
12 The archaeology of medieval fishing tackle

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Abstract

This paper provides a summary of fish catching methods in medieval England. The principal methods and associated tackle are described with archaeological examples. Distinct regional fishing traditions are identified, the lack of overlap between these techniques possibly reflecting differences in the prey species available. The technology employed in coastal fishing is different again and its development seems to reflect changes in the economic importance of the fishing industry. Small-scale, essentially local, fishing with the sale of fresh fish at local markets was gradually replaced by large-scale fleet fishing in the late medieval period, accompanied by curing and salting processes.

The sources

Fishing is a comparatively sparsely documented industry (Heath 1968) and the archaeological information does not satisfactorily supplement the lack of written sources. There are several reasons for this. Much of the equipment was made from organic materials, and has not survived except in waterlogged deposits. A vivid reminder of this was given recently (Coles 1984) when the fishing equipment from the waterlogged Neolithic settlement of Traun in Switzerland was reviewed. Bark floats, and net sinkers consisting of pebbles wrapped and tied with bark were found. If there had not been exceptionally favourable conditions for their survival the evidence would simply have been scattered pebbles. Only in Norway, Poland, and Russia has the full range of medieval fishing tackle been found: floats, nets, lines, hooks, sinkers (Herteig 1975; Rulewicz & Zajdel-Szczyska 1970; Artsikhovsky & Kolchin 1959).

Another difficulty arises from the fact that effective fishing methods were developed at an early period and thereafter continued with very little typological change for hundreds if not thousands of years. Consequently objects are difficult to date. On the other hand, recent material (such as the extensive collections in the Gloucester Folk Museum) may provide vivid insights into early fishing methods. Comparative anthropological material from other cultures (as in the Pitt Rivers Collections, Oxford) may also be valuable. Modern anthropological study of the lives of Norwegian fishermen is helpful (Kolsrud 1984) (Fig 12.1). It has recently been realised that literary evidence from all over medieval Europe shows that fishing for sport is older than previously thought (Hoffmann 1985). What emerges from a study of the fish remains themselves is that, throughout the medieval period, north European fishermen were becoming more daring and were venturing with their boats into deeper waters (Steane 1985, 261). Their boats were also becoming more seaworthy and bigger, and had storage compartments amidships with small holes to create a bath of sea water in the middle of the ship for the catch (Unger 1980).

Throughout this paper it is recognised that there were four types of fishing: that carried on in rivers and

estuaries; inland fisheries, using ponds either natural or artificial; coastal fishing; and deep water fishing. The different methods used may be more appropriate to one or other or all four of these locations. The most valuable summary of fish catching methods is von Brandt (1984) and broadly speaking his classification has been followed.

Collecting by hand with no tackle

The simplest method of fishing is gathering by hand by wading fishermen or with the help of more or less trained animals such as dogs, otters, or cormorants. The most suitable areas for hand picking are those sea coasts which experience great differences in the rise and fall of tides. Here many species of shellfish can be collected or dug by hand from the wide muddy areas exposed twice a day. Rocky coasts with many small pools provide areas prolific for seaweed growth and cover for molluscs and urchins. The only tackle required is a supply of baskets or bags for carrying the collected material and perhaps an implement to help prise the shellfish. Medieval sites have produced evidence for this. Oysters, cockles, and common mussels were found at Castle Barnard (Donaldson *et al* 1980). Southampton produced quantities of marine bivalves (Platt & Coleman-Smith 1975). At Pevensey the molluscan species found included oysters, whelks, mussels, and cockles (Dulley 1967, 232). Oysters, cockles, and winkles were found at the palace of King's Langley in Hertfordshire (Locker 1977, 162), and at Oxford in the centre of England, finds of mussels, oysters, cockles, and limpets have been made (Wilson 1980). Doubtless they were transported live in barrels. Even an inland town like Redford produced quantities of oysters, but very few mussels, cockles, whelks, and winkles (Baker *et al* 1979, 13).

Fish can also be grabbed by trailing the hands in the water behind boats. They can also be grasped by means of 'tickling' and by smearing the hands with bait. A crude but effective method was to drain ponds or pools and to pick the floundering fish off the exposed surface. This was much done in the 16th and 17th centuries.



Fig 12.1 Fair Isle fishermen c 1900. The methods these men used closely parallel those of medieval fishermen. Photograph: Shetland Museum and Library

Spearing, harpooning, and shooting fish

'Fishing by foot' means collecting fish food without a boat and without other gear. More important than equipment is the endurance and fitness of the collector; his legs would need to have developed resistance to the cold, and he would need good eyes and quick perceptive senses (von Brandt 1984). A fish spear has been found in interglacial deposits of the Early Pleistocene at Clacton-on-Sea which may be 300,000 years old (Dent 1984-5). Using such a spear is quite difficult. The refraction of light in water has to be allowed for; the fish seems to be higher and further away than its true position. To increase the effectiveness of aim, fish spears are often provided with several prongs. This also has the advantage of preventing the fish escaping by vigorous wriggling if speared by a single point. Medieval excavations at Novgorod have produced a fish spear with three prongs (Artsikhovskiy & Kolchin 1959, 77).

One widely found freshwater fish, the common eel (*Anguilla anguilla* (L)) is so elongated and slender in shape that it requires a specialised tool for its capture. Eels gather in large concentrations, individuals being in constant shifting contact with one another (Tesch 1977). One solution was spearing by means of a head

fitted with many sharp tines close together, another was a comb in which the head was offset by some 15-20 degrees from the main axis. The 'glaive' was an implement with flat, blunt tines set close together and serrated on their opposing edges. Eels would be wedged between the blades without piercing.

Line fishing

The first tentative beginnings of sea fishing in Britain from boats using tackle including lines and hooks occurred towards the end of Mesolithic times on the islands and coasts of northern and western Scotland (Clark 1965). With the exception of the use of the primitive fish spear this is probably the oldest method of fishing (Holdsworth 1874).

There are two principal methods used at sea, hand line and long line, and both are very simple.

The *hand line* is composed of a line of a certain length, a sinker, a snood (a hook-carrying branch line) and at least one hook (Bridger 1981). The fisherman holds one end of the line and winds up the line on to a frame, or later, when it has been invented, a reel, feeling with his finger for the bite of the fish. To shoot the line the weight is dropped into the water where fish are

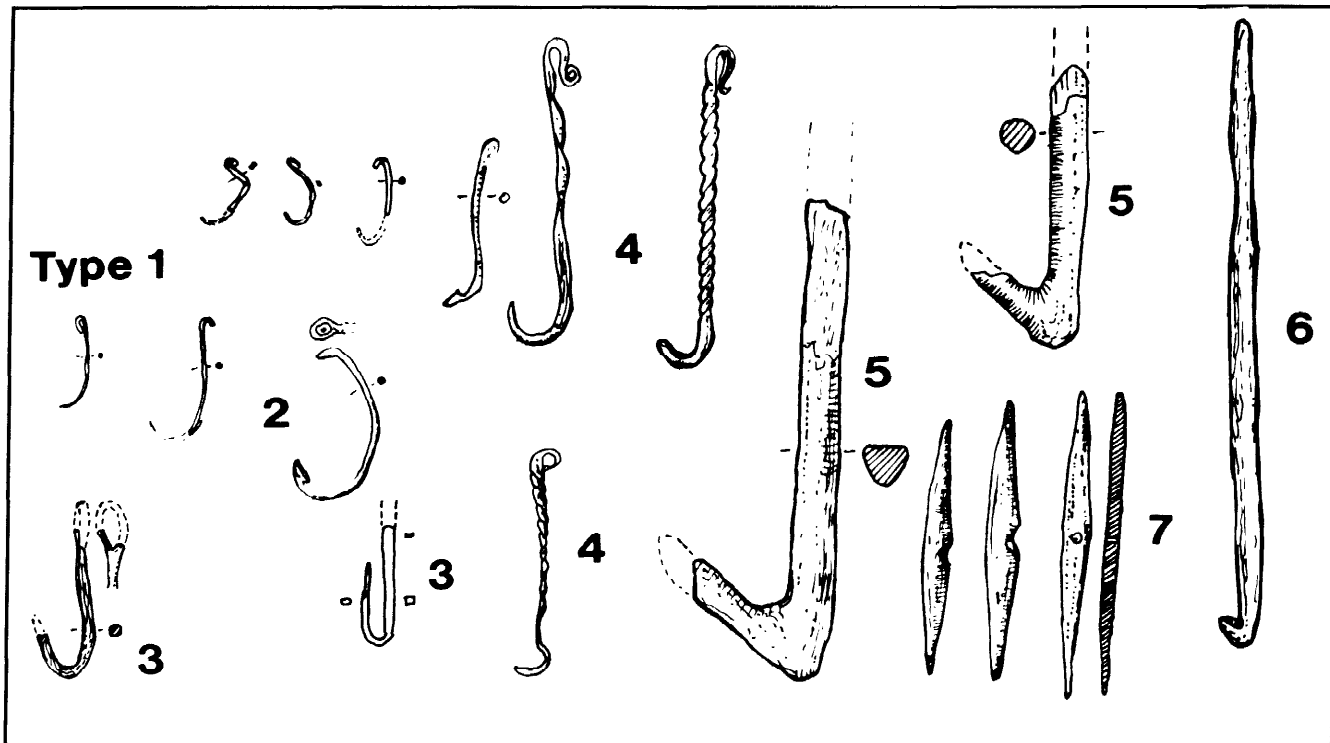


Fig 12.2 Wolin, Poland: medieval fish hooks of different types and materials, iron (3), bronze (1,2, and 4), and wood (5 and 6). Gorges are represented in 7. After Rulewicz & Zajdel-Szczyrska (1970)

expected. The line needs to be dropped quickly, perhaps with the aid of a stone, to prevent other fishes or crabs from gnawing away a slowly sinking hook. It also needs to be longer than the depth of the water due to the effect of currents and the drift of the vessel.

The *long line* can involve hundreds or today even thousands of hooks, each fixed to the main line by short lines called branch lines (or snoods, leaders, dropper lines, droplines, or droppers, gangion, or gangin). Bottom long lines with many hooks have been used in northern Europe and the Mediterranean area from earliest times (von Brandt 1984). The sea-bed needs to be fairly level, because projecting rocks may snag or break lines. Floats are needed to keep hooks and lines well clear of the bottom and in middle-depth waters where most fish are found. Sometimes one end of the line is tied to the beach, while the other is towed by a boat or an unmanned raft before the wind. A third method involves the vessel trailing the line – the so called troll line. Medieval spoons and hooks used in trolling have been found in Finland (Vilkuna 1975). Juliana Berners in 15th century England advised tying a short line with a hook to the foot of a goose and letting the hapless bird swim. Isaac Walton advised tying a line bait 'about the body or wings of a goose or duck and chase it over the pond' (Chevenix-Trench 1974).

The *gorge* was in use by the prehistoric Swiss lake dwellers (Clark 1965). This was a small piece of wood, straight and slightly pointed at either end, tied at the middle, where it narrowed, to the line and inserted lengthwise in the bait held parallel to the line. The

gorge is swallowed readily by the fish, but when it swims away or the line is pulled the gorge takes up a transverse position in the fish's throat or belly so it cannot spit it out. Gorges have been found in profusion in early medieval levels at Wolin (Rulewicz & Zajdel-Szczyrska 1970), but have not so far been recognised in British medieval contexts (Fig 12.2).

The gorge is probably the prototype of the *bent hook* which is another and better-known device for holding the fish captive once it has taken the bait. The earliest fish-hooks are likely to have been made of wood; branches with twigs sticking out at suitable angles were used. Sometimes hooks were made of small parts of plants such as thorns. Wooden hooks were found alongside metal ones at Wolin (Fig 12.2; Rulewicz & Zajdel-Szczyrska 1970). Compound hooks made of wood, bone, and shell were made in primitive societies throughout the world (Hurum 1977), but were labour intensive. Most medieval European hooks were made of metal, either of bronze or, more frequently, of iron. The result of the use of metal was that the shape of the hook now became freer: iron hooks were often made bigger than bronze hooks but had to be treated with copper plating or tinning if they were to resist corrosion. They had to be neither too soft to avoid straightening out by pulling nor too hard to prevent their breaking under strain.

The hook consists of five parts (Hurum 1977): the point (1); the barb (2) may be immediately under the point or possibly at the rear; the hook is bent round (3) and straightens out to the shank (4) which is attached to

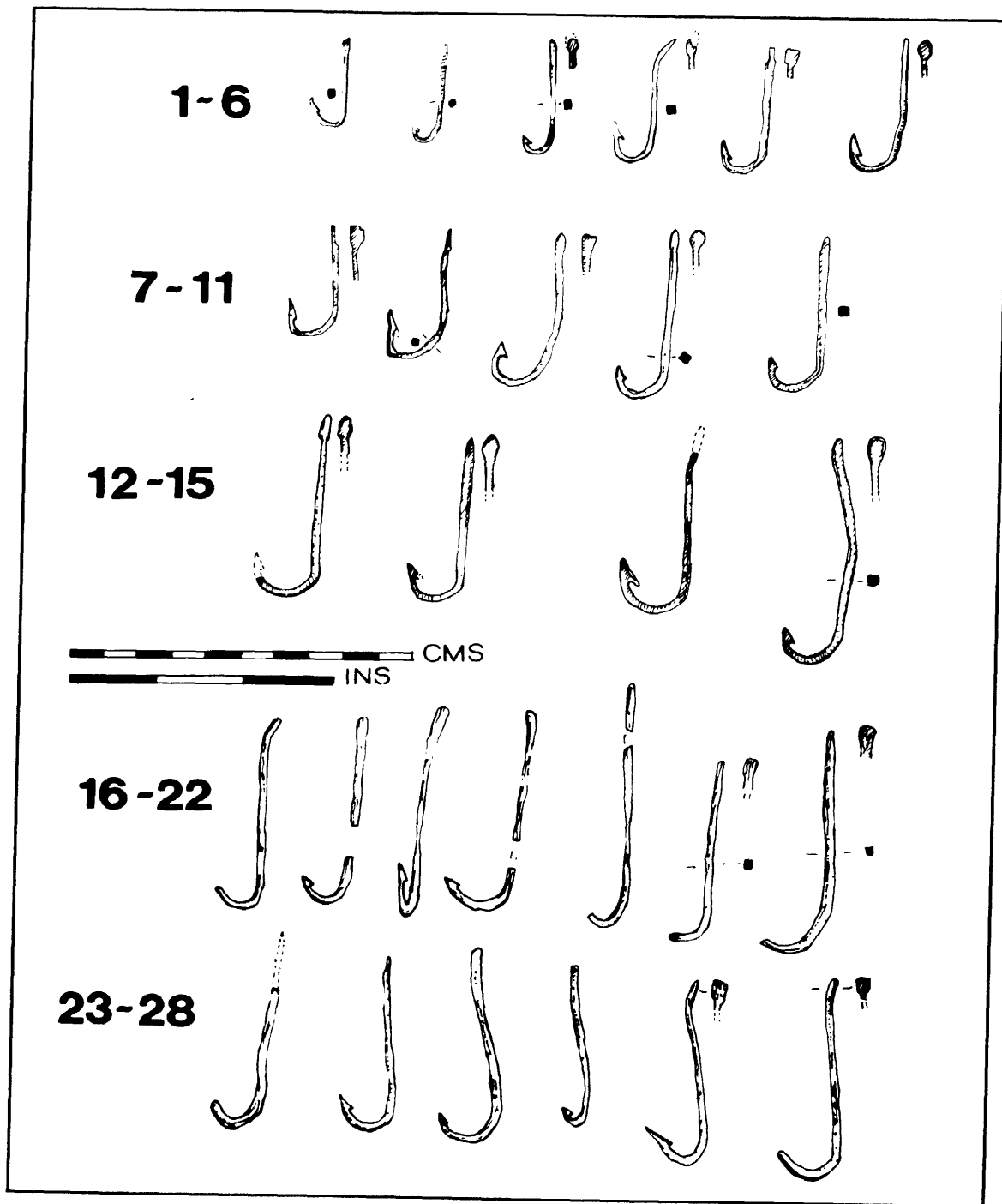


Fig 12.3 Medieval fish-hooks made of iron from London (1-15) and Great Yarmouth (16-28). Different sizes are explained by the fact that fishes of a great range of sizes were being sought