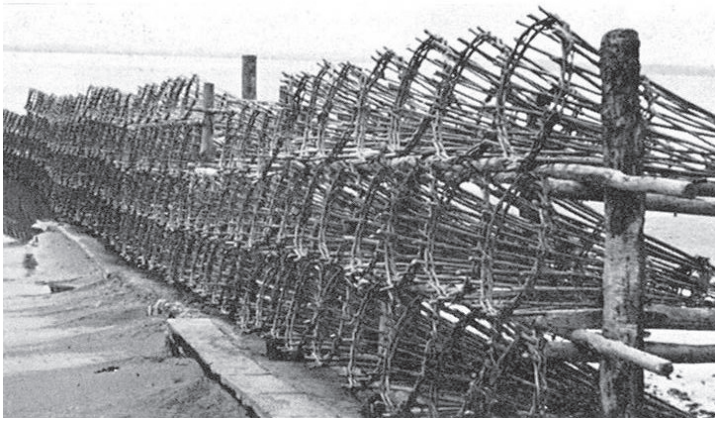
Fishing on the Severn Estuary 1 - Fixed Trap Fishing



Left: Gloucestershire Archives: D4764/4/31 Right: © Gloucester Museums Service

Sources: This lesson looks at fixed trap fishing on the River Severn. It uses photographs from Gloucestershire Archives collection reference D4764/4/31 and from Gloucester City Museum.

Background information: Fixed-trap fishing using 'fish-weirs' have been used on the lower stretches of the Severn Estuary for at least 4,000 years. There were two main types of weir, the hedge-weir and the basket-weir. These were used because they were more robust than nets which would be damaged by the strong tidal currents of this area of the river. They were also less labour-intensive than nets.

Fish weirs had a common construction, utilising hazel and willow withies (small flexible stems from the tree) to form a cone or funnel-like trap. The traps differed in size depending on the type of fish weir and ranged from small 'putchers' or 'putcheons' about 2m long and 1m in diameter (at their widest point) to large 'putts', which were made in sections and could be up to 4m long and 3m wide. The materials used to make the traps were all sourced locally, often being obtained from riverside tree plantations. These plantations were actively managed in order to provide a renewable source for these materials.

The traps were then be set in a timber framework with the smaller traps being used in basket-weirs on the middle estuary, while the larger traps were used in hedge-weirs on the lower estuary as shown in the table below. The traps could be set in either direction (i.e. upstream or downstream), but the majority faced upstream so that they caught fish on the ebbing tide. These were more effective because to escape the trap the fish would have to try and fight against the tidal flow.

Method	Trap type	Target species	Area
Basket-weirs	Putcher or putcheon	Salmon	Upper estuary (Newnham to Woolaston)
Hedge-weirs	Putt	Salmon, Bass, Sea trout, Mullet	Lower estuary (downstream from Woolaston)

Operation of these fish weirs was governed by the tides. The tides rise and fall twice a day and each consecutive tide occurs roughly an hour later than the previous one. As the traps were only accessible as the tide fell, the fishermen's lives revolved around the tidal cycles and this often meant that they had to work their traps at night.
As the tide fell, fishermen would walk out to the weirs, removing any fish caught in the traps. Once the fish had been removed, they would clear the traps of any debris (such as seaweed or sticks) and repair any damage. The fishermen had to work quickly as the large tidal range on the river (as much as 14m between the level of high and low water) meant that the traps would not be exposed for long. At the low water mark, some might be accessible for only 10 minutes.

Most weirs were owned by an individual and might have been in the hands of the same family for several generations. To obtain the right to use a weir the owners would pay a rent to the owner of the riverbank, who was usually a Lord, an abbey or monastery or the Crown.

Basket weirs – Photograph 1

This photograph shows a typical basket-weir on the middle estuary. The frame work was made of elm and was usually expected to last up to 20 years.

Each putcher trap might last 2 years before being replaced. If damaged, any repairs were undertaken in-situ. The traps were removed during the closed season, leaving just the open framework. New traps were usually made on the riverbank by the weir.

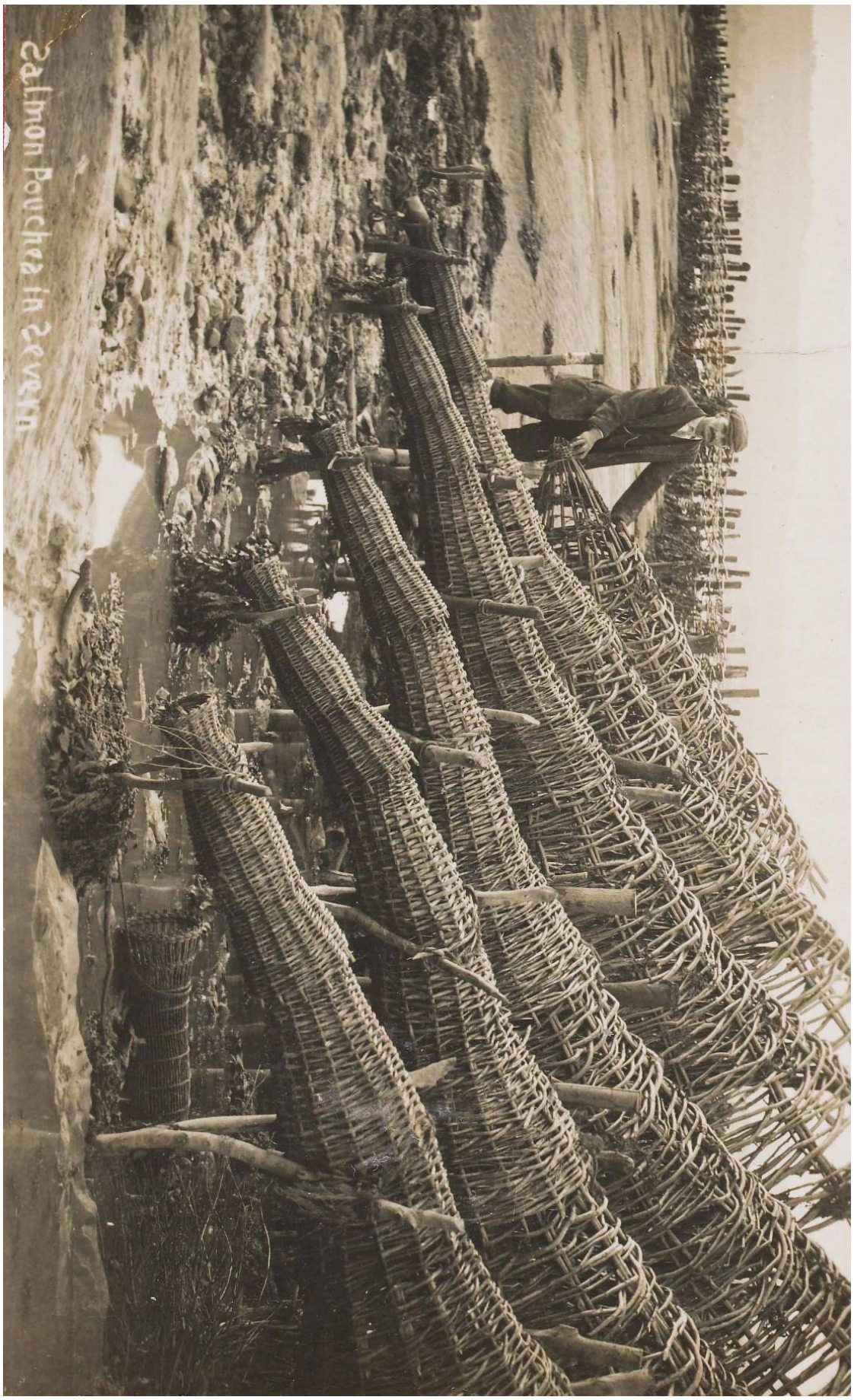
A basket-weir could hold from as few as 10 putchers to as many as 2,000. A typical catch would be 1 or 2 fish per tide.

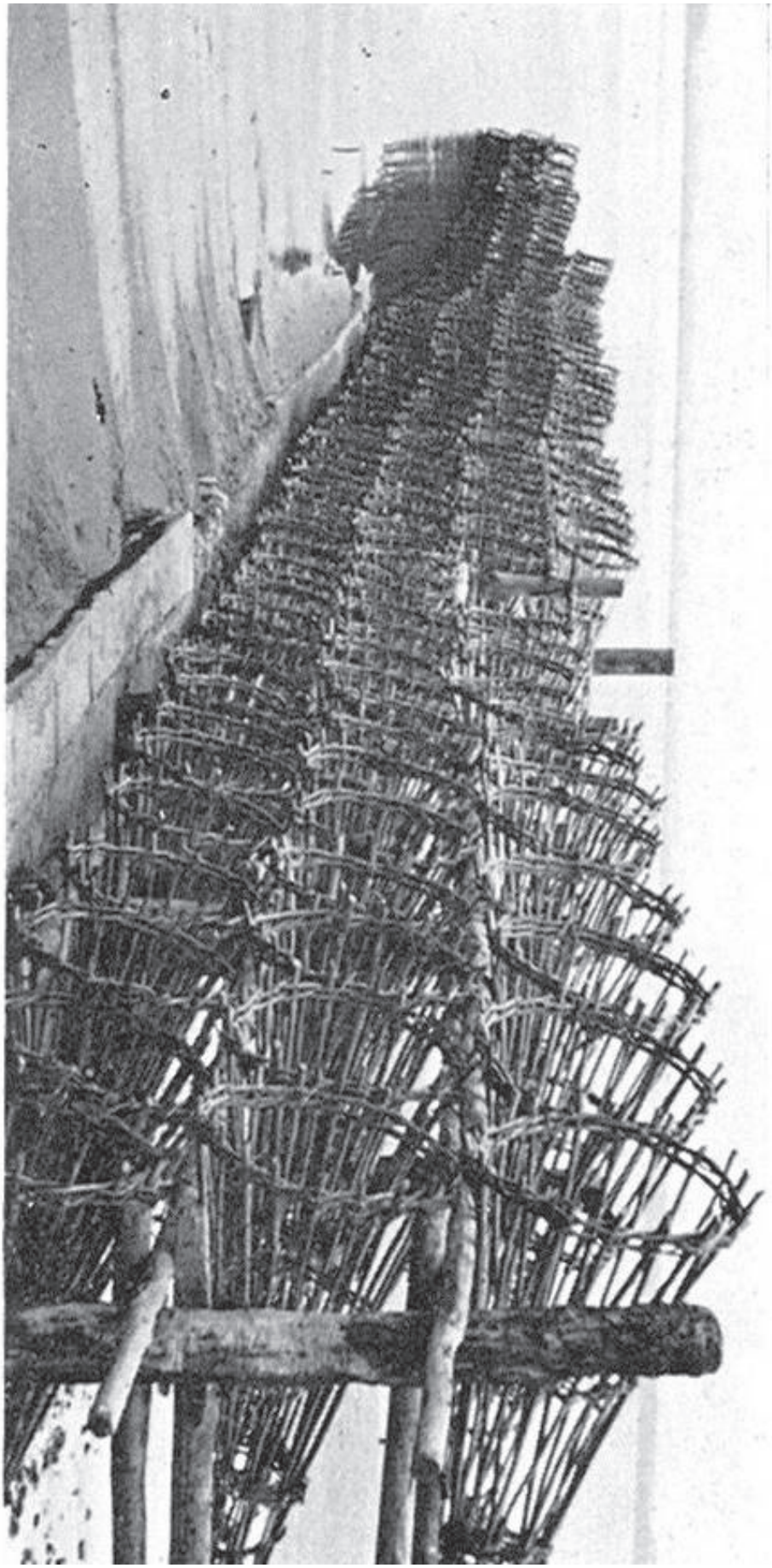
Hedge weirs – Photograph 2

This photograph shows a hedge-weir on the lower estuary with a fisherman. These traps differed from basket-weirs as they used barriers called 'hedges' set in a large V-shape with a gap at the apex of the 'V'. The hedges were made of hazel or elm uprights with interwoven hazel and willow withies. Stones were often piled up along the base to reinforce the barrier while on the extreme lower estuary the barriers were made of stones and were more like low walls.

The traps or putts, were set in the gap of the 'V' and the weir worked by funnelling fish (heading downriver on the ebbing tide) along the barriers and into the baskets. These weirs would have from 1 to 20 traps. Due to their size, putt traps were made of 3 sections: the front forewheel, a middle kype and a narrow butt. The latter could be made with a very tight weave and could catch flatfish and even shrimps. These traps were secured by stakes.

The catch rate was broadly similar to basket weirs with 1 or 2 fish per tide.


Salmon Pouches in Severn



A putcher weir near Awre, 1964

Learning Outcomes - To know that a historian asks questions such as who, what, when, why, where, how, to discover information from a source . To discover what historical information can be learnt from a photograph. To be able to interpret through drama, information from a photograph. To be able to chronologically order a sequence of events.

Pose a series of questions to elicit investigation and discovery of the facts: What is happening? Who is the man? What are the objects in the picture? What is their purpose? What are they made from? Was it in the present or the past?

Dramatic interpretation: Why do you think the man is by the trap? Who is he? Where do you think it took place? What might the man be thinking about? Who else might have been there?

Children could:

- Draw a story board of the sequence of events. What might the man have done first? What might he do after?
- Imagine that they are a fish caught in the trap. Interpret this through dance.
- Imagine what it was like to work on these traps – think about what you might see, feel or hear.
- Think about what would happen if the traps caught no fish? What if it caught a lot of fish? How might this affect the man's future or his family?
- What might have happened when laws to conserve fish stocks were imposed? What might the fishing communities have done to make a living?
- Creatively improvise these situations.

Curriculum links: KS2

Historical, geographical and social understanding: Essential knowledge 1b, 1c, 1d; Key Skills 2a, 2c, 2d; Cross-curricular studies 3a, 3b, 3c; Breadth of learning 4a1, 4b4, 4c2, 4d2, 4d3, 4d4; Curriculum progression M1, M4, M6, M7, M10;.

Understanding the arts: Essential knowledge 1a, 1b, 1c; Key Skills 2a, 2b, 2c, 2d; Cross-curricular studies 3b, 3c; Breadth of learning 4a1, 4a3, 4a5, 4c1, 4c3, 4c4, 4d1, 4d2; Curriculum progression M1, M2, M3, M4, M6, M7, M8, M9;

Links with: Understanding English, communication and languages; Understanding physical development, health and well being.

A&DT: Look at the photograph from a composition point-of-view. Is it a good photograph? What would improve it? Would it be better in colour? Discuss the technology being used.

Children could:

- Recreate the picture in colour, using everyday colours but also unusual ones.
- Recreate the picture in different ways: i.e. collage, paint, charcoal, pastels.
- Recreate the image using IT.

- Try recreating the picture in different artistic styles (i.e. impressionism, cubism, etc) or in different artist's styles (i.e. Dali, Lichtenstein, Monet).
- Recreate the picture in 3D using different materials (i.e. clay, cardboard, plastic items).
- Make a pinhole camera.
- Draw what is behind the camera.

Curriculum links KS2:

Historical, geographical and social understanding: Essential knowledge 1a, 1c; Key Skills 2a, 2c, 2d; Cross-curricular studies 3b, 3c; Breadth of learning 4a1, 4d4; Curriculum progression M1, M10, M10;.

Understanding the arts: Essential knowledge 1a, 1 b, 1c, 1d; Key Skills 2a, 2b, 2c; Cross-curricular studies 3a, 3b, 3c; Breadth of learning 4a1, 4a2, 4a3, 4b1; Curriculum progression M1, M2, M3.

Scientific and technological understanding: Key skills 2a, 2b, 2d; Cross-curricular studies 3b, 3c; Breadth of learning 4a3, 4c1, 4c3; Curriculum progression M1, M3, M5, M9, M12.

Links with: Understanding English, communication and languages; Understanding physical development, health and well being.

Citizenship: Why is there only a man in the picture? Where might the women be? Would they work these traps? Would the families who owned the traps be wealthy or poor?

Children could:

- Research the decline in the fishing industry. What changes have created this situation?
- Look at the different ways that people catch fish around the world. What might happen in the future?
- Research the sorts of jobs and industry behind this scene:
- Weirs – Forestry, weaving, metal working.
- Fishermen - cloth making, tanning, shoe-making, metal working (belt buckles, buttons), clothing industry, hat-making.

Curriculum links KS2:

Historical, geographical and social understanding: Essential knowledge 1a,1b, 1c; 1d; Key Skills 2a, 2b, 2c, 2d; Cross-curricular studies 3b, 3c; Breadth of learning 4a1, 4b4, 4c2, 4d1, 4d2, 4d3, 4d4; Curriculum progression M1, M4, M5, M7, M9, M10.

Links with: Understanding English, communication and languages; Understanding physical development, health and well being.