decreases in quantity and value of white fish.
Lines.	Loch Linnhe.	..	..	385	446	732	Saithe.	..	Little fishing carried on.
	Sound of Mull.	..	..	..	..	..	Cod, haddock, eels, skate, lobsters.	..	Do. do.
	Inshore.	25	22	98	86	51	Saithe.	..	Do. do.
Lines and creels.	..	..	..	183	77	61	Haddock, lobsters.	..	Of little importance. Results similar to last year.
	..	..	..	63	57	40	..	..	Do. do.
	..	..	..	..	..	257	LoBSTERS.	..	Do. do.
Lines and creels.	Round island.	52	26	65	92	188	Cod, lobsters.	..	Slight increase in number and value of lobsters.
	..	56	18	220	253	54	..	..	Slight increases in quantity and value of white fish.
	..	..	..	425	433	111	Cod, haddock, white fish.	..	Increases in quantity and value of white fish.
Creels.	..	..	..	..	388	..	LoBSTERS.	..	Slight decrease in value of shell fish.
	..	..	..	..	264	..	..	..	Increase in lobsters.
	Totals	116,783	95,500	41,665	38,316	4,206	..	19	..



TABLE A.—No. II.—continued.

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)						2nd Class.		3rd Class.		Total.	Increase on or Decrease from 1920.	Seaworthy Boats Unemployed.	Regularly Employed.	Partially Employed.		
	45 feet keel and upwards.		30 to 45 feet keel.		18 to 30 feet keel.		Under 18 feet keel.										
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.	No.		
<i>Campbeltown District.</i>																	
Carradale and Torrisdale	..	..	..	1	..	18	2	..	..	21	188	2	4	3	90	..	..
Campbeltown and Machrihanish	..	..	..	3	..	58	12	2	3	78	622	2	25	6	309	..	..
Sanda	..	..	..	..	..	1	1	..	..	2	12	1	10	1	3	..	..
Southend	..	..	..	..	..	2	2	..	..	4	9	..	..	..	8	..	..
Muasdale and Ballochante	..	..	..	..	..	1	..	..	3	4	6	..	..	..	8	..	..
Gigha	..	..	..	..	..	6	2	..	14	22	79	2	18	2	47	..	..
Port Ellen	..	..	..	..	..	7	..	..	7	12	1	1	1	1	16	..	..
Portaskaig	..	..	..	..	..	3	7	..	1	11	26	1	3	..	28	..	..
Portnahaven and Port Wemyss	..	..	..	..	..	10	..	12	22	25	8	14	5	40	..	..	
Bowmore	..	..	..	..	..	4	..	2	6	7	..	..	..	20	..	..	
Port Charlotte	..	..	..	..	..	4	..	..	4	7	..	..	..	10	..	..	
Bruchladdich	..	..	..	..	..	5	..	..	5	13	..	..	1	9	..	..	
Loch Gruinart	..	..	..	..	..	1	..	..	1	1	..	..	..	5	..	..	
Jura	..	..	..	..	..	2	..	4	6	10	..	..	..	8	..	..	
Colonsay	..	..	..	..	..	2	..	7	9	11	1	1	1	16	..	..	
Totals	..	..	..	4	..	88	62	2	46	202	1,028	8	2	20	*617	..	..
<i>Inveraray District.</i>																	
Luing	..	..	..	..	..	1	4	..	26	31	50	..	3	4	21	10	..
Crinan	..	..	..	..	..	1	..	1	2	7	7	1	1	..	5	..	..
Loch Kylesport	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Tarbert	..	..	..	..	..	48	..	..	12	60	454	2	8	7	189	8	..
Ardrisbaig	..	..	..	..	..	13	8	..	4	25	142	1	11	4	54	8	..
Lochgilphead	..	..	..	..	..	2	1	..	1	4	21	..	..	..	11	..	..
Castleton	..	..	..	..	..	3	..	..	3	19	..	..	..	..	12	..	..
Lochgair	..	..	..	..	..	1	..	1	2	2	2	1	3	..	4	..	..
Minard	..	..	..	..	..	4	..	..	2	6	40	..	..	..	21	..	..
Craræ	..	..	..	..	..	2	..	..	2	18	..	..	..	..	8	..	..
Furnace	..	..	..	..	..	2	2	..	2	3	1	1	1	..	3	..	..

\* Including 120 crofter fishermen.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£				
Seine nets.	Kilbrannan Sound.	5,581	2,217	87	31	32	Herrings and mackerel.	1	Decreases in herrings and mackerel, chiefly owing to poor summer fishing.
Seine nets, lines, and creels.	..	83,899	43,638	3,638	3,972	482	Herrings, mackerel, cod, whittings, haddock and plaice.	6	Returns include herrings, etc. sold at sea. Considerable increase in herrings, owing to heavy winter fishing. After April herring fishing was very poor. Decreased returns from great and small line fishing.
Creels and lines.	Around the island.	..	..	3	3	93	Lobsters.	..	Increase in lobsters.
..	Along the coast.	..	..	8	21	130	Cod and lobsters.	..	Considerable increase in lobsters.
Creels.	..	..	..	..	..	386	Lobsters.	..	Slight increase in number of lobsters, decrease in value.
Drift nets, lines, and creels.	Around the island, and 1 to 5 miles S.W. from Cara.	32	22	1,096	1,096	747	Herrings, cod, and lobsters.	4	Decreases in cod and herrings, increase in lobsters.
..	Along the coast.	25	14	26	43	176	..	..	Decreases in landings.
Creels.	Sound of Islay.	..	..	..	..	376	Lobsters.	..	Decrease in lobsters.
Lines and creels.	1 to 5 miles off Rhyms Light.	..	..	193	155	46	Cod, saithe, and lobsters.	..	Slight increase in landings by line boats. Number of old unseaworthy boats written off.
Drift nets and lines.	Lochinadaal.	57	41	176	447	..	Herrings, cod, haddock, and plaice.	..	Decrease in all fish landed.
..	..	32	27	102	179	..	Herrings, cod, and flounders.	..	Landings similar to last year.
Drift nets, lines, and creels.	..	172	34	43	85	74	Herrings, cod, flounders, and lobsters.	..	Do.
Nets and lines.	Gruinart Bay.	..	..	1,120	132	201	Saithe and unclassified shellfish.	..	Increase in landings.
Creels.	Around the island.	..	..	..	..	97	Lobsters.	..	Number of lobsters similar but value less.
..	..	..	..	..	..	186	..	..	Do.
		89,798	46,043	6,492	6,164	3,026			11
Creels and drift nets.	Vicinity of Luing.	40	40	..	..	654	Herrings and lobsters.	..	Decrease in landings due chiefly to coal strike.
Creels.	Vicinity of Crinan.	..	..	..	..	290	Lobsters and oysters.	..	Decrease in shell fish.
Seine nets and lines.	Loch Fyne and Kilbrannan Sound.	785	198	65	70	37	Herrings, cod, and saithe.	2	Of no importance. Decrease in landings because more steamers buying at sea.
Seine nets, cod nets, and lines.	..	5,131	1,460	189	185	..	Herring and cod.	4	Slight decrease in landings, due to the poor winter and spring fishings.
Seine nets and lines.	..	..	..	..	..	..	..	..	..
Seine nets cod nets, and lines.	..	40	27	85	79	..	..	..	Slight decrease in landings. Lochgair and Furnace are of little importance.

TABLE A.—

STATION OR CREEK.	FISHING BOATS AND VESSELS belonging to Creek.														Seaworthy Boats Unemployed.	Fishermen and Boys.	
	1st Class (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		Increase on or Decrease from 1920.		Regularly Employed.		Partially Employed.	
	45 feet keel and upwards.		30 to 45 feet keel.			18 to 30 feet keel.		Under 18 feet keel.									
	Steam	Motor	Sail	Motor	Sail	Motor	Sail	Motor	Sail	No.	Ton.	No.	Ton.	No.		No.	No.
<i>Inveraray District—contd.</i>																	
Inveraray - - - - -	..	..	..	..	..	..	..	..	4	4	4	1	2	2	3	3	
Cairndhu to Newton - - -	..	..	..	..	..	..	..	..	2	2	1	..	..	..	3	2	
Otter to Ardlamont - - -	..	..	..	..	..	..	..	..	1	1	1	..	..	..	2	..	
Sold at sea - - - - -	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Totals - - - - -	..	..	..	..	..	73	15	..	56	144	757	1	9	18	*333	34	
<i>Rothsay District.</i>																	
Rothsay (Bute) - - - - -	..	..	..	1	..	6	..	..	9	16	63	1	2	5	18	8	
Port Bannatyne ,, - - -	..	..	..	..	..	2	1	..	3	6	8	1	5	..	6	2	
St. Ninian's ,, - - - - -	..	..	..	..	..	3	1	..	6	10	33	..	..	2	8	3	
Kilchattan Bay ,, - - -	..	..	..	..	..	2	..	..	4	6	21	..	..	2	5	5	
Kyles of Bute (Argyll)-	..	..	..	..	..	4	3	..	9	16	31	..	..	5	15	8	
Toward to Holy Loch ,, -	..	..	..	..	..	1	1	1	5	8	10	1	1	2	4	6	
Blairmore to Loch Goil (Dumbartonshir.)	..	..	..	..	..	..	1	..	2	3	2	..	..	1	4	..	
Kilcreggan to Arrochar (Dumbartonshire)	..	..	..	..	..	..	3	2	4	9	11	1	1	1	14	..	
Lochranza to Caticol (Arran)	..	..	..	..	..	2	..	..	2	4	11	..	..	2	2	4	
Pinnmill to Blackwater ,, -	..	..	..	2	..	1	..	..	3	33	..	..	..	1	10	..	
Blackwater to Whiting Bay (Arran)	..	..	..	..	..	..	..	..	1	1	2	1	1	..	2	..	
Whiting Bay to Lamlash (Arran)	..	..	..	..	..	..	..	..	4	4	4	..	..	1	2	4	
Totals - - - - -	..	..	..	3	..	21	10	3	49	86	229	1	4	22	90	40	
<i>Greenock District.</i>																	
Gareloch (Dumbartonshire)	..	..	..	..	..	..	1	..	1	2	3	3	5	..	..	4	
Helensburgh ,, - - - - -	..	..	..	..	..	4	..	..	5	9	12	1	1	3	6	4	
Glasgow - - - - -	*9	..	..	1	..	..	..	..	..	10	705	1	78	..	90	..	
Port Glasgow (Renfrewshire)	..	..	..	..	..	2	..	..	2	4	6	1	1	3	..	8	
Greenock ,, - - - - -	..	..	..	..	..	6	8	1	2	17	77	1	1	5	18	7	
Wemyss Bay ,, - - - - -	..	..	..	..	..	..	..	1	..	1	1	..	..	..	2	..	
Gourock ,, - - - - -	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Largs (Ayrshire) - - - - -	..	..	..	..	..	1	..	..	15	16	14	2	3	4	10	6	
Cumraes (Buteshire) - - -	..	..	..	..	..	3	..	..	4	7	20	4	5	1	6	6	

\* Including 7 crofter fishermen.



No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.	
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.				
		Cwts.	£	Cwts.	£	£				
} Drift nets and lines.	Upper Loch Fyne.	276	95	47	12	..	Herrings and mackerel.	..	Decrease in landings at Inveraray, which are made chiefly by boats from other centres. The other creeks are of little importance. Thirteen steamers and one motor boat were employed buying and carrying fresh herring.	
	Seine nets.	Loch Fyne.	91,852	41,794	1,265	567	..	"		
		98,124	43,614	1,601	913	981		6		
} Nets and lines.	Firth of Clyde.	8,406	3,684	770	741	12	Herrings, cod, saithe, conger.	3	Marked decreases in herrings and white fish. Decrease in value of shell fish. Decrease in cod. Increase in value of shell fish. Marked decrease in herrings. Decrease in quantity but increase in value of white fish. Marked decreases in herrings and white fish. Increase in value of shell fish. Decrease in herrings and white fish. Increase in value of shell fish. Marked decrease in value of herrings. Decrease in quantity but increase in value of white fish. Marked decreases in herrings and white fish. Decrease in quantity but increase in value of white fish. Increase in quantity but decrease in value of lobsters.	
	"	"	..	..	46	61	66	Cod.		..
	"	S.E. from Bute.	10	7	199	258	13	Herrings, cod, mackerel.		..
	"	Kyles of Bute.	165	74	305	432	197	Herrings, cod.		..
	"	Off the coast.	..	..	182	346	101	Cod, plaice.		..
	"	Lochs Long and Goil.	81	61	741	770	169	Herrings, cod, saithe.		..
	"	Firth of Clyde.	2,247	1,224	37	72	..	Herrings, plaice.		..
"	Off the coast.	223	214	47	77	361	Herrings, cod, lobsters.	..		
		11,132	5,264	2,327	2,757	919		3		
Nets and lines.	The Gareloch.	..	..	7	4	175	Mackerel and mussels.	..	Decrease in shell fish.	
	"	Firth of Clyde.	..	..	65	92	136	Cod and flounders.		..
Otter trawl, nets and lines.	West Coast, Firth of Clyde.	2,572	741	202	478	..	Herrings and halibut.	24	Decided increase in total landings.	
Nets and lines.	Firth of Clyde.	..	..	10	15	..	Codling.	..	A general decrease.	
Mussel dredge, nets and lines.	"	705	424	12	20	310	Herrings and mussels.	2	Increase in landings of herrings, but decrease of shell fish.	
Nets and lines.	"	..	..	156	196	..	Cod and whittings.	..	Slight increase in total landings.	
"	"	358	83	..	..	..	Herrings.	..	Herrings landed by boats from other districts.	
Nets and lines.	Firth of Clyde.	..	..	264	366	..	Cod.	..	Decrease in landings.	
"	"	50	31	233	432	10	"	..	Decided decrease in herrings, but marked increase in cod.	

TABLE A.—

STATION or CREEK.	FISHING BOATS AND VESSELS belonging to Creek.												Increase on or Decrease from 1920.	Fishermen and Boys.		
	1st Class. (Including Steam Trawlers.)					2nd Class.		3rd Class.		Total.		Sea-worthy Boats Unemployed.		Regularly Employed.	Partially Employed.	
	45 feet keel and upwards.		30 to 45 feet keel.			18 to 30 feet keel.	Under 18 feet keel.	No.	Ton.							No.
<i>Greenock District—contd.</i>																
Fairlie (Ayrshire)	..	..	..	..	..	..	..	..	5	5	4	1	..	4	..	5
Saltcoats	..	..	..	..	..	7	2	..	6	15	62	1	1	6	16	8
Irvine	..	..	..	..	..	3	2	..	2	7	31	1	..	2	8	6
Troon	..	..	..	..	..	1	6	..	1	8	25	..	..	5	..	10
Totals	*9	..	..	1	..	27	19	2	43	101	960	3	63	33	151	64
<i>Ballantrae District.</i>																
Ayr	..	..	..	..	..	2	3	..	1	6	13	1	1	2	4	4
Dunure	..	..	..	7	..	9	8	..	..	24	171	1	11	5	54	..
Maidens	..	..	..	..	..	18	14	..	..	32	131	1	14	6	43	..
Girvan	..	..	..	..	..	20	8	1	..	29	173	3	29	4	73	..
Carleton	..	..	..	..	..	2	1	..	3	6	18	1	2	1	8	..
Ballantrae	..	..	..	..	..	2	8	..	7	17	42	1	4	7	10	10
Cairnryan	..	..	..	..	..	1	1	..	..	2	6	2	3	..	3	2
Stranraer	*2	..	..	6	..	15	5	1	12	41	366	5	22	8	66	..
Kirkcolumb	..	..	..	..	..	3	1	..	5	9	17	3	1	1	6	3
Portpatrick	..	..	..	..	..	3	..	1	5	9	18	3	6	1	16	..
Port Logan	..	..	..	..	..	..	1	..	6	7	11	1	1	2	..	6
Drummore	..	..	..	..	..	5	4	2	9	20	62	2	3	4	24	12
Sandhead	..	..	..	..	..	2	..	2	10	14	17	1	..	3	10	6
Glenluce	..	..	..	..	..	..	1	..	6	7	7	2	2	2	6	2
Port William	..	..	..	..	..	1	2	..	13	16	29	..	..	3	12	6
Isle of Whithorn	..	..	..	..	..	1	2	..	8	11	31	1	2	2	10	4
Garliestown	..	..	..	..	..	..	2	..	3	5	10	2	2	..	..	6
Creetown	..	..	..	..	..	..	2	..	6	8	11	2	3	2	6	4
Kirkcudbright	..	..	..	..	..	..	2	..	3	5	8	..	..	..	4	4
Kippford	..	..	..	..	..	..	3	..	1	4	17	..	1	..	6	4
Carsethorn	..	..	..	..	..	..	2	..	..	2	5	..	..	..	..	6
Glencaple	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	10
Annan	..	..	..	..	..	..	43	2	4	49	208	..	..	3	84	..
Totals	*2	..	..	13	..	84	113	9	102	323	1,371	10	57	56	445	39
Grand Totals for 1921	£1,214	541	193	353	58	936	1017	157	8099	7568	106,058	345	1,634	667	†31033	713
Grand Totals for 1920	£1,208	568	220	327	86	910	1118	142	3234	7813	107,692	..	..	760	†32333	660

\* Trawlers.

† Including 9197 crofter fishermen in 1921 against 9829 in 1920.

‡ 376 trawlers, 836 drifters or liners and 2 mussel dredgers against 354 trawlers, 852 drifters or liners and 2 mussel dredgers in 1920.

No. II.—continued.

Methods of Fishing pursued.	Position of Principal Fishing Grounds.	QUANTITY AND VALUE OF FISH LANDED.					Principal kinds of Fish Landed.	No. of Curing Stations.	GENERAL REMARKS.
		Herrings.		Other kinds (excluding Shell Fish).		Value of Shell Fish.			
		Cwts.	£	Cwts.	£	£			
Nets and lines.	Firth of Clyde.	6,336	3,197	26	48	2	Herrings.	1	Increase in quantity of herrings but decrease in value. Decrease in other kinds.
Nets, lines, and creels.	"	311	247	26	47	331	Herrings and lobsters.	..	Increase in herrings and lobsters, decrease in codlings.
Nets and lines.	"	81	18	143	246	..	Cod and flounders.	..	Decrease in herrings.
"	"	60	48	40	42	..	Herrings and cod.	..	Slight increase in total landings.
		10,423	4,789	1,134	1,986	964		27	
Nets and lines.	Off coast.	21,743	7,083	510	381	..	Herring.	..	Landings mostly by boats from other creeks. Increase in herrings, but decrease in other kinds.
"	Clyde area.	1,360	574	967	1,544	225	Herrings, whiting, and flounders.	..	Decrease in landings. When herring fishing successful, landings are made at Ayr, owing to poor transport facilities locally.
"	"	771	459	1,255	2,090	..	"	..	Do. do do.
"	"	11,494	4,898	7,453	8,599	252	Herrings, cod, and flounders.	4	Increase in quantity but decrease in value of herrings, and, in less degree, of white fish.
Cod and trammel nets.	Ballantrae Bank.	..	..	292	252	..	Cod.	..	Creek continues to decline; only a few of the older men fish during the spring with cod nets.
Trammel and flounder nets and lines.	Loch Ryan, Ballantrae Bank and Luce Bay.	2,866	1,013	8,852	8,017	1,513	Herrings, flounders, cod, and eels.	1	Reduced landings at Stranraer owing to failure of herring fishing in Loch Ryan and on Ballantrae Bank, and to withdrawal of steam trawlers. The oyster beds were less productive. Landings at Kirkcolm were normal.
Lines.	Off coast.	6	8	859	2,111	57	Cod.	..	Slight decrease in landings.
Nets and creels.	"	73	45	..	..	24	Lobsters.	..	Herrings were secured during July.
Lines, and flounder nets and creels.	Luce Bay.	..	..	1,381	1,640	1,094	Cod, flounders, and crabs.	..	Decrease in landings from Luce Bay, especially of cod and plaice, perhaps because fewer stranger boats operating. Increase in shell fish.
"	"	..	..	270	410	50	"	..	"
"	"	..	..	347	499	18	"	..	"
"	"	..	..	519	714	137	"	..	"
Lines and nets.	Wigtown Bay.	..	..	141	271	116	Sparlings and mussels.	..	Creeks on Wigtown Bay. Slight falling off in shell fish; otherwise little change.
"	"	..	..	8	20	127	"	..	"
"	"	..	..	118	378	313	"	..	"
Mussel dredging.	Solway Firth.	..	..	..	..	271	Mussels and whelks.	..	Shell fish mostly hand gathered and marketed for consumption rather than for bait. Results show a decided falling off.
"	"	..	..	24	35	343	"	..	"
Flounder stakenets.	Estuary of Nith.	..	..	230	178	..	Flounders.	..	Nith Estuary; decline in quantity and value of landings.
Beamtrawl.	Solway Firth.	..	..	339	631	..	"	..	"
		..	..	2,014	2,014	6,514	Flounders and shrimps.	..	An industrious and energetic community of fishermen. Little change in quantity of landings, but substantial reduction in value.
		38,318	14,080	23,065	30,506	11,084		5	
		2,461,896	1,173,789	2,738,338	3,736,835	102,832		784	
		3,155,165	2,244,680	3,170,774	4,275,303	106,846		771	

TABLE A.—No. III.

MAXIMUM LOCAL ACTIVITY IN HERRING FISHING.—RETURN for the Year 1921, showing the number of Boats and Persons engaged in the Herring Fishing Industry in the various Districts in Scotland during the week of greatest activity.

DISTRICT.	Date.	No. of Boats.				No. of Persons Employed.					
	Week ending.	Steam.	Motor.	Sail.	Total.	Fishermen and Boys.	Curers and Buyers.	Coopers.	Gutters, Packers, &c.	Labourers.	Total.
Eyemouth, . . .	Aug. 27	120	58	...	178	1,544	50	73	822	250	2,739
Leith, . . .	Feb. 12	2	101	20	123	443	15	10	80	48	596
Anstruther, . . .	Feb. 26	6	93	10	109	743	34	12	...	59	848
Montrose, . . .	Feb. 19	...	...	9	9	32	2	...	...	2	36
Stonehaven, . . .	...	...	...	...	...	...	...	...	...	...	...
Aberdeen, . . .	July 16	8	1	...	9	80	9	3	201	35	328
Peterhead, . . .	July 30	74	60	3	137	1,213	96	228	1,265	236	3,038
Fraserburgh, . . .	Aug. 13	100	130	10	240	1,880	100	175	1,294	291	3,740
Banff, . . .	Aug. 13	12	30	...	42	308	7	17	119	15	466
Buckie, . . .	Aug. 13	22	17	4	43	362	7	32	112	21	534
Findhorn, . . .	Nov. 19	...	6	26	32	160	10	3	15	10	198
Cromarty, . . .	Oct. 15	...	...	2	2	8	...	...	...	6	14
Helmsdale, . . .	Aug. 20	...	7	1	8	32	1	...	...	4	37
Lybster, . . .	Sept. 3	...	6	8	14	59	2	2	18	2	83
Wick, . . .	Aug. 6	100	65	3	168	1,385	60	240	950	85	2,720
Orkney, . . .	Aug. 6	50	30	9	89	738	10	46	243	54	1,091
Shetland, . . .	July 16	67	152	72	291	2,171	45	243	1,284	131	3,874
Stornoway, . . .	Jan. 15	100	14	19	133	1,131	21	35	325	110	1,622
Barra, . . .	Aug. 13	105	60	15	180	1,600	18	57	342	32	2,049
Loch Broom, . . .	Dec. 17	5	3	19	27	112	..	2	..	4	118
Loch Carron and Skye,	Jan. 8	12	1	...	13	138	10	9	32	25	214
Fort William, . . .	Jan. 22	50	15	...	65	570	103	26	95	77	871
Campbeltown, . . .	Jan. 29	...	80	...	80	373	32	1	25	78	509
Inveraray, . . .	Dec 17	...	178	...	178	783	7	3	24	4	821
Rothsay, . . .	Nov. 26	...	12	...	12	60	4	...	18	12	94
Greenock, . . .	July 9	...	13	...	13	65	27	16	82	100	290
Ballantrae, . . .	Feb. 26	...	52	...	52	208	14	7	16	12	257

TABLE B.—No. I.

FISH LANDED.—STATEMENT of the Total Quantity and Value of Herrings taken by Steam, Motor, and Sailing Boats respectively and landed in Scotland during the various Seasons of the Year 1921.

No.	DISTRICT.	Winter. (1st Jan. to 31st Mar.)								Early Summer. (1st April to 30th June.)	
		Steam.		Motor.		Sail.		TOTAL.		Steam.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
		Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£
	<b>EAST COAST.</b>										
1	Eyemouth . . .	3,209	1,567	23,860	12,509	..	..	27,069	14,076	143	221
2	Leith . . .	200	74	29,596	19,933	1,916	1,314	31,712	21,321	41	28
3	Anstruther . . .	5,096	2,745	81,186	45,786	893	209	87,175	48,740	..	..
4	Montrose . . .	151	79	377	170	123	25	651	274	21	13
5	Stonehaven . . .	..	..	..	..	..	..	..	..	..	..
6	Aberdeen . . .	3,230	1,324	..	..	..	..	3,230	1,324	2,947	1,701
7	Peterhead . . .	11,039	4,974	364	142	..	..	11,403	5,116	5,628	3,393
8	Fraserburgh . . .	33,363	13,561	637	232	..	..	34,000	13,793	985	182
9	Banff . . .	3,038	1,051	..	..	..	..	3,038	1,051	199	167
10	Buckie . . .	28,743	12,020	592	182	..	..	29,335	12,202	49	41
11	Findhorn . . .	808	379	176	53	581	224	1,565	656	..	..
12	Cromarty . . .	..	..	..	..	10	15	10	15	..	..
13	Helmsdale . . .	..	..	..	..	..	..	..	..	..	..
14	Lybster . . .	..	..	..	..	..	..	..	..	..	..
15	Wick . . .	132,336	71,611	15,407	7,285	306	149	148,099	79,045	3,087	3,335
	<b>East Coast Totals</b>	<b>221,263</b>	<b>109,385</b>	<b>152,195</b>	<b>86,292</b>	<b>3,829</b>	<b>1,936</b>	<b>377,237</b>	<b>197,613</b>	<b>13,050</b>	<b>9,081</b>
	<b>ORKNEY AND SHETLAND.</b>										
16	Orkney . . .	392	186	88	59	..	..	480	245	7	5
17	Shetland . . .	2,059	735	..	..	..	..	2,059	735	12,082	7,785
	<b>Orkney and Shetland Totals</b>	<b>2,451</b>	<b>921</b>	<b>88</b>	<b>59</b>	<b>..</b>	<b>..</b>	<b>2,539</b>	<b>980</b>	<b>12,089</b>	<b>7,790</b>
	<b>WEST COAST.</b>										
18	Stornoway . . .	49,887	26,819	3,423	1,604	4,979	2,130	58,289	30,553	3,549	3,252
19	Barra . . .	32	9	231	56	160	72	423	137	210	313
20	Loch Broom . . .	..	..	42	16	612	291	654	307	..	..
21	Loch Carron & Skye . . .	14,252	11,401	1,064	671	958	365	16,274	12,437	..	..
22	Fort-William . . .	57,511	42,716	6,386	5,226	56	18	63,953	47,960	286	266
23	Campbeltown . . .	..	..	44,530	21,410	..	..	44,530	21,410	..	..
24	Inveraray . . .	..	..	1,799	1,493	..	..	1,799	1,493	..	..
25	Rothsay . . .	..	..	3,049	1,927	..	..	3,049	1,927	..	..
26	Greenock . . .	..	..	413	248	..	..	413	248	..	..
27	Ballantrae . . .	224	64	13,575	4,484	..	..	13,799	4,548	..	..
	<b>West Coast Totals</b>	<b>121,906</b>	<b>81,009</b>	<b>74,512</b>	<b>37,135</b>	<b>6,765</b>	<b>2,876</b>	<b>208,183</b>	<b>121,020</b>	<b>4,045</b>	<b>3,831</b>
	<b>Grand Tls. for 1921</b>	<b>345,620</b>	<b>191,315</b>	<b>226,795</b>	<b>123,486</b>	<b>10,594</b>	<b>4,812</b>	<b>583,009</b>	<b>319,613</b>	<b>29,184</b>	<b>20,702</b>
	<b>Grand Tls. for 1920</b>	<b>516,983</b>	<b>385,616</b>	<b>158,990</b>	<b>102,081</b>	<b>48,337</b>	<b>16,896</b>	<b>724,010</b>	<b>504,593</b>	<b>237,744</b>	<b>180,706</b>
	<b>Increase in 1921</b>	<b>..</b>	<b>..</b>	<b>67,805</b>	<b>21,405</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>
	<b>Decrease in 1921</b>	<b>171,063</b>	<b>194,301</b>	<b>..</b>	<b>..</b>	<b>37,743</b>	<b>12,084</b>	<b>141,001</b>	<b>184,980</b>	<b>208,560</b>	<b>160,004</b>

TABLE B.—

FISH LANDED.—STATEMENT of the Total Quantity and Value of **Herrings** during the various Seasons

No.	DISTRICT.	Early Summer— <i>continued</i> . (1st April to 30th June.)						Great Summer and Autumn. (1st July to 31st Dec.)			
		Motor.		Sail.		TOTAL.		Steam.		Motor.	
		Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
EAST COAST.		Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£
1	Eyemouth . . .	7,106	9,493	..	..	7,249	9,714	7,679	3,604	12,734	6,259
2	Leith . . .	1,298	995	39	22	1,378	1,045	2,904	2,084	848	608
3	Anstruther . . .	413	325	13	18	426	343	385	137	217	74
4	Montrose . . .	150	67	..	..	171	80	192	98	111	54
5	Stonehaven . . .	42	41	..	..	42	41	..	..	..	..
6	Aberdeen . . .	2,026	879	..	..	4,973	2,580	22,469	12,934	494	178
7	Peterhead . . .	12,257	5,119	728	281	18,613	8,793	106,701	48,773	63,560	23,932
8	Fraserburgh . . .	31,546	16,785	872	190	33,360	17,157	120,061	49,152	159,546	67,734
9	Banff . . .	3,851	3,850	..	..	4,050	4,017	5,717	2,781	12,764	5,981
10	Buckie . . .	2,858	1,007	178	291	3,085	1,339	3,318	1,285	3,066	1,266
11	Findhorn . . .	35	25	..	..	35	25	325	146	1,519	389
12	Cromarty . . .	..	..	..	..	..	..	..	..	..	..
13	Helmsdale . . .	58	60	..	..	58	60	..	..	401	245
14	Lybster . . .	7	8	84	96	91	104	..	..	189	69
15	Wick . . .	14,035	12,599	425	385	17,547	16,319	116,116	43,713	68,901	23,065
<b>East Coast Totals</b>		<b>75,632</b>	<b>51,253</b>	<b>2,346</b>	<b>1,283</b>	<b>91,078</b>	<b>61,617</b>	<b>385,887</b>	<b>164,757</b>	<b>324,350</b>	<b>139,854</b>
<b>ORKNEY AND SHETLAND.</b>											
16	Orkney . . .	707	330	658	226	1,372	561	32,278	9,112	26,323	7,597
17	Shetland . . .	57,845	30,752	44,307	21,017	114,234	59,554	151,996	46,016	217,717	68,372
<b>Orkney and Shetland Totals</b>		<b>58,552</b>	<b>31,082</b>	<b>44,965</b>	<b>21,243</b>	<b>115,606</b>	<b>60,115</b>	<b>184,274</b>	<b>55,123</b>	<b>244,040</b>	<b>75,969</b>
<b>WEST COAST.</b>											
18	Stornoway . . .	4,720	4,098	5,066	4,239	13,335	11,589	36,486	21,031	8,598	7,434
19	Barra . . .	4,892	5,507	2,332	2,634	7,434	8,454	48,590	48,379	11,546	10,838
20	Loch Broom . . .	119	71	244	129	363	200	140	40	647	249
21	Loch Carron & Skye	1,323	1,380	132	52	1,455	1,432	2,667	953	6,895	3,374
22	Fort-William . . .	12,206	15,882	577	620	13,069	16,768	26,099	21,668	13,397	8,941
23	Campbeltown . . .	20,972	7,314	..	..	20,972	7,314	..	..	24,035	17,167
24	Inveraray . . .	12,317	6,400	3	2	12,320	6,402	..	..	83,770	35,638
25	Rothsay . . .	1,543	699	189	118	1,732	817	..	..	6,127	2,311
26	Greenock . . .	3,435	1,804	110	79	3,545	1,883	721	247	5,744	2,411
27	Ballantrae . . .	22,553	7,975	4	3	22,557	7,978	..	..	1,886	1,510
<b>West Coast Totals</b>		<b>84,080</b>	<b>51,130</b>	<b>8,657</b>	<b>7,876</b>	<b>96,782</b>	<b>62,837</b>	<b>114,703</b>	<b>92,318</b>	<b>162,645</b>	<b>89,873</b>
<b>Grand Tls. for 1921</b>		<b>218,314</b>	<b>133,465</b>	<b>55,968</b>	<b>30,402</b>	<b>303,466</b>	<b>184,569</b>	<b>684,844</b>	<b>312,208</b>	<b>731,035</b>	<b>305,696</b>
<b>Grand Tls. for 1920</b>		<b>123,803</b>	<b>93,017</b>	<b>20,717</b>	<b>14,523</b>	<b>382,270</b>	<b>288,246</b>	<b>1,321,283</b>	<b>976,932</b>	<b>623,495</b>	<b>411,783</b>
<b>Increase in 1921</b>		<b>94,505</b>	<b>40,448</b>	<b>35,251</b>	<b>15,879</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>107,550</b>	<b>..</b>
<b>Decrease in 1921</b>		<b>..</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>78,804</b>	<b>103,677</b>	<b>636,439</b>	<b>664,729</b>	<b>..</b>	<b>106,087</b>

No. I.—continued.

taken by Steam, Motor, and Sailing Boats respectively and landed in **Scotland** of the Year 1921.

Great Summer and Autumn—contd. (1st July to 31st Dec.)				TOTALS.						GRAND TOTAL.		No.
Sail.		TOTAL.		Steam.		Motor.		Sail.		Quantity.	Value.	
Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.			
Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	Cwts.	£	
..	..	20,413	9,863	11,031	5,392	43,700	28,261	..	..	54,731	33,653	1
132	66	3,884	2,758	3,145	2,186	31,742	21,536	2,087	1,402	36,974	25,124	2
..	..	602	211	5,481	2,882	81,816	46,185	906	227	88,203	49,294	3
..	..	303	152	364	190	638	291	123	25	1,125	506	4
..	..	..	..	..	..	42	41	..	..	42	41	5
..	..	22,963	13,162	28,646	16,009	2,520	1,057	..	..	31,166	17,066	6
2,583	1,077	172,844	78,782	123,368	57,140	76,181	34,193	3,311	1,358	202,860	92,691	7
5,197	1,875	234,304	118,761	154,359	62,895	191,729	84,751	6,076	2,065	352,164	149,711	8
172	55	18,653	8,817	8,954	3,999	16,615	9,831	172	55	25,741	13,885	9
340	116	6,724	2,667	32,110	13,346	6,516	2,455	518	407	39,144	16,208	10
4,307	722	6,151	1,257	1,133	525	1,730	467	4,888	946	7,751	1,938	11
38	17	38	17	..	..	..	..	48	32	48	32	12
4	2	405	247	..	..	459	305	4	2	463	307	13
294	131	483	200	..	..	196	77	378	227	574	304	14
3,220	957	188,237	72,735	251,589	118,659	98,343	47,949	3,951	1,491	353,883	168,099	15
16,287	5,018	726,504	309,629	620,180	283,223	552,227	277,399	22,462	8,237	1,194,869	563,859	
10,787	2,967	69,388	19,676	32,677	9,303	27,118	7,986	11,445	3,193	71,240	20,482	16
104,559	27,786	474,272	142,174	166,137	54,536	275,562	99,124	148,866	48,803	590,565	202,463	17
115,346	30,753	543,660	161,850	198,814	63,839	302,680	107,110	160,311	51,993	661,805	222,945	
18,835	11,607	63,919	40,072	89,922	51,102	16,741	13,136	28,880	17,976	135,543	82,214	18
1,980	2,156	62,116	61,373	48,832	48,701	16,669	16,401	4,472	4,862	69,973	69,961	19
4,056	831	4,843	1,170	140	40	808	336	4,912	1,301	5,860	1,677	20
3,387	1,243	12,949	5,570	16,919	12,354	9,282	5,425	4,477	1,660	30,678	19,439	21
265	163	39,761	30,772	83,896	64,650	31,989	30,049	898	801	116,783	95,500	22
261	152	24,296	17,319	..	..	89,537	45,891	261	152	89,798	46,043	23
235	81	84,005	35,719	..	..	97,886	43,531	238	83	98,124	43,614	24
224	209	6,351	2,520	..	..	10,719	4,937	413	327	11,132	5,264	25
..	..	6,465	2,658	721	247	9,592	4,463	110	79	10,423	4,789	26
76	44	1,962	1,554	224	64	35,014	13,969	80	47	38,318	14,080	27
29,319	16,536	306,687	198,727	240,654	177,158	321,287	178,138	44,741	27,238	606,632	382,584	
160,952	52,307	1,576,831	670,206	1,059,648	524,220	1,176,144	562,647	227,514	87,521	2,463,306	1,174,388	
104,117	63,126	2,048,885	1,451,841	2,075,710	1,543,254	906,284	606,881	173,171	94,545	3,155,165	2,244,680	
56,835	..	..	..	..	..	289,860	..	54,343	..	..	..	
..	10,819	472,054	781,635	1,016,062	1,019,034	..	44,234	..	7,024	691,859	1,070,292	









Whiting	34,672	24,853	72	107	65	91	137	196	19	83	9	34,828	25,060	35,229	27,480
Conger Eels	2	1	3	3	36	91	39	94	19	19	83	60	178	67	204
Gurnards	2,864	973	..	..	..	..	..	..	..	..	..	2,864	973	2,624	905
Catfish	6,118	6,281	272	305	56	86	331	395	..	..	1,206	7,276	7,882	6,357	6,538
Monks (Anglers)	4,653	4,749	..	..	..	..	..	..	..	..	..	4,653	4,749	3,314	3,754
Hake	52	59	..	..	..	..	..	..	..	..	..	52	59	100	94
<b>Total of Round Fish</b>	<b>350,832</b>	<b>385,238</b>	<b>2,214</b>	<b>3,357</b>	<b>2,778</b>	<b>4,226</b>	<b>33,414</b>	<b>69,567</b>	<b>1,089</b>	<b>15,466</b>	<b>2,279</b>	<b>386,370</b>	<b>450,074</b>	<b>435,532</b>	<b>508,598</b>
<b>FLAT.</b>															
Turbot	1,895	6,286	..	..	..	..	..	..	..	..	..	1,895	6,286	2,607	7,675
Halibut	489	1,923	61	315	..	..	143	709	..	..	..	632	2,632	1,091	3,964
Lemon Soles	6,585	23,464	4	12	3	9	7	21	..	..	..	6,592	23,465	5,828	21,884
Flounders	311	927	94	134	29	49	123	183	651	11,152	720	1,154	2,314	827	1,751
Piace, Large	7,135	22,195	925	2,523	207	355	1,132	2,878	2950	5876	4	11,221	30,954	11,033	29,127
" Medium	..	..	..	..	..	..	..	..	..	..	5	..	..	..	..
" Small	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	29	93	..	..	..	..	..	..	..	..	..	29	93	35	51
Dabs	4,905	2,519	23	20	93	92	116	112	..	..	..	5,021	2,631	4,480	2,468
Whitches	2,093	4,751	..	..	..	..	..	..	..	..	..	2,093	4,751	1,353	2,951
Megrims	1,200	2,389	..	..	..	..	..	..	..	..	..	1,200	2,389	926	1,926
<b>Total of Flat Fish</b>	<b>24,642</b>	<b>64,540</b>	<b>82</b>	<b>394</b>	<b>332</b>	<b>505</b>	<b>1,521</b>	<b>3,903</b>	<b>3,601</b>	<b>7,028</b>	<b>73</b>	<b>29,837</b>	<b>75,535</b>	<b>28,180</b>	<b>71,747</b>
Skates and Rays	7,492	3,393	444	250	2	4	1,946	1,415	..	..	42	9,480	4,829	7,851	3,962
Squids	12	7	..	..	..	..	..	..	42	21	21	12	7	2	1
Unclassified kinds	804	472	..	..	16	24	23	34	..	..	..	827	506	752	441
<b>GRAND TOTALS</b>	<b>387,952</b>	<b>456,719</b>	<b>2,740</b>	<b>4,001</b>	<b>3,159</b>	<b>4,794</b>	<b>36,954</b>	<b>67,975</b>	<b>4,661</b>	<b>31,782</b>	<b>36,013</b>	<b>497,757</b>	<b>560,707</b>	<b>499,230</b>	<b>607,778</b>
<b>TOTAL VALUE OF ALL FISH</b>															
Fish used for Manure (Included above)	..	..	..	62,055	2,900	387,820	2,317	4,515	444	7,269	592	..	6468	..	10,191
" " "	..	..	..	..	..	..	..	..	..	..	..	..	567,175	..	617,969
" " Bait	..	..	..	..	..	..	..	..	..	..	..	21,756	1,282	7,125	456
" " "	..	..	..	..	..	..	..	..	..	..	..	575	187	3,399	650

SHELL-FISH.

Oysters. No. £ Lobsters. No. £ Crabs. No. £ Mussels. £ Cwts. £ Clams. £ Cwts. £ Unclassified. £ Cwts. £

\* Included are landings by motor trawlers totalling 320 cwts., valued at £619, mostly haddocks and codling.  
 † Included are 2116 landings by flounder seine net vessels totalling 4168 cwts., valued at £7760, mostly plaice, and 1 landing by a Danish seine net vessel of 30 cwts. plaice, valued at £66.







	5,924	4,625	3	5,283	2,854	5,233	2,854	2,854	11,157	7,479	6,513	5,318
Whittings	..	..	..	..	..	..	..	..	..	..	..	..
Conger Belts	649	289	..	109	108	112	114	114	112	114	357	14
Gurnards	1,018	1,470	..	307	444	307	444	..	649	289	1,633	167
Catfish	361	838	..	1	1	1	1	..	1,325	1,914	2,264	2,264
Monks (Anglers)	1	..	..	..	..	..	..	..	362	883	268	602
Hake	..	..	..	..	..	..	..	..	1	1	6	14
<b>Total of Round Fish.</b>	58,393	73,901	993	1,571	75,985	786	78,342	4,672	115,428	159,015	106,036	161,096
<b>FLAT.</b>												
Turbot	488	1,964	..	2	7	2	7	..	490	1,971	450	1,689
Halibut	30	208	..	89	377	146	677	..	176	885	145	726
Lemon Soles	2,906	14,466	..	39	207	39	207	..	2,945	14,673	2,464	11,979
Flounders	..	..	..	6	9	45	54	69	53	107	53	76
Plaice, Large.	1,558	6,513	..	16	41	76	117	12,048	23,844	32,845	8,622	23,502
" Medium	556	1,590	..	..	..	..	..	..	..	..	..	..
" Small.	533	781	..	..	..	..	..	..	..	..	..	..
Brill	..	..	..	..	..	..	..	..	..	..	..	..
Dabs	383	390	..	40	87	32	119	1,105	641	1,154	917	959
Whitches	121	383	..	..	..	..	..	..	121	383	105	358
Megrims	36	99	..	..	..	..	..	..	36	99	123	367
<b>Total of Flat Fish</b>	6,611	26,394	57	300	728	153	1,181	13,223	24,546	52,121	12,879	38,966
Skates and Rays	1,243	753	260	225	307	..	582	3	1,828	1,268	1,244	907
Squids	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified kinds	..	..	..	..	..	..	..	..	..	..	..	..
<b>GRAND TOTALS</b>	66,265	101,092	1,310	2,096	77,033	1,194	80,263	18,577	43,999	213,681	137,458	203,628

<b>SHELL-FISH.</b>										
	Oysters.	Lotsters.	Crabs.	Mussels.	Clams.	Unclassified.				
	No.	No.	No.	Cwts.	Cwts.	Cwts.	£	£	£	£
<b>TOTAL VALUE OF ALL FISH</b>	..	15,988	128,791	1,004	15,981	2,332	1,265	323	4,656	6,348
Fish used for Manure (included above)	..	..	..	..	..	..	..	..	218,337	209,976
" Bait ( " " )	..	..	..	..	..	..	..	..	5,763	1,367
" " " " " "	..	..	..	..	..	..	..	..	334	272

\* Included is one landing by a motor trawler, absent from port one day, totalling 5 cwts., valued at £4, mostly haddocks.  
 † Included are 2 landings by Danish seine net vessels totalling 49 cwts., valued at £80, mostly plaice.  
 ‡ 3,703 " flounder " " 13,229 " " £24,469, mostly plaice (sail: 2 landings, 3 cwts., £5; balance motor).







TABLE B.—No. II.—RETURN respecting Vessels arriving and Fish landed in the District of Aberdeen during the Year 1921, and showing the catch and value during the previous Year.

Method of Fishing.	Trawls.				Lines.								Nets.				1921.		1920.			
	Steam.*		Motor.		Sail.		Total.		Steam.†		Motor.†		Sail.		Total.		Total Quantity and Value.		Total Quantity and Value.			
	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Cwt.	£	Cwt.	£		
No. of Vessels arriving	9,196	1,379	2,599	1,809	5,787	261	1,119	..	1,380	..	..	..	..	..	..	..	..	..	..	..		
Aggregate No. of Days absent from Port	47,456	13,982	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Description of Fish.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Quantity	Value.	Cwt. <td>£</td> <td>Cwt. <td>£</td> </td>	£	Cwt. <td>£</td>	£		
<b>PELAGIC FISH—</b>																						
Herrings	15,157	9,626	..	..	..	..	..	..	13,469	6,363	2,520	1,057	..	..	..	..	16,009	7,440	31,166	17,066		
Sprats	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Spurrings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
Mackerel	1,792	1,275	10	169	172	175	133	69	..	..	..	..	..	..	..	133	69	2,097	1,519	1,487		
Total of Pelagic Fish.	16,949	10,901	10	162	172	175	133	69	13,469	6,452	2,520	1,057	..	..	..	16,142	7,509	33,263	18,585	86,184	72,601	
<b>DEMERSAL FISH—</b>																						
<b>ROUND.</b>																						
Cod	160,797	271,803	39,558	54,276	408,694	2	7	43,593	63,225	137	148	18	35	..	..	155	183	204,545	335,211	333,180	451,732	
Codling	199,291	283,230	10,434	12,358	797,126	541	968	11,772	14,595	65	81	175	298	..	..	240	379	211,303	298,204	293,419	377,056	
Ling	47,219	34,967	80,417	54,615	563,701	..	..	80,980	55,316	..	..	..	..	..	..	..	..	128,199	90,283	111,185	96,557	
Torsk (Tusk)	1,251	1,149	14,197	13,677	..	..	14,197	13,677	..	..	..	..	..	..	..	..	..	15,448	14,826	10,228	8,917	
Saithe (Coal Fish)	84,131	42,632	2,756	1,306	463,292	..	..	3,220	1,599	..	..	..	..	..	..	..	..	87,351	44,231	129,405	80,647	
Haddock, ex. La.	14,704	22,677	877	1,159	..	..	878	1,160	..	..	..	..	..	..	..	..	..	15,615	23,917	51,471	50,732	
" " Laye	176,634	341,978	..	..	3086,6300	1	..	3,088	6,304	33	80	..	..	..	..	33	80	160,151	349,037	288,065	486,543	
" " Medium	90,519	143,546	..	..	195,236	733	989	753	1,175	428	753	1	2	..	..	429	755	180,151	349,037	288,065	486,543	
" " Small	228,504	192,159	..	..	1546,1597	658	556	2,204	2,153	205	194	8	15	..	..	213	217	280,921	194,521	264,839	252,903	

Whittings	100,881	87,790	46113632	902	691	5,513	4,323	8	5	8	5	8	5	8	5	106,402	92,118	99,617	86,813	
																				384
Conger Eels	585	252														2,338	480	1,896	570	
Gurnards	2,270	468														12,322	7,510	12,807	7,178	
Catfish	12,161	7,434														20,726	8,990	14,710	8,056	
Monks (Anglers)	20,681	8,972														22,877	45,943	15,628	33,034	
Hake	22,617	45,441														1,330	1,766,857	2,117,977		
Total of Round Fish	1,162,265	1,490,498	148,972	136,235	15,292	22,970	2,842	3,166	167,106	164,371	1,128	1,508	202	350	1,858	1,330,701	1,656,727	1,766,857	2,117,977	
FLAT.																				
Turbot	5,355	18,746	5	21	8	27		7	17		7	17		7	17	5,375	18,811	4,733	16,318	
Hallibut	6,756	35,667	64,673	280,763	191	1045		4	8		4	8		4	8	71,624	317,473	70,643	386,434	
Lemon Soles	30,224	134,448						428	1,472	1	2			429	1,474	30,653	135,922	24,318	103,344	
Flounders	5,254	18,192																	31	
Plaice, Large	24,363	119,765																	14,533	
" Medium	3,809	12,212																	162,546	
" Small	574	1,581																	16,803	
Brill	1,600	1,351																	1,586	
Dabs	4,547	9,423																	2,212	
Whites	9,568	21,801																	9,935	
Megrim	92,070	373,186	64,678	280,774	244	1153	3	2,211	7,260	2830	6813			4,541	14,073	161,536	609,192	172,627	687,549	
Total of Flat Fish	50,695	31,134	84,255	52,654	4741	8020		326	147	2	1			328	148	140,019	86,956	99,443	58,266	
Skates and Rays	292	84	2,218	790	2											282	84	48	23	
Squids	2,067	716														4,292	1,509	2,518	1,113	
Unclassified kinds	1,324,338	1,906,519	300,123	472,453	20,289	27,149	3,007	3,341	323,419	502,943	17,292	15,370	5054	8221	23,591	1,670,103	2,433,053	2,127,677	2,937,529	
GRAND TOTALS																				
SHELL-FISH.																				
Oysters	No.	£	Lobsters	No.	£	Crabs	No.	£	Mussels	£	Clams	£	Unclassified	£						
Fish used for Manure (included above)			684	60		15,104	242													
" " Bait																				
TOTAL VALUE OF ALL FISH																				
Fish used for Manure (included above)																				
" " Bait																				

\* Included are 3 landings by motor trawlers, representing an aggregate absence from port of 16 days, and totalling 87 cwts., valued at £307, mostly plaice and haddocks.  
 † Included are 84 landings by steam and 5 by motor vessels using Danish seine nets totalling 3,603 cwts. (mostly plaice and haddocks), valued at £8,894 (steam 3,583 cwts., £8,833; motor 25 cwts., £61), and 1,066 landings by motor vessels using flounder seine nets totalling 2,500 cwts. (mostly plaice), valued at £7,103.  
 Landed by English vessels (included above), 36,135 cwts., valued at £58,618.  
 " Foreign " (not included above), 54,104 " " £42,776 (for particulars see pp. 116-117).

TABLE B.—No. II.—RETURN respecting Vessels arriving and Fish landed in the District of Peterhead during the Year 1921, and showing the catch and value during the previous Year.

Method of Fishing.	Trawls.				Lines.								Nets.				1921.		1920.			
	Steam.*		Sail.		Motor.		Sail.		Total.		Steam.		Motor.†		Sail.		Total.		Total Quantity and Value.		Total Quantity and Value.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Cwt.	£	Cwt.	£
No. of Vessels arriving	874	35	3,718	7,256	11,009	2,139	2,304	132	4,575	..	..	..	..	..	..	..	..	..	..	..	..	..
Aggregate No. of Days absent from Port	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Description of Fish.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Cwt. <td>£ <td>Cwt. <td>£ </td></td></td>	£ <td>Cwt. <td>£ </td></td>	Cwt. <td>£ </td>	£
PELAGIC FISH—	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> </td>	£	Cwt. <td>£</td>	£
Herrings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sprats	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sparlings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mackerel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Pelagic Fish.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	202,860	92,691	367,083	285,884
DEMERSAL FISH—	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> <td>Cwt. <td>£</td> </td></td>	£	Cwt. <td>£</td> <td>Cwt. <td>£</td> </td>	£	Cwt. <td>£</td>	£
Round.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cod	138	226	173	308	1,199	1,697	46	81	24	34	115	1,407	2,086	1,848	2,421	1,407	2,086	1,848	2,421	1,848	2,421	
Codling	206	272	1,506	7,026	10,671	14,865	214	288	25	42	330	11,116	15,487	10,428	13,665	11,116	15,487	10,428	13,665	10,428	13,665	
Ling	..	..	31	50	288	350	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Torsk (Tusk)	..	..	7	5	19	18	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Saithe (Coal Fish)	45	30	195	153	1,211	657	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Haddock, ex. Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Large	42	80	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Medium.	85	116	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Small	96	82	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Demersal Fish.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	209,893	95,054	371,056	287,649















	6	4	117	123	747	611	864	734											870	738	1,439	1,733
Whittings . . . . .	1080	1416	47	1,437	2,727	9,601	14,587	11,078	17,361	7,331	2,025	15,320	16,563	2,766	3,173	25,417	26,761	37,575	47,538	34,090	54,416	
<b>FLAT.</b>																						
Turbot . . . . .	4	20	37	8	31	6	27	24	95	5	24	6	28	1	4	12	56	16	76	2	10	
Halibut . . . . .	6	26	..	..	..	..	..	..	..	32	125	46	150	5	18	83	293	113	414	321	1,514	
Lemon Soles . . . . .	100	410	..	..	..	..	..	..	..	320	1,331	29	107	..	..	349	1,848	449	1,848	34	234	
Flounders . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	164	348	
Piace, Large . . . . .	..	..	..	..	..	..	..	..	..	788	2,260	173	526	..	..	..	2,786	1,017	2,952	99	331	
" Medium . . . . .	274	1,053	..	..	..	..	..	..	..	1,491	5,531	398	1,359	42	111	1,931	7,001	2,286	8,275	222	700	
" Small . . . . .	25	61	..	..	..	..	..	..	..	194	494	20	42	..	..	214	536	239	597	3	12	
Brill . . . . .	8	27	..	..	..	..	..	..	..	29	95	3	10	..	..	32	105	40	132	2	9	
Dabs . . . . .	10	16	..	..	..	..	..	..	..	35	53	6	10	..	..	63	63	75	124	18	25	
Whites . . . . .	20	43	..	..	..	..	..	..	..	228	393	6	13	..	..	234	406	254	449	2	3	
Megrims . . . . .	1	2	..	..	..	..	..	..	..	19	40	1	2	..	..	20	42	21	44	1	1	
Total of Flat Fish . . . . .	504	1,824	37	10	37	173	436	193	510	3,141	10,346	688	2,247	48	133	3,877	12,726	4,574	15,060	868	3,247	
Skates and Rays . . . . .	170	67	81	54	38	83	54	224	173	459	264	248	271	36	47	743	562	1,137	822	366	482	
Squids . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Unclassified kinds . . . . .	33	17	..	..	..	..	..	..	..	33	12	..	..	..	..	33	12	66	29	..	..	
<b>GRAND TOTALS</b> . . . . .	1787	3,324	165	1,501	2,802	9,862	15,077	11,495	18,044	43,405	33,177	22,854	21,556	3,398	3,775	69,637	58,508	82,939	79,876	141,421	129,950	

SHELL-FISH.

	Oysters.	Lobsters.	Crabs.	Mussels.	Clams.	Unclassified.
	No.	No.	No.	Cwts.	Cwts.	Cwts.
Fish used for Manure (included above)	..	3,840	..	..	..	401
" Bait ( " " )	..	..	..	..	..	80,277
	..	..	..	..	..	..
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\* Included are 303 landings by steam and 22 by motor vessels using Danish seine nets totalling 6,841 cwts. (mostly haddocks and plaice), valued at £15,391 (steam 6,516 cwts., £14,694); motor 325 cwts., £697), and 59 landings by motor vessels using flounder seine nets totalling 494 cwts. (mostly plaice), valued at £1,408.

TABLE B.—No. II.—RETURN respecting Vessels arriving and Fish landed in the District of Findhorn during the Year 1921, and showing the catch and value during the previous Year.

Method of Fishing.	Trawls.				Lines.								Nets.				1921.		1920.			
	Steam.		Sail.		Motor.		Sail.		Motor.*		Sail.		Total.		Quantity.		Value.		Cwt.		£	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
No. of Vessels arriving	34	..	6	12,304	793	13,103	676	1,048	610	2,334	..	..	..	..	..	..	..	..	..	..	..	..
Aggregate No. of Days absent from Port	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Description of Fish.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
PELAGIC FISH—	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
Herrings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sprats	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Sparlings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mackerel	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Pelagic Fish.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
DEMERSAL FISH—	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
ROUND.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cod	77	118	25	2,319	31	45	1,901	2,393	68	72	8,044	8,245	10,022	10,756	13,035	15,520	..	..	..	..	..	..
Codling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Torsk (Tusk)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Saithe (Coal Fish)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Haddock, ex. L.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Medium	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Small	409	668	..	38,274	1,228	1,916	22,828	40,190	..	..	729	1,312	23,966	42,170	20,377	37,587	..	..	..	..	..	..























	342	446	16	21	16	21	16	21	16	21	16	21	62	90
Whittings	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Conger Eels	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gurnards	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Catfish	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Monks (Anglers)	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hake	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Total of Round Fish</b>	342	446	2,013	3,340	4,001	4,436	6,014	7,776	6,356	8,222	7,031	8,969	7,031	8,969
<b>FLAT.</b>														
Turbot	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Halibut	2	6	97	360	27	74	124	434	126	440	214	778	214	778
Lemon Soles	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Flounders	14	24	39	78	..	..	39	78	53	102	47	84	47	84
Plaice, Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Medium	27	52	..	..	..	..	..	..	27	52	15	30	15	30
" Small	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dabs	..	..	15	30	..	..	15	30	19	36	15	27	15	27
Whitchies	4	6	..	..	..	..	..	..	..	..	..	..	..	..
Megrimms	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>Total of Flat Fish</b>	47	86	151	468	27	74	178	542	225	630	291	919	291	919
Skates and Rays	23	25	134	135	99	106	233	241	256	266	317	397	317	397
Squids	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified kinds	..	..	..	..	..	..	..	..	..	..	..	..	..	..
<b>GRAND TOTALS</b>	412	559	2,298	3,943	4,127	4,616	6,425	8,559	78,595	29,672	99,388	72,087	99,388	72,087
<b>SHELL-FISH.</b>														
			<b>Oysters.</b>	<b>Lobsters.</b>	<b>Crabs.</b>	<b>Mussels.</b>	<b>Clams.</b>	<b>Unclassified.</b>						
	<b>No.</b>	<b>£</b>	<b>No.</b>	<b>No.</b>	<b>No.</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>	<b>£</b>
<b>TOTAL VALUE OF ALL FISH</b>	..	..	116,170	8,042	27,900	273	273	954	252	8,567	10,090	82,177	10,090	82,177
<b>Fish used for Manure (included above)</b>	..	..	..	..	..	..	..	..	..	38,239	520	26	520	26
<b>" " Bait ( " )</b>	..	..	..	..	..	..	..	..	..	371	242	177	242	177









	69	44	69	44	69	44	69	44	69	44	69	44	69	44	69	44	69	44	69	44	69	44	69	44			
<b>Whitings</b>																											
<b>Conger Bells</b>	499	498	82	842	1,433	1,300	235	287	235	287	235	287	235	287	235	287	235	287	235	287	235	287	235	287	235	287	
<b>Gurnards</b>																											
<b>Catfish</b>																											
<b>Monks (Anglers)</b>																											
<b>Hake</b>	3	6			23	39			23	39				23	39				23	39							
<b>Total of Round Fish.</b>	3,096	2,267	235	202	17,205	14,780			20,536	17,249				85	90			20,626	17,334					23,341	19,566		
<b>FLAT.</b>																											
<b>Turbot</b>																											
<b>Halibut</b>	32	88	3	12	247	621			247	621								247	621								
<b>Lennon Soles</b>																											
<b>Flounders</b>																											
<b>Plaice, Large</b>																											
<b>    "    Medium</b>																											
<b>    "    Small</b>																											
<b>Brill</b>																											
<b>Dabs</b>																											
<b>Whittches</b>																											
<b>Megrins</b>																											
<b>Total of Flat Fish.</b>	32	88	3	12	626	1,055			626	1,055				27	56			663	1,116					868	1,728		
<b>Skates and Rays</b>																											
<b>Squids</b>	217	132	6	3	1,074	601			1,074	601								1,074	601					1,761	1,171		
<b>Unclassified kinds</b>																											
<b>GRAND TOTALS</b>	3,345	2,487	244	217	21,109	17,700			24,698	20,404				169,481	133,062			162,274	103,263					306,658	208,207		
<b>SHELL-FISH.</b>																											
<b>Oysters.</b>	No.	£	<b>Lobsters.</b>		No.	£	<b>Crabs.</b>		No.	£	<b>Mussels.</b>		No.	£	<b>Clams.</b>		No.	£	<b>Unclassified</b>		No.	£	<b>Total</b>		No.	£	
	96,230	5,824			96,230	5,824														137,576	82,859			5,662	2,645	213,898	5,661

\* Included are 3 landings by flounder seine net vessels, totalling 27 cwts. plaice, valued at £56.

















Whittings	5	4	45	106	124	151	164	..	..	..	156	168	269	344		
Conger Eels	3	2	2,340	1,367	6	9,641	6,528	..	..	..	9,644	6,530	8,148	9,695		
Gurnards	2	1	..	..	..	..	..	..	..	..	2	1	..	..		
Catfish	2	1	..	..	..	..	..	..	..	..	873	2,796	295	621		
Monks (Anglers)	2	1	..	..	..	865	2,788	..	..	..	..	..	..	..		
Hake	8	8	72	177	3	..	..	..	..	..	..	..	..	..		
Total of Round Fish	327	330	15,808	14,881	4,707	3,553	1,751	1,364	1,077	913	191	155	1,268	1,068	24,953	28,075
<b>FLAT.</b>																
Turbot	10	44	..	..	..	..	..	..	..	..	..	..	..	..	4	21
Halibut	1	7	..	..	..	261	1,345	..	..	..	..	..	..	..	476	3,061
Lemon Soles	6	15	..	..	..	..	..	..	..	..	..	..	..	..	4	13
Flounders	..	..	..	..	4	..	..	..	..	..	..	..	..	..	..	..
Plaice, Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Medium	188	538	..	..	286	277	400	..	136	391	4	8	182	535	492	1,006
" Small	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	8	28	..	..	..	..	..	..	..	..	..	..	..	..	2	10
Dabs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whitchies	5	8	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Megrims	2	4	..	..	..	..	..	..	..	..	..	..	..	..	4	9
Total of Flat Fish	220	644	210	1,036	122	423	208	290	137	136	391	4	183	536	987	4,131
Skates and Rays	521	376	5,327	6,047	2,682	2,719	8	4	..	..	..	..	..	..	8,200	9,648
Squids	..	..	440	130	202	53	25	10	..	..	..	..	..	..	567	345
Unclassified kinds	..	..	..	..	..	..	..	..	..	17	11	5	22	13	206	345
GRAND TOTALS	1,068	1,350	21,785	22,094	7,713	6,748	1,992	1,668	34,742	32,449	1,244	1,021	125,890	101,955	335,913	288,925
<b>SHELL-FISH.</b>																
			Oysters.	Lobsters.	Crabs.	Mussels.	Clams.									
			No.	No.	No.	Cwts.	Cwts.	£	£	£	£	£	£	£	£	£
			55,794	3,329	9,660	135	..	..	..	..	..	..	1,640	782	4,206	2,511
TOTAL VALUE OF ALL FISH			..	..	..	..	..	..	..	..	..	..	..	..	..	..
Fish used for Manure (included above)			..	..	..	..	..	..	..	..	..	..	..	..	138,021	291,436
" " Bait ( " " )			..	..	..	..	..	..	..	..	..	..	..	..	..	..

\* Included are 4 landings by steam and 5 by motor vessels using Danish seine nets totalling 133 cwts. (mostly plaice), valued at £411 (steam, 43 cwts., £137; motor, 90 cwts., £274).



	No.	£	Lobsters.		Crabs.	Mussels.		Clams.		Unclassified.									
			No.	£		Cwts.	£	Cwts.	£										
Whiting	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Conger Eels	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Gunwards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Catfish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Monks (Anglers)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hake	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Round Fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
FLAT.																			
Turbot	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Halibut	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Lenon Soles	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Flounders	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Plaice, Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
"  Medium	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
"  Small	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Brill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Dabs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Whitches	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Megrins	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Flat Fish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Skates and Rays	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Squids	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified kinds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
GRAND TOTALS	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

\* Included are 185 landings by flounder seine net vessels totalling 238 cwt., valued at £647, mostly plaice and codlings.



















TABLE B.—No. II.—FISH LANDED.—STATEMENT of the Total Quantity and Value of the different kinds of White and Shell-Fish landed on the East Coast of Scotland during the Year 1921.

DESCRIPTION OF FISH.	TRAWLS.				LINES.								NETS.†				1921.		1920.			
	Steam.*		Steam.		Motor.		Sail.		TOTAL.		Steam.		Motor.		Sail.		TOTAL.		Cwt.	£	Cwt.	£
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.				
	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£	Cwt.	£
<b>PELAGIC FISH.</b>																						
Herrings	18,051	11,707	..	..	42	51	13	18	55	69	602,129	271,516	552,185	277,348	22,449	8,219	1,176,763	557,083	1,194,869	569,859	1,805,475	1,823,332
Sprats	..	..	..	..	..	..	..	..	..	..	..	..	13,303	1,958	31,330	3,488	44,633	5,446	44,633	5,446	33,189	5,001
Sparlings	..	..	..	..	..	..	..	..	..	..	..	..	..	..	202	664	202	664	202	664	192	762
Mackerel	3,086	2,317	..	..	911	619	1,135	787	2,046	1,406	15,501	6,104	14,808	4,299	541	147	30,350	10,550	35,982	14,273	30,495	11,251
Total of Pelagic Fish	21,137	14,024	..	..	953	670	1,148	805	2,101	1,475	617,630	277,620	580,296	283,605	54,522	12,518	1,252,448	573,743	1,275,686	589,242	1,869,351	1,940,346
<b>DEMERSAL FISH.</b>																						
<i>(a) ROUND.</i>																						
Cod	455,748	687,890	55,544	74,294	82,806	109,063	32,137	36,375	170,487	219,732	8,961	9,835	34,999	35,821	7,140	6,700	51,100	54,916	677,335	962,538	899,294	1,195,429
Codling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Ling	53,936	41,924	81,734	56,196	3,723	4,837	44	48	85,501	61,081	2	..	..	..	..	..	2	3	139,439	103,008	120,490	108,044
Torsk (Tusk)	1,253	1,151	14,234	13,708	24	15	..	..	14,258	13,723	..	..	..	..	..	..	..	..	15,511	14,874	10,301	8,263
Saithe (Coal Fish)	90,940	46,297	4,596	1,969	2,559	1,371	1,668	972	8,823	4,312	121	81	215	139	..	..	..	..	245	50,854	144,629	98,653
Haddock, ex. L.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Large	756,562	981,873	987	1,170	131,734	234,315	22,080	31,447	154,751	266,932	4,126	6,391	309	489	..	..	4,435	6,880	915,748	1,255,185	1,169,657	1,551,671
" Medium	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
" Small	141,545	117,314	..	..	27,225	15,225	3,796	2,679	31,021	17,904	18	8	..	..	19	9	37	17	172,603	135,235	152,927	129,008
Whitings	587	253	344	280	757	817	65	109	1,166	1,206	..	..	..	..	..	..	..	..	1,772	1,542	1,693	1,817
Conger Belts	5,788	1,730	..	..	16	3	3	2	19	5	68	12	..	..	..	..	..	..	5,870	1,747	4,939	1,684
Gurnards	19,340	15,205	1,43	79	971	1,084	81	109	1,272	1,272	..	..	827	1,205	..	..	830	1,210	21,365	17,987	21,482	16,687
Catfish	25,720	14,570	1	2	5	2	..	..	6	4	181	62	357	119	..	..	596	198	26,322	14,772	18,600	12,615
Monks (Anglers)	22,689	45,533	294	520	20	65	..	..	284	585	8	2	..	..	..	..	3	2	22,976	46,120	15,741	33,153
Hake	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total of Round Fish	1,574,103	1,953,240	157,747	148,218	249,890	366,797	59,874	71,741	467,511	586,756	13,483	15,958	36,707	40,774	7,294	6,834	57,484	63,566	2,099,098	2,808,562	2,559,703	3,147,724







(b) FLAT.																		
Turbot	.. 2	.. 43	125	509	1,663	442	937	994	2,755	..	..	..	..	..	..			
Haddock	.. 14	.. 24	..	.. 39	78	..	..	.. 39	78	..	..	..	..	..	..			
Leimon Soles	.. 27	.. 52	..	2	2	20	25	22	27	..	..	..	..	..	..			
Flounders	.. 4	.. 6	..	.. 38	51	42	39	75	90	..	..	..	..	..	..			
Plaice, Large	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
" Small	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Brill	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Dabs	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Whittches	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Meგრims.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..			
Total of Flat Fish	47	88	43	563	1,824	504	1,001	1,130	2,950	..	..	..	..	1,177	3,038	1,804	5,386	
Skates and Rays	23	25	73	360	232	187	139	620	404	..	..	..	..	643	429	1,140	790	
Squids	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Unclassified kinds	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total for 1921	412	559	668	17,419	17,807	15,758	12,765	34,450	31,240	197,973	63,365	308,428	107,266	160,773	52,124	662,174	222,755	
Total for 1920	160	231	3,876	16,907	19,336	13,590	13,142	35,947	36,354	308,403	225,100	52,187	35,753	45,400	29,456	405,990	290,309	
Increase in 1921	252	328	..	512	..	2,168	..	..	..	..	..	251,241	71,513	115,373	22,668	256,184	..	
Decrease in 1921	..	..	..	..	..	..	377	1,497	5,114	110,430	161,735	..	..	..	..	..	72,340	
SHELL-FISH.																		
Oysters.	£	..	..	116,930	8,099	..	..	..	..	..	..	..	..	..	..	..	..	..
No.	..	..	..	27,900	273	1,410	300	..	..	..	..	..	..	..	..	..	..	..
Lobsters.	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Crabs.	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
No.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Mussels.	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cwt.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Clams.	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cwt.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Unclassified.	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Cwt.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Total Value of Shell-Fish for 1921	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
"    "    "    "    "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Decrease in 1921	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Grand Total Value of Fish and Shell-Fish for 1921	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
"    "    "    "    "	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Decrease in 1921	£	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..

TABLE B.—No II —FISH LANDED.—STATEMENT of the Total Quantity and Value of the different kinds of White and Shell-Fish landed on the **West Coast of Scotland** during the Year 1921.

DESCRIPTION OF FISH.	TRAWLS.						LINES.						NETS.								
	Steam.*		Motor.		Sail.		TOTAL.		Steam.†		Motor.†		Sail.		TOTAL.		1921.		1920.		
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Cwt.	£	Cwt.	£	
<b>PELAGIC FISH.</b>																					
Herrings	721	247	..	..	..	..	..	..	239,833	176,911	321,237	178,138	44,741	27,288	605,911	382,337	606,632	382,584	947,247	632,426	
Sprats	..	..	..	..	..	..	..	..	..	..	..	..	51	236	..	236	..	236	..	..	
Sparlings	..	..	..	..	..	..	..	..	..	..	..	..	1,596	705	15,930	8,144	16,087	8,280	37,488	21,660	
Mackerel	..	..	25	16	132	120	157	136	8,171	4,293	6,163	3,146	..	..	..	..	..	..	..	..	
Total of Pelagic Fish	721	247	..	..	132	120	157	136	248,104	181,204	327,400	181,284	46,388	28,229	621,892	390,717	622,770	391,100	984,751	654,183	
<b>DEMERSAL FISH.</b>																					
(a) ROUND.																					
Cod	143	132	6,933	6,812	8,854	10,044	22,902	24,978	..	..	7,059	5,593	1,082	1,323	8,141	6,916	31,186	32,026	42,185	48,966	
Codling	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Lang	10	8	1,917	1,732	612	614	1,901	4,320	..	..	6	7	..	..	6	7	4,336	4,262	5,582	6,702	
Torsk (Tusk)	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Saithe (Coal Fish)	..	..	25	14	81	145	95	145	..	..	..	..	..	..	..	..	..	..	..	..	
Haddock, ex. La.	..	..	2,005	754	530	160	1,948	2,862	..	..	4,134	1,563	351	188	4,485	1,751	13,721	4,617	19,008	8,850	
Large Medium Small	162	180	25	48	698	1,110	13,029	13,281	..	..	66	112	..	..	66	112	13,257	13,673	12,955	14,415	
Whittings	5	4	1,921	3,626	666	888	2,587	4,514	..	..	..	..	..	..	..	..	2,592	4,518	3,635	5,946	
Conger Belts	3	2	8,305	6,414	994	880	12,577	9,492	..	..	..	..	..	..	..	..	12,580	9,494	11,437	13,208	
Gurnards	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Catfish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Monks (Anglers)	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Fluke	2	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	
Total of Round Fish	341	340	20,016	18,393	15,998	18,008	29,998	26,280	60,012	62,681	11,817	8,828	1,436	1,517	13,253	10,345	79,606	73,366	96,670	101,604	





(b) FLAT.	81	106	81	106	19	8	19
Turbot	..	..	..	..	..	..	..
Halibut	100	275	100	275	8	18	67
Lemon Soles	..	..	..	..	..	..	..
Flounders	5	8	..	..	7	5	7
Plaice, Large	12	61	..	..	11	11	19
„ Medium	5	7	..	..	..	..	..
„ Small	..	..	..	..	..	..	..
Brill	..	..	..	..	..	..	..
Dabs	5	4	..	..	..	..	..
Whites	17	27	..	..	..	..	..
Megrims	5	7	..	..	..	..	..
Total of Flat Fish	180	495	..	..	32	651	112
Skates and Rays	87	24	..	..	1	24	1
Squids	85	3	..	..	..	3	..
Unclassified kinds	..	..	..	..	..	..	..
Total for 1921	2,929	2,713	..	..	..	46,372	..
Total for 1920	1,784	2,079	..	..	..	1,784	2,079
Increase in 1921	1,145	634	..	..	..	..	..
Decrease in 1921	..	..	..	..	..	..	..

Note.—The above landings were composed as follows:—  
 HERRINGS.—Landed at Shetland by a Swedish vessel.  
 TRAWL FISH.—Landed at Aberdeen in fresh condition by a Belgian vessel (6 arrivals, 69 days' absence).  
 LINE FISH.—Landed at Aberdeen in fresh condition: balance represents estimated equivalent fresh of wet-salted fish brought direct from the fishing grounds, viz. 4750 cwts. cod (value £2987) representing 1923 cwts. wet-salted landed at Shetland, and 50,983 cwts. (value £39,819) representing 25,492 cwts. wet-salted landed at Aberdeen.  
 NET FISH.—Landed by a Danish vessel, using the snurrevaad (2 arrivals).



(b) FLAT.		Oysters.	Lobsters.	Crabs.	Mussels.	Clams.	Unclassified.	Total Value of Shell-Fish for 1921	Total Value of Shell-Fish for 1920	Decrease in 1921											
No.	£	No.	No.	No.	£	£	£	£	£	£											
Turbot . . . . .	7,754	27,070	5	21	12	43	64	19	68	32	110	1	4	52	182	7,823	27,316	7,860	25,939		
Halibut . . . . .	7,517	37,955	65,446	284,353	2,217	9,486	1,596	682	1,596	682	1,596	682	1,596	682	1,596	682	1,596	682	1,596		
Lemon Soles . . . . .	40,010	178,685	..	..	163	579	12	172	591	197	1,039	5	18	1,039	4,531	41,271	178,607	33,157	139,205		
Flounders . . . . .	326	946	..	..	189	375	1,658	1,810	1,847	863	1,433	..	804	1,667	2,669	3,840	5,800	4,254	7,433		
Plaice, Large . . . . .	47,313	190,813	..	..	3,776	9,506	3,780	8,141	7,556	6,853	23,074	317	760	34,195	82,223	89,064	290,683	92,136	288,520		
" Medium . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..		
" Small . . . . .	623	1,745	..	..	363	617	..	549	778	50	151	..	38	63	171	686	1,916	644	1,712		
Brill . . . . .	6,929	4,319	..	..	..	..	..	..	..	99	105	..	..	1,734	1,328	9,441	6,813	8,912	7,210		
Dabs . . . . .	6,829	14,680	..	..	1	1	..	..	..	570	1,082	..	..	656	1,274	7,486	15,965	6,021	13,355		
Whitches . . . . .	10,833	24,304	..	..	..	..	..	..	..	58	117	..	..	59	119	10,892	24,423	11,404	26,147		
Megrimms . . . . .	..	..	..	..	..	..	..	..	..	1	2	..	..	..	..	..	..	..	..		
Total of Flat Fish . . . . .	127,934	475,927	65,451	284,374	6,721	20,607	6,544	12,108	78,716	317,089	8,591	28,208	29,884	62,650	1,143	2,004	39,618	92,892	240,829	868,994	
Skates and Rays . . . . .	60,301	35,831	92,203	61,000	16,087	13,676	1,528	1,018	109,818	75,694	888	484	672	691	177	202	1,737	171,856	112,902	81,493	
Squids . . . . .	304	91	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	304	91	24	
Unclassified kinds . . . . .	2,944	1,217	2,665	936	278	88	3,506	2,146	6,449	3,172	..	15	325	256	14	14	..	9,770	4,674	5,010	
Total for 1921 . . . . .	1,790,754	2,482,954	339,239	513,431	306,428	435,613	173,698	168,724	819,335	1,117,798	1,088,117	567,453	129,054	685,379	271,747	103,442	2,650,404	5,280,493	4,956,996	..	
Total for 1920 . . . . .	2,339,109	3,092,925	290,612	497,317	273,311	418,851	125,538	141,675	639,461	1,057,843	2,073,163	1,525,698	100,298	728,244	223,032	117,349	3,299,153	2,371,291	6,327,723	6,522,062	
Increase in 1921 . . . . .	..	..	48,627	16,114	33,117	16,762	48,130	27,049	129,874	59,925	..	..	237,582	..	48,715	..	..	..	..	..	..
Decrease in 1920 . . . . .	548,355	609,974	..	..	..	..	..	..	..	..	985,046	953,245	..	42,865	13,907	648,749	1,015,917	1,067,230	1,565,066	..	
SHELL-FISH.											Grand Total Value of Fish and Shell-Fish for 1921, £5,039,328		1920, 6,623,908		Decrease in 1921, £1,569,580						

\* Included are 1,546 cwts. (mostly plaice, haddocks and codlings), value £5,093, landed by motor trawlers, and 2,014 cwts. plaice, value £2,014, landed by sailing trawlers.  
 † Included are 783 landings by steam and 114 by motor vessels using Danish seine nets totalling 15,200 cwts. (mostly plaice and haddocks) valued at £38,084 (steam 14,292 cwts., motor 918 cwts., £2486) and 10,443 landings by motor and 37 by sail vessels using flounder seine nets totalling 28,712 cwts. (mostly plaice), valued at £56,918 (motor 28,674 cwts., £56,822; sail 38 cwts., £96).

TABLE B.—III.

SUMMARY of the Means of Capture and Fish Landed for the Years from 1889 to 1921 inclusive.

Year.	Number of Vessels.*	Value of Boats and Gear.	Total Catch.†		Number of Fishermen and Shore-workers.
			Quantity (excluding shell fish).	Value (including shell fish).	
		£	Cwts.	£	
1889 . . .	14,714	1,603,307	5,589,239	1,517,376	...
1890 . . .	14,352	1,590,636	5,864,488	1,691,959	...
1891 . . .	13,933	1,637,305	5,434,206	1,838,659	...
1892 . . .	13,862	1,756,800	5,436,138	1,676,043	...
1893 . . .	13,491	1,785,365	6,208,018	1,700,250	...
1894 . . .	13,297	1,796,530	6,188,774	1,635,709	...
1895 . . .	13,098	1,820,429	6,107,044	1,830,424	...
1896 . . .	12,040	1,873,870	6,146,738	1,649,457	88,242
1897 . . .	11,633	1,922,685	5,001,672	1,710,157	81,549
1898 . . .	11,576	2,029,384	6,557,768	1,956,996	86,964
1899 . . .	11,245	2,383,776	5,145,076	2,270,484	84,538
1900 . . .	11,275	2,711,877	5,369,265	2,401,900	82,809
1901 . . .	11,201	3,001,301	6,385,170	2,319,399	83,905
1902 . . .	11,097	3,212,455	6,866,028	2,580,619	85,367
1903 . . .	11,008	3,448,168	6,518,808	2,474,885	84,553
1904 . . .	10,891	3,431,284	7,947,829	2,307,902	86,621
1905 . . .	10,581	3,304,695	7,856,310	2,719,810	88,201
1906 . . .	10,554	4,117,549	7,593,369	3,049,915	92,305
1907 . . .	10,365	4,857,816	9,018,153	3,221,331	94,783
1908 . . .	10,078	5,223,149	8,645,252	2,586,224	92,857
1909 . . .	9,889	5,291,533	7,423,185	2,961,499	92,060
1910 . . .	9,724	5,439,857	8,753,380	3,185,566	90,813
1911 . . .	9,543	5,628,087	8,511,974	3,127,929	89,152
1912 . . .	9,290	5,777,102	8,587,106	3,656,178	89,715
1913 . . .	8,991	6,035,952	7,828,350	3,997,717	90,710
1914 . . .	8,869	6,297,745	7,440,321	3,208,536	87,119
1915 . . .	4,653	1,668,765	2,319,390	2,109,465	35,461
1916 . . .	4,650	1,827,346	3,412,030	3,206,550	37,009
1917 . . .	4,609	1,902,167	3,079,768	3,704,789	35,746
1918 . . .	4,614	3,038,592	3,313,228	6,066,588	37,624
1919 . . .	6,534	9,223,456	5,969,015	6,148,251	60,159
1920 . . .	8,177	11,916,468	6,327,723	6,628,908	70,983
1921 . . .	7,648	7,907,467	5,260,493	5,059,328	65,327

\* Although the number of vessels shows a steady decrease there was a marked increase in the catching power, owing to the gradual adoption of steam and motor propulsion.

† Inclusive of landings by foreign fishing vessels.



**TABLE C.**

**FISH USED IN A FRESH STATE.**—Table showing the Estimated Quantity of each Species of Fish consumed fresh in Scotland, or dispatched from Scotland in a fresh state, in the Year 1921.

Description of Fish.	Year 1921.	Year. 1920.
	Cwts.	Cwts.
Herrings . . . . .	611,052	700,288
Sprats . . . . .	32,788	31,989
Sparlings . . . . .	253	208
Mackerel . . . . .	44,351	65,903
Cod and Codlings . . . . .	572,712	621,011
Ling . . . . .	84,237	38,220
Torsk (Tusk) . . . . .	14,211	8,844
Saithe . . . . .	78,545	65,340
Haddocks . . . . .	469,072	415,400
Whittings . . . . .	133,001	69,007
Conger Eels . . . . .	14,352	13,130
Gurnards . . . . .	6,221	5,321
Catfish . . . . .	20,177	18,036
Monks . . . . .	26,336	18,602
Hake . . . . .	24,475	16,996
Squids . . . . .	304	50
Turbot . . . . .	7,823	7,860
Halibut . . . . .	75,769	76,441
Lemon Soles . . . . .	41,271	33,157
Flounders . . . . .	3,840	4,254
Plaice . . . . .	89,067	92,136
Brill . . . . .	686	644
Dabs . . . . .	9,441	8,912
Whitches and Megrims . . . . .	18,378	17,425
Skates and Rays . . . . .	171,728	126,328
Unclassified kinds . . . . .	9,770	8,675
<b>Total</b> . . . . .	<b>2,559,860</b>	<b>2,464,177</b>

TABLE D.—No. I.

FISH CURED.—RETURN showing the Quantity of each Species of Fish Cured, and the Mode of Cure, in the Year 1921.

No.	DISTRICT.	(a) HERRINGS.					Total Number of Barrels.
		Barrels Guttled.	Barrels Un-guttled.	Barrels (Crans) Kipperd.	Barrels (Crans) of Bloaters or Reds.	Barrels (Crans) Tinned.	
<b>EAST COAST.</b>							
1	Eyemouth . . . . .	1,482	..	23,523	1,736	2,373	29,114
2	Leith . . . . .	..	..	4,931	300	..	5,231
3	Anstruther . . . . .	53	..	131	400	..	584
4	Montrose . . . . .	..	..	78	2	163	243
5	Stonehaven . . . . .	..	..	..	..	..	..
6	Aberdeen . . . . .	..	..	20,045	7,376	1,423	28,844
7	Peterhead . . . . .	40,555	..	23,329	..	174	64,058
8	Fraserburgh . . . . .	63,739	2,010	26,213	126	825	92,913
9	Banff . . . . .	6,128	..	1,501	10	..	7,639
10	Buckie . . . . .	1,750	660	3,561	..	..	5,971
11	Findhorn . . . . .	95	..	40	..	..	135
12	Cromarty . . . . .	..	..	..	..	..	..
13	Helmsdale . . . . .	82	..	..	..	..	82
14	Lybster . . . . .	80	..	743	..	..	823
15	Wick . . . . .	59,300	6,656	28,700	..	..	94,656
	East Coast Totals . . . . .	173,264	9,326	132,795	9,950	4,958	330,293
<b>Orkney and Shetland.</b>							
16	Orkney . . . . .	25,864	..	..	..	..	25,864
17	Shetland . . . . .	199,646	..	4,598	..	..	204,244
	Orkney and Shetland Totals . . . . .	225,510	..	4,598	..	..	230,108
<b>WEST COAST.</b>							
18	Stornoway . . . . .	17,797	..	18,206	..	..	36,003
19	Barra . . . . .	26,748	..	..	..	..	26,748
20	Loch Broom . . . . .	483	..	..	..	..	483
21	Loch Carron and Skye . . . . .	921	..	1,358	..	..	2,279
22	Fort-William . . . . .	9,324	..	2,992	..	..	12,316
23	Campbeltown . . . . .	454	..	295	..	..	749
24	Inveraray . . . . .	1,050	..	12	..	..	1,062
25	Rothesay . . . . .	55	..	635	8	..	698
26	Greenock . . . . .	1,901	..	12,682	58	..	14,641
27	Ballantrae . . . . .	45	..	921	20	..	986
	West Coast Totals . . . . .	58,778	..	37,101	86	..	95,965
	Grand Totals for 1921 . . . . .	457,552	9,326	174,494	10,036	4,958	656,366
	Grand Totals for 1920 . . . . .	552,828½	20,735	253,483	14,700	38,245	879,991½
	Increase in 1921 . . . . .	..	..	..	..	..	..
	Decrease in 1921 . . . . .	95,276½	11,409	78,989	4,664	33,287	223,625½

Note 1.—No vessel was fitted out for curing at sea during the year.

2.—The above figures represent the quantities pickled as "bungpacked," i.e. as finally packed. Corresponding particulars of the quantities in the "seastick" state, i.e. before the herrings have "pined," will be found in Table D.—No. II.

3.—Included above are 2,168 barrels gutted herrings cured "spiced" in Shetland for Sweden; and 683 crans kippers, 8,732 crans reds or bloaters, and 300 crans tinned manufactured from herrings brought from England; and 470 crans kippers from herrings imported from Norway.

TABLE D.—No. I.—*continued*.

FISH CURED.—RETURN showing the Quantity of each Species of Fish Cured, and the Mode of Cure, in the year 1921.

(b) SPECIES OTHER THAN HERRINGS.						
Description of Fish.	Dried.	Smoked.	Pickled.	Tinned	Total 1921.	Total 1920.
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Sprats . . .	..	..	11,845	..	11,845	1,200
Mackerel . . .	..	..	376	4,445	4,821	2,114
Cod and Codling	19,367	56,302	27	..	75,696	136,773
Ling . . .	18,213	2,883	..	..	21,096	30,752
Torsk . . .	638	..	..	..	638	792
Saithe . . .	3,766	11,369	..	..	15,135	46,846
Haddocks . . .	373	238,444	..	1,086	239,903	388,227
Whittings . . .	..	22,535	..	..	22,535	44,427
Catfish . . .	..	493	..	..	493	1,708
Skate . . .	43	..	..	..	43	154
Total in 1921 . . .	42,400	332,026	12,248	5,531	392,205	652,993
Total in 1920 . . .	104,468	536,033	1,971	10,521	..	..
Increase in 1921 . . .	..	..	10,277	..	..	..
Decrease in 1921 . . .	62,068	204,007	..	4,990	260,788	..

Note 1.—In addition to the above there was imported from Iceland, Faroe and Norway in a wet-salted state, and dried in Scotland, 20,203 cwts. of fish (cod, 19,338 cwts.; ling, 582 cwts.; saithe, 136 cwts.; and haddocks, 147 cwts).

2.—The above figures represent the weight after cure.

TABLE D.—No. II.

HERRINGS CURED.—STATEMENT showing the Numbers of \*Barrels of Herrings Cured, Guttled and Unguttled, on the East and West Coasts of Scotland, for the Hundred and eleven years ended 31st December 1921.

Year ended	East Coast (with Orkney and Shetland).			West Coast.			GRAND TOTAL.
	Guttled.	Unguttled, Kipperd, &c.	Total.	Guttled.	Unguttled, Kipperd, &c.	Total.	
6th April 1811	2,008½	6,630	8,638½	62,186	19,110	81,296	89,934½
" 1812	4,325½	10,332	14,657½	65,922	24,518	90,440	105,097½
" 1813	9,179	20,950½	30,129½	76,561¾	31,025½	107,587½	137,716¾
" 1814	9,503	46,800½	56,303½	37,969	5,773	43,742	100,045½
" 1815	24,314	36,827	61,141	76,021¼	7,756	83,777¼	144,918¼
" 1816	55,411½	18,416½	73,828	73,292¾	2,578¼	75,870¾	149,698¾
" 1817	90,710½	26,252½	116,963	60,581¾	3,233¼	63,815	180,778
" 1818	118,594¾	8,287¼	126,882	76,765	4,491½	81,256½	208,138½
" 1819	221,959¾	22,158	244,117½	75,197½	6,441	81,638½	325,756
" 1820	267,556¾	27,391½	294,948	72,629¾	4,512	77,141¾	372,089¾
" 1821	318,473½	23,909¼	342,382¾	88,626½	2,613	91,239½	433,622¼
" 1822	229,070	12,808¾	241,878¾	56,342½	1,328	57,670½	299,549¼
" 1823	183,687	15,256¼	198,943¼	34,211	245¼	34,456½	233,399¾
" 1824	272,340½	32,402	304,742½	52,792	802¼	53,594¼	358,336¾
" 1825	227,667	28,849¾	256,516¾	64,623	593	65,216	321,732¾
" 1826	289,101	31,703¼	320,804¼	42,602	121	42,723	363,527¼
" 1827	211,042¾	22,241¼	233,284¼	43,231	117	43,348	276,632¼
" 1828	287,906½	37,882½	325,789	45,632	2,039½	47,671½	373,460¾
" 1829	249,365½	41,047¼	290,412¾	47,525	945	48,470	338,882¾
" 1830	216,427½	35,226	251,653½	59,494	639	60,133	311,786½
" 1831	315,479	51,609¾	367,088¾	46,631	855	47,486	414,574¾
" 5th April 1832	259,197½	36,183½	295,381	49,216¼	3,167	52,383¼	347,764¼
" 1833	267,928½	45,564¾	313,493¼	77,144	573	77,717	391,210¼
" 1834	315,159	56,374¾	371,533¾	64,427½	137	64,564½	436,098½

\* The figures in this table, so far as relating to pickled herrings, gutted or unguttled, represent the numbers of barrels of "sea-sticks."  
 Vide Note 2 to Appendix D.—No. I. (p. 122).

TABLE D.—No. II.—continued.

Year ended	East Coast (with Orkney and Shetland).			West Coast.			GRAND TOTAL.
	Gutted.	Ungutted, Kipped, &c.	Total.	Gutted.	Ungutted, Kipped, &c.	Total.	
5th April 1835	166,539½	33,339½	199,879	45,091½	633	45,724½	245,603½
" 1836	343,693½	68,891½	412,585½	46,554½	479	47,033½	459,618½
" 1837	229,371	71,449½	300,820½	54,859	1,892½	56,751½	357,571½
" 1838	307,625	82,634½	390,259½	68,990½	2,374½	71,365	461,624½
" 1839	308,581	119,489½	428,070½	66,046½	1,672½	67,719	495,789½
" 1840	345,074½	103,160	448,234½	54,208½	343	54,551½	502,786
" 1841	334,539	78,225½	412,764½	78,562½	3,402½	90,965	503,729½
" 1842	404,502½	116,675½	521,178	77,755½	2,183½	80,939	602,117
" 1843	376,374	118,755½	495,129½	61,568½	1,627	63,195½	558,325½
" 1844	384,729	105,927½	490,656½	81,643	4,776	86,419	577,075½
" 1845	305,461½	72,649½	378,110½	80,836	901	81,737	459,847½
" 1846	343,927	82,607½	426,534½	64,056	3,753½	67,809½	494,344
" 1847	343,009½	137,296½	480,306½	67,613	11,263	78,876	559,182½
" 1848	323,471½	135,479	458,950½	46,636½	9,570	56,206½	515,157
" 1849	337,450	155,654½	493,104½	52,473	6,981	59,454	552,558½
" 1850	427,138	152,530	579,668	77,171½	25,029½	102,201½	681,869½
" 1851	320,493	129,532½	450,025½	57,694	21,134	78,828	528,853½
" 1852	348,573	109,933	458,506	68,660½	36,220½	104,881	563,387
" 1853	331,055½	89,355	420,410½	44,623½	13,903	58,526½	478,937
" 1854	482,017	165,459½	647,476½	78,350	28,431½	106,781½	754,257½
" 1855	410,332	132,977½	543,309½	48,247½	31,207½	79,455	622,764½
" 1856	505,481½	136,687½	642,169½	77,175½	32,631	109,806½	751,975½
" 1857	396,650	92,400½	489,050½	69,755½	32,492½	102,248	591,298½
" 1858	390,775	59,712½	450,487½	74,447½	25,763½	100,211	550,698½
" 1859	410,524½	111,440½	521,965½	59,868½	23,350	83,218½	605,184
" 1860	308,518½	55,584	364,102½	72,541	30,487	93,028	457,130½
" 1861	424,201½	103,086½	527,287½	71,894	27,891½	109,785½	637,073½
" 1862	447,931½	97,207	545,138½	71,241½	34,336½	105,578	650,716½
" 1862	536,602½	88,911	625,513½	119,257½	52,685	171,942½	797,456

\* The figures in this table, so far as relating to the West Coast, are taken from the Appendix D., No. 1, (p. 132).

TABLE D.—No. II.—continued.

Year ended	(with Orkney and Shetland).			West Coast.			GRAND TOTAL.	
	East Coast		Total.	Gutted.	Ungutted, Kipperd, &c.			Total.
	Gutted.	Ungutted, Kipperd, &c.						
31st December 1863	445,596½	75,511½	521,108½	61,396½	26,810	88,206½	609,314½	
" 1864	378,752	88,107½	466,859½	99,737½	42,889	142,626½	609,486½	
" 1865	374,424	73,814½	448,238½	95,920½	57,207	153,127½	601,366	
" 1866	398,358	72,420½	470,778½	99,396½	74,431	173,827½	644,605½	
" 1867	492,172½	81,978½	574,150½	139,547½	90,392	229,939½	804,090	
" 1868	363,922½	62,906	426,828½	81,546	129,886½	211,432½	638,260½	
" 1869	395,500½	61,809½	457,310½	93,330½	124,502½	217,832½	675,143	
" 1870	508,805½	98,318	607,123½	148,254	77,783	226,037	833,160½	
" 1871	585,172	94,178	679,350	83,317½	62,808½	146,125½	825,475½	
" 1872	623,443½	62,341	685,784½	48,260	39,815	88,075	778,859½	
" 1873	710,376½	96,983½	807,360	86,525½	45,348	131,873½	939,233½	
" 1874	789,345½	77,489½	866,835½	97,657	36,068½	133,725½	1,000,561	
" 1875	774,293½	67,729	842,022½	60,529	40,428½	100,957½	942,980	
" 1876	454,164	59,230	513,394	32,074½	52,729	84,803½	598,197½	
" 1877	618,116½	65,529½	683,646	98,754½	65,318½	164,072½	847,718	
" 1878	702,433½	70,927½	773,361	69,122½	63,284½	132,407	905,768	
" 1879	563,754	62,833½	626,587½	92,237	122,971½	215,208½	841,796	
" 1880	1,096,953½	104,151½	1,201,105	127,245	145,250½	272,495½	1,473,600½	
" 1881	830,751½	73,602½	904,353½	84,346½	122,455	206,801½	1,111,155½	
" 1882	879,243½	98,983	978,226½	101,512	203,235	304,747	1,282,973½	
" 1883	960,428½	87,477½	1,047,906½	128,658½	148,848½	221,506½	1,269,412½	
" 1884	1,323,989½	132,061½	1,456,050½	78,223½	112,803	241,026½	1,697,077½	
" 1885	1,244,259	74,723½	1,318,982½	108,190	145,779½	253,969½	1,572,952½	
" 1886	1,017,152	125,287½	1,142,439½	76,211	93,572½	169,783½	1,312,223½	
" 1887	962,116	127,588	1,089,704	101,937½	111,782½	213,720½	1,303,424½	
" 1888	790,458	82,155½	872,613½	116,542	129,717	246,259	1,118,872½	
" 1889	1,071,686	112,171	1,183,857	105,417	108,233	213,650	1,397,507	
" 1890	1,042,089	81,218½	1,123,307½	142,340½	38,955	181,295½	1,304,603	
" 1891	797,219	61,427	858,646	208,024	59,402	267,426	1,126,072	

TABLE D.—No. II.—continued.

Year ended	East Coast (with Orkney and Shetland).			West Coast.			GRAND TOTAL.
	Gutted.	Ungutted, Kipped, &c.	Total.	Gutted.	Ungutted, Kipped, &c.	Total.	
31st December 1892	1,012,452	82,267	1,094,719	125,299	37,924	163,223	1,257,942
" 1893	1,177,365	110,236	1,287,601	90,977	30,960½	121,937½	1,409,538½
" 1894	1,312,926	98,783	1,411,709	91,489	14,879	106,368	1,518,077
" 1895	1,314,225	79,695	1,393,920	114,902	19,312	134,214	1,528,134
" 1896	1,232,549	101,098	1,333,647	132,234	26,035	158,269	1,491,916
" 1897	732,454	72,457	804,911	143,319	41,212	184,531	989,442
" 1898	1,500,533	92,883½	1,593,416½	174,743	37,188	211,931	1,805,347
" 1899	912,841	71,512	984,353	154,768	36,534	191,302	1,175,655
" 1900	968,077	98,673	1,066,750	156,522	32,333	188,855	1,255,605
" 1901	1,334,010	118,173	1,452,183	109,056	44,646	153,702	1,605,885
" 1902	1,507,138	125,933	1,633,071	123,437	46,651	170,088	1,803,159
" 1903	1,331,664	138,949	1,470,613	105,654	42,543	148,197	1,618,810
" 1904	1,737,345	170,510	1,907,855	102,548	52,571	155,119	2,062,974
" 1905	1,766,734	164,098	1,930,832	112,156	68,613	180,769	2,111,601
" 1906	1,679,947	166,011	1,845,958	116,343	35,561	151,904	1,997,862
" 1907	2,181,017	189,892	2,370,909	147,945	59,414	207,359	2,578,268
" 1908	1,787,835	183,495	1,971,330	163,931	64,808	228,739	2,200,069
" 1909	1,507,914	180,740	1,688,654	148,410	53,201	201,611	1,890,265
" 1910	1,934,320	211,236	2,145,556	145,628	37,690	183,318	2,328,874
" 1911	1,667,432	207,335	1,874,767	139,272	32,708	171,980	2,046,747
" 1912	1,660,972	178,116	1,839,088	148,414	34,945	183,359	2,022,447
" 1913	1,407,323	172,591	1,579,914	253,804	52,878	306,682	1,886,596
" 1914	1,176,361	185,854	1,362,215	185,925	66,387	252,312	1,614,527
" 1915	28,597	61,502	90,099	44,852	40,518	85,370	175,469
" 1916	322,398	149,043	471,441	89,709	72,847	162,556	633,997
" 1917	109,976	178,770	288,746	120,743	67,566	188,309	477,055
" 1918	25,942	268,641	294,583	11,750	80,748	92,498	387,081
" 1919	729,612	346,272	1,075,884	47,057	75,634	122,691	1,198,575
" 1920	591,303	272,854	864,157	93,904	58,911	152,815	1,016,972
" 1921	497,314	163,640	660,954	68,846	37,187	106,033	766,987

APPENDIX E.—No. I.

CURED FISH BRANDED.—RETURN showing the Number of Barrels of Cured Herrings Branded, distinguishing the different Brands, and the Amount of Brand Fees collected, during the Year 1921.

No.	DISTRICT.	NUMBER OF BARRELS OF CURED HERRINGS BRANDED.							Fees Received.	DISTRICT.	No.
		La. Full.	Full.	Matt. Full.	Mattie.	La. Spent.	Spent.	Total.			
<b>EAST COAST.</b>											
1	Eyemouth . . . . .	..	133	219	155	3	..	510	£ 8 10 0	EAST COAST.	1
2	Leith . . . . .	..	..	..	..	..	..	..	0	Eyemouth.	2
3	Anstruther . . . . .	..	..	..	..	..	..	..	..	Leith.	3
4	Montrose . . . . .	..	..	..	..	..	..	..	..	Anstruther.	4
5	Stonehaven . . . . .	..	..	..	..	..	..	..	..	Montrose.	5
6	Aberdeen . . . . .	..	..	..	..	..	..	..	..	Stonehaven.	6
7	Peterhead . . . . .	723½	7,545	10,048½	9,488	1,187½	6	28,998½	483 6 2	Aberdeen.	7
8	Fraserburgh . . . . .	1,116	9,084	14,514	10,348	1,605	63	36,730	612 3 4	Peterhead.	8
9	Banff . . . . .	163	1,909½	2,271	845½	69½	3	5,261½	87 13 10	Fraserburgh.	9
10	Buckie . . . . .	22	248½	337½	168½	8½	..	785	13 1 8	Banff.	10
11	Findhorn . . . . .	..	..	..	..	..	..	..	..	Buckie.	11
12	Cromarty . . . . .	..	..	..	..	..	..	..	..	Findhorn.	12
13	Helmsdale . . . . .	..	..	..	..	..	..	..	..	Cromarty.	13
14	Lybster . . . . .	..	4½	2	..	..	..	6½	0 2 2	Helmsdale.	14
15	Wick . . . . .	118½	5,140½	12,509½	9,064½	172½	60½	27,066	451 2 0	Lybster.	15
	East Coast Totals . . . . .	2,143	24,065	39,901½	30,069½	3,046	132½	99,357½	1,655 19 2	Wick.	
16	Orkney and Shetland.	..	1,420½	3,200	1,830	170	88	6,708½	111 16 2	East Coast Totals.	16
17	Orkney . . . . .	4,477	12,777	9,765	5,878	6,709	152	39,758	662 12 8	Orkney and Shetland.	17
	Shetland . . . . .	..	..	..	..	..	..	..	..	Orkney.	
	Orkney and Shetland } Totals . . . . .	4,477	14,197½	12,965	7,708	6,879	240	46,466½	774 8 10	Shetland.	
	Grand Totals Branded . . . . .	6,620	38,262½	52,866½	37,777½	9,925	372½	145,824	2,430 8 0	{ Totals.	
	Rejected . . . . .	122	855½	1,194½	1,142	7	..	3,321	..	Grand Totals Branded.	
	Totals Presented . . . . .	6,742	39,118	54,061	38,919½	9,932	372½	149,145	..	Rejected.	
									..	Totals Presented.	



TABLE E.—No. II.

FISH EXPORTED.—RETURN showing the Total Quantity of Fish Exported to England, Ireland, the Continent, and Places out of Europe during the Year 1921.

I.—HERRINGS.						
DESCRIPTION OF FISH.	DESTINATION.					
	Eng-land.	Ire-land.	The Continent.	Places out of Europe.	Total 1921.	Total 1920
CURED GUTTED HERRINGS.	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.
(a) Graded or Branded—						
La. Full . . . . .	..	..	4,211½	..	4,211½	} 29,672½
Full . . . . .	566	..	96,455	..	97,021	
Mat. Full . . . . .	..	..	125,070	..	125,070	48,889
Mattie . . . . .	..	..	127,530	..	127,530	59,094
La. Spent . . . . .	..	..	27,537½	..	27,537½	} 2,939
Spent . . . . .	..	..	1,390½	..	1,390½	
Tornbellies . . . . .	..	..	489½	..	489½	13,766
Total Graded or Branded . . . . .	566	..	382,684	..	383,250	154,360½
(b) Not Graded or Branded	4,718	628½	232,837	72,296½	310,480	171,595
Total Cured Guttet . . . . .	5,284	628½	615,521	72,296½	693,730	325,955½
Total Cured Unguttet . . . . .	..	..	6,611	..	6,611	10,285
Herrings Sprinkled or Iced . . . . .	152	..	15,543½	..	15,695½	5,816
Grand Totals for 1921 . . . . .	5,436	628½	637,675½	72,296½	*716,036½	..
Grand Totals for 1920 . . . . .	18,377	1,886	252,741½	69,052	..	342,056½
Increase in 1921 . . . . .	..	..	384,934	3,244½	373,980	..
Decrease in 1921 . . . . .	12,941	1,257½	..	..	..	..

\* Includes 279,382½ barrels, branded or graded, and 23,581 barrels unbranded of 1920 cure.

II.—OTHER KINDS.						
	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.	Cwts.
Cod, Ling, &c., dried . . . . .	31,800	6,607	22,803	4,886	66,096	116,156
Do., pickled . . . . .	..	..	71	..	71	18
Mackerel, do. . . . .	8	..	157	..	165	218
Sprats, do. . . . .	60	..	4,040	..	4,100	7,294

NOTE.—In addition to the above there were exported *via* Glasgow 2,109 barrels of Irish herrings to America, and of preserved fish 9,991 cwts. to America, 4,325 cwts. to Australia, 1,630 cwts. to Spain, 327 cwts. to Ireland, and 242 cwts. to England, making a total of 16,515 cwts. preserved fish. 763½ barrels of Irish herrings and 10 barrels of Iceland herrings were also exported to Hamburg *via* Leith.

TABLE E.—No. III.

DESTINATION OF EXPORTS.—STATEMENT showing the Ports or Places to which Herrings exported to the Continent were shipped.

DESTINATION.	From East Coast.	From Orkney & Shetland.	From West Coast.	Total 1921.	Total 1920.
<b>GERMANY AND THE BALTIC:—</b>	Barrels.	Barrels.	Barrels.	Barrels.	Barrels.
Cuxhaven . . . . .	..	..	..	..	1,290
Altona . . . . .	2,396½	3,654	2,536	8,586½	..
Hamburg . . . . .	42,788½	79,033	5,374	127,195½	17,957
Stettin . . . . .	125,344½	73,157	10,180	213,681½	4,667
Neufahrwasser . . . . .	..	..	..	..	398
Danzig . . . . .	75,458	27,794½	10,580	113,832½	91,408
Königsberg . . . . .	15,382	16,542½	..	31,924½	13,803½
Memel . . . . .	..	..	..	..	10,134
Libau . . . . .	8,589½	3,817½	..	12,407	31,045
Riga . . . . .	9,273	2,014½	3,775½	15,063	..
Reval . . . . .	17,554½	14,194	..	31,748½	..
Wyborg . . . . .	3,443	1,550	..	4,993	10,025
Kotka . . . . .	3,761	..	..	3,761	..
Helsingfors . . . . .	19,106½	1,484	..	20,590½	10,219
Abo . . . . .	..	..	..	..	3,000
Wasa . . . . .	1,076	..	..	1,076	..
<b>SWEDEN:—</b>					
Stockholm . . . . .	5,489½	6,900	..	12,389½	14,996½
Gothenburg . . . . .	2,612	6,404	..	9,016	7,390½
Marstrand . . . . .	..	1,098	..	1,098	..
Lysekil . . . . .	..	868	..	868	..
<b>NORWAY:—</b>					
Christiania . . . . .	1,007½	..	..	1,007½	100
<b>DENMARK:—</b>					
Copenhagen . . . . .	185½	..	..	185½	108½
<b>HOLLAND:—</b>					
Amsterdam . . . . .	151	..	..	151	..
Ymuiden . . . . .	1,290	..	..	1,290	..
Vlaardingen . . . . .	1,014	..	..	1,014	..
Rotterdam . . . . .	573	..	..	573	502½
<b>BELGIUM:—</b>					
Antwerp . . . . .	936½	..	..	936½	7,589½
Ostend . . . . .	4,137½	..	..	4,137½	4,171
Astride . . . . .	..	..	..	..	837
<b>FRANCE:—</b>					
Dunkirk . . . . .	196	..	..	196	60
Boulogne . . . . .	200	..	..	200	..
Fécamp . . . . .	4,634	..	..	4,634	3,266
Havre . . . . .	102	..	..	102	..
Rouen . . . . .	40	..	..	40	190½
<b>PORTUGAL:—</b>					
Lisbon . . . . .	..	..	..	..	52½
<b>ROUMANIA:—</b>					
Galatz . . . . .	4,768	10,209½	..	14,977½	19,530½
Totals . . . . .	351,509½	253,720½	32,445½	637,675½	252,741½

Note.—Included above are 1,966 barrels Spiced Herrings (Marstrand 1,098, Lysekil 868); 6,611 barrels ungnitted (Hamburg 197, Vlaardingen 736, Ostend 1059, Fécamp 4,594, Rouen 25); and 15,543½ barrels Sprinkled or Iced (Altona 8,586½, Hamburg 5,015, Amsterdam 151, Ymuiden 1,290, Rotterdam 386, Antwerp 115).

TABLE E.—No. IV.

VALUE OF CURED FISH.—RETURN showing the estimated Value—after Cure—of Herrings Cured (distinguishing Herrings Branded) and of Cod, &c. Cured during the Year 1921.

DISTRICT.	VALUE OF CURED HERRINGS BRANDED.						
	La. Full.	Full.	Mat. Full.	Mat-tie.	La Spent.	Spent	Total Branded.
<b>EAST COAST.</b>	£	£	£	£	£	£	£
Eyemouth . . . . .	..	266	394	248	4	..	912
Leith . . . . .	..	..	..	..	..	..	..
Anstruther . . . . .	..	..	..	..	..	..	..
Montrose . . . . .	..	..	..	..	..	..	..
Stonehaven . . . . .	..	..	..	..	..	..	..
Aberdeen . . . . .	..	..	..	..	..	..	..
Peterhead . . . . .	1,592	15,845	17,208	15,418	1,366	6	51,435
Fraserburgh . . . . .	2,511	19,531	24,674	16,557	1,766	66	65,105
Banff . . . . .	355	3,962	3,804	1,332	76	3	9,532
Buckie . . . . .	44	497	540	253	10	..	1,344
Findhorn . . . . .	..	..	..	..	..	..	..
Cromarty . . . . .	..	..	..	..	..	..	..
Helmsdale . . . . .	..	..	..	..	..	..	..
Lybster . . . . .	..	8	3	..	..	..	11
Wick . . . . .	237	9,767	21,266	14,503	175	60	46,008
East Coast Totals . . . . .	4,739	49,876	67,889	48,311	3,397	135	174,347
<b>Orkney and Shetland.</b>							
Orkney . . . . .	..	3,054	5,440	2,928	217	110	11,749
Shetland . . . . .	10,073	26,832	16,112	9,405	7,715	175	70,312
Orkney and Shetland Totals . . . . .	10,073	29,886	21,552	12,333	7,932	285	82,061
<b>WEST COAST</b>							
Stornoway . . . . .	..	..	..	..	..	..	..
Barra . . . . .	..	..	..	..	..	..	..
Loch Broom . . . . .	..	..	..	..	..	..	..
Loch Carron and Skye . . . . .	..	..	..	..	..	..	..
Fort-William . . . . .	..	..	..	..	..	..	..
Campbeltown . . . . .	..	..	..	..	..	..	..
Inveraray . . . . .	..	..	..	..	..	..	..
Rothesay . . . . .	..	..	..	..	..	..	..
Greenock . . . . .	..	..	..	..	..	..	..
Ballantrae . . . . .	..	..	..	..	..	..	..
West Coast Totals . . . . .	..	..	..	..	..	..	..
Grand Totals for 1921 . . . . .	14,812	79,762	89,441	60,644	11,329	420	256,408
Grand Totals for 1920 . . . . .	†331,255	†403,716	†465,424	†53,417			†1,278,098
Increase in 1921 . . . . .	..	..	..	..	..	..	..
Decrease in 1921 . . . . .	236,681	314,275	404,780	41,668			1,021,690

† Cured Herrings Branded or Accepted under Government Guarantee in 1920. Total includes £24,286 in respect of Tornbellies.

TABLE E.—

VALUE OF CURED FISH.—RETURN showing the estimated Value—  
and of Cod, &c. Cured

DISTRICT.	VALUE OF CURED HERRINGS NOT BRANDED.					
	Gutted.	Un-gutted.	Kip-pered.	Bloaters or Reds.	Tinned.	Total not Branded.
<b>EAST COAST.</b>	£	£	£	£	£	£
Eyemouth . . . . .	1,458	..	87,192	6,693	21,970	117,313
Leith . . . . .	..	..	19,974	1,125	..	21,099
Anstruther . . . . .	80	..	393	1,040	..	1,513
Montrose . . . . .	..	..	265	3	1,010	1,278
Stonehaven . . . . .	..	..	..	..	..	..
Aberdeen . . . . .	..	..	75,712	1,064	6,738	83,514
Peterhead . . . . .	19,068	..	93,316	..	1,392	113,776
Fraserburgh . . . . .	47,266	3,015	104,852	630	5,363	161,126
Banff . . . . .	1,693	..	7,505	30	..	9,228
Buckie . . . . .	1,544	825	12,464	..	..	14,833
Findhorn . . . . .	166	..	180	..	..	346
Cromarty . . . . .	..	..	..	..	..	..
Helmsdale . . . . .	164	..	..	..	..	164
Lybster . . . . .	118	..	3,474	..	..	3,592
Wick . . . . .	54,798	8,320	134,172	..	..	197,290
East Coast Totals . . . . .	126,355	12,160	539,499	10,585	36,473	725,072
<b>Orkney and Shetland.</b>						
Orkney . . . . .	34,481	..	..	..	..	34,481
Shetland . . . . .	439,692	..	11,495	..	..	451,187
Orkney and Shetland Totals	474,173	..	11,495	..	..	485,668
<b>WEST COAST.</b>						
Stornoway . . . . .	51,611	..	72,824	..	..	124,435
Barra . . . . .	99,355	..	..	..	..	99,355
Loch Broom . . . . .	845	..	..	..	..	845
Loch Carron and Skye . . . . .	2,072	..	9,778	..	..	11,850
Fort-William . . . . .	31,745	..	16,466	..	..	48,211
Campbeltown . . . . .	1,135	..	1,549	..	..	2,684
Inveraray . . . . .	2,625	..	43	..	..	2,668
Rothsay . . . . .	140	..	3,238	40	..	3,418
Greenock . . . . .	5,418	..	68,482	261	..	74,161
Ballantrae . . . . .	135	..	4,517	80	..	4,732
West Coast Totals . . . . .	195,081	..	176,897	381	..	372,359
Grand Totals for 1921 . . . . .	795,609	12,160	727,891	10,966	36,473	1,583,099
Grand Totals for 1920 . . . . .	472,101	47,223	1,333,145	42,343	331,266	2,226,078
Increase in 1921 . . . . .	323,508	..	..	..	..	..
Decrease in 1921 . . . . .	..	35,063	605,254	31,377	294,793	642,979

NOTE 1.—Included above are £5420 for gutted herrings cured "spiced" in Shetland for Sweden; and £3059 for kippers, £13,982 for reds or bloaters, and £1500 for tinned manufactured from herrings brought from England; and £1480 for kippers from herrings imported from Norway.

No. IV.—*continued.*

after Cure—of Herrings Cured (distinguishing Herrings Branded) during the Year 1921.

Grand Total Value of Cured Herrings.	VALUE OF CURED COD, LING, &c.					Grand Total Value of Cured Fish.
	Dried.	Pickled.	Tinned.	Smoked.	Total.	
£	£	£	£	£	£	£
118,225	..	..	..	1,680	1,680	119,905
21,099	..	5,630	..	9,342	14,972	36,071
1,513	1,000	..	..	360	1,360	2,873
1,278	75	..	549	59,209	59,833	61,111
..	..	..	..	10,405	10,405	10,405
83,514	97,514	..	6,280	1,050,753	1,154,547	1,238,061
165,211	690	..	306	4,740	5,736	170,947
226,231	2,074	35	5,859	7,136	15,104	241,335
18,760	380	..	..	23,180	23,560	42,320
16,177	1,280	..	..	7,840	9,120	25,297
346	..	2,380	..	15,776	18,156	18,502
..	..	..	..	1,566	1,566	1,566
164	..	..	..	2,925	2,925	3,089
3,603	85	..	..	384	469	4,072
243,298	665	..	..	3,368	4,033	247,331
899,419	103,763	8,045	12,994	1,198,664	1,323,466	2,222,885
46,230	315	50	..	..	365	46,595
521,499	7,906	187	..	3,780	11,873	533,372
567,729	8,221	237	..	3,780	12,238	579,967
124,435	607	..	..	..	607	125,042
99,355	242	..	..	..	242	99,597
845	141	20	..	..	161	1,006
11,850	..	..	..	..	..	11,850
48,211	..	..	..	..	..	48,211
2,684	615	..	..	..	615	3,299
2,668	..	..	..	..	..	2,668
3,418	..	..	..	..	..	3,418
74,161	53	..	..	..	53	74,214
4,732	..	..	..	..	..	4,732
372,359	1,658	20	..	..	1,678	374,037
1,839,507	113,642	8,302	12,994	1,202,444	1,337,382	3,176,889
3,504,176	307,460	2,424	50,017	1,798,584	2,158,485	5,662,661
..	..	5,878	..	..	..	..
1,664,669	193,818	..	37,023	596,140	821,103	2,485,772

NOTE 2.—In addition to the above there was imported from Iceland, Faroe and Norway in a wet-salted state and dried in Scotland fish to the value—after cure—of £43,680 (cod £41,795, ling £1397, saithe £231, and haddocks £257).

**TABLE F.—**  
**PERSONS EMPLOYED.—RETURN** showing the Total Number of  
 branches of the Sea Fisheries

No.	DISTRICT.	Fishermen and Boys (regularly or partially employed.)	Fishmongers.	Hawkers of Herring and other Fish.	Fishcurers.	Coopers.	Gutters and Packers.	Clerks.	Carters and Labourers.	Persons gathering Bait and Baiting Lines.
<b>EAST COAST.</b>										
1	Eymouth . . . . .	573	2	6	13	36	247	12	74	70
2	Leith . . . . .	1,712	653	346	22	29	144	261	353	82
3	Anstruther . . . . .	1,551	25	31	27	25	81	12	19	239
4	Montrose . . . . .	958	258	194	44	8	43	32	71	383
5	Stonehaven . . . . .	145	5	31	6	7	17	6	9	63
6	Aberdeen . . . . .	3,402	192	272	173	129	1,318	351	1,772	63
7	Peterhead . . . . .	1,421	6	27	89	264	1,023	43	220	54
8	Fraserburgh . . . . .	1,973	5	20	80	410	960	75	390	90
9	Banff . . . . .	1,400	3	48	24	28	240	5	29	72
10	Buckie . . . . .	3,639	11	24	21	89	288	31	24	60
11	Findhorn . . . . .	1,494	22	110	37	12	404	14	34	15
12	Cromarty . . . . .	514	..	25	6	..	210	..	7	15
13	Helmsdale . . . . .	305	..	16	12	6	90	1	9	40
14	Lymbster . . . . .	124	..	6	2	5	32	..	4	..
15	Wick . . . . .	1,106	12	56	54	210	840	22	160	24
	<b>East Coast Totals</b> . . . . .	<b>20,317</b>	<b>1,194</b>	<b>1,212</b>	<b>610</b>	<b>1,258</b>	<b>5,937</b>	<b>865</b>	<b>3,175</b>	<b>1,270</b>
<b>Orkney and Shetland.</b>										
16	Orkney . . . . .	874	1	14	6	12	45	..	43	..
17	Shetland . . . . .	2,124	2	9	39	115	594	19	117	52
	<b>Orkney and Shetland Totals</b> . . . . .	<b>2,998</b>	<b>3</b>	<b>23</b>	<b>45</b>	<b>127</b>	<b>639</b>	<b>19</b>	<b>160</b>	<b>52</b>
<b>WEST COAST.</b>										
18	Stornoway . . . . .	4,056	20	40	15	35	1,600	14	120	..
19	Barra . . . . .	955	..	1	7	1	306	1	32	..
20	Loch Broom . . . . .	711	..	2	8	3	12	..	6	10
21	Loch Carron and Skye . . . . .	862	..	..	17	10	45	3	18	89
22	Fort-William . . . . .	403	8	14	16	5	24	5	8	20
23	Campbeltown . . . . .	617	3	15	26	1	28	..	12	15
24	Inveraray . . . . .	367	3	6	7	3	24	..	7	..
25	Rothesay . . . . .	130	17	47	3	..	18	3	12	..
26	Greenock . . . . .	215	686	891	27	16	82	124	237	13
27	Ballantrae . . . . .	552	94	65	16	3	18	1	46	..
	<b>West Coast Totals</b> . . . . .	<b>8,868</b>	<b>831</b>	<b>1,081</b>	<b>142</b>	<b>77</b>	<b>2,157</b>	<b>151</b>	<b>498</b>	<b>147</b>
	<b>Grand Totals for 1921</b>	<b>32,183</b>	<b>2,028</b>	<b>2,316</b>	<b>797</b>	<b>1,462</b>	<b>8,733</b>	<b>1,035</b>	<b>3,833</b>	<b>1,469</b>
	<b>Grand Totals for 1920</b>	<b>36,319</b>	<b>1,889</b>	<b>2,262</b>	<b>822</b>	<b>1,738</b>	<b>9,403</b>	<b>899</b>	<b>3,790</b>	<b>1,570</b>
	<b>Increase in 1921</b> . . . . .	<b>..</b>	<b>139</b>	<b>54</b>	<b>..</b>	<b>..</b>	<b>..</b>	<b>136</b>	<b>43</b>	<b>..</b>
	<b>Decrease in 1921</b> . . . . .	<b>4,136</b>	<b>..</b>	<b>..</b>	<b>25</b>	<b>276</b>	<b>670</b>	<b>..</b>	<b>..</b>	<b>101</b>

No. I.

Persons employed in each District in connection with the various during the Year 1921.

Boxmakers.	Boat Builders.	Basketmakers.	Persons making and mending Nets.	Persons manufacturing Barrel Staves.	Persons employed on board Vessels Curing, Exporting, and Carrying Herrings and other Fish.		Persons employed on board Vessels Importing Salt, Stave Wood, and Hoops.		Other Occupations.	Total Persons employed.	DISTRICT.
					British.	Foreign.	British.	Foreign.			
..	15	..	12	..	37	16	4	..	..	1,117	<b>EAST COAST.</b>
41	65	31	552	6	184	15	12	..	363	4,871	Eyemouth.
..	19	..	170	4	2	9	..	..	28	2,242	Leith.
13	12	5	23	..	13	..	..	..	44	2,101	Anstruther.
..	1	..	40	..	..	..	..	..	..	330	Montrose.
215	1,050	18	465	25	208	24	..	122	360	10,159	Stonehaven.
10	22	..	118	24	238	286	73	81	25	4,024	Aberdeen.
6	26	3	110	40	664	429	137	147	..	5,565	Peterhead.
..	54	..	38	5	4	41	9	..	..	2,000	Fraserburgh.
8	160	..	95	6	69	34	35	4	12	4,610	Banff.
..	12	..	20	..	2	21	..	..	30	2,227	Buckie.
..	5	..	6	..	..	..	..	..	..	788	Findhorn.
3	..	..	..	..	..	..	..	..	..	483	Cromarty.
..	1	..	2	..	..	..	..	..	..	176	Helmsdale.
40	14	8	44	8	51	317	88	50	..	3,104	Lybster.
336	1,456	65	1,695	118	1,472	1,192	358	404	863	43,797	Wick.
<b>East Coast Totals.</b>											
<b>Orkney and Shetland.</b>											
..	31	..	..	..	40	157	10	..	10	1,243	Orkney.
..	32	..	57	12	571	539	255	161	21	4,719	Shetland.
..	63	..	57	12	611	696	265	161	31	5,962	<b>Orkney and Shetland Totals.</b>
<b>WEST COAST.</b>											
..	18	..	42	..	232	76	22	..	12	6,302	Stornoway.
..	..	..	..	..	109	..	53	..	3	1,468	Barra.
..	5	..	..	..	15	..	..	..	..	772	Loch Broom.
..	15	4	..	..	18	..	..	..	..	1,061	Loch Carron and Skye
..	6	..	..	..	42	..	..	..	..	551	Fort-William.
..	2	..	10	..	172	..	2	..	1	904	Campbeltown.
..	10	..	..	..	89	..	2	..	..	518	Inveraray.
..	10	..	..	..	22	..	..	..	..	262	Rothsay.
7	7	..	187	..	359	..	20	..	36	2,907	Greenock.
..	4	..	..	..	..	..	4	..	..	803	Ballantrae.
7	77	4	239	..	1,058	76	103	..	52	15,568	<b>West Coast Totals.</b>
343	1,596	69	1,991	130	3,141	1,964	726	565	946	65,327	<b>Grand Totals for 1921.</b>
282	3,376	69	2,260	169	2,881	631	1,138	769	716	70,983	<b>Grand Totals for 1920.</b>
61	..	..	..	..	260	1,333	..	..	230	..	<b>Increase in 1921.</b>
..	1,780	..	269	39	..	..	412	204	..	5,656	<b>Decrease in 1921.</b>

TABLE I.—No. 1.

HARBOUR WORKS.—ACCOUNT OF RECEIPTS and PAYMENTS by the Fishery Board for Scotland for Building, Extending, and Repairing PIERS or HARBOURS in Scotland in the Year 1921.

Dr.		Cr.	
1921.		1921.	
	£	s.	d.
Jan. 1. To Balance . . . . .	17,814	7	7
Mar. 31. To Interest on amount deposited in Bank . . . . .	327	4	11
"    "    To Grant in aid of Piers or Quays (5 Geo. IV. cap. 64) . . . . .	3,000	0	0
June 1. To Interest on amount deposited in Bank . . . . .	36	19	7
Sept. 1. To do. do. do.	39	6	8
"    30. To do. do. do.	10	1	2
	<u>£21,227</u>		<u>19 11</u>
Dec. 31. By Payments for Harbour Works during the year, viz. :—			
Macduff . . . . .			1,000 0 0
Banff . . . . .			284 17 4
Buchanhaven . . . . .			850 0 0
"    "    By R. Gordon Nicol, O.B.E., M.Inst. C.E., allowance to provide professional assistance . . . . .			52 10 0
"    "    By W. A. Knight, Clerk of Works, allowance for Inspection of Harbour Works . . . . .			54 15 0
"    "    By Travelling Expenses . . . . .			8 10 2
"    "    By Balance in hand . . . . .			18,977 7 5
	<u>£21,227</u>		<u>19 11</u>

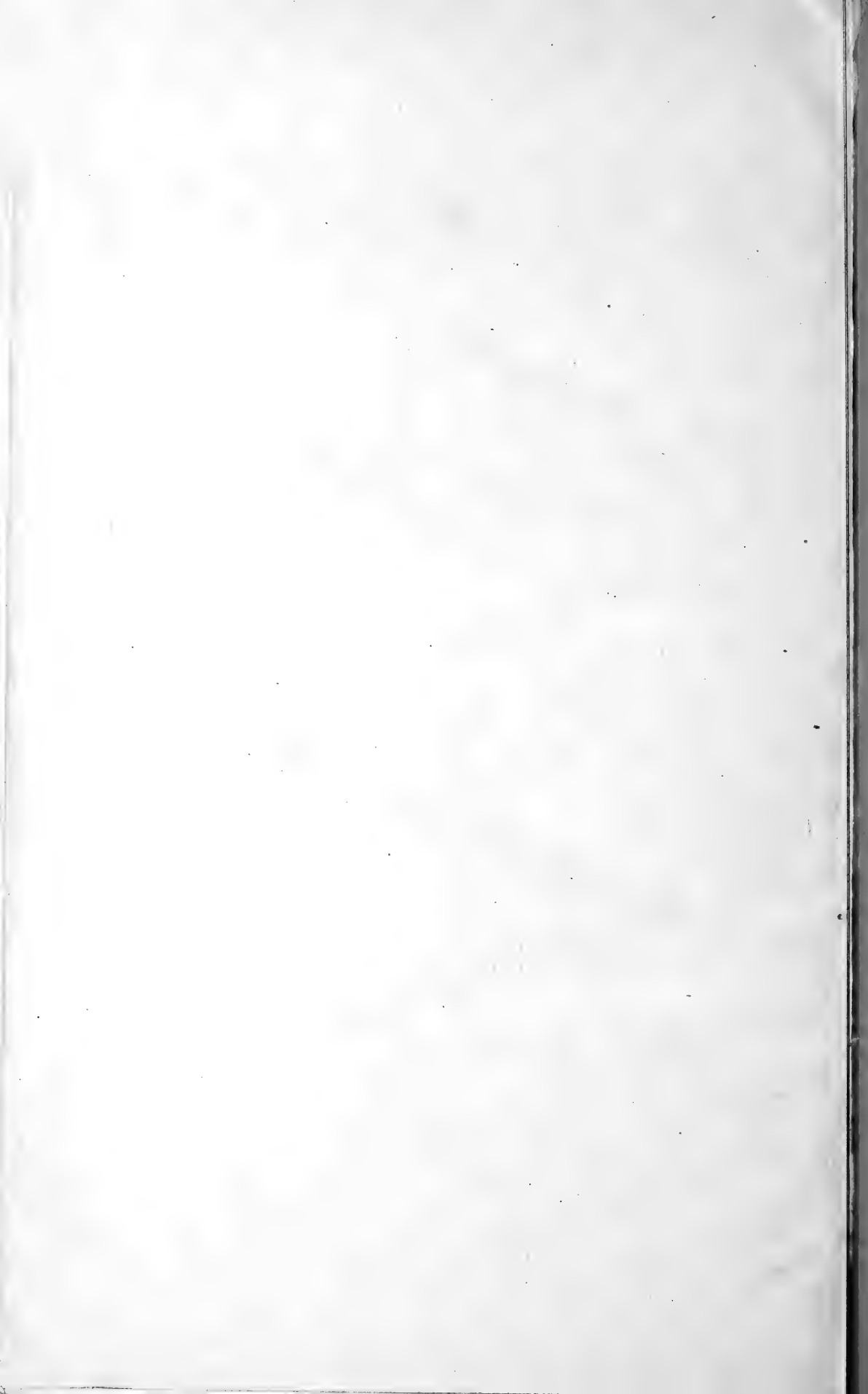


TABLE I.—No. II.

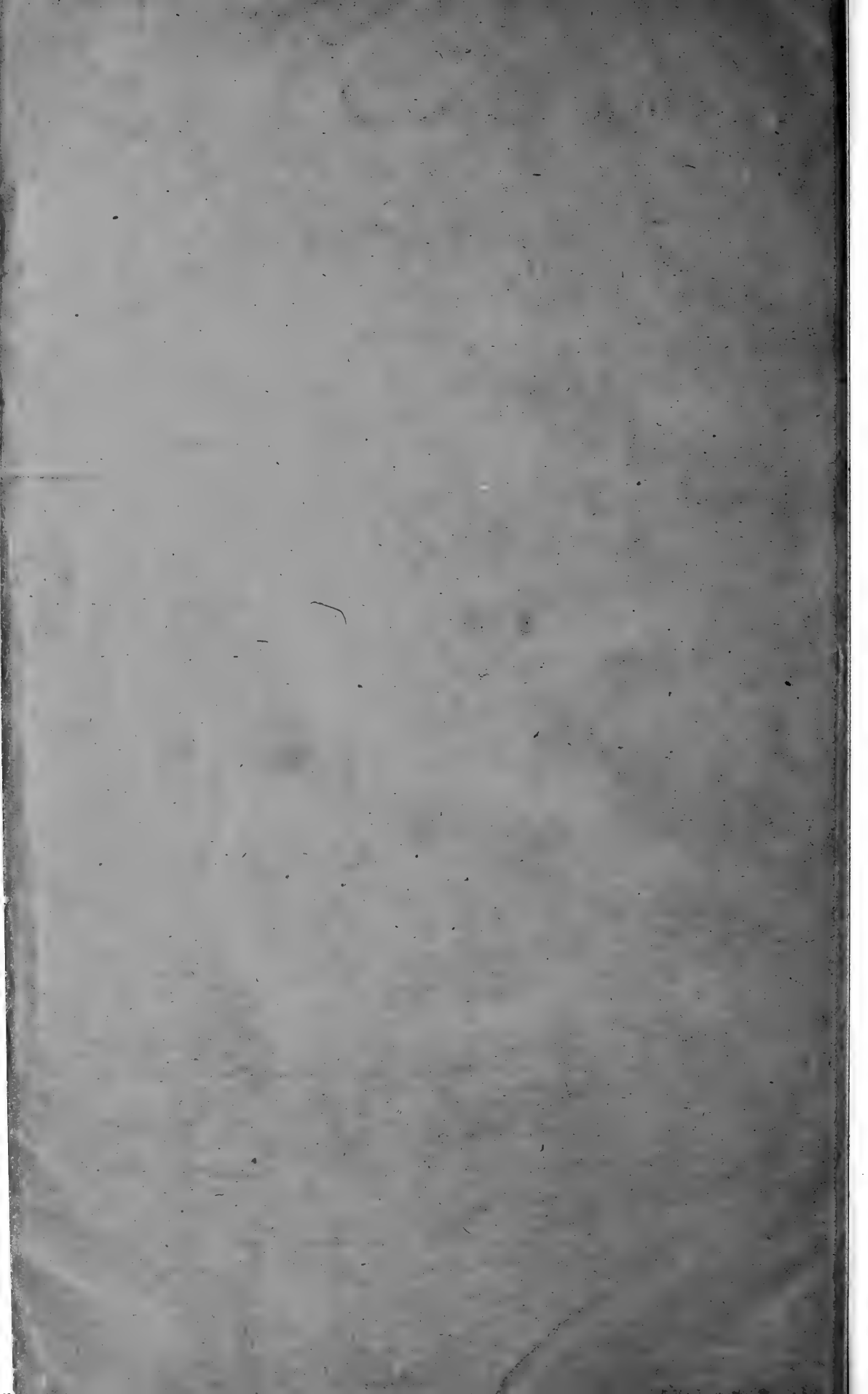
RETURN of the PIERS and HARBOURS Erected or Improved by the FISHERY BOARD FOR SCOTLAND from 1st January 1883 to 31st December 1921, showing for each undertaking the CONTRIBUTION made by the Board.

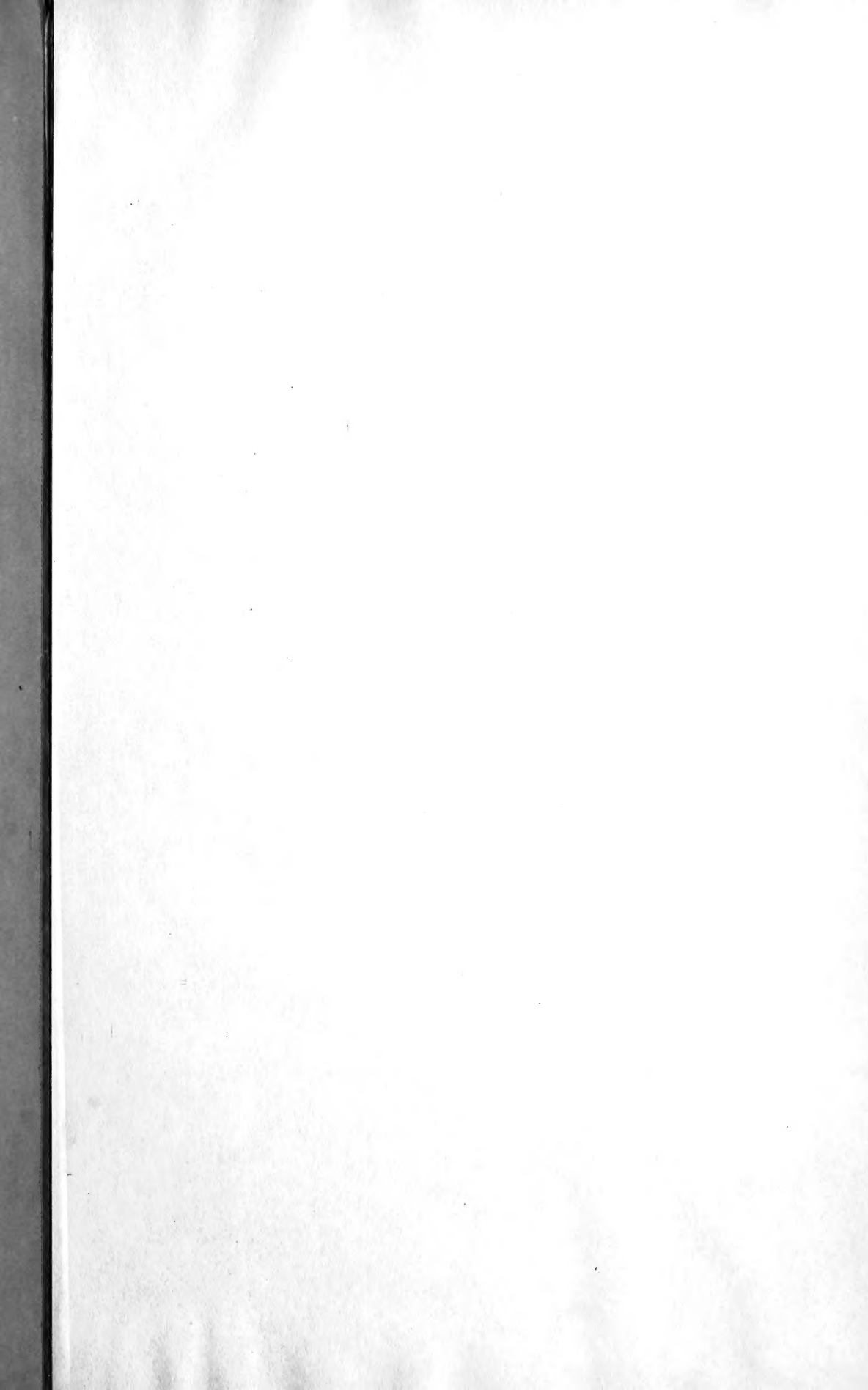
County.	Pier or Harbour.	Contributions by the Board.			County.	Pier or Harbour.	Contributions by the Board.		
		£	s.	d.			£	s.	d.
					Brought forward	81,169	1	7	
Aberdeen	*Roseheart	3,881	10	11	Elgin	Lossiemouth	1,000	0	0
	Pennan .	1,320	13	4	Fife .	St. Monance	5,839	18	1
	Collieston .	5,482	0	7		Pittenweem	4,450	0	0
	Sandhaven	738	10	9		St. Andrews	5,670	2	1
	Fraserburgh	5,000	0	0		Cellardyke	1,300	0	0
	Buchanhaven	850	0	0	Forfar .	Auchmithie	4,125	0	0
Argyll .	Carsaig, Mull	5	17	0	Haddington	Port Seton	180	0	0
	Waterfoot,				Inverness .	Broadford,			
	Cantyre .	24	0	0		Skye .	7,875	0	0
Ayr . .	Dunure .	512	6	8	Kincardine	Stonehaven	2,900	0	0
	Ballantrae	105	0	0	Northum-	Greenshaven	319	16	1
	Maidens .	1,181	19	6	berland .	Craster .	1,000	0	0
Banff .	Crovie .	971	16	3	Nairn .	Nairn .	5,587	10	0
	*Findochty	9,331	8	9	Orkney and	Holm, Ork-			
	Buckpool .	1,474	18	11	Shetland	ney .	1,102	0	10
	Buckie					Whitehall,			
	(Cluny) .	15,000	0	0		Stronsay	3,000	0	0
	Portknockie	6,993	16	0	Ross and	Balintore	5,805	13	0
	Whitehills.	10,012	4	7	Cromarty	Rockfield .	10	0	0
	Sandend .	432	18	4		Ness, Lewis	8,072	6	7
	Cullen .	3,100	0	0		Cromarty .	300	0	0
	Banff .	5,750	0	0		Avoch .	1,900	0	0
	Macduff .	6,000	0	0	Sutherland	Portnacou.	900	0	0
Berwick	Coldingham	3,000	0	0					
	Carried forward	81,169	1	7			142,506	8	3

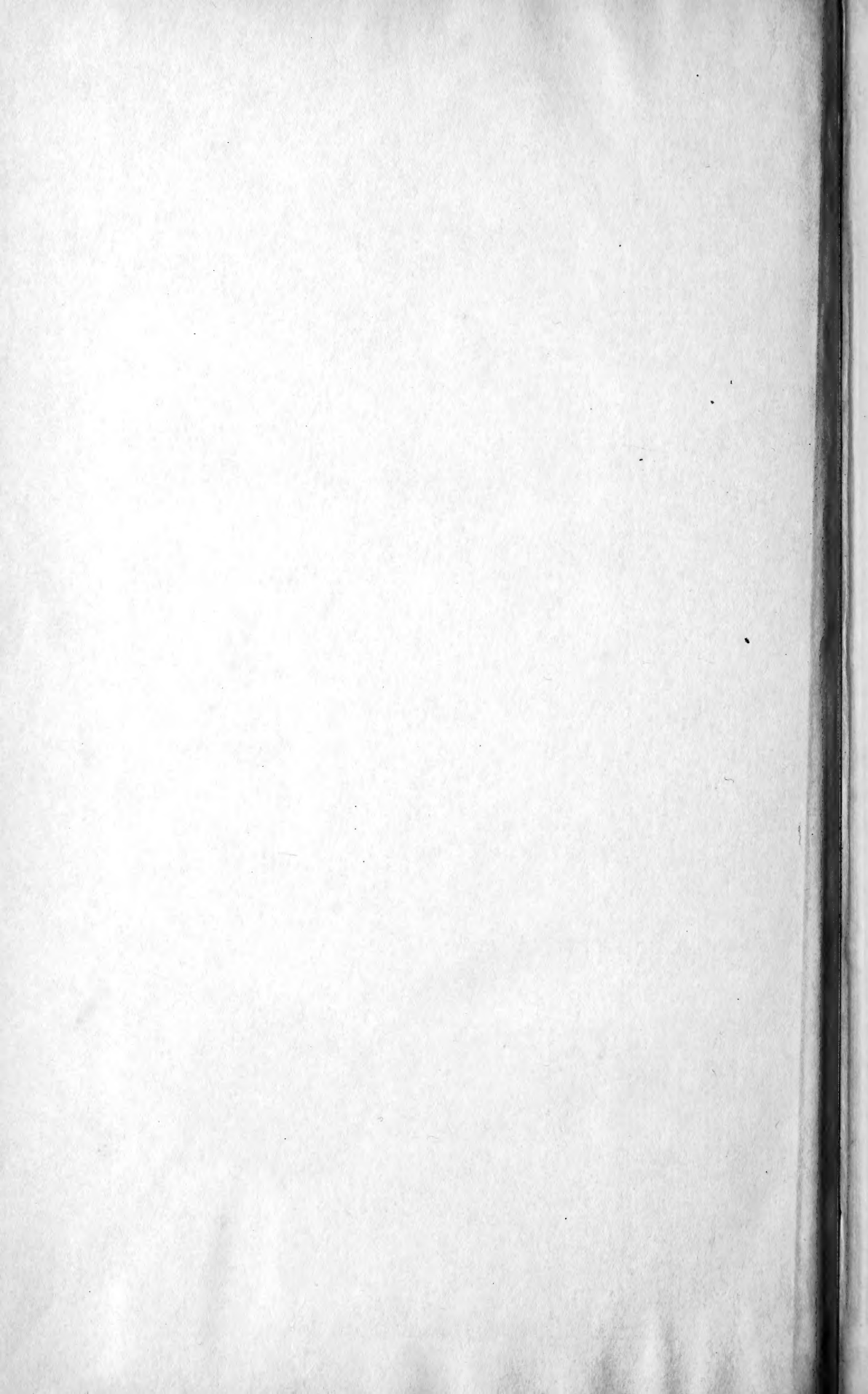
\* These harbours were begun by the old Board, but the whole of the payments made towards the works are now given.











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