



FOCUS on FISHING

Arbroath & Gourdon

Edna R Hay Bruce Walker

Abertay Historical Society Publication number 23

The Abertay Historical Society

Honorary Presidents

The Lord Provost of Dundee
The Principal of the University of Dundee
The Principal of the University of St. Andrews
The Convenor, Tayside Regional Council.

President:

Miss C. M. Kinnear.

Secretary:

Mr. Roy M. Gerrie, Secretary's Department, University of Dundee.

Treasurer:

Mr. John R. Barker, Librarian, University of Dundee

Editor:

Dr. Annette M. Smith, Department of Modern History, University of Dundee.

Publications Secretary:

Mrs. Joan Auld, Archivist, University of Dundee

The Society was founded in May, 1947, and exists to promote interest in History, particularly the history of the Tayside Region, Perthshire and Fife.

Details of the Society's other publications will be found inside the back cover.

Printed by Severson (Printers) Limited, Dundee Tel 25768

Cover design by W. Barr – Duncan of Jordanstone College of Art

FOCUS ON FISHING

Arbroath & Gourdon

Edna R Hay – Bruce Walker

Abertay Historical Society Publication number 23

Dundee 1985

ACKNOWLEDGEMENTS

The Abertay Historical Society wishes to thank Professor T.C. Smout, Mrs Edna Hay's supervisor, for allowing publication of what was originally an undergraduate thesis, part of the M.A. Degree at Edinburgh University.

The Society also wishes to express its thanks to various people and institutions for allowing us to use photographs of which they possess the Copyright.

Iain Wright, Millgate, Arbroath.
Mrs. Mary Coutts, Montrose
D.C. Thomson, Dundee.
Dundee Public Library, and
St. Andrews University Library

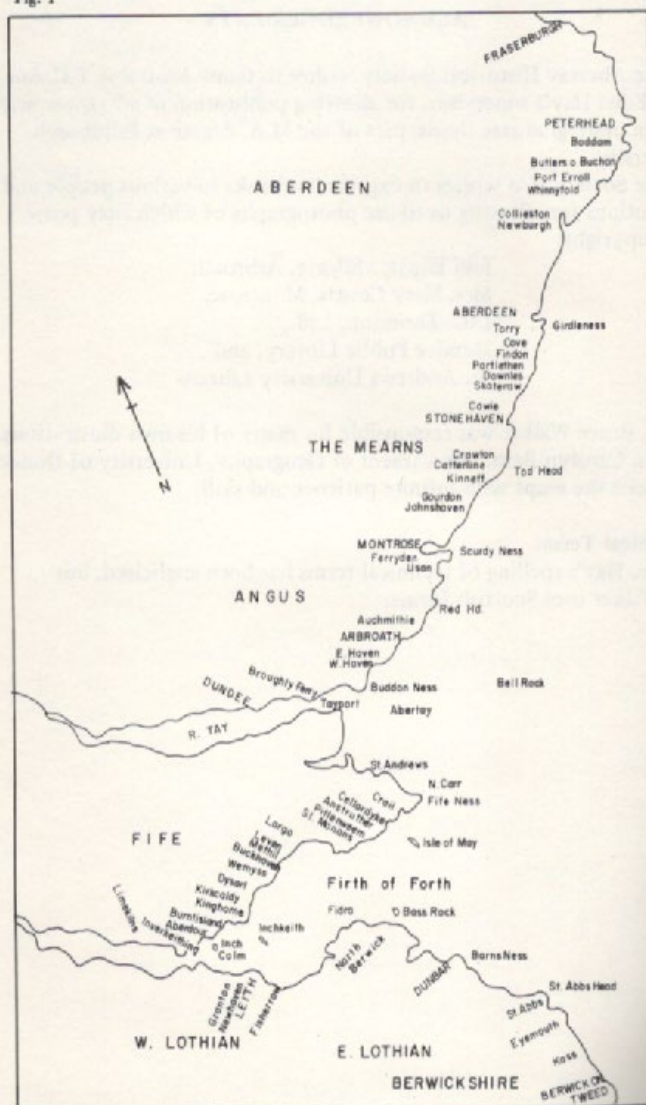
Dr. Bruce Walker was responsible for many of his own illustrations.

Mrs Carolyn Bain, Department of Geography, University of Dundee, prepared the maps with infinite patience and skill.

Technical Terms.

Mrs. Hay's spelling of technical terms has been anglicised, but Dr. Walker uses Scottish forms.

Fig. 1



THE EAST COAST FROM FRASERBURGH TO BERWICK
ON TWEED

CONTENTS

Edna R Hay: *Arbroath Fishing Industry: Benefits of Co-operation*

List of Tables		6
List of Illustrations		7
Introduction		9
Sources		11
Chapter	1: The Development of the Community to 1920	13
	i Auchmithie	15
	ii Growth of the Arbroath Fishing Community to 1920	20
	iii Economic Survey to 1920	22
Chapter	2: The Roll of the Family	
	i Ownership	25
	ii The Work of the Women in connection with Line Fishing	29
	iii Fishing Methods: Line, Seine-net, Creel	32
	iv The Roll of women in Smoking and Retailing their Produce	35
Chapter	3: Community Co-operation	39
Chapter	4: Diversification	
	i Capture	43
	ii Supply and Distribution	48
Conclusion		51
Bruce Walker:	<i>Sma'line Fishing as Practised from Arbroath and Gourdon in the 1950's and 1970's</i>	53
Conclusion		93
Notes and References		94

TABLES

1) Number of Vessels & Fishermen: 1855	13
2) Number of Vessels & Fishermen: 1881	14
3) Number of Vessels & Fishermen: 1928	14
4) Results of Small Line Fishing	27
5) Quantities of Haddock Purchased from Aberdeen by Arbroath Women for Curing	35
6) Membership of the Arbroath Fishermen's Association 1926-1929	40
7) Arbroath Fishermen's Association 1926-1929	42

ILLUSTRATIONS

1) East Coast Scotland	4
2) Street Plan of Arbroath	8
3) Smoking Haddocks, 19 th Century	17
4) Fisher Washing Day	19
5) Shelling Mussels	31
6) Scull being taken to boat	33
7) Lines being taken in	33
8) Smoking Haddock, c1930	36
9) Ripp and Hand Creel	36
10) Number of Creels in Use, 1918-1939	45
11) Number of Motor Boats, 1918-1939	47
12) Arbroath & Hinterland: Railway Routes	4

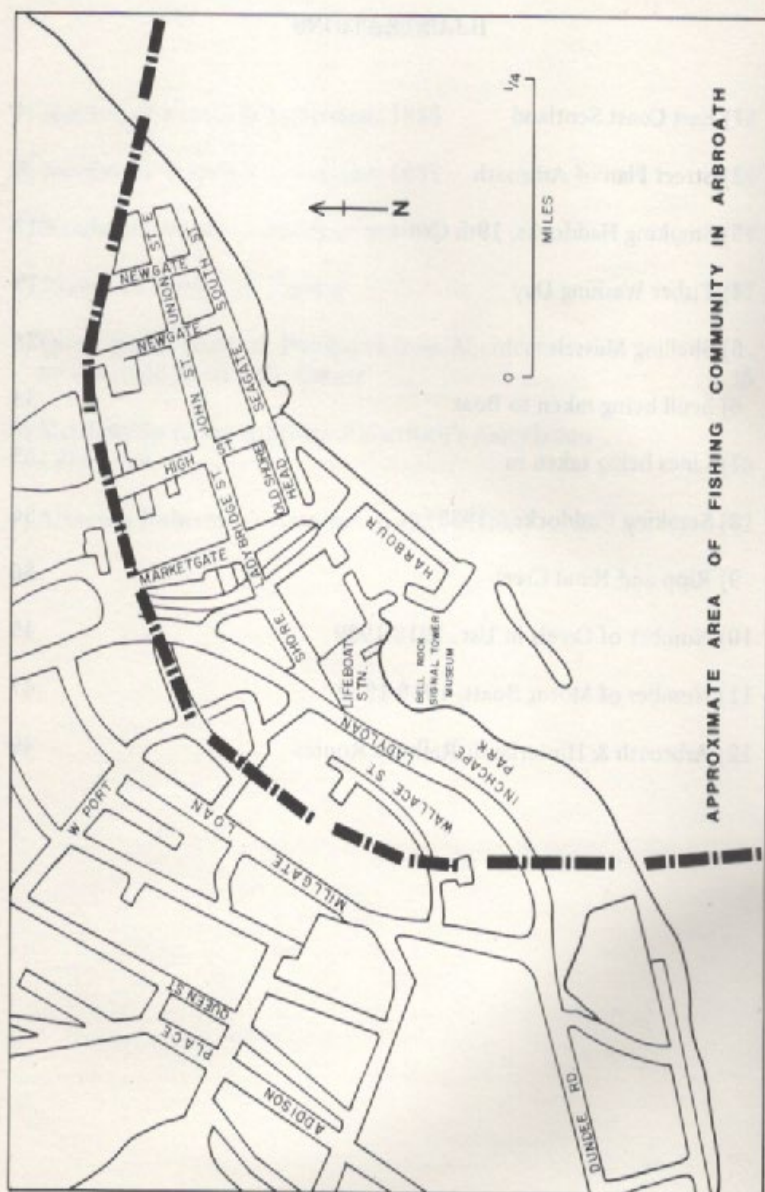


Fig. 2

INTRODUCTION

The *New Statistical Account*, published in 1839, made no mention of fishing as an industry in Arbroath; nor were fishermen included in the tabular view of the employment of the whole population of the parish of Arbroath.¹ Yet, almost a hundred years later, in 1929, a northern newspaper, the *Press and Journal* was commenting that only one northeastern fishing village could be said to have returned to its pre-World War 1 prosperity while 'Farther south an exactly similar state exists, Arbroath being the only thriving port'.²

The purpose of this paper is to look at the fishing community in Arbroath, from its beginnings in the nineteenth century to its performance in the 1920s, to see how it was able to thrive and expand its activities during a period of great difficulty for the fishing industry as a whole. Concern for the Scottish fishing industry at that time meant concern for the herring-fishing and its decline following the First World War, with the loss of the Russian, Baltic and German markets, actual or potential over-production and increasing age and inefficiency of boats and gear. The *Press and Journal* reporter, seeking the causes and the possible cures for the decline in activity and indeed in population of many of the north-eastern villages, received a wide variety of answers. The most common, and that considered the most serious, was the defection of sons of fishermen from the trade. Many were going abroad taking their young families with them; their experience in war and their better education had given them a restlessness and a changed outlook. Locally, the young men were turning to serving on trawlers or entering industry; salmon fishing in season provided an outlet for some whereby good wages and commission were received, with no expenses, with the alternative of harvest work or line fishing at the end of the season. For others it was said that after the relative comfort of the drifters many were unwilling to tackle the arduous work on line boats. Another major deterrent to the forming local associations for the purchase of essential materials, but despaired of any such co-operation in view of the apparently conservative attitude towards change of most fishermen and their alleged suspicion and mistrust of new methods which appeared to threaten their independence.

¹ *New Statistical Account (Angus) 1839*

² *Press and Journal* 28 March 1928 'Decay of Fishing Villages'

I would suggest that Arbroath differed from the generalised picture in three important ways which contributed to its success in the 1920s. Firstly, it retained the importance of the family as an ownership group and as a working unit. Young men in Arbroath did, in fact, follow their fathers into the industry to a greater extent than in other creeks; for the older men there appeared to be no thought of retirement on the Old Age Pension as happened in neighbouring creeks. Here too, the task of shelling and baiting was undertaken widely by the women, daughters, wives and mothers, if not eagerly, at least with acceptance of its necessity. By the smoking and selling of fish, independently of their husbands, the wives added to the family income in general and added to investment when required. Secondly, the willingness and enterprise shown in diversification of the fishing effort to ensure work was carried on throughout the year, the pursuit of technological advancements at an early stage in their development and the spread of markets, all helped to increase production and maintain a balance between supply and demand. Thirdly, the charge of 'suspicious and mistrustful' could not be applied in Arbroath. The Fishery Board repeatedly quoted the example of the Arbroath Fishermen's Association, the first of its kind **and** the sole example for many years, whereby individual interests were submerged in the general interests of the community as a whole, in cooperating to provide the essential materials to carry on the activities connected with fishing and in selling the fish through Association salesmen.

SOURCES

The topic of the demersal fishing industry by methods other than trawling, i.e. by line and net, in the Montrose District in the County of Angus (Forfarshire, as it was still known in the 1920s), has been passed over lightly by historians, newspaper reports, municipal and national government investigations and reports, possibly because of its very small share in relation to the major pelagic fishing industry of Scotland and, locally, to the trawling activities which accounted for some 50% of the total catch. Line and net fishing, however, despite its small proportion in relation to the total, provided Arbroath with its 'raison d'être'. Historians writing of the period under review tend merely to mention that small-line fishing and seine-net fishing were carried on in the East Coast and, as a result, their books have been of use only in the context of the general setting of the times.

Local interest has to date been negligible for this period. Historians at the end of the nineteenth century such as G. Hay, *A History of Arbroath* (1876), J.M. McBain, *Arbroath, Past and Present* (1887) and J.B. Salmond's various books have provided good histories of the town as a whole and have mentioned in detail the fishing industry of their time but no contemporary author of the post-war period has followed their useful works. The local press, apart from one or two articles in the first decade of the century concerning the 'quaintness and picturesqueness' of the community, has been remarkably reticent. Local catches, prices and occasionally weather conditions have been reported but the contribution of the community as food producers for the town, immediate hinterland and more distant customers in the midlands of Scotland and in England, and as employers of some 150 men and boys and an indeterminate number, probably equal, of women, have not been subjects of discussion until more recent times. Even the formation of the Arbroath Fishermen's Association in 1925 was passed by without comment from either of the local weekly papers, i.e. the *Arbroath Herald* and *Arbroath Guide*, or the district daily newspapers, the *Dundee Courier and Advertiser* and the *Press and Journal*. By April 1928 the *Press and Journal* was concerning itself with the decay of fishing villages in the north-east and commenting on the success of Arbroath and Gourdon, both of Montrose District, in achieving some prosperity. The *Glasgow Herald* in August 1929 covered the same subject and mentioned the success of the Arbroath Fishermen's Association. The A.F.A. itself was unwilling to discuss its formation and progress but some details were available, to 1942, in the *Scottish Record*

Office, together with Fishery Board enquiries on certain points of interest concerning the town. A visit by Commander Fisher of the Edinburgh Fishery Board, in May 1925, described the lack of initiative in the Town Council with regard to plans for the development of the fishing industry and its apparent apathy as a body towards the functioning of the fishing industry.

The main source of information has been, therefore, the Arbroath Fishery Officer's files for the period from 1920. I have to thank Mr. John Wiseman and his assistant, Mr. David Smillie, in Arbroath, who so willingly allowed me to disrupt their normal duties and who provided clarification and additional information. Fishery Officers' reports consist of daily, monthly and annual reports to the Edinburgh Office of the Fishery Board. They provide information regarding weather conditions, catches, prices, details of boat purchase, new developments in fishing technology, details of curing carried on, inspections and reports on retail outlets in Dundee and some information regarding market outlets in England, matters of transportation and difficulties of distribution, local and national, which affected the industry. Successive Fishery Officers adopted different styles of reporting with the result that for certain years personal comments were more freely added than for others. The collection of statistics by the Fishery Officers was no doubt a time-consuming and difficult task and they have undertaken a wide variety of investigations. Unfortunately many of the points where I would have liked even an 'estimated guess' lie concealed beneath the vague 'many', 'large numbers of' and 'some'. Nevertheless, the reports were invaluable.

CHAPTER 1

The Development of the Community to 1920

The Arbroath fishing community in the nineteenth century developed from the migration of fishermen and their families from the village of Auchmithie, some three miles to the north, into the town to join the somewhat faltering existing fishing community, which in 1830 owned no more than half-a-dozen fishing-boats and gear not exceeding £100 in value.³ Although Auchmithie was of far greater importance than Arbroath at that time, its fishing activities were seriously handicapped by the lack of a harbour or pier for the boats to land at or receive shelter from. Arbroath, on the other hand, could boast a ‘commodious harbour accommodating ships plying their trade with the Baltic, the Mediterranean, East and West Indies and South America’.⁴ From 1830 a serious movement into Arbroath began and a local historian, reviewing the situation some 50 years later, was able to write of the venture with some satisfaction:

‘They (the former Auchmithie residents) have proved themselves an industrious class of people - supplying the harbour with pilots, the lifeboat with a skilful and handy crew and the fish market with an important article of food.’⁵

In the Creek Returns for the East Coast of Scotland (Montrose District) Arbroath found itself in 5th place behind Ferryden, Gourdon, Auchmithie and Broughty Ferry.⁶ (Table 1)

Table 1 Number of Vessels & Fishermen 1855

	1855	More than 30ft	Less than 30ft	Less than 18ft	Total	Men/Boys
1	Ferryden	21	32	15	68	186
2	Gourdon	22	20	5	47	11
3	Auchmithie	14	15	4	33	78
4	Broughty Ferry	10	14	6	30	76
5	Arbroath	8	14	7	29	69
6	Johnsahven	14	8	5	27	68
7	Montrose	-	4	2	6	22

By 1881, although numbers of both fishermen and boats had increased

³ J M McBain *ArMontrosebroath, Past and Present* (1887) 71

⁴ J M McBain *op. cit* 141

⁶ G Hay *A History of Arbroath* (1887) 377

⁶ Peter Anson *Fishing Boats and Fisher Folk on the East Coast of Scotland* (1930) 268-9

dramatically, other creeks had similarly expanded and Arbroath had moved to only 4th place⁷ (Table 2)

Table 2 Number of Vessels and Fishermen 1881

		Vessels	Fishermen
1	Ferryden	156	350
2	Gourdon	108	165
3	Broughty Ferry	96	172
4	Arbroath	92	150
5	Johnshaven	59	120
6	Achmithie	40	70
7	Montrose	7	12

However, by 1929, the situation had changed beyond recognition; Johnshaven, Montrose and Ferryden, Auchmithie and Broughty Ferry had declined to such an extent that only Gourdon and Arbroath could claim to have maintained a thriving fleet and industry in the difficult days following the First World War.⁸ (Table 3)

Table 3 Number of Vessels and Fishermen 1928

		30ft keel And upwards		Under 30ft keel		Total	Fishermen
		Motor	Sail	Motor	Sail		
1	Arbroath	25	-	11	8	44	162
2	Gourdon	22	-	11	6	39	146
3	Montrose and Ferryden	13	-	7	8	28	94
4	Johnshaven	3	-	9	11	23	48
5	Broughty Ferry	-	3	-	9	12	30
6	Auchmithie	-	-	-	10	10	11

⁷ Peter Anson op. cit. 273

⁸ Peter Anson op. cit. 276

i Auchmithie

Looking at Auchmithie, a village set on top of old red sandstone cliffs, it is to be wondered how the fishermen could have carried on a vigorous fishing trade in such a rugged part of the coastline. The road linking the village to the beach winds down a steep brae and the labour involved in carrying down lines and nets and in carrying up the produce must have been no small inducement to many to look for a more amenable location. There was, too, the consideration of the £2 per boat per annum which had to be paid for the use of the beach. As well as providing a harbour Arbroath could also provide a much bigger local market, growing throughout the century. The town population, 11,211 in 1831, rose to 22,993 sixty years later.⁹ On the other hand, distance had not prevented the Auchmithie fisherwomen from walking to Dundee and back to dispose of their crabs, lobsters and dried fish,¹⁰ a journey of twenty miles each way.

The Rev. John Muir, minister of the parish of St Vigeans, wrote regarding the nature of the fishing activity in 1840. He reported that some salmon-fishing was attempted but usually with little success. Twelve boats, each carrying a crew of five, were regularly employed at white-fishing and by the second week in July all the boats started out for the herring-fishing, which generally lasted about six weeks. At that time, the fishermen were under contract to a curer to secure for him 200 crans per boat, which quota they usually managed to fulfil. The given rate was somewhere between 9 shillings (45p) and 13 shillings (65p) per cran, with an added weekly bonus of two bottles of whisky to each crew member.¹¹ It is hardly to be wondered at the comment of Mr Muir that:

‘They (the fishermen) spend their money with less economy and sobriety than formerly.’¹²

Thirty-five years later, James Bertram was to marvel at the strength of the women of Auchmithie:

‘Fisher life may be witnessed here in all its unvarnished simplicity. Indeed, nothing could be more primitive than the inhabitants and the mode of life. I have seen the women of Auchmithie “kilt their coats” and rush into the water in order to aid in shoving off the boats and on the return of the little fleet carry the men ashore on their brawny

⁹ G. Hay *op. cit.* 401

¹⁰ *New Statistical Account* (1839) II 34

¹¹ Peter Anson *op. cit.* 113

¹² *ibid*

shoulders with the greatest ease and all the nonchalance imaginable, no matter who might be looking at them.’¹³

This is not to suggest that the fisherwomen of Auchmithie were of superior strength and character to their menfolk; their actions can be described as entirely logical. Whereas the men had to fish for hours at sea where there was little hope of their heavy clothing having a chance to dry, the women, on the other hand, could return to their homes, change or dry out their clothing and carry on with their duties. Yet, Ronald McMillan, describing the women of Broughty Ferry at the turn of the century said that the women there did three times the amount of work as the men.¹⁴ Wishing to enter no arguments I would merely suggest that evidence points to a hardy breed of women to whom heavy, prolonged and dirty work was no deterrent in following their way of life and which, in fact, stood them in good stead for the essential part they played in the family work unit, vitally important to the success of family and community in difficult times after the migration of the town.

The Auchmithie fishwives took with them into Arbroath their ‘peculiar way of smoking haddocks’, noticed by Mr Bertram on his visit. He described the process:

‘Instead of splitting the fish after cleaning them, as regular curers do, they smoke them in their round shape. They use a barrel without top or bottom as substitute for a curing house. The barrel, being inserted a little distance in the ground, an old kail pot or kettle, filled with sawdust, is placed at the bottom, and the inside is then filled with as many fish as can be conveniently hung on it. The sawdust is then set fire to, and a piece of canvas thrown over the top of the barrel; by this means the females of Auchmithie smoke their haddocks in a round state, and very excellent they are.’¹⁵ (Figure 3 shows this process.)

The ‘smokie’ as it was known, remained tender and juicy, and it was around this product that so much of the success of the Arbroath fishing industry was built.¹⁶

Along with the basic need for harbour facilities, market opportunities and with the possession of a distinctive and appealing product, yet another ingredient was required to embark on a move down the coast.

¹³ James Bertram *Harvest of the Sea* (1869) 444

¹⁴ Ronald McMillan *Broughty Ferry in the Days of Sail* (Undated – possibly 1970 +) 33

¹⁵ P. Anson *op. cit.* 114 – quoted from J. Bertram *op. cit.*

¹⁶ *New Statistical Account Angus* (1977) 521 – ‘Smokies’ are exported all over the world



Fig. 3. Smoking Haddocks, 19th Century

This was a combination of character and initiative, which seems to have been a part of the village tradition to establish an independent way of life. An earlier migration into Arbroath at the beginning of the eighteenth century ‘clandestinely and under a cloud of night’ by a family named Cargill, had led to a judicial decision in 1805, granting in favour of the Earl of Northesk, the right to look upon his white fishers as serfs or thralls.¹⁷ Legal restrictions having been removed sometime later yet more families of the same name, along with others, approached the Arbroath Town Council in 1830 to negotiate for a site from which they could carry on their livelihood. The mood was welcomed by the then Town Council who had been trying to induce fishermen from as far afield as Shetland to settle in the town to try to kindle some life into the faltering industry, and to that date, with little success. The movement into Arbroath continued over the years, well into the present century, settling around Danger Point, where the Brothock Water enters the sea, spreading into a roughly semi-circular area around the harbour. (Figure 4 shows how the community made use of the water from textile mills of St Vigeans and Arbroath flowing into the Brothock Water.) At Auchmithie, fishing was still carried on and in fact the 33 boats of 1855 increased to 40 in 1880, employing 70 fishermen, but the trend thereafter was downwards and by 1929 only ten small boats remained, all sail, employing 11 fishermen at line fishing in the winter months and lobster and crab fishing between April and September.¹⁸

¹⁷ G Hay *op. cit.* 446

¹⁸ P. Anson *op. cit.* 114. *Arbroath Fishery Office Report* 11 July 1930



Fig. 4. Fisher Washing Day

ii Growth of the Arbroath Fishing Community to 1920

In 1830 the Arbroath fishing population amounted to no more than 80 persons. McBain describes their half dozen boats as ‘very small concerns, but poorly furnished, the whole lot being scarcely worth £100’.¹⁹ Geographically segregated from the main population of the town their numbers formed something less than 1% of the total and even with an increase to 500 persons in 1887 their proportion had risen to just over 2%, as the town population had itself doubled to 22,993.²⁰ Nevertheless, within that time the community had had time to develop and many changes were noticeable by the end of the 1880s. In the 1830s the fisherfolk were described as poor and ignorant and used to putting ‘considerable quantities of liquor under their capacious blue waistcoats’.²¹ By 1887 McBain was describing the 180 men actively engaged in the fishing industry as owning sixteen large herring boats and thirty- nine haddock boats, having a total value of £6,000. They were noted by then to be generally sober, quiet, decent, industrious and ‘in possession of a degree of shrewdness that their simple forefathers had failed to exhibit’.²² What had brought about this change? McBain had no doubt that it was brought about by the wave of interest in temperance which swept through the community, later spreading to Auchmithie and Ferryden to the north and to Easthaven and Broughty Ferry to the south. As owners of the means of production, fishermen’s activities, though not perhaps capable of being described as conventional capitalism, involved the problem of how to save a significant proportion of their income. Financial discipline was not easily compatible with their earlier mode of life, when short term consumption (particularly of a liquid variety) took precedence over thought for future requirements. The temperance message, therefore, of rational expenditure, saving for long term advantages, particularly recommended itself to the fishermen.

And how was this achieved in Arbroath? Not, according to McBain, through the conventional works of the Arbroath Total Abstinence Society which claimed a large measure of success in the town itself from 1837 onwards, nor from the Gospel Temperance Movement started a few years later which claimed some further 7,000 converts in the town, but rather as the result of a spontaneous suggestion made in jest, round about the year 1860, at the close of the herring season. The drawing up of the boats called

¹⁹ J.M McBain *op. cit.* 71

²⁰ G Hay *op. cit.* 401.

²¹ J M McBain *op. cit.* 72

²² J M McBain *op. cit.* 78.

for celebration and in the course of a procession following Jonathan Watt, a chimney sweep who had joined the company and had been crowned 'king' for the occasion, a suggestion was made at the height of the merriment that those involved should all become teetotallers. To the credit of Jonathan he gave the matter serious thought and suggested a discussion the following day when heads were clearer. Accordingly, the proposal was thought to be a good one and the result was a work of reformation which McBain claimed was still in evidence in the 1880s, by which time their Temperance Society had acquired a room in Seagate which was fitted for a school during the day and a lecture room in the evening, and they had started an instrumental band. Apparently the movement spread with much success:

'With flying banners, and preceded by their own band, this temperance society, with King Jonathan at their head, visited the neighbouring fishing villages, the inhabitants of which soon caught the infection and for some years thereafter teetotalism was the order of the day.'²³

The event has all the appearance of fiction but McBain was regarded as an eminently careful historian. At any rate, the results were there to be seen if the actual event had become slightly embroidered in the process. The temporal and spiritual welfare of all concerned was considerably improved and, later, those who were in comfortable circumstances were apparently not ashamed to attribute their prosperity to the exertions of 'King' Jonathan and his temperance movement.

'Boats and their appurtenances were bought, and dwelling houses were acquired, from the savings effected by their changed mode of living.'²⁴

Their investment in the capital equipment of their industry, however, is to be seen as a means to defend their independence and traditional values. Although prosperity in the form of boats and gear was widely distributed among them, their standard of living remained that of a working class community. They remained apart, geographically settled around Danger Point, socially distinguishable from the larger population by their distinctive characteristics of dialect and intonation, their superstitions and customs, and by their mode of dress.

²³ J M McBain *op. cit.* 74.

²⁴ J M McBain *op. cit.* 75

iii Economic Survey to 1920

In the early years of the twentieth century Arbroath was taking part, along with the other east and north-east coast ports, in the greatly expanded herring-fishing, the vessels, varying according to their size and inclination, participating from three to seven months of the year around the coast depending upon season. The larger drifters by this time, carrying a crew of seven, were fitted with steam capstans for hauling in the nets. For winter fishing in the Firth of Forth smaller boats were used with a crew of five. The remaining months were filled in with line fishing which was also carried on throughout the herring season by the older men of the family with smaller boats. However, as early as 1908/9, the local Fishery Board reports were indicating signs of Arbroath's declining share in the herring-fishing. 1909 was the second consecutive year to show comparatively poor results; in consequence fewer boats had fitted out for the summer herring-fishing that year and the area of netting was not increased to take account of worn-out netting. The Anstruther winter fishing did little more than clear expenses.²⁵ The banks from 15 to 70 miles were proving to be unproductive and only the boats which had motor-power fitted by the end of the first decade were able to fish the banks 60 to 80 miles south-south-east, a distance quite unworkable by a fleet of sailing-boats.

World War I closed the Russian market with only spasmodic flutters of Russian interest in 1924 and 1927; the German market was lost on the outbreak of war and interrupted by its later currency problems; the agricultural eastern European countries of Romania, Poland and the Baltic states suffered difficult internal economic conditions and a consequent low purchasing power of the peasant for imported herring from Scotland. Yet, these international barriers to trade and the apparent changes marked what were really continuations of a trend which had already begun before the war. The local Fishery Board Officer in 1913 was proclaiming the 1912 season as the poorest on record for the herring-fishing.

He warned that the slight increase in price per cran could not compensate for the succession of barren years experienced and that this was bound to have a deterrent effect on the general prosperity of the fisheries for the district as a whole. One bright spot which appeared from his report, which promised well for the future, was the superiority of the motor-driven line boats over sail, demonstrated in all respects but especially in catch size which was consistently double that taken by sail

²⁵ *Annual Report of the Fishery Board for Scotland, 191 and 1911.*

boats.²⁶ During the war landings by motor-boat exceeded those of sail for the first time and the trend continued. Many of the boats classified under motor-boats were originally converted from sail, some of them having their engines changed to a greater h.p. as a second phase in the early post-war years.

Reporting on 1919, the first full year of fishing operations after the end of the war, the Fishery Officer found it difficult to make a fair comparison with earlier years. Boats which had remained fishing during the war were said to have made enormous earnings owing to the high prices secured for fish through general scarcity of other food commodities and, although the cost of boats and gear had escalated, there was still a reasonably large margin of profit left for the fishermen. However, with demobilisation came increased catching power, both in the number of vessels, after return from requisition, and in personnel. Dislocation was felt most keenly by those who had been on service, whose gear in some cases had so deteriorated that they could not use it. Prior to the war only the best gear had been used, any nets of doubtful catching power being scrapped without hesitation. Formerly there were 200 nets per boat but after the war only an estimated 100 per boat could be mustered, and those considerably below standard. At the same time, the conversion to motor from sail was almost complete, stimulated by the good catches and high prices of the latter war years. In 1913 practically half the line caught fish were landed by sail-boats; by 1919 the proportion landed by sail was only 1/2 2nd part which meant that very few of the sail-boats left were regularly in use. To restart in herring-fishing would have meant finding a good deal of capital or credit, in many cases not available, and, as a result, practically all the demobilized men took up line fishing. It required the minimum of expenditure and ensured a ready return for their labour.

Enormous changes had come about from the beginnings of the community in the years following 1830 to the position in which it found itself in 1920, when 120 regular fishermen and boys worked from a fleet of 48 motor boats and 12 sail. By 1920, however, the national trend towards rising prices for coal, fishing-gear, oil and stores, and the higher rates of wages, increased rail transport charges at the same time as a reduction in the means of transport, all combined to make running costs exceedingly heavy. The big 72 foot herring boats of former years gradually went into liquidation from 1920 as maintenance costs could not justify their putting to sea. Five years later the last of these vessels ceased to operate from

²⁶ *Annual Report of the Fishery Board for Scotland, 1914, 193.*

Yarmouth.²⁷ The years of the 1920s were experimental years in many ways, new methods of fishing were tried, new grounds fished, technological advancements were explored and modified to suit particular requirements. The established community worked within its family groups to produce an efficient working unit, to retain family ownership and control and thus prevent the 'proletarianisation' which had overtaken similar communities. The community co-operated to gain control over production costs and sales prices. There were some natural advantages – good fishing grounds within easy reach, a fairly populous hinterland as a market, good local communications – but the results were achieved by hard unending work and the use of initiative.

²⁷ R R Spink '50 years of Progress' in *Arbroath Herald Annual Review* (1948)

CHAPTER 2

The Role of the family**i Ownership**

The sense of family and community cohesion which had been achieved in Arbroath over the nineteenth century was particularly strongly developed and it was in order to retain this cohesion that strenuous efforts were made to resist the encroachment of the prevailing national trend towards loss of fishermen-ownership of boats and gear and acceptance of permanent wage earning instead.

The Scottish Departmental Committee on the North Sea Fishing Industry (1914) investigated the effect of the increase in size of fishing-vessels and also of the installation of mechanical power prior to World War I.²⁸ It reported that the boom in the growth of the steam-drifter fleet in Scotland, from 70 in 1900 to 824 in 1912, had not been achieved without problems, principally the passing of control of ownership from fishermen to shore-owners. The 1912 price of a steel-drifter was between <£3,000 and £3,200, its wooden counterpart was £2,700, thus taking the price beyond the individual or combination of individuals. It was found that fishermen could perhaps only raise between £400 and £600 between them, wealthy fish-salesmen making the share up to half the value of the boat and banks financing the other half. Thus, fishermen with small share capital were being precluded from being shareholders; only those able to put in a fairly substantial sum were likely to have a hope of ever becoming boat-owners. The parallel changes in the ownership of the nets, so that in most cases only fishermen-owners were holders of nets, was yet another sign of capital increasingly contained in the hands of a minority. The drift from ownership to wage-labour had been noted by the Fishery Board as early as 1905 when Lewis owners of small boats gave them up to become hired hands on east coast boats. Such a move effectively cut off the next generation from following in their fathers' footsteps and ended a traditional way of life. In Arbroath this trend towards loss of independence to shore-owners was strongly resisted and continues to the present period:

‘Arbroath vessels were, and are, owned by individuals and families; no large companies own or have shares in Arbroath vessels.’²⁹

²⁸ Scottish Departmental Committee on North Sea Fishing Industry (1914) Comd. 7221, 152-155

²⁹ Letter received from *Brian Bruce*, Fisherman, Arbroath (1977)

By retaining family investment in wooden vessels, steam vessels were never popular in Arbroath. Their operation would have necessitated the encroachment of outsiders to act as engineers. Also, facilities were not available for the repair of steel vessels and would have required a large amount of capital and construction as well as a suitable location. In any case, there was a limit to the size of vessel which could be accommodated by the harbour, which could only cater for vessels up to 85- 90 feet, and it had been found that vessels of this size were not so commercially successful as larger vessels. One threat to the autonomy of the family-owned wooden vessels came with the suggestion of the Town Council in answer to a request from the Fishery Board, Edinburgh; the proposed was to develop a trawling fleet of perhaps nine vessels which would render the town independent of supplies from Aberdeen and to offer drifter lay-up and repair accommodation for vessels from other ports. The first proposal, the Fishery Officer suggested, was likely to provoke much opposition from the local fishermen and from the officials of the Dundee Town Council as the Dundee trawling fleet would have to bear the competition. The second proposal was abandoned in view of the disruption which would be caused when cargo-steamers were berthing or manoeuvring. The Council's ideas for developing the fisheries were considered 'Very vague... they really had no fixed plans'.³⁰

The threat over, the fishermen continued their practice of small, family ownership of wooden motor-powered vessels, not restricted to the nuclear family but including any acceptable combination of fathers, sons, brothers, nephews, uncles, etc. For line fishing, each man provided his own lines and bait. Distribution of the money received from the sale of the catch, after deductions had been made for fuel, lubricating oil, harbour and fishing dues, seine-net repair, was as detailed below:

Share System

4 man crew	(boat generally less than 40ft overall length $\frac{1}{6}$ th to owner(s) of the Vessel $\frac{1}{6}$ th. to fishing gear $\frac{1}{6}$ th. to each of four crew members
5 Man Crew	(Boat generally more than 40ft overall length $\frac{1}{7}$ th to Owner(s) of the vessel $\frac{1}{7}$ th to fishing gear $\frac{1}{7}$ th to each of five crew members. ³¹

³⁰ SRO AF 1717/1

³¹ Arbroath Fishery Board Office, *Share Systems*, (November 1927)

The money from sales of fish was taken immediately to the skipper's house and distributed, generally weekly, but at times of hardship, more frequently, and then 'They destroy all papers in connection forthwith'³². Accordingly, successive Fishery Officers found particular difficulty in Arbroath in extracting figures of earnings from the fishermen. 'None can or will give even give an estimate of their yearly gross.'³³ However, Table 4 was constructed by the Fishery Officer in January 1924 in order to give an indication of the income and expenditure of line fishermen. The share per man allowance is included as a charge which would have to be paid if a fisherman had to employ a baiter. Generally, of course, the work was done by the female members of the family who received no separate payment for this task.

Table 4

Statement showing the results of small line fishing with Gross Earnings, Expenses and nett earnings 1923.

Arbroath fleet of 32 boats
Arrivals for the year – 5,803
Fishing area – mostly Bell Rock.

Total gross	£	27,727
Expenses of oils, commissions, dues		22,504
Boat's share for fleet	£5,223	
Upkeep of lines, boots, etc, for 139 men	£4,224	18,280
Share per man – allowance at 4/- (20p) per line for baiting	£2,085	16,195
Man's earnings for year		6,137
		44

AFBO January 1924

It should be borne in mind that this income is not total income; other forms of fishing were being undertaken concurrently, for example, flounder seine-netting and at this time, the beginnings of Danish seine-netting for flat fish, together with creel-fishing, principally for lobsters.

³² AFBO 29 January 1924

³³ AFBO 26 January 1923

Details forwarded to the Fishery Office, Edinburgh regarding the income of boats involved in small line, cod and seine-nets and creel-fishing estimated the district earnings per man at £73 for 1922. The Fishery Officer's estimate for Arbroath boats employed at various fishings was £95 per man and this higher rate per man compared with other creeks was continuously maintained.³⁴

³⁴ *AFBO* 26 January 1923.

ii The Work of the Women in connection with Line Fishing

The importance of the contribution of the women, wives, daughters, daughters-in-law, in shelling mussels and baiting lines, cannot be overstressed, particularly in the early years following World War I when line fishing occupied more than two-thirds of the men of the District at various times over the year and was the livelihood of 50%. The large increase in the number of motor-powered boats in 1919 increased the amount of bait and baiting required as these boats were more independent of weather conditions and so could set out to sea more often and travel greater distances.

Arbroath had no mussel-beds of her own and in addition to mussels brought from Montrose, the South Esk basin and Broughty Ferry at times had to seek supplies farther afield. Morecambe mussels, although more expensive, were considered to be of good quality and capable of producing good results and were used on perhaps every fifth or tenth hook. While some of the shortages were due to an actual shortage of supply, as the 1920s progressed the problem at Broughty Ferry was one of labour shortage for collection of bait, owing to preference for alternative work which would pay benefit in times of unemployment.³⁵ The Arbroath Fishermen's Association tried on several occasions to get permission through the Fishery Board in Edinburgh to obtain their own beds in the St Andrews area and thus be able to control supply, but without success. Delivery of bait in the immediate post-war period was by rail to Arbroath station, thence by horse and cart to Danger Point, for distribution by a 'chargehand' who distributed the bait to his or her clients either by barrow or in creels. Increasingly throughout the 1920s supplies were delivered by motor-wagon direct to Danger Point.

If the fisherman had no womenfolk available to shell and bait he could employ a baiter at the rate of 4/6d (22½p) per line in 1922; the bait for the line at 3/6d (17½p) brought the total cost per line to 8/- (40p).³⁶ By 1923 there was a considerable amount of dependence on outside baiters and one case was recorded whereby a fisherman, either employed at an alternative form of fishing or fishing from another port, had 'retained' his baiter at a cost of 10/- (50p) per week, so that he could be sure of her services on his return to line fishing.³⁷

The working day of the women involved began early and continued many long hours. Shelling had to be done first, beginning about 4.30 am.

³⁵ *AFBO* 23 October 1930

³⁶ *AFBO* 26 January 1923

³⁷ *AFBO* January 1924

Next, the mussels, two per hook, set 24" apart, had to be attached to the line, which in the case of Arbroath was rather longer than the standard line, having 1,300 to 1,400 hooks. Times varied with the experience of the women and with the quality of the bait but, as a guide, the following table shows the time which might be involved. Usually, of course, more than one person was involved; children learned to shell at an early age and were also often sent to collect limpets off the rocks to supplement the mussel supply.

Break-up of time involved in preparation of lines

Shelling of approx. 2,600/2,800 mussels (2 per hook) approx.	5 hours
Baiting (2 per hook)	approx 4 hours
Setting line over	1 hour

M Coutts, Montrose, letter received 1977 - (ex-fisherman's daughter)

Setting the line over involved layering the lines over 'bent' (dune grass) so that the line would flow off the scull, a flat basket, without tangling. The scull was transported to the boats by barrow. Figure 5 shows the women at Auchmithie at the turn of the century shelling mussels with the sculls beside them. Figure 6 shows the scull being taken down to the boat.

The pressure on local supplies of bait and the demanding nature of the work for the women was part of the reason for exploring alternative methods of fishing in the 1920s but line fishing continued to play a large part in alternation with other methods throughout the following years.



Fig. 5. Shelling Mussels

iii Fishing Methods

1) Small Line:

Season, weather conditions, supply of bait and baiters all played their part in determining the type of fishing carried on at a particular time. Season provides no sharp demarcation; line fishing although more generally carried on in autumn and winter is followed throughout most of the year; similarly seine-netting which is usually carried on between April and October can be extended, providing weather conditions are suitable. The Fishery Officer in October 1931 detailed the factors which govern the setting out times of the boats and their return to harbour in winter and in summer:

‘In the winter months when employed at small line fishing in stream tides, fishermen endeavour to leave the harbour for the fishing grounds about two hours before low water. By doing so² they are able to shoot and haul their lines in the slack of the tide. In strong flood tides, hauling operations, owing to the hooks being apt to catch on rocks, etc., on the bottom, are often attended with great difficulties, damage to gear, and loss of time. Fishermen as far as possible usually endeavour to avoid these conditions and thus leave harbour early or late so as to be able to work their lines when the tide is slack.

In the summer months the tides are not regarded to the same extent. Fishermen in these months usually endeavour to leave the harbour about dawn of day and to return from 10.00 to 11.00 am with their catches, so as to be in time for the first sales, when highest prices can usually be obtained for the fish they have to dispose of, as buyers are anxious to secure their supplies early so as to get them prepared as finnan, smokies, fillets, or in other cases, in order that they may be able to despatch the fresh fish by certain trains.

The fishermen usually endeavour to work so as to suit the needs of the buyers and the success of their fishing operation greatly depends on whether they have been able to meet their needs or not.’³⁸

Figure 7, shows the lines being hauled in, by hand, and the fish removed from the hooks.

³⁸ *AFBO* 10 October 1931

Fig. 6. Scull being taken to Boat



Fig. 7. Lines being taken in

The time spent on board after reaching the particular ground can **be** divided *very approximately* into half an hour shooting lines, one hour tiding, four hours hauling and three hours clearing lines, the last normally done on the homeward journey. All operations, of course, depend on weather conditions and sudden change in weather on arrival at the grounds can force the men to return to port without having shot their lines. In such instances the work of the baiter is wasted and will have to be redone before another visit can be made.

2) Seine-Net Fishing:

Increasingly in the 1920s the fishermen turned to seine-net fishing. For many it became their sole livelihood, especially those for whom the difficulties of finding women to bait lines had been greatest. Motor- power introduced at the end of the first decade of the century had given increased distance to the boats and as the bays of Carnoustie and St Andrews were opened to permit this form of fishing after 1912, the Arbroath boats fished there regularly. During the longest days of summer the men pursued this method from ten to fourteen hours, averaging one drag per hour.³⁹ The fish caught by seine-net were largely plaice, but dabs, witches, catfish and skate were also landed for sale at the afternoon market, depending on tided and other considerations, usually about 4.00 pm.

3) Creel Fishing:

Increasing attention was paid to the catching of shellfish, particularly lobster, from 1921 onwards. Although some lobster-fishing was done from sail boats, the major part was done in conjunction with the line-fishing boats which worked a fleet of creels set around the Bell Rock.

In a good spell, the boats could pick up creels twice a day.

The importance of a diversification of methods helped to cut periods of unemployment to a minimum, combined fishings helped to raise the income of the fishermen and the experience gained in one method was of tremendous assistance in locating fish for the alternative methods over the years.

³⁹ *AFBO* January 1927

iv The Role of Women in Smoking Fish and Retailing their Produce

‘Every day an army of women, mostly the wives and daughters of the fishermen leave Arbroath by train, bus and on foot and hawk their fish over a wide area in the Midlands of Scotland.’⁴⁰

Unfortunately, at no time did any Fishery Board Officer attempt to ascertain the number of women actually involved but comments were frequently made that the work of smoking closed (smokies) and open (finnan) haddocks was carried on in almost every back yard. Figure 8 shows the haddocks tied in twos ready for smoking in a typical back yard which performed the double purpose of being a retail outlet as well as processing unit. On the other hand, the amount of haddock taken by trawl, and imported annually from Aberdeen to supplement local supplies, gives an indication of the enormous scale of their operations. Figures are not available for all years but selected years are noted below:

Table 5

Quantities of Haddock Purchased from Aberdeen by Arbroath Women for Curing

1920	‘More than 2,000 tons
1922	1,200 tons
1923	1,250 tons + 61 tons from Grimsby
1924	1,480 tons + 70 tons produced locally
1929	1,480 tons
1930	1,450 tons

AFBO Annual Reports for years as detailed

Orders were placed with the purchasing agents for haddock the day before required and five or six buyers travelled on the early morning train to Aberdeen daily to obtain supplies. The fish were delivered to Arbroath at 2 pm the same day and distributed direct to the houses, often while the housewives were still out ‘hawking’ their fish smoked the day before.

Commander Fisher of the Fishery Board, Edinburgh reported that in 1925 the smoking was almost entirely done by the wives of fishermen; no firms carried out smoking on any scale.⁴¹ The work of smoking and selling in many cases had to be carried on in conjunction with the work in preparation of lines and this involved much dovetailing of time and allocation of tasks to members of the family. On the other hand, the smoking and hawking of haddock was often carried on by the widows of fishermen.

⁴⁰ *AFBO Curing and Exporting Report for 1929*, February 1930

⁴¹ *SRO AF62/1717/1*

Fig. 8. Smoking Haddocks, c1930s



Fig. 9. Ripp and Hand Creel

As little as half or third share of a box (one box - six stones) could be purchased so that lack of capital was little hindrance.

Because of the perishable nature of the product and the dependence upon rail transport to take the women to their destinations, a fairly strict routine of preparation had to be established. The creels (arm baskets) and the rippes (worn to the back with a canvas strap across the chest) were prepared the night before, the various kinds of fish being kept separate, i.e. white fish, finns, smokies. In season, some herring, generally supplied by Broughty Ferry boats, would be carried and also an extra hand creel for shell-fish. It has been estimated that the ripp would probably hold some 50/60lbs of fish. Figure 9 shows the ripp being worn and the arm creel. Fortunately, a carter uplifted the filled creels to the station and, six days a week, regardless of weather, the fishwives travelled by train to Dundee, Perth, Forfar, taking trams and buses to the outlying districts of Angus, Fife and Perthshire. Each fishwife had her own route and her customers repaid her regular visits with loyalty as they would buy fish from no-one else. Some stayed overnight on Friday with a customer and had another stock of fish sent on from Arbroath by train for a Saturday round. Both girls and boys accompanied their mothers on these long walks from about ten years of age and by fourteen a daughter was able to cover the round on her own. The problem of having young children was no deterrent as they would be looked after by the women who remained at home shelling and baiting. Economic conditions conditioned her trade; towards the end of the six-monthly period after payment of their wages, rural labourers' incomes were unable to buy fish regularly and the fishwife would have a walk to the nearest town in an attempt to sell off surplus stocks. In Dundee too, the vicissitudes of the jute industry made an increasing impact on the purchasing power of the women workers as unemployment soared especially in the 1930s.

Conclusion

Confirmation of the success of the community's endeavours to retain its identity as a distinct community remaining in control of its industry was given in the Annual Fishery Officer's report of 1927.

'To a greater extent than any other of the East Coast ports, Arbroath fishermen's sons were finding employment at fishing. Of the fishermen belonging to the creek, more than 50 were in the 13-25 age group.'⁴²

This infusion of young men was in contrast to Johnshaven where the *Press and Journal* of March 1929 reported that 'No crew included a man less than 30 years

⁴² *AFBO Annual Report, 1927*

of age'. This situation could not have been achieved without the complete co-operation of the family unit, especially the two roles of the women, preparing the lines and selling fish on their own account. Line-caught fish commanded high prices and the income from the selling of 'smokies' and 'finnans' added to the family income in difficult times and provided investment funds when needed.

To ensure the continuity of family ownership and control a harmonious marriage was required and, consequently, young men did not marry outside the confines of the fishing community except within other fishing communities. No 'outsider' was likely to be prepared to accept the rigours of life as a fisherman's wife and local social pressures were such that any man marrying outside the community was likely to find himself without a home or prospect of employment. The traditional ceremonies attached to weddings, although much modified from extremes of nineteenth century practices, reinforced the sense of community within and stressed the separateness from the town population as a whole.

CHAPTER 3

Community Co-operation

‘Scottish fishermen have never shown any special desire to form co-operative organisations... Fishermen in general are very individualistic in their outlook, also decidedly conservative in their ideas and great difficulty has and will be experienced in approaching them to depart from the normal practice of selecting their own particular agents and business firms with whom they desire to have dealings.’⁴³

This statement was part of a letter dated 1942, some 16 years after the formation of the Arbroath Fishermen’s Association. Although the foundation of the A.F.A. was passed over, unrecorded in any of the local daily or weekly newspapers of the town and district, its formation proved to be of vital importance to both community and town. Following the threat of the fish salesmen to increase their charges for services to the fishermen, the Association was formed to ‘carry on the industries, businesses and trades of fish-salesmen, fish-merchants, oil-merchants, boat-chandlers and fishing-gear merchants’.⁴⁴ The aim was to eliminate middle men in as many spheres as possible and thereby cut down on running costs.

Arbroath had two advantages which helped in the operation and success of the venture. Firstly, the nature of the fishing carried on, line, seine-net and creel, meant that the fishermen were working from local grounds in most cases, returning to port daily, so that regular advantage could be taken of the facilities available. Secondly, the town, situated on the main east coast railway line from Aberdeen to the south, was well placed to receive supplies, which were then easily distributed within the compact area of the community, and to effect speedy distribution after landing.

The first offices of the A.F.A. were at 33 John Street, later moving to its present location in Marketgate. The rules of the Association were drawn up on the lines of Friendly Society Model Rules and registered as such in July 1926. Each member was to hold at least one share and no more than ten shares. A Fishery Board report stated that, at the end of 1929, most members held an equal number of shares and that, at that time, there was about £8 standing to the credit of each member.

⁴³ *SRO AF 62/1717/1*

⁴⁴ *SRO AF 62/603*

Table 6 shows the membership figures from the commencement in July 1926.

Year	Membership of A.F.A. 1926 to end 1929 ⁴⁵		
	Membership	Total No. Men/Boys involved in Fishing at Arbroath	% Membership
July 1926 to Dec. 1926	132	155	85%
1927	128	154	83%
1928	135	154	87%
1929	143	154	92%

The high initial membership shows the interest and determination of the fishermen involved. Edinburgh Fishery Board officials frequently urged other communities to follow the example of Arbroath but as late as World War II no advance had been made in this direction. The success of the venture can be seen in Table 7. The accompanying Fishery Board Report, from which the table was taken, attributes the check in 1929 to the previous steady increase in annual sales to a combination of considerable spells of bad weather and to a general scarcity of fish.

The Association's venture into acting as fish-merchants, building up connections direct with customers in the industrial centres of Scotland and England, although initially successful was later discontinued. In so far as benefit to the individual fishermen was concerned, for the purchase of such items as general ship-chandlery, ropes, nets, twines, lines and fuel oil, a *Glasgow Herald* reporter claimed that the members were able to purchase their requirements at some 50% less than normal.⁴⁶ The Association arranged for boat repair for members at a boat-building yard and slipway leased by the Association from the Harbour. As might be expected, the Association met with some opposition from salesmen, wholesale fish-merchants, ship-chandlers, etc. who feared that the spread and success of the idea would damage their business. Nevertheless, the Association survived and proved to play a very important role for the community. Credit for its success was given to 'the local fishermen who are of an energetic and efficient type. They are themselves the boatowners (the

⁴⁵ SRO AF 62/1717/1, AFBO 'Means of Capture'.

⁴⁶ *Glasgow Herald*, 9 August 1929.

Association does not own vessels)'.⁴⁷ The same report gives credit also to the fact that 'the Association seems to be particularly fortunate in their management'. A report of 1942 concerning the Association's activities suggested that in its latter years management had become less efficient, with arguments concerning slackness creeping in. Nevertheless, it went on to say the Association was 'very substantially founded with the members solidly behind the movement' and it had withstood its troubles.⁴⁸

⁴⁷ *SRO AF 62/603*

⁴⁸ *SRO AF 62/1717/1.*

Table 7 Arbroath Fishermen's Association 1926 - 1929 inclusive

Year	Membership at end year	Sales	Profit	Share Capital	Balance Profit at end	Total Assets end year	Trading Stocks (included in Total Assets)	Land, Bldgs, Fixtures (included in Total Assets)
1926 part to end Dec.	132	£16,409	£208	£264	£208	£1,368	£198	£363
1927	128	£39,213	£334	£656	£476	£1,982	£430	£441
1928	135	£48,371*	£135	£886	£345	£1,815	£746	£370
1929	143	£37,454**	£131	£1,091	£146	£2,302	£950	£597

*Sales £48,371 - Fish Sales £39,441
Oil 3,787
Fishing Gear 5,143
& Tackle

**Sales £37,454 - Fish Sales £30,314
Oil 4,718
Fishing Gear 2,422
& Tackle

Source:- SRO AF 62/603, 30 May 1935

CHAPTER 4

Diversification

i Capture

At the end of the 1920s the *Glasgow Herald*, seeking the reasons behind the survival of a few fishing-ports in the midst of general decline in the Fishing communities in the North-East came to the conclusion that any success was the result of:

‘Sheer enterprise, based on early recognition that fishing is a full time job requiring undivided devotion for its efficient practice.’⁴⁹

The early years of the 1920s for Arbroath were years of experimentation, building on experience gained from technological adaptations to boats, methods of capture, patterns of operation, accompanied by such natural misfortunes as periodic scarcity of fish and long spells of stormy weather. From the mid 1920s to the end of the decade was more a period of consolidation, when the earlier technical and operational difficulties had been worked out and when the benefits of the Association in controlling costs were beginning to be noticeable. The great upsurge in line fishing following the end of World War I was already, by 1920, being halted by the effect of the increased catching power; lighter catches were being taken and lower prices obtained. In addition, expenditure had increased considerably for oil, gear, bait and baiting. Flounder seine-net fishing introduced in limited areas from 1917, and generally followed by those who experienced difficulty in having lines baited, had afforded occasional relief but had not provided the results which had, at one time, been confidently expected.

Intensive fishing on the same banks for 40-50 weeks of the year had depleted the stocks and it was felt that only a rest from repeated exploitation would lead to their revival. However, if a resumption of herring fishing was thought of as providing a respite, its operation was prevented by the prevalent market and conditions and, principally, by the prohibitive cost of refitting the drifters after years of neglect.

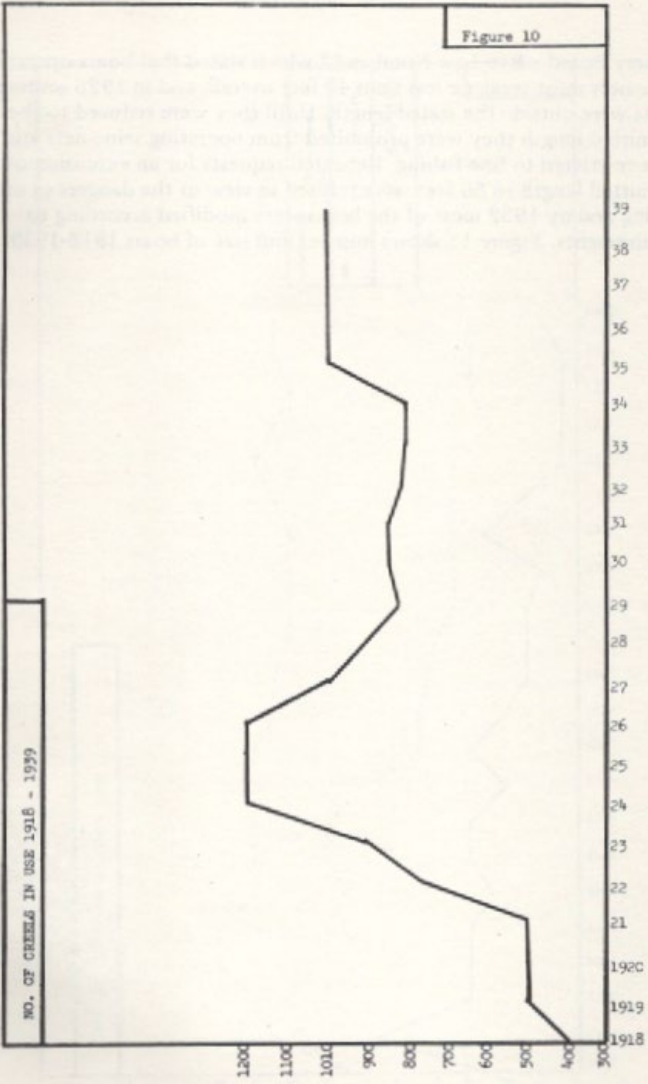
1921 brought about a slight improvement for a time with the opening of St Andrews Bay and Carnoustie Bay in February to flounder seine-net fishing, but by the end of the year the results had once again disappointed earlier hopes of a major breakthrough. The next two years brought little

⁴⁹ *Glasgow Herald*, 6 August 1928.

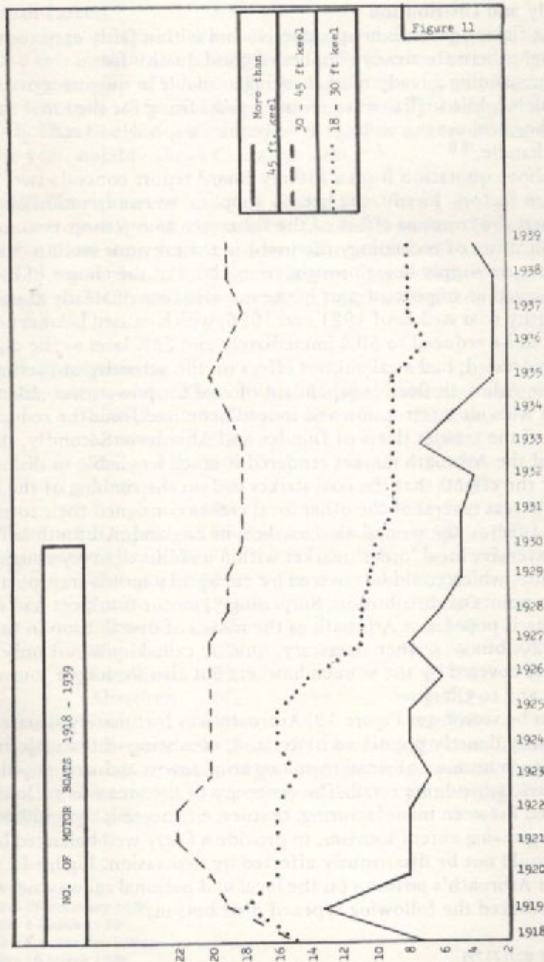
change; stormy weather and continuing scarcity of fish kept catches low, although material and labour costs gradually began to fall. Nevertheless, by the operation of line and seine-net, and the increased attention paid to lobster-fishing (see figure 10), the pattern of diversification was beginning to be established, which was to provide a solid base for the remainder of the 1920s and 1930s. There was no great defection from fishing to industry in Arbroath as there was in other neighbouring creeks and from the end of 1923 the energies of the fishermen were devoted to widening their range of operations and perfecting the alternation of the different methods, line, net and creel, to take the best advantage of weather and supply conditions.

The introduction of the Danish seine-net and the mechanical winch in 1924 marked the beginnings of an upward trend, although it was the end of 1925 before the check to the decline which had set in from 1921 was noticeable. The usual method of anchoring the boat as in flounder seine-net fishing was at first tried and then later dispensed with; the result was an increase in the speed of operations. Efficiency was greatly improved as the net could be hauled up quickly and kept closer, giving less opportunity for the fish to escape, labour was saved and the boats were able to fish in the much deeper waters off Tod Head and Red Head (see figure 1), thus securing greater catches than would have been possible without the winch. Immediately the success of the winch was established, the number of boats employing it increased rapidly and by the end of the first year only four boats were without mechanical power. Attempts to introduce the Danish seine-net for haddock fishing as well as plaice were made in 1925, at first with only spasmodic success, but as the decade progressed the haddock seine-net came into much wider use, relieving some of the strain of the shore work normally associated with line haddock fishing.

The knowledge gained from pursuing each of the different methods of fishing benefited the others and the trend towards the larger, multipurpose boat grew which would allow pursuit of all methods, according to weather, season and availability. The idea of the men was to have one boat which could be used for drift-netting, (which had seen something of a revival for the Arbroath fishermen in 1925 in the Firth of Forth and off Ireland), line or seine-net fishing, and on which there would be plenty of room on deck for the necessary gear as well as comfortable accommodation for the crew, whenever they were fishing away from home.



However, this trend towards larger boats clashed with the Fishery Board's By-Law Number 33 which stated that boats operating seine-nets must measure less than 40 feet overall, and in 1926 seventeen boats were outside the stated length. Until they were reduced to the permitted length they were prohibited from operating seine-nets and were restricted to line fishing. Repeated requests for an extension of the permitted length to 50 feet were refused in view of the dangers of over-fishing and by 1932 most of the boats were modified according to requirements. Figure 11 shows number and size of boats 1918-1939.



ii Supply and Distribution

‘The fishing grounds are productive and within fairly easy reach; there are steady supplies of good quality fish, commanding a ready market, being available in quantities which, while sufficient to ensure a good living for the fishermen, are not so large as to require a specialised staff to handle.’⁵⁰

The above quotation from a Fishery Board report conceals two ability and the constant effort of the fishermen to tap these resources. The application of technology discussed in the previous section ensured the maximum supply being brought to market but the choice of motor- power played an important part in the maintenance of steady supplies. The lengthy coal strikes of 1921 and 1926, which caused bunker supplies to be reduced to 50% immediately and 25% later as the disputes progressed, had a calamitous effect on the activities of the trawler fleet. The Arbroath fleet, independent of coal for power, was able to carry on without interruption and indeed benefited from the reduced activity of the trawler fleets of Dundee and Aberdeen. Secondly, the nature of the Arbroath market rendered it much less liable to dislocation by the effects that the coal strikes had on the running of the railways. Whereas several of the other local creeks consigned their toted supply of fish to the commission markets in England, Arbroath had a very extensive local ‘order’ market within a radius of - very roughly - forty miles, which could be covered by emergency motor-transport to the main points of distribution. Surprisingly, motor-transport had not proved itself popular in Arbroath as the means of distribution in the early 1920s but was, when necessary, quickly called upon not only for the routes covered by the women hawkers but also for longer journeys to Perth and to Glasgow.

As can be seen from Figure 12, Arbroath was fortunately situated with a fairly densely populated hinterland, consisting of the major city of Dundee, a number of small manufacturing towns and well-populated rural districts for direct retail. The economy of the area was sufficiently diversified between manufacturing, textiles, engineering, agriculture, and to a growing extent tourism, to provide a fairly well-balanced base which would not be disastrously affected by depression. Figure 12 also indicates Arbroath’s position on the local and national railway network which favoured the following types of distribution:

⁵⁰ SRO AF 62/1717/1

(1) Small Parcels

In response to a request for details regarding the amount of business done by this method the local Office details were unfortunately vague. 'A large number of parcels of fish, chiefly smokies and finnans are sent by post from Arbroath and in that way they, at the Post Office have to deal with a very large number at certain times of the year, notably about Christmas time.'⁵¹

(2) Small Consignments

These cover quantities of about 1 cwt. A similar enquiry brought the reply that these were despatched by rail to stations all over Britain.

'In 1929, upwards of 10,000 parcels were despatched from Arbroath, upwards of 710 from Montrose and a large number from Dundee and Gourdon.'⁵²

(3) Bulk Consignments

The main centres of distribution in 1924 by this method were:⁵³

Liverpool	38%	Cwt.	6,650
London	22%		3,850
Glasgow	20%		3,500
Aberdeen	10%		1,750
	100%		15,700

The distribution appears to have altered, both geographically and in share total by 1930.⁵⁴

Liverpool	35%	Cwt.	10,010
Perth	12%		3,360
Glasgow	10%		2,960
Wigan	8%		2,440
London	7%		2,047
Aberdeen	6%		1,752
	78%		22,556

Pursuit of such

diverse markets and means of distribution, following upon the regularity of supply of good quality fresh and smoked fish by the most efficient means of capture ensured the 'good living' described by the Fishery Officer.

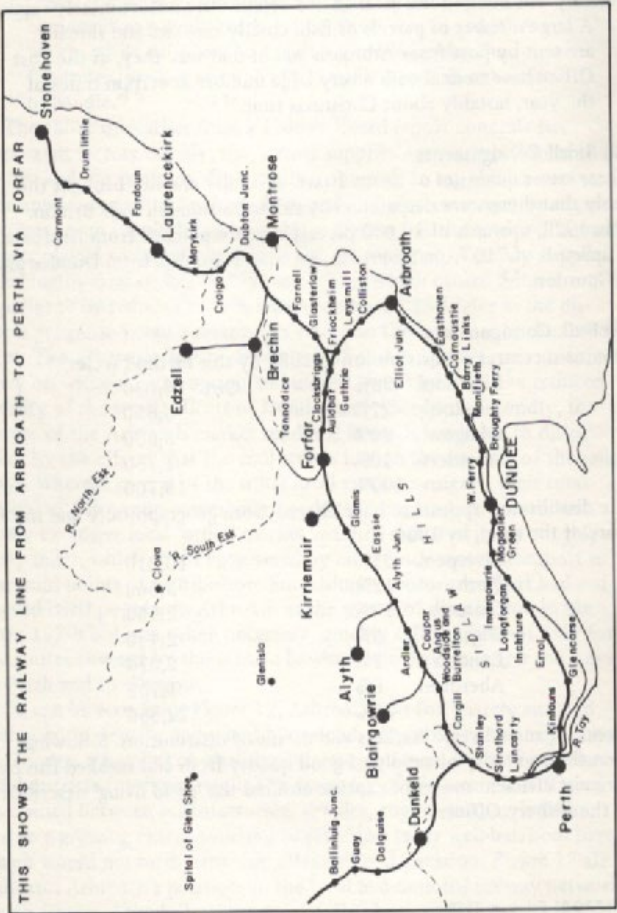
⁵¹ *AFBO* 25 February 1930

⁵² *AFBO* 8 March 1930

⁵³ *AFBO* 6 December 1924

⁵⁴ *AFBO* 10 March 1930

Fig. 12



CONCLUSION

Michael Graham in *The Fish Gate* said of the inter-war period and its difficulties: 'Between the wars we lived in a world that seemed entirely disjointed. We could not understand the causes of our distress; should we, we wondered, plunge forward to make a brave new world, or should we rather try to return to the life of 1913, to which we look back wistfully. Posterity may blame us - but we did realise there was an evil to be arrested.'⁵⁵

Arbroath in the 1920s looked forward, experimented, adapted and at the same time held on to its traditional family and community values. Very little changed in the process of the capture, supply and distribution of fish in the 1930s. Family and community remained the motivating forces but the geographical segregation began to show the first tiny cracks which were to widen slowly over the following decades. The growth of council-housing within and outside the traditional fishing community allowed the movement of families into and out of the community. Education provided the other wedge as the local community school closed and the children spread out into the wider town area schools. Today, there is much closer economic and social interchange - but the separate sense of identity remains.

⁵⁵ Michael Graham *The Fish Gate* (1943)

BRUCE WALKER

SMA'LINE FISHING AS PRACTISED FROM ARBROATH AND GOURDON IN THE 1950s AND 1970s

Arbroath is a small, formerly important, royal burgh on the east coast of Scotland situated to the north of the Firth of Tay in the parish of Arbroath and St Vigeans, Angus. The town now supports a thriving fishing community, established circa 1830 as fishing families were persuaded to leave the old fishing community of Auchmithie, in the same parish, and move to Arbroath to utilise the superior harbour facilities.¹ Gourdon was a traditional fishing hamlet, in the parish of Bervie, Kincardineshire, which developed into a small port in the early nineteenth century² but retained and developed its fishing connections. In both of these communities the use of sma'lines continued long after their demise in other Scottish fishing ports.

The following notes, sketches and diagrams are the result of a survey carried out in Gourdon during the winter of 1974-1975³ and the formalising of various casual observations made in Arbroath in the early 1950s, particularly 1953-1954 when the Author had direct connections with the Arbroath fishing community.⁴ It is not intended that this paper provide a complete history of the use of sma'lines in either community but aims to record the techniques and methods of using these lines as practised by a small number of fishermen in each of these communities at these late dates.

Definition of Sma'lines

A von Brandt classifies the various forms of fishing practised throughout the world.⁵ Using this classification, the sma'line fishing carried out from Arbroath and Gourdon can be defined as a form of 'set-line fishing' known as 'bottom-long-line-fishing'.

The terms 'sma'line', 'smallin' or 'small-line' distinguishes this form of long-line fishing from the 'gretlin', 'gertlin', 'gritlin' or 'great-line'. The sma'line was used to catch comparatively small fish such as haddock, whiting and flounders mainly on fishing grounds close to the dhore,⁶ whereas the gretlin was used to catch larger or 'great' fish such cod, ling, skate and halibut, found in much deeper water.⁷ It must be emphasised that the adjectives 'small' and 'great' refer to the size of fish caught on these lines and not to the length of the line or to the number of hooks employed.

The Sma'line

Traditionally sma'lines were used by the-majority of Scottish fishermen for inshore fishing during the winter months. The rest of the year was spent gretlin fishing or drift-netting for herring. Many of the fishermen had two boats, a large 'drifter' for the herring and gretlin fishing and a smaller 'Yawl' or 'liner' for sma'line fishing. This pattern, established in the nineteenth century, gradually changed with the introduction of ring-netting for herring and seine-netting for white fish. By the 1950s most of the boats in Arbroath and Gourdon were seine-netting throughout the year, the boats under consideration in this paper being the exceptions.

The sma'line (Figure 13) comprised a continuous cotton, hemp or manilla ground line or 'line-back' (Arbroath) with a series of short secondary lines spliced into it at regular intervals along its entire length. These secondary lines were known as 'snids' or 'sneds'⁸ each terminating at the detached end in a 'tippet' to which was attached a single hook. The exact spacing of the snids varied from crew to crew, being based on the length of ground line that could be comfortably pulled with two grips of the line, that is, from gripping the top of one snid to gripping the top of the next with only one intermediate grip. This results in a spacing of approximately one hundred and twenty-five centimetres between snids.

In Gourdon every second snid had a 'bailie' - a small lead ball - spliced into the snid against the ground line to help keep the line on the sea bed when in use. The Arbroath sma'line did not include this feature. Each snid had a small spliced loop at the loose end into which was tied the 'tippet' or 'tippen' - a short horse-hair line forming the connection between the snid and the hook.⁹

The hooks used had straight shanks without eyes or flattened ends and each was 'whipped' or 'beetin' to the loose end of the tippet using waxed or 'beetin' thread.¹⁰⁰ The number of hooks and therefore the length of the line varied from one community to the next even within a comparatively short distance. The longest recorded sma'lines in Scotland were those used in Arbroath where the number of hooks on a single line varied from twelve hundred to fourteen hundred, the larger number being the norm before World War Two but reducing afterwards to cut down the work given to the baiters. A small timber long-line scull (Figure 14) recently recorded in Portsoy, Banffshire, was used for a half- line of two hundred and fifty hooks, each fisherman taking two of these half-lines to sea each day.¹¹ In Gourdon the traditional line had between five hundred and six hundred hooks but after the Arbroath men stopped line fishing much of the gear was

Fig. 13. Portion of sma'line with details of individual snids of the Arbroath and Gourdon types.

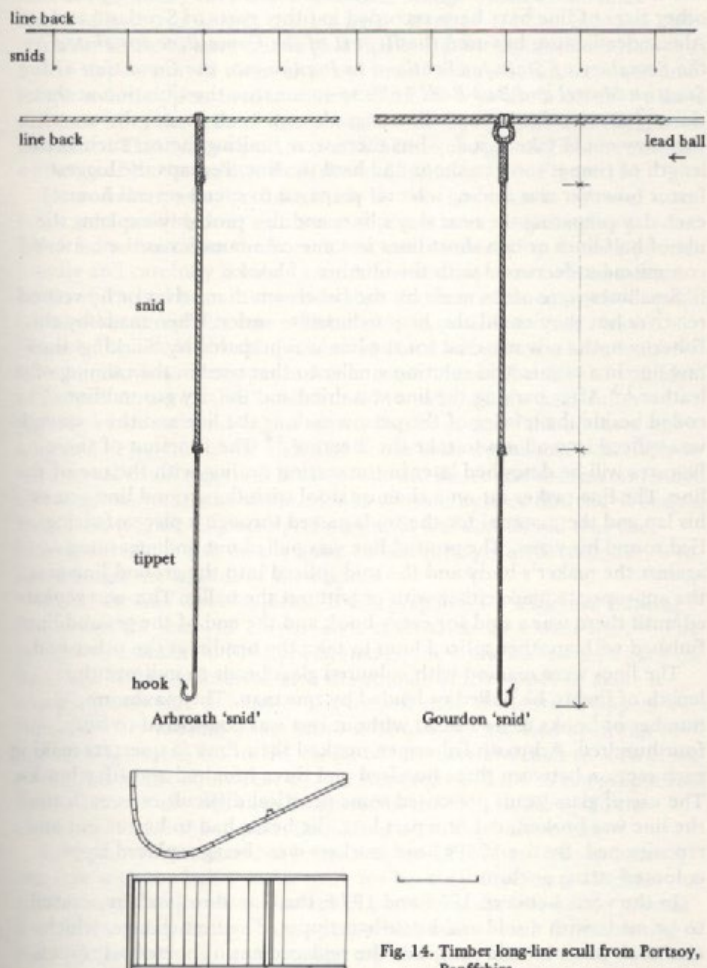


Fig. 14. Timber long-line scull from Portsoy, Banffshire.

sold to Gourdon fishermen and the twelve-hundred-hook line was introduced at that date. Many other sizes of line have been recorded in other parts of Scotland and Alexander Fenton has used the *Report of the Committee appointed by the Secretary of State for Scotland to Inquire into the Condition of the Scottish Mussel and Bait Beds* 1889 to summarise the situation at that time.¹² Obviously the more line a boat's crew took to sea, the more fish they could take in a day but there were limiting factors such as the length of time it took to shoot and haul the line. Perhaps the biggest factor however was finding a baiter prepared to spend several hours each day preparing the next day's lines and this probably explains the use of half-lines or two short lines in some communities as the baiter's commitment decreased with the number of hooks.

Sma'lines were often made by the fishermen themselves or by retired relatives but they could also be purchased to order. When made by the fishermen, the raw material for the line was prepared by 'barking' the raw line in a tannic acid solution similar to that used in the tanning of leather.¹³ After barking the line was dried and the dry ground-line coiled beside the left leg of the person making the line and the free end was spliced into a loop to take the 'bendin'.¹⁴ The function of these features will be described later in the section dealing with the use of the line. The line maker sat on a chair or stool with the ground line across his lap and the material for the snids passed through a piece of string tied round his waist. The ground line was pulled out and measured against the maker's body and the snid spliced into the ground line at the appropriate place either with or without the bailie. This was repeated until there was a snid for every hook and the end of the ground line finished with another spliced loop to take the bendin at the other end.

The lines were marked with coloured glass beads to indicate the length of line to be pulled or hauled by one man. The maximum number of hooks to be hauled without rest was considered to be four hundred. Arbroath fishermen marked their lines in quarters making each section between three hundred and three hundred and fifty hooks. The use of glass beads presented some practical difficulties as each time the line was broken, cut or a part lost, the beads had to be cut out and repositioned. By the 1950s bead markers were being replaced by coloured string or thread.

In the years between 1954 and 1974, the Gourdon sma'lines ceased to be made with a snid and horse-hair tippet. The first change, which also took place in Arbroath, was the replacement of horse-hair tippets with stranded-nylon tippets. Tradition being strong amongst fishermen, they insisted on black nylon strands at first as they looked like horsehair but

gradually they began to accept orange nylon of the same stranded nylon as used in making nets. Shortage of horse-hair and high costs are likely to have caused this first break with tradition but as the nylon tippets proved themselves the use of snids was discontinued and longer nylon tippets used in their place. This kept the hook at the same distance from the ground line but made the line simpler and cheaper to construct. The nylon tippet was attached to the ground line by means of two half-hitches rather than the traditional splice. (Figure 15)

Horse-hair tippets had been made by the fishermen in a similar way to farmers making their own straw rope but on a much smaller scale. Black horse-hair from the horse's tail was purchased by the one-pound bundle and carefully combed out. A few strands were twisted using a hook which had been inserted through the base of an empty boot-polish tin or other receptacle into which had been poured molten lead. (Figure 16) The lead held the hook in place and gave the base weight thereby allowing the tippet maker to work alone. The twisted strands of horse-hair were halved and allowed to twist against each other making a hair rope. After the tippets had been made the hooks were whipped or beetin to one end. The hooks used were chosen carefully as hard metal could snap and break off at the shank and soft metal tended to straighten under the strain. Hooks without eyes or flattened ends to the shank (Figure 17) were preferred as it was considered that the movement of the fish on the hook caused the eyes or flattened ends to cut through the strands of the tippet.

When the line was completed it was prepared for a second 'barking'. To do this the line was 'cloved' on a 'clove-stick' or 'clow-stick'.¹⁵ The hooks were 'stuck' in the tippets, that is, the hook was twisted back on itself and the barb inserted into the strands of the tippet to make it comparatively safe to handle. The looped ends of the stuck tippets were threaded over the end of the clove-stick and the line tied in strings or hanks. (Figure 18) Up to five hanks of line were attached to each clove-stick, that is, the equivalent of four hundred hooks. The line, supported by the clove-stick, was then immersed in the bark boiler up to the connection with the tippets, then hung up to dry before use.

Each fisherman needed at least three working lines - one to take to one with the baiter and a spare for barking. Barking took place regularly, not so much as a means of preserving the line but to prevent line from becoming too slippery which could result in its running through the hauler's hands causing rope burns or cuts. Nylon ground lines were introduced into Gourdon during the summer of 1974 thereby eliminating the need for barking as a preservative.

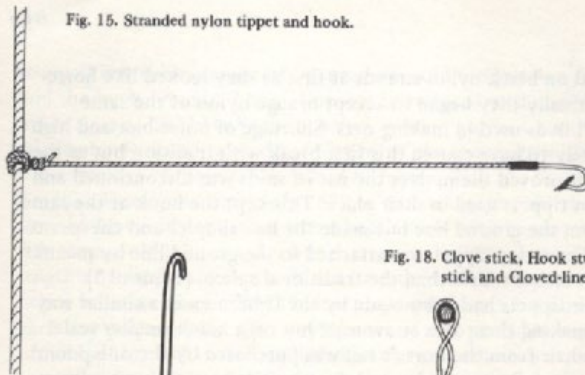


Fig. 15. Stranded nylon tippet and hook.

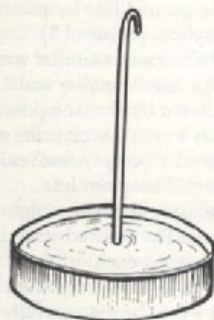


Fig. 16. Tippen-stane.

Fig. 18. Clove stick, Hook stuck round clove stick and Cloved-line.

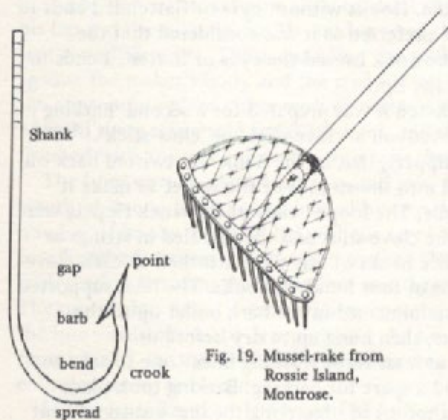
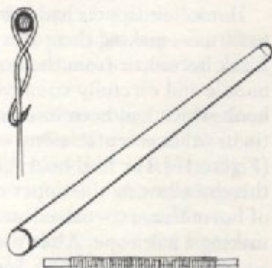


Fig. 17. Sma'line hook.

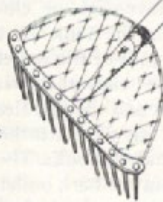
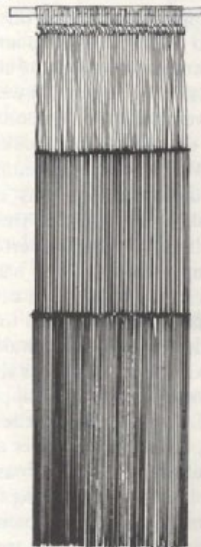


Fig. 19. Mussel-rake from
Rossie Island,
Montrose.



Lines took a considerable amount of punishment particularly when working on rocky sea-beds and because of this they seldom lasted more than a year. When they were eventually discarded all useful material was salvaged and old tippets were sold to the ragman for teasing as upholstery stuffing. Waste was never encouraged in the fishing community but when a line began to give trouble it was quickly discarded as broken lines created problems for the whole crew and not simply for the owner of the line.

Bait

The bait used for sma'lines in both of these communities was the common mussel - *Mytilus Edulis* - brought mainly from Montrose, Angus or Newport, Fife. Occasionally mussels had to be brought from further afield and Musselburgh, East Lothian and Morcambe Bay, Lancashire both supplied this area after the introduction of the railways. Older Gourdon fishermen talk, of shipments of mussels brought from Holland in special tanks and in times of scarcity the Gourdon fishermen often collected their own mussels from Newburgh, Aberdeenshire, Alexander Fenton summarises other traditional sources of bait for sma'lines¹⁶ and used material collected during the Gourdon survey¹⁷ to describe present day practices.

Although better bait was often obtainable at a distance, daily supplies of fresh mussels were preferred as this reduced the amount of work required from the baiters. Joseph Johnston and Sons Ltd, Salmon fishermen, Montrose, organised the mussel trade in the Montrose Basin in the 1850s and still provide a fresh bait service. Johnstons set out new mussel beds in the Montrose Basin and have farmed these continuously since the 1850s and this mussel fishing is probably the most successful attempt at mussel farming ever carried out in Scotland.¹⁸ When first established the mussel scaulps had to be seeded each year with mussels brought from the River Tay and this practice continued throughout the period of intense usage of the beds but with the small number of fishermen being supplied today, re-seeding is no longer necessary.¹⁹

In addition to establishing a mussel fishery, Joseph Johnston set up a delivery service to supply their customers with fresh mussels daily. Orders were placed with the Gourdon Fishermen's Association, William Street, Gourdon before four o'clock on the afternoon prior to the required delivery. The Fishermen's Association clerks telephoned the supplier stating the number of bags required at each of the predetermined collection points within the town and Johnston's men made the appropriate delivery.

Individual fishermen or their baiters were responsible for collecting their own order from the collection point and the cost of the mussels was deducted from the sale price of the fish which was also handled by the same Association. The average daily order for mussels in Gourdon during 1974 was between fifty and sixty bags, the largest single-day order that year being for eighty bags.²⁰

The mussels were gathered from the scaulps by Johnston's men working from salmon cobbles. The coble was rowed over the bed and the mussels raked up using a heavy curved-toothed long-handled rake with a bag net attached to the spine of the rake and to a curved metel brace. (Figure 19) The handles of these rakes could be up to six metres long thereby allowing the mussels to be collected in semi-deep water. The rake dislodged the mussels and these were caught in the bag net then brought to the surface and lifted into the coble. The raking process helped to spread the sculp and prevented the mussels building up in thick clusters thereby encouraging faster growth. (Figure 20) The 'rough mussels' as they were called before being removed from their shell were then bagged and distributed as described above.²¹ Fenton makes some direct comparisons between the tonnage of mussels used and the tonnage of fish caught²² but this tends to be a little misleading as the mussel weight included the weight of the shell and the water contained within the shell and round the 'meat' of the mussel: a much higher proportion of the mussel weight was discarded than the guts, head, bones and skin of the fish caught. A more interesting statistic would be to compare the weight of food used as bait against the weight of food provided by the fish caught.

Traditionally mussels were delivered to the fishermen in baskets and one of the last firms to use this method of distribution was Mr McPhilips, Newport-on-Tay, Fife. McPhilips delivered baskets of mussels for both Arbroath and Gourdon fishermen to the quayside at Broughty Ferry, Angus to be taken by a carrier to the railway station for dispatch to Arbroath or Gourdon or more recently to be collected by the respective Fishermen's Association lorries.

Mussels delivered daily were ideal but if for some reason the mussels were not to be used immediately they had to be kept alive and this was done by laying out the rough mussels on a suitable place on the foreshore where they would be covered with sea water twice a day at high tide. To prevent loss the rough mussels were netted and the nets weighted with stones. This practice was previously quite common particularly when the mussels were collected at a distance using the fishermen's own boats for the transportation.²³ (Figure 21)



Fig. 20. Using mussel-rakes from a salmon cable near St Andrews, Fife. (St Andrews University Library)

When required, an appropriate quantity of rough mussels were taken to the house or baiting shed where they were opened and the meat removed. This operation was termed 'sheeling' and the implement used known as a 'sheel blade'. (Figure 22a) These were often made by the fishermen from cut down table knives, but they were also available commercially.²⁴

To sheel a mussel the blade was inserted at the wide end of the mussel shell and moved back to cut the muscle holding the two halves of the shell together. The meat was then scooped out using the blade to free the muscle working from the 'tongue' back to the wide end. Cloths were often tied around the women's fingers to provide protection from the sharp edges of the shells as the work had to be carried out quickly to provide the large numbers of mussels required to bait a single line. At an average of three mussels per hook, Arbroath women had to sheel up to four thousand two hundred mussels to bait a single line and this had to be repeated every day prior to the boat going to sea. (Figure 22b)

The sheeled mussels were dropped into a basin and the shell discarded. Huge quantities of mussel shells accumulated at the various fishing communities when all of the east coast fishermen were using mussels as bait for at least three months of the year. This linked to a shortage of limestone in the county of Angus resulted in a special plant being set up at Ferryden, Angus to bum and crush the mussel shells, the product being sold to local farmers for the liming of their fields.²⁵

Baiting the Sma'line

The line, ready for baiting was brought in a 'rip' - an oval basket²⁶ with hand grips at either side (Figure 23) into which the line had been 'redd'.²⁷ In Arbroath an old scull was used for this purpose rather than the purpose-made rip. The rip was set beside the 'scull' to be used to take the line to sea. A 'scull'²⁸ was a long basketwork or timber platform with shallow sides at the front or 'nib' but tapered to nothing at the back or 'erse'. Basketwork sculls were used in Arbroath but the majority of Gourdon fishermen had begun to use timber sculls prior to 1974. (Figures 24a&b) The scull also had hand grips at either side and its size was determined by the length of the line used with it. The empty scull was prepared by laying a layer of 'bent'²⁹ from the 'brig' to the 'erse'. The 'brig' (Arbroath),³⁰ or 'corsingyn' (Gourdon)³¹ was formed by a roll of bent bound round with 'thrums'³² and tied to the basketwork to form an edge against which the first line of baited hooks was placed. In the case of timber sculls a bar of wood nailed to the bottom of the scull served the same purpose.

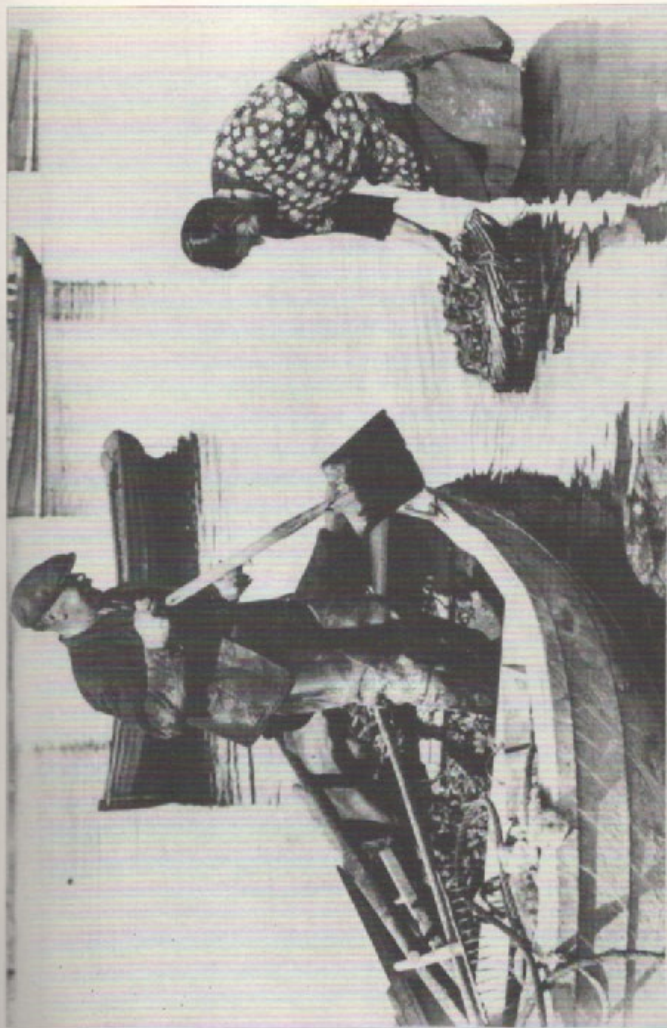


Fig. 21. Rough mussels being collected in a herring basket, Ferryden, Angus. (D C Thomson)



Fig. 22b. Shelling mussels, Fittenwern. (St. Andrews University Library)

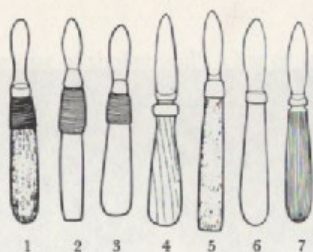


Fig. 22a. Stone blades from
Arbroath & Gourdon.

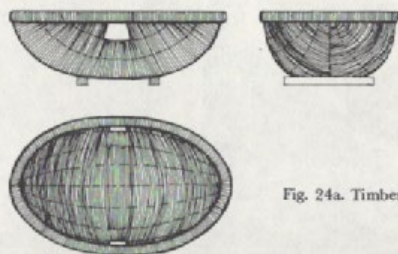


Fig. 24a. Stone sculls from Gourdon.

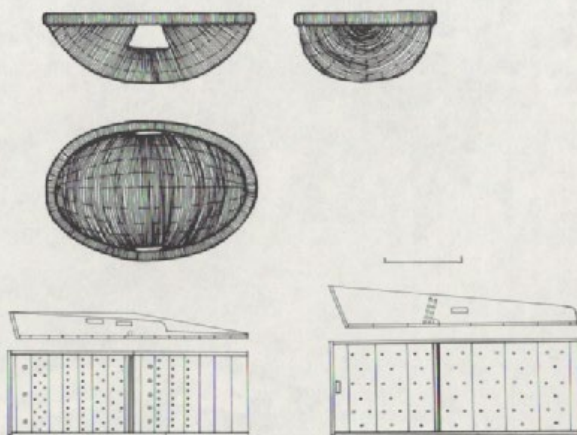


Fig. 23. Stone rips from Gourdon.

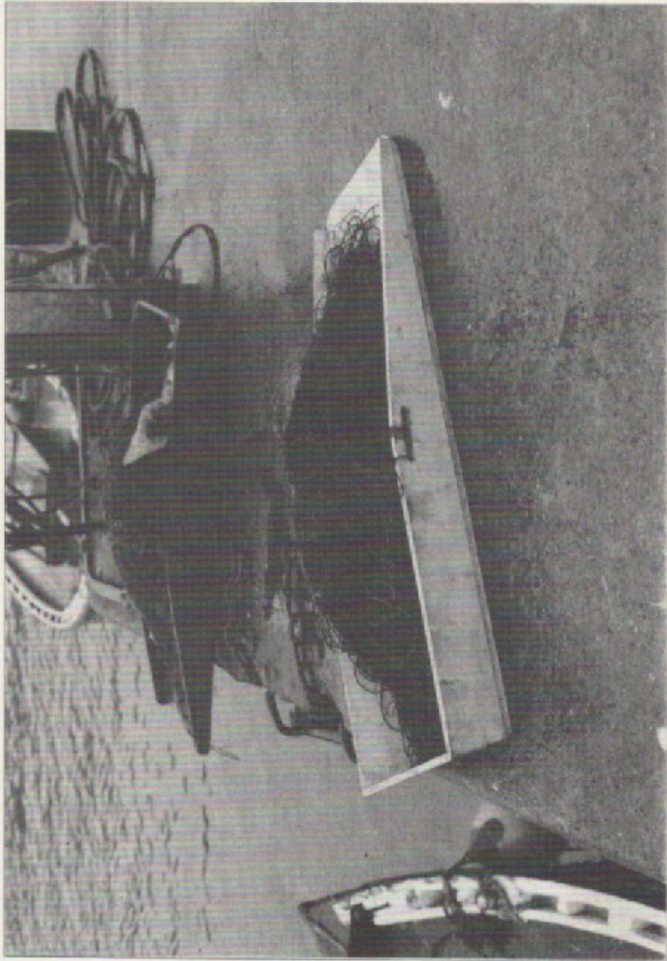


Fig. 24b. Timber scull on quay, Gourdon.

The term 'corsingyn' is interesting as the various syllables in the word mean 'to cross-in-the beginning', a very accurate description of the purpose to which it was put. In Arbroath the term 'gyne' was used to describe any line of baited hooks³³ from first to last.

The ground line was carefully coiled in the front of the scull and as each hook was un-stuck and baited it was placed along the 'brig' from left to right, each baited hook set at the same angle but each baiter had her own particular method of placing the hooks. Each hook was placed in turn, the bait forming a continuous line until the row or gyne was complete. The same procedure was repeated but from right to left and so on until the entire line was baited and the apron of the scull entirely covered with rows of baited hooks. Between the placing of each hook the ground line, snid and tippet had to be carefully placed to prevent snagging when the line was being shot. (Figure 25)

The sheeled mussels were kept in basins in some of the water from inside their shells. To make it easier for the baiter to work with the mussels a 'baitin board' was placed across the basin and handfuls of mussels scooped out and set on the board to drain. The boards were designed for this purpose and had both drainage channels and holes according to the baiters' preference. (Figures 26a & b) Latterly in Arbroath the curved top rail from the back of a kitchen chair was used as a baitin board as the curve prevented the water from running over the edge of the basin. (Figure 27a) This is also shown in the illustration used for the cover which shows Meg McKinnon (nee Bruce) baiting lines in 1953. An average of three mussels was used on each hook. Good baiters ensured that the hook was full and that the hook went firmly through the tongue of each mussel. The tongue was the firmest part of the mussel and the hook penetrating this diminished the risk of the bait tearing off during shooting or being washed away in the tide. A good bait mussel was not too fat and had plenty of tough substance, the preferred colour being half white and half red. (Figure 27b)

Once the line was baited it was stored in a cool place until taken to sea by the fishermen. Warm weather turned the bait sour - perhaps one reason why this type of fishing was traditionally a winter employment. In the 1950s there was still a considerable gamble in baiting the line as the weather could change quite quickly and if the fishermen were prevented from going to sea, the mussels on the hooks could sour and the whole line had to be redd and re-baited with fresh mussels. By the 1970s, the Gourdon fishermen had solved this problem by converting deep-freeze cabinets for the storage of baited lines,



Fig. 25. Mrs Carol Criggie, Gourdon with a baited line of 1200 hooks in an Arbroath-type scull, 1971. (D C Thomson)

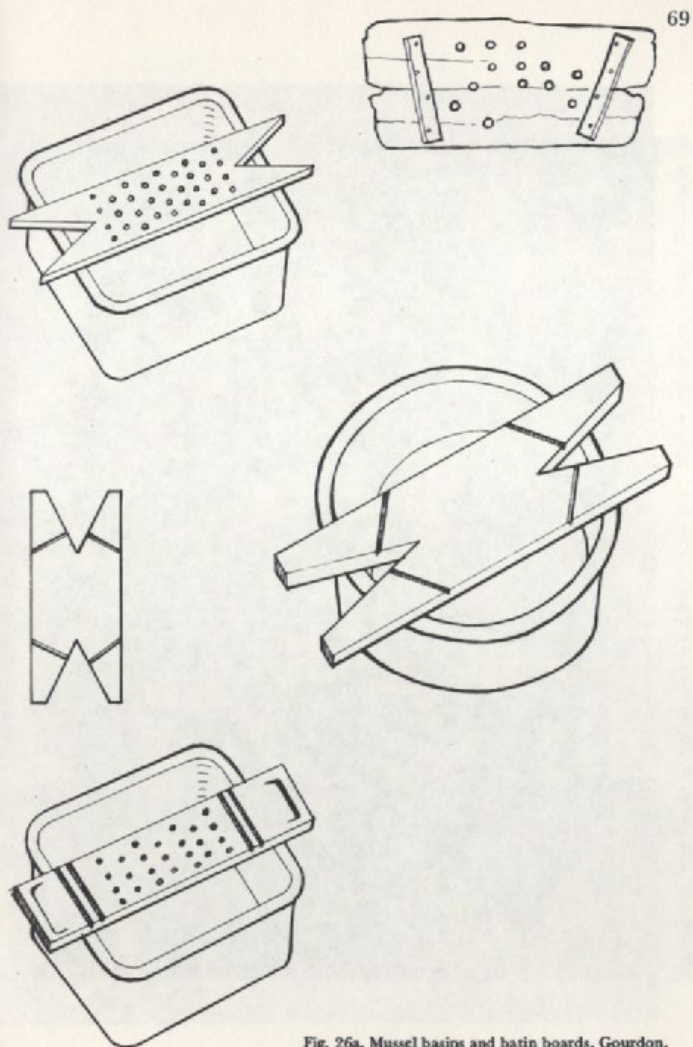


Fig. 26a. Mussel basins and batin boards, Gourdon.

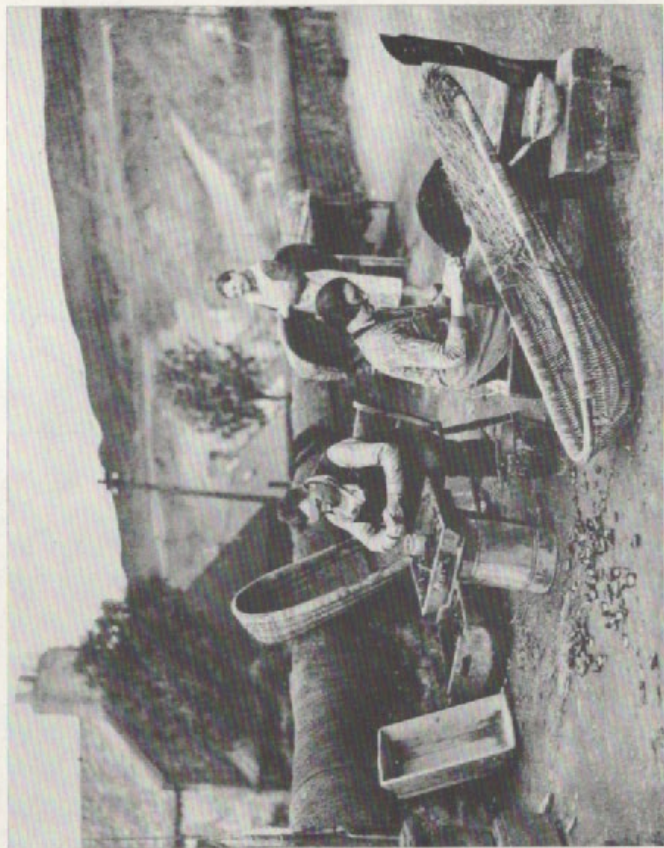


Fig. 2Gb. Sheddling mussels and bating lines, Courdon, 1940s. (D C Thomson)



Fig. 27a. Mrs Peter Shepherd, Arbroath in 1954, using the top rail of a kitchen chair as a batin board. (D C Thomson)



Fig. 27b. Bating lines, Fittenweem (St Andrews University Library)

the whole scull being slid into a horizontal cabinet, thereby avoiding this particular waste of material and labour.

After the line was baited and before it was moved, the 'corsbearer'³⁴ was made fast. This was a piece of old line spliced to one of the hand grips of the scull and the loose end was lifted over the baited line, pulled tight and made fast to the other hand-grip thereby stabilizing the bulky part of the coiled line, holding it firmly, thereby allowing the scull to be handled both ashore and more particularly in the boat in rough weather.

Traditionally the line was carried from the house to the boat by the fisherman's wife. To do this, she used the large 'rip' or 'creel' that was also used to transport fish for sale'. (Figure 28a) This rip sat on the woman's buttocks resting against her waist and was held by a strap taken round the arms and across the chest just below shoulder level. The scull was lifted on to the rip sitting across the woman's back, projecting to either side. The woman carried the line to the harbour where it was removed and passed down into the boat.

Again, tradition was so strong that this method of transport was not questioned until one fisherman, whose wife sometimes drank a little too much resulting in the line being spilt on occasion, used the wheels of a pram to make a small barrow to wheel his line to the boat. This resulted in considerable laughter from the other fishermen until they had time to consider the situation, then they also built line-barrows. (Figure 28b)

Using the Sma'line

The boat crews normally comprised four or five men and each man took a line or two half-lines to sea with him. The lines were carefully stored in the hold and made fast to prevent their tipping with the movement of the boat. The boats left harbour in the late afternoon or evening depending on the suitability of the tide and the distance to the chosen fishing ground. There was considerable skill in knowing which ground to fish at particular times of the year and in which particular conditions. In the 1950s few line boats were equipped with electronic navigational aids and echo sounders and there was a great reliance on experience. There was a wide vocabulary used to describe specific conditions both above and below the water and these conditions combined with knowledge of the behaviour of fish determined where the line would be shot. When the appropriate bank was reached the type of bottom was established by sounding with a hollow lead weight into which lard had been placed.



Fig. 28a. Fisher girls carrying home empty rips after a day selling fish in the Angus Glens, 1931.
(D C Thomson)

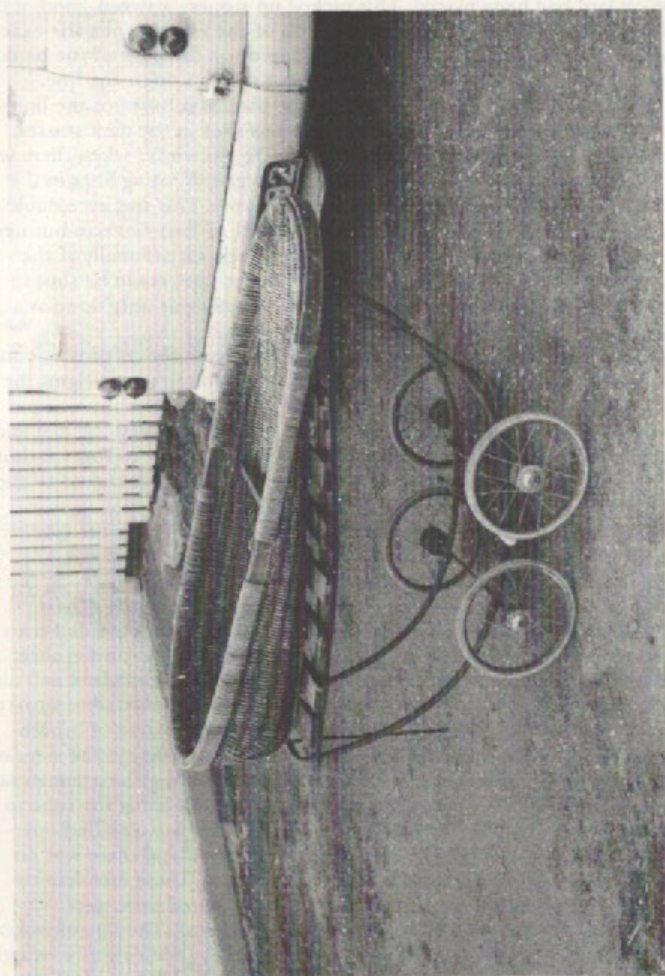


Fig. 28b. Line barrow, Gourdon, 1974.

This picked up stones, seaweed, sand or other material as well as giving the depth of the water. When the exact location was established, either on the top or on the edge of the bank, the boat's crew had to wait for the correct time to shoot the line.

Timing was vital to line fishing and the ideal was to shoot the line just as daylight was breaking. If the line was shot in the dark starfish got to the bait before the fish started feeding. In winter when there was a limited amount of time some fishermen began shooting lines in the dark *almost* finishing the shot *as* the light broke. This was acceptable on some grounds such as Cockenzie off the coast of East Lothian but never worked on other grounds such as the Bell Rock. Occasionally if the tides were completely against dawn fishing the lines could be shot in the 'gloaming'³⁵ and hauled in the dark, but this was only done as a last resort.

Lines were normally shot in eighteen to thirty fathoms of water and when the appropriate ground was reached and the time was right, the shooting of the lines commenced. A 'dan'³⁶ or marker buoy was put overboard with fifty to sixty fathoms of 'tow'³⁷ between the dan and the line anchor. The line anchor was attached to thirty or forty fathoms of 'ground-string' (Gourdon) or 'strae-line' (Arbroath) attached to the end of the ground-line by means of a 'bendin'.

The dan, tow, strae-line and ground-line were shot over the quarter of the boat as it travelled at full speed across the tide. This was important as the flow of the tide kept the snids at right angles to the line thereby cutting down the chances of snagging. (Figure 29)

The scull was set on two fish boxes and other boxes provided seats for the men operating the 'irneman' or 'iron-man', a galvanised sheet-metal tube, nineteen centimetres in diameter and one hundred and nineteen centimetres long.³⁸ The irneman had two internal handles situated thirty centimetres in from either end. These handles were of broom-handle dimensions and were nailed from each side through the sides of the cylinder. (Figure 30) The crew members operating the irneman sat with one arm in the tube gripping the handle whilst using the tube to guide the line over the gunwhale of the boat. This was a skilled operation as the line was pulled from the scull at speed and there was no way of stopping the line other than by cutting it. These men had to have faith in the skill of the baiter as skilfully baited lines were essential if the line was to be shot without snagging. The line unwound at speed, each baited hook leaving the back of the scull cleanly swinging in a clear arc over the back of the irneman and into the sea. In Gourdon one of the fishermen reported the use of an old sea-boot to replace an

Fig. 29. Diagram showing sma'line in use.

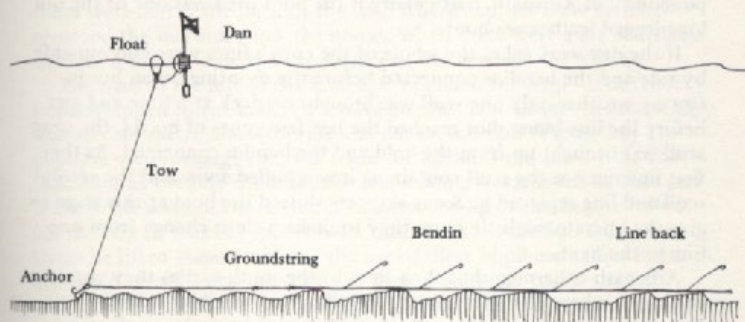


Fig. 30. Imneman

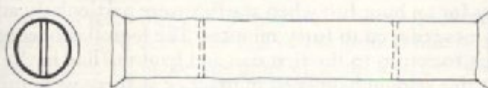
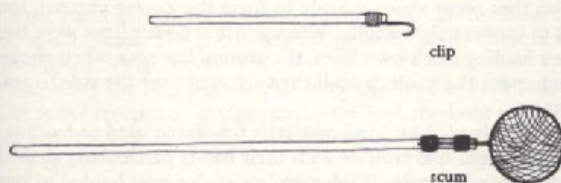


Fig. 31. Clip and scum.



irnneman lost at sea: the fisherman's arm being inserted into the boot and the line shot over the shiny surface. This was considered a possibility in Arbroath, particularly if the boot used was one of the old long-legged leather sea-boots.

If the day were calm, the whole of the crew's lines were laid out side by side and the bendins connected before the shooting began but in stormy weather only one scull was brought on deck at a time and just before the line being shot reached the last few gynes of hooks, the next scull was brought up from the hold and the bendin connected. As the first line ran out the scull containing it was pulled away and the second scull and line replaced it. Some skippers slowed the boat at this stage to give the operators a little more time to make a clean change from one line to the next.

Arbroath fishermen shot their lines to the south-east as they considered that this kept the line tighter particularly on rough bottoms. Gourdon men shot to the south-south-east at right angles to the tidal flow. On large banks such as the Bell Rock the lines could be set in a straight line but on most grounds there was insufficient room for five times fourteen hundred hooks to be shot in a straight line and there the line was shot in a zig-zag pattern.

After all the lines were set, the last line was followed by a strae-line, anchor, tow and dan similar to that used at the other end. The line was left in the water for an hour but when starfish were particularly active this was sometimes reduced to forty minutes. The logical procedure would have been to return to the first dan and haul the line in the order of shooting but this seldom happened in practice as there were usually a number of boats fishing the same ground and they would all start shooting together, travelling in the same direction, the fastest boat being able to determine when to break into the zig-zag pattern. Lines were laid over other lines and it was therefore easier for everyone if the hauling started in reverse order of shooting, each boat gradually retracing its course hauling as it went. As all the boats shot in the same direction then went about sharply to form the zig-zag pattern, lines tended to cross at right angles. When another boat's lines were brought up when hauling one's own lines, the ground-line was taken aboard and dropped under the hauler's scull then released over the side to return to the bottom.

Lines were hauled by hand and even fishermen used to hauling nets and heavier ropes had trouble with their hands particularly if the line became slimy with scales. Each member of the crew hauled in turn. The man hauling the line stood to the right of the nib of the scull, hauling the line

and laying it into the front of the scull where a man on the left of the scull worked quickly at sticking the hooks. Hooks with fish on them were laid at the back of the scull where another crew member removed the fish and stuck the hooks. When there were a lot of fish on the line it often floated to the surface at the bends in the zig-zag.

The man to the left of the scull also operated the 'clip' - a butcher hook whipped to the end of a broom handle - and 'scum' - a pole with a sixty centimetre diameter ring and net on the end. (Figure 31) The clip was used for large fish, the scum for medium and small fish. The man hauling the line could see the fish coming towards the surface and if the hook was not throated but through the lip of the fish he called for the clip or scum as appropriate. Cod caught at the lip could sometimes be lifted aboard without the use of these implements but haddock and whiting had softer mouths and these would tear under the full weight of the fish once the buoyancy given by the water was removed and the fish could be lost in the depth of the freeboard if the clip and scum were not used.

Lines were subject to wear and tear on the bottom of the sea and often broke as a result. When this happened a 'bow-steen' - a large granite block round which was fixed a rope attached to a dan - was dropped over the side to show where the break had occurred. In Gourdon the implement used to retrieve the broken line was known as a 'creeper'. (Figure 32) The creeper was a heavy quadruple iron hook which was dragged across the line of the ground-line to catch the broken section. To make this more efficient a weight was suspended from the boat to hang just short of the sea bottom. A second rope attached to the weight pulled the creeper and half way along the length of the creeper rope a smaller length of rope was spliced in to take a second creeper. (Figure 33) The Arbroath men used an implement known as 'the grades' to carry out this operation. The grade was somewhat longer than a creeper and was kept on the bottom by a 'bullet' - a metal cylinder about twenty centimetres long with an eye in each end to take the rope. The bullet ran along the bottom and the man operating it could usually feel it crossing the ground line just before the grades caught it. (Figure 34)

In both cases the tide was used to allow the boat to drift over the line and as the

creeper or grades caught the line, the boat was swung quickly into the tide to lift the lines off the bottom and prevent their breaking again.

On particularly rough bottoms, Arbroath fishermen used an implement, similar to a grappling iron, with six larger hooks and known as a 'sixer'.

Fig. 33. Diagram showing use of creeper.

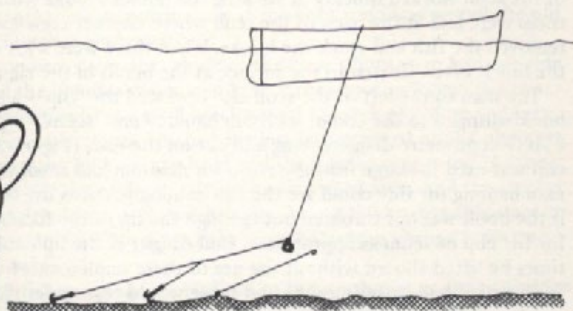
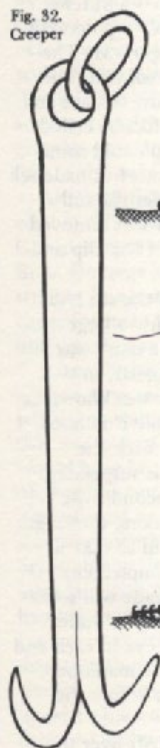
Fig. 32.
Creeper

Fig. 34. Diagram showing use of grades.

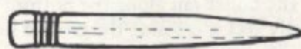
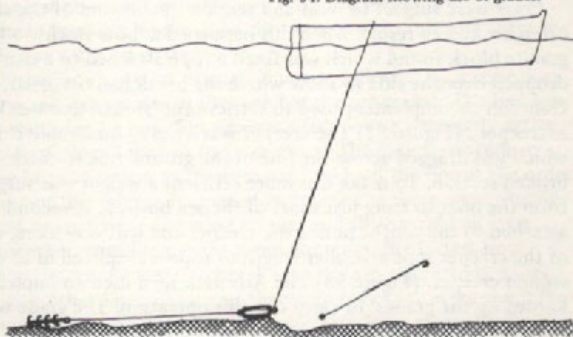


Fig. 35. Bones from Gourdon.

These were used on the rock bottom off Carnoustie: a ground so rough that it has not been fished with lines since the 1930s.

Creeping or grading was not always used simply for broken lines. If a line was held fast on the bottom, it was sometimes cut and a length of strae-line bent to the cut end. The boat then turned into the tide and the man slowly let out the strae-line. If the ground remained fast on the bottom the boat then drifted back across the ground-line using creepers or grades to pick up the other side of the fast line. When both sides of the fast portion were held another attempt was made to release the line. If this were unsuccessful the line was broken on the other side of the snag and the hauling continued.

A sma'line lasted about a year and always had to be lengthened at various times to replace line and hooks lost in breakages. Lines on the seabed rubbed against sharp rocks, wrecks and other debris and the frayed sections had to be cut out and the ground-line spliced. This was done during the reddin of the line and the fishermen always had to look out for these weak sections. Lines were easy to splice and the small marlin spikes used for the purpose were known as 'bones' in Gourdon. (Figure 35) In both communities a large marlin spike was known as a 'fid'.

Line Fish

Fish caught by line fishing were known as 'line-fish' and were always considered superior to fish caught in a net. There were many sound reasons for this superiority. Line fish bled to death and therefore died more quickly than fish suffocated in a large haul of netted fish or than fish allowed to die in the hold of the boat. Each fish was brought out of the water individually and was not subjected to squeezing and bruising as happens in the bag of a trawl or seine-net. These factors resulted in the flesh of the fish staying in prime condition for longer than fish caught by other methods; therefore, these fish had a higher market value.

Line fish were particularly prized for the manufacture of 'Arbroath smokies' and 'Bervies', the two local cures. They were also preferred for other cold-cure fish such as Eyemouths and Finnans. Recipes for these and other forms of fish preservation have already been discussed in print³⁹ and some of the buildings used in the various processes have also been described.⁴⁰ Two large fish-curing premises in Gourdon were surveyed by architectural students from Duncan of Jordanstone College of Art/University of Dundee and the drawings lodged with the Country Life Archive, National Museum of Antiquities of Scotland, Edinburgh.⁴¹

It is not intended to repeat this information here but simply to note that even in terms of fish preservation there were considerable local variations in the equipment used to carry out similar processes. Fishermen's wives were often in business for themselves as fish merchants and would purchase fish from the local market and prepare them for sale. This could simply be a small quantity prepared each day and taken to Dundee, or some other town, in rips or creels to be sold. The 'rounds' were often in the suburbs and landward areas where there were no established fish shops, but some families also prepared fish for established fish shops. This activity resulted in the wives being much more independent of their husbands than in most types of community and in times of low quayside fish prices the fishermen's wives often made considerably more money than their husbands.

To give one example: Jane Bruce, nee Cargill,⁴² had regular fish rounds in the outskirts of Dundee, but also made all the smokies for Stout's chain of fish-shops in the city. Stout purchased his own fish at the Dundee fish market and had those selected for smoking put on the train for Arbroath at about four o'clock in the afternoon. A local carrier delivered these to 21 Seagate, Arbroath, where Jane Bruce and some of her family prepared them for smoking. Two smoke barrels were used, one operated by Dave Bruce, the other by Jeemie Cargill. (Figure 36) The fish were smoked and ready for collection by the carrier who put them on the six o'clock train the following morning. The fish processed in this way could amount to fourteen boxes of haddocks a night and this work was additional to the fish prepared to be sold by Jane Bruce on her regular fish rounds.

The introduction of motor-vans cut down the number of fisher women selling fish from rips carried on their backs but there were still a number operating in the early 1950s. These were put out of business through Government legislation requiring all street traders dealing in foodstuffs to have a water supply and wash basin for washing their hands: a simple request to comply with when working from a van but almost impossible for those working on foot. Some ingenious devices were tried on small wheel barrows but in a very short time the whole trade was being carried out from motor-vans.

Reddin the Sma'line

After the boats returned to harbour, the fish unloaded, the gear safely stored and the boat berthed, the reddin, or cleaning, preparing and repairing of the line commenced. Occasionally if the boat was fishing at a distance from its home port or if it had to lie off the harbour waiting for enough water to enter,



Fig. 36. Nell Hernan, Arbroath, removing smokies from the smoke barrel at 5 Ladyloan, Arbroath, 1966. (D. C. Thomson)

the work might be carried out in the boat, otherwise it was a land based job. A rip, or in Gourdon a 'ripie', was used to hold the redd line. It was placed close to the scull containing the used line and the fishermen sat between the two, taking up the free end of the ground line and checking and cleaning both ground line, snids and tippets, coiling the redd line into the rip as he worked. (Figure 37) The main debris fouling any line was old bait, starfish and seaweed either attached to the line or to the hooks. Any 'unstuck' hooks were stuck and tippets that had lost their hooks were left hanging over the edge of the rip to be replaced afterwards. These tippets were known as 'wints' or 'wants'.⁴³ All frayed sections of line were cut out and the ends spliced together. When the line became appreciably shorter, new sections were spliced in as appropriate. After the reddin was completed and the wints repaired, the line was delivered to the baiter to be baited the following day.

Sma'line Boats

The boats originally registered as 'liners' were mainly nine to thirteen metres, carvel built, fifie yawls, some originally built for sail (Figure 38) but all operating as motor vessels by the late 1930s. They were no larger than the first decked herring drifters although, at the time most of these boats were built, the herring drifters had increased in size to approximately twenty one metres.

The fifie had an almost vertical stem and only a slight rake on the stern post, enough to make the reverse tapered rudder look vertical. This resulted in a boat with a keel almost the same length as the overall length of the boat, a good feature when 'running' but presenting problems for a boat 'going-about'. East coast fishermen preferred the fifie whereas fishermen from the north facing ports of the Moray and Pentland Firths preferred the zulu. A slightly narrower boat, with vertical stem and steeply raking stem, easier to manoeuvre owing to its reduced keel. Something of the development of these boat types can be found in Edgar J March's *Sailing Drifters*.⁴⁴

The 1930s had seen changes in fishing boat design, but development was temporarily halted in the 1940s owing to World War Two. Most of the boats going to the sma'lines in the 1950s were the tail end of the earlier tradition. The traditional boat had a very distinctive colour scheme. The hull had a black freeboard, white cutwater and water line, and red bottom. Decks were still tarred. The top rail of the gunwale was white, the inboard surfaces blue and white whilst on the outboard side the first strake above the deck was hollowed and painted to form a thin



Fig. 37. Peter Bruce reddin his line, 1958. (D C Thomson)



Fig. 48. Fifies at Ferryden, 1896. Note the change in scale between the largest and smallest boats. (Dundee Public Library)

yellow line from stem to stern, interrupted to accommodate name plates and registration numbers. This line was often finished in a spearhead at the bow and in a circular stop at the stern. The name plates were also black with carved lettering and decoration, finished with gold leaf and paint. The registration numbers were white seriffed letters and numbers with blue painted shaded-shadows. The masts were white with blue ends and the wheelhouse was grained to look like light pine. There were still one or two boats where the gunwales stopped just proud of deck level and the ends of the ribs were unprotected by a top strake. (Figure 39) The high deep-seated masts needed for sailing had been replaced by lighter, deck-mounted spars and wheelhouses had replaced the earlier open cockpit. The hatch to the hold was large by comparison with present-day boats which made it easier to pass the sculls from the hold to the deck. Since there was no radio requiring height for the aerial and boats could tie up along-side the fish quay in both centres, the foremast was lowered to rest against the roof of the wheelhouse and the derrick was mounted on the deck to the starboard side of the front of the wheelhouse. This was lashed to the raked foremast when not in use. (Figure 40) Below deck the crew's cabin was forward the hold amidships and the engine room aft. (Figure 41) One of the Arbroath fifies still sma'line fishing in the 1950s has been recently restored to its former sailing rig. This boat, the Isobella-Fortuna, was built at Arbroath in 1890 and spent its fishing life working from the same port. It is now based at Tayport, Fife and is used purely for recreational and demonstration purposes.

Similar boats were used at Gourdon but Mr Craig, one of the fishermen interviewed, worked from a fife skiff a little over eight metres long. This skiff, the Trustful, was built in St Monance for an Arbroath man before being purchased by Mr Craig. It was designed as a combined motor/sailing vessel and still retains many of the original sailing features. (Figures 42a & b)



Fig. 39. The Fife yawl, 'Rose', Arbroath, circa 1950.



Fig. 40. The Fife yawl, 'Our Boys', Athroath, with the derrick lashed to the lowered foremast.

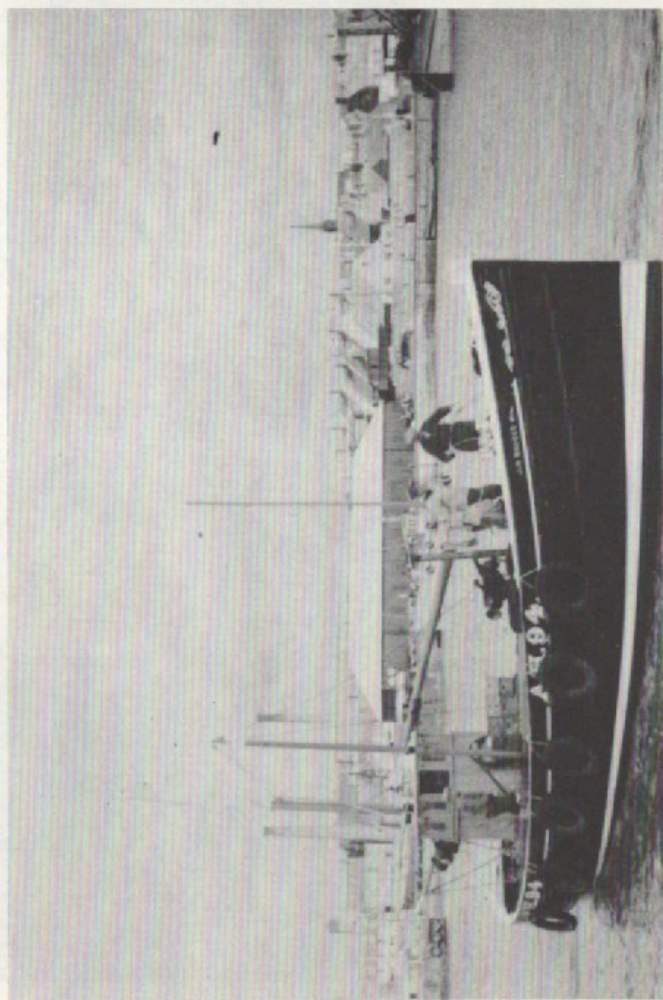


Fig. 41. The Fifth yawl, 'Bruces', Arbroath.



Fig. 42a. The Fife skiff, 'Trustfull', Gouidon, 1974.

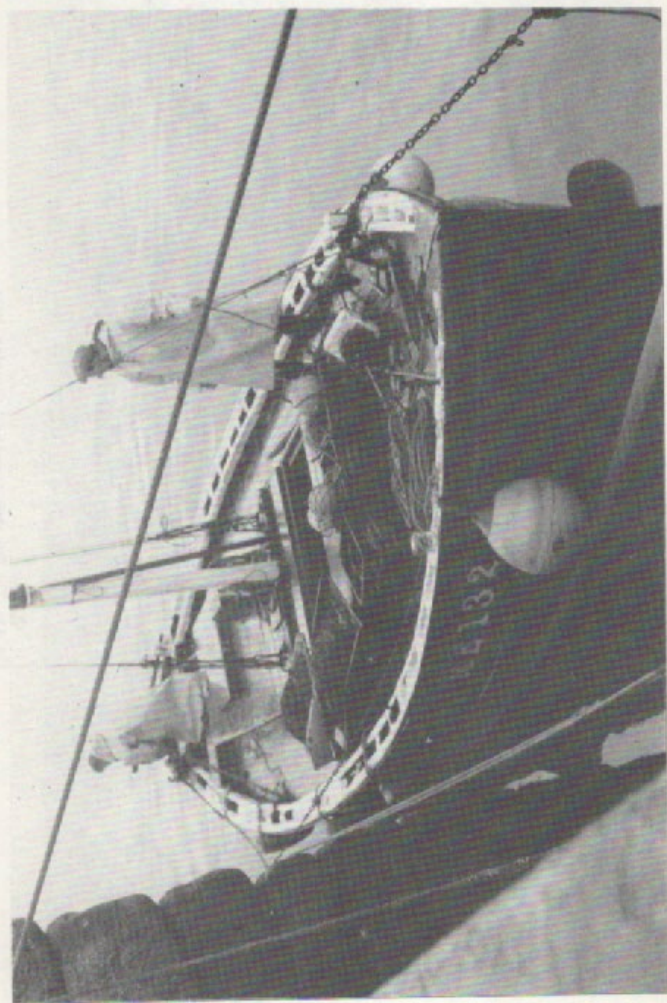


Fig. 42b. The Fife skiff, 'Trustfull', Gourdon, 1974.

Conclusions

It is hoped that this paper will give some notion of the interdependence of the many trades and skills associated with sma'line fishing. The total number of boats using the technique in the 1950s was probably under fifteen employing less than sixty men. At the height of the sma'line fishing in Scotland in the last decade of the nineteenth century over fifty thousand fishermen were using sma'lines for some part of the year. With the large number of half-lines employed at that time, this fishing probably gave employment for over eighty thousand baiters, as well as numerous mussel gatherers, line and scull makers, boat builders, fish merchants and so on.

These latter day sma'line fishermen had certain advantages. They could fish grounds which would normally result in torn nets if fished by the seine-net boats, and the small number of boats involved ensured a good return from these otherwise unfished or underfished banks. On the other hand the numbers of seine-net and trawl-net boats fishing the other banks could cause problems for line-boats working in the same area.

A major study of the technique should be undertaken now before the last of the practising sma'line fishermen die off and some effort should be made to obtain photographs of the fishing process as carried on in the boats. Time is running short if another important part of Scottish material culture is not to disappear without adequate record.

Similar studies are also required for crab and lobster fishing, ring-netting, line fishing without bait, gretlin fishing, and so on. The Scottish Fisheries Museum, Anstruther does a good job but their resources are limited. Perhaps some of the coastal historical societies could take up the challenge and help fill this gap in the nation's knowledge.

NOTES AND REFERENCES

¹ Hay, George: *History of Arbroath to the Present Time* (1876) 376-377

² Southey, Robert: *Journal of a Tour of Scotland in 1819* (1929 & 1972) 61-63.

³ Information collected as part of the background material to a series of process analysis and building surveys carried out by first year architectural students from the School of Architecture, Duncan of Jordanstone College of Art/University of Dundee. The group comprised: Simon Addison, John Baddley, Stewart Blake, Nick Brand, William Crichton, Brian Crowe, Alan Curr, Stephen Donald, Kenneth Greig, Elin Grimstvedt, Alistair Keyte, Kenneth McIntosh, Robert Mills, Charles Masterton, David Piercy and William Rogerson, under the direction of Martin Birkhans and Bruce Walker. The Gourdon Fishermen interviewed were: A.M Craig, 7 Mowatt Street, Gourdon, Alexander Glass, 29 William Street, Gourdon, and Mr Walsh, 29 William Street, Gourdon. The Gourdon baiters interviewed were: Mrs Donaldson, 27 William Street, Gourdon and Mrs Gowans, 1 Brae Road, Gourdon.

⁴ The author stayed for a time with his grandfather John Bruce (1872-1954), fisherman, Arbroath, where he observed the making of sculls, sma'lines, tippets and other fishing equipment. Discussions on line fishing occupied much time and these sometimes included his uncles John Bruce (1903-1970), David Bruce (? – 1954), and Peter Bruce (1909- ?) all fishermen in Arbroath. The impressions gained at the time were checked in a recent interview with Alexander Shepherd, 6 Alexandra Place, Arbroath an ex-fisherman who was also working sma'lines at that time. Line baiting was observed in the houses of Mrs David Bruce (ne Meg MacKinnon) and Mrs Peter Bruce, (nee Georgina Swankie).

⁵ Brandt, Andres von: *Revised and Enlarged Fish Catching Methods of the World* (1972) 222-223, item '4.22 Set Lines (including bottom or near bottom long line).

⁶ Grant, William and Murison, David: *Scottish National Dictionary* (1929-1976) viii, 350. 'Sma (18) Sma Lines, Smallins. The lines used by inshore fishermen to catch small fish.

⁷ Ibid. iv. 272 'Great 8 (8) Great-line, Grit-, Gret(t)-lin, the line used in deep water fishing for catching the larger kinds of fish such as cod, ling, etc...'

⁸ Jamieson, John: *Etymological Dictionary of the Scottish Language* (1879-1882) iv. 317. 'Sned, Sneed, sl. The link of hair to which a hook is tied, that is fastened to the cord-line or set line. Snood, synon.

⁹ Ibid. 583. 'Tippit. Sl. One length of twisted hair or gut in a fishing line. S Tibbit, Fife, Mearns: synon. Leit, Upp Clydes.' Grant and Murison: (1929-1976) op. cit. ix 343. 'Tippet, Tibbet. 1. length of twisted horse-hair to which the hook is attached on a fishing line.

¹⁰ Ibid. i. 81 'Beet. 1. (3) To supply something wanting e.g. To replace lost hooks on a fishing line – to fasten a bit of snood line on to a hook to facilitate the fixing upon a line.' 'Beet the line. To overhaul a line for the purpose replacing lost tippens or hooks.'

¹¹ Information from Mr Finlay, 7 Low Street, Portsoy, Banffshire.

¹² Fenton, Alexander: *Notes on Shellfish as Food and Bait in Scotland* in Gunda, Bela (editor) *The Fishing Culture of the World* (1984) 121-142, Akademia Kindo Budapest.

¹³ Grant and Murison: 1929-1976; op. cit. i. 46 'Bark n³ tormentil, esp the root of the plant which formerly was commonly used in tanning of skins and hides (for sea clothes and boots). Bark, tormentil (*Potentilla erecta*) generally called hillbark. It used to be highly esteemed for its roots, which were employed in the 'barking' or tanning of nets etc., before the days of cutch bark.

¹⁴ Ibid. 101. 'Bendin. N. The place where two pieces of longline, Bugts, are joined [or bended].'

¹⁵ Jamieson, John: 1879-1882: op. cit. i. 459 'Clowis s. pl. Small pieces of anything of a round form.

¹⁶ Fenton, Alexander: 1984: op. cit. 126-135.

¹⁷ Ibid. 135-136. Summary of study sheets prepared by students and lodged with the Country Life Archive, National Museum of Antiquities of Scotland, Edinburgh.

¹⁸ Ibid. 135.

¹⁹ Information from Joseph Johnston and Sons Ltd., Montrose.

²⁰ Information from Gourdon Fisherman's Association.

²¹ Ibid.

²² Fenton, Alexander: 1984: op. cit. 129 'Sometimes the total weight of fish caught at a fishing port was little more than the total weight of mussels.. Eyemouth ... The average annual catch of fish per boat varied between 41-43½ tons and the amount of bait between 37½-38 tons... total value of the catch £58,940 and the amount spent on mussels was £7,664.

²³ Muir, John: Parish of St Vigean, *New Statistical Account of Scotland 1845 XI* (Forfar) 514. Information from Alexander Glass, Gourdon.

²⁴ These could be purchased from the Arbroath Fishermen's Association and the Gourdon Fishermen's Association.

²⁵ Douglas, Andrew: *History of the Village of Ferryden* (Montrose, 1855) 19.

²⁶ Grant and Murison: 1929-1976: vii. 456 'Rip. N³. I. A round wicker (and straw) basket used for carrying fish and eggs or coiled fish lines.'

²⁷ Ibid. 378. 'Redd. 6. To disentangle, unravel, sort out (2) of a fishing line or net; to unravel, to undo entanglements.'

- ²⁸ Ibid. viii. 101. 'Scul. 2. A shaped basket 'deep at one end for the line, and shallow at the other for the baited hooks' used by fishermen to carry their lines...'
- ²⁹ Ibid. i. 'Bent, n³. course grass of a reedy or rush like character.'
- ³⁰ Ibid. ii. 270. 'Brig, Brigg, Breeg. N¹. v¹. Gen. Sc. Forms of Eng. Bridge.
- ³¹ Jamieson, John: 1879-1882: op. cit. i. 500. 'Corss, Corse. V.a. 1. To cross, to lay one body athwart another'. Ibid. ii. 485. 'To Gyn v.n. To Begin.'
- ³² Grant and Murison: 1929-1976: op. cit. ix. 316, 'Thrum. A fragment of waste thread.'
- ³³ Information from Mrs B.C. Walker (nee Bruce).
- ³⁴ Name given by Alexander Glass, Gourdon.
- ³⁵ Grant and Murison: 1929-1976: op. cit. iv. 338. 'Gloamin, n. also Gloaming, Glomin (g), Glomen. 1. Evening, twilight, dusk.'
- ³⁶ An almost universal expression on the East Coast of Scotland for a 'floating marker flag.' Does not appear in the Standard English Dictionaries, Grant and Murison: 1929-1976: or Jamieson, John: 1979-1882.
- ³⁷ Grant and Murison: 1929-1976: op. cit. ix. 382-383. 'Tow. n.v. also Towe, Touw. I. 1. A rope, cord, length of strong string, etc.
- ³⁸ Ibid. v. 299. 'Iron. 5. (5) Ironman (a) a hand winch used on fishing boats to haul in the nets.' This contradicts the usage in both Arbroath and Gourdon where it is an implement used in the shooting of lines.
- ³⁹ Walker, Bruce: 'Scottish Methods of Preserving White Fish' *Gold Under the Furze: Studies in Folk Tradition in honour of Caoimhin O Donachair* (1982) Dublin, 138-149. For more up to date methods, see Burgess, G.H.O: Cutting, C.L: Loveran, J.A: and Waterman, J.J: 1965: *Fish Handling and Processing*. Edinburgh.
- ⁴⁰ Walker, Bruce: 'Scottish Buildings for Meat and Fish Preservation: A preliminary Survey' *Scottish Industrial History*. 5.1 – 1982. 25-44. For up to date equipment see Burgess, Cutting, Loveran and Waterman; 1965: op. cit'.
- ⁴¹ Drawings by John Baddley and Elin Grimstvedt.
- ⁴² Wife of John Bruce (1872-1954).
- ⁴³ Grant and Murison: 1929-1976: op. cit. x. 41-42. 'Want, Wunt, Wint, Went, II n.1. A defect, a fault, a missing or defective part of something. (4) a defective or damaged part of a fishing net or line.'
- ⁴⁴ March, Edgar J: *Sailing Drifters: The Story of the Herring Luggers of England, Scotland and the Isle of Man* (1952 and 1969).

Publications of the Abertay Historical Society in Print

- No.2 W.H.K. Turner. *The Textile Industry of Arbroath since the Early 18th Century*. (1954. Reprinted 1972.)
- No.7 J.H. Baxter, *Dundee and the Reformation*. (1960)
- No.8 W.A. McNeil, *Montrose before 1700*. (1961)
- No.9 Sir Francis Mudie and D.W. Walker, *Mains Castle and the Grahams of Fintry*. (1964)
- No.10 S.G.E. Lythe, *Gourlays of Dundee: The Rise and Fall of a Shipbuilding Firm*. (1964)
- No.11 *Aspects of Antiquity: A Miscellany by Members of the Archaeological Section of the Abertay Historical Society collected by Elise M. Wilson*. (1966)
- No.12 D.W. Doughty, *The Tullis Press, Cupar, 1803-1849*. (1967)
- No.13 S.G.E. Lythe, J.T. Ward and D.G. Southgate, *Three Dundonians: James Carmichael, Charles William Boase, Edwin Scrimgeour*. (1968)
- No.14 B.P. Lenman, Charlotte Lythe and Enid E. Gauldie, *Dundee and its Textile Trade*. (1969)
- No.15 Sir Francis Mudie, David Walker, Iain MacIvor, *Broughty Castle and the Defence of the Tay*. (1970, reprinted 1979)
- No.16 A.A.M. Duncan, T.I. Rae, Martinell Ash and B.P. Lenman, *Scots Antiquaries and Historians: papers read at the Silver Jubilee Conference of the Abertay Historical Society on 15 April 1972*, (1972)
- No.17 A.M. Carstairs: *The Tayside Industrial Population, 1911-1951*. (1974)
- No.18 D.M. Walker: *Architects and Architecture in Dundee, 1770-1914*. (1977)
- No.19 James V. Smith: *The Watt Institution Dundee, 1824-1849*. (1978)
- No.20 John Hume (ed.) *Early Days of a Dundee Mill, 1819-23*. (1980)
- No.21 A.R.B. Haldane. *The Great Fishmonger of the Tay: John Richardson of Perth and Pitfour, (1760-1821)*. (1981)
- No.22 C.A. Whatley, 'That Important and Necessary Article' *The Salt Industry and its Trade in Fife and Tayside c1570-1850* (1984, reprinted 1985).

The above publications may be obtained through booksellers or by post from the Hon. Publications Secretary, Abertay Historical Society, University Library, Dundee.



Book Scanned by Iain D. McIntosh February 2022

Scanning on A4 CanoScanLiDE 220 - 400 dpi. Software - Abby Finereader 12 OCR.

No changes whatever have been made to the original book after scanning and converting to pdf format.

All text and images from the original book, including details of the Abertay Council members and the list of books currently in print at that time, are as they were at the date of the original publication.

Up to date information of all current books and prices for sale can be found on the Abertay Historical Society Website - <http://www.abertay.org.uk/>

