

the scottish fisheries museum trust ltd.



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Different varieties of fish can be classified in the following ways:

1. By Habitat

Swimming in surface waters: **PELAGIC FISH** e.g. herring, mackerel, sprats

Bottom of sea swimmers: **DEMERSAL FISH** e.g. cod, dogfish, haddock, hake, saithe, whiting, and flat-fish

Most **pelagic fish** feed on microscopic plants and animals i.e. **plankton** which flourish in surface waters. **Demersal fish**, on the other hand, live on small fish and crustaceans found on the sea-bed. At certain times of year, however, demersal fish may move up to the surface if food supplies are plentiful there e.g. dogfish may come up to feed on herring. Young flat-fish develop in surface waters and eventually travel to the sea-bed when they begin to mature. On the other hand, herring eggs hatch on the sea-bed, staying there for their early stages of development.

2. By Shape

FLAT FISH: brill, dab, flounder, plaice, skate, turbot, halibut, megrim

ROUND FISH: cod, saithe, dogfish, haddock, hake, salmon, sea bream, whiting

3. By their Flesh

WHITE FISH: bass, brill, cod, saithe, flounder, haddock, hake, halibut, plaice, sea bream, sole, turbot, whiting

OILY FISH: anchovy, herring in all its forms, mackerel, red or grey mullet, pilchards, salmon, sea trout, sardines, sprats, tuna (tunny), whitebait

4. Shell Fish

Those with jointed shells: **CRUSTACEANS** e.g. crawfish, crab, crayfish, lobster, prawns -all varieties

Those with unjointed shells: **MOLLUSCS**

a. **UNI-VALVES**, which have a one-part shell e.g. whelks, winkles

b. **BI-VALVES** which have two-part, hinged shells e.g. cockles, mussels, oysters, scallops, queens

i. CREEL FISHING

Around the coasts of Scotland the catching of lobsters and edible crabs (partans) is of considerable importance.

The design of the creel is quite intriguing. Normally it consists of a rectangular base over which are spaced, at regular intervals, three bow-shaped spars. In the past, fishermen had rights to collect wood from common land to make these spars. The branches would either be bent dry or would be steamed first to make them pliable. Ash was often used as it did not break when bent although whin, which had to be steamed into shape, was preferred as it was stronger. Tared twine netting covered the whole construction.

Nowadays the netting is more likely to be made of high-density polypropylene which is preferred since crabs are quite destructive to twine. An earlier practice in Angus and Kincardineshire was to cover the framework with wooden slats. For a time metal framed creels were popular, either rectangular or in the traditional shape. However, the high rate of corrosion owing to near constant exposure to salt water has caused a return to wooden and plastic models. All around the coast where crab and lobster fishing is practised, such creels of whatever construction, can be seen stacked along the quaysides.

The means of entrapment can be understood by observing the inner arrangement of the creel. There can be one or two tapered openings to the creel from either of the sides. These lead to an inner chamber where the bait is placed. Having been lured in, the entrapped creature cannot find its way out again and is well and truly caught!

The creel is weighted by means of a stone, concrete or lead weight placed on the base and is dropped on to the sea bed. It is attached to a line which, in turn, is affixed to a coloured marker buoy or flag to make location easy.

The creels are collected once or twice per day for, the longer they are left, the greater the chance of the catches making their escape (or eating each other!). Therefore, they are used in inshore waters where the fishermen can make frequent trips to empty them. The boats operating them have to be small enough to work among the rocks and skerries that are the ideal habitat for lobsters and crabs. This has meant the survival of creel-fishing in smaller ports while trawling and seining have outgrown these harbours and are now confined to a very few large facilities e.g. Aberdeen, Peterhead and Shetland.

Creel fishing is very labour intensive but it results in a high quality catch which can attract high prices. Scottish lobster and crab are found on the menus of the most exclusive restaurants and are exported all over the world.

ii. SMA' AND GREAT LINES (GARTLINS)

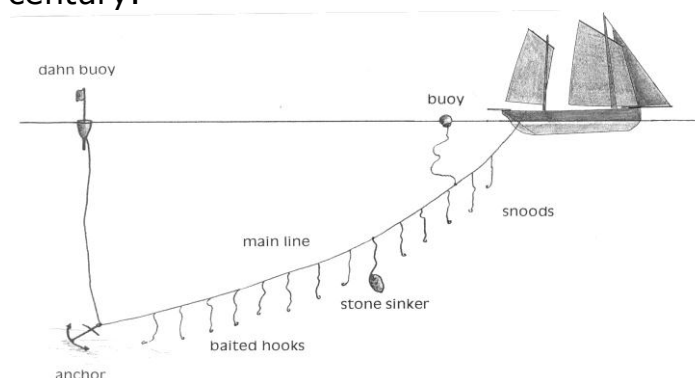
This method was used to catch white (demersal) fish such as cod, halibut, saithe, ling and flat fish which live at the bottom of the sea. It was very labour-intensive but resulted in a high quality catch.

Small line fishing was a family affair with women and children responsible for much of the work in preparing the equipment. This was a line, up to a mile in length, to which were attached snoods or shorter pieces of line. Each snood had a hook which was baited with fish or shellfish. The woman's work started in the early morning when she would go down to the shore to gather mussels. Then she would shell these and put one on each hook. There were around 1,200 hooks per line and each fisherman had two lines. The lines were neatly coiled in a scull (basket) and layered with grass (gathered by the children) to prevent them snagging as they were shot out. It was not uncommon for a woman to work a ten-hour day to prepare her husband or father's gear for a single trip. Sma' lining would be done in inshore waters in the winter between herring or gartlin seasons.

Great line fishing was similar to small line fishing but was undertaken in deeper waters, further out to sea. The lines could be up to 15 miles in length and would be fitted with 5,000 hooks. The fishermen usually baited the lines on the boat. Many liners carried a small-meshed drift-net to catch young herring to use as bait, or would buy small haddock from other fishermen. The main grounds were very distant, for example the Faroe Banks north of Shetland, so the men could be out at sea for three weeks at a time.

Equipment was developed to try to make the work of shooting and hauling the lines easier. A metal tube (known in Gourdon as an irneman) prevented the hooks snagging in the fishermen's skin or clothing as the line was shot at speed over its surface. Irneman was also the name given in the Forth area to a mechanical winch or line-hauler used to pull in the lines. As the line came in, the fish were grabbed using a hook tied to a pole. They were gutted on board and the livers saved in barrels to make cod liver oil.

The advent of steam-trawling in Scotland in the 1880s finally caused the decline of lining as the markets were flooded with cheap fish. Despite the labour required, long-lining did continue in some areas, particularly Gourdon, into the late 20th century.

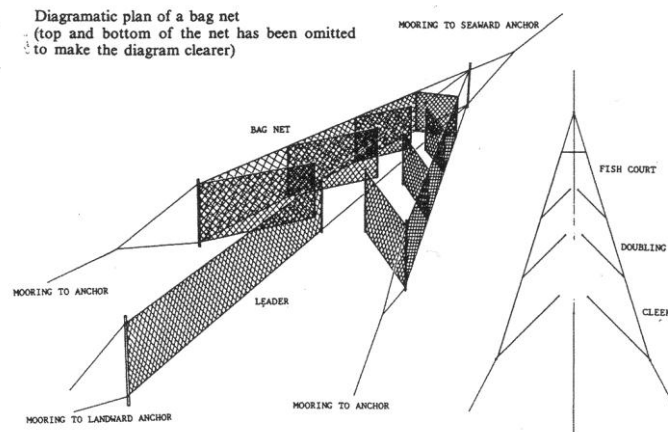


iii. FIXED NETS

These are used primarily in inshore waters and near estuaries up and down the coast to catch salmon. Strips of netting are set on the shore at low tide in shallow water so as to form an enclosure with an opening facing towards the beach. The fish swim in towards the shore with the incoming tide and are then trapped by the nets as the tide recedes. In all cases the net is heavy enough to guide or hold rather than to enmesh the fish.

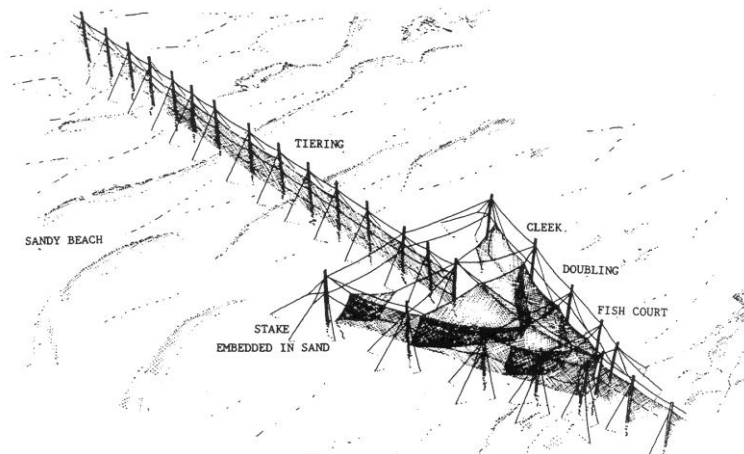
Bag Nets:

This may be defined as a net extending from the shore, suspended from floats and anchored in position. A leader up to 120 m long guides the fish into the trap compartments.



Stake/Fly Nets:

This is a curtain of netting fixed on stakes on the foreshore. The fish are directed along the leader and are trapped in pockets set at intervals at the far end.



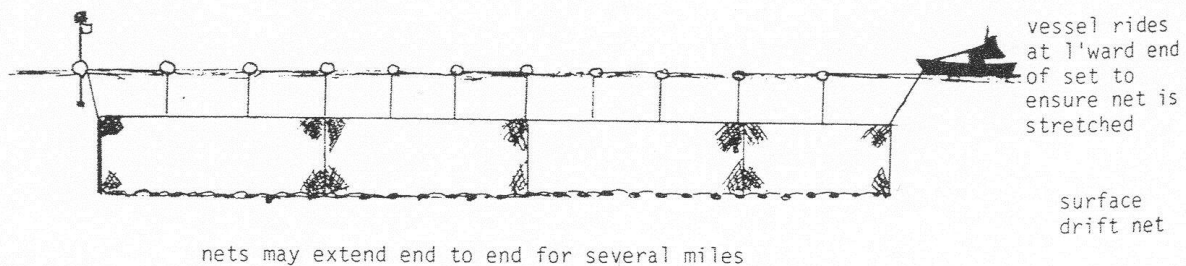
Jumper Nets:

These are a type of fly net in which the netting is fixed only at each end and is allowed to float up and down with the tide.

Salmon was commonly sought in the Solway, Tweed and around Montrose. There are now very few fishers of wild salmon left owing to the competition from cheaper farmed fish pricing them out of the market.

iv. DRIFT NETS

This was the traditional method used for catching herring. Herring and other pelagic fish cannot be caught by line as they have soft, fleshy mouths which a hook would tear as it was hauled in. Instead, a long net in the form of a curtain was suspended from corks floating on the surface. At either end was a buoy which located the net, while its lower edge was held down by a heavy rope which also served to haul in the catch. The fish were trapped by the gills as they swam against the net.



Once the net was shot, the drifter lowered the foremast (if she was fitted with sails) or again, shut off all power (if she was steam-powered) and, lying with her head to the wind to minimize rolling and disturbing the nets, drifted with the tide for two to three hours before hauling in the catch. Fishing took place at night when the fish rose to the surface to feed and the boats would race back to port in the early morning.

This method owed a lot to chance – the fishermen had to place the net in the midst of a shoal of herring for it to be successful – there was no bait to lure the fish. Certain tricks such as watching the behaviour of sea birds or looking out for a certain oily sheen on the surface of the sea were used to locate a shoal. Later, technology in the form of echo-sounders helped fishermen to find shoals of herring.

Drift-netting was also labour-intensive as the early nets had to be hauled on board by hand and the fish shaken out into the hold. The introduction of cotton in the 1860s made this work easier as cotton was a lighter fibre than the flax used previously, but it also required more maintenance and treatment between trips to prevent it rotting. It also encouraged boats to carry larger nets to increase their catching ability. These could be hauled with the aid of steam or later powered winches.

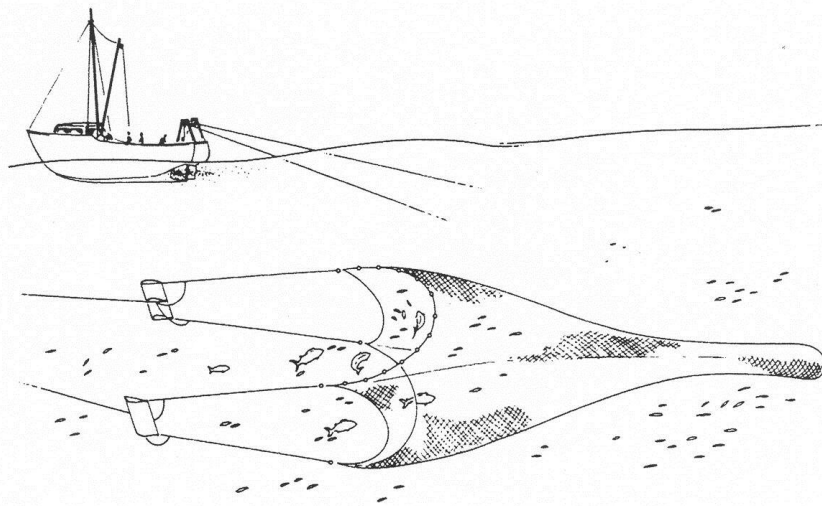
Although results were unpredictable, drift-netting could be very effective and was the basis of the late 19th and early 20th century herring boom. It is argued that the uncertainty of the drift net had a positive aspect - later methods of trawling or pursing for herring are much more destructive to fish stocks as even the smallest fish are taken.

V. TRAWLING

This is the principal method of catching white fish such as cod, haddock etc. and was introduced into Scotland from England in the late 19th Century. The Scottish Fishing Industry, however, did not generally accept it until it was combined with steam power a few years later.

The trawl net is a bag that is dragged through the water scooping up its catch of fish. The mouth of the net is kept open by means of either a metal frame (beam) fixed along the top edge or by otterboards fitted on either side. Sailing boats used the beam trawl method while otterboards were introduced with steamers in the 1880s. Here, the bottom edge of the net is weighted by bobbins i.e. great rollers, while the top (headline) has floats attached.

When being dragged the net takes on the shape of a flattened tube with extended wings which guide the fish into the mouth - these wings also serve as points of attachment to the trawling lines. The net is usually wider than the stern of the trawler, the wings being kept open by the pressure of the flow of the water on the otterboards.



Mid-water trawl.

As the net is hauled in, the fish collect in the bottom (cod end) and are winched on board the boat. This part of the net has to be made of particularly strong twine to withstand the weight of fish inside it. The cod end is released and the fish pour into the hold.

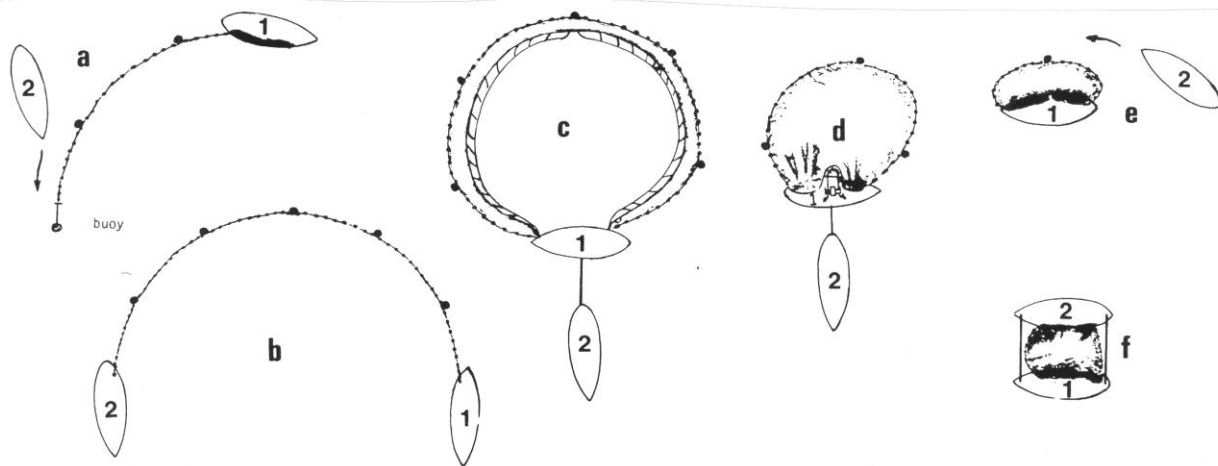
This mode of trawling was adapted to a method known as a pair trawl towed, as the name suggests, by two boats. As a result, trawlers working in pairs can use much larger nets than can single boats, and can therefore catch as much as five times the amount of fish.

Originally used to catch fish at the sea bottom, trawling has been adapted for use at a variety of depths – e.g. mid-water trawling for surface feeders such as herring and mackerel using a lighter net. Recent years have seen much controversy about mesh sizes and regulations have been imposed to ensure that small fish can escape trawl nets so that fish stocks are protected.

vi. RING NETTING

Ring-netting developed in the sheltered waters around Loch Fyne in Argyll and was used to catch herring. The Clyde had developed into a successful fishing area supplying the urban centres of Glasgow and Strathclyde with fish caught locally and around the Northern Isles. Large scale drift-netting was not suited to the confined waters of the lochs so ring-netting was developed in the mid 19th century. The method involved surrounding a shoal of herring with a net and then pulling the ring tight to trap them. Firstly the net was shore-based, then operated by two boats working together.

A ring net consists of five panels – the wings, shoulders and bag, each with a canvas float attached. It hangs vertically in the water where the wings and shoulders serve to guide the herring into the bag. The two boats would sail to the fishing ground where one would remain at a certain point with one end of the net. The other would sail round in a circle, shooting the net as it went, until it rejoined the first boat. Both crews would then board one vessel to haul in the nets. The fish are trapped by the tightening circle and are forced into the bag. They can then be taken out using a smaller scoop net.



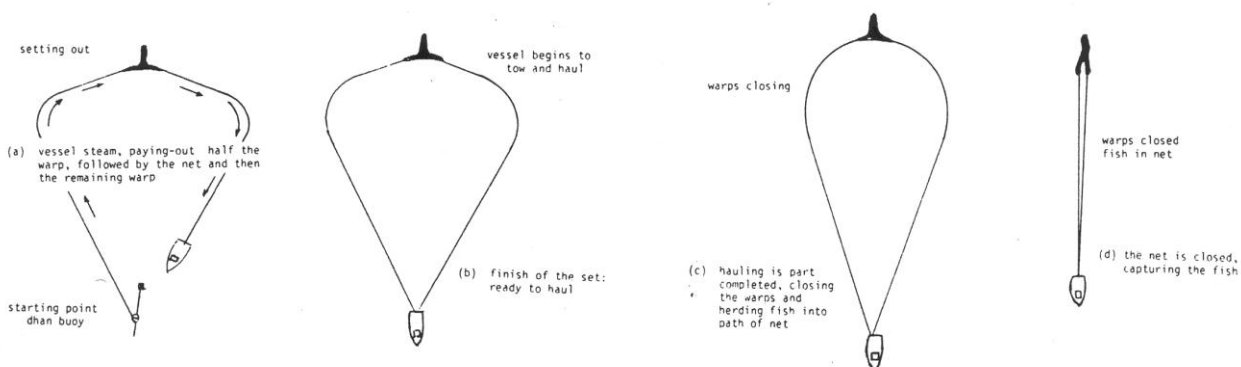
This was cheaper and more efficient than drift-netting but concerns over the effects on fish stocks were raised from the beginning. Following conflict with other fishermen, the method was banned in 1851. The ban was largely ignored and was lifted in 1867, from which time ring-netting dominated the Clyde and spread to other sheltered waters such as the Forth.

By the 1920s, ring netting was carried on extensively in Loch Fyne, using the distinctive Loch Fyne skiffs. The first purpose-built motorised ring-netter, Falcon, was built in 1921 by J N Miller of St Monans for Robert Robertson of Campbeltown and became the template for all those that followed. To operate the nets effectively, the boats need to be light, buoyant, speedy craft, able to turn quickly and able to lie alongside their partner at sea. The main innovation was the canoe or cruiser stern which was more rounded than a Fifie stern post and so made the boat more manoeuvrable. The new Nabbies also had a rounded forefoot, full deck, wheelhouse and auxiliary ketch rig. A good example is the Museum's Lively Hope built in Cockenzie in 1936.

vii. SEINE NETTING

The seine net originated in Denmark but it was not used in Scotland until the early 1920s when its potential for increasing productivity in the Scottish Fishing Industry was realised. After the collapse of the herring markets in 1919 (following the Great War and Socialist Revolutions in Eastern Europe), many fishermen were looking for some other sources of income to see them through the summer months. Their boats had now been fitted with expensive internal combustion engines and could not be allowed to sit idle.

The seine net is a drag net used to catch white fish. The net mouth is kept open by weights at the bottom and floats at the top. Long lines are attached to wings at either side of the mouth. The boat will shoot one of these lines, attached to an anchored marker buoy, when it is broadside to the flow of the tide. The boat then moves away from the marker, paying out the line until it is some distance downstream. Then the net is shot and the boat returns to the marker buoy, completing a triangular course, leaving the open net behind it. The vessel picks up the marker and hauls both lines in together, closing the net around the fish as it is raised from the seabed.



One or two difficulties did arise, however. For example, although the power was there to pull in the nets, a very much heavier anchor was needed to hold the boat in position against the pulling power of the winches and the tide. Hauling the net was, therefore, difficult. Later the Scots developed a variation on the method known as fly dragging. Here the boat picks up the marker buoy (dahn) and, instead of hauling in the net from a stationary position, moves forward. More engine power is needed for fly dragging than for anchor fishing but the method could be used in shallower water nearer home. Trawling was not allowed within a three-mile limit from shore; however, if used by a boat under 40 foot long, the seine net could be used right up to the coast.

Boats from Moray and North East Scotland were the first to adopt the method. Seine-netting was profitable and saved the hard work of baiting lines. At first, converted sailing boats were used but, from the 1920s, purpose-built seiners were developed with corresponding deck machinery such as a powerful seine net winch invented by C Paterson of Macduff. This equipment was relatively cheap to buy and encouraged many fishermen to take up the new method. From 1927 to 1938 the total landings of fish by seiners increased from 72,431 cwt (1 cwt = approx. 50 kg) to 259,159 cwt. By 1963 the total catch had reached 1,780,710 cwt.

viii. PURSE SEINE NETTING (PURSING)

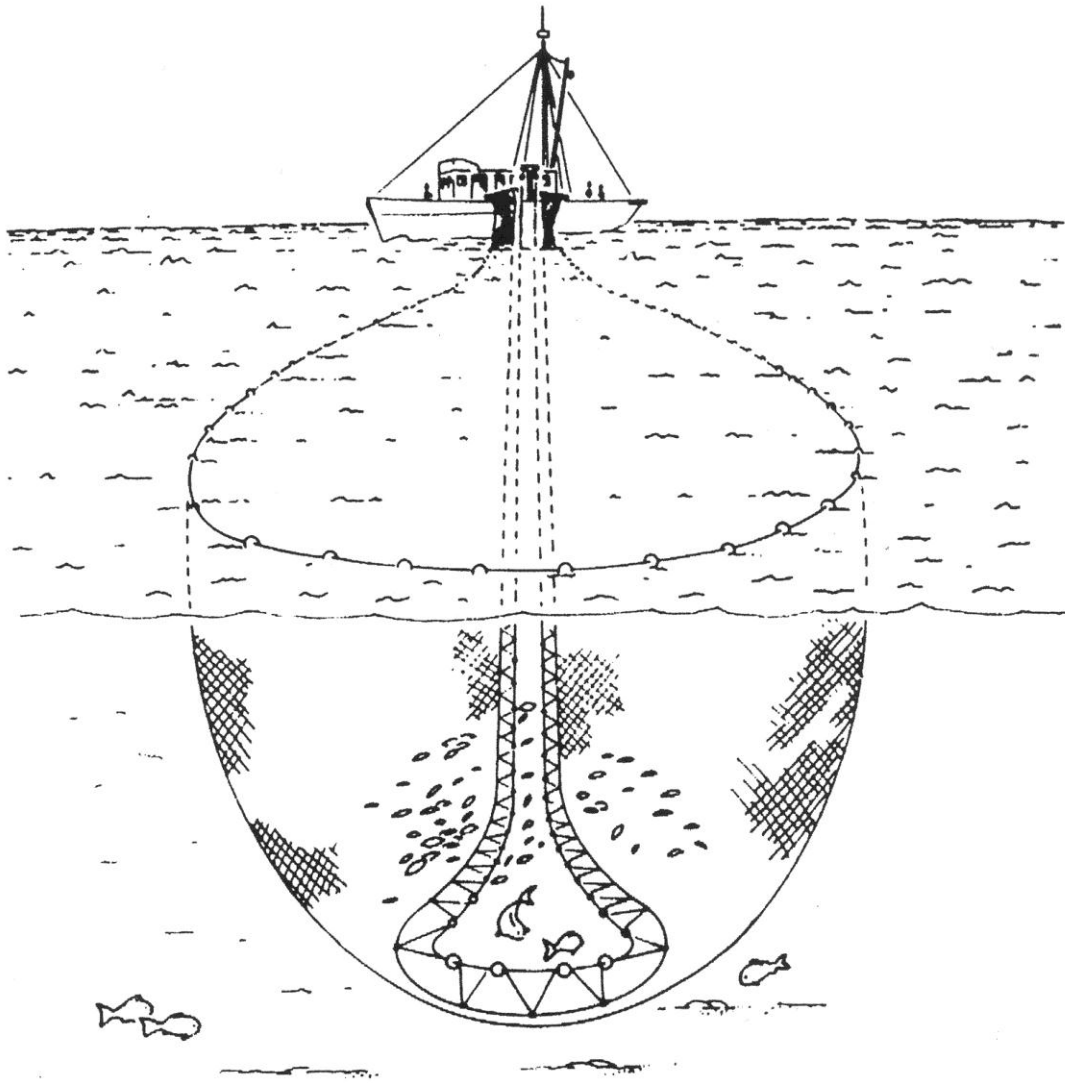
The purse-seine net is the principal method used today to catch pelagic fish e.g. herring and mackerel. The nets are lightweight synthetic material, usually nylon or high-density polypropylene, and they work on the principle of a drawstring purse. Thus, a low net is set to form a wall of webbing around the fish to be taken, the top of the net lying on, or just below the surface. When the net has circled the shoal, its bottom is drawn together so that a pond of webbing contains the catch, the pond becoming smaller until the fish are gathered alongside the vessel. They are then hoisted aboard.

The purse-seine net is enormous, the length being equivalent to three football pitches or the area of St. Paul's Cathedral. The mesh size of the nylon or polypropylene net is regulated by the European Union to conserve fish stocks. A net may be made up of more than three miles (4 km) of synthetic fibre, requiring approximately four tons (2 tonnes) of lead to sink it. The nets are constructed in panels to permit of easy repair and have reinforcing bars of heavier twine in every panel. The cork-line running along the top of the net has large numbers of floats attached to it. This holds the net just below the surface, whilst the leadline with its lead weights runs along the bottom to sink the webbing and keep the net vertical. A purse line runs through rings connected to the leadline by short lengths of rope; the purse line is pulled through the rings to close the bottom of the net.

This method is normally used to catch pelagic fish but, in the case of cod, the net can be sunk so the bottom is on the seabed with the top well below the surface.

Purse-Seining was introduced into Great Britain in 1966 at a time when the continuing failure of the drift net was forcing skippers to look for an alternative. There was a slow start to the adoption of this method of netting but as skippers became more interested, the number of purse-seiners steadily increased until the fleet stood at 50 or so. Since 1967, Pursers have been made of steel, gradually increasing in size from 80ft to 200 ft long, carrying refrigerated water tanks. They are very versatile and can be adapted for pair trawling for herring, sand-eel, cod, and mackerel making pursers viable all year round. Most have a crew of twelve.

Purse-seiners catch huge quantities of fish - modern pursers take a total of at least 1100 tons of fish into their refrigerated tanks. These catches are mainly for human consumption and also for processing into meal and animal feed. Over the years there has been much criticism of them being too efficient in their huge catches thereby leading to overfishing. These threats led to a strict licensing system by the E. E. C., involving imposed quotas. Another restriction is that there is no system of grants being available for the purchase of Seiners, the cost of which can be up to £6 or £7 million.



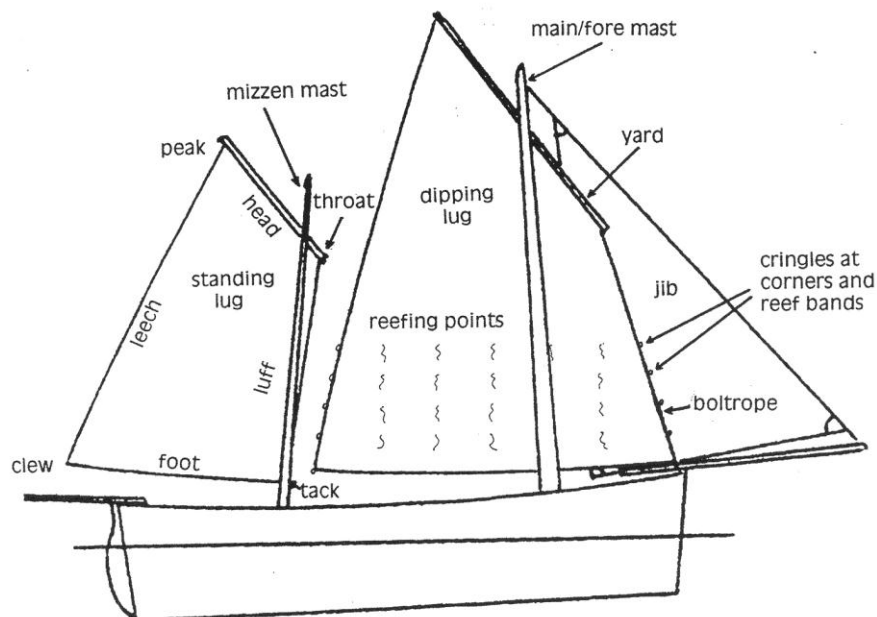
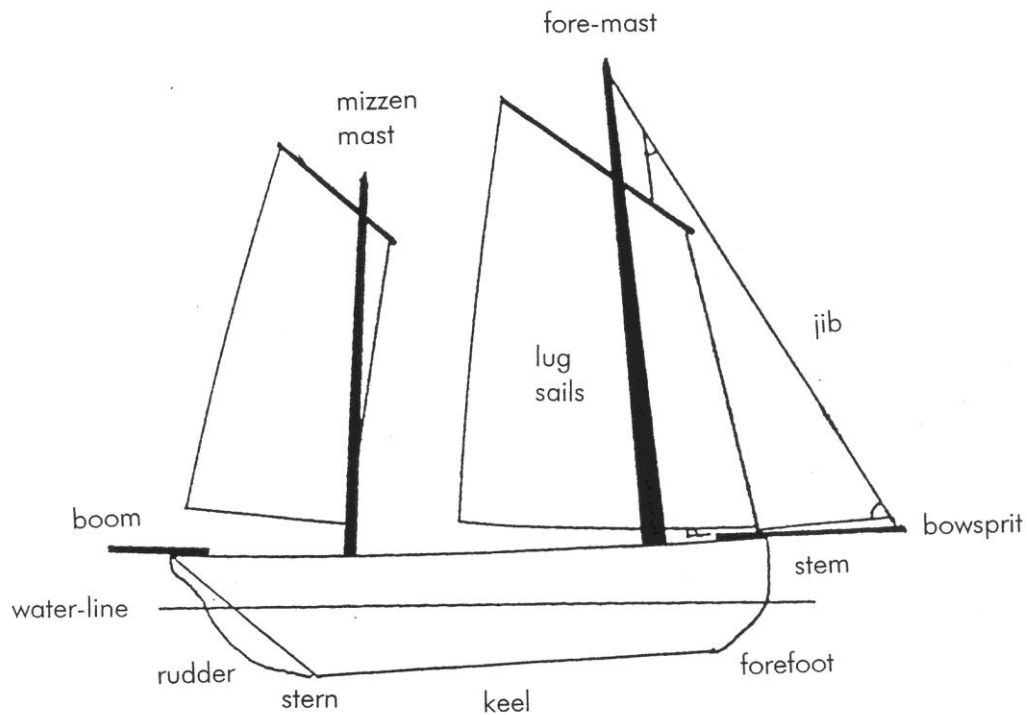
Purse seine.

FACTSHEET C

FISHING VESSEL TYPES (Sail, 18 -19th centuries)

Although there were many local variations in Scottish boat design, there were a number of main types which can be identified. Some were detailed in a report by Captain John Washington in 1848. Smaller versions of the large vessels are known in Scotland as yawls or yoles, the word meaning small boat.

Parts of a Boat:



BOATS OF THE NORTHERN ISLES:

These vessels were developed in Orkney and Shetland and used mainly in Northern fishing waters. The boats were pointed at both the bow and stern - being known as double-ended, and raked both fore and aft. This was reminiscent of the long historical connections of Orkney with the Vikings, indeed many boats were imported in kit form from Norway, there being a shortage of timber in Orkney and Shetland.

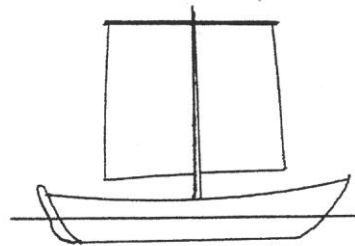
The main variations were a **sixern**, **fourern** and **yole**, the design being largely identical in each save for the overall size. A sixern which, as the name suggests, was powered by six oars, was the largest and quite capable of handling the open North Sea and Atlantic. The yole was a smaller boat used for inshore fishing amongst the voes and skerries of the islands. The flexible, light build made them excellent craft at riding the waves and bending with the forces of the water. Their simple rigging and square sail took great skill to operate.

Dimensions of a yole: Length - 19 feet (6 metres) average
Beam - 9 feet (3 metres) approximately.

This 2:1 Ratio resulted in plenty of room for gear (i.e. nets, ropes etc.).



Fair Isle skiff, c.20 feet (6.1 metres).

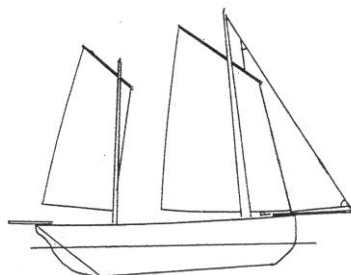


Sixern, c.36 feet (10.9 metres).

BOATS OF THE EAST COAST:

Scaffie

From Wick to the southern shores of the Moray Firth, the Scaffie was favoured. These boats measured 20 to 40 feet (6 to 12 metres) in length and had a curved stem and forefoot, and a very sharply raked stern. This made the keel relatively short and allowed the boats to turn easily in narrow waterways. Normally they were rigged with one or two masts (even three on the largest vessels), with lug sails. They were very light so that they could be beached easily by their five-man crew. They had a larger area of working space on board for their size but they lacked the Fifie's ability to run with the wind.

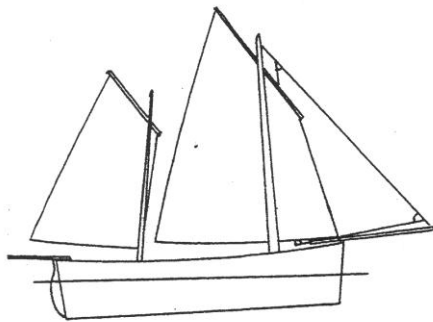


Scaffie, c.42 feet (12.5 metres).

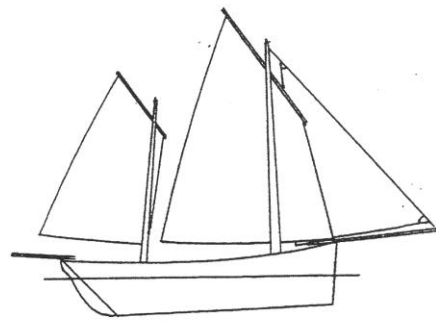
Fifie

Between Aberdeen and Eyemouth, the more heavily built Fifie was most commonly used. The stem and the stern were almost vertical and the tendency was to build them larger than Scaffies - measuring 65 feet (20 metres) or more in overall length. They had a long straight keel and this made them fast, but not as manoeuvrable as the Scaffie. The Fifies had two masts. They used a dipping lug rig set on the unstayed fore-mast and a standing lug on the mizzen. Although this rig was simple, fishermen needed great skill to use it safely. There was nothing to stop them being knocked overboard when the sail was swung round when the boat was tacked. In Shetland, the smack rig was preferred as it was easier to handle in restricted waters where frequent turning was required (the lug sail had to be lowered and raised on the other side of the mast every time the boat tacked).

It is interesting to note that neither Fifies nor Scaffies were decked until 1885 - it having been considered that fishing boats should be open - but it was due to the persistence and example of the RNLi who built a partly-decked boat and proved it satisfactory that fishermen were eventually persuaded to convert to boats which were decked and much safer in heavy weather.



Fifie, c.70 feet (21.3 metres).



Zulu, c.80 feet (24.3 metres).

Zulu

The Zulu type of fishing boat was introduced by William Campbell of Lossiemouth in 1879 with his vessel *Nonesuch*. The vessel was an attempt to combine the best features of both the Fifie and Scaffie and had a vertical stem and raked stern.

The Zulu (so called because of the Zulu Wars raging at the time of its invention) was an immediate success and quickly came to dominate the east coast fleet. There were continued developments of the design: steering wheels replaced the traditional tillers in around 1895 and steam-powered capstans were introduced in the 1880s. The latter took over from hand-powered winches, allowing a greater weight of sail to be handled, and so led to the building of bigger boats.

At their peak, Zulus could reach 80 feet (24.3 metres) in length. The mast was as long as the keel and the boat would be crewed by seven or eight men and a boy. Commercially it was fast, giving a speedy return to port with catches which exceeded the capacities of either the Fifie or the Scaffie.

BOATS OF THE WEST COAST:

Loch Fyne Skiff

These boats were developed in the 1880s to pursue the ring-netting in Loch Fyne. They were around 30 feet (9.1 metres) long with a near vertical stem and sharply raked, pointed stern. A deck provided some shelter for the crew and allowed the boat to sail on longer trips. They were considerably deeper at the aft end of the keel than at the bow and this made for a very handy vessel which could turn tightly. This was ideal for casting the ring net in its characteristic circle.

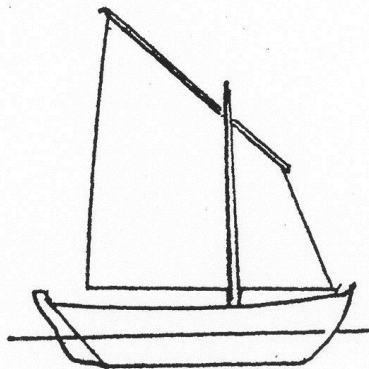


Loch Fyne skiff, c.30 feet (9.1 metres).

Sgoth

The Sgoth (pronounced skaw) was a line-fishing vessel of around 25 feet (7.7 metres) in length built in the Isle of Lewis for working the exposed and dangerous seas around the Outer Hebrides. These specialised craft had to be able to manoeuvre in the restricted waters around the islands and also to withstand the pounding waves of the open Atlantic Ocean.

The Sgoth is more strongly framed than boats of the Northern Isles and has the rounded stern typical of boats of the Western Isles. This shape was difficult to build but gave plenty of buoyancy. Sgoths were often beach-launched and were rigged with a dipping lugsail.



Sgoth, c.25 feet (7.7 metres).

The various species of herring around the British Isles mature at different times of year creating a nationwide pattern of distinct seasons which the fleets followed. There were three distinct seasons around the coasts, a number of fishermen taking part in all three. In the majority of cases, this also applied to the herring lasses who travelled by train, coach or by horse and cart depending on the location and how far these places were from their home base.

The herring season began in late May in the Hebrides and a fortnight later in Shetland. Through the summer, the fleets moved from Orkney and Shetland down the East Coast until they reached Northumberland and Yorkshire by mid September. October to December saw them in Yarmouth and Lowestoft.

Summer Herring

May – June: the season began in the Hebrides, moving on to Shetland a fortnight later

July – August: the fleets took in the whole of the East Coast of Scotland, moving gradually southwards

Autumn Fishing

September – October: boats and curers would travel to the Yorkshire ports of Whitby and Grimsby or to the Isle of Man

November – December: from the 1860s, Lowestoft and Yarmouth in East Anglia were included in the year

Winter Herring

January - March: some boats also took part in a winter season - herring spawning in the Forth, Minch, Irish Sea and off Northern Island were fished at this time

Many fishermen would return home at the end of the autumn season to re-equip their boats for line-fishing over the winter. White fish e.g. haddock and cod could be caught all year round. During winter months, fishermen worked sma' lines close to the shore and during the summer months, many of them would sail further afield to deeper waters and fish Great lines (Gartlins). Others would use the winter to repair nets and gear ready for the next year's herring harvest.

FACTSHEET E

HERRING LASSES

At the end of the 18th and the beginning of the 19th centuries, there were four main industries in Scotland – fishing, coal-mining, agriculture, and heavy engineering, which included ship-building. It was in the fishing industry that women played a most important part.

As the herring industry expanded, fleets would follow the shoals around the coasts of Britain. Thousands of women and girls travelled all over the country with them to work at the gutting and packing of the herring. They were recruited by the curers and worked for them, together with the coopers who made the barrels, in the curing yards at each harbour.

The women's job was to gut the fish and to pack them into barrels along with coarse salt which acted as a preservative. Their work was done out-of-doors at troughs (farlans) and the dress for this job consisted of an oilskin apron coming down as far as the ankles, protecting a cotton blouse and also a light woollen short-sleeved cardigan or sweater. On their feet they wore hand-made, pull-on knee-length boots. These boots and aprons were always dropped off before the women entered the house. On their heads they wore small shawls, tied under the chin. They worked in teams of three – two gutters and one packer.

The daily routine for a fisherlass was thus: they would be woken at 5 am by a cooper banging on the door and calling "Up girls and tie your fingers!" This referred to the bandages they tied round their fingers and hands to avoid the fish from slipping from their grasp during the gutting process. Over their morning cup of tea they tied these cloots which also served to protect any self-inflicted wounds from turning septic. Considering that their work rate was **60+ fish gutted per minute**, the risk of wounding was high!

The hours that the girls worked were long, the girls often having to work well after midnight for each catch had to be salted and packed within 24 hours of landing. Having completed the bandaging, they went off to the quayside and worked until 8.30 am when they breakfasted on porridge, steaming hot tea and bread and jam. A hot lunch followed about midday and thereafter they worked until tea-time at around 6 pm. If the catches were good, work continued until late in the night when oil lamps lit the farlans. Should the catches be small and slow in coming, many of the women brought along wool for socks, jerseys etc. to knit while they waited.

There was no doubt as to the camaraderie that existed among the girls and the men alike. Stories are told of the girls singing at their task and, as they shifted from one quayside to another to deal with the latest catch to be landed, they carried on with their knitting as they walked. There was indeed a community spirit in being in these fishing towns and villages. One of the East Neuk sayings goes "yir ain fish guts tae yir ain sea maws"! which exemplifies the sharing among one's own folk.

Although it was demanding work, the girls knew how to enjoy themselves in the limited leisure time they had. In Shetland, for example, there would be music and dancing in the lodging huts at the weekends, the music being provided by fiddles or concertinas brought by the fishermen. Or the girls would go round the shops, buying what they could afford for their providin' (i.e. their fu kist or bottom drawer). This may have included such things as jugs, vases, or dinner-sets for which they used such funds as they had been given for, the system of payment was that they were only given part of their wages, the rest of their accumulated monies being given to them at the end of the season. Many of these women and girls would have to take home their earnings to augment family finances.

Earnings were based on work done e.g. 8d per barrel filled by a team, divided thus - 3d each to the gutters and 2d to the packer. As boats did not go out on Sundays, there were no herring to gut on Mondays, so the girls checked barrels filled during the previous week. The melted salt allowed the herring to sink so the barrels were topped up with fish and, if need be, by emptying a barrel to fill up others. The payment for this task was 3d per hour. From this they had to pay for their own clothing and lodgings although the curer would provide oil-skin aprons and their knee-length boots. Generally, they had anything between £17 and £20 to take home at the end of a season, also being paid a retainer of between £1 and £4 in respect of a contract at the start.



Herring lasses and curers at Wick [3186]

FACTSHEET F

LODGINGS FOR HERRING LASSES

In the resorts of Yarmouth and Lowestoft the herring lasses lived in lodgings in town. While landladies could see the benefit of earning income from lodgers in the off-season, the price was the mess caused by the herring. Yarmouth landladies would lift carpets and cover walls in brown paper to counteract the lingering smell of fish. All would be returned to normal for the summer tourists once the lasses had gone. If a lass found good lodgings she would try to return to the same place each season.

In Shetland, however, they lived in purpose-built, wooden huts at the curing stations. The huts were watertight, each being raised from the ground with steps leading to the doorway. The living quarters could be primitive - six girls shared a hut, with beds and a coal or wood-fired stove, but no other furniture, except in some cases, a table. Their seats were the kists they had brought along containing their personal belongings. Sometimes, these also served as tables. The story is told of one group of girls who went in search of some unoccupied huts and found a large flat board, which, in spite of battling against a strong wind, they carried back and laid across two kists.

Where beds were provided these were fixed well up on the wall so that there was plenty of space underneath where the kists could be stored. A curtain over the bunks provided some small measure of privacy. If there were no beds, the girls used the warm blankets they had brought with them and "dossed down" on the floor. Empty mattress covers were provided and the girls stuffed these with straw. There being only two beds per hut, each team of three took it in turns to take over when the previous lot had had their rest.

There was always a fire in the stove, this providing not only warmth but also the heat for cooking, and boiling water for the welcome cups of tea, not to mention hot water for washing. Each hut had a corner curtained off for washing termed a *Glory Hole*. Sometimes an extra hut was provided where it was possible to do laundry, and it was also from there that the girls had to carry water to their own huts. There could also be a dry toilet placed at some distance from the huts; the girls had to empty this themselves - usually over rocks into the sea nearby.

The women took it in turns to light the fire, fetch water and do the cooking for the hut. As far as provisions were concerned, one of the girls may have been detailed to do the messages but, because the rates of pay were relatively low, arrangements were more often made for a message boy to deliver orders. The account could be settled at the end of the season.

At weekends they would bake buns and so on to entertain the fishermen. The crews would often be men from the women's home towns who had also travelled with the fleets. Should such a boat arrive at the nearby pier, there was every likelihood that the girls would be invited on board for Sunday dinner. The social aspect of life in the huts was one of its main attractions and many girls met their future husbands while working at the curing yards.

The period between 1918 and 1939 was a time of mixed fortunes for the steam drifter in Scottish Fishing. 1249 boats had been taken up by the Navy for use as mine-sweepers, tenders and patrol vessels during the First World War. New steam drifters built by the Admiralty to replace those lost, and grants for refitting boosted the fleet after 1918.

Steam drifters returning their home ports after the War had to have extensive refits due to many of them having been to foreign ports, mainly in the Mediterranean or Adriatic. Because of the warmer waters the boats suffered severe bacteriological attack so that planking along their bottoms had to be renewed. Some had actually to be scrapped and replaced by newer, more modern boats. From the 1920s, steel hulls began to replace wood, partly because of the scarcity of wood following the war, in contrast to stockpiles of steel built up for the war effort. Fishermen also preferred the steel vessels as they were stronger and so could be used for great line-fishing in the off-season.

The mode of fishing was as it had been previously and the fishermen soon fell back into their accustomed jobs. Normally, during the first week of January, the first drifters to start fishing were those from the East Coast, in the main from the East Neuk - vessels with the KY registration were a familiar sight on the fishing banks.

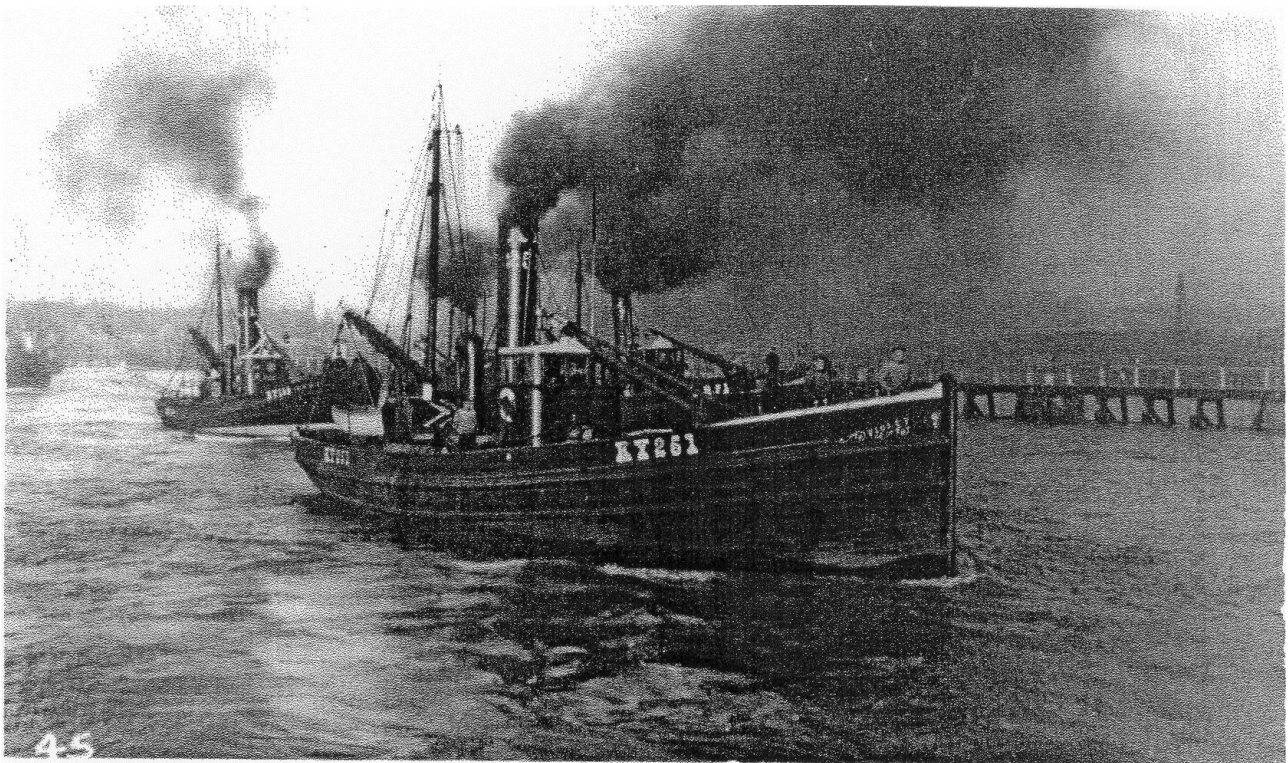
Herring was plentiful in those days with the result that many boats from East Anglia were to be found fishing in the North Sea but, these English boats were not allowed to land their catches at any of the East Neuk ports so as a result had to land their catches at Methil or Leith.

The standard drifters from the East Neuk stopped their fishing for herring before Lent and went over to great line fishing for white fish - not because of any religious significance but rather commercial considerations (white fish commanded a much better price then!). The boats, usually working 10 to 12 day trips, landed their catches in North Shields. They were not only attracted by the Fish Market but also the coaling facilities (coal was cheaper in the Newcastle area). By the mid-thirties, line -fishing was beginning to decline and so some of the boats were adapted to trawling, some even being fitted out as seine-netters.

Summer saw the herring draves on and fishermen went with their boats to Fraserburgh and/or Peterhead. The men came home on Saturday in specially chartered buses, returning to their boats on Monday. It was always obvious which boats had been to Lerwick for the fathers invariably returned with Shetland pullovers for the children to wear to school. Other boats went to Stornoway, following the herring to Mallaig, Oban and Peel.

In the second half of September the boats were home for a couple of weeks. Then they were painted and made ready for the Yarmouth fishing. Some of the men chose to go to the Hebridean fishing grounds off the Minches since herring was running in plenty at that time. Herring was publicised in the U.K. as a nutritious food by Madame Prunier who sponsored a trophy for the largest haul in a single night. In 1936, the award's inaugural year, it was won by the Boy Andrew BF 592 of Portsoy for a catch of 231 crans. However, this could not compensate for the loss of foreign markets following the War and prices were generally low. This, added to the high cost of a steam drifter, made them uneconomical and so fewer and fewer were built.

The general economic depression of the 1930s also affected fishing and, with little spare income to spend on new vessels, the fleet was aging. With the outbreak of the Second World War, 437 of the boats were commandeered by the Royal Navy and pressed into wartime duties. Many of the fishermen were drafted into the Royal Naval Reserve or into the Merchant Navy. When they returned, the more versatile motor boat was firmly in place at the forefront of the fleet.



The *Violet* KY251, *Scot* KY139 and *Rosehall* FR71
Going down Yarmouth River in the 1930s [1092]

Perhaps because of the hazards of their occupation or their mutual reliance, fishing communities developed their own unique customs and folklore. They were tight-knit and conservative and their names, food and mode of life were different from the surrounding population. Even between different fishing villages there was often rivalry and it was rare for them to marry outwith their own community.

Because of the dangerous nature of their work, they were unusually superstitious. Thus there were words considered as very unlucky e.g. to mention the word minister was never done - he was called the man in the black coat, the words rabbit, salmon (red fish), rat (lang tail), pig (curly tail), and salt were amongst the most forbidden words. Should the men encounter a hare, a dog, or a person with red hair they were likely to refuse to put to sea and, if a rabbit, hare, dove, or pigeon were found on board they would most certainly not set out. The antidote to bad-luck words was to touch cauld iron.

Other customs were associated with sailing or fishing itself. At Nairn it was unlucky to shoot nets on the port side, to taste food before the first fish was caught or not to take blood from the first fish. In some places fights were started so that blood could be shed before the fleet went to sea. Some boats were thought unlucky in themselves. One way of avoiding bad luck was never to row against the sun (anti-clockwise) when leaving harbour.

Rituals and charms were thought to influence the weather. It was believed that a wind could be whistled up or that it could be untied from special knots in a piece of rope - one knot would give a breeze, the second a gale and the third a storm. A change of weather was always expected on a Friday.

In some areas, other days of the week had special significance, being either lucky or unlucky. Most communities did not fish on a Sunday for example, although it was considered a lucky day. Work begun on a Saturday was thought to take seven more Saturdays to complete while jobs started on Mondays would be finished quickly.

There were initiation customs before a lad could become a fisherman and, even today, customs and superstitions influence aspects of a fisherman's life. Echoes of the old ways are still found in the villages today.

FACTSHEET I

EAST NEUK WEDDINGS

The time between the end of the Yarmouth fishing and the appearance of the winter shoals was a favourite time for weddings and the brides were expected to come home well provided after a season's work in the curing yards.

A wedding was always signalled by the raising of a red, white and blue flag on the groom's boat. The bride would have sewn the wedding flag and it was flown from the mast until the day of the wedding. The state of the flag when it was lowered was considered an omen for the marriage. This custom is still practiced in some areas.

A day or so before the wedding, when the excitement was beginning to mount, there was a hoose-fillin when the women folk went to get the house ready. The kists o' providin' were fetched out from below the beds containing the lovely china and glass the bride had been buying piece-by-piece ever since she had left school and whilst at the gutting, or had been given as presents. These were put out on the shelves. It was the bridesmaid who was in charge, as it was forbidden for the bride to see the house ready until she was married. Honeymoons were almost unknown but, on the first Sunday after the wedding, the newly-weds would go to the church for their kirkin'. There was no special ceremony, but the whole congregation expected them to be there - the groom probably went back to sea on the first Monday-morning tide.

An East Neuk bride did not even in past times buy her own wedding dress, this duty being left to the groom's family who had been laying money aside to pay for it (this was called putting past money). Records state that the dress was rarely white - it had to be serviceable, to be worn on Sundays in the coming years. Changing methods in fishing brought about a greater independence among women and, as a result, the brides-to-be were free to choose their own dresses.

There were very few church weddings and certainly none in a Registry Office. Scots Law permitted them to be married in the Manse, the Town Hall or even at home with the Minister officiating. The ceremony took place on a Friday evening, as men had little time to spare - even for their own wedding! Once the ceremony was over, the invited guests who had been bidden by word o' mooth sat down to a delicious supper, normally purveyed by the local baker. From the supper, several plates of piping hot food were sent out to neighbours and friends who could not be present - the first of the plates was known as the bride's plate, it being quite an honour to receive this. It usually went to someone who it was deemed had no immediate right to be there at the wedding but who had a special place in the family's affections.

After supper more guests arrived, indeed it sometimes being announced by the couple that they would let a' body in. Dancing then followed the feast and this continued into the wee sma' hours.

Fishermen have been wearing ganseys (Guernseys) since about the start of the 17th Century - the design is said to have been developed in the Isle of Guernsey, just the same way that the term jersey originated from the neighbouring Channel Island of Jersey.

Ganseys were knitted in un-oiled, soft, round, dark-blue 4 ply wool on four size 14 needles to make a firm, close fabric that was almost wind and waterproof. They were one-piece garments. A split had to be made at the underarm, the back and the front then being joined on the shoulders with a decorative bar about an inch wide. This shoulder bar was retained even when fashions changed and plainer type patterns were introduced. The sleeves were knitted from armhole to the wrist, there being no sewing anywhere. Repair was therefore easy since it was no problem to pull out a ragged cuff and re-knit the repair area.

The ganseys that were worn by the fishermen were always hand-knitted but there were no written instructions, the designs being copied from existing garments and, in the case of unique design patterns, developed by the womenfolk themselves and passed on to daughters and relations. Some traditions state that a drowned man could be identified by the pattern on his gansey.

The gansey came into its own around the late 18th and 19th centuries when fishing boats followed the great shoals of herring that appeared round the coasts. Women moving from port to port copied each other's designs and could even copy a pattern seen being worn by a stranger in the street.

The designs were simple geometric shapes and were often given nautical names e.g. herring bone, anchor and flag etc. The womenfolk made their own variations even to the extent of incorporating, or alternating, two designs into the same garment. When the number of patterns was investigated, it was found that there were twelve basic patterns but that each was capable of infinite variation.

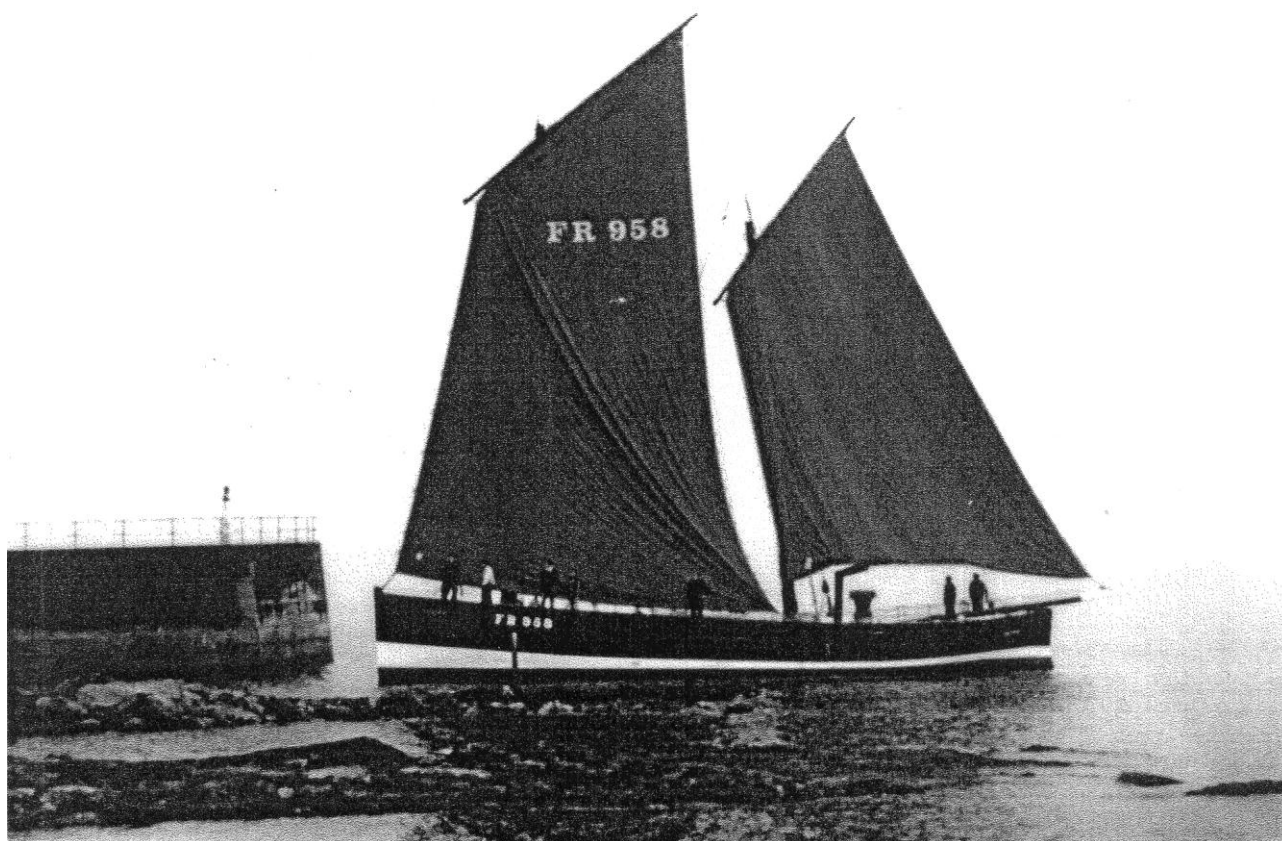
Each man possessed four, or even five, ganseys for general use but habit dictated that one guid gansey was kept for going ashore or away from home, or even for the Kirk on Sundays.

By the early 1930s, patterns began to disappear and plain ganseys became the fashion. Gradually, other colours rather than the navy-blue took over, especially among the younger fishermen. It wasn't to be long before the wearing of ganseys was confined to the older fishermen, whilst the younger men took to wearing pullovers.

FACTSHEET K

THE REAPER

The Reaper FR 958 is the flagship of the Scottish Fisheries Museum. As one leaves the Museum, this boat is usually lying directly in front at the quayside. She is a Fifie herring drifter, an example of the most popular form of fishing vessel to be found around the East Coast of Scotland in the 19th and early 20th Centuries.



The Reaper at Pittenweem, 1992 [93/50]

Technical Details:

Length (overall) 21.43 m
Beam 6.19 m
Loaded Draught 2.62 m

Sailing Rig:

Jib
Dipping Lug - Foresail
Standing Lug - Mizzen

Tonnage: 61.3 tons (DW)
49.15 tons gross
29.04 tons net

Sail Areas:

Jib 62 sq m
Foresail 144.7 sq m
Mizzen 105 sq m

Height of Foremast above Deck 17.39 m
Height of Mizzen Mast 14.27 m

Fishing Gear: Drift Nets & Gartlins

Crew: 8 men and a boy

Brief History of The Reaper

She was built at Sandhaven, near Fraserburgh in 1902, the constructors being J & G Forbes. The registration allocated to her was FR 958 and she was built for a syndicate of four fishermen. One of the owners was William Buchan who was her first skipper and fished out of Fraserburgh in her for some six years or so. Late in 1908 the Reaper was sold to new owners in Shetland when she was re-registered, carrying the new number LK 707. Her new captain was Thomas Moncrieff who was responsible for making one or two modifications.

A few years later (date to be established) she was sold once again to Captain Williamson who skippered her until his death in 1935, but it was under his command she became renowned as a highly successful fishing boat at summer herring seasons. Williamson was a progressive skipper - he had a Gardner Engine installed and reduced her sailing rig to a conventional mizzen riding sail, common to all motor drifters.

During the Second World War, the Reaper was requisitioned by the Admiralty, seeing service off the South Coast of England. One of her duties was to act as a mooring for barrage balloons in order to protect the coast against enemy air attack. After the War she was returned to Shetland whereupon she continued fishing, until, in 1958 she was purchased by Shetland County Council. They had her re-named the Shetlander and took her off the Fishing Register, entering her on to the Merchant Shipping Register. The Council now used her as a flit boat, i.e. one flitting between the Islands carrying all sorts of cargo. In order to equip her for this new role, the boat had to be given a major re-fit which considerably altered her appearance: this refit incorporated various safety aspects as required by the Board of Trade. Another change was the installation of a reconditioned Kelvin 88 Engine. This Kelvin engine remained in use until it was deemed as being unreliable for further service.

Eventually, the Shetlander became quite uneconomical to maintain to the standard required of a passenger-carrying craft; she was withdrawn from this arduous service and subsequently sold to the Scottish Fisheries Museum Trust in 1975.

The modifications that had been made over the years detracted from her original lines as a fishing vessel so, the decision was taken to restore her to her original lines. This restoration work took several years, the work being done by volunteers in the Museum's Boats Club who restored to her the original name of the Reaper, and gave her back her original Registration Number of FR 958. Yearly they sail her to various festivals and open days up and down the East Coast of Scotland and North East Coast of England i.e. following the path of the herring shoals and the fishing fleets of olden times. In doing this and acting as our flagship, this grand old lady is making a very important contribution to the life and work of the Museum.

(These historical notes are taken from a very comprehensive paper written by Dr. Robert Prescott, a member of our Board)

FACTSHEET L

BIBLIOGRAPHY

This bibliography has been prepared for those who wish to study the themes presented in the galleries in more depth. The books listed are available in the Museum's Library and reference numbers are given after every book title. It is pointed out, however, that the list given below is certainly not exhaustive; the books chosen are those which it is believed will give, at least, a further insight into the main topics which have been covered in the Factsheets.

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