

## A WOODEN FISHTRAP IN THE SEVERN ESTUARY AT NORTHWICK OAZE, SOUTH GLOUCESTERSHIRE

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At the head of the outer Severn Estuary, between Aust Cliff and New Passage, lies the salt marsh of Northwick Warth and the adjoining, and genetically related, intertidal mudflat called Northwick Oaze. The Warth is the largest area of active salt marsh on the English bank of the estuary and is an important wildlife habitat. Like many others in the area, it is a polyphase marsh, consisting of at least three terrace-like elements that can be seen to step down seaward at low tides (Allen and Rae 1987). Each element records an episode of upward and outward marsh growth

upon a deep-lying erosional platform, followed by the retreat of the marsh-edge in response to wave action and the development of a new platform. The storms of mid January and early February, 2007, effected a further retreat of the lower, outermost marsh, and also stripped the thinner loose mud from parts of adjoining Northwick Oaze.

The consequent exposure in places of older deposits brought to light a substantial wooden structure toward the southwestern end of the



Figure 1. General view looking north of the fishtrap, Northwick Oaze.



Figure 2. Detail of the bands of rods lying between the upright posts.

mudflat (British National Grid Reference ST 550872). It lies low down in the upper half of the tidal frame (c. 2.5 m OD) and consists of an L-shaped setting of eroded timber poles and rods emerging from pale brown, laminated silts (Figure 1). The slightly uneven long arm of the setting extends for c. 75 m on a northeast-southwest trend, and lies roughly parallel with the adjacent marsh cliff. The short arm, arranged roughly at right-angles, ranges for c. 10 m toward the southeast before disappearing in an eroded state among the overlying thick grey silts that formed beneath the outermost marsh.

The setting consists of straight roundwood posts 8-12 cm in diameter arranged roughly 1-1.5 m apart between which rods 15-30 mm are grouped vertically (Figure 2). The posts seem to be mainly of various softwoods but there is occasional oak. Here and there occurs a branching post which is not straight. The rods are loosely clustered a diameter or so apart in a band between the posts and protrude upward for several centimetres above the surrounding pale brown silt. At no point on the setting were any horizontal, cross-members found amongst the rods.

This substantial setting could represent either (1) an attempt at local coastal protection, (2)

a sediment field, or (3) a fishtrap. The first interpretation is considered unlikely, as the setting, with far-spaced posts and loosely grouped rods, seems far too insubstantial to have survived wave-action for long. The second, also considered unlikely, is that the setting of posts and rods is the boundary of a 'sediment field' (Beefink 1977), a substantial area set out on a mudflat and defined by an outer brushwood fence that encloses a mesh of drainage furrows and low banks of dug sediment (*Spartina* may be planted here), the whole intended to encourage sedimentation. The difficulties of this interpretation are that (1) the structure is not recorded on any maps, and (2) there is no sign of either the expected internal ditches and banks or of neighbouring fields. Instead, it seems most plausible that the wooden setting is part of a larger fishtrap, intended to function on the ebbing tide. The loosely grouped rods would have allowed water and small fry to escape through the trap but have effectively held back adult fish, which could be collected either when the tide had fully ebbed off or earlier by hand-net. The occasional irregular, branched posts suggest repairs using driftwood collected opportunistically from trashlines on the nearby marsh.

A roughly circular arrangement of wooden

rods (Figure 3) was seen protruding from the silt a few metres to the southwest of the long arc of the fishtrap, but did not appear to be an integral part of the main setting. It measured c. 0.9 m in diameter and consisted of widely spaced pairs of rods with a steep downward and outward slope. There were traces of other, roughly horizontal rods that had been woven between these pairs. This circular setting is interpreted as some kind of fishing basket as seen in cross-section, perhaps either a globular holding basket for fish or the large, leading portion of a conical putt that had been abandoned.

Fishing in the Bristol Channel and Severn Estuary, practised from prehistoric times (Bell *et al* 2000), was traditionally conducted using either various kinds of portable/transportable net (Waters 1947; Neufville Taylor 1974; Jenkins 1991; Green 1992, 2005) or different designs of 'fixed engine' (Neufville Taylor 1974; Jenkins 1991; Green, 1992, 2005; Godbold and Turner

1994; McDonnell, 1994; Hildich 1997; Townley 1998; Nayling 1999a, 1999b; James and James 2003; Allen, 2004). Depending on local circumstances, and variously known as fishweirs, fishing hedges or fishtraps, the latter covers substantial settings of stone or wood - in some the two together - or lengthy groupings of woven baskets of various designs and sizes that were secured to the substrate. Similar kinds of fishtrap have been described from elsewhere in Britain and Ireland (Salisbury 1991; Bannerman and Jones 1999; O'Sullivan 2001; McErlean *et al* 2002).

The fishweir at Northwick Ooze cannot be fully seen but is otherwise similar in scale and plan to many better-exposed fishweirs that have been described (Salisbury 1991; Bannerman and Jones 1994; O'Sullivan 2001; McErlean *et al* 2002). It is clearly not a post-net trap (O'Sullivan 2001), but is unusual in showing no evidence that the posts were, as appears generally to be the case, linked by either preformed woven wattle panels or



Figure 3. The circular setting of wooden rods with interwoven elements.

by interwoven horizontal rods. The upright rods could, however, have been effectively laced together along the top of a hedge-like arrangement by either rope or withies.

A definite date for the setting cannot be offered. The pale brown silts from which it emerges are attributable to the Rumney Formation underlying the highest and innermost element of Northwick Warth (Allen 1987; Allen and Rae). The fishweir could therefore date from the beginning of the early modern period. That it disappears in an eroded state beneath the silts of the youngest marsh (Northwick Formation) restricts it to the early twentieth century at the latest. In the light of Nayling's (1999a) experience on the Caldicot Level, the presence of softwood posts suggests a date in the later part of the interval defined by the local stratigraphic context. The setting at Northwick Oaze further enlarges the range of designs of fixed engine known from the Severn Estuary and Bristol Channel.

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