The St Ives Fishing Industry

Fishing and mining were until quite recently the traditional industries and principal source of employment in Cornwall, and this was especially true in St Ives. Today however, there is no more tin or copper mining, and the fishing industry is considerably smaller. A hundred years ago over 250 boats and 1500 men fished out of St Ives alone, but by 2009, there were just 581 registered boats and 867 fishermen in the whole of Cornwall.

The huer directing the seine boat.

A seine net enclosing a shoal of pilchards off Porthminster Beach, 1845.

The Pilchard Seine Industry

For most of the period for which records exist, the pilchard seine industry was the main fishery in Cornwall, employing thousands both afloat and onshore. Annual catches at St Ives frequently exceeded the whole of the rest of Cornwall combined, with the largest recorded catch in a single day taken at St Ives in 1847, when over 57,000,000 pilchards were caught. The industry required significant investment in labour and equipment and a considerable amount of coordination to ensure that catches of this size could be efficiently processed and packed as quickly as possible.

Pilchards are a smaller relative of the herring, shoaling in vast numbers and coming into shallow water between August and November when the seine fishery took place. At the heart of the fishery was an enormous seine net, usually 300-450m long and weighing 3 tons, which was carried on the seine boat. A huer was stationed on a vantage point ashore, and when a shoal was spotted, he would raise the alert by shouting "Hevva! Hevva!", and would direct the rowers in the seine boat to shoot the seine net around the shoal. A warp rope fixed to a capstan ashore would be used to gradually draw the seine towards the shore. Finally a tuck net was shot inside the seine, raised, so bringing the fish to the surface, and the fish were dipped out of the water in baskets, transferred to dipper boats and brought ashore.

The pilchards were then transported to the pilchard cellar, where they would be built up into a stack of alternative layers of fish and salt and allowed to cure, a process known as bulking the fish. After about 4 weeks they were washed and carefully packed into barrels or hogsheads, each containing at least 2,950 pilchards. They were pressed using pressing poles and pressing stones to extract the oil, a valuable by-product, and the hogsheads were then sealed, ready for export mainly to Italy.

By the end of the nineteenth century this process had been industrialised, the bulks replaced with large pickling tanks, and screw presses used instead of poles and weights. However pilchards were now coming inshore less frequently, and the last recorded seine catch at St Ives took place in 1908. Pilchards continued to be caught off-shore by drift netters, and much of the catch was now canned. However they gradually fell out of fashion, demand fell, landings dwindled, and the last remaining salt pilchard plant, the Newlyn Pilchard Works, finally closed in 2005.

Over the past few years there has been a considerable revival in pilchard sales led by its rebranding as a Cornish sardine and the fashion for Mediterranean cooking. Although they are now caught offshore, the fishing technique is surprisingly similar. Fishermen use a ring net instead of a seine, the huer is replaced by an electronic fish-finder, the onshore capstan by hydraulic net haulers and the fish are dipped out of the net using a brailer. This is a successful sustainable fishery, pilchard stocks are healthy, and the name Cornish Sardine has now been given EU Protected Status.

Using baskets to transfer the pilchards to the dipper boats.

Dipper boats in the harbour. The fish are being transferred to gurries ready for transporting to the cellars.

Maid Betsy's cellar, next to Porthmeor, showing a bulk of pilchards, and in the foreground the gurries used for ferrying them from the harbour, and hogsheads. 1871.

Images courtesy St Ives Museum (unless otherwise stated).

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St Ives pilchard boats heading out to sea.

The Drift Net Fishery

Until the 1950s the technique of drift netting had changed little from that developed by 16th century Dutch fishermen, where the drift net was suspended from the surface of the water, and acted like a giant curtain. The boats, called drifters, were originally sail powered, but these later gave way to steam and motor engines. Traditionally drift nets were shot at dusk since the fish would rise to the surface at night, and the boat would be allowed to drift so keeping the net taut. The nets were hauled in at dawn, the fish shaken out, and taken ashore.

For over 200 years the Cornish lugger was the workhorse of the Cornish fishing fleet. The smaller 32' to 38' drifters with 4 crew were known as pilchard boats, and they fished out of St Ives principally for pilchards and herring. The larger 43' to 50' luggers with 7 crew fished for mackerel and herring were called mackerel boats, and could travel further afield. In 1874 the St Ives fleet comprised 69 mackerel boats, 143 pilchard boats and 60 smaller boats, employing a total of 1551 men, and these numbers increased following the decline in the seine industry.

Pilchards can be caught off Cornwall for most of the year, but the main drift netting season was between July and December when the fish assembled in huge shoals. There were constant disputes between the seiners and drifters and the industry was the subject of a number of Acts of Parliament, and reflecting the relative importance of the two fisheries, these Acts supported the seiners by prohibiting inshore drift net fishing. The problem was only finally resolved by the closure of the seine fishery.

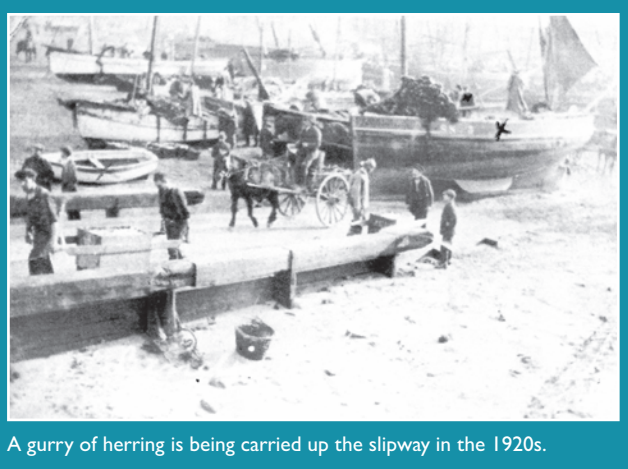
Herring follow an annual migration cycle from feeding grounds to spawning grounds. As spawning approaches they gather in large shoals which is when they are usually caught, and the different herring stock spawn at different times of the year, giving rise to a seasonal fishery. The North Cornish herring season lasted from October to January, but the larger mackerel boats took advantage of the extended fishing season elsewhere by sailing for the Irish Sea in early June, passing through the Forth and Clyde Canal in July, and then sailing down the east coast and arriving back in September. Herring became the most important fishery in St Ives following the decline of the pilchard seine industry, but this also came to an end in the 1930s when steam trawlers damaged the spawning grounds.

Mackerel was also an historically important fishery. The mackerel boats fished for mackerel from January until June or July, before sailing to the Irish Sea in search of herring, but the arrival of steam drifters signalled the end of the sailing luggers. Mackerel fishing reached its peak in the 1970s, but then industrial trawling led to a collapse in fish stocks. A ban on trawling allowed a recovery in mackerel, and now most mackerel are caught by hand-lining, a very sustainable and low impact fishery.

The St Ives drift net fishery was second in importance only to the pilchard seine fishery, but in contrast to the short seining season, it offered employment almost all year round. The principal fish caught were herring, pilchard and mackerel, each having its own season and requiring a different net.

Packing herring into barrels in front of The Sloop.

A packed harbour during the herring season.



A gurry of herring is being carried up the slipway in the 1920s.

The Endeavor SS 568 leaving St Ives for the North Sea.

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Long-lining and Crab Pots: using baited hooks and traps.

Long-lines and crab pots are known as static gear and employ similar strategies. They both use bait to attract the fish or shellfish, and the fishing gear is deployed on the seabed, left for a period and then recovered.

Long line fishermen and dogfish.

Cutting up bait aboard a long liner.

David Harrison making a willow crab pot at Porthmeor.

Long-lining

Using baited hooks is one of the oldest kinds of fishing, and long line fishing uses a long line with cords branching off it, each ending in a baited hook. In St Ives, sand-eel were caught using a draw bait net, a miniature seine net, and used as the bait to catch rays and dogfish. This fishery took place in the summer on the sandy grounds along the shore west of St Ives and was sometimes called Summer's Raying.

In the days of sail, only small boats could operate long lines as they usually had to be rowed along the line. Fishermen used four oared gigs up to about 28 feet long, working small lines called tayckle which was baited into three sided boxes called rips. The line was carefully coiled into the box and the baited hooks neatly arranged in order along the back so that the hooks would not tangle up when the lines were shot.

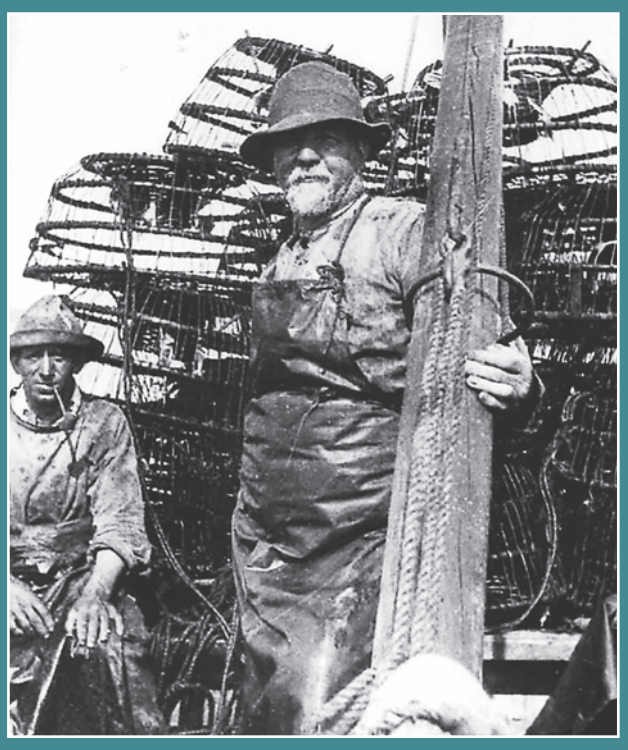
The use of motors allowed the boats to travel much further, often going 50-100 miles off in the Channel. Long lines had bigger rope than small tayckle and were carried in baskets. Each basket had 150 hooks, spaced 2 fathoms (4 m) apart, which were stuck in cork around its edge, and the boats carried 25-35 baskets. When the lines were shot, they were all tied together to make one long line which stretched up to 9 miles along the sea bed. It took about 2 hours to shoot a fleet of lines and 9 hours to haul them. This deep water long lining lasted until the 1970s, when it was replaced by netting.

Crabbing

Although the job was called 'Crabbing', the traps 'Crab Pots' and the boats 'Crabbers', crabs fetched a low price and the fishermen were mainly concerned with the higher value lobsters and crawfish, also known as langoustes. St Ives fishermen were originally mainly occupied with the deep water mackerel and herring fisheries. However when their sail powered luggers were no longer able to compete with the east coast steam drifters, shellfishing became increasingly important.

Cornish fishermen used the distinctive dome shaped willow pot, also used in France and Ireland, and they usually made their own pots, with many having their own withy gardens. The willow pot was effective but would only last one season, and a much stronger crab pot made of wire was developed in St Ives. The pots were worked in tiers of 10-30, each fastened by a short rope, the leg, to the main rope, the backrope. Each pot was baited with salt mackerel or gurnards, and these were threaded on sharp sticks called skivvers which were jammed inside the mouth of the pot.

These traditional willow pots were not escape proof, and often they were hauled empty of bait and shellfish. Nowadays most pots are factory made parlour pots which have a separate compartment, the parlour, and are used to catch crabs, lobsters, crawfish and prawns.



St Ives Fishermen and their wire crabpots. Photograph, Shore Shelter.

Hauling willow crabpots.

Rays hanging out to dry.

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Crawfish coming up to the hauler in John Stevens' Sweet Promise SS 192, 1970s. Photograph W Stevens, courtesy of St Ives Archive

Moored Nets and Trawling

Moored nets

Moored nets have been used around Cornwall at least since Tudor times, when it was recorded that trammels, comprising three parallel walls of net, were used to catch red mullet, bass, plaice and even lobsters. Crab nets, also called crawfish nets or ray nets, have been used here for over a century, but probably much longer.

Crab nets were originally made of cotton which has two drawbacks, it rots, and since they were worked on rocky ground to catch crawfish, they were often ripped. Although they were very effective, the fishermen could not mend them fast enough to keep them working. A local man remembered his childhood in the 1930s, *"When I came home from school, I had to make enough crab net to fill up the window, before I was allowed out to play."* In the 1960s and 1970s the adoption of rot proof nylon monofilament nets for making craw nets led to a revival of shellfishing from St Ives and Hayle. At its peak twenty boats fished out of St Ives, with many new boats being built for netting, but within a few years the crawfish stock was fished out.

While crab net fishing in St Ives declined, other Cornish fishermen diversified into using gill nets and tangle nets, which are monofilament nylon nets that are set on the seabed and left to fish. They are moored either end, have a weighted foot rope to keep them on the seabed, and are held up by a floating head rope. The size of mesh, location and length of time is specific to the fish being targeted, which mainly include hake, red mullet, monkfish, turbot, cod, ling, crawfish, and spider crab. Several of St Ives inshore boats now work nets, which are set and stored out of season at Porthmeor cellars.

Trawling

Trawling involves towing a stocking shaped net along the sea bed to catch fish such as cod, hake, ling, sole, plaice and haddock. Trawling was developed around the Cornish coast by visiting sailing smacks from Brixham, Lowestoft and Ramsgate, but sailing trawlers were relatively inefficient. Archive photos show one little sailing jumbo fitted for trawling at St Ives. She was not the most powerful of trawlers, an old man remembering her *"out in the Bay, tied afast by the ass and going nowhere."* Many Cornish fishermen hated trawling, blaming trawlers for damage to their long lines and drift nets.

Trawling became much more efficient after the introduction of steam, and later motor engines, but only a minority of Cornish boats went trawling until the mid 20th century. Most Cornish boats had two engines but were still underpowered. When the Boy Richard SS 148 needed more power for trawling, they simply added another engine. When a little boy asked, *"Why three engines?"* he was told, *"Well one is to drive the boat ahead. The second one is for when we shoot the net and the other one is to boil the kettle!"*

In the second half of the 20th century, Cornish fishermen started to invest in larger boats, converting them for trawling. Trawling now accounts for about 50% of fish landings in Cornwall, mainly monkfish, cuttlefish, sole, lemon sole, plaice and haddock, making Newlyn one of the largest fishing ports in the UK.

Trawling gig Boy Richard SS 148, 1950s.

Tom Pearce & Skipper Tommy Toman mending a trawl aboard the gig Nellie SS 25. Photograph, Penlee House Museum.

Chris Care setting nets at Porthmeor. Photograph, Rosie Hallam.

Mending craw nets on Smeaton's Pier, 1930s, Murley Andrews, Willie Care Senior, George and Willie Care.

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